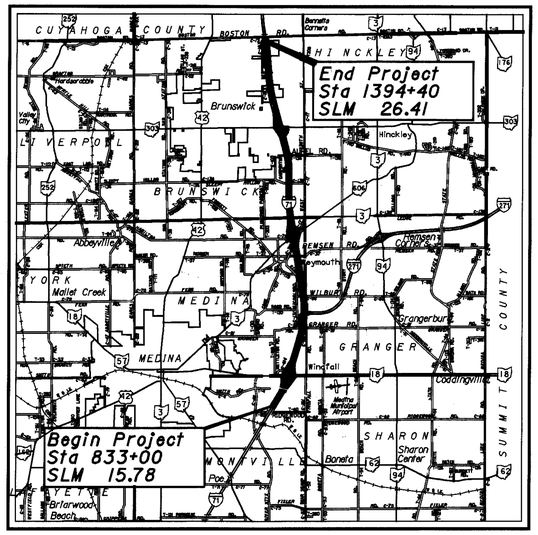
MED - IR 71 - 15.78
000239
PID#7885

05/10/00
DIST. 03

# STATE OF OHIO
# DEPARTMENT OF TRANSPORTATION
# MED - 71 - 15.78

## City of Brunswick
## Medina, Granger, Brunswick Hills
## And Montville Townships
## Medina County




LOCATION MAP

LATITUDE: 41° 08′ 38″ LONGITUDE: 81° 47′ 30″

0 1 2 3 4
SCALE IN MILES

N

PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES
OTHER ROADS

## DESIGN DESIGNATION

| | |
|---|---|
| CURRENT ADT (2000) | 56,530 |
| DESIGN YEAR ADT (2020) | 72,470 |
| DESIGN HOURLY VOLUME (2020) | 7,247 |
| DIRECTIONAL DISTRIBUTION | 55 % |
| TRUCKS (24 HOUR B&C) | 22 % |
| DESIGN SPEED | 70 MPH |
| LEGAL SPEEDS | 55 MPH and 65 MPH |

DESIGN FUNCTIONAL CLASSIFICATION -
Interstate Rural/Urban

## DESIGN EXCEPTIONS

IR 71 - NONE REQUIRED

PLAN PREPARED BY:
District One
Ohio Department
of Transportation

| | | |
|---|---|---|
| GRANGER RD | APPRV DATE | SHT |
| SSD | 12/14/99 | 408,409 |
| SHOULDER WIDTH | 12/14/99 | 402 |

## INDEX OF SHEETS:


| | | | |
|---|---|---|---|
| Title Sheet | 1 | Noise Walls | 664-679 |
| Schematic Plan | 2-7 | Structure Index & Misc. Sheets | 680-686 |
| Typical Sections - Proposed | 8-22 | MED-71-1685 L&R over SR 18 | 687-720,720A |
| Typical Sections - Existing | 23-30 | MED-71-1828 Granger Road over IR 71 | 721-736 |
| General Notes | 31-36 | MED-71-1870 L&R OVER IR 271 | 737-775 |
| Maintenance Of Traffic | 37-67, 42A, 42B, 42C, 63A | MED-71-1918 L&R over Wilbur Road | 776-797 |
| General Summary | 68-74 | MED-71-1988 over ROCKY RIVER | 798-820 |
| Subsummary Sheets | 75-76, 76A, 77-128 | MED-71-2088E RAMP B @ SR3 | 821-836 |
| Calculation Sheets | 129-146A | MED-71-2090 L&R over SR 3 | 837-867 |
| Superelevation Tables | 147-148 | MED-71-2092W RAMP C @ SR 3 | 868-895 |
| Storm Water Pollution Prevention Plan | 149-171 | MED-71-2402 L&R over SR 303 | 896-931 |
| IR 71 Plan & Profile Sheets | 172-218 | Miscellaneous Overhead Sheets | 932-940 |
| IR 71 Cross-Sections | 219-374 | | |
| SR 18 | 375-382, 384-401 | Sheets Not Used - 383, 420, 481, 644, 645 & 646 | |
| Granger Road | 402-419 | | |
| IR 271 Connector "W" | 421-448 | | |
| IR 271 Connector "E" | 449-452 | | |
| SR 3 | 453-457, 457A, 458-465 | | |
| Rest Areas | 466-480 | | |
| SR 303 | 482-484, 484A, 485, 485A, 486-500 | | |
| Miscellaneous Details | 501-502 | | |
| Drainage Details | 503-512, 512A, 513-516 | | |
| Culvert Details | 517-530 | | |
| Drainage Profiles | 531-536, 536A | | |
| Underdrain Details | 537-550 | | |
| Traffic Control | 551-560, 560A-560B | | |
| Signing | 561-606, 561A, 569A-E, 574A-C | | |
| Lighting | 607-643 | | |
| Landscaping | 647-663 | | |


UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
P.O. Box 206
Granville, OH 43023-0206
800-925-0988
(Fax) 740-587-0446

ENGINEERS SEAL:

STATE OF OHIO
John Wesley Rogers
E-43661
REGISTERED
PROFESSIONAL ENGINEER

For Signing, Pavement Marking, Guardrail, Pavement Calculations & Maintenance of Traffic except at SR 18, Granger Road and IR 271.

SIGNED John W. Rogers
DATE: December 15, 1999

For additional Seal Blocks, See Sheet 2 of 940.

### PROJECT DESCRIPTION

Reconstruction of 10.6 miles of IR 71 existing lanes and shoulders including construction of widened inside shoulders from Begin Project to SR 303 and additional lanes from SR 303 to End Project. Also reconstruction of the connection lanes between IR 71 and IR 271. The work shall consist of but is not limited to new pavement and shoulders, new underdrains, rehabilitation or replacement of existing drainage, new guardrail, upgrading of signing, replacement of fencing, lighting at the IR 271, SR 3 and SR 303 interchanges, noise walls, replacement of Rest Area parking Areas, pavement markings and rehabilitation or replacement of structures.

### LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

### 1997 SPECIFICATIONS

The Standard Specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve the plans and declare that the making of this improvement will not require the closing to traffic of the highway and provisions for the maintenance and safety of the traffic will be as set forth on the plans and estimate.

"Under authority of Section 4511.21, Division (I) of the Revised Code of Ohio, the revised prima facia speed limits as indicated herein are determined to be reasonable andsafe and are hereby established for the duration of this project. The prima facia speed limit or limits hereby established shall become effective when appropriate signs giving notice thereof are erected."

APPROVED James D. Mawhorn
DATE 12-17-99 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor Jr.
DATE 2-18-00 DIRECTOR, DEPARTMENT OF TRANSPORTATION

## STANDARD CONSTRUCTION DRAWINGS

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BP-1.1M | 10-28-94 | GR-1.1M | 10-21-97 | CB-1.2M | 7-12-95 | AS-1-81 | 09-15-94 | TC-22.10M | 03-13-97 | TC-61.10M | 03-31-94 | HL-20.22M | 03-31-95 | MT-95.40M | 04-25-94 | 806 | 09-09-97 |
| BP-2.1M | 04-08-97 | GR-1.2M | 1-3-96 | CB-2.1M | 7-12-95 | GR-3.5M | 10-21-97 | TC-22.20M | 02-01-94 | TC-65.10M | 11-01-95 | HL-20.23M | 03-31-95 | MT-97.10M | 04-25-94 | 814 | 06-02-98 |
| BP-2.2M | 10-21-97 | GR-1.3M | 11-30-94 | CB-2.2M | 7-12-95 | BR-1M | 01-06-99 | TC-31.21M | 03-31-94 | TC-65.11M | 11-01-95 | | | MT-98.12M | 06-24-93 | 815 | 05-30-96 |
| BP-2.3 | 04-29-99 | GR-2.1M | 04-14-98 | CB-3.1M | 7-12-95 | BS-1-93 | 12-19-94 | TC-32.10M | 03-31-94 | TC-65.12M | 11-01-95 | HL-30.11M | 03-31-95 | MT-98.13M | 06-24-93 | 816 | 04-21-97 |
| BP-2.4M | 10-28-94 | GR-3.1M | 10-21-97 | CB-3.2M | 7-12-95 | CS-1-93 | 06-30-95 | TC-32.11M | 03-31-94 | TC-71.10M | 09-01-93 | HL-30.21M | 05-01-95 | MT-98.14M | 06-24-93 | 825 | 9-14-99 |
| BP-2.5M | 04-08-97 | GR-3.2M | 10-21-97 | CB-3.4M | 7-12-95 | EXJ-4-87M | 02-18-97 | MT-102.10M | 01-30-95 | TC-72.20M | 09-01-93 | HL-30.22M | 03-31-95 | MT-98.15M | 06-24-93 | 842 | 01-06-99 |
| BP3.1M | 10-28-94 | GR-4.1M | 11-30-94 | HW-2.1M | 07-12-95 | VPF-1-90M | 03-20-95 | TC-41.10M | 03-31-94 | TC-82.10M | 11-24-93 | HL-30.31M | 05-01-95 | MT-98.16M | 06-24-93 | 844 | 01-06-99 |
| BP-4.1M | 10-28-94 | GR-4.2M | 10-21-97 | HW-2.2M | 07-12-95 | GSD-1-96 | 02-12-97 | TC-41.20M | 07-01-94 | TC-83.10M | 11-24-93 | GR-4.3M | 10-27-97 | MT-98.17M | 04-25-94 | 855 | 6-30-98 |
| BP-5.1M | 10-28-94 | GR-6.1M | 1-3-96 | I-2.2M | 09-06-95 | PCB-1-91 | 07-06-99 | TC-41.50M | 07-01-94 | RM-4.5M | 10-21-97 | HL-40.10M | 03-31-95 | MT-98.18M | 04-25-94 | 863 | 10-12-99 |
| BP-9.1 | 04-29-99 | GR-6.2M | 1-3-96 | MH-1.1M | 10-21-97 | SBR-1-99 | 01-12-99 | TC-42.10M | 03-31-94 | HL-10.11M | 05-01-95 | HL-50.11M | 03-31-95 | MT-99.20M | 01-30-95 | 870 | 08-10-99 |
| BP-9.2 | 04-29-99 | RM-1.1 | 04-29-99 | MH-1.2M | 09-06-95 | HW-1.1M | 07-12-95 | TC-42.20M | 03-31-94 | HL-10.12M | 05-01-95 | HL-50.21M | 08-31-94 | MT-101.60M | 04-25-94 | 899 | 10-21-98 |
| F-1.1M | 4-8-97 | RM-4.1M | 10-21-97 | MH-3.1M | 09-06-95 | TC-7.65M | 02-01-94 | TC-82.11M | 01-19-99 | HL-10.13M | 05-01-95 | HL-60.11M | 05-01-95 | MT102.20M | 01-30-95 | 880 | 06-15-99 |
| F-2.1M | 4-8-97 | RM-4.2M | 10-21-97 | DM-1.1M | 10-21-97 | TC-12.30M | 02-01-94 | TC-51.11M | 09-30-94 | HL-10.31M | 03-31-95 | HL-60.21M | 03-31-95 | MT-105.10M | 04-25-94 | 904 | 05-05-98 |
| F-3.1M | 4-21-95 | RM-4.3M | 10-21-97 | DM-4.2M | 6-30-95 | TC-18.26M | 02-01-94 | TC-51.12M | 03-31-94 | HL-20.11M | 03-31-95 | HL-60.31M | 03-31-95 | MT-105.11M | 04-25-94 | 905 | 04-01-98 |
| F-3.3M | 4-21-95 | RM-4.4M | 10-21-97 | DM-4.3 | 04-29-99 | TC-21.10M | 12-10-96 | TC-52.10M | 07-29-94 | HL-20.15M | 03-31-95 | MT-95.31M | 04-25-94 | MT-95.32M | 04-25-94 | 906 | 05-05-98 |
| F-3.4M | 4-8-97 | CB-1.1M | 7-12-95 | DM-4.4 | 04-29-99 | TC-21.20M | 12-10-96 | TC-52.20M | 07-29-94 | HL-20.21M | 08-31-94 | MT-95.30M | 04-25-94 | | | 907 | 08-10-99 |

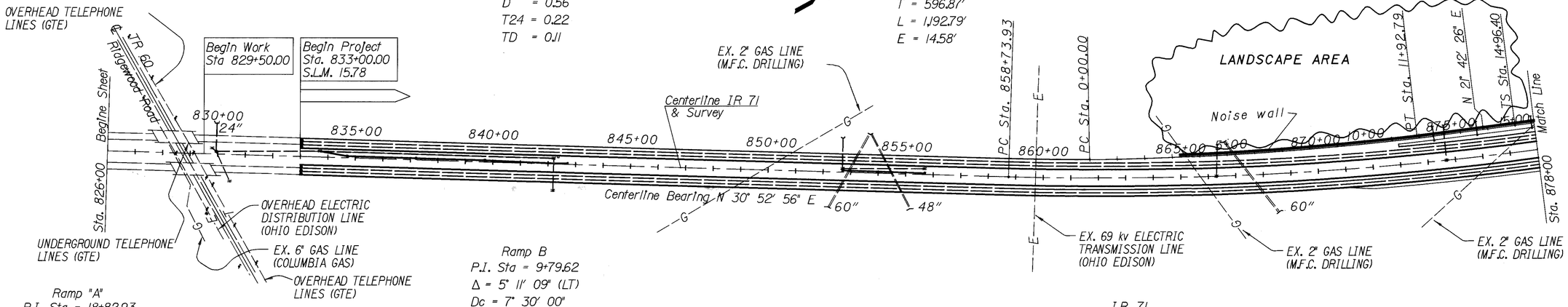
| SUPPLEMENTAL SPECIFICATIONS | | SPECIAL PROVISIONS | |
|---|---|---|---|
| | | Waterway Permit | |
| | | NWP# | DATE: |
| | | 3 & 14 | 01-28-98 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | SUPPLEMENTAL | |
| | | SPECIFICATIONS | |
| | | | |
| 910 | 07-28-98 | | |
| 911 | 07-10-97 | | |
| 954 | 09-09-97 | | |
| 877 | 4-13-99 | | |
| 925 | 5-14-99 | | |

FEDERAL PROJECT NO. TE21-6000(267)
PID NO. 7885
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE

MED - 71 - 15.78

1
940

Str. No. MED - 71 - 1569 L&R




IR 71
ADT (2000) = 34,900
ADT (2020) = 49,130
K = 0.11
D = 0.56
T24 = 0.22
TD = 0.11

Ramp "A"
P.I. Sta = 5+96.87
Δ = 5° 35' 47" (LT)
Dc = 0° 28' 09"
R = 12,211.62'
T = 596.87'
L = 1,192.79'
E = 14.58'

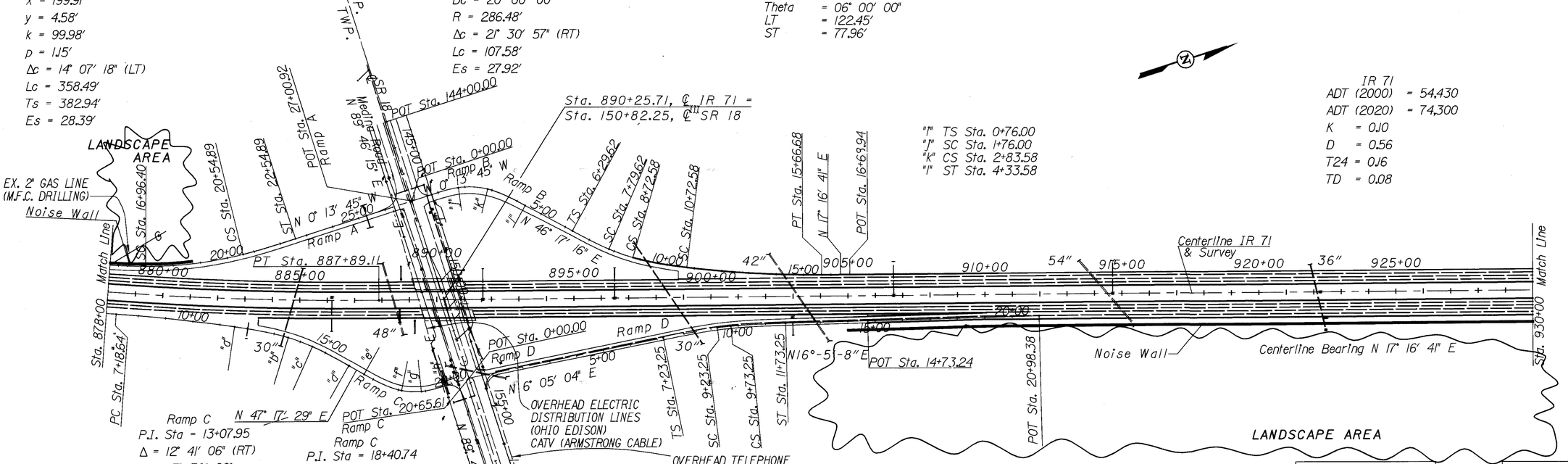
Ramp "A"
P.I. Sta = 18+82.93
Δ = 22° 00' 00" (LT)
Dc = 3° 56' 21"
R = 1,454.52'
Ls = 200.00'
Theta = 3° 56' 21"
LT = 133.37'
ST = 66.70'
x = 199.91'
y = 4.58'
k = 99.98'
p = 1.15'
Δc = 14° 07' 18" (LT)
Lc = 358.49'
Ts = 382.94'
Es = 28.39'

Ramp B
P.I. Sta = 9+79.62
Δ = 5° 11' 09" (LT)
Dc = 7° 30' 00"
R = 763.94'
Δc = 6° 58' 20" (LT)
Lc = 92.96'
Es = 49.15'

Ramp B
P.I. Sta = 2+52.20
Δ = 46° 30' 57" (RT)
Dc = 20° 00' 00"
R = 286.48'
Δc = 21° 30' 57" (RT)
Lc = 107.58'
Es = 27.92'

Ramp B
P. I. Sta. = 13+19.97
Δ = 7° 24' 41" (LT)
Dc = 01° 30' 00"
R = 3,819.72'
T = 247.39'
L = 494.10'
E = 8.00'
D = 9° 00' 00" (RT)
Ls = 200.00'
Theta = 06° 00' 00"
LT = 122.45'
ST = 77.96'

I.R. 71
P.I. Sta. = 87+38.41
Δ = 13° 36' 15" (LT)
Dc = 00° 28' 00"
R = 12,277.67
T = 1,464.48
L = 2,915.18
E = 87.03'
Max. Super Rate = 0.018




IR 71
ADT (2000) = 54,430
ADT (2020) = 74,300
K = 0.10
D = 0.56
T24 = 0.16
TD = 0.08

Ramp C
P.I. Sta = 13+07.95
Δ = 12° 41' 06" (RT)
Dc = 7° 30' 00"
R = 763.94'
Δc = 7° 03' 49" (RT)
Lc = 94.18'
Es = 200.88'

Ramp C
P.I. Sta = 18+40.74
Δ = 47° 29' 36" (LT)
Dc = 24° 00' 00"
R = 238.73'
Δc = 17° 29' 36" (LT)
Lc = 72.89'
Es = 25.19'

"a" CS Sta. 11+53.36
"b" SC Sta. 13+53.36
"c" CS Sta. 14+47.55
"d" ST Sta. 15+97.55
"e" TS Sta. 16+62.18
"f" SC Sta. 18+12.18
"g" CS Sta. 18+85.06
"h" TS Sta. 19+85.06

DESIGN DESIGNATION
MEDINA ROAD (S.R. 18)
CURRENT A.D.T. (2000) = 12,250
DESIGN YEAR A.D.T. (2020) = 35,850
D.H.V. (2020) = 3,585

Ramp D
P.I. Sta = 10+72.01
Δ = 11° 11' 37" (RT)
Dc = 1° 36' 35"
R = 3,559.36'
Ls = 250.00'
Theta = 2° 00' 44"
LT = 166.68'
ST = 83.34'
x = 249.97'
y = 2.93'
k = 124.99'
p = 0.73'
Δc = 7° 10' 09" (RT)
Lc = 445.37'
Ts = 473.86'
Es = 17.78'

ENGINEERS SEAL: FOR I.R. 271 CONNECTION 'W' DRAINAGE, NOISE BARRIERS
STATE OF OHIO DEAN A PALMER E-37475 REGISTERED PROFESSIONAL ENGINEER
SIGNED: Dean A Palmer
DATE: 12/14/99

ENGINEERS SEAL:
STATE OF OHIO DAVID F. TRAINI E-49751 REGISTERED PROFESSIONAL ENGINEER
SIGNED: David F Traini
DATE: 12-16-99

DATE : 15-DEC-1999
TIME : 08:59
DESIGN FILE : i:\pd_med_ir71\dgn\schematics\gb1.dgn
USERNAME : jrogers

HORIZONTAL SCALE IN FEET
0 100 200 400
CALCULATED June
CHECKED DJV

SCHEMATIC PLAN
Sta. 826+00 to Sta. 930+00

MED - 71 - 15.78

2
940

Str. No. MED - 71 - 1828

IR 71
ADT (2000) = 54,430
ADT (2020) = 74,300
K = 0.10
D = 056
T24 = 0.16
TD = 0.08

Connector W
P.I. Sta = 955+61.72
Δ = 6° 11' 21" (LT)
Dc = 0° 22' 08"
R = 15,536.07'
T = 839.92'
L = 1,678.20'
E = 22.69'

Connector W
P.I. Sta = 968+15.48
Δ = 4° 54' 48" (LT)
Dc = 0° 50' 33"
R = 6,800.00'
T = 291.74'
L = 583.12'
E = 6.26'

IR 71
P.I. Sta = 984+41.65
Δ = 26° 45' 35" (LT)
Dc = 0° 22' 00"
R = 15,626.07'
T = 3,716.85'
L = 7,298.08'
E = 435.97'

CH 21
P.I. Sta = 46+38.02
Δ = 2° 49' 12" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 70.51'
L = 141.00'
E = 0.87'

Nichols Rd.
P.I. Sta = 2+08.27
Δ = 9° 09' 32" (LT)
Dc = 8° 00' 00"
R = 716.20'
T = 57.37'
L = 114.49'
E = 2.29'

℄ PROP. CONNECTION 'W' I.R. 271
P.I. Sta = 974+61.07
Δ = 25° 03' 12" (LT)
Dc = 5° 30' 00"
R = 1,041.74'
Ls = 200.00'
Theta = 5° 30' 00"
LT = 133.40'
ST = 66.73'
x = 199.82'
y = 6.40'
k = 99.97'
p = 1.60'
Δc = 14° 03' 12" (LT)
Lc = 255.51'
Ts = 331.78'
Es = 27.04'

Begin Work
Sta. 44+53

POT Sta. 40+00.03
N 89° 56' 37" E 445.00'
PC Sta. 45+67.51
PC Sta. 1+50.90
PT Sta. 2+65.39
POT Sta. 4+99.19
POT Sta. 0+02.71
Nichols Rd.
N 11° 20' 05" W
5+00
N 2° 10' 33" W
PT Sta. 47+08.51

Match Line
Centerline IR 71 & Survey
Sta. 937+55.07 Begin Taper
Sta. 945+95.07 End Taper
PC Sta. 947+24.80
Sta. 930+00
Centerline Bearing N 17° 16' 41" E
935+00 940+00 945+00 950+00 955+00 960+00 965+00 970+00 975+00 980+00
42" 30" 24" 24" 24"
"a" "b" "c" "d" "e" "f" "g"
Match Line
Sta. 982+00

Sta. 964+78.75, ℄ IR 71 =
Sta. 49+41.23, ℄ Granger Rd.
EX. COAX LINE (AT&T)
Sta. 0+00.00
POT
Windfall Rd.
S 0° 06' 19" E
PC Sta. 54+77.16
PT Sta. 56+11.26
CH 21 Granger Road
MEDINA TWP.
GRANGER TWP.
POT Sta. 969+33.40
PC Sta. 970+35.01
PT Sta. 979+68.80
N 13° 50' 55" E
TS Sta. 980+62.95
OVERHEAD ELECTRIC DISTRIBUTION LINES (OHIO EDISON)

Granger Road
P.I. Sta = 55+44.52
Δ = 2° 40' 12" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 66.76'
L = 133.50'
E = 0.78'

End Work
Sta. 54+00

E.B. 271
P.I. Sta = 975+02.16
Δ = 4° 40' 08" (RT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 467.15'
L = 933.79'
E = 9.52'

"a" POT Sta. 970+27.07 ℄ I.R. 71 = ℄ SB IR 271 Sta. 970+27.07
"b" TS Sta. 971+29.29
"c" SC Sta. 973+29.29
"d" CS Sta. 975+84.80
"e" ST Sta. 977+84.80
"f" TS Sta. 977+97.74
"g" SC Sta. 979+97.74

Connector W
P.I. Sta = 988+87.94
Δ = 107° 24' 37" (RT)
Dc = 8° 00' 00"
R = 716.20'
Ls = 300.00'
Theta = 12° 00' 00"
LT = 200.46'
ST = 100.42'
x = 298.69'
y = 20.88'
k = 149.78'
p = 5.23'
Δc = 83° 24' 37" (RT)
Lc = 1,042.63'
Ts = 1,132.07'
Es = 502.55'

℄ PROP. CONNECTION 'W' I.R. 271
P.I. Sta = 989+07.34
Δ = 107° 24' 36" (RT)
Dc = 7° 45' 00"
R = 739.30'
Δc = 91° 54' 37" (RT)
Lc = 1,185.94'
Es = 513.42'

Eastbound IR 271
P.I. Sta = 987+77.90
Δ = 76° 09' 04" (RT)
Dc = 8° 00' 00"
R = 716.20'
Ls = 300.00'
Theta = 12° 00' 00"
LT = 200.46'
ST = 100.42'
x = 298.69'
y = 20.88'
k = 149.78'
p = 5.23'
Δc = 52° 09' 05" (RT)
Lc = 651.89'
Ts = 714.96'
Es = 200.25'

Sta. 988+95.46 B Connection W
Sta. 987+47.47 IR 71

DESIGN DESIGNATION
GRANGER ROAD (C.H. 21)
CURRENT A.D.T. (2000) = 3,330
DESIGN YEAR A.D.T. (2020) = 4,680
D.H.V. (2020) = 610
D (DIRECTIONAL DISTRIB.) = 55%
T (PERCENT (B & C TRUCKS) = 13%
V (LEGAL SPEED) = 55 M.P.H.
FUNCTIONAL CLASSIFICATION = RURAL LOCAL

IR 71
ADT (2000) = 34,010
ADT (2020) = 46,690
K = 0.10
D = 056
T24 = 0.12
TD = 0.06

Wilbur Road
POT Sta. 43+00.00
CH 66
N 89° 22' 45" E 445.00'
PT Sta. 1020+22.88
EX. COAX LINE (AT&T)
AT&T Cable
Centerline IR 71 & Survey
Match Line
985+00 990+00 995+00 1000+00 1005+00 1010+00 1015+00 1020+00 1025+00 1030+00
42" 36" 36" 42"
Centerline Bearing N 9° 28' 54" W
Sta. 982+00
Sta. 1034+00
EX. FIBER OPTIC LINE (AT&T)
EX. 6" GAS LINE IN 10" CASING (COLUMBIA GAS)
EX. 345 kv TRANSMISSION LINE (OHIO EDISON)
Sta. 1013+06.01, ℄ IR 71 =
Sta. 49+83.28, ℄ Wilbur Rd.
MEDINA TWP.
GRANGER TWP.
POT Sta. 55+00.00
SC Sta. 983+62.95
985+00
990+00
CS Sta. 990+14.84
ST Sta. 993+14.84
IR 271
Begin Work
Sta. 998+98.25

℄ PROP. CONNECTION 'W' I.R. 271
P.I. Sta = 995+12.33
Δ = 1° 12' 02" (RT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 128.65'
L = 257.28'
E = 0.67'

℄ PROP. CONNECTION 'W' I.R. 271
P.I. Sta = 997+69.61
Δ = 1° 12' 02" (LT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 128.65'
L = 257.28'
E = 0.67'

DESIGN DESIGNATION
WILBUR ROAD (C.H. 66)
CURRENT A.D.T. (2000) = 840
DESIGN YEAR A.D.T. (2020) = 1,170
D.H.V. (2020) = 117
D (DIRECTIONAL DISTRIB.) = 55%
T (PERCENT (B & C TRUCKS) = 13%
V (LEGAL SPEED) = 55 M.P.H.
FUNCTIONAL CLASSIFICATION = RURAL LOCAL

There are no existing landscaped areas within the work limits on this sheet.

Str. No. MED - 71 - 1870 L&R

Str. No. MED - 71 - 1918 L&R

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED JRR
CHECKED RLS

# SCHEMATIC PLAN
## Sta. 930+00 To Sta. 1034+00

MED - 71 - 15.78

3
940

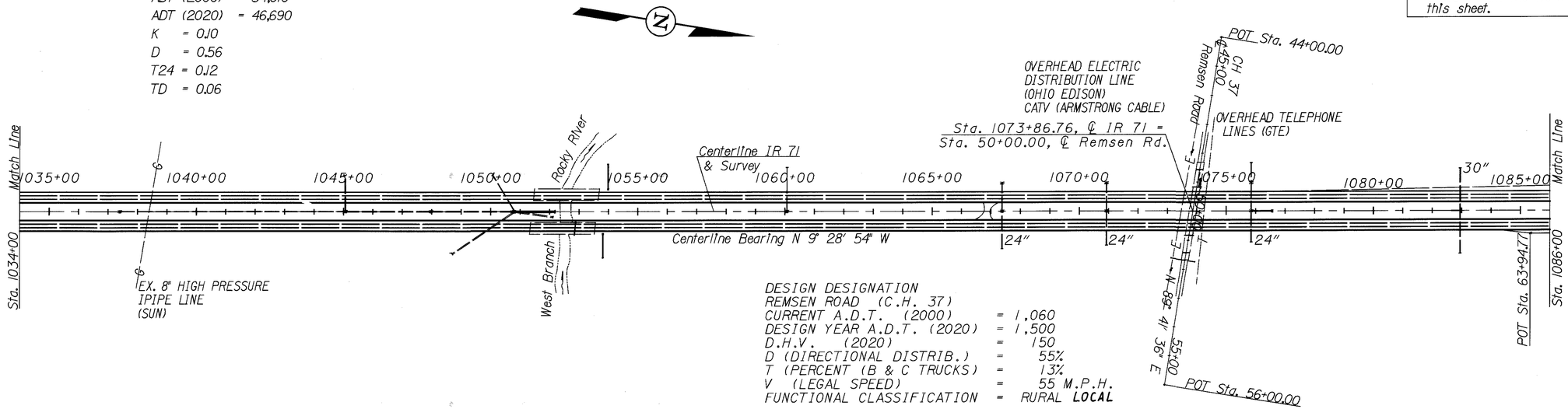
DESIGN FILE : i:\pd_med_ir71\dgn\schematics\gb2.dgn
USERNAME : jrogers
DATE : 07-DEC-1999
TIME : 14:08

Str. No. MED - 71 - 1992 L&R

Str. No. MED - 71 - 2034

There are no existing landscaped areas within the work limits on this sheet.

IR 71
ADT (2000) = 34,010
ADT (2020) = 46,690
K = 0.10
D = 0.56
T24 = 0.12
TD = 0.06




DESIGN DESIGNATION
REMSEN ROAD (C.H. 37)
CURRENT A.D.T. (2000) = 1,060
DESIGN YEAR A.D.T. (2020) = 1,500
D.H.V. (2020) = 150
D (DIRECTIONAL DISTRIB.) = 55%
T (PERCENT (B & C TRUCKS) = 13%
V (LEGAL SPEED) = 55 M.P.H.
FUNCTIONAL CLASSIFICATION = RURAL LOCAL

IR 71
ADT (2000) = 34,010
ADT (2020) = 46,690
K = 0.10
D = 0.56
T24 = 0.12
TD = 0.06

Ramp D
P.I. Sta = 76+08.62
Δ = 25° 00' 18" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
Δc = 22° 00' 18" (LT)
Lc = 733.50'
Es = 46.84'

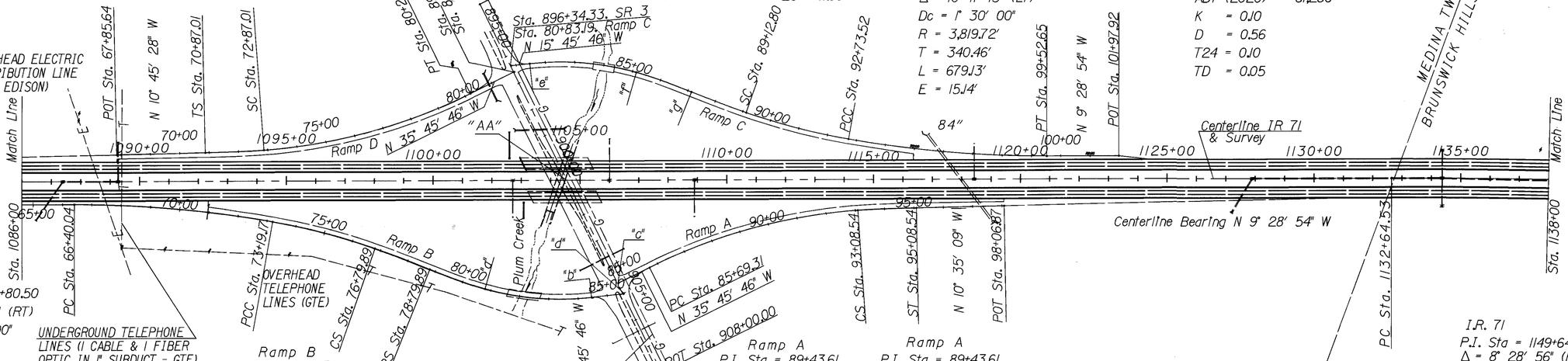
Ramp C
P.I. Sta = 83+88.05
Δ = 27° 59' 10" (RT)
Dc = 6° 00' 00"
R = 954.93'
Δc = 21° 59' 10" (RT)
Lc = 366.44'
Es = 30.11'

Ramp C
P.I. Sta = 90+40.36
Δ = 11° 31' 05" (LT)
Dc = 2° 30' 00"
R = 2,291.83'
Δc = 9° 01' 05" (LT)
Lc = 360.72'
Es = 11.99'

Ramp C
P.I. Sta = 96+13.98
Δ = 10° 11' 13" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 340.46'
L = 679.13'
E = 15.14'

IR 71
ADT (2000) = 44,560
ADT (2020) = 61,280
K = 0.10
D = 0.56
T24 = 0.10
TD = 0.05

"AA" Sta. 1104+55.56, ℄ IR 71 =
Sta. 900+70.63, ℄ SR 3




UNDERGROUND TELEPHONE
LINES (1 CABLE & 1 FIBER
OPTIC IN 1" SUBDUCT - GTE)

Ramp B
P.I. Sta = 69+80.50
Δ = 10° 11' 13" (RT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 340.46'
L = 679.13'
E = 15.14'

Ramp B
P.I. Sta = 75+53.95
Δ = 11° 31' 05" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
Δc = 9° 01' 05" (RT)
Lc = 360.72'
Es = 11.99'

Ramp B
P.I. Sta = 82+14.54
Δ = 27° 59' 10" (LT)
Dc = 6° 00' 00"
R = 954.93'
Δc = 21° 59' 10" (LT)
Lc = 366.44'
Es = 30.11'

EX. GAS LINE
IN 4" CASING
(COLUMBIA GAS)

Ramp A
P.I. Sta = 89+43.61
Δ = 25° 10' 37" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 739.23'
L = 739.23'
E = 47.49'

Ramp A
P.I. Sta = 89+43.61
Δ = 25° 10' 37" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 739.23'
L = 739.23'
E = 47.49'

I.R. 71
P.I. Sta = 1149+64.08
Δ = 8° 28' 56" (RT)
Dc = 0° 15' 00"
R = 22,918.23'
T = 1,699.54'
L = 3,392.88'
E = 62.93'

"d" SC Sta. 80+79.89
"b" PT Sta. 84+46.33
"c" POT Sta. 84+50.93
"d" POT Sta. 85+56.33
"e" PC Sta. 81+46.36
"f" CS Sta. 85+12.80
"g" SRS Sta. 87+12.80

DESIGN DESIGNATION
WEYMOUTH ROAD (S.R. 3)
CURRENT A.D.T. (2000) = 17,560
DESIGN YEAR A.D.T. (2020) = 26,740
D.H.V. (2020) = 2,674
D (DIRECTIONAL DISTRIB.) = 55%
T (PERCENT (B & C TRUCKS) = 13%
V (LEGAL SPEED) = 55 M.P.H.
FUNCTIONAL CLASSIFICATION = RURAL ARTERIAL

Str. No. MED - 71 - 2088E

Str. No. MED - 71 - 2090 L&R

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USERNAME : jrogers

HORIZONTAL SCALE IN FEET
0 100 200 400

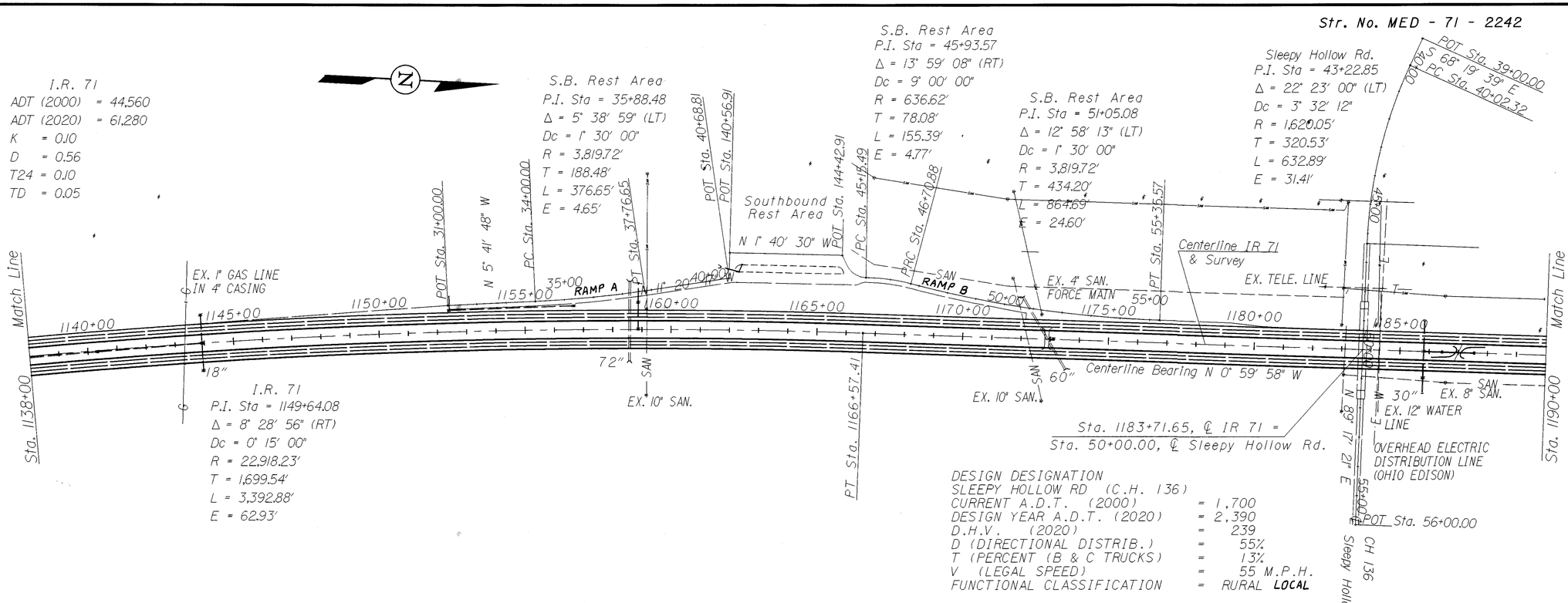
CALCULATED jrr
CHECKED RLS

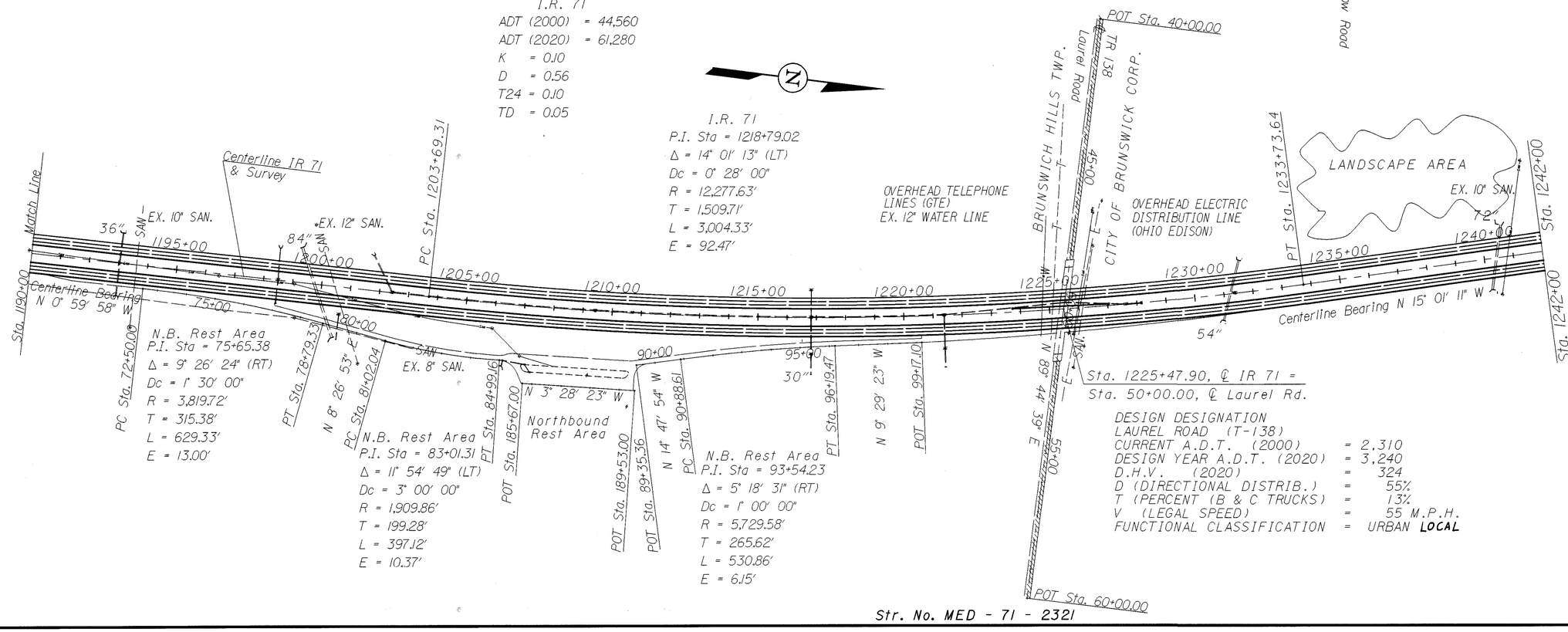
# SCHEMATIC PLAN
## Sta. 1034+00 to Sta. 1138+00

MED - 71 - 15.78

4
940

Str. No. MED - 71 - 2242




Str. No. MED - 71 - 2321

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED JRR
CHECKED RJS

# SCHEMATIC PLAN
## Sta. 1138+00 to Sta. 1242+00

MED - 71 - 15.78

5
940

DESIGN FILE : i:\pd_med_ir71\dgn\schematics\gb4.dgn
USERNAME : jrogers
DATE : 07-DEC-1999
TIME : 14:08

# Str. No. MED - 71 - 2402 L&R

"a" PC Sta. 44+17.52
"b" PT Sta. 47+56.68
"c" TS Sta. 45+20.26
"d" SC Sta. 47.20.26
"e" CS Sta. 48+96.07
"f" ST Sta. 50+96.07

IR 71
ADT (2000) = 44,560
ΔDT (2020) = 61,280
K = 0.10
D = 0.56
T24 = 0.10
TD = 0.05

Ramp "A"
P.I. Sta = 45+87.41
Δ = 8° 28' 44" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
T = 169.89'
L = 339.16'
E = 6.29'

Ramp "A"
P.I. Sta = 48+31.13
Δ = 61° 31' 16" (LT)
Dc = 16° 22' 13"
R = 350.00'
Ls = 200.00'
Theta = 16° 22' 13"
LT = 133.91'
ST = 67.19'

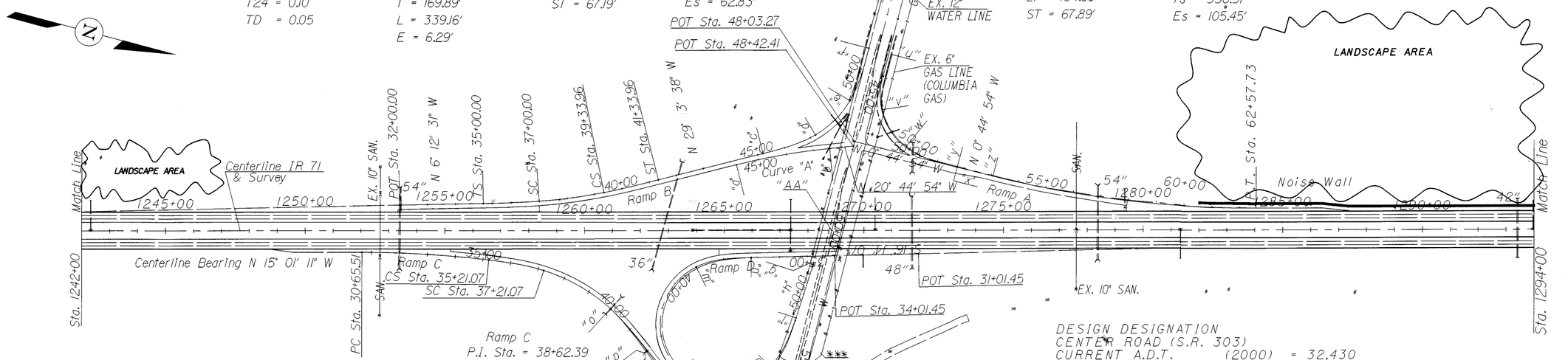
x = 198.37'
y = 18.94'
k = 99.73'
p = 4.75'
Δc = 28° 46' 50" (LT)
Lc = 175.81'
Ts = 310.87'
Es = 62.83'

Ramp "B"
P.I. Sta = 49+49.13
Δ = 90° 00' 00" (LT)
Dc = 24° 54' 40"
R = 230.00'
Ls = 200.00'
Theta = 24° 54' 40"
LT = 134.68'
ST = 67.89'

x = 196.25'
y = 28.60'
k = 99.37'
p = 7.20'
Δc = 40° 10' 40" (LT)
Lc = 161.28'
Ts = 336.57'
Es = 105.45'

Ramp "B"
P.I. Sta = 57+84.65
Δ = 14° 16' 00" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 478.03'
L = 951.11'
E = 29.80'

"u" TS Sta. 46+12.56
"v" SC Sta. 48+12.56
"w" CS Sta. 49+73.84
"x" POT Sta. 51+73.84
"y" ST Sta. 51+73.84
"z" PC Sta. 53+06.62




"g" POT Sta. 51+09.93
"h" N 87° 21' 10" W
"i" ST Sta. 49+09.46
"j" CS Sta.47+09.46
"k" PT Sta.44+67.82
"l" ST Sta. 43+99.21
"m" SC Sta. 39+01.45
"n" TS Sta. 37+01.45
"o" CS Sta. 39+99.21
"p" ST Sta. 41+97.21
"q" N 38° 55' 26" E
"r" TS Sta. 41+99.18
"s" ST Sta. 43+99.18
"t" PC Sta. 43+99.18
"u" TS Sta. 46+12.56
"v" SC Sta. 48+12.56
"w" CS Sta. 49+73.84
"x" POT Sta. 51+73.84
"y" ST Sta. 51+73.84
"z" PC Sta. 53+06.62

IR 71
ADT (2000) = 44,560
ΔDT (2020) = 61,280
K = 0.10
D = 0.56
T24 = 0.10
TD = 0.05

Ramp "A"
P.I. Sta = 45+87.41
Δ = 8° 28' 44" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
T = 169.89'
L = 339.16'
E = 6.29'

Ramp C
P.I. Sta. = 38+62.39
Δ = 34° 01' 48" (RT)
Dc = 9° 00'
R = 636.62'
Ls = 200.00'
Theta = 9° 00'
LT = 133.51'
ST = 66.82'
x = 199.51'
y = 10.45'
k = 99.92'
p = 2.62'
Δc = 25° 01' 48" (RT)
Lc = 278.11'
Ec = 15.49'
Tc = 141.31'

Ramp CD
P.I. Sta = 44+33.72
Δ = 15° 38' 15" (LT)
Dc = 22° 46' 54"
R = 251.50'
T = 34.54'
L = 68.64'
E = 2.36'

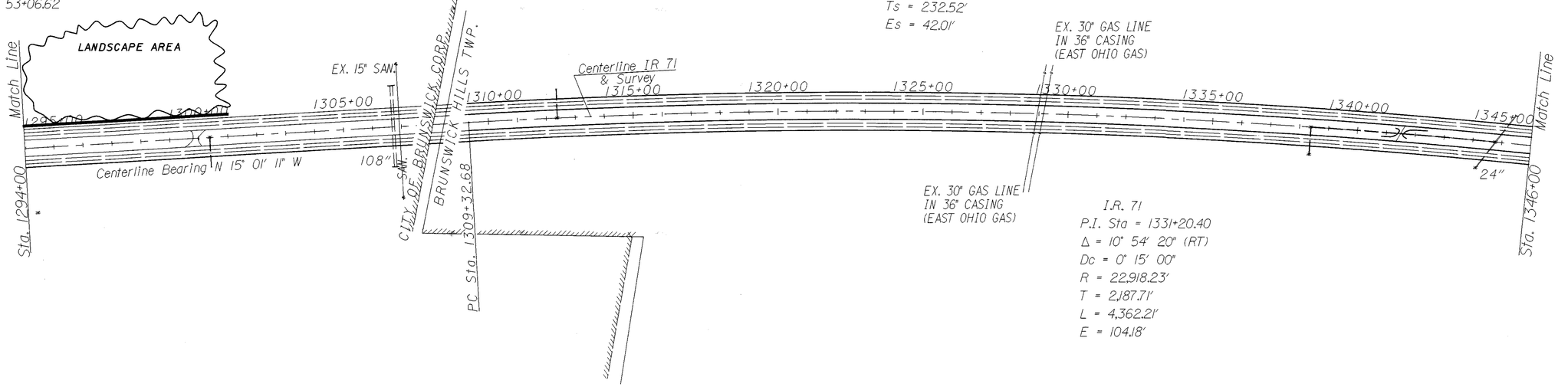
Ramp D
P.I. Sta = 39+33.97
Δ = 251° 06' 21" (LT)
Dc = 24° 54' 40"
R = 230.00'
Ls = 200.00'
Theta = 24° 54' 40"
LT = 134.68'
ST = 67.89'
x = 196.25'
y = 28.60'
k = 99.37'
p = 7.20'
Δc = 201° 17' 01" (LT)
Lc = 808.01'
Ts = 232.52'
Es = 42.01'

DESIGN DESIGNATION
CENTER ROAD (S.R. 303)
CURRENT A.D.T. (2000) = 32,430
DESIGN YEAR A.D.T. (2020) = 38,430
D.H.V. (2020) = 3,840

* OVERHEAD TELEPHONE LINES (GTE)
** OVERHEAD ELECTRIC DISTRIBUTION LINE (OHIO EDISON)
*** UNDERGROUND ELECTRIC FOR LIGHTING (OHIO EDISON)

"AA" Sta. 1268+85.23, ℄ IR 71 = Sta. 50+00.00, ℄ SR 303

POT Sta. 47+56.54 (Proposed)
POT Sta. 60+00.00
SR 303
N 38° 55' 26" E
108.68'




HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED Jmr
CHECKED R.L.S

SCHEMATIC PLAN
Sta. 1242+00 to Sta. 1346+00

MED - 71 - 15.78

6
940

DESIGN FILE : i:\pd_med_ir71\dgn\schematics\gb5.dgn
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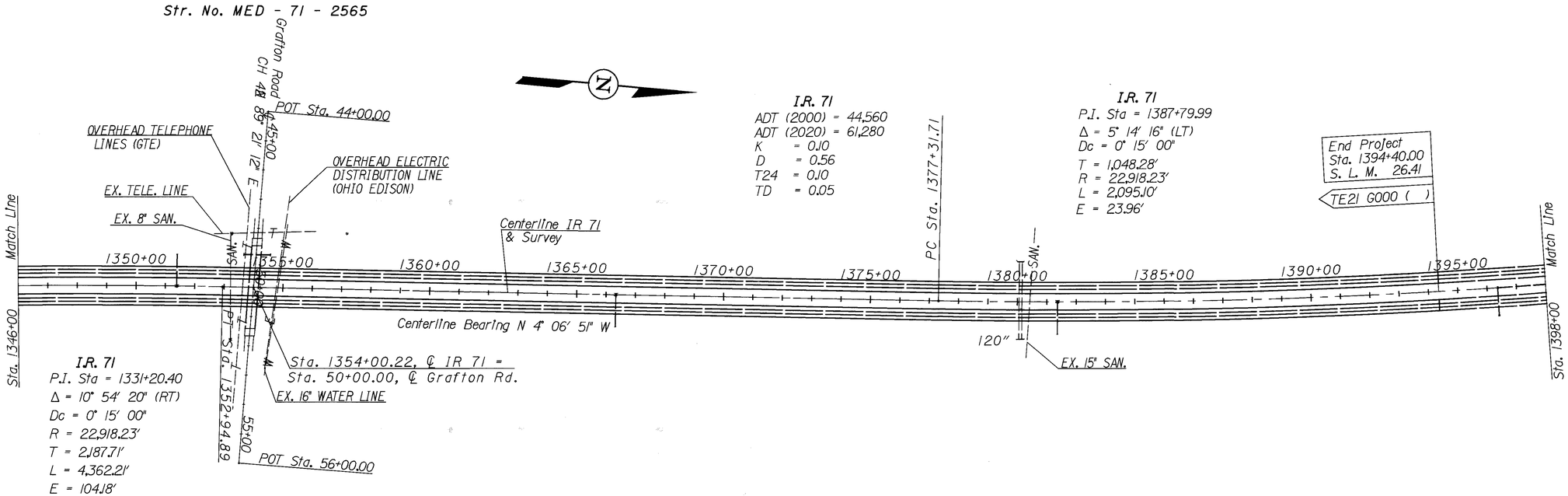
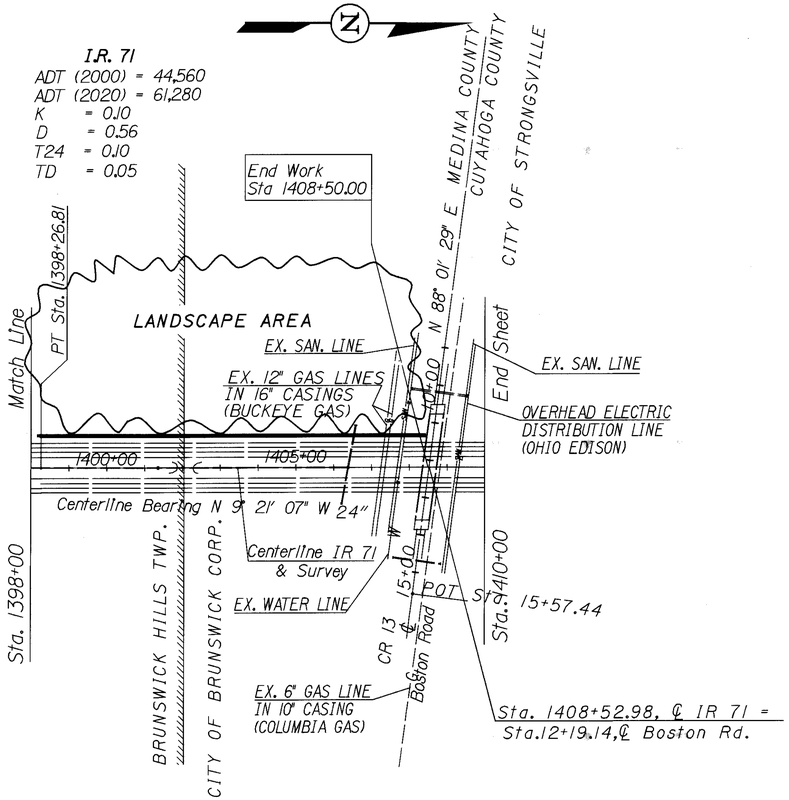
Str. No. MED - 71 - 2565

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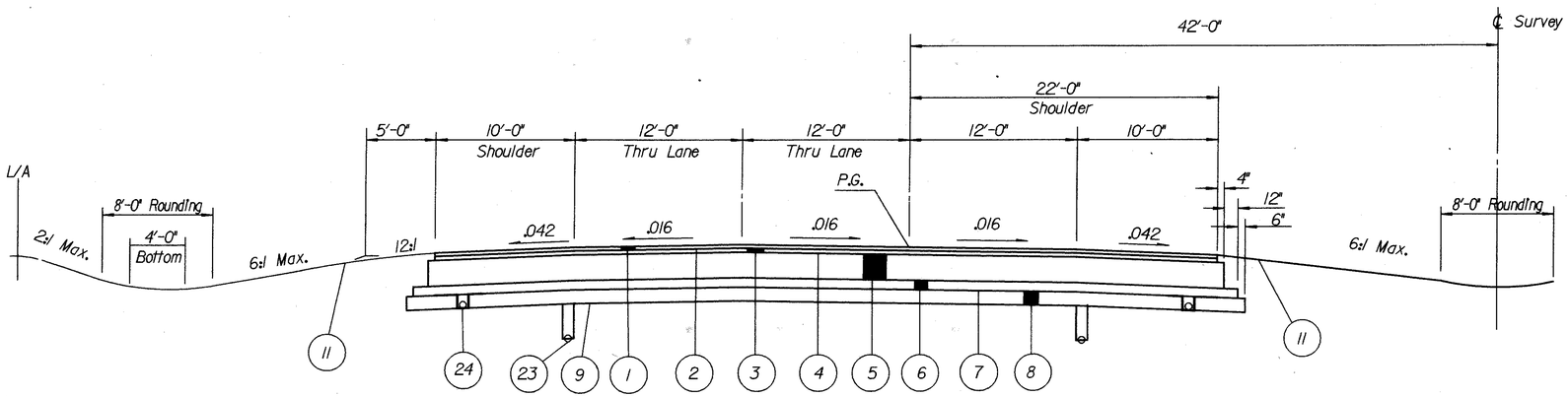
HORIZONTAL SCALE IN FEET
0 100 200 400
CALCULATED J.L.R.
CHECKED R.L.S

SCHEMATIC PLAN
Sta. 1346+00 to Sta. 1410+00

MED - 71 - 15.78

7
940

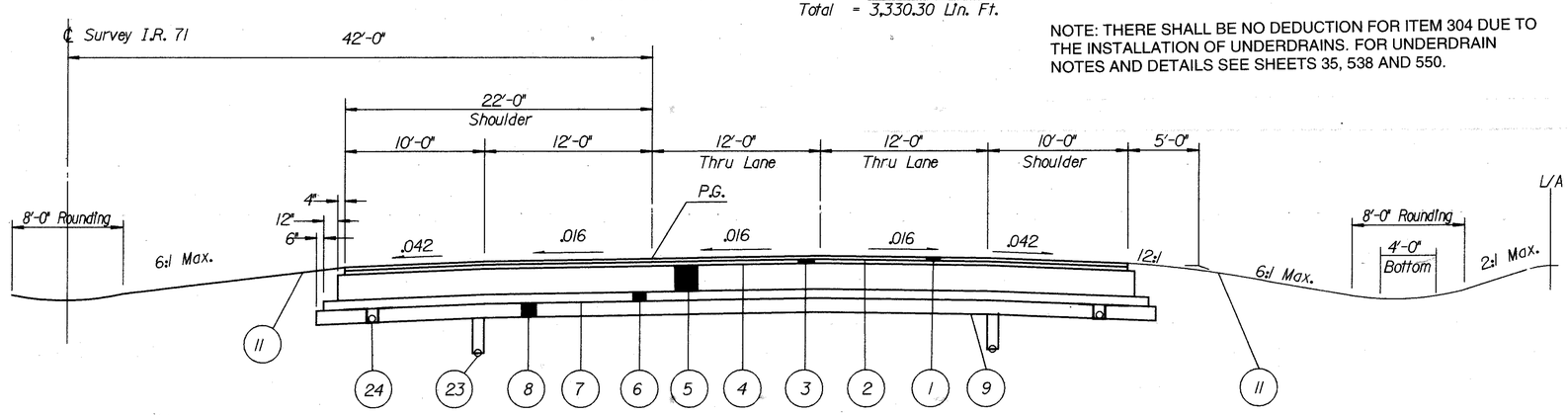



## NORMAL SECTION SOUTHBOUND LANES

**Applies @:**

Sta. 833+00.00 to Sta. 856+00.00 = 2,300.00 Lin. Ft.
Sta. 893+75.00 to Sta. 904+05.30 = 1,030.30 Lin. Ft.
Total = 3,330.30 Lin. Ft.

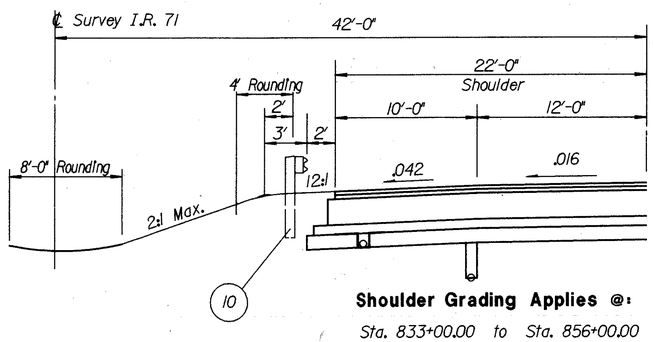
NOTE: THERE SHALL BE NO DEDUCTION FOR ITEM 304 DUE TO THE INSTALLATION OF UNDERDRAINS. FOR UNDERDRAIN NOTES AND DETAILS SEE SHEETS 35, 538 AND 550.




## NORMAL SECTION NORTHBOUND LANES

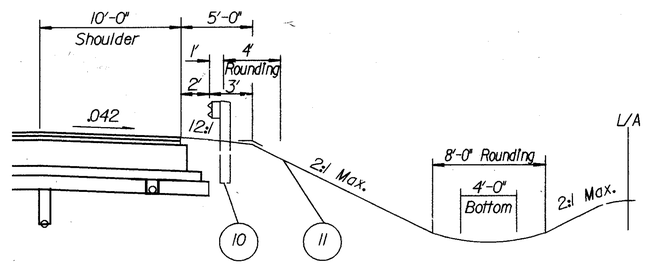
**Applies @:**

Sta. 833+00.00 to Sta. 856+00.00 = 2,300.00 Lin. Ft.
Sta. 893+75.00 to Sta. 938+45.25 = 4,470.25 Lin. Ft.
Total = 6,770.25 Lin. Ft.




**Shoulder Grading Applies @:**

Sta. 833+00.00 to Sta. 856+00.00 NB




**Shoulder Grading Applies @:**

See Plan And Profile Sheets for Guardrail locations

**NOTE: MAINLINE I-71 PAVEMENT WARRANTY**
THE MAINLINE PAVEMENT BUILDUP ON I-71 SHOWN AS REFERENCES 1-5 AND 25 ARE FOR INFORMATION ONLY. THESE ITEMS ARE TO BE ITEM 880 ASPHALT CONCRETE (7 YEAR WARRANTY).

## PROPOSED LEGEND

| | | |
|---|---|---|
| 1 | 1 ½" | Item 858 Asphalt Concrete Surface Course, 12.5mm, Type A (446) |
| 2 | | Item 407 Tack Coat for Intermediate Course (See the General Notes) |
| 3 | 1 ¾" | Item 858 Asphalt Concrete Intermediate Course, 19mm, Type A (446) |
| 4 | | Item 407 Tack Coat (See the General Notes) |
| 5 | 11" | Item 302 Bituminous Aggregate Base, PG64-22 |
| 6 | 4" | Item 855 Asphalt Treated Free Draining Base |
| 7 | | Item 408 Bituminous Prime Coat - Applied at the rate of 0.4 Gals./SY. |
| 8 | 6" | Item 304 Aggregate Base |
| 9 | | Item 203 Subgrade Compaction |
| 10 | | Guardrail, Type 5 |
| 11 | | Item 870, Seeding And Mulching |
| 12 | | Item 615 Temporary Pavement, As Per Plan (See Sheet 40.) |
| 13 | | Item 830 Curb, Type 6, As Per Plan (See Sheet 506.) |
| 14 | | Item 254 Pavement Planing, Bituminous |
| 15 | Varies | Item 302 Bituminous Aggregate Base, PG64-22 Varies from 11" to 9" |
| 16 | 9¼" | Item 304 Aggregate Base |
| 17 | | Item 611 Reinforced Concrete Approach Slab (T=15") |
| 18 | | Item 830 Concrete Median |
| 19 | 11" | Item 452 Plain Concrete Pavement |
| 20 | Varies | Item 452 Plain Concrete Pavement Varies from 9" to 11" |
| 21 | | Item 611 Reinforced Concrete Approach Slab (T=12") |
| 22 | 12¼" | Item 304 Aggregate Base |
| 23 | | Item 605 4" Shallow Pipe Underdrain |
| 24 | | Item 605 4" Shallow Pipe Underdrain with Fabric Wrap, 712.09 Type A |
| 25 | 9" | Item 302 Bituminous Aggregate Base, PG64-22 |

PROPOSED TYPICAL SECTIONS

MED-71-15.78



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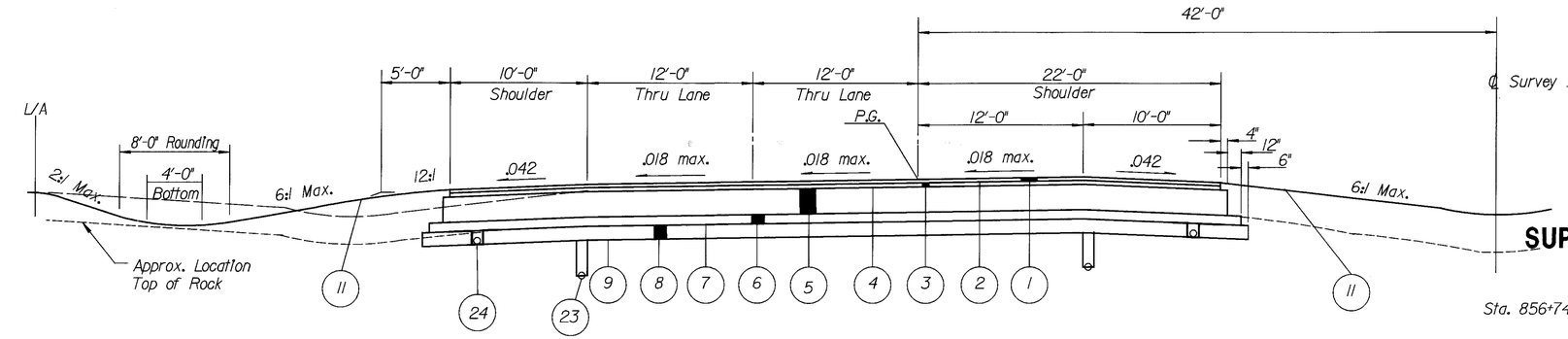
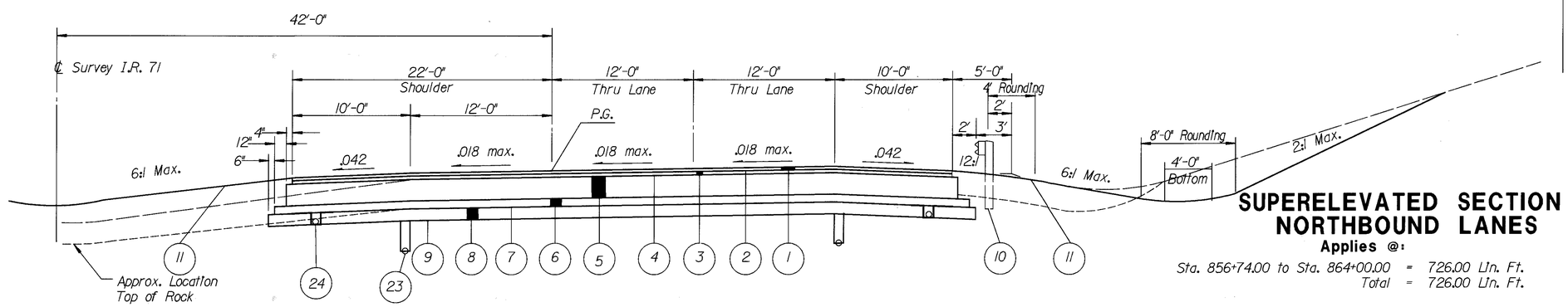



## SUPERELEVATED SECTION SOUTHBOUND LANES

**Applies @:**

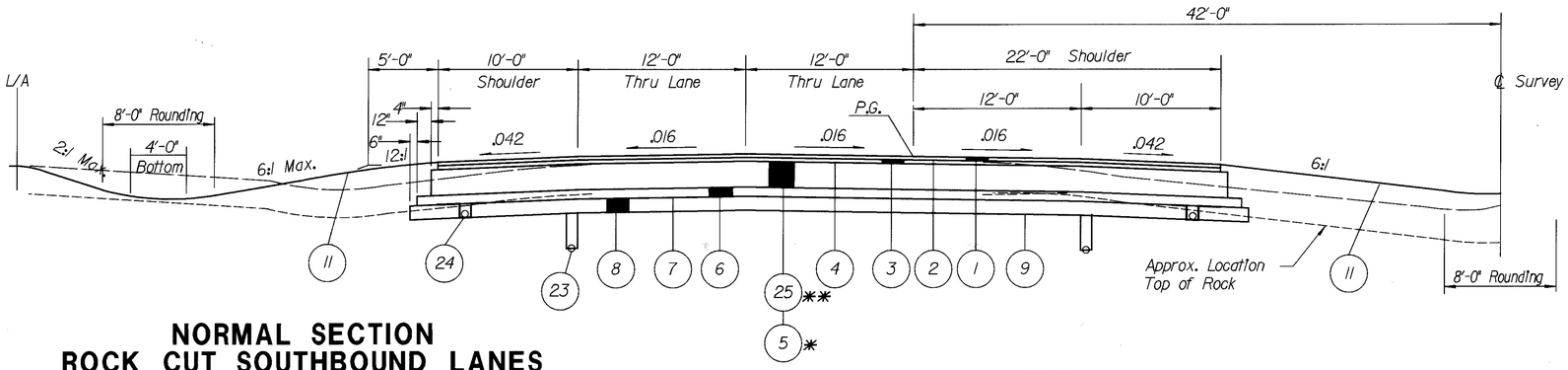
Sta. 856+74.00 to Sta. 864+00.00 = 726.00 Lin. Ft.
Total = 726.00 Lin. Ft.




## SUPERELEVATED SECTION NORTHBOUND LANES

**Applies @:**

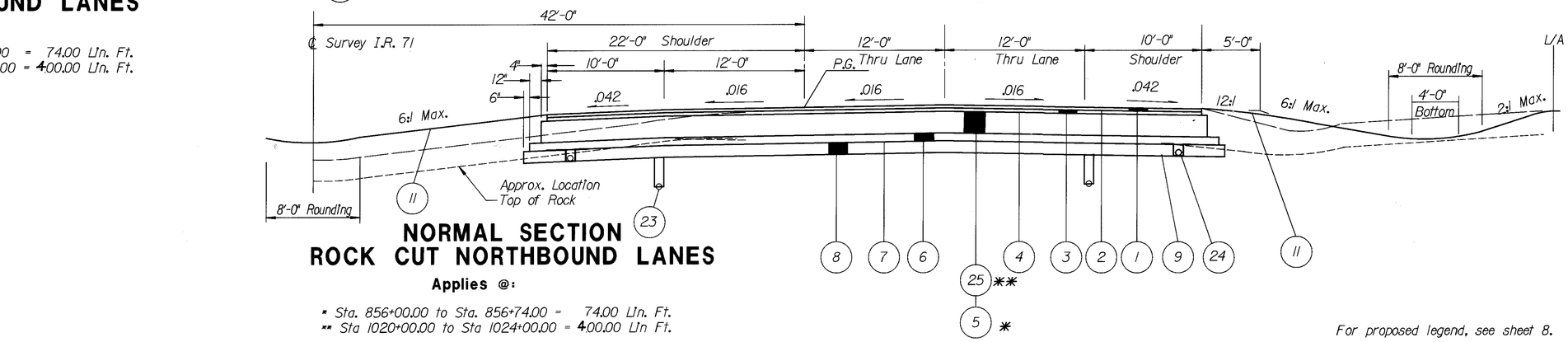
Sta. 856+74.00 to Sta. 864+00.00 = 726.00 Lin. Ft.
Total = 726.00 Lin. Ft.




## NORMAL SECTION ROCK CUT SOUTHBOUND LANES

**Applies @:**

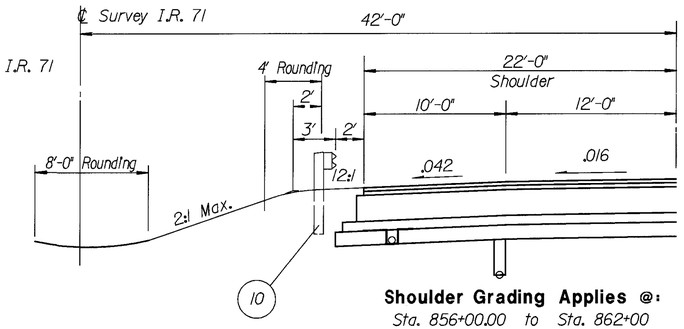
* Sta. 856+00.00 to Sta. 856+74.00 = 74.00 Lin. Ft.
** Sta. 1020+00.00 to Sta. 1024+00.00 = 400.00 Lin. Ft.




## NORMAL SECTION ROCK CUT NORTHBOUND LANES

**Applies @:**

* Sta. 856+00.00 to Sta. 856+74.00 = 74.00 Lin. Ft.
** Sta 1020+00.00 to Sta 1024+00.00 = 400.00 Lin Ft.




**Shoulder Grading Applies @:**

Sta. 856+00.00 to Sta. 862+00

For proposed legend, see sheet 8.

PROPOSED TYPICAL SECTIONS

MED-71-15.78



DESIGN FILE : I:\pd_MED_IR71\DGN\Typicals\proposed\gy02.dgn
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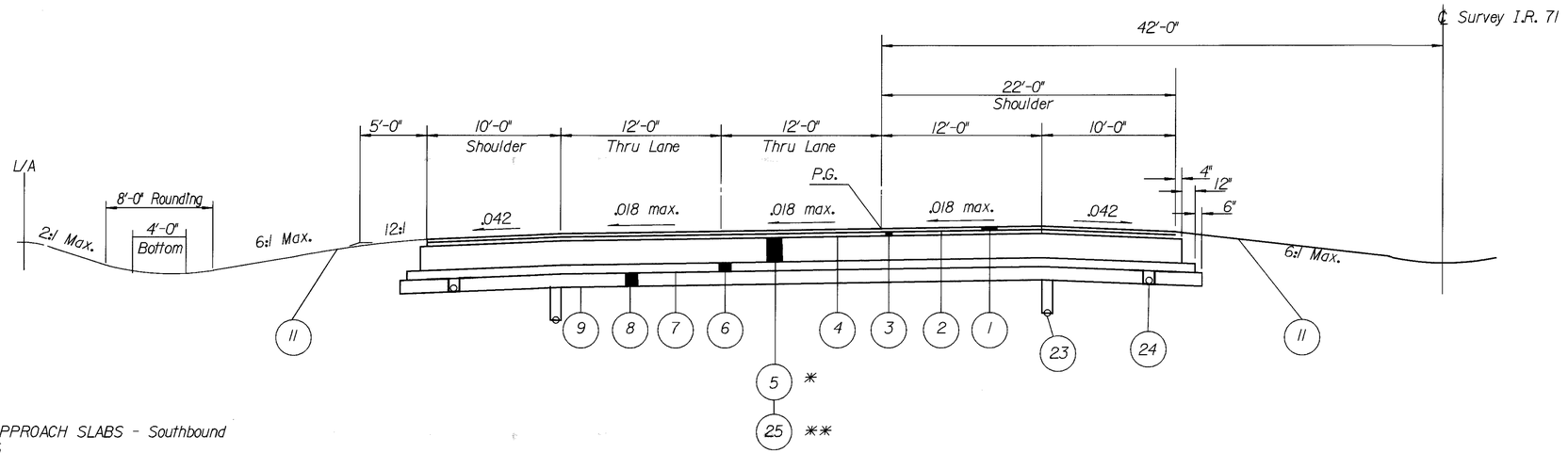
DATE : 29-NOV-1999
TIME : 10:41

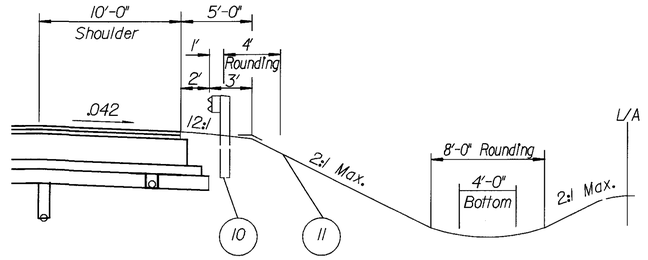



STRUCTURE & APPROACH SLABS - Southbound
MED - 71 - 1685
Sta. 888+95.43 to Sta. 891+22.11 = 226.66 Lin. Ft.

## SUPERELEVATED SECTION SOUTHBOUND LANES

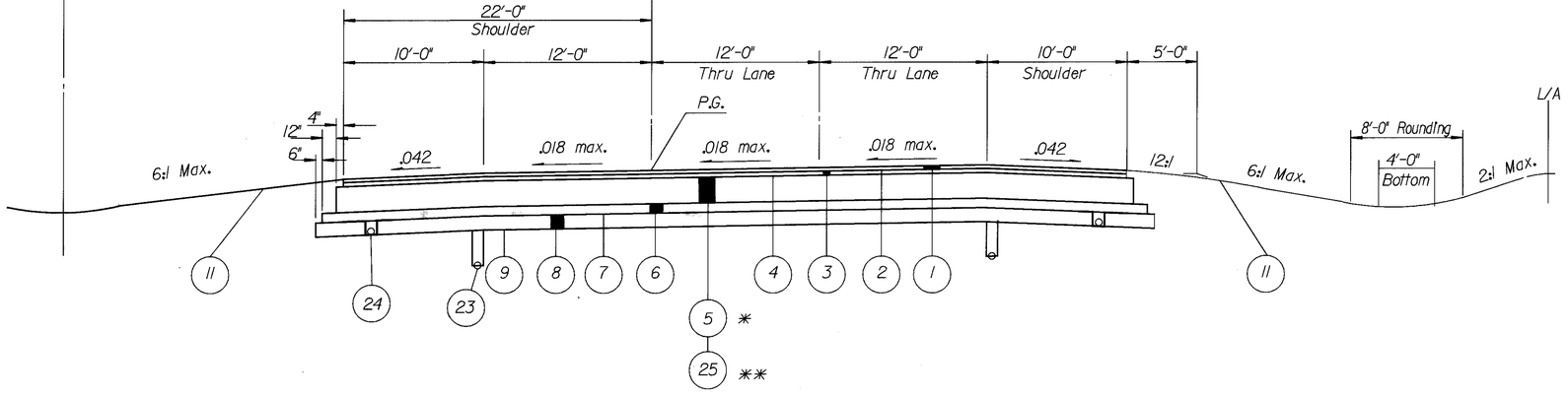
**Applies @:**

| | | |
|---|---|---|
| Sta. 864+00.00 to Sta. 893+75.00 | = | 2,975.00 Lin. Ft. |
| ** Sta. 1201+69.00 to Sta. 1203+00.00 | = | 131.00 Lin. Ft. |
| * Sta. 1203+00.00 to Sta. 1235+74.00 | = | 3,274.00 Lin. Ft. |
| Deduct for structure & approach slabs | = | - 226.66 Lin. Ft. |
| Total | = | 6,153.34 Lin. Ft. |




**Shoulder Grading Applies @:**

*See Plan And Profile Sheets for Guardrail locations*




## SUPERELEVATED SECTION NORTHBOUND LANES

**Applies @:**

| | | |
|---|---|---|
| Sta. 864+00.00 to Sta. 893+75.00 | = | 2,975.00 Lin. Ft. |
| ** Sta. 1201+69.00 to Sta. 1203+00.00 | = | 131.00 Lin. Ft. |
| * Sta. 1203+00.00 to Sta. 1235+74.00 | = | 3,274.00 Lin. Ft. |
| Deduct for structure & approach slabs | = | - 226.66 Lin. Ft. |
| Total | = | 6,153.34 Lin. Ft. |

STRUCTURE & APPROACH SLABS - Northbound
MED - 71 - 1685
Sta. 889+29.49 to Sta. 891+56.17 = 226.66 Lin. Ft.

*For Proposed Legend, see sheet 8.*

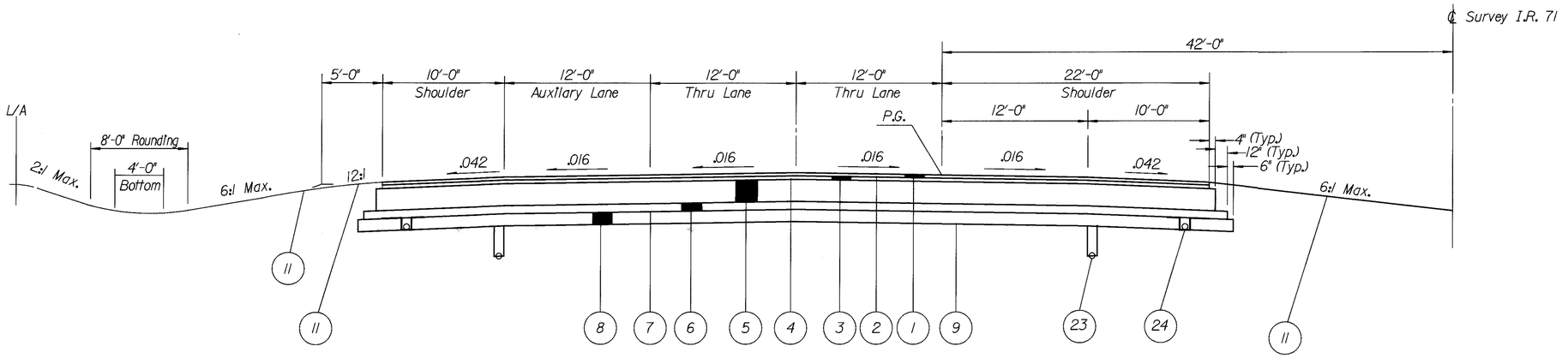
*For Superelevation Tables, see sheets 147-148.*

PROPOSED TYPICAL SECTIONS

MED-71-15.78

10
940

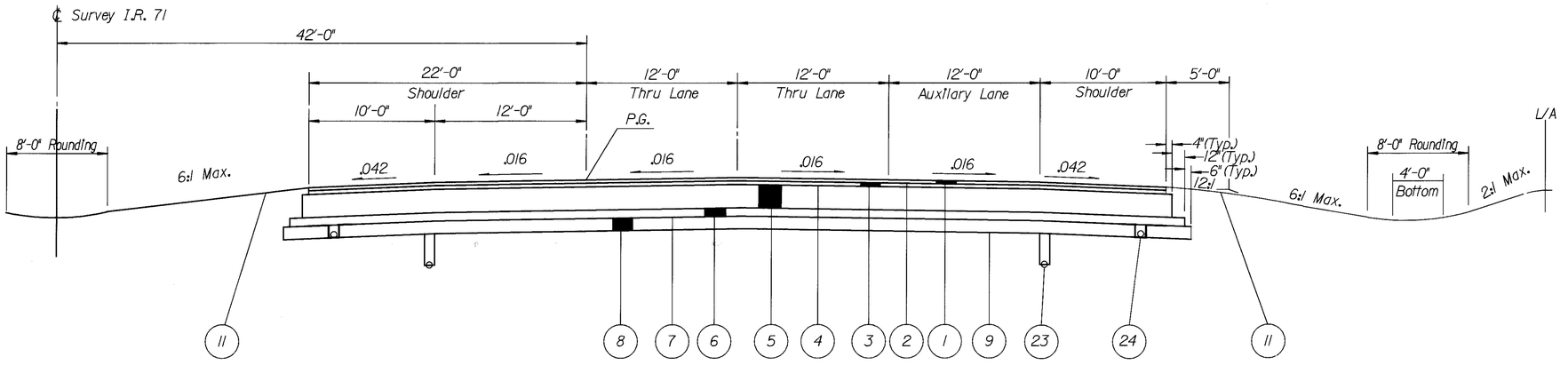
DESIGN FILE : i:\pd_MED_JR71\DGN\Typicals\proposed\gy03.dgn
USERNAME : jpuente
DATE : 29-NOV-1999
TIME : 11:08




## NORMAL SECTION SOUTHBOUND LANES

**Applies @:**

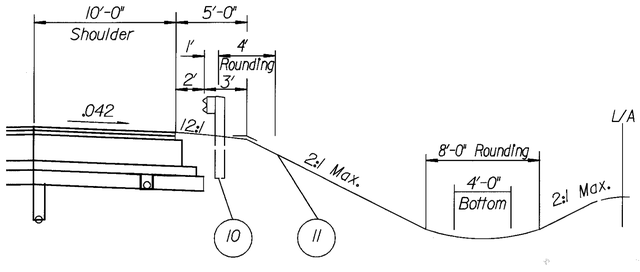
*Sta. 904+05.30 to Sta. 964+00.00 = 5,994.70 Lin. Ft.*




## NORMAL SECTION NORTHBOUND LANES

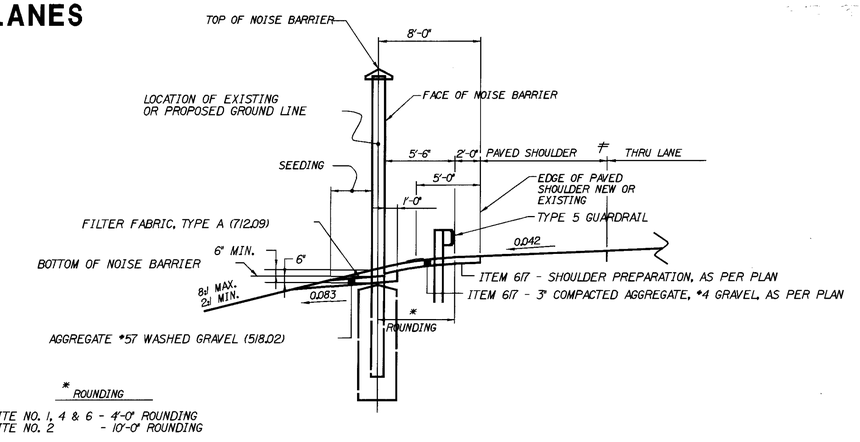
**Applies @:**

*Sta. 938+45.25 to Sta. 969+33.40 = 3,088.15 Lin. Ft.*




**Shoulder Grading Applies @:**

*See Plan And Profile Sheets for Guardrail locations*




## *NOISE BARRIER TYPICAL SECTION*

*For Proposed Legend, see sheet 8.*

**PROPOSED TYPICAL SECTIONS**

**MED-71-15.78**

11
940

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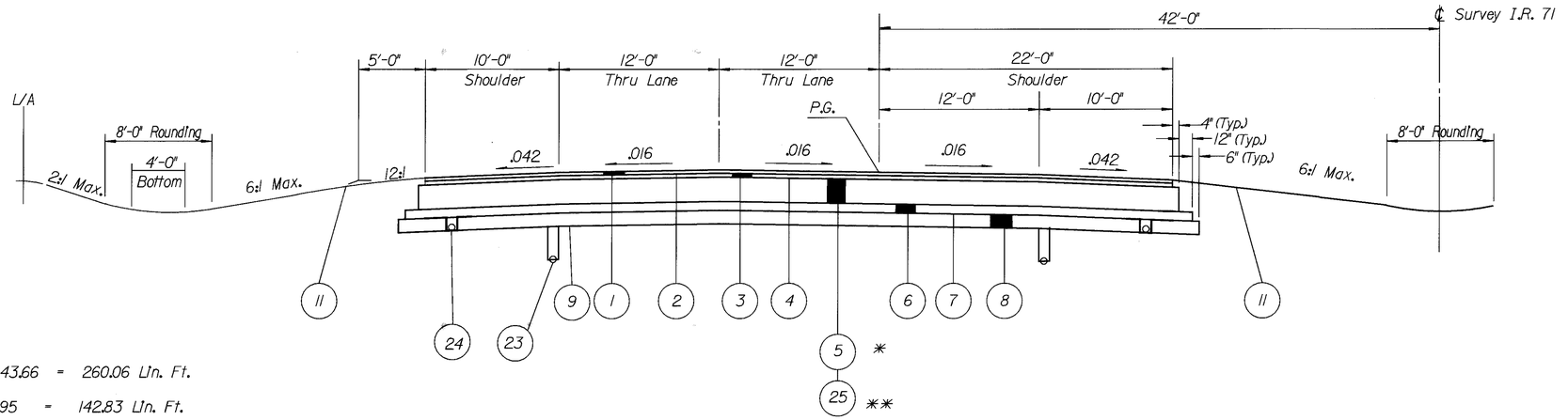
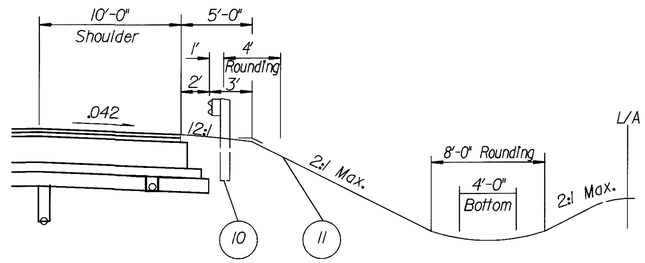



**APPROACH SLABS AND**
STRUCTURES - Southbound
MED - 71 - 1870
Sta. 985+83.60 to Sta. 988+43.66 = 260.06 Lin. Ft.
MED - 71 - 1918
Sta. 1012+40.12 to Sta. 1013+82.95 = 142.83 Lin. Ft.
MED - 71 - 1992
Sta. 1051+15.59 to Sta. 1053+86.09 = 270.50 Lin. Ft.
MED - 71 - 2090
Sta. 1102+80.42 to Sta 1105+62.91 = 282.49 Lin. Ft.
Total = 955.88 Lin. Ft.

## NORMAL SECTION SOUTHBOUND LANES

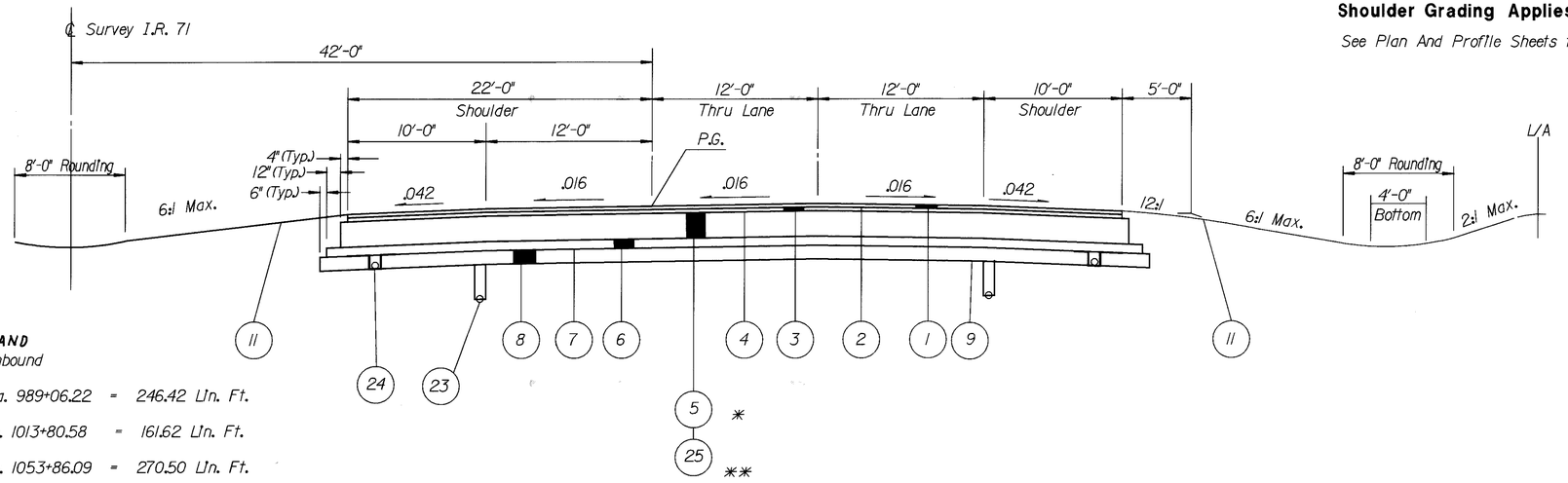
**Applies @:**

* Sta . 964+00.00 to Sta. 977+00.00 = 1,300.00 Lin. Ft.
** Sta. 977+00.00 to Sta. 1020+00.00 = 4,300.00 Lin. Ft.
** Sta. 1024+00.00 to Sta. 1201+69.00 = 17,769.00 Lin. Ft.
* Sta. 1235+74.00 to Sta. 1260+00.00 = 2,426.00 Lin. Ft.
Deduct for structures = 955.88 Lin. Ft.
Total = 24,840.70 Lin. Ft.




**Shoulder Grading Applies @:**

See Plan And Profile Sheets for Guardrail locations




**APPROACH SLABS AND**
STRUCTURES - Northbound
MED - 71 - 1870
Sta. 986+59.80 to Sta. 989+06.22 = 246.42 Lin. Ft.
MED - 71 - 1918
Sta. 1012+18.96 to Sta. 1013+80.58 = 161.62 Lin. Ft.
MED - 71 - 1992
Sta. 1051+15.59 to Sta. 1053+86.09 = 270.50 Lin. Ft.
MED - 71 - 2090
Sta. 1103+05.49 to Sta. 1105+87.89 = 285.27 Lin. Ft.
Total = 963.81 Lin. Ft.

## NORMAL SECTION NORTHBOUND LANES

**Applies @:**

* Sta. 969+33.40 to Sta. 977+00.00 = 766.60 Lin. Ft.
** Sta. 977+00.00 to Sta. 1020+00.00 = 4,300.00 Lin. Ft.
** Sta. 1024+00.00 to Sta. 1201+69.00 = 17,769.00 Lin. Ft.
* Sta. 1235+74.00 to Sta. 1260+00.00 = 2,426.00 Lin. Ft.
Deduct for structures = 963.81 Lin. Ft.
Total = 24,341.13 Lin. Ft.

For Proposed Legend see sheet 8 .

DESIGN FILE : I:\pd_MED_IR71\DGN\Typicals\proposed\gy05.dgn
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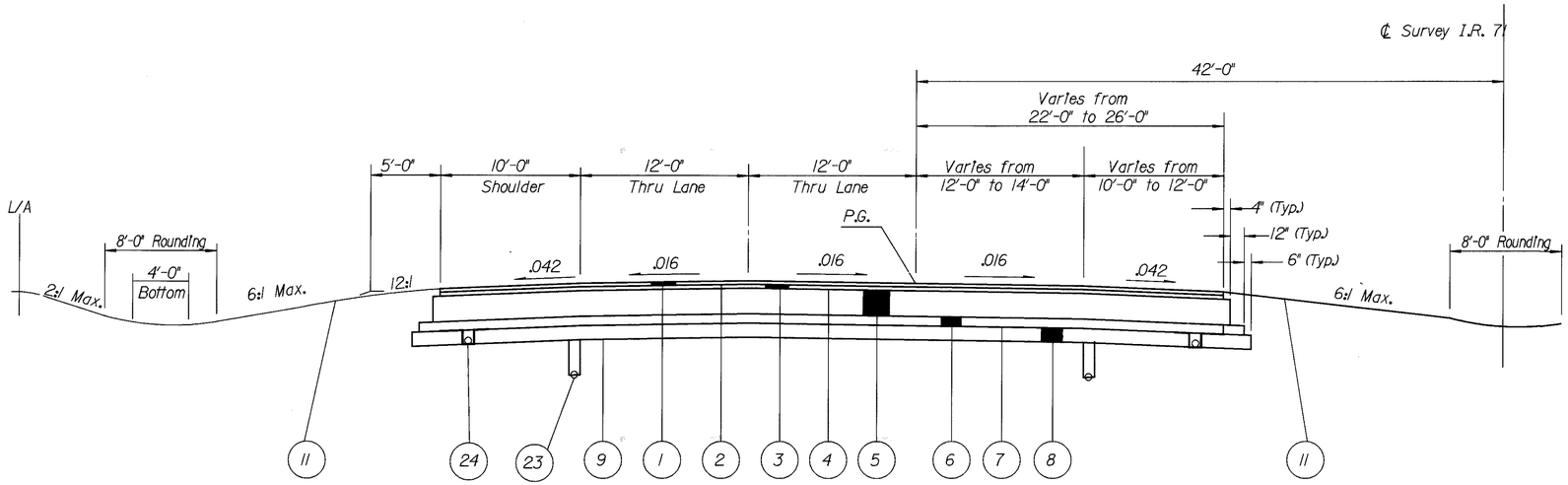
DATE : 29-NOV-1999
TIME : 12:58

# PROPOSED TYPICAL SECTIONS

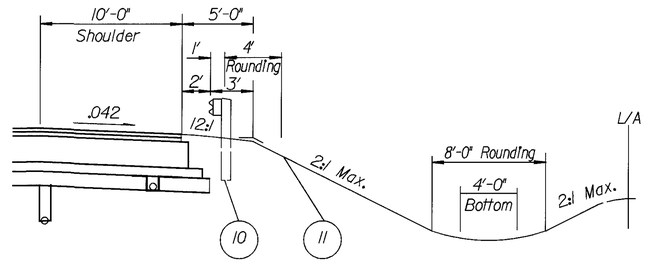
MED-71-15.78




## NORMAL SECTION SOUTHBOUND LANES

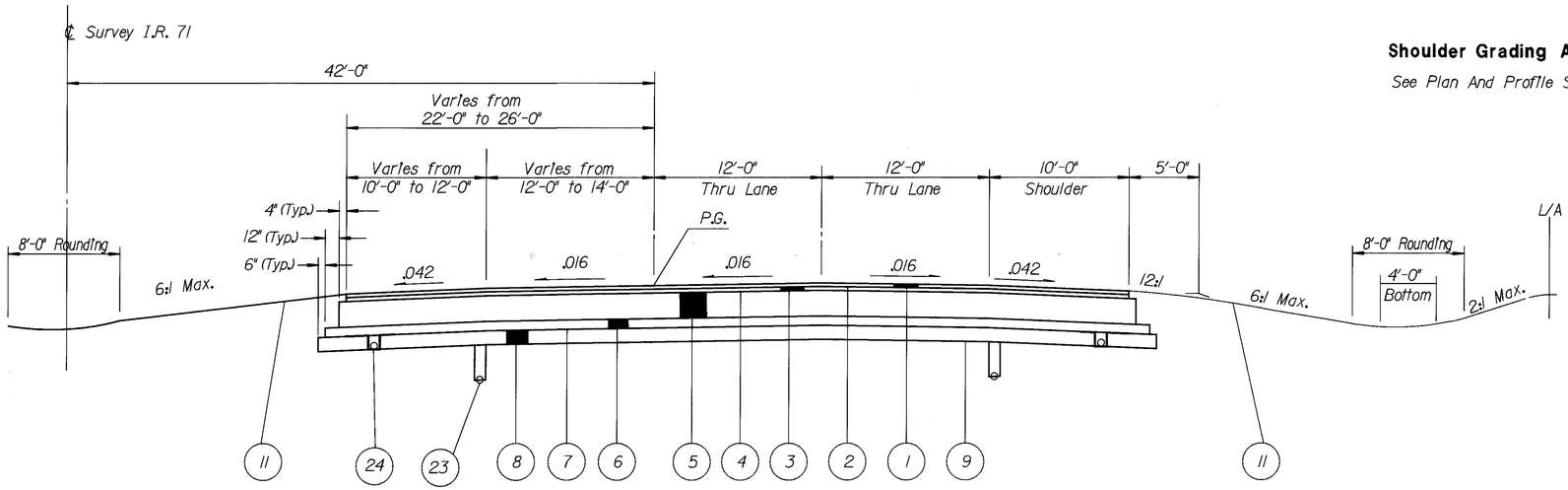
**Applies @:**

*Sta. 1260+00.00 to Sta. 1263+00.00 = 300.00 Lin. Ft.*
*(Lane Taper to SR 303)*




**Shoulder Grading Applies @:**

*See Plan And Profile Sheets for Guardrail locations*




## NORMAL SECTION NORTHBOUND LANES

**Applies @:**

*Sta. 1260+00.00 to Sta. 1263+00.00 = 300.00 Lin. Ft.*
*(Lane Taper to SR 303)*

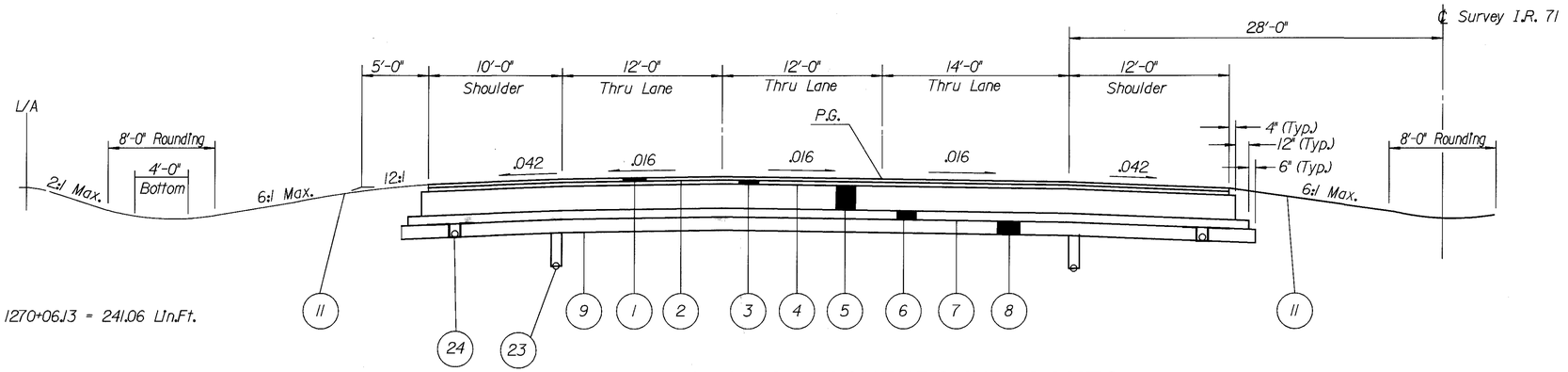
*For Proposed Legend, see sheet 8.*

DESIGN FILE : i:\pd_MED_IR71\DGN\Typicals\proposed\gy06.dgn
USERNAME : jpuente
DATE : 29-NOV-1999
TIME : 13:01

# PROPOSED TYPICAL SECTIONS

MED-71-15.78

13
940

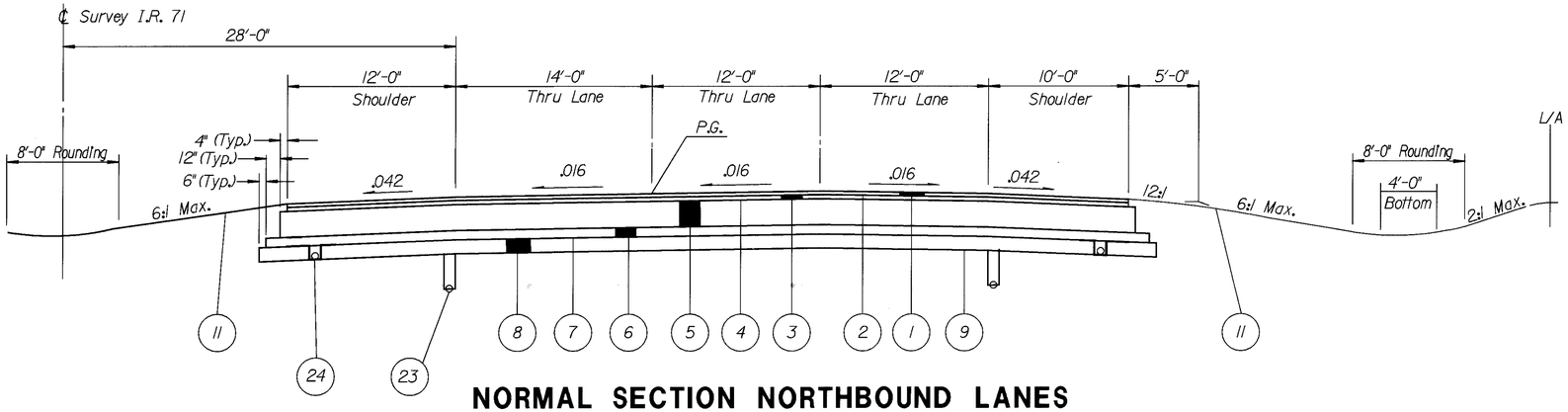



*STRUCTURE*
*MED - 71 - 2402*
*Sta. 1267+65.07 to Sta. 1270+06.13 = 241.06 Lin.Ft.*

## NORMAL SECTION SOUTHBOUND LANES

**Applies @:**

*Sta. 1263+00.00 to Sta. 1394+40.00 = 13,140.00 Lin. Ft.*
*Deduct for structure = 241.06 Lin. Ft.*
*Total = 12,898.94 Lin. Ft.*

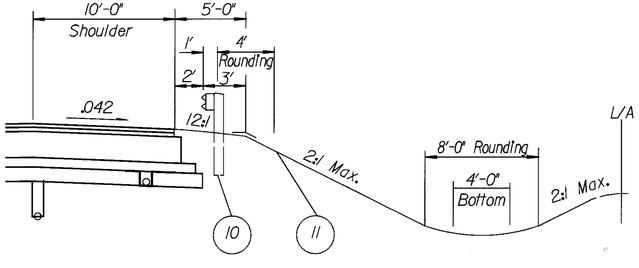



*STRUCTURE*
*MED - 71 - 2402*
*Sta. 1267+65.07 to Sta. 1270+06.13 = 241.06 Lin.Ft.*

## NORMAL SECTION NORTHBOUND LANES

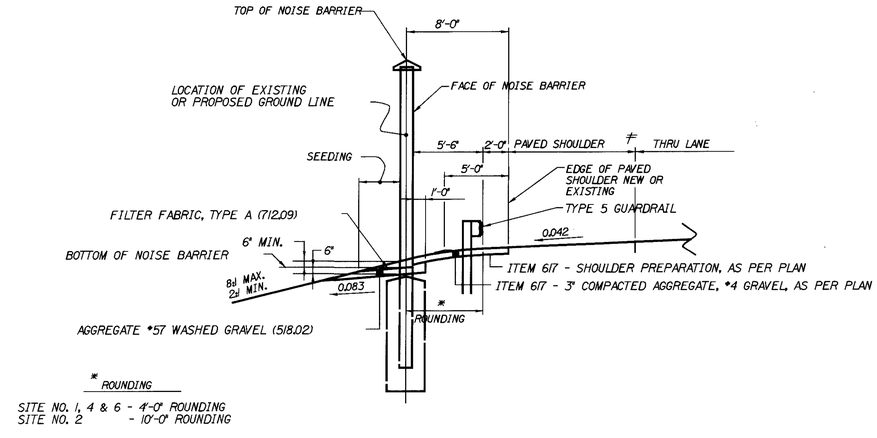
**Applies @:**

*Sta. 1263+00.00 to Sta. 1394+40.00 = 13,140.00 Lin. Ft.*
*Deduct for structure = 241.06 Lin. Ft.*
*Total = 12,898.94 Lin. Ft.*




**Shoulder Grading Applies @:**

*See Plan And Profile Sheets for Guardrail locations*



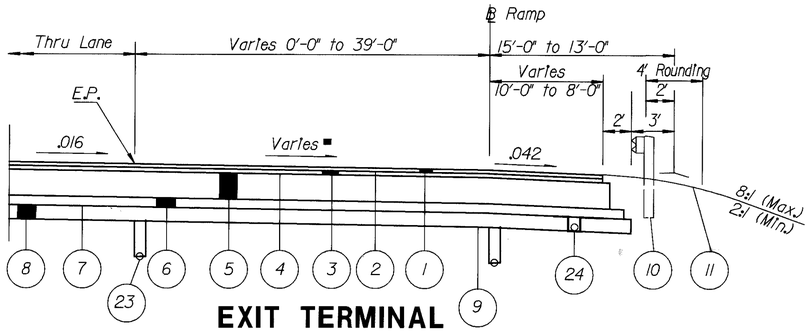

*NOISE BARRIER TYPICAL SECTION*

*For Proposed Legend, see sheet 8.*

DESIGN FILE : i:\pd_MED_IR71\DGN\Typicals\proposed\gy07.dgn
USERNAME : jpuente
DATE : 29-NOV-1999
TIME : 13:04

PROPOSED TYPICAL SECTIONS

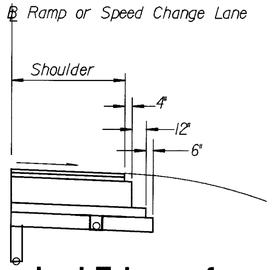
MED-71-15.78




## EXIT TERMINAL DECELERATION LANE

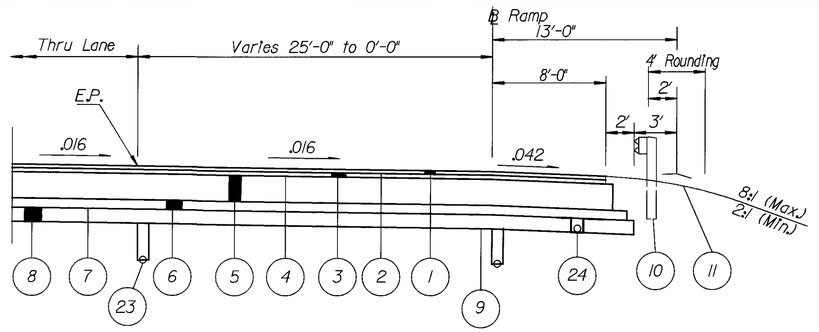
**Applies @:**

S.R. 18 - Ramp C Sta. 0+00.00 to Sta. 11+86.77
S.R. 3 - Ramp B Sta. 62+94.77 to Sta. 70+97.00
- Ramp C Sta. 94+97.92 to Sta. 102+97.92
S.R. 303 - Ramp A Sta. 58+15.93 to Sta. 66+15.93
- Ramp C Sta. 27+21.07 to Sta. 35+21.07
Rest Area - Ramp B Sta. 50+81.56 to Sta. 58+81.56
- Ramp C Sta. 69+03.50 to Sta. 77+03.50




## Typical Edge of Shoulder Treatment

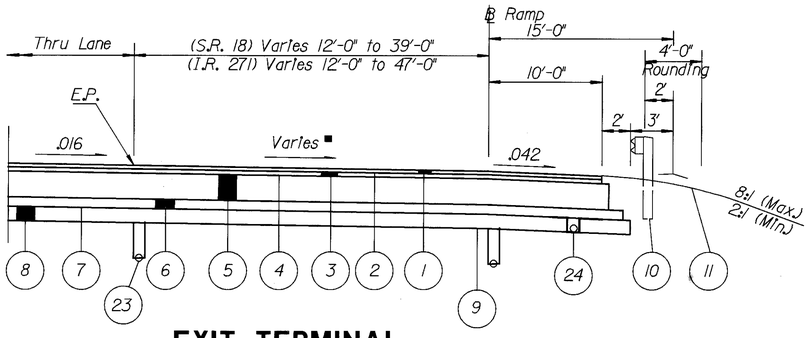
■ See pavement elevations on sheets .




## ENTRANCE TERMINAL ACCELERATION LANE

**Applies @:**

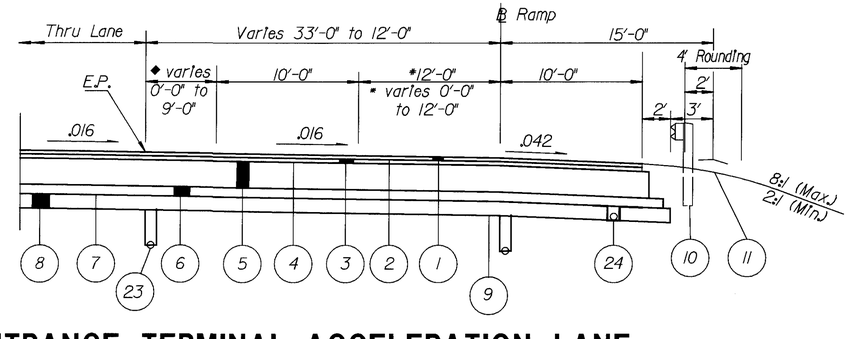
S.R. 18 - Ramp A Sta. 0+00.00 to Sta. 11+92.79
S.R. 3 - Ramp A Sta. 98+06.87 to Sta. 110+06.64
- Ramp D Sta. 55+85.64 to Sta. 67+85.64
S.R. 303 - Ramp B Sta. 18+86.20 to Sta. 31+93.03
- Ramp D Sta. 21+05.28 to Sta. 34+01.28
Rest Area - Ramp A Sta. 18+95.63 to Sta. 31+00.00
- Ramp D Sta. 99+17.10 to Sta. 111+25.02




## EXIT TERMINAL DECELERATION LANE

**Applies @:**

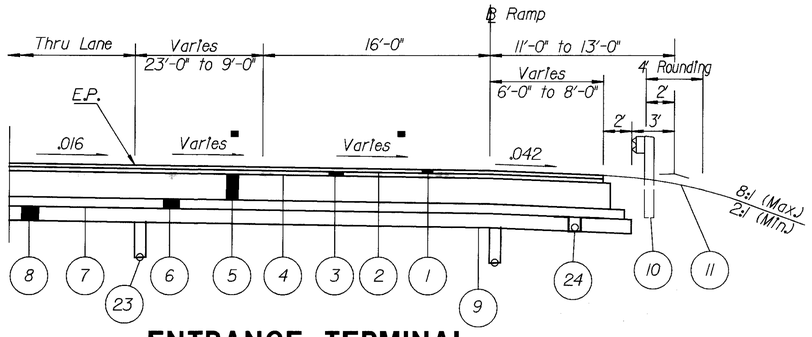
SR 18 - Ramp B Sta. 11+13.19 to Sta. 15+66.68
IR 271 EB - Sta. 969+33.40 to Sta. 976+92.92




## ENTRANCE TERMINAL ACCELERATION LANE

**Applies @:**

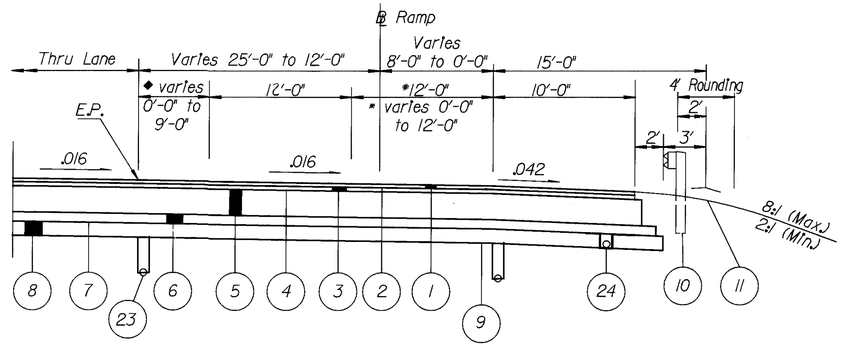
IR 271 WB - ▪ Sta 937+55.07 to Sta. 945+95.07
* Sta. 945+95.07 to Sta. 965+95.07
◆▪ Sta. 965+95.07 to Sta. 970+27.07




## ENTRANCE TERMINAL PACING LANE

**Applies @:**

S.R. 18 - Ramp A Sta. 11+92.79 to Sta. 16+96.40
S.R. 3 - Ramp A Sta. 93+02.65 to Sta. 98+06.87
- Ramp D Sta. 67+85.64 to Sta. 72+77.26
S.R. 303 - Ramp B Sta. 31+93.03 to Sta. 37+00.00
- Ramp D Sta. 38+13.48 to Sta. 34+01.28
Rest Area - Ramp A Sta. 31+00.00 to Sta. 35+17.53
- Ramp D Sta. 94+81.23 to Sta. 99+17.10




## ENTRANCE TERMINAL ACCELERATION LANE

**Applies @:**

S.R. 18 - Ramp D *Sta. 905+73.25 to Sta. 938+45.25
* Sta. 910+05.25 to Sta. 930+05.25
▪ Sta. 930+05.25 to Sta. 938+45.25
◆ Sta. 905+73.25 to Sta. 910+02.25

For Proposed Legend, see sheet 8.

DESIGN FILE : i:\pd_med_1r71\dgn\typicals\proposed\gy08.dgn
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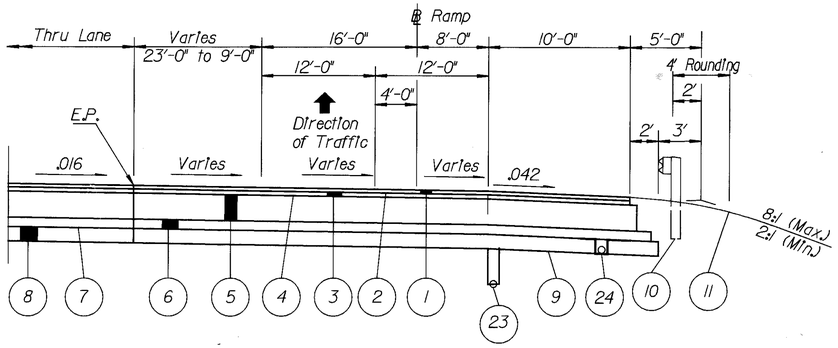
DATE : 01-DEC-1999
TIME : 14:08

PROPOSED TYPICAL SECTIONS

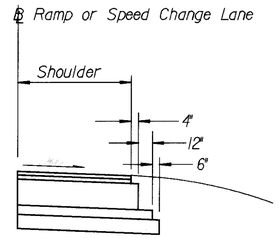
MED-71-15.78



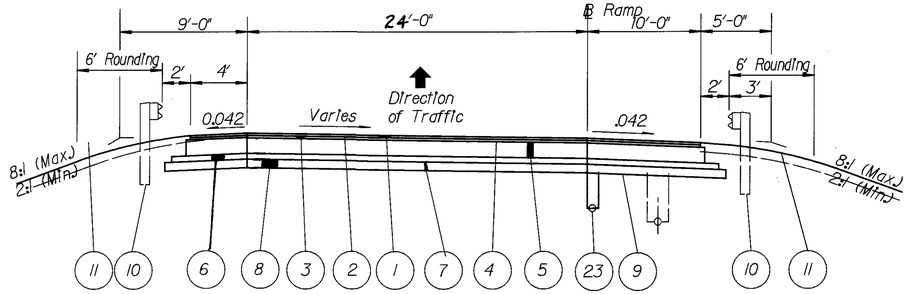

## ENTRANCE TERMINAL PACING LANE

**Applies @:**

*Sta. 9+85.26 to Sta. 14+74.55*
*SR 18 Ramp D*



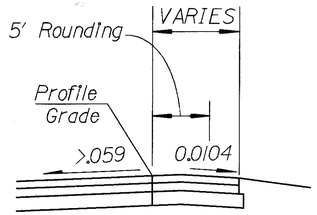

## Typical Edge of Shoulder Treatment



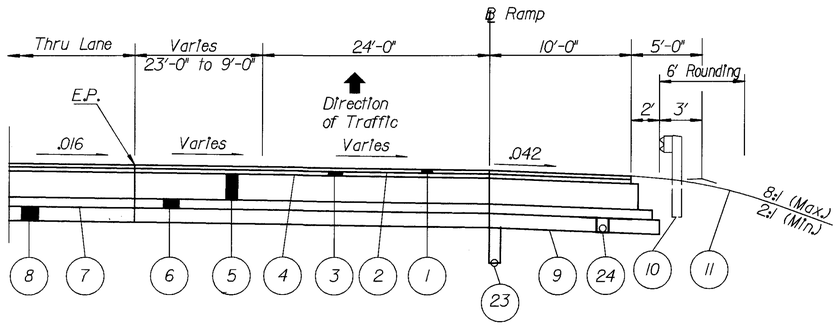

## IR 271 RAMPS

**Applies @:**

*WB Ramp Sta. 973+64.26 to Sta. 998+98.25*
*EB Ramp Sta. 976+92.92 to Sta. 980+62.95*
*NOTE: SEE SUPERELEVATION TABLE ON SHEET 424*



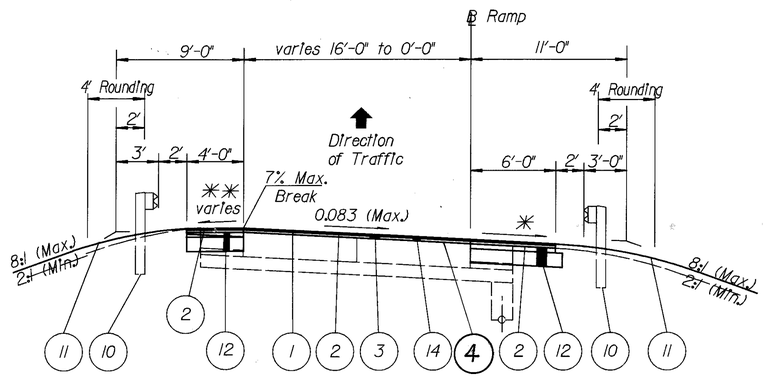

## RAMP OUTSIDE SHOULDER DETAIL




## ENTRANCE TERMINAL PACING LANE

**Applies @:**

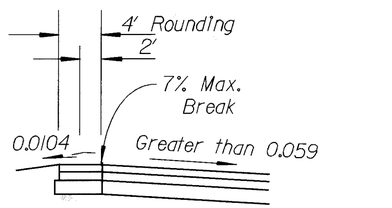
*IR 271 WB Sta. 970+27.07 to Sta. 973+04.15*

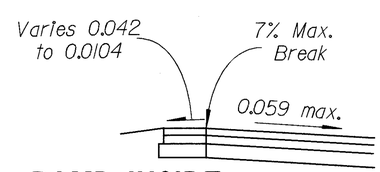



## SUPERELEVATED SECTION

**Applies @:**

*Sta. 44+17.52 to Sta. 47+96.07*
*SR 303 Ramp A*




## RAMP INSIDE SHOULDER DETAILS

*NOTE: Superelevations on ramps shall match that of the existing concrete pavement.*

*For Proposed Legend, see sheet 8.*

# PROPOSED TYPICAL SECTIONS

MED-71-15.78

16
940

DESIGN FILE : i:\pd_med_lr71\dgn\typicals\proposed\gy09.dgn
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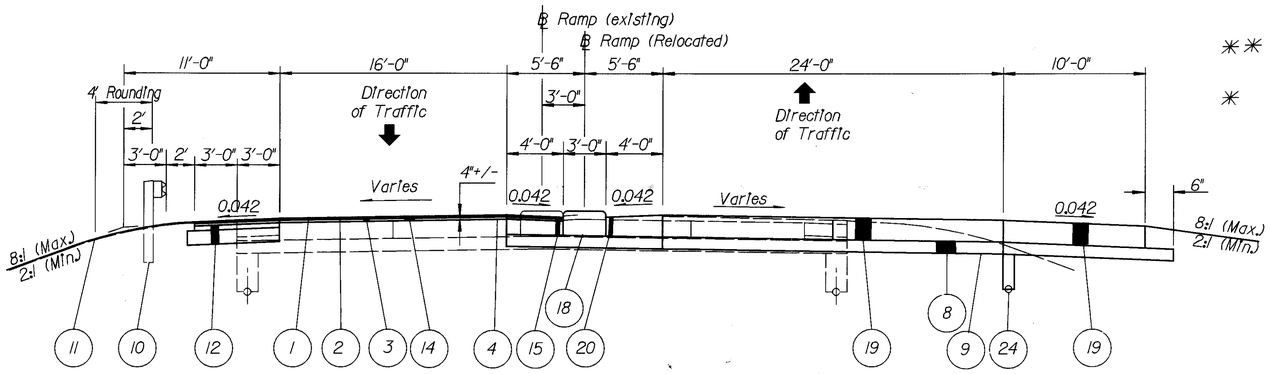
TIME : 08:05




## SUPERELEVATED SECTION
## S.R. 303 INTERCHANGE RAMPS C&D

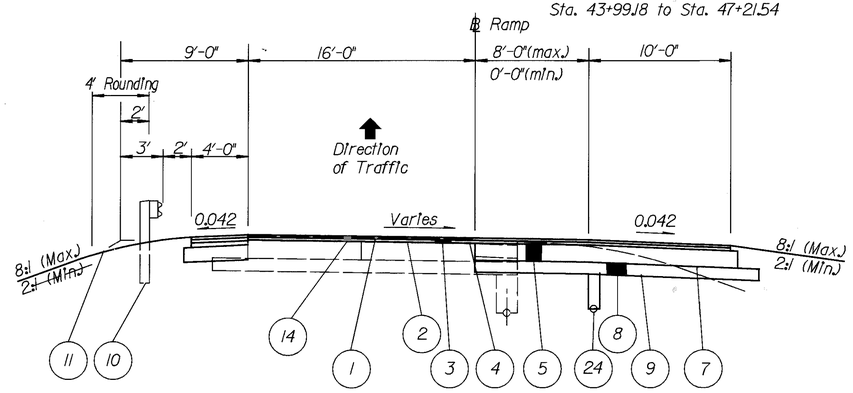
**Applies @:**

Sta. 43+99.18 to Sta. 47+21.54

** see shoulder details on this sheet

* Varies 0.042 or rate of superelevation if greater

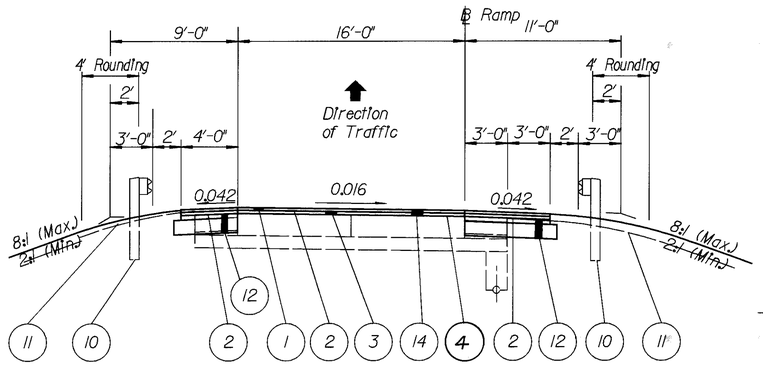
■ See pavement elevations on sheets 468, 471, 474, 480 and 481.




## SUPERELEVATED SECTION
## S.R. 303 INTERCHANGE RAMP C

**Applies @:**

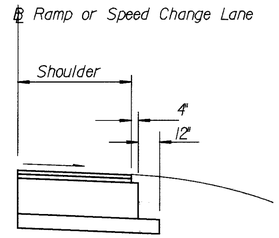
Sta. 39+99.21 to Sta. 43+99.18



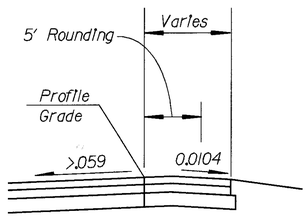

## NORMAL SECTION

**Applies @:**

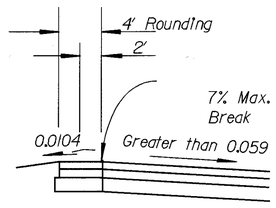
S.R. 3 - Ramp D Sta. 80+20.51 to Sta. 81+29.92
S.R. 303 - Ramp B Sta. 41+33.96 to Sta. 45+20.26
Rest Area - Ramp C Sta. 78+79.33 to Sta. 81+02.04
Ramp D Sta. 89+35.36 to Sta. 90+88.61

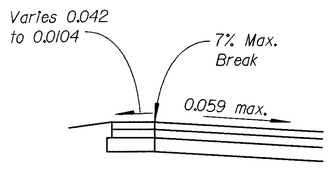



## Typical Edge of Shoulder Treatment For Asphalt Pavement

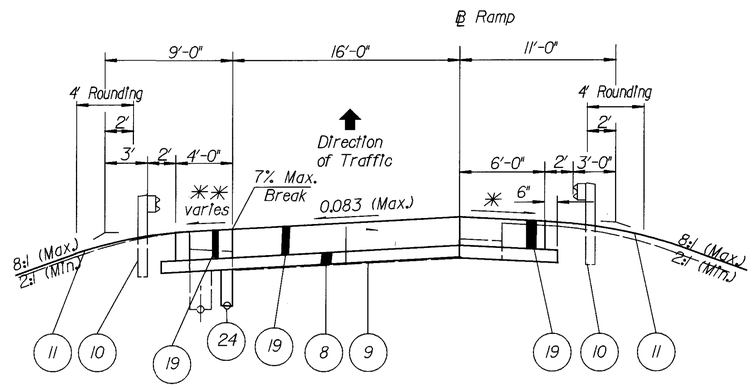



## RAMP OUTSIDE SHOULDER DETAIL



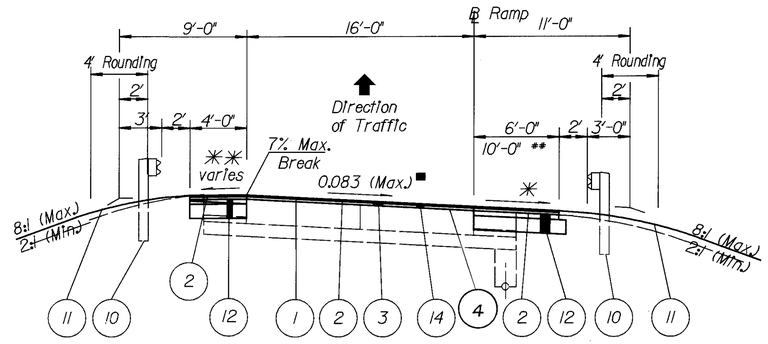

## RAMP INSIDE SHOULDER DETAILS




## SUPERELEVATED SECTION
## RAMPS B & C @ S.R. 3 INTERCHANGE

**Applies @:**

Ramp B Sta. 82+84.69 to Sta. 84+96.74
Ramp C Sta. 80+95.99 to Sta. 83+48.24
See Joint Details on sht. 465.




## SUPERELEVATED SECTION

**Applies @:**

Rest Area : Ramp C Sta. 77+03.15 to Sta. 78+79.33
Ramp C Sta. 81+02.04 to Sta. 84+99.16
Ramp D Sta. 90+88.61 to Sta. 94+81.23
Ramp A Sta. 35+17.53 to Sta. 40+26.65
Ramp B Sta. 45+15.49 to Sta. 50+81.56

S.R. 3: Ramp A - Sta. 84+62.93 to Sta. 93+08.54
Ramp B - Sta. 70+96.38 to Sta. 81+41.97
Ramp C - Sta. 84+51.76 to Sta. 94+96.69
Ramp D - Sta. 72+77.17 to Sta. 80+20.51

S.R. 303: Ramp B - Sta. 36+99.08 to Sta. 41+17.52
Ramp B Spur - Sta. 44+17.52 to Sta. 50+96.07
Ramp A - Sta. 52+88.51 to Sta. 58+15.93
Ramp A Spur - Sta. 46+12.56 to Sta. 51+73.84
** Ramp C - Sta. 35+21.07 to Sta. 39+99.21
Ramp D - Sta. 43+99.18 to Sta. 38+13.48
Sta. 51+09.93 to Sta. 44+67.82

NOTE: Superelevations on ramps shall match that of the existing concrete pavement.

For Proposed Legend see sheet 8.

PROPOSED TYPICAL SECTIONS

MED-71-15.78



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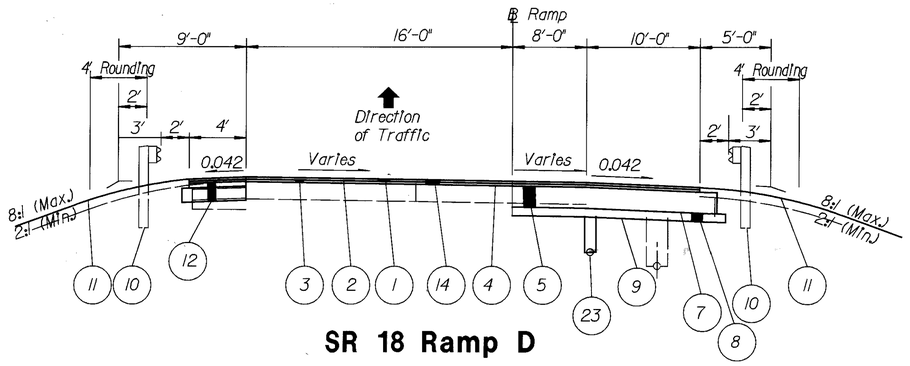
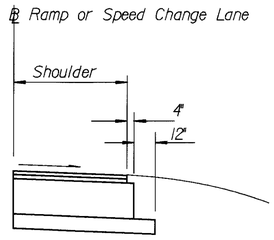
USERNAME : jrogers
DATE : 01-DEC-1999
TIME : 14:57



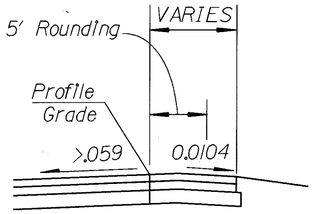

## SR 18 Ramp D

**Applies @:**

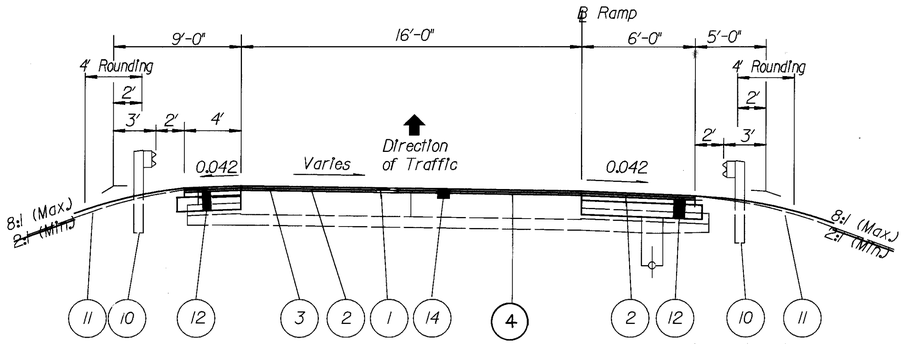
Sta 0+00.00 to Sta 9+85.26




## Typical Edge of Shoulder Treatment




## RAMP OUTSIDE SHOULDER DETAIL

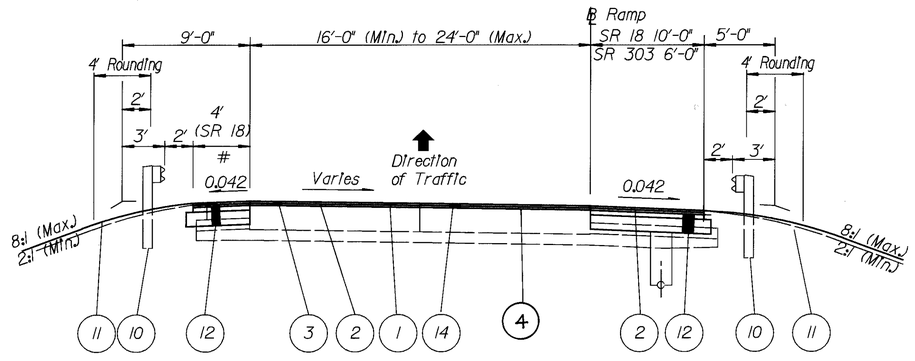



## RAMPS A & C @ S.R. 18 INTERCHANGE

**Applies @:**

Ramp A Sta. 20+54.89 to Sta. 26+64.33

Ramp C Sta. 15+97.55 to Sta. 16+62.18

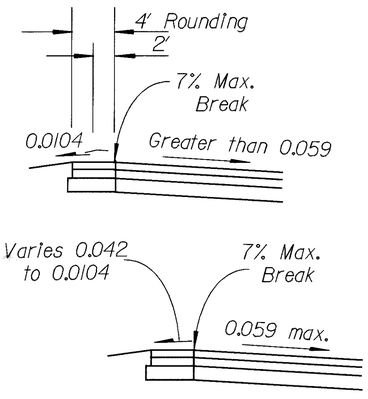



## SUPERELEVATED SECTION

**Applies @:**

S.R. 18 Ramp B Sta. 0+25.04 to Sta. 11+13.19
S.R. 303 Ramp A Sta. 49+78.84 to Sta. 53+06.62

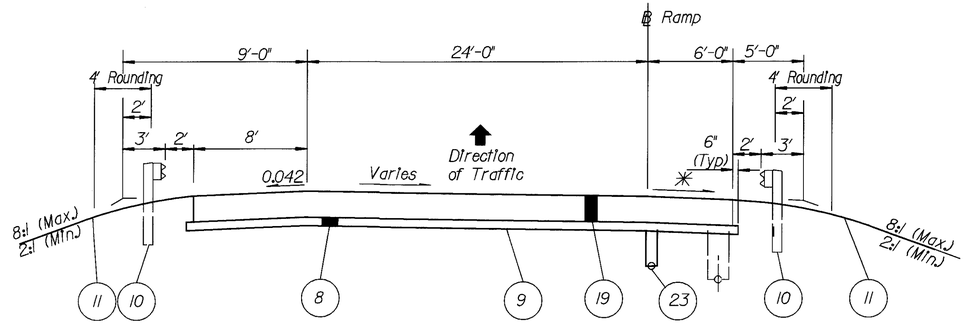
\# Shoulder width varies from 4' @ Sta. 52+99.94 to 8' @ Sta. 51+65.88




## RAMP INSIDE SHOULDER DETAILS

NOTE: Superelevations on ramps shall match that of the existing concrete pavement.

For Proposed Legend, see sheet 8.



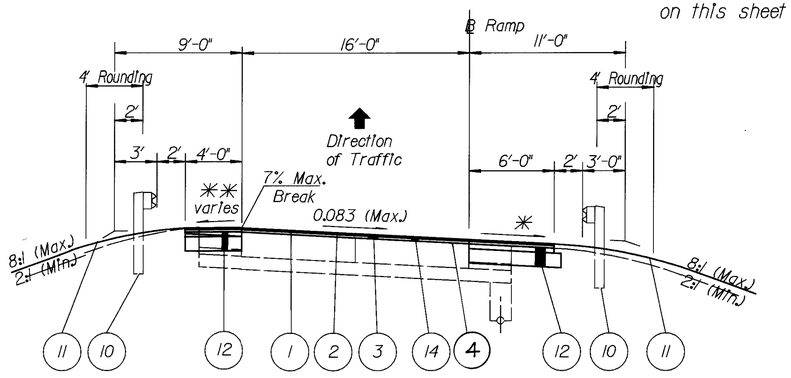

## SR 303 RAMP A

**Applies @:**

S.R. 303 Sta. 48+36.35 to Sta. 49+78.84

✳ Varies 0.042 or rate of superelevation if greater

✳✳ see shoulder details on this sheet




## SUPERELEVATED SECTION RAMPS A & C @ S.R. 18 INTERCHANGE

**Applies @:**

Ramp A Sta 16+96.40 to Sta 20+54.89
Ramp C Sta. 11+86.77 to Sta. 15+97.55
Ramp C Sta. 16+62.18 to Sta. 19+85.06

PROPOSED TYPICAL SECTIONS

MED-71-15.78

18
940

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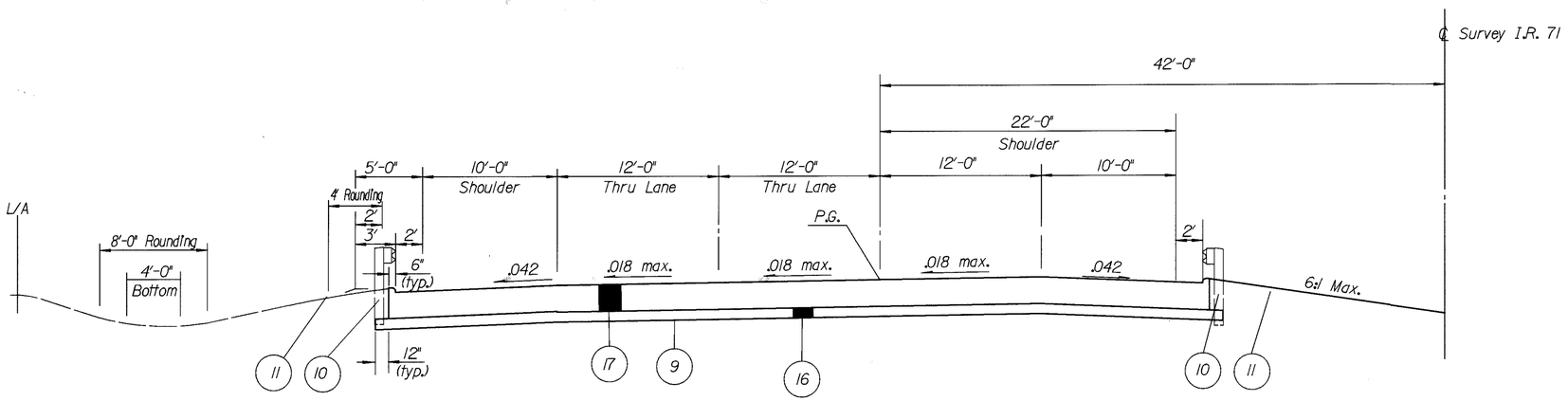
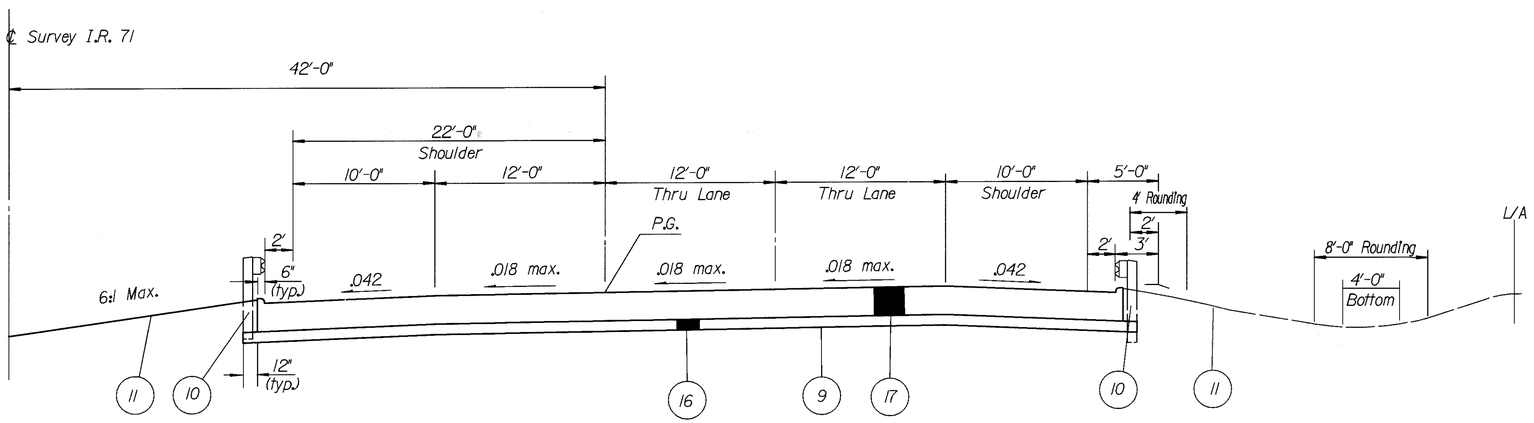
DATE : 01-DEC-1999
TIME : 14:57




## APPROACH SLABS
## SOUTHBOUND LANES
**Applies @: MED-71-1685**

Sta. 888+95.43 to Sta. 889+20.43 = 25.00 Lin. Ft.
Sta. 890+97.11 to Sta. 891+22.11 = 25.00 Lin. Ft.
Total = 50.00 Lin. Ft.




## APPROACH SLABS
## NORTHBOUND LANES
**Applies @: MED-71-1685**

Sta. 889+29.49 to Sta. 889+54.49 = 25.00 Lin. Ft.
Sta. 891+31.17 to Sta. 891+56.17 = 25.00 Lin. Ft.
Total = 50.00 Lin. Ft.

For proposed Legend, see sheet 8.

DESIGN FILE : I:\pd_MED_IR71\DGN\Typicals\proposed\typ12.dgn
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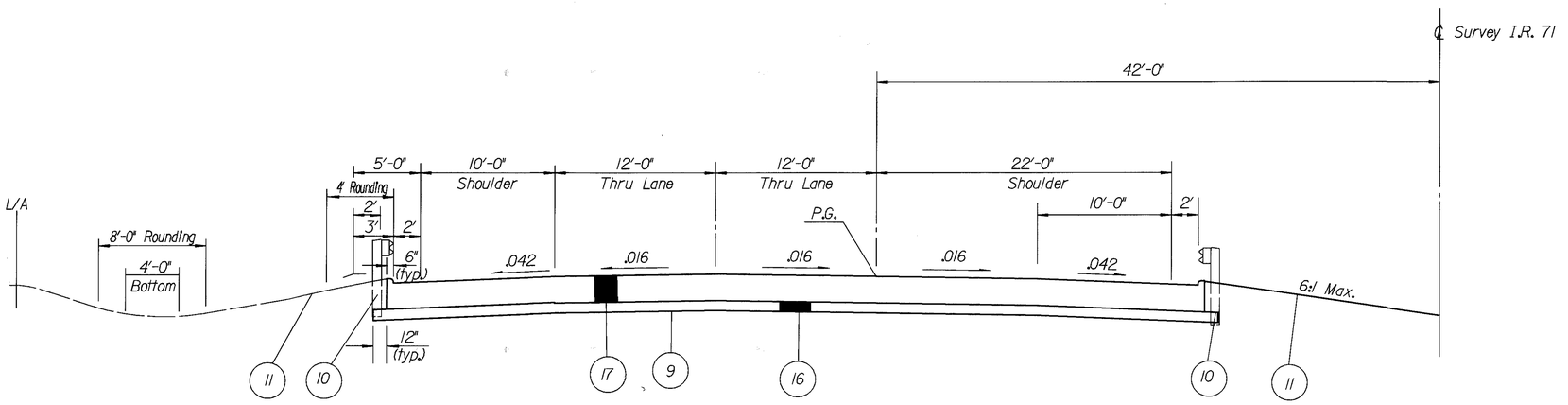
DATE : 30-NOV-1999
TIME : 07:47

PROPOSED TYPICAL SECTIONS

MED-71-15.78




## APPROACH SLABS
## SOUTHBOUND LANES

**Applies @:**

**Applies @: MED-71-1870**

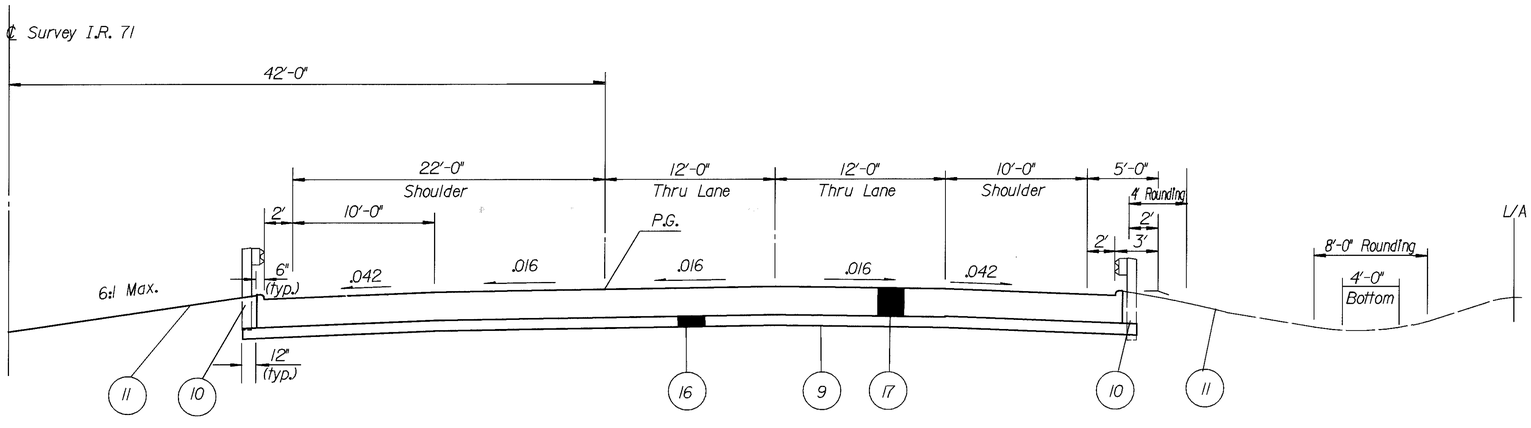
Sta. 985+83.60 to Sta. 986+08.60 = 25.00 Lin. Ft.
Sta. 988+18.66 to Sta. 988+43.66 = 25.00 Lin. Ft.

**Applies @: MED-71-1918**

Sta. 1012+40.12 to Sta. 1012+65.12 = 25.00 Lin. Ft.
Sta. 1013+57.95 to Sta. 1013+82.95 = 25.00 Lin. Ft.

**Applies @: MED-71-1992**

Sta. 1051+15.59 to Sta. 1051+40.59 = 25.00 Lin. Ft.
Sta. 1053+61.09 to Sta. 1053+86.09 = 25.00 Lin. Ft.
Total = 150.00 Lin. Ft.




## APPROACH SLABS
## NORTHBOUND LANES

**Applies @:**

**Applies @: MED-71-1870**

Sta. 986+59.80 to Sta. 986+84.80 = 25.00 Lin. Ft.
Sta. 988+81.22 to Sta. 989+06.22 = 25.00 Lin. Ft.

**Applies @: MED-71-1918**

Sta. 1012+18.96 to Sta. 1012+43.96 = 25.00 Lin. Ft.
Sta. 1013+55.58 to Sta. 1013+80.58 = 25.00 Lin. Ft.

**Applies @: MED-71-1992**

Sta. 1051+15.59 to Sta. 1051+40.59 = 25.00 Lin. Ft.
Sta. 1053+61.09 to Sta. 1053+86.09 = 25.00 Lin. Ft.
Total = 150.00 Lin. Ft.

For Proposed legend see sheet 8.

DESIGN FILE : i:\pd_MED_IR71\DGN\Typicals\proposed\gyl3.dgn
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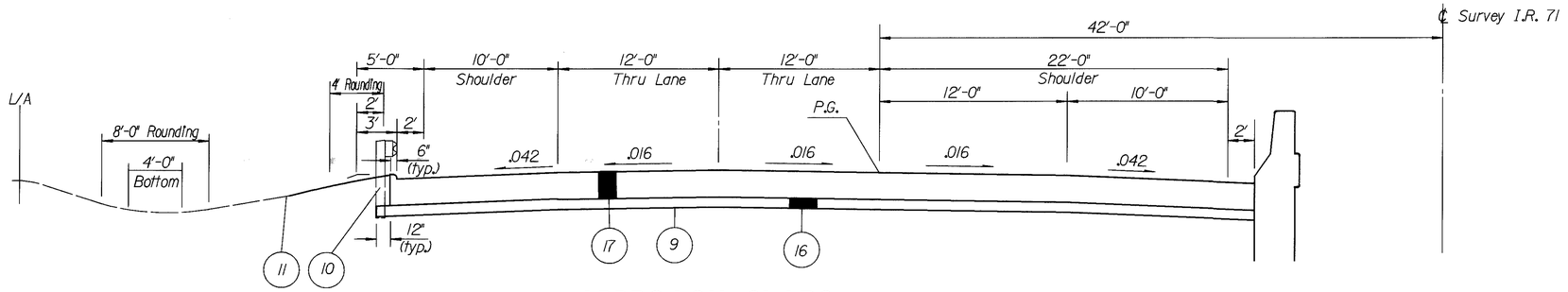
TIME : 07:50

PROPOSED TYPICAL SECTIONS

MED-71-15.78

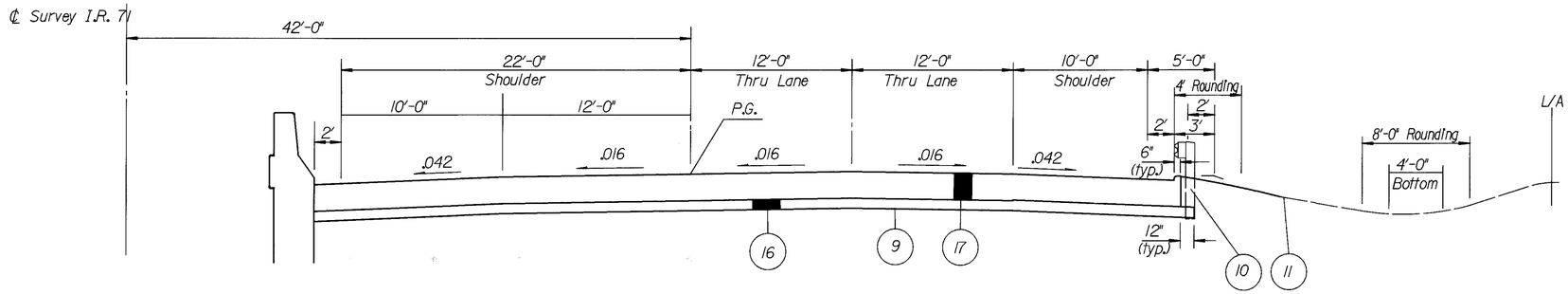



Parapet detail applies either side.

## APPROACH SLABS
## SOUTHBOUND LANES

**Applies @: MED-71-2090**

Sta. 1102+80.42 to Sta. 1103+05.42 = 25.00 Lin. Ft.
Sta. 1105+37.91 to Sta 1105+62.91 = 25.00 Lin. Ft.
Total = 50.00 Lin. Ft.

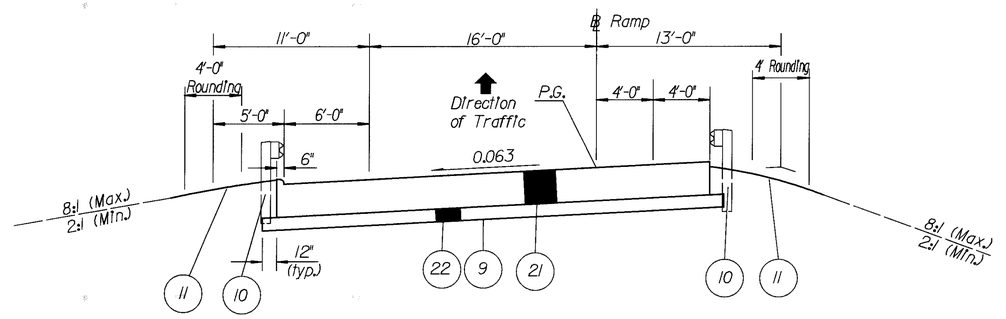



Parapet detail applies either side.

## APPROACH SLABS
## NORTHBOUND LANES

**Applies @: MED-71-2090**

Sta. 1103+05.49 to Sta. 1103+30.49 = 25.00 Lin. Ft.
Sta. 1105+62.98 to Sta 1105+87.98 = 25.00 Lin. Ft.
Total = 50.00 Lin. Ft.




## APPROACH SLAB
## RAMPS B & C @ S.R. 3 INTERCHANGE

**Applies @: MED-71-2088E:** Ramp B - Sta. 81+41.97 to Sta. 81+56.97 = 15.00 Lin. Ft. Sta. 82+69.69 to Sta. 82+84.69 = 15.00 Lin. Ft.

**Applies @: MED-71-2092W:** Ramp C - Sta. 83+48.24 to Sta. 83+63.24 = 15.00 Lin. Ft. Sta. 84+36.76 to Sta. 84+51.76 = 15.00 Lin. Ft.

Total = 60.00 Lin. Ft.

For Proposed Legend see sheet 8.

PROPOSED TYPICAL SECTIONS

MED-71-15.78



DESIGN FILE : i:\pd_MED_IR71\DGN\Typicals\proposed\gyl4.dgn
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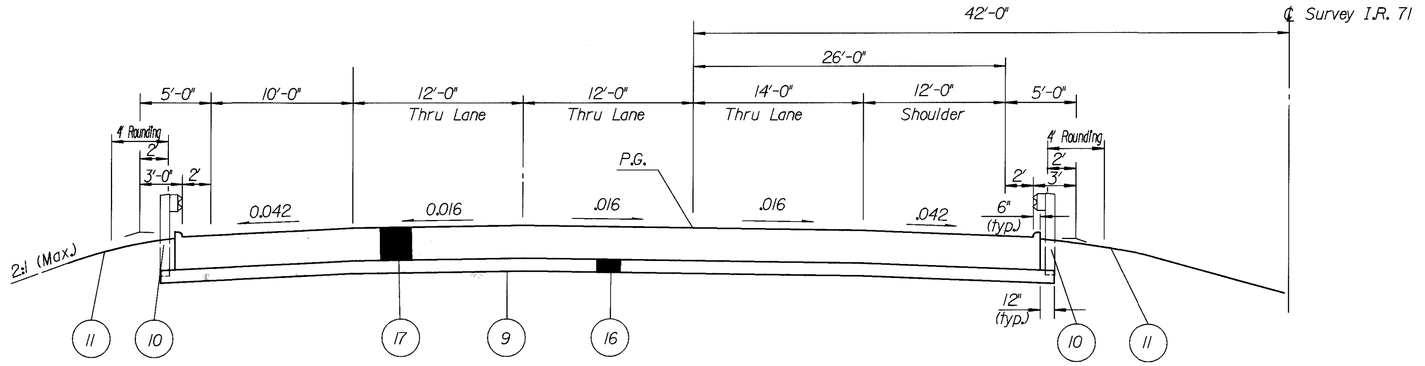
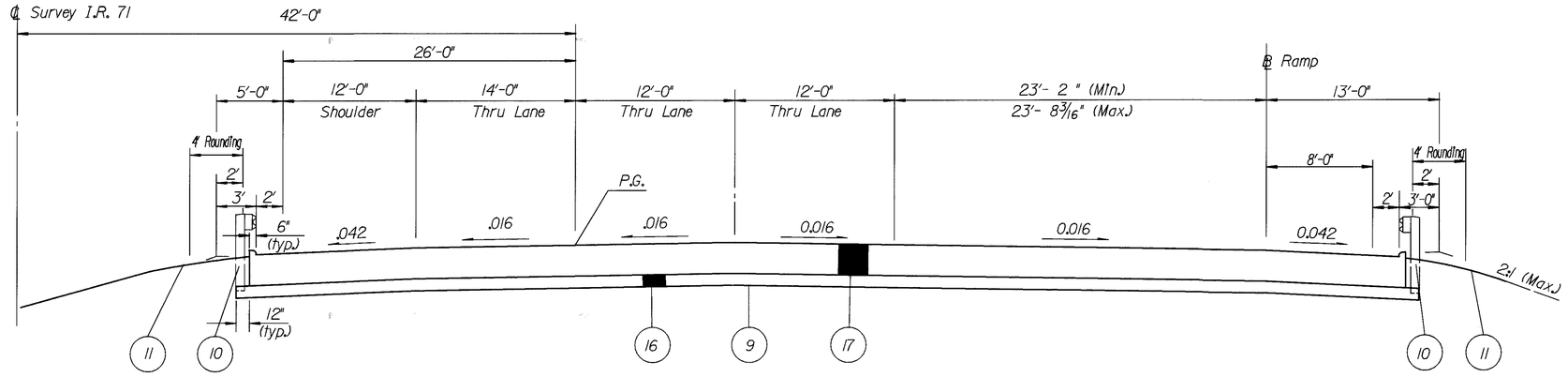



## APPROACH SLAB - SOUTHBOUND LANES

**Applies @: MED-71-2402**

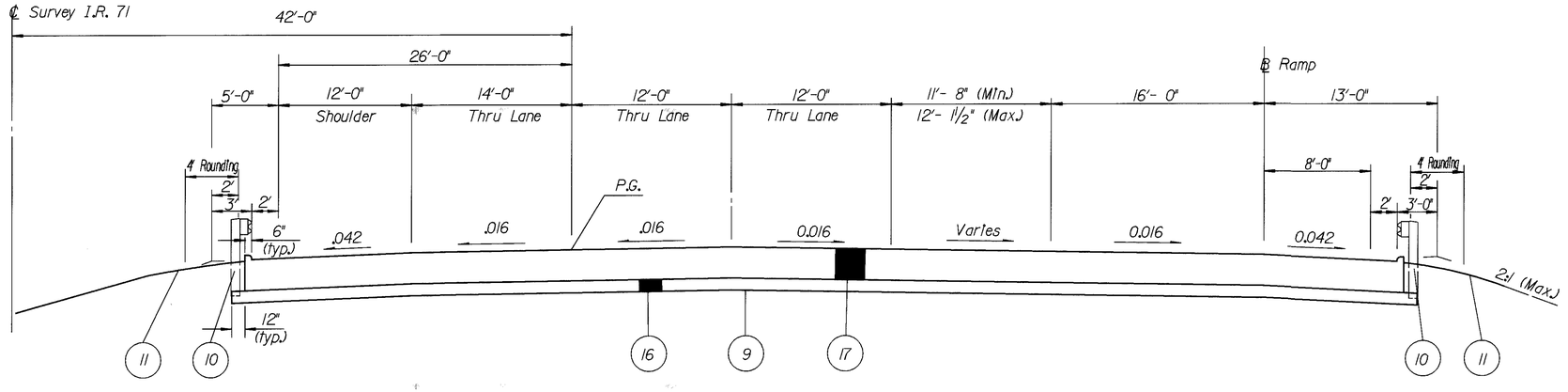
Sta. 1267+65.07 to Sta. 1267+90.07 = 25.00 Lin. Ft
Sta. 1269+81.13 to Sta. 1270+06.13 = 25.00 Lin. Ft.
Total = 50.00 Lin. Ft.




## FORWARD APPROACH SLAB - NORTHBOUND LANES

**Applies @: MED-71-2402**

Sta. 1269+81.13 to Sta. 1270+06.13 = 25.00 Lin. Ft.




## REAR APPROACH SLAB - NORTHBOUND LANES

**Applies @: MED-71-2402**

Sta. 1267+65.07 to Sta. 1267+90.07 = 25.00 Lin. Ft.

For Proposed Legend see sheet 8.

PROPOSED TYPICAL SECTIONS

MED-71-15.78



DESIGN FILE : i:\pd_MED_IR71\DGN\Typicals\proposed\gyl5.dgn
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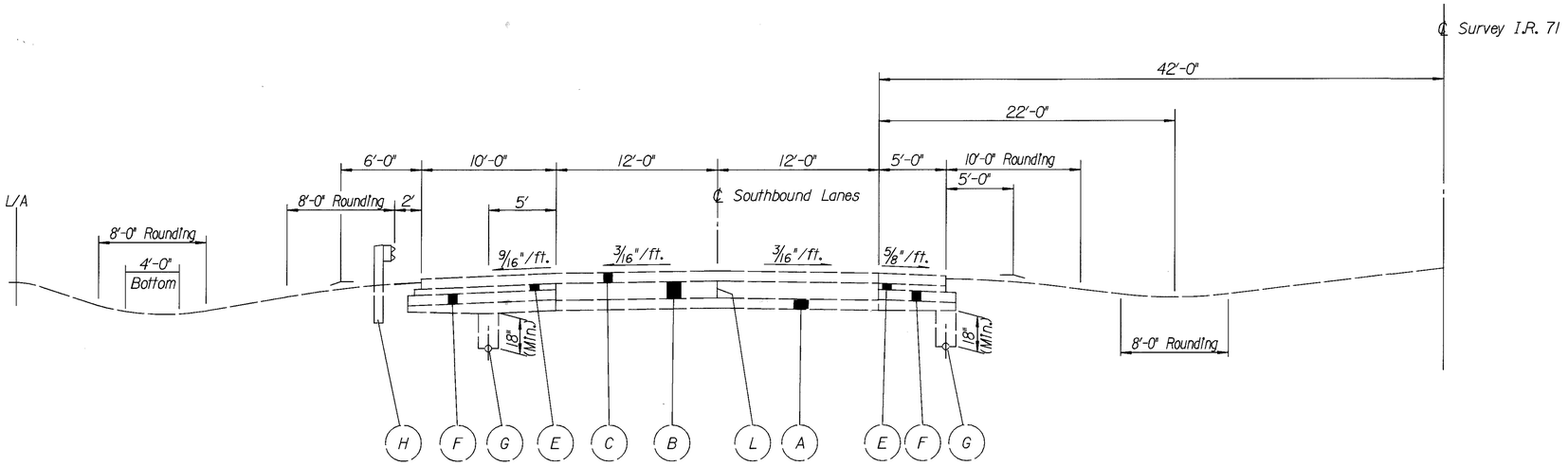
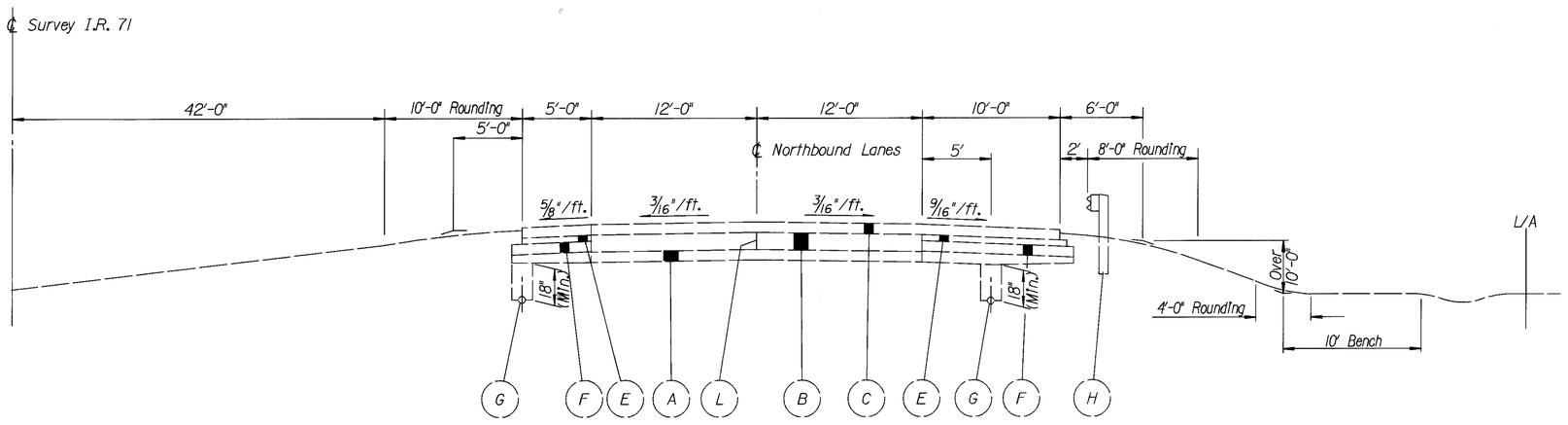
TIME : 08:07




## HILL SIDE SECTION SOUTHBOUND LANES

**Applies @:**

*Sta. 831+68.07 to Sta. 859+68.07 = 2,795.00 Lin. Ft.*




## HILL SIDE SECTION NORTHBOUND LANES

**Applies @:**

*Sta. 832+38.07 to Sta. 859+63.07 = 2,725.00 Lin. Ft.*

## EXISTING LEGEND

- (A) Subbase
- (B) Reinforced Concrete Pavement
- (C) Asphalt Concrete
- (D) Concrete Median, 4"
- (E) Bituminous Aggregate Base
- (F) Aggregate Base
- (G) 6" Underdrains (Shallow or Deep)
- (H) Guardrail
- (I) Concrete Curb, Type 6
- (J) Barrier Curb, Modified
- (K) Key Joint Without Tie Bars
- (L) Standard Longitudinal Joint
- (M) Topsoil
- (N) Aggregate Drains
- (O) Reinforced Concrete Approach Slab (T=13")

DESIGN FILE : i:\pd_med_lr71\dgn\typicals\existing\exstyp1.dgn
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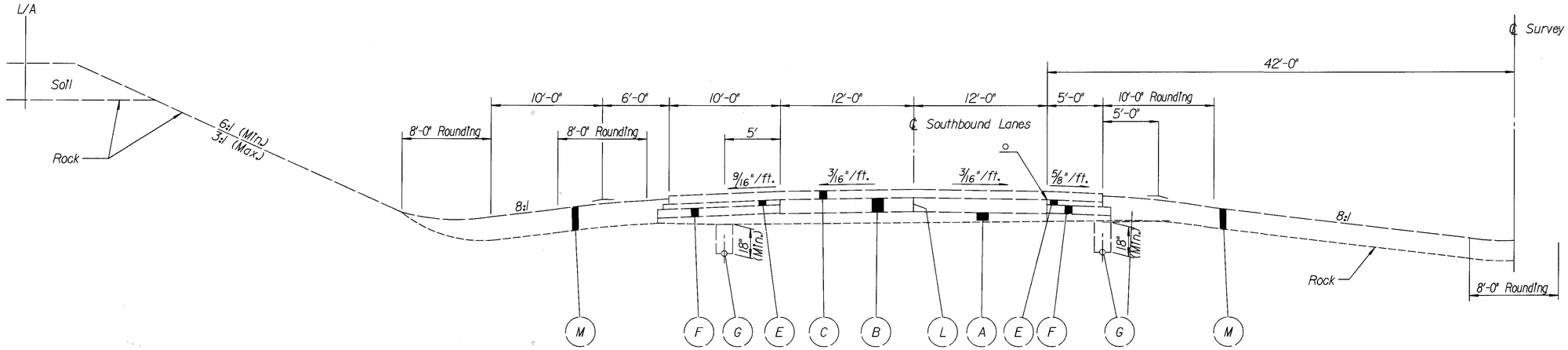
TIME : 10:58

EXISTING TYPICAL SECTIONS

MED-71-15.78

23
940

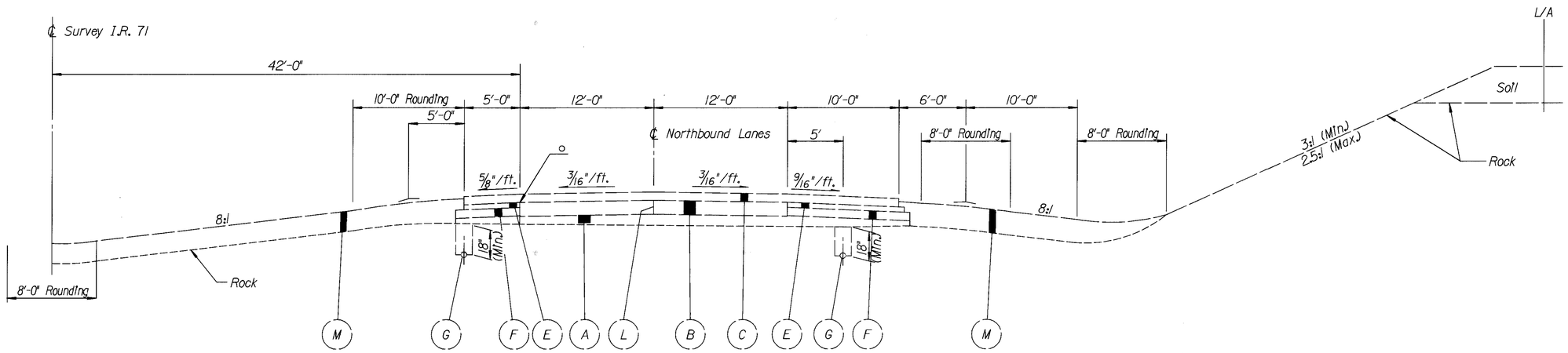



# NORMAL SECTION
# ROCK CUT SOUTHBOUND LANES

○ - Exist. Profile Grade Point (Mainline)

**Applies @:**

Sta. 859+63.07 to Sta. 865+63.07 = 600.00 Lin. Ft.




# NORMAL SECTION
# ROCK CUT NORTHBOUND LANES

**Applies @:**

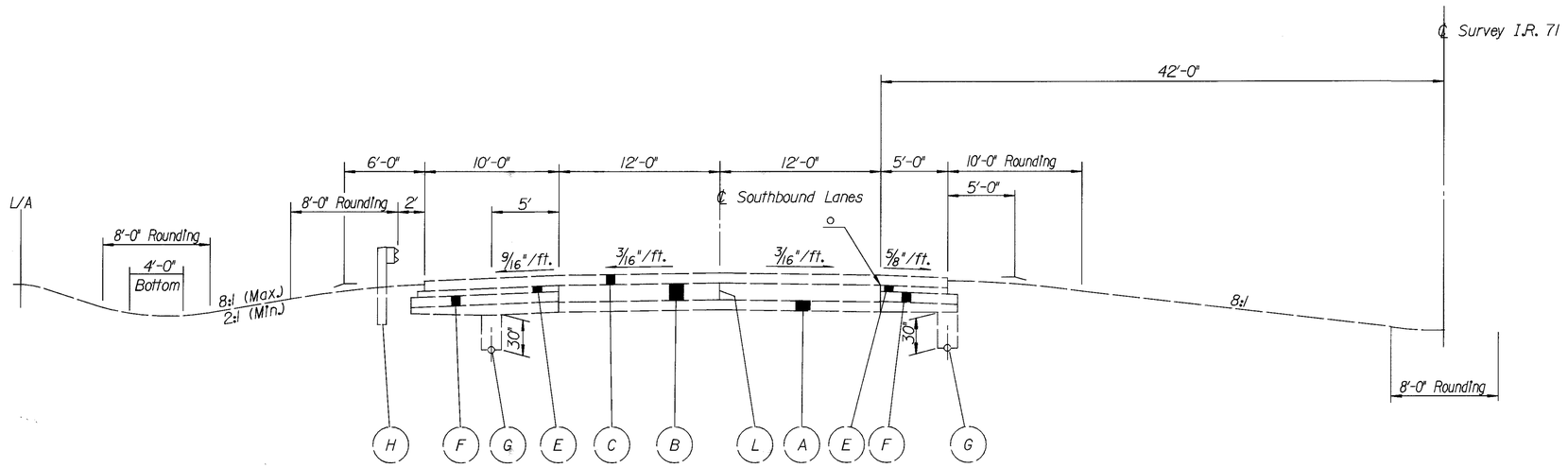
Sta. 859+63.07 to Sta. 865+63.07 = 600.00 Lin. Ft.

For existing legend, see sheet 23.

DESIGN FILE : i:\pd_med_lr71\dgn\Typicals\existing\exstyp2.dgn
USERNAME : jrogers
DATE : 30-NOV-1999
TIME : 10:58

EXISTING TYPICAL SECTIONS

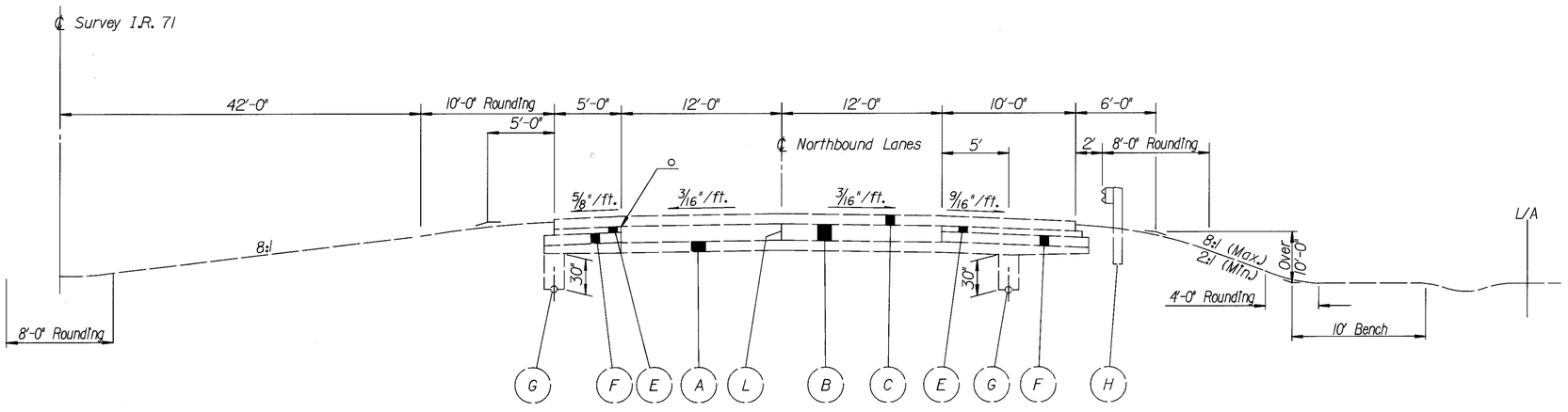
MED-71-15.78




## NORMAL SECTION
## SOUTHBOUND LANES

**Applies @:**

Sta. 865+63.07 to Sta. 889+02.73 = 2,339.66 Lin. Ft.
Sta. 891+39.45 to Sta. 921+63.07 = 3,023.62 Lin. Ft.
Total = 5,363.28 Lin. Ft.




## NORMAL SECTION
## NORTHBOUND LANES

**Applies @:**

Sta. 865+63.07 to Sta. 889+02.73 = 2,339.66 Lin. Ft.
Sta. 891+39.45 to Sta. 921+63.07 = 3,023.62 Lin. Ft.
Total = 5,363.28 Lin. Ft.

o- Exist. Profile Grade Point (Mainline)

For existing legend, see sheet 23.

# EXISTING TYPICAL SECTIONS

MED-71-15.78



DESIGN FILE : I:\pd_med_ir71\dgn\typicals\existing\exstyp3.dgn
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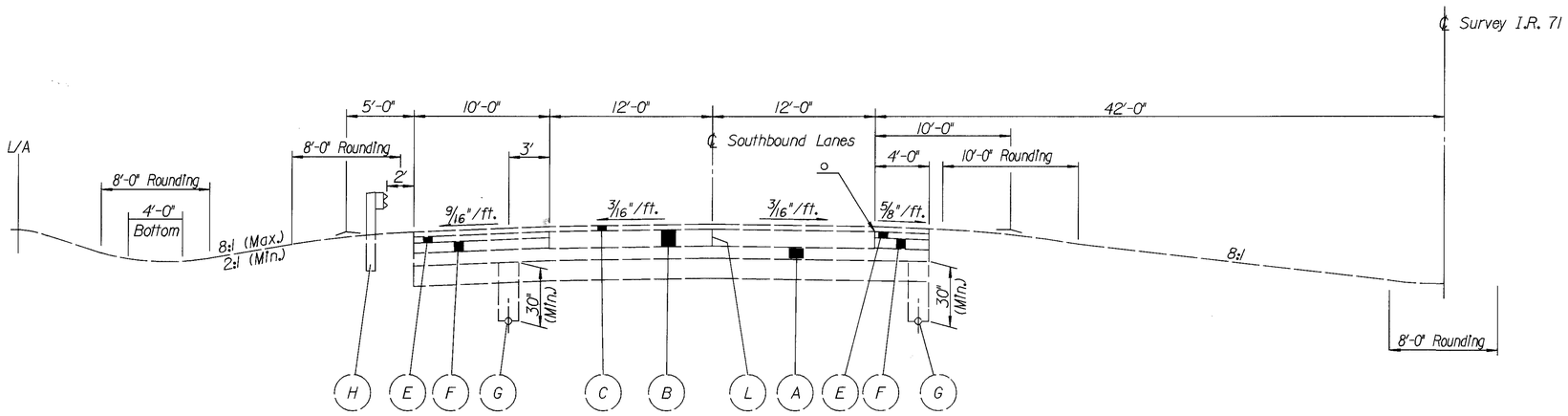
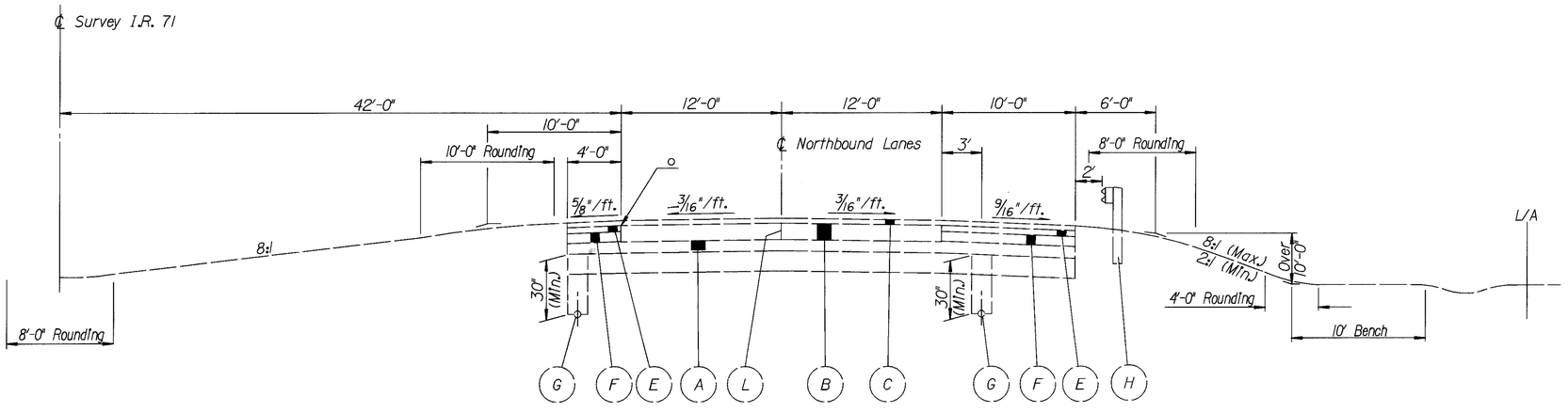
DATE : 30-NOV-1999
TIME : 10:59




## NORMAL SECTION
## SOUTHBOUND LANES

**Applies @:**

*Sta. 921+63.07 to Sta. 1416+18.19 = 49,485.00 Lin. Ft*




## NORMAL SECTION
## NORTHBOUND LANES

**Applies @:**

*Sta. 921+63.07 to Sta. 1416+18.19 = 49,485.00 Lin. Ft*

o- *Exist. Profile Grade Point (Mainline)*

*For existing legend, see sheet 23.*

# EXISTING TYPICAL SECTIONS

MED-71-15.78



DESIGN FILE : i:\pd_med_1r71\dgn\typicals\existing\exstyp4.dgn
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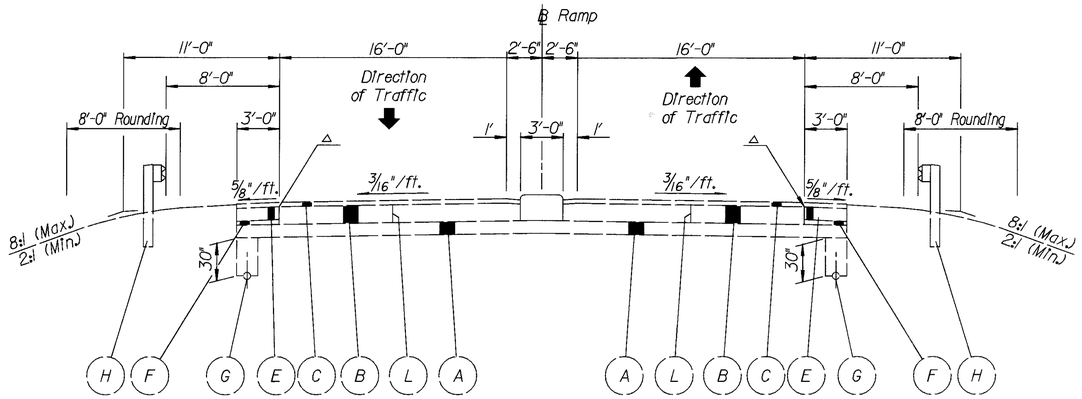
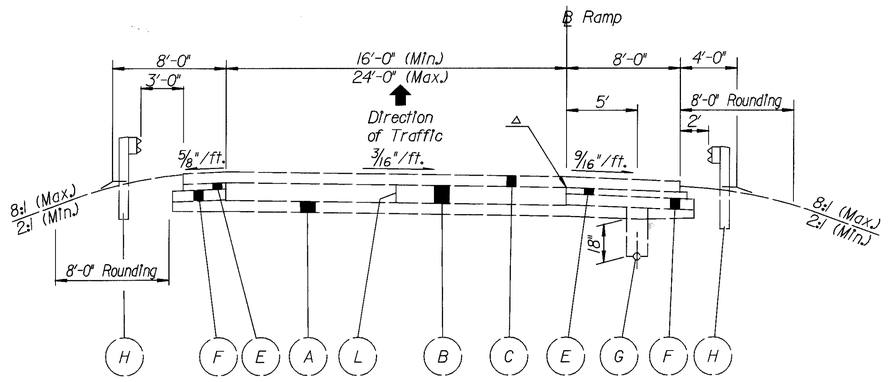
DATE : 30-NOV-1999
TIME : 10:59

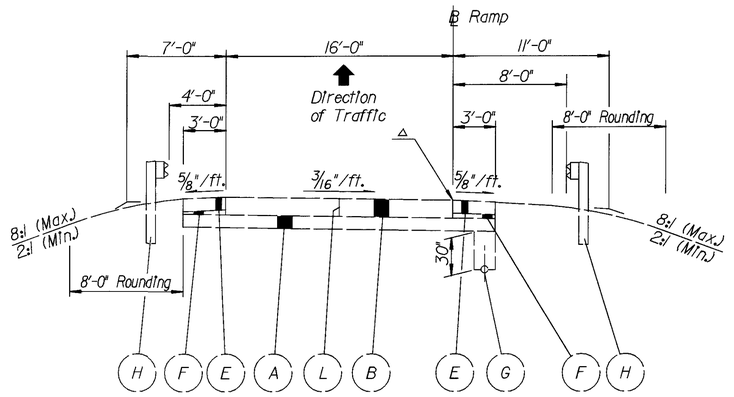
DESIGN FILE : I:\pd_med_1r71\dgn\typicals\existing\exstyp5.dgn
USERNAME : jrogers
DATE : 30-NOV-1999
TIME : 10:59



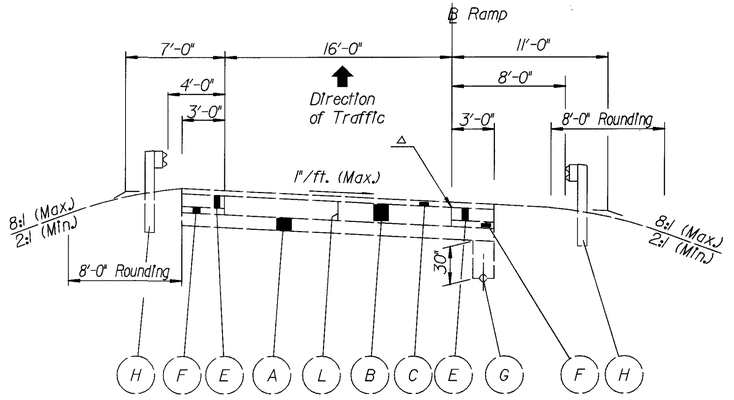

△ - Exist. Profile Grade Point (Ramp)

## RAMPS A,B,C&D @ S.R. 18 INTERCHANGE

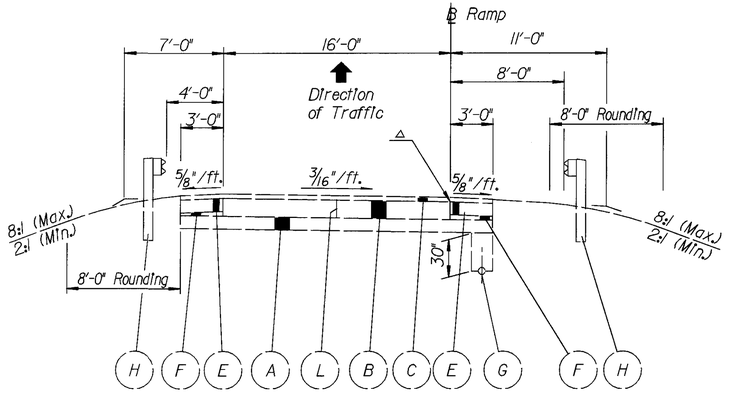



## NORMAL SECTION
## RAMPS @ NORTHBOUND REST AREA




## SUPERELEVATED SECTION
## RAMPS @ S.R. INTERCHANGE,
## S.R. 303 INTERCHANGE & SOUTHBOUND REST AREA

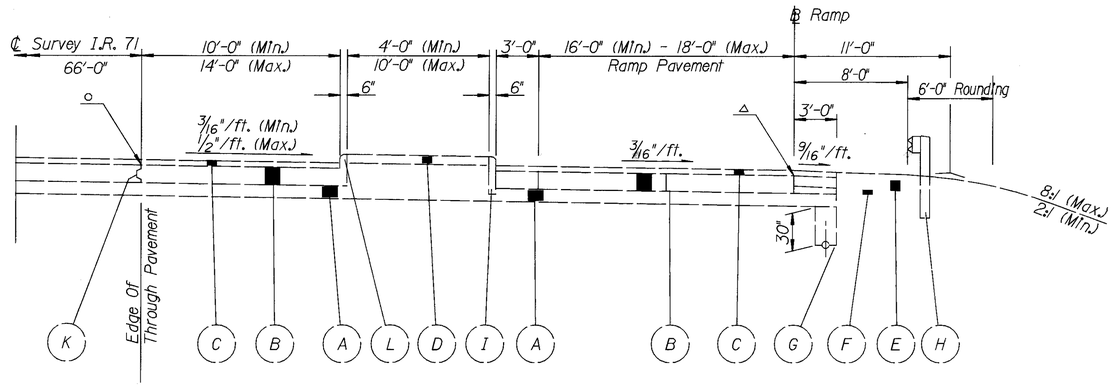



## NORMAL SECTION
## RAMPS @ S.R. INTERCHANGE,
## S.R. 303 INTERCHANGE & SOUTHBOUND REST AREA

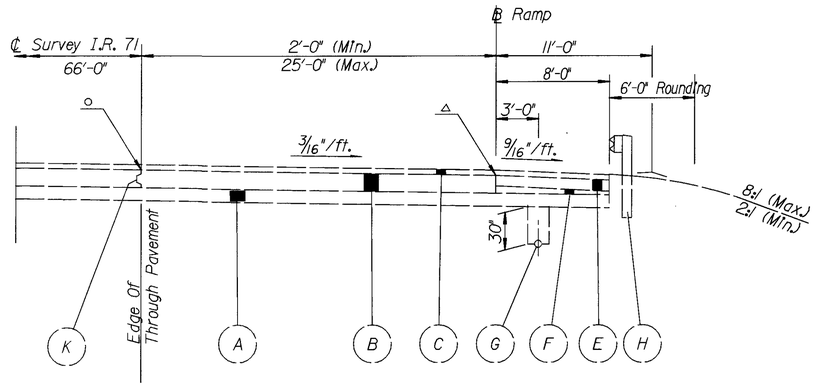
For existing legend, see sheet 23.

# EXISTING TYPICAL SECTIONS

MED-71-15.78

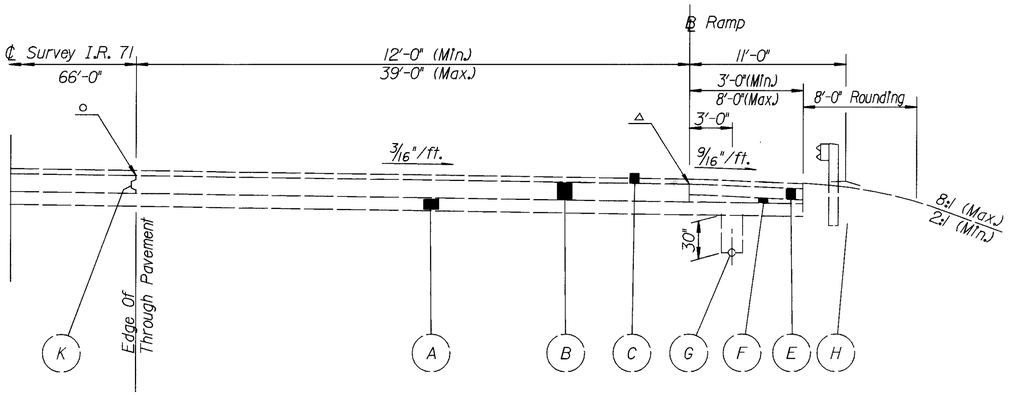



## EXIT TERMINAL

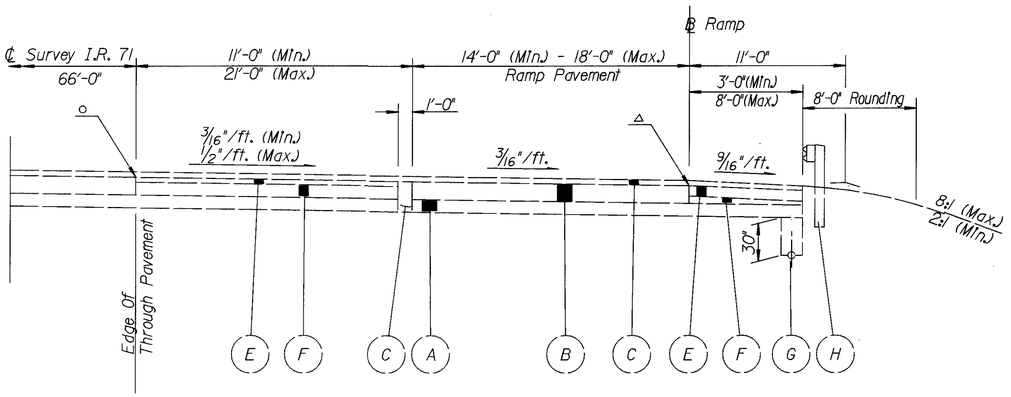



## ENTRANCE TERMINAL ACCELERATION LANE

△ - Exist. Profile Grade Point (Ramp)
○ - Exist. Profile Grade Point (Mainline)




## EXIT TERMINAL DECELERATION LANE




## ENTRANCE TERMINAL PACING LANE

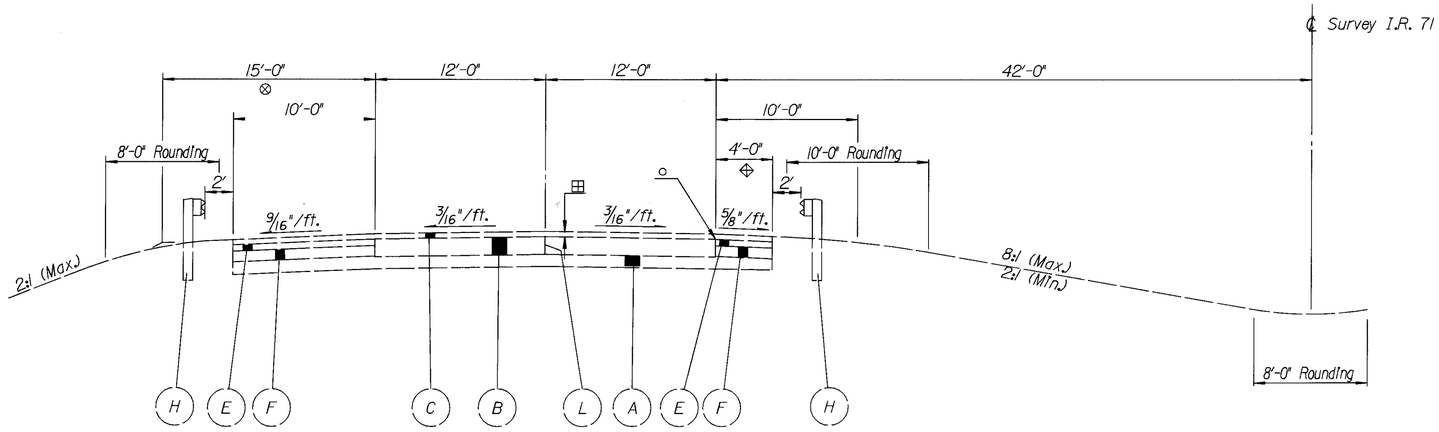
For existing legend, see sheet 23.

# EXISTING TYPICAL SECTIONS

MED-71-15.78



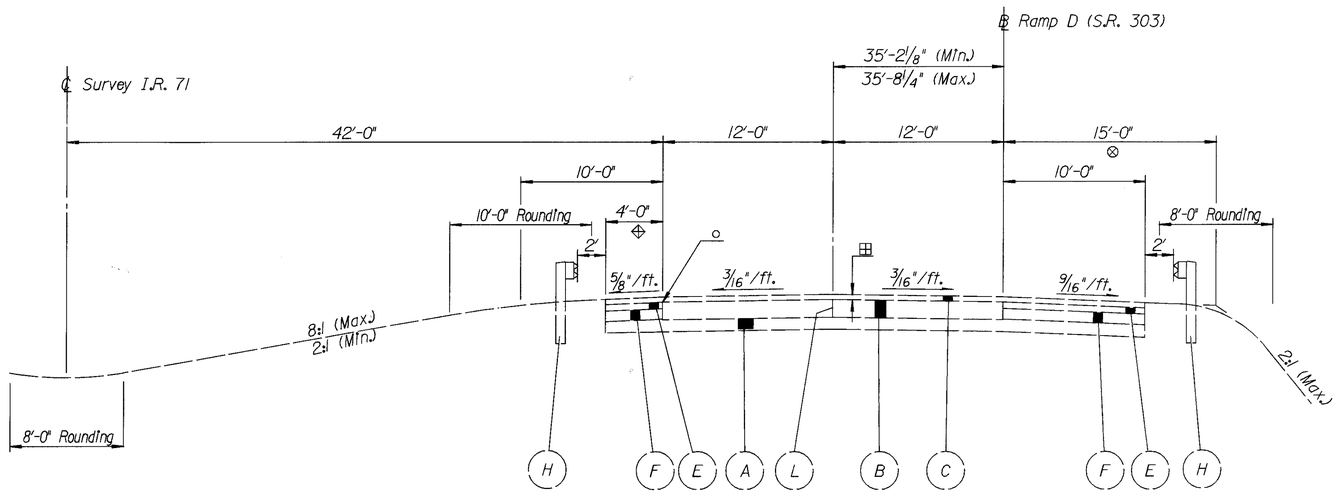
DESIGN FILE : i:\pd_med_ir71\dgn\typicals\existing\exstyp6.dgn
USERNAME : jrogers
DATE : 30-NOV-1999
TIME : 11:00




## APPROACH SLABS
## SOUTHBOUND LANES

**Applies @:**

| | | | | | |
|---|---|---|---|---|---|
| Sta. | 889+02.73 to Sta. 889+27.73 | = 25.00 Lin. Ft. | Sta. | 1050+73.84 to Sta. 1050+98.84 | = 25.00 Lin. Ft. |
| Sta. | 891+14.45 to Sta. 891+39.45 | = 25.00 Lin. Ft. | Sta. | 1053+58.79 to Sta. 1053+83.79 | = 25.00 Lin. Ft. |
| Sta. | 986+21.74 to Sta. 986+46.74 | = 25.00 Lin. Ft. | Sta. | 1103+01.82 to Sta. 1103+26.82 | = 25.00 Lin. Ft. |
| Sta. | 988+47.24 to Sta. 988+72.24 | = 25.00 Lin. Ft. | Sta. | 1105+62.09 to Sta. 1105+87.09 | = 25.00 Lin. Ft. |
| Sta. | 1012+30.19 to Sta. 1012+55.19 | = 25.00 Lin. Ft. | Sta. | 1267+59.43 to Sta. 1267+84.43 | = 25.00 Lin. Ft. |
| Sta. | 1013+47.69 to Sta. 1013+72.69 | = 25.00 Lin. Ft. | Sta. | 1269+78.07 to Sta. 1270+03.07 | = 25.00 Lin. Ft. |
| | | | | Total | = 300.00 Lin. Ft. |




## APPROACH SLABS
## NORTHBOUND LANES

**Applies @:**

| | | | | | |
|---|---|---|---|---|---|
| ◐ Sta. | 889+02.73 to Sta. 889+27.73 | = 25.00 Lin. Ft. | Sta. | 1050+73.84 to Sta. 1050+98.84 | = 25.00 Lin. Ft. |
| ◐ Sta. | 891+14.45 to Sta. 891+39.45 | = 25.00 Lin. Ft. | Sta. | 1053+58.79 to Sta. 1053+83.79 | = 25.00 Lin. Ft. |
| Sta. | 986+22.04 to Sta. 986+47.04 | = 25.00 Lin. Ft. | Sta. | 1102+73.57 to Sta. 1102+98.57 | = 25.00 Lin. Ft. |
| Sta. | 988+47.24 to Sta. 988+72.24 | = 25.00 Lin. Ft. | Sta. | 1106+33.84 to Sta. 1106+58.84 | = 25.00 Lin. Ft. |
| Sta. | 1012+20.43 to Sta. 1012+45.43 | = 25.00 Lin. Ft. | Sta. | 1269+78.07 to Sta. 1270+03.07 | = 25.00 Lin. Ft. |
| Sta. | 1013+57.37 to Sta. 1013+82.37 | = 25.00 Lin. Ft. | | Total | = 300.00 Lin. Ft. |

○ -Exist. Profile Grade Point (Mainline)
⊗ -16'-0" @ Structure MED 71-1685
⟡ - 5'-0" @ Structure MED 71-1685
⊞ -1¼" to 5½" @ Structure MED 71-1685
◐ -Structure MED 71-1685

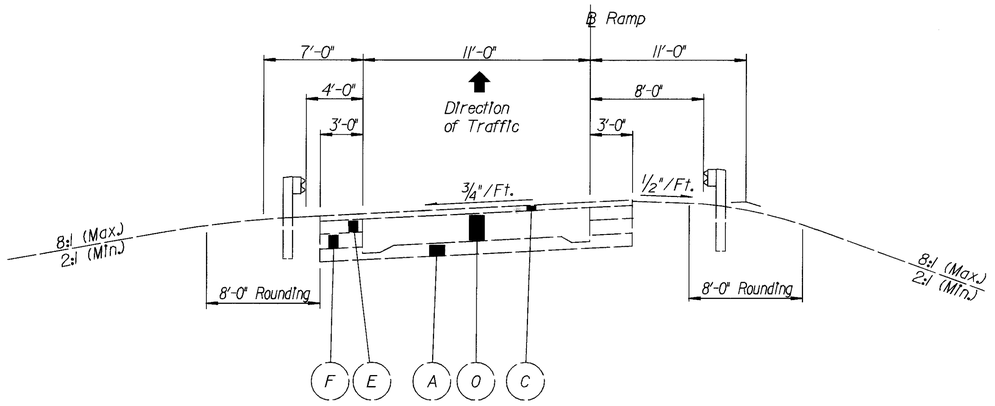
For existing legend, see sheet 23.

EXISTING TYPICAL SECTIONS

MED-71-15.78



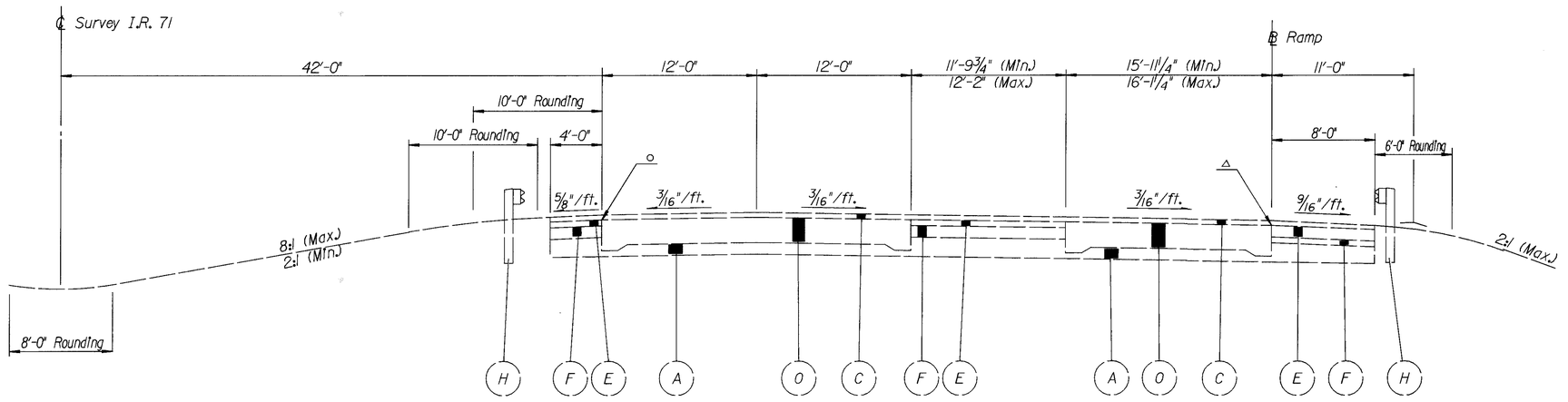
DESIGN FILE : I:\pd_med_lr71\dgn\typicals\existing\exstyp7.dgn
USERNAME : jrogers
DATE : 30-NOV-1999
TIME : 11:00




## APPROACH SLAB
## RAMPS B & C @ S.R. 3 INTERCHANGE

Ramp B - Sta. 81+32.23 to Sta. 81+57.23 = 25.00 Lin. Ft. Sta. 82+69.42 to Sta. 82.94.42 = 25.00 Lin. Ft.
Ramp C - Sta. 83+38.49 to Sta. 83+63.49 = 25.00 Lin. Ft. Sta. 84+36.51 to Sta. 84+61.51 = 25.00 Lin. Ft.
Total = 100.00 Lin. Ft.

△ - Exist. Profile Grade Point (Ramp)
○ - Exist. Profile Grade Point (Mainline)




## APPROACH SLAB
## NORTHBOUND LANES

**Applies @:**

Sta. 1267+59.43 (Rt.) to Sta. 1267+84.43 (Rt.) (Str. 2402) = 25.00 Lin. Ft.

For existing legend, see sheet 23.

EXISTING TYPICAL SECTIONS

MED-71-15.78

30
940

DESIGN FILE : I:\pd_med.ir71\dgn\typicals\existing\exstyp8.dgn
USERNAME : jrogers
DATE : 30-NOV-1999
TIME : 11:01

## ORIGINAL CONSTRUCTION PLANS

ORIGINAL CONSTRUCTION PLANS FOR THIS PROJECT ARE ON FILE IN THE DISTRICT 3 OFFICES OF THE OHIO DEPARTMENT OF TRANSPORTATION IN ASHLAND, OHIO. THE PROJECT PLANS ARE:

MED-I-13.63
MED-42-17.46
MED-42-21.94
MED/CUY-42-26.17/0.00
MED/CUY-71-17.46/0.00
MED-71-8.26 (1972)
MED-71-8.26 (1984)
MED-71-17.46

## WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OF OUTSIDE THESE WORK LIMITS.

## ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

## UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

Armstrong Utilities, Inc.
1141 LaFayette Road
Medina, Ohio 44256
800-589-3536

Cablevision of Ohio
8179 Dow Circle
Strongsville, Ohio 44136
800-686-2510

City of Brunswick
4095 Center Rd.
Brunswick, Ohio 44212
330-225-9144

GTE Telephone Operations - North Area
6223 Norwalk Road
Medina, Ohio 44256
330-722-9580

Ohio Edison Company Distribution
6326 Lake Avenue
Elyria, Ohio 44035
440-324-0231

Ohio Edison Company Transmission
76 South Main Street
Akron, Ohio 44308
330-384-5180

The East Ohio Gas Company, GSO Div.
7015 Freedom Avenue, N.W.
North Canton, Ohio 44720
330-497-5136

Columbia Gas Transmission
589 North State Road P.O. Box 629
Medina, Ohio 44256
330-721-4163

Buckeye Pipe Line Company
5002 Buckeye Road
P. O. Box 368
Emmaus, PA 18049-0368
610-770-5215

City of Cleveland - Division of Water*
1201 Lakeside Ave. - 6th Floor Engineering
Cleveland, Ohio 44114
216-664-2440

Columbia Gas of Ohio, Inc.
7080 Fry Rd.
Middleburg Hts. Ohio 44130
440-891-2455

Medina County Sanitary Dept.
P. O. Box 542
Medina, Ohio 44256
330-723-9585

AT&T
229 W. 7th St. - 10th Floor
Cincinnati, Ohio 45202
513-784-3228

Sun Pipe Line Company
Ten Penn Center - 26th Floor
1801 Market Street
Philadelphia, PA 19103-1699
215-977-6297 Ref. No. SPLI9990835

MFC Drilling
P.O. Box 715
46275 U.S. Route 36
Coshocton, Ohio 43815
740-622-5600

Gatherco, Inc.
6273 Frank Avenue NW
North Canton, Ohio 44720
330-498-9553

* CONTACT 3 DAYS PRIOR TO BEGINNING CONSTRUCTION NEAR CITY OF CLEVELAND WATER LINE.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

## ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

## CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

## AIRWAY-HIGHWAY CLEARANCE

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. THE CONTRACTOR IS ADVISED THAT NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 103 Ft.. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, THE CONTRACTOR IS ADVISED THAT COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA) WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. A COPY OF THE SUBMISSION AND TWO COPIES OF FORM 7460-1 SHALL BE FORWARDED TO THE ODOT OFFICE OF AVIATION. THE CONTRACTOR IS ADVISED THAT NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

THE FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGIONAL OFFICE
AIR TRAFFIC DIVISION AGL-530
2300 EAST DEVON AVENUE
DES PLAINES, ILLINOIS 60018
(847) 294-7458

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
(614) 793-5046

## CONVERSION OF METRIC STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

## ITEM 203, PROOF ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM OF 17 HOURS HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIPECTED BY THE ENGINEER.

## CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE RESPECTIVE GUARDRAIL ITEMS.

## GUARDRAIL LOCATIONS

THE CONTRACTOR SHALL STAKE ALL LOCATIONS OF GUARDRAIL FOR REVIEW BY THE PROJECT ENGINEER BEFORE THE GUARDRAIL IS ERECTED.

## REMOVAL OF TOPSOIL

THE EXISTING TOPSOIL SHALL BE REMOVED FROM 1 FOOT BEYOND THE PROPOSED INSIDE SHOULDER TO THE EXISTING INSIDE SHOULDER WITH AN AVERAGE UNDERCUT DEPTH OF 4 INCHES BELOW THE EXISTING GROUND SURFACE AND REPLACED WITH SUITABLE ITEM 203, EMBANKMENT MATERIAL AT THE LOCATIONS WHERE THE PROPOSED PAVEMENT SURFACE IS MORE THAN 12 INCHES ABOVE THE EXISTING GROUND. A CONTINGENCY QUANTITY OF 400 CU. YD. OF ITEM 203, EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION AND 400 CU. YD. OF ITEM 203, EMBANKMENT IS INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER AT THESE LOCATIONS.

## UNSUITABLE SOIL CONDITIONS

IF UNSUITABLE FOUNDATION SOILS ARE ENCOUNTERED IN THE AREAS OF THE PROPOSED ROADBED, THEY SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL MEETING THE REQUIREMENTS OF 203.08. THE LOCATIONS AND DIMENSIONS SHALL BE AS DETERMINED BY THE ENGINEER.

ITEM 203, EXCAVATION NOT INCLUDING EMBANKMENT = 500 CUBIC YARDS
CONSTRUCTION

ITEM 304, AGGREGATE BASE = 500 CUBIC YARDS

(QUANTITIES CARRIED TO THE GENERAL SUMMARY)

## REFERENCE MONUMENTS, AS PER PLAN

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON THIS SHEET.

ITEM 604, REFERENCE MONUMENT, AS PER PLAN = 29 EACH

(QUANTITIES CARRIED TO THE GENERAL SUMMARY)

## REFERENCE MONUMENTS, AS PER PLAN (CONT.)

THE EXISTING CENTERLINE REFERENCE MONUMENTS SHALL BE PRESERVED AT ALL LOCATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF THE EXISTING MONUMENTS PRIOR TO ANY WORK IN THE MEDIAN. IN THE EVENT A CONTRACTOR DISTURBS A MONUMENT, A NEW CENTERLINE REFERENCE MONUMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATION SHOWN ON THIS SHEET. THE CENTERLINE REFERENCE MONUMENTS SHALL BE ESTABLISHED AND SET BY AN OHIO REGISTERED SURVEYOR. THE SURVEYOR SHALL SUPPLY TO THE PROJECT ENGINEER A RECORD OF WHERE THE CENTERLINE REFERENCE MONUMENTS HAVE BEEN SET.

LOCATIONS OF THE EXISTING MONUMENTS ARE SHOWN ON THE CENTERLINE SURVEY PLATS FOR PROJECTS:

| | |
|---|---|
| MED-I-13.60 | SHEETS 286 & 287 |
| MED-42-17.46 | SHEETS 281 & 282 |
| MED-42-21.94 | SHEETS 265 & 266 |
| MED/CUY-42-26.17/0.00 | SHEET 272 |

EXISTING CENTERLINE REFERENCE MONUMENTS ARE LOCATED IN THE FIELD AT THE FOLLOWING LOCATIONS:

STA. 850+0.57 (0.03' RT.)
STA. 858+70.15 (℄)
STA. 865+63.77 (0.15' RT.)
STA. 873+27.01 (0.17' RT.)
STA. 882+63.66 (0.34' RT.)
STA. 887+84.60 (0.22' RT.) (TACKED HUB)
STA. 893+66.37 (0.46' RT.)
STA. 899+69.18 (0.21' RT.)
STA. 907+63.08 (0.02' LT.)
STA. 913+66.76 (0.02' RT.)
STA. 921+63.07 (BK) = STA. 921+63.16 (AHD)
STA. 926+63.07
STA. 931+55.82 (0.59' LT) (TACKED HUB)
STA. 936+62.64 (0.06' LT.)
STA. 941+62.58 (0.09' LT.)
STA. 947+22.46 (0.04' LT.)
STA. 951+62.40 (0.13' LT.)
STA. 956+59.43 (0.77' LT) (TACKED HUB)
STA. 961+66.47 (0.56' LT) (TACKED HUB)
STA. 966+74.21 (0.56' LT) (TACKED HUB)
STA. 971+62.90 (0.46' LT.)
STA. 976+62.85 (0.42' LT.)
STA. 981+62.76 (0.57' LT.)
STA. 986+23.72 (0.21' RT.) (TACKED HUB)
STA. 991+63.11 (0.82' LT.)
STA. 996+63.07
STA. 1001+63.07
STA. 1006+63.07
STA. 1011+63.07
STA. 1020+22.48 (BK) = STA. 1020+51.56 (AHD)
STA. 1026+33.99
STA. 1031+33.99
STA. 1036+33.99
STA. 1046+33.99
STA. 1061+33.99
STA. 1066+33.99
STA. 1071+33.99
STA. 1076+33.99
STA. 1081+33.99
STA. 1086+33.99
STA. 1091+33.99
STA. 1096+33.99
STA. 1101+33.99
STA. 1106+33.99
STA. 1111+33.99
STA. 1116+33.99
STA. 1121+33.99
STA. 1127+33.99
STA. 1141+33.99
STA. 1147+33.99
STA. 1151+33.99
STA. 1156+33.99
STA. 1161+33.99
STA. 1166+56.23 (P.T.)
STA. 1171+33.99
STA. 1176+33.99
STA. 1181+33.99
STA. 1186+33.99
STA. 1191+33.99
STA. 1196+33.99
STA. 1200+33.99
STA. 1203+62.81 (P.C.)
STA. 1226+33.99
STA. 1230+33.99
STA. 1233+67.27 (P.T.)
STA. 1237+33.99
STA. 1241+33.99
STA. 1246+33.99
STA. 1251+33.99
STA. 1256+33.99
STA. 1261+33.99
STA. 1271+33.99
STA. 1276+33.99
STA. 1286+33.99
STA. 1291+33.99
STA. 1296+33.99
STA. 1301+33.99
STA. 1305+33.99
STA. 1309+33.11 (P.C.)
STA. 1313+33.99
STA. 1316+33.99
STA. 1321+33.99
STA. 1326+33.99
STA. 1331+33.99
STA. 1336+33.99
STA. 1347+33.99
STA. 1352+89.89 (P.T.)
STA. 1356+33.99
STA. 1371+33.99
STA. 1377+32.63 (P.C.)
STA. 1386+33.99
STA. 1391+33.99
STA. 1395+33.99
STA. 1398+26.30 (P.T.)

IN ADDITION, THE LOCATIONS LISTED BELOW ARE APPROXIMATE FOR STATIONING (+/- 25') AND INDICATED AS LEFT OR RIGHT OF THE CENTERLINE ONLY FOR THE PURPOSE OF DEFINING A QUANTITY. THE ACTUAL LOCATIONS WILL BE STAKED BY THE DISTRICT THREE SURVEY DEPARTMENT PRIOR TO CONSTRUCTION. THE MONUMENTS WILL BE CONSTRUCTED AS CENTERLINE REFERENCE MONUMENTS PER THE STANDARD DRAWING RM-1.1.

PROPOSED REFERENCE MONUMENTS

| | | | | | |
|---|---|---|---|---|---|
| STA. 849+50 | RT. | STA. 1014+75 | RT. | STA. 1229+50 | LT. |
| STA. 865+25 | LT. | STA. 1030+50 | RT. | STA. 1247+25 | RT. |
| STA. 882+00 | RT. | STA. 1048+25 | LT. | STA. 1267+25 | RT. |
| STA. 900+75 | RT. | STA. 1064+75 | RT. | STA. 1288+25 | RT. |
| STA. 910+50 | RT. | STA. 1072+25 | RT. | STA. 1297+75 | RT. |
| STA. 929+25 | LT. | STA. 1094+25 | LT. | STA. 1319+25 | LT. |
| STA. 938+75 | LT. | STA. 1157+00 | RT. | STA. 1333+75 | RT. |
| STA. 950+00 | RT. | STA. 1175+50 | LT. | STA. 1349+25 | RT. |
| STA. 958+75 | LT. | STA. 1190+25 | LT. | STA. 1367+25 | RT. |
| STA. 986+75 | RT. | STA. 1205+00 | RT. | | |

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GENERAL NOTES

MED-71-15.78

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## ITEM 607, FENCE, TYPE 47, AS PER PLAN

THIS ITEM SHALL INCLUDE REMOVAL OF ALL RIGHT OF WAY FENCE AND ASSOCIATED HARDWARE, CLEARING OF THE NEW FENCE ALIGNMENT OF TREES AND BRUSH, FURNISHING AND APPLYING CUT STUMP HERBICIDE AND FURNISHING AND ERECTING NEW FENCE AND ASSOCIATED HARDWARE IN ACCORDANCE WITH THE PLAN AND CURRENT STANDARDS. THE CONTRACTOR IS ADVISED TO VISIT THE SITE TO DETERMINE THE CORRECT NUMBERS OF INDIVIDUAL FENCE COMPONENTS REQUIRED TO CONSTRUCT THE NEW FENCE IN ACCORDANCE WITH CURRENT STANDARDS.

THE INTENT OF THE PLAN IS TO CONSTRUCT THE NEW FENCE IN THE SAME TYPE AND LOCATION AS THE EXISTING FENCE, EXCEPT WHERE NECESSARY TO COMPLY WITH CURRENT STANDARDS (e.g. AT STRUCTURES etc.). WHERE EXISTING FENCE IS MISSING AND ITS LOCATION CANNOT BE DETERMINED FROM FIELD EVIDENCE, THE DEPARTMENT WILL STAKE THE RIGHT OF WAY LINE AND NEW FENCE SHALL BE LOCATED FROM THE RIGHT OR WAY LINE IN ACCORDANCE WITH CURRENT STANDARDS. IN ALL CASES, CURRENT STANDARD CONSTRUCTION DRAWINGS SHALL BE USED TO ESTABLISH THE CORRECT CONFIGURATION AND LOCATION OF THE NEW FENCE.

THE WORK SHALL INCLUDE REMOVAL OF ALL OF THE EXISTING RIGHT OF WAY FENCE AND ASSOCIATED HARDWARE AND DISPOSAL. CORNER, END AND ANCHOR POSTS AND THEIR ASSOCIATED CONCRETE ENCASEMENTS ARE TO COMPLETELY REMOVED. METAL POSTS SHALL BE REMOVED OR DRIVEN A MINIMUM OR 6 INCHES (150 mm) BELOW THE EXISTING GROUND SURFACE.

ALL TREES AND BRUSH WITH 2 FEET (0.6 m) EITHER SIDE OF THE FENCE AND A SUFFICIENT DISTANCE INSIDE THE FENCE ALIGNMENT TO PERMIT ITS CONSTRUCTION SHALL BE REMOVED IN ACCORDANCE WITH ITEM 201, EXCEPT THAT NO STUMP MAY EXCEED A HEIGHT OF 2 INCHES (50 mm) ABOVE THE EXISTING GROUND SURFACE. THE STUMPS OF ALL TREES AND BRUSH SHALL BE TREATED WITH AN EPA REGISTERED HERBICIDE LABELED FOR CUT STUMP TREATMENT. THE HERBICIDE SHALL BE SHIPPED IN NEW SEALED CONTAINERS BEARING THE MANUFACTURER'S LABEL. THE CONTRACTOR SHALL BE LICENSED BY THE OHIO DEPARTMENT OF AGRICULTURE AS A COMMERCIAL OR LIMITED COMMERCIAL APPLICATOR. ALL PERSONS APPLYING THE CUT STUMP HERBICIDE SHALL BE LICENSED COMMERCIAL OR LIMITED COMMERCIAL APPLICATORS OR UNDER THE DIRECT SUPERVISION OF THE SAME.

OHIO LAW REGULATES THE DISPOSAL OF LANDSCAPE WASTER THAT RESULT FROM ROADWAY CLEARING AND GRUBBING OPERATIONS. THE REGULATED WASTES INCLUDES BRUSH, TREES, STUMPS, TREE TRIMMINGS, BRANCHES, WEEDS, LEAVES, GRASS, SHRUBBERY, YARD TRIMMINGS, CROP RESIDUE, AND OTHER PLANT MATTER, EXCLUDING SOIL AND GARBAGE. THIS MATERIAL MAY BE BURIED IN NONSTRUCTURAL AREAS ON THE PROJECT SITE OR RIGHT-OF-WAY, WHERE PERMITTED BY THE ENGINEER.

ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AND SEEDED ACCORDING TO ITEM 870 AND INCLUDED IN ITEM 607 FOR PAYMENT.

THE FOLLOWING ESTIMATED QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECT BY THE ENGINEER:

| | |
|---|---|
| ITEM 607, FENCE, TYPE 47, AS PER PLAN | = 68428 LIN. FT. |
| ITEM 607, FENCE, TYPE 47RA, AS PER PLAN | = 1878 LIN. FT. |
| ITEM 607, FENCE, TYPE CLT, AS PER PLAN | = 37082 LIN. FT. |
| ITEM 601, ROCK CHANNEL PROTECTION, TYPE B WITH FILTER | = 50 CU. YD. |

## WATERING AND MOWING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR THE PERMANENT SEEDED AREAS, AS PER 870 :

ITEM 870, WATER = 1599 M. GAL. (FROM SHEET 136)

ITEM 870, MOWING = 1666 M. SQ. FT. (FROM SHEET 136)

## ITEM 870, SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 870, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.
THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

870, SEEDING AND MULCHING = 707,575 + 24,186 + 8,618 = 740,379 SQ. YD.

## PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1M.

## ITEM 202, RAISED PAVEMENT MARKERS REMOVED FOR STORAGE

NUMBER AND LOCATION OF EXISTING RAISED PAVEMENT MARKERS TO BE REMOVED FOR STORAGE ON THE THE PROJECT ARE:

| | |
|---|---|
| S.R. 18 INTERCHANGE | 122 |
| I.R. 271 CONNECTOR | 91 |
| S.R. 3 INTERCHANGE | 142 |
| S.B. REST AREA | 65 |
| N.B. REST AREA | 62 |
| S.R. 303 INTERCHANGE | 118 |
| MAINLINE | 1417 |
| TOTAL | 2017 |

(QUANTITIES CARRIED TO THE GENERAL SUMMARY.)
THE CONTRACTOR SHALL DELIVER THESE RPM's TO THE MEDINA COUNTY GARAGE.

## TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE PLACED BY THE CONTRACTOR WITH THE ENGINEER'S CONCURRENCE FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

| | |
|---|---|
| ITEM 877, TEMPORARY SEEDING AND MULCHING | = 148,000 SQ. YD. |
| ITEM 877, TEMPORARY SLOPE DRAINS | = 3,830 LIN. FT. |
| ITEM 877, TEMPORARY SEDIMENT BASINS AND SEDIMENT DAMS | = 40,870 CU. YD. |
| ITEM 877, TEMPORARY PERIMETER FILTER FABRIC FENCE | = 35,725 LIN. FT. |
| ITEM 877, TEMPORARY DITCH CHECK FILTER FABRIC FENCE | = 2,484 LIN. FT. |
| ITEM 877, TEMPORARY INLET PROTECTION FILTER FABRIC FENCE | = 1,720 LIN. FT. |
| ITEM 877, TEMPORARY DIKES | = 7,660 CU. YD. |
| ITEM 877, TEMPORARY DITCH PROTECTION | = 3500 SQ. YD. |
| ITEM 877, SEDIMENT REMOVAL | = 10,218 CU. YD. |
| ITEM 601, ROCK CHANNEL PROTECTION, TYPE C (WITHOUT FILTER) | = 12,000 CU. YD. |
| ITEM 870, MOWING | = 330 M. SQ. FT. |
| ITEM 870, COMMERCIAL FERTILIZER | = 31.60 TON |
| ITEM 870, REPAIR SEEDING AND MULCHING | = 37,000 SQ. YD. |
| ITEM 870, WATER | = 320 M. GAL. |

## REMOVAL OF UNSUITABLE SUBGRADE

CONTINGENCY QUANTITIES FOR ITEM 203, EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION AND ITEM 304, AGGREGATE BASE ARE PROVIDED FOR REMOVAL AND REPLACEMENT OF UNSUITABLE SUBGRADE MATERIALS AT THE FOLLOWING LOCATIONS:

1) STA. 1091+50 TO STA. 1092+50
STA. 1129+50 TO STA. 1130+00
STA. 1147+50 TO STA. 1148+50
STA. 1152+00 TO STA. 1164+00
STA. 1179+50 TO STA. 1180+50
STA. 1355+50 TO STA. 1356+50
STA. 1403+50 TO STA. 1404+50
(1750)(3)(56)(2)(1/27) = 21,778 CU.YD.
REMOVAL LIMITS SHALL BE FROM 1 FT. OUTSIDE OF THE LEFT SHOULDER TO 1 FT. OUTSIDE OF THE RIGHT SHOULDER WITH AN UNDERCUT DEPTH OF 36 INCHES BELOW THE PROPOSED SUBGRADE.

2) STA. 1343+50 TO STA. 1344+50
(100)(4)(56)(2)(1/27) = 1660 CU.YD.
REMOVAL LIMITS SHALL BE FROM 1 FT. OUTSIDE OF THE LEFT SHOULDER TO 1 FT. OUTSIDE OF THE RIGHT SHOULDER FOR THE SOUTHBOUND LANES WITH AN UNDERCUT DEPTH OF 48 INCHES BELOW THE PROPOSED SUBGRADE.

| | |
|---|---|
| ITEM 203, EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION | = 23,438 CU.YD. |
| ITEM 304, AGGREGATE BASE | = 23,438 CU.YD. |

QUANTITIES FOR USE AT THESE LOCATIONS ARE AS DIRECTED BY THE ENGINEER. THE PRICES BID SHALL INCLUDE ALL ASSOCIATED LABOR, MATERIAL AND EQUIPMENT COSTS.

## EROSION CONTROL

ITEMS 601 AND 670 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 670. THE ENGINEER SHALL CHECK AND NONPERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET THE REQUIREMENT OF 108.04.

## ITEM 605, AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

## ITEM 202, CATCH BASIN ABANDONED

ANY EXISTING CONDUIT IN CATCH BASINS TO BE ABANDONED SHALL BE CONNECTED THROUGH THE STRUCTURE.

## ITEM 604, CATCH BASIN, NO. 4, 4A, 5 AND 5A, AS PER PLAN

REINFORCING BARS AS PER DETAIL ON SHEET 504 SHALL BE PROVIDED FOR CATCH BASIN NUMBERS 4, 4A, 5 AND 5A. THE TOTAL COST OF THE MATERIAL, EQUIPMENT, LABOR AND COMPLETE INSTALLATION OF THE REINFORCING BARS SHALL BE INCLUDED WITH THE UNIT PRICE BID FOR ITEM 604, CATCH BASIN, NO. 4, 4A, 5, AND 5A, AS PER PLAN.

## REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

## ITEM SPECIAL, AIR SPEED ZONE MARKING

SPEED MEASUREMENT MARKINGS SHALL BE WHITE AND 2 FEET WIDE. THE MARKINGS SHALL BE 4 FEET IN LENGTH AND BE PLACED ON THE SHOULDER STARTING FROM THE EDGE LINE OF THE PAVED SURFACE AT 0.25 MILE INTERVALS OVER A 1 MILE LENGTH OF ROADWAY. THE ZONE SHALL START AT STA. 1110+37 NORTHBOUND AND STA. 1237+09 SOUTHBOUND ON BOTH INSIDE AND OUTSIDE SHOULDERS. THE MARKINGS SHALL BE LAID OUT BY A REGISTERED SURVEYOR. A RECORD SHALL BE KEPT AND COPIES MADE AVAILABLE TO LAW ENFORCEMENT OFFICERS. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM SPECIAL, AIR SPEED ZONE MARKING = 2 EACH
THIS ITEM SHALL MEET THE REQUIREMENTS OF CMS 644.

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GENERAL NOTES

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## ITEM 606, IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING IMPACT ATTENUATORS:

1) THE C-A-T MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE C-A-T SYSTEM IS CONSIDERED TO BE 31'3" [9525mm] LONG.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE PRE-APPROVED SHOP DRAWINGS.

| DWG. # | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL |
|---|---|---|---|
| SS245M | CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS FOR USE AS A LONGITUDINAL MEDIAN BARRIER TERMINAL OR CRASH CUSHION ATTENUATOR | 4/10/97 | 3/6/98 |
| SS224M | C-A-T TRANSITION TO MEDIAN BARRIER GUARDRAIL PLAN, ELEVATION & SECTIONS | 4/26/96 | 3/6/98 |
| SS226M | C-A-T TRANSITION TO VERTICAL WALL OR PIER PLAN, ELEVATION & SECTIONS | 4/26/96 | 3/6/98 |

2) THE BRAKEMASTER MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WICKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

THE LENGTH OF THE BRAKEMASTER SYSTEM IS CONSIDERED TO BE 32'8" [9957mm] LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS.

| DWG. # | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL |
|---|---|---|---|
| 92-00-02 | BRAKEMASTER GENERAL ASSEMBLY (BIDIRECTIONAL SYSTEM) | 3/10/97 | 3/6/98 |
| 92-00-82 | BRAKEMASTER (BIDIRECTIONAL) WITH FOUNDATION TUBES | 2/9/98 | 3/6/98 |
| 9202024 | ANCHOR ASSEMBLY, FOUNDATION TUBE, 6.5 FT., BRS | 6/12/97 | 3/6/98 |

THE FACE OF THE TYPE 1-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 36" W x 12" [915mm W x 305mm H]. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1-98 [(UNIDIRECTIONAL OR BIDIRECTIONAL)], EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

## ITEM 407, TACK COAT AND ITEM 407, TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF:

ITEM 407, TACK COAT = 0.10 GALLONS/SQ. YD.

ITEM 407, TACK COAT FOR INTERMEDIATE COURSE = 0.05 GALLONS/SQ. YD.

## ROCK EXCAVATION

SECTION 203.04(b) OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS CALLS FOR EXCAVATION OF ROCK TO A DEPTH OF 18" BELOW THE SUBBASE FOR THE CROSS-SECTION WIDTH OF THE ROADWAY BETWEEN POINTS 1 FOOT BEYOND THE SHOULDERS. THE REQUIREMENT IS WAIVED UNDER THE EXISTING CONCRETE PAVEMENT AND OUTSIDE PAVED SHOULDERS. ROCK EXCAVATION DEPTH OF 18" SHALL BE PROVIDED FROM THE EDGE OF EXISTING CONCRETE PAVEMENT ON THE INSIDE TO 1 FOOT BEYOND THE INSIDE SHOULDER. AREAS OF POSSIBLE ROCK EXCAVATION ARE STA. 856+00 TO STA. 864+00 AND STA. 1019+75 TO STA. 1020+25.

## ITEM 603, CONDUIT BORED AND JACKED

WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING AND JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 22 FEET TO THE EDGE OF PAVEMENT. TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SPECIFICATION REQUIREMENTS FOR CLASS B BEDDING SHALL BE DISREGARDED. IF A CASING PIPE IS USED IN THE BORING AND JACKING OPERATION, THE VOID BETWEEN IT AND THE INTERIOR CARRIER PIPE SHALL BE COMPLETELY FILLED WITH ITEM 613 SAND, GROUT OR OTHER MATERIAL APPROVED BY THE ENGINEER. THE CONTRACTOR HAS THE OPTION TO USE TUNNELING TO INSTALL THE CONDUIT. REQUIREMENTS SHOWN FOR CONDUIT BORED AND JACKED SHALL APPLY TO TUNNELING.

CONSTRUCTION OF 48" CONDUIT SHALL BE DONE AFTER THE 10HP42 PILES FOR STRUCTURE MED-71-1992 L&R ARE IN PLACE. THE CONTRACTOR SHALL MAINTAIN FLOW FOR EXISTING 48" CORREGATED METAL PIPE BY METHODS APPROVED BY THE PROJECT ENGINEER. ALL COSTS SHALL BE INCLUDED IN PRICE BID FOR ITEM 603, CONDUIT BORED AND JACKED, TYPE A, 706.02, D-LOAD 3000.

## ITEM 606, ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS:

1) THE ET-2000 (1997) MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS.

| DWG. # | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL |
|---|---|---|---|
| SS265M | ET-2000 (1997) PLAN, ELEVATION & SECTIONS | 6/20/97 | 3/6/98 |

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS.

| DWG. # | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL |
|---|---|---|---|
| SKT-4M | SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES | 12/11/97 | 3/6/98 |

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" x 18".

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

## ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE A

THIS ITEM SHALL INCLUDE THE COST OF REMOVAL OF THE EXISTING TYPE A, ANCHOR ASSEMBLY INCLUDING ALL POSTS, HARDWARE AND RAIL ELEMENTS AND THE CONCRETE ANCHORS. ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF.

THE EXISTING CONCRETE ANCHOR AND CONCRETE POSTS SHALL BE REMOVED ENTIRELY. ALL HOLES REMAINING AGTER REMOVAL SHALL BE FILLED WITH GRANULAR MATERIAL OR EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION. ALL FILL MATERIAL SHALL BE THOROUGHLY COMPACTED AND LEVELED, AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE A.

## ITEM 606, ANCHOR ASSEMBLY, TYPE B-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO INC., 1170 N. STATE STREET, GIROD, OHIO 44420 (TELEPHONE: 330-545-4373)

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37'-6" [11.43M)], INCLUSIVE OF THREE 12'-6" [(3.81M)] LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

| DWG. # | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL |
|---|---|---|---|
| SS444<br>SS444M | SLOTTED RAIL TERMINAL<br>POST LAYOUT AND ERECTION DETAILS<br>SRT-350 (12.5, 8 POST) | 7/12/99 | 8/27/99 |
| SS425M | C-A-T TRANSITION TO MEDIAN BARRIER GUARDRAIL PLAN, ELEVATION & SECTIONS | 6/21/97 | 3/6/98 |
| | | | |

2) THE FLEAT-350, MANUFACTURED BY ROAD SYSTEMS, INC., 7634 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917)

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37'-6" [11.43M)], INCLUSIVE OF THREE 12'-6" [(3.81M)] LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

| DWG. # | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL |
|---|---|---|---|
| FLT-M | FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) ASSEMBLY | 4/16/98 | 7/31/98 |

GRADING SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING GR-4.3 M.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 36" W X 12" H [915mm W X 305mm H] FOR TYHE SRT-350 AND 14" W X 20" [350 mm W X 500 mm H] FOR THE FLEAT

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2-98 BIDIRECTIONAL, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

## CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY. PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

CALCULATED M.LOPEZ CHECKED D.J.V

GENERAL NOTES

MED-71-15.78

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## ITEM 201, CLEARING AND GRUBBING, AS PER PLAN

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN.

IN ADDITION TO THE REQUIREMENTS OF ITEM 201, ALL VEGETATION MECHANICALLY REMOVED BY CUTTING OR MOWING SHALL HAVE A CUT STUMP HERBICIDE TREATMENT APPLIED TO EACH INDIVIDUAL REMAINING STUMP WITHIN TWO (2) HOURS OF CUTTING CARE SHALL BE EXERCISED TO APPLY TREATMENT ONLY TO INDIVIDUAL STUMPS SO AS NOT TO HARM OTHER VEGETATION. THE CUT STUMP TREATMENT SHALL BE GARLON 4 OR PATHFINDER II RTU APPLIED IN ACCORDANCE WITH LABEL DIRECTIONS. APPLICATORS OF THE CUT STUMP TREATMENT SHALL BE CURRENTLY LICENSED OHIO COMMERCIAL APPLICATORS IN THE APPROPRIATE CATEGORY. EVIDENCE OF VALID LICENSES SHALL BE PROVIDED TO THE ENGINEER FOR VERIFICATION.

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN.

## PRIVATE SIGNS

OHIO LOGO SIGNS (BURGER KING, McDONALDS, ..etc.) WHICH APPEAR WITHIN THE PROJECT ARE PRIVATELY OWNED SIGNS. THE LOGO SIGNS WHICH NEED TO BE REMOVED (AS AGREED BETWEEN THE CONTRACTOR AND THE ENGINEER) SHALL BE PERFORMED BY OHIO LOGO, INC.

THE CONTRACTOR SHALL NOTIFY OHIO LOGO, INC. IN WRITING A MINIMUM OF THIRTY (30) DAYS IN ADVANCE OF THE DATE THE PRIVATE SIGN(S) NEED REMOVED. THE ADDRESS IS: OHIO LOGO, INC., 4384 TULLER ROAD, DUBLIN, OHIO 43017 (TELEPHONE: 1-800-860-5646).

THE CONTRACTOR SHALL ALSO NOTIFY THE OHIO LOGO, INC. IN WRITING WHEN THEY CAN RE-ERECT THE SIGNS THAT HAVE BEEN PREVIOUSLY REMOVED.

## RELATIONSHIP BAR CHART SCHEDULE

THE RELATIONSHIP BAR CHART SCHEDULE SHALL BE COMPUTER GENERATED ONLY. HAND DRAWN SCHEDULES ARE NOT ACCEPTABLE. SEE THE PROPOSAL NOTE FOR ADDITIONAL REQUIREMENTS.

## PROTECTION OF RIGHT-OF-WAY LANDSCAPING

THE CONTRACTOR SHALL CONSTRICT ALL OF HIS/HER ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FT FROM THE EDGE OF PAVEMENT. SHOULD THE CONTRACTOR WISH TO USE ANY AREA OUTSIDE THESE LIMITS, A REQUEST IN WRITING MUST BE SUBMITTED TO THE PROJECT ENGINEER. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA THAT THE CONTRACTOR PLANS TO USE AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. THE ENGINEER SHALL APPROVE THE REQUEST IN WRITING BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA. PRIOR TO BEGINNING WORK, THE CONTRACTOR, SUPERINTENDENT OR HIS REPRESENTATIVE, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY SHALL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE. ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS DIRECTED BY THE PROJECT ENGINEER.

## STORM WATER POLLUTION PREVENTION PLAN

THE CONDITIONS OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT (SEE PROPOSAL) SHALL BE MET DURING ALL STAGES OF CONSTRUCTION. THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED. INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE CONCURRENT WITH CLEARING AND GRUBBING AND/OR GRADING OPERATIONS. ALL REASONABLE ATTEMPTS SHALL BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND. AREAS TO REMAIN DORMANT FOR MORE THAN 45 DAYS SHALL BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES. ADDITIONAL QUANTITIES OF TEMPORARY SOIL EROSION AND SEDIMENT CONTROL ITEMS ARE GIVEN IN THE GENERAL NOTES.

## ASBESTOS NOTIFICATION AND REMOVAL

An asbestos survey of the bridges scheduled for demolition or renovation was conducted by a certified asbestos hazard evaluation specialist. Approximately 320 Sq. Ft. of Regulated Asbestos Containing Materials was identified on bridge no. MED-71- 1918 L&R over Wilbur Road.
The removal and disposal of the asbestos containing material must comply with the Ohio Administrative Code, the Occupational Safety and Health Administrative (OSHA) regulations and the National Emission Standard for Hazardous Air Pollutants (NESHAP) Standard for Asbestos.

The contractor shall provide an individual trained in the provisions of the NESHAP on site, to direct the removal of the asbestos containing material.

A copy of the Ohio Environmental Protection Agency (OEPA) Notification of Demolition and Renovation Form, partially completed and signed by the bridge owner, will be provided to the successful bidder. The contractor shall complete the form and submit it to the District Construction Engineer. The form may be completed at the preconstruction meeting. The District Construction Engineer shall submit the form to the OEPA at least ten (10) working days prior to the start of the demolition of the bridge. The District Contruction Engineer shall provide a copy of the completed form to the contractor.

Information which may be required on the form will include:

- -The contractor's name and address.
- -The asbestos removal sub-contractor's name and address.
- -The scheduled dates for the start and completion of the bridge removal or renovation.
- -The dates and hours of operation for the asbestos removal.
- -A description of the planned demolition or renovation work and the method(s) to be used.
- -A description of work practices and engineering controls to be used to prevent emissions of asbestos at the site.
- -The name and addresses of waste transporters to be used on the project.
- -The name and address of the Waste Disposal Facility (licensed by the local health department and permitted by the OEPA) to be used.
- -A description of procedures to be followed in the event that unexpected asbestos is found or previously non-friable asbestos material becomes crumbled, pulverized or reduced to powder.

A copy of the OEPA form is available for inspection at the ODOT, District Three Office, 906 N. Clark Street, Ashland, Ohio, 44805.

Basis of Payment
The contractor shall furnish all fees, labor, equipment and materials necessary to complete, submit and comply with the OEPA Notification form and to remove, transport and dispose of the asbestos containing material. Payment for this work shall be made under the contract lump sum price bid for Item Special-Asbestos Abatement.

(QUANTITY CARRIED TO THE GENERAL SUMMARY)

## ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH LEAN GROUT, ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF LINEAR FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED.

THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER LINEAR FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

### ASBESTOS NOTIFICATION

An asbestos survey of the bridge(s) scheduled for demolition or renovation was conducted by a certified asbestos hazard evaluation specialist. The survey determined that no asbestos is present on the bridge(s).

The bridges which were surveyed and contained no asbestos are: MED-71-1685 L & R (I-71 over sr 18), MED-71-1828 (Granger Road),MED-71-1870 L & R (I-71 over I-271), and MED-71-1992 L & R (I-71 over Rocky River), MED-71-2088E (Ramp B @ SR 3 over Plum Creek), MED-71-2090 L & R (I-71 over SR 3), MED-71-2092W (Ramp C @ SR 3 over Plum Creek), and MED-71-2402 L & R (I-71 over SR 303).

A copy of the Ohio Environmental Protection Agency (OEPA) Notification of Demolition and Renovation form, partially completed and signed by the bridge owner, will be provided to the successful bidder at the preconstruction meeting. The contractor shall complete the form and return it to the District Construction Engineer. The completion of this form may be performed at the preconstruction meeting. The District Construction Engineer shall submit it to (OEPA District Office or the Local Air Authority) at least ten (10) working days prior to the start of the demolition of the bridge. The District Construction Engineer shall provide a copy of the completed form to the contractor. The contractor shall not commence demolition of the structure until the above requirements are met.

Information required on the form will include:
- The contractors name and address
- The scheduled dates for the start and completion of the bridge removal or renovation
- A description of the planned demolition or renovation work and the method(s) to be used

A copy of the OEPA form is available for inspection at the ODOT District 3 Office, 906 N. Clark Street, Ashland, Ohio, 44805.

Basis for Payment
The contractor shall furnish all fees, labor, and material necessary to complete and submit the OEPA Notification form. Payment for this work shall be included in the bid item 202 for Structure Removal.

## ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 203.05. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

| | |
|---|---|
| SPECIAL, PIPE CLEANOUT | 1,200 LIN. FT. |

(QUANTITIES CARRIED TO THE GENERAL SUMMARY)

## ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE A

FOR DETAILS, SEE STANDARD DRAWING BP-2.3.

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GENERAL NOTES

MED-71-15.78



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## EXISTING UNDERDRAINS

ALL EXISTING UNDERDRAINS NOT REMOVED OR RECONNECTED TO PROPOSED UNDERDRAINS DURING PROPOSED CONSTRUCTION SHALL BE PROVIDED WITH A POSITIVE OUTLET. ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO PROVIDE AN OUTLET FOR THE EXISTING UNDERDRAIN SHALL BE INCLUDED IN ITEM 605, 6" BY TYPE UNDERDRAIN WITH FABRIC WRAP, TO THE SATISFACTION OF THE ENGINEER

## PIPE REPLACEMENT & EXTENSIONS

THE CONTRACTOR SHALL HAVE THE OPTION OF USING A COUPLING BAND TO JOIN THE EXISTING CORRUGATED METAL PIPE WITH THE PROPOSED SECTION OF CORRUGATED METAL OR BY PLACING A CONCRETE COLLAR AS PER STANDARD CONSTRUCTION DRAWING DM-1JM. ALL CONCRETE PIPE EXTENSIONS SHALL HAVE A CONCRETE COLLAR AS PER STANDARD CONSTRUCTION DRAWING DM-1JM PLACED AT THE JOINING OF EXISTING AND PROPOSED SECTIONS OF PIPE.

ANY EXPOSED METAL FROM THE PIPE REPLACEMENT OF A CORUGATED METAL PIPE SHALL BE GALVANIZED COATED AS PER CMS SPECIFACTION 711.02 AND INCLUDED IN THE COST OF ITEM 603.

## ITEM 507 - NOISE BARRIER DRILLED SHAFTS

COORDINATION BETWEEN THE NOISE BARRIER OPERATION AND DRAINAGE INCLUDING UNDERDRAIN OPERATIONS WILL BE CRITICAL IN ORDER TO CONSTRUCT AND MAINTAIN ALL DRAINAGE ITEMS INCLUDING UNDERDRAINS. CARE SHALL BE TAKEN, AS APPROVED BY THE ENGINEER, TO MAINTAIN POSITIVE FLOW THRU DRAINAGE ITEMS PASSING BENEATH THE NOISE BARRIER.

## ITEM 601 - RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN

THE RIPRAP PAD SHALL BE CONSTRUCTED AS DETAILED ON SHEET 537-538. ALSO INCLUDED IN THE COST OF THE 601 - RIPRAP USING 6" REINFORCED CONCRETE, AS PER PLAN WILL BE 6" OF #57 STONE BEDDING PLACED AS SHOWN ON THE DETAILS. ALL LABOR, EQUIPMENT, MATERIALS AND ALL INCIDENTALS NECESSARY TO CONSTRUCT THIS ITEM AS SHOWN ON THE DETAILS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THIS ITEM.

## ITEM 603 - 54" CONDUIT, TYPE C, AS PER PLAN

IN ADDITION TO THE NORMAL REQUIREMENT OF ITEM 603, THE COST OF THIS ITEM SHALL ALSO INCLUDE THE EXTENSION OF THE EXISTING LINER PIPE INSIDE THE EXISTING 54" CULVERT THROUGH THE PROPOSED CULVERT EXTENSIONS. ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO CONSTRUCT THE PROPOSED CULVERT EXTENSIONS WITH LINER EXTENSION AND PROVIDE A SUITABLE JOINT BETWEEN THE PROPOSED AND EXISTING LINER OF THE SAME MAKE, MODEL AND MANUFACTURER AS APPROVED BY THE ENGINEER. ALL THE ABOVE SHALL BE INCLUDED IN ITEM 603 - 54" CONDUIT TYPE C, AS PER PLAN.

## ITEM 606 - GUARDRAIL POSTS

POSTS LOCATED OVER OR NEAR UNDERDRAIN OUTLETS SHALL BE OFFSET TO MAXIMIZE CLEARANCE. CARE SHALL BE TAKEN TO MAINTAIN POSITIVE FLOW THRU UNDERDRAIN OUTLET UNDER GUARDRAIL AS APPROVED BY THE ENGINEER.

## ITEM 605 - 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN

THIS ITEM SHALL BE AS DETAILED ON SHEET NO. 538 AND ALSO SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT THIS ITEM.

## ITEM 605 - 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.33 OR 707.41, AS PER PLAN

THIS ITEM SHALL BE AS DETAILED ON SHEET NO. 550. CONSTRUCTION AND MATERIAL SPECIFICATION 605.03 (C) IS MODIFIED TO BACKFILL THE UNDERDRAIN TRENCH WITH GRANULAR FILTER MATERIAL USING CRUSHED NO. 8 AGGREGATE ONLY.

## DUAL LOOP TRAFFIC RECORDER

SEE DETAILS ON SHEET NOS. 551 FOR NOTES, DETAILS AND QUANTITES FOR CONSTRUCTING THIS ITEM.

## CLASSIFICATION SITE TRAFFIC RECORDERS

SEE DETAILS ON SHEET NOS. 553 FOR NOTES, DETAILS AND QUANTITES FOR CONSTRUCTING THIS ITEM.

## ITEM 203 - DITCH CLEANOUT

THIS WORK SHALL CONSIST OF REESTABLISHING THE CROSS-SECTION OF AN EXISTING DITCH. SURPLUS OR UNSUITABLE MATERIAL, AS DETERMINED BY THE ENGINEER, SHALL BE DISPOSED OF AS PER 203.05. EMBANKMENT REQUIRED FOR ERODED CONDITIONS SHALL MEET THE REQUIREMENTS OF 203.07 EXCEPT THAT THE COMPACTION REQUIREMENTS ARE AS DIRECTED BY THE ENGINEER. ALSO INCLUDED IN THIS ITEM SHALL BE ALL MATERIALS, LABOR AND INCIDENTALS INCLUDING SEEDING AND MULCHING THE CLEANED OUT DITCH AS PER CMS ITEM 670 SEEDING AND MULCHING.

THE CONTRACTOR SHALL RESTORE ANY DISTURBED AREAS TO THE SATISFACTION OF THE ENGINEER CAUSED BY CONSTRUCTION OF THIS ITEM AT NO ADDITIONAL COST TO THE STATE.

MEASUREMENT OF THE DITCH CLEANOUT SHALL BE THE ACTUAL LIN. FEET MEASURED ALONG THE CENTERLINE OF THE DITCH.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, DITCH CLEANOUT.

IN ADDITION TO THE ESTIMATED QUANTITIES IN THE DRAINAGE SUBSUMMARY, THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

203 DITCH CLEANOUT 500 LIN. FT.

ALL PROPOSED DITCH CLEANOUTS SHALL BE GRADED TO PROVIDE A POSITIVE OUTLET AND CONSTRUCTED AS DIRECTED BY THE ENGINEER. SEE DETAIL ON SHEET NO. 503 FOR ADDITIONAL DETAILS.

## HEADWALL REFERENCE

REFERENCE TO HEADWALL HW-1 AND/OR HW-2 AND/OR HW-2A SHALL BE CONSTRUCTED AS DETAILED ON SHEET NO. 506-508.

## HEADWALL PATCHING

HEADWALLS ON THE PROJECT THAT ARE NOT BEING REPLACED MAY NEED PATCHING TO REPAIR MINOR FACIAL DETERIORATION. HEADWALL PATCHING SHALL BE AT LOCATIONS AS DETAILED ON SHEET NO. 503. AS APPROVED BY THE ENGINEER. ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO MAKE THESE DETAILED HEADWALLS AESTHETICALLY PLEASING SHALL ALSO BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THIS ITEM AS APPROVED BY THE ENGINEER.

IN ADDITION, A CONTINGENCY QUANTITY OF ITEM 519 - PATCHING CONCRETE STRUCTURES HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 519 - PATCHING CONCRETE STRUCTURES 200 SQ. FT.

## MISCELLANEOUS REMOVAL

EXISTING RCP, RIPRAP OR OTHERWISE UNSUITABLE MATERIALS IN THE SAME LOCATION AS THE PROPOSED DRAINAGE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER SO THAT THE PROPOSED DRAINAGE ITEM CAN BE PROPERLY CONSTRUCTED. PAYMENT FOR ALL MATERIALS, LABOR AND ANY INCIDENTALS TO PERFORM THESE MISCELLANEOUS REMOVALS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED WITH THE PROPOSED DRAINAGE ITEM AT THESE LOCATIONS.

## CATCH BASIN NO. 2-4, AS PER PLAN

THE SIDE INLET SHALL BE PROVIDED FOR THE CB NO. 2-4. THE TOTAL COST OF THE MATERIAL, EQUIPMENT, LABOR AND COMPLETED INSTALLATION OF THE SIDE INLET SHALL BE INCLUDED WITH THE UNIT PRICE BID FOR ITEM 604 CATCH BASIN NO. 2-4, AS PER PLAN.
SEE DETAIL ON SHEET NO. 504 FOR CONSTRUCTING THIS ITEM.

## ITEM 602 CONCRETE MASONRY, AS PER PLAN

VARIOUS HEADWALLS ARE TO BE EXTENDED IN ORDER TO FACILITATE UNDERDRAIN OUTLETS. THE TOTAL COST OF THE MATERIAL, EQUIPMENT, LABOR, INCIDENTALS AND COMPLETED INSTALLATION OF THE EXTENDED HEADWALL SHALL BE INCLUDED WITH THE UNIT PRICE BID FOR ITEM 602 CONCRETE MASONRY, AS PER PLAN.
SEE DETAIL ON SHEET NO. 537 FOR CONSTRUCTING THIS ITEM.

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# DRAINAGE GENERAL NOTES

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## ITEM 603 - CONDUIT MISC.: INSITU LINER PIPE

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING THE APPROPRIATE SIZE AS PER THE MANUFACTURER OF A CURED IN THE PLACE THERMOSETTING RESIN SEWER PIPE. MATERIALS FOR THIS ITEM SHALL COMPLY WITH ASTM D 5813 SPECIFICATION. THE LINER PIPE SHALL BE INSTALLED PER THE MANUFACTURERS RECOMMENDATION AND COMPLY WITH ASTM F 1216. THE LINER PIPE AT THE INLET END OF THE CULVERT SHALL HAVE A NEAT CUT IN ORDER TO NOT RESTRICT THE DRAINAGE ENTRANCE INTO THE CULVERT. ANY DAMAGE TO THE EXISTING STRUCTURES SHALL BE REPAIRED OR REPLACED AS DETERMINED BY THE ENGINEER AND INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM. ANY CONNECTIONS INTO THE EXISTING PIPE SHALL BE EXTENDED THROUGH THE LINER BY MEANS OF A SAW CUT OR AS RECOMMENDED BY THE MANUFACTURER. PAYMENT FOR THE INSITU LINER PIPE ITEM INCLUDING ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY FOR THIS ITEM COMPLETE AND IN PLACE SHALL BE AT THE CONTRACT UNIT PRICE IN ACTUAL NUMBER OF LINEAR FEET MEASURED BETWEEN THE ENDS OF THE EXISTING CONDUIT.

## CHANNEL EASEMENT

THE CONTRACTOR SHALL COORDINATE THE PROPOSED DRAINAGE WORK AT STA. 932+00± LT. & RT. WITH THE PROPOSED FENCING OPERATIONS SO THAT THE DRAINAGE WORK CAN BE COMPLETED BEFORE ERECTION OF THE NEW FENCE.

## PROPOSED UNDERDRAINS

UNDERDRAIN OUTLET CONNECTIONS AND TRANSVERSE UNDERDRAINS MAY EXTEND ACROSS ADJOINING CONSTRUCTION PHASES. IN THESE SITUATIONS THE CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY PLUGS OR CAPS AT THE LIMITS OF THE UNDERDRAIN CONSTRUCTION. DURING THE CONSTRUCTION OF THE SUBSEQUENT PHASE THE TEMPORARY PLUG OR CAP SHALL BE REMOVED, THE EXISTING UNDERDRAIN OR OUTLET SHALL BE INSPECTED FOR CLEANLINESS, CLEANED IF NECESSARY, AND THE UNDERDRAIN OR OUTLET CONSTRUCTION COMPLETED OR CONTINUED TO THE NEXT STAGE LIMIT. ALL MATERIAL, LABOR, AND INCIDENTALS NECESSARY TO PROVIDE, TO THE SATISFACTION OF THE ENGINEER, THE TEMPORARY CAPPING AND PIPE CLEANOUT BETWEEN EACH PHASE SHALL BE INCLUDED IN ITEM 603, 150 mm. CONDUIT, TYPE F AND/OR ITEM 605, SHALLOW PIPE UNDERDRAIN, BY SIZE AND TYPE.

THE UNDERDRAINS MAY CROSS CONSTRUCTION STAGE LIMITS. TEMPORARY OUTLETS MAY BE NEEDED TO BE CONSTRUCTED AS DIRECTED BY THE ENGINEER TO PROVIDE POSITIVE OUTLETS FOR UNDERDRAINS AT ALL TIMES DURING CONSTRUCTION. ALL MATERIAL, LABOR, AND INCIDENTALS NECESSARY TO PROVIDE, TO THE SATISFACTION OF THE ENGINEER, THE TEMPORARY OUTLETS AND PIPE CLEANOUT BETWEEN EACH STAGE SHALL BE INCLUDED IN ITEM 605, SHALLOW PIPE UNDERDRAIN, BY SIZE AND TYPE.

## REST AREA DRAINAGE

THE CONTRACTOR SHALL USE THE UTMOST CARE WHEN CONSTRUCTING THE DRAINAGE AT THE REST AREAS SO AS NOT TO DAMAGE ANY UNNECESSARY ITEMS AS PER THE PLANS AND AS DETERMINED/ APPROVED BY THE ENGINEER. A CONTINGENCY QUANTITY OF ITEM 830, CURB, TYPE 6, AS PER PLAN HAS BEEN INCLUDED IN THE PLANS TO BE USED AS DIRECTED BY THE ENGINEER TO REPLACE THE EXISTING CURB WHERE PROPOSED DRAINAGE STRUCTURES ARE BEING CONSTRUCTED IN THE REST AREAS. AN ESTIMATED QUANTITY OF 10' PER STRUCTURE HAS BEEN INCLUDED FOR THIS CONTINGENCY.

ITEM 830 CURB, TYPE 6, AS PER PLAN 50 LIN. FT.

ENVIRONMENTAL COMMITMENTS

1. BANK STABILIZATION WILL BE LIMITED TO WITHIN 45 METERS (148 FEET) UPSTREAM AND DOWNSTREAM OF THE EXISTING STRUCTURE. BANK STABILIZATION WILL BE LIMITED TO REGRADING OF THE BANKS FOR THE TOE-OF-SLOPE (IN-STREAM) TO THE TOP OF BANK AND WILL INCLUDE PLACEMENT OF ROCK CHANNEL PROTECTION WHERE REQUIRED. THIS WILL EXCLUDE WORK SUCH AS WIDENING, DEEPENING OR RELOCATION. THIS STABILIZATION WILL BE KEPT TO A MINIMUM.

2. IN-STREAM WORK WILL BE LIMITED WHERE PRACTICABLE AND ONLY CLEAN NON-ERODIBLE MATERIAL WILL BE USED FOR FORDS AND COFFERDAMS. THIS TEMPORARILY PLACED MATERIAL WILL BE REMOVED AND THE STREAM BOTTOM RESTORED TO NEAR NATURAL CONDITIONS WHEN THE WORK IS COMPLETED.

3. WRITTEN PERMISSION WILL BE OBTAINED FROM THE CHIEF OF ODNR'S DIVISION OF WILDLIFE FOR ANY NECESSARY IN-STREAM BLASTING.

4. IF THIS PROJECT IS LOCATED WITHIN FLOOD PLAINS, IT WILL COMPLY WITH NECESSARY FLOOD PLAIN CRITERIA. THOSE PROJECTS IN FEMA DESIGNATED FLOOD PLAINS WILL BE COORDINATED WITH THE APPROPRIATE AUTHORITIES.

5. WETLANDS: THE CONTRACTOR SHALL BE PROHIBITED FROM PERFORMING ANY CONSTRUCTION ACTIVITIES, SUCH AS STAGING OR STORAGE OF MATERIALS, WITHIN THE LIMITS OF ANY IDENTIFIED WETLANDS. THERE ARE NO WETLANDS ON MED-71-15.78.

6. TREE REMOVAL RESTRICTIONS
THIS PROJECT IS WITHIN THE LIMITS OF THE FEDERAL ENDANGERED INDIANA BAT (MYOTIS SODALIS) AND MAY IMPACT THAT SPECIES HABITAT. TREES OVER 230 MM (9 INCHES) IN DIAMETER WITH LOOSE OR PEELING BARK OR CAVITIES SHALL ONLY BE CUT BETWEEN SEPTEMBER 16 AND APRIL 14.

7. STREAM CHANNEL EXCAVATION
THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, FOUNDATION PIER OR ABUTMENT EXCAVATION, CHANNEL CLEAN OUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

8. DEMOLITION DEBRIS
THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

### ITEM 606 - IMPACT ATTENUATOR, TYPE 2-98 [(MODEL NO.QS2406Y), (BIDIRECTIONAL)]

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A QUADGUARD IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

| DWG. NO. | DRAWING NAME | DWG./ REV. DATE | ODOT APPROVAL DATE |
|---|---|---|---|
| 35-40-08<br>2 SHEETS | QUADGUARD SYSTEM<br>CONCRETE BACKUP, QG<br>ON GRADE & ON EXISTING<br>CONCRETE STRUCTURE | 10/14/97<br>Rev. F<br>10/14/97<br>Rev. F | 8/27/99<br><br>8/27/99 |
| 35-40-15 | QUADGUARD SYSTEM END SHOE ASSSEMBLY, QG | 9/11/98<br>Rev. F | 8/27/99 |
| 3540498 | QG SYSTEM NOSE ASSEMBLY, QG, 24, 30, 36, W/BELTING | 12/30/98 | 8/27/99 |
| 3540150 | QUADGUARD TRANSITION TO VERTICAL CONCRETE BARRIER | 9/96 | 8/27/99 |

WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2-98 [(MODEL NO. QS2406Y), (BIDIRECTIONAL)], EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. THE QUADGUARD SHALL BE ATTACHED DIRECTLT TO THE CONCRETE MEDIAN BARRIER AS DETAILED IN THESE PLANS WITHOUT THE USE OF A SEPARATE BACKUP.

**ITEM 202 PAVEMENT REMOVED**
ALL SAWCUTTING OF THE EXISTING PAVEMENT IN ORDER TO MEET THE INTENTIONS OF THE MAINTENANCE OF TRAFFIC SEQUENCING ARE AT THE CONTRACTOR'S EXPENSE AND SHALL BE CONSIDERED INCIDENTAL IN THE COST OF ITEM 202 PAVEMENT REMOVED.

CALCULATED PRS CHECKED SAW

DRAINAGE GENERAL NOTES

MED - 71 - 15.78



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## TRAFFIC MAINTENANCE

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF SPEC. 614. THESE MAINTENANCE OF TRAFFIC NOTES AND DETAILS AND THE TRAFFIC CONTROL DETAILS DESCRIBED IN THESE PLANS. THE MINIMUM LANE WIDTH FOR TRAFFIC CONTROL SHALL BE 11 FEET AT ALL TIMES ON I-71, EXCEPT WHEN SETTING THE OVERHEAD SIGN SUPPORTS (SEE SHEET 37 FOR NOTE). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ORGANIZE HIS WORK IN SUCH A MANNER TO PROVIDE THE MOST SAFETY WITH THE LEAST INCONVENIENCE TO THE TRAVELING PUBLIC.

THE CONTRACTOR SHALL SUBMIT, IN WRITING, A SCHEDULE OF OPERATIONS TO THE ENGINEER AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL CO-ORDINATE THE MAINTENANCE OF TRAFFIC OPERATIONS WITH THE LOCAL STATE HIGHWAY PATROL.

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

CONSTRUCTION ACCESS POINTS IN THE PORTABLE CONCRETE BARRIER ARE REQUIRED IN ORDER TO ACCESS THE WORK ZONE IN CERTAIN AREAS OF THE PROJECT. SEE SHEET **64** FOR CONSTRUCTION ACCESS POINTS NOTES AND DETAILS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC* 600 CU YARD

* FOR THE ENTIRE PROJECT AND NOT JUST THE PORTION UNDER CONSTRUCTION.

## ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR)

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASK:

- FOR LANE CLOSURES: DURING INITIAL SETUP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.
- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

OHIO STATE HIGHWAY PATROL
3149 FRANTZ ROAD
MEDINA, OH 44256
(330) 725-4921

LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614-LAW ENFORCEMENT OFFICER (WITH PATROL CAR). THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY. THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

614 LAW ENFORCEMENT OFFICER WITH PATROL CAR = 640 HRS

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE.

## ITEM 614 BARRIER REFLECTORS & OBJECT MARKERS

BARRIER REFLECTORS & OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO THE PROPOSAL NOTE AND SHALL BE SPACED AT 25 FEET. BASIS OF PAYMENT SHALL BE AT THE UNIT PRICE BID FOR THE APPROPRIATE 614 ITEMS AND SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE AND INCIDENTALS REQUIRED TO PERFORM THE WORK.

614 BARRIER REFLECTOR TYPE B = 9775 EACH
614 OBJECT MARKER = 9775 EACH

### Item 622 Portable Concrete Barrier

Temporarily filling in the void between phases is not allowed. The material placed will become contaminated and the step construction will be lost, which is not acceptable. The contractor has only two options of setting up the portable concrete barrier between phases.

The first option is to retain the portable concrete barrier setup when traffic is on the existing pavement and provide additional portable concrete barrier on the new section of pavement prior to shifting traffic over onto the new section.

The second option is to move the existing portable concrete barrier setup over to the new section, but with restrictions. Movement of the portable concrete barrier between phases shall be accomplished in one working day and only at night per the "Work Hour Restriction" note in the plans. A lane closure of the lane adjacent to the portable concrete barrier is necessary to perform this work. The contractor shall utilize multiple crews, equipment, etc... in order to perform this task.

All costs involved in removing and reinstalling the portable concrete barrier shall be included in the contract price bid for Item 622 portable concrete barrier.

| ITEM | PART I | PART II | PART III | PART III | TOTALS |
|---|---|---|---|---|---|
| PORTABLE CONCRETE BARRIER, 32" | 59,980 | 90,210 | 31,830 | 62,210 | 244,230 |
| PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED | 0 | 1850 | 400 | 430 | 2680 |

## PORTABLE CONCRETE BARRIER END TREATMENT

ALL TAPERED END SECTIONS SHOWN IN THESE PLANS AT THE APPROACH END OF P.C.B. RUNS SHALL BE LOCATED AT LEAST 17 FEET FROM THE EDGE OF THE TRAVELED LANE. THE CROSS SLOPE OF THE APPROACH EMBANKMENT SHALL BE A MAXIMUM OF 10:1. THE PLACEMENT AND SUBSEQUENT REMOVAL OF ANY GRADING REQUIRED SHALL BE INCLUDED IN THE LUMP SUM BID ITEM 614 MAINTAINING TRAFFIC AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO PERFORM THE WORK DESCRIBED. SHOULDERS AT NO EXPENSE TO THE STATE.

## ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, THEY MAY SUBMIT ALTERNATE METHODS FOR MAINTENANCE OF TRAFFIC PROVIDED THE INTENT OF THE ABOVE PROVISIONS ARE FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THERE FROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DISTRICT CONSTRUCTION ENGINEER.

## ITEM SPECIAL - REPLACEMENT SIGNS & DRUMS

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLAN, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER AND PAID FOR UNDER "ITEM SPECIAL - REPLACEMENT SIGNS." PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE PRICE BID PER SQUARE FOOT FOR "ITEM SPECIAL - REPLACEMENT SIGNS," AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED SIGNS, HARDWARE, SUPPORTS, ETC. REPLACEMENT SIGNS SHALL BE NEW, BUT OTHER MATERIALS MAY BE USED SUBJECT TO APPROVAL OF THE ENGINEER.

ITEM SPECIAL REPLACEMENT SIGNS 500 SQ FEET

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLAN, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER AND PAID FOR UNDER "ITEM SPECIAL - REPLACEMENT DRUMS". PAYMENT FOR THE NEW DRUM SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM AND PROVIDING AND MAINTAINING NEW DRUMS IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUMS.

ITEM SPECIAL REPLACEMENT DRUMS = 500 EACH

## QUANTITIES

| ITEM | QUANTITY | UNIT | DESCRIPTION |
|---|---|---|---|
| 614 | 600 | CU YARD | BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC |
| 614 | 9775 | EACH | BARRIER REFLECTOR, TYPE B |
| 614 | 9775 | EACH | OBJECT MARKER |
| 614 | 640 | HOUR | LAW ENFORCEMENT OFFICER WITH PATROL CAR |
| 622 | 244,230 | LIN FEET | PORTABLE CONCRETE BARRIER, 32" |
| 622 | 2680 | LIN FEET | PORTABLE CONCRETE BARRIER, 32" BRIDGE MOUNTED |
| SPECIAL | 500 | SQ FEET | REPLACEMENT SIGN |
| SPECIAL | 500 | EACH | REPLACEMENT DRUM |

(QUANTITIES CARRIED TO GENERAL SUMMARY, SHEET 46)

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# MAINTENANCE OF TRAFFIC GENERAL NOTES

MED-71-15.78

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## 614 WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND REMOVE WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS (R-10-48) (55 MPH) WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT OR MINIMUM SPEED SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED SIGNS IS INCIDENTAL TO THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED AND COVERED PRIOR TO STARTING WORK OR MAY BE ERECTED UNCOVERED NO MORE THAN 4 HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO MORE THAN 4 HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS OR SOONER AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF ANY LANE RESTRICTION WHICH IS ½ MILE OR MORE IN LENGTH AND WHICH IS EXPECTED TO LAST AT LEAST 30 CONSECUTIVE CALENDAR DAYS OR AS DIRECTED BY THE ENGINEER. THE SIGNS SHALL BE MOUNTED ON BOTH SIDES OF DIVIDED HIGHWAYS, 500 FEET IN ADVANCE OF THE LANE REDUCTION TAPER. THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE, 250 FEET IN ADVANCE OF THE LANE REDUCTION TAPER ON UNDIVIDED HIGHWAYS. THE SIGN SHALL BE REPEATED, ON THE SIDE NEAREST TRAFFIC, EVERY 1 MILE FOR 55 MPH ZONES AND ½ MILE FOR 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE. A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THIS SIGN SHALL BE AN R-10 (65MPH) AND A R-9A (55MPH).

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED BUT GOOD CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF 730J9 AND U.S. DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION FOR TYPE III-C SHEETING, FP-85. WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO (2) ITEM 630 GROUND MOUNTED SUPPORTS, NO. 3 POSTS.

WORK ZONE SPEED LIMIT SIGN AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING OF THE SIGNS AND SUPPORTS.

614 WORK ZONE SPEED LIMIT SIGN = 60 EACH

## TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

## OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 1½" INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY AND USE OW-171 AND OWP-171 SIGNS.

THIS NOTE ALSO APPLIES TO BOTH RAMP CONSTRUCTION AND RIGHT SHOULDER RECONSTRUCTION EXCEPT IN AREAS PROTECTED BY PORTABLE CONCRETE BARRIER. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER **AT THE CONTRACTORS EXPENSE.**

## DOUBLE FINES IN WORK ZONES SIGN

R-180-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFF-SETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS SHALL BE COVERED OR REMOVED WHEN THE CONSTRUCTION ZONE IS DISCONTINUED FOR 30 DAYS OR MORE.

THE SIGNS SHALL BE DUAL MOUNTED. THE FIRST SIGN SHALL BE PLACED BETWEEN THE "ROAD CONSTRUCTION AHEAD" (OW-128) SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY TWO MILES THROUGH THE CONSTRUCTION WORK LIMITS.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED BUT GOOD CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF 730J9 AND U.S. DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION FOR TYPE III-C SHEETING, FP-85.

DOUBLE FINES IN WORK ZONES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614 - DOUBLE FINES IN WORK ZONE SIGNS 32 EACH

## CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

IN ADDITION TO THE REQUIREMENTS OF SECTION 614.03(a) OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS THE FOLLOWING SHALL APPLY. THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC WHERE PRACTICAL. A FLAGGER SHALL BE USED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S VEHICLES AND EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT.

EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY, THIRTY (30') FEET FROM THE EDGE OF TRAVELED LANE OR SEVEN (7') FEET BEHIND FACE OF GUARDRAIL, WHEN VARIOUS OPERATIONS ARE SCHEDULED TO CONTINUE THE NEXT WORKDAY. ON WEEKENDS OR AT OTHER TIMES OF SUSPENSION OF WORK, **EQUIPMENT SHALL BE STORED BEHIND GUARDRAIL OR BARRIER AS DIRECTED BY THE ENGINEER.** NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF THE HIGHWAY EXCEPT WHEN TRAFFIC IS MAINTAINED ON THE OUTSIDE LANES. ADEQUATE BARRICADES AND LIGHT SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA.

## PAVEMENT MARKING

PRIOR TO PLACEMENT OF ANY TEMPORARY PAVEMENT MARKINGS, THE CONTRACTOR SHALL COMPLETELY OBLITERATE, AS PER SPEC. 641.10, ALL EXISTING PAVEMENT MARKINGS THAT WOULD CREATE CONFUSION OR CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS. PAYMENT FOR THIS COMPLETE REMOVAL SHALL BE INCLUDED IN THE PERTINENT 614 ITEM.

## WORKING HOURS RESTRICTION

Interstate 71 throughout District Three (Richland, Ashland, Wayne and Medina counties) is a restricted work corridor due to high traffic volumes. Lane closures or other work, including installation of maintenance of traffic devices, which occupies any portion of the present travel lanes is restricted to the following hours:

**Non-Holiday Weeks:** Sunday 10:00 p.m. through Monday 6:00 a.m.
Monday 10:00 p.m. through Tuesday 6:00 a.m.
Tuesday 10:00 p.m. through Wednesday 6:00 a.m.
Wednesday 10:00 p.m. through Thursday 6:00 a.m.
Thursday 10:00 p.m. through Friday 6:00 a.m.

**Holiday Weeks:**
**Holiday on Monday**
Tuesday 10:00 p.m. through Wednesday 6:00 a.m.
Wednesday 10:00 p.m. through Thursday 6:00 a.m.
Thursday 10:00 p.m. through Friday 6:00 a.m.
**Holiday on Tuesday**
Sunday 10:00 p.m. through Monday 6:00 a.m.
Wednesday 10:00 p.m. through Thursday 6:00 a.m.
Thursday 10:00 p.m. through Friday 6:00 a.m.
**Holiday on Wednesday**
Sunday 10:00 p.m. through Monday 6:00 a.m.
Monday 10:00 p.m. through Tuesday 6:00 a.m.
Thursday 10:00 p.m. through Friday 6:00 a.m.
**Holiday on Thursday**
Sunday 10:00 p.m. through Monday 6:00 a.m.
Monday 10:00 p.m. through Tuesday 6:00 a.m.
Tuesday 10:00 p.m. through Wednesday 6:00 a.m.
**Holiday on Friday, Saturday or Sunday**
Sunday 10:00 p.m. through Monday 6:00 a.m.
Monday 10:00 p.m. through Tuesday 6:00 a.m.
Tuesday 10:00 p.m. through Wednesday 6:00 a.m.
Wednesday 10:00 p.m. through Thursday 6:00 a.m.

Holidays are Easter, Mother's Day, Memorial Day, July 4 and Labor Day.

No work within active travel lanes or which will slow traffic is permitted at any other times. All maintenance of traffic work, including installation of signing and lane closures shall occur within the 10:00 p.m. through 6:00 a.m. time periods. No exceptions are permitted.

All work vehicles licensed to operate on the highway, including material trucks, shall be equipped with a flashing, rotating or oscillating amber light visible to all directions of traffic a minimum of one-quarter mile in bright sunlight and shall be operated with lighted head and tail lamps. The amber light shall be in operation at all times within the work zone and while traveling to and from the work zone whenever the vehicle speed is below 40 mph. Vehicle hazard lamps do not satisfy this requirement. All other equipment shall be equipped with a flashing, rotating or oscillating amber light visible to all directions of traffic a minimum of one-quarter mile in bright sunlight. The amber light shall be in operation while the equipment is within the work zone.

Lighting used to illuminate the work area shall be aimed and shielded to prevent glare encroaching into open traffic lanes. For additional notes see the "FLOODLIGHTING" note.

Should the contractor fail to meet any of these requirements, the contractor shall be assessed liquidated damages per 108.07 of the cms.

## QUANTITIES

| ITEM | QUANTITY | UNIT | DESCRIPTION |
|---|---|---|---|
| 614 | 60 | EACH | WORK ZONE SPEED LIMIT SIGN |
| 614 | 32 | EACH | DOUBLE FINES IN WORK ZONE SIGNS |
| | | | |
| | | | |
| | | | |
| | | | |

(QUANTITIES CARRIED TO GENERAL SUMMARY, SHEET 46)

CALCULATED BL CHECKED

# MAINTENANCE OF TRAFFIC GENERAL NOTES

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## TRAFFIC CONTROL REVIEW

THE CONTRACTOR SHALL DESIGNATE A QUALIFIED INDIVIDUAL, OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO PERIODICALLY INSPECT, DOCUMENT, REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL INSPECT, DOCUMENT, REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES AT LEAST ONCE EVERY TWO (2) HOURS.

THE ABOVE DESIGNATED INDIVIDUAL OR ANOTHER QUALIFIED INDIVIDUAL SUBJECT TO THE APPROVAL OF THE ENGINEER SHALL BE AVAILABLE AND ON CALL DURING THE NON-WORKING PERIODS THAT TRAFFIC IS DIVERTED FROM ITS NORMAL PATH. WHEN WORK IS NOT BEING PERFORMED ON THE PROJECT, THE DESIGNATED INDIVIDUAL SHALL INSPECT, DOCUMENT, REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES AT LEAST ONCE EVERY TWO HOURS SEVEN DAYS A WEEK, INCLUDING HOLIDAYS. IN ADDITION, THIS INDIVIDUAL SHALL BE ABLE TO RESPOND AND BE ON THE PROJECT WITHIN TWO (2) HOURS AFTER A CALL AND HAVE SUFFICIENT INVENTORY ON HAND TO REPAIR OR REPLACE THE DAMAGED OR MISSING TRAFFIC CONTROL DEVICE.

THE CONTRACTOR SHALL PROVIDE A COPY OF THE DAILY INSPECTION REPORT DOCUMENTING THE CONDITION OF THE TRAFFIC CONTROL DEVICES IN PLACE AND REPAIRS THAT WERE MADE. THIS REPORT SHALL BE DELIVERED TO THE PROJECT ENGINEER THE FOLLOWING WORK DAY. FAILURE TO PROVIDE THIS DAILY INSPECTION AND WRITTEN REPORT SHALL CONSTITUTE CAUSE FOR THE PROJECT ENGINEER TO SUSPEND ALL WORK UNTIL ALL OF THE ABOVE PROVISIONS HAVE BEEN SATISFIED.

PAYMENT FOR THIS INDIVIDUAL OR INDIVIDUALS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

## WORKSITE TRAFFIC SUPERVISOR

*THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL WORKSITE TRAFFIC SUPERVISOR (WTS) FOR THE PURPOSE OF MONITORING THE TRAFFIC CONTROL PLAN (TCP). THE WORKSITE TRAFFIC SUPERVISOR SHALL HAVE EXPERIENCE OR TRAINING IN PROJECT SUPERVISION AND TRAFFIC CONTROL COMMENSURATE WITH THE RESPONSIBILITIES OF MANAGING THE PROJECT TRAFFIC CONTROL AND COORDINATING WITH THE MOTORIST INFORMATION SYSTEM OUTSIDE THE PROJECT LIMITS. THE GOALS OF THE WORKSITE TRAFFIC SUPERVISORS POSITION ARE TO MINIMIZE TRAFFIC CONGESTION AND MAXIMIZE PROJECT SAFETY AND EFFICIENCY. THE CONTRACTOR SHALL SUBMIT TO THE **ENGINEER** (ENGINEER OF CONSTRUCTION) FOR APPROVAL A RESUME OF THE EXPERIENCE, TRAINING AND EDUCATION OF THE PERSON PROPOSED FOR WORKSITE TRAFFIC SUPERVISOR. PROJECT WORK SHALL NOT BEGIN WITHOUT AN APPROVED WORKSITE TRAFFIC SUPERVISOR. THE WTS SHALL BE PRESENT WHEN THE CONTRACTOR INSTALLS A TRAFFIC RESTRICTION, LANE CLOSURE ETC. THE WTS SHALL REVIEW THE TRAFFIC CONTROL PATTERN UPON COMPLETION OF THE INSTALLATION BOTH DURING THE DAY AND AT NIGHT FOR ASSURANCE OF CONTRACT COMPLIANCE. THE WTS SHALL MAKE RECOMMENDATIONS TO MODIFY THE TCP FOR BETTER/SAFER TRAFFIC FLOW. THESE RECOMMENDATIONS SHALL BE MADE IN WRITING TO THE **ENGINEER**. NO CHANGES TO THE TRAFFIC CONTROL PLAN SHALL BE MADE UNTIL APPROVAL IS OBTAINED FROM THE **ENGINEER** IN WRITING.*

*EACH DAY, THE WORKSITE TRAFFIC SUPERVISOR SHALL REVIEW THE PROJECT'S TRAFFIC CONTROL. A MINIMUM OF TWO REVIEWS EACH WEEK SHALL BE PERFORMED AT NIGHT. THE FOLLOWING ITEMS SHALL BE INCLUDED IN EACH REVIEW: TRAFFIC CONTROL DEVICE CONDITION, PLACEMENT, VISIBILITY; TRAFFIC FLOW CONDITIONS, INCIDENTS, CONGESTION POINTS, DELAYS ADEQUACY OF ADVANCED INFORMATIONAL SIGNS BEYOND THE PROJECT LIMITS; INTERACTION OF WORK VEHICLES AND TRAFFIC; EVIDENCE OF ACCIDENTS; PROPER STORAGE OF MATERIALS AND EQUIPMENT; CONFORMANCE WITH TCP; ADEQUACY OF TCP; CONFLICTING OR NON-PERFORMING PAVEMENT MARKINGS. THE WTS SHALL NOTE ANY TRAFFIC CONTROL DEFICIENCIES. DEFICIENT OR IMPROPERLY PLACED TRAFFIC CONTROL DEVICES SHALL BE CORRECTED. THE WORKSITE TRAFFIC SUPERVISOR SHALL HAVE NECESSARY AUTHORITY TO IMMEDIATELY PERFORM THIS CORRECTIVE WORK. DAILY, A RECORD OF REVIEW SHALL BE GIVEN TO THE PROJECT ENGINEER IN WRITING AND SHALL INCLUDE A RECORD OF DEFICIENCIES AND RESOLUTION OF THE DEFICIENCIES.*

*FAILURE OF THE CONTRACTOR TO COMPLY WITH ANY OF THE ABOVE SHALL CONSTITUTE CAUSE FOR THE PROJECT ENGINEER TO SUSPEND ALL WORK UNTIL ALL CORRECTIONS ARE MADE.*

*PAYMENT FOR FURNISHING THE WORKSITE TRAFFIC SUPERVISOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE ITEM 614 MAINTAINING TRAFFIC.*

## TEMPORARY CLOSURES ON I-71 and I-271

TEMPORARY CLOSURES ON I-71 AT GRANGER ROAD AND ON I-271 AT THE I-71 INTERCHANGE ARE REQUIRED TO AVOID PERFORMING WORK OVER TRAVELED LANES DURING THE REMOVAL OF THE STEEL BEAMS AND THE ERECTION OF THE PROPOSED STRUCTURAL STEEL. SUCH CLOSURES SHALL OCCUR ONLY BETWEEN THE HOURS OF 12:01 AM TO 5:00 AM MONDAY THROUGH THURSDAY. TRAFFIC NEED ONLY BE STOPPED DURING THE ACTUAL ATTACHMENT, LIFTING AND HANDLING OF THE BEAMS OVER THE TRAVELED LANES AND AT NO TIME SHALL ANY ONE CLOSURE EXCEED FIFTEEN (15) MINUTES PER EACH HOUR. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE PUBLIC.

*ADVANCE NOTICE: **ONE PORTABLE** CHANGEABLE MESSAGE SIGN (PCMS) IN EACH DIRECTION SHALL BE PROVIDED FOR SEVEN (7) DAYS IN ADVANCE OF THE CLOSURE DATE TO PROVIDE ADVANCE NOTICE OF THE TEMPORARY CLOSURE. THESE SIGNS ARE TO BE LOCATED AT AN APPROVED LOCATION NEAR THE CLOSURE SITE.*

*CLOSURE NOTICE: ONE PCMS IN EACH DIRECTION SHALL BE PROVIDED THE DAY OF THE CLOSURE TO PROVIDE SPECIFIC CLOSURE INFORMATION. THE ADVANCE NOTICE PCMS MAY BE RELOCATED TO PERFORM THIS FUNCTION. THE CONTRACTOR SHALL PROVIDE ERECT AND MAINTAIN APPROVED PCMS APPROXIMATELY ONE (1) MILE, IN EACH DIRECTION, IN ADVANCE OF THE CLOSURE TO ADVISE TRAFFIC OF A POTENTIAL STOP CONDITION AND CONSTRUCTION DELAY. THE MESSAGE CONTENT SHALL BE APPROVED BY THE ENGINEER.*

*THE PCMS SHALL BE CONSIDERED INCIDENTAL IN THE COST OF ITEM 614 MAINTAINING TRAFFIC.*

*SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, LIQUIDATED DAMAGES SHALL BE ASSESSED THE CONTRACTOR IN ACCORDANCE WITH CMS 108.07.*

*THE COST OF THE ABOVE WORK INCLUDING PROVIDING, ERECTING, MAINTAINING AND REMOVING THE PCMS SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.*

*AN ADDITIONAL ESTIMATED QUANTITY OF 96 HOURS OF ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR IS PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER FOR THESE CLOSURES.*

## TEMPORARY CLOSURES ON SR 18, SR 3, & SR 303

TEMPORARY CLOSURES ON SR 18, SR 3 AND SR 303 UNDER I-71 ARE REQUIRED TO AVOID PERFORMING WORK OVER TRAVELED LANES DURING THE REMOVAL OF THE STEEL BEAMS AND THE ERECTION OF THE PROPOSED STRUCTURAL STEEL. SUCH CLOSURES SHALL OCCUR ONLY BETWEEN THE HOURS OF 12:01 AM TO 5:00 AM MONDAY THROUGH THURSDAY. TRAFFIC NEED ONLY BE STOPPED DURING THE ACTUAL ATTACHMENT, LIFTING AND HANDLING OF THE BEAMS OVER THE TRAVELED LANES AND AT NO TIME SHALL ANY ONE CLOSURE EXCEED FIFTEEN (15) MINUTES PER EACH HOUR. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE PUBLIC.

*ADVANCE NOTICE: ONE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) IN EACH DIRECTION SHALL BE PROVIDED FOR SEVEN (7) DAYS IN ADVANCE OF THE CLOSURE DATE TO PROVIDE ADVANCE NOTICE OF THE TEMPORARY CLOSURE. THESE SIGNS ARE TO BE LOCATED AT AN APPROVED LOCATION NEAR THE CLOSURE SITE.*

*CLOSURE NOTICE: ONE PCMS IN EACH DIRECTION SHALL BE PROVIDED THE DAY OF THE CLOSURE TO PROVIDE SPECIFIC CLOSURE INFORMATION. THE ADVANCE NOTICE PCMS MAY BE RELOCATED TO PERFORM THIS FUNCTION. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN APPROVED PCMS APPROXIMATELY 500 FEET IN ADVANCE OF THE CLOSURE, IN EACH DIRECTION, TO ADVISE TRAFFIC OF A POTENTIAL STOP CONDITION AND CONSTRUCTION DELAY. SEE THE PLAN SHEET 63A TITLED "SHORT DURATION CLOSING OF RURAL DIVIDED HIGHWAY" FOR ADDITIONAL NOTES.*

*A FLAGGER WITH A STOP/SLOW SIGN SHALL BE LOCATED AS PER STD. DWG. MT 97.10M. ONE PCMS SHALL BE PLACED TO THE EAST OF NORTHBOUND EXIT RAMPS. THE OTHER PCMS SHALL BE PLACED TO THE WEST OF SOUTHBOUND EXIT RAMPS. ONLY TWO LEO's WITH PATROL CARS ARE REQUIRED ONE FOR EACH DIRECTION AT THE STOP SIGNS.*

*THE LOCATIONS OF ALL SIGNS AND PCMS UNITS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THE MESSAGE CONTENT SHALL BE APPROVED BY THE ENGINEER.*

## CONTINUED - TEMPORARY CLOSURES ON SR 18, SR 3, & SR 303

*SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, LIQUIDATED DAMAGES SHALL BE ASSESSED THE CONTRACTOR IN ACCORDANCE WITH CMS 108.07..*

*THE COST OF THE ABOVE WORK INCLUDING PROVIDING, ERECTING, MAINTAINING AND REMOVING THE PCMS SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.*

*AN ADDITIONAL ESTIMATED QUANTITY OF 208 HOURS OF ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR IS PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER FOR THESE CLOSURES.*

## SR 303 LOOP RAMP CLOSURE (RAMP D)

THIS RAMP SHALL REMAIN OPEN EXCEPT FOR A MAXIMUM OF SEVEN (7) CONSECUTIVE CALENDAR DAYS. FOR THE TEMPORARY ROAD CONSTRUCTION LIMITATIONS, SEE THE NOTE ON SHEET 42A. FOR DETOUR ROUTE SEE SHEET 42. THE CONTRACTOR IS ENCOURAGED TO PERFORM THE RAMP WORK BEFORE THE MAINLINE STRUCTURE WORK OVER SR 303, BUT IS NOT MANDATORY. WHEN RAMP D IS CLOSED, THE EXIT RAMP C SHALL HAVE SIGNS PLACED BY THE CONTRACTOR THAT STATE "NO DIRECT RE-ENTRY _____BOUND", N-75 SIGN.

THE CONTRACTOR SHALL NOTIFY THE DISTRICT ROADWAY SERVICES MANAGER IN WRITING A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF THE DATE THE DETOUR IS NEEDED. THE STATE OF OHIO WILL PROVIDE, INSTALL, MAINTAIN AND REMOVE THE DETOUR SIGNING.

LIMITATIONS:
1. ALL WORK ON THE RAMP INCLUDING THE SURFACE COURSE, FEATHER AND TEMPORARY STRIPING SHALL BE COMPLETED PRIOR TO OPENING THE RAMP TO TRAFFIC. THE ONLY EXCEPTION IS THE GUARDRAIL WORK MAY BE COMPLETED INDEPENDENT OF THE PAVEMENT WORK.
2. THE EXISTING OR PROPOSED SIGNING SHALL BE IN PLACE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. THE MINIMUM BOUNDRIES ARE FROM THE CONCRETE PAVEMENT PRIOR TO THE SIDE ROAD TO THE GORE AREA. THE INTENT IS TO HAVE ALL OF THE JOINT REPAIRS, SHOULDERS AND TEMPORARY PAVEMENT DONE SUCH THAT THE VARIOUS LANE CLOSURE IN THE ENTRANCE RAMP STANDARD CONSTRUCTION DRAWINGS AND THE PLANS UTILIZE THE REPAIRED AREAS. THE EXISTING SHOULDERS MAY NOT SUPPORT TRAFFIC.

**THIS WORK SHALL BE PERFORMED BEFORE WORK ON THE MAINLINE NORTHBOUND BRIDGE OVER SR 303:**
SEQUENCE OF CONSTRUCTION
PART III PHASE IIIA
1. CONSTRUCT THE MAINLINE PAVEMENT FROM STATION 1256+60 TO STATION 1267+65. MAINTAIN TRAFFIC FROM RAMP D ON THE OUTSIDE (RIGHT SIDE) PORTION OF THE STRUCTURE. SEE SUBPHASE 2 DETAIL ON SHEET 66.
2. CONSTRUCT THE TEMPORARY ROAD. *SEE SHEET 42B.*
3. PLACE TRAFFIC CONTROL AS PER STANDARD CONSTRUCTION DRAWING MT-98.16M. SHIFT TRAFFIC TO THE TEMPORARY ROAD AND INSIDE PORTION OF THE BRIDGE. SEE SUBPHASE 1 DETAIL ON SHEET 66.
4. CONSTRUCT THE OUTSIDE PORTION OF THE BRIDGE AND REMAINDER PORTION OF RAMP D.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, LIQUIDATED DAMAGES SHALL BE ASSESSED THE CONTRACTOR IN ACCORDANCE WITH CMS 108.07.

## ERECTING OVERHEAD SIGN SUPPORTS (I-71)

ERECTION/REMOVAL OF OVERHEAD SIGN SUPPORTS (TRUSS TYPE) WILL REQUIRE THE CLOSING OF THE NORTHBOUND OR SOUTHBOUND LANES, WHICHEVER THE SIGN LIES OVER. THE LANE CLOSURES SHALL OCCUR ONLY BETWEEN THE HOURS OF 12:01 AM TO 5:00 AM MONDAY THROUGH THURSDAY. SEE "SHORT DURATION CLOSING OF RURAL DIVIDED HIGHWAY" ON SHEET **63A**.

IF THE CONTRACTOR FAILS TO FOLLOW THESE REQUIREMENTS A STOP WORK ORDER WILL BE ISSUED AND LIQUIDATED DAMAGES ASSESSED PER 108.07 FOR EACH INCIDENT.

### QUANTITIES

| ITEM | QUANTITY | UNIT | DESCRIPTION |
|---|---|---|---|
| 614 | 304 | HOUR | LAW ENFORCEMENT OFFICER WITH PATROL CAR |
| | | | |

(QUANTITIES CARRIED TO GENERAL SUMMARY , SHEET 46)

CALCULATED BC CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

MED-71-15.78

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## WILBUR RD. AND GRANGER RD. DETOURS

IN ADDITION TO THE REQUIREMENTS OF 614.03(B), THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND REMOVE DETOUR SIGNS AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) AND TYPE III BARRICADES AT THE LOCATIONS SHOWN ON THE MAPS ON SHEET 42 & 403.

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND REMOVE THE ADVANCE WARNING SIGNS, GATES, AND BARRICADES AS PER STANDARD CONSTRUCTION DRAWING MT-101.60M AT THE LOCATIONS SHOWN ON SHEET 42 & 403.

THE CONTRACTOR SHALL NOTIFY BOTH THE COUNTY ENGINEER & THE PROJECT ENGINEER FOURTEEN (14) DAYS IN ADVANCE OF THE CLOSURE. THE CONTRACTOR SHALL ALSO SIMILARLY NOTIFY THE SCHOOL DISTRICT OFFICIALS AND EMERGENCY RESPONSE PERSONNEL.

WHEN TEMPORARY PAVEMENT STRIPING IS REQUIRED PRIOR TO PERMANENT STRIPING FOR OPENING TO TRAFFIC, THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED AND CARRIED FORWARD TO THE GENERAL SUMMARY:

ITEM 614 TEMPORARY CENTER LINE, CLASS II, PAINT 0.5 MILE

THE FOLLOWING ROADS WILL REQUIRE THE CLOSING OF THE ROAD TO TRAFFIC DURING PART II. THESE ROADS ARE AS FOLLOWS:

GRANGER RD. - C.H. 21 (SHEET 403)
WILBUR RD. - C.H. 66 (SHEET 42)

THE MAXIMUM LENGTH OF CLOSURE AND LIQUDATED DAMAGES FOR ROADS CLOSED TO TRAFFIC ARE LISTED AS FOLLOWS:

| ROAD | STRUCTURE | MAXIMUM LENGTH OF CLOSURE |
|---|---|---|
| GRANGER RD. | MED-71-1828 | 135 DAYS |
| WILBUR RD. | MED-71-30867 | 150 DAYS |

ONCE CLOSURE OF THE LOCAL ROAD IS MADE, THE CONTRACTOR SHALL DILIGENTLY PURSUE THE WORK TO MINIMIZE THE INCONVENIENCE TO THE TRAVELING PUBLIC. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO AS TO MINIMIZE ROAD CLOSURES DURING THE PERIOD OF TIME BETWEEN SEPTEMBER 1ST AND JUNE 1ST TO MITIGATE INCONVENIENCE TO SCHOOL BUS ROUTES. THESE ROADS SHALL NOT BE CLOSED CONCURRENTLYTHE DETOURS ARE SHOWN ON SHEET42 & 403.

THE NUMBER OF CONSECUTIVE CALENDAR DAYS SHOWN ABOVE SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THOSE DAYS THAT THE CROSS ROAD REMAINS CLOSED TO TRAFFIC, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN THE AMOUNT PER 108.07.

## GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME AS THE ENGINEER IS ASSURED OF COMPLIANCE.

## ITEM 615--TEMPORARY PAVEMENT, AS PER PLAN

IN LIEU OF 615.05, THE FLEXIBLE PAVEMENT BUILDUP SHALL CONSIST OF 8" OF CMS 301 BITUMINOUS AGGREGATE BASE, AND COMPACTION OF THE AREA PER 203. PAYMENT FOR THIS ITEM SHALL BE MADE PER SQUARE YARD AND SHALL INCLUDE MATERIALS, LABOR AND EQUIPMENT FOR A COMPLETE INSTALLATION PER THE ABOVE REQUIREMENTS.

THE CONTRACTOR MAY CONSTRUCT THIS ITEM FOR PARTS II AND/OR III DURING PART I CONSTRUCTION AND FOR PART III DURING PART II CONSTRUCTION.

## SHOULDER MAINTENANCE ON I-71

TRAFFIC CONTROL OPERATIONS REQUIRE THE PARTIAL UTILIZATION OF THE SHOULDERS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE SHOULDERS ARE MAINTAINED IN ACCEPTABLE CONDITION TO ASSURE THEIR SAFE USE AS A TRAFFIC LANE. AN ESTIMATED QUANTITY OF 600 CUBIC YARDS OF ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ANY REQUIRED REPAIRS. TO BE USED AS DIRECTED BY THE ENGINEER.

## NOTICE OF CLOSURE SIGNS

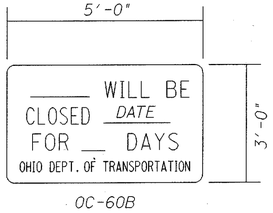
THESE SIGNS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE LOCATED IN THE FIELD SO AS NOT TO INTERFERE WITH ANY PERMANENT SIGNS. ON THIS PROJECT THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

OC-60B SIGN SHALL BE USED ON THE FOLLOWING LOCAL ROADS:

GRANGER ROAD
WILBUR ROAD

PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AND SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING AND REMOVING THE SIGNS INCLUDING SUPPORTS.

NOTE: THE CONTRACTOR IS TO FILL IN THE ROAD, DATE AND DURATION.




OC-60B

## ITEM 614-VEHICLE ASSISTANCE

THE CONTRACTOR SHALL PROVIDE A VEHICLE WITH OPERATOR ABLE TO ASSIST OR REMOVE DISABLED VEHICLES FROM THE TRAVELED LANE TO RE-ESTABLISH FREE FLOWING TRAFFIC WHILE IR 71 IS LIMITED TO TWO LANE IN EACH DIRECTION. THE EXCEPTION IS TRAFFIC ACCIDENTS WHICH ARE NOT TO BE MOVED WITHOUT DIRECTION OF THE OHIO STATE HIGHWAY PATROL.

THE RESPONSE TIME SHOULD BE WITHIN TEN MINUTES OF THE VEHICLE BEING REPORTED AS DISABLED. THE INTENT IS TO PERFORM THIS WORK IN A VERY SHORT TIME PERIOD TO AVOID TRAFFIC FROM BACKING UP.

THE HOURS FOR THIS VEHICLE WITH OPERATOR ARE 24 HOURS PER DAY SEVEN DAYS A WEEK FROM MARCH 15 THROUGH THE FRIDAY BEFORE THANKSGIVING.

THE VEHICLE SHALL BE EQUIPPED WITH AT LEAST THE FOLLOWING: FUEL CANS OF GAS AND DIESEL, FLARES, CONES, JUMPER CABLES, AMBER LIGHTS, CELL PHONE (TO RECEIVE TROUBLE CALLS AND TO CALL TOW VEHICLES).

THE CONTRACTOR IS NOT TO REMOVE THE VEHICLE EXCEPT TO THE SHOULDER OR OFF THE TRAVELED LANE. COMMERCIAL TOW OPERATORS ARE TO BE CONTACTED TO REMOVE THE DISABLED VEHICLE FROM THE ROADWAY.

ANY DAMAGE DONE TO DISABLED VEHICLES SHALL BE BORNE BY THE CONTRACTOR (THE STATE SHALL BE HELD HARMLESS).

ALL COSTS ASSOCIATED WITH THE REQUIREMENTS MENTIONED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614-MAINTAINING TRAFFIC, MISC.: VEHICLE ASSISTANCE.

## ITEM 614 - TEMPORARY PAVEMENT MARKINGS, AS PER PLAN

THE CONTRACTOR SHALL BE REQUIRED TO INSTALL VARIOUS TYPES OF TEMPORARY MARKINGS ACCORDING TO THE FOLLOWING CRITERIA CONTINGENT UPON THE SEQUENCE OF CONSTRUCTION. TEMPORARY PAVEMENT MARKINGS SHALL BE 740.06, TYPE I PREFORMED MATERIAL OR 642 PAINT APPLIED USING THE FOLLOWING CRITERIA: ALL TEMPORARY MARKINGS INSTALLED ON A PERMANENT BRIDGE DECK OR ON PERMANENT PAVEMENT SURFACE SHALL BE 740.06, TYPE I PREFORMED MATERIAL. PAINT MAY BE USED FOR TEMPORARY MARKINGS INSTALLED ON EXISTING BRIDGE DECKS TO BE REPLACED OR OVERLAYED, OR ON EXISTING PAVEMENT THAT WILL BE RESURFACED.

PAYMENT FOR THE ABOVE WILL BE TEMPORARY PAVEMENT MARKING, BY CLASS, AS PER PLAN OF VARIOUS TYPES WHICH WILL INCLUDE EITHER PAINT OR TAPE AS REQUIRED. SEE SHEET 43-44.

TEMPORARY RAISED PAVEMENT MARKERS CANNOT BE USED TO SIMULATE (REPLACE) ANY TYPE OF TEMPORARY PAVEMENT MARKING.

### QUANTITIES

| ITEM | QUANTITY | UNIT | DESCRIPTION |
|---|---|---|---|
| 614 | 0.50 | MILE | TEMPORARY CENTERLINE, CLASS II, PAINT |
| 614 | 600 | CU.YD. | BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC |
| 614 | LUMP | | MAINTAINING TRAFFIC, MISC.: VEHICLE ASSISTANCE |

(QUANTITIES CARRIED TO GENERAL SUMMARY, SHEET 46)

CALCULATED BJL CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

MED-71-15.78

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PROJECTZONE

## REPLACEMENT OF DAMAGED GUARDRAIL

IF, DURING THE CONSTRUCTION OF THE PROJECT, THE EXISTING GUARDRAIL IS DAMAGED BY THE TRAVELING PUBLIC, THE CONTRACTOR SHALL REPAIR THE DAMAGED SECTIONS AS DIRECTED BY THE ENGINEER. THE FOLLOWING QUANTITIES ARE PROVIDED FOR SUCH OCCURRENCES:

| ITEM | QUANTITY | UNIT | DESCRIPTION |
|---|---|---|---|
| 606 | 1,000 | LIN. FT. | GUARDRAIL, TYPE 5 |
| 606 | 20 | EACH | ANCHOR ASSEMBLY, TYPE E-98 * |
| 202 | 2,000 | LIN. FT. | GUARDRAIL REMOVED |

* OFFSET DESIGN

SALVAGEABLE GUARDRAIL MAY BE REUSED IF IT IS DETERMINED BY THE ENGINEER TO BE IN GOOD CONDITION. ANY GRADING NECESSARY TO RESTORE THE DAMAGED AREA BACK TO THE PRE-EXISTING CONDITION SHALL BE CONSIDERED INCIDENTAL IN THE COST OF ITEM 606.

THE REMOVAL AND DISPOSAL OF THE DAMAGED GUARDRAIL AND ANCHOR ASSEMBLIES SHALL BE PERFORMED BY THE LINEAL FOOT MEASUREMENT AND INCLUDED IN ITEM 202 GUARDRAIL REMOVED.

QUANTITIES NOT USED FOR THE INTENDED PURPOSE SHALL BE NONPERFORMED.

THE 606 ITEMS IN THIS NOTE ARE INTENDED TO BE USED ONLY DURING THE MAINTENANCE OF TRAFFIC PHASES OF THIS PROJECT. THEY ARE NOT TO BE CONSIDERED AS A PERMANENT INSTALLATION.

## ITEM 614- PORTABLE CHANGEABLE MESSAGE SIGN, CLASS II, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, PORTABLE CHANGEABLE MESSAGE SIGN, (PCMS) AS CALLED FOR IN PLAN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR. THE CLASS II UNITS HAVE A MINIMUM LEGIBILITY DISTANCE OF 850 FT.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY.

THE NUMBER, LOCATION, PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE LOCATIONS OF THE PCMS MAY NOT BE WITHIN THE WORK LIMITS OF THE PROJECT BUT SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION, YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGE, IF NECESSARY.
ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD.

## ITEM 614- PORTABLE CHANGEABLE MESSAGE SIGN, CLASS II, AS PER PLAN (CON'T)

THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHRASES SHALL BE SUPPORTED, BUT NORMALLY, NOT MORE THAN TWO MESSAGE PHRASES SHOULD BE EMPLOYED, ALTHOUGH THREE PHRASES MAY BE USED IN UNUSUAL CONDITIONS. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHRASE TO BE READ AT LEAST ONCE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.06. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.
THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 104.04.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT BID PER SIGN-MONTH FOR ALL SIGNS FURNISHED UNDER ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, CLASS II, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK, INCLUDING RELOCATION IF NECESSARY.

A QUANTITY OF 64* SIGN-MONTHS HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

* ESTIMATED 8 LOCATIONS FOR 8 MONTHS

## COORDINATION OF CONTRACTORS

DURING THE SECOND YEAR OF CONSTRUCTION, MED-71-15.78 WILL ABUT THE DESIGN BUILD PROJECT MED-271-0.00. EACH CONTRACTOR SHALL WORK TO ASSURE SMOOTH TRANSITIONAL TRAFFIC FLOW FROM ONE PROJECT TO THE OTHER.

SINCE THE MAINTENANCE OF TRAFFIC AND WORK OF THESE TWO PROJECTS OVERLAP EACH OTHER, IT IS ESSENTIAL THAT EACH CONTRACTOR CONDUCT THEIR WORK AND COOPERATE WITH EACH OTHER IN SUCH A MANNER AS NOT TO HINDER THE PROGRESS OR COMPLETION OF THE WORK BEING PERFORMED BY THE OTHER CONTRACTOR.

## BRIDGE CONSTRUCTION ON S.R. 3 RAMPS

THE CONTRACTOR WILL BE GIVEN 135 CONSECUTIVE CALENDAR DAYS TO COMPLETE EACH OF THE BRIDGES CROSSING PLUM CREEK. FAILURE TO COMPLETE THE CONSTRUCTION WITHIN THE DESIGNATED TIME LIMIT THE CONTRACTOR SHALL INCUR LIQUIDATED DAMAGES IN ACCORDANCE WITH CMS 108.07.

## BRIDGE CONSTRUCTION

THE CONTRACTOR SHALL COMPLETE ALL STRUCTURE WORK IN THE CONSTRUCTION SEASON OUTLINED IN "SEQUENCE OF CONSTRUCTION I-71".

ALL STRUCTURE WORK INCLUDING THE PAINTING SHALL BE PERFORMED WHILE THAT PORTION OF I-71 IS UNDER CONSTRUCTION.

## ACCESS TO ADJACENT PROPERTY

ACCESS TO ADJACENT PROPERTY WITHIN THE WORK LIMITS ON THE VARIOUS LOCAL ROADS SHALL BE MAINTAINED BY THE CONTRACTOR AT ALL TIMES, AS PER 614.02(a). THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF LOCAL TRAFFIC:

410 TRAFFIC COMPACTED AGGREGATE, TYPE A, 50 CU.YD.

## DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

| | | |
|---|---|---|
| 616 | WATER | 200 M GALLON |
| 616 | CALCIUM CHLORIDE | 5 TON |

## CONSTRUCTION ACCESS POINTS

FOR CONSTRUCTION ACCESS POINTS SEE NOTES AND DETAILS ON SHEET **64**.

### QUANTITIES

| ITEM | QUANTITY | UNIT | DESCRIPTION |
|---|---|---|---|
| 202 | 2000 | LIN. FT. | GUARDRAIL REMOVED |
| 410 | 50 | CU YARD | TRAFFIC COMPACTED AGGREGATE, TYPE A |
| 606 | 1000 | LIN. FT. | GUARDRAIL, TYPE 5 |
| 606 | 20 | EACH | ANCHOR ASSEMBLY, TYPE E-98 |
| 614 | 64 | MONTH | PORTABLE CHANGEABLE MESSAGE SIGN, CLASS II, AS PER PLAN |
| 616 | 200 | M GAL. | WATER |
| 616 | 5 | TON | CALCIUM CHLORIDE |

(QUANTITIES CARRIED TO GENERAL SUMMARY, SHEET 46)

CALCULATED BZ CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

MED-71-15.78

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REF_FILE : 5)\npd_mod_lr7\dgn\mot\motdet.dgn
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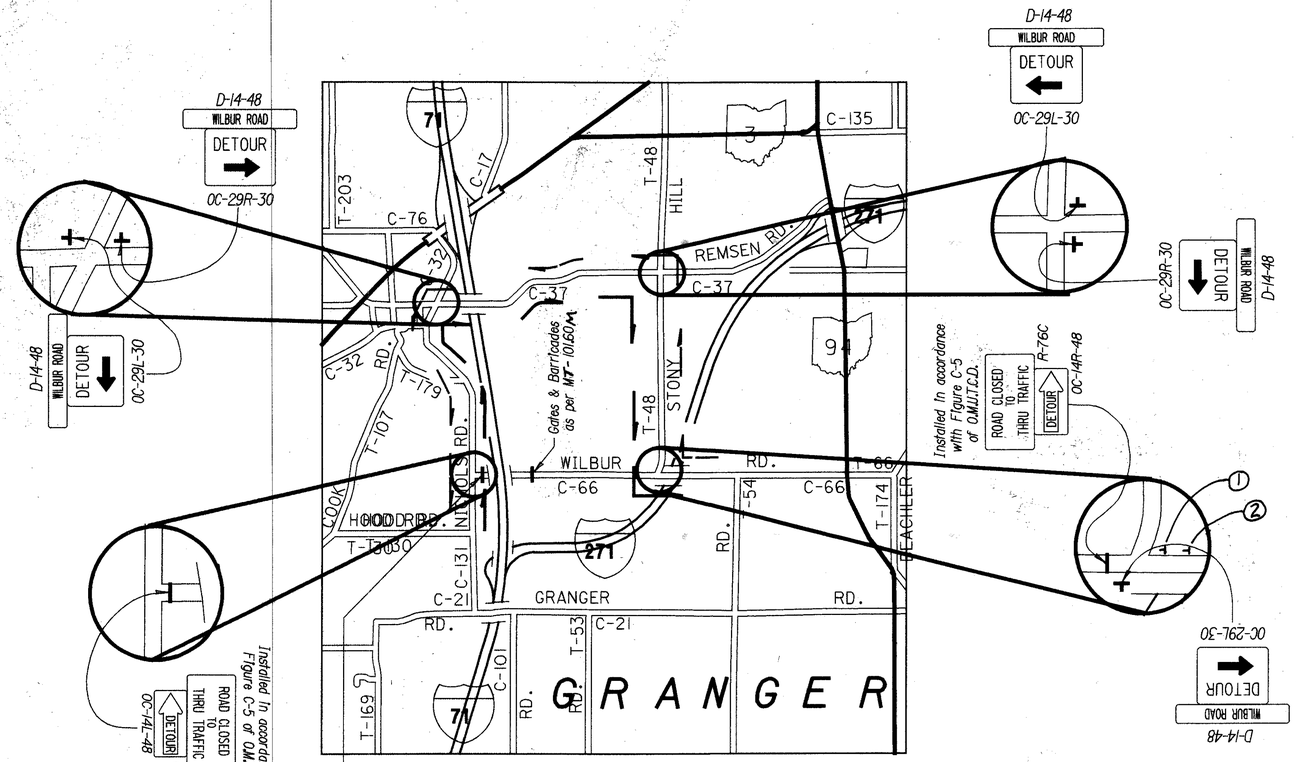
USERNAME : nvondere
DATE : 29-DEC-1999
TIME : 10:11




## Wilbur Road DETOUR MAP

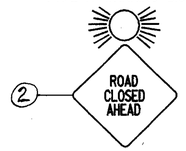
Scale In Miles

0 1 2

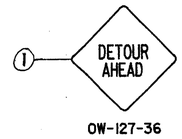
## LEGEND

- Detour
- Interstate
- State & Federal Routes
- Other Roads

TYPE A WARNING LIGHT



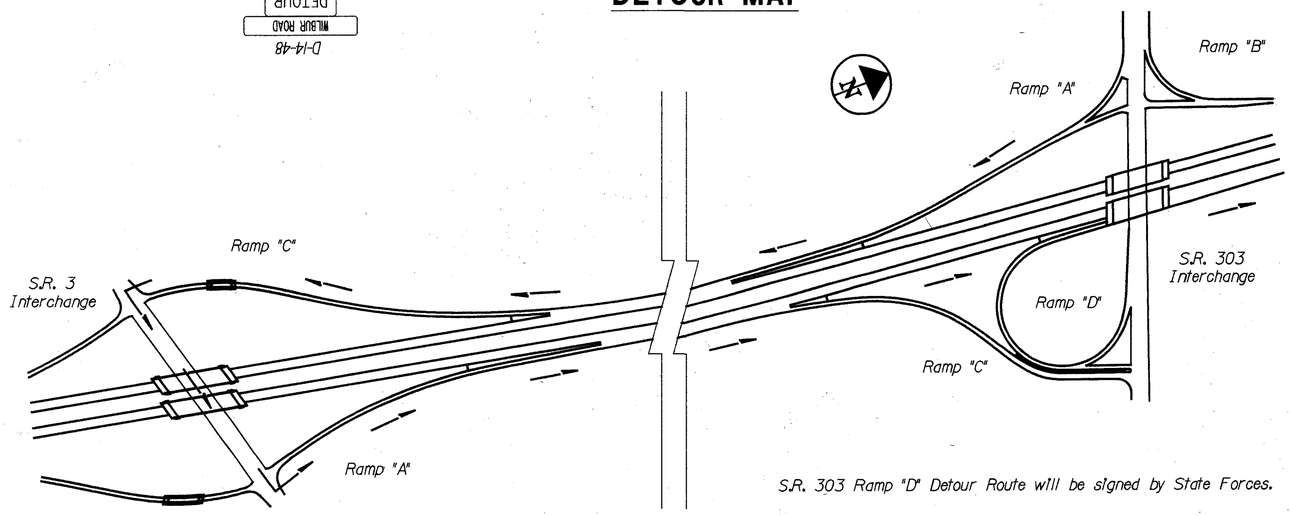

OW-120-36




OW-127-36

NOTE: FOR ADDITIONAL NOTES AND DURATION OF THE DETOUR, SEE SHEET 40.

## S.R. 303 Ramp "D" DETOUR MAP




S.R. 303 Ramp "D" Detour Route will be signed by State Forces.

**ITEM 614- MAINTAINING TRAFFIC, MISC.: EMERGENCY PULLOFFS**

THE CONTRACTOR SHALL INSTALL EMERGENCY PULLOFFS AT THE STATIONS SPECIFIED IN THE MAINTENANCE OF TRAFFIC SEQUENCE OF CONSTRUCTION. THE PAVEMENT DESIGN SHALL CONSIST OF TEMPORARY PAVEMENT, CLASS B AS PER 615.05.

THE BID PRICE FOR EACH ITEM 614 MAINTAINING TRAFFIC, MISC.: EMERGENCY PULLOFFS SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NOT LIMITED TO GRADING, PAVEMENT, PAVEMENT MARKINGS, SIGNS AND SIGN SUPPORTS AS DETAILED ON SHEET 65 FOR A COMPLETE INSTALLATION. THIS ITEM SHALL ALSO INCLUDE THE REMOVAL OF THE SAME WHEN IT IS DETERMINED TO BE NO LONGER NEEDED AS DIRECTED BY THE ENGINEER.

AN ESTIMATED QUANTITY OF **10** EACH OF ITEM 614 MAINTAINING TRAFFIC, MISC.: EMERGENCY PULLOFFS HAS BEEN PROVIDED.

## QUANTITIES

| ITEM | QUANTITY | UNIT | DESCRIPTION |
|---|---|---|---|
| 614 | 10 | EACH | MAINTAINING TRAFFIC, MISC.: EMERGENCY PULLOFFS |
| | | | |

(QUANTITIES CARRIED TO GENERAL SUMMARY, SHEET 46)

## MAINTENANCE OF TRAFFIC GENERAL NOTES

CALCULATED BC
CHECKED

MED-71-15.78



LEVELS ON: 1-4,6-9,11,13-64)
PLOT QUEUE: \QUEPLOT.QUE
PEN TABLES: H:\Bentley\Projects\Cross.DGE.pen
DATE & TIME: 29-DEC-1999 10:11
USERNAME: nvondere
PROJECT: HOME

## ITEM 614 - TEMPORARY IMPACT ATTENUATOR, (UNIDIRECTIONAL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING IMPACT ATTENUATORS:

1) THE QUADGUARD CZ, (24" [610 MM] WIDE 6-BAY) TEMPORARY IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312.467.6750).

   THE LENGTH OF THE 6-BAY QUADGUARD CZ IS 20'-9" [6.33 M]. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

| DWG. # | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL DATE |
|---|---|---|---|
| QSCZCVR-T4 | QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES | 5/13/99 Rev. J | 8/27/99 |
| 35-40-10 | QUADGUARD SYSTEM CONCRETE PAD, CZ, QG | 11/19/99 Rev. D | 8/27/99 |
| 35-40-16 | QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, QG | 7/30/99 Rev. F | 8/27/99 |
| 354051Z | QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, QG, 24,30,36 | 5/17/99 | 8/27/99 |
| 35-40-18 | TRANSITION ASSEMBLY, 4 OFFSET, QG | 6/25/99 Rev. F | 8/27/99 |
| 3540260 | QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY | 11/19/97 Rev. C | 8/27/99 |

2) THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY SYRO INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330.545.4373).

   THE TRACC IS 21'-0" [6.4 M] LONG AND 2'-7" [0.8 M] WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

| DWG. # | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL DATE |
|---|---|---|---|
| SS450<br>SS450M | CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS | 3/12/99 Rev. 1<br>3/12/99 Rev. 1 | 8/27/99<br>8/27/99 |
| SS455 | TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS | 2/18/99 | 8/27/99 |
| SS461 | TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS | 6/30/99 Rev. 1 | 8/27/99 |
| SS462 | TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS | 6/30/99 | 8/27/99 |

THE CONTRACTOR SHALL PROVIDE A REPLACEMENT UNIT WHEN AN IMPACT IS SEVERE ENOUGH TO REQUIRE COMPLETE REPLACEMENT OF THE ATTENUATOR. THE CONTRACTOR SHALL HAVE A SPARE PARTS PACKAGE AVAILABLE ON THE PROJECT SITE AT ALL TIMES WHEN AN ATTENUATOR IS IN PLACE. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE COMPLETE SPARE PARTS PACKAGE FOR EVERY 1 TO 6 UNITS INSTALLED ON THE PROJECT SITE. FOR EXAMPLE, 5 INSTALLED UNITS REQUIRE 1 SPARE PARTS PACKAGE AND 7 INSTALLED UNITS REQUIRE 2 SPARE PARTS PACKAGES.

WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 614, TEMPORARY IMPACT ATTENUATOR, (UNIDIRECTIONAL OR BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT, MAINTAIN, REPAIR, REPLACE OR RELOCATE A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

## ITEM 614- TEMPORARY IMPACT ATTENUATOR (REPLACEMENT), UNIDIRECTIONAL

THIS ITEM IS TO BE USED AS SPARE TEMPORARY ATTENUATORS TO REPLACE THOSE DAMAGED WHERE THE RESTORATION OF MINOR OR MAJOR REPAIRS CANNOT BE PERFORMED IN A SAFE AND TIMELY MANNER. THIS ITEM INCLUDES THE COST OF ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO REMOVE THE DAMAGED TEMPORARY IMPACT ATTENUATOR, ASSEMBLE A COMPLETE AND FUNCTIONAL ATTENUATOR, AND MAINTAIN THE REPLACEMENT TEMPORARY IMPACT ATTENUATOR. THE FINAL REMOVAL OF THIS TEMPORARY IMPACT ATTENUATOR WHEN NO LONGER NEEDED FOR THAT CONSTRUCTION PHASE IS INCLUDED IN THE COST OF THE ORIGINAL TEMPORARY IMPACT ATTENUATOR.

THE CONTRACTOR SHALL HAVE THE ENGINEER INSPECT THE DAMAGED TEMPORARY IMPACT ATTENUATOR PRIOR TO ANY REPAIRS BEING MADE IN ORDER TO BE JUSTIFIABLY PAID FOR THIS ITEM. PAYMENT SHALL BE MADE PER EACH FOR ITEM 614 TEMPORARY IMPACT ATTENUATOR (REPLACEMENT), UNIDIRECTIONAL .

## RAMP WORK

THE CONTRACTOR IS ENCOURAGED TO PERFORM THE RAMP WORK PRIOR TO THE MAINLINE WORK, BUT IS NOT MANDATORY, UNLESS OTHERWISE NOTED. WHEN AN ENTRANCE RAMP IS CLOSED, THE EXIT RAMP IN THE SAME DIRECTION AT THE SAME INTERCHANGE SHALL HAVE SIGNS PLACED THAT STATE "NO DIRECT RE-ENTRY ____BOUND", N-75 SIGN, PRIOR TO EXITING I-71. TRAFFIC SHALL BE MAINTAINED ON ALL RAMPS EXCEPT AS NOTED BELOW.

**RAMP WORK LIMITATIONS:**

1. GENERAL: AFTER THE RAMP WIDENING, JOINT REPAIRS AND SHOULDER WORK ARE COMPLETED, THE CONTRACTOR MAY CLOSE THE RAMP IN ORDER TO PLACE THE APPLICABLE INTERMEDIATE AND SURFACE COURSES OF ASPHALT BUT ONLY AT NIGHT AS PER THE WORKING HOURS RESTRICTION NOTE ON SHEET **38** , UNLESS OTHERWISE NOTED. AN ENTIRE SINGLE COURSE OF ASPHALT, FEATHER AND TEMPORARY STRIPING SHALL BE COMPLETED PRIOR TO REOPENING THE RAMP TO TRAFFIC. THE MINIMUM BOUNDRIES ARE FROM THE CONCRETE PAVEMENT PRIOR TO THE SIDE ROAD TO THE GORE AREA. THE INTENT IN THE GORE AREA IS TO HAVE ALL JOINT WORK AND TEMPORARY PAVEMENT DONE SUCH THAT THE VARIOUS LANE CLOSURE IN THE ENTRANCE/EXIT RAMP STANDARD CONSTRUCTION DRAWINGS UTILIZES THE REPAIRED AREAS. THE EXISTING SHOULDERS ON THE RAMPS MAY NOT BE ADEQUATE TO HANDLE TRAFFIC LOADING.

2. SR 303 LOOP ENTRANCE RAMP D: FOR THE PROPOSED WORK, THE CONTRACTOR HAS A MAXIMUM OF SEVEN (7) CONSECUTIVE CALENDAR DAYS TO CLOSE RAMP D BUT ONLY AT NIGHT AS PER THE WORKING HOURS RESTRICTION NOTE ON SHEET **38**.

3. SR 303 LOOP ENTRANCE RAMP D: FOR THE TEMPORARY ROAD WORK CONSTRUCTION, THE CONTRACTOR HAS A MAXIMUM OF THREE (3) CONSECUTIVE CALENDAR DAYS TO CLOSE RAMP D BUT ONLY AT NIGHT AS PER THE WORKING HOURS RESTRICTION NOTE ON SHEET **38**.THE SAME LIMITATIONS APPLY WHEN REMOVING THE TEMPORARY PAVEMENT AND RECONSTRUCTION OF THE AFFECTED PAVEMENT AREAS ON THE RAMP.

4. ONLY ONE RAMP AT ANY ONE INTERCHANGE MAY BE CLOSED AT A TIME. IN OTHER WORDS, WE DON'T WANT TWO RAMPS CLOSED AT THE SAME TIME IN THE SAME INTERCHANGE.

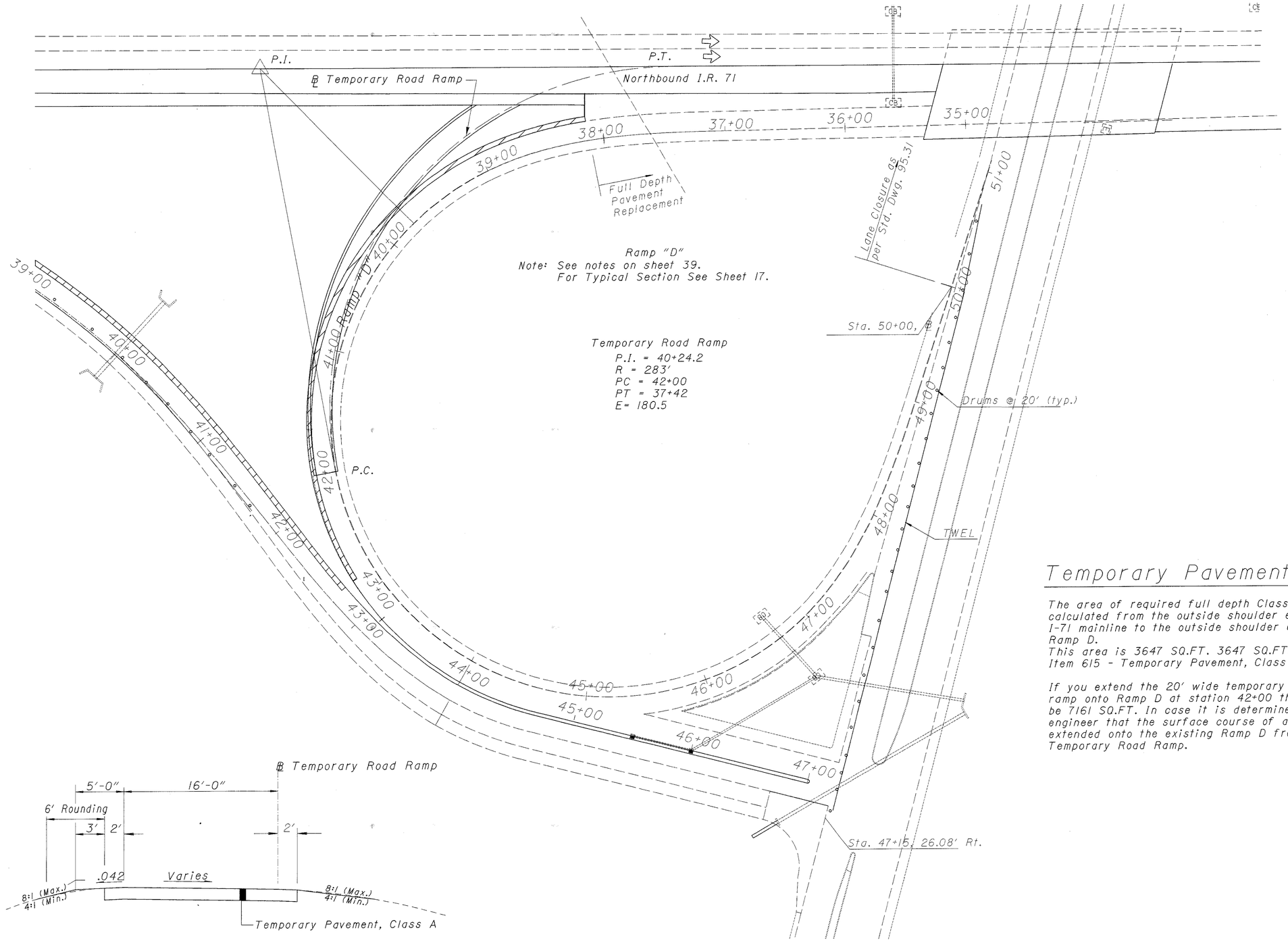
SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, LIQUIDATED DAMAGES SHALL BE ASSESSED THE CONTRACTOR IN ACCORDANCE WITH CMS 108.07.

CALCULATED | CHECKED

# MAINTENANCE OF TRAFFIC NOTES

MED-71-15.78

42A
940







# TEMPORARY ROAD TYPICAL SECTION, RAMP "D" S.R. 303 INTERCHANGE

## Temporary Pavement Areas

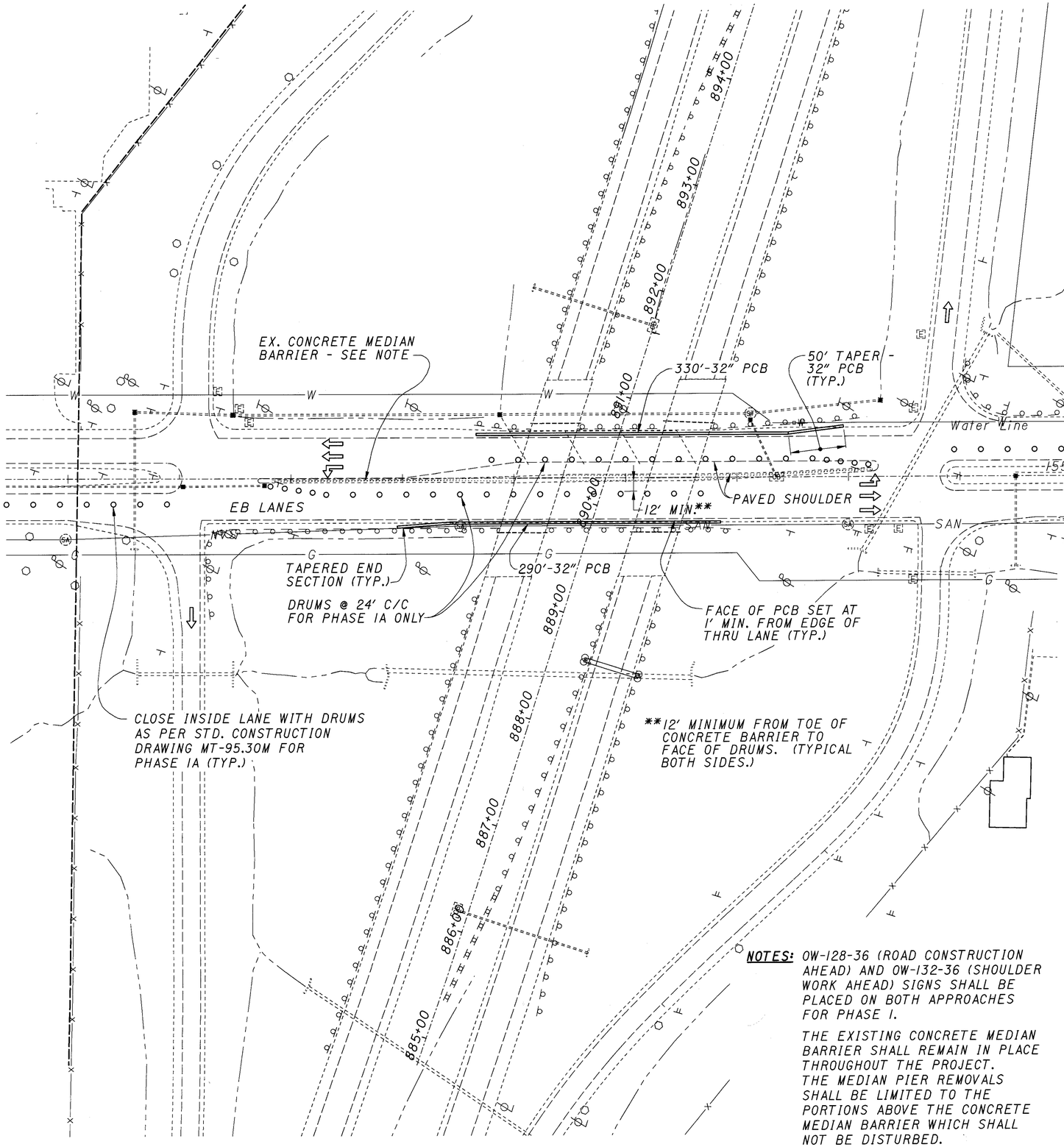
The area of required full depth Class A is calculated from the outside shoulder edge on I-71 mainline to the outside shoulder edge on Ramp D.
This area is 3647 SQ.FT. 3647 SQ.FT. ÷ 9 = 405 SQ.YDS.
Item 615 - Temporary Pavement, Class A.

If you extend the 20' wide temporary pavement ramp onto Ramp D at station 42+00 the area would be 7161 SQ.FT. In case it is determined by the engineer that the surface course of asphalt be extended onto the existing Ramp D from the Temporary Road Ramp.

▨ - Shoulder Removal and Reconstruction
TWEL - Temporary White Edge Line
TYEL - Temporary Yellow Edge Line

PART III - Phase IIIA - S.R. 303 Ramp "D"
TEMPORARY ROAD PA
MED-71-15.78
42B
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$




## MAINTENANCE OF TRAFFIC QUANTITIES

| | | |
|---|---|---|
| 622 | 32" PORTABLE CONCRETE BARRIER (290' + 330') | = 620 LIN. FT. |
| 614 | OBJECT MARKERS* (13 EACH + 15 EACH) | = 28 EACH |
| 614 | BARRIER REFLECTORS, TYPE B* (12 EACH + 14 EACH) | = 26 EACH |
| 614 | LAW ENFORCEMENT OFFICER WITH PATROL CAR = 80 HOURS | |

*MOUNTED AT 25' C/C SPACING ON PCB

QUANTITIES CARRIED TO SHEET ____.

**NOTES:** OW-128-36 (ROAD CONSTRUCTION AHEAD) AND OW-132-36 (SHOULDER WORK AHEAD) SIGNS SHALL BE PLACED ON BOTH APPROACHES FOR PHASE I.

THE EXISTING CONCRETE MEDIAN BARRIER SHALL REMAIN IN PLACE THROUGHOUT THE PROJECT. THE MEDIAN PIER REMOVALS SHALL BE LIMITED TO THE PORTIONS ABOVE THE CONCRETE MEDIAN BARRIER WHICH SHALL NOT BE DISTURBED.

## MAINTENANCE OF TRAFFIC - STATE ROUTE 18

### PHASE I

WORK UNDER THIS PHASE SHALL INCLUDE CONSTRUCTION THROUGH THE REMOVAL AND REPLACEMENT OF THE OVERHEAD BRIDGE PLUS GUARDRAIL REMOVAL, STORM SEWER RECONSTRUCTION AND MISCELLANEOUS GRADING ON S.R. 18. THE PORTABLE CONCRETE BARRIER (PCB) SHALL BE PLACED AS SHOWN ON THE M.O.T. PLAN. THE PCB SHALL REMAIN IN PLACE AS SHOWN UNTIL PHASE 2 IS STARTED, SEE BELOW. DURING ALL BRIDGE REMOVAL AND RECONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL PROVIDE PROTECTION FROM FALLING DEBRIS FOR VEHICLES ON S.R. 18.

A MINIMUM OF 2 LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON S.R. 18, EXCEPT FOR MINIMUM PERIODS AS NOTED BELOW.

THROUGH TRAFFIC MAY BE STOPPED BETWEEN 10:00 P.M. AND 6:00 A.M. FOR REMOVAL OF EITHER THE EXISTING STEEL BEAMS OR THE ERECTION OF THE NEW STEEL BEAMS OVER THE S.R. 18 PAVEMENT. EACH STOPPAGE SHALL BE LIMITED TO A MAXIMUM OF 15 MINUTES DURATION. LEOS SHALL BE USED TO CONTROL AND ADVISE TRAFFIC OF THE DELAYS DURING THE PERIODS WHEN TRAFFIC WILL BE STOPPED.

### PHASE IA

TO ACCOMMODATE THE NECESSARY EQUIPMENT AND VEHICLES REQUIRED TO REMOVE THE MEDIAN BRIDGE PIERS ABOVE THE CONCRETE BARRIER, THE INSIDE ADJACENT TRAFFIC LANES MAY BE CLOSED TO TRAFFIC WITH DRUMS AS PER M.O.T. PLAN. THIS CLOSURE SHALL ONLY OCCUR BETWEEN 10:00 P.M. AND 6:00 A.M. AND WILL BE LIMITED TO ONE (1) WORK WEEK FOR EACH REMOVAL PHASE OF THE I.R. 71 OVERHEAD BRIDGE. LIQUIDATED DAMAGES SHALL BE ASSESSED FOR EACH CALENDAR DAY BEYOND THIS LIMIT.

### PHASE 2

AFTER ALL PHASE I WORK HAS BEEN COMPLETED, THE PCB SHALL BE REMOVED. THE CONTRACTOR SHALL THEN PLACE THE PROPOSED 4 FOOT PAVED SHOULDERS. DURING THIS SHOULDER REPLACEMENT, THE ADJACENT OUTSIDE LANE OF S.R. 18 MAY BE CLOSED TO TRAFFIC WITH DRUMS USING STANDARD CONSTRUCTION DRAWING MT-95.30M. THE LANE CLOSURE SHALL BE LIMITED TO ONE (1) WORK DAY FOR EACH SHOULDER REPLACEMENT.

N

0 25 50 100 HORIZONTAL SCALE IN FEET

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# MAINTENANCE OF TRAFFIC PLAN S.R. 18

MED-71-15.78

42c / 940

7885MPA.DGN 1/27/00 SAM

**Sequence of Construction I-71**

All construction work for this project shall be completed in (3) construction seasons. The project has been split into three parts, with the first beginning at Sta. 1116+00 and ending at Sta. 1246+00; the second beginning at Sta. 912+95 and ending at Sta. 1116+00 and the third beginning at Sta. 833+00 and suspending at Sta. 912+95 and resuming at Sta. 1246+00 and ending at Sta. 1394+40.

**Interim Completion Dates**

This project is divided up into three (3) parts as described in the plans. Each part is to be constructed in the following years:

Part I - 2000 Construction Season
Part II - 2001 Construction Season
Part III - 2002 Construction Season

All work in Parts I & II is to be completed the Friday before Thanksgiving. The start up Date for each part is March 15. All work is defined to include not only the ramp, mainline and bridges but also the rest areas, lighting etc., work which physically falls within the limits of the parts as scheduled.

Should the Contractor fail to meet any of these requirements, the Contractor shall be assessed liquidated damages in accordance with 108.07of the CMS.

## PART I - Sta. 1116+00 to 1246+00

Begin construction between Sta. 1116+00 and Sta. 1246+00, including the removal and replacement of the Rest Area parking lots. Two lanes of traffic shall be maintained in both the northbound and southbound directions during daylight hours. Traffic may be reduced to one lane as per work hour restriction note for outside shoulder and drive lane build up.

**Phase I** (Build up outside shoulder and drive lane)

**Traffic Control**

1. Maintain Traffic as per Std. Dwg. MT-95.30M.
2. Move traffic to passing lane. Lane closures...etc. are restricted as per the "Working Hours Restriction" note on sheet 38.

**Work Proposed**

1. Build up the existing outside shoulder and drive lane along the mainline as per Typical sections detailed on sheet 47.

**Phase II** (Construct proposed passing lane, inside shoulder and emergency pulloff)

**Traffic Control**

1. Place temporary pavement markings on the built up outside shoulder and driving lane. Place portable concrete barrier as per details on sheet 48.
2. Move traffic to the outside shoulder and driving lane, maintain two lanes of traffic in accordance with Std. Dwg. MT-102.10M. (except for temporary lighting)

**Work Proposed**

1. Remove the passing lane, inside shoulder and reconstruct the pavement and inside shoulder in accordance with these plans.
2. Construct inside shoulder emergency pull off at Sta. 1186+00 as detailed on Sheet 65.
3. Perform all grading, drainage, signing and erosion control measures needed in the median.
4. Place the pavement except for the surface course, connect and outlet all proposed underdrains.
5. Remove and replace existing guardrail.
6. Construct temporary pavement as shown on sht. 48

**Phase III** (Construct proposed driving lane, center lane and outside shoulder)

**Traffic Control**

1. Place temporary pavement markings on the new inside shoulder and passing lane. Place portable concrete barrier as per details on sheet 49
2. Move traffic to the inside shoulder and passing lane and maintain two lanes of traffic as per Std. Dwg. MT-102.10M.
3. Close the Rest Areas and Rest Area Ramps.

**Work Proposed**

1. Remove the driving lane and outside shoulder and reconstruct the pavement and outside shoulder in accordance with these plans.
2. Place pavement except for the surface course, connect and outlet all proposed underdrains.
3. Perform all grading and drainage and signing along the outside of the roadway.
4. Remove and replace existing guardrail.
5. Reconstruct Rest Area parking lot and ramps.
   A. Remove and widen the inside and outside shoulders of each ramp.
   B. Perform pavement planing and joint repair.
   C. Pave the ramp shoulders except for the surface course.
   D. Remove and replace the existing concrete parking lot.
   E. Apply pavement markings on the new concrete.

**Phase IV** (Place the surface course and permanent outside edge line pavement markings on the outside shoulder, driving lane and ramps)

**Traffic Control**

1. Maintain two lanes of traffic in the passing lane and inside shoulder, in accordance with Std. Dwg. MT-102.10M.

**Work Proposed**

1. Place the surface course on the outside shoulders, driving lanes and ramps with a hot joint between the lanes and the shoulder.
2. Finish all grading, permanent edge line and miscellaneous items.

**Phase V** (Place the surface course and permanent pavement markings on the inside shoulder and passing lanes)

**Traffic Control**

1. Maintain two lanes of traffic in the driving lanes and outside shoulder, in accordance with Std. Dwg. MT-102.10M and /or MT-95.30M.
2. Permanently stripe and sign the inside shoulders and passing lanes.

**Work Proposed**

1. Place the surface course on the inside shoulders and passing lanes with a hot joint between the lanes and the shoulder.
2. Finish all grading, striping and miscellaneous items.
3. Erect proposed lighting.

**Phase VI** (Place the surface course and permanent pavement markings on the center lanes)

**Traffic Control**

1. Maintain traffic one lane on the outside shoulder. Lane closures...etc. are restricted as per the "Working Hours Restriction" note on sheet 38.

**Work Proposed**

1. Place the surface course on center lane . Apply temporary markings at conclusion of paving each night prior to opening to traffic.
2. Place all remaining permanent markings.

A. The contractor may delay the placement of final pavement and markings until the spring of the following year. If the contractor elects to do this, he shall place full dimension (class I) pavement markings through out the recently completed stage for the purpose of maintaining traffic over the winter, at his expense. Furthermore if the contractor elects to place the surface course in the spring, he shall complete the placement by June 1st or shall be assessed liquidated damages in the amount as prescribed in section 108.07 for every day after June 1st that the surface course remains uncompleted from the previous stage of work.

## PART II - Sta. 912+95 to Sta. 1116+00

Begin construction between Sta. 912+95 and Sta. 1116+00 , including interchanges of I.R.-71 with S.R. 3 and I.R.-271. Two lanes of traffic shall be maintained in both the northbound and southbound directions during daylight hours. Traffic may be reduced to one lane as per work hour restriction note for outside shoulder and drive lane build up and full depth replacement. All the ramps at S.R. 3 and I.R.-271 shall remain open during construction, unless otherwise noted.

**Phase I** (Reconstruct and build up the outside shoulder and drive lane)

**Traffic Control**

1. Maintain Traffic as per Std. Dwg. MT-95.30M.
2. Move traffic to passing lane. Lane closures...etc. are restricted as per the "Working Hours Restriction" note on sheet 38.

**Work Proposed**

1. Reconstruct and build up the existing outside shoulder with temporary pavement as per Typical sections detailed on sheet 47. Only as much shoulder shall be removed as can be reconstructed during the overnight closure time.
2. Construct outside shoulder emergency pull off at Sta. 1025+00 as detailed on Sheet 65.

**Phase II** (Construct proposed passing lane, inside shoulder and emergency pulloff)

**Traffic Control**

1. Place temporary pavement markings on the reconstructed and built up outside shoulder and driving lane. Place portable concrete barrier as per details on sheet 48.
2. Move traffic to the outside shoulder and driving lane, maintain two lanes of traffic in accordance with Std. Dwg. MT-102.10M. (Except for Temporary lighting)

**Work Proposed**

1. Remove the passing lane, inside shoulder and reconstruct the pavement and inside shoulder in accordance with these plans.
2. Reconstruct the inside portion of the mainline structures as detailed on sheets 48.
3. Construct inside shoulder emergency pull off at Sta. 1025+00 as detailed on Sheet 65.
4. Perform all grading, drainage, signing and erosion control measures needed in the median.
5. Place the pavement except for the surface course, connect and outlet all proposed underdrains.
6. Remove and replace existing guardrail.
7. Construct temporary pavement as shown on sht. 48

**Phase III A** (Construct proposed driving lane, center lane and outside shoulder)

**Traffic Control**

1. Place temporary pavement markings on the new inside shoulder and passing lane. Place portable concrete barrier as per details on sheet 49.
2. Move traffic to the new inside shoulder and passing lane and maintain two lanes of traffic as per Std. Dwg. MT-102.10M.
3. Keep all ramps open according to Std. Dwg. MT-98.13M, MT-98.14M and MT-98.15M and details in these plans..

**Work Proposed**

1. Between Sta. 976+89 - Sta. 1116+00 northbound and Sta. 973+04 - Sta. 1116+00 southbound, remove the driving lane and outside shoulder and reconstruct the pavement and outside shoulder. Between Sta. 912+95 and Sta. 969+33 northbound and Sta. 912+95 and Sta. 964+00 southbound remove the driving lane and reconstruct two drive lanes and an outside shoulder in accordance with these plans.
2. Between Sta. 969+33 and Sta. 976+89 Northbound and Sta. 964+00 and Sta. 973+04 Southbound, remove the speed change lanes and outside shoulder and reconstruct in accordance with these plans.
3. Reconstruct the outside portion of the mainline structures as detailed on sheet 49.
4. Place pavement except for the surface course, connect and outlet all proposed underdrains.
5. Perform all grading and drainage and signing along the outside of the roadway.
6. Remove and replace existing guardrail.
7. Construct noise walls.

**Phase III B - (S.R. 3)** (During Phase III, widen and repair joints on existing ramps. Replace the bridges on ramps "B" and "C") (May begin structure work during phase II)

**Subphase 1** (Reconstruct the outside shoulder and perform joint repairs)

**Traffic Control**

1. On ramp "B" and "C" maintain traffic onto the inside shoulder for partwidth construction as detailed on sheet 55 and 57.

**Work Proposed**

1. Perform all joint repairs on all ramps using FS concrete. Complete all joint repairs prior to shoulder reconstruction.
2. Remove and widen the outside shoulders of each ramp. At no time shall the contractor allow any greater than a 5" drop at the edge of the ramp pavement for a distance of more than 60' while separating adjacent traffic from the the work zone with drums.

**Subphase 2** (Reconstruct the inside shoulder and inside portion of structures)

**Traffic Control**

1. On ramp "B" and "C" maintain traffic at the structure for partwidth construction as detailed on sheet 55 and 57.

**Work Proposed**

1. Remove and widen the inside shoulders of all ramps.
2. Reconstruct and widen the inside half of the structures on Ramp "B" and "C".
3. Place temporary pavement on S.R.3 as detailed on sheet 55.
4. Reconstruct the inside half of the concrete entrance and exit sections at the intersection of S.R. 3 as detailed on sheet 55 and 57. F.S. concrete shall be used at the intersection with S.R. 3. The existing ramp pavement and inside shoulder shall be removed; replaced with F.S. concrete and finished within 3 days. At that time the PCB shall be removed back as shown in plans and the area protected with drums.
5. Remove and replace existing guardrail.

**Subphase 3** (Reconstruct the outside shoulders and outside portion of structures)

**Traffic Control**

1. On ramp "B" and "C" maintain traffic at the structure for outside partwidth construction as detailed on sheet 56 and 58.
2. At the exit and entrance of all the Ramps from S.R. 3, maintain traffic on the Ramps partwidth as detailed on sheet 56 and 58 for outside shoulder work.

**Work Proposed**

1. Remove temporary outside shoulders and reconstruct permanent shoulders.
2. Reconstruct and widen the outside half of the structures on Ramp "B" & "C".
3. Perform pavement planing.
4. Reconstruct the remainder of the concrete entrance and exit sections at the intersection of S.R. 3 as detailed on sheet 56 and 58. The existing pavement and outside shoulder shall be removed; replaced with F.S. concrete and finished within 3 days. At that time the PCB shall be removed back as shown in plans and the area protected with drums.
5. Pave the ramps except for the surface course.

**Phase III C - (I.R. 271)** (During Phase III, widen and reconstruct existing ramps)

**Subphase 1** (Reconstruct the outside shoulder & lane)

**Traffic Control**

1. Place temporary pavement markings on existing I.R.271 as detailed on sht. 67.
2. Maintain two lanes of traffic on the passing lane and inside shoulder on I.R.-71.
3. At the exit ramps maintain traffic as detailed on sheet 67. At the entrance ramps maintain traffic as detailed on sheet 66.
4. Maintain one lane of traffic on the inside lane of I.R. 271 under the I.R.-71 bridge as per Std. Dwg. MT-95.30M.

**Work Proposed**

1. Remove and reconstruct the proposed outside shoulders and drive lanes of I.R.-71 and I.R. 271 Connection "E" and Connection "W" except for the gore areas as detailed on sheet 66 & 67.
2. Pave the ramp shoulders except for the surface course.
3. Remove and replace existing guardrail.

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**Subphase 2** (Reconstruct the inside shoulder and lane on Ramps "E" and "W")

**Traffic Control**

1. Continue to maintain two lanes of traffic on the passing lane and inside shoulder on I-71.
2. At the exit ramps maintain traffic as detailed on sheet 65. At the entrance ramps maintain traffic as detailed on sheet 67.
3. Maintain one lane of traffic on the outside lane of I.R. 271 under the I.R.-71 bridge as per Std. Dwg. MT-95.32M.

**Work Proposed**

1. Remove and reconstruct the inside shoulders and lane of each connection. Remove and reconstruct gore areas and driving lanes for I.R.-71 as detailed sheet 66 & 67.
2. Pave the ramp shoulders except for the surface course.
3. Remove and replace existing guardrail.

**Phase IV** (Place the surface course and permanent edge line pavement markings on the outside shoulder, driving lane and ramps)

**Traffic Control**

1. Maintain two lanes of traffic in the passing lane and inside shoulder, in accordance with Std. Dwg. MT-102.10M.

**Work Proposed**

1. Place the surface course on the outside shoulders, driving lanes and ramps with a hot joint between the lanes and the shoulder.
2. Finish all grading, striping and miscellaneous items.

**Phase V** (Place the surface course and permanent pavement markings on the inside shoulder and passing lanes)

**Traffic Control**

1. Maintain two lanes of traffic in the driving lanes and outside shoulder, in accordance with Std. Dwg. MT-102.10M and /or MT-95.30M.
2. Permanently stripe and sign the inside shoulders and passing lanes.

**Work Proposed**

1. Place the surface course on the inside shoulders and passing lanes with a hot joint between the lanes and the shoulder.
2. Finish all grading, striping and miscellaneous items.
3. Erect proposed lighting.

**Phase VI** (Place the surface course and permanent pavement markings on the center lanes)

**Traffic Control**

1. Maintain traffic one lane on the outside shoulder. Lane closures...etc. are restricted as per the "Working Hours Restriction" note on sheet 38.

**Work Proposed**

1. Place the surface course on center lane . Apply temporary markings at conclusion of paving each night prior to opening to traffic.
2. Place all remaining permanent markings.
   A. The contractor may delay the placement of final pavement and markings until the spring of the following year. If the contractor elects to do this, he shall place full dimension (class 1) pavement markings through out the recently completed stage for the purpose of maintaining traffic over the winter, at his expense. Furthermore if the contractor elects to place the surface course in the spring, he shall complete the placement by June 1st or shall be assessed liquidated damages in the amount as prescribed in section 108.07 for every day after June 1st that the surface course remains uncompleted from the previous stage of work.

## PART III - Sta. 833+00 to Sta. 912+95 and Sta. 1246+00 to Sta. 1394+40

Begin construction between Sta. 833+00 to Sta. 912+95 and Sta. 1246+00 to Sta. 1394+40, including interchanges of I.R.-71 with S.R. 18 and S.R. 303. Two lanes of traffic shall be maintained in both the northbound and southbound directions during daylight hours. Traffic may be reduced to one lane as per work hour restriction note for outside shoulder and drive lane build up and full depth replacement. All the ramps at S.R. 18 and S.R. 303 shall remain open during construction except for Ramp "D" on S.R. 303 which shall be closed during I.R.-71 mainline bridge construction.

**Phase I** (Reconstruct and build up of the outside shoulder and drive lane)

**Traffic Control**

1. Maintain Traffic as per Std. Dwg. MT-95.30M.
2. Move traffic to passing lane. Lane closures...etc. are restricted as per the "Working Hours Restriction" note on sheet 38.

**Work Proposed**

1. Reconstruct and build up the existing outside shoulder with temporary pavement as per Typical sections detailed on sheets 47-49. Only as much shoulder shall be removed as can be reconstructed during the overnight closure time.
2. Construct temporary pavement between Sta. 830+00 & Sta. 840+50 as detailed on Sheet 54.
3. Construct outside shoulder emergency pull off at Sta. 1335+00 as detailed on Sheet 65.

**Phase II** (Construct proposed passing lane and inside shoulder)

**Traffic Control**

1. Place temporary pavement markings on the reconstructed and built up outside shoulder and driving lane. Place portable concrete barrier as per details on sheet 44.
2. Move traffic to the outside shoulder and driving lane, maintain two lanes of traffic in accordance with Std. Dwg. MT-102.10M. (Except for temporary lighting)

**Work Proposed**

1. Remove the passing lane, inside shoulder and reconstruct the pavement and inside shoulder in accordance with these plans.
2. Reconstruct the inside portion of the mainline structures as detailed on sheets 48.
3. Construct inside shoulder emergency pull off at Sta. 1335+00 as detailed on Sheet 65.
4. Perform all grading, drainage, signing and erosion control measures needed in the median.
5. Place the pavement except for the surface course, connect and outlet all proposed underdrains.
6. Remove and replace existing guardrail.
7. Construct temporary pavement as shown on sht. 48 & 54.

**Phase III A** (Construct proposed driving lane, center lane and outside shoulder)

**Traffic Control**

1. Place temporary pavement markings on the new inside shoulder and passing lane. Place portable concrete barrier as per details on sheet 49.
2. Move traffic to the new inside shoulder and passing lane and maintain two lanes of traffic as per Std. Dwg. MT-102.10M.
3. Keep all ramps except S.R. 303 Ramp 'D' open according to Std. Dwg. MT-98.13M, MT-98.14M and MT-98.15M and details in these plans. See S.R. 303 Loop Ramp Closure (Ramp D) note on sheet 39.

**Work Proposed**

1. Between Sta. 833+00 - Sta. 912+95 and Sta. 1246+00 - Sta. 1394+40, remove the driving lane and outside shoulder and reconstruct the pavement and outside shoulder in accordance with these plans. See S.R. 303 Loop Ramp Closure (Ramp D) note on sheet 39.
2. Reconstruct the outside portion of the mainline structures as detailed on sheet 49.
3. Place pavement except for the surface course, connect and outlet all proposed underdrains.
4. Construct noise walls.

**Phase III B - (S.R. 18)** (During Phase III widen and repair joints on existing ramps)

**Subphase 1** (Reconstruct the outside shoulder)

**Traffic Control**

1. At the exit and entrance of all the Ramps from S.R. 18, maintain traffic on the Ramps partwidth as detailed on sheet 63 for outside shoulder work. The hours of work on the ramps are per the "Work Hour Restriction" note on sheet 38.

**Work Proposed**

1. Perform pavement planing and joint repair using F.S. concrete.
2. Remove and widen the outside shoulders of each ramp, including work needed for the additional lane at the entrance of Ramp "B" and the exit of Ramp "D". At no time shall the contractor allow any greater than a five (5) inch drop of the edge of ramp pavement for a maximum distance of 60 feet while separating adjacent traffic from the work zone with drums.
3. Reconstruct the outside half of the concrete entrance and exit sections at the intersection of S.R. 18 as detailed on sheet 63. The existing pavement and outside shoulder shall be removed, replaced with F.S. concrete and completed within 3 days. At that time the PCB shall be removed back as shown in the plans and the area protected with drums.
4. Pave the ramps except for the surface course.
5. Remove and replace existing guardrail.
6. Construct noise walls.

**Subphase 2** (Reconstruct the inside shoulder)

**Traffic Control**

1. At the exit and entrance of all the Ramps from S.R. 18, maintain traffic on the Ramps partwidth as detailed on sheet 63 for inside shoulder work.

**Work Proposed**

1. Perform pavement planing and joint repair using F.S. concrete.
2. Remove and widen the inside shoulders of each ramp. At no time shall the contractor allow any greater than a five (5) inch drop of the edge of ramp pavement for a maximum distance of 60 feet while separating adjacent traffic from the work zone with drums.
3. Reconstruct the inside half of the concrete entrance and exit sections at the intersection of S.R. 18 as detailed on sheet 63. The existing pavement and outside shoulder shall be removed, replaced with F.S. concrete and completed within 3 days. At that time the PCB shall be removed back as shown in the plans and the area protected with drums.
4. Pave the ramps except for the surface course.
5. Remove and replace the guardrail.

**Phase III C - (S.R. 303)** (During Phase III, widen and repair existing ramps. Realign ramp "C" to obtain the proper clearance between ramp "C" and ramp "D")

**Subphase 1** (Reconstruct the outside shoulder, for ramp "C" and "D". Widen ramp "C" pavement)

**Traffic Control**

1. On Ramp "C" maintain traffic as detailed on sheet 61 while ramp is being relocated and the outside shoulder is being widened.
2. Close Ramp "D" while construction is underway on the outside portion of the I.R.-71 mainline structure over 303. Detour Ramp "D" traffic as shown on sheet 42. See S.R. 303 Loop Ramp Closure (Ramp D) note on sheet 39.
3. At ramps "A", "B" and "C" from S.R. 303 maintain traffic partwidth as detailed in these plans.

**Work Proposed**

1. Remove and widen the outside shoulders of each ramp.
2. Realign and widen Ramp "C" as detailed on sheet 61-62.
3. Perform pavement planing and pavement joint repair using F.S. concrete.
4. Reconstruct the outside half of the concrete entrance and exit sections at the intersection of S.R. 303 as detailed on sheets 59 & 61. F.S. concrete shall be used at the intersection of S.R. 303. The existing ramp pavement and inside shoulder shall be removed: replace with F.S. concrete and finished within 3 days. At that time the PCB shall be removed back as shown in the plans and the area protected with drums.
5. Pave the ramp and ramp shoulders except for the surface course.
6. Remove and replace existing guardrail.

**Subphase 2** (Reconstruct the inside shoulder)

**Traffic Control**

1. On Ramp "C" maintain traffic as detailed on sheet 62 while the inside shoulder is being widened.
2. Keep ramp "D" open while construction is underway on the outside portion of the I.R.-71 mainline structure over 303 except as noted on sheet 39. Detour Ramp 'D' as shown on sht. 42.
3. At the ramps "A", "B" and "C" from S.R. 303 maintain traffic partwidth as detailed in these plans.

**Work Proposed**

1. Remove and widen the inside shoulders of each ramp. At no time shall the contractor allow any greater than a five (5) inch drop of the edge of ramp pavement for a maximum distance of 60 feet while separating adjacent traffic from the work zone with drums.
2. Perform pavement planing and joint repair using F.S. concrete.
3. Reconstruct the remainder of the concrete entrance and exit sections of S.R. 303 as detailed on sheet 60 & 62. F.S. concrete shall be used at the intersection with S.R. 303. The existing ramp pavement and outside shoulder shall be removed; replaced with F.S. concrete and finished within 3 days. At that time the PCB shall be removed back as shown in plans and the area protected by drums.
4. Pave the ramp shoulders except for the surface course.
5. Remove and replace existing guardrail.

**Phase IV** (Place the surface course and permanent outside edge line pavement markings on the outside shoulder, driving lane and ramps)

**Traffic Control**

1. Maintain two lanes of traffic in the passing lane and inside shoulder, in accordance with Std. Dwg. MT-102.10M.

**Work Proposed**

1. Place the surface course on the outside shoulders, driving lanes and ramps.
2. Finish all grading, permanent edge line, striping and miscellaneous items.

**Phase V** (Place the surface course and permanent pavement markings on the inside shoulder and passing lanes)

**Traffic Control**

1. Maintain two lanes of traffic in the driving lanes and outside shoulders in accordance with Std. Dwg. MT-102.10M and /or MT-95.30M.
2. Permanently stripe and sign the inside shoulders and passing lanes.

**Work Proposed**

1. Place the surface course on the inside shoulders and passing lanes, with a hot joint between the lanes and the shoulder
2. Finish all grading, striping and miscellaneous items.
3. Erect proposed lighting.

**Phase VI** (Place the surface course and permanent pavement markings on the center lanes)

**Traffic Control**

1. Maintain traffic one lane on the outside shoulder. Lane closures...etc. are restricted as per the "Working Hours Restriction" note on sheet 38.

**Work Proposed**

1. Place the surface course on center lane . Apply temporary markings at conclusion of paving each night prior to opening to traffic.
2. Place all remaining permanent markings.

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# MAINTENANCE OF TRAFFIC SEQUENCE OF CONSTRUCTION

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## 4" EDGE LINE

| LOCATION | STATION | Linear Feet | |
|---|---|---|---|
| NORTHBOUND | (Mainline Stationing) | White | Yellow |
| Part I | | | |
| Phase I | 1116+00 to 1246+00 | 13000 | |
| Phase II | 1083+90 to 1277+60 | 19370 | 19370 |
| Phase III | 1094+05 to 1267+45 | 17340 | 17340 |
| Part II | | | |
| Phase I | 930+05 to 970+35 | 4030 | |
| | 976+90 to 1084+32 | 10742 | |
| | 1092+35 to 1116+00 | 2365 | |
| Phase II | 880+85 to 903+20 | 2235 | |
| | 930+05 to 977+35 | 4730 | |
| | 976+90 to 1084+32 | 10742 | |
| | 1092+35 to 1120+04 | 2859 | |
| | 880+85 to 1127+65 | | 24680 |
| Phase III | 891+00 to 909+00 | 1800 | |
| | 916+20 to 964+80 | 4860 | |
| | 972+00 to 1081+20 | 10920 | |
| | 1086+00 to 1122+50 | 3650 | |
| | 1127+30 to 1137+45 | 1015 | |
| | 891+00 to 1137+45 | | 24645 |
| S.R. 3 | | | |
| Ramp B | | | |
| PIIIB S1 | 70+00 to 85+24 | 1509 | |
| PIIIB S2 | 68+00 to 84+80 | 476 | 1700 |
| PIIIB S3 | 68+00 to 85+20 | 2276 | |
| Ramp D | | | |
| PIIIB S2 | 67+00 to 81+00 | 458 | 1550 |
| PIIIB S3 | 84+50 to 100+00 & (SR 3)905+00 to 907+00 | 1740 | |
| Ramp B | | | |
| PIIIC S1 | 32+00 to 47+50 | 1475 | |
| PIIIC S2 | 33+50 to 47+20 | | 1475 |
| Ramp D | ℄ Ramp C on S.R. 303 to Sta. 51+50 | 375 | |
| Part III | | | |
| Phase I | 833+00 to 870+93 | 3793 | |
| | 882+91 to 903+20 | 2029 | |
| Phase II | 825+25 to 870+93 | 4568 | |
| | 882+91 to 903+20 | 2029 | |
| | 825+25 to 924+60 | | 9935 |
| Phase III | 825+25 to 872+20 | 4695 | |
| | 877+00 to 909+00 | 3200 | |
| | 916+20 to 934+40 | 1800 | |
| | 825+25 to 934+40 | | 10915 |
| S.R. 18 | | | |
| Ramp B | | | |
| PIIIB S1 | 0+50 TO 5+50 | 350 | 1450 |
| PIIIB S2 | 0+50 TO 5+50 | 1900 | |
| Ramp A | | | |
| PIIIB S1 | 9+00 to 27+00 | 2000 | |
| PIIIB S2 | 10+50 to 26+60 | 130 | 1610 |
| * Part III | | | |
| Phase I | 1246+00 to 1248+59 | 259 | |
| | 1256+59 to 1270+46 | 1389 | |
| | 1280+96 to 1394+40 | 11344 | |
| Phase II | 1233+85 to 1248+59 | 1474 | |
| | 1256+59 to 1270+46 | 1387 | |
| | 1280+96 to 1406+05 | 12509 | |
| | 1233+85 to 1406+05 | | 17220 |
| | | | |
| Phase III | 1224+05 to 1244+20 | 2015 | |
| | 1249+00 to 1406+05 | 15705 | |
| | 1224+05 to 1406+05 | | 18200 |
| | Subtotal | 190543 | 150090 |

Continued on Sheet 46

## 4" EDGE LINE

| LOCATION | STATION | Linear Feet | |
|---|---|---|---|
| SOUTHBOUND | (Mainline Stationing) | White | Yellow |
| Part I | | | |
| Phase I | 1116+00 to 1246+00 | 13000 | |
| Phase II | 1084+40 to 1278+10 | 19370 | 19370 |
| Phase III | 1094+55 to 1267+95 | 17340 | 17340 |
| Part II | | | |
| Phase I | 912+95 to 937+55 | 2460 | |
| | 969+27 to 1077+23 | 10796 | |
| | 1087+73 to 1116+00 | 2827 | |
| Phase II | 881+35 to 899+51 | 1816 | |
| | 904+05 to 937+55 | 3350 | |
| | 969+27 to 1077+23 | 10796 | |
| | 1087+73 to 1116+33 | 2860 | |
| | 1124+36 to 1128+15 | 379 | |
| | 881+95 to 1128+15 | | 24680 |
| Phase III | 891+50 to 904+00 | 1250 | |
| | 911+20 to 958+80 | 4760 | |
| | 966+00 to 1081+20 | 11520 | |
| | 1086+09 to 1121+00 | 3500 | |
| | 1125+80 to 1137+95 | 1215 | |
| | 891+50 to 1137+95 | | 24645 |
| S.R. 3 | | | |
| Ramp C | | | |
| PIIIB S1 | 80+70 to 96+12 | 1524 | |
| PIIIB S2 | 80+82 to 98+00 | 476 | 2689 |
| PIIIB S3 | 80+40 to 98+00 | 1910 | |
| Ramp A | | | |
| PIIIB S2 | 67+00 to 81+00 | 458 | 1550 |
| PIIIB S3 | 84+50 to 100+00 & (SR 3)905+00 to 907+00 | 1740 | |
| Ramp A | | | |
| PIIIC S1 | 52+10 to 61+00 | 2447 | 120 |
| PIIIC S2 | 47+10 to 52+80 | 787 | 570 |
| PIIIC S3 | 48+68 to 61+00 | 160 | 1232 |
| Ramp C | | | |
| PIIIC S1 thru | | | |
| PIIIC S3 | 30+50 to 52+50 | 2550 | 110 |
| Part III | | | |
| Phase I | 833+00 to 862+23 | 2923 | |
| | 872+73 to 899+51 | 2678 | |
| | 904+05 to 912+95 | 890 | |
| Phase II | 825+75 to 862+23 | 3648 | |
| | 872+73 to 899+51 | 2678 | |
| | 904+05 to 925+10 | 2105 | |
| | 825+75 to 925+10 | | 9935 |
| Phase III | 825+75 to 867+20 | 4145 | |
| | 880+00 to 906+00 | 2600 | |
| | 910+80 to 934+90 | 2410 | |
| | 825+75 to 934+90 | | 10915 |
| S.R. 18 | | | |
| Ramp C | | | |
| PIIIB S1 | 8+50 to 20+30 | 170 | 1180 |
| PIIIB S2 | 8+50 to 20+30 | 1525 | 1180 |
| Ramp D | | | |
| PIIIB S1 | 9+00 to 27+00 | 2000 | |
| PIIIB S2 | 10+50 to 26+60 | 130 | 1610 |
| * Part III | | | |
| Phase I | 1251+81 to 1279+61 | 2780 | |
| | 1287+41 to 1394+40 | 10699 | |
| Phase II | 1234+35 to 1241+31 | 696 | |
| | 1251+81 to 1279+61 | 2780 | |
| | 1287+41 to 1406+55 | 11914 | |
| | 1234+35 to 1436+15 | | 20180 |
| Phase III | 1224+55 to 1246+20 | 2165 | |
| | 1259+00 to 1286+50 | 2750 | |
| | 1291+30 to 1436+15 | 14485 | |
| | 1224+55 to 1406+55 | | 18200 |
| | Subtotal | 195462 | 155506 |

Continued on Sheet 46

## 4" LANE LINE

| LOCATION | STATION | Linear Feet |
|---|---|---|
| NORTHBOUND | (Mainline Stationing) | White |
| Part I | | |
| Phase II | 1096+05 to 1265+95 | 16990 |
| Phase III | 1116+00 to 1246+00 | 13000 |
| Part II | | |
| Phase II | 893+00 to 1116+00 | 22300 |
| Phase III | 912+95 to 1116+00 | 20305 |
| Part III | | |
| Phase II | 84050 to 912+95 | 7245 |
| Phase III | 840+50 to 912+95 | 7245 |
| * Phase II | 1246+00 to 1394+40 | 14840 |
| * Phase III | 1246+00 to 1394+40 | 14840 |
| SOUTHBOUND | (Mainline Stationing) | White |
| Part I | | |
| Phase II | 1096+05 to 1265+95 | 16990 |
| Phase III | 1116+00 to 1246+00 | 13000 |
| Part II | | |
| Phase II | 893+00 to 1116+00 | 22300 |
| Phase III | 912+95 to 1116+00 | 20305 |
| Part III | | |
| Phase II | 840+50 to 912+95 | 7245 |
| Phase III | 840+50 to 912+95 | 7245 |
| * Phase II | 1246+00 to 1394+40 | 14840 |
| * Phase III | 1246+00 to 1394+40 | 14840 |
| Total Linear Feet | | 233,530 |
| Total Miles Carried to Pavement Marking Sum, Sheet 46 | | 44.23 |

* Part III quantities for construction between Sta. 1246+00 to 1394+40.

## 8" CHANNELIZING LINE

| LOCATION | STATION | Linear Feet |
|---|---|---|
| NORTHBOUND | (Mainline Stationing) | White |
| Part I | | |
| Phase II | 1083+90 to 1096+05 | 1215 |
| | 1265+95 to 1277+60 | 1165 |
| Phase III | 1094+55 to 1116+00 | 2145 |
| | 1246+00 to 1267+45 | 2145 |
| Part II | | |
| Phase II | 880+85 to 893+00 | 1215 |
| | 1116+00 to 1127+65 | 1165 |
| Phase III | 891+00 to 912+95 | 2195 |
| | 1116+00 to 1137+45 | 2145 |
| Part III | | |
| Phase II | 825+25 to 840+50 | 1525 |
| | 912+95 to 924+60 | 1165 |
| Phase III | 825+25 to 840+50 | 1525 |
| | 912+95 to 934+40 | 2145 |
| * Phase II | 1233+85 to 1246+00 | 1215 |
| | 1394+40 to 1406+05 | 1165 |
| * Phase III | 1224+05 to 1246+00 | 2195 |
| | 1394+40 to 1406+05 | 1165 |
| SOUTHBOUND | (Mainline Stationing) | White |
| Part I | | |
| Phase II | 1084+40 to 1096+05 | 1165 |
| | 1265+95 to 1278+10 | 1215 |
| Phase III | 1094+55 to 1116+00 | 2145 |
| | 1246+00 to 1267+95 | 2195 |
| Part II | | |
| Phase II | 881+35 to 893+00 | 1165 |
| | 1116+00 to 1128+15 | 1215 |
| Phase III | 891+50 to 912+95 | 2145 |
| | 1116+00 to 1137+95 | 2195 |
| Part III | | |
| Phase II | 825+75 to 840+50 | 1475 |
| | 912+95 to 925+10 | 1215 |
| Phase III | 825+75 to 840+50 | 1475 |
| | 912+95 to 925+10 | 1215 |
| * Phase II | 1234+35 to 1246+00 | 1165 |
| | 1394+40 to 1406+55 | 1215 |
| * Phase III | 1224+55 to 1246+00 | 2145 |
| | 1394+40 to 1406+55 | 1215 |
| | Total Linear Feet | 50050 |
| Total Linear Feet Carried to Pavement Marking Sum, Sheet 46 | | 50050 |

CALCULATED

CHECKED JRR

# MAINTENANCE OF TRAFFIC

*Temporary Pavement Markings*

MED-71-15.78

45
940

DESIGN FILE : i:\pd_med_lr71\dgn\mot\pm.dgn
USERNAME : jrogers
DATE : 27-DEC-1999
TIME : 14:45

| 4" EDGE LINE | | | |
|---|---|---|---|
| LOCATION | STATION | Linear Feet | |
| NORTHBOUND | (Mainline Stationing) | White | Yellow |
| | | | |
| * Part III CONT. | | | |
| * Part III | | | |
| S.R. 303 | | | |
| Ramp D | TOTAL CLOSURE | | |
| Ramp C | | | |
| PIIIC S1 | 32+00 TO 47+20 | 1475 | |
| PIIIC S2 | 33+50 TO 47+20 | | 850 |
| | | | |
| | Subtotal | 10089 | 4022 |
| | Subtotal from Sheet 45 | 190543 | 150090 |
| | | | |
| | Southbound Total | 365079 | |
| | Northbound Total | 354744 | |
| | | | |
| | Total Linear Feet | 719823 | |
| | Total Miles Carried to Pavement Marking Sum, Sheet 46 | 136.3 | |

| 4" EDGE LINE | | | |
|---|---|---|---|
| LOCATION | STATION | Linear Feet | |
| SOUTHBOUND | (Mainline Stationing) | White | Yellow |
| | | | |
| * Part III CONT. | | | |
| * Part III | | | |
| S.R. 303 | | | |
| Ramp B | | | |
| PIIIC S1 | 32+00 to 47+20 | 2550 | 110 |
| PIIIC S2 | NO CHANGE | | |
| PIIIC S3 | 30+50 to 52+50 | 2545 | 1990 |
| Ramp A | | | |
| PIIIC S1 | 46+13 TO 61+00 | 2447 | 120 |
| PIIIC S2 | 47+10 TO 52+80 | 787 | 570 |
| PIIIC S3 | 46+85 TO 61+00 | 1760 | 1232 |
| | | | |
| | Subtotal | 10089 | 4022 |
| | Subtotal from Sheet 45 | 195462 | 155506 |
| | Southbound Total | 365079 | |

Temporary Pavement Calculated Graphically - 17450 SQ YD

From the Maintenance of Traffic Sequence of Construction

Temporary Impact Attenuator, Unidirectional - 14 EACH

TEMP. IMPACT ATTEN. (REPLACEMENT), UNIDIRECTIONAL - 6 EACH

* Part III quantities for construction between Sta. 1246+00 to 1394+40.

# MAINTENANCE OF TRAFFIC GENERAL SUMMARY

| SHEET No. | | | | | | | | | | ITEM | ITEM EXT. | TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 134 | 37 | 38 | 39 | 40 | 41 | 42 ● Sheet 42C. | 45 | 46 | 453 | | | | | | |
| | | | | | | | | | | | | | | MAINTENANCE OF TRAFFIC | |
| | | | | | 2,000 | | | | | 202 | 38000 | 2,000 | LIN FT | GUARDRAIL REMOVED | |
| | | | | | 50 | | | | | 410 | 10000 | 50 | CU YD | TRAFFIC COMPACTED SURFACE, TYPE A | |
| | | | | | 1,000 | | | | | 606 | 13000 | 1,000 | LIN FT | GUARDRAIL, TYPE 5 | |
| | | | | | 20 | | | | | 606 | 22010 | 20 | EACH | ANCHOR ASSEMBLY, TYPE E-98, OFFSET DESIGN | |
| | 640 | | 304 | | | 80● | | | | 614 | 11100 | 1024 | HOUR | LAW ENFORCEMENT OFFICER WITH PATROL CAR | |
| | | | | | | | | | | | | | | | |
| | | 60 | | | | | | | | 614 | 12470 | 60 | EACH | WORK ZONE SPEED LIMIT SIGN | |
| | | 32 | | | | | | | | 614 | 12480 | 32 | EACH | DOUBLED FINES IN WORK ZONE SIGN | |
| | 500 | | | | | | | | | SPECIAL | 6141 2500 | 500 | SQ FT | REPLACEMENT SIGN | 37 |
| | 500 | | | | | | | | | SPECIAL | 6141 2600 | 500 | EACH | REPLACEMENT DRUM | 37 |
| | 600 | | | 600 | | | | | | 614 | 13000 | 1200 | CU YD | BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC | 37 |
| | | | | | | | | | | | | | | | |
| | 9,775 | | | | | 26● | | | | 614 | 13300 | 9,801 | EACH | BARRIER REFLECTOR, TYPE B | |
| | 9,775 | | | | | 28● | | | | 614 | 13350 | 9,803 | EACH | OBJECT MARKER | |
| | | | | | | | | 14 | | 614 | 12350 | 14 | EACH | TEMPORARY IMPACT ATTENUATOR, UNIDIRECTIONAL | 42A |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | 6 | | 614 | 12360 | 6 | EACH | ~~TEMPORARY~~ IMPACT ATTENUATOR (REPLACEMENT), UNIDIRECTIONAL | 42A |
| | | | | | | | | | | | | | | | |
| | | | | | | 10 | | | | 614 | 18000 | 10 | EACH | MAINTAINING TRAFFIC, MISC.: EMERGENCY PULLOFFS | 42 |
| | | | | | | | | | | 614 | 18002 | LUMP | | MAINTAINING TRAFFIC, MISC: VEHICLE ASSISTANCE | 40 |
| | | | | | 64 | | | | | 614 | 18601 | 64 | SIGN MONTH | PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN | 41 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | 44.23 | | | 614 | 20001 | 44.23 | MILE | TEMPORARY LANE LINE, CLASS I, AS PER PLAN | 40 |
| | | | | 0.50 | | | | | | 614 | 21500 | 0.50 | MILE | TEMPORARY CENTER LINE, CLASS II, 642 PAINT | |
| | | | | | | | | 136.3 | | 614 | 22001 | 136.3 | MILE | TEMPORARY EDGE LINE, CLASS I, AS PER PLAN | 40 |
| | | | | | | | | | | | | | | | |
| | | | | | | | 50,050 | | | 614 | 23001 | 50,050 | LIN FT | TEMPORARY CHANNELIZING LINE, CLASS I, AS PER PLAN | 40 |
| | | | | | | | | | | 615 | 20000 | 405 | SQ. YD. | TEMPORARY PAVEMENT, CLASS A | 42B |
| | | | | | | | | | | 615 | 10000 | LUMP | | TEMPORARY ROAD | |
| 19479 | | | | | | | | 17,450 | 84 | 615 | 35001 | 37,013 | SQ YD | TEMPORARY PAVEMENT, AS PER PLAN | 40 |
| | | | | | 200 | | | | | 616 | 10000 | 200 | M GAL. | WATER | |
| | | | | | 5 | | | | | 616 | 20000 | 5 | TON | CALCIUM CHLORIDE | |
| | 244,230 | | | | | 620● | | | | 622 | 40020 | 244,850 | LIN FT | PORTABLE CONCRETE BARRIER, 32" | |
| | | | | | | | | | | | | | | | |
| | 2,680 | | | | | | | | | 622 | 40040 | 2,680 | LIN FT | PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED | |

REV. 2-22-00

CALCULATED BC CHECKED JRR

MAINTENANCE OF TRAFFIC GENERAL SUMMARY

MED-71-15.78

46 940

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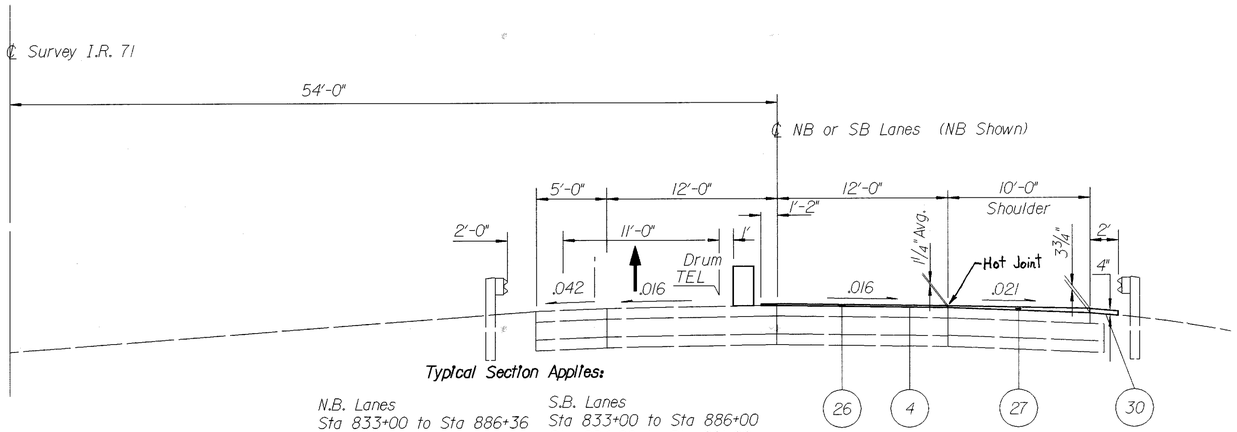
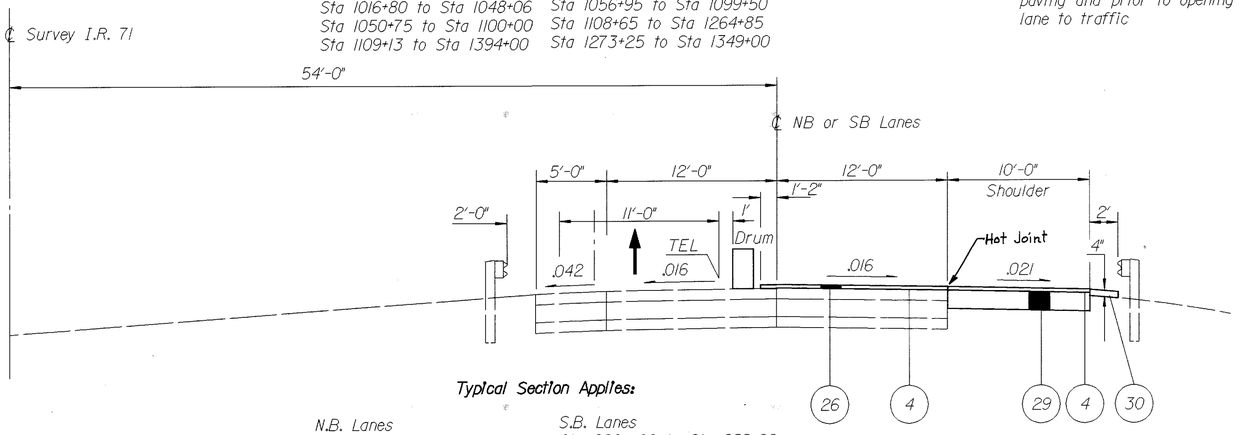
TIME : 09:57




*Typical Section Applies:*

| N.B. Lanes | S.B. Lanes |
|---|---|
| Sta 833+00 to Sta 886+36 | Sta 833+00 to Sta 886+00 |
| Sta 894+50 to Sta 925+00 | Sta 894+00 to Sta 961+00 |
| Sta 957+00 to Sta 962+ 00 | Sta 967+00 to Sta 982+70 |
| Sta 968+00 to Sta 983+65 | Sta 991+29 to Sta 1009+40 |
| Sta 992+23 to Sta 1009+ 19 | Sta 1016+82 to Sta 1048+25 |
| Sta 1016+80 to Sta 1048+06 | Sta 1056+95 to Sta 1099+50 |
| Sta 1050+75 to Sta 1100+00 | Sta 1108+65 to Sta 1264+85 |
| Sta 1109+13 to Sta 1394+00 | Sta 1273+25 to Sta 1349+00 |

*Maintain one Lane as per lane closure restriction note. Place TLL at conclusion of each night's paving and prior to opening driving lane to traffic*

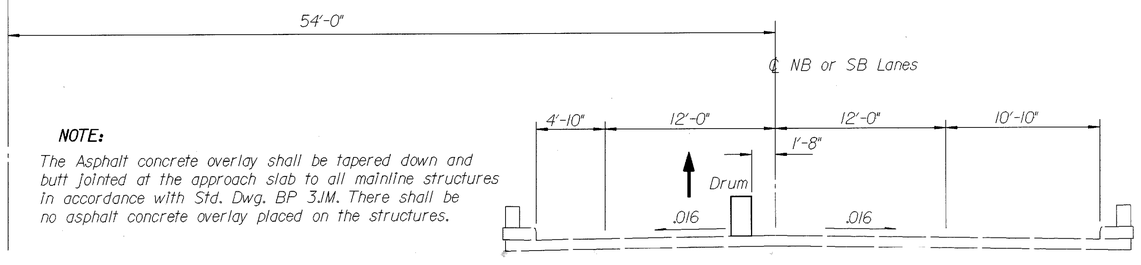



*Typical Section Applies:*

| N.B. Lanes | S.B. Lanes |
|---|---|
| Sta 886+36 to Sta 889+36 | Sta 886+ 00 to Sta 889+00 |
| Sta 891+50 to Sta 894+50 | Sta 891+00 to Sta 894+00 |
| Sta 925+00 to Sta 957+00 | Sta 961+00 to Sta 967+00 |
| Sta 962+ 00 to Sta 968+00 | Sta 982+70 to Sta 985+70 |
| Sta 983+65 to Sta 986+65 | Sta 988+29 to Sta 991+29 |
| Sta 989+23 to Sta 992+23 | Sta 1009+40 to Sta 1012+40 |
| Sta 1009+ 19 to Sta 1012+19 | Sta 1013+82 to Sta 1016+82 |
| Sta 1013+80 to Sta 1016+80 | Sta 1048+25 to Sta 1051+25 |
| Sta 1048+06 to Sta 1051+06 | Sta 1053+95 to Sta 1056+95 |
| Sta 1053+75 to Sta 1050+75 | Sta 1099+50 to Sta 1102+50 |
| Sta 1100+00 to Sta 1103+00 | Sta 1105+65 to Sta 1108+65 |
| Sta 1106+13 to Sta 1109+13 | Sta 1264+85 to Sta 1273+25 |
| | Sta 1349+00 to Sta 1394+00 |

*Maintain one Lane as per lane closure restriction note. Place TLL at conclusion of each night's paving and prior to opening driving lane to traffic*

℄ Survey I.R. 71




***NOTE:***

*The Asphalt concrete overlay shall be tapered down and butt jointed at the approach slab to all mainline structures in accordance with Std. Dwg. BP 3.1M. There shall be no asphalt concrete overlay placed on the structures.*

## PROPOSED LEGEND

| | | |
|---|---|---|
| 4 | | Item 407 Tack Coat |
| 26 | 1 ¼" | Item 448 Asphalt Concrete Surface Course, Type 2, PG64-22 |
| 27 | Varies | Item 448 Asphalt Concrete Surface Course, Type 2, PG64-22 |
| 29 | | Item 615 Temporary Pavement, As Per Plan (See Sheet 40.) |
| 30 | | Item 410 Traffic Compacted Aggregate, Type A |

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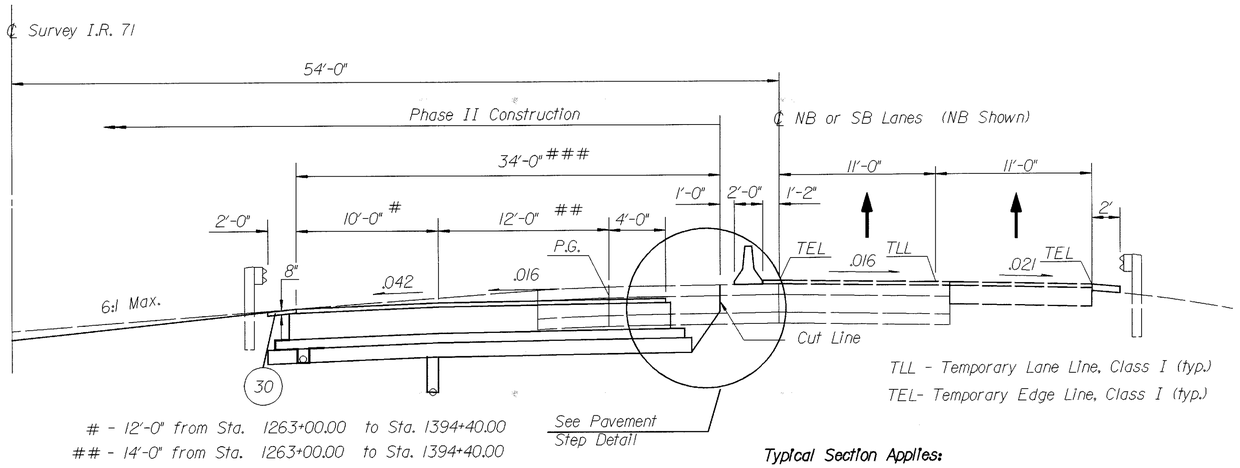
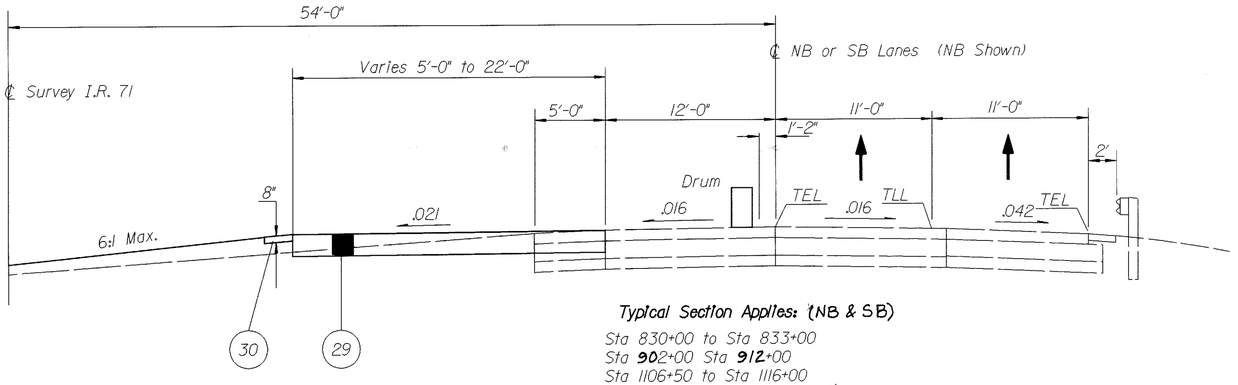
**MOT - Phase I**

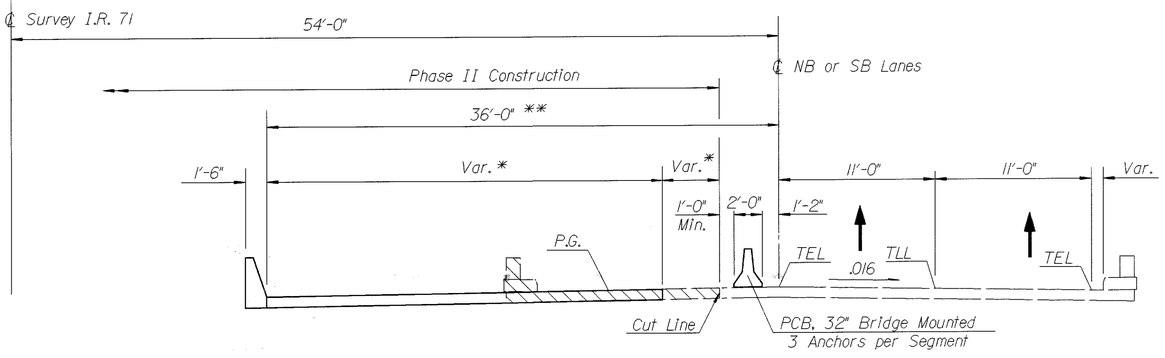
**MED-71-15.94**

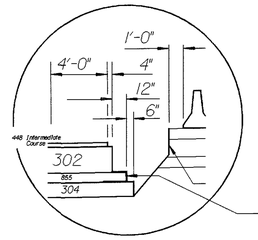



**Typical Section Applies:**
Sta 833+00 to Sta 1394+00



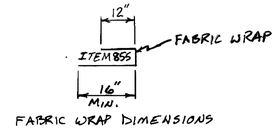

**Typical Section Applies:** (NB & SB)
Sta 830+00 to Sta 833+00
Sta 902+00 Sta 912+00
Sta 1106+50 to Sta 1116+00
Sta. 1246+00 to Sta. 1252+65




Geotextile fabric shall be placed on the vertical face of the free draining base to protect against contamination from the surrounding materials during this Phase. All costs associated with this work shall be considered incidental to the Asphalt Treated Free Draining Base.

## Pavement Step Detail




FABRIC WRAP DIMENSIONS

For proposed legend, see sheet 47.

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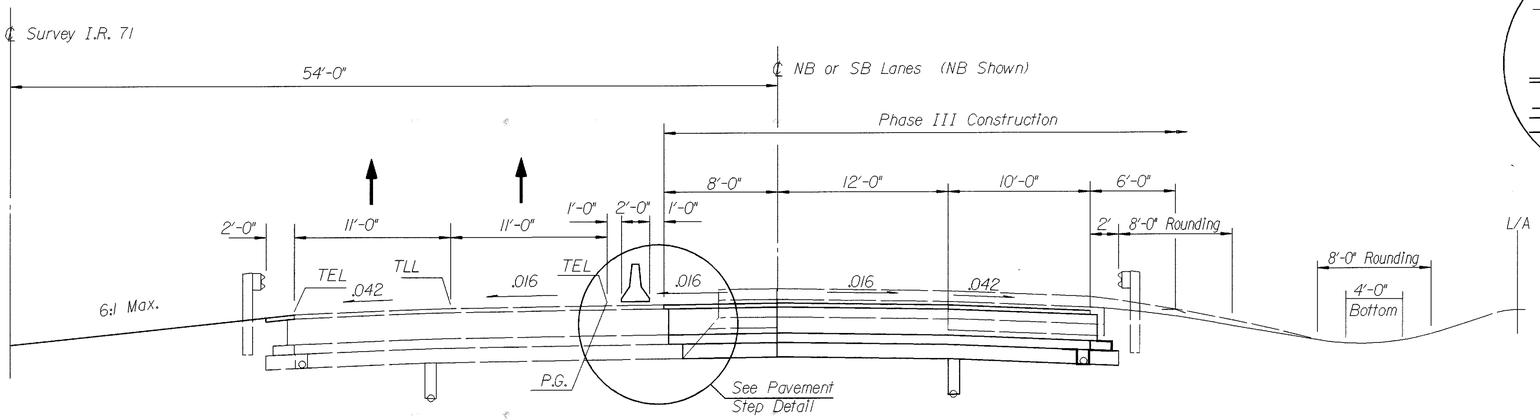
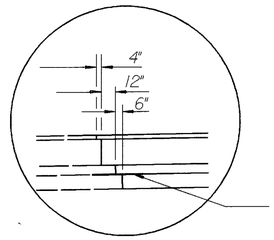
TIME : 07:28



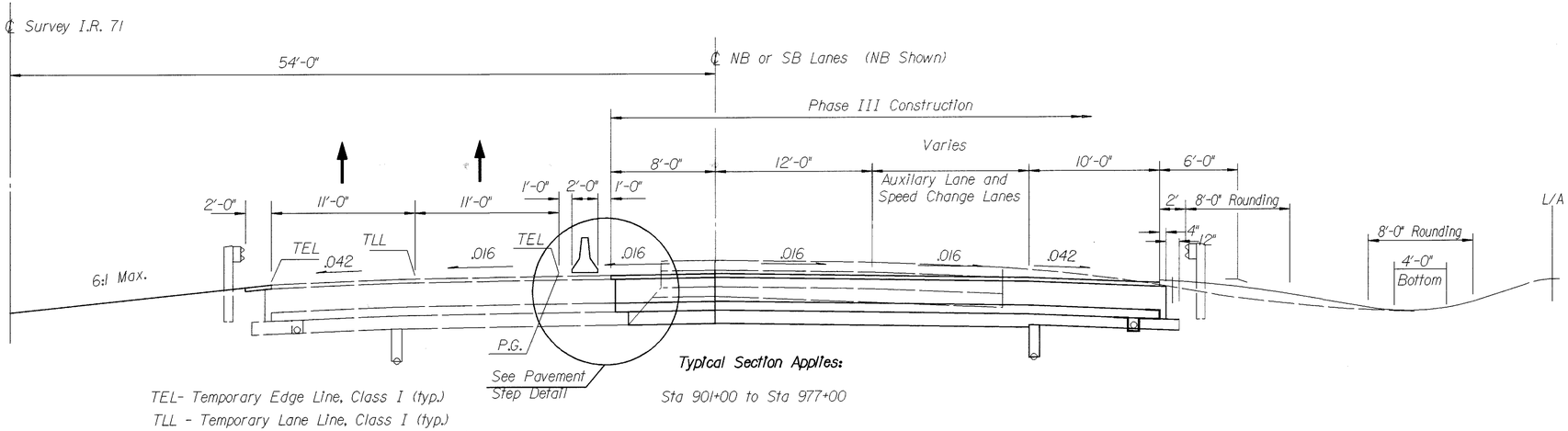

TEL- Temporary Edge Line, Class I (typ.)
TLL - Temporary Lane Line, Class I (typ.)

**Typical Section Applies:**
Sta 833+00 to Sta 901+00
Sta 977+00 to Sta 1394+00



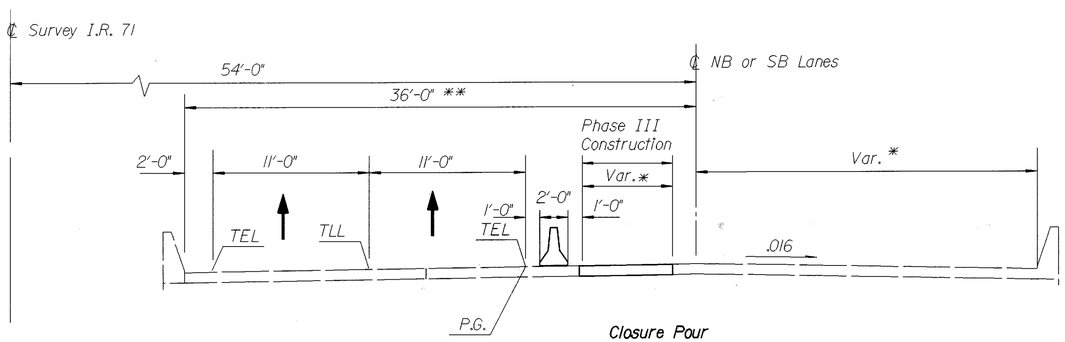

The Geotextile fabric shall be placed on the vertical face of the free draining base in Phase 2 shall be laid flat prior to placing the free draining base in this Phase. All costs associated with this work shall be considered incidental to the Asphalt Treated Free Draining Base.

## Pavement Step Detail

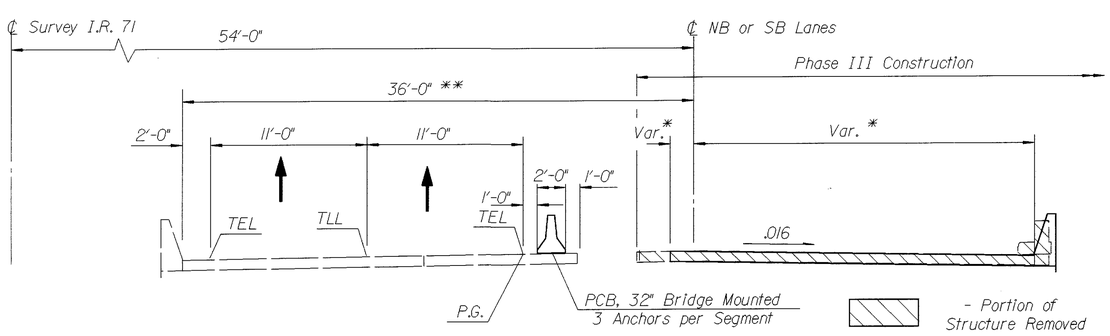



TEL- Temporary Edge Line, Class I (typ.)
TLL - Temporary Lane Line, Class I (typ.)

**Typical Section Applies:**
Sta 901+00 to Sta 977+00




**Closure Pour**




* - See Bridge Plans for Dimensions and Beam Locations
** - 40'-0" @ Str. No. Med-71-2402 L/R

For proposed legend, see sheet 47.

DESIGN FILE : i:\pd_med_lr71\dgn\mot\motgy.dgn
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DATE : 07-DEC-1999
TIME : 07:28

**MOT - Phase III**

**MED-71-15.94**

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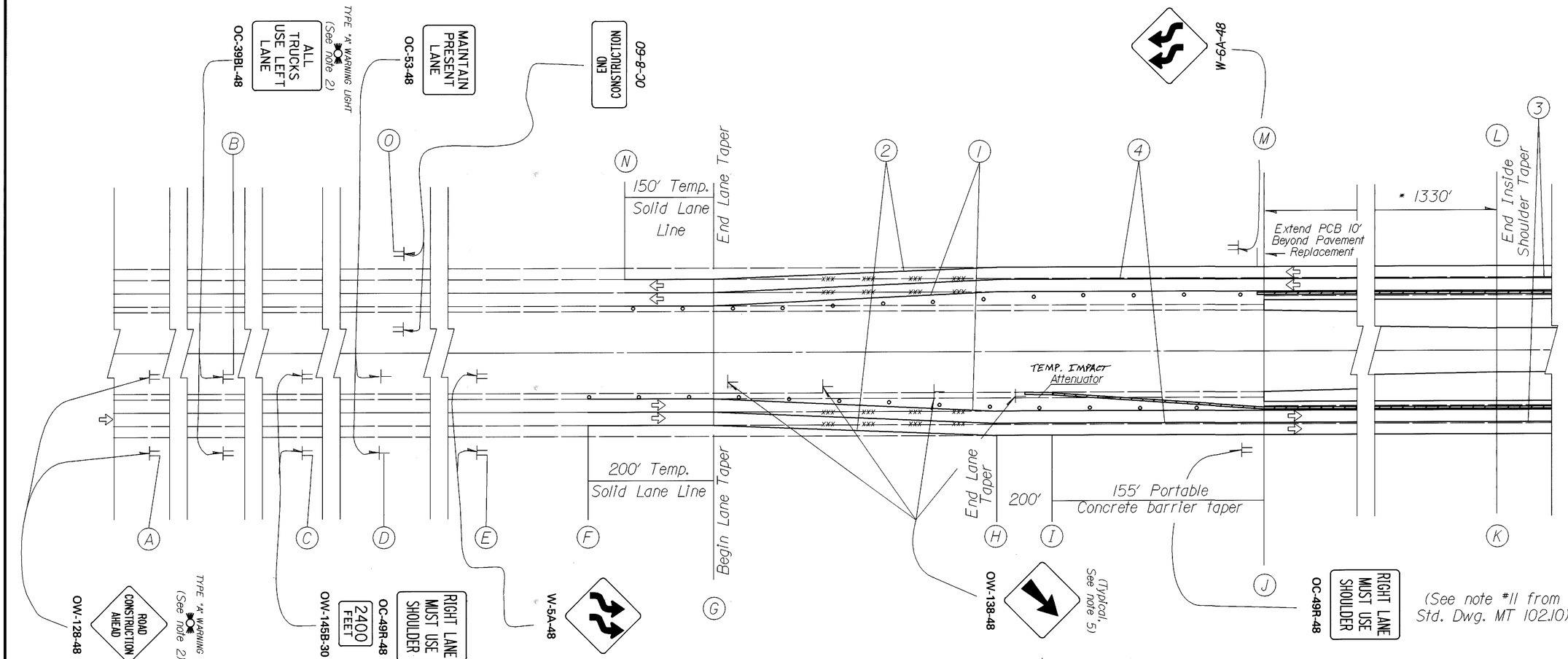


NOTES:

1. DRUM SPACING = 60'.
2. TYPE A FLASHING WARNING LIGHTS ARE REQUIRED ON THE "ROAD CONSTRUCTION AHEAD" SIGNS, (OW-128-48) AND THE "ALL TRUCKS USE LEFT LANE" SIGNS, (OC-39BL-48).
3. LANE DIRECTIONAL ARROW SHOWN FOR PLAN CLARIFICATION ONLY.
4. REMOVE EXISTING LANE LINES AND EXISTING EDGE LINES AS DETAILED ON THIS SHEET
5. ERECT OW-138-48 SIGN ADJACENT TO FIRST DRUM ON LANE TAPER, THEN EVERY 100' FOR 300' - THEN EVERY 200' THEREAFTER.
6. FOR ADDITIONAL NOTES, DETAILS AND SIGNS, SEE STD. DWG. MT-102.10M

(1) Temporary Yellow Edge Line, Class I, as per plan
(2) Temporary White Edge Line, Class I, as per plan
(3) Temporary Lane Line, Class I , as per plan
(4) Temporary Channelizing Line, Class I, As Per Plan

Locate ℄ of Sign 12' from temporary edge line.

- Portable Concrete Barrier (PCB)

* - Use this dimension where the inside shoulder has not already been built.

LEGEND:

⇨ = LANE DIRECTIONAL ARROW
xxx = LINES TO BE REMOVED
∘ = DRUMS

| Part | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I | NB | 1035+90 | 1040+90 | 1061+90 | 1077+90 | 1080+90 | 1083+90 | 1085+90 | 1092+50 | 1094+50 | 1096+05 | 1109+35 | 1252+65 | 1265+95 | 1277+60 | 1281+10 |
| | SB | 1326+10 | 1321+10 | 1300+10 | 1284+10 | 1281+10 | 1278+10 | 1276+10 | 1269+50 | 1267+50 | 1265+95 | 1252+65 | 1109+35 | 1096+05 | 1084+40 | 1080+90 |
| II | NB | 832+85 | 837+85 | 858+85 | 874+85 | 877+85 | 880+85 | 882+85 | 889+45 | 891+45 | 893+00 | 906+00 | 1116+00 | 1116+00* | 1127+65 | 1131+15 |
| | SB | 1176+15 | 1171+15 | 1150+15 | 1134+15 | 1131+15 | 1128+15 | 1126+15 | 1119+55 | 1117+55 | 1116+00 | 1116+00* | 906+30 | 893+00 | 881+35 | 877+85 |
| III | NB | For Stations See Sheet 54. | | | | | | | | | | 833+00 | 912+95* | 912+95* | 924+60 | 928+10 |
| | SB | 973+10 | 968+10 | 947+10 | 931+10 | 928+10 | 925+10 | 923+10 | 916+50 | 914+50 | 912+95* | 912+95* | 833+00 | For Stations See Sheet 54. | | |
| | NB | 1185+85 | 1190+85 | 1211+85 | 1227+85 | 1230+85 | 1233+85 | 1235+85 | 1242+45 | 1244+45 | 1246+00* | 1246+00* | For Stations See Sheet 52. | | | |
| | SB | For Stations See Sheet 52. | | | | | | | | | | | 1246+00* | 1246+00* | 1234+35 | 1230+85 |

# BEGINNING AND END OF PROJECT PHASE II

PART I, II, III

MED-71-15.78

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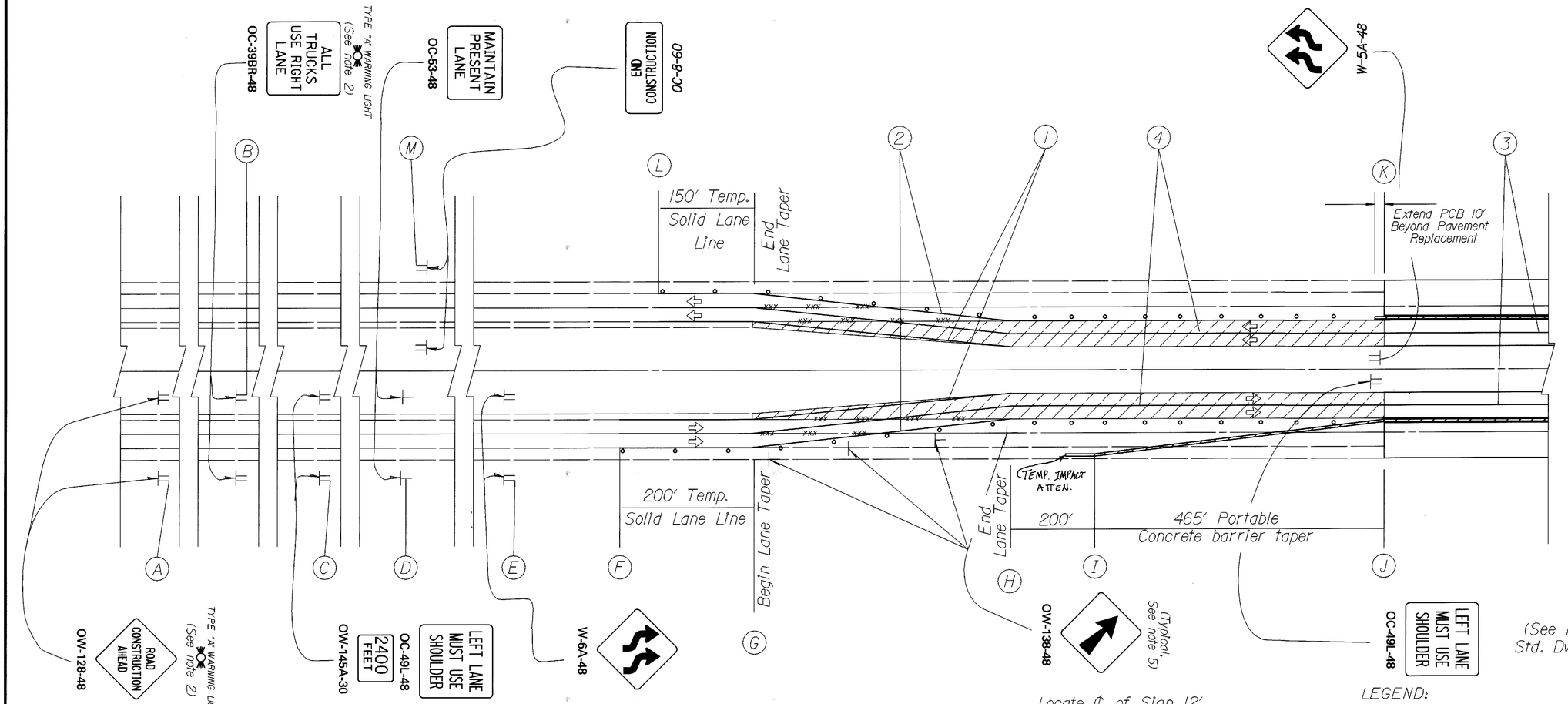
TIME : 07:36




Locate ℄ of Sign 12' from temporary edge line.

NOTES:

1. DRUM SPACING = 60'.
2. TYPE A FLASHING WARNING LIGHTS ARE REQUIRED ON THE "ROAD CONSTRUCTION AHEAD" SIGNS, (OW-128-48) AND THE "ALL TRUCKS USE RIGHT LANE" SIGNS, (OC-39BR-48).
3. LANE DIRECTIONAL ARROW SHOWN FOR PLAN CLARIFICATION ONLY.
4. REMOVE EXISTING LANE LINES AND EXISTING EDGE LINES AS DETAILED ON THIS SHEET
5. ERECT OW-138-48 SIGN ADJACENT TO FIRST DRUM ON LANE TAPER, THEN EVERY 100' FOR 300' - THEN EVERY 200' THEREAFTER.
6. FOR ADDITIONAL NOTES, DETAILS AND SIGNS, SEE STANDARD DRAWING MT-102.IM

LEGEND:

⇨ = LANE DIRECTIONAL ARROW

xxx = LINES TO BE REMOVED

° = DRUMS

SEE SHEET 50 FOR TEMPORARY PAVEMENT MARKING LEGEND

▬▬ - Portable Concrete Barrier (PCB)

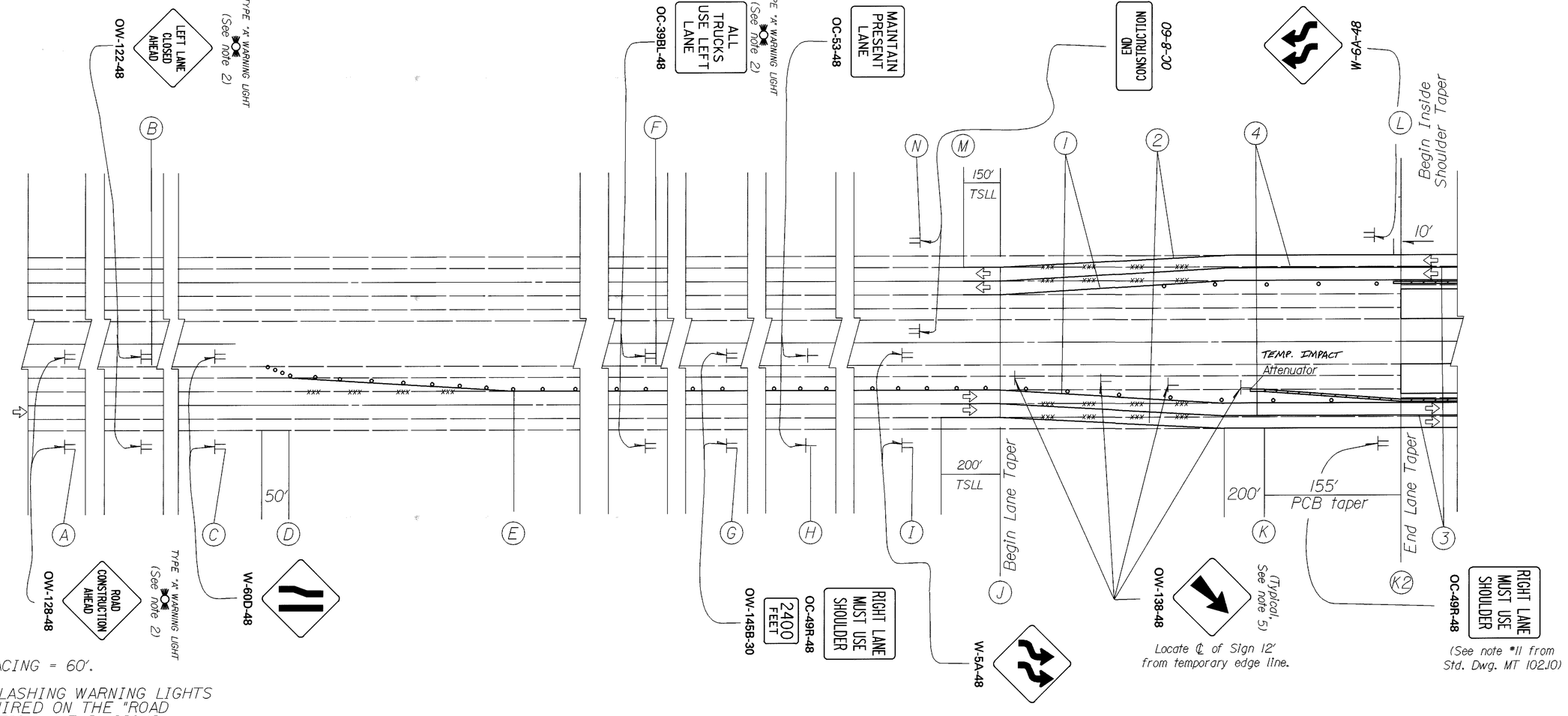
▨ Temporay Pavement, As Per Plan

| Part | | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I | NB | 1046+05 | 1051+05 | 1072+05 | 1088+05 | 1091+05 | 1094+05 | 1096+05 | 1109+35 | 1111+35 | 1116+00 | 1246+00 | 1267+45 | 1270+95 |
| | SB | 1315+95 | 1310+95 | 1289+95 | 1273+95 | 1270+95 | 1267+95 | 1265+95 | 1252+65 | 1250+65 | 1246+00 | 1116+00 | 1094+55 | 1091+05 |
| II | NB | 843+00 | 848+00 | 869+00 | 885+00 | 888+00 | 891+00 | 893+00 | 906+30 | 909+30 | 912+95 | 1116+00 | 1137+45 | 1140+95 |
| | SB | 1185+95 | 1180+95 | 1159+95 | 1143+95 | 1140+95 | 1137+95 | 1135+95 | 1122+65 | 1120+65 | 1116+00 | 912+95 | 891+50 | 888+00 |
| III | NB | For Stations See Sheet 54. | | | | | | | | | | 912+95 | 934+40 | 937+90 |
| | SB | 982+90 | 977+90 | 956+90 | 940+90 | 937+90 | 934+90 | 932+90 | 919+60 | 917+60 | 912+95 | 833+00 | For Stations See Sheet 54. | |
| | NB | 1176+05 | 1181+05 | 1202+05 | 1218+05 | 1221+05 | 1224+05 | 1226+05 | 1239+35 | 1241+35 | 1246+00 | For Stations See Sheet 53. | | |
| | SB | For Stations See Sheet 53. | | | | | | | | | | 1246+00 | 1224+55 | 1221+05 |

BEGINNING AND END OF PROJECT PHASE III
PART I, II, III

MED-71-15.78

51
940




NOTES:

1. DRUM SPACING = 60'.
2. TYPE A FLASHING WARNING LIGHTS ARE REQUIRED ON THE "ROAD CONSTRUCTION AHEAD" SIGNS, (OW-128-48) AND THE "ALL TRUCKS USE LEFT LANE" SIGNS, (OC-39BL-48).
3. LANE DIRECTIONAL ARROW SHOWN FOR PLAN CLARIFICATION ONLY.
4. REMOVE EXISTING LANE LINES AND EXISTING EDGE LINES BEGINNING @ STA. 1436+15 - 1429+55, STA. 1404+55 - 1397+95 AND STA. 1397+95 - 1404+55 NB LANE & SB LANE.
5. ERECT OW-138-48 SIGN ADJACENT TO FIRST DRUM ON LANE TAPER, THEN EVERY 100' FOR 300' - THEN EVERY 200' THEREAFTER.
6. FOR ADDITIONAL NOTES, DETAILS AND SIGNS, SEE STD. DWG. MT-102.10M.

LEGEND:

⇨ = LANE DIRECTIONAL ARROW

xxx = LINES TO BE REMOVED

∘ = DRUMS

▭▭ - Portable Concrete Barrier (PCB)
SEE SHEET 50 FOR TEMPORARY PAVEMENT MARKING LEGEND

* - Use this dimension where the inside shoulder has not already been built.

| Phase | | A | B | C | D | E | F | G | H | I | J | K | K2 | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| III | NB | For Stations See Sheet 50. | | | | | | | | | | | | 1394+40* | 1406+05 | 1409+55 |
| | SB | 1466+65 | 1456+65 | 1446+65 | 1436+15 | 1429+55 | 1427+55 | 1422+55 | 1412+55 | 1409+55 | 1404+55 | 1395+95 | 1394+40 | For Stations See Sheet 50. | | |

# BEGINNING AND END OF PROJECT PHASE II
PART III

MED-71-15.78

52
940

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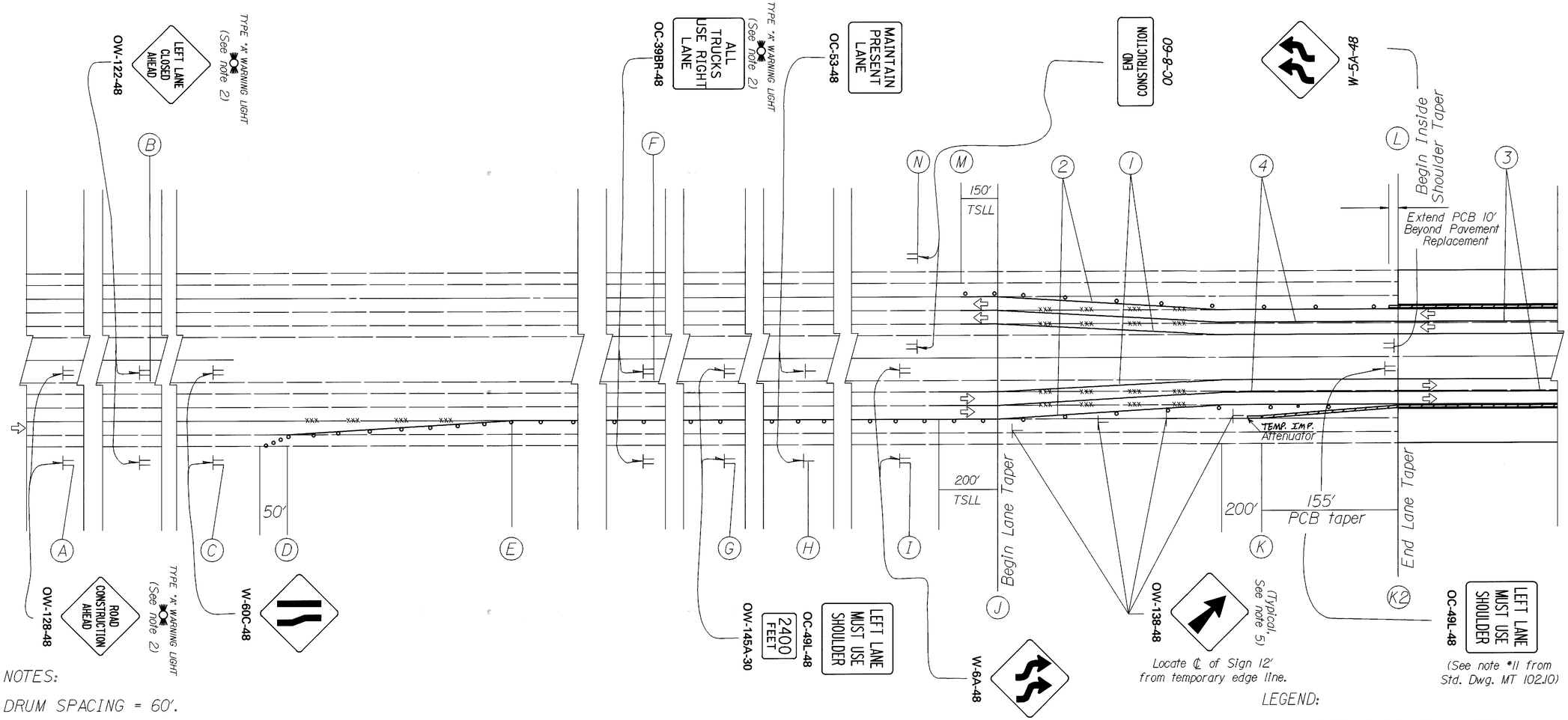



NOTES:

1. DRUM SPACING = 60'.
2. TYPE A FLASHING WARNING LIGHTS ARE REQUIRED ON THE "ROAD CONSTRUCTION AHEAD" SIGNS, (OW-128-48) AND THE "ALL TRUCKS USE RIGHT LANE" SIGNS, (OC-39BR-48).
3. LANE DIRECTIONAL ARROW SHOWN FOR PLAN CLARIFICATION ONLY.
4. REMOVE EXISTING LANE LINES AND EXISTING EDGE LINES BEGINNING @ STA. 1436+15 - 1429+55, STA. 1404+55 - 1397+95 AND STA. 1397+95 - 1404+55 NB LANE & SB LANE.
5. ERECT OW-138-48 SIGN ADJACENT TO FIRST DRUM ON LANE TAPER, THEN EVERY 100' FOR 300' - THEN EVERY 200' THEREAFTER.
6. FOR ADDITIONAL NOTES, DETAILS AND SIGNS, SEE STANDARD DRAWING MT-102.IM

- Portable Concrete Barrier (PCB)

* - Use this dimension where the inside shoulder has not already been built.

LEGEND:

⇨ = LANE DIRECTIONAL ARROW

xxx = LINES TO BE REMOVED

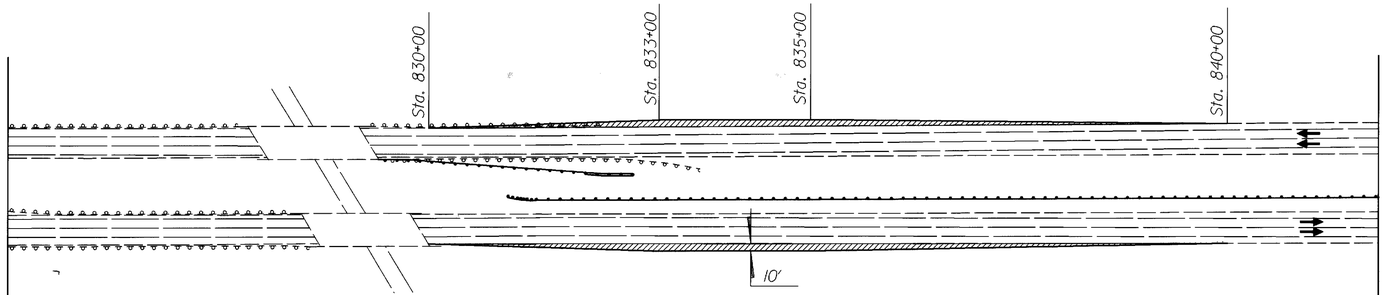
∘ = DRUMS

SEE SHEET 50 FOR TEMPORARY PAVEMENT MARKING LEGEND

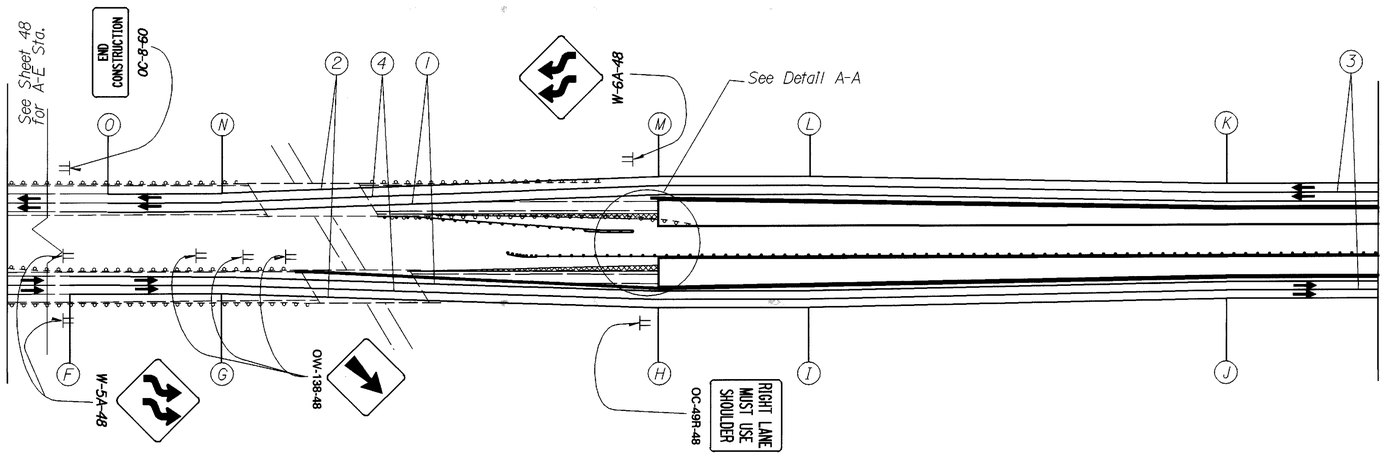
| Phase | | A | B | C | D | E | F | G | H | I | J | K | K2 | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| III | NB | For Stations See Sheet 51. | | | | | | | | | | | | 1394+40* | 1406+05 | 1409+55 |
| | SB | 1466+65 | 1456+65 | 1446+65 | 1436+15 | 1429+55 | 1427+55 | 1422+55 | 1412+55 | 1409+55 | 1404+55 | 1395+95 | 1394+40 | For Stations See Sheet 51. | | |

# BEGINNING AND END OF PROJECT PHASE III
PART III

MED-71-15.78

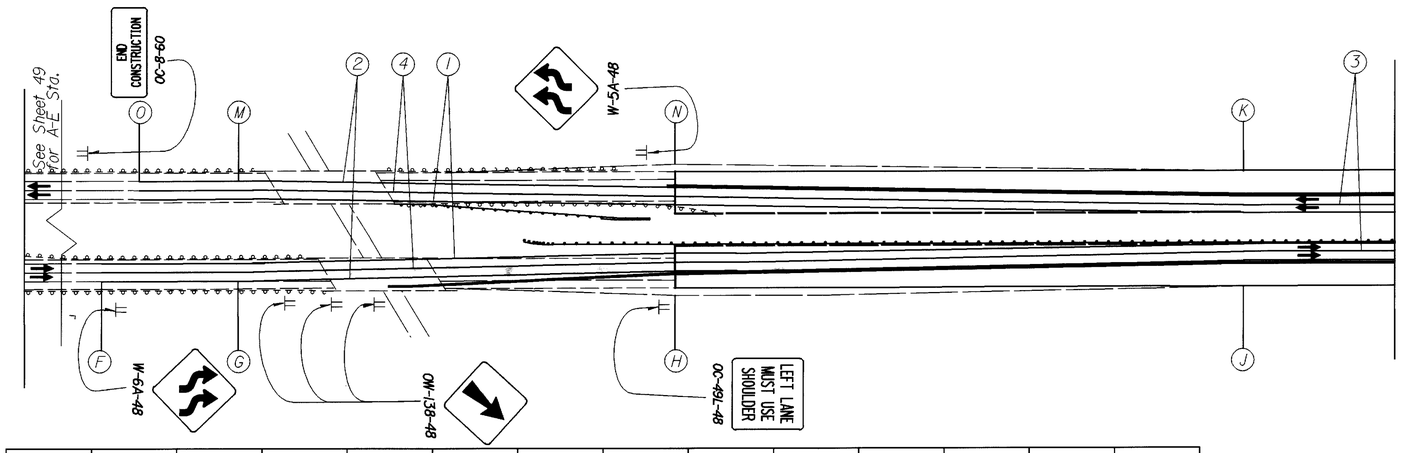



PHASE I



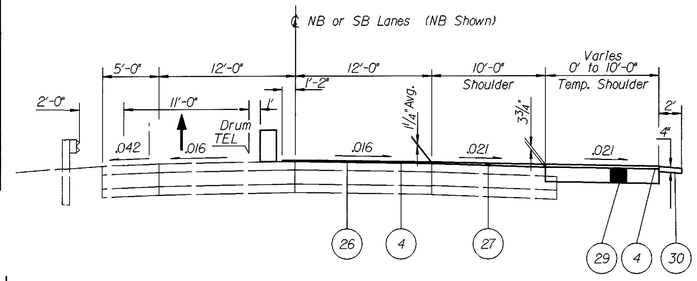

| Phase | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| II | NB | 777+25 | 782+25 | 803+25 | 819+25 | 822+25 | 825+25 | 827+25 | 833+00 | 835+00 | 840+50 | 840+50 | See Sheet 48. | | | |
| | SB | See Sheet 48. | | | | | | | | | | | 855+00 | 833+00 | 827+25 | 825+75 |

PHASE II

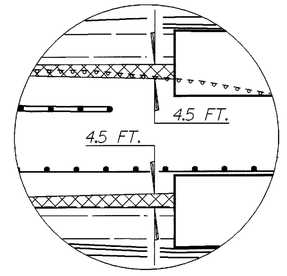



| Phase | | A | B | C | D | E | F | G | H | J | K | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| III | NB | 777+25 | 782+25 | 803+25 | 819+25 | 822+25 | 825+25 | 827+25 | 833+00 | 840+50 | 840+50 | | | |
| | SB | | | | | | | | | | | 833+00 | 827+25 | 825+75 |

PHASE III




For legend see sheet 47.




Detail A-A

- Temporary Pavement Outside Shoulder

- Temporary Pavement Inside Shoulder

See Sheet 50 for Temporary Pavement Marking Legend.

CALCULATED BC CHECKED

**BEGINNING & ENDING OF PROJECT PHASE I, II, III PART III.**

**MED-71-15.78**



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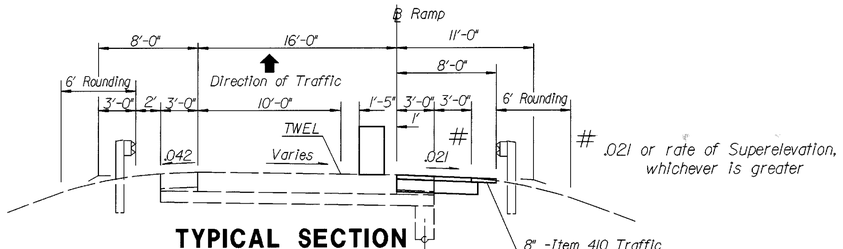
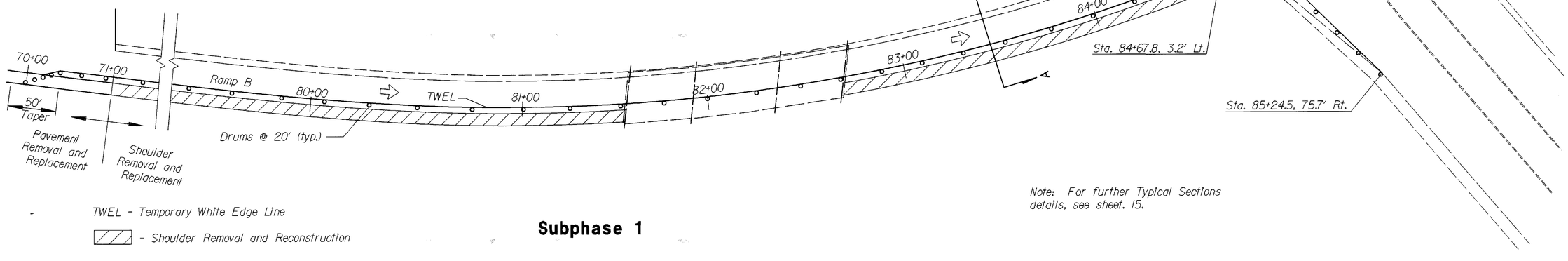



**TYPICAL SECTION**
**RAMP B @ S.R. 3 INTERCHANGE,**
**OUTSIDE SHOULDER WIDENING**

**A - A**

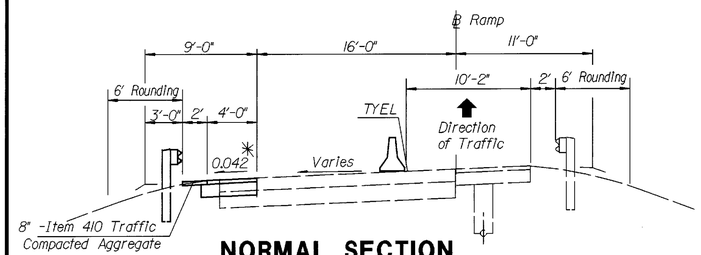



TWEL - Temporary White Edge Line

- Shoulder Removal and Reconstruction

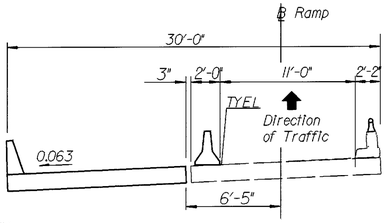
Note: For further Typical Sections details, see sheet. 15.

**Subphase 1**




**NORMAL SECTION**
**RAMP B @ S.R. 3 INTERCHANGE,**
**INSIDE SHOULDER WIDENING**

* .042 or rate of Superelevation, whichever is greater



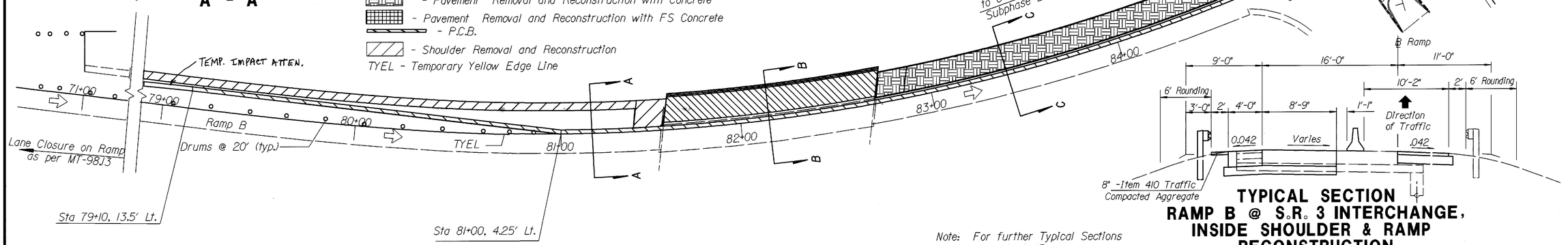

**TYPICAL SECTION**
**RAMP B @ S.R. 3 INTERCHANGE,**
**INSIDE STRUCTURE REPLACEMENT**

**B - B**

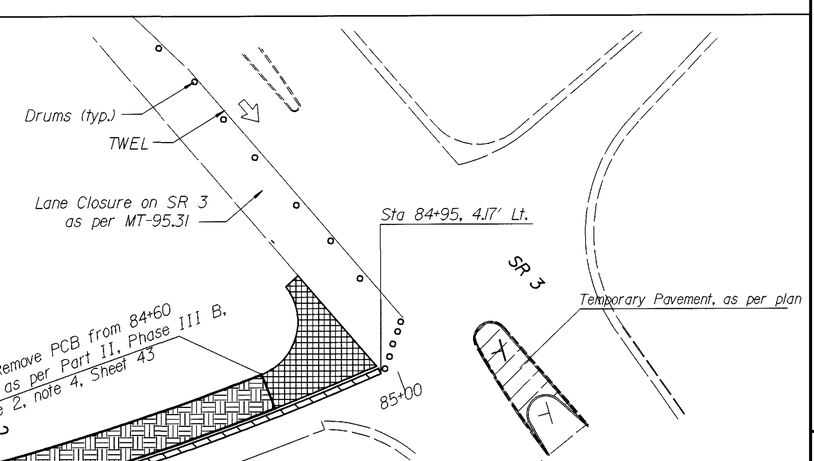
- Structure Removal and Reconstruction
- Pavement Removal and Reconstruction with Concrete
- Pavement Removal and Reconstruction with FS Concrete
- P.C.B.
- Shoulder Removal and Reconstruction

TYEL - Temporary Yellow Edge Line

**A - A**




**Subphase 2**







**TYPICAL SECTION**
**RAMP B @ S.R. 3 INTERCHANGE,**
**INSIDE SHOULDER & RAMP RECONSTRUCTION**

**C - C**

Note: For further Typical Sections details, see sheet. 15.

**MOT - Phase IIIB - S.R. 3 Ramp "B"**

**MED-71-15.78**

55
940

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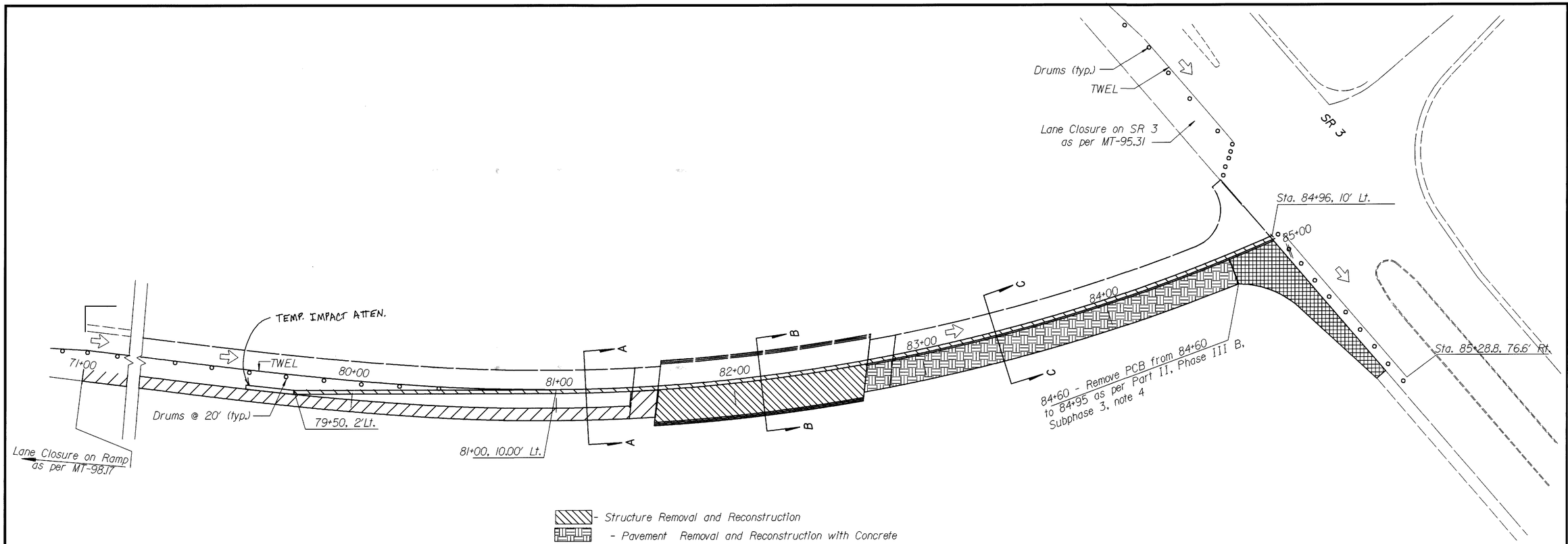
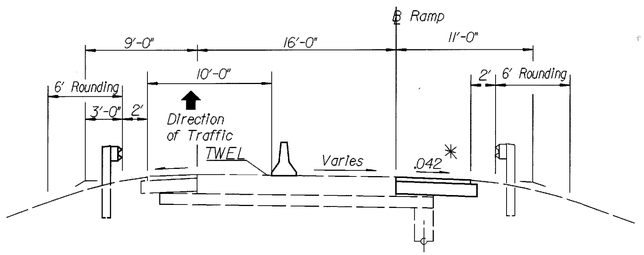


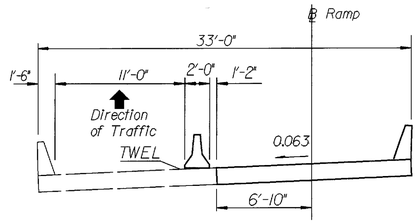

Note: For further Typical Sections details, see sheet. 15.

**Subphase 3**



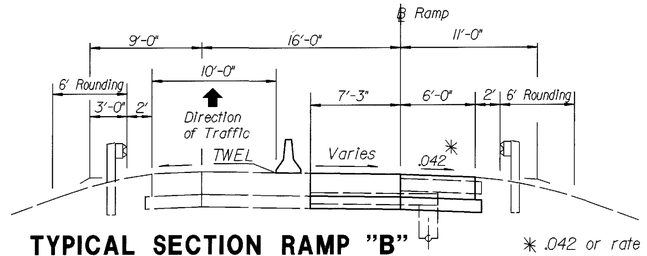

**TYPICAL SECTION RAMP "B" @ S.R. 3 INTERCHANGE, OUTSIDE SHOULDER REPLACEMENT**

**A - A**




**TYPICAL SECTION RAMP B @ S.R. 3 INTERCHANGE, OUTSIDE STRUCTURE REPLACEMENT**

**B - B**




**TYPICAL SECTION RAMP "B" @ S.R. 3 INTERCHANGE, PAVEMENT& OUTSIDE SHOULDERREPLACEMENT**

**C - C**

* .042 or rate of Superelevation, whichever is greater

**MOT - Phase IIIB - S.R. 3 Ramp "B"**

**MED-71-15.78**

56
940

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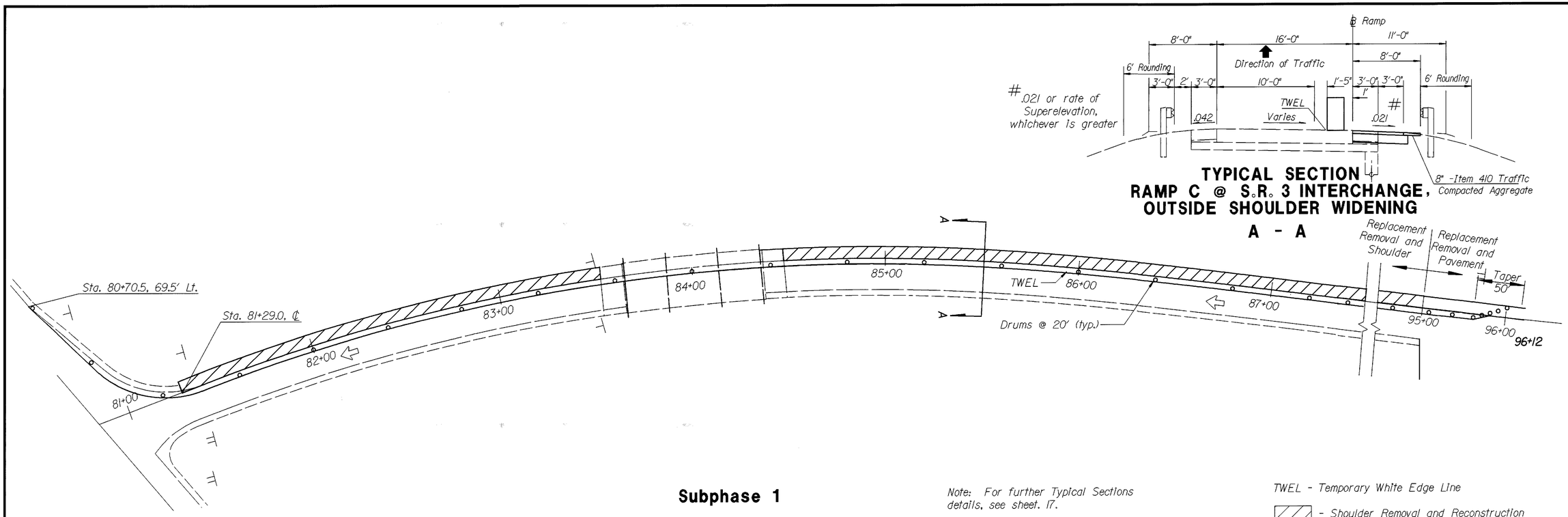
TIME : 07:41



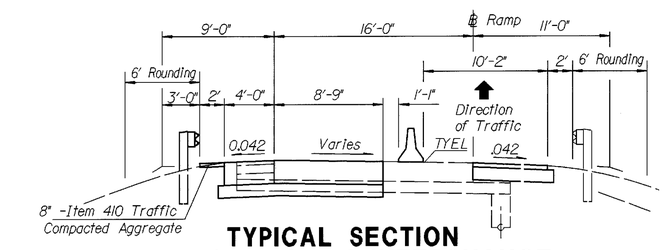

**TYPICAL SECTION**
**RAMP C @ S.R. 3 INTERCHANGE, OUTSIDE SHOULDER WIDENING**
**A - A**

**Subphase 1**

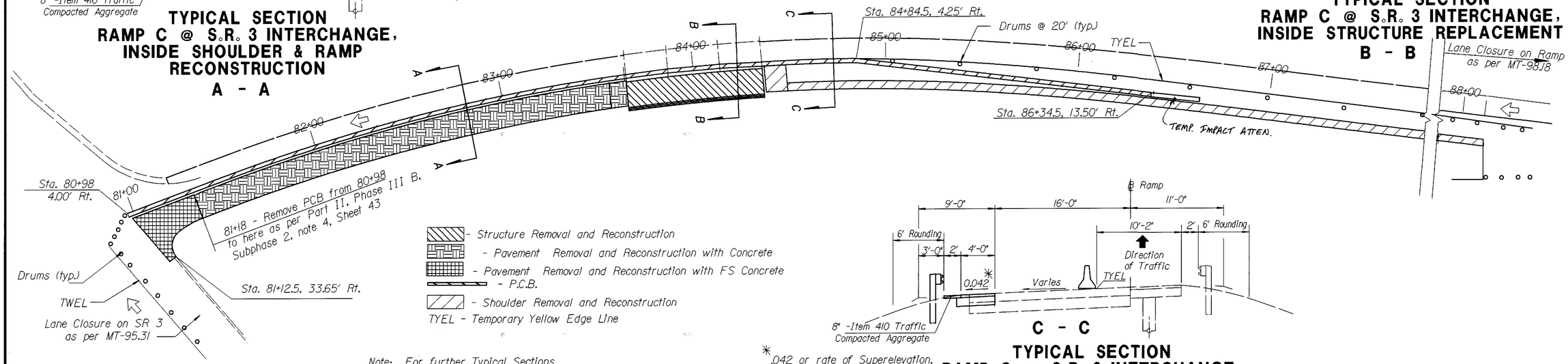
Note: For further Typical Sections details, see sheet. 17.

TWEL - Temporary White Edge Line

- Shoulder Removal and Reconstruction




**TYPICAL SECTION**
**RAMP C @ S.R. 3 INTERCHANGE, INSIDE SHOULDER & RAMP RECONSTRUCTION**
**A - A**

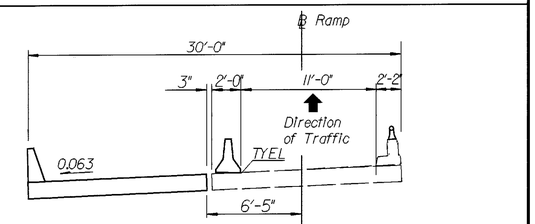



- Structure Removal and Reconstruction
- Pavement Removal and Reconstruction with Concrete
- Pavement Removal and Reconstruction with FS Concrete
- P.C.B.
- Shoulder Removal and Reconstruction

TYEL - Temporary Yellow Edge Line

Note: For further Typical Sections details, see sheet. 17.

**Subphase 2**




**TYPICAL SECTION**
**RAMP C @ S.R. 3 INTERCHANGE, INSIDE STRUCTURE REPLACEMENT**
**B - B**




**C - C**

**TYPICAL SECTION**
**RAMP C @ S.R. 3 INTERCHANGE, INSIDE SHOULDER WIDENING**

* .042 or rate of Superelevation, whichever is greater

**MOT - Phase IIIB S.R. 3 Ramp "C"**

**MED-71-15.78**

57
940

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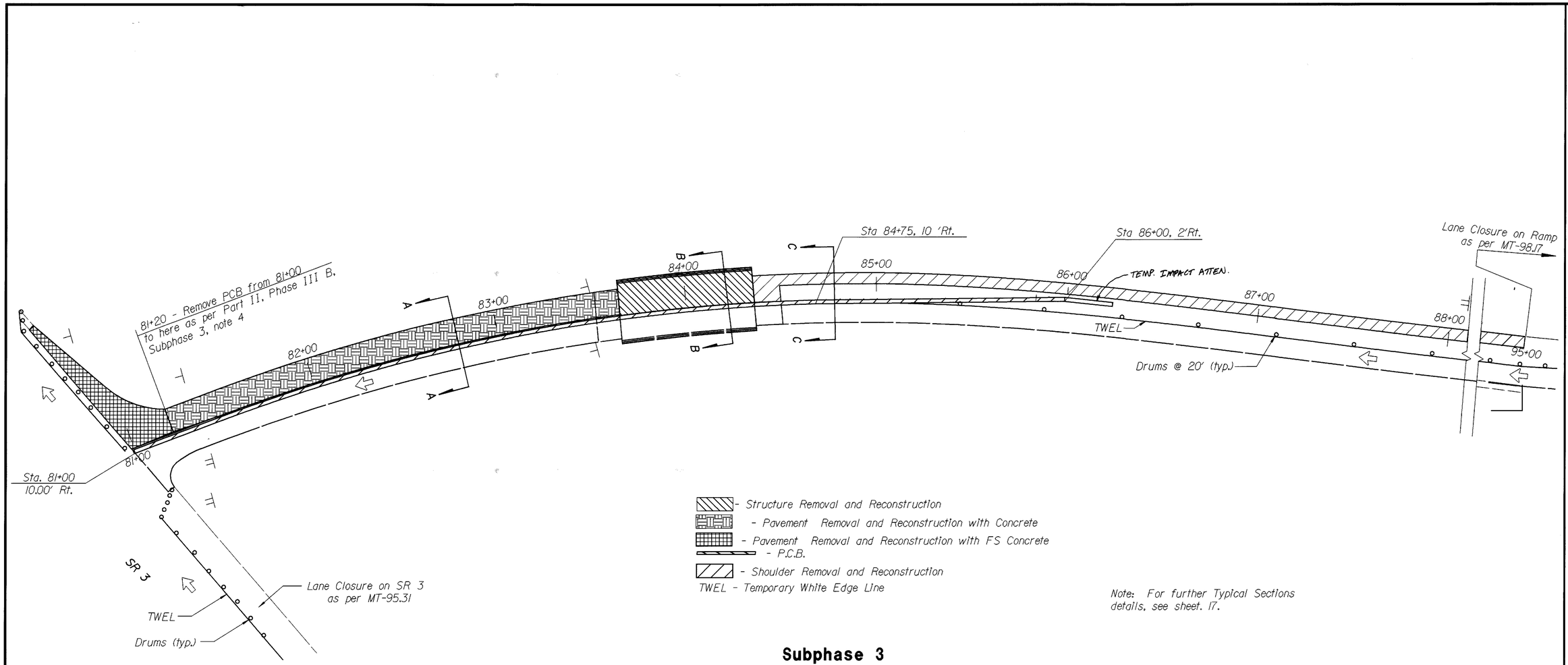
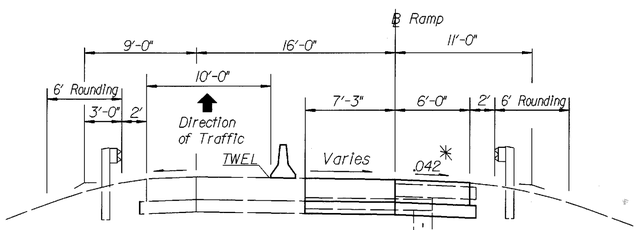



- Structure Removal and Reconstruction
- Pavement Removal and Reconstruction with Concrete
- Pavement Removal and Reconstruction with FS Concrete
- P.C.B.
- Shoulder Removal and Reconstruction

TWEL - Temporary White Edge Line

Note: For further Typical Sections details, see sheet. 17.

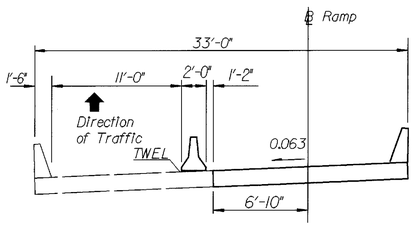
**Subphase 3**




**TYPICAL SECTION RAMP "C" @ S.R. 3 INTERCHANGE, PAVEMENT& OUTSIDE SHOULDERREPLACEMENT**

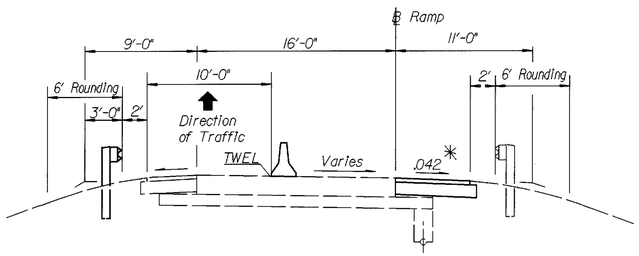
**A - A**

* .042 or rate of Superelevation, whichever is greater




**TYPICAL SECTION RAMP C @ S.R. 3 INTERCHANGE, OUTSIDE STRUCTURE REPLACEMENT**

**B - B**




**TYPICAL SECTION RAMP "C" @ S.R. 3 INTERCHANGE, OUTSIDE SHOULDER REPLACEMENT**

**C - C**

**MOT - Phase IIIB S.R. 3 Ramp 'C'**

**MED-71-15.78**

58
940

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USERNAME : pfought

DATE : 07-DEC-1999
TIME : 07:55

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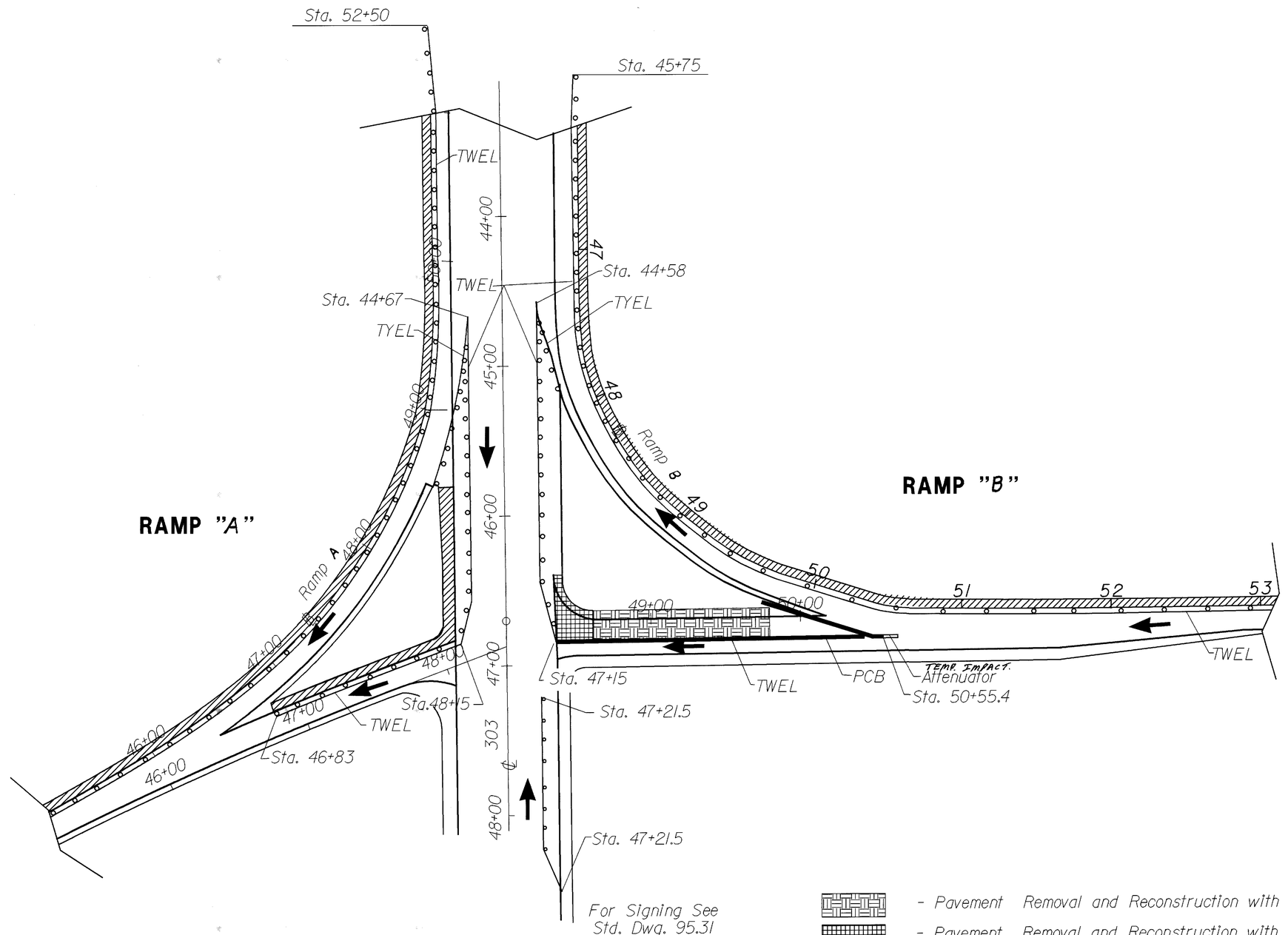



**Subphase I**

- Pavement Removal and Reconstruction with Concrete
- Pavement Removal and Reconstruction with FS Concrete
- P.C.B.
- Shoulder Removal and Reconstruction

TWEL - Temporary White Edge Line
TYEL - Temporary Yellow Edge Line

CALCULATED BL CHECKED

**MOT - Phase IIIC - S.R. 303 Ramp "A" & "B"**

**MED-71-15.78**

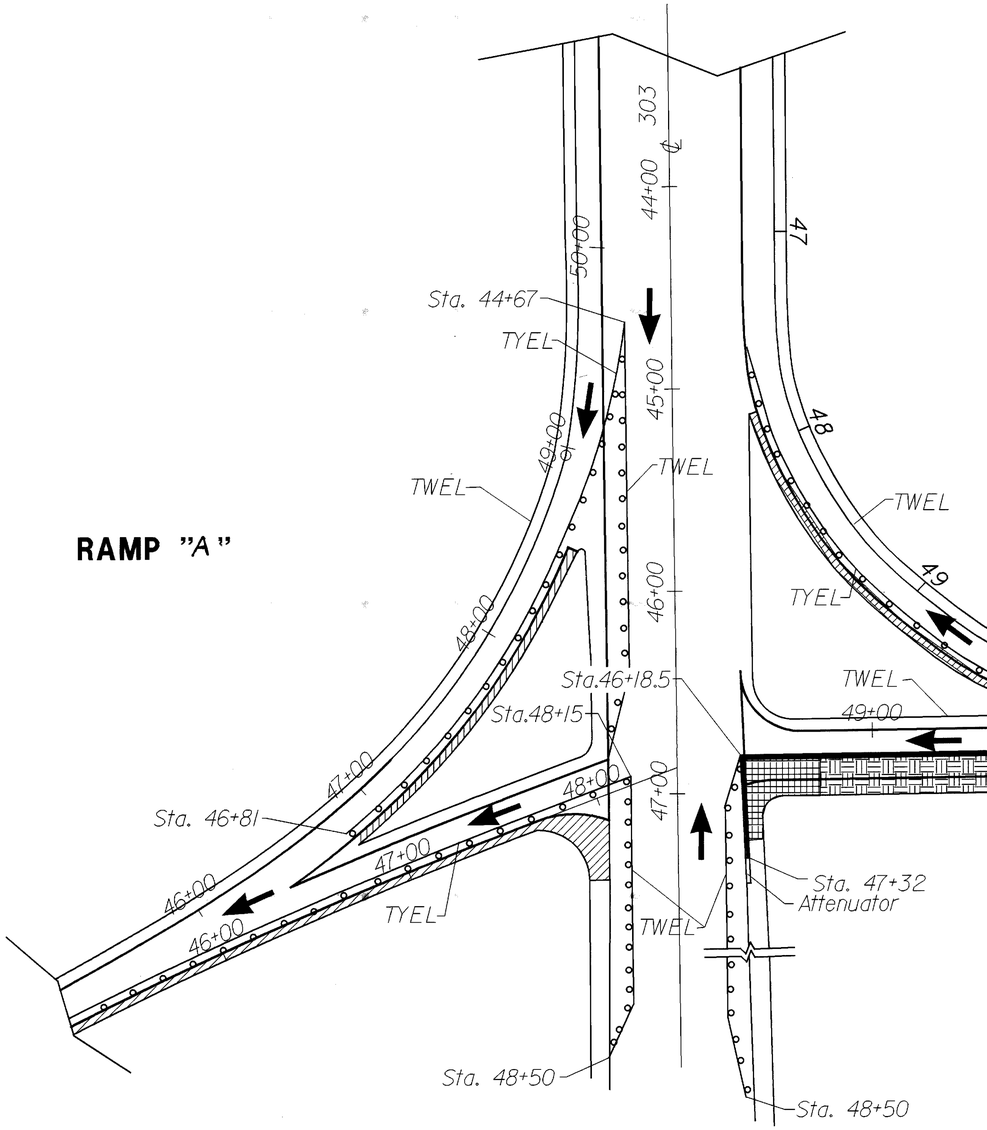
DESIGN FILE : i:\pd_MED_IR71\DGN\MOT\dt303c.dgn
USERNAME : pfought

DATE : 07-DEC-1999
TIME : 08:00

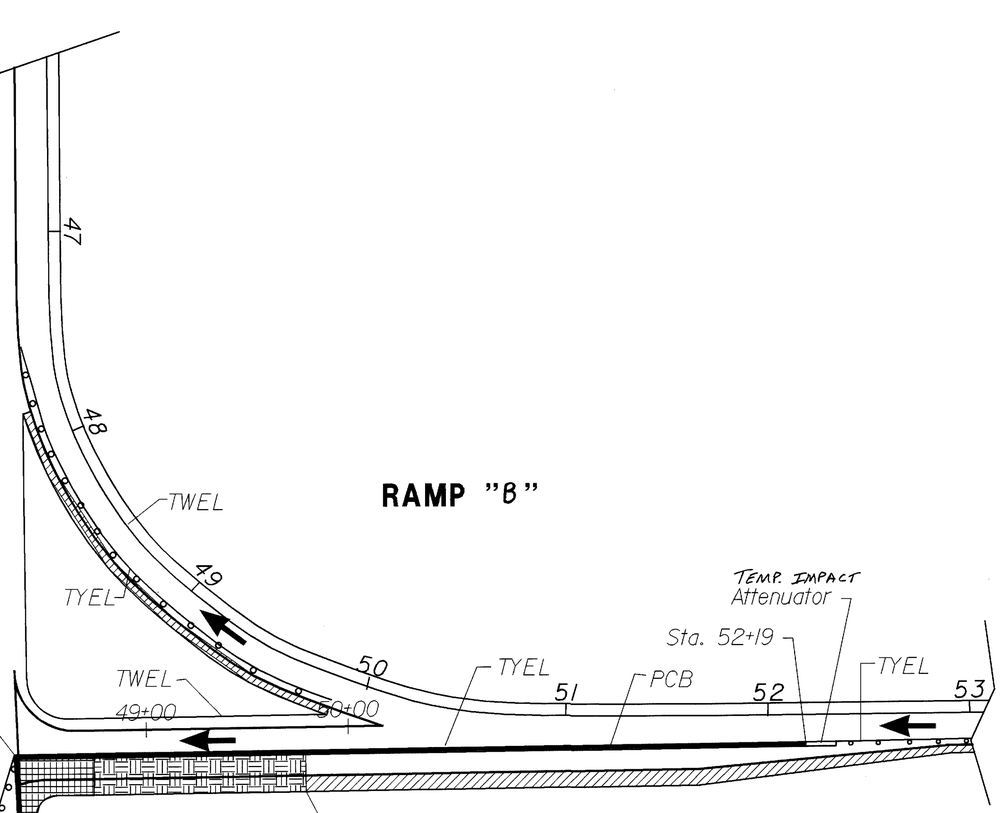
CALCULATED
CHECKED

# MOT - Phase IIIC - S.R. 303 Ramp "A" & "B"

## RAMP "A"




## RAMP "B"




For Signing See
Std. Dwg. 95.31

**Subphase III**

- Pavement Removal and Reconstruction with Concrete
- Pavement Removal and Reconstruction with FS Concrete
- P.C.B.
- Shoulder Removal and Reconstruction

TWEL - Temporary White Edge Line
TYEL - Temporary Yellow Edge Line

MED-71-15.78

DESIGN FILE : i:\pd_MED_IR71\DGN\MOT\motdt3cd.dgn
USERNAME : pfought
DATE : 07-DEC-1999
TIME : 08:02

Connect to I.R. 71 M.O.T. barrels

Northbound I.R. 71

Lane Closure on Ramp as per Std. Dwg . MT-98.13

Match Line 38+00

Ramp "C" 39+00

TEMP. IMP. Attenuator

40+00

41+00

A

A

B

B

Ramp "D" 40+00

41+00

42+00

43+00

44+00

45+00

46+00

47+00

48+00

49+00

50+00

51+00

Match Line 38+00

Northbound I.R. 71

35+00

36+00

37+00

38+00

39+00

Full Depth Pavement Replacement

Lane Closure as per Std. Dwg. 95.31

Sta. 50+00, ℄

Ramp "D"
Note: Outside shoulder widening and all Ramp work shall be done when the Ramp is closed for Phase III mainline structure construction

℄ Ramp
9'-0" 16'-0" 10'-0"
6' Rounding
3' 3' 3'
Direction of Traffic
11'-6" TWEL
1'-5" 1'
.042 Varies 0.042
8:1 (Max.) 2:1 (Min.)
8" - Item 410 Traffic Compacted Aggegate

**TYPICAL SECTION RAMP "C"&"D" @ S.R. 303 INTERCHANGE, OUTSIDE SHOULDER REPLACEMENT**

℄ Ramp
9'-0" 16'-0" 8'-0"(max.) 0'-0"(min.) 10'-0"
6' Rounding
3' 3' 3'
Direction of Traffic
11'-6" TWEL
1'-5" 1'
.042 Varies 0.042
8:1 (Max.) 2:1 (Min.)
8" - Item 410 Traffic Compacted Aggegate

**TYPICAL SECTION RAMPS "C" S.R. 303 INTERCHANGE- ASPHALT PAVEMENT & SHOULDER WIDENING**
**B - B**

℄ Ramp
11'-0" 18'-6" 21'-6" 11'-0" 10'-0"
6' Rounding
3'-0" 2' 3'-0" 3'-0"
Direction of Ramp "D" Traffic
Direction of Ramp "C" Traffic
3'-0" 12'-6" 1'-5" 1'
Varies 4"+/-
0.042
8:1 (Max.) 2:1 (Min.)
8:1 (Max.) 2:1 (Min.)
8" - Item 410 Traffic Compacted Aggegate

**TYPICAL SECTION RAMPS "C" & "D" S.R. 303 INTERCHANGE- CONCRETE PAVEMENT & SHOULDER WIDENING**
**C - C**

46+72 - Remove PCB from 46+72 to 47+15 as per Part III, Phase III C, Subphase I, note 4

Sta. 47+15, 9.50' Rt.

Sta. 47+16.5, 72.8' Rt.

TWEL

Note: For further Typical Sections details, see sheet. 15.

**Subphase 1**

- Structure Removal and Reconstruction
- Pavement Removal and Reconstruction with Concrete
- Pavement Removal and Reconstruction with FS Concrete
- P.C.B.
- Shoulder Removal and Reconstruction

TWEL - Temporary White Edge Line

**MOT - Phase IIIC - S.R. 303 Ramp "C" & "D"**

**MED-71-15.78**

61
940

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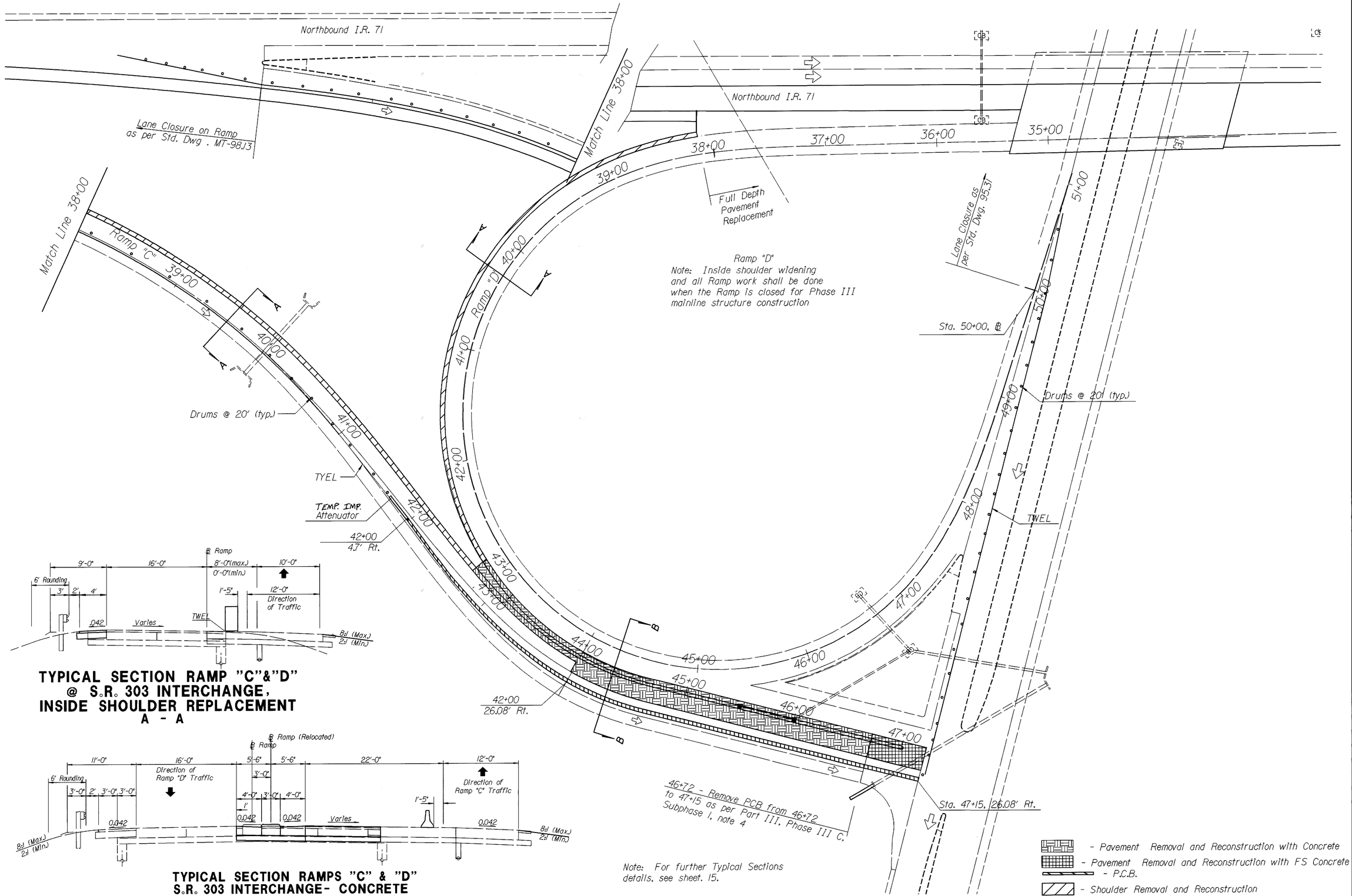






**TYPICAL SECTION RAMP "C"&"D"**
**@ S.R. 303 INTERCHANGE,**
**INSIDE SHOULDER REPLACEMENT**
**A - A**




**TYPICAL SECTION RAMPS "C" & "D"**
**S.R. 303 INTERCHANGE- CONCRETE**
**PAVEMENT & MEDIAN WIDENING**
**B - B**

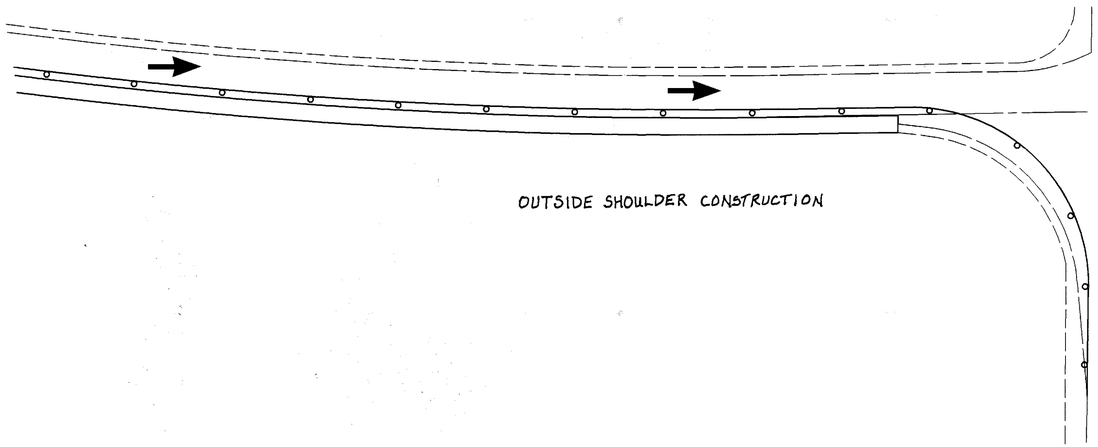
Note: For further Typical Sections details, see sheet. 15.

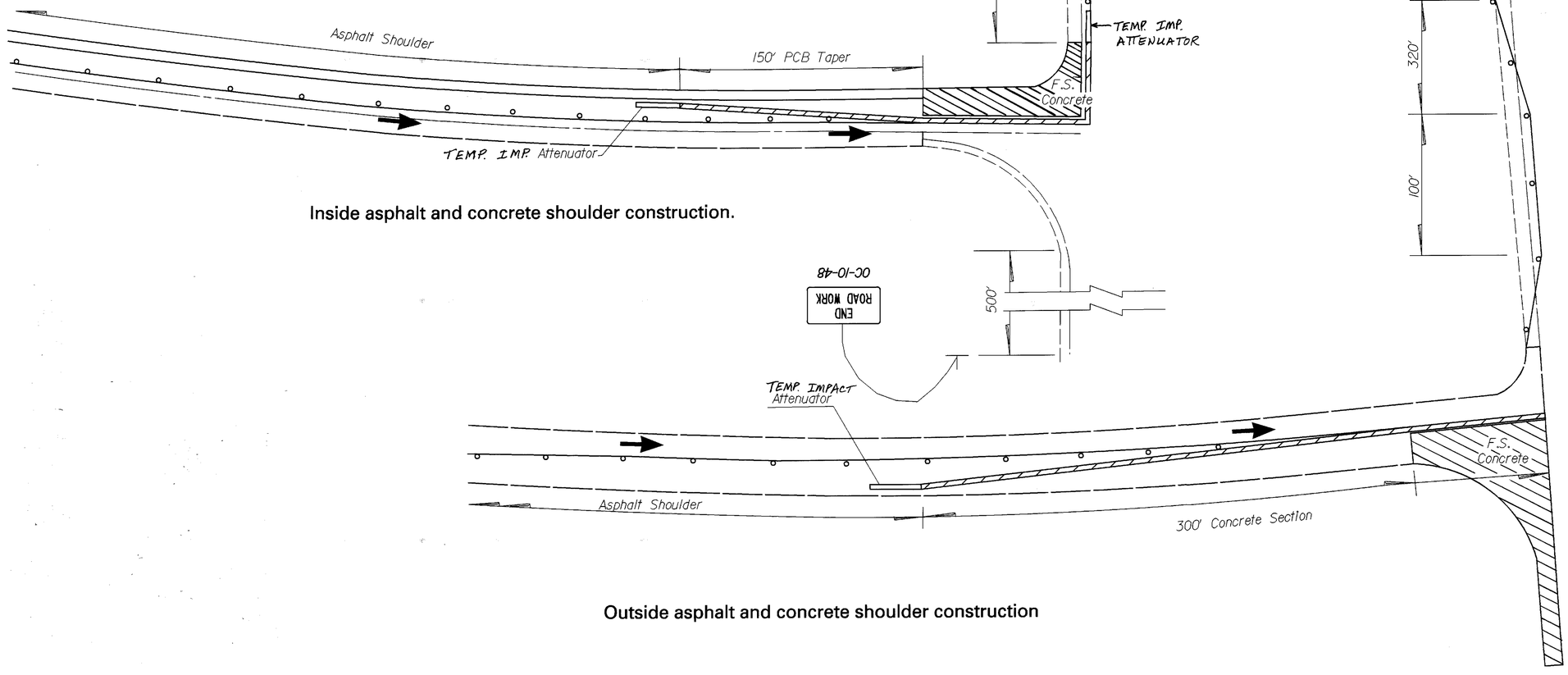
**Subphase 2**

**MOT - Phase IIIC - S.R. 303 Ramp "C" & "D"**

**MED-71-15.78**

# MAINTENANCE OF TRAFFIC AT RAMP EXITS




Inside asphalt and concrete shoulder construction.

Outside asphalt and concrete shoulder construction

For additional notes & details see SR 3 Ramp work.

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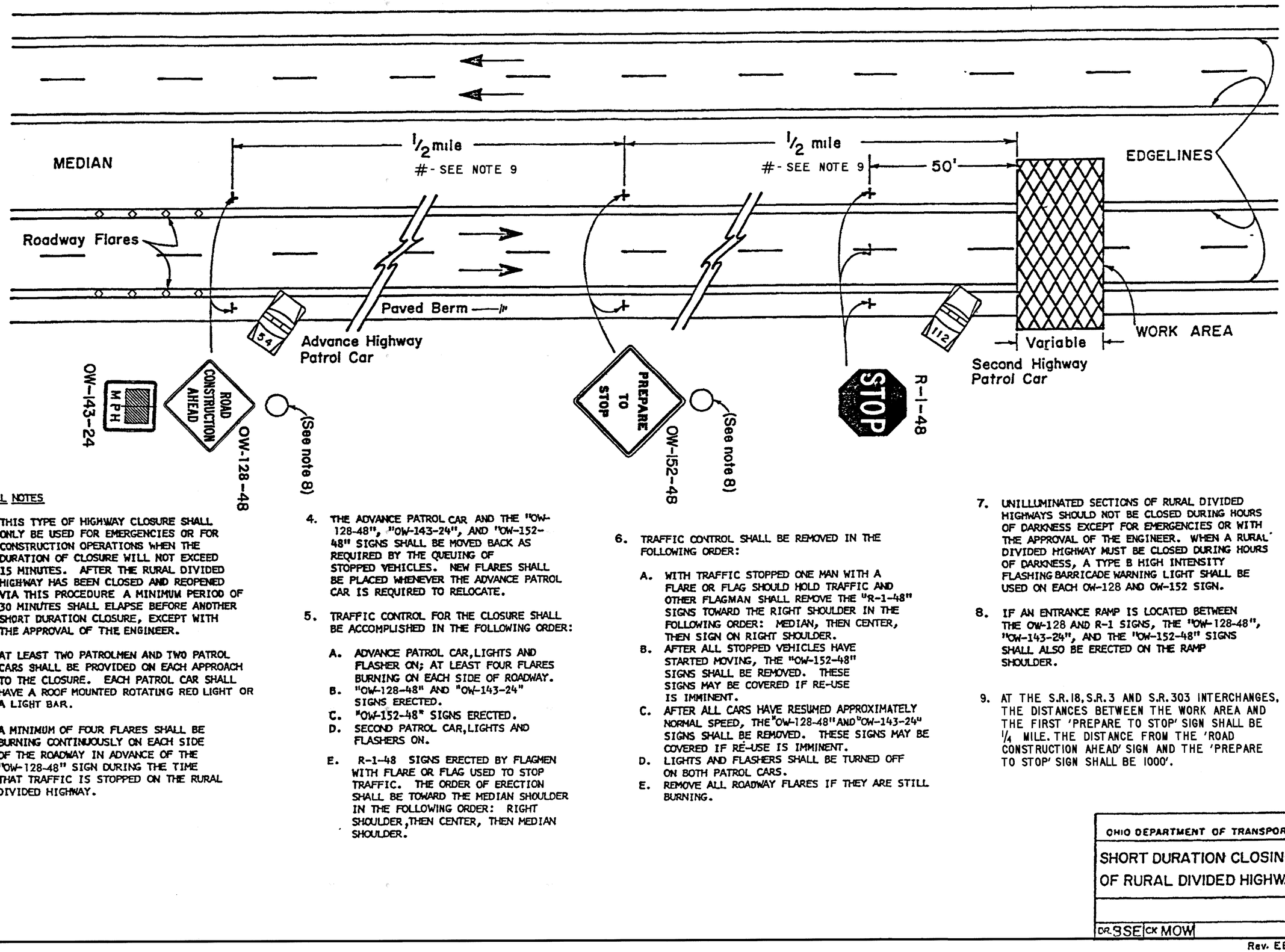
TIME : 08:10

MAINTENANCE OF TRAFFIC AT EXIT RAMPS S.R. 18

MED-71-15.94




GENERAL NOTES

1. THIS TYPE OF HIGHWAY CLOSURE SHALL ONLY BE USED FOR EMERGENCIES OR FOR CONSTRUCTION OPERATIONS WHEN THE DURATION OF CLOSURE WILL NOT EXCEED 15 MINUTES. AFTER THE RURAL DIVIDED HIGHWAY HAS BEEN CLOSED AND REOPENED VIA THIS PROCEDURE A MINIMUM PERIOD OF 30 MINUTES SHALL ELAPSE BEFORE ANOTHER SHORT DURATION CLOSURE, EXCEPT WITH THE APPROVAL OF THE ENGINEER.

2. AT LEAST TWO PATROLMEN AND TWO PATROL CARS SHALL BE PROVIDED ON EACH APPROACH TO THE CLOSURE. EACH PATROL CAR SHALL HAVE A ROOF MOUNTED ROTATING RED LIGHT OR A LIGHT BAR.

3. A MINIMUM OF FOUR FLARES SHALL BE BURNING CONTINUOUSLY ON EACH SIDE OF THE ROADWAY IN ADVANCE OF THE "OW-128-48" SIGN DURING THE TIME THAT TRAFFIC IS STOPPED ON THE RURAL DIVIDED HIGHWAY.

4. THE ADVANCE PATROL CAR AND THE "OW-128-48", "OW-143-24", AND "OW-152-48" SIGNS SHALL BE MOVED BACK AS REQUIRED BY THE QUEUING OF STOPPED VEHICLES. NEW FLARES SHALL BE PLACED WHENEVER THE ADVANCE PATROL CAR IS REQUIRED TO RELOCATE.

5. TRAFFIC CONTROL FOR THE CLOSURE SHALL BE ACCOMPLISHED IN THE FOLLOWING ORDER:

   A. ADVANCE PATROL CAR, LIGHTS AND FLASHER ON; AT LEAST FOUR FLARES BURNING ON EACH SIDE OF ROADWAY.
   B. "OW-128-48" AND "OW-143-24" SIGNS ERECTED.
   C. "OW-152-48" SIGNS ERECTED.
   D. SECOND PATROL CAR, LIGHTS AND FLASHERS ON.
   E. R-1-48 SIGNS ERECTED BY FLAGMEN WITH FLARE OR FLAG USED TO STOP TRAFFIC. THE ORDER OF ERECTION SHALL BE TOWARD THE MEDIAN SHOULDER IN THE FOLLOWING ORDER: RIGHT SHOULDER, THEN CENTER, THEN MEDIAN SHOULDER.

6. TRAFFIC CONTROL SHALL BE REMOVED IN THE FOLLOWING ORDER:

   A. WITH TRAFFIC STOPPED ONE MAN WITH A FLARE OR FLAG SHOULD HOLD TRAFFIC AND OTHER FLAGMAN SHALL REMOVE THE "R-1-48" SIGNS TOWARD THE RIGHT SHOULDER IN THE FOLLOWING ORDER: MEDIAN, THEN CENTER, THEN SIGN ON RIGHT SHOULDER.
   B. AFTER ALL STOPPED VEHICLES HAVE STARTED MOVING, THE "OW-152-48" SIGNS SHALL BE REMOVED. THESE SIGNS MAY BE COVERED IF RE-USE IS IMMINENT.
   C. AFTER ALL CARS HAVE RESUMED APPROXIMATELY NORMAL SPEED, THE "OW-128-48" AND "OW-143-24" SIGNS SHALL BE REMOVED. THESE SIGNS MAY BE COVERED IF RE-USE IS IMMINENT.
   D. LIGHTS AND FLASHERS SHALL BE TURNED OFF ON BOTH PATROL CARS.
   E. REMOVE ALL ROADWAY FLARES IF THEY ARE STILL BURNING.

7. UNILLUMINATED SECTIONS OF RURAL DIVIDED HIGHWAYS SHOULD NOT BE CLOSED DURING HOURS OF DARKNESS EXCEPT FOR EMERGENCIES OR WITH THE APPROVAL OF THE ENGINEER. WHEN A RURAL DIVIDED HIGHWAY MUST BE CLOSED DURING HOURS OF DARKNESS, A TYPE B HIGH INTENSITY FLASHING BARRICADE WARNING LIGHT SHALL BE USED ON EACH OW-128 AND OW-152 SIGN.

8. IF AN ENTRANCE RAMP IS LOCATED BETWEEN THE OW-128 AND R-1 SIGNS, THE "OW-128-48", "OW-143-24", AND THE "OW-152-48" SIGNS SHALL ALSO BE ERECTED ON THE RAMP SHOULDER.

9. AT THE S.R.18, S.R.3 AND S.R.303 INTERCHANGES, THE DISTANCES BETWEEN THE WORK AREA AND THE FIRST 'PREPARE TO STOP' SIGN SHALL BE 1/4 MILE. THE DISTANCE FROM THE 'ROAD CONSTRUCTION AHEAD' SIGN AND THE 'PREPARE TO STOP' SIGN SHALL BE 1000'.

OHIO DEPARTMENT OF TRANSPORTATION

| SHORT DURATION CLOSING OF RURAL DIVIDED HIGHWAY | DATE 5/77 |
|---|---|
| DR SSE CK MOW | |

HORIZONTAL SCALE IN FEET

CALCULATED | CHECKED

SHORT DURATION CLOSING OF RURAL DIVIDED HIGHWAY

MED-71-15.78

63A / 940

Rev. EEF 9/84

REF-FILE #1 LEVELS ON:
REF-FILE #2 LEVELS ON:
REF-FILE #3 LEVELS ON:
REF-FILE #4 LEVELS ON:

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DATE & TIME: 07-DEC-1999 08:28
USERNAME: pfaught
PROJECT: NONE

LEVELS ON: [1-64]
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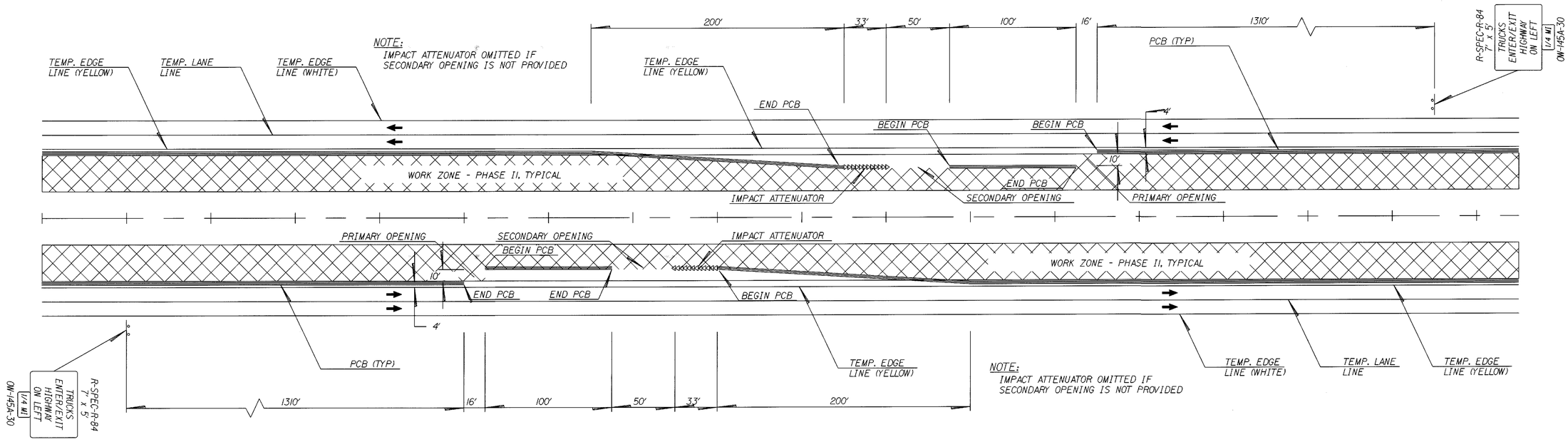
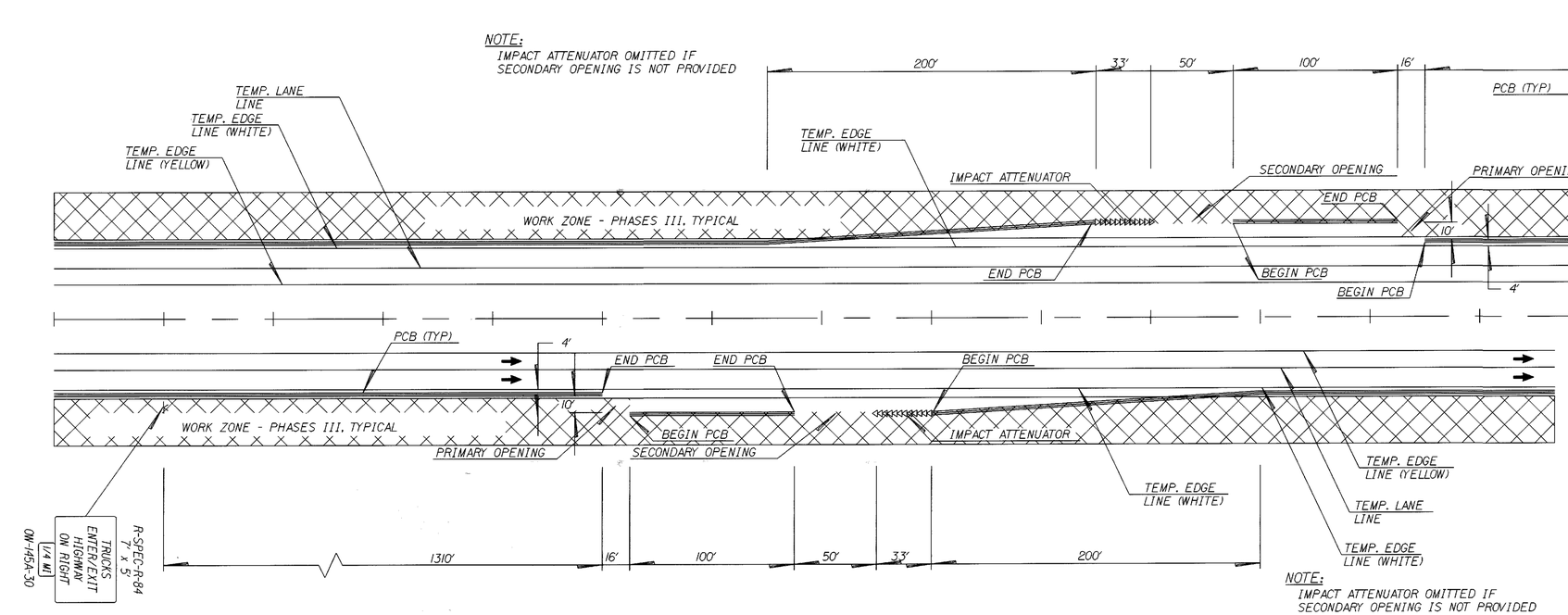



**CONSTRUCTION ACCESS POINTS - PHASE II, TYPICAL**




**CONSTRUCTION ACCESS POINTS - PHASES III, TYPICAL**

*CONSTRUCTION ACCESS POINTS*

*CONSTRUCTION ACCESS POINT LOCATIONS MAY BE SELECTED BY THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER. THEY SHALL BE IN ACCORDANCE WITH THE DETAILS IN THE PLANS. THE LOCATIONS SHALL BE SELECTED FOR GOOD SIGHT DISTANCE AND EASE OF ACCESS FOR ENTERING VEHICLES (AVOID LOCATIONS JUST BEYOND CREST VERTICAL CURVES, ON CURVES TO THE SIDE OF THE ROAD WITH THE BARRIER, JUST BEYOND OVERHEAD STRUCTURES, ON UPGRADES, ETC.) IN THE EVENT THAT THE ENGINEER DETERMINES THAT AN ACCESS POINT DOES NOT FUNCTION IN A SAFE MANNER, HE SHALL ORDER IT IMMEDIATELY CLOSED AT NO COST TO THE STATE. ACCESS POINTS WHICH INCLUDE THE SECONDARY OPENING SHALL ALSO INCLUDE AN OPERABLE IMPACT ATTENUATOR AS DETAILED. WHEN AN IMPACT ATTENUATOR BECOMES INOPERABLE FOR ANY REASON, THE ENGINEER SHALL ORDER THE SECONDARY OPENING TO BE IMMEDIATELY CLOSED WITH PORTABLE CONCRETE BARRIER. ACCESS POINTS MAY BE RELOCATED, SUBJECT TO THE APPROVAL OF THE ENGINEER, AS NECESSARY TO ACCOMPLISH CONSTRUCTION ACTIVITIES.*

*ALL COSTS FOR RELOCATION OF PORTABLE CONCRETE BARRIER, INSTALLATION, REPAIR, REPLACEMENT, AND REMOVAL OF IMPACT ATTENUATORS, GRADING FOR ACCESS DRIVES AND RELATED COSTS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC.*

CALCULATED | CHECKED

**MAINTENANCE OF TRAFFIC**
**CONSTRUCTION ACCESS PLANS, TYPICAL**

**MED-71-15.78**



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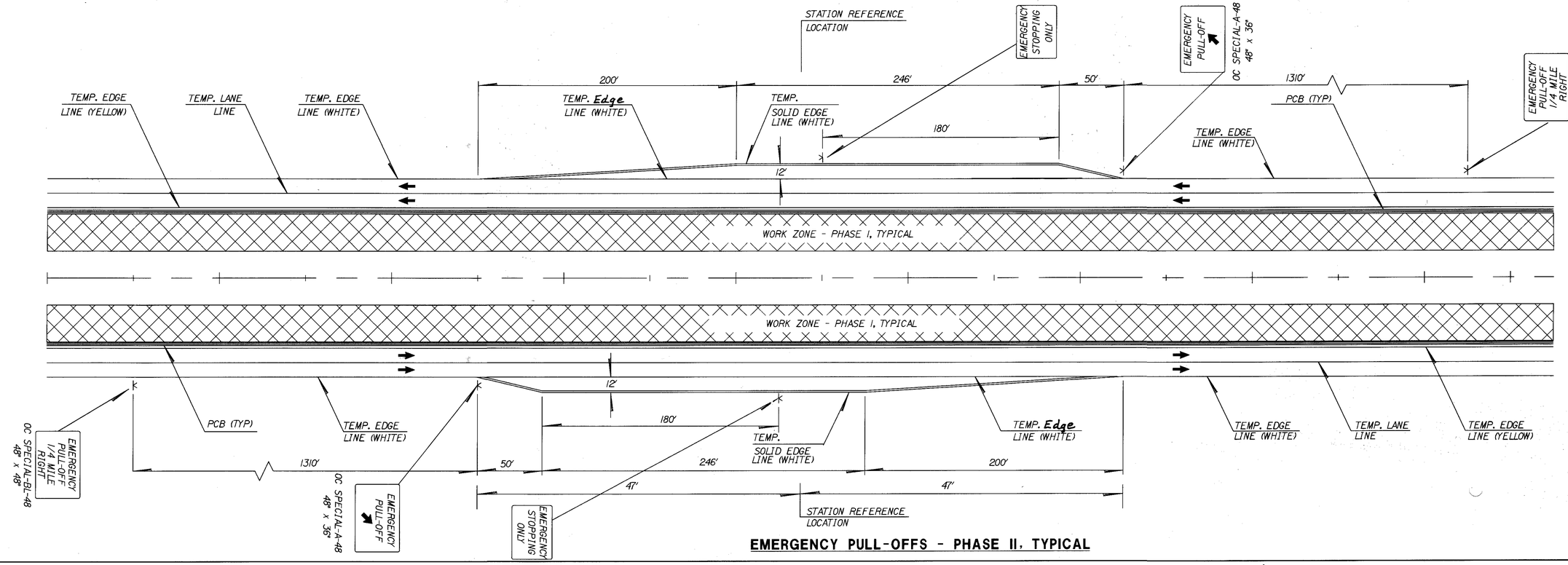
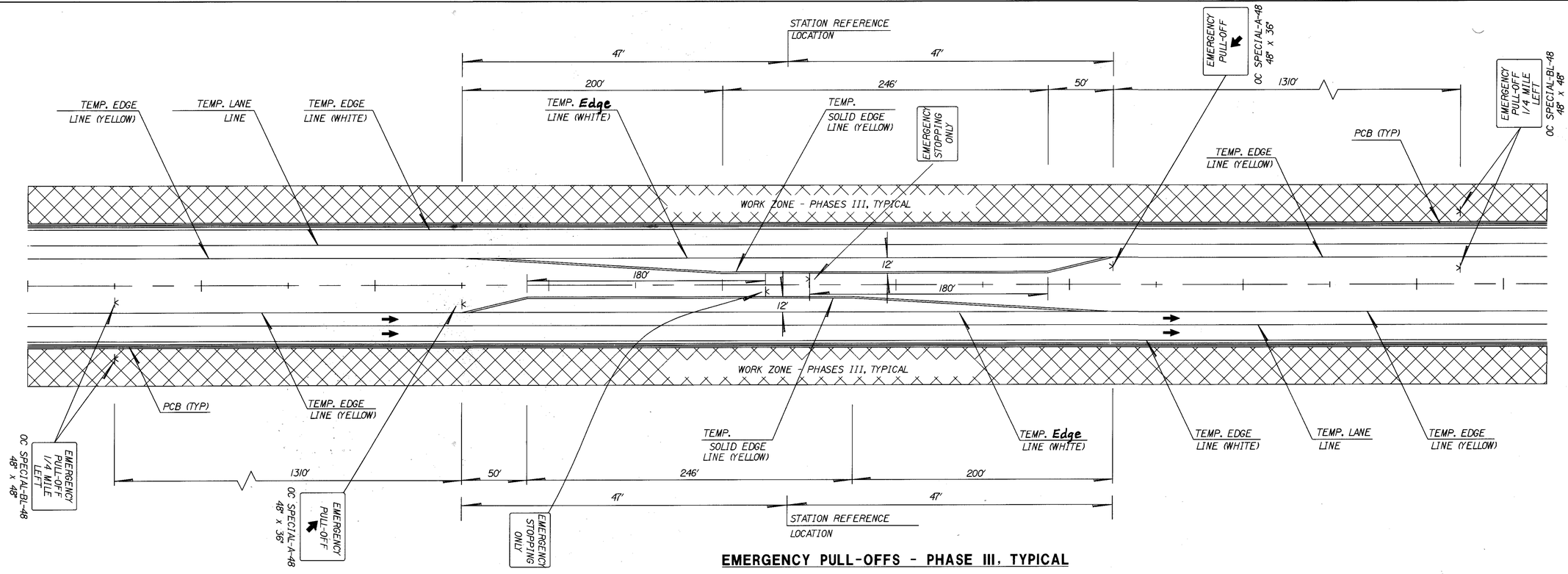



**EMERGENCY PULL-OFFS - PHASE II, TYPICAL**




**EMERGENCY PULL-OFFS - PHASE III, TYPICAL**

CALCULATED | CHECKED

# MAINTENANCE OF TRAFFIC

## EMERGENCY PULLOFFS, TYPICAL

MED-71-15.78



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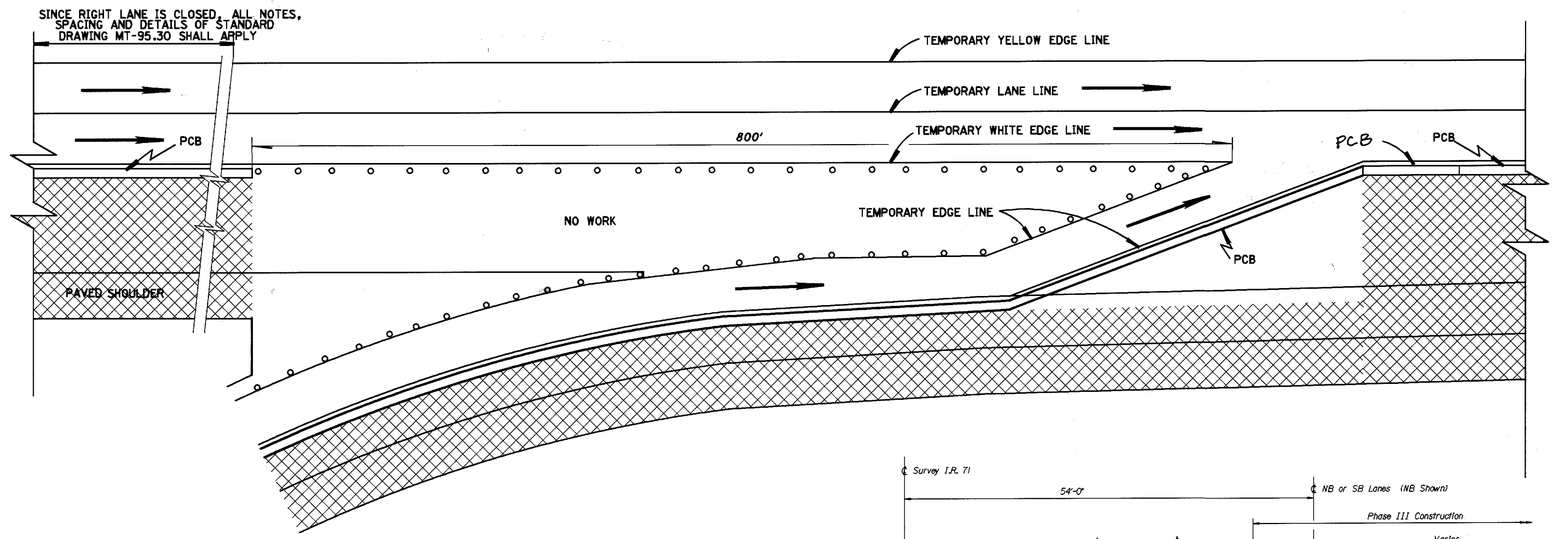
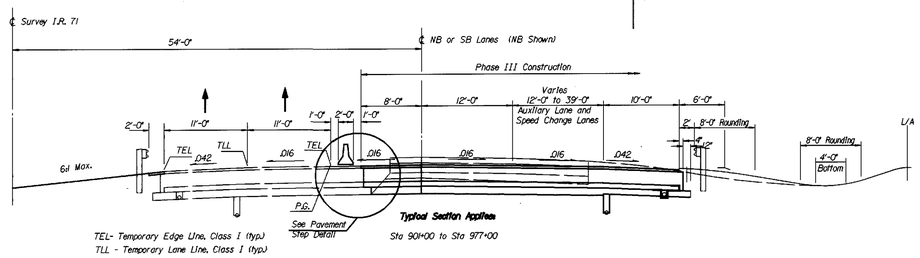
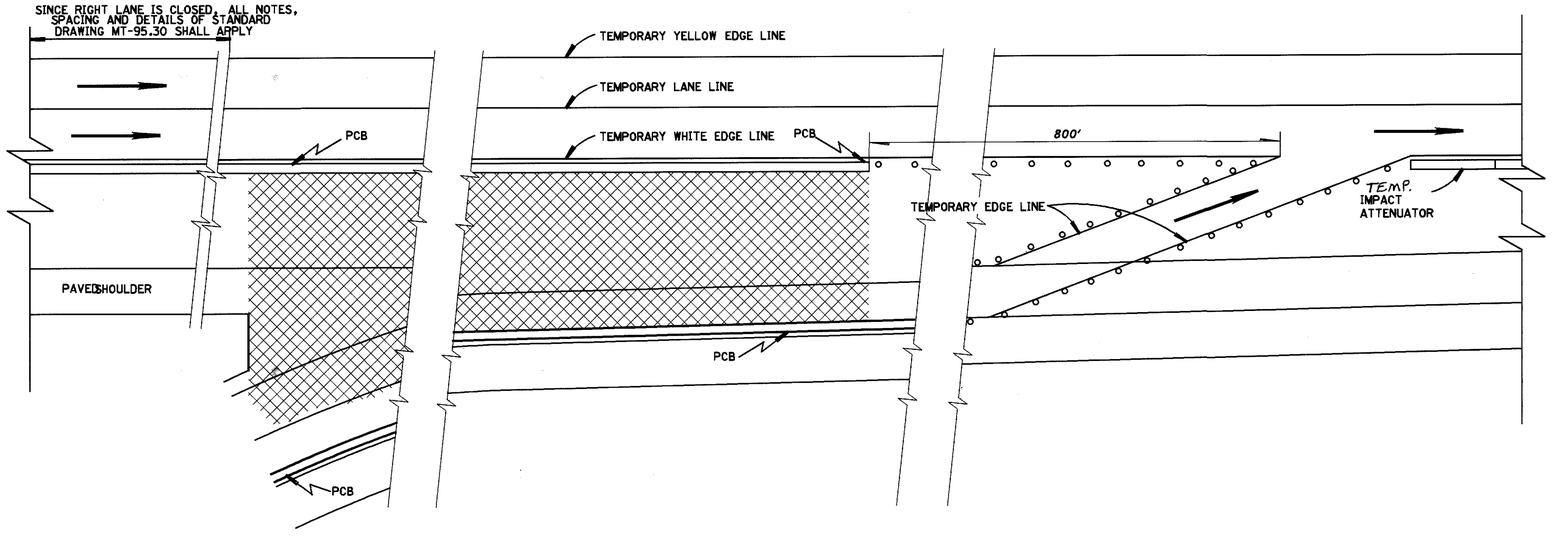



For further details see std. dwg MT98.16M

**Part II**
**Phase IIIC**
**Subphase 1**




For further details see std. dwg MT98.15M

**Part II**
**Phase IIIC**
**Subphase 2**

CALCULATED BL CHECKED

# MOT ENTRANCE RAMP DETAILS

MED-71-15.78

66
940

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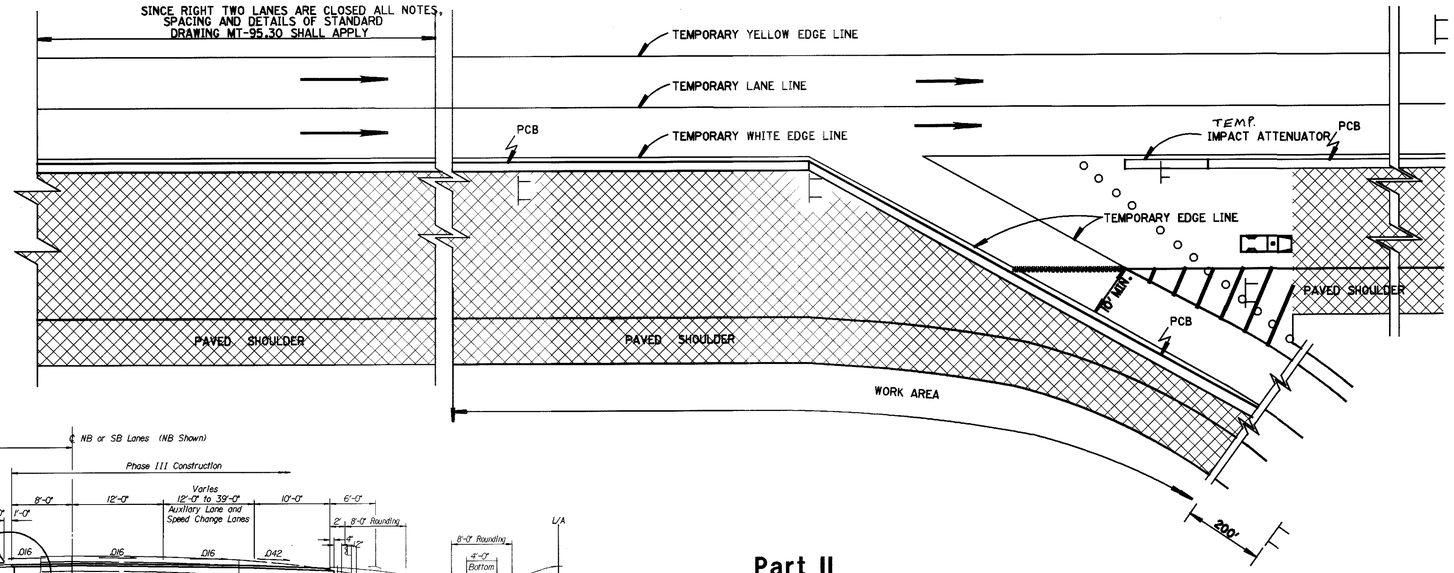
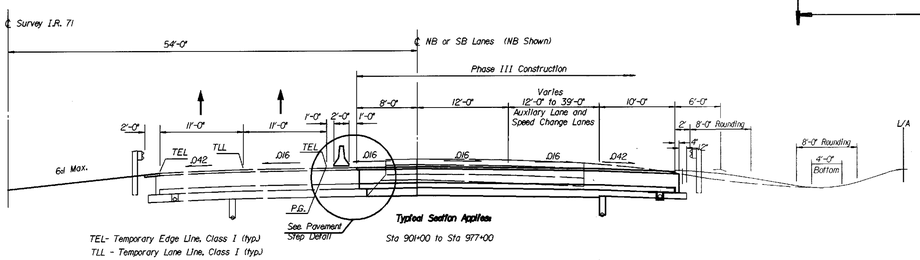
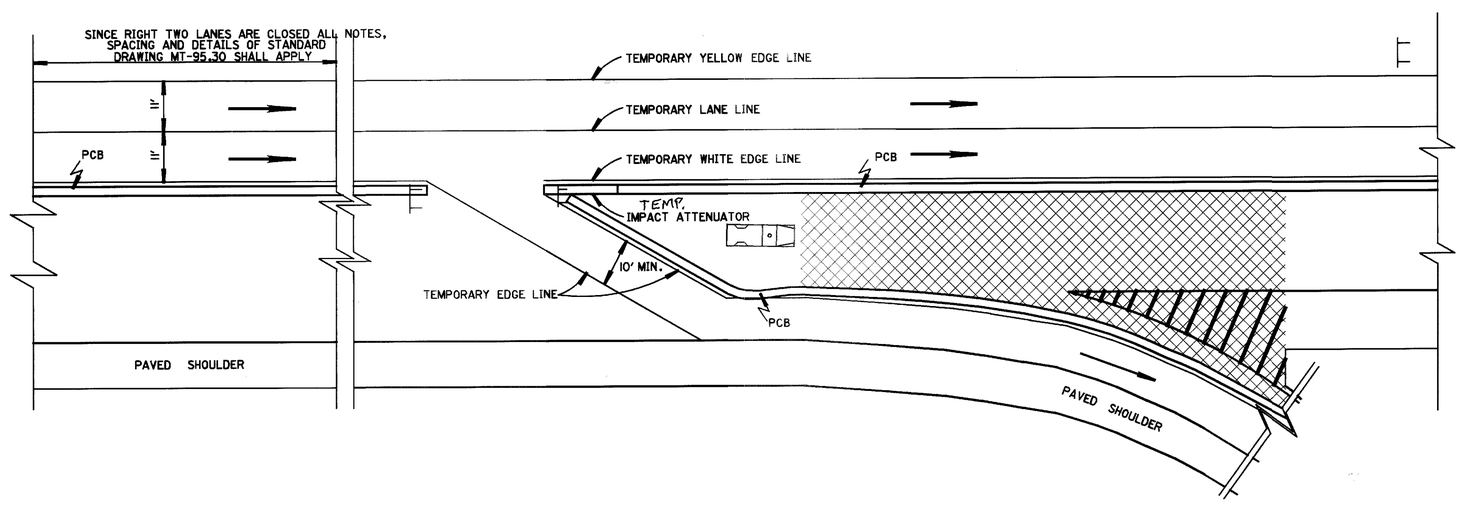



**Part II**
**Phase IIIC**
**Subphase 1**

For further details see std. dwg MT98.13M




**Part II**
**Phase IIIC**
**Subphase 2**

For further details see std. dwg MT98.14M

CALCULATED | CHECKED

# MOT EXIT RAMP DETAIL

MED-71-15.78



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TIME : 08:35
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USERNAME : ptought

| SHEET NUMBER | | | | | | | | | | | | | | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 31 | 32 | 34 | 35 | 76A | 93 | 134 | 135 | 136 | 137 | 375 | 421 | 501 | 672 | 217 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | ROADWAY | |
| | | | | | | | | | | | | | | | 201 | 11001 | LUMP | | CLEARING AND GRUBBING, AS PER PLAN | 34 |
| | | | | | | | | | | | 152 | | | | 202 | 22900 | 152 | SQ YD | APPROACH SLAB REMOVED | |
| | | | | | | | | 354,907 | | | | 8,140 | | | 202 | 23000 | 363,047 | SQ YD | PAVEMENT REMOVED | |
| | | | | | | | | | | 11,217 | | | | | 400 | 202 | 23500 | 11,617 | SQ YD | WEARING COURSE REMOVED | |
| | | | | | | | | 3,019 | | 3,150 | | | | | | 202 | 32000 | 6,169 | LIN FT | CURB REMOVED | |
| | | | | | | 2,801 | | | | | | | | | | 202 | 35100 | 2,801 | LIN FT | PIPE REMOVED, 24" AND UNDER | |
| | | | | | 37,145 | | | | | | 713 | 1,000 | | | | 202 | 38000 | 38,858 | LIN FT | GUARDRAIL REMOVED | |
| | | | | | 1,056 | | | | | | | | | | | 202 | 38300 | 1,056 | LIN FT | GUARDRAIL REMOVED, BARRIER DESIGN | |
| | | | | | 130 | | | | | | | | | | | 202 | 42000 | 130 | EACH | ANCHOR ASSEMBLY REMOVED, TYPE A | 33 |
| | | 2,017 | | | | | | | | | | | | | | 202 | 54100 | 2,017 | EACH | RAISED PAVEMENT MARKER REMOVED FOR STORAGE | |
| | | | | | | 1 | | | | | | | | | | 202 | 58000 | 1 | EACH | MANHOLE REMOVED | |
| | | | | | | 18 | | | | | | | | | | 202 | 58100 | 18 | EACH | CATCH BASIN REMOVED | |
| | | | | | | 3 | | | | | | | | | | 202 | 58501 | 3 | EACH | CATCH BASIN ABANDONED, AS PER PLAN | 32 |
| | | | | | | 375 | | | | | | | | | | SPECIAL | 20270000 | 375 | LIN FT | FILL AND PLUG EXISTING CONDUIT | 34 |
| | | | 1,200 | | | | | | | | | | | | | SPECIAL | 20270100 | 1,200 | LIN FT | PIPE CLEANOUT | 34 |
| | 500 | 23,438 | | | | | | 2,420 | 387,841 | 150 | 1,282 | 10,756 | | | | 203 | 12000 | 426,387 | CU YD | EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION | |
| | | | | | | | | | 166,442 | | 1,166 | 434 | | | | 203 | 20000 | 168,042 | CU YD | EMBANKMENT | |
| | 17 | | | | | | | | | | | | | | | 203 | 45000 | 17 | HOUR | PROOF ROLLING | 31 |
| | | | | | | | 758,483 | 9,996 | | | 1,981 | 8,507 | 426 | | | 203 | 50000 | 779,393 | SQ YD | SUBGRADE COMPACTION | |
| | | | | 500 | | 970 | | | | | | | | | | 203 | 55000 | 1,470 | LIN FT | DITCH CLEANOUT | 35 |
| | | | | | | | | 11 | | | | | | | | 203 | 60000 | 11 | STATION | LINEAR GRADING | |
| | 29 | | | | | | | | | | | | | | | 604 | 40501 | 29 | EACH | REFERENCE MONUMENT, AS PER PLAN | 31 |
| | | | | | | | | | | | | | | 1,756 | | SPECIAL | 60610200 | 1,756 | SQ FT | NOISE BARRIER (REFLECTIVE), 10' HEIGHT AND UNDER | 673 |
| | | | | | | | | | | | | | | 12,552 | | SPECIAL | 60610210 | 12,552 | SQ FT | NOISE BARRIER (REFLECTIVE), OVER 10' TO 14' HEIGHT | 673 |
| | | | | | | | | | | | | | | 112,272 | | SPECIAL | 60610220 | 112,272 | SQ FT | NOISE BARRIER (REFLECTIVE), OVER 14' TO 20' HEIGHT | 673 |
| | | | | | 54,909.98 | | | | | | 875.00 | 562.50 | | | | 606 | 13000 | 56,347.48 | LIN FT | GUARDRAIL, TYPE 5 | |
| | | | | | | | | | | | | 200.00 | | | | 606 | 13050 | 200.00 | LIN FT | GUARDRAIL, TYPE 5A | |
| | | | | | 468.75 | | | | | | | | | | | 606 | 14000 | 468.75 | LIN FT | GUARDRAIL, TYPE 8 | |
| | | | | | 1650.00 | | | | | | | | | | | 606 | 15500 | 1650.00 | LIN FT | GUARDRAIL, BARRIER DESIGN, TYPE 5 | |
| | | | | | 45 | | | | | | | 2 | | | | 606 | 22000 | 47 | EACH | ANCHOR ASSEMBLY, TYPE B-98 | 33 |
| | | | | | 29 | | | | | | | | | | | 606 | 22010 | 29 | EACH | ANCHOR ASSEMBLY, TYPE E-98 | 33 |
| | | | | | | | | | | | 2 | | | | | 606 | 25000 | 2 | EACH | ANCHOR ASSEMBLY, TYPE A | |
| | | | | | 69 | | | | | | 2 | 2 | | | | 606 | 26500 | 73 | EACH | ANCHOR ASSEMBLY, TYPE T | |
| | | | | | 64 | | | | | | 4 | | | | | 606 | 35000 | 68 | EACH | BRIDGE TERMINAL ASSEMBLY, TYPE 1 | |
| | | | | | 23 | | | | | | | | | | | 606 | 60010 | 23 | EACH | IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL) | 33 |
| | | | | | 4 | | | | | | | | | | | 606 | 60025 | 4 | EACH | IMPACT ATTENUATOR, TYPE 2-98 (BIDIRECTIONAL), AS PER PLAN MODEL * QS2406Y | 34 |
| | | 68,428 | | | | | | | | | | | | | | 607 | 15001 | 68,428 | LIN FT | FENCE, TYPE 47, AS PER PLAN | 32 |
| | | 1,878 | | | | | | | | | | | | | | 607 | 15101 | 1,878 | LIN FT | FENCE, TYPE 47RA, AS PER PLAN | 32 |
| | | 37,082 | | | | | | | | | | | | | | 607 | 23001 | 37,082 | LIN FT | FENCE, TYPE CLT, AS PER PLAN | 32 |
| | | | | | 27 | | | | | | | 24 | | | | 620 | 10300 | 51 | EACH | DELINEATOR, TYPE C, POST MOUNTED | |
| | | | | | 2 | | | | | | | 3 | | | | 620 | 15300 | 5 | EACH | DELINEATOR, TYPE D, POST MOUNTED | |
| | | | | | 564 | | | | | | | | | | | 622 | 23300 | 564 | LIN FT | CONCRETE BARRIER, TYPE A | |
| | | | | | 1,075 1 | | | | | | | | | | | 622 | 24000 | 1,071 | LIN FT | CONCRETE BARRIER, TYPE D | |
| | | | LUMP | | | | | | | | | | | | | SPECIAL | 69071000 | LUMP | | ASBESTOS ABATEMENT | 34 |

CALCULATED

CHECKED

GENERAL SUMMARY

MED-71-15.78

68
940

DESIGN FILE : i:\pd_MED_IR71\DGN\GenSummary\med71gg.dgn
USERNAME : jrogers

DATE : 30-DEC-1999
TIME : 14:34

| SHEET NUMBER | | | | | | | | | | | | | | | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 32 | | 93 | 95 | | 128 | | 136 | 137 | | 171 | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | EROSION CONTROL | |
| | | | | | | 882 | | | | | | | | | | 601 | 11000 | 882 | SQ YD | RIPRAP USING 6" REINFORCED CONCRETE SLAB | |
| | | | | | | | | | 2,116 | | | | | | | 601 | 11001 | 2,116 | SQ YD | RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 35 |
| | | | | | | 908 | | | | | | | | | | 601 | 32000 | 908 | CU YD | ROCK CHANNEL PROTECTION, TYPE A WITH FILTER | |
| | | | | 50 | | 1,091 | | | | | | | | | | 601 | 32100 | 1,141 | CU YD | ROCK CHANNEL PROTECTION, TYPE B WITH FILTER | |
| | | | | | | 208 | | | | | | | | | | 601 | 32200 | 208 | CU YD | ROCK CHANNEL PROTECTION, TYPE C WITH FILTER | |
| | | | | 12,000 | | | | | | | | | | | | 601 | 34200 | 12,000 | CU YD | ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER | |
| | | | | | | | 12,500 | | | | | 1,550 | | | | 670 | 40000 | 14,050 | SQ YD | DITCH EROSION PROTECTION | |
| | | | | 740,379 | | | | | | | | | | | | 870 | 10000 | 740,379 | SQ YD | SEEDING AND MULCHING | |
| | | | | 37,000 | | | | | | | | | | | | 870 | 14000 | 37,000 | SQ YD | REPAIR SEEDING AND MULCHING | |
| | | | | 31.60 | | | | | | | 66.63 | | | | | 870 | 20000 | 98.23 | TON | COMMERCIAL FERTILIZER | |
| | | | | 1,919 | | | | | | | | | | | | 870 | 35000 | 1,919 | M GAL | WATER | |
| | | | | 1,996 | | | | | | | | | | | | 870 | 40000 | 1,996 | M SQ FT | MOWING | |
| | | | | 148,000 | | | | | | | | | | | | 877 | 10000 | 148,000 | SQ YD | TEMPORARY SEEDING AND MULCHING | |
| | | | | 35,725 | | | | | | | | | | 71,450 | | 877 | 30100 | 107,175 | LIN FT | TEMPORARY PERIMETER FILTER FABRIC FENCE | |
| | | | | 2,484 | | | | | | | | | | 4,968 | | 877 | 30200 | 7,452 | LIN FT | TEMPORARY DITCH CHECK FILTER FABRIC FENCE | |
| | | | | 1,720 | | | | | | | | | | 3,441 | | 877 | 30300 | 5,161 | LIN FT | TEMPORARY INLET PROTECTION FILTER FABRIC FENCE | |
| | | | | 3,830 | | | | | | | | | | | | 877 | 40000 | 3,830 | LIN FT | TEMPORARY SLOPE DRAINS | |
| | | | | 40,870 | | | | | | | | | | | | 877 | 50000 | 40,870 | CU YD | TEMPORARY SEDIMENT BASINS AND DAMS | |
| | | | | 7,660 | | | | | | | | | | | | 877 | 55000 | 7,660 | CU YD | TEMPORARY DIKES | |
| | | | | 3,500 | | | | | | | | | | | | 877 | 55500 | 3,500 | SQ YD | TEMPORARY DITCH PROTECTION | |
| | | | | 10,218 | | | | | | | | | | | | 877 | 60000 | 10,218 | CU YD | SEDIMENT REMOVAL | |

CALCULATED NJW CHECKED

GENERAL SUMMARY

MED-71-15.78

69
940

DESIGN FILE : h:\od_med_lr-7\dgn\gensummary\med7gga.dgn
USERNAME : nvondero
DATE : 09-DEC-1999
TIME : 12:49

| SHEET NUMBER | | | | | | | | | | | | | | | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 35 | | 93 | 94 | 95 | 128 | | 137 | | 551 | 553 | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | DRAINAGE | |
| | | | | 200 | | 168 | | | | | | | | | | 519 | 11100 | 368 | SQ FT | PATCHING CONCRETE STRUCTURE | |
| | | | | | | 183.4 | | | | | | | | | | 602 | 20000 | 183.4 | CU YD | CONCRETE MASONRY | |
| | | | | | | | | | 8.3 | | | | | | | 602 | 20001 | 8.3 | CU YD | CONCRETE MASONRY, AS PER PLAN | 36 |
| | | | | | | | | | 508 | | | | | | | 603 | 00100 | 508 | LIN FT | 4" CONDUIT, TYPE B, 707.33 OR 707.41 | |
| | | | | | | | | | | | | | 240 | 80 | | 603 | 00400 | 320 | LIN FT | 4" CONDUIT, TYPE E | |
| | | | | | | | | | 10,099 | | | | | | | 603 | 00406 | 10,099 | LIN FT | 4" CONDUIT, TYPE F, 707.33 OR 707.41 | |
| | | | | | | | | | 5,124 | | | | | | | 603 | 00900 | 5,124 | LIN FT | 6" CONDUIT, TYPE B, 707.33 OR 707.41 | |
| | | | | | | | | | | | 40 | | | | | 603 | 01500 | 40 | LIN FT | 6" CONDUIT, TYPE F | |
| | | | | | | | | | 4,435 | | | | | | | 603 | 01500 | 4,435 | LIN FT | 6" CONDUIT, TYPE F, 707.33 OR 707.41 | |
| | | | | | | 100 | | | | | | | | | | 603 | 05100 | 100 | LIN FT | 12" CONDUIT, TYPE E | |
| | | | | | | 135 | | | | | | | | | | 603 | 05900 | 135 | LIN FT | 15" CONDUIT, TYPE B | |
| | | | | | | 3,486 | | | | | | | | | | 603 | 06100 | 3,486 | LIN FT | 15" CONDUIT, TYPE C | |
| | | | | | | 898 | | | | | | | | | | 603 | 06700 | 898 | LIN FT | 15" CONDUIT, TYPE F, 707.05, TYPE C | |
| | | | | | | | 155 | | | | | | | | | 603 | 07400 | 155 | LIN FT | 18" CONDUIT, TYPE B | |
| | | | | | | | 1,708 | | | | | | | | | 603 | 07600 | 1,708 | LIN FT | 18" CONDUIT, TYPE C | |
| | | | | | | | 28 | | | | | | | | | 603 | 07600 | 28 | LIN FT | 18" CONDUIT, TYPE C, 706.02 | |
| | | | | | | | 1,309 | | | | | | | | | 603 | 10600 | 1,309 | LIN FT | 24" CONDUIT, TYPE C | |
| | | | | | | | 116 | | | | | | | | | 603 | 10600 | 116 | LIN FT | 24" CONDUIT, TYPE C, 706.02 | |
| | | | | | | | 140 | | | | | | | | | 603 | 11200 | 140 | LIN FT | 24" CONDUIT, TYPE F, 707.05, TYPE C | |
| | | | | | | | 64 | | | | | | | | | 603 | 13600 | 64 | LIN FT | 30" CONDUIT, TYPE C | |
| | | | | | | | 119 | | | | | | | | | 603 | 13600 | 119 | LIN FT | 30" CONDUIT, TYPE C, 706.02 | |
| | | | | | | | 8 | | | | | | | | | 603 | 13600 | 8 | LIN FT | 30" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | |
| | | | | | | | 192 | | | | | | | | | 603 | 14200 | 192 | LIN FT | 30" CONDUIT, TYPE F, 707.05, TYPE C | |
| | | | | | | | 124 | | | | | | | | | 603 | 16600 | 124 | LIN FT | 36" CONDUIT, TYPE C | |
| | | | | | | | 16 | | | | | | | | | 603 | 16600 | 16 | LIN FT | 36" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | |
| | | | | | | | 4 | | | | | | | | | 603 | 19600 | 4 | LIN FT | 42" CONDUIT, TYPE C | |
| | | | | | | | 39 | | | | | | | | | 603 | 19600 | 39 | LIN FT | 42" CONDUIT, TYPE C, 706.02 | |
| | | | | | | | 20 | | | | | | | | | 603 | 19600 | 20 | LIN FT | 42" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | |
| | | | | | | | 48 | | | | | | | | | 603 | 22601 | 48 | LIN FT | 54" CONDUIT, TYPE C, AS PER PLAN | 35 |
| | | | | | | | | 6 | | | | | | | | 603 | 26000 | 6 | LIN FT | 72" CONDUIT, TYPE A, 706.02 | |
| | | | | | | | | 6 | | | | | | | | 603 | 28000 | 6 | LIN FT | 84" CONDUIT, TYPE A, 706.02 | |
| | | | | | | | 128 | | | | | | | | | 603 | 96600 | 128 | LIN FT | CONDUIT, BORED OR JACKED: 48" CONDUIT, TYPE A, 706.02, 3000 D-LOAD | |
| | | | | | | | | 398 | | | | | | | | 603 | 98300 | 398 | LIN FT | CONDUIT, MISC.: INSITU LINER | 36 |
| | | | | | | | | 2 | | | | | | | | 604 | 00400 | 2 | EACH | CATCH BASIN, NO. 3 | |
| | | | | | | | | 35 | | | | | | | | 604 | 00800 | 35 | EACH | CATCH BASIN, NO. 3A | |
| | | | | | | | | 66 | | | | | | | | 604 | 01201 | 66 | EACH | CATCH BASIN, NO. 4, AS PER PLAN | 32 |
| | | | | | | | | 7 | | | | | | | | 604 | 01401 | 7 | EACH | CATCH BASIN, NO. 4A, AS PER PLAN | 32 |
| | | | | | | | | 19 | | | | | | | | 604 | 01601 | 19 | EACH | CATCH BASIN, NO. 5, AS PER PLAN | 32 |
| | | | | | | | | 7 | | | | | | | | 604 | 01801 | 7 | EACH | CATCH BASIN, NO. 5A, AS PER PLAN | 32 |
| | | | | | | | | 4 | | | | | | | | 604 | 04500 | 4 | EACH | CATCH BASIN, NO. 2-2B | |
| | | | | | | | | 1 | | | | | | | | 604 | 05301 | 1 | EACH | CATCH BASIN, NO. 2-4, AS PER PLAN | 36 |
| | | | | | | | | 4 | | | | | | | | 604 | 09500 | 4 | EACH | CATCH BASIN RECONSTRUCTED TO GRADE | |
| | | | | | | | | 20 | | | | | | | | 604 | 31500 | 20 | EACH | MANHOLE, NO. 3 | |
| | | | | | | | | 1 | | | | | | | | 604 | 35500 | 1 | EACH | MANHOLE RECONSTRUCTED TO GRADE | |

CALCULATED NJV
CHECKED

GENERAL SUMMARY

MED-71-15.78

70
940

DESIGN FILE : i:\pd_med_lr7i\dgn\gensummary\med7igg.dgn
USERNAME : nvonderle
DATE : 09-DEC-1999
TIME : 12:50

| SHEET NUMBER 96 | SHEET NUMBER 128 | SHEET NUMBER 137 | SHEET NUMBER 375 | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | **DRAINAGE (CONTINUED)** | |
| | | | | | | | | | |
| | 214,012 | | | 605 | 05111 | 214,012 | LIN FT | 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, | |
| | | | | | | | | AS PER PLAN, 707.31 OR 707.41 | 35 |
| | 7,592 | | | 605 | 05111 | 7,592 | LIN FT | 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, | |
| | | | | | | | | AS PER PLAN, 707.33 OR 707.41 | 35 |
| | 1,506 | | | 605 | 05211 | 1,506 | LIN FT | 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC | |
| | | | | | | | | WRAP, AS PER PLAN, 707.31 OR 707.41 | 538 |
| | | | | | | | | | |
| | | 52 | | 605 | 11100 | 52 | LIN FT | 6" SHALLOW PIPE UNDERDRAIN, 707.31 OR 707.41 | |
| | 213,151 | | | 605 | 11110 | 213,151 | LIN FT | 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, | |
| | | | | | | | | 707.31 OR 707.41 | |
| | 2,155 | | | 605 | 13410 | 2,155 | LIN FT | 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC | |
| | | | | | | | | WRAP, 707.31 OR 707.41 | |
| | 3,808 | | | 605 | 13510 | 3,808 | LIN FT | 6" ROCK CUT UNDERDRAIN WITH FABRIC WRAP, | |
| | | | | | | | | 707.33 OR 707.41 | |
| | | | | | | | | | |
| | | | 133 | 605 | 31100 | 133 | LIN FT | AGGREGATE DRAIN | |
| | | | | | | | | | |
| 286 | | | | 837 | 10000 | 286 | LIN FT | LINER PIPE, 24" ASTM F894 OR LINER PIPE, 24" 707.12 | |
| | | | | | | | | OR LINER PIPE, 24" 707.42 OR LINER PIPE, 26.278" SS937 | |
| | | | | | | | | | |
| 858 | | | | 837 | 10000 | 858 | LIN FT | LINER PIPE, 27" ASTM F894 WITH 33" (MIN.) INLET OPENING | |
| | | | | | | | | OR LINER PIPE, 30" 707.12 WITH 33" (MIN.) INLET OPENING | |
| | | | | | | | | OR LINER PIPE, 30" 707.42 WITH 33" (MIN.) INLET OPENING | |
| | | | | | | | | OR LINER PIPE, 30.03" SS937 WITH 33" (MIN.) INLET OPENING | |
| | | | | | | | | | |
| 206 | | | | 837 | 10000 | 206 | LIN FT | LINER PIPE, 27" ASTM F894 WITH 36" (MIN.) INLET OPENING | |
| | | | | | | | | OR LINER PIPE, 30" 707.12 WITH 36" (MIN.) INLET OPENING | |
| | | | | | | | | OR LINER PIPE, 30" 707.42 WITH 36" (MIN.) INLET OPENING | |
| | | | | | | | | OR LINER PIPE, 30.03" SS937 WITH 36" (MIN.) INLET OPENING | |
| | | | | | | | | | |
| 212 | | | | 837 | 10000 | 212 | LIN FT | LINER PIPE, 33" ASTM F894 WITH 36" (MIN.) INLET OPENING | |
| | | | | | | | | OR LINER PIPE, 36" 707.12 OR 36" LINER PIPE, 707.42 | |
| | | | | | | | | OR LINER PIPE, 33.784" SS937 WITH 36" (MIN.) INLET OPENING | |
| | | | | | | | | | |
| 384 | | | | 837 | 10000 | 384 | LIN FT | LINER PIPE, 36" 707.12 | |
| 296 | | | | 837 | 10000 | 296 | LIN FT | LINER PIPE, 36" 707.12 WITH 39" (MIN.) INLET OPENING . | |
| | | | | | | | | | |
| 624 | | | | 837 | 10000 | 624 | LIN FT | LINER PIPE, 36" ASTM F894 WITH 42" (MIN.) INLET OPENING | |
| | | | | | | | | OR LINER PIPE, 42" 707.12 | |
| | | | | | | | | OR LINER PIPE, 36" 707.42 WITH 42" (MIN.) INLET OPENING | |
| | | | | | | | | OR LINER PIPE, 39.416" SS937 WITH 42" (MIN.) INLET OPENING | |
| | | | | | | | | | |
| 230 | | | | 837 | 10000 | 230 | LIN FT | LINER PIPE, 60" ASTM F894 OR LINER PIPE, 66" 707.12 | |
| 998 | | | | 837 | 20000 | 998 | CU YD | BACKFILL FOR LINER PIPE | |

CALCULATED NJV
CHECKED 9447

GENERAL SUMMARY

MED-71-15.78

71
940

DESIGN FILE : i:\od_mod_lr7i\dgn\gensummary\med7lgg.dgn
USERNAME : nvonderge

DATE : 09-DEC-1999
TIME : 12:50

| SHEET NUMBER | | | | | | | | | | | | | | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 31 | 32 | 36 | | 134 | 135 | 137 | 217 | 375 | 421 | 484 | 501 | 502 | 672 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | **PAVEMENT** | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | 29,930 | | | | 772 | 106 | | | | | 254 | 01000 | 30,808 | SQ YD | PAVEMENT PLANING, BITUMINOUS | |
| | | | | | | | 546 | | | | | | | | 255 | 10100 | 546 | SQ YD | FULL DEPTH PAVEMENT REMOVAL AND RIGID | |
| | | | | | | | | | | | | | | | | | | | REPLACEMENT, CLASS **FS** | |
| | | | | | | | 1,568 | | | | | | | | 255 | 20000 | 1,568 | LIN FT | FULL DEPTH PAVEMENT SAWING | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | 406 | | | 417 | | | | | | 301 | 46000 | **823** | CU YD | BITUMINOUS AGGREGATE BASE, PG64-22 | |
| | | | | | **5028** | | | | | | | 161 | | | 302 | 46000 | **5189** | CU YD | BITUMINOUS AGGREGATE BASE, PG64-22 | |
| | **500** | 23,160 | | | 132,519 | 1,722 | | | 353 | 2,258 | | 83 | | | 304 | 20000 | 160,595 | CU YD | AGGREGATE BASE | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | ~~7374~~ | 244 | | 40 | 20 | 11 | | 43 | | | 407 | 10000 | **7732** | GALLON | TACK COAT | |
| | | | | | **3737** | 122 | | | 97 | | | 21 | | | 407 | 14000 | **3977** | GALLON | TACK COAT FOR INTERMEDIATE COURSE | |
| | | | | | 302,062 | 974 | | | 462 | 4,499 | | 171 | | | 408 | 10000 | 308,168 | GALLON | BITUMINOUS PRIME COAT | |
| | | | | | | 118 | | | 94 | | | | | | 448 | 46050 | 212 | CU YD | ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 | |
| | | | | | | 85 | | | 67 | | | | | | 448 | 47020 | 152 | CU YD | ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 | |
| | | | | | | | | 17 | | | | | | | **448** | **50000** | 17 | **CU YD** | **ASPHALT CONCRETE SURFACE COURSE TYPE 1H** | |
| | | | | | | 1,891 | | | | | | | | | 451 | 14000 | 1,891 | SQ YD | 9" REINFORCED CONCRETE PAVEMENT | |
| | | | | | | | 52 | | | | | | | | SPECIAL | 45130000 | 52 | LIN FT | PRESSURE RELIEF JOINT, TYPE A | 34 |
| | | | | | 2,817 | | | | | | | | | | 452 | 14100 | 2,817 | SQ YD | 11" PLAIN CONCRETE PAVEMENT | |
| | | | | | 887 | | | | | | | | | | 452 | 14100 | 887 | SQ YD | 11" PLAIN CONCRETE PAVEMENT, TYPE FS | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | 430 | | | | | | | | | | 611 | 10000 | 430 | SQ YD | REINFORCED CONCRETE APPROACH SLAB (T=12") | |
| | | | | | 4,251 | | | | 191 | | | | | | 611 | 25000 | 4,442 | SQ YD | REINFORCED CONCRETE APPROACH SLAB (T=15") | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 9 | | | | | | 617 | 10100 | 9 | CU YD | COMPACTED AGGREGATE, TYPE A | |
| | | | | | | | | | | | | | | 1,028 | 617 | 11101 | 1,028 | TON | COMPACTED AGGREGATE, AS PER PLAN | 674 |
| | | | | | | | | | | | | | | 5,275 | 617 | 20001 | 5,275 | SQ YD | SHOULDER PREPARATION, AS PER PLAN | 674 |
| | | | | | | | | | 135 | | | | | | 617 | 25000 | 135 | M GAL | WATER | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | 124,298 | | 618 | 40100 | 124,298 | LIN FT | RUMBLE STRIPS, TYPE 2 (ASPHALT) | |
| | | | | | | | | | | | | | 74,618 | | 618 | 40101 | 74,618 | LIN FT | RUMBLE STRIPS, TYPE 2 (ASPHALT), AS PER PLAN | 502 |
| | | | | | | | | | | | | | | | | | | | | |
| | | | 50 | | 303 | 3,019 | 398 | | 58 | | | | | | 830 | 26001 | 3,828 | LIN FT | CURB, TYPE 6 , AS PER PLAN | 506 |
| | | | | | | | | | | | 580 | | | | 830 | 72000 | 580 | SQ YD | CONCRETE MEDIAN | |
| | | | | | 767,610 | | | | | 11,748 | | | | | 855 | 10000 | 779,358 | SQ YD | 4" ASPHALT TREATED FREE DRAINING BASE | |
| | | | | | **3053** | | | | | | | 18 | | | 858 | 10000 | **3071** | CU YD | ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) | |
| | | | | | **3560** | | | | | | | 21 | | | 858 | 10100 | **3581** | CU YD | ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | 278661 | | | | | 4992 | | | | | **880** | 15000 | 283653 | CU YD | ASPHALT CONCRETE (7 YEAR WARRANTY) | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | **LIGHTING** | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | **FOR LIGHTING GENERAL SUMMARY** | 609-610 |

CALCULATED MJW
CHECKED JMR

**GENERAL SUMMARY**

**MED-71-15.78**



DESIGN FILE : i:\pd_med_1r71\dgn\gensummary\med71gg.dgn
USERNAME : nvondere
DATE : 09-DEC-1999
TIME : 12:50

| SHEET NUMBER | | | | | | | | | | | | | | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 32 | | 76A | | 375 | 421 | | 551 | 553 | 560 | | | | | | |
| | | | | | | | | | | | | | | | | | | | TRAFFIC CONTROL | |
| | | | | | | | | | | | | | | 378 | 620 | 10300 | 378 | EACH | DELINEATOR, TYPE C, POST MOUNTED | |
| | | | | | | | | | | | | | | 106 | 620 | 15300 | 106 | EACH | DELINEATOR, TYPE D, POST MOUNTED | |
| | | | | | | | | | 9 | 59 | | | | 1,490 | 621 | 00100 | 1,558 | EACH | RAISED PAVEMENT MARKER | |
| | | | | | | | | | | | | 3 | | | 625 | 29901 | 3 | EACH | JUNCTION BOX, AS PER PLAN | 551 |
| | | | | | | | | | | | | 3 | 1 | | 625 | 30706 | 4 | EACH | PULL BOX, 713.08, 24" | |
| | | | | | | | 651 | | | 20 | | | | | 626 | 00100 | 671 | EACH | BARRIER REFLECTOR, TYPE A | |
| | | | | | | | 59 | | | | | | | | 626 | 00200 | 59 | EACH | BARRIER REFLECTOR, TYPE B | |
| | | | | | | | | | | | | 36 | 16 | | 632 | 26501 | 52 | EACH | DETECTOR LOOP, AS PER PLAN | 551 |
| | | | | | | | | | | | | | 1 | | 632 | 63000 | 1 | EACH | PHONE DROP | |
| | | | | | | | | | | | | | 1 | | 632 | 64020 | 1 | EACH | PEDESTAL FOUNDATION | |
| | | | | | | | | | | | | 4,290 | 3,040 | | 632 | 65200 | 7,330 | LIN FT | LOOP DETECTOR LEAD-IN CABLE | |
| | | | | | | | | | | | | | 1 | | 632 | 89800 | 1 | EACH | PEDESTAL, 3', TRANSFORMER BASE | |
| | | | | | | | | | | | | | 8 | | 632 | 90400 | 8 | EACH | SIGNALIZATION, MISC.: PIEZOCABLE AXLE SENSOR CLASS 2 (11' IN LENGTH) | |
| | | | | | | | | | | | | | 1 | | 633 | 65001 | 1 | EACH | CABINET WITHOUT CONTROLLER, AS PER PLAN | 554 |
| | | | | | | | | | | | | | 12 | | 633 | 70500 | 12 | SQ FT | CONTROLLER WORK PAD | |
| | | | | | | | | | | | | | 1 | | 633 | 99000 | 1 | EACH | CONTROLLER ITEM, MISC.: SOLAR PANEL | |
| | | | | | 2 | | | | | | | | | | SPECIAL | 64240000 | 2 | EACH | AIR SPEED ZONE MARKING | 32 |
| | | | | | | | | | 57 | | | | | 199 | 644 | 00500 | 256 | LIN FT | STOP LINE | |
| | | | | | | | | | | | | | | 361 | 644 | 00600 | 361 | LIN FT | CROSSWALK LINE | |
| | | | | | | | | | | | | | | 3,725 | 644 | 00700 | 3,725 | LIN FT | TRANSVERSE LINE | |
| | | | | | | | | | | | | | | 2,250 | 644 | 01200 | 2,250 | LIN FT | PARKING LOT STALL MARKING | |
| | | | | | | | | | | | | | | 13 | 644 | 01300 | 13 | EACH | LANE ARROW | |
| | | | | | | | | | | | | | | 7 | 644 | 01410 | 7 | EACH | WORD ON PAVEMENT, 96" | |
| | | | | | | | | | | | | | | 4 | 644 | 01600 | 4 | EACH | HANDICAP SYMBOL MARKING | |
| | | | | | | | | | | | | | | | | | | | FOR ADDITIONAL TRAFFIC CONTROL QUANTITIES | 562-563 |
| | | | | | | | | | 0.32 | 0.96 | | | | 51.05 | 887 | 20000 | 52.33 | MILE | EDGE LINE (5 YEAR WARRANTY) | |
| | | | | | | | | | | 0.48 | | | | 30.77 | 887 | 22000 | 31.25 | MILE | LANE LINE (5 YEAR WARRANTY) | |
| | | | | | | | | | 0.15 | | | | | 0.68 | 887 | 24000 | 0.83 | MILE | CENTER LINE (5 YEAR WARRANTY) | |
| | | | | | | | | | | | | | | 6945 | 887 | 26000 | 6945 | LIN.FT. | CHANNELIZING LINE (5 YEAR WARRANTY) | |

CALCULATED KJW CHECKED JWW

GENERAL SUMMARY

MED-71-15.78



REV. 2-22-00

DESIGN FILE : i:\pd_med_ir71\dgn\gensummary\med71gg.dgn
USERNAME : nvondere
DATE : 09-DEC-1999
TIME : 12:51

| SHEET NUMBER | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | **LANDSCAPING** | |
| 241 | 661 | 40080 | 241 | EACH | DECIDUOUS TREE, 2" CALIPER, FRAXINUS AMERICANA (JUNGINER) B&B 24" MIN. | |
| 241 | 661 | 40080 | 241 | EACH | DECIDUOUS TREE, 2" CALIPER, ACER SACCHARUM (COMMEMORATION) B&B 16" MIN. | |
| 241 | 661 | 40080 | 241 | EACH | DECIDUOUS TREE, 2" CALIPER, PLATANUS X ACERIFOLICA (BLOODGOOD) B&B 16" MIN. | |
| 241 | 661 | 40080 | 241 | EACH | DECIDUOUS TREE, 2" CALIPER, QUERCUS RUBRA B&B 20" MIN. | |
| 241 | 661 | 40080 | 241 | EACH | DECIDUOUS TREE, 2" CALIPER, QUERCUS PALUSTRIS B&B 20" MIN. | |
| 670 | 661 | 50140 | 670 | EACH | EVERGREEN TREE, 7' HEIGHT, PICEA ABIES B&B 24" MIN. | |
| | | | | | | |
| 40 | 662 | 30000 | 40 | M GAL | LANDSCAPE WATERING | |
| | | | | | | |
| | | | | | **STRUCTURES OVER 20' SPAN** | |
| | | | | | **FOR MED-71-1685 L&R over SR 18 QUANTITIES** | 688 |
| | | | | | **FOR MED-71-1828 Granger Road over IR 71 QUANTITIES** | 722 |
| | | | | | **FOR MED-71-1870 L&R over IR 271 QUANTITIES** | 738 |
| | | | | | **FOR MED-71-1918 L&R over Wilbur Road QUANTITIES** | 779 |
| | | | | | **FOR MED-71-1992 L&R over Rocky River QUANTITIES** | 800 |
| | | | | | **FOR MED-71-2088E Ramp B at SR 3 over Plum Creek QUANTITIES** | 822 |
| | | | | | **FOR MED-71-2090 L&R over SR 3 QUANTITIES** | 838 |
| | | | | | **FOR MED-71-2092W Ramp C at SR 3 over Plum Creek QUANTITIES** | 869 |
| | | | | | **FOR MED-71-2402 L&R over SR 303 QUANTITIES** LT. | 888 |
| | | | | | RT. | 907 |
| | | | | | **FOR MAINTENANCE OF TRAFFIC GENERAL SUMMARY** | 46 |
| 614 | 11000 | LUMP | | | MAINTAINING TRAFFIC | |
| 623 | 10000 | LUMP | | | CONSTRUCTION LAYOUT STAKES | |
| 624 | 10000 | LUMP | | | MOBILIZATION | |
| 806 | 16020 | 42 | | MONTH | FIELD OFFICE, TYPE C | |

CALCULATED AMW CHECKED

GENERAL SUMMARY

MED-71-15.78



REV. 2-22-00

| REFERENCE NO. | LOCATION (Station) | | SIDE | 202 | | | 606 | | | | | | | | | | | | | | 620 | | 622 | | 626 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Guardrail Removed | Guardrail Removed, Barrier Design | Anchor Assembly Removed, Type A | Bridge Terminal Assembly Type 1 | Guardrail, Type 5 | | | | | Guardrail, Barrier Design, Type 5 | Guardrail, Type 8 | Anchor Assembly, Type B-98 | Anchor Assembly, Type E-98 | Anchor Assembly, Type T | Impact Attenuator, Type 1-98 (Bidirectional) | Impact Attenuator, Type 2-98 (Bidirectional) as per plan | | Delineator Type | | Concrete Barrier Type D | Concrete Barrier Type A | Barrier Reflectors, Type A | Barrier Reflectors, Type B |
| | | | | | | | | STRAIGHT | 24' RADIUS | 25' RADIUS | 30' RADIUS | 50' RADIUS | | | | | | | | | C | D | | | | |
| | FROM | TO | | LIN. FT. | LIN. FT. | EACH | EACH | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | EACH | EACH | EACH | EACH | EACH | EACH | | | LIN. FT. | LIN. FT. | EACH | EACH |
| 1-G | 829+30.28 | 833+50 | MEDIAN | 400 | | 1 | 1 | 282.25 | | | | | 75 | | | | | 1 | | | | | | | 3 | |
| 2-G | 831+00 | 859+00 | MEDIAN | | | | | 2750.0 | | | | | | | 1 | | 1 | | | | | | | | 28 | |
| 3-G | 847+75 | 857+50 | RIGHT | 437.5 | | 1 | | 912.5 | | | | | | | 1 | | 1 | | | | | | | | 10 | |
| 4-G | 852+40 | 857+40 | LEFT | 250 | | 2 | | 450 | | | | | | | 1 | | 1 | | | | | | | | 5 | |
| 5-G | 864+87.5 | 21+50 | LEFT | 168.75 | | 2 | | 1812.5 | | | | | | | | 1 | 1 | | | | 1 | | | | 19 | |
| 6-G | 884+53.44 | 888+97.19 | LEFT | 412.5 | | 1 | 1 | 431.25 | | | | | | | | | 1 | | | | | | | | 5 | |
| 7-G | 886+40.23 | 889+27.48 | MEDIAN | 275 | 81.25 | 1 | 1 | 181.25 | | | | | 75 | | | | | 1 | | | | | | | 3 | |
| 8-G | 885+21.31 | 889+46.13 | RIGHT | 362.5 | | 1 | 1 | 393.75 | | | | | | | 1 | | | | | | | | | | 5 | |
| 9-G | 891+16.59 | 897+36.44 | LEFT | 375 | | 1 | 1 | 581.25 | | | | | | | 1 | | | | | | | | | | 7 | |
| 10-G | 891+24.12 | 894+11.37 | MEDIAN | 225 | 75 | 1 | 1 | 181.25 | | | | | 75 | | | | | 1 | | | | | | | 3 | |
| 11-G | 891+54.40 | 896+98.15 | RIGHT | 475 | | 1 | 1 | 531.25 | | | | | | | | | 1 | | | | | | | | 6 | |
| 12-G | 6+29 | 916+50 | LEFT | 1262.5 | | 1 | | 2125 | | | | | | | | 1 | 1 | | | | 1 | | | | 22 | |
| 13-G | 947+39.8 | 948+89.8 | RIGHT | 337.5 | | 2 | | 100 | | | | | | | 1 | | 1 | | | | | | | | 2 | |
| 14-G | 904+50 | 937+62.5 | RIGHT | 3311.25 | | 2 | 2 | 3200 | | | | | | | | 1 | 1 | | | | 1 | | 48 | | 33 | 2 |
| 15-G | 927+12.5 | 938+12.5 | LEFT | 462.5 | | 2 | | 105.0 | | | | | | | 1 | | 1 | | | | | | | | 9 | |
| 16-G | 930+40.5 | 934+92 | RIGHT | 400 | | 2 | | | | | | | | | | | | | | | | | | | | |
| 17-G | 943+50 | 960+00 | LEFT | 1112.5 | | 2 | | 1600 | | | | | | | | 1 | 1 | | | | 1 | | | | 17 | |
| 18-G | 963+88.12 | 966+14.66 | LEFT | 175 | | 2 | | | | | | | | | | | | | | | | | | | | |
| 19-G | 963+16.75 | 965+11.6 | MEDIAN | 350 | 50 | 2 | | 75 | | | | | 75 | | | | 1 | 1 | | | | | | | 2 | |
| 19-G1 | 964+47.4 | 966+40.75 | MEDIAN | | | | | 75 | | | | | 75 | | | | 1 | 1 | | | | | | | 2 | |
| 20-G | 963+44.08 | 975+67.73 | RIGHT | 175 | | 2 | | | | | | | | | | | | | | | | | | | | |
| 21-G | 974+26.27 | 975+69.5 | RIGHT | 237.5 | | 4 | | | | | | | | | | | | | | | | | | | | |
| 22-G | 969+63.5 | 971+02.6 | RIGHT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | | 2 | |
| 23-G | 988+92.98 | 1012+42.46 | RIGHT | 1845 | | 1 | 2 | 2342.07 | | | | | | | | | | | | | | | | | 24 | |
| 24-G | 984+94.68 | 987+00.93 | RIGHT | 343.75 | | 1 | 1 | 156.25 | | | | | | | | 1 | | | | | 1 | | | | 3 | |
| 25-G | 983+78.34 | 986+65.59 | MEDIAN | 150 | 50 | 1 | 1 | 181.25 | | | | | | | | | | 1 | | | | | | | 3 | |
| 26-G | 988+04.9 | 1012+67.75 | LEFT | 2075 | | 1 | 2 | 2459.66 | | | | | | | | | | | | | | | | | 25 | |
| 27-G | 988+39.72 | 991+24.87 | MEDIAN | 150 | 50 | 1 | 1 | 181.25 | | | | | 75 | | | | | 1 | | | | | | | 3 | |
| 28-G | 1009+61.55 | 1012+48.80 | MEDIAN | 150 | 50 | 1 | 1 | 181.25 | | | | | 75 | | | | | 1 | | | | | | | 3 | |
| 29-G | 1013+59.68 | 1016+59.68 | LEFT | 100 | | 1 | 1 | 256.25 | | | | | | | 1 | | | | | | | | | | 3 | |
| 30-G | 1010+92.46 | 1012+42.46 | RIGHT | 125 | | | | | | | | | | | | | | | | | | | | | | |
| 31-G | 1013+52.95 | 1016+90.20 | MEDIAN | 150 | 50 | 1 | 1 | 181.25 | | | | | 75 | | | | | 1 | | | | | | | 3 | |
| 32-G | 1045+52.58 | 1051+33.83 | RIGHT | 437.5 | | 1 | 1 | 531.25 | | | | | | | | 1 | | | | | 1 | | | | 6 | |
| 33-G | 1050+20.30 | 1051+53.55 | LEFT | 75 | | 1 | 1 | 118.75 | | | | | | | | | 1 | | | | | | | | 3 | |
| 34-G | 1048+53.36 | 1051+40.61 | MEDIAN | 150 | 50 | 1 | 1 | 181.25 | | | | | 75 | | | | 1 | 1 | | | | | | | 3 | |
| 35-G | 1053+61.07 | 1056+48.32 | MEDIAN | 150 | 50 | 1 | 1 | 181.25 | | | | | 75 | | | | 1 | 1 | | | | | | | 3 | |
| 36-G | 1053+67.85 | 1063+61.60 | LEFT | 825 | | 1 | 1 | 943.75 | | | | | | | | 1 | | | | | 1 | | | | 10 | |
| 37-G | 1053+49.90 | 1059+93.65 | RIGHT | 575 | | 1 | 1 | 631.25 | | | | | | | | | 1 | | | | | | | | 7 | |
| 38-G | 1065+37.5 | 1067+00 | RIGHT | 300 | | 2 | | 112.5 | | | | | | | 1 | | 1 | | | | | | | | 3 | |
| 39-G | 1072+11.23 | 1074+05.23 | MEDIAN | 350 | 50 | 2 | | 75 | | | | | 75 | | | | 2 | 2 | | | | | | | 2 | |
| 39-G1 | 1073+68.53 | 1075+62.53 | MEDIAN | | | | | 75 | | | | | 75 | | | | | | | | | | | | 2 | |
| 40-G | 1071+94.84 | 1074+90.74 | RIGHT | 150 | | 2 | 1 | 100 | | | | | | | | 1 | | | | | 1 | | 44 | | 2 | 3 |
| 41-G | 1073+99.29 | 1075+80.19 | LEFT | 150 | | 2 | 1 | 100 | | | | | | | | 1 | | | | | 1 | | 44 | | 2 | 3 |
| 42-G | 1077+62.50 | 1087+75 | RIGHT | 843.75 | | 2 | | 962.5 | | | | | | | 1 | | 1 | | | | | | | | 10 | |
| 43-G | 1080+00 | 1087+00 | LEFT | 512.5 | | 2 | | 637.5 | | | | | | | | 1 | 1 | | | | 1 | | | | 7 | |
| 44-G | 1100+13.57 | 1103+00.82 | MEDIAN | 125 | 75 | 1 | 1 | 181.25 | | | | | 75 | | | | | 1 | | | | | | | 3 | |
| 45-G | 79+11.65 | 81+61.65 | LEFT | 212.5 | | 1 | 1 | 200 | | | | | | | | 1 | | | | | 1 | | | | 3 | |
| 46-G | 77+56.58 | 81+56.58 | RIGHT | 212.5 | | 1 | 1 | 200 | | | | | | | | 1 | | | | | 1 | | | | 3 | |
| 47-G | 82+75.23 | 80+40.39 | RT & LT | 975 | | | 1 | 906.25 | 43.75 | | 50 | | | | | 1 | | | | | 1 | | | | 10 | |
| 48-G | 82+65.94 | 84+46.15 | RIGHT | 181.25 | | 1 | 1 | 256.25 | | | | 50 | | | 1 | | | | | | | | | | 3 | |
| 49-G | 80+36.1 | 895+05.89 | LEFT | 150 | | 2 | | 62.5 | | | | 75 | | | | 1 | 1 | | | | 1 | | | | 3 | |
| 50-G | 1098+96.23 | 1102+72.48 | LEFT | 343.75 | | 1 | 1 | 368.75 | | | | | | | | | 1 | | | | | | | | 4 | |
| 51-G | 1096+86.7 | 1103+30.45 | RIGHT | 368.75 | | 1 | 1 | 606.25 | | | | | | | 1 | | | | | | | | | | 7 | |
| 52-G | 1105+37.96 | 1108+81.71 | LEFT | 275 | | 1 | 1 | 306.25 | | | | | | | 1 | | | | | | | | | | 4 | |
| 53-G | 1105+67.58 | 1108+54.83 | MEDIAN | 125 | 75 | 1 | 1 | 181.25 | | | | | 75 | | | | | 1 | | | | | | | 3 | |
| 54-G | 1105+86.73 | 1108+67.98 | RIGHT | 250 | | 1 | 1 | 268.75 | | | | | | | | | 1 | | | | | | | | 4 | |
| TOTALS CARRIED TO SHEET 76-A | | | | 21051.25 | 706.25 | 70 | 37 | 30026.48 | 43.75 | | 50 | 125 | 1050 | | 14 | 14 | 26 | 15 | | 14 | | 136 | | 357 | 8 |

DESIGN FILE : i:\pd_MED_JR71\DGN\SubSummaries\gr71.dgn
USERNAME : jrogers
DATE : 30-DEC-1999
TIME : 14:37

CALCULATED
CHECKED

GUARDRAIL SUB-SUMMARY

MED-71-15.78

75
940

# GUARDRAIL SUB-SUMMARY

CALCULATED | CHECKED

| REFERENCE NO. | LOCATION (Station) FROM | LOCATION (Station) TO | SIDE | 202 Guardrail Removed | 202 Guardrail Removed, Barrier Design | 202 Anchor Assembly Removed, Type A | 606 Bridge Terminal Assembly Type 1 | 606 Guardrail, Type 5 STRAIGHT | 606 Guardrail, Type 5 24' RADIUS | 606 Guardrail, Type 5 25' RADIUS | 606 Guardrail, Type 5 30' RADIUS | 606 Guardrail, Type 5 50' RADIUS | 606 Guardrail, Barrier Design, Type 5 | 606 Guardrail, Type 8 | 606 Anchor Assembly, Type B-98 | 606 Anchor Assembly, Type E-98 | 606 Anchor Assembly, Type T | 606 Impact Attenuator, Type 1-98 (Bidirectional) | 606 Impact Attenuator, Type 2-98 (Bidirectional) as per plan | 620 Delineator Type C | 620 Delineator Type D | 622 Concrete Barrier Type D | 622 Concrete Barrier Type A | 626 Barrier Reflectors, Type A | 626 Barrier Reflectors, Type B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | LIN. FT. | LIN. FT. | EACH | EACH | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | EACH | EACH | EACH | EACH | | EACH | EACH | LIN. FT. | LIN. FT. | EACH | EACH |
| 55-G | 906+50 | 85+62 | RIGHT | 175 | | 1 | | 106.25 | | | | 68.75 | | | | 1 | 1 | | | 1 | | | | 3 | |
| 56-G | 898+65.03 | 85+33.29 | LEFT | 175 | | 1 | | 525 | | 37.5 | | | | | | 1 | 1 | | | 1 | | | | 6 | |
| 57-G | 84+35.19 | 1125+83.62 | LEFT | 1375 | | 1 | 1 | 1968.75 | | | | | | | 1 | | | | | | | | | 20 | |
| 58-G | 1114+10.13 | 1123+60.13 | RIGHT | 625 | | 2 | | 900 | | | | | | | 1 | | 1 | | | | | | | 10 | |
| 59-G | 1180+66.07 | 1183+82.97 | RIGHT | 150 | | 2 | 1 | 281.25 | | | | | | | 1 | | | | | | | 44 | | 3 | 3 |
| 60-G | 1181+97 | 1185+99.92 | MEDIAN | 350 | 50 | 2 | | 75 | | | | | 75 | | | | 1 | 1 | | | | | | 2 | |
| 60-GI | 1183+39.42 | 1185+45.92 | MEDIAN | | | | | 75 | | | | | 75 | | | | 1 | 1 | | | | | | 2 | |
| 61-G | 1183+60 | 1186+76.9 | LEFT | 150 | | 2 | 1 | 281.25 | | | | | | | 1 | | | | | | | 44 | | 3 | 3 |
| 62-G | 1192+25 | 1207+68.75 | LEFT | 1137.5 | | 2 | | 1062.5 | | | | | | 468.75 | | | 1 | | | | | | | 11 | |
| 63-G | 78+00 | 84+25 | RIGHT | 562.5 | | 2 | | 562.5 | | | | | | | | 1 | 1 | | | 1 | | | | 6 | |
| 64-G | 84+99.16 | 92+75 | RIGHT | 756.25 | | 2 | | 752 | | | | | | | | 1 | 1 | | | | 1 | | | 8 | |
| 65-G | 1223+68.37 | 1225+74.87 | MEDIAN | 375 | 50 | 2 | | 75 | | | | | 75 | | | | 1 | 1 | | | | | | 2 | |
| 65-GI | 1225+16.5 | 1227+03 | MEDIAN | | | | | 75 | | | | | 75 | | | | 1 | 1 | | | | | | 2 | |
| 66-G | 1222+04.8 | 1225+46.7 | RIGHT | 137.5 | | 1 | 1 | 268.75 | | | | | | | 1 | | 1 | | | | | 44 | | 3 | 3 |
| 67-G | 1225+50.4 | 1227+43 | LEFT | 225 | | 2 | 1 | 218.75 | | | | | | | 1 | | 1 | | | | | 44 | | 3 | 3 |
| 68-G | 1227+75 | 1231+50 | RIGHT | 106.25 | | 1 | | 325 | | | | | | | 1 | | 1 | | | | | | | 4 | |
| 69-G | 1236+86.2 | 1242+61.2 | RIGHT | 325 | | 2 | | 525 | | | | | | | 1 | | 1 | | | | | | | 6 | |
| 70-G | 1239+28.04 | 1245+53.04 | LEFT | 362.5 | | 2 | | 575 | | | | | | | 1 | | 1 | | | | | | | 6 | |
| 71-G | 1246+41.2 | 1254+91.2 | RIGHT | 475 | | 2 | | 800 | | | | | | | 1 | | 1 | | | | | | | 9 | |
| 72-G | 1251+93.96 | 45+52.8 | LEFT | 1450 | | 2 | | 1450 | | | | | | | 1 | | | | | | | | | 15 | |
| 73-G | 1264+93.25 | 1268+08.27 | LEFT | 275 | | 1 | 1 | 306.25 | | | | | | | | | 1 | | | | | | | 4 | |
| 74-G | 1265+01.36 | 1267+86.45 | MEDIAN | 143.75 | 50 | 1 | 1 | 181.25 | | | | | 75 | | | | | 1 | | | | | | 3 | |
| 75-G | 39+15.08 | 1267+63.83 | RIGHT | 162.5 | | 1 | 1 | 331.25 | | | | | | | | 1 | | | | | | | | 4 | |
| 76-G | 1269+51.5 | 1279+91.71 | RIGHT | 1012.5 | | 1 | 1 | 1025 | | | | | | | | | 1 | | | | | | | 11 | |
| 77-G | 1269+82.60 | 1272+73.57 | MEDIAN | 143.75 | 50 | 1 | 1 | 181.25 | | | | | 75 | | | | | 1 | | | | | | 3 | |
| 78-G | 1269+98.86 | 1276+80.12 | LEFT | 637.5 | | 1 | 1 | 643.75 | | | | | | | 1 | | | | | | | | | 7 | |
| 79-G | 49+37.0 | 1315+26.7 | LEFT | 450 | | 2 | 2 | 4337.5 | | | | | | | 1 | | 1 | | | | | 48 | | 45 | 3 |
| 80-G | 1299+50 | 1313+00 | RIGHT | 1212.5 | | 2 | | 1300 | | | | | | | 1 | | 1 | | | | | | | 14 | |
| 81-G | 1175+85 | 1177+35 | RIGHT | | | | | 100 | | | | | | | 1 | | 1 | | | | | | | 3 | |
| 82-G | 1350+67.27 | 1354+16.92 | RIGHT | 193.75 | | 2 | 1 | 268.75 | | | | | | | 1 | | | | | 1 | | 44 | | 3 | 3 |
| 83-G | 1352+24 | 1354+30.5 | MEDIAN | 400 | 50 | 2 | | 75 | | | | | 75 | | | | 1 | 1 | | | | | | 2 | |
| 83-GI | 1353+69.5 | 1355+76 | MEDIAN | | | | | 75 | | | | | 75 | | | | 1 | 1 | | | | | | 2 | |
| 84-G | 1353+85.84 | 1356+90.25 | LEFT | 162.5 | | 2 | 1 | 231.5 | | | | | | | 1 | | | | | | | 44 | | 3 | 3 |
| 85-G | 48+20 | 54+48.3 | RIGHT | 250 | | 1 | 2 | 350 | | | | | | | | 1 | 1 | | | 1 | | 220 | | 4 | 4 |
| 86-G | 1331+96 | 1333+46 | LEFT | | | | | 100 | | | | | | | 1 | | 1 | | | | | | | 3 | |
| 87-G | 1398+04.63 | 1408+35.88 | LEFT | | | | 1 | 1018.75 | | | | | | | | | 1 | | | | | | | 11 | |
| 88-G | 25+75 | 152+03 | RIGHT | 500 | | 2 | | | | | | | | | | | | | | | | | | | |
| 89-G | 149+64 | 153+16.75 | LEFT | 300 | | 2 | | | | | | | | | | | | | | | | | | | |
| 90-G | 1+55 | 155+31.35 | LEFT | 62.5 | | 1 | | 37.5 | | | | 75 | | | | 1 | 1 | | | 1 | | | | 2 | |
| 91-G | 48+10.33 | 51+67.21 | RIGHT | | | | 2 | 162.5 | | | | | | | | 2 | | | | 2 | | 93.5 | | 3 | 3 |
| 92-G | 48+05.75 | 51+57.55 | LEFT | | | | 2 | 162.5 | | | | | | | | 2 | | | | 2 | | 93.5 | | 3 | 3 |
| 93-G | 47+13 | 57+65 | LEFT | 325 | | 2 | 2 | 737.5 | | | | | | | | 2 | | | | 2 | | 216 | | 8 | 4 |
| 94-G | 47+11.5 | 57+61.05 | RIGHT | 150 | | 1 | | 112.5 | | | | | | | | 1 | 1 | | | 1 | | | | 3 | |
| 95-G | 84+36.71 | 87+11.71 | RIGHT | | | | 1 | 231.25 | | | | | | | | 1 | | | | | 1 | | | 3 | |
| 96-G | 869+45 | 871+07.5 | MEDIAN | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | 3 | |
| 97-G | 869+45 | 871+07.5 | RIGHT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | 3 | |
| 98-G | 1065+38 | 1067+00 | RIGHT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | 3 | |
| 99-G | 1167+54.08 | 1267+91.68 | LEFT | | | | 1 | 81.25 | | | | | | | | | 1 | | | | | | | 2 | |
| 100-G | 1142+57 | 1144+07 | LEFT | | | | | 100 | | | | | | | 1 | | 1 | | | | | | | 3 | |
| 101-G | 1293+86 | 1295+48.5 | LEFT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | 3 | |
| 102-G | 1307+12.5 | 1308+75 | LEFT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | 3 | |
| 103-G | 989+70 | 902+48.8 | ℄SR 3 | 400 | 50 | 2 | | | | | | | | | | | | | 2 | | | | 270.5 | 2 | 8 |
| 104-G | 48+10 | 52+12.5 | ℄SR 303 | 400 | 50 | 2 | | | | | | | | | | | | | 2 | | | | 293.5 | 2 | 8 |
| 105-G | 984+98.2 | 985+91.95 | LEFT | | | | 1 | 81.25 | | | | | | | | | 1 | | | | | | | 2 | |
| **TOTALS CARRIED TO SHEET 76-A** | | | | 21156.25 | 350 | 60 | 27 | 23696 | | 37.5 | | 143.75 | 600 | 468.75 | 24 | 15 | 36 | 8 | 4 | 13 | 2 | 939 | 564 | 291 | 51 |

DESIGN FILE : i:\pd_MED_IR71\DGN\SubSummaries\gr71.dgn
USERNAME : jrogers
DATE : 30-DEC-1999
TIME : 14:37

MED-71-15.78

# GUARDRAIL SUB-SUMMARY

CALCULATED | CHECKED

| REFERENCE NO. | LOCATION (Station) | | SIDE | 202 | | | 606 | | | | | | | | | | | | | 620 | | 622 | | 626 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Guardrail Removed | Guardrail Removed, Barrier Design | Anchor Assembly Removed, Type A | Bridge Terminal Assembly Type 1 | Guardrail, Type 5 | | | | | Guardrail, Barrier Design, Type 5 | Guardrail, Type 8 | Anchor Assembly, Type B-98 | Anchor Assembly, Type E-98 | Anchor Assembly, Type T | Impact Attenuator, Type 1-98 (Bidirectional) | Impact Attenuator, Type 2-98 (Bidirectional) as per plan | Delineator Type | | Concrete Barrier Type D | Concrete Barrier Type A | Barrier Reflectors, Type A | Barrier Reflectors, Type B |
| | | | | | | | | STRAIGHT | 24' RADIUS | 25' RADIUS | 30' RADIUS | 50' RADIUS | | | | | | | | C | D | | | | |
| | FROM | TO | | LIN. FT. | LIN. FT. | EACH | EACH | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | EACH | EACH | EACH | EACH | EACH | EACH | | LIN. FT. | LIN. FT. | EACH | EACH |
| 106-G | 943+66 | 85+62 | RIGHT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | | |
| 107-G | 943+66 | 85+33.29 | RIGHT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | | |
| 108-G | 969+63.5 | 1125+83.62 | RIGHT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | | |
| 109-G | 953+55 | 1123+60.13 | LEFT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | | |
| 110-G | 900+71.5 | 1183+82.97 | LEFT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | | |
| 111-G | 927+14.5 | 1185+99.92 | LEFT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | | |
| 112-G | 916+84 | 1185+45.92 | RIGHT | | | | | 112.5 | | | | | | | 1 | | 1 | | | | | | | | |
| TOTALS THIS SHEET | | | | | | | | 787.5 | | | | | | | 7 | | 7 | | | | | | | | |
| TOTALS FROM SHEET 75 | | | | 21051.25 | 706.25 | 70 | 37 | 30026.48 | 43.75 | | 50 | 125 | 1050 | | 14 | 14 | 26 | 15 | | 14 | | 136 | | 357 | 8 |
| TOTALS FROM SHEET 76 | | | | 21156.25 | 350 | 60 | 27 4 | 23696 | | 37.5 | | 143.75 | 600 | 468.75 | 24 | 15 | 36 | 8 | 4 | 13 | 2 | 939 | 564 | 291 | 51 |
| SUB-TOTALS | | | | | | | | 54509.98 | 43.75 | 37.5 | 50 | 268.75 | | | | | | | | | | | | | |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | 42207.5 | 1056.25 | 130 | 64 4 | 54909.98 | | | | | 1650 | 468.75 | 45 | 29 | 69 | 23 | 4 | 27 | 2 | 1075 | 564 | 648 | 59 |

MED-71-15.78

76-A 940

DESIGN FILE : i:\pd_MED_IR71\DGN\SubSummaries\gr71.dgn
USERNAME : jrogers
DATE : 30-DEC-1999
TIME : 14:38

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 202 PIPE REMOVED 24", AND UNDER | 202 CATCH BASIN REMOVED | 202 CATCH BASIN ABANDONED | 202 MANHOLE REMOVED | SPECIAL FILL AND PLUG EXISTING CONDUIT | 203 DITCH CLEANOUT | 519 PATCHING CONCRETE STRUCTURES | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB | 601 ROCK CHANNEL PROTECTION, TYPE A WITH FILTER | 601 ROCK CHANNEL PROTECTION, TYPE B WITH FILTER | 601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER | 602 CONCRETE MASONRY | 603 12" CONDUIT, TYPE E | 603 15" CONDUIT, TYPE B | 603 15" CONDUIT, TYPE C | 603 15" CONDUIT, TYPE F 707.05 TYPE C | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | LIN. FT. | EACH | EACH | EACH | LIN. FT. | LIN. FT. | SQ. FT. | SQ. YD. | CU. YD. | CU. YD. | CU. YD. | CU. YD. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | | | |
| 1 - D | 172 | 829 +95.00 | | CONST | CT. | 833 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 2 - D | 172 | 833 +10.00 | | CONST | CL. | 837 +20.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 3 - D | 172 | 837 +20.00 | | CONST | CL. | 839 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 4 - D | 173 | 839 +70.00 | | CONST | CL. | 842 +20.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 5 - D | 173 | 842 +20.00 | | CONST | CL. | 842 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | 54 | | | | |
| 6 - D | 173 | 842 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 7 - D | 173 | 842 +20.00 | 95 | CONST | RT. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 8 - D | 174 | 851 +25.00 | | CONST | RT. | 853 +25.00 | | CONST | RT. | | | | | | | 28 | 45.83 | | 143.51 | | | | | | | | | |
| 9 - D | 174 | 852 +70.00 | | CONST | CL. | 855 +70.00 | | CONST | CL. | | 1 | | | | | | | | | | | | | 300 | | | | |
| 10 - D | 174 | 853 +65.00 | | CONST | LT. | | | | | | | | | | | 120 | | 60.09 | | | | | | | | | | |
| 11 - D | 174 | 855 +20.00 | | CONST | RT. | | | | | | | | | | | 20 | | | | | | | | | | | | |
| 12 - D | 174 | 855 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 13 - D | 175 | 866 +30.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 14 - D | 175 | 868 +50.00 | | CONST | RT. | 869 +50.00 | | CONST | RT. | | | | | | | | 56.98 | | 75.19 | | | | | | | | | |
| 1 - DR | 172-173 | 833 +10.00 | | CONST | CL. | 842 +20.00 | | CONST | LT. | 930 | 2 | | | | | | | | | | | | | | | | | |
| 2 - DR | 174 | 852 +70.00 | | CONST | LT. | 855 +70.00 | | CONST | LT. | 300 | 1 | | | | | | | | | | | | | | | | | |
| 3 - DR | 175 | 874 +30.00 | | CONST | LT. | | | | | 50 | 1 | | | | | | | | | | | | | | | | | |
| 15 - D | 175 | 874 +68.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 3A - DR | 175 | 875 +90.00 | | CONST | LT. | | | | | 50 | 1 | | | | | | | | | | | | | | | | | |
| 4 - DR | 176 | 877 +90.00 | | CONST | LT. | | | | | 40 | 1 | | | | | | | | | | | | | | | | | |
| 5 - DR | 176 | 883 +10.00 | | CONST | RT. | 883 +15.00 | | CONST | RT. | 60 | 1 | | | | | | | | | | | | | | | | | |
| 16 - D | 176 | 884 +32.00 | | CONST | RT. | | | | | | | | | | | | 9.41 | | | | 4.70 | | | | | | | |
| 17 - D | 176 | 886 +18.00 | | CONST | LT. | 889 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | 296 | | | | |
| 18 - D | 176 | 25 +30.00 | | SR18-RAMP A | RT. | | | | LT. | | | | | | | | | 40.00 | | | | | | | | | | |
| 19 - D | 176 | 25 +30.00 | | SR18-RAMP A | LT. | 26+30.00 | | SR18-RAMP A | LT. | | | | | | 100 | | | | | | | | | | | | | |
| 20 - D | 176-177 | 887 +60.00 | | CONST | LT. | 888 +80.00 | | CONST | RT. | | | | | | 120 | | 7.12 | 37.99 | | | | | | | | | | |
| 21 - D | 177 | 888 +81.49 | | CONST | LT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | | 49 | | | |
| 21A - D | 177 | 889 +04.00 | | CONST | LT. | 889 +10.00 | | CONST | CT. | | | | | | | | | | | | | | | 18 | | | | |
| 22 - D | 177 | 888 +80.00 | | CONST | RT. | 889 +20.00 | | CONST | RT. | | | | | | 80 | | | | | | | | | | | | | |
| 22A - D | 177 | 889 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 23 - D | 177 | 889 +30.72 | | CONST | RT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | | 61 | | | |
| 23A - D | 177 | 889 +11.79 | | CONST | RT. | 889 +10.00 | | CONST | CL | | | | | | | | | | | | | | | 18 | | | | |
| 24 - D | 177 | 19 +79.00 | | SR18-RAMP C | LT. | | | | RT. | | | | | | | | 12.57 | 90.86 | | | | | | | | | | |
| 25 - D | 177 | 891 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 26 - D | 177 | 1 +32.00 | | SR18-RAMP D | RT. | | | | | | | | | | | | 78.46 | | 11.78 | | 25.10 | | | | | | | |
| 27 - D | 177 | 896 +50.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 28 - D | 177 | 897 +25.00 | | CONST | LT. | 899 +68.00 | | CONST | RT. | | | | | | | | 41.61 | 26.53 | | | 6.00 | | | | | | | |
| 29 - D | 178 | 902 +12.00 | | CONST | LT. | 904 +30.00 | | CONST | RT. | | | | | | | | | | 28.76 | | | | | | | | | |
| 6 - DR | 178 | 903 +0.00 | | CONST | RT. | | | | | 65 | 1 | | | | | | | | | | | | | | | | | |
| 30 - D | 178 | 903 +25.00 | | CONST | RT. | 905 +25.00 | | CONST | RT. | | | | | | | | 58.29 | | | 125.80 | | | | | | | | |
| 31 - D | 178 | 906 +65.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 32 - D | 178-179 | 913 +00.00 | | CONST | LT. | 915 +65.00 | | CONST | LT. | | | | | | | | | 73.56 | 83.33 | | 22.74 | | | | | | | |
| 33 - D | 179 | 914 +65.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 34 - D | 179 | 915 +65.00 | | CONST | RT. | 917 +00.00 | | CONST | RT. | | | | | | | | 57.51 | | 181.33 | | | | | | | | | |
| 35 - D | 179 | 922 +25.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 36 - D | 179 | 922 +00.00 | | CONST | LT. | 922 +50.00 | | CONST | RT. | | | | | | | | | | 33.83 | | 5.40 | | | | | | | |
| 37 - D | 179 | 922 +50.00 | 138 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 38 - D | 180 | 931 +68.00 | | CONST | CL. | | | | LT. | | | | | | | | | | | 2.00 | 0.27 | | 22 | 4 | 68 | | | |
| 39 - D | 180 | 932 +25.00 | | CONST | LT. | 932 +60.00 | | CONST | RT. | | | | | | | | 93.28 | 62.81 | | | 8.82 | | | | | | | |
| 40 - D | 181 | 944 +68.00 | | CONST | CL. | | | | LT. | | | | | | | | | | | 2.00 | 0.27 | | | 32 | | | | |
| 41 - D | 181 | 943 +45.00 | | CONST | RT. | 944 +45.00 | | CONST | LT. | | | | | | | | 20.27 | | 13.33 | | 9.60 | | | | | | | |
| 41A - D | 181 | 947 +50.00 | | CONST | LT. | | | | RT. | | | | | | | | 14.44 | | 77.78 | | 6.60 | | | | | | | |
| 42 - D | 182 | 952 +68.00 | | CONST | LT. | | | | RT. | | | | | | | | 32.48 | 4.00 | | | 6.60 | | | | | | | |
| **TOTALS CARRIED TO SHEET 93** | | | | | | | | | | 1495 | 9 | | | | 300 | 168 | 528.25 | 395.84 | 648.84 | 133.80 | 96.64 | | 22 | 754 | 178 | | | |

CALCULATED PS CHECKED WJC

DRAINAGE SUBSUMMARY

MED - 71 - 15.78

77
940

7885DS10.DGN 11/30/99 RB 1

# DRAINAGE SUBSUMMARY

CALCULATED PS | CHECKED WJC

603

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 18" CONDUIT, TYPE B | 18" CONDUIT, TYPE C | 18" TYPE C, 706.02 | 24" CONDUIT, TYPE C | 24" CONDUIT, TYPE C, 706.02 | 24" CONDUIT TYPE F, 707.05, TYPE C | 30" CONDUIT, TYPE C | 30" CONDUIT, TYPE C 706.02 | 30" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | 30" CONDUIT, TYPE F, 707.05, TYPE C | 36" CONDUIT, TYPE C | 36" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | 42" CONDUIT, TYPE C | 42" CONDUIT, TYPE C, 706.02 | 42" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | CONDUIT BORED OR JACKED 48" CONDUIT, TYPE A, 706.02, 3000 D-LOAD | 54" CONDUIT, TYPE C, AS PER PLAN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | | |
| 1 - D | 172 | 829 +95.00 | | CONST | CT. | 833 +10.00 | | CONST | CL. | | | | 315 | | | | | | | | | | | | | | | |
| 2 - D | 172 | 833 +10.00 | | CONST | CL. | 837 +20.00 | | CONST | CL. | | | | 410 | | | | | | | | | | | | | | | |
| 3 - D | 172 | 837 +20.00 | | CONST | CL. | 839 +70.00 | | CONST | CL. | | | | 250 | | | | | | | | | | | | | | | |
| 4 - D | 173 | 839 +70.00 | | CONST | CL. | 842 +20.00 | | CONST | CL. | | | | 250 | | | | | | | | | | | | | | | |
| 5 - D | 173 | 842 +20.00 | | CONST | CL. | 842 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 6 - D | 173 | 842 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 7 - D | 173 | 842 +20.00 | 95 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 8 - D | 174 | 851 +25.00 | | CONST | RT. | 853 +25.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 9 - D | 174 | 852 +70.00 | | CONST | CL. | 855 +70.00 | | CONST | CL. | 12 | | | | | | | | | | | | | | | | | | |
| 10 - D | 174 | 853 +65.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 11 - D | 174 | 855 +20.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 12 - D | 174 | 855 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 13 - D | 175 | 866 +30.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 14 - D | 175 | 868 +50.00 | | CONST | RT. | 869 +50.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 1 - DR | 172-173 | 833 +10.00 | | CONST | CL. | 842 +20.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 2 - DR | 174 | 852 +70.00 | | CONST | LT. | 855 +70.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 3 - DR | 175 | 874 +30.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 15 - D | 175 | 874 +68.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 3A - DR | 175 | 875 +90.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 4 - DR | 176 | 877 +90.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 5 - DR | 176 | 883 +10.00 | | CONST | RT. | 883 +15.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 16 - D | 176 | 884 +32.00 | | CONST | RT. | | | | | | | | | | | | 16 | | | | | | | | | | | |
| 17 - D | 176 | 886 +18.00 | | CONST | LT. | 889 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 18 - D | 176 | 25 +30.00 | | SR18-RAMP A | RT. | | | | LT. | | | | | | | | | | | | | | | | | | | |
| 19 - D | 176 | 25 +30.00 | | SR18-RAMP A | LT. | 26+30.00 | | SR18-RAMP A | LT. | | | | | | | | | | | | | | | | | | | |
| 20 - D | 176-177 | 887 +60.00 | | CONST | LT. | 888 +80.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 21 - D | 177 | 888 +81.49 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 21A - D | 177 | 889 +04.00 | | CONST | LT. | 889 +10.00 | | CONST | CT. | | | | | | | | | | | | | | | | | | | |
| 22 - D | 177 | 888 +80.00 | | CONST | RT. | 889 +20.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 22A - D | 177 | 889 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 23 - D | 177 | 889 +30.72 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 23A - D | 177 | 889 +11.79 | | CONST | RT. | 889 +10.00 | | CONST | CL | | | | | | | | | | | | | | | | | | | |
| 24 - D | 177 | 19 +79.00 | | SR18-RAMP C | LT. | | | | RT. | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 - D | 177 | 891 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 26 - D | 177 | 1 +32.00 | | SR18-RAMP D | RT. | | | | | | | | | | | | | | | | | | 15 | | | | | |
| 27 - D | 177 | 896 +50.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 28 - D | 177 | 897 +25.00 | | CONST | LT. | 899 +68.00 | | CONST | RT. | | | | | | | | 16 | | | | | | | | | | | |
| 29 - D | 178 | 902 +12.00 | | CONST | LT. | 904 +30.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 6 - DR | 178 | 903 +0.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 30 - D | 178 | 903 +25.00 | | CONST | RT. | 905 +25.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 31 - D | 178 | 906 +65.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 32 - D | 178-179 | 913 +00.00 | | CONST | LT. | 915 +65.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | 48 | |
| 33 - D | 179 | 914 +65.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 34 - D | 179 | 915 +65.00 | | CONST | RT. | 917 +00.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 35 - D | 179 | 922 +25.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 36 - D | 179 | 922 +00.00 | | CONST | LT. | 922 +50.00 | | CONST | RT. | | | | | | | | | | | 28 | | | | | | | | |
| 37 - D | 179 | 922 +50.00 | 138 | CONST | RT. | | | | | | | | | | | | | | | 24 | | | | | | | | |
| 38 - D | 180 | 931 +68.00 | | CONST | CL. | | | | LT. | | | | | | | | | | | | | | | | | | | |
| 39 - D | 180 | 932 +25.00 | | CONST | LT. | 932 +60.00 | | CONST | RT. | | | | | | | | | | | | | | | | 20 | | | |
| 40 - D | 181 | 944 +68.00 | | CONST | CL. | | | | LT. | | | | | | | | | | | | | | | | | | | |
| 41 - D | 181 | 943 +45.00 | | CONST | RT. | 944 +45.00 | | CONST | LT. | | | | | | | | 44 | | | | | | | | | | | |
| 41A - D | 181 | 947 +50.00 | | CONST | LT. | | | | RT. | | | | | 42 | | | | | | | | | | | | | | |
| 42 - D | 182 | 952 +68.00 | | CONST | LT. | | | | RT. | | | | | 46 | | | | | | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 94** | | | | | | | | | | 12 | | | 1225 | 88 | | | 76 | | | 52 | | | 15 | 20 | | 48 | | |

MED - 71 - 15.78

78
940

7885DSILDGN 11/30/99 RB 2

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 603 | | | 604 | | | | | | | | | | 670 | BENDS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 72" CONDUIT, TYPE A, 706.02 | 84" CONDUIT, TYPE A, 706.02 | CONDUIT MISC. INSITU LINER | CATCH BASIN NO. 3 | CATCH BASIN NO. 3A | CATCH BASIN NO. 4, AS PER PLAN | CATCH BASIN NO. 4A, AS PER PLAN | CATCH BASIN NO. 5, AS PER PLAN | CATCH BASIN NO. 5A, AS PER PLAN | CATCH BASIN NO. 2-2B | CATCH BASIN NO. 2-4, AS PER PLAN | CATCH BASIN RECONSTRUCTED TO GRADE | MANHOLE NO. 3 | MANHOLE RECONSTRUCTED TO GRADE | DITCH EROSION PROTECTION | 15" - 22.5° | 15" - 30° | 15" - 45° | 24" - 30° | | |
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | SQ. YD. | EACH | | | | | |
| 1 - D | 172 | 829 +95.00 | | CONST | CT. | 833 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | |
| 2 - D | 172 | 833 +10.00 | | CONST | CL. | 837 +20.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 3 - D | 172 | 837 +20.00 | | CONST | CL. | 839 +70.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 4 - D | 173 | 839 +70.00 | | CONST | CL. | 842 +20.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 5 - D | 173 | 842 +20.00 | | CONST | CL. | 842 +70.00 | | CONST | CL. | | | | | | | | | | | | | 1 | | | | | | | |
| 6 - D | 173 | 842 +70.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 7 - D | 173 | 842 +20.00 | 95 | CONST | RT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | |
| 8 - D | 174 | 851 +25.00 | | CONST | RT. | 853 +25.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | |
| 9 - D | 174 | 852 +70.00 | | CONST | CL. | 855 +70.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 10 - D | 174 | 853 +65.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 - D | 174 | 855 +20.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 - D | 174 | 855 +70.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 13 - D | 175 | 866 +30.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 14 - D | 175 | 868 +50.00 | | CONST | RT. | 869 +50.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | |
| 1 - DR | 172-173 | 833 +10.00 | | CONST | CL. | 842 +20.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | |
| 2 - DR | 174 | 852 +70.00 | | CONST | LT. | 855 +70.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | |
| 3 - DR | 175 | 874 +30.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 - D | 175 | 874 +68.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 3A - DR | 175 | 875 +90.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 - DR | 176 | 877 +90.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 - DR | 176 | 883 +10.00 | | CONST | RT. | 883 +15.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | |
| 16 - D | 176 | 884 +32.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 - D | 176 | 886 +18.00 | | CONST | LT. | 889 +10.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 18 - D | 176 | 25 +30.00 | | SR18-RAMP A | RT. | | | | LT. | | | | | | | | | | | | | | | | | | | | |
| 19 - D | 176 | 25 +30.00 | | SR18-RAMP A | LT. | 26+30.00 | | SR18-RAMP A | LT. | | | | | | | | | | | | | | | | | | | | |
| 20 - D | 176-177 | 887 +60.00 | | CONST | LT. | 888 +80.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | |
| 21 - D | 177 | 888 +81.49 | | CONST | LT. | | | | | | | | | 1 | | | | | | | | | | | | | | 2 | |
| 21A - D | 177 | 889 +04.00 | | CONST | LT. | 889 +10.00 | | CONST | CT. | | | | | 1 | | | | | | | | | | | | | | | |
| 22 - D | 177 | 888 +80.00 | | CONST | RT. | 889 +20.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | |
| 22A - D | 177 | 889 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| 23 - D | 177 | 889 +30.72 | | CONST | RT. | | | | | | | | | 1 | | | | | | | | | | | | | | 2 | |
| 23A - D | 177 | 889 +11.79 | | CONST | RT. | 889 +10.00 | | CONST | CL | | | | | 1 | | | | | | | | | | | | | | | |
| 24 - D | 177 | 19 +79.00 | | SR18-RAMP C | LT. | | | | RT. | | | | | | | | | | | | | | | | | | | | |
| 25 - D | 177 | 891 +70.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 26 - D | 177 | 1 +32.00 | | SR18-RAMP D | RT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 - D | 177 | 896 +50.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 28 - D | 177 | 897 +25.00 | | CONST | LT. | 899 +68.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | |
| 29 - D | 178 | 902 +12.00 | | CONST | LT. | 904 +30.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | |
| 6 - DR | 178 | 903 +0.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 - D | 178 | 903 +25.00 | | CONST | RT. | 905 +25.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | |
| 31 - D | 178 | 906 +65.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 32 - D | 178-179 | 913 +00.00 | | CONST | LT. | 915 +65.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | |
| 33 - D | 179 | 914 +65.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 34 - D | 179 | 915 +65.00 | | CONST | RT. | 917 +00.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | |
| 35 - D | 179 | 922 +25.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 36 - D | 179 | 922 +00.00 | | CONST | LT. | 922 +50.00 | | CONST | RT. | | | | | | | | | 1 | | | | | | 125 | | | | | |
| 37 - D | 179 | 922 +50.00 | 138 | CONST | RT. | | | | | | | | | | | | | | 1 | | | | | | | | 2 | | |
| 38 - D | 180 | 931 +68.00 | | CONST | CL. | | | | LT. | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 39 - D | 180 | 932 +25.00 | | CONST | LT. | 932 +60.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | |
| 40 - D | 181 | 944 +68.00 | | CONST | CL. | | | | LT. | | | | | | 1 | | | | | | | | | 125 | | | | | |
| 41 - D | 181 | 943 +45.00 | | CONST | RT. | 944 +45.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | |
| 41A - D | 181 | 947 +50.00 | | CONST | LT. | | | | RT. | | | | | | | | | | | | | | | | | | | | |
| 42 - D | 182 | 952 +68.00 | | CONST | LT. | | | | RT. | | | | | | | | | | | | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 95** | | | | | | | | | | | | | | 4 | 16 | | 1 | 1 | | 1 | | 2 | | 2250 | | | | | |

7885DS12.DGN 11/30/99 RB 3

CALCULATED PS CHECKED WJC

# DRAINAGE SUBSUMMARY

MED - 71 - 15.78

# DRAINAGE SUBSUMMARY

CALCULATED PS CHECKED WJC

MED - 71 - 15.78

80/940

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | SS837 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 24" LINER PIPE ASTM F894 OR 24" LINER PIPE, 707.12 OR 24" LINER PIPE, 707.42 OR 26.278" LINER PIPE SS937 | 27" LINER PIPE ASTM F894 WITH 33" (MIN.) INLET OPENING OR 30" LINER PIPE, 707.12 WITH 33" (MIN.) INLET OPENING 30" LINER PIPE, 707.42 WITH 33" (MIN.) INLET OPENING OR 30.03" LINER PIPE, SS937 WITH 33" (MIN.) INLET OPENING | 27" LINER PIPE ASTM F894 WITH 36" (MIN.) INLET OPENING OR 30"LINER PIPE 707.12 WITH 36" (MIN.) INLET OPENING OR 30" LINER PIPE 707.42 WITH 36" (MIN.) INLET OPENING OR 30.03" LINER PIPE SS937 WITH 36" (MIN.) INLET OPENING | 33" LINER PIPE ASTM F894 WITH 36" (MIN.) INLET OPENING OR 36" LINER PIPE, 707.12 OR 36" LINER PIPE, 707.42 OR 33.784" LINER PIPE SS937 WITH 36" (MIN.) INLET OPENING | 36" LINER PIPE, 707.12 | 36" LINER PIPE, 707.12 WITH 39" (MIN.) INLET OPENING | 36" LINER PIPE ASTM F894 WITH 42" (MIN.) INLET OPENING OR 42" LINER PIPE, 707.12 OR 36" LINER PIPE, 707.42 WITH 42" (MIN.) INLET OPENING OR 39.416" LINER PIPE, SS937 WITH 42" (MIN.) INLET OPENING | 60" LINER PIPE ASTM F894 OR 66" LINER PIPE, 707.12 | BACKFILL FOR LINER PIPE | |
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | CU. YD. | |
| 1 - D | 172 | 829 +95.00 | | CONST | CT. | 833 +10.00 | | CONST | CL. | | | | | | | | | | |
| 2 - D | 172 | 833 +10.00 | | CONST | CL. | 837 +20.00 | | CONST | CL. | | | | | | | | | | |
| 3 - D | 172 | 837 +20.00 | | CONST | CL. | 839 +70.00 | | CONST | CL. | | | | | | | | | | |
| 4 - D | 173 | 839 +70.00 | | CONST | CL. | 842 +20.00 | | CONST | CL. | | | | | | | | | | |
| 5 - D | 173 | 842 +20.00 | | CONST | CL. | 842 +70.00 | | CONST | CL. | | | | | | | | | | |
| 6 - D | 173 | 842 +70.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 7 - D | 173 | 842 +20.00 | 95 | CONST | RT. | | | | | | | | | | | | | | |
| 8 - D | 174 | 851 +25.00 | | CONST | RT. | 853 +25.00 | | CONST | RT. | | | | | | | | | | |
| 9 - D | 174 | 852 +70.00 | | CONST | CL. | 855 +70.00 | | CONST | CL. | | | | | | | | | | |
| 10 - D | 174 | 853 +65.00 | | CONST | LT. | | | | | | | | | | | | | | |
| 11 - D | 174 | 855 +20.00 | | CONST | RT. | | | | | | | | | | | | | | |
| 12 - D | 174 | 855 +70.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 13 - D | 175 | 866 +30.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 14 - D | 175 | 868 +50.00 | | CONST | RT. | 869 +50.00 | | CONST | RT. | | | | | | | | | | |
| 1 - DR | 172-173 | 833 +10.00 | | CONST | CL. | 842 +20.00 | | CONST | LT. | | | | | | | | | | |
| 2 - DR | 174 | 852 +70.00 | | CONST | LT. | 855 +70.00 | | CONST | LT. | | | | | | | | | | |
| 3 - DR | 175 | 874 +30.00 | | CONST | LT. | | | | | | | | | | | | | | |
| 15 - D | 175 | 874 +68.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 3A - DR | 175 | 875 +90.00 | | CONST | LT. | | | | | | | | | | | | | | |
| 4 - DR | 176 | 877 +90.00 | | CONST | LT. | | | | | | | | | | | | | | |
| 5 - DR | 176 | 883 +10.00 | | CONST | RT. | 883 +15.00 | | CONST | RT. | | | | | | | | | | |
| 16 - D | 176 | 884 +32.00 | | CONST | RT. | | | | | | | | | | | | | | |
| 17 - D | 176 | 886 +18.00 | | CONST | LT. | 889 +10.00 | | CONST | CL. | | | | | | | | | | |
| 18 - D | 176 | 25 +30.00 | | SR18-RAMP A | RT. | | | | LT. | | | | | | | | 86 | | 114 |
| 19 - D | 176 | 25 +30.00 | | SR18-RAMP A | LT. | 26+30.00 | | SR18-RAMP A | LT. | | | | | | | | | | |
| 20 - D | 176-177 | 887 +60.00 | | CONST | LT. | 888 +80.00 | | CONST | RT. | | | | | | | | 270 | | 114 |
| 21 - D | 177 | 888 +81.49 | | CONST | LT. | | | | | | | | | | | | | | |
| 21A - D | 177 | 889 +04.00 | | CONST | LT. | 889 +10.00 | | CONST | CT. | | | | | | | | | | |
| 22 - D | 177 | 888 +80.00 | | CONST | RT. | 889 +20.00 | | CONST | RT. | | | | | | | | | | |
| 22A - D | 177 | 889 +10.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 23 - D | 177 | 889 +30.72 | | CONST | RT. | | | | | | | | | | | | | | |
| 23A - D | 177 | 889 +11.79 | | CONST | RT. | 889 +10.00 | | CONST | CL | | | | | | | | | | |
| 24 - D | 177 | 19 +79.00 | | SR18-RAMP C | LT. | | | | RT. | | 88 | | | | | | | | 20 |
| 25 - D | 177 | 891 +70.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 26 - D | 177 | 1 +32.00 | | SR18-RAMP D | RT. | | | | | | | | | | | | | | |
| 27 - D | 177 | 896 +50.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 28 - D | 177 | 897 +25.00 | | CONST | LT. | 899 +68.00 | | CONST | RT. | | | | | | 384 | | | | 115 |
| 29 - D | 178 | 902 +12.00 | | CONST | LT. | 904 +30.00 | | CONST | RT. | | | | | | | | | | |
| 6 - DR | 178 | 903 +0.00 | | CONST | RT. | | | | | | | | | | | | | | |
| 30 - D | 178 | 903 +25.00 | | CONST | RT. | 905 +25.00 | | CONST | RT. | | | | | | | | | | |
| 31 - D | 178 | 906 +65.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 32 - D | 178-179 | 913 +00.00 | | CONST | LT. | 915 +65.00 | | CONST | LT. | | | | | | | | | | |
| 33 - D | 179 | 914 +65.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 34 - D | 179 | 915 +65.00 | | CONST | RT. | 917 +00.00 | | CONST | RT. | | | | | | | | | | |
| 35 - D | 179 | 922 +25.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 36 - D | 179 | 922 +00.00 | | CONST | LT. | 922 +50.00 | | CONST | RT. | | | | | | | | | | |
| 37 - D | 179 | 922 +50.00 | 138 | CONST | RT. | | | | | | | | | | | | | | |
| 38 - D | 180 | 931 +68.00 | | CONST | CL. | | | | LT. | | | | | | | 296 | | | 63 |
| 39 - D | 180 | 932 +25.00 | | CONST | LT. | 932 +60.00 | | CONST | RT. | | | | | | | | | | |
| 40 - D | 181 | 944 +68.00 | | CONST | CL. | | | | LT. | | | | | | | | | | |
| 41 - D | 181 | 943 +45.00 | | CONST | RT. | 944 +45.00 | | CONST | LT. | | | | | | | | | | |
| 41A - D | 181 | 947 +50.00 | | CONST | LT. | | | | RT. | | | | | | | | | | |
| 42 - D | 182 | 952 +68.00 | | CONST | LT. | | | | RT. | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 96** | | | | | | | | | | | 88 | | | | 384 | 296 | 356 | | 426 |

7885DS14.DGN 11/30/99 RB

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 202 | | | | SPECIAL | 203 | 519 | 601 | | | | 602 | | 603 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | PIPE REMOVED 24", AND UNDER | CATCH BASIN REMOVED | CATCH BASIN ABANDONED | MANHOLE REMOVED | FILL AND PLUG EXISTING CONDUIT | DITCH CLEANOUT | PATCHING CONCRETE STRUCTURES | RIPRAP USING 6" REINFORCED CONCRETE SLAB | ROCK CHANNEL PROTECTION, TYPE A WITH FILTER | ROCK CHANNEL PROTECTION, TYPE B WITH FILTER | ROCK CHANNEL PROTECTION, TYPE C WITH FILTER | CONCRETE MASONRY | 12" CONDUIT, TYPE E | 15" CONDUIT, TYPE B | 15" CONDUIT, TYPE C | 15" CONDUIT, TYPE F 707.05 TYPE C | | | |
| | | | | | | | | | | LIN. FT. | EACH | EACH | EACH | LIN. FT. | LIN. FT. | SQ. FT. | SQ. YD. | CU. YD. | CU. YD. | CU. YD. | CU. YD. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | | | |
| 43 - D | 182 | 955 +30.00 | | CONST | LT. | 956 +38.00 | | CONST | CL. | | | | | | | | | | 20.16 | | 3.00 | | | | | | | |
| 44 - D | 182 | 957 +10.00 | | CONST | RT. | | | | | | | 1 | | | | | | | | | | | | | | | | |
| 45 - D | 182 | 957 +40.00 | 145 | CONST | RT. | | | | | | | | | | | | | | | | 0.33 | | | | | | | |
| 46 - D | 182 | 961 +68.00 | | CONST | CL. | 962 +28.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 47 - D | 182-183 | 962 +28.00 | | CONST | LT. | 965 +70.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 48 - D | 183 | 965 +70.00 | | CONST | LT. | 967 +50.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 49 - D | 183 | 967 +50.00 | | CONST | CL. | 974 +00.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 49A - D | 183 | 974 +00.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 7 - DR | 183 | 965 +70.00 | | CONST | LT. | | | | | 60 | 1 | | | | | | | | | | | | | | | | | |
| 8 - DR | 183 | 961 +68.00 | | CONST | CL. | 965 +70.00 | | CONST | LT. | 405 | | | 1 | | | | | | | | | | | | | | | |
| 8A - DR | 183 | 965 +70.00 | | CONST | LT. | 966 +70.00 | | CONST | CL. | 100 | 1 | | | | | | | | | | | | | | | | | |
| 9 - DR | 184 | 977 +05.00 | | CONST | RT. | | | | | 85 | 1 | | | | | | | | | | | | | | | | | |
| 50 - D | 184 | 982 +90.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 51 - D | 184 | 985 +92.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 52 - D | 184 | 988 +39.00 | | CONST | LT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | | 42 | | | |
| 52A - D | 185 | 988 +78.66 | | CONST | LT. | 989 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | 42 | | | | |
| 53 - D | 185 | 989 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 54 - D | 185 | 989 +31.03 | | CONST | RT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | | 24 | | | |
| 54A - D | 185 | 988 +96.00 | | CONST | RT. | 989 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | 25 | | | | |
| 55 - D | 185 | 991 +35.00 | | CONST | LT. | 993 +68.00 | | CONST | RT. | | | | | | | | | | | | 13.20 | | | | | | | |
| 55A - D | 185 | 993 +00.00 | | CONST | CL. | 998 +65.00 | | CONST | CL. | | | | | | | | | | | | | | | 565 | | | | |
| 56 - D | 185 | 998 +65.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 57 - D | 185 | 999 +22.00 | | CONST | RT. | | | | LT. | | | | | | | | 5.56 | 50.37 | | | | | | | | | | |
| 58 - D | 186 | 1007+18.00 | | CONST | RT. | | | | LT. | | | | | | | | | | 22.22 | | | | | | | | | |
| 59 - D | 186 | 1008+52.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 60 - D | 186 | 1011+95.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 60A - D | 187 | 1013+93.64 | | CONST | LT. | 1013 +90.00 | | CONST | CL. | | | | | | | | | | | | | | | 20 | | | | |
| 61 - D | 187 | 1014+00.50 | | CONST | LT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | 24 | | | | |
| 61A - D | 187 | 1013 +94.00 | | CONST | RT. | 1013+20.00 | | CONST | CL. | | | | | | | | | | 3.34 | | 0.27 | | | 48 | 119 | | | |
| 62 - D | 187 | 1022+72.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 63 - D | 187 | 1022+72.00 | 110 | CONST | RT. | | | | | | | | | | | | | | | | | | | 8 | | | | |
| 64 - D | 187 | 1013+88.12 | | CONST | RT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | 22 | | | | |
| 64A - D | 187 | 1013+90.00 | | CONST | RT. | 1013+90.00 | | CONST | CL. | | | | | | | | | | | | | | | 20 | | | | |
| 65 - D | 188 | 1037+40.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 66 - D | 188 | 1045+08.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 67 - D | 188 | 1047+55.00 | | CONST | CL. | | | | | | | 1 | | | | | | | | | | | | | | | | |
| 68 - D | 188 | 1048+70.00 | | CONST | RT. | 1050+70.00 | | CONST | CL. | | | | | | | | 9.40 | | | | | | | | | | | |
| 69 - D | 188 | 1049+30.00 | 125 | CONST | LT. | 1050+70.00 | | CONST | CL. | | | | | | | | 55.94 | | 67.67 | 13.53 | | | | | | | | |
| 10 - DR | 188-189 | 1050+65.00 | | CONST | CL. | 1052+15.00 | 18 | CONST | RT. | | | | | 145 | | | | | | | | | | | | | | |
| 70 - D | 188 | 1050+65.00 | | CONST | CL. | 1052+20.00 | | CONST | CL. | | | | | | | | | | | | 1.10 | | | | | | | |
| 70A - D | 189 | 1053+95.00 | | CONST | CL. | 1053 +50.00 | | CONST | CL. | | | | | | | | | | | 2.00 | 0.27 | | | 45 | | | | |
| 71 - D | 189 | 1054+08.45 | | CONST | LT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | | 85 | | | |
| 71A - D | 189 | 1054+01.65 | | CONST | LT. | 1053 +93.00 | | CONST | CL. | | | | | | | | | | | | | | | 20 | | | | |
| 72 - D | 189 | 1053+90.88 | | CONST | RT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | | 84 | | | |
| 72A - D | 189 | 1053+95.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | 20 | | | | |
| 73 - D | 189 | 1060+08.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 74 - D | 191 | 1067+40.00 | | CONST | CL. | | | | RT. | | | | | | | | | | 3.70 | | 0.46 | | | | | | | |
| 75 - D | 191 | 1067+40.00 | 95 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 76 - D | 191 | 1070+92.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 77 - D | 191 | 1070+92.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 78 - D | 191 | 1075+85.00 | | CONST | CL. | | | | RT. | | | | | | | | | | 27.22 | | 0.46 | | | | | | | |
| 79 - D | 191 | 1075+85.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 80 - D | 192 | 1076+55.00 | | CONST | CL. | 1075 +85.00 | | CONST | CL. | | | | | | | | | | | | | | | 70 | | | | |
| 81 - D | 192 | 1081+95.00 | | CONST | RT. | 1083+45.00 | | CONST | RT. | | | | | | 150 | | | | | | | | | | | | | |
| 82 - D | 192 | 1082+95.00 | | CONST | RT. | | | | LT. | | | | | | | | | | | 3.70 | 4.70 | | | | | | | |
| TOTALS CARRIED TO SHEET 93 | | | | | | | | | | 650 | 3 | 2 | 1 | 145 | 150 | | 70.90 | 50.37 | 144.31 | 31.23 | 25.41 | | | 969 | 354 | | | |

# DRAINAGE SUBSUMMARY

CALCULATED PS CHECKED WJC

MED - 71 - 15.78

81/940

7885DSIO.DGN 11/30/99 RB 4

# DRAINAGE SUBSUMMARY

CALCULATED PS | CHECKED WJC

603

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 18" CONDUIT, TYPE B | 18" CONDUIT, TYPE C | 18" TYPE C, 706.02 | 24" CONDUIT, TYPE C | 24" CONDUIT, TYPE C, 706.02 | 24" CONDUIT TYPE F, 707.05, TYPE C | 30" CONDUIT, TYPE C | 30" CONDUIT, TYPE C 706.02 | 30" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | 30" CONDUIT, TYPE F, 707.05, TYPE C | 36" CONDUIT, TYPE C | 36" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | 42" CONDUIT, TYPE C | 42" CONDUIT, TYPE C, 706.02 | 42" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | CONDUIT BORED OR JACKED 48" CONDUIT, TYPE A, 706.02, 3000 D-LOAD | 54" CONDUIT, TYPE C, AS PER PLAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | | | |
| 43 - D | 182 | 955 +30.00 | | CONST | LT. | 956 +38.00 | | CONST | CL. | | 4 | | | 28 | | | | | | | | | | | | | | |
| 44 - D | 182 | 957 +10.00 | | CONST | RT. | | | | | | 4 | | 4 | | | | | | | | | | | | | | | |
| 45 - D | 182 | 957 +40.00 | 145 | CONST | RT. | | | | | | 20 | | | | | | | | | | | | | | | | | |
| 46 - D | 182 | 961 +68.00 | | CONST | CL. | 962 +28.00 | | CONST | LT. | | 64 | | | | | | | | | | | | | | | | | |
| 47 - D | 182-183 | 962 +28.00 | | CONST | LT. | 965 +70.00 | | CONST | LT. | | 342 | | | | | | | | | | | | | | | | | |
| 48 - D | 183 | 965 +70.00 | | CONST | LT. | 967 +50.00 | | CONST | CL. | | 182 | | | | | | | | | | | | | | | | | |
| 49 - D | 183 | 967 +50.00 | | CONST | CL. | 974 +00.00 | | CONST | CL. | | 650 | | | | | | | | | | | | | | | | | |
| 49A - D | 183 | 974 +00.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 7 - DR | 183 | 965 +70.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 8 - DR | 183 | 961 +68.00 | | CONST | CL. | 965 +70.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 8A - DR | 183 | 965 +70.00 | | CONST | LT. | 966 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 9 - DR | 184 | 977 +05.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 50 - D | 184 | 982 +90.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 51 - D | 184 | 985 +92.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 52 - D | 184 | 988 +39.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 52A - D | 185 | 988 +78.66 | | CONST | LT. | 989 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 53 - D | 185 | 989 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 54 - D | 185 | 989 +31.03 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 54A - D | 185 | 988 +96.00 | | CONST | RT. | 989 +10.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 55 - D | 185 | 991 +35.00 | | CONST | LT. | 993 +68.00 | | CONST | RT. | | | | | | | | | | | | 16 | | | | | | | |
| 55A - D | 185 | 993 +00.00 | | CONST | CL. | 998 +65.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 56 - D | 185 | 998 +65.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 57 - D | 185 | 999 +22.00 | | CONST | RT. | | | | LT. | | | | | | | | | | | | | | | | | | | |
| 58 - D | 186 | 1007+18.00 | | CONST | RT. | | | | LT. | | | | | | | | | | | | | | | | | | | |
| 59 - D | 186 | 1008+52.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 60 - D | 186 | 1011+95.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 60A - D | 187 | 1013+93.64 | | CONST | LT. | 1013 +90.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 61 - D | 187 | 1014+00.50 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 61A - D | 187 | 1013 +94.00 | | CONST | RT. | 1013+20.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 62 - D | 187 | 1022+72.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 63 - D | 187 | 1022+72.00 | 110 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 64 - D | 187 | 1013+88.12 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 64A - D | 187 | 1013+90.00 | | CONST | RT. | 1013+90.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 65 - D | 188 | 1037+40.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 66 - D | 188 | 1045+08.00 | | CONST | CL. | | | | | | | | | | | | | | | 8 | | | | | | | | |
| 67 - D | 188 | 1047+55.00 | | CONST | CL. | | | | | | | | | | | | | | | 8 | | | | | | | | |
| 68 - D | 188 | 1048+70.00 | | CONST | RT. | 1050+70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 69 - D | 188 | 1049+30.00 | 125 | CONST | LT. | 1050+70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 10 - DR | 188-189 | 1050+65.00 | | CONST | CL. | 1052+15.00 | 18 | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 70 - D | 188 | 1050+65.00 | | CONST | CL. | 1052+20.00 | | CONST | CL. | | | | | | | | | | | | | | | | 128 | | | |
| 70A - D | 189 | 1053+95.00 | | CONST | CL. | 1053 +50.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 71 - D | 189 | 1054+08.45 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 71A - D | 189 | 1054+01.65 | | CONST | LT. | 1053 +93.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 72 - D | 189 | 1053+90.88 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 72A - D | 189 | 1053+95.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 73 - D | 189 | 1060+08.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 74 - D | 191 | 1067+40.00 | | CONST | CL. | | | | RT. | | | | 8 | | 70 | | | | | | | | | | | | | |
| 75 - D | 191 | 1067+40.00 | 95 | CONST | LT. | | | | | | | | 4 | | | | | | | | | | | | | | | |
| 76 - D | 191 | 1070+92.00 | | CONST | CL. | | | | | | | | 8 | | | | | | | | | | | | | | | |
| 77 - D | 191 | 1070+92.00 | | CONST | LT. | | | | | | | | 4 | | | | | | | | | | | | | | | |
| 78 - D | 191 | 1075+85.00 | | CONST | CL. | | | | RT. | | | | 8 | | | | | | | | | | | | | | | |
| 79 - D | 191 | 1075+85.00 | | CONST | LT. | | | | | | | | 4 | | 70 | | | | | | | | | | | | | |
| 80 - D | 192 | 1076+55.00 | | CONST | CL. | 1075 +85.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 81 - D | 192 | 1081+95.00 | | CONST | RT. | 1083+45.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 82 - D | 192 | 1082+95.00 | | CONST | RT. | | | | LT. | | | | | | | | | 8 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 94** | | | | | | | | | | | 1266 | | 40 | 28 | 140 | | | 8 | | 16 | 16 | | | | 128 | | | |

MED - 71 - 15.78

82
940

7885DSILDGN 11/30/99 RB 5

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 603 | | | 604 | | | | | | | | | | 670 | BENDS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 72" CONDUIT, TYPE A, 706.02 | 84" CONDUIT, TYPE A, 706.02 | CONDUIT MISC. INSITU LINER | CATCH BASIN NO. 3 | CATCH BASIN NO. 3A | CATCH BASIN NO. 4, AS PER PLAN | CATCH BASIN NO. 4A, AS PER PLAN | CATCH BASIN NO. 5, AS PER PLAN | CATCH BASIN NO. 5A, AS PER PLAN | CATCH BASIN NO. 2-2B | CATCH BASIN NO. 2-4, AS PER PLAN | CATCH BASIN RECONSTRUCTED TO GRADE | MANHOLE NO. 3 | MANHOLE RECONSTRUCTED TO GRADE | DITCH EROSION PROTECTION | 15" - 22.5° | 15" - 30° | 15" - 45° | 24" - 30° | | |
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | SQ. YD. | EACH | | | | | |
| 43 - D | 182 | 955 +30.00 | | CONST | LT. | 956 +38.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 44 - D | 182 | 957 +10.00 | | CONST | RT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 45 - D | 182 | 957 +40.00 | 145 | CONST | RT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 46 - D | 182 | 961 +68.00 | | CONST | CL. | 962 +28.00 | | CONST | LT. | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 47 - D | 182-183 | 962 +28.00 | | CONST | LT. | 965 +70.00 | | CONST | LT. | | | | | | | | | | | | | 1 | | | | | | | | |
| 48 - D | 183 | 965 +70.00 | | CONST | LT. | 967 +50.00 | | CONST | CL. | | | | | | | | | | | | | 1 | | | | | | | | |
| 49 - D | 183 | 967 +50.00 | | CONST | CL. | 974 +00.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 49A - D | 183 | 974 +00.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 7 - DR | 183 | 965 +70.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 - DR | 183 | 961 +68.00 | | CONST | CL. | 965 +70.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | |
| 8A - DR | 183 | 965 +70.00 | | CONST | LT. | 966 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | |
| 9 - DR | 184 | 977 +05.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 - D | 184 | 982 +90.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 51 - D | 184 | 985 +92.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 52 - D | 184 | 988 +39.00 | | CONST | LT. | | | | | | | | | 1 | | | | | | | | | | | | 2 | | | | |
| 52A - D | 185 | 988 +78.66 | | CONST | LT. | 989 +10.00 | | CONST | CL. | | | | | 1 | | | | | | | | | | | | | | | | |
| 53 - D | 185 | 989 +10.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 54 - D | 185 | 989 +31.03 | | CONST | RT. | | | | | | | | | 1 | | | | | | | | | | | | 2 | | | | |
| 54A - D | 185 | 988 +96.00 | | CONST | RT. | 989 +10.00 | | CONST | CL. | | | | | 1 | | | | | | | | | | | | | | | | |
| 55 - D | 185 | 991 +35.00 | | CONST | LT. | 993 +68.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | |
| 55A - D | 185 | 993 +00.00 | | CONST | CL. | 998 +65.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 56 - D | 185 | 998 +65.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 57 - D | 185 | 999 +22.00 | | CONST | RT. | | | | LT. | | | | | | | | | | | | | | | | | | | | | |
| 58 - D | 186 | 1007+18.00 | | CONST | RT. | | | | LT. | | | | | | | | | | | | | | | | | | | | | |
| 59 - D | 186 | 1008+52.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 60 - D | 186 | 1011+95.00 | | CONST | CL. | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| 60A - D | 187 | 1013+93.64 | | CONST | LT. | 1013 +90.00 | | CONST | CL. | | | | | 1 | | | | | | | | | | | | | | | | |
| 61 - D | 187 | 1014+00.50 | | CONST | LT. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 61A - D | 187 | 1013 +94.00 | | CONST | RT. | 1013+20.00 | | CONST | CL. | | | | | | | | | | | | | 1 | | | | 2 | | | | |
| 62 - D | 187 | 1022+72.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 63 - D | 187 | 1022+72.00 | 110 | CONST | RT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 64 - D | 187 | 1013+88.12 | | CONST | RT. | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| 64A - D | 187 | 1013+90.00 | | CONST | RT. | 1013+90.00 | | CONST | CL. | | | | | 1 | | | | | | | | | | | | | | | | |
| 65 - D | 188 | 1037+40.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 66 - D | 188 | 1045+08.00 | | CONST | CL. | | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 67 - D | 188 | 1047+55.00 | | CONST | CL. | | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 68 - D | 188 | 1048+70.00 | | CONST | RT. | 1050+70.00 | | CONST | CL. | | | 250 | | | | | | | | | | | | | | | | | | |
| 69 - D | 188 | 1049+30.00 | 125 | CONST | LT. | 1050+70.00 | | CONST | CL. | | | 148 | | | | | | | | | | | | | | | | | | |
| 10 - DR | 188-189 | 1050+65.00 | | CONST | CL. | 1052+15.00 | 18 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | |
| 70 - D | 188 | 1050+65.00 | | CONST | CL. | 1052+20.00 | | CONST | CL. | | | | | | | | | | | | 1 | | 1 | 125 | | | | | | |
| 70A - D | 189 | 1053+95.00 | | CONST | CL. | 1053 +50.00 | | CONST | CL. | | | | | | | | | | | | | 1 | | | | | | | | |
| 71 - D | 189 | 1054+08.45 | | CONST | LT. | | | | | | | | | 1 | | | | | | | | | | | | 2 | | | | |
| 71A - D | 189 | 1054+01.65 | | CONST | LT. | 1053 +93.00 | | CONST | CL. | | | | | 1 | | | | | | | | | | | | | | | | |
| 72 - D | 189 | 1053+90.88 | | CONST | RT. | | | | | | | | | 1 | | | | | | | | | | | | 2 | | | | |
| 72A - D | 189 | 1053+95.00 | | CONST | RT. | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| 73 - D | 189 | 1060+08.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 250 | | | | | | |
| 74 - D | 191 | 1067+40.00 | | CONST | CL. | | | | RT. | | | | | | 1 | | | | | | | | | 125 | | | | 2 | | |
| 75 - D | 191 | 1067+40.00 | 95 | CONST | LT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 76 - D | 191 | 1070+92.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 77 - D | 191 | 1070+92.00 | | CONST | LT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 78 - D | 191 | 1075+85.00 | | CONST | CL. | | | | RT. | | | | | | | | | | | | | 1 | | | | | | | | |
| 79 - D | 191 | 1075+85.00 | | CONST | LT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 80 - D | 192 | 1076+55.00 | | CONST | CL. | 1075 +85.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 81 - D | 192 | 1081+95.00 | | CONST | RT. | 1083+45.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | |
| 82 - D | 192 | 1082+95.00 | | CONST | RT. | | | | LT. | | | | | | | | | | | | | | | | | | | | | |
| TOTALS CARRIED TO SHEET 95 | | | | | | | | | | | | 398 | | 12 | 17 | 2 | 6 | | | | 1 | 5 | 1 | 3250 | | | | | | |

# DRAINAGE SUBSUMMARY

CALCULATED PS CHECKED WJC

MED - 71 - 15.78



7885DS12.DGN 11/30/99 RB 6

# DRAINAGE SUBSUMMARY

CALCULATED PS CHECKED WJC

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | SS837 24" LINER PIPE ASTM F894 OR 24" LINER PIPE, 707.12 OR 24" LINER PIPE, 707.42 OR 26.278" LINER PIPE SS937 | SS837 27" LINER PIPE ASTM F894 WITH 33" (MIN.) INLET OPENING OR 30" LINER PIPE, 707.12 WITH 33" (MIN.) INLET OPENING 30" LINER PIPE, 707.42 WITH 33" (MIN.) INLET OPENING OR 30.03" LINER PIPE, SS937 WITH 33" (MIN.) INLET OPENING | SS837 27" LINER PIPE ASTM F894 WITH 36" (MIN.) INLET OPENING OR 30"LINER PIPE 707.12 WITH 36" (MIN.) INLET OPENING OR 30" LINER PIPE 707.42 WITH 36" (MIN.) INLET OPENING OR 30.03" LINER PIPE SS937 WITH 36" (MIN.) INLET OPENING | SS837 33" LINER PIPE ASTM F894 WITH 36" (MIN.) INLET OPENING OR 36" LINER PIPE, 707.12 OR 36" LINER PIPE, 707.42 OR 33.784" LINER PIPE SS937 WITH 36" (MIN.) INLET OPENING | SS837 36" LINER PIPE, 707.12 | SS837 36" LINER PIPE, 707.12 WITH 39" (MIN.) INLET OPENING | SS837 36" LINER PIPE ASTM F894 WITH 42" (MIN.) INLET OPENING OR 42" LINER PIPE, 707.12 OR 36" LINER PIPE, 707.42 WITH 42" (MIN.) INLET OPENING OR 39.416" LINER PIPE, SS937 WITH 42" (MIN.) INLET OPENING | SS837 60" LINER PIPE ASTM F894 OR 66" LINER PIPE, 707.12 | BACKFILL FOR LINER PIPE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | CU. YD. | |
| 43 - D | 182 | 955 +30.00 | | CONST | LT. | 956 +38.00 | | CONST | CL. | | | | | | | | | |
| 44 - D | 182 | 957 +10.00 | | CONST | RT. | | | | | | | | | | | | | |
| 45 - D | 182 | 957 +40.00 | 145 | CONST | RT. | | | | | | | | | | | | | |
| 46 - D | 182 | 961 +68.00 | | CONST | CL. | 962 +28.00 | | CONST | LT. | | | | | | | | | |
| 47 - D | 182-183 | 962 +28.00 | | CONST | LT. | 965 +70.00 | | CONST | LT. | | | | | | | | | |
| 48 - D | 183 | 965 +70.00 | | CONST | LT. | 967 +50.00 | | CONST | CL. | | | | | | | | | |
| 49 - D | 183 | 967 +50.00 | | CONST | CL. | 974 +00.00 | | CONST | CL. | | | | | | | | | |
| 49A - D | 183 | 974 +00.00 | | CONST | CL. | | | | | | | | | | | | | |
| 7 - DR | 183 | 965 +70.00 | | CONST | LT. | | | | | | | | | | | | | |
| 8 - DR | 183 | 961 +68.00 | | CONST | CL. | 965 +70.00 | | CONST | LT. | | | | | | | | | |
| 8A - DR | 183 | 965 +70.00 | | CONST | LT. | 966 +70.00 | | CONST | CL. | | | | | | | | | |
| 9 - DR | 184 | 977 +05.00 | | CONST | RT. | | | | | | | | | | | | | |
| 50 - D | 184 | 982 +90.00 | | CONST | CL. | | | | | | | | | | | | | |
| 51 - D | 184 | 985 +92.00 | | CONST | CL. | | | | | | | | | | | | | |
| 52 - D | 184 | 988 +39.00 | | CONST | LT. | | | | | | | | | | | | | |
| 52A - D | 185 | 988 +78.66 | | CONST | LT. | 989 +10.00 | | CONST | CL. | | | | | | | | | |
| 53 - D | 185 | 989 +10.00 | | CONST | CL. | | | | | | | | | | | | | |
| 54 - D | 185 | 989 +31.03 | | CONST | RT. | | | | | | | | | | | | | |
| 54A - D | 185 | 988 +96.00 | | CONST | RT. | 989 +10.00 | | CONST | CL. | | | | | | | | | |
| 55 - D | 185 | 991 +35.00 | | CONST | LT. | 993 +68.00 | | CONST | RT. | | | | | | | | | |
| 55A - D | 185 | 993 +00.00 | | CONST | CL. | 998 +65.00 | | CONST | CL. | | | | | | | | | |
| 56 - D | 185 | 998 +65.00 | | CONST | CL. | | | | | | | | | | | | | |
| 57 - D | 185 | 999 +22.00 | | CONST | RT. | | | | LT. | | 244 | | | | | | 54 | |
| 58 - D | 186 | 1007+18.00 | | CONST | RT. | | | | LT. | | | | 212 | | | | 64 | |
| 59 - D | 186 | 1008+52.00 | | CONST | CL. | | | | | | | | | | | | | |
| 60 - D | 186 | 1011+95.00 | | CONST | CL. | | | | | | | | | | | | | |
| 60A - D | 187 | 1013+93.64 | | CONST | LT. | 1013 +90.00 | | CONST | CL. | | | | | | | | | |
| 61 - D | 187 | 1014+00.50 | | CONST | LT. | | | | | | | | | | | | | |
| 61A - D | 187 | 1013 +94.00 | | CONST | RT. | 1013+20.00 | | CONST | CL. | | | | | | | | | |
| 62 - D | 187 | 1022+72.00 | | CONST | CL. | | | | | | | | | | | | | |
| 63 - D | 187 | 1022+72.00 | 110 | CONST | RT. | | | | | | | | | | | | | |
| 64 - D | 187 | 1013+88.12 | | CONST | RT. | | | | | | | | | | | | | |
| 64A - D | 187 | 1013+90.00 | | CONST | RT. | 1013+90.00 | | CONST | CL. | | | | | | | | | |
| 65 - D | 188 | 1037+40.00 | | CONST | CL. | | | | | | | | | | | | | |
| 66 - D | 188 | 1045+08.00 | | CONST | CL. | | | | | | | | | | | | | |
| 67 - D | 188 | 1047+55.00 | | CONST | CL. | | | | | | | | | | | | | |
| 68 - D | 188 | 1048+70.00 | | CONST | RT. | 1050+70.00 | | CONST | CL. | | | | | | | | | |
| 69 - D | 188 | 1049+30.00 | 125 | CONST | LT. | 1050+70.00 | | CONST | CL. | | | | | | | | | |
| 10 - DR | 188-189 | 1050+65.00 | | CONST | CL. | 1052+15.00 | 18 | CONST | RT. | | | | | | | | | |
| 70 - D | 188 | 1050+65.00 | | CONST | CL. | 1052+20.00 | | CONST | CL. | | | | | | | | | |
| 70A - D | 189 | 1053+95.00 | | CONST | CL. | 1053 +50.00 | | CONST | CL. | | | | | | | | | |
| 71 - D | 189 | 1054+08.45 | | CONST | LT. | | | | | | | | | | | | | |
| 71A - D | 189 | 1054+01.65 | | CONST | LT. | 1053 +93.00 | | CONST | CL. | | | | | | | | | |
| 72 - D | 189 | 1053+90.88 | | CONST | RT. | | | | | | | | | | | | | |
| 72A - D | 189 | 1053+95.00 | | CONST | RT. | | | | | | | | | | | | | |
| 73 - D | 189 | 1060+08.00 | | CONST | CL. | | | | | | | | | | | | | |
| 74 - D | 191 | 1067+40.00 | | CONST | CL. | | | | RT. | | | | | | | | | |
| 75 - D | 191 | 1067+40.00 | 95 | CONST | LT. | | | | | | | | | | | | | |
| 76 - D | 191 | 1070+92.00 | | CONST | CL. | | | | | | | | | | | | | |
| 77 - D | 191 | 1070+92.00 | | CONST | LT. | | | | | | | | | | | | | |
| 78 - D | 191 | 1075+85.00 | | CONST | CL. | | | | RT. | | | | | | | | | |
| 79 - D | 191 | 1075+85.00 | | CONST | LT. | | | | | | | | | | | | | |
| 80 - D | 192 | 1076+55.00 | | CONST | CL. | 1075 +85.00 | | CONST | CL. | | | | | | | | | |
| 81 - D | 192 | 1081+95.00 | | CONST | RT. | 1083+45.00 | | CONST | RT. | | | | | | | | | |
| 82 - D | 192 | 1082+95.00 | | CONST | RT. | | | | LT. | 286 | | | | | | | 34 | |
| TOTALS CARRIED TO SHEET 96 | | | | | | | | | | 286 | 244 | | 212 | | | | 152 | |

MED - 71 - 15.78



7885DSI4.DGN 11/30/99 RB

# DRAINAGE SUBSUMMARY

CALCULATED PS CHECKED WJC

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 202 PIPE REMOVED 24", AND UNDER | 202 CATCH BASIN REMOVED | 202 CATCH BASIN ABANDONED | 202 MANHOLE REMOVED | SPECIAL FILL AND PLUG EXISTING CONDUIT | 203 DITCH CLEANOUT | 519 PATCHING CONCRETE STRUCTURES | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB | 601 ROCK CHANNEL PROTECTION, TYPE A WITH FILTER | 601 ROCK CHANNEL PROTECTION, TYPE B WITH FILTER | 601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER | 602 CONCRETE MASONRY | 12" CONDUIT, TYPE E | 603 15" CONDUIT, TYPE B | 603 15" CONDUIT, TYPE C | 603 15" CONDUIT, TYPE F 707.05 TYPE C | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | LIN. FT. | EACH | EACH | EACH | LIN. FT. | LIN. FT. | SQ. FT. | SQ. YD. | CU. YD. | CU. YD. | CU. YD. | CU. YD. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | | | |
| 83 - D | 192 | 1087+40.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 84 - D | 193 | 1089+28.00 | | CONST | CL. | | | | LT. | | | | | | | | | | | | | | | | | | | |
| 11 - DR | 193 | 1092+30.00 | 80 | CONST | RT. | 1092+35.00 | 125 | CONST | RT. | 50 | 1 | | | | | | | | | | | | | | | | | |
| 85 - D | 194 | 1102+59.69 | | CONST | LT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | 90 | | | | |
| 85A - D | 194 | 1102+89.00 | | CONST | LT. | 1102 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | 25 | | | | |
| 86 - D | 194 | 1102+70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 87 - D | 194 | 1103+08.00 | | CONST | RT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | 54 | | | | |
| 87A - D | 194 | 1102+77.00 | | CONST | RT. | 1102 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | 18 | | | | |
| 88 - D | 194 | 1106+00.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 89 - D | 194 | 1108+80.00 | 8 | CONST | RT. | | | | | 6 | 1 | | | | | | | | | | | | | 4 | | | | |
| 90 - D | 195 | 1116+80.00 | 155 | CONST | LT. | | | | | | | | | | | | | 106.67 | | | 23.30 | | | | | | | |
| 91 - D | 195 | 1118+42.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 92 - D | 196 | 1127+90.00 | | CONST | CL. | 1127 +20.00 | | CONST | RT. | | | | | | | | | | 4.63 | | 0.84 | | | | | | | |
| 93 - D | 196 | 1134+38.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 94 - D | 196 | 1134+38.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 95 - D | 196 | 1134+38.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 96 - D | 197 | 1140+30.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 97 - D | 197 | 1143+90.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 98 - D | 197 | 1143+90.00 | | CONST | RT. | | | | | | | | | | | | | | | | | 100 | | | | | | |
| 99 - D | 197 | 1143+90.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 100 - D | 198 | 1152+40.00 | 75 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 101 - D | 198 | 1156+64.00 | 82 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 102 - D | 198 | 1156+80.00 | | CONST | RT. | 1158 +80.00 | | CONST | RT. | | | | | | | | 78.13 | | 164.89 | | | | | | | | | |
| 103 - D | 198 | 1158+55.00 | 100 | CONST | RT. | | | | | | | | | | | | | | | | 16.30 | | | | | | | |
| 104 - D | 198 | 1158+84.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 105 - D | 198 | 1158+84.00 | 92 | CONST | LT. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 106 - D | 199 | 1173+04.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 107 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 108 - D | 200 | 1185+80.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 57 | | | | |
| 109 - D | 200 | 1185+74.00 | 90 | CONST | RT. | | | | | | | | | | | | | | | | 0.60 | | | | | | | |
| 110 - D | 200 | 1184+20.00 | | CONST | RT. | 1187+10.00 | | CONST | RT. | | | | | | 190 | | | | | | | | | | | | | |
| 111 - D | 200 | 1186 +37.00 | | CONST | CL. | 1187+50.00 | | CONST | CL. | | | | | | | | | | | | | | | 113 | | | | |
| 111A - D | 200 | 1186 +37.00 | | CONST | CL. | 1187+30.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 112 - D | 201 | 1193+00.00 | | CONST | RT. | | | | LT. | | | | | | 75 | | 3.89 | 37.04 | | | | | | | | | | |
| 113 - D | 201 | 1198+41.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 8 | | | | |
| 114 - D | 201 | 1198+41.00 | 117 | CONST | LT. | | | | | | | | | | | | | | | 2.22 | 0.27 | | | | 42 | | | |
| 114A - D | 201 | 1198 +41.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 115 - D | 201 | 1199 +20.00 | 109 | CONST | LT. | 1198+50.00 | | CONST | LT. | | | | | | 60 | | | 98.79 | | | | | | | | | | |
| 116 - D | 201 | 1200+62.00 | 95 | CONST | RT. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 117 - D | 201 | 1200+62.00 | 186 | CONST | RT. | | | | | | | | | | | | 83.09 | | | | 0.27 | | | 8 | | | | |
| 118 - D | 202 | 1201+65.00 | 118 | CONST | LT. | 1202+34.00 | | CONST | CL. | | | | | | | | 4.77 | 31.41 | | | | | | | | | | |
| 119 - D | 202 | 1202+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 120 - D | 202 | 1205+87.00 | 300± | CONST | RT. | 1206+32.60 | 219± | CONST | RT. | | | | | | | | | | 11.11 | | 0.33 | | | | | | | |
| 121 - D | 202 | 1209+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 122 - D | 203 | 1216+76.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 123 - D | 203 | 1216+76.00 | | CONST | RT. | | | | | | | | | | | | | | | | 0.60 | | | | | | | |
| 124 - D | 203 | 1216+76.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 125 - D | 203 | 1221+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 126 - D | 203 | 1221+34.00 | | CONST | RT. | | | | | | | | | | | | | | | | 0.60 | | | | | | | |
| 12 - DR | 203 | 1223+69.00 | | CONST | CL. | 1227+00.00 | | CONST | LT. | 330 | | | | | | | | | | | | | | | | | | |
| 127 - D | 203 | 1223+69.00 | | CONST | LT. | 1227+00.00 | | CONST | LT. | | | | | | | | | | | | | | | 334 | | | | |
| 128 - D | 203 | 1223 +00.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 129 - D | 204 | 1227+59.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 130 - D | 204 | 1227 +59.00 | | CONST | CL. | 1227+59.00 | | CONST | CL. | | | | | | | | | | | | | | | 54 | | | | |
| 131 - D | 204 | 1230+79.00 | 87 | CONST | RT. | | | | | | | | | | | | 78.84 | | | | | | | | | | | |
| TOTALS CARRIED TO SHEET 93 | | | | | | | | | | 386 | 2 | | | | 325 | | 248.72 | 273.91 | 180.63 | 6.22 | 43.65 | 100 | | 673 | 186 | | | |

MED - 71 - 15.78



7885DSO.DGN 11/30/99 RB 7

# DRAINAGE SUBSUMMARY

CALCULATED PS | CHECKED WJC

603

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 18" CONDUIT, TYPE B | 18" CONDUIT, TYPE C | 18" TYPE C, 706.02 | 24" CONDUIT, TYPE C | 24" CONDUIT, TYPE C, 706.02 | 24" CONDUIT TYPE F, 707.05, TYPE C | 30" CONDUIT, TYPE C | 30" CONDUIT, TYPE C 706.02 | 30" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | 30" CONDUIT, TYPE F, 707.05, TYPE C | 36" CONDUIT, TYPE C | 36" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | 42" CONDUIT, TYPE C | 42" CONDUIT, TYPE C, 706.02 | 42" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | CONDUIT BORED OR JACKED 48" CONDUIT, TYPE A, 706.02, 3000 D-LOAD | 54" CONDUIT, TYPE C, AS PER PLAN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | | |
| 83 - D | 192 | 1087+40.00 | | CONST | CL. | | | | | | | | | | | 8 | | | | | | | | | | | | |
| 84 - D | 193 | 1089+28.00 | | CONST | CL. | | | | LT. | | | | | | | 8 | | | | | | | | | | | | |
| 11 - DR | 193 | 1092+30.00 | 80 | CONST | RT. | 1092+35.00 | 125 | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 85 - D | 194 | 1102+59.69 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 85A - D | 194 | 1102+89.00 | | CONST | LT. | 1102 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 86 - D | 194 | 1102+70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 87 - D | 194 | 1103+08.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 87A - D | 194 | 1102+77.00 | | CONST | RT. | 1102 +70.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 88 - D | 194 | 1106+00.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 89 - D | 194 | 1108+80.00 | 8 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 90 - D | 195 | 1116+80.00 | 155 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 91 - D | 195 | 1118+42.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 92 - D | 196 | 1127+90.00 | | CONST | CL. | 1127 +20.00 | | CONST | RT. | | | | | | | | | | | | | | 16 | | | | | |
| 93 - D | 196 | 1134+38.00 | | CONST | CL. | | | | | | 8 | | | | | | | | | 4 | | 4 | | | | | | |
| 94 - D | 196 | 1134+38.00 | | CONST | RT. | | | | | | 4 | | | | | | | | | | | | | | | | | |
| 95 - D | 196 | 1134+38.00 | | CONST | LT. | | | | | | 4 | | | | | | | | | | | | | | | | | |
| 96 - D | 197 | 1140+30.00 | | CONST | CL. | | | | | | | | | | | 4 | | | | 4 | | | | | | | | |
| 97 - D | 197 | 1143+90.00 | | CONST | CL. | | | | | | 8 | | | | | 4 | | | | | | | | | | | | |
| 98 - D | 197 | 1143+90.00 | | CONST | RT. | | | | | | 4 | | | | | | | | | | | | | | | | | |
| 99 - D | 197 | 1143+90.00 | | CONST | LT. | | | | | | 4 | | | | | | | | | | | | | | | | | |
| 100 - D | 198 | 1152+40.00 | 75 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 101 - D | 198 | 1156+64.00 | 82 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 102 - D | 198 | 1156+80.00 | | CONST | RT. | 1158 +80.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 103 - D | 198 | 1158+55.00 | 100 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 104 - D | 198 | 1158+84.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 105 - D | 198 | 1158+84.00 | 92 | CONST | LT. | | | | | | | | 4 | | | | | | | | | | | | | | | |
| 106 - D | 199 | 1173+04.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 107 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 108 - D | 200 | 1185+80.00 | | CONST | CL. | | | | | | | | | | | 8 | | | | | | | | | | | | |
| 109 - D | 200 | 1185+74.00 | 90 | CONST | RT. | | | | | | | | | | | 4 | | | 48 | | | | | | | | | |
| 110 - D | 200 | 1184+20.00 | | CONST | RT. | 1187+10.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 111 - D | 200 | 1186 +37.00 | | CONST | CL. | 1187+50.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 11A - D | 200 | 1186 +37.00 | | CONST | CL. | 1187+30.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 112 - D | 201 | 1193+00.00 | | CONST | RT. | | | | LT. | | | | | | | | | | | | | | | | | | | |
| 113 - D | 201 | 1198+41.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 114 - D | 201 | 1198+41.00 | 117 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 114A - D | 201 | 1198 +41.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 115 - D | 201 | 1199 +20.00 | 109 | CONST | LT. | 1198+50.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 116 - D | 201 | 1200+62.00 | 95 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 117 - D | 201 | 1200+62.00 | 186 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 118 - D | 202 | 1201+65.00 | 118 | CONST | LT. | 1202+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 119 - D | 202 | 1202+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | 8 | | | | | | | |
| 120 - D | 202 | 1205+87.00 | 300± | CONST | RT. | 1206+32.60 | 219± | CONST | RT. | | 70 | | | | | | | | | | | | | | | | | |
| 121 - D | 202 | 1209+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | 8 | | | | | | | |
| 122 - D | 203 | 1216+76.00 | | CONST | CL. | | | | | | | | | | | 8 | | | | | 4 | | | | | | | |
| 123 - D | 203 | 1216+76.00 | | CONST | RT. | | | | | | | | | | | 4 | | | 76 | | | | | | | | | |
| 124 - D | 203 | 1216+76.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 125 - D | 203 | 1221+34.00 | | CONST | CL. | | | | | | | | | | | 8 | | | | | | | | | | | | |
| 126 - D | 203 | 1221+34.00 | | CONST | RT. | | | | | | | | | | | 4 | | | 68 | | | | | | | | | |
| 12 - DR | 203 | 1223+69.00 | | CONST | CL. | 1227+00.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 127 - D | 203 | 1223+69.00 | | CONST | LT. | 1227+00.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 128 - D | 203 | 1223 +00.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 129 - D | 204 | 1227+59.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 130 - D | 204 | 1227 +59.00 | | CONST | CL. | 1227+59.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 131 - D | 204 | 1230+79.00 | 87 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 94** | | | | | | | | | | | 102 | | 4 | | | 60 | | | 192 | 28 | | 4 | 16 | | | | | |

MED - 71 - 15.78



7885DSHLDGN 11/30/99 RB 8

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 603 | | | 604 | | | | | | | | | | 670 | BENDS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 72" CONDUIT, TYPE A, 706.02 | 84" CONDUIT, TYPE A, 706.02 | CONDUIT MISC. INSITU LINER | CATCH BASIN NO. 3 | CATCH BASIN NO. 3A | CATCH BASIN NO. 4, AS PER PLAN | CATCH BASIN NO. 4A, AS PER PLAN | CATCH BASIN NO. 5, AS PER PLAN | CATCH BASIN NO. 5A, AS PER PLAN | CATCH BASIN NO. 2-2B | CATCH BASIN NO. 2-4, AS PER PLAN | CATCH BASIN RECONSTRUCTED TO GRADE | MANHOLE NO. 3 | MANHOLE RECONSTRUCTED TO GRADE | DITCH EROSION PROTECTION | 15" - 22.5° | 15" - 30° | 15" - 45° | 24" - 30° | | |
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | SQ. YD. | EACH | | | | | |
| 83 - D | 192 | 1087+40.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 84 - D | 193 | 1089+28.00 | | CONST | CL. | | | | LT. | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 11 - DR | 193 | 1092+30.00 | 80 | CONST | RT. | 1092+35.00 | 125 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | |
| 85 - D | 194 | 1102+59.69 | | CONST | LT. | | | | | | | | | 1 | | | | | | | | | | | 2 | | | | | |
| 85A - D | 194 | 1102+89.00 | | CONST | LT. | 1102 +70.00 | | CONST | CL. | | | | | 1 | | | | | | | | | | | | | | | | |
| 86 - D | 194 | 1102+70.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 87 - D | 194 | 1103+08.00 | | CONST | RT. | | | | | | | | | 1 | | | | | | | | | | | | 2 | | | | |
| 87A - D | 194 | 1102+77.00 | | CONST | RT. | 1102 +70.00 | | CONST | CL. | | | | | 1 | | | | | | | | | | | | | | | | |
| 88 - D | 194 | 1106+00.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 89 - D | 194 | 1108+80.00 | 8 | CONST | RT. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 90 - D | 195 | 1116+80.00 | 155 | CONST | LT. | | | | | | 6 | | | | | | | | | | | | | | | | | | | |
| 91 - D | 195 | 1118+42.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 92 - D | 196 | 1127+90.00 | | CONST | CL. | 1127 +20.00 | | CONST | RT. | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 93 - D | 196 | 1134+38.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 94 - D | 196 | 1134+38.00 | | CONST | RT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 95 - D | 196 | 1134+38.00 | | CONST | LT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 96 - D | 197 | 1140+30.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 97 - D | 197 | 1143+90.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 98 - D | 197 | 1143+90.00 | | CONST | RT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 99 - D | 197 | 1143+90.00 | | CONST | LT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 100 - D | 198 | 1152+40.00 | 75 | CONST | LT. | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| 101 - D | 198 | 1156+64.00 | 82 | CONST | LT. | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| 102 - D | 198 | 1156+80.00 | | CONST | RT. | 1158 +80.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | |
| 103 - D | 198 | 1158+55.00 | 100 | CONST | RT. | | | | | 6 | | | | | | | | | | | | | | | | | | | | |
| 104 - D | 198 | 1158+84.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 105 - D | 198 | 1158+84.00 | 92 | CONST | LT. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 106 - D | 199 | 1173+04.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 107 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 108 - D | 200 | 1185+80.00 | | CONST | CL. | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 109 - D | 200 | 1185+74.00 | 90 | CONST | RT. | | | | | | | | | | | | | 1 | | | | | | 125 | | | | | | |
| 110 - D | 200 | 1184+20.00 | | CONST | RT. | 1187+10.00 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | |
| 111 - D | 200 | 1186 +37.00 | | CONST | CL. | 1187+50.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 111A - D | 200 | 1186 +37.00 | | CONST | CL. | 1187+30.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 112 - D | 201 | 1193+00.00 | | CONST | RT. | | | | LT. | | | | | | | | | | | | | | | | | | | | | |
| 113 - D | 201 | 1198+41.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 114 - D | 201 | 1198+41.00 | 117 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | 2 | | | | |
| 114A - D | 201 | 1198 +41.00 | | CONST | RT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 115 - D | 201 | 1199 +20.00 | 109 | CONST | LT. | 1198+50.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | |
| 116 - D | 201 | 1200+62.00 | 95 | CONST | RT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 117 - D | 201 | 1200+62.00 | 186 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 118 - D | 202 | 1201+65.00 | 118 | CONST | LT. | 1202+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | |
| 119 - D | 202 | 1202+34.00 | | CONST | CL. | | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 120 - D | 202 | 1205+87.00 | 300± | CONST | RT. | 1206+32.60 | 219± | CONST | RT. | | | | | | | | | | | | | 1 | | | | | | | | |
| 121 - D | 202 | 1209+34.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 122 - D | 203 | 1216+76.00 | | CONST | CL. | | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 123 - D | 203 | 1216+76.00 | | CONST | RT. | | | | | | | | | | | | | 1 | | | | | | 125 | | | | | | |
| 124 - D | 203 | 1216+76.00 | | CONST | LT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 125 - D | 203 | 1221+34.00 | | CONST | CL. | | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 126 - D | 203 | 1221+34.00 | | CONST | RT. | | | | | | | | | | | | | 1 | | | | | | 125 | | | | | | |
| 12 - DR | 203 | 1223+69.00 | | CONST | CL. | 1227+00.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | |
| 127 - D | 203 | 1223+69.00 | | CONST | LT. | 1227+00.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | |
| 128 - D | 203 | 1223 +00.00 | | CONST | LT. | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 129 - D | 204 | 1227+59.00 | | CONST | CL. | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 130 - D | 204 | 1227 +59.00 | | CONST | CL. | 1227+59.00 | | CONST | CL. | | | | | | 1 | | | | | | | | | 125 | | | | | | |
| 131 - D | 204 | 1230+79.00 | 87 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS CARRIED TO SHEET 95 | | | | | | | | | | 6 | 6 | | | 4 | 17 | 4 | 7 | 3 | | | 2 | 5 | | 3875 | | | | | | |

CALCULATED PS CHECKED WJC

# DRAINAGE SUBSUMMARY

MED - 71 - 15.78



7885DS12.DGN 11/30/99 RB 9

# DRAINAGE SUBSUMMARY

CALCULATED PS CHECKED WJC

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | SS837 24" LINER PIPE ASTM F894 OR 24" LINER PIPE, 707.12 OR 24" LINER PIPE, 707.42 OR 26.278" LINER PIPE SS937 LIN. FT. | SS837 27" LINER PIPE ASTM F894 WITH 33" (MIN.) INLET OPENING OR 30" LINER PIPE, 707.12 WITH 33" (MIN.) INLET OPENING 30" LINER PIPE, 707.42 WITH 33" (MIN.) INLET OPENING OR 30.03" LINER PIPE, SS937 WITH 33" (MIN.) INLET OPENING LIN. FT. | SS837 27" LINER PIPE ASTM F894 WITH 36" (MIN.) INLET OPENING OR 30"LINER PIPE 707.12 WITH 36" (MIN.) INLET OPENING OR 30" LINER PIPE 707.42 WITH 36" (MIN.) INLET OPENING OR 30.03" LINER PIPE SS937 WITH 36" (MIN.) INLET OPENING LIN. FT. | SS837 33" LINER PIPE ASTM F894 WITH 36" (MIN.) INLET OPENING OR 36" LINER PIPE, 707.12 OR 36" LINER PIPE, 707.42 OR 33.784" LINER PIPE SS937 WITH 36" (MIN.) INLET OPENING LIN. FT. | SS837 36" LINER PIPE, 707.12 LIN. FT. | SS837 36" LINER PIPE, 707.12 WITH 39" (MIN.) INLET OPENING LIN. FT. | SS837 36" LINER PIPE ASTM F894 WITH 42" (MIN.) INLET OPENING OR 42" LINER PIPE, 707.12 OR 36" LINER PIPE, 707.42 WITH 42" (MIN.) INLET OPENING OR 39.416" LINER PIPE, SS937 WITH 42" (MIN.) INLET OPENING LIN. FT. | SS837 60" LINER PIPE ASTM F894 OR 66" LINER PIPE, 707.12 LIN. FT. | BACKFILL FOR LINER PIPE CU. YD. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83 - D | 192 | 1087+40.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 84 - D | 193 | 1089+28.00 | | CONST | CL. | | | | LT. | | | | | | | | | | |
| 11 - DR | 193 | 1092+30.00 | 80 | CONST | RT. | 1092+35.00 | 125 | CONST | RT. | | | | | | | | | | |
| 85 - D | 194 | 1102+59.69 | | CONST | LT. | | | | | | | | | | | | | | |
| 85A - D | 194 | 1102+89.00 | | CONST | LT. | 1102 +70.00 | | CONST | CL. | | | | | | | | | | |
| 86 - D | 194 | 1102+70.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 87 - D | 194 | 1103+08.00 | | CONST | RT. | | | | | | | | | | | | | | |
| 87A - D | 194 | 1102+77.00 | | CONST | RT. | 1102 +70.00 | | CONST | CL. | | | | | | | | | | |
| 88 - D | 194 | 1106+00.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 89 - D | 194 | 1108+80.00 | 8 | CONST | RT. | | | | | | | | | | | | | | |
| 90 - D | 195 | 1116+80.00 | 155 | CONST | LT. | | | | | | | | | | | | | | |
| 91 - D | 195 | 1118+42.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 92 - D | 196 | 1127+90.00 | | CONST | CL. | 1127 +20.00 | | CONST | RT. | | | | | | | | | | |
| 93 - D | 196 | 1134+38.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 94 - D | 196 | 1134+38.00 | | CONST | RT. | | | | | | | | | | | | | | |
| 95 - D | 196 | 1134+38.00 | | CONST | LT. | | | | | | | | | | | | | | |
| 96 - D | 197 | 1140+30.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 97 - D | 197 | 1143+90.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 98 - D | 197 | 1143+90.00 | | CONST | RT. | | | | | | | | | | | | | | |
| 99 - D | 197 | 1143+90.00 | | CONST | LT. | | | | | | | | | | | | | | |
| 100 - D | 198 | 1152+40.00 | 75 | CONST | LT. | | | | | | | | | | | | | | |
| 101 - D | 198 | 1156+64.00 | 82 | CONST | LT. | | | | | | | | | | | | | | |
| 102 - D | 198 | 1156+80.00 | | CONST | RT. | 1158 +80.00 | | CONST | RT. | | | | | | | | | | |
| 103 - D | 198 | 1158+55.00 | 100 | CONST | RT. | | | | | | | | | | | | | | |
| 104 - D | 198 | 1158+84.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 105 - D | 198 | 1158+84.00 | 92 | CONST | LT. | | | | | | | | | | | | | | |
| 106 - D | 199 | 1173+04.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 107 - D | | NOT USED | | | | | | | | | | | | | | | | | |
| 108 - D | 200 | 1185+80.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 109 - D | 200 | 1185+74.00 | 90 | CONST | RT. | | | | | | | | | | | | | | |
| 110 - D | 200 | 1184+20.00 | | CONST | RT. | 1187+10.00 | | CONST | RT. | | | | | | | | | | |
| 111 - D | 200 | 1186 +37.00 | | CONST | CL. | 1187+50.00 | | CONST | CL. | | | | | | | | | | |
| 111A - D | 200 | 1186 +37.00 | | CONST | CL. | 1187+30.00 | | CONST | CL. | | | | | | | | | | |
| 112 - D | 201 | 1193+00.00 | | CONST | RT. | | | | LT. | | | 206 | | | | | | 45 | |
| 113 - D | 201 | 1198+41.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 114 - D | 201 | 1198+41.00 | 117 | CONST | LT. | | | | | | | | | | | | | | |
| 114A - D | 201 | 1198 +41.00 | | CONST | RT. | | | | | | | | | | | | | | |
| 115 - D | 201 | 1199 +20.00 | 109 | CONST | LT. | 1198+50.00 | | CONST | LT. | | | | | | | | | | |
| 116 - D | 201 | 1200+62.00 | 95 | CONST | RT. | | | | | | | | | | | | | | |
| 117 - D | 201 | 1200+62.00 | 186 | CONST | RT. | | | | | | | | | | | | | | |
| 118 - D | 202 | 1201+65.00 | 118 | CONST | LT. | 1202+34.00 | | CONST | CL. | | 138 | | | | | | | 30 | |
| 119 - D | 202 | 1202+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 120 - D | 202 | 1205+87.00 | 300± | CONST | RT. | 1206+32.60 | 219± | CONST | RT. | | | | | | | | | | |
| 121 - D | 202 | 1209+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 122 - D | 203 | 1216+76.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 123 - D | 203 | 1216+76.00 | | CONST | RT. | | | | | | | | | | | | | | |
| 124 - D | 203 | 1216+76.00 | | CONST | LT. | | | | | | | | | | | | | | |
| 125 - D | 203 | 1221+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 126 - D | 203 | 1221+34.00 | | CONST | RT. | | | | | | | | | | | | | | |
| 12 - DR | 203 | 1223+69.00 | | CONST | CL. | 1227+00.00 | | CONST | LT. | | | | | | | | | | |
| 127 - D | 203 | 1223+69.00 | | CONST | LT. | 1227+00.00 | | CONST | LT. | | | | | | | | | | |
| 128 - D | 203 | 1223 +00.00 | | CONST | LT. | | | | | | | | | | | | | | |
| 129 - D | 204 | 1227+59.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 130 - D | 204 | 1227 +59.00 | | CONST | CL. | 1227+59.00 | | CONST | CL. | | | | | | | | | | |
| 131 - D | 204 | 1230+79.00 | 87 | CONST | RT. | | | | | | | | | | | | | | |
| TOTALS CARRIED TO SHEET 96 | | | | | | | | | | | 138 | 206 | | | | | | 75 | |

MED - 71 - 15.78



7885DS14.DGN 11/30/99 RB

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 202 | | | | SPECIAL | 203 | 519 | 601 | | | | 602 | | 603 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | PIPE REMOVED 24", AND UNDER | CATCH BASIN REMOVED | CATCH BASIN ABANDONED | MANHOLE REMOVED | FILL AND PLUG EXISTING CONDUIT | DITCH CLEANOUT | PATCHING CONCRETE STRUCTURES | RIPRAP USING 6" REINFORCED CONCRETE SLAB | ROCK CHANNEL PROTECTION, TYPE A WITH FILTER | ROCK CHANNEL PROTECTION, TYPE B WITH FILTER | ROCK CHANNEL PROTECTION, TYPE C WITH FILTER | CONCRETE MASONRY | 12" CONDUIT, TYPE E | 15" CONDUIT, TYPE B | 15" CONDUIT, TYPE C | 15" CONDUIT, TYPE F 707.05 TYPE C | | | |
| | | | | | | | | | | LIN. FT. | EACH | EACH | EACH | LIN. FT. | LIN. FT. | SQ. FT. | SQ. YD. | CU. YD. | CU. YD. | CU. YD. | CU. YD. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | | | |
| 132 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 133 - D | 204 | 1231+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 134 - D | 205 | 1240+15.00 | | CONST | RT. | 1240+74.00 | | CONST | LT. | | | | | | | | 5.56 | 37.04 | | | | | | | | | | |
| 135 - D | 205 | 1242+34.00 | | CONST | CL. | 1242+34.00 | | CONST | LT. | | | | | | | | | | | 15.40 | 0.27 | | | 34 | | | | |
| 136 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 - DR | 206 | 1253+39.00 | 75 | CONST | LT. | | | | | 80 | 1 | | | | | | | | | | | | | | | | | |
| 137 - D | 206-207 | 1262+35.00 | 137 | CONST | RT. | 1263+40.00 | | CONST | LT. | | | | | | 55 | | 4.11 | 22.22 | | | | | | | | | | |
| 138 - D | 207 | 1263+84.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 139 - D | 207 | 1267+34.00 | 75 | CONST | RT. | 1267+34.00 | | CONST | LT. | 75 | 1 | | | | 50 | | | | 8.33 | | | | | 4 | | | | |
| 140 - D | 207 | 1269+93.96 | | CONST | RT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | | 42 | | | |
| 140A- D | 207 | 1270+13.00 | | CONST | RT. | 1270 +34.00 | | CONST | CL. | | | | | | | | | | | | | | | 30 | | | | |
| 141 - D | 207 | 1270+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 142 - D | 207 | 1270+40.50 | | CONST | LT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | 4 | | 44 | | | |
| 142A- D | 207 | 1270+23.03 | | CONST | LT. | 1270 +34.00 | | CONST | CL. | | | | | | | | | | | | | | | 25 | | | | |
| 143 - D | 207 | 1271+68.00 | 141 | CONST | RT. | 1271+68.00 | | CONST | LT. | | | | | | | | | 23.56 | | | | | | | | | | |
| 144 - D | 208 | 1278+34.00 | 159 | CONST | LT. | | | | | | | | | | | | | 50.00 | | | | | | | | | | |
| 14 - DR | 208 | 1279+34.00 | 75 | CONST | LT. | | | | | 65 | 1 | | | | | | | | | | | | | | | | | |
| 145 - D | 208 | 1281+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 146 - D | 209 | 1293+94.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 147 - D | 209 | 1300+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 148 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 149 - D | 210 | 1312+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 150 - D | 212 | 1338+38.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 151 - D | 212 | 1338+38.00 | 95 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 152 - D | 213 | 1344+19.00 | 95 | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 153 - D | 213 | 1344+76.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 154 - D | 213 | 1341+00.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 155 - D | 214 | 1351+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 156 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 157 - D | 215 | 1366+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 158 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 159 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 160 - D | 216 | 1381+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| 160A- D | 217 | 1394.35.00 | | CONST | CL. | 1396+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 161 - D | 177 | 149 +95.00 | | S.R. 18 | LT. | 150 +02.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | | | 48 | | | |
| 161A- D | 177 | 149 +87.00 | | S.R. 18 | LT. | 152 +15.00 | | S.R. 18 | LT. | | | | | 230 | | | | | | | | | | 4 | | | | |
| 162 - D | 177 | 149 +95.00 | | S.R. 18 | LT. | 152 +00.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | | 228 | | | | |
| 163 - D | 177 | 152 +00.00 | | S.R. 18 | LT. | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | | 15 | | | | |
| 164 - D | 177 | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRANGER ROAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 165 - D | 408 | 47 +51.82 | | GRANGER RD | RT. | 47 +61.19 | | GRANGER RD | LT. | | | | | | | | | | | | | | 32 | | | | | |
| 166 - D | 408 | 47 +61.19 | | GRANGER RD | LT. | 46 +94.00± | | GRANGER RD | LT. | | | | | | | | | | | | | | | 80 | | | | |
| 167 - D | 409 | 51 +10.78 | | GRANGER RD | RT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | | 24 | | | |
| 168 - D | 409 | 51 +20.15 | | GRANGER RD | LT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | 22 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S.R. 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 169 - D | 194 | 899 +10.00 | | S.R. 3 | LT. | | | | | | | | | | | | | 54.81 | | | 8.03 | | | | | | | |
| 170 - D | 194 | 903 +65.00 | | S.R. 3 | LT. | | | | | | | | | | | | | | | | 2.20 | | | | | | | |
| 170A- D | 194 | 81 +33.00 | | SR3-RAMP B | LT. | | | | | | | | | | | | | | | 2.00 | 0.27 | | | | 22 | | | |
| 170B- D | 194 | 83 +34.91 | | SR3-RAMP C | RT. | | | | | | | | | | 40 | | | | | 2.00 | 0.27 | | | 30 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 93** | | | | | | | | | | 220 | 3 | | | 230 | 145 | | 9.67 | 187.63 | 8.33 | 27.40 | 12.12 | | 36 | 512 | 180 | | | |

CALCULATED PS CHECKED WJC

# DRAINAGE SUBSUMMARY

MED - 71 - 15.78

89
940

7885DS10.DGN 11/30/99 RB 10

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 603 18" CONDUIT, TYPE B LIN. FT. | 18" CONDUIT, TYPE C LIN. FT. | 18" TYPE C, 706.02 LIN. FT. | 24" CONDUIT, TYPE C LIN. FT. | 24" CONDUIT, TYPE C, 706.02 LIN. FT. | 24" CONDUIT TYPE F, 707.05, TYPE C LIN. FT. | 30" CONDUIT, TYPE C LIN. FT. | 30" CONDUIT, TYPE C 706.02 LIN. FT. | 30" CONDUIT, TYPE C, 707.01, ALUMINUM COATED LIN. FT. | 30" CONDUIT, TYPE F, 707.05, TYPE C LIN. FT. | 36" CONDUIT, TYPE C LIN. FT. | 36" CONDUIT, TYPE C, 707.01, ALUMINUM COATED LIN. FT. | 42" CONDUIT, TYPE C LIN. FT. | 42" CONDUIT, TYPE C, 706.02 LIN. FT. | 42" CONDUIT, TYPE C, 707.01, ALUMINUM COATED LIN. FT. | CONDUIT BORED OR JACKED 48" CONDUIT, TYPE A, 706.02, 3000 D-LOAD LIN. FT. | 54" CONDUIT, TYPE C, AS PER PLAN LIN. FT. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 132 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 133 - D | 204 | 1231+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 134 - D | 205 | 1240+15.00 | | CONST | RT. | 1240+74.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 135 - D | 205 | 1242+34.00 | | CONST | CL. | 1242+34.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 136 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 - DR | 206 | 1253+39.00 | 75 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 137 - D | 206-207 | 1262+35.00 | 137 | CONST | RT. | 1263+40.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 138 - D | 207 | 1263+84.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 139 - D | 207 | 1267+34.00 | 75 | CONST | RT. | 1267+34.00 | | CONST | LT. | | | 20 | | | | | | | | | | | | | | | | |
| 140 - D | 207 | 1269+93.96 | | CONST | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 140A- D | 207 | 1270+13.00 | | CONST | RT. | 1270 +34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 141 - D | 207 | 1270+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 142 - D | 207 | 1270+40.50 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 142A- D | 207 | 1270+23.03 | | CONST | LT. | 1270 +34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | |
| 143 - D | 207 | 1271+68.00 | 141 | CONST | RT. | 1271+68.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| 144 - D | 208 | 1278+34.00 | 159 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 14 - DR | 208 | 1279+34.00 | 75 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 145 - D | 208 | 1281+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 146 - D | 209 | 1293+94.00 | | CONST | CL. | | | | | | 4 | | | | | | | | | | | | | | | | | |
| 147 - D | 209 | 1300+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 148 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 149 - D | 210 | 1312+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 150 - D | 212 | 1338+38.00 | | CONST | CL. | | | | | | | | 8 | | | | | | | | | | | | | | | |
| 151 - D | 212 | 1338+38.00 | 95 | CONST | RT. | | | | | | | | 4 | | | | | | | | | | | | | | | |
| 152 - D | 213 | 1344+19.00 | 95 | CONST | RT. | | | | | | | | 4 | | | | | | | | | | | | | | | |
| 153 - D | 213 | 1344+76.00 | | CONST | CL. | | | | | | | | 8 | | | 4 | | | | | | | | | | | | |
| 154 - D | 213 | 1341+00.00 | | CONST | CL. | | | | | | | | 8 | | | | | | | | | | | | | | | |
| 155 - D | 214 | 1351+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 156 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 157 - D | 215 | 1366+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 158 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 159 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 160 - D | 216 | 1381+34.00 | | CONST | CL. | | | | | | | | | | | | | | | | | | | | | | | |
| 160A- D | 217 | 1394.35.00 | | CONST | CL. | 1396+34.00 | | CONST | CL. | | 194 | | | | | | | | | | | | | | | | | |
| S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 161 - D | 177 | 149 +95.00 | | S.R. 18 | LT. | 150 +02.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | | | | | | |
| 161A- D | 177 | 149 +87.00 | | S.R. 18 | LT. | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | | | | | | |
| 162 - D | 177 | 149 +95.00 | | S.R. 18 | LT. | 152 +00.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | | | | | | |
| 163 - D | 177 | 152 +00.00 | | S.R. 18 | LT. | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | | | | | | |
| 164 - D | 177 | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRANGER ROAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 165 - D | 408 | 47 +51.82 | | GRANGER RD | RT. | 47 +61.19 | | GRANGER RD | LT. | | | | | | | | | | | | | | | | | | | |
| 166 - D | 408 | 47 +61.19 | | GRANGER RD | LT. | 46 +94.00± | | GRANGER RD | LT. | | | | | | | | | | | | | | | | | | | |
| 167 - D | 409 | 51 +10.78 | | GRANGER RD | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 168 - D | 409 | 51 +20.15 | | GRANGER RD | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S.R. 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 169 - D | 194 | 899 +10.00 | | S.R. 3 | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 170 - D | 194 | 903 +65.00 | | S.R. 3 | LT. | | | | | | | 8 | | | | | | | | | | | | | | | | |
| 170A- D | 194 | 81 +33.00 | | SR3-RAMP B | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 170B- D | 194 | 83 +34.91 | | SR3-RAMP C | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 94** | | | | | | | | | | | 198 | 28 | 32 | | | 4 | | | | | | | | 8 | | | | |

CALCULATED PS CHECKED WJC

# DRAINAGE SUBSUMMARY

MED - 71 - 15.78

90
940

7885DSIL.DGN 11/30/99 RB

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 603 | | | 604 | | | | | | | | | | 670 | BENDS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 72" CONDUIT, TYPE A, 706.02 | 84" CONDUIT, TYPE A, 706.02 | CONDUIT MISC. INSITU LINER | CATCH BASIN NO. 3 | CATCH BASIN NO. 3A | CATCH BASIN NO. 4, AS PER PLAN | CATCH BASIN NO. 4A, AS PER PLAN | CATCH BASIN NO. 5, AS PER PLAN | CATCH BASIN NO. 5A, AS PER PLAN | CATCH BASIN NO. 2-2B | CATCH BASIN NO. 2-4, AS PER PLAN | CATCH BASIN RECONSTRUCTED TO GRADE | MANHOLE NO. 3 | MANHOLE RECONSTRUCTED TO GRADE | DITCH EROSION PROTECTION | 15" - 22.5° | 15" - 30° | 15" - 45° | 24" - 30° | | |
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | SQ. YD. | EACH | | | | | |
| 132 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 133 - D | 204 | 1231+34.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 134 - D | 205 | 1240+15.00 | | CONST | RT. | 1240+74.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | |
| 135 - D | 205 | 1242+34.00 | | CONST | CL. | 1242+34.00 | | CONST | LT. | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 136 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 - DR | 206 | 1253+39.00 | 75 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 137 - D | 206-207 | 1262+35.00 | 137 | CONST | RT. | 1263+40.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | |
| 138 - D | 207 | 1263+84.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 139 - D | 207 | 1267+34.00 | 75 | CONST | RT. | 1267+34.00 | | CONST | LT. | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 140 - D | 207 | 1269+93.96 | | CONST | RT. | | | | | | | | | 1 | | | | | | | | | | | 2 | | | | |
| 140A- D | 207 | 1270+13.00 | | CONST | RT. | 1270 +34.00 | | CONST | CL. | | | | | 1 | | | | | | | | | | | | | | | |
| 141 - D | 207 | 1270+34.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 142 - D | 207 | 1270+40.50 | | CONST | LT. | | | | | | | | | 1 | | | | | | | | | | | 2 | | | | |
| 142A- D | 207 | 1270+23.03 | | CONST | LT. | 1270 +34.00 | | CONST | CL. | | | | | 1 | | | | | | | | | | | | | | | |
| 143 - D | 207 | 1271+68.00 | 141 | CONST | RT. | 1271+68.00 | | CONST | LT. | | | | | | | | | | | | | | | | | | | | |
| 144 - D | 208 | 1278+34.00 | 159 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 - DR | 208 | 1279+34.00 | 75 | CONST | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 145 - D | 208 | 1281+34.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 146 - D | 209 | 1293+94.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 250 | | | | | | |
| 147 - D | 209 | 1300+34.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 148 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 149 - D | 210 | 1312+34.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 150 - D | 212 | 1338+38.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 151 - D | 212 | 1338+38.00 | 95 | CONST | RT. | | | | | | | | | | | | 1 | | | | | | 125 | | | | | | |
| 152 - D | 213 | 1344+19.00 | 95 | CONST | RT. | | | | | | | | | | | | 1 | | | | | | 125 | | | | | | |
| 153 - D | 213 | 1344+76.00 | | CONST | CL. | | | | | | | | | | | 1 | | | | | | | 125 | | | | | | |
| 154 - D | 213 | 1341+00.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 155 - D | 214 | 1351+34.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 156 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 157 - D | 215 | 1366+34.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 158 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 159 - D | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 160 - D | 216 | 1381+34.00 | | CONST | CL. | | | | | | | | | | 1 | | | | | | | | 125 | | | | | | |
| 160A- D | 217 | 1394.35.00 | | CONST | CL. | 1396+34.00 | | CONST | CL. | | | | | | 1 | | | | | | | | 125 | | | | | | |
| S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 161 - D | 177 | 149 +95.00 | | S.R. 18 | LT. | 150 +02.00 | | S.R. 18 | LT. | | | | | | | | 1 | | | | | | 125 | | | | | | |
| 161A- D | 177 | 149 +87.00 | | S.R. 18 | LT. | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | | | 1 | | | | | | | | | |
| 162 - D | 177 | 149 +95.00 | | S.R. 18 | LT. | 152 +00.00 | | S.R. 18 | LT. | | | | | | | | | 1 | | | | | | | | | | | |
| 163 - D | 177 | 152 +00.00 | | S.R. 18 | LT. | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | 1 | | | | | | | | | | | |
| 164 - D | 177 | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| GRANGER ROAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 165 - D | 408 | 47 +51.82 | | GRANGER RD | RT. | 47 +61.19 | | GRANGER RD | LT. | | | | | 1 | | | | | | | | | | | | | | | |
| 166 - D | 408 | 47 +61.19 | | GRANGER RD | LT. | 46 +94.00± | | GRANGER RD | LT. | | | | | 1 | | | | | | | | | | | | | | | |
| 167 - D | 409 | 51 +10.78 | | GRANGER RD | RT. | | | | | | | | | 1 | | | | | | | | | | | 2 | | | | |
| 168 - D | 409 | 51 +20.15 | | GRANGER RD | LT. | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| S.R. 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 169 - D | 194 | 899 +10.00 | | S.R. 3 | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 170 - D | 194 | 903 +65.00 | | S.R. 3 | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 170A- D | 194 | 81 +33.00 | | SR3-RAMP B | LT. | | | | | | | | | 1 | | | | | | | | | | | | | | 2 | |
| 170B- D | 194 | 83 +34.91 | | SR3-RAMP C | RT. | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| TOTALS CARRIED TO SHEET 95 | | | | | | | | | | | | | | 10 | 15 | 1 | 3 | | 2 | | | 2 | 2500 | | 2 | | 2 | | |

CALCULATED PS CHECKED WJC

# DRAINAGE SUBSUMMARY

MED - 71 - 15.78

91
940

7885DS12.DGN 11/30/99 RB 12

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | SS837 24" LINER PIPE ASTM F894 OR 24" LINER PIPE, 707.12 OR 24" LINER PIPE, 707.42 OR 26.278" LINER PIPE SS937 | SS837 27" LINER PIPE ASTM F894 WITH 33" (MIN.) INLET OPENING OR 30" LINER PIPE, 707.12 WITH 33" (MIN.) INLET OPENING 30" LINER PIPE, 707.42 WITH 33" (MIN.) INLET OPENING OR 30.03" LINER PIPE, SS937 WITH 33" (MIN.) INLET OPENING | SS837 27" LINER PIPE ASTM F894 WITH 36" (MIN.) INLET OPENING OR 30" LINER PIPE 707.12 WITH 36" (MIN.) INLET OPENING OR 30" LINER PIPE 707.42 WITH 36" (MIN.) INLET OPENING OR 30.03" LINER PIPE SS937 WITH 36" (MIN.) INLET OPENING | SS837 33" LINER PIPE ASTM F894 WITH 36" (MIN.) INLET OPENING OR 36" LINER PIPE, 707.12 OR 36" LINER PIPE, 707.42 OR 33.784" LINER PIPE SS937 WITH 36" (MIN.) INLET OPENING | SS837 36" LINER PIPE, 707.12 | SS837 36" LINER PIPE, 707.12 WITH 39" (MIN.) INLET OPENING | SS837 36" LINER PIPE ASTM F894 WITH 42" (MIN.) INLET OPENING OR 42" LINER PIPE, 707.12 OR 36" LINER PIPE, 707.42 WITH 42" (MIN.) INLET OPENING OR 39.416" LINER PIPE, SS937 WITH 42" (MIN.) INLET OPENING | SS837 60" LINER PIPE ASTM F894 OR 66" LINER PIPE, 707.12 | SS837 BACKFILL FOR LINER PIPE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | CU. YD. | |
| 132 - D | | NOT USED | | | | | | | | | | | | | | | | | |
| 133 - D | 204 | 1231+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 134 - D | 205 | 1240+15.00 | | CONST | RT. | 1240+74.00 | | CONST | LT. | | | | | | | | | 230 | 147 |
| 135 - D | 205 | 1242+34.00 | | CONST | CL. | 1242+34.00 | | CONST | LT. | | | | | | | | | | |
| 136 - D | | NOT USED | | | | | | | | | | | | | | | | | |
| 13 - DR | 206 | 1253+39.00 | 75 | CONST | LT. | | | | | | | | | | | | | | |
| 137 - D | 206-207 | 1262+35.00 | 137 | CONST | RT. | 1263+40.00 | | CONST | LT. | | 388 | | | | | | | | 85 |
| 138 - D | 207 | 1263+84.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 139 - D | 207 | 1267+34.00 | 75 | CONST | RT. | 1267+34.00 | | CONST | LT. | | | | | | | | | | |
| 140 - D | 207 | 1269+93.96 | | CONST | RT. | | | | | | | | | | | | | | |
| 140A D | 207 | 1270+13.00 | | CONST | RT. | 1270 +34.00 | | CONST | CL. | | | | | | | | | | |
| 141 - D | 207 | 1270+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 142 - D | 207 | 1270+40.50 | | CONST | LT. | | | | | | | | | | | | | | |
| 142A D | 207 | 1270+23.03 | | CONST | LT. | 1270 +34.00 | | CONST | CL. | | | | | | | | | | |
| 143 - D | 207 | 1271+68.00 | 141 | CONST | RT. | 1271+68.00 | | CONST | LT. | | | | | | | | 268 | | 113 |
| 144 - D | 208 | 1278+34.00 | 159 | CONST | LT. | | | | | | | | | | | | | | |
| 14 - DR | 208 | 1279+34.00 | 75 | CONST | LT. | | | | | | | | | | | | | | |
| 145 - D | 208 | 1281+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 146 - D | 209 | 1293+94.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 147 - D | 209 | 1300+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 148 - D | | NOT USED | | | | | | | | | | | | | | | | | |
| 149 - D | 210 | 1312+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 150 - D | 212 | 1338+38.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 151 - D | 212 | 1338+38.00 | 95 | CONST | RT. | | | | | | | | | | | | | | |
| 152 - D | 213 | 1344+19.00 | 95 | CONST | RT. | | | | | | | | | | | | | | |
| 153 - D | 213 | 1344+76.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 154 - D | 213 | 1341+00.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 155 - D | 214 | 1351+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 156 - D | | NOT USED | | | | | | | | | | | | | | | | | |
| 157 - D | 215 | 1366+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 158 - D | | NOT USED | | | | | | | | | | | | | | | | | |
| 159 - D | | NOT USED | | | | | | | | | | | | | | | | | |
| 160 - D | 216 | 1381+34.00 | | CONST | CL. | | | | | | | | | | | | | | |
| 160A- D | 217 | 1394.35.00 | | CONST | CL. | 1396+34.00 | | CONST | CL. | | | | | | | | | | |
| S.R. 18 | | | | | | | | | | | | | | | | | | | |
| 161 - D | 177 | 149 +95.00 | | S.R. 18 | LT. | 150 +02.00 | | S.R. 18 | LT. | | | | | | | | | | |
| 161A- D | 177 | 149 +87.00 | | S.R. 18 | LT. | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | | |
| 162 - D | 177 | 149 +95.00 | | S.R. 18 | LT. | 152 +00.00 | | S.R. 18 | LT. | | | | | | | | | | |
| 163 - D | 177 | 152 +00.00 | | S.R. 18 | LT. | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | | |
| 164 - D | 177 | 152 +15.00 | | S.R. 18 | LT. | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| GRANGER ROAD | | | | | | | | | | | | | | | | | | | |
| 165 - D | 408 | 47 +51.82 | | GRANGER RD | RT. | 47 +61.19 | | GRANGER RD | LT. | | | | | | | | | | |
| 166 - D | 408 | 47 +61.19 | | GRANGER RD | LT. | 46 +94.00± | | GRANGER RD | LT. | | | | | | | | | | |
| 167 - D | 409 | 51 +10.78 | | GRANGER RD | RT. | | | | | | | | | | | | | | |
| 168 - D | 409 | 51 +20.15 | | GRANGER RD | LT. | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| S.R. 3 | | | | | | | | | | | | | | | | | | | |
| 169 - D | 194 | 899 +10.00 | | S.R. 3 | LT. | | | | | | | | | | | | | | |
| 170 - D | 194 | 903 +65.00 | | S.R. 3 | LT. | | | | | | | | | | | | | | |
| 170A- D | 194 | 81 +33.00 | | SR3-RAMP B | LT. | | | | | | | | | | | | | | |
| 170B- D | 194 | 83 +34.91 | | SR3-RAMP C | RT. | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 96** | | | | | | | | | | | 388 | | | | | | 268 | 230 | 345 |

CALCULATED PS CHECKED WJC

# DRAINAGE SUBSUMMARY

MED - 71 - 15.78

92
940

7885DS14.DGN 11/30/99 RB

# DRAINAGE SUBSUMMARY

CALCULATED PS CHECKED WJC

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 202 PIPE REMOVED 24", AND UNDER (LIN. FT.) | 202 CATCH BASIN REMOVED (EACH) | 202 CATCH BASIN ABANDONED (EACH) | 202 MANHOLE REMOVED (EACH) | SPECIAL FILL AND PLUG EXISTING CONDUIT (LIN. FT.) | 203 DITCH CLEANOUT (LIN. FT.) | 519 PATCHING CONCRETE STRUCTURES (SQ. FT.) | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB (SQ. YD.) | 601 ROCK CHANNEL PROTECTION, TYPE A WITH FILTER (CU. YD.) | 601 ROCK CHANNEL PROTECTION, TYPE B WITH FILTER (CU. YD.) | 601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (CU. YD.) | 602 CONCRETE MASONRY (CU. YD.) | 603 12" CONDUIT, TYPE E (LIN. FT.) | 603 15" CONDUIT, TYPE B (LIN. FT.) | 603 15" CONDUIT, TYPE C (LIN. FT.) | 603 15" CONDUIT, TYPE F 707.05 TYPE C (LIN. FT.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SOUTHBOUND REST AREA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 171 - D | 198 | 1161+61.27 | | CONST | LT. | 1162+29.92 | | CONST | LT. | | | | | | | | | | | 2.00 | 0.33 | | | | | | | |
| 172 - D | 198 | 1162+29.92 | | CONST | LT. | 1162+39.09 | | CONST | LT. | | | | | | | | | | | | | | 30 | | | | | |
| NORTHBOUND REST AREA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 173 - D | 202 | 1206+32.33 | | CONST | RT. | 1206+32.60 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 173A- D | 202 | 1206+32.60 | | CONST | RT. | 1207+10.94 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| 173B- D | 202 | 1207+10.94 | | CONST | RT. | 1207+30.09 | | CONST | RT. | | | | | | | | | | | | | | | 32 | | | | |
| S.R. 303 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 174 - D | 207 | 47 +55.00 | | S.R. 303 | RT. | | | | | | | | | | 50 | | | | | | | | | | | | | |
| 174A - D | 207 | 45 +80.00 | | S.R. 303 | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 175 - D | 207 | 48 +75.00 | 50 | S.R. 303 | LT. | 49 +05.00 | 43.5 | S.R. 303 | LT. | | | | | | | | | | | 3.33 | 0.27 | | | 31 | | | | |
| 176 - D | 207 | 49 +05.00 | 43.5 | S.R. 303 | LT. | 51 +00.00 | 43.5 | S.R. 303 | LT. | | | | | | | | | | | | | | | 195 | | | | |
| 177 - D | 207 | 51 +00.00 | 43.5 | S.R. 303 | LT. | 51 +30.00 | 50 | S.R. 303 | LT. | | | | | | | | | | | | | | | 31 | | | | |
| 178 - D | 207 | 49 +80.00 | 52 | S.R. 303 | RT. | 49 +25.00 | 39 | S.R. 303 | RT. | | | | | | | | | | | 3.33 | 0.27 | | | 47 | | | | |
| 179 - D | 207 | 49 +25.00 | 39 | S.R. 303 | RT. | 51 +00.00 | 39 | S.R. 303 | RT. | | | | | | | | | | | | | | | 175 | | | | |
| 180 - D | 207 | 51 +00.00 | 39 | S.R. 303 | RT. | 51 +62.00 | 51.5 | S.R. 303 | RT. | | | | | | | | | | | | | | | 63 | | | | |
| I.R. 271 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 181 - D | 427 | 987 +64.00 | 32 | I.R. 271 | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 182 - D | 427 | 987 +55.86 | 34 | I.R. 271 | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 183 - D | 427 | 989 +15.84 | 30 | I.R. 271 | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 184 - D | 427 | 990 +52.27 | 50 | I.R. 271 | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 185 - D | 427 | 993 +70.40 | 32 | I.R. 271 | LT. | | | | | | | | | | | | | | | | | | | | | | | |
| 186 - D | 427 | 986 +50.00 | 48 | I.R. 271 | RT. | 987 +64.00 | | I.R. 271 | RT. | | | | | | | | | | | | | | | | | | | |
| 187 - D | 428 | 986 +56.44 | 50 | I.R. 271 | RT. | | | | | | | | | | | | | | | | | | | 4 | | | | |
| S.R. 303 RAMPS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 180A - D | 492 | 45 +50.00 | 1.5 | S.R. 303 | RT. | RAMP C-D | | | RT. | | | | | | | | | | | | | | 47 | | | | | |
| 180B - D | 492 | 46 +00.00 | 1.5 | S.R. 303 | RT. | RAMP C-D | | | RT. | | | | | | | | | | | | | | | | | | | |
| 180C - D | 492 | 46 +84.54 | 38.91 | S.R. 303 | RT. | RAMP C-D | | | | | | | | | | | 24.04 | | 108.80 | | 4.70 | | | | | | | |
| 15-DR | 492 | 45 +50.00 | | S.R. 303 | RT. | RAMP C-D | | | LT. | 50 | 1 | | | | | | | | | | | | | | | | | |
| 16-DR | 492 | 46 +00.00 | | S.R. 303 | RT. | RAMP C-D | | | LT. | | | 1 | | | | | | | | | | | | | | | | |
| 171-D THRU 16-DR TOTALS | | | | | | | | | | 50 | 1 | 1 | | | 50 | | 24.04 | | 108.80 | 8.66 | 5.57 | | 77 | 578 | | | |
| TOTALS FROM SHEET NO. 77 | | | | | | | | | | 1495 | 9 | | | | 300 | 168 | 528.25 | 395.84 | 648.84 | 133.80 | 96.64 | | 22 | 754 | 178 | | |
| TOTALS FROM SHEET NO. 81 | | | | | | | | | | 650 | 3 | 2 | 1 | 145 | 150 | | 70.90 | 50.37 | 144.31 | 31.23 | 25.41 | | | 969 | 354 | | |
| TOTALS FROM SHEET NO. 85 | | | | | | | | | | 386 | 2 | | | | 325 | | 248.72 | 273.91 | 180.63 | 6.22 | 43.65 | 100 | | 673 | 186 | | |
| TOTALS FROM SHEET NO. 89 | | | | | | | | | | 220 | 3 | | | 230 | 145 | | 9.67 | 187.63 | 8.33 | 27.40 | 12.12 | | 36 | 512 | 180 | | |
| SUBTOTALS | | | | | | | | | | 2801 | 18 | 3 | 1 | 375 | 970 | 168 | 881.58 | 907.75 | 1090.91 | 207.31 | 183.39 | 100 | 135 | 3486 | 898 | | |
| **TOTALS CARRIED TO GENERAL SUMMARY** | | | | | | | | | | **2801** | **18** | **3** | **1** | **375** | **970** | **168** | **882** | **908** | **1091** | **208** | **183.4** | **100** | **135** | **3486** | **898** | | |

MED - 71 - 15.78



7885DSI0.DGN 11/30/99 RB 13

# DRAINAGE SUBSUMMARY

CALCULATED PS | CHECKED WJC

MED - 71 - 15.78



| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 603 18" CONDUIT, TYPE B | 603 18" CONDUIT, TYPE C | 603 18" TYPE C, 706.02 | 603 24" CONDUIT, TYPE C | 603 24" CONDUIT, TYPE C, 706.02 | 603 24" CONDUIT TYPE F, 707.05, TYPE C | 603 30" CONDUIT, TYPE C | 603 30" CONDUIT, TYPE C 706.02 | 603 30" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | 603 30" CONDUIT, TYPE F, 707.05, TYPE C | 603 36" CONDUIT, TYPE C | 603 36" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | 603 42" CONDUIT, TYPE C | 603 42" CONDUIT, TYPE C, 706.02 | 603 42" CONDUIT, TYPE C, 707.01, ALUMINUM COATED | 603 CONDUIT BORED OR JACKED 48" CONDUIT, TYPE A, 706.02, 3000 D-LOAD | 603 54" CONDUIT, TYPE C, AS PER PLAN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | | |
| SOUTHBOUND REST AREA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 171 - D | 198 | 1161+61.27 | | CONST | LT. | 1162+29.92 | | CONST | LT. | 65 | | | | | | | | | | | | | | | | | | |
| 172 - D | 198 | 1162+29.92 | | CONST | LT. | 1162+39.09 | | CONST | LT. | | | | | | | | | | | | | | | | | | | |
| NORTHBOUND REST AREA | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 173 - D | 202 | 1206+32.33 | | CONST | RT. | 1206+32.60 | | CONST | RT. | | 24 | | | | | | | | | | | | | | | | | |
| 173A- D | 202 | 1206+32.60 | | CONST | RT. | 1207+10.94 | | CONST | RT. | 72 | | | | | | | | | | | | | | | | | | |
| 173B- D | 202 | 1207+10.94 | | CONST | RT. | 1207+30.09 | | CONST | RT. | | | | | | | | | | | | | | | | | | | |
| S.R. 303 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 174 - D | 207 | 47 +55.00 | | S.R. 303 | RT. | | | | | | | | 8 | | | | | | | | | | | | | | | |
| 174A - D | 207 | 45 +80.00 | | S.R. 303 | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| 175 - D | 207 | 48 +75.00 | 50 | S.R. 303 | LT. | 49 +05.00 | 43.5 | S.R. 303 | LT. | | | | | | | | | | | | | | | | | | | |
| 176 - D | 207 | 49 +05.00 | 43.5 | S.R. 303 | LT. | 51 +00.00 | 43.5 | S.R. 303 | LT. | | | | | | | | | | | | | | | | | | | |
| 177 - D | 207 | 51 +00.00 | 43.5 | S.R. 303 | LT. | 51 +30.00 | 50 | S.R. 303 | LT. | | | | | | | | | | | | | | | | | | | |
| 178 - D | 207 | 49 +80.00 | 52 | S.R. 303 | RT. | 49 +25.00 | 39 | S.R. 303 | RT. | | | | | | | | | | | | | | | | | | | |
| 179 - D | 207 | 49 +25.00 | 39 | S.R. 303 | RT. | 51 +00.00 | 39 | S.R. 303 | RT. | | | | | | | | | | | | | | | | | | | |
| 180 - D | 207 | 51 +00.00 | 39 | S.R. 303 | RT. | 51 +62.00 | 51.5 | S.R. 303 | RT. | | | | | | | | | | | | | | | | | | | |
| I.R. 271 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 181 - D | 427 | 987 +64.00 | 32 | I.R. 271 | RT. | | | | | | 4 | | | | | | | | | | | | | | | | | |
| 182 - D | 427 | 987 +55.86 | 34 | I.R. 271 | LT. | | | | | | 4 | | | | | | | | | 4 | | | | | | | | |
| 183 - D | 427 | 989 +15.84 | 30 | I.R. 271 | LT. | | | | | | | | | | | | | | | 8 | | | | | | | | |
| 184 - D | 427 | 990 +52.27 | 50 | I.R. 271 | LT. | | | | | | | | | | | | | | | 8 | | | | | | | | |
| 185 - D | 427 | 993 +70.40 | 32 | I.R. 271 | LT. | | | | | | | | | | | | | | | 8 | | | | | | | | |
| 186 - D | 427 | 986 +50.00 | 48 | I.R. 271 | RT. | 987 +64.00 | | I.R. 271 | RT. | | 110 | | | | | | | | | | | | | | | | | |
| 187 - D | 428 | 986 +56.44 | 50 | I.R. 271 | RT. | | | | | | | | | | | | | | | | | | | | | | | |
| S.R. 303 RAMPS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 180A - D | 492 | 45 +50.00 | 1.5 | S.R. 303 | RT. | RAMP C-D | | | RT. | | | | | | | | | | | | | | | | | | | |
| 180B - D | 492 | 46 +00.00 | 1.5 | S.R. 303 | RT. | RAMP C-D | | | RT. | 6 | | | | | | | | | | | | | | | | | | |
| 180C - D | 492 | 46 +84.54 | 38.91 | S.R. 303 | RT. | RAMP C-D | | | | | | | | | | | 43 | | | | | | | | | | | |
| 15-DR | 492 | 45 +50.00 | | S.R. 303 | RT. | RAMP C-D | | | LT. | | | | | | | | | | | | | | | | | | | |
| 16-DR | 492 | 46 +00.00 | | S.R. 303 | RT. | RAMP C-D | | | LT. | | | | | | | | | | | | | | | | | | | |
| 171-D THRU 16-DR TOTALS | | | | | | | | | | 137 | 142 | | 8 | | | | 43 | | | 28 | | | | | | 48 | |
| TOTALS FROM SHEET NO. 78 | | | | | | | | | | 12 | | | 1225 | 88 | | | 76 | | | 52 | | | 15 | 20 | | | |
| TOTALS FROM SHEET NO. 82 | | | | | | | | | | | 1266 | | 40 | 28 | 140 | | | 8 | | 16 | 16 | | | | 128 | | |
| TOTALS FROM SHEET NO. 86 | | | | | | | | | | | 102 | | 4 | | | 60 | | | 192 | 28 | | 4 | 16 | | | | |
| TOTALS FROM SHEET NO. 90 | | | | | | | | | | | 198 | 28 | 32 | | | 4 | | | | | | | 8 | | | | |
| SUBTOTALS | | | | | | | | | | 149 | 1708 | 28 | 1309 | 146 | 140 | 64 | 119 | 8 | 192 | 124 | 16 | 4 | 39 | 20 | 128 | 48 | | |
| **TOTALS CARRIED TO GENERAL SUMMARY** | | | | | | | | | | **149** | **1708** | **28** | **1309** | **146** | **140** | **64** | **119** | **8** | **192** | **124** | **16** | **4** | **39** | **20** | **128** | **48** | | |

7885DSIL.DGN 11/30/99 RB 14

# DRAINAGE SUBSUMMARY

CALCULATED PS | CHECKED WJC

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | 603 | | | 604 | | | | | | | | | | 670 | BENDS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 72" CONDUIT, TYPE A, 706.02 | 84" CONDUIT, TYPE A, 706.02 | CONDUIT MISC. INSITU LINER | CATCH BASIN NO. 3 | CATCH BASIN NO. 3A | CATCH BASIN NO. 4, AS PER PLAN | CATCH BASIN NO. 4A, AS PER PLAN | CATCH BASIN NO. 5, AS PER PLAN | CATCH BASIN NO. 5A, AS PER PLAN | CATCH BASIN NO. 2-2B | CATCH BASIN NO. 2-4, AS PER PLAN | CATCH BASIN RECONSTRUCTED TO GRADE | MANHOLE NO. 3 | MANHOLE RECONSTRUCTED TO GRADE | DITCH EROSION PROTECTION | 15" - 22.5° | 15" - 30° | 15" - 45° | 24" - 30° |
| | | | | | | | | | | | | | | | | | | | | | | | | | EACH | | | |
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | SQ. YD. | | | | |
| SOUTHBOUND REST AREA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 171 - D | 198 | 1161+61.27 | | CONST | LT. | 1162+29.92 | | CONST | LT. | | | | | 1 | | | | | | | | | | | | | | | |
| 172 - D | 198 | 1162+29.92 | | CONST | LT. | 1162+39.09 | | CONST | LT. | | | | | 1 | | | | | | | | | | | | | | | |
| NORTHBOUND REST AREA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 173 - D | 202 | 1206+32.33 | | CONST | RT. | 1206+32.60 | | CONST | RT. | | | | | 1 | | | | | | | | | | | | | | | |
| 173A- D | 202 | 1206+32.60 | | CONST | RT. | 1207+10.94 | | CONST | RT. | | | | 1 | | | | | | | | | | | | | | | | |
| 173B- D | 202 | 1207+10.94 | | CONST | RT. | 1207+30.09 | | CONST | RT. | | | | 1 | | | | | | | | | | | | | | | | |
| S.R. 303 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 174 - D | 207 | 47 +55.00 | | S.R. 303 | RT. | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 174A - D | 207 | 45 +80.00 | | S.R. 303 | RT. | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 175 - D | 207 | 48 +75.00 | 50 | S.R. 303 | LT. | 49 +05.00 | 43.5 | S.R. 303 | LT. | | | | | | | | | | | | | 1 | | | | | | | |
| 176 - D | 207 | 49 +05.00 | 43.5 | S.R. 303 | LT. | 51 +00.00 | 43.5 | S.R. 303 | LT. | | | | | | | | | | | | | 1 | | | | | | | |
| 177 - D | 207 | 51 +00.00 | 43.5 | S.R. 303 | LT. | 51 +30.00 | 50 | S.R. 303 | LT. | | | | | | | | | | 1 | | | | | | | | | | |
| 178 - D | 207 | 49 +80.00 | 52 | S.R. 303 | RT. | 49 +25.00 | 39 | S.R. 303 | RT. | | | | | | | | | | | | | 1 | | | | | | | |
| 179 - D | 207 | 49 +25.00 | 39 | S.R. 303 | RT. | 51 +00.00 | 39 | S.R. 303 | RT. | | | | | | | | | | | | | 1 | | | | | | | |
| 180 - D | 207 | 51 +00.00 | 39 | S.R. 303 | RT. | 51 +62.00 | 51.5 | S.R. 303 | RT. | | | | | | | | | | 1 | | | | | | | | | | |
| I.R. 271 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 181 - D | 427 | 987 +64.00 | 32 | I.R. 271 | RT. | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| 182 - D | 427 | 987 +55.86 | 34 | I.R. 271 | LT. | | | | | | | | | | | | | 1 | | | | | | 125 | | | | | |
| 183 - D | 427 | 989 +15.84 | 30 | I.R. 271 | LT. | | | | | | | | | | | | | 1 | | | | | | 125 | | | | | |
| 184 - D | 427 | 990 +52.27 | 50 | I.R. 271 | LT. | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| 185 - D | 427 | 993 +70.40 | 32 | I.R. 271 | LT. | | | | | | | | | | | | | 1 | | | | | | 125 | | | | | |
| 186 - D | 427 | 986 +50.00 | 48 | I.R. 271 | RT. | 987 +64.00 | | I.R. 271 | RT. | | | | | | | | 1 | | | | | | | 125 | | | | | |
| 187 - D | 428 | 986 +56.44 | 50 | I.R. 271 | RT. | | | | | | | | | | | | 1 | | | | | | | 125 | | | | | |
| S.R. 303 | RAMPS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 180A - D | 492 | 45 +50.00 | 1.5 | S.R. 303 | RT. | RAMP C-D | | | RT. | | | | | 1 | | | | | | | | | | | | | | | |
| 180B - D | 492 | 46 +00.00 | 1.5 | S.R. 303 | RT. | RAMP C-D | | | RT. | | | | | 1 | | | | | | | | | | | | | | | |
| 180C - D | 492 | 46 +84.54 | 38.91 | S.R. 303 | RT. | RAMP C-D | | | | | | | | | | | | | | | | | | | | | | | |
| 15-DR | 492 | 45 +50.00 | | S.R. 303 | RT. | RAMP C-D | | | LT. | | | | | | | | | | | | | | | | | | | | |
| 16-DR | 492 | 46 +00.00 | | S.R. 303 | RT. | RAMP C-D | | | LT. | | | | | | | | | | | | | | | | | | | | |
| 171-D THRU 16-DR TOTALS | | | | | | | | | | | | | 2 | 5 | 1 | | 2 | 3 | 2 | | 1 | 6 | | 625 | | | | | |
| TOTALS FROM SHEET NO. 79 | | | | | | | | | | | | | | 4 | 16 | | 1 | 1 | | 1 | | 2 | | 2250 | | | | | |
| TOTALS FROM SHEET NO. 83 | | | | | | | | | | | | 398 | | 12 | 17 | 2 | 6 | | | | 1 | 5 | 1 | 3250 | | | | | |
| TOTALS FROM SHEET NO. 87 | | | | | | | | | | 6 | 6 | | | 4 | 17 | 4 | 7 | 3 | | | 2 | 5 | | 3875 | | | | | |
| TOTALS FROM SHEET NO. 91 | | | | | | | | | | | | | | 10 | 15 | 1 | 3 | | 2 | | | 2 | | 2500 | | | | | |
| SUBTOTALS | | | | | | | | | | | | 398 | | 35 | 66 | 7 | 19 | 7 | 4 | 1 | 4 | 20 | 1 | 12500 | | | | | |
| **TOTALS CARRIED TO GENERAL SUMMARY** | | | | | | | | | | 6 | 6 | 398 | 2 | 35 | 66 | 7 | 19 | 7 | 4 | 1 | 4 | 20 | 1 | 12500 | | | | | |

MED - 71 - 15.78

95
940

7885DSI2.DGN 11/30/99 RB 15

# DRAINAGE SUBSUMMARY

CALCULATED PS CHECKED WJC

MED - 71 - 15.78

96/940

| REFERENCE NO. | SHEET REFERENCE NO. | STATION | OFFSET | ℄ REFERENCE | SIDE | STATION | OFFSET | ℄ REFERENCE | SIDE | SS837 24" LINER PIPE ASTM F894 OR 24" LINER PIPE, 707.12 OR 24" LINER PIPE, 707.42 OR 26.278" LINER PIPE SS937 | SS837 27" LINER PIPE ASTM F894 WITH 33" (MIN.) INLET OPENING OR 30" LINER PIPE, 707.12 WITH 33" (MIN.) INLET OPENING 30" LINER PIPE, 707.42 WITH 33" (MIN.) INLET OPENING OR 30.03" LINER PIPE, SS937 WITH 33" (MIN.) INLET OPENING | SS837 27" LINER PIPE ASTM F894 WITH 36" (MIN.) INLET OPENING OR 30"LINER PIPE 707.12 WITH 36" (MIN.) INLET OPENING OR 30" LINER PIPE 707.42 WITH 36" (MIN.) INLET OPENING OR 30.03" LINER PIPE SS937 WITH 36" (MIN.) INLET OPENING | SS837 33" LINER PIPE ASTM F894 WITH 36" (MIN.) INLET OPENING OR 36" LINER PIPE, 707.12 OR 36" LINER PIPE, 707.42 OR 33.784" LINER PIPE SS937 WITH 36" (MIN.) INLET OPENING | SS837 36" LINER PIPE, 707.12 | SS837 36" LINER PIPE, 707.12 WITH 39" (MIN.) INLET OPENING | SS837 36" LINER PIPE ASTM F894 WITH 42" (MIN.) INLET OPENING OR 42" LINER PIPE, 707.12 OR 36" LINER PIPE, 707.42 WITH 42" (MIN.) INLET OPENING OR 39.416" LINER PIPE, SS937 WITH 42" (MIN.) INLET OPENING | SS837 60" LINER PIPE ASTM F894 OR 66" LINER PIPE, 707.12 | SS837 BACKFILL FOR LINER PIPE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | CU. YD. | |
| SOUTHBOUND REST AREA | | | | | | | | | | | | | | | | | | | |
| 171 - D | 198 | 1161+61.27 | | CONST | LT. | 1162+29.92 | | CONST | LT. | | | | | | | | | | |
| 172 - D | 198 | 1162+29.92 | | CONST | LT. | 1162+39.09 | | CONST | LT. | | | | | | | | | | |
| NORTHBOUND REST AREA | | | | | | | | | | | | | | | | | | | |
| 173 - D | 202 | 1206+32.33 | | CONST | RT. | 1206+32.60 | | CONST | RT. | | | | | | | | | | |
| 173A- D | 202 | 1206+32.60 | | CONST | RT. | 1207+10.94 | | CONST | RT. | | | | | | | | | | |
| 173B- D | 202 | 1207+10.94 | | CONST | RT. | 1207+30.09 | | CONST | RT. | | | | | | | | | | |
| S.R. 303 | | | | | | | | | | | | | | | | | | | |
| 174 - D | 207 | 47 +55.00 | | S.R. 303 | RT. | | | | | | | | | | | | | | |
| 174A - D | 207 | 45 +80.00 | | S.R. 303 | RT. | | | | | | | | | | | | | | |
| 175 - D | 207 | 48 +75.00 | 50 | S.R. 303 | LT. | 49 +05.00 | 43.5 | S.R. 303 | LT. | | | | | | | | | | |
| 176 - D | 207 | 49 +05.00 | 43.5 | S.R. 303 | LT. | 51 +00.00 | 43.5 | S.R. 303 | LT. | | | | | | | | | | |
| 177 - D | 207 | 51 +00.00 | 43.5 | S.R. 303 | LT. | 51 +30.00 | 50 | S.R. 303 | LT. | | | | | | | | | | |
| 178 - D | 207 | 49 +80.00 | 52 | S.R. 303 | RT. | 49 +25.00 | 39 | S.R. 303 | RT. | | | | | | | | | | |
| 179 - D | 207 | 49 +25.00 | 39 | S.R. 303 | RT. | 51 +00.00 | 39 | S.R. 303 | RT. | | | | | | | | | | |
| 180 - D | 207 | 51 +00.00 | 39 | S.R. 303 | RT. | 51 +62.00 | 51.5 | S.R. 303 | RT. | | | | | | | | | | |
| I.R. 271 | | | | | | | | | | | | | | | | | | | |
| 181 - D | 427 | 987 +64.00 | 32 | I.R. 271 | RT. | | | | | | | | | | | | | | |
| 182 - D | 427 | 987 +55.86 | 34 | I.R. 271 | LT. | | | | | | | | | | | | | | |
| 183 - D | 427 | 989 +15.84 | 30 | I.R. 271 | LT. | | | | | | | | | | | | | | |
| 184 - D | 427 | 990 +52.27 | 50 | I.R. 271 | LT. | | | | | | | | | | | | | | |
| 185 - D | 427 | 993 +70.40 | 32 | I.R. 271 | LT. | | | | | | | | | | | | | | |
| 186 - D | 427 | 986 +50.00 | 48 | I.R. 271 | RT. | 987 +64.00 | | I.R. 271 | RT. | | | | | | | | | | |
| 187 - D | 428 | 986 +56.44 | 50 | I.R. 271 | RT. | | | | | | | | | | | | | | |
| S.R. 303 RAMPS | | | | | | | | | | | | | | | | | | | |
| 180A - D | 492 | 45 +50.00 | 1.5 | S.R. 303 | RT. | RAMP C-D | | | RT. | | | | | | | | | | |
| 180B - D | 492 | 46 +00.00 | 1.5 | S.R. 303 | RT. | RAMP C-D | | | RT. | | | | | | | | | | |
| 180C - D | 492 | 46 +84.54 | 38.91 | S.R. 303 | RT. | RAMP C-D | | | | | | | | | | | | | |
| 15-DR | 492 | 45 +50.00 | | S.R. 303 | RT. | RAMP C-D | | | LT. | | | | | | | | | | |
| 16-DR | 492 | 46 +00.00 | | S.R. 303 | RT. | RAMP C-D | | | LT. | | | | | | | | | | |
| 171-D THRU 16-DR TOTALS | | | | | | | | | | | | | | | | | | | |
| TOTALS FROM SHEET NO. 80 | | | | | | | | | | | 88 | | | 384 | 296 | 356 | | 426 | |
| TOTALS FROM SHEET NO. 84 | | | | | | | | | | 286 | 244 | | 212 | | | | | 152 | |
| TOTALS FROM SHEET NO. 88 | | | | | | | | | | | 138 | 206 | | | | | | 75 | |
| TOTALS FROM SHEET NO. 92 | | | | | | | | | | | 388 | | | | | 268 | 230 | 345 | |
| SUBTOTALS | | | | | | | | | | 286 | 858 | 206 | 212 | 384 | 296 | 624 | 230 | 998 | |
| **TOTALS CARRIED TO GENERAL SUMMARY** | | | | | | | | | | **286** | **858** | **206** | **212** | **384** | **296** | **624** | **230** | **998** | |

7885DS14.DGN 11/30/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN SQ. YD. | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 FEET | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 FEET | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN FEET | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN FEET | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE EACH | 4" x 4" x 4" TEE EACH | 4" 90° BEND EACH | 4" 45° BEND EACH | 4" 22.5° BEND EACH | 4" PLUG EACH | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - SM | 172 | 833+02.00 | 12 | 833+10.00 | 18 | | | | | | | 8 | | | | | | | 1 | | | | | | | |
| 2 - SM | 172 | 833+10.00 | 18 | 833+20.00 | 12 | | 7 | | | | | 10 | T | | 1 | | 1 | | | | | | | | | |
| 3 - SM | 172 | 833+20.00 | 12 | 837+16.00 | 12 | | | | | 396 | | | | | | | | | 1 | | | | | | | |
| 4 - SM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 - SM | 172-173 | 837+20.00 | 12 | 839+66.00 | 12 | | | 7 | | 246 | | | F | | | 1 | 1 | | 1 | | | | | | | |
| 6 - SM | 173 | 839+70.00 | 12 | 842+66.00 | 12 | | | 15 | | 296 | | | M | | | 1 | | | 1 | | | | | | | |
| 7 - SM | 173 | 842+70.00 | 12 | 845+16.00 | 12 | | | 7 | | 246 | | | F | | | 1 | 1 | | 1 | | | | | | | |
| 8 - SM | 173 | 845+20.00 | 12 | 847+66.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | | |
| 9 - SM | 173 | 847+70.00 | 12 | 850+16.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | | |
| 10 - SM | 173-174 | 850+20.00 | 12 | 852+66.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | | |
| 11 - SM | 174 | 852+70.00 | 12 | 855+66.00 | 12 | | | 7 | | 296 | | | D | | | 1 | 1 | | 1 | | | | | | | |
| 12 - SM | 174 | 855+70.00 | 12 | 858+31.00 | 12 | | 1 | | | 261 | | | L5 | | | | | 1 | 1 | | | | | | | |
| 13 - SM | 174 | 858+35.00 | 12 | 860+96.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 | | | | | | | |
| 14 - SM | 174-175 | 861+00.00 | 12 | 863+61.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 | | | | | | | |
| 15 - SM | 175 | 863+65.00 | 12 | 866+26.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 | | | | | | | |
| 16 - SM | 175 | 866+30.00 | 12 | 869+06.00 | 12 | | | 20 | | 276 | | | M | | | 1 | | | 1 | | | | | | | |
| 17 - SM | 175 | 869+10.00 | 12 | 871+86.00 | 12 | 4 | | 16 | | 276 | | | B | | | 1 | | | 1 | | | | | | | |
| 18 - SM | 175 | 871+90.00 | 12 | 874+64.00 | 12 | 4 | | 16 | | 274 | | | B | | | 1 | | | 1 | | | | | | | |
| 19 - SM | 175-176 | 874+68.00 | 12 | 877+41.00 | 12 | | | 20 | | 273 | | | M | | | 1 | | | 1 | | | | | | | |
| 20 - SM | 176 | 877+45.00 | 12 | 880+31.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 | | | | | | | |
| 21 - SM | 176 | 880+35.00 | 12 | 883+21.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 | | | | | | | |
| 22 - SM | 176 | 883+25.00 | 12 | 886+14.00 | 12 | 4 | | 16 | | 289 | | | B | | | 1 | | | 1 | | | | | | | |
| 23 - SM | 176-177 | 886+18.00 | 12 | 889+00.00 | 12 | | | 15 | | 282 | | | M | | | 1 | | | 1 | | | | | | | |
| 24 - SM | 177 | 891+28.00 | 12 | 891+70.00 | 24 | | | | | | | 42 | | | | | | | 1 | | | | | | | |
| 25 - SM | 177 | 891+70.00 | 24 | 891+80.00 | 12 | | | 7 | | | | 10 | J | | 1 | | 1 | | | | | | | | | |
| 26 - SM | 177 | 891+80.00 | 12 | 894+66.00 | 12 | | | | | 286 | | | | | | | | | 1 | | | | | | | |
| 27 - SM | 177 | 894+70.00 | 12 | 896+46.00 | 12 | 4 | | 16 | | 176 | | | B | | | 1 | | | 1 | | | | | | | |
| 28 - SM | 177 | 896+50.00 | 12 | 898+96.00 | 12 | | | 7 | | 246 | | | D | | | 1 | 1 | | 1 | | | | | | | |
| 29 - SM | 177-178 | 899+00.00 | 12 | 901+46.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | | |
| 30 - SM | 178 | 901+50.00 | 12 | 903+96.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | | |
| 31 - SM | 178 | 904+00.00 | 12 | 906+61.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 | | | | | | | |
| 32 - SM | 178 | 906+65.00 | 12 | 909+46.00 | 12 | | | 7 | | 281 | | | D | | | 1 | 1 | | 1 | | | | | | | |
| 33 - SM | 178 | 909+50.00 | 12 | 911+96.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | | |
| 34 - SM | 178-179 | 912+00.00 | 12 | 914+61.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 | | | | | | | |
| 35 - SM | 179 | 914+65.00 | 12 | 917+21.00 | 12 | | | 7 | | 256 | | | D | | | 1 | 1 | | 1 | | | | | | | |
| 36 - SM | 179 | 917+25.00 | 12 | 919+71.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | | |
| 37 - SM | 179 | 919+75.00 | 12 | 922+21.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | | |
| 38 - SM | 179 | 922+25.00 | 12 | 924+66.00 | 12 | | | 7 | | 241 | | | D | | | 1 | 1 | | 1 | | | | | | | |
| 39 - SM | 179-180 | 924+70.00 | 12 | 926+96.00 | 12 | 4 | | 16 | | 226 | | | B | | | 1 | | | 1 | | | | | | | |
| 40 - SM | 180 | 927+00.00 | 12 | 929+26.00 | 12 | 4 | | 16 | | 226 | | | B | | | 1 | | | 1 | | | | | | | |
| 41 - SM | 180 | 929+30.00 | 12 | 931+64.00 | 12 | 4 | | 16 | | 234 | | | B | | | 1 | | | 1 | | | | | | | |
| 42 - SM | 180 | 931+68.00 | 12 | 934+16.00 | 12 | | | 7 | | 248 | | | D | | | 1 | 1 | | 1 | | | | | | | |
| 43 - SM | 180 | 934+20.00 | 12 | 936+76.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 | | | | | | | |
| 44 - SM | 180-181 | 936+80.00 | 12 | 939+36.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 | | | | | | | |
| 45 - SM | 181 | 939+40.00 | 12 | 941+96.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 | | | | | | | |
| 46 - SM | 181 | 942+00.00 | 12 | 944+64.00 | 12 | 4 | | 16 | | 264 | | | B | | | 1 | | | 1 | | | | | | | |
| 47 - SM | 181 | 944+68.00 | 12 | 947+56.00 | 12 | | | 7 | | 288 | | | D | | | 1 | 1 | | 1 | | | | | | | |
| 48 - SM | 181 | 947+60.00 | 12 | 950+46.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 | | | | | | | |
| 49 - SM | 181-182 | 950+50.00 | 12 | 953+36.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 | | | | | | | |
| 50 - SM | 182 | 953+40.00 | 12 | 956+34.00 | 12 | 4 | | 16 | | 294 | | | B | | | 1 | | | 1 | | | | | | | |
| 51 - SM | 182 | 956+38.00 | 12 | 958+96.00 | 12 | | | 7 | | 258 | | | D | | | 1 | 1 | | 1 | | | | | | | |
| 52 - SM | 182 | 959+00.00 | 12 | 961+64.00 | 12 | 4 | | 16 | | 264 | | | B | | | 1 | | | 1 | | | | | | | |
| 53 - SM | 182-183 | 961+68.00 | 12 | 964+46.00 | 12 | | | 7 | | 278 | | | F | | | 1 | 1 | | 1 | | | | | | | |
| TOTALS CARRIED TO SHEET 101 | | | | | | 120 | 8 | 634 | | 12662 | | 70 | | | 2 | 45 | 13 | 1 | 50 | | | | | | | |

CALCULATED P.S. CHECKED B.C.

UNDERDRAIN SUBSUMMARY
SOUTHBOUND MEDIAN, FREE DRAINAGE BASE

MED-71-15.78

97
940

7885DS6.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | BENDS AND BRANCHES: OUTLET DETAIL | 6" x 4" x 6" TEE | 4" x 4" x 4" TEE | 4" 90° BEND | 4" 45° BEND | 4" 22.5° BEND | 4" PLUG | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | FEET | FEET | | FEET | | | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | |
| 54 - SM | 183 | 964+50.00 | 12 | 967+46.00 | 12 | | 9.2 | | | 296 | | | K | 1 | | 1 | | | 1 | | | | | | |
| 55 - SM | 183 | 967+50.00 | 12 | 969+56.00 | 12 | | | 7 | | 206 | | | D | | | 1 | 1 | | 1 | | | | | | |
| 56 - SM | 183 | 969+60.00 | 12 | 971+76.00 | 12 | 4 | | 16 | | 216 | | | B | | | 1 | | | 1 | | | | | | |
| 57 - SM | 183 | 971+80.00 | 12 | 973+96.00 | 12 | 4 | | 16 | | 216 | | | B | | | 1 | | | 1 | | | | | | |
| 58 - SM | 183-184 | 974+00.00 | 12 | 976+96.00 | 12 | | | 7 | | 296 | | | S | | | 1 | | 1 | 1 | | | | | | |
| 59 - SM | 184 | 977+00.00 | 12 | 980+50.00 | 12 | 4 | | 16 | | 350 | | | B | | | 1 | | | | | | | | | |
| 60 - SM | 184 | 980+50.00 | 12 | 982+90.00 | 12 | | | 20 | | 240 | | | M | | | 1 | | | | | | | | | |
| 61 - SM | 184 | 982+94.00 | 12 | 985+82.00 | 12 | | | | | 288 | | | | | | | | | 1 | | | | | | |
| 62 - SM | 184 | 985+82.00 | 12 | 985+92.00 | 18 | | | 7 | | | | 10 | J | | 1 | | 1 | | | | | | | | |
| 63 - SM | 184 | 985+92.00 | 18 | 986+03.00 | 12 | | | | | | | 11 | | | | | | | 1 | | | | | | |
| 64 - SM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 65 - SM | 185 | 988+82.00 | 12 | 993+00.00 | 12 | | | 7 | | 418 | | | A | | | 1 | 1 | | 1 | | | | | | |
| 66 - SM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 67 - SM | 185 | 993+04.00 | 12 | 995+80.00 | 12 | 4 | | 16 | | 276 | | | B | | | 1 | | | 1 | | | | | | |
| 68 - SM | 185 | 995+84.00 | 12 | 998+65.00 | 12 | | | 7 | | 281 | | | D | | | 1 | 1 | | 1 | | | | | | |
| 69 - SM | 185-186 | 998+69.00 | 12 | 1001+10.00 | 12 | 4 | | 16 | | 241 | | | B | | | 1 | | | 1 | | | | | | |
| 70 - SM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 71 - SM | 186 | 1001+14.00 | 12 | 1003+60.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | |
| 72 - SM | 186 | 1003+64.00 | 12 | 1006+00.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 | | | | | | |
| 73 - SM | 186 | 1006+04.00 | 12 | 1008+52.00 | 12 | | | 7 | | 248 | | | D | | | 1 | 1 | | 1 | | | | | | |
| 74 - SM | 186 | 1008+56.00 | 12 | 1011+85.00 | 12 | | | | | 329 | | | | | | | | | 1 | | | | | | |
| 75 - SM | 186 | 1011+85.00 | 12 | 1011+95.00 | 22 | | | 7 | | | | 10 | J | | 1 | | 1 | | | | | | | | |
| 76 - SM | 186 | 1011+95.00 | 22 | 1012+32.00 | 12 | | | | | | | 37 | | | | | | | 1 | | | | | | |
| 77 - SM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 78 - SM | 187 | 1013+98.00 | 12 | 1017+50.00 | 12 | 4 | | 16 | | 352 | | | B | | | 1 | | | 1 | | | | | | |
| 79 - SM | 187 | 1017+54.00 | 12 | 1020+10.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 | | | | | | |
| 80 - SM | 187 | 1020+14.00 | 12 | 1022+72.00 | 12 | | 1 | | | 258 | | | L5 | | | | | 1 | 1 | | | | | | |
| 81 - SM | 187 | 1022+76.00 | 12 | 1025+70.00 | 12 | 4 | | 16 | | 294 | | | B | | | 1 | | | 1 | | | | | | |
| 82 - SM | 187-188 | 1025+74.00 | 12 | 1028+60.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 | | | | | | |
| 83 - SM | 188 | 1028+64.00 | 12 | 1031+50.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 | | | | | | |
| 84 - SM | 188 | 1031+54.00 | 12 | 1034+40.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 | | | | | | |
| 85 - SM | 188 | 1034+44.00 | 12 | 1037+40.00 | 12 | | | 7 | | 296 | | | F | | | 1 | 1 | | 1 | | | | | | |
| 86 - SM | 188-189 | 1037+44.00 | 12 | 1040+00.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 | | | | | | |
| 87 - SM | 189 | 1040+04.00 | 12 | 1042+50.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | |
| 88 - SM | 189 | 1042+54.00 | 12 | 1045+08.00 | 12 | | | 7 | | 254 | | | D | | | 1 | 1 | | 1 | | | | | | |
| 89 - SM | 189 | 1045+12.00 | 12 | 1047+55.00 | 12 | | | 20 | | 243 | | | M | | | 1 | | | 1 | | | | | | |
| 90 - SM | 189 | 1047+59.00 | 12 | 1050+70.00 | 12 | | | | | 311 | | | R | | | 1 | 1 | | 1 | | | | | | |
| 91 - SM | 189-190 | 1050+74.00 | 12 | 1051+08.00 | 12 | | 9.2 | | | 34 | | | K | 1 | | 1 | | | 1 | | | | | | |
| 92 - SM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 93 - SM | 190 | 1054+06.00 | 12 | 1058+00.00 | 12 | 4 | | 16 | | 394 | | | B | | | 1 | | | 1 | | | | | | |
| 94 - SM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 95 - SM | 190 | 1058+04.00 | 12 | 1060+08.00 | 12 | | | 7 | | 204 | | | J | | 1 | | 1 | | | | | | | | |
| 96 - SM | 190 | 1060+08.00 | 12 | 1062+46.00 | 12 | | | | | 238 | | | | | | | | | 1 | | | | | | |
| 97 - SM | 190-191 | 1062+50.00 | 12 | 1064+96.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | | |
| 98 - SM | 191 | 1065+00.00 | 12 | 1067+36.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 | | | | | | |
| 99 - SM | 191 | 1067+40.00 | 12 | 1070+88.00 | 12 | | | 7 | | 348 | | | D | | | 1 | 1 | | 1 | | | | | | |
| 100- SM | 191 | 1070+92.00 | 12 | 1073+51.00 | 12 | | | 7 | | 259 | | | D | | | 1 | 1 | | 1 | | | | | | |
| 101- SM | 191-192 | 1073+55.00 | 12 | 1076+51.00 | 12 | | 9.2 | | | 296 | | | K | 1 | | 1 | | | 1 | | | | | | |
| 102- SM | 192 | 1076+55.00 | 12 | 1079+26.00 | 12 | | | 7 | | 271 | | | D | | | 1 | 1 | | 1 | | | | | | |
| 103- SM | 192 | 1079+30.00 | 12 | 1081+96.00 | 12 | 4 | | 16 | | 266 | | | B | | | 1 | | | 1 | | | | | | |
| 104- SM | 192 | 1082+00.00 | 12 | 1084+66.00 | 12 | 4 | | 16 | | 266 | | | B | | | 1 | | | 1 | | | | | | |
| 105- SM | 192 | 1084+70.00 | 12 | 1087+36.00 | 12 | 4 | | 16 | | 266 | | | B | | | 1 | | | 1 | | | | | | |
| 106- SM | 192-193 | 1087+40.00 | 12 | 1089+24.00 | 12 | | | 7 | | 184 | | | D | | | 1 | 1 | | 1 | | | | | | |
| **TOTALS CARRIED TO SHEET 101** | | | | | | 84 | 28.6 | 474 | | 11515 | | 68 | | 3 | 3 | 38 | 15 | 1 | 42 | | | | | | |

7885D56.DGN 11/4/99 RB

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY SOUTHBOUND MEDIAN, FREE DRAINAGE BASE

MED-71-15.78

# UNDERDRAIN SUBSUMMARY
# SOUTHBOUND MEDIAN, FREE DRAINAGE BASE

CALCULATED P.S. CHECKED B.C.

MED-71-15.78

99/940

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN (SQ. YD.) | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 (FEET) | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 (FEET) | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN (FEET) | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN (FEET) | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE (EACH) | 4" x 4" x 4" TEE (EACH) | 4" 90° BEND (EACH) | 4" 45° BEND (EACH) | 4" 22.5° BEND (EACH) | 4" PLUG (EACH) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 107- SM | 193 | 1089+28.00 | 12 | 1091+96.00 | 12 | | | 7 | | 268 | | | D | | | 1 | 1 | | 1 |
| 108- SM | 193 | 1092+00.00 | 12 | 1094+61.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 |
| 109- SM | 193 | 1094+65.00 | 12 | 1097+26.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 |
| 110- SM | 193 | 1097+30.00 | 12 | 1099+31.00 | 12 | 4 | | 16 | | 201 | | | B | | | 1 | | | 1 |
| 111- SM | 193-194 | 1099+35.00 | 12 | 1102+66.00 | 12 | 4 | | 16 | | 331 | | | B | | | 1 | | | 1 |
| 112- SM | 194 | 1102+70.00 | 12 | 1102+85.00 | 12 | | | 7 | | 15 | | | D | | | 1 | 1 | | 1 |
| 113- SM | 194 | 1105+82.00 | 12 | 1106+00.00 | 18 | | | | | | | 18 | | | | | | | 1 |
| 114- SM | 194 | 1106+00.00 | 18 | 1106+10.00 | 12 | | | 7 | | | | 10 | J | | 1 | | 1 | | |
| 115- SM | 194 | 1106+10.00 | 12 | 1108+76.00 | 12 | | | | | 266 | | | | | | | | | 1 |
| 116- SM | 194 | 1108+80.00 | 12 | 1111+16.00 | 12 | | | 7 | | 236 | | | D | | | 1 | 1 | | 1 |
| 117- SM | 194-195 | 1111+20.00 | 12 | 1113+56.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 |
| 118- SM | 195 | 1113+60.00 | 12 | 1115+96.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 |
| 119- SM | 195 | 1116+00.00 | 12 | 1118+38.00 | 12 | 4 | | 16 | | 238 | | | B | | | 1 | | | 1 |
| 120- SM | 195 | 1118+42.00 | 12 | 1120+76.00 | 12 | | | 7 | | 234 | | | D | | | 1 | 1 | | 1 |
| 121- SM | 195 | 1120+80.00 | 12 | 1123+16.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 |
| 122- SM | 195 | 1123+20.00 | 12 | 1125+56.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 |
| 123- SM | 195-196 | 1125+60.00 | 12 | 1127+86.00 | 12 | 4 | | 16 | | 226 | | | B | | | 1 | | | 1 |
| 124- SM | 196 | 1127+90.00 | 12 | 1129+96.00 | 12 | | | 7 | | 206 | | | D | | | 1 | 1 | | 1 |
| 125- SM | 196 | 1130+00.00 | 12 | 1132+16.00 | 12 | 4 | | 16 | | 216 | | | B | | | 1 | | | 1 |
| 126- SM | 196 | 1132+20.00 | 12 | 1134+34.00 | 12 | 4 | | 16 | | 214 | | | B | | | 1 | | | 1 |
| 127- SM | 196 | 1134+38.00 | 12 | 1137+30.00 | 12 | | | 7 | | 292 | | | D | | | 1 | 1 | | 1 |
| 128- SM | 196-197 | 1137+34.00 | 12 | 1140+26.00 | 12 | 4 | | 16 | | 292 | | | B | | | 1 | | | 1 |
| 129- SM | 197 | 1140+30.00 | 12 | 1142+06.00 | 12 | | | 7 | | 176 | | | F | | | 1 | 1 | | 1 |
| 130- SM | 197 | 1142+10.00 | 12 | 1143+86.00 | 12 | 4 | | 16 | | 176 | | | B | | | 1 | | | 1 |
| 131- SM | 197 | 1143+90.00 | 12 | 1146+86.00 | 12 | | | 7 | | 296 | | | D | | | 1 | 1 | | 1 |
| 132- SM | 197 | 1146+90.00 | 12 | 1149+86.00 | 12 | 4 | | 16 | | 296 | | | B | | | 1 | | | 1 |
| 133- SM | 197-198 | 1149+90.00 | 12 | 1152+86.00 | 12 | 4 | | 16 | | 296 | | | B | | | 1 | | | 1 |
| 134- SM | 198 | 1152+90.00 | 12 | 1155+86.00 | 12 | 4 | | 16 | | 296 | | | B | | | 1 | | | 1 |
| 135- SM | 198 | 1155+90.00 | 12 | 1158+80.00 | 12 | 4 | | 16 | | 290 | | | B | | | 1 | | | 1 |
| 136- SM | 198 | 1158+84.00 | 12 | 1161+66.00 | 12 | | | 7 | | 282 | | | D | | | 1 | 1 | | 1 |
| 137- SM | 198-199 | 1161+70.00 | 12 | 1164+46.00 | 12 | 4 | | 16 | | 276 | | | B | | | 1 | | | 1 |
| 138- SM | 199 | 1164+50.00 | 12 | 1167+31.00 | 12 | 4 | | 16 | | 281 | | | B | | | 1 | | | 1 |
| 139- SM | 199 | 1167+35.00 | 12 | 1170+16.00 | 12 | 4 | | 16 | | 281 | | | B | | | 1 | | | 1 |
| 140- SM | 199 | 1170+20.00 | 12 | 1173+00.00 | 12 | 4 | | 16 | | 280 | | | B | | | 1 | | | 1 |
| 141- SM | 199 | 1173+04.00 | 12 | 1175+96.00 | 12 | | | 7 | | 292 | | | D | | | 1 | 1 | | 1 |
| 142- SM | 200 | 1176+00.00 | 12 | 1178+96.00 | 12 | 4 | | 16 | | 296 | | | B | | | 1 | | | 1 |
| 143- SM | 200 | 1179+00.00 | 12 | 1181+56.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 |
| 144- SM | 200 | 1181+60.00 | 12 | 1186+33.00 | 12 | 4 | | 16 | | 473 | | | B | | | 1 | | | 1 |
| 145- SM | 200-201 | 1186+37.00 | 12 | 1189+34.00 | 12 | | | 7 | | 297 | | | D | | | 1 | 1 | | 1 |
| 146- SM | 201 | 1189+38.00 | 12 | 1192+35.00 | 12 | 4 | | 16 | | 297 | | | B | | | 1 | | | 1 |
| 147- SM | 201 | 1192+39.00 | 12 | 1195+36.00 | 12 | 4 | | 16 | | 297 | | | B | | | 1 | | | 1 |
| 148- SM | 201 | 1195+40.00 | 12 | 1198+37.00 | 12 | 4 | | 16 | | 297 | | | B | | | 1 | | | 1 |
| 149- SM | 201 | 1198+41.00 | 12 | 1200+36.00 | 12 | | | 7 | | 195 | | | D | | | 1 | 1 | | 1 |
| 150- SM | 201-202 | 1200+40.00 | 12 | 1202+30.00 | 12 | 4 | | 16 | | 190 | | | B | | | 1 | | | 1 |
| 151- SM | 202 | 1202+34.00 | 14 | 1203+00.00 | 14 | | | 20 | | 66 | | | M | | | 1 | | | |
| | | 1203+00.00 | 12 | 1204+61.00 | 12 | | | | | 161 | | | | | | | | | 1 |
| 152- SM | 202 | 1204+65.00 | 12 | 1206+96.00 | 12 | 4 | | 16 | | 231 | | | B | | | 1 | | | 1 |
| 153- SM | 202 | 1207+00.00 | 12 | 1209+30.00 | 12 | 4 | | 16 | | 230 | | | B | | | 1 | | | 1 |
| 154- SM | 202 | 1209+34.00 | 12 | 1211+76.00 | 12 | | | 7 | | 242 | | | F | | | 1 | | | 1 |
| 155- SM | 202-203 | 1211+80.00 | 12 | 1214+26.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 |
| 156- SM | 203 | 1214+30.00 | 12 | 1216+72.00 | 12 | 4 | | 16 | | 242 | | | B | | | 1 | | | 1 |
| 157- SM | 203 | 1216+76.00 | 12 | 1219+01.00 | 12 | | | 20 | | 225 | | | M | | | 1 | | | 1 |
| 158- SM | 203 | 1219+05.00 | 12 | 1221+30.00 | 12 | 4 | | 16 | | 225 | | | B | | | 1 | | | 1 |
| **TOTALS CARRIED TO SHEET 101** | | | | | | 136 | | 682 | | 12685 | | 28 | | | 1 | 49 | 13 | | 51 |

7885DS6.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE | 4" x 4" x 4" TEE | 4" 90° BEND | 4" 45° BEND | 4" 22.5° BEND | 4" PLUG | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | FEET | FEET | | FEET | | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | | | | | |
| 159- SM | 203 | 1221+34.00 | 12 | 1223+65.00 | 12 | | | 7 | | 231 | | | F | | | 1 | | | 1 | | | | | |
| 160- SM | 203-204 | 1223+69.00 | 12 | 1226+95.00 | 12 | | | 2 | | 326 | | | M | | | 1 | | | 1 | | | | | |
| 161- SM | 204 | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 162- SM | 204 | 1226+99.00 | 12 | 1228+09.00 | 12 | | | 7 | | 110 | | | F | | | 1 | | | 1 | | | | | |
| 163- SM | 204 | 1228+13.00 | 12 | 1231+30.00 | 12 | | | 20 | | 317 | | | M | | | 1 | | | 1 | | | | | |
| 164- SM | 204 | 1231+34.00 | 12 | 1234+06.00 | 12 | | | 7 | | 272 | | | D | | | 1 | 1 | | 1 | | | | | |
| 165- SM | 204 | 1234+10.00 | 12 | 1236+81.00 | 12 | 4 | | 16 | | 271 | | | B | | | 1 | | | 1 | | | | | |
| 166- SM | 204-205 | 1236+85.00 | 12 | 1239+56.00 | 12 | 4 | | 16 | | 271 | | | B | | | 1 | | | 1 | | | | | |
| 167- SM | 205 | 1239+60.00 | 12 | 1242+30.00 | 12 | 4 | | 16 | | 270 | | | B | | | 1 | | | 1 | | | | | |
| 168- SM | 205 | 1242+34.00 | 12 | 1244+96.00 | 12 | | | 7 | | 262 | | | D | | | 1 | 1 | | 1 | | | | | |
| 169- SM | 205 | 1245+00.00 | 12 | 1247+71.00 | 12 | 4 | | 16 | | 271 | | | B | | | 1 | | | 1 | | | | | |
| 170- SM | 205 | 1247+75.00 | 12 | 1250+46.00 | 12 | 4 | | 16 | | 271 | | | B | | | 1 | | | 1 | | | | | |
| 171- SM | 205-206 | 1250+50.00 | 12 | 1253+21.00 | 12 | 4 | | 16 | | 271 | | | B | | | 1 | | | 1 | | | | | |
| 172- SM | 206 | 1253+25.00 | 12 | 1256+00.00 | 12 | 4 | | 16 | | 275 | | | B | | | 1 | | | 1 | | | | | |
| 173- SM | 206 | 1256+00.00 | 12 | 1258+60.00 | 12 | 4 | | 16 | | 260 | | | B | | | 1 | | | | | | | | |
| 174- SM | 206 | 1258+64.00 | 12 | 1261+20.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | | | | | | |
| 175- SM | 206-207 | 1261+24.00 | 12 | 1263+84.00 | 12 | | | 7 | | 260 | | | F | | | 1 | 1 | | 1 | | | | | |
| 176- SM | 207 | 1263+88.00 | 12 | 1267+24.00 | 12 | | | | | 336 | | | | | | | | | 1 | | | | | |
| 177- SM | 207 | 1267+24.00 | 12 | 1267+34.00 | 18 | | | 7 | | | | 10 | J | | 1 | | 1 | | | | | | | |
| 178- SM | 207 | 1267+34.00 | 18 | 1267+65.00 | 12 | | | | | | | 31 | | | | | | | 1 | | | | | |
| 179- SM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 180- SM | 207 | 1270+27.00 | 12 | 1273+65.00 | 12 | 2 | | 16 | | 338 | | | W | | | 1 | | | 1 | | | | | |
| 181- SM | 207 | 1273+69.00 | 12 | 1275+85.00 | 12 | 2 | | 16 | | 216 | | | W | | | 1 | | | 1 | | | | | |
| 182- SM | 207-208 | 1275+89.00 | 12 | 1278+60.00 | 12 | 2 | | 16 | | 271 | | | W | | | 1 | | | 1 | | | | | |
| 183- SM | 208 | 1278+64.00 | 12 | 1281+34.00 | 12 | | | 7 | | 270 | | | Z | | | 1 | 1 | | 1 | | | | | |
| 184- SM | 208 | 1281+38.00 | 12 | 1283+85.00 | 12 | 2 | | 16 | | 247 | | | W | | | 1 | | | 1 | | | | | |
| 185- SM | 208 | 1283+89.00 | 12 | 1286+40.00 | 12 | 2 | | 16 | | 251 | | | W | | | 1 | | | 1 | | | | | |
| 186- SM | 208-209 | 1286+44.00 | 12 | 1288+95.00 | 12 | 2 | | 16 | | 251 | | | W | | | 1 | | | 1 | | | | | |
| 187- SM | 209 | 1288+99.00 | 12 | 1291+50.00 | 12 | 2 | | 16 | | 251 | | | W | | | 1 | | | 1 | | | | | |
| 188- SM | 209 | 1291+54.00 | 12 | 1293+94.00 | 12 | | | 7 | | 240 | | | J | | 1 | | 1 | | | | | | | |
| 189- SM | 209 | 1293+94.00 | 12 | 1295+96.00 | 12 | | | | | 202 | | | | | | | | | 1 | | | | | |
| 190- SM | 209 | 1296+00.00 | 12 | 1298+16.00 | 12 | 2 | | 16 | | 216 | | | W | | | 1 | | | 1 | | | | | |
| 191- SM | 209 | 1298+20.00 | 12 | 1300+30.00 | 12 | 2 | | 16 | | 210 | | | W | | | 1 | | | 1 | | | | | |
| 192- SM | 209-210 | 1300+34.00 | 12 | 1303+30.00 | 12 | | | 7 | | 296 | | | D | | | 1 | 1 | | 1 | | | | | |
| 193- SM | 210 | 1303+34.00 | 12 | 1306+30.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 194- SM | 210 | 1306+34.00 | 12 | 1309+30.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 195- SM | 210 | 1309+34.00 | 12 | 1312+30.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 196- SM | 210-211 | 1312+34.00 | 12 | 1315+16.00 | 12 | | | 7 | | 282 | | | D | | | 1 | 1 | | 1 | | | | | |
| 197- SM | 211 | 1315+20.00 | 12 | 1318+06.00 | 12 | 2 | | 16 | | 286 | | | W | | | 1 | | | 1 | | | | | |
| 198- SM | 211 | 1318+10.00 | 12 | 1320+96.00 | 12 | 2 | | 16 | | 286 | | | W | | | 1 | | | 1 | | | | | |
| 199- SM | 211 | 1321+00.00 | 12 | 1324+00.00 | 12 | 2 | | 16 | | 300 | | | W | | | 1 | | | | | | | | |
| 200- SM | 211-212 | 1324+00.00 | 12 | 1326+80.00 | 12 | 2 | | 16 | | 280 | | | W | | | 1 | | | | | | | | |
| 201- SM | 212 | 1326+84.00 | 12 | 1329+70.00 | 12 | 2 | | 16 | | 286 | | | W | | | 1 | | | 1 | | | | | |
| 202- SM | 212 | 1329+74.00 | 12 | 1332+60.00 | 12 | 2 | | 16 | | 286 | | | W | | | 1 | | | 1 | | | | | |
| 203- SM | 212 | 1332+64.00 | 12 | 1335+50.00 | 12 | 2 | | 16 | | 286 | | | W | | | 1 | | | 1 | | | | | |
| 204- SM | 212 | 1335+54.00 | 12 | 1338+34.00 | 12 | | | 7 | | 280 | | | F | | | 1 | 1 | | 1 | | | | | |
| 205- SM | 212-213 | 1338+38.00 | 12 | 1341+00.00 | 12 | | | 16 | | 262 | | | M | | | 1 | | | 1 | | | | | |
| 206- SM | 213 | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 207- SM | 213 | 1341+04.00 | 12 | 1344+76.00 | 12 | | | 7 | | 372 | | | D | | | 1 | 1 | | 1 | | | | | |
| 208- SM | 213 | 1344+80.00 | 12 | 1347+05.00 | 12 | 2 | | 16 | | 225 | | | W | | | 1 | | | 1 | | | | | |
| 209- SM | 213 | 1347+09.00 | 12 | 1349+25.00 | 12 | 2 | | 16 | | 216 | | | W | | | 1 | | | 1 | | | | | |
| 210- SM | 213-214 | 1349+29.00 | 12 | 1351+34.00 | 12 | | | 7 | | 205 | | | D | | | 1 | 1 | | 1 | | | | | |
| 211- SM | 214 | 1351+38.00 | 12 | 1356+00.00 | 12 | 2 | | 16 | | 462 | | | W | | | 1 | | | 1 | | | | | |
| TOTALS CARRIED TO SHEET 101 | | | | | | 80 | | 625 | | 12991 | | 41 | | | 2 | 45 | 11 | | 44 | | | | | |

UNDERDRAIN SUBSUMMARY
SOUTHBOUND MEDIAN, FREE DRAINAGE BASE

CALCULATED P.S. CHECKED B.C.

MED-71-15.78

100
940

7885DS6.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE | 4" x 4" x 4" TEE | 4" 90° BEND | 4" 45° BEND | 4" 22.5° BEND | 4" PLUG | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FROM | DEPTH | TO | DEPTH | SQ. YD. | FEET | FEET | | FEET | | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | | | | | |
| 212- SM | 214 | 1356+04.00 | 12 | 1358+60.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 213- SM | 214 | 1358+64.00 | 12 | 1361+20.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 214- SM | 214-215 | 1361+24.00 | 12 | 1363+80.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 215- SM | 215 | 1363+84.00 | 12 | 1366+34.00 | 12 | | | 7 | | 250 | | | D | | | 1 | 1 | | 1 | | | | | |
| 216- SM | 215 | 1366+38.00 | 12 | 1369+34.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 217- SM | 215 | 1369+38.00 | 12 | 1372+34.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 218- SM | 215 | 1372+38.00 | 12 | 1375+34.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 219- SM | 215-216 | 1375+38.00 | 12 | 1378+34.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 220- SM | 216 | 1378+38.00 | 12 | 1381+34.00 | 12 | | | 7 | | 296 | | | D | | | 1 | 1 | | 1 | | | | | |
| 221- SM | 216 | 1381+38.00 | 12 | 1383+95.00 | 12 | 2 | | 16 | | 257 | | | W | | | 1 | | | 1 | | | | | |
| 222- SM | 216 | 1383+99.00 | 12 | 1386+55.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 223- SM | 216-217 | 1386+59.00 | 12 | 1389+15.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 224- SM | 217 | 1389+19.00 | 12 | 1391+75.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 225- SM | 217 | 1391+79.00 | 12 | 1394+35.00 | 12 | | | 7 | | 256 | | | F | | | 1 | | | 1 | | | | | |
| TOTALS FROM SHEET 97 | | | | | | 120 | 8 | 634 | | 12662 | | 70 | | | 2 | 45 | 13 | 1 | 50 | | | | | |
| TOTALS FROM SHEET 98 | | | | | | 84 | 28.6 | 474 | | 11515 | | 68 | | 3 | 3 | 38 | 15 | 1 | 42 | | | | | |
| TOTALS FROM SHEET 99 | | | | | | 136 | | 682 | | 12685 | | 28 | | | 1 | 49 | 13 | | 51 | | | | | |
| TOTALS FROM SHEET 100 | | | | | | 80 | | 625 | | 12991 | | 41 | | | 2 | 45 | 11 | | 44 | | | | | |
| TOTALS 212-SM THRU 225-SM | | | | | | 22 | | 197 | | 3779 | | | | | | 14 | 2 | | 14 | | | | | |
| **TOTALS CARRIED TO SHEET 128** | | | | | | 442 | 36.6 | 2612 | | 53632 | | 207 | | 3 | 8 | 191 | 54 | 2 | 201 | | | | | |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY
## SOUTHBOUND MEDIAN, FREE DRAINAGE BASE

MED-71-15.78

101
940

7885DS6.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | | 605, 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | OUTLET DETAIL | BENDS AND BRANCHES 6" x 6" x 4" TEE | 4" x 4" x 4" TEE | 4" 90° BEND | 4" 45° BEND | 4" 22.5° BEND | 4" PLUG | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | FEET | FEET | | FEET | | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | | | | | |
| 1 - SS | 172 | 833+02.00 | 12 | 835+26.00 | 12 | 4 | | 19 | | 224 | | | B | | | 1 | | | 1 | | | | | |
| 2 - SS | 172 | 835+30.00 | 12 | 837+16.00 | 12 | 4 | | 19 | | 186 | | | B | | | 1 | | | 1 | | | | | |
| 3 - SS | 172-173 | 837+20.00 | 12 | 839+96.00 | 12 | | 9.2 | | | 276 | | | F | | | 1 | | | 1 | | | | | |
| 4 - SS | 173 | 840+00.00 | 12 | 842+66.00 | 12 | 4 | | 19 | | 266 | | | B | | | 1 | | | 1 | | | | | |
| 5 - SS | 173 | 842+70.00 | 12 | 845+61.00 | 12 | | 9.2 | | | 291 | | | F | | | 1 | | | 1 | | | | | |
| 6 - SS | 173 | 845+65.00 | 12 | 848+96.00 | 12 | 4 | | 19 | | 331 | | | B | | | 1 | | | 1 | | | | | |
| 7 - SS | 173-174 | 849+00.00 | 12 | 852+16.00 | 12 | 4 | | 19 | | 316 | | | B | | | 1 | | | 1 | | | | | |
| 8 - SS | 174 | 852+20.00 | 12 | 854+21.00 | 12 | | | 7 | | 201 | | | L4 | | | 1 | 1 | | 1 | | | | | |
| 9 - SS | 174 | 854+25.00 | 12 | 857+26.00 | 12 | | 1 | | | 301 | | | A | | | | | 1 | 1 | | | | | |
| 10 - SS | 174 | 857+30.00 | 12 | 860+26.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 11 - SS | 174 | 860+30.00 | 12 | 863+26.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 12 - SS | 174-175 | 863+30.00 | 12 | 866+24.00 | 12 | 4 | | 19 | | 294 | | | B | | | 1 | | | 1 | | | | | |
| 13 - SS | 175 | 866+28.00 | 12 | 868+96.00 | 12 | | | 7 | | 268 | | | O | | | 1 | 1 | | 1 | | | | | |
| 14 - SS | 175 | 869+00.00 | 12 | 871+81.00 | 12 | 4 | | 15 | | 281 | | | B | | | 1 | | | 1 | | | | | |
| 15 - SS | 175 | 871+85.00 | 12 | 874+66.00 | 12 | 4 | | 15 | | 281 | | | B | | | 1 | | | 1 | | | | | |
| 16 - SS | 175-176 | 874+70.00 | 12 | 877+21.00 | 12 | | | 7 | | 251 | | | X | | | 1 | 1 | | 1 | | | | | |
| 17 - SS | 176 | 877+25.00 | 12 | 879+70.00 | 12 | 4 | | 15 | | 245 | | | B | | | 1 | | | 1 | | | | | |
| 18 - SS | 176 | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 19 - SS | 176 | 877+80.00 | 12 | 880+96.00 | 12 | | 9.2 | | | 316 | | | K | 1 | | 1 | | | 1 | | | | | |
| 20 - SS | 176 | 881+00.00 | 12 | 883+21.00 | 12 | 4 | | 10 | | 221 | | | B | | | 1 | | | 1 | | | | | |
| 21 - SS | 176 | 883+25.00 | 12 | 885+96.00 | 12 | | | 7 | | 271 | | | A | | | 1 | 1 | | 1 | | | | | |
| 22 - SS | 176-177 | 886+00.00 | 12 | 888+78.00 | 12 | 4 | | 10 | | 278 | | | B | | | 1 | | | 1 | | | | | |
| 23 - SS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 24 - SS | 177 | 891+10.00 | 12 | 891+30.00 | 18 | | | | | | | 20 | | | | | | | 1 | | | | | |
| 25 - SS | 177 | 891+30.00 | 18 | 891+40.00 | 12 | | | 7 | | | | 10 | C | | 1 | | 1 | | | | | | | |
| 26 - SS | 177 | 891+40.00 | 12 | 893+96.00 | 12 | | | | | 256 | | | | | | | | | 1 | | | | | |
| 27 - SS | 177 | 894+00.00 | 12 | 896+44.00 | 12 | 4 | | 10 | | 244 | | | B | | | 1 | | | 1 | | | | | |
| 28 - SS | 177 | 896+48.00 | 12 | 899+80.00 | 12 | | | 7 | | 332 | | | O | | | 1 | 1 | | 1 | | | | | |
| 29 - SS | 177-178 | 899+50.00 | 12 | 903+06.00 | 12 | | | 7 | | 356 | | | A | | | 1 | 1 | | 1 | | | | | |
| 30 - SS | 178 | 903+10.00 | 12 | 906+59.00 | 12 | 4 | | 11 | | 349 | | | B | | | 1 | | | 1 | | | | | |
| 31 - SS | 178 | 906+63.00 | 12 | 909+46.00 | 12 | | | 7 | | 283 | | | O | | | 1 | 1 | | 1 | | | | | |
| 32 - SS | 178 | 909+50.00 | 12 | 912+46.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 33 - SS | 178-179 | 912+50.00 | 12 | 915+56.00 | 12 | | | 7 | | 306 | | | A | | | 1 | 1 | | 1 | | | | | |
| 34 - SS | 179 | 915+60.00 | 12 | 918+66.00 | 12 | | | 7 | | 306 | | | L2 | | | 1 | 1 | | 1 | | | | | |
| 35 - SS | 179 | 918+70.00 | 12 | 921+68.00 | 12 | 4 | | 19 | | 298 | | | B | | | 1 | | | 1 | | | | | |
| 36 - SS | 179 | 921+72.00 | 12 | 924+71.00 | 12 | | | 7 | | 299 | | | L2 | | | 1 | 1 | | 1 | | | | | |
| 37 - SS | 179-180 | 924+75.00 | 12 | 927+66.00 | 12 | 4 | | 19 | | 291 | | | B | | | 1 | | | 1 | | | | | |
| 38 - SS | 180 | 927+70.00 | 12 | 930+66.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 39 - SS | 180 | 930+70.00 | 12 | 934+46.00 | 12 | | | 7 | | 376 | | | A | | | 1 | 1 | | 1 | | | | | |
| 40 - SS | 180 | 934+50.00 | 12 | 937+86.00 | 12 | | | 7 | | 336 | | | A | | | 1 | 1 | | 1 | | | | | |
| 41 - SS | 180-181 | 937+90.00 | 12 | 940+96.00 | 12 | 4 | | 19 | | 306 | | | B | | | 1 | | | 1 | | | | | |
| 42 - SS | 181 | 941+00.00 | 12 | 944+06.00 | 12 | 4 | | 19 | | 306 | | | B | | | 1 | | | 1 | | | | | |
| 43 - SS | 181 | 944+10.00 | 12 | 947+01.00 | 12 | | | 7 | | 291 | | | A | | | 1 | 1 | | 1 | | | | | |
| 44 - SS | 181 | 947+05.00 | 12 | 950+01.00 | 12 | 4 | | 10 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 45 - SS | 181-182 | 950+05.00 | 12 | 953+01.00 | 12 | | | 7 | | 296 | | | A | | | 1 | 1 | | 1 | | | | | |
| 46 - SS | 182 | 953+05.00 | 12 | 955+96.00 | 12 | 4 | | 10 | | 291 | | | B | | | 1 | | | 1 | | | | | |
| 47 - SS | 182 | 956+00.00 | 12 | 958+86.00 | 12 | | | 7 | | 286 | | | A | | | 1 | 1 | | 1 | | | | | |
| 48 - SS | 182-183 | 958+90.00 | 12 | 961+64.00 | 12 | 4 | | 19 | | 274 | | | B | | | 1 | | | 1 | | | | | |
| 49 - SS | 183 | 961+68.00 | 12 | 964+46.00 | 12 | | 9.2 | | | 278 | | | F | | | 1 | | | 1 | | | | | |
| 50 - SS | 183 | 964+50.00 | 12 | 967+46.00 | 12 | | 9.2 | | | 296 | | | K | 1 | | 1 | | | 1 | | | | | |
| 51 - SS | 183 | 967+50.00 | 12 | 970+11.00 | 12 | 4 | | 19 | | 261 | | | B | | | 1 | | | 1 | | | | | |
| 52 - SS | 183 | 970+15.00 | 12 | 972+00.00 | 12 | 4 | | 19 | | 185 | | | B | | | 1 | | | | | | | | |
| 53 - SS | 183 | 973+00.00 | 12 | 974+00.00 | 24 | | | | | | | 100 | | | | | | | 1 | | | | | |
| TOTALS CARRIED TO SHEET 106 | | | | | | 104 | 47 | 541 | | 13680 | | 130 | | 2 | 1 | 46 | 16 | 1 | 49 | | | | | |

CALCULATED P.S. CHECKED B.C.

UNDERDRAIN SUBSUMMARY
SOUTHBOUND OUTSIDE, FREE DRAINAGE BASE

MED-71-15.78

102/940

7885DS7.DGN 8/25/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN SQ. YD. | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 FEET | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 FEET | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN FEET | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN FEET | OUTLET DETAIL | BENDS AND BRANCHES 6" x 6" x 4" TEE EACH | 4" x 4" x 4" TEE EACH | 4" 90° BEND EACH | 4" 45° BEND EACH | 4" 22.5° BEND EACH | 4" PLUG EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 - SS | 183 | 974+00.00 | 24 | 974+10.00 | 12 | | 10 | | | | | 10 | S | | 1 | | | | |
| 55 - SS | 183-184 | 974+10.00 | 12 | 977+21.00 | 12 | | | | | 311 | | | | | | | | | 1 |
| 56 - SS | 184 | 977+25.00 | 12 | 980+50.00 | 12 | 4 | | 19 | | 325 | | | B | | | 1 | | | |
| 57 - SS | 184 | 980+50.00 | 12 | 983+50.00 | 12 | 4 | | 38 | | 300 | | | B | | | 1 | | | |
| 58 - SS | 184 | 983+54.00 | 12 | 985+50.00 | 12 | | | | | 196 | | | | | | | | | 1 |
| 59 - SS | 184 | 985+50.00 | 12 | 985+60.00 | 18 | | | 7 | | | | 10 | C | | 1 | | 1 | | |
| 60 - SS | 184 | 985+60.00 | 18 | 985+69.00 | 12 | | | | | | | 9 | | | | | | | 1 |
| 61 - SS | 184 | NOT USED | | | | | | | | | | | | | | | | | |
| 62 - SS | 184-185 | 988+45.00 | 12 | 991+00.00 | 12 | 4 | | 12 | | 255 | | | B | | | 1 | | | 1 |
| 63 - SS | 185 | 991+04.00 | 12 | 994+00.00 | 12 | | | 7 | | 296 | | | A | | | 1 | 1 | | 1 |
| 64 - SS | 185 | 994+04.00 | 12 | 996+60.00 | 12 | 4 | | 11 | | 256 | | | B | | | 1 | | | 1 |
| 65 - SS | 185 | 996+64.00 | 12 | 999+30.00 | 12 | | | 7 | | 266 | | | A | | | 1 | 1 | | 1 |
| 66 - SS | 185-186 | 999+34.00 | 12 | 1002+50.00 | 12 | 4 | | 9 | | 316 | | | B | | | 1 | | | 1 |
| 67 - SS | 186 | 1002+54.00 | 12 | 1005+75.00 | 12 | | | 7 | | 321 | | | A | | | 1 | 1 | | 1 |
| 68 - SS | 186 | 1005+79.00 | 12 | 1009+00.00 | 12 | 4 | | 10 | | 321 | | | B | | | 1 | | | 1 |
| 69 - SS | 186 | 1009+04.00 | 12 | 1011+00.00 | 12 | | | | | 196 | | | | | | | | | 1 |
| 70 - SS | 186 | 1011+00.00 | 12 | 1011+10.00 | 30 | | | 7 | | | | 10 | C | | 1 | | 1 | | |
| 71 - SS | 186 | 1011+10.00 | 30 | 1012+38.00 | 12 | | | | | | | 128 | | | | | | | 1 |
| 72 - SS | | NOT USED | | | | | | | | | | | | | | | | | |
| 73 - SS | 187 | 1014+04.00 | 12 | 1016+60.00 | 12 | 4 | | 19 | | 256 | | | B | | | 1 | | | 1 |
| 74 - SS | | NOT USED | | | | | | | | | | | | | | | | | |
| 75 - SS | 187 | 1016+64.00 | 12 | 1019+50.00 | 12 | 4 | | 19 | | 286 | | | B | | | 1 | | | 1 |
| 76 - SS | 187 | 1019+54.00 | 12 | 1022+40.00 | 12 | | 1 | | | 286 | | | L5 | | | | | 1 | |
| 77 - SS | 187 | 1022+44.00 | 12 | 1024+90.00 | 12 | 4 | | 19 | | 246 | | | B | | | 1 | | | 1 |
| 78 - SS | 187-188 | 1024+94.00 | 12 | 1027+40.00 | 12 | 4 | | 19 | | 246 | | | B | | | 1 | | | 1 |
| 79 - SS | 188 | 1027+44.00 | 12 | 1029+90.00 | 12 | 4 | | 19 | | 246 | | | B | | | 1 | | | 1 |
| 80 - SS | 188 | 1029+94.00 | 12 | 1032+40.00 | 12 | 4 | | 19 | | 246 | | | B | | | 1 | | | 1 |
| 81 - SS | 188 | 1032+44.00 | 12 | 1034+90.00 | 12 | 4 | | 19 | | 246 | | | B | | | 1 | | | 1 |
| 82 - SS | 188 | 1034+94.00 | 12 | 1037+40.00 | 12 | | 9.2 | | | 246 | | | F | | | 1 | | | 1 |
| 83 - SS | 188-189 | 1037+44.00 | 12 | 1040+00.00 | 12 | 4 | | 19 | | 256 | | | B | | | 1 | | | 1 |
| 84 - SS | 189 | 1040+04.00 | 12 | 1042+40.00 | 12 | 4 | | 19 | | 236 | | | B | | | 1 | | | 1 |
| 85 - SS | 189 | 1042+44.00 | 12 | 1044+85.00 | 12 | | | 7 | | 241 | | | A | | | 1 | 1 | | 1 |
| 86 - SS | 189 | 1044+89.00 | 12 | 1047+80.00 | 12 | 4 | | 19 | | 291 | | | B | | | 1 | | | 1 |
| 87 - SS | 189 | 1047+84.00 | 12 | 1050+75.00 | 12 | | | 7 | | 291 | | | L3 | | | | | | 1 |
| 88 - SS | 189-190 | 1050+79.00 | 12 | 1051+13.00 | 12 | | 10 | 10 | | 34 | | | K | 1 | | 1 | | | 1 |
| 89 - SS | | NOT USED | | | | | | | | | | | | | | | | | |
| 90 - SS | | NOT USED | | | | | | | | | | | | | | | | | |
| 91 - SS | 190 | 1054+12.00 | 12 | 1057+00.00 | 12 | | | 7 | | 288 | | | A | | | 1 | 1 | | 1 |
| 92 - SS | 190 | 1057+04.00 | 12 | 1060+12.00 | 12 | | | 7 | | 308 | | | C | | 1 | | 1 | | 1 |
| 93 - SS | 190 | 1060+12.00 | 12 | 1062+56.00 | 12 | | | | | 244 | | | | | | | | | 1 |
| 94 - SS | 190-191 | 1062+60.00 | 12 | 1064+96.00 | 12 | 4 | | 19 | | 236 | | | B | | | 1 | | | 1 |
| 95 - SS | 191 | 1065+00.00 | 12 | 1067+36.00 | 12 | 4 | | 19 | | 236 | | | B | | | 1 | | | 1 |
| 96 - SS | 191 | 1067+40.00 | 12 | 1070+88.00 | 12 | | | 7 | | 348 | | | D | | | 1 | 1 | | 1 |
| 97 - SS | 191 | 1070+92.00 | 12 | 1073+46.00 | 12 | | | 7 | | 254 | | | D | | | 1 | 1 | | 1 |
| 98 - SS | 191 | 1073+00.00 | 12 | 1075+81.00 | 12 | | 9.2 | | | 231 | | | K | 1 | | 1 | | | 1 |
| 99 - SS | 191-192 | 1075+85.00 | 12 | 1078+36.00 | 12 | | | 7 | | 251 | | | D | | | 1 | 1 | | 1 |
| 100- SS | 192 | 1078+40.00 | 12 | 1080+96.00 | 12 | 4 | | 19 | | 256 | | | B | | | 1 | | | 1 |
| 101- SS | 192 | 1081+00.00 | 12 | 1083+96.00 | 12 | | | 7 | | 296 | | | A | | | 1 | 1 | | 1 |
| 102- SS | 192 | 1084+00.00 | 12 | 1086+66.00 | 12 | | | 7 | | 266 | | | A | | | 1 | 1 | | 1 |
| 103- SS | 192-193 | 1086+70.00 | 12 | 1089+31.00 | 12 | 4 | | 19 | | 261 | | | B | | | 1 | | | 1 |
| 104- SS | 193 | 1089+35.00 | 12 | 1091+96.00 | 12 | | | 7 | | 261 | | | Y | | | 1 | 1 | | 1 |
| 105- SS | 193 | 1092+00.00 | 12 | 1094+15.00 | 12 | 4 | | 19 | | 215 | | | B | | | 1 | | | 1 |
| 106- SS | | NOT USED | | | | | | | | | | | | | | | | | |
| TOTALS CARRIED TO SHEET 106 | | | | | | 84 | 39.4 | 499 | | 10963 | | 167 | | 2 | 4 | 36 | 15 | 1 | 42 |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY SOUTHBOUND OUTSIDE, FREE DRAINAGE BASE

MED-71-15.78



7885DS7.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | OUTLET DETAIL | BENDS AND BRANCHES 6" x 6" x 4" TEE | 4" x 4" x 4" TEE | 4" 90° BEND | 4" 45° BEND | 4" 22.5° BEND | 4" PLUG | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | FEET | FEET | | FEET | | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | |
| 107- SS | 193 | 1094+00.00 | 12 | 1096+96.00 | 12 | | 9.2 | | | 296 | | | K | 1 | | 1 | | | 1 | | | | | |
| 108- SS | 193 | 1097+00.00 | 12 | 1099+96.00 | 12 | | | 7 | | 296 | | | A | | | 1 | 1 | | 1 | | | | | |
| 109- SS | 193-194 | 1100+00.00 | 12 | 1102+56.00 | 12 | 4 | | 14 | | 256 | | | B | | | 1 | | | 1 | | | | | |
| 110- SS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 111- SS | 194 | 1105+55.00 | 12 | 1105+65.00 | 18 | | | | | | | 10 | | | | | | | 1 | | | | | |
| 112- SS | 194 | 1105+65.00 | 18 | 1105+75.00 | 12 | | | 7 | | | | 10 | C | | 1 | | 1 | | | | | | | |
| 113- SS | 194 | 1105+75.00 | 12 | 1108+61.00 | 12 | | | | | 286 | | | | | | | | | 1 | | | | | |
| 114- SS | 194 | 1108+65.00 | 12 | 1111+61.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 115- SS | 194-195 | 1111+65.00 | 12 | 1114+31.00 | 12 | | | 7 | | 266 | | | A | | | 1 | 1 | | 1 | | | | | |
| 116- SS | 195 | 1114+35.00 | 12 | 1116+50.00 | 12 | 4 | | 19 | | 215 | | | B | | | 1 | | | 1 | | | | | |
| 117- SS | 195 | 1116+30.00 | 12 | 1118+40.00 | 12 | | | 7 | | 210 | | | A | | | 1 | 1 | | 1 | | | | | |
| 118- SS | 195 | 1118+44.00 | 12 | 1121+71.00 | 12 | | | 7 | | 327 | | | O | | | 1 | 1 | | 1 | | | | | |
| 119- SS | 195 | 1121+75.00 | 12 | 1125+06.00 | 12 | 4 | | 19 | | 331 | | | B | | | 1 | | | 1 | | | | | |
| 120- SS | 195-196 | 1125+10.00 | 12 | 1128+16.00 | 12 | | | 7 | | 306 | | | A | | | 1 | 1 | | 1 | | | | | |
| 121- SS | 196 | 1128+20.00 | 12 | 1131+26.00 | 12 | 4 | | 19 | | 306 | | | B | | | 1 | | | 1 | | | | | |
| 122- SS | 196 | 1131+30.00 | 12 | 1134+34.00 | 12 | 4 | | 19 | | 304 | | | B | | | 1 | | | 1 | | | | | |
| 123- SS | 196 | 1134+38.00 | 12 | 1137+30.00 | 12 | | | 7 | | 292 | | | D | | | 1 | 1 | | 1 | | | | | |
| 124- SS | 196-197 | 1137+34.00 | 12 | 1140+26.00 | 12 | 4 | | 19 | | 292 | | | B | | | 1 | | | 1 | | | | | |
| 125- SS | 197 | 1140+30.00 | 12 | 1142+06.00 | 12 | | 9.2 | | | 176 | | | F | | | 1 | | | 1 | | | | | |
| 126- SS | 197 | 1142+10.00 | 12 | 1143+86.00 | 12 | 4 | | 19 | | 176 | | | B | | | 1 | | | 1 | | | | | |
| 127- SS | 197 | 1143+90.00 | 12 | 1146+96.00 | 12 | | | 7 | | 306 | | | D | | | 1 | 1 | | 1 | | | | | |
| 128- SS | 197 | 1147+00.00 | 12 | 1149+96.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 129- SS | 197-198 | 1150+00.00 | 12 | 1152+36.00 | 12 | 4 | | 19 | | 236 | | | B | | | 1 | | | 1 | | | | | |
| 130- SS | 198 | 1152+40.00 | 12 | 1154+96.00 | 12 | | | 7 | | 256 | | | Y | | | 1 | 1 | | 1 | | | | | |
| 131- SS | 198 | 1155+00.00 | 12 | 1156+50.00 | 12 | 4 | | 19 | | 150 | | | B | | | 1 | | | 1 | | | | | |
| 132- SS | 198 | 1156+00.00 | 12 | 1158+80.00 | 12 | | 9.2 | | | 280 | | | K | 1 | | 1 | | | 1 | | | | | |
| 133- SS | 198 | 1158+84.00 | 12 | 1162+06.00 | 12 | | | 7 | | 322 | | | D | | | 1 | 1 | | 1 | | | | | |
| 134- SS | 198-199 | 1162+10.00 | 12 | 1165+36.00 | 12 | 4 | | 19 | | 326 | | | B | | | 1 | | | 1 | | | | | |
| 135- SS | 199 | 1165+40.00 | 12 | 1168+46.00 | 12 | 4 | | 19 | | 306 | | | B | | | 1 | | | 1 | | | | | |
| 136- SS | 199 | 1168+50.00 | 12 | 1172+25.00 | 12 | 4 | | 19 | | 375 | | | B | | | 1 | | | 1 | | | | | |
| 137- SS | 199 | 1172+20.00 | 12 | 1175+46.00 | 12 | | | 7 | | 326 | | | A | | | 1 | 1 | | 1 | | | | | |
| 138- SS | 199-200 | 1175+50.00 | 12 | 1178+96.00 | 12 | 4 | | 19 | | 346 | | | B | | | 1 | | | 1 | | | | | |
| 139- SS | 200 | 1179+00.00 | 12 | 1182+46.00 | 12 | 4 | | 19 | | 346 | | | B | | | 1 | | | 1 | | | | | |
| 140- SS | 200 | 1182+50.00 | 12 | 1186+16.00 | 12 | 4 | | 19 | | 366 | | | B | | | 1 | | | 1 | | | | | |
| 141- SS | 200-201 | 1186+20.00 | 12 | 1189+66.00 | 12 | | | 7 | | 346 | | | A | | | 1 | 1 | | 1 | | | | | |
| 142- SS | 201 | 1189+70.00 | 12 | 1193+16.00 | 12 | 4 | | 19 | | 346 | | | B | | | 1 | | | 1 | | | | | |
| 143- SS | 201 | 1193+20.00 | 12 | 1195+76.00 | 12 | | | 7 | | 256 | | | A | | | 1 | 1 | | 1 | | | | | |
| 144- SS | 201 | 1195+80.00 | 12 | 1198+40.00 | 12 | 4 | | 16 | | 260 | | | B | | | 1 | | | 1 | | | | | |
| 145- SS | 201-202 | 1198+44.00 | 12 | 1202+21.00 | 12 | | | 7 | | 377 | | | O | | | 1 | 1 | | 1 | | | | | |
| 146- SS | 202 | 1202+25.00 | 14 | 1203+00.00 | 14 | | | 7 | | 75 | | | A | | | 1 | 1 | | | | | | | |
| | | 1203+00.00 | 12 | 1204+61.00 | 12 | | | | | 161 | | | | | | | | | 1 | | | | | |
| 147- SS | 202 | 1204+65.00 | 12 | 1206+96.00 | 12 | 4 | | 19 | | 231 | | | B | | | 1 | | | 1 | | | | | |
| 148- SS | 202 | 1207+00.00 | 12 | 1209+30.00 | 12 | 4 | | 19 | | 230 | | | B | | | 1 | | | 1 | | | | | |
| 149- SS | 202 | 1209+34.00 | 12 | 1211+76.00 | 12 | | 9.2 | | | 242 | | | F | | | 1 | | | 1 | | | | | |
| 150- SS | 202-203 | 1211+80.00 | 12 | 1214+26.00 | 12 | 4 | | 19 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 151- SS | 203 | 1214+30.00 | 12 | 1216+72.00 | 12 | 4 | | 19 | | 242 | | | B | | | 1 | | | 1 | | | | | |
| 152- SS | 203 | 1216+76.00 | 12 | 1219+01.00 | 12 | | | 7 | | 225 | | | D | | | 1 | 1 | | 1 | | | | | |
| 153- SS | 203 | 1219+05.00 | 12 | 1221+30.00 | 12 | 4 | | 19 | | 225 | | | B | | | 1 | | | 1 | | | | | |
| 154- SS | 203 | 1221+34.00 | 12 | 1224+16.00 | 12 | | 9.2 | | | 282 | | | F | | | 1 | | | 1 | | | | | |
| 155- SS | 203-204 | 1224+20.00 | 12 | 1228+09.00 | 12 | 4 | | 19 | | 389 | | | B | | | 1 | | | 1 | | | | | |
| 156- SS | 204 | 1228+13.00 | 12 | 1229+46.00 | 12 | | 9.2 | | | 133 | | | F | | | 1 | | | 1 | | | | | |
| 157- SS | 204 | 1229+50.00 | 12 | 1231+86.00 | 12 | 4 | | 19 | | 236 | | | B | | | 1 | | | 1 | | | | | |
| 158- SS | 204 | 1231+90.00 | 12 | 1234+46.00 | 12 | | | 7 | | 256 | | | A | | | 1 | 1 | | 1 | | | | | |
| TOTALS CARRIED TO SHEET 106 | | | | | | 104 | 55.2 | 605 | | 13626 | | 20 | | 2 | 1 | 48 | 17 | | 50 | | | | | |

7885DS70GN 11/4/99 RB

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY SOUTHBOUND OUTSIDE, FREE DRAINAGE BASE

MED-71-15.78

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN SQ. YD. | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 FEET | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 FEET | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN FEET | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN FEET | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE EACH | 4" x 4" x 4" TEE EACH | 4" 90° BEND EACH | 4" 45° BEND EACH | 4" 22.5° BEND EACH | 4" PLUG EACH | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 159- SS | 204 | 1234+50.00 | 12 | 1236+96.00 | 12 | 4 | | 19 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 160- SS | 204-205 | 1237+00.00 | 12 | 1239+46.00 | 12 | 4 | | 19 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 161- SS | 205 | 1239+50.00 | 12 | 1242+32.00 | 12 | | | 7 | | 282 | | | A | | | 1 | 1 | | 1 | | | | | |
| 162- SS | 205 | 1242+36.00 | 12 | 1244+86.00 | 12 | | | 7 | | 250 | | | 0 | | | 1 | 1 | | 1 | | | | | |
| 163- SS | 205 | 1244+90.00 | 12 | 1247+41.00 | 12 | 4 | | 19 | | 251 | | | B | | | 1 | | | 1 | | | | | |
| 164- SS | 205 | 1247+45.00 | 12 | 1249+96.00 | 12 | 4 | | 19 | | 251 | | | B | | | 1 | | | 1 | | | | | |
| 165- SS | 205-206 | 1250+00.00 | 12 | 1252+46.00 | 12 | 4 | | 19 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 166- SS | 206 | 1252+50.00 | 12 | 1256+00.00 | 12 | | | 7 | | 350 | | | A | | | 1 | 1 | | | | | | | |
| 167- SS | 206 | 1256+00.00 | 12 | 1258+35.00 | 12 | | | 7 | | 235 | | | A | | | 1 | 1 | | | | | | | |
| 168- SS | 206 | 1258+00.00 | 12 | 1261+00.00 | 12 | 4 | | 20 | | 300 | | | B | | | 1 | | | 1 | | | | | |
| 169- SS | 206-207 | 1261+04.00 | 12 | 1263+84.00 | 12 | | 9.2 | | | 280 | | | F | | | 1 | | | 1 | | | | | |
| 170- SS | 207 | 1263+88.00 | 12 | 1267+60.00 | 12 | | | | | 372 | | | | | | | | | 1 | | | | | |
| 171- SS | 207 | 1267+60.00 | 12 | 1267+70.00 | 18 | | | 7 | | | | 10 | C | | 1 | | 1 | | | | | | | |
| 172- SS | 207 | 1267+70.00 | 18 | 1267+81.00 | 12 | | | | | | | 11 | | | | | | | 1 | | | | | |
| 173- SS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 174- SS | 207 | 1270+45.00 | 12 | 1273+00.00 | 12 | 4 | | 17 | | 255 | | | B | | | 1 | | | 1 | | | | | |
| 175- SS | 207 | 1273+04.00 | 12 | 1275+50.00 | 12 | | | 7 | | 246 | | | A | | | 1 | 1 | | 1 | | | | | |
| 176- SS | 207-208 | 1275+54.00 | 12 | 1277+00.00 | 12 | 4 | | 19 | | 146 | | | B | | | 1 | | | 1 | | | | | |
| 177- SS | 208 | 1277+04.00 | 12 | 1280+00.00 | 12 | | 9.2 | | | 296 | | | K | 1 | | 1 | | | 1 | | | | | |
| 178- SS | 208 | 1279+60.00 | 12 | 1281+80.00 | 12 | | | 7 | | 220 | | | A | | | 1 | 1 | | 1 | | | | | |
| 179- SS | 208 | 1281+84.00 | 12 | 1284+90.00 | 12 | 4 | | 15 | | 306 | | | B | | | 1 | | | 1 | | | | | |
| 180- SS | 208 | 1284+94.00 | 12 | 1288+00.00 | | 4 | | 15 | | 306 | | | B | | | 1 | | | 1 | | | | | |
| 181- SS | 208-209 | 1288+04.00 | 12 | 1291+00.00 | 12 | 4 | | 15 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 182- SS | 209 | 1291+04.00 | 12 | 1293+96.00 | 12 | | | 7 | | 292 | | | P | | | 1 | 1 | | 1 | | | | | |
| 183- SS | 209 | 1293+96.00 | 12 | 1297+56.00 | 12 | | | | | 360 | | | | | | | | | 1 | | | | | |
| 184- SS | 209-210 | 1297+60.00 | 12 | 1301+16.00 | 12 | 4 | | 15 | | 356 | | | B | | | 1 | | | 1 | | | | | |
| 185- SS | 210 | 1301+20.00 | 12 | 1303+36.00 | 12 | | | 7 | | 216 | | | A | | | 1 | 1 | | 1 | | | | | |
| 186- SS | 210 | 1303+40.00 | 12 | 1305+56.00 | 12 | 4 | | 19 | | 216 | | | B | | | 1 | | | 1 | | | | | |
| 187- SS | 210 | 1305+60.00 | 12 | 1308+96.00 | 12 | | | 7 | | 336 | | | A | | | 1 | 1 | | 1 | | | | | |
| 188- SS | 210 | 1309+00.00 | 12 | 1312+32.00 | 12 | 4 | | 10 | | 332 | | | B | | | 1 | | | 1 | | | | | |
| 189- SS | 210-211 | 1312+36.00 | 12 | 1315+26.00 | 12 | | | 7 | | 290 | | | 0 | | | 1 | 1 | | 1 | | | | | |
| 190- SS | 211 | 1315+30.00 | 12 | 1318+21.00 | 12 | 4 | | 19 | | 291 | | | B | | | 1 | | | 1 | | | | | |
| 191- SS | 211 | 1318+25.00 | 12 | 1320+96.00 | 12 | 4 | | 19 | | 271 | | | B | | | 1 | | | 1 | | | | | |
| 192- SS | 211 | 1321+00.00 | 12 | 1324+00.00 | 12 | 4 | | 19 | | 300 | | | B | | | 1 | | | | | | | | |
| 193- SS | 211-212 | 1324+00.00 | 12 | 1326+80.00 | 12 | 4 | | 19 | | 280 | | | B | | | 1 | | | | | | | | |
| 194- SS | 212 | 1326+84.00 | 12 | 1329+70.00 | 12 | 4 | | 19 | | 286 | | | B | | | 1 | | | 1 | | | | | |
| 195- SS | 212 | 1329+74.00 | 12 | 1332+60.00 | 12 | 4 | | 19 | | 286 | | | B | | | 1 | | | 1 | | | | | |
| 196- SS | 212 | 1332+64.00 | 12 | 1335+50.00 | 12 | 4 | | 19 | | 286 | | | B | | | 1 | | | 1 | | | | | |
| 197- SS | 212 | 1335+54.00 | 12 | 1338+34.00 | 12 | | 9.2 | | | 280 | | | F | | | 1 | | | 1 | | | | | |
| 198- SS | 212-213 | 1338+38.00 | 12 | 1340+70.00 | 12 | 4 | | 19 | | 232 | | | B | | | 1 | | | 1 | | | | | |
| 199- SS | 213 | 1340+74.00 | 12 | 1343+00.00 | 12 | 4 | | 19 | | 226 | | | B | | | 1 | | | 1 | | | | | |
| 200- SS | 213 | 1343+04.00 | 12 | 1345+45.00 | 12 | | | 7 | | 241 | | | A | | | 1 | 1 | | 1 | | | | | |
| 201- SS | 213 | 1345+49.00 | 12 | 1348+40.00 | 12 | 4 | | 19 | | 291 | | | B | | | 1 | | | 1 | | | | | |
| 202- SS | 213-214 | 1348+44.00 | 12 | 1351+36.00 | 12 | | | 7 | | 292 | | | 0 | | | 1 | 1 | | 1 | | | | | |
| 203- SS | 214 | 1351+40.00 | 12 | 1355+90.00 | 12 | 4 | | 19 | | 450 | | | B | | | 1 | | | 1 | | | | | |
| 204- SS | 214 | 1355+94.00 | 12 | 1358+50.00 | 12 | | | 7 | | 256 | | | A | | | 1 | 1 | | 1 | | | | | |
| 205- SS | 214 | 1358+54.00 | 12 | 1361+50.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 206- SS | 214-215 | 1361+54.00 | 12 | 1364+50.00 | 12 | | | 7 | | 296 | | | A | | | 1 | 1 | | 1 | | | | | |
| 207- SS | 215 | 1364+54.00 | 12 | 1367+50.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 208- SS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 209- SS | 215 | 1367+54.00 | 12 | 1370+50.00 | 12 | | | 7 | | 296 | | | A | | | 1 | 1 | | 1 | | | | | |
| 210- SS | 215 | 1370+54.00 | 12 | 1373+50.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 211- SS | 215-216 | 1373+54.00 | 12 | 1376+50.00 | 12 | | | 7 | | 296 | | | A | | | 1 | 1 | | 1 | | | | | |
| **TOTALS CARRIED TO SHEET 106** | | | | | | 112 | 27.6 | 625 | | 13827 | | 21 | | 1 | 1 | 47 | 17 | | 46 | | | | | |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY SOUTHBOUND OUTSIDE, FREE DRAINAGE BASE

MED-71-15.78

105/940

7885DS7.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | OUTLET DETAIL | BENDS AND BRANCHES 6" x 6" x 4" TEE | 4" x 4" x 4" TEE | 4" 90° BEND | 4" 45° BEND | 4" 22.5° BEND | 4" PLUG | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | FEET | FEET | | FEET | | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | | | | | |
| 212- SS | 216 | 1376+54.00 | 12 | 1379+50.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 213- SS | 216 | 1379+54.00 | 12 | 1382+50.00 | 12 | | | 7 | | 296 | | | A | | | 1 | 1 | | 1 | | | | | |
| 214- SS | 216 | 1382+54.00 | 12 | 1385+50.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 215- SS | 216 | 1385+54.00 | 12 | 1388+50.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 216- SS | 217 | 1388+54.00 | 12 | 1391+50.00 | 12 | 4 | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 217- SS | 217 | 1391+54.00 | 12 | 1394+35.00 | 12 | | 9.2 | | | 281 | | | F | | | 1 | | | 1 | | | | | |
| TOTALS FROM SHEET 102 | | | | | | 104 | 47 | 541 | | 13680 | | 130 | | 2 | 1 | 46 | 16 | 1 | 49 | | | | | |
| TOTALS FROM SHEET 103 | | | | | | 84 | 39.4 | 499 | | 10963 | | 167 | | 2 | 4 | 36 | 15 | 1 | 42 | | | | | |
| TOTALS FROM SHEET 104 | | | | | | 104 | 55.2 | 605 | | 13626 | | 20 | | 2 | 1 | 48 | 17 | | 50 | | | | | |
| TOTALS FROM SHEET 105 | | | | | | 112 | 27.6 | 625 | | 13822 | | 21 | | 1 | 1 | 47 | 17 | | 46 | | | | | |
| TOTALS 212-SS THRU 217-SS | | | | | | 16 | 9.2 | 83 | | 1761 | | | | | | 6 | 1 | | 6 | | | | | |
| **TOTALS CARRIED TO SHEET 128** | | | | | | 420 | 178.4 | 2353 | | 53875 | | 338 | | 7 | 7 | 183 | 66 | 2 | 193 | | | | | |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY
## SOUTHBOUND OUTSIDE, FREE DRAINAGE BASE

MED-71-15.78

106
940

7885DST.DGN 11/1/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 603 6" CONDUIT, TYPE B, 707.33 OR 707.41 FEET | 603 6" CONDUIT, TYPE F, 707.33 OR 707.41 FEET | 605 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 FEET | 605 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41 FEET | 605 ROCK CUT UNDERDDRAIN WITH FABRIC WRAP FEET | OUTLET DETAIL | BENDS AND BRANCHES 6" x 6" x 6" TEE EACH | 6" x 4" x 6" TEE EACH | 6" 90° BEND EACH | 6"x 6"x4" 45° WYE EACH | 6" PLUG EACH | 6"x6"x6"x6" CROSS EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 - SI | 172 | 833+02.00 | 24 | 833+10.00 | 30 | | | | 8 | | | | | | | 1 | |
| 2 - SI | 172 | 833+10.00 | 30 | 837+16.00 | 30 | 15 | 8 | 406 | | | T | | | | 1 | 1 | 1 |
| 3 - SI | 172-173 | 837+20.00 | 30 | 842+66.00 | 30 | 15 | 8 | 546 | | | F | 1 | | | 1 | 1 | |
| 4 - SI | 173-174 | 842+70.00 | 30 | 852+66.00 | 30 | 15 | 10 | 996 | | | F | 1 | | | 1 | 1 | |
| 5 - SI | 174 | 852+70.00 | 30 | 855+66.00 | 30 | 15 | 8 | 296 | | | D | | | 1 | 1 | 1 | |
| 6 - SI | 174 | 855+70.00 | 12 | 858+80.00 | 12 | 9 | 41 | | | 310 | L5 | | 1 | 1 | | 1 | |
| 7 - SI | 177 | 891+67.00 | 29 | 891+70.00 | 30 | | | | 3 | | | | | | | 1 | |
| 8 - SI | 177 | 891+70.00 | 30 | 896+46.00 | 30 | 15 | 14 | 476 | | | J | 1 | | | 1 | 1 | |
| 9 - SI | 177-178 | 896+50.00 | 30 | 906+61.00 | 30 | 15 | 14 | 1011 | | | D | | | 1 | 1 | 1 | |
| 10 - SI | 178-179 | 906+65.00 | 30 | 914+61.00 | 30 | 15 | 14 | 796 | | | D | | | 1 | 1 | 1 | |
| 11 - SI | 179 | 914+65.00 | 30 | 922+21.00 | 30 | 15 | 14 | 756 | | | D | | | 1 | 1 | 1 | |
| 12 - SI | 179-180 | 922+25.00 | 30 | 931+64.00 | 30 | 15 | 14 | 939 | | | D | | | 1 | 1 | 1 | |
| 13 - SI | 180-181 | 931+68.00 | 30 | 944+64.00 | 30 | 15 | 14 | 1296 | | | D | | | 1 | 1 | 1 | |
| 14 - SI | 181-182 | 944+68.00 | 30 | 956+34.00 | 30 | 15 | 19 | 1166 | | | D | | | 1 | 1 | 1 | |
| 15 - SI | 182 | 956+38.00 | 30 | 961+64.00 | 30 | 15 | 14 | 526 | | | D | | | 1 | 1 | 1 | |
| 16 - SI | 182-183 | 961+68.00 | 30 | 967+46.00 | 30 | 15 | 14 | 578 | | | F | | | 1 | 1 | 1 | |
| 17 - SI | 183 | 967+50.00 | 30 | 973+96.00 | 30 | 15 | 14 | 646 | | | D | | | 1 | 1 | 1 | |
| 18 - SI | 183-184 | 974+00.00 | 30 | 980+50.00 | 30 | 15 | 14 | 650 | | | S | 1 | | | 1 | | |
| 19 - SI | 184 | 980+50.00 | 30 | 985+92.00 | 30 | 15 | 14 | 542 | | | J | 1 | | | 1 | | |
| 20 - SI | 184 | 985+92.00 | 30 | 986+19.00 | 27.25 | | | | 27 | | | | | | | 1 | |
| 21 - SI | 184-185 | 988+38.00 | 33.25 | 993+00.00 | 30 | 15 | 14 | 462 | | | D | | | 1 | 1 | 1 | |
| 22 - SI | 185 | 993+04.00 | 30 | 998+65.00 | 30 | 15 | 14 | 561 | | | D | | | 1 | 1 | 1 | |
| 23 - SI | 185-186 | 998+69.00 | 30 | 1008+52.00 | 30 | 15 | 14 | 983 | | | D | | | 1 | 1 | 1 | |
| 24 - SI | 186 | 1008+56.00 | 30 | 1011+95.00 | 30 | 15 | 14 | 339 | | | J | 1 | | | 1 | 1 | |
| 25 - SI | 186 | 1011+95.00 | 30 | 1012+55.00 | 23.25 | | | | 60 | | | | | | | 1 | |
| 26 - SI | 187 | 1013+60.00 | 21.25 | 1019+00.00 | 18 | | | 540 | | | | | | | | 1 | |
| 26A- SI | 187 | 1019+00.00 | 18 | 1020+00.00 | 12 | | | | 100 | | | | | | | | |
| 26B- SI | 187 | 1020+00.00 | 12 | 1022+72.00 | 12 | 9 | 20 | | | 272 | L5 | | 1 | 1 | | | |
| 27 - SI | 187 | 1022+76.00 | 12 | 1024+00.00 | 12 | | | | | 124 | | | | | | 1 | |
| 27A- SI | 187 | 1024+00.00 | 12 | 1024+50.00 | 30 | | | | 50 | | | | | | | | |
| 27B- SI | 187-188 | 1024+50.00 | 30 | 1037+40.00 | 30 | 15 | 14 | 1290 | | | F | 1 | | | 1 | | |
| 28 - SI | 188-189 | 1037+44.00 | 30 | 1045+08.00 | 30 | 15 | 14 | 764 | | | D | | | 1 | 1 | 1 | |
| 29 - SI | 189 | 1045+12.00 | 30 | 1050+70.00 | 30 | 15 | 14 | 558 | | | R | 1 | | | 1 | 1 | |
| 30 - SI | 189-190 | 1050+70.00 | 30 | 1051+30.00 | 9.25 | | | | 60 | | | | | | | 1 | |
| 31 - SI | 190 | 1053+65.00 | 33.25 | 1060+08.00 | 30 | 15 | 14 | 643 | | | J | 1 | | | 1 | 1 | |
| 32 - SI | 190-191 | 1060+08.00 | 30 | 1067+36.00 | 30 | | | 728 | | | | | | | | 1 | |
| 33 - SI | 191 | 1067+40.00 | 30 | 1070+88.00 | 30 | 15 | 14 | 348 | | | D | | | 1 | 1 | 1 | |
| 34 - SI | 191-192 | 1070+92.00 | 30 | 1076+51.00 | 30 | 15 | 14 | 559 | | | D | | | 1 | 1 | 1 | |
| 35 - SI | 192 | 1076+55.00 | 30 | 1087+36.00 | 30 | 15 | 14 | 1081 | | | D | | | 1 | 1 | 1 | |
| 36 - SI | 192-193 | 1087+40.00 | 30 | 1089+24.00 | 30 | 15 | 14 | 184 | | | D | | | 1 | 1 | 1 | |
| 37 - SI | 193-194 | 1089+28.00 | 30 | 1102+66.00 | 30 | 15 | 14 | 1338 | | | D | | | 1 | 1 | 1 | |
| 38 - SI | 194 | 1102+70.00 | 30 | 1103+11.00 | 33.25 | 15 | 14 | 41 | | | D | | | 1 | 1 | 1 | |
| 39 - SI | | NOT USED | | | | | | | | | | | | | | | |
| 40 - SI | 194 | 1105+55.00 | 27.25 | 1106+00.00 | 30 | | | | 45 | | | | | | | 1 | |
| 41 - SI | 194 | 1106+00.00 | 30 | 1108+76.00 | 30 | 15 | 14 | 276 | | | J | 1 | | | 1 | 1 | |
| 42 - SI | 194-195 | 1108+80.00 | 30 | 1118+38.00 | 30 | 15 | 14 | 958 | | | D | | | 1 | 1 | 1 | |
| 43 - SI | 195-196 | 1118+42.00 | 30 | 1127+86.00 | 30 | 15 | 14 | 944 | | | D | | | 1 | 1 | 1 | |
| 44 - SI | 196 | 1127+90.00 | 30 | 1134+34.00 | 30 | 15 | 14 | 644 | | | D | | | 1 | 1 | 1 | |
| 45 - SI | 196-197 | 1134+38.00 | 30 | 1140+26.00 | 30 | 15 | 14 | 588 | | | D | | | 1 | 1 | 1 | |
| 46 - SI | 197 | 1140+30.00 | 30 | 1143+86.00 | 30 | 15 | 14 | 356 | | | F | 1 | | | 1 | 1 | |
| 47 - SI | 197-198 | 1143+90.00 | 30 | 1158+80.00 | 30 | 15 | 14 | 1490 | | | D | | | 1 | 1 | 1 | |
| 48 - SI | 198-199 | 1158+84.00 | 30 | 1173+00.00 | 30 | 15 | 14 | 1416 | | | D | | | 1 | 1 | 1 | |
| 49 - SI | 199-200 | 1173+04.00 | 30 | 1186+33.00 | 30 | 15 | 14 | 1329 | | | D | | | 1 | 1 | 1 | |
| TOTALS CARRIED TO SHEET 108 | | | | | | 603 | 590 | 30046 | 353 | 706 | | 11 | 2 | 29 | 39 | 46 | 1 |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY SOUTHBOUND MEDIAN, SUBGRADE

MED-71-15.78

107
940

7885DS8.DGN 11/5/99 RB

| REFERENCE NO. | SHEET NO. | STATION | | | | 603 | 603 | 605 | 605 | 605 | | BENDS AND BRANCHES | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 6" CONDUIT, TYPE B, 707.33 OR 707.41 | 6" CONDUIT, TYPE F, 707.33 OR 707.41 | 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 | 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41 | ROCK CUT UNDERDDRAIN WITH FABRIC WRAP | OUTLET DETAIL | 6" x 6" x 6" TEE | 6" x 4" x 6" TEE | 6" 90° BEND | 6"x 6"x4" 45° WYE | 6" PLUG | 6"x6"x6"x6" CROSS | | | | | | | | |
| | | FROM | DEPTH | TO | DEPTH | FEET | FEET | FEET | FEET | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | | |
| 50 - SI | 200-201 | 1186+37.00 | 30 | 1198+37.00 | 30 | 15 | 14 | 1200 | | | D | | | 1 | 1 | 1 | | | | | | | | |
| 51 - SI | 201-202 | 1198+41.00 | 30 | 1203+00.00 | 30 | 15 | 14 | 459 | | | D | | | 1 | 1 | 1 | | | | | | | | |
| 52 - SI | 204-205 | 1231+34.00 | 30 | 1242+30.00 | 30 | 15 | 9 | 1096 | | | D | | | 1 | 1 | 1 | | | | | | | | |
| 53 - SI | 205-206 | 1242+34.00 | 30 | 1256+00.00 | 30 | 15 | 14 | 1366 | | | D | | | 1 | 1 | | | | | | | | | |
| 54 - SI | 206-207 | 1256+00.00 | 30 | 1263+84.00 | 30 | 15 | 14 | 784 | | | F | 1 | | | 1 | | | | | | | | | |
| 55 - SI | 207 | 1263+88.00 | 30 | 1267+34.00 | 30 | 15 | 10 | 346 | | | J | | | 1 | 1 | 1 | | | | | | | | |
| 56 - SI | 207 | 1267+34.00 | 30 | 1267+89.00 | 23.25 | 15 | | | 55 | | | | | 1 | 1 | 1 | | | | | | | | |
| 57 - SI | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 58 - SI | 207-208 | 1269+93.00 | 33.25 | 1281+34.00 | 30 | 15 | 14 | 1141 | | | Z | 1 | | | 1 | 1 | | | | | | | | |
| 59 - SI | 208-209 | 1281+38.00 | 30 | 1293+94.00 | 30 | 15 | 14 | 1256 | | | J | | | 1 | 1 | 1 | | | | | | | | |
| 60 - SI | 209 | 1293+94.00 | 30 | 1300+30.00 | 30 | | | 636 | | | | | | | | 1 | | | | | | | | |
| 61 - SI | 209-210 | 1300+34.00 | 30 | 1312+30.00 | 30 | 15 | 19 | 1196 | | | D | | | 1 | 1 | 1 | | | | | | | | |
| 62 - SI | 210-211 | 1312+34.00 | 30 | 1324+00.00 | 30 | 15 | 14 | 1166 | | | D | | | 1 | 1 | | | | | | | | | |
| 63 - SI | 211-212 | 1324+00.00 | 30 | 1338+34.00 | 30 | 15 | 14 | 1434 | | | F | 1 | | | 1 | | | | | | | | | |
| 64 - SI | 212-213 | 1338+38.00 | 30 | 1344+76.00 | 30 | 15 | 14 | 638 | | | D | | | 1 | 1 | 1 | | | | | | | | |
| 65 - SI | 213-214 | 1344+80.00 | 30 | 1351+34.00 | 30 | 15 | 14 | 654 | | | D | | | 1 | 1 | 1 | | | | | | | | |
| 66 - SI | 214-215 | 1351+38.00 | 30 | 1366+34.00 | 30 | 15 | 14 | 1496 | | | D | | | 1 | 1 | 1 | | | | | | | | |
| 67 - SI | 215-216 | 1366+38.00 | 30 | 1381+34.00 | 30 | 15 | 14 | 1496 | | | D | | | 1 | 1 | 1 | | | | | | | | |
| 68 - SI | 216-217 | 1381+38.00 | 30 | 1394+35.00 | 30 | 15 | 14 | 1297 | | | F | 1 | | | 1 | 1 | | | | | | | | |
| TOTALS FROM SHEET 107 | | | | | | 603 | 590 | 30046 | 353 | 706 | | 11 | 2 | 29 | 39 | 46 | 1 | | | | | | | | |
| 50-SI THRU 68-SI TOTALS ____ | | | | | | 255 | 220 | 17661 | 55 | | | 4 | | 13 | 17 | 14 | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 128** | | | | | | 858 | 810 | 47707 | 408 | 706 | | 15 | 2 | 42 | 56 | 60 | 1 | | | | | | | | |

CALCULATED P.S.
CHECKED B.C.

**UNDERDRAIN SUBSUMMARY**
**SOUTHBOUND MEDIAN, SUBGRADE**

**MED-71-15.78**



7885DS8.DGN 11/5/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 602 CONCRETE MASONRY, AS PER PLAN | 603 6" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 6" CONDUIT, TYPE F, 707.33 OR 707.41 | 605 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 | 605 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41 | 605 ROCK CUT UNDERDRAIN WITH FABRIC WRAP | OUTLET DETAIL | BENDS AND BRANCHES 4" x 6" x 6" x 6" CROSS | 6" x 6" x 4" TEE | 6" x 4" x 6" TEE | 6" x 6" x 6" TEE | 6" 90° BEND | 6"x6"x4" 45° WYE | 6" PLUG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FROM | DEPTH | TO | DEPTH | SQ. YD. | CU. YD. | FEET | FEET | FEET | FEET | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | EACH |
| 1 - SO | 172 | 833+02.00 | 24 | 833+10.00 | 30 | | | | | | 8 | | | | | | | | | 1 |
| 2 - SO | 172 | 833+10.00 | 30 | 837+16.00 | 30 | | | 37.2 | | 406 | | | T | | | | 1 | | | 1 |
| 3 - SO | 172-173 | 837+20.00 | 30 | 842+66.00 | 30 | | | 37.2 | | 546 | | | F | | 1 | | | | | 1 |
| 4 - SO | 173-174 | 842+70.00 | 30 | 852+16.00 | 30 | | | 37.2 | | 946 | | | F | | 1 | | | | | 1 |
| 5 - SO | 174 | 852+20.00 | 30 | 854+21.00 | 30 | 4 | | 15 | 18 | 201 | | | A | | | | | 1 | 1 | 1 |
| 6 - SO | 174-175 | 854+25.00 | 12 | 866+24.00 | 12 | | | 9.2 | 11 | 399 | | 800 | L4 | | | 1 | | 1 | | 1 |
| 7 - SO | | NOT USED | | | | | | | | | | | | | | | | | | |
| 8 - SO | 175 | 866+28.00 | 30 | 874+66.00 | 30 | | 0.51 | 15 | 20 | 838 | | | O | | | | | 1 | 1 | 1 |
| 9 - SO | 175-176 | 874+70.00 | 30 | 879+70.00 | 30 | | 0.51 | 13 | 19 | 500 | | | X | | | | 1 | | 1 | 1 |
| 10 - SO | 175-176 | 874+70.00 | 30 | 883+21.00 | 30 | | | 27 | | 851 | | | X | | | | | 1 | | 1 |
| 11 - SO | 176-177 | 883+25.00 | 30 | 889+19.00 | 33.25 | 4 | | 15 | 29 | 594 | | | A | | | | | 1 | 1 | 1 |
| 12 - SO | 177 | 890+91.00 | 23.25 | 891+30.00 | 30 | | | | | | 39 | | | | | | | | | 1 |
| 13 - SO | 177 | 891+30.00 | 30 | 896+44.00 | 30 | 4 | | 15 | 9 | 514 | | | C | | | | 1 | | 1 | 1 |
| 14 - SO | 177 | 896+48.00 | 30 | 901+00.00 | 30 | | 0.51 | 15 | 30 | 452 | | | O | | | | | 1 | 1 | 1 |
| 15 - SO | 177-178 | 899+50.00 | 30 | 906+59.00 | 30 | 4 | | 15 | 9 | 709 | | | A | | | | | 1 | 1 | 1 |
| 16 - SO | 178 | 906+63.00 | 30 | 912+46.00 | 30 | | 0.51 | 15 | 30 | 583 | | | O | | | | | 1 | 1 | 1 |
| 17 - SO | 178-179 | 912+50.00 | 30 | 915+56.00 | 30 | 4 | | 15 | 9 | 306 | | | A | | | | | 1 | 1 | 1 |
| 18 - SO | 179 | 915+60.00 | 30 | 921+68.00 | 30 | | | 15 | 14 | 608 | | | L2 | | | | | 1 | 1 | 1 |
| 19 - SO | 179-180 | 921+72.00 | 30 | 930+66.00 | 30 | | | 15 | 34 | 894 | | | L2 | | | | | 1 | 1 | 1 |
| 20 - SO | 180 | 930+70.00 | 30 | 934+46.00 | 30 | 4 | | 15 | 9 | 376 | | | A | | | | | 1 | 1 | 1 |
| 21 - SO | 180-181 | 934+50.00 | 30 | 944+06.00 | 30 | 4 | | 15 | 9 | 956 | | | A | | | | | 1 | 1 | 1 |
| 22 - SO | 181 | 944+10.00 | 30 | 950+01.00 | 30 | 4 | | 15 | 9 | 591 | | | A | | | | | 1 | 1 | 1 |
| 23 - SO | 181-182 | 950+05.00 | 30 | 955+96.00 | 30 | 4 | | 15 | 9 | 591 | | | A | | | | | 1 | 1 | 1 |
| 24 - SO | 182 | 956+00.00 | 30 | 961+64.00 | 30 | 4 | | 15 | 13 | 564 | | | A | | | | | 1 | 1 | 1 |
| 25 - SO | 182-183 | 961+68.00 | 27 | 972+00.00 | 27 | | | 49.2 | | 1032 | | | F | | 1 | | | | | |
| 26 - SO | 183 | 973+00.00 | 18 | 974+00.00 | 30 | | | | | | 100 | | | | | | | | | 1 |
| 27 - SO | 183-184 | 974+00.00 | 30 | 980+50.00 | 30 | | | 37.2 | | 650 | | | S | 1 | | | | | | |
| 28 - SO | | NOT USED | | | | | | | | | | | | | | | | | | |
| 29 - SO | 184 | 980+50.00 | 30 | 985+60.00 | 30 | 4 | | 15 | 9 | 510 | | | C | | | | 1 | | 1 | |
| 30 - SO | 184 | 985+60.00 | 30 | 985+97.00 | 27.25 | | | | | | 37 | | | | | | | | | 1 |
| 31 - SO | 184-185 | 988+19.00 | 33.25 | 994+00.00 | 30 | 4 | | 15 | 11 | 581 | | | A | | | | | 1 | 1 | 1 |
| 32 - SO | 185 | 994+04.00 | 30 | 999+30.00 | 30 | 4 | | 15 | 11 | 526 | | | A | | | | | 1 | 1 | 1 |
| 33 - SO | 185-186 | 999+34.00 | 30 | 1005+75.00 | 30 | 4 | | 15 | 22 | 641 | | | A | | | | | 1 | 1 | 1 |
| 34 - SO | 186 | 1005+79.00 | 30 | 1011+10.00 | 30 | 4 | | 15 | 19 | 531 | | | C | | | | 1 | | 1 | 1 |
| 35 - SO | 186 | 1011+10.00 | 30 | 1012+60.00 | 15.25 | | | | | | 150 | | | | | | | | | 1 |
| 36 - SO | 187 | 1013+66.00 | 21.25 | 1019+00.00 | 18 | | | | | 534 | | | | | | | | | | 1 |
| 36A- SO | 187 | 1019+00.00 | 18 | 1020+00.00 | 12 | | | | | | 100 | | | | | | | | | |
| 36B- SO | 187 | 1020+00.00 | 12 | 1022+40.00 | 12 | 4 | | 9 | 12 | | | 240 | L4 | | | 1 | | 1 | | |
| 37 - SO | 187 | 1022+44.00 | 12 | 1024+00.00 | 12 | | | | | | | 156 | | | | | | | | 1 |
| 37A- SO | 187 | 1024+00.00 | 12 | 1024+50.00 | 30 | | | | | | 50 | | | | | | | | | |
| 37B- SO | 187-188 | 1024+50.00 | 30 | 1037+40.00 | 30 | | | 37.2 | | 1290 | | | F | | 1 | | | | | |
| 38 - SO | 189 | 1037+44.00 | 30 | 1044+85.00 | 30 | 4 | | 15 | 25 | 741 | | | A | | | | | 1 | 1 | 1 |
| 39 - SO | 189 | 1044+89.00 | 30 | 1050+75.00 | 30 | | | 15 | 20 | 586 | | | L3 | | | | | 1 | 1 | 1 |
| 40 - SO | 189-190 | 1050+79.00 | 30 | 1051+42.00 | 9.25 | | | | | | 63 | | | | | | | | | 1 |
| 41 - SO | 190 | 1053+75.00 | 33.25 | 1057+00.00 | 30 | 4 | | 15 | 10 | 325 | | | A | | | | | 1 | 1 | 1 |
| 42 - SO | 190 | 1057+04.00 | 30 | 1060+12.00 | 30 | 4 | | 15 | 12 | 308 | | | C | | | | 1 | | 1 | 1 |
| 43 - SO | 190-191 | 1060+12.00 | 30 | 1067+36.00 | 30 | | | | | 724 | | | | | | | | | | 1 |
| 44 - SO | 191 | 1067+40.00 | 30 | 1071+88.00 | 30 | | | 15 | 19 | 448 | | | D | | | | | 1 | 1 | 1 |
| 45 - SO | 191 | 1071+92.00 | 30 | 1075+81.00 | 30 | | | 15 | 19 | 389 | | | D | | | | | 1 | 1 | 1 |
| 46 - SO | 191-192 | 1075+85.00 | 30 | 1080+96.00 | 30 | | | 15 | 18 | 511 | | | D | | | | | 1 | 1 | 1 |
| 47 - SO | 192 | 1081+00.00 | 30 | 1083+96.00 | 30 | 4 | | 15 | 10 | 296 | | | A | | | | | 1 | 1 | 1 |
| 48 - SO | 192-193 | 1084+00.00 | 30 | 1089+31.00 | 30 | 4 | | 15 | 8 | 531 | | | A | | | | | 1 | 1 | 1 |
| 49 - SO | 193 | 1089+35.00 | 30 | 1094+15.00 | 30 | 4 | | 13 | 25 | 480 | | | Y | | | | 1 | | 1 | 1 |
| **TOTALS CARRIED TO SHEET 111** | | | | | | 88 | 2.04 | 741.4 | 531 | 24059 | 547 | 1196 | | 1 | 4 | 2 | 7 | 28 | 31 | 44 |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY SOUTHBOUND OUTSIDE, SUBGRADE

MED-71-15.78



7885DS9.DGN 11/5/99 RB

| REFERENCE NO. | SHEET NO. | STATION | | | | 601 | 602 | 603 | 603 | 605 | 605 | 605 | | BENDS AND BRANCHES | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | CONCRETE MASONRY, AS PER PLAN | 6" CONDUIT, TYPE B, 707.33 OR 707.41 | 6" CONDUIT, TYPE F, 707.33 OR 707.41 | 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 | 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, | ROCK CUT UNDERDRAIN WITH FABRIC WRAP | OUTLET DETAIL | 4" x 6" x 6" x 6" CROSS | 6" x 6" x 4" TEE | 6" x 4" x 6" TEE | 6" x 6" x 6" TEE | 6" 90° BEND | 6"X6"x4" 45° WYE | 6" PLUG | | | | |
| | | FROM | DEPTH | FROM | DEPTH | SQ. YD. | CU. YD. | FEET | FEET | FEET | FEET | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | |
| 50 - SO | 193 | 1089+35.00 | 30 | 1096+96.00 | 30 | | | 25 | | 761 | | | Y | | | | | 1 | | 1 | | | | |
| 51 - SO | 193-194 | 1097+00.00 | 30 | 1102+93.00 | 33.25 | 4 | | 15 | 19 | 593 | | | A | | | | | 1 | 1 | 1 | | | | |
| 52 - SO | 194 | 1105+80.00 | 27.25 | 1106+10.00 | 30 | | | | | | 30 | | | | | | | | | | | | | |
| 53 - SO | 194 | 1106+10.00 | 30 | 1111+61.00 | 30 | 4 | | 15 | 9 | 551 | | | C | | | | 1 | | 1 | 1 | | | | |
| 54 - SO | 194-195 | 1111+65.00 | 30 | 1117+00.00 | 30 | 4 | | 15 | 27 | 535 | | | A | | | | | 1 | 1 | 1 | | | | |
| 55 - SO | 195 | 1116+30.00 | 30 | 1118+40.00 | 30 | 4 | | 15 | 11 | 210 | | | A | | | | | 1 | 1 | 1 | | | | |
| 56 - SO | 195 | 1118+44.00 | 30 | 1125+06.00 | 30 | | 0.51 | 15 | 24 | 662 | | | O | | | | | 1 | 1 | 1 | | | | |
| 57 - SO | 195-196 | 1125+10.00 | 30 | 1134+34.00 | 30 | 4 | | 15 | 21 | 924 | | | A | | | | | 1 | 1 | 1 | | | | |
| 58 - SO | 196-197 | 1134+38.00 | 30 | 1140+26.00 | 30 | | | 15 | 13 | 588 | | | D | | | | | 1 | 1 | 1 | | | | |
| 59 - SO | 197 | 1140+30.00 | 30 | 1143+86.00 | 30 | | | 37.2 | | 356 | | | F | | 1 | | | | | 1 | | | | |
| 60 - SO | 197-198 | 1143+90.00 | 30 | 1152+36.00 | 30 | | | 15 | 13 | 846 | | | D | | | | | 1 | 1 | 1 | | | | |
| 61 - SO | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 62 - SO | 198 | 1152+40.00 | 30 | 1156+50.00 | 30 | 4 | | 13 | 21 | 410 | | | Y | | | | 1 | | 1 | 1 | | | | |
| 63 - SO | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 64 - SO | 198 | 1152+40.00 | 30 | 1158+80.00 | 30 | | | 25 | | 640 | | | Y | | | | | 1 | | 1 | | | | |
| 65 - SO | 198-199 | 1158+84.00 | 30 | 1172+30.00 | 30 | | | 15 | 11 | 1346 | | | D | | | | | 1 | 1 | 1 | | | | |
| 66 - SO | 199 | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 67 - SO | 199-200 | 1172+20.00 | 30 | 1186+16.00 | 30 | 4 | | 15 | 24 | 1396 | | | A | | | | | 1 | 1 | 1 | | | | |
| 68 - SO | 200 | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 69 - SO | 200-201 | 1186+20.00 | 30 | 1193+16.00 | 30 | 4 | | 15 | 25 | 696 | | | A | | | | | 1 | 1 | 1 | | | | |
| 70 - SO | 201 | 1193+20.00 | 30 | 1198+40.00 | 30 | 4 | | 15 | 12 | 520 | | | A | | | | | 1 | 1 | 1 | | | | |
| 71 - SO | 201-202 | 1198+44.00 | 30 | 1202+21.00 | 30 | | 0.51 | 15 | 30 | 377 | | | O | | | | | 1 | 1 | 1 | | | | |
| 72 - SO | 202 | 1202+25.00 | 30 | 1203+00.00 | 30 | 4 | | 15 | 20 | 75 | | | A | | | | | 1 | 1 | | | | | |
| | | 1203+00.00 | 32 | 1209+30.00 | 32 | | | | | 630 | | | | | | | | | | 1 | | | | |
| 73 - SO | 202-203 | 1209+34.00 | 30 | 1216+72.00 | 30 | | | 66 | | 738 | | | F | | 1 | | | | 1 | 1 | | | | |
| 74 - SO | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 75 - SO | 203 | 1216+76.00 | 30 | 1221+30.00 | 30 | | | 15 | 17 | 454 | | | D | | | | | 1 | 1 | 1 | | | | |
| 76 - SO | 203-204 | 1221+34.00 | 30 | 1228+09.00 | 30 | | | 66 | | 675 | | | F | | 1 | | | | 1 | 1 | | | | |
| 77 - SO | 204 | 1228+13.00 | 30 | 1231+86.00 | 30 | | | 66 | | 373 | | | F | | 1 | | | | 1 | 1 | | | | |
| 78 - SO | 204-205 | 1231+90.00 | 30 | 1239+46.00 | 30 | 4 | | 15 | 23 | 756 | | | A | | | | | 1 | 1 | 1 | | | | |
| 79 - SO | 205 | 1239+50.00 | 30 | 1242+32.00 | 30 | 4 | | 15 | 21 | 282 | | | A | | | | | 1 | 1 | 1 | | | | |
| 80 - SO | 205-206 | 1242+36.00 | 30 | 1252+46.00 | 30 | | 0.51 | 15 | 27 | 1010 | | | O | | | | | 1 | 1 | 1 | | | | |
| 81 - SO | 206 | 1252+50.00 | 30 | 1256+00.00 | 30 | 4 | | 15 | 15 | 350 | | | A | | | | | 1 | 1 | | | | | |
| 82 - SO | 206 | 1256+00.00 | 30 | 1258+35.00 | 30 | 4 | | 15 | 10 | 235 | | | A | | | | | 1 | 1 | | | | | |
| 83 - SO | 206-207 | 1257+50.00 | 30 | 1263+84.00 | 30 | | | 37.2 | | 634 | | | F | | 1 | | | | | 1 | | | | |
| 84 - SO | 207 | 1263+88.00 | 30 | 1267+70.00 | 30 | 4 | | 15 | 10 | 382 | | | C | | | | 1 | | 1 | 1 | | | | |
| 85 - SO | 207 | 1267+70.00 | 30 | 1268+01.00 | 27.25 | | | | | 0 | 31 | | | | | | | | | 1 | | | | |
| 86 - SO | 207 | 1270+02.00 | 33.25 | 1275+50.00 | 30 | 4 | | 15 | 21 | 548 | | | A | | | | | 1 | 1 | 1 | | | | |
| 87 - SO | 207-208 | 1275+54.00 | 30 | 1281+34.00 | 30 | | | 37.2 | | 580 | | | Z | | | | | 1 | | 1 | | | | |
| 88 - SO | 208 | 1279+60.00 | 30 | 1281+80.00 | 30 | 4 | | 15 | 27 | 220 | | | A | | | | | 1 | 1 | 1 | | | | |
| 89 - SO | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 90 - SO | 208-209 | 1281+84.00 | 30 | 1293+96.00 | 30 | | 0.56 | 15 | 24 | 1212 | | | P | | | | 1 | | 1 | 1 | | | | |
| 91 - SO | 209-210 | 1293+96.00 | 30 | 1301+16.00 | 30 | | | | | 720 | | | | | | | | | | 1 | | | | |
| 92 - SO | 210 | 1301+20.00 | 30 | 1305+56.00 | 30 | 4 | | 15 | 19 | 436 | | | A | | | | | 1 | 1 | 1 | | | | |
| 93 - SO | 210 | 1305+60.00 | 30 | 1312+32.00 | 30 | 4 | | 15 | 9 | 672 | | | A | | | | | 1 | 1 | 1 | | | | |
| 94 - SO | 210-211 | 1312+36.00 | 30 | 1324+00.00 | 30 | | 0.51 | 15 | 19 | 1164 | | | O | | | | | 1 | 1 | | | | | |
| 95 - SO | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 96 - SO | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 97 - SO | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 98 - SO | 211-212 | 1324+00.00 | 30 | 1338+34.00 | 30 | | | 37.2 | | 1434 | | | F | | 1 | | | | | | | | | |
| 99 - SO | 212-213 | 1338+38.00 | 30 | 1345+45.00 | 30 | 4 | | 15 | 19 | 707 | | | A | | | | | 1 | 1 | 1 | | | | |
| 100- SO | 213-214 | 1345+49.00 | 30 | 1351+36.00 | 30 | | 0.51 | 15 | 37 | 587 | | | O | | | | | 1 | 1 | 1 | | | | |
| 101- SO | 214 | 1351+40.00 | 30 | 1358+50.00 | 30 | 4 | | 15 | 21 | 710 | | | A | | | | | 1 | 1 | 1 | | | | |
| 102- SO | 214-215 | 1358+54.00 | 30 | 1364+50.00 | 30 | 4 | | 15 | 21 | 596 | | | A | | | | | 1 | 1 | 1 | | | | |
| TOTALS CARRIED TO SHEET 111 | | | | | | 88 | 3.11 | 874.8 | 620 | 27591 | 61 | | | | 6 | | 4 | 31 | 35 | 40 | | | | |

# UNDERDRAIN SUBSUMMARY
# SOUTHBOUND OUTSIDE, SUBGRADE

CALCULATED P.S.
CHECKED B.C.

MED-71-15.78



7885DS9.DGN 11/8/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 602 CONCRETE MASONRY, AS PER PLAN | 603 6" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 6" CONDUIT, TYPE F, 707.33 OR 707.41 | 605 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, | 605 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, | 605 ROCK CUT UNDERDRAIN WITH FABRIC WRAP | OUTLET DETAIL | BENDS AND BRANCHES 4" x 6" x 6" CROSS | 6" x 6" x 4" TEE | 6" x 4" x 6" TEE | 6" x 6" x 6" TEE | 6" 90° BEND | 6"x6"x4" 45° WYE | 6" PLUG | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | CU. YD. | FEET | FEET | FEET | FEET | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | |
| 103- SO | 215 | 1364+54.00 | 30 | 1370+50.00 | 30 | 4 | | 15 | 21 | 596 | | | A | | | | | 1 | 1 | 1 | | | | |
| 104- SO | 215-216 | 1370+54.00 | 30 | 1376+50.00 | 30 | 4 | | 15 | 21 | 596 | | | A | | | | | 1 | 1 | 1 | | | | |
| 105- SO | 216 | 1376+54.00 | 30 | 1382+50.00 | 30 | 4 | | 15 | 21 | 596 | | | A | | | | | 1 | 1 | 1 | | | | |
| 106- SO | 216-217 | 1382+54.00 | 30 | 1394+35.00 | 30 | | | 37.2 | | 1181 | | | F | | 1 | | | | | 1 | | | | |
| TOTALS FROM SHEET 109 | | | | | | 88 | 2.04 | 741.4 | 531 | 24056 | 547 | 1196 | | 1 | 4 | 2 | 7 | 28 | 31 | 44 | | | | |
| TOTALS FROM SHEET 110 | | | | | | 88 | 3.11 | 874.8 | 620 | 27591 | 61 | | | | 6 | | 4 | 31 | 35 | 40 | | | | |
| 103-SO THRU 106-SO TOTALS | | | | | | 12 | | 82 | 63 | 2969 | | | | | 1 | | | 3 | 3 | 4 | | | | |
| **TOTALS CARRIED TO SHEET 128** | | | | | | 188 | 5.15 | 1698.2 | 1214 | 54619 | 608 | 1196 | | 1 | 11 | 2 | 11 | 62 | 69 | 88 | | | | |

CALCULATED P.S. CHECKED B.C.

**UNDERDRAIN SUBSUMMARY SOUTHBOUND OUTSIDE, SUBGRADE**

**MED-71-15.78**



7885DS9.DGN 11/8/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE | 4" x 4" x 4" TEE | 4", 90° BEND | 4", 45° BEND | 4" x 22.5° BEND | 4" PLUG | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | CU. YD. | FEET | | FEET | | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | | | | | |
| 1 - NM | 172 | 833+02.00 | 12 | 833+10.00 | 18 | | | | | | | 8 | | | | | | | 1 | | | | | |
| 2 - NM | 172 | 833+10.00 | 18 | 833+20.00 | 12 | | | 7 | | | | 10 | T | | 1 | | 1 | | | | | | | |
| 3 - NM | 172 | 833+20.00 | 12 | 837+16.00 | 12 | | | | | 396 | | | | | | | | | 1 | | | | | |
| 4 - NM | 172 | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 5 - NM | 172-173 | 837+20.00 | 12 | 839+66.00 | 12 | | | 7 | | 246 | | | F | | | 1 | 1 | | 1 | | | | | |
| 6 - NM | 173 | 839+70.00 | 12 | 842+66.00 | 12 | | | 25 | | 296 | | | M | | | 1 | | | 1 | | | | | |
| 7 - NM | 173 | 842+70.00 | 12 | 845+16.00 | 12 | | | 7 | | 246 | | | D | | | 1 | 1 | | 1 | | | | | |
| 8 - NM | 173 | 845+20.00 | 12 | 847+66.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 9 - NM | 173 | 847+70.00 | 12 | 850+16.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 10 - NM | 173-174 | 850+20.00 | 12 | 852+66.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 11 - NM | 174 | 852+70.00 | 12 | 855+66.00 | 12 | | | 7 | | 296 | | | D | | | 1 | 1 | | 1 | | | | | |
| 12 - NM | 174 | 855+70.00 | 12 | 857+70.00 | 12 | | 1 | | | 200 | | | L5 | | | | | 1 | 1 | | | | | |
| 13 - NM | 174 | 857+74.00 | 12 | 860+66.00 | 12 | 4 | | 10 | | 292 | | | B | | | 1 | | | 1 | | | | | |
| 14 - NM | 174-175 | 860+70.00 | 12 | 863+61.00 | 12 | | 9.2 | | | 291 | | | K | 1 | | 1 | | | 1 | | | | | |
| 15 - NM | 175 | 863+65.00 | 12 | 866+26.00 | 12 | | 9.2 | | | 261 | | | K | 1 | | 1 | | | 1 | | | | | |
| 16 - NM | 175 | 866+30.00 | 12 | 869+06.00 | 12 | | | 7 | | 276 | | | D | | | 1 | 1 | | 1 | | | | | |
| 17 - NM | 175 | 869+10.00 | 12 | 871+86.00 | 12 | | 9.2 | | | 276 | | | K | 1 | | 1 | | | 1 | | | | | |
| 18 - NM | 175 | 871+90.00 | 12 | 874+64.00 | 12 | | 9.2 | | | 274 | | | K | 1 | | 1 | | | 1 | | | | | |
| 19 - NM | 175-176 | 874+68.00 | 12 | 877+41.00 | 12 | | | 7 | | 273 | | | F | | | 1 | 1 | | 1 | | | | | |
| 20 - NM | 176 | 877+45.00 | 12 | 880+31.00 | 12 | | 9.2 | | | 286 | | | K | 1 | | 1 | | | 1 | | | | | |
| 21 - NM | 176 | 880+35.00 | 12 | 883+21.00 | 12 | | 9.2 | | | 286 | | | K | 1 | | 1 | | | 1 | | | | | |
| 22 - NM | 176 | 883+25.00 | 12 | 886+14.00 | 12 | | 9.2 | | | 289 | | | K | 1 | | 1 | | | 1 | | | | | |
| 23 - NM | 176-177 | 886+18.00 | 12 | 889+08.00 | 12 | | | 7 | | 290 | | | D | | | 1 | 1 | | 1 | | | | | |
| 24 - NM | 177 | 891+40.00 | 12 | 891+70.00 | 22 | | | | | | | 30 | | | | | | | 1 | | | | | |
| 25 - NM | 177 | 891+70.00 | 22 | 891+80.00 | 12 | | | 7 | | | | 10 | J | | 1 | | 1 | | | | | | | |
| 26 - NM | 177 | 891+80.00 | 12 | 894+66.00 | 12 | | | | | 286 | | | | | | | | | 1 | | | | | |
| 27 - NM | 177 | 894+70.00 | 12 | 896+46.00 | 12 | | 9.2 | | | 176 | | | K | 1 | | 1 | | | 1 | | | | | |
| 28 - NM | 177 | 896+50.00 | 12 | 898+96.00 | 12 | | | 7 | | 246 | | | D | | | 1 | 1 | | 1 | | | | | |
| 29 - NM | 177-178 | 899+00.00 | 12 | 901+46.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 30 - NM | 178 | 901+50.00 | 12 | 903+96.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 31 - NM | 178 | 904+00.00 | 12 | 906+61.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 | | | | | |
| 32 - NM | 178 | 906+65.00 | 12 | 909+46.00 | 12 | | | 7 | | 281 | | | D | | | 1 | 1 | | 1 | | | | | |
| 33 - NM | 178 | 909+50.00 | 12 | 911+96.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 34 - NM | 178-179 | 912+00.00 | 12 | 914+61.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 | | | | | |
| 35 - NM | 179 | 914+65.00 | 12 | 917+21.00 | 12 | | | 7 | | 256 | | | D | | | 1 | 1 | | 1 | | | | | |
| 36 - NM | 179 | 917+25.00 | 12 | 919+71.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 37 - NM | 179 | 919+75.00 | 12 | 922+21.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 38 - NM | 179 | 922+25.00 | 12 | 924+66.00 | 12 | | | 7 | | 241 | | | D | | | 1 | 1 | | 1 | | | | | |
| 39 - NM | 179-180 | 924+70.00 | 12 | 926+96.00 | 12 | 4 | | 16 | | 226 | | | B | | | 1 | | | 1 | | | | | |
| 40 - NM | 180 | 927+00.00 | 12 | 929+26.00 | 12 | 4 | | 16 | | 226 | | | B | | | 1 | | | 1 | | | | | |
| 41 - NM | 180 | 929+30.00 | 12 | 931+64.00 | 12 | 4 | | 16 | | 234 | | | B | | | 1 | | | 1 | | | | | |
| 42 - NM | 180 | 931+68.00 | 12 | 934+16.00 | 12 | | | 7 | | 248 | | | D | | | 1 | 1 | | 1 | | | | | |
| 43 - NM | 180 | 934+20.00 | 12 | 936+76.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 | | | | | |
| 44 - NM | 180-181 | 936+80.00 | 12 | 939+36.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 | | | | | |
| 45 - NM | 181 | 939+40.00 | 12 | 941+96.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 | | | | | |
| 46 - NM | 181 | 942+00.00 | 12 | 944+64.00 | 12 | 4 | | 16 | | 264 | | | B | | | 1 | | | 1 | | | | | |
| 47 - NM | 181 | 944+68.00 | 12 | 947+56.00 | 12 | | | 7 | | 288 | | | D | | | 1 | 1 | | 1 | | | | | |
| 48 - NM | 181 | 947+60.00 | 12 | 950+46.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 | | | | | |
| 49 - NM | 181-182 | 950+50.00 | 12 | 953+36.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 | | | | | |
| 50 - NM | 182 | 953+40.00 | 12 | 956+34.00 | 12 | 4 | | 16 | | 294 | | | B | | | 1 | | | 1 | | | | | |
| 51 - NM | 182 | 956+38.00 | 12 | 958+96.00 | 12 | | | 7 | | 258 | | | D | | | 1 | 1 | | 1 | | | | | |
| 52 - NM | 182 | 959+00.00 | 12 | 961+64.00 | 12 | 4 | | 16 | | 264 | | | B | | | 1 | | | 1 | | | | | |
| 53 - NM | 182-183 | 961+68.00 | 12 | 964+46.00 | 12 | | | 7 | | 278 | | | F | | | 1 | 1 | | 1 | | | | | |
| TOTALS CARRIED TO SHEET 116 | | | | | | 88 | 74.6 | 483 | | 12670 | | 58 | | 8 | 2 | 45 | 16 | 1 | 50 | | | | | |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY NORTHBOUND MEDIAN, FREE DRAINAGE BASE

MED-71-15.78

112
940

7885DSI.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE | 4" x 4" x 4" TEE | 4", 90° BEND | 4", 45° BEND | 4" x 22.5° BEND | 4" PLUG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | CU. YD. | FEET | | FEET | | FEET | | EACH | EACH | EACH | EACH | EACH | EACH |
| 54 - NM | 183 | 964+50.00 | 12 | 967+46.00 | 12 | | 9.2 | | | 296 | | | K | 1 | | 1 | | | 1 |
| 55 - NM | 183 | 967+50.00 | 12 | 969+56.00 | 12 | | | 7 | | 206 | | | D | | | 1 | 1 | | 1 |
| 56 - NM | 183 | 969+60.00 | 12 | 971+76.00 | 12 | 4 | | 16 | | 216 | | | B | | | 1 | | | 1 |
| 57 - NM | 183 | 971+80.00 | 12 | 973+96.00 | 12 | 4 | | 16 | | 216 | | | B | | | 1 | | | 1 |
| 58 - NM | 183-184 | 974+00.00 | 12 | 976+96.00 | 12 | | | 7 | | 296 | | | D | | | 1 | 1 | | 1 |
| 59 - NM | 184 | 977+00.00 | 12 | 980+50.00 | 12 | 4 | | 16 | | 350 | | | B | | | 1 | | | |
| 60 - NM | 184 | 980+50.00 | 12 | 982+90.00 | 12 | | | 20 | | 240 | | | M | | | 1 | | | |
| 61 - NM | 184 | 982+94.00 | 12 | 985+82.00 | 12 | | | | | 288 | | | | | | | | | 1 |
| 62 - NM | 184 | 985+82.00 | 12 | 985+92.00 | 22 | | | 7 | | | | 10 | J | | 1 | | 1 | | |
| 63 - NM | 184 | 985+92.00 | 22 | 986+36.00 | 12 | | | | | | | 44 | | | | | | | 1 |
| 64 - NM | | NOT USED | | | | | | | | | | | | | | | | | |
| 65 - NM | 185 | 989+35.00 | 12 | 993+00.00 | 12 | | | 20 | | 365 | | | M | | | 1 | | | 1 |
| 66 - NM | 185 | 993+04.00 | 12 | 995+80.00 | 12 | 4 | | 16 | | 276 | | | B | | | 1 | | | 1 |
| 67 - NM | 185 | 995+84.00 | 12 | 998+65.00 | 12 | | | 7 | | 281 | | | D | | | 1 | 1 | | 1 |
| 68 - NM | 185-186 | 998+69.00 | 12 | 1001+10.00 | 12 | 4 | | 16 | | 241 | | | B | | | 1 | | | 1 |
| 69 - NM | 186 | 1001+14.00 | 12 | 1003+60.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 |
| 70 - NM | 186 | 1003+64.00 | 12 | 1006+00.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 |
| 71 - NM | 186 | 1006+04.00 | 12 | 1008+52.00 | 12 | | | 7 | | 248 | | | D | | | 1 | 1 | | 1 |
| 72 - NM | 186 | 1008+56.00 | 12 | 1011+85.00 | 12 | | | | | 329 | | | | | | | | | 1 |
| 73 - NM | 186 | 1011+85.00 | 12 | 1011+95.00 | 20 | | | 7 | | | | 10 | J | | 1 | | 1 | | |
| 74 - NM | 186 | 1011+95.00 | 20 | 1012+18.00 | 12 | | | | | | | 23 | | | | | | | 1 |
| 75 - NM | | NOT USED | | | | | | | | | | | | | | | | | |
| 76 - NM | 187 | 1013+98.00 | 12 | 1017+50.00 | 12 | 4 | | 16 | | 352 | | | B | | | 1 | | | 1 |
| 77 - NM | 187 | 1017+54.00 | 12 | 1020+10.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 |
| 78 - NM | 187 | 1020+14.00 | 12 | 1022+72.00 | 12 | | 1 | | | 258 | | | L5 | | | | | 1 | 1 |
| 79 - NM | 187 | 1022+76.00 | 12 | 1025+70.00 | 12 | 4 | | 16 | | 294 | | | B | | | 1 | | | 1 |
| 80 - NM | 187-188 | 1025+74.00 | 12 | 1028+60.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 |
| 81 - NM | 188 | 1028+64.00 | 12 | 1031+50.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 |
| 82 - NM | 188 | 1031+54.00 | 12 | 1034+40.00 | 12 | 4 | | 16 | | 286 | | | B | | | 1 | | | 1 |
| 83 - NM | 188 | 1034+44.00 | 12 | 1037+40.00 | 12 | | | 7 | | 296 | | | F | | | 1 | 1 | | 1 |
| 84 - NM | 188-189 | 1037+44.00 | 12 | 1040+00.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 |
| 85 - NM | 189 | 1040+04.00 | 12 | 1042+50.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 |
| 86 - NM | 189 | 1042+54.00 | 12 | 1045+08.00 | 12 | | | 7 | | 254 | | | F | | | 1 | 1 | | 1 |
| 87 - NM | 189 | 1045+12.00 | 12 | 1047+55.00 | 12 | | | 20 | | 243 | | | M | | | 1 | | | 1 |
| 88 - NM | 189 | 1047+59.00 | 12 | 1050+70.00 | 12 | | | | | 311 | | | R | | | 1 | 1 | | 1 |
| 89 - NM | 189-190 | 1050+74.00 | 12 | 1051+03.00 | 12 | | | | | 29 | | | K | 1 | | 1 | | | 1 |
| 90 - NM | | NOT USED | | | | | | | | | | | | | | | | | |
| 91 - NM | | NOT USED | | | | | | | | | | | | | | | | | |
| 92 - NM | | NOT USED | | | | | | | | | | | | | | | | | |
| 93 - NM | 190 | 1053+99.00 | 9.25 | 1058+00.00 | 12 | 4 | | 16 | | 401 | | | B | | | 1 | | | 1 |
| 94 - NM | 190 | 1058+04.00 | 12 | 1060+08.00 | 12 | | | 7 | | 204 | | | J | | 1 | | 1 | | |
| 95 - NM | 190 | 1060+08.00 | 12 | 1062+46.00 | 12 | | | | | 238 | | | | | | | | | 1 |
| 96 - NM | 190-191 | 1062+50.00 | 12 | 1064+96.00 | 12 | 4 | | 16 | | 246 | | | B | | | 1 | | | 1 |
| 97 - NM | 191 | 1065+00.00 | 12 | 1067+36.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 |
| 98 - NM | 191 | 1067+40.00 | 12 | 1070+88.00 | 12 | | | 7 | | 348 | | | D | | | 1 | 1 | | 1 |
| 99 - NM | 191 | 1070+92.00 | 12 | 1073+51.00 | 12 | | | 7 | | 259 | | | D | | | 1 | 1 | | 1 |
| 100 - NM | 191-192 | 1073+55.00 | 12 | 1076+51.00 | 12 | | 9.2 | | | 296 | | | K | 1 | | 1 | | | 1 |
| 101 - NM | 192 | 1076+55.00 | 12 | 1079+26.00 | 12 | | | 7 | | 271 | | | D | | | 1 | 1 | | 1 |
| 102 - NM | 192 | 1079+30.00 | 12 | 1081+96.00 | 12 | 4 | | 16 | | 266 | | | B | | | 1 | | | 1 |
| 103 - NM | 192 | 1082+00.00 | 12 | 1084+66.00 | 12 | 4 | | 16 | | 266 | | | B | | | 1 | | | 1 |
| 104 - NM | 192 | 1084+70.00 | 12 | 1087+36.00 | 12 | 4 | | 16 | | 266 | | | B | | | 1 | | | 1 |
| 105 - NM | 192-193 | 1087+40.00 | 12 | 1089+24.00 | 12 | | | 7 | | 184 | | | D | | | 1 | 1 | | 1 |
| 106 - NM | 193 | 1089+28.00 | 12 | 1091+96.00 | 12 | | | 7 | | 268 | | | D | | | 1 | 1 | | 1 |
| **TOTALS CARRIED TO SHEET 116** | | | | | | 84 | 19.4 | 494 | | 12670 | | 87 | | 3 | 3 | 39 | 15 | 1 | 44 |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY NORTHBOUND MEDIAN, FREE DRAINAGE BASE

MED-71-15.78



7885DSL.DGN 11/4/99 RB

# UNDERDRAIN SUBSUMMARY
# NORTHBOUND MEDIAN, FREE DRAINAGE BASE

CALCULATED P.S. CHECKED B.C.

MED-71-15.78

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN (SQ. YD.) | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 (CU. YD.) | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 (FEET) | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (FEET) | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN (FEET) | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE (EACH) | 4" x 4" x 4" TEE (EACH) | 4", 90° BEND (EACH) | 4", 45° BEND (EACH) | 4" x 22.5° BEND (EACH) | 4" PLUG (EACH) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 107 - NM | 193 | 1092+00.00 | 12 | 1094+61.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 | | | | | |
| 108 - NM | 193 | 1094+65.00 | 12 | 1097+26.00 | 12 | 4 | | 16 | | 261 | | | B | | | 1 | | | 1 | | | | | |
| 109 - NM | 193 | 1097+30.00 | 12 | 1099+96.00 | 12 | 4 | | 16 | | 266 | | | B | | | 1 | | | 1 | | | | | |
| 110 - NM | 193-194 | 1100+00.00 | 12 | 1102+73.00 | 12 | 4 | | 16 | | 273 | | | B | | | 1 | | | 1 | | | | | |
| 111 - NM | | NOT USED | | . | | | | | | | | | | | | | | | | | | | | |
| 112 - NM | 194 | 1105+74.00 | 12 | 1106+00.00 | 18 | | | | | | | 26 | | | | | | | 1 | | | | | |
| 113 - NM | 194 | 1106+00.00 | 18 | 1106+10.00 | 12 | | | 7 | | | | 10 | J | | 1 | | 1 | | | | | | | |
| 114 - NM | 194 | 1106+10.00 | 12 | 1108+76.00 | 12 | | | | | 266 | | | | | | | | | 1 | | | | | |
| 115 - NM | 194 | 1108+80.00 | 12 | 1111+16.00 | 12 | | | 7 | | 236 | | | D | | | 1 | 1 | | 1 | | | | | |
| 116 - NM | 194-195 | 1111+20.00 | 12 | 1113+56.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 | | | | | |
| 117 - NM | 195 | 1113+60.00 | 12 | 1115+96.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 | | | | | |
| 118 - NM | 195 | 1116+00.00 | 12 | 1118+38.00 | 12 | 4 | | 16 | | 238 | | | B | | | 1 | | | 1 | | | | | |
| 119 - NM | 195 | 1118+42.00 | 12 | 1120+76.00 | 12 | | | 7 | | 234 | | | D | | | 1 | 1 | | 1 | | | | | |
| 120 - NM | 195 | 1120+80.00 | 12 | 1123+16.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 | | | | | |
| 121 - NM | 195 | 1123+20.00 | 12 | 1125+56.00 | 12 | 4 | | 16 | | 236 | | | B | | | 1 | | | 1 | | | | | |
| 122 - NM | 195-196 | 1125+60.00 | 12 | 1127+86.00 | 12 | 4 | | 16 | | 226 | | | B | | | 1 | | | 1 | | | | | |
| 123 - NM | 196 | 1127+90.00 | 12 | 1129+96.00 | 12 | | | 7 | | 206 | | | D | | | 1 | 1 | | 1 | | | | | |
| 124 - NM | 196 | 1130+00.00 | 12 | 1132+16.00 | 12 | 4 | | 16 | | 216 | | | B | | | 1 | | | 1 | | | | | |
| 125 - NM | 196 | 1132+20.00 | 12 | 1134+34.00 | 12 | 4 | | 16 | | 214 | | | B | | | 1 | | | 1 | | | | | |
| 126 - NM | 196 | 1134+38.00 | 12 | 1137+30.00 | 12 | | | 7 | | 292 | | | D | | | 1 | 1 | | 1 | | | | | |
| 127 - NM | 196-197 | 1137+34.00 | 12 | 1140+26.00 | 12 | 4 | | 16 | | 292 | | | B | | | 1 | | | 1 | | | | | |
| 128 - NM | 197 | 1140+30.00 | 12 | 1142+06.00 | 12 | | | 7 | | 176 | | | F | | | 1 | 1 | | 1 | | | | | |
| 129 - NM | 197 | 1142+10.00 | 12 | 1143+86.00 | 12 | 4 | | 16 | | 176 | | | B | | | 1 | | | 1 | | | | | |
| 130 - NM | 197 | 1143+90.00 | 12 | 1146+86.00 | 12 | | | 7 | | 296 | | | D | | | 1 | 1 | | 1 | | | | | |
| 131 - NM | 197 | 1146+90.00 | 12 | 1149+86.00 | 12 | 4 | | 16 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 132 - NM | 197-198 | 1149+90.00 | 12 | 1152+86.00 | 12 | 4 | | 16 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 133 - NM | 198 | 1152+90.00 | 12 | 1155+86.00 | 12 | 4 | | 16 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 134 - NM | 198 | 1155+90.00 | 12 | 1158+80.00 | 12 | 4 | | 16 | | 290 | | | B | | | 1 | | | 1 | | | | | |
| 135 - NM | 198 | 1158+84.00 | 12 | 1161+66.00 | 12 | | | 7 | | 282 | | | D | | | 1 | 1 | | 1 | | | | | |
| 136 - NM | 198-199 | 1161+70.00 | 12 | 1164+46.00 | 12 | 4 | | 16 | | 276 | | | B | | | 1 | | | 1 | | | | | |
| 137 - NM | 199 | 1164+50.00 | 12 | 1167+31.00 | 12 | 4 | | 16 | | 281 | | | B | | | 1 | | | 1 | | | | | |
| 138 - NM | 199 | 1167+35.00 | 12 | 1170+16.00 | 12 | 4 | | 16 | | 281 | | | B | | | 1 | | | 1 | | | | | |
| 139 - NM | 199 | 1170+20.00 | 12 | 1173+00.00 | 12 | 4 | | 16 | | 280 | | | B | | | 1 | | | 1 | | | | | |
| 140 - NM | 199-200 | 1173+04.00 | 12 | 1175+96.00 | 12 | | | 7 | | 292 | | | D | | | 1 | 1 | | 1 | | | | | |
| 141 - NM | 200 | 1176+00.00 | 12 | 1178+96.00 | 12 | 4 | | 16 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 142 - NM | 200 | 1179+00.00 | 12 | 1181+96.00 | 12 | 4 | | 16 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 143 - NM | 200 | 1182+00.00 | 12 | 1186+33.00 | 12 | 4 | | 16 | | 433 | | | B | | | 1 | | | 1 | | | | | |
| 144 - NM | 200-201 | 1186+37.00 | 12 | 1189+34.00 | 12 | | | 7 | | 297 | | | D | | | 1 | 1 | | 1 | | | | | |
| 145 - NM | 201 | 1189+38.00 | 12 | 1192+35.00 | 12 | 4 | | 16 | | 297 | | | B | | | 1 | | | 1 | | | | | |
| 146 - NM | 201 | 1192+39.00 | 12 | 1195+36.00 | 12 | 4 | | 16 | | 297 | | | B | | | 1 | | | 1 | | | | | |
| 147 - NM | 201 | 1195+40.00 | 12 | 1198+37.00 | 12 | 4 | | 16 | | 297 | | | B | | | 1 | | | 1 | | | | | |
| 148 - NM | 201-202 | 1198+41.00 | 12 | 1200+36.00 | 12 | | | 7 | | 195 | | | F | | | 1 | 1 | | 1 | | | | | |
| 149 - NM | 202 | 1200+40.00 | 12 | 1202+30.00 | 12 | 4 | | 16 | | 190 | | | B | | | 1 | | | 1 | | | | | |
| 150 - NM | 202 | 1202+34.00 | 14 | 1203+00.00 | 14 | | | 7 | | 66 | | | D | | | 1 | 1 | | | | | | | |
| | | 1203+00.00 | 12 | 1204+61.00 | 12 | | | | | 161 | | | | | | | | | 1 | | | | | |
| 151 - NM | 202 | 1204+65.00 | 12 | 1206+96.00 | 12 | | 9.2 | | | 231 | | | K | 1 | | 1 | | | 1 | | | | | |
| 152 - NM | 202 | 1207+00.00 | 12 | 1209+30.00 | 12 | | 9.2 | | | 230 | | | K | 1 | | 1 | | | 1 | | | | | |
| 153 - NM | 202 | 1209+34.00 | 12 | 1211+76.00 | 12 | | | 7 | | 242 | | | D | | | 1 | 1 | | 1 | | | | | |
| 154 - NM | 202-203 | 1211+80.00 | 12 | 1214+26.00 | 12 | | 9.2 | | | 246 | | | K | 1 | | 1 | | | 1 | | | | | |
| 155 - NM | 203 | 1214+30.00 | 12 | 1216+72.00 | 12 | | 9.2 | | | 242 | | | K | 1 | | 1 | | | 1 | | | | | |
| 156 - NM | 203 | 1216+76.00 | 12 | 1219+01.00 | 12 | | | 7 | | 225 | | | D | | | 1 | 1 | | 1 | | | | | |
| 157 - NM | 203 | 1219+05.00 | 12 | 1221+30.00 | 12 | | 9.2 | | | 225 | | | K | 1 | | 1 | | | 1 | | | | | |
| 158 - NM | 203 | 1221+34.00 | 12 | 1223+65.00 | 12 | | | 7 | | 231 | | | D | | | 1 | 1 | | 1 | | | | | |
| **TOTALS CARRIED TO SHEET 116** | | | | | | 116 | 46 | 569 | | 12640 | | 36 | | 5 | 1 | 48 | 15 | | 50 | | | | | |

7885DSL.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN SQ. YD. | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 CU. YD. | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 FEET | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN FEET | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN FEET | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE EACH | 4" x 4" x 4" TEE EACH | 4", 90° BEND EACH | 4", 45° BEND EACH | 4" x 22.5° BEND EACH | 4" PLUG EACH | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 159- NM | 203-204 | 1223+69.00 | 12 | 1228+09.00 | 12 | | | 7 | | 440 | | | D | | | 1 | 1 | | 1 | | | | | |
| 160- NM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 161- NM | 204 | 1228+13.00 | 12 | 1231+30.00 | 12 | | | 7 | | 317 | | | D | | | 1 | 1 | | 1 | | | | | |
| 162- NM | 204 | 1231+34.00 | 12 | 1234+06.00 | 12 | | | 7 | | 272 | | | D | | | 1 | 1 | | 1 | | | | | |
| 163- NM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 164- NM | 204 | 1234+10.00 | 12 | 1236+81.00 | 12 | | 9.2 | | | 271 | | | K | 1 | | 1 | | | 1 | | | | | |
| 165- NM | 204-205 | 1236+85.00 | 12 | 1239+56.00 | 12 | 4 | | 16 | | 271 | | | B | | | 1 | | | 1 | | | | | |
| 166- NM | 205 | 1239+60.00 | 12 | 1242+30.00 | 12 | 4 | | 16 | | 270 | | | B | | | 1 | | | 1 | | | | | |
| 167- NM | 205 | 1242+34.00 | 12 | 1244+96.00 | 12 | | | 7 | | 262 | | | D | | | 1 | 1 | | 1 | | | | | |
| 168- NM | 205 | 1245+00.00 | 12 | 1247+71.00 | 12 | 4 | | 16 | | 271 | | | B | | | 1 | | | 1 | | | | | |
| 169- NM | 205 | 1247+75.00 | 12 | 1250+46.00 | 12 | 4 | | 16 | | 271 | | | B | | | 1 | | | 1 | | | | | |
| 170- NM | 205-206 | 1250+50.00 | 12 | 1253+25.00 | 12 | 4 | | 16 | | 275 | | | B | | | 1 | | | 1 | | | | | |
| 171- NM | 206 | 1253+29.00 | 12 | 1256+00.00 | 12 | 4 | | 16 | | 271 | | | B | | | 1 | | | 1 | | | | | |
| 172- NM | 206 | 1256+00.00 | 12 | 1258+60.00 | 12 | 4 | | 16 | | 260 | | | B | | | 1 | | | 1 | | | | | |
| 173- NM | 206 | 1258+64.00 | 12 | 1261+20.00 | 12 | 4 | | 16 | | 256 | | | B | | | 1 | | | 1 | | | | | |
| 174- NM | 206-207 | 1261+24.00 | 12 | 1263+84.00 | 12 | | | 7 | | 260 | | | D | | | 1 | 1 | | 1 | | | | | |
| 175- NM | 207 | 1263+88.00 | 12 | 1267+24.00 | 12 | | | | | 336 | | | | | | | | | 1 | | | | | |
| 176- NM | 207 | 1267+24.00 | 12 | 1267+34.00 | 18 | | | 7 | | | | 10 | J | | 1 | | 1 | | | | | | | |
| 177- NM | 207 | 1267+34.00 | 18 | 1267+58.00 | 12 | | | | | | | 24 | | | | | | | 1 | | | | | |
| 178- NM | 207 | 1270+17.00 | 12 | 1270+34.00 | 12 | | | 7 | | 17 | | | D | | | 1 | 1 | | 1 | | | | | |
| 179- NM | 207 | 1270+38.00 | 12 | 1273+65.00 | 12 | 2 | | 16 | | 327 | | | W | | | 1 | | | 1 | | | | | |
| 180- NM | 207 | 1273+69.00 | 12 | 1275+85.00 | 12 | 2 | | 16 | | 216 | | | W | | | 1 | | | 1 | | | | | |
| 181- NM | 207-208 | 1275+89.00 | 12 | 1278+60.00 | 12 | 2 | | 16 | | 271 | | | W | | | 1 | | | 1 | | | | | |
| 182- NM | 208 | 1278+64.00 | 12 | 1281+34.00 | 12 | | | 7 | | 270 | | | D | | | 1 | 1 | | 1 | | | | | |
| 183- NM | 208 | 1281+38.00 | 12 | 1283+85.00 | 12 | 2 | | 16 | | 247 | | | W | | | 1 | | | 1 | | | | | |
| 184- NM | 208 | 1283+89.00 | 12 | 1286+40.00 | 12 | 2 | | 16 | | 251 | | | W | | | 1 | | | 1 | | | | | |
| 185- NM | 208-209 | 1286+44.00 | 12 | 1288+95.00 | 12 | 2 | | 16 | | 251 | | | W | | | 1 | | | 1 | | | | | |
| 186- NM | 209 | 1288+99.00 | 12 | 1291+50.00 | 12 | 2 | | 16 | | 251 | | | W | | | 1 | | | 1 | | | | | |
| 187- NM | 209 | 1291+54.00 | 12 | 1293+94.00 | 12 | | | 7 | | 240 | | | J | | 1 | | 1 | | | | | | | |
| 188- NM | 209 | 1293+94.00 | 12 | 1295+96.00 | 12 | | | | | 202 | | | | | | | | | 1 | | | | | |
| 189- NM | 209 | 1296+00.00 | 12 | 1298+16.00 | 12 | 2 | | 16 | | 216 | | | W | | | 1 | | | 1 | | | | | |
| 190- NM | 209 | 1298+20.00 | 12 | 1300+30.00 | 12 | 2 | | 16 | | 210 | | | W | | | 1 | | | 1 | | | | | |
| 191- NM | 209-210 | 1300+34.00 | 12 | 1303+30.00 | 12 | | | 7 | | 296 | | | D | | | 1 | 1 | | 1 | | | | | |
| 192- NM | 210 | 1303+34.00 | 12 | 1306+30.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 193- NM | 210 | 1306+34.00 | 12 | 1309+30.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 194- NM | 210 | 1309+34.00 | 12 | 1312+30.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 195- NM | 210-211 | 1312+34.00 | 12 | 1315+16.00 | 12 | | | 7 | | 282 | | | D | | | 1 | 1 | | 1 | | | | | |
| 196- NM | 211 | 1315+20.00 | 12 | 1318+06.00 | 12 | 2 | | 16 | | 286 | | | W | | | 1 | | | 1 | | | | | |
| 197- NM | 211 | 1318+10.00 | 12 | 1320+96.00 | 12 | 2 | | 16 | | 286 | | | W | | | 1 | | | 1 | | | | | |
| 198- NM | 211 | 1321+00.00 | 12 | 1324+00.00 | 12 | 2 | | 16 | | 300 | | | W | | | 1 | | | | | | | | |
| 199- NM | 211 | 1324+00.00 | 12 | 1326+80.00 | 12 | 2, | | 16 | | 280 | | | W | | | 1 | | | | | | | | |
| 200- NM | 211-212 | 1326+84.00 | 12 | 1329+70.00 | 12 | 2 | | 16 | | 286 | | | W | | | 1 | | | 1 | | | | | |
| 201- NM | 212 | 1329+74.00 | 12 | 1332+60.00 | 12 | 2 | | 16 | | 286 | | | W | | | 1 | | | 1 | | | | | |
| 202- NM | 212 | 1332+64.00 | 12 | 1335+50.00 | 12 | 2 | | 16 | | 286 | | | W | | | 1 | | | 1 | | | | | |
| 203- NM | 212 | 1335+54.00 | 12 | 1338+34.00 | 12 | | | 7 | | 280 | | | D | | | 1 | 1 | | 1 | | | | | |
| 204- NM | 212-213 | 1338+38.00 | 12 | 1341+00.00 | 12 | | | 16 | | 262 | | | M | | | 1 | | | 1 | | | | | |
| 205- NM | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 206- NM | 213 | 1341+04.00 | 12 | 1344+76.00 | 12 | | | 7 | | 372 | | | D | | | 1 | 1 | | 1 | | | | | |
| 207- NM | 213 | 1344+80.00 | 12 | 1347+05.00 | 12 | 2 | | 16 | | 225 | | | W | | | 1 | | | 1 | | | | | |
| 208- NM | 213 | 1347+09.00 | 12 | 1349+25.00 | 12 | 2 | | 16 | | 216 | | | W | | | 1 | | | 1 | | | | | |
| 209- NM | 213-214 | 1349+29.00 | 12 | 1351+34.00 | 12 | | | 7 | | 205 | | | F | | | 1 | 1 | | 1 | | | | | |
| 210- NM | 214 | 1351+38.00 | 12 | 1356+00.00 | 12 | 2 | | 16 | | 462 | | | W | | | 1 | | | 1 | | | | | |
| 211- NM | 214 | 1356+04.00 | 12 | 1358+60.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| **TOTALS CARRIED TO SHEET 116** | | | | | | 78 | 9.2 | 610 | | 13026 | | 34 | | 1 | 2 | 45 | 14 | | 46 | | | | | |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY
# NORTHBOUND MEDIAN, FREE DRAINAGE BASE

MED-71-15.78



7885DSL.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN SQ. YD. | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 CU. YD. | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 FEET | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN FEET | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN FEET | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE EACH | 4" x 4" x 4" TEE EACH | 4", 90° BEND EACH | 4", 45° BEND EACH | 4" x 22.5° BEND EACH | 4" PLUG EACH | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 212- NM | 214 | 1358+64.00 | 12 | 1361+20.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 213- NM | 214-215 | 1361+24.00 | 12 | 1363+80.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 214- NM | 215 | 1363+84.00 | 12 | 1366+34.00 | 12 | | | 7 | | 250 | | | D | | | 1 | 1 | | 1 | | | | | |
| 215- NM | 215 | 1366+38.00 | 12 | 1369+34.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 216- NM | 215 | 1369+38.00 | 12 | 1372+34.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 217- NM | 215 | 1372+38.00 | 12 | 1375+34.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 218- NM | 215-216 | 1375+38.00 | 12 | 1378+34.00 | 12 | 2 | | 16 | | 296 | | | W | | | 1 | | | 1 | | | | | |
| 219- NM | 216 | 1378+38.00 | 12 | 1381+34.00 | 12 | | | 7 | | 296 | | | D | | | 1 | 1 | | 1 | | | | | |
| 220- NM | 216 | 1381+38.00 | 12 | 1383+95.00 | 12 | 2 | | 16 | | 257 | | | W | | | 1 | | | 1 | | | | | |
| 221- NM | 216 | 1383+99.00 | 12 | 1386+55.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 222- NM | 216-217 | 1386+59.00 | 12 | 1389+15.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 223- NM | 217 | 1389+19.00 | 12 | 1391+75.00 | 12 | 2 | | 16 | | 256 | | | W | | | 1 | | | 1 | | | | | |
| 224- NM | 217 | 1391+79.00 | 12 | 1394+35.00 | 12 | | | 7 | | 256 | | | F | | | 1 | 1 | | 1 | | | | | |
| TOTALS FROM SHEET 112 | | | | | | 88 | 74.6 | 483 | | 12670 | | 58 | | 8 | 2 | 45 | 16 | 1 | 50 | | | | | |
| TOTALS FROM SHEET 113 | | | | | | 84 | 19.4 | 494 | | 11732 | | 87 | | 3 | 3 | 39 | 15 | 1 | 44 | | | | | |
| TOTALS FROM SHEET 114 | | | | | | 116 | 46 | 569 | | 12640 | | 36 | | 5 | 1 | 48 | 15 | | 50 | | | | | |
| TOTALS FROM SHEET 115 | | | | | | 78 | 9.2 | 610 | | 13026 | | 34 | | 1 | 2 | 45 | 14 | | 46 | | | | | |
| 212-NM THRU 224-NM TOTALS | | | | | | 20 | | 181 | | 3523 | | | | | | 13 | 3 | | 13 | | | | | |
| **TOTALS CARRIED TO SHEET 128** | | | | | | 386 | 149.2 | 2337 | | 53591 | | 215 | | 17 | 8 | 190 | 63 | 2 | 203 | | | | | |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY NORTHBOUND MEDIAN, FREE DRAINAGE BASE

MED-71-15.78



7885DSL.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 602 CONCRETE MASONRY, AS PER PLAN | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | | BENDS AND BRANCHES: OUTLET DETAIL | 6" x 4" x 6" TEE | 4" x 4" x 4" TEE | 4" 90° BEND | 4" 45° BEND | 4" 22.5° BEND | 4" PLUG | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FROM | DEPTH | TO | DEPTH | SQ. YD. | CU. YD. | FEET | FEET | | FEET | | FEET | | | EACH | EACH | EACH | EACH | EACH | EACH | | | | |
| 1 - NS | 172 | 833+02.00 | 12 | 835+26.00 | 12 | 4 | | | 19 | | 224 | | | | B | | | 1 | | | 1 | | | | |
| 2 - NS | 172 | 835+30.00 | 12 | 837+16.00 | 12 | 4 | | | 19 | | 186 | | | | B | | | 1 | | | 1 | | | | |
| 3 - NS | 172-173 | 837+20.00 | 12 | 839+46.00 | 12 | | | 9.2 | | | 226 | | | | F | | | 1 | | | 1 | | | | |
| 4 - NS | 173 | 839+50.00 | 12 | 842+16.00 | 12 | 4 | | | 19 | | 266 | | | | B | | | 1 | | | 1 | | | | |
| 5 - NS | 173 | 842+20.00 | 12 | 845+16.00 | 12 | | | | 7 | | 296 | | | | D | | | 1 | 1 | | 1 | | | | |
| 6 - NS | 173 | 845+20.00 | 12 | 848+16.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 7 - NS | 173-174 | 848+20.00 | 12 | 851+26.00 | 12 | 4 | | | 19 | | 306 | | | | B | | | 1 | | | 1 | | | | |
| 8 - NS | 174 | 851+30.00 | 12 | 854+06.00 | 12 | | | | 7 | | 276 | | | | L2 | | | 1 | 1 | | 1 | | | | |
| 9 - NS | 174 | 854+10.00 | 12 | 855+66.00 | 12 | 4 | | | 12 | | 146 | | | | B | | | 1 | | | 1 | | | | |
| 10 - NS | 174 | 855+70.00 | 12 | 859+56.00 | 12 | | | 1 | | | 386 | | | | L4 | | | | | 1 | 1 | | | | |
| 11 - NS | 174 | 859+60.00 | 12 | 862+06.00 | 12 | 4 | | | 19 | | 246 | | | | B | | | 1 | | | 1 | | | | |
| 12 - NS | 174-175 | 862+10.00 | 12 | 864+56.00 | 12 | 4 | | | 19 | | 246 | | | | B | | | 1 | | | 1 | | | | |
| 13 - NS | 175 | 864+60.00 | 12 | 867+06.00 | 12 | 4 | | | 19 | | 246 | | | | B | | | 1 | | | 1 | | | | |
| 14 - NS | 175 | 867+10.00 | 12 | 869+56.00 | 12 | 4 | | | 19 | | 246 | | | | B | | | 1 | | | 1 | | | | |
| 15 - NS | 175 | 869+60.00 | 12 | 872+21.00 | 12 | | | | 40 | | 261 | | | | L1 | | | 1 | | 1 | 1 | | | | |
| 16 - NS | 175 | 872+25.00 | 12 | 874+64.00 | 12 | 4 | | | 19 | | 239 | | | | B | | | 1 | | | 1 | | | | |
| 17 - NS | 175-176 | 874+68.00 | 12 | 877+41.00 | 12 | | | 9.2 | | | 273 | | | | F | | | 1 | | | 1 | | | | |
| 18 - NS | 176 | 877+45.00 | 12 | 879+96.00 | 12 | 4 | | | 19 | | 251 | | | | B | | | 1 | | | 1 | | | | |
| 19 - NS | 176 | 880+00.00 | 12 | 882+46.00 | 12 | 4 | | | 19 | | 246 | | | | B | | | 1 | | | 1 | | | | |
| 20 - NS | 176 | 882+50.00 | 12 | 882+90.00 | 12 | 4 | | | 19 | | 40 | | | | U | | 1 | | | | 1 | | | | |
| 21 - NS | 176 | 882+50.00 | 12 | 886+16.00 | 12 | | | 34 | 10 | | 366 | | | | U | | | 1 | | | 1 | | | | |
| 22 - NS | 176-177 | 886+20.00 | 12 | 889+27.00 | 12 | | 0.52 | | 39 | | 307 | | | | Q | | | 1 | | | 1 | | | | |
| 23 - NS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 24 - NS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 25 - NS | 177 | 891+70.00 | 12 | 893+96.00 | 12 | | | | 7 | | 226 | | | | A | | | 1 | 1 | | 1 | | | | |
| 26 - NS | 177 | 894+00.00 | 12 | 896+96.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 27 - NS | 177 | 897+00.00 | 12 | 898+46.00 | 12 | | | | 7 | | 146 | | | | A | | | 1 | 1 | | 1 | | | | |
| 28 - NS | 177 | 898+50.00 | 12 | 900+82.00 | 12 | 4 | | | 19 | | 232 | | | | B | | | 1 | | | 1 | | | | |
| 29 - NS | 177-178 | 900+82.00 | 12 | 902+86.00 | 12 | | | | 7 | | 204 | | | | A | | | 1 | 1 | | 1 | | | | |
| 30 - NS | 178 | 902+90.00 | 12 | 904+71.00 | 12 | 4 | | | 19 | | 181 | | | | B | | | 1 | | | 1 | | | | |
| 31 - NS | 178 | 904+85.00 | 12 | 907+36.00 | 12 | | | | 7 | | 251 | | | | A | | | 1 | 1 | | 1 | | | | |
| 32 - NS | 178 | 907+40.00 | 12 | 909+96.00 | 12 | 4 | | | 15 | | 256 | | | | B | | | 1 | | | 1 | | | | |
| 33 - NS | 178 | 910+00.00 | 12 | 912+61.00 | 12 | 4 | | | 15 | | 261 | | | | B | | | 1 | | | 1 | | | | |
| 34 - NS | 178-179 | 912+65.00 | 12 | 915+21.00 | 12 | 4 | | | 14 | | 256 | | | | B | | | 1 | | | 1 | | | | |
| 35 - NS | 179 | 915+25.00 | 12 | 917+21.00 | 12 | | | | 7 | | 196 | | | | A | | | 1 | 1 | | 1 | | | | |
| 36 - NS | 179 | 917+25.00 | 12 | 920+01.00 | 12 | | | | 15 | | 276 | | | | L1 | | | 1 | 1 | | 1 | | | | |
| 37 - NS | 179 | 920+05.00 | 12 | 922+46.00 | 12 | 4 | | | 15 | | 241 | | | | B | | | 1 | | | 1 | | | | |
| 38 - NS | 179 | 922+50.00 | 12 | 925+71.00 | 12 | | | | 7 | | 321 | | | | D | | | 1 | 1 | | 1 | | | | |
| 39 - NS | 179-180 | 925+75.00 | 12 | 928+96.00 | 12 | 4 | | | 15 | | 321 | | | | B | | | 1 | | | 1 | | | | |
| 40 - NS | 180 | 929+00.00 | 12 | 932+21.00 | 12 | 4 | | | 15 | | 321 | | | | B | | | 1 | | | 1 | | | | |
| 41 - NS | 180 | 932+25.00 | 12 | 934+71.00 | 12 | | | | 7 | | 246 | | | | A | | | 1 | 1 | | 1 | | | | |
| 42 - NS | 180 | 934+75.00 | 12 | 937+66.00 | 12 | | | | 7 | | 291 | | | | A | | | 1 | 1 | | 1 | | | | |
| 43 - NS | 180-181 | 937+70.00 | 12 | 940+56.00 | 12 | 4 | | | 19 | | 286 | | | | B | | | 1 | | | 1 | | | | |
| 44 - NS | 181 | 940+60.00 | 12 | 943+16.00 | 12 | 4 | | | 19 | | 156 | | | | B | | | 1 | | | 1 | | | | |
| 45 - NS | 181 | 943+20.00 | 12 | 945+46.00 | 12 | | | | 7 | | 226 | | | | A | | | 1 | 1 | | 1 | | | | |
| 46 - NS | 181 | 945+50.00 | 12 | 947+56.00 | 12 | 4 | | | 19 | | 206 | | | | B | | | 1 | | | 1 | | | | |
| 47 - NS | 181 | 947+60.00 | 12 | 950+46.00 | 12 | | | | 7 | | 286 | | | | A | | | 1 | 1 | | 1 | | | | |
| 48 - NS | 181-182 | 950+50.00 | 12 | 952+73.00 | 12 | 4 | | | 19 | | 223 | | | | B | | | 1 | | | 1 | | | | |
| 49 - NS | 182 | 952+77.00 | 12 | 954+96.00 | 12 | | | | 7 | | 219 | | | | A | | | 1 | 1 | | 1 | | | | |
| 50 - NS | 182 | 955+00.00 | 12 | 957+06.00 | 12 | 4 | | | 19 | | 206 | | | | B | | | 1 | | | 1 | | | | |
| 51 - NS | 182 | 957+10.00 | 12 | 959+36.00 | 12 | | | | 7 | | 226 | | | | D | | | 1 | 1 | | 1 | | | | |
| 52 - NS | 182 | 959+40.00 | 12 | 961+64.00 | 12 | 4 | | | 19 | | 224 | | | | B | | | 1 | | | 1 | | | | |
| 53 - NS | 182-183 | 961+68.00 | 12 | 964+46.00 | 12 | | | 9.2 | | | 278 | | | | F | | | 1 | | | 1 | | | | |
| **TOTALS CARRIED TO SHEET 121** | | | | | | 116 | 0.52 | 62.6 | 721 | | 12633 | | | | | | 1 | 49 | 16 | 1 | 51 | | | | |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY NORTHBOUND OUTSIDE, FREE DRAINAGE BASE

MED-71-15.78

117
940

7885DS2.DGN 11/4/99 RB

# UNDERDRAIN SUBSUMMARY
## NORTHBOUND OUTSIDE, FREE DRAINAGE BASE

CALCULATED P.S. CHECKED B.C.

MED-71-15.78

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN (SQ. YD.) | 602 CONCRETE MASONRY, AS PER PLAN (CU. YD.) | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 (FEET) | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 (FEET) | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (FEET) | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN (FEET) | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE (EACH) | 4" x 4" x 4" TEE (EACH) | 4" 90° BEND (EACH) | 4" 45° BEND (EACH) | 4" 22.5° BEND (EACH) | 4" PLUG (EACH) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 - NS | 183 | 964+50.00 | 12 | 967+46.00 | 12 | | | 9.2 | | | 296 | | | K | 1 | | 1 | | | 1 | | | | | |
| 55 - NS | 183 | 967+50.00 | 12 | 970+46.00 | 12 | 4 | | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 56 - NS | 183 | 970+50.00 | 12 | 973+46.00 | 12 | 4 | | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | | |
| 57 - NS | 183-184 | 973+50.00 | 12 | 976+90.00 | 12 | 4 | | | 19 | | 340 | | | B | | | 1 | | | 1 | | | | | |
| 58 - NS | 184 | 977+00.00 | 12 | 980+00.00 | 30 | | | | | | | | 300 | | | | | | | 1 | | | | | |
| 59 - NS | 184 | 980+00.00 | 30 | 980+10.00 | 12 | | | | 7 | | | | 10 | C | | 1 | | 1 | | | | | | | |
| 60 - NS | 184 | 980+10.00 | 12 | 980+50.00 | 12 | | | | | | 40 | | | | | | | | | 1 | | | | | |
| 61 - NS | 184 | 980+50.00 | 12 | 983+00.00 | 12 | 4 | | | 19 | | 250 | | | B | | | 1 | | | 1 | | | | | |
| 62 - NS | 184 | 983+04.00 | 12 | 986+40.00 | 12 | | | | | | 336 | | | | | | | | | 1 | | | | | |
| 63 - NS | 184 | 986+40.00 | 12 | 986+50.00 | 18 | | | | 7 | | | | 10 | C | | 1 | | 1 | | | | | | | |
| 64 - NS | 184 | 986+50.00 | 18 | 986+69.00 | 12 | | | | | | | | 19 | | | | | | | 1 | | | | | |
| 65 - NS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 66 - NS | 185 | 989+34.00 | 12 | 992+50.00 | 12 | 4 | | | 10 | | 316 | | | B | | | 1 | | | 1 | | | | | |
| 67 - NS | 185 | 992+54.00 | 12 | 995+40.00 | 12 | | | | 7 | | 286 | | | A | | | 1 | 1 | | 1 | | | | | |
| 68 - NS | 185 | 995+44.00 | 12 | 998+30.00 | 12 | 4 | | | 19 | | 286 | | | B | | | 1 | | | 1 | | | | | |
| 69 - NS | 185-186 | 998+34.00 | 12 | 1001+20.00 | 12 | | | | 7 | | 286 | | | A | | | 1 | 1 | | 1 | | | | | |
| 70 - NS | 186 | 1001+24.00 | 12 | 1004+10.00 | 12 | 4 | | | 19 | | 286 | | | B | | | 1 | | | 1 | | | | | |
| 71 - NS | 186 | 1004+14.00 | 12 | 1006+90.00 | 12 | | | | 7 | | 276 | | | A | | | 1 | 1 | | 1 | | | | | |
| 72 - NS | 186 | 1006+94.00 | 12 | 1009+40.00 | 12 | 4 | | | 19 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 73 - NS | 186 | 1009+44.00 | 12 | 1011+87.00 | 12 | | | | | | 243 | | | | | | | | | 1 | | | | | |
| 74 - NS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 75 - NS | 186 | 1011+87.00 | 12 | 1011+97.00 | 18 | | | | 7 | | | | 10 | P | | | 1 | 1 | | | | | | | |
| 76 - NS | 186 | 1011+97.00 | 18 | 1012+12.00 | 12 | | | | | | | | 15 | | | | | | | 1 | | | | | |
| 77 - NS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 78 - NS | 187 | 1013+92.00 | 12 | 1016+70.00 | 12 | 4 | | | 19 | | 278 | | | B | | | 1 | | | 1 | | | | | |
| 79 - NS | 187 | 1016+74.00 | 12 | 1019+50.00 | 12 | | | | 7 | | 276 | | | A | | | 1 | 1 | | 1 | | | | | |
| 80 - NS | 187 | 1019+54.00 | 12 | 1022+00.00 | 12 | 4 | | | 19 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 81 - NS | 187 | 1022+04.00 | 12 | 1024+40.00 | 12 | | | | 7 | | 236 | | | L4 | | | | | 1 | 1 | | | | | |
| 82 - NS | 187-188 | 1024+44.00 | 12 | 1027+00.00 | 12 | 4 | | | 19 | | 256 | | | B | | | 1 | | | 1 | | | | | |
| 83 - NS | 188 | 1027+04.00 | 12 | 1029+60.00 | 12 | 4 | | | 19 | | 256 | | | B | | | 1 | | | 1 | | | | | |
| 84 - NS | 188 | 1029+64.00 | 12 | 1032+25.00 | 12 | 4 | | | 19 | | 261 | | | B | | | 1 | | | 1 | | | | | |
| 85 - NS | 188 | 1032+29.00 | 12 | 1034+80.00 | 12 | 4 | | | 19 | | 251 | | | B | | | 1 | | | 1 | | | | | |
| 86 - NS | 188 | 1034+84.00 | 12 | 1037+40.00 | 12 | | | 9.2 | | | 256 | | | F | | | 1 | | | 1 | | | | | |
| 87 - NS | 188-189 | 1037+44.00 | 12 | 1040+00.00 | 12 | 4 | | | 19 | | 256 | | | B | | | 1 | | | 1 | | | | | |
| 88 - NS | 189 | 1040+04.00 | 12 | 1042+50.00 | 12 | 4 | | | 19 | | 246 | | | B | | | 1 | | | 1 | | | | | |
| 89 - NS | 189 | 1042+54.00 | 12 | 1045+08.00 | 12 | | | 9.2 | | | 254 | | | F | | | 1 | | | 1 | | | | | |
| 90 - NS | 189 | 1045+12.00 | 12 | 1048+00.00 | 12 | 4 | | | 19 | | 288 | | | B | | | 1 | | | 1 | | | | | |
| 91 - NS | 189 | 1048+04.00 | 12 | 1050+90.00 | 12 | | | | | | 286 | | | | | | | | | 1 | | | | | |
| 92 - NS | 189-190 | 1050+90.00 | 12 | 1051+00.00 | 24 | | | | 7 | | | | 10 | C | | 1 | | 1 | | | | | | | |
| 93 - NS | 190 | 1051+00.00 | 24 | 1051+04.00 | 12 | | | | | | | | 4 | | | | | | | 1 | | | | | |
| 94 - NS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 95 - NS | 190 | 1053+95.00 | 12 | 1057+00.00 | 12 | | | | 7 | | 305 | | | A | | | 1 | 1 | | 1 | | | | | |
| 96 - NS | 190 | 1057+04.00 | 12 | 1060+08.00 | 12 | | | | 7 | | 304 | | | C | | 1 | | 1 | | 1 | | | | | |
| 97 - NS | 190 | 1060+08.00 | 12 | 1063+21.00 | 12 | | | | | | 313 | | | | | | | | | 1 | | | | | |
| 98 - NS | 190-191 | 1063+25.00 | 12 | 1066+46.00 | 12 | 4 | | | 19 | | 321 | | | B | | | 1 | | | 1 | | | | | |
| 99 - NS | 191 | 1066+50.00 | 12 | 1068+96.00 | 12 | | | | 7 | | 246 | | | A | | | 1 | 1 | | 1 | | | | | |
| 100 - NS | 191 | 1069+00.00 | 12 | 1071+36.00 | 12 | 4 | | | 19 | | 196 | | | B | | | 1 | | | 1 | | | | | |
| 101 - NS | 191 | 1071+00.00 | 12 | 1074+46.00 | 12 | | | | 7 | | 346 | | | A | | | 1 | 1 | | 1 | | | | | |
| 102 - NS | 191-192 | 1074+50.00 | 12 | 1076+36.00 | 12 | 4 | | | 19 | | 186 | | | B | | | 1 | | | 1 | | | | | |
| 103 - NS | 192 | 1076+40.00 | 12 | 1079+91.00 | 12 | | | | 7 | | 351 | | | A | | | 1 | 1 | | 1 | | | | | |
| 104 - NS | 192 | 1079+95.00 | 12 | 1083+46.00 | 12 | | | | 7 | | 351 | | | A | | | 1 | 1 | | 1 | | | | | |
| 105 - NS | 192 | 1083+50.00 | 12 | 1086+86.00 | 12 | 4 | | | 9 | | 336 | | | B | | | 1 | | | 1 | | | | | |
| 106 - NS | 192-193 | 1086+90.00 | 12 | 1090+41.00 | 12 | | | | 7 | | 351 | | | A | | | 1 | 1 | | 1 | | | | | |
| **TOTALS CARRIED TO SHEET 121** | | | | | | 84 | | 27.6 | 492 | | 11331 | | 378 | | 1 | 4 | 35 | 15 | 1 | 45 | | | | | |



7885DS2.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN SQ. YD. | 602 CONCRETE MASONRY, AS PER PLAN CU. YD. | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 FEET | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 FEET | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN FEET | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN FEET | | BENDS AND BRANCHES OUTLET DETAIL | 6" x 4" x 6" TEE EACH | 4" x 4" x 4" TEE EACH | 4" 90° BEND EACH | 4" 45° BEND EACH | 4" 22.5° BEND EACH | 4" PLUG EACH | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 107 - NS | 193 | 1090+45.00 | 12 | 1092+26.00 | 12 | 4 | | | 19 | | 181 | | | | B | | | 1 | | | 1 | | | | |
| 108 - NS | 193 | 1092+30.00 | 12 | 1092+35.00 | 12 | | | | 7 | | 5 | | | | H | | | 1 | 1 | | 1 | | | | |
| 109 - NS | 193 | 1092+30.00 | 12 | 1095+21.00 | 12 | | | 2 | | | 291 | | | | H | | | 1 | 1 | | 1 | | | | |
| 110 - NS | 193 | 1095+25.00 | 12 | 1097+96.00 | 12 | 4 | | | 19 | | 271 | | | | B | | | 1 | | | 1 | | | | |
| 111 - NS | 193 | 1098+00.00 | 12 | 1100+46.00 | 12 | | | | 7 | | 246 | | | | A | | | 1 | 1 | | 1 | | | | |
| 112 - NS | 193-194 | 1100+50.00 | 12 | 1103+02.00 | 12 | 4 | | | 12 | | 252 | | | | B | | | 1 | | | 1 | | | | |
| 113 - NS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 114 - NS | 194 | 1106+02.00 | 12 | 1106+50.00 | 18 | | | | | | | | 48 | | | | | | | | 1 | | | | |
| 115 - NS | 194 | 1106+50.00 | 18 | 1106+60.00 | 12 | | | | 7 | | | | 10 | | C | | 1 | | 1 | | | | | | |
| 116 - NS | 194 | 1106+60.00 | 12 | 1108+74.00 | 12 | | | | | | 214 | | | | | | | | | | 1 | | | | |
| 117 - NS | 194 | 1108+78.00 | 12 | 1111+46.00 | 12 | | | | 7 | | 268 | | | | A | | | 1 | 1 | | 1 | | | | |
| 118 - NS | 194-195 | 1111+50.00 | 12 | 1114+45.00 | 12 | 4 | | | 19 | | 295 | | | | B | | | 1 | | | 1 | | | | |
| 119 - NS | 195 | 1114+40.00 | 12 | 1117+71.00 | 12 | | | | 7 | | 331 | | | | A | | | 1 | 1 | | 1 | | | | |
| 120 - NS | 195 | 1117+75.00 | 12 | 1120+96.00 | 12 | 4 | | | 15 | | 321 | | | | B | | | 1 | | | 1 | | | | |
| 121 - NS | 195 | 1121+00.00 | 12 | 1123+96.00 | 12 | | | | 7 | | 296 | | | | A | | | 1 | 1 | | 1 | | | | |
| 122 - NS | 195-196 | 1124+00.00 | 12 | 1126+96.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 123 - NS | 196 | 1127+00.00 | 12 | 1130+46.00 | 12 | | | | 7 | | 346 | | | | A | | | 1 | 1 | | 1 | | | | |
| 124 - NS | 196 | 1130+50.00 | 12 | 1134+34.00 | 12 | 4 | | | 19 | | 384 | | | | B | | | 1 | | | 1 | | | | |
| 125 - NS | 196 | 1134+38.00 | 12 | 1137+30.00 | 12 | | | | 7 | | 292 | | | | D | | | 1 | 1 | | 1 | | | | |
| 126 - NS | 196-197 | 1137+34.00 | 12 | 1140+26.00 | 12 | 4 | | | 19 | | 292 | | | | B | | | 1 | | | 1 | | | | |
| 127 - NS | 197 | 1140+30.00 | 12 | 1142+06.00 | 12 | | | 9.2 | | | 176 | | | | F | | | 1 | | | 1 | | | | |
| 128 - NS | 197 | 1142+10.00 | 12 | 1143+86.00 | 12 | 4 | | | 19 | | 176 | | | | B | | | 1 | | | 1 | | | | |
| 129 - NS | 197 | 1143+90.00 | 12 | 1146+86.00 | 12 | | | | 7 | | 296 | | | | D | | | 1 | 1 | | 1 | | | | |
| 130 - NS | 197 | 1146+90.00 | 12 | 1149+86.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 131 - NS | 197-198 | 1149+90.00 | 12 | 1152+46.00 | 12 | 4 | | | 19 | | 256 | | | | B | | | 1 | | | 1 | | | | |
| 132 - NS | 198 | 1152+50.00 | 12 | 1155+46.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 133 - NS | 198 | 1155+50.00 | 12 | 1158+16.00 | 12 | 4 | | | 19 | | 266 | | | | B | | | 1 | | | 1 | | | | |
| 134 - NS | 198 | 1158+20.00 | 12 | 1160+21.00 | 12 | | | | 7 | | 201 | | | | L2 | | | 1 | 1 | | 1 | | | | |
| 135 - NS | 198 | 1160+25.00 | 12 | 1161+96.00 | 12 | 4 | | | 19 | | 171 | | | | B | | | 1 | | | 1 | | | | |
| 136 - NS | 198-199 | 1162+00.00 | 12 | 1164+96.00 | 12 | | | | 7 | | 296 | | | | A | | | 1 | 1 | | 1 | | | | |
| 137 - NS | 199 | 1165+00.00 | 12 | 1167+96.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 138 - NS | 199 | 1168+00.00 | 12 | 1170+96.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 139 - NS | 199 | 1171+00.00 | 12 | 1173+96.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 140 - NS | 199-200 | 1174+00.00 | 12 | 1176+96.00 | 12 | | | | 7 | | 296 | | | | A | | | 1 | 1 | | 1 | | | | |
| 141 - NS | 200 | 1177+00.00 | 12 | 1179+96.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 142 - NS | 200 | 1180+00.00 | 12 | 1182+71.00 | 12 | 4 | | | 19 | | 271 | | | | B | | | 1 | | | 1 | | | | |
| 143 - NS | 200 | 1182+75.00 | 12 | 1185+70.00 | 12 | 4 | | | 19 | | 295 | | | | B | | | 1 | | | 1 | | | | |
| 144 - NS | 200-201 | 1185+74.00 | 12 | 1189+21.00 | 12 | | | | 7 | | 347 | | | | D | | | 1 | 1 | | 1 | | | | |
| 145 - NS | 201 | 1189+25.00 | 12 | 1192+76.00 | 12 | | | 7.2 | | | 351 | | | | K | 1 | | 1 | | | 1 | | | | |
| 146 - NS | 201 | 1192+80.00 | 12 | 1195+46.00 | 12 | | | | 7 | | 266 | | | | A | | | 1 | 1 | | 1 | | | | |
| 147 - NS | 201 | 1195+50.00 | 12 | 1198+40.00 | 12 | | | 7.2 | | | 290 | | | | K | 1 | | 1 | | | 1 | | | | |
| 148 - NS | 201-202 | 1198+41.00 | 12 | 1201+36.00 | 12 | | | 9.2 | | | 295 | | | | F | | | 1 | | | 1 | | | | |
| 149 - NS | 202 | 1201+40.00 | 14 | 1203+00.00 | 14 | 4 | | | 19 | | 160 | | | | B | | | 1 | | | | | | | |
| | | 1203+00.00 | 12 | 1204+36.00 | 12 | | | | | | 136 | | | | | | | | | | 1 | | | | |
| 150 - NS | 202 | 1204+40.00 | 12 | 1207+36.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 151 - NS | 202 | 1207+40.00 | 12 | 1210+36.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 152 - NS | 202 | 1210+40.00 | 12 | 1213+36.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 153 - NS | 202-203 | 1213+40.00 | 12 | 1216+74.00 | 12 | 4 | | | 19 | | 334 | | | | B | | | 1 | | | 1 | | | | |
| 154 - NS | 203 | 1216+76.00 | 12 | 1218+96.00 | 12 | | | | 7 | | 220 | | | | D | | | 1 | 1 | | 1 | | | | |
| 155 - NS | 203 | 1219+00.00 | 12 | 1221+30.00 | 12 | 4 | | | 19 | | 230 | | | | B | | | 1 | | | 1 | | | | |
| 156 - NS | 203 | 1221+34.00 | 12 | 1224+46.00 | 12 | | | | 7 | | 312 | | | | D | | | 1 | 1 | | 1 | | | | |
| 157 - NS | 203-204 | 1224+50.00 | 12 | 1227+46.00 | 12 | 4 | | | 19 | | 296 | | | | B | | | 1 | | | 1 | | | | |
| 158 - NS | 204 | 1227+50.00 | 12 | 1230+66.00 | 12 | 4 | | | 19 | | 316 | | | | B | | | 1 | | | 1 | | | | |
| TOTALS CARRIED TO SHEET 121 | | | | | | 112 | | 34.8 | 633 | | 13498 | | 58 | | | 2 | 1 | 48 | 17 | | 50 | | | | |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY
## NORTHBOUND OUTSIDE, FREE DRAINAGE BASE

MED-71-15.78



7885DS2.DGN 8/25/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN (SQ. YD.) | 602 CONCRETE MASONRY, AS PER PLAN (CU. YD.) | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 (FEET) | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 (FEET) | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (FEET) | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN (FEET) | OUTLET DETAIL | BENDS AND BRANCHES 6" x 4" x 6" TEE (EACH) | 4" x 4" x 4" TEE (EACH) | 4", 90° BEND (EACH) | 4", 45° BEND (EACH) | 4", 22.5° BEND (EACH) | 4" PLUG (EACH) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 159- NS | 204 | 1230+70.00 | 12 | 1233+36.00 | 12 | | | | 7 | | 266 | | | A | | | 1 | 1 | | 1 | | | | |
| 160- NS | 204 | 1233+40.00 | 12 | 1236+21.00 | 12 | 4 | | | 19 | | 281 | | | B | | | 1 | | | 1 | | | | |
| 161- NS | 204-205 | 1236+25.00 | 12 | 1238+71.00 | 12 | 4 | | | 19 | | 246 | | | B | | | 1 | | | 1 | | | | |
| 162- NS | 205 | 1238+75.00 | 12 | 1242+56.00 | 12 | | | | 7 | | 381 | | | A | | | 1 | 1 | | 1 | | | | |
| 163- NS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 164- NS | 205 | 1242+60.00 | 12 | 1245+96.00 | 12 | | | | 7 | | 336 | | | A | | | 1 | 1 | | 1 | | | | |
| 165- NS | 205 | 1246+00.00 | 12 | 1249+46.00 | 12 | 4 | | | 19 | | 346 | | | B | | | 1 | | | 1 | | | | |
| 166- NS | 205-206 | 1249+50.00 | 12 | 1252+71.00 | 12 | | | | 7 | | 321 | | | A | | | 1 | 1 | | 1 | | | | |
| 167- NS | 206 | 1252+75.00 | 12 | 1256+60.00 | 12 | 4 | | | 12 | | 385 | | | B | | | 1 | | | 1 | | | | |
| 168- NS | 206 | 1256+20.00 | 12 | 1259+75.00 | 12 | 4 | | | 12 | | 355 | | | B | | | 1 | | | 1 | | | | |
| 169- NS | 206 | 1259+79.00 | 12 | 1263+15.00 | 12 | | | | | | 336 | | | | | | | | | 1 | | | | |
| 170- NS | 206 | 1263+15.00 | 12 | 1263+25.00 | 30 | | | | 7 | | | | 10 | C | | 1 | | 1 | | 1 | | | | |
| 171- NS | 206-207 | 1263+25.00 | 30 | 1264+90.00 | 12 | | | | | | | | 165 | | | | | | | 1 | | | | |
| 172- NS | 207 | 1264+85.00 | 12 | 1267+15.00 | 12 | | | | | | 230 | | | | | | | | | 1 | | | | |
| 173- NS | 207 | 1267+15.00 | 12 | 1267+25.00 | 18 | | | | 7 | | | | 10 | C | | 1 | | 1 | | | | | | |
| 174- NS | 207 | 1267+25.00 | 18 | 1267+35.00 | 12 | | | | 7 | | | | 10 | | | | | | | 1 | | | | |
| 175- NS | | NOT USED | | | | | | | | | | | | | | | | | | | | | | |
| 176- NS | 207 | 1269+98.00 | 12 | 1272+75.00 | 12 | 4 | | | 9 | | 277 | | | B | | | 1 | | | 1 | | | | |
| 177- NS | 207 | 1272+79.00 | 12 | 1275+40.00 | 12 | | | | 7 | | 261 | | | A | | | 1 | 1 | | 1 | | | | |
| 178- NS | 207-208 | 1275+44.00 | 12 | 1278+45.00 | 12 | 4 | | | 10 | | 301 | | | B | | | 1 | | | 1 | | | | |
| 179- NS | 208 | 1278+49.00 | 12 | 1281+36.00 | 12 | | | | 7 | | 287 | | | 0 | | | 1 | 1 | | 1 | | | | |
| 180- NS | 208 | 1281+40.00 | 12 | 1284+50.00 | 12 | 4 | | | 19 | | 310 | | | B | | | 1 | | | 1 | | | | |
| 181- NS | 208 | 1284+54.00 | 12 | 1287+75.00 | 12 | 4 | | | 19 | | 321 | | | B | | | 1 | | | 1 | | | | |
| 182- NS | 208-209 | 1287+79.00 | 12 | 1290+85.00 | 12 | 4 | | | 19 | | 306 | | | B | | | 1 | | | 1 | | | | |
| 183- NS | 209 | 1290+89.00 | 12 | 1293+94.00 | 12 | | | | 7 | | 305 | | | C | | 1 | | 1 | | 1 | | | | |
| 184- NS | 209 | 1293+94.00 | 12 | 1297+06.00 | 12 | | | | | | 312 | | | | | | | | | 1 | | | | |
| 185- NS | 209 | 1297+10.00 | 12 | 1300+28.00 | 12 | 4 | | | 19 | | 318 | | | B | | | 1 | | | 1 | | | | |
| 186- NS | 209-210 | 1300+32.00 | 12 | 1303+30.00 | 12 | | | | 7 | | 298 | | | 0 | | | 1 | 1 | | 1 | | | | |
| 187- NS | 210 | 1303+34.00 | 12 | 1306+30.00 | 12 | 4 | | | 10 | | 296 | | | B | | | 1 | | | 1 | | | | |
| 188- NS | 210 | 1306+34.00 | 12 | 1309+30.00 | 12 | | | | 7 | | 296 | | | A | | | 1 | 1 | | 1 | | | | |
| 189- NS | 210 | 1309+34.00 | 12 | 1312+30.00 | 12 | 4 | | | 10 | | 296 | | | B | | | 1 | | | 1 | | | | |
| 190- NS | 210-211 | 1312+34.00 | 12 | 1315+16.00 | 12 | | | | 7 | | 282 | | | A | | | 1 | 1 | | 1 | | | | |
| 191- NS | 211 | 1315+20.00 | 12 | 1318+06.00 | 12 | 4 | | | 19 | | 286 | | | B | | | 1 | | | 1 | | | | |
| 192- NS | 211 | 1318+10.00 | 12 | 1320+96.00 | 12 | 4 | | | 19 | | 286 | | | B | | | 1 | | | 1 | | | | |
| 193- NS | 211 | 1321+00.00 | 12 | 1324+00.00 | 12 | 4 | | | 19 | | 300 | | | B | | | 1 | | | 1 | | | | |
| 194- NS | 211-212 | 1324+00.00 | 12 | 1326+80.00 | 12 | 4 | | | 19 | | 280 | | | B | | | 1 | | | 1 | | | | |
| 195- NS | 212 | 1326+84.00 | 12 | 1329+70.00 | 12 | 4 | | | 19 | | 286 | | | B | | | 1 | | | 1 | | | | |
| 196- NS | 212 | 1329+74.00 | 12 | 1332+60.00 | 12 | 4 | | | 19 | | 286 | | | B | | | 1 | | | 1 | | | | |
| 197- NS | 212 | 1332+64.00 | 12 | 1335+50.00 | 12 | 4 | | | 19 | | 286 | | | B | | | 1 | | | 1 | | | | |
| 198- NS | 212 | 1335+54.00 | 12 | 1338+34.00 | 12 | | | | 7 | | 280 | | | D | | | 1 | 1 | | 1 | | | | |
| 199- NS | 212-213 | 1338+38.00 | 12 | 1341+00.00 | 12 | 4 | | | 19 | | 262 | | | B | | | 1 | | | 1 | | | | |
| 200- NS | 213 | 1341+04.00 | 12 | 1344+19.00 | 12 | | | | 7 | | 315 | | | D | | | 1 | 1 | | 1 | | | | |
| 201- NS | 213 | 1344+23.00 | 12 | 1347+00.00 | 12 | 4 | | | 19 | | 277 | | | B | | | 1 | | | 1 | | | | |
| 202- NS | 213 | 1347+04.00 | 12 | 1349+25.00 | 12 | 4 | | | 19 | | 221 | | | B | | | 1 | | | 1 | | | | |
| 203- NS | 213-214 | 1349+29.00 | 12 | 1351+34.00 | 12 | | | 9.2 | | | 205 | | | F | | | 1 | | | 1 | | | | |
| 204- NS | 214 | 1351+38.00 | 12 | 1355+25.00 | 12 | 4 | | | 19 | | 387 | | | B | | | 1 | | | 1 | | | | |
| 205- NS | 214 | 1355+29.00 | 12 | 1358+00.00 | 12 | 4 | | | 19 | | 271 | | | B | | | 1 | | | 1 | | | | |
| 206- NS | 214 | 1358+04.00 | 12 | 1360+75.00 | 12 | | | | 7 | | 271 | | | A | | | 1 | 1 | | 1 | | | | |
| 207- NS | 214-215 | 1360+79.00 | 12 | 1363+50.00 | 12 | 4 | | | 19 | | 271 | | | B | | | 1 | | | 1 | | | | |
| 208- NS | 215 | 1363+54.00 | 12 | 1366+36.00 | 12 | | | | 7 | | 282 | | | 0 | | | 1 | 1 | | 1 | | | | |
| 209- NS | 215 | 1366+40.00 | 12 | 1369+34.00 | 12 | 4 | | | 19 | | 294 | | | B | | | 1 | | | 1 | | | | |
| 210- NS | 215 | 1369+38.00 | 12 | 1372+34.00 | 12 | | | | 7 | | 296 | | | A | | | 1 | 1 | | 1 | | | | |
| 211- NS | 215 | 1372+38.00 | 12 | 1375+34.00 | 12 | 4 | | | 19 | | 296 | | | B | | | 1 | | | 1 | | | | |
| **TOTALS CARRIED TO SHEET 121** | | | | | | 112 | | 9.2 | 607 | | 13887 | | 195 | | | 3 | 43 | 17 | | 50 | | | | |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY NORTHBOUND OUTSIDE, FREE DRAINAGE BASE

MED-71-15.78

120
940

7885DS2.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 602 CONCRETE MASONRY, AS PER PLAN | 603 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN | | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | | BENDS AND BRANCHES: OUTLET DETAIL | 6" x 4" x 6" TEE | 4" x 4" x 4" TEE | 4" 90° BEND | 4" 45° BEND | 4" 22.5° BEND | 4" PLUG | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | CU. YD. | FEET | FEET | | FEET | | FEET | | | EACH | EACH | EACH | EACH | EACH | EACH | | | | |
| 212- NS | 215-216 | 1375+38.00 | 12 | 1378+34.00 | 12 | | | | 7 | | 296 | | | | A | | | 1 | 1 | | 1 | | | | |
| 213- NS | 216 | 1378+38.00 | 12 | 1381+32.00 | 12 | | | | 7 | | 294 | | | | 0 | | | 1 | 1 | | 1 | | | | |
| 214- NS | 216 | 1381+36.00 | 12 | 1384+50.00 | 12 | 4 | | | 19 | | 314 | | | | B | | | 1 | | | 1 | | | | |
| 215- NS | 216 | 1384+54.00 | 12 | 1387+85.00 | 12 | 4 | | | 19 | | 331 | | | | B | | | 1 | | | 1 | | | | |
| 216- NS | 216-217 | 1387+89.00 | 12 | 1391+00.00 | 12 | 4 | | | 19 | | 311 | | | | B | | | 1 | | | 1 | | | | |
| 217- NS | 217 | 1391+04.00 | 12 | 1394+35.00 | 12 | | | 9.2 | | | 331 | | | | F | | | 1 | | | 1 | | | | |
| TOTALS FROM SHEET 117 | | | | | | 116 | 0.52 | 62.6 | 721 | | 12633 | | | | | | 1 | 49 | 16 | 1 | 51 | | | | |
| TOTALS FROM SHEET 118 | | | | | | 84 | | 27.6 | 492 | | 11331 | | 378 | | | 1 | 4 | 35 | 15 | 1 | 45 | | | | |
| TOTALS FROM SHEET 119 | | | | | | 112 | | 34.8 | 633 | | 13498 | | 58 | | | 2 | 1 | 48 | 17 | | 50 | | | | |
| TOTALS FROM SHEET 120 | | | | | | 112 | | 9.2 | 607 | | 13887 | | 195 | | | | 3 | 43 | 17 | | 50 | | | | |
| 212-NS THRU 217-NS TOTALS | | | | | | 12 | | 9.2 | 71 | | 1877 | | | | | | | 6 | 2 | | 6 | | | | |
| **TOTALS CARRIED TO SHEET 128** | | | | | | 436 | 0.52 | 143.4 | 2524 | | 53226 | | 631 | | | 3 | 9 | 181 | 67 | 2 | 202 | | | | |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY
## NORTHBOUND OUTSIDE, FREE DRAINAGE BASE

MED-71-15.78

121/940

7885DS2.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 602 CONCRETE MASONRY, AS PER PLAN | 603 6" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 6" CONDUIT, TYPE F, 707.33 OR 707.41 | 605 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 | 605 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41 | 605 6" ROCK CUT UNDERDRAIN WITH FABRIC WRAP | BENDS AND BRANCHES: OUTLET DETAIL | 6" x 6" x 4" TEE | 6" x 4" x 6" TEE | 6" x 6" x 6" TEE | 6" 90° BEND | 6"x6"x4" 45° WYE | 6" PLUG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | CU. YD. | FEET | FEET | FEET | FEET | FEET | | EACH | EACH | EACH | EACH | EACH | EACH |
| 1 - NO | 172 | 833+02.00 | 24 | 833+10.00 | 30 | | | | | | 8 | | | | | | | | 1 |
| 2 - NO | 172 | 833+10.00 | 30 | 837+16.00 | 30 | | | 37.2 | | 406 | | | T | | | 1 | | | 1 |
| 3 - NO | 172-173 | 837+20.00 | 30 | 842+16.00 | 30 | | | 37.2 | | 496 | | | F | 1 | | | | | 1 |
| 4 - NO | 173-174 | 842+20.00 | 30 | 851+26.00 | 30 | | | 15 | 16 | 906 | | | D | | | | 1 | 1 | 1 |
| 5 - NO | 174 | 851+30.00 | 30 | 855+66.00 | 30 | | | 15 | 21 | 436 | | | L2 | | | | 1 | 1 | 1 |
| 6 - NO | 174 | 855+70.00 | 12 | 858+80.00 | 12 | | | 9 | 13 | | | 310 | L4 | | 1 | | 1 | | 1 |
| 7 - NO | 175-176 | 874+68.00 | 30 | 882+90.00 | 30 | | | 37.2 | | 822 | | | F | 1 | | | | | 1 |
| 8 - NO | 177 | NOT USED | | | | | | | | | | | | | | | | | |
| 9 - NO | 177 | 891+70.00 | 30 | 896+96.00 | 30 | 4 | | 15 | 8 | 526 | | | A | | | | 1 | 1 | 1 |
| 10 - NO | 177 | 897+00.00 | 30 | 902+50.00 | 30 | 4 | | 15 | 20 | 550 | | | A | | | | 1 | 1 | 1 |
| 11 - NO | 177-178 | NOT USED | | | | | | | | | | | | | | | | | |
| 12 - NO | | 904+85.00 | 30 | 915+21.00 | 30 | 4 | | 15 | 32 | 1036 | | | A | | | | 1 | 1 | 1 |
| 13 - NO | 178-179 | NOT USED | | | | | | | | | | | | | | | | | |
| 14 - NO | 179 | 915+25.00 | 30 | 922+21.00 | 30 | 4 | | 15 | 12 | 696 | | | A | | | | 1 | 1 | 1 |
| 15 - NO | 179-180 | 922+25.00 | 30 | 932+21.00 | 30 | | | 15 | 8 | 996 | | | D | | | | 1 | 1 | 1 |
| 16 - NO | 180 | 932+25.00 | 30 | 934+71.00 | 30 | 4 | | 15 | 12 | 246 | | | A | | | | 1 | 1 | 1 |
| 17 - NO | 180-181 | 934+75.00 | 30 | 943+16.00 | 30 | 4 | | 15 | 9 | 841 | | | A | | | | 1 | 1 | 1 |
| 18 - NO | 181 | 943+20.00 | 30 | 947+56.00 | 30 | 4 | | 15 | 19 | 436 | | | A | | | | 1 | 1 | 1 |
| 19 - NO | 181-182 | 947+60.00 | 30 | 952+73.00 | 30 | 4 | | 15 | 17 | 513 | | | A | | | | 1 | 1 | 1 |
| 20 - NO | 182 | 952+77.00 | 30 | 957+06.00 | 30 | 4 | | 15 | 29 | 429 | | | A | | | | 1 | 1 | 1 |
| 21 - NO | 182 | 957+10.00 | 30 | 961+64.00 | 30 | | | 15 | 9 | 454 | | | D | | | | 1 | 1 | 1 |
| 22 - NO | 182-183 | 961+68.00 | 30 | 976+90.00 | 30 | | | 49.2 | | 1522 | | | F | 1 | | | | | 1 |
| 23 - NO | 184 | 977+00.00 | 12 | 980+00.00 | 30 | | | | | | 300 | | | | | | | | 1 |
| 24 - NO | 184 | 980+00.00 | 30 | 980+50.00 | 30 | 4 | | 15 | 23 | 50 | | | C | | | 1 | | 1 | |
| 25 - NO | 184 | 980+50.00 | 30 | 986+50.00 | 30 | 4 | | 15 | 20 | 600 | | | C | | | 1 | | 1 | |
| 26 - NO | 184 | 986+50.00 | 30 | 986+85.00 | 27.25 | | | | | | 35 | | | | | | | | 1 |
| 27 - NO | 185 | 988+95.00 | 33.25 | 995+40.00 | 30 | 4 | | 15 | 10 | 645 | | | A | | | | 1 | 1 | 1 |
| 28 - NO | 185 | 995+44.00 | 30 | 1001+20.00 | 30 | 4 | | 15 | 9 | 576 | | | A | | | | 1 | 1 | 1 |
| 29 - NO | 186 | 1001+24.00 | 30 | 1006+90.00 | 30 | 4 | | 15 | 10 | 566 | | | A | | | | 1 | 1 | 1 |
| 30 - NO | 186 | 1006+94.00 | 30 | 1011+97.00 | 30 | | 0.51 | 15 | 30 | 503 | | | P | | | 1 | | 1 | 1 |
| 31 - NO | 186 | 1011+97.00 | 30 | 1012+38.00 | 25.25 | | | | | | 41 | | | | | | | | 1 |
| 32 - NO | 187 | 1013+61.00 | 33.25 | 1019+50.00 | 30 | 4 | | 15 | 20 | 589 | | | A | | | | 1 | 1 | 1 |
| 33 - NO | 187 | 1019+54.00 | 12 | 1024+40.00 | 12 | 4 | | 15 | 20 | 86 | | 400 | L4 | | 1 | | 1 | | 1 |
| 34 - NO | | NOT USED | | | | | | | | | | | | | | | | | |
| 35 - NO | 187-188 | 1024+44.00 | 27 | 1037+40.00 | 27 | | | 37.2 | | 1296 | | | F | 1 | | | | | 1 |
| 36 - NO | 188-189 | 1037+44.00 | 27 | 1045+08.00 | 27 | | | 37.2 | | 764 | | | F | 1 | | | | | 1 |
| 37 - NO | 189 | 1045+12.00 | 30 | 1051+00.00 | 30 | 4 | | 15 | 31 | 588 | | | C | | | 1 | | 1 | 1 |
| 38 - NO | 189-190 | 1051+00.00 | 30 | 1051+28.00 | 21.25 | | | | | | 28 | | | | | | | | 1 |
| 39 - NO | 190 | 1053+60.00 | 33.25 | 1057+00.00 | 30 | 4 | | 15 | 8 | 340 | | | A | | | | 1 | 1 | 1 |
| 40 - NO | 190 | 1057+04.00 | 30 | 1060+08.00 | 30 | 4 | | 15 | 25 | 304 | | | C | | | 1 | | 1 | 1 |
| 41 - NO | 190-191 | 1060+08.00 | 30 | 1066+46.00 | 30 | | | | | 638 | | | | | | | | | 1 |
| 42 - NO | 191 | 1066+50.00 | 30 | 1070+46.00 | 30 | 4 | | 15 | 53 | 446 | | | A | | | | 1 | 1 | 1 |
| 43 - NO | 191-192 | 1071+00.00 | 30 | 1076+36.00 | 30 | 4 | | 15 | 27 | 536 | | | A | | | | 1 | 1 | 1 |
| 44 - NO | 192 | 1076+40.00 | 30 | 1079+91.00 | 30 | 4 | | 15 | 26 | 351 | | | A | | | | 1 | 1 | 1 |
| 45 - NO | 192 | 1079+95.00 | 30 | 1086+86.00 | 30 | 4 | | 15 | 13 | 691 | | | A | | | | 1 | 1 | 1 |
| 46 - NO | 192-193 | 1086+90.00 | 30 | 1092+26.00 | 30 | 4 | | 15 | 18 | 536 | | | A | | | | 1 | 1 | 1 |
| 47 - NO | 193 | 1092+30.00 | 30 | 1092+35.00 | 30 | 4 | | 15 | 13 | 5 | | | H | | | 1 | | 1 | 1 |
| 48 - NO | 193 | 1092+30.00 | 30 | 1097+96.00 | 30 | | | 35 | | 566 | | | H | | | | 1 | 1 | 1 |
| 49 - NO | 193-194 | 1098+00.00 | 30 | 1103+32.00 | 33.25 | 4 | | 15 | 23 | 532 | | | A | | | | 1 | 1 | 1 |
| 50 - NO | 194 | 1105+72.00 | 23.25 | 1106+50.00 | 30 | | | | | | 78 | | | | | | | | 1 |
| 51 - NO | 194 | 1106+50.00 | 30 | 1108+74.00 | 30 | 4 | | 15 | 10 | 224 | | | C | | | 1 | | 1 | 1 |
| 52 - NO | 194-195 | 1108+78.00 | 30 | 1115+00.00 | 30 | 4 | | 15 | 20 | 622 | | | A | | | | 1 | 1 | 1 |
| 53 - NO | 195 | 1114+40.00 | 30 | 1120+96.00 | 30 | 4 | | 15 | 15 | 656 | | | A | | | | 1 | 1 | 1 |
| TOTALS CARRIED TO SHEET 123 | | | | | | 112 | 0.51 | 789.2 | 649 | 24021 | 490 | 710 | | 5 | 2 | 8 | 29 | 34 | 47 |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY NORTHBOUND OUTSIDE, SUBGRADE

MED-71-15.78



7885DS4.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN SQ. YD. | 602 CONCRETE MASONRY, AS PER PLAN CU. YD. | 603 6" CONDUIT, TYPE B, 707.33 OR 707.41 FEET | 603 6" CONDUIT, TYPE F, 707.33 OR 707.41 FEET | 605 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 FEET | 605 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, FEET | 605 6" ROCK CUT UNDERDRAIN WITH FABRIC WRAP FEET | BENDS AND BRANCHES: OUTLET DETAIL | 6" x 6" x 4" TEE EACH | 6" x 4" x 6" TEE EACH | 6" x 6" x 6" TEE EACH | 6" 90° BEND EACH | 6"x4"x6" 45° WYE EACH | 6" PLUG EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 - NO | 195-196 | 1121+00.00 | 30 | 1126+96.00 | 30 | 4 | | 15 | 9 | 596 | | | A | | | | 1 | 1 | 1 |
| 55 - NO | 196 | 1127+00.00 | 30 | 1134+34.00 | 30 | 4 | | 15 | 23 | 734 | | | A | | | | 1 | 1 | 1 |
| 56 - NO | 196-197 | 1134+38.00 | 30 | 1140+26.00 | 30 | | | 15 | 13 | 588 | | | D | | | | 1 | 1 | 1 |
| 57 - NO | 197 | 1140+30.00 | 30 | 1143+86.00 | 30 | | | 37.2 | | 356 | | | F | 1 | | | | | 1 |
| 58 - NO | 197-198 | 1143+90.00 | 30 | 1158+16.00 | 30 | | | 15 | 13 | 1426 | | | D | | | | 1 | 1 | 1 |
| 59 - NO | | NOT USED | | | | | | | | | | | | | | | | | |
| 60 - NO | 198 | 1158+20.00 | 30 | 1161+96.00 | 30 | | | 15 | 30 | 376 | | | L2 | | | | 1 | 1 | 1 |
| 61 - NO | 198-199 | 1162+00.00 | 30 | 1173+96.00 | 30 | 4 | | 15 | 27 | 1196 | | | A | | | | 1 | 1 | 1 |
| 62 - NO | | NOT USED | | | | | | | | | | | | | | | | | |
| 63 - NO | 199-200 | 1174+00.00 | 30 | 1185+70.00 | 30 | 4 | | 15 | 22 | 1170 | | | A | | | | 1 | 1 | 1 |
| 64 - NO | | NOT USED | | | | | | | | | | | | | | | | | |
| 65 - NO | 200-201 | 1185+74.00 | 30 | 1192+76.00 | 30 | | | 15 | 12 | 702 | | | D | | | | 1 | 1 | 1 |
| 66 - NO | 201 | 1192+80.00 | 30 | 1198+40.00 | 30 | 4 | | 15 | 28 | 560 | | | A | | | | 1 | 1 | 1 |
| 67 - NO | 201-202 | 1198+41.00 | 30 | 1203+00.00 | 30 | | | 37.2 | | 459 | | | F | 1 | | | | | 1 |
| 68 - NO | 202-203 | 1216+76.00 | 30 | 1221+30.00 | 30 | | | 15 | 10 | 454 | | | D | | | | 1 | 1 | 1 |
| 69 - NO | 203-204 | 1221+34.00 | 30 | 1230+66.00 | 30 | | | 15 | 11 | 932 | | | D | | | | 1 | 1 | 1 |
| 70 - NO | 204 | 1230+70.00 | 30 | 1238+71.00 | 30 | 4 | | 15 | 16 | 801 | | | A | | | | 1 | 1 | 1 |
| 71 - NO | 205 | 1238+75.00 | 30 | 1242+56.00 | 30 | 4 | | 15 | 19 | 381 | | | A | | | | 1 | 1 | 1 |
| 72 - NO | 205 | 1242+60.00 | 30 | 1249+46.00 | 30 | 4 | | 15 | 19 | 686 | | | A | | | | 1 | 1 | 1 |
| 73 - NO | 205-206 | 1249+50.00 | 30 | 1256+60.00 | 30 | 4 | | 15 | 19 | 710 | | | A | | | | 1 | 1 | 1 |
| 74 - NO | 206 | 1256+20.00 | 30 | 1263+25.00 | 30 | 4 | | 15 | 21 | 705 | | | C | | | 1 | | 1 | 1 |
| 75 - NO | 206-207 | 1263+25.00 | 30 | 1265+40.00 | 30 | | | | | 215 | | | | | | | | | 1 |
| 76 - NO | 207 | 1264+85.00 | 30 | 1267+25.00 | 30 | 4 | | 15 | 36 | 240 | | | C | | | 1 | | 1 | 1 |
| 77 - NO | 207 | 1267+25.00 | 30 | 1267+60.00 | 25.25 | | | | | 0 | 35 | | | | | | | | 1 |
| 78 - NO | | NOT USED | | | | | | | | | | | | | | | | | |
| 79 - NO | 207-208 | 1269+62.00 | 33.25 | 1275+40.00 | 30 | 4 | | 15 | 10 | 578 | | | A | | | | 1 | 1 | 1 |
| 80 - NO | 208 | 1275+44.00 | 30 | 1281+36.00 | 30 | | 0.51 | 15 | 22 | 592 | | | 0 | | | | 1 | 1 | 1 |
| 81 - NO | 208-209 | 1281+40.00 | 30 | 1293+94.00 | 30 | 4 | | 15 | 22 | 1254 | | | C | | | 1 | | 1 | 1 |
| 82 - NO | 209 | NOT USED | | | | | | | | | | | | | | | | | |
| 83 - NO | 209 | 1293+94.00 | 30 | 1300+28.00 | 30 | | | | | 634 | | | | | | | | | 1 |
| 84 - NO | 209-210 | 1300+32.00 | 30 | 1306+30.00 | 30 | | 0.51 | 15 | 21 | 598 | | | 0 | | | | 1 | 1 | 1 |
| 85 - NO | 210 | 1306+34.00 | 30 | 1312+30.00 | 30 | 4 | | 15 | 9 | 596 | | | A | | | | 1 | 1 | 1 |
| 86 - NO | 210-211 | 1312+34.00 | 30 | 1324+00.00 | 30 | 4 | | 15 | 16 | 1166 | | | A | | | | 1 | 1 | 1 |
| 87 - NO | | NOT USED | | | | | | | | | | | | | | | | | |
| 88 - NO | | NOT USED | | | | | | | | | | | | | | | | | |
| 89 - NO | 211-212 | 1324+00.00 | 30 | 1338+34.00 | 30 | | | 15 | 18 | 1434 | | | D | | | | 1 | 1 | 1 |
| 90 - NO | 212-213 | 1338+38.00 | 30 | 1344+19.00 | 30 | | | 15 | 6 | 581 | | | D | | | | 1 | 1 | 1 |
| 91 - NO | 213-214 | 1344+23.00 | 30 | 1351+34.00 | 30 | | | 37.2 | | 711 | | | F | 1 | | | | | 1 |
| 92 - NO | 214 | 1351+38.00 | 30 | 1360+75.00 | 30 | 4 | | 15 | 21 | 937 | | | A | | | | 1 | 1 | 1 |
| 93 - NO | 214-215 | 1360+79.00 | 30 | 1366+36.00 | 30 | | 0.51 | 15 | 33 | 557 | | | 0 | | | | 1 | 1 | 1 |
| 94 - NO | 215 | 1366+40.00 | 30 | 1372+34.00 | 30 | 4 | | 15 | 21 | 594 | | | A | | | | 1 | 1 | 1 |
| 95 - NO | 215-216 | 1372+38.00 | 30 | 1378+34.00 | 30 | 4 | | 15 | 21 | 596 | | | A | | | | 1 | 1 | 1 |
| 96 - NO | 216 | 1378+38.00 | 30 | 1381+32.00 | 30 | | 0.51 | 15 | 22 | 294 | | | 0 | | | | 1 | 1 | 1 |
| 97 - NO | 216-217 | 1381+36.00 | 30 | 1394+35.00 | 30 | | | 37.2 | | 1299 | | | F | 1 | | | | | 1 |
| TOTALS FROM SHEET 122 | | | | | | 112 | 0.51 | 789.2 | 649 | 24021 | 490 | 710 | | 5 | 2 | 8 | 29 | 34 | 47 |
| 54-NO THRU 97-NO TOTALS | | | | | | 72 | 2.04 | 598.8 | 570 | 25708 | 35 | | | 4 | | 3 | 27 | 30 | 37 |
| **TOTALS CARRIED TO SHEET 128** | | | | | | 184 | 2.55 | 1388 | 1219 | 49729 | 525 | 710 | | 9 | 2 | 11 | 56 | 64 | 84 |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY NORTHBOUND OUTSIDE, SUBGRADE

MED-71-15.78



7885DS4.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 603 6" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 6" CONDUIT, TYPE F, 707.33 OR 707.41 | 605 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 | 605 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41 | 605 6" ROCK CUT UNDERDRAIN WITH FABRIC WRAP | BENDS AND BRANCHES OUTLET DETAIL | 6" x 6" x 6" CROSS | 6" x 6" x 6" TEE | 6" x 4" x 6" TEE | 6" 90° BEND | 6"x6"x4" 45° WYE | 6" PLUG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | CU. YD. | FEET | FEET | FEET | FEET | | EACH | EACH | EACH | EACH | EACH | EACH |
| 1 - NI | 172 | 833+02.00 | 24 | 833+10.00 | 30 | | | | 8 | | | | | | | | 1 |
| 2 - NI | 172 | 833+10.00 | 30 | 837+16.00 | 30 | 15 | 22 | 406 | | | T | 1 | | | | 1 | 1 |
| 3 - NI | 172-173 | 837+20.00 | 30 | 842+66.00 | 30 | 15 | 22 | 546 | | | F | | 1 | | | 1 | 1 |
| 4 - NI | 173-174 | 842+70.00 | 30 | 852+66.00 | 30 | 15 | 22 | 996 | | | D | | | | 1 | 1 | 1 |
| 5 - NI | 174 | 852+70.00 | 30 | 855+66.00 | 30 | 15 | 21 | 296 | | | D | | | | 1 | 1 | 1 |
| 6 - NI | 174-175 | 855+70.00 | 12 | 866+26.00 | 12 | 9 | 24 | 256 | | 800 | L5 | | | 1 | 1 | | 1 |
| 7 - NI | 175 | 866+30.00 | 30 | 874+64.00 | 30 | 15 | 14 | 834 | | | D | | | | 1 | 1 | 1 |
| 8 - NI | 175-176 | 874+68.00 | 30 | 886+14.00 | 30 | 15 | 14 | 1146 | | | F | | 1 | | | 1 | 1 |
| 9 - NI | 176-177 | 886+18.00 | 30 | 889+49.00 | 33.25 | 15 | 20 | 331 | | | D | | | | 1 | 1 | 1 |
| 10 - NI | 177 | 891+21.00 | 22.25 | 891+70.00 | 34 | | | | 49 | | | | | | | | 1 |
| 11 - NI | 177 | 891+70.00 | 34 | 896+46.00 | 34 | 15 | 14 | 476 | | | J | | 1 | | | 1 | 1 |
| 12 - NI | 177-178 | 896+50.00 | 30 | 906+61.00 | 30 | 15 | 14 | 1011 | | | D | | | | 1 | 1 | 1 |
| 13 - NI | 178-179 | 906+65.00 | 30 | 914+61.00 | 30 | 15 | 14 | 796 | | | D | | | | 1 | 1 | 1 |
| 14 - NI | 179 | 914+65.00 | 30 | 922+21.00 | 30 | 15 | 14 | 756 | | | D | | | | 1 | 1 | 1 |
| 15 - NI | 179-180 | 922+25.00 | 30 | 931+64.00 | 30 | 15 | 14 | 939 | | | D | | | | 1 | 1 | 1 |
| 16 - NI | 180-181 | 931+68.00 | 30 | 944+64.00 | 30 | 15 | 14 | 1296 | | | D | | | | 1 | 1 | 1 |
| 17 - NI | 181-182 | 944+68.00 | 30 | 956+34.00 | 30 | 15 | 9 | 1166 | | | D | | | | 1 | 1 | 1 |
| 18 - NI | 182 | 956+38.00 | 30 | 961+64.00 | 30 | 15 | 14 | 526 | | | D | | | | 1 | 1 | 1 |
| 19 - NI | 182-183 | 961+68.00 | 30 | 967+46.00 | 30 | 15 | 14 | 578 | | | F | | 1 | | | 1 | 1 |
| 20 - NI | 183 | 967+50.00 | 30 | 973+96.00 | 30 | 15 | 14 | 646 | | | D | | | | 1 | 1 | 1 |
| 21 - NI | 183-184 | 974+00.00 | 30 | 980+50.00 | 30 | 15 | 14 | 650 | | | D | | | | 1 | 1 | |
| 22 - NI | 184 | 980+50.00 | 30 | 985+92.00 | 30 | | | 542 | | | J | | 1 | | | 1 | |
| 23 - NI | 184 | 985+92.00 | 30 | 986+64.00 | 23.25 | 15 | 14 | | 72 | | | | | | | | 1 |
| 24 - NI | 185 | 988+74.00 | 33.25 | 998+65.00 | 30 | 15 | 14 | 991 | | | D | | | | 1 | 1 | 1 |
| 25 - NI | 185-186 | 998+69.00 | 30 | 1008+52.00 | 30 | 15 | 14 | 983 | | | D | | | | 1 | 1 | 1 |
| 26 - NI | 186 | 1008+56.00 | 30 | 1011+95.00 | 30 | | | 339 | | | J | | 1 | | | 1 | 1 |
| 27 - NI | 186 | 1011+95.00 | 30 | 1012+39.00 | 25.25 | 15 | 14 | | 44 | | | | | | | | 1 |
| 28 - NI | 187 | 1013+65.00 | 21.25 | 1019+00.00 | 18 | | | 535 | | | | | | | | | |
| 28A - NI | 187 | 1019+00.00 | 18 | 1020+00.00 | 12 | | | | 100 | | | | | | | | |
| 28B - NI | 187 | 1020+00.00 | 12 | 1019+00.00 | 18 | 1 | | | | 272 | L5 | | | 1 | 1 | | |
| 29 - NI | 187 | 1022+76.00 | 12 | 1022+72.00 | 12 | | | | | 124 | | | | | | | 1 |
| 29A - NI | 187 | 1024+00.00 | 12 | 1024+50.00 | 30 | | | | 50 | | | | | | | | |
| 29B - NI | 187-188 | 1024+50.00 | 30 | 1037+40.00 | 30 | 15 | 14 | 1290 | | | D | | | | 1 | 1 | |
| 30 - NI | 188-189 | 1037+44.00 | 30 | 1045+08.00 | 30 | 15 | 14 | 764 | | | F | | 1 | | | 1 | 1 |
| 31 - NI | 189 | 1045+12.00 | 30 | 1050+70.00 | 30 | 15 | 14 | 558 | | | R | | 1 | | | 1 | 1 |
| 32 - NI | 189-190 | 1050+70.00 | 30 | 1051+30.00 | 9.25 | | | | 60 | | | | | | | | 1 |
| 33 - NI | 190 | 1053+59.00 | 33.25 | 1060+08.00 | 30 | 15 | 14 | 649 | | | J | | 1 | | | 1 | 1 |
| 34 - NI | 190-191 | 1060+08.00 | 30 | 1067+36.00 | 30 | | | 728 | | | | | | | | | 1 |
| 35 - NI | 191 | 1067+40.00 | 30 | 1070+88.00 | 30 | 15 | 14 | 348 | | | D | | | | 1 | 1 | 1 |
| 36 - NI | 191-192 | 1070+92.00 | 30 | 1076+51.00 | 30 | 15 | 14 | 559 | | | D | | | | 1 | 1 | 1 |
| 37 - NI | 192 | 1076+55.00 | 30 | 1087+36.00 | 30 | 15 | 14 | 1081 | | | D | | | | 1 | 1 | 1 |
| 38 - NI | 192-193 | 1087+40.00 | 30 | 1089+24.00 | 30 | 15 | 14 | 184 | | | D | | | | 1 | 1 | 1 |
| 39 - NI | 193-194 | 1089+28.00 | 30 | 1103+13.00 | 30 | 15 | 14 | 1385 | | | D | | | | 1 | 1 | 1 |
| 40 - NI | | NOT USED | | | | | | | | | | | | | | | |
| 41 - NI | 194 | 1105+52.00 | 27.25 | 1106+00.00 | 30 | | | | 48 | | | | | | | | 1 |
| 42 - NI | | NOT USED | | | | | | | | | | | | | | | |
| 43 - NI | 194 | 1106+00.00 | 30 | 1108+76.00 | 30 | 15 | 14 | 276 | | | J | | 1 | | | 1 | 1 |
| 44 - NI | 194-195 | 1108+80.00 | 30 | 1118+38.00 | 30 | 15 | 6 | 958 | | | D | | | | 1 | 1 | 1 |
| 45 - NI | 195-196 | 1118+42.00 | 30 | 1127+86.00 | 30 | 15 | 14 | 944 | | | D | | | | 1 | 1 | 1 |
| 46 - NI | 196 | 1127+90.00 | 30 | 1134+34.00 | 30 | 15 | 14 | 644 | | | D | | | | 1 | 1 | 1 |
| 47 - NI | 196-197 | 1134+38.00 | 30 | 1140+26.00 | 30 | 15 | 14 | 588 | | | D | | | | 1 | 1 | 1 |
| 48 - NI | 197 | 1140+30.00 | 30 | 1143+86.00 | 30 | 15 | 14 | 356 | | | F | | 1 | | | 1 | 1 |
| 49 - NI | 197-198 | 1143+90.00 | 30 | 1158+80.00 | 30 | 15 | 14 | 1490 | | | D | | | | 1 | 1 | 1 |
| **TOTALS CARRIED TO SHEET 125** | | | | | | 580 | 580 | 29843 | 431 | 1196 | | 1 | 11 | 2 | 28 | 38 | 45 |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY NORTHBOUND MEDIAN, SUBGRADE

MED-71-15.78

124
940

7885DS3.DGN 11/4/99 RB

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 603 6" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 6" CONDUIT, TYPE F, 707.33 OR 707.41 | 605 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 | 605 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41 | 605 6" ROCK CUT UNDERDRAIN WITH FABRIC WRAP | BENDS AND BRANCHES OUTLET DETAIL | 6" 45 DEGREE BEND | 6" x 6" x 6" TEE | 6" x 4" x 6" TEE | 6" 90° BEND | 6"x 6"x4" 45° WYE | 6" PLUG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | CU. YD. | FEET | FEET | FEET | FEET | | EACH | EACH | EACH | EACH | EACH | EACH |
| 50 - NI | 198-199 | 1158+84.00 | 30 | 1173+00.00 | 30 | 15 | 14 | 1416 | | | D | | | | 1 | 1 | 1 |
| 51 - NI | 199-200 | 1173+04.00 | 30 | 1186+33.00 | 30 | 15 | 14 | 1329 | | | D | | | | 1 | 1 | 1 |
| 52 - NI | 200-201 | 1186+37.00 | 30 | 1198+37.00 | 30 | 15 | 14 | 1200 | | | D | | | | 1 | 1 | 1 |
| 53 - NI | 201-202 | 1198+41.00 | 30 | 1202+30.00 | 30 | 15 | 14 | 389 | | | F | | 1 | | | 1 | 1 |
| 54 - NI | 202 | 1202+34.00 | 32 | 1203+00.00 | 32 | 15 | 14 | 66 | | | D | | | | 1 | 1 | |
| | | 1203+00.00 | 30 | 1209+30.00 | 30 | | | 630 | | | | | | | | | 1 |
| 55 - NI | 202-203 | 1204+34.00 | 30 | 1216+72.00 | 30 | 15 | 14 | 738 | | | D | | | | 1 | 1 | 1 |
| 56 - NI | 203 | 1216+76.00 | 30 | 1221+30.00 | 30 | 15 | 14 | 454 | | | D | | | | 1 | 1 | 1 |
| 57 - NI | 203 | 1221+34.00 | 30 | 1223+65.00 | 30 | 15 | 14 | 231 | | | D | | | | 1 | 1 | 1 |
| 58 - NI | 203-204 | 1223+69.00 | 30 | 1228+09.00 | 30 | 15 | 26 | 440 | | | D | | | | 1 | 1 | 1 |
| 59 - NI | | NOT USED | | | | | | | | | | | | | | | |
| 60 - NI | 204 | 1228+13.00 | 30 | 1231+30.00 | 30 | 15 | 14 | 317 | | | D | | | | 1 | 1 | 1 |
| 61 - NI | 204-205 | 1231+34.00 | 30 | 1242+30.00 | 30 | 15 | 14 | 1096 | | | D | | | | 1 | 1 | 1 |
| 62 - NI | 205-206 | 1242+34.00 | 30 | 1256+00.00 | 30 | 15 | 14 | 1366 | | | D | | | | 1 | 1 | |
| 63 - NI | 206-207 | 1256+00.00 | 30 | 1263+84.00 | 30 | 15 | 14 | 784 | | | D | | | | 1 | 1 | |
| 64 - NI | 207 | 1263+88.00 | 30 | 1267+34.00 | 30 | 15 | 18 | 346 | | | J | | 1 | | | 1 | 1 |
| 65 - NI | 207 | 1267+34.00 | 30 | 1267+77.00 | 23.25 | | | | 43 | | | | | | | | 1 |
| 66 - NI | 207 | 1269+80.00 | 33.25 | 1270+34.00 | 30 | 15 | 18 | 54 | | | D | | | | 1 | 1 | 1 |
| 67 - NI | 207-208 | 1270+38.00 | 30 | 1281+34.00 | 30 | 15 | 14 | 1096 | | | D | | | | 1 | 1 | 1 |
| 68 - NI | 208-209 | 1281+38.00 | 30 | 1293+94.00 | 30 | 15 | 14 | 1256 | | | J | | 1 | | | 1 | 1 |
| 69 - NI | 209 | 1293+94.00 | 30 | 1300+30.00 | 30 | | | 636 | | | | | | | | | 1 |
| 70 - NI | 209-210 | 1300+34.00 | 30 | 1312+30.00 | 30 | 15 | 14 | 1196 | | | D | | | | 1 | 1 | 1 |
| 71 - NI | 210-211 | 1312+34.00 | 30 | 1324+00.00 | 30 | 15 | 14 | 1166 | | | D | | | | 1 | 1 | |
| 72 - NI | 211-212 | 1324+00.00 | 30 | 1338+34.00 | 30 | 15 | 14 | 1434 | | | D | | | | 1 | 1 | |
| 73 - NI | 212-213 | 1338+38.00 | 30 | 1344+76.00 | 30 | 15 | 14 | 638 | | | D | | | | 1 | 1 | 1 |
| 74 - NI | 213-214 | 1344+80.00 | 30 | 1351+34.00 | 30 | 15 | 14 | 654 | | | F | | 1 | | | 1 | 1 |
| 75 - NI | 214-215 | 1351+38.00 | 30 | 1366+34.00 | 30 | 15 | 14 | 1496 | | | D | | | | 1 | 1 | 1 |
| 76 - NI | 215-216 | 1366+38.00 | 30 | 1381+34.00 | 30 | 15 | 14 | 1496 | | | D | | | | 1 | 1 | 1 |
| 77 - NI | 216-217 | 1381+38.00 | 30 | 1394+35.00 | 30 | 15 | 14 | 1297 | | | F | | 1 | | | 1 | 1 |
| TOTALS FROM SHEET 124 | | | | | | 580 | 580 | 29843 | 431 | 1196 | | 1 | 11 | 2 | 28 | 38 | 45 |
| 50-NI THRU 77-NI TOTALS | | | | | | 375 | 370 | 23221 | 43 | | | | 5 | | 20 | 25 | 23 |
| **TOTALS CARRIED TO SHEET 128** | | | | | | 955 | 950 | 53064 | 474 | 1196 | | 1 | 16 | 2 | 48 | 63 | 68 |

CALCULATED P.S. CHECKED B.C.

# UNDERDRAIN SUBSUMMARY NORTHBOUND MEDIAN, SUBGRADE

MED-71-15.78



7885DS3.DGN 11/4/99 RB

## NORTHBOUND

| REFERENCE NO. | SHEET NO. | STATION | 605 | INFORMATION ONLY | |
|---|---|---|---|---|---|
| | | | 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.33 OR 707.41, AS PER PLAN | 4" x 4"x 4" 45° WYE | 4" PLUG |
| | | CONNECTION | FEET | EACH | EACH |
| 1 - TM | 174 | 862+00.00 | 62 | 1 | 1 |
| 2 - TM | 175 | 865+00.00 | 62 | 1 | 1 |
| 3 - TM | 175 | 868+00.00 | 62 | 1 | 1 |
| 4 - TM | 175 | 871+00.00 | 62 | 1 | 1 |
| 5 - TM | 175 | 874+00.00 | 62 | 1 | 1 |
| 6 - TM | 176 | 877+00.00 | 62 | 1 | 1 |
| 7 - TM | 176 | 880+00.00 | 62 | 1 | 1 |
| 8 - TM | 176 | 883+00.00 | 62 | 1 | 1 |
| 9 - TM | 187 | 1026+00.00 | 26 | 1 | 1 |
| 1 - TS | 187 | 1026+00.00 | 26 | 1 | 1 |
| 10 - TM | 188 | 1029+00.00 | 26 | 1 | 1 |
| 2 - TS | 188 | 1029+00.00 | 26 | 1 | 1 |
| 11 - TM | 188 | 1032+00.00 | 26 | 1 | 1 |
| 3 - TS | 188 | 1032+00.00 | 26 | 1 | 1 |
| 12 - TM | 188 | 1035+25.00 | 26 | 1 | 1 |
| 4 - TS | 188 | 1035+25.00 | 26 | 1 | 1 |
| 13 - TM | 188 | 1038+25.00 | 26 | 1 | 1 |
| 5 - TS | 188 | 1038+25.00 | 26 | 1 | 1 |
| 14 - TM | 189 | 1041+25.00 | 26 | 1 | 1 |
| 6 - TS | 189 | 1041+25.00 | 26 | 1 | 1 |
| 15 - TM | 189 | 1044+25.00 | 26 | 1 | 1 |
| 7 - TS | 189 | 1044+25.00 | 26 | 1 | 1 |
| 16 - TM | 189 | 1047+25.00 | 26 | 1 | 1 |
| 8 - TS | 189 | 1047+25.00 | 26 | 1 | 1 |
| 17 - TM | 189 | 1050+25.00 | 26 | 1 | 1 |
| 9 - TS | 189 | 1050+25.00 | 26 | 1 | 1 |
| **1-TM THRU 9-TS TOTALS** | | | 964 | 26 | 26 |

## SOUTHBOUND

| REFERENCE NO. | SHEET NO. | STATION | 605 | INFORMATION ONLY | |
|---|---|---|---|---|---|
| | | | 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.33 OR 707.41, AS PER PLAN | 4" x 4"x 4" 45° WYE | 4" PLUG |
| | | CONNECTION | FEET | EACH | EACH |
| 1 - TO | 174 | 860+00.00 | 38 | 1 | 1 |
| 2 - TO | 174 | 863+00.00 | 40 | 1 | 1 |
| 3 - TO | 174 | 866+25.00 | 48 | 1 | 1 |
| 4 - TO | 174 | 869+25.00 | 54 | 1 | 1 |
| 5 - TO | | NOT USED | | | |
| 6 - TO | | NOT USED | | | |
| 7 - TO | 176 | 878+25.00 | 38 | 1 | 1 |
| 8 - TO | 176 | 881+25.00 | 38 | 1 | 1 |
| 9 - TO | 176 | 884+25.00 | 38 | 1 | 1 |
| 10- TO | 187 | 1026+00.00 | 26 | 1 | 1 |
| 1 - TI | 187 | 1026+00.00 | 26 | 1 | 1 |
| 11- TO | 188 | 1029+00.00 | 26 | 1 | 1 |
| 2 - TI | 188 | 1029+00.00 | 26 | 1 | 1 |
| 12- TO | 188 | 1032+00.00 | 26 | 1 | 1 |
| 3 - TI | 188 | 1032+00.00 | 26 | 1 | 1 |
| 13- TO | 188 | 1035+25.00 | 26 | 1 | 1 |
| 4 - TI | 188 | 1035+25.00 | 26 | 1 | 1 |
| 14- TO | 188 | 1038+25.00 | 26 | 1 | 1 |
| 5 - TI | 188 | 1038+25.00 | 26 | 1 | 1 |
| 15- TO | 189 | 1041+25.00 | 26 | 1 | 1 |
| 6 - TI | 189 | 1041+25.00 | 26 | 1 | 1 |
| 16- TO | 189 | 1044+25.00 | 26 | 1 | 1 |
| 7 - TI | 189 | 1044+25.00 | 26 | 1 | 1 |
| 17- TO | 189 | 1047+25.00 | 26 | 1 | 1 |
| 8 - TI | 189 | 1047+25.00 | 26 | 1 | 1 |
| 18- TO | 189 | 1050+25.00 | 26 | 1 | 1 |
| 9 - TI | 189 | 1050+25.00 | 26 | 1 | 1 |
| **1-TM TO 9-TS** | | | 964 | 26 | 26 |
| **1-TO TO 9-TI** | | | 762 | 25 | 25 |
| **TOTAL CARRIED TO SHEET 128** | | | 1726 | 51 | 51 |

# UNDERDRAIN SUBSUMMARY
# NORTHBOUND AND SOUTHBOUND TRANSVERSE

CALCULATED P.S. CHECKED B.C.

MED-71-15.78

126
940

7885DS5.DGN 11/5/99 RB

# UNDERDRAIN SUBSUMMARY
## RAMP AND REST AREA UNDERDRAINS

CALCULATED P.S. CHECKED B.C.

| REFERENCE NO. | SHEET NO. | STATION FROM | DEPTH | STATION TO | DEPTH | 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | 603 6" CONDUIT, TYPE B, 707.33 OR 707.41 | 603 4" CONDUIT, TYPE F, 707.33 OR 707.41 | 603 6" CONDUIT, TYPE F, 707.33 OR 707.41 | 605 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41, AS PER PLAN | 605 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 | 605 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 | 605 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP 707.31 OR 707.41 | BENDS AND BRANCHES: OUTLET DETAIL | 4" x 4" x 4" TEE | 6" x 6" x 6" TEE | 6"x6"x4"x45° WYE | 4" 90° BEND | 6" 90° BEND | 4" 45° BEND | 6" 22.5° BEND | 4" PLUG | 6" PLUG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | SQ. YD. | FEET | FEET | FEET | FEET | FEET | FEET | FEET | | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH |
| I.R. 271 - W.B. RAMP | | | | | | | | | | | | | | | | | | | | | | | |
| 1 - UD | 426-427 | 972+00.00 | 30 | 987+65.00 | 30 | | 15 | | 24 | | 1565 | | | D | | | 1 | | 1 | | | | |
| 2 - UD | 426-427 | 977+84.80 | 30 | 987+65.00 | 30 | | 9 | | 9 | | 981 | | | D | | | 1 | | 1 | | | | 1 |
| 3 - UD | 427 | 987+69.00 | 30 | 995+65.00 | 30 | | 9 | | 21 | | 795 | | | D | | | 1 | | 1 | | | | 1 |
| 4 - UD | 427-428 | 994+00.00 | 30 | 999+96.00 | 30 | 4 | 15 | | 23 | | 596 | | | A | | | 1 | | 1 | | | | 1 |
| 5 - UD | 428 | 995+69.00 | 30 | 999+96.00 | 30 | 4 | 9 | | 31 | | 427 | | | A | | | 1 | | 1 | | | | 1 |
| 6 - UD | 426 | 972+00.00 | 12 | 975+00.00 | 12 | 4 | | 22 | | 300 | | | | B | | | | 1 | | | | 1 | |
| 7 - UD | 426 | 975+04.00 | 12 | 978+00.00 | 12 | 4 | | 22 | | 296 | | | | B | | | | 1 | | | | 1 | |
| 8 - UD | 426 | 978+04.00 | 12 | 981+20.00 | 12 | 4 | | 22 | | 316 | | | | B | | | | 1 | | | | 1 | |
| 9 - UD | 426-427 | 981+24.00 | 12 | 984+40.00 | 12 | 4 | | 22 | | 316 | | | | B | | | | 1 | | | | 1 | |
| 10 - UD | 427 | 984+44.00 | 12 | 987+65.00 | 12 | | | 7 | | 321 | | | | D | | | | 1 | | 1 | | 1 | |
| 11 - UD | 427 | 987+69.00 | 12 | 995+00.00 | 12 | 4 | | 22 | | 731 | | | | B | | | | 1 | | | | 1 | |
| 12 - UD | 427-428 | 985+04.00 | 12 | 999+96.00 | 12 | | | 7 | | 195 | | | | A | | | | 1 | | 1 | | 1 | |
| 13 - UD | 426-427 | 973+70.00 | 12 | 981+00.00 | 12 | 4 | | 22 | | 730 | | | | B | | | | 1 | | | | 1 | |
| 14 - UD | 426-427 | 981+04.00 | 12 | 984+50.00 | 12 | 4 | | 22 | | 346 | | | | B | | | | 1 | | | | 1 | |
| 15 - UD | 427 | 984+54.00 | 12 | 987+65.00 | 12 | | | 7 | | 311 | | | | D | | | | 1 | | 1 | | 1 | |
| 16 - UD | 427 | 987+69.00 | 12 | 991+50.00 | 12 | 4 | | 22 | | 381 | | | | B | | | | 1 | | | | 1 | |
| 17 - UD | 427-428 | 991+54.00 | 12 | 995+65.00 | 12 | | | 7 | | 411 | | | | D | | | | 1 | | 1 | | 1 | |
| 18 - UD | 428 | 995+69.00 | 12 | 998+96.00 | 12 | | | 7 | | 427 | | | | A | | | | 1 | | 1 | | 1 | |
| S.R. 3 - RAMP B | | | | | | | | | | | | | | | | | | | | | | | |
| 19 - UD | 457 | 83+00.00 | 30 | 84+96.15 | 30 | 4 | 10 | | | | 195 | | | A** | | | | | 1 | | | | 1 |
| S.R. 3 - RAMP C | | | | | | | | | | | | | | | | | | | | | | | |
| 20 - UD | 459-460 | 80+96.58 | 30 | 83+45.00 | 30 | 4 | 5 | | 45 | | 200 | | | A** | | | | | 1 | | | | 1 |
| I.R. 71 - SB REST AREA (MAINLINE STATIONS) | | | | | | | | | | | | | | | | | | | | | | | |
| 21 - UD | 198-199 | 1162+30.00 | 30 | 1165+89.00 | 30 | | 10 | | | | 365 | | | I* | | | | | | | 1 | | 1 |
| 22 - UD | 198-199 | 1162+39.00 | 30 | 1165+64.00 | 30 | | 10 | | | | 330 | | | I* | | | | | | | 1 | | 1 |
| I.R. 71 - NB REST AREA (MAINLINE STATIONS) | | | | | | | | | | | | | | | | | | | | | | | |
| 23 - UD | 202 | 1207+11.00 | 30 | 1210+31.00 | 30 | | 10 | | | | 320 | | | I* | | | | | | | 1 | | |
| 24 - UD | 202 | 1207+30.00 | 30 | 1210+30.00 | 30 | | 10 | | | | 300 | | | I* | | | | | | | 1 | | |
| 25 - UD | 202 | 1210+31.00 | 30 | 1210+66.00 | 24 | | | | | | | | 35 | | | | | | | | | | 1 |
| 26 - UD | 202 | 1210+30.00 | 30 | 1210+60.00 | 24 | | | | | | | | 30 | | | | | | | | | | 1 |
| S.R. 303 - RAMP B | | | | | | | | | | | | | | | | | | | | | | | |
| 27 - UD | 487-488 | 48+35.76 | 30 | 48+79.00 | 30 | | 7 | | 28 | | 55 | | | J** | | 1 | | | | | | | 1 |
| 28 - UD | 487-488 | 48+79.00 | 30 | 50+10.00 | 30 | | | | | | 131 | | | | | | | | | | | | 1 |
| S.R. 303 - RAMP B SPUR | | | | | | | | | | | | | | | | | | | | | | | |
| 29 - UD | 487-488 | 49+73.84 | 30 | 51+73.84 | 30 | | | | | | 200 | | | A*** | | | | | 1 | | 1 | | 1 |
| S.R. 303 - RAMP C | | | | | | | | | | | | | | | | | | | | | | | |
| 30 - UD | 491-192 | 39+99.21 | 30 | 46+94.00 | 30 | | | | | | 696 | | | J** | | 1 | 1 | | | | | | 1 |
| 31 - UD | 491-492 | 46+94.00 | 30 | 47+20.95 | 30 | | | | | | 80 | | | | | | 1 | | | | | | 1 |
| S.R. 18 - RAMP D | | | | | | | | | | | | | | | | | | | | | | | |
| 32 - UD | 394 | 1+00.00 | 30 | 1+75.00 | 30 | | | | | | | | 75 | | | | | | | | | | 1 |
| 33 - UD | 394 | 1+75.00 | 30 | 6+96.00 | 30 | | 15 | | 19 | | 521 | | | C**** | | 1 | | | | | | | 1 |
| 34 - UD | 394 | 7+00.00 | 24 | 9+78.00 | 30 | 4 | 15 | | 22 | | 278 | | | A | | | | | | 1 | | | 1 |
| 35 - UD | 394 | 0+70.00 | 12 | 1+75.00 | 18 | | | | | | | 105 | | | | | | | | | | 1 | |
| 36 - UD | 394 | 1+75.00 | 18 | 1+85.00 | 12 | | | 7 | | | | 10 | | C | 1 | | | | | 1 | | 1 | |
| 37 - UD | 394 | 1+85.00 | 12 | 3+96.00 | 12 | | | | | 211 | | | | B | | | | 1 | | | | 1 | |
| 38 - UD | 394 | 4+00.00 | 12 | 6+96.00 | 12 | 4 | | 18 | | 296 | | | | A | | | | 1 | | 1 | | 1 | |
| 39 - UD | 394-395 | 7+00.00 | 12 | 9+78.00 | 12 | | | 7 | | 278 | | | | | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 128** | | | | | | 56 | 149 | 243 | 222 | 5866 | 8035 | 115 | 140 | | 1 | 3 | 7 | 15 | 9 | 7 | 5 | 17 | 18 |

* CONNECT 6" PIPES AS SHOWN FOR 4"
** USE UNDERDRAIN DETAIL WITHOUT ANY CONNECTION TO 4" PIPES
*** USE UNDERDRAIN DETAIL WITHOUT ANY CONNECTION TO 4" PIPES AND 22.5° BEND USED WITH THE 90° BEND
**** OUTLET DIRECTLY TO PROPOSED ROCK CHANNEL PROTECTION IN LIEU OF RIPPAP

**NOTE:**
ALL DETAILS REFERENCED FOR RAMP UNDERDRAINS MAY SHOW A SHOULDER WIDTH DIFFERENT FROM ACTUAL

MED-71-15.78



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| TOTALS | 601 | 602 | 603 | | | | 605 | | | | | | BENDS AND BRANCHES FOR INFORMATION ONLY | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RIPRAP, USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN | CONCRETE MASONRY, AS PER PLAN | 4" CONDUIT, TYPE B, 707.33 OR 707.41 | 6" CONDUIT, TYPE B, 707.33 OR 707.41 | 4" CONDUIT, TYPE F, 707.33 OR 707.41 | 6" CONDUIT, TYPE F, 707.33 OR 707.41 | 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN | 4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.33 OR 707.41, AS PER PLAN | 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, | 4" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN | 6" UNCLASSIFIED PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 | 6" ROCK CUT UNDERDRAIN WITH FABRIC WRAP, 707.33 OR 707.41 | 6" X 6" X 6" X 6" CROSS | 4" X 4" X 4" TEE | 6" X 6" X 4" TEE | 6" X 4" X 6" TEE | 6" X 6" X 6" TEE | 4", 90° BEND | 6", 90° BEND | 4", 45° BEND | 6", 45° BEND | 4", 22.5° BEND | 6", 22.5° BEND | 4" X 4" X 4", 45° WYE | 6" X 6" X 4", 45° WYE | 4" PLUG | 6" PLUG |
| | SQ. YD. | CU. YD. | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | EACH | | | | | | | | | | | | | |
| TOTALS FROM SHEET 116 (NM) | 386 | | 149.2 | | 2337 | | 53591 | | | 215 | | | | 8 | | 17 | | 190 | | 63 | | 2 | | | | 203 | |
| TOTALS FROM SHEET 121 (NS) | 436 | 0.52 | 143.4 | | 2524 | | 53226 | | | 631 | | | | 9 | 3 | | | 181 | | 67 | | 2 | | | | 202 | |
| TOTALS FROM SHEET 125 (NI) | | | | 955 | | 950 | | | 53064 | | 474 | 1196 | | | 2 | | 16 | | 48 | | 1 | | | | 63 | | 68 |
| TOTALS FROM SHEET 123 (NO) | 184 | 2.55 | | 1388 | | 1219 | | | 49729 | | 525 | 710 | | | 2 | 9 | 11 | | 56 | | | | | | 64 | | 84 |
| TOTALS FROM SHEET 101 (SM) | 442 | | 36.6 | | 2612 | | 53632 | | | 207 | | | | 8 | 3 | | | 191 | | 54 | | 2 | | | | 201 | |
| TOTALS FROM SHEET 106 (SS) | 420 | | 178.4 | | 2353 | | 53852 | | | 338 | | | | 7 | | 7 | | 183 | | 66 | | 2 | | | | 193 | |
| TOTALS FROM SHEET 108 (SI) | | | | 858 | | 810 | | | 47707 | | 408 | 706 | 1 | | 2 | 56 | 15 | | 42 | | | | | | | | 60 |
| TOTALS FROM SHEET 111 (SO) | 188 | 5.15 | | 1698.2 | | 1214 | | | 54619 | | 608 | 1196 | 1 | | 2 | 11 | 11 | | 62 | | | | | | 69 | | 88 |
| TOTALS FROM SHEET 126 (TR) | | | | | | | | 1726 | | | | | | | | | | | | | | | | 51 | | 51 | |
| TOTALS FROM SHEET 127 (UD) | 56 | | | 149 | 243 | 222 | | 5866 | 8035 | 115 | 140 | | | 1 | | | 3 | 15 | 9 | | 7 | | 5 | | 7 | 17 | 18 |
| QUANTITES FROM UNDERDRAIN DETAIL L4 & L5, SHEET 539 | | | | 75 | 30 | 20 | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL FOR ALL UNDERDRAINS | 2112 | 8.22 | 507.6 | 5123.2 | 10099 | 4435 | 214301 | 7602 | 213.54 | 1496 | 2155 | 3808 | 2 | 33 | 14 | 100 | 56 | 760 | 217 | 250 | 8 | 8 | 5 | 51 | 203 | 867 | 318 |
| **TOTALS CARRIED TO GENERAL SUMMARY** | 2112 | 8.3 | 508 | 5124 | 10031 | 4435 | 214301 | 7602 | 212355 | 1496 | 2155 | 3808 | | | | | | | | | | | | | | | |

# UNDERDRAIN SUBSUMMARY

CALCULATED P.S.
CHECKED B.C.

MED-71-15.78



7885D0A.DGN

# PAVEMENT CALCULATIONS

CALCULATED RJ-R  CHECKED DJV

MED - 71 - 15.78

| LOCATION | | LENGTH | WIDTH | TOTAL AREA | | 203 SUBGRADE COMPACTION | 254 PAVEMENT PLANNING | 302 11" BITUMINOUS AGGREGATE BASE, P-64-22 (+ 9" THICK) | 304 6" AGGREGATE BASE | 407 TACK COAT APPLIED @ 0.10 GAL/SQ. YD. | 407 TACK COAT FOR INTERMEDIATE COURSE APPLIED @ 0.05 GAL/SQ. YD. | 408 BITUMINOUS PRIME COAT APPLIED @ 0.40 GAL/SQ. YD. | 452 11" PLAIN CONCRETE PAVEMENT | 611 REINFORCED CONCRETE APPROACH SLAB (7"-12") | 611 REINFORCED CONCRETE APPROACH SLAB (7"-15") | 615 TEMPORARY PAVEMENT, AS PER PLAN | 830 CURB, TYPE 6, As Per Plan | 855 4" ASPHALT TREATED FREE DRAINING BASE | 858 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE 19mm, TYPE A (446) | 858 1½" ASPHALT CONCRETE SURFACE COURSE 12.5mm, TYPE A (446) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAINLINE | | Lin. Ft. | Lin. Ft. | Sq. Yds. | | Sq. Yds. | Sq. Yds. | Cu. Yds. | Cu. Yds. | Gals. | Gals. | Gals. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Lin. Ft. | Sq. Yds. | Cu. Yds. | Cu. Yds. |
| 833+00.00 (NB) | 889+36.74 (NB) | 5,636.74 | | | | | | | | | | | | | | | | | | |
| 833+00.00 (SB) | 889+02.67 (SB) | 5,602.67 | | | | | | | | | | | | | | | | | | |
| 891+50.93 (NB) | 977+00.00 (NB) | 8,549.07 | | | | | | | | | | | | | | | | | | |
| 891+16.86 (SB) | 977+00.00 (SB) | 8,583.14 | | | | | | | | | | | | | | | | | | |
| 1203+00.00 (NB) | 1260+00.00 (NB) | 5,700.00 | | | | | | | | | | | | | | | | | | |
| 1203+00.00 (SB) | 1260+00.00 (SB) | 5,700.00 | | | | | | | | | | | | | | | | | | |
| PAVEMENT - 3 LANES @ 12.0 ft. | | 39,771.62 | 36.0 | 159,086.48 | | 159,086 | | 48,610 | 26,514 | 15,909 | 7,954 | 63,635 | | | | | | 159,806 | 7,733 | 6,628 |
| 977+00.00 (NB) | 986+22.04 (NB) | 922.04 | | | | | | | | | | | | | | | | | | |
| 977+00.00 (SB) | 986+21.74 (SB) | 921.74 | | | | | | | | | | | | | | | | | | |
| 988+72.24 (NB) | 1012+24.34 (NB) | 2,352.10 | | | | | | | | | | | | | | | | | | |
| 988+72.24 (SB) | 1012+34.76 (SB) | 2,362.52 | | | | | | | | | | | | | | | | | | |
| 1013+86.36 (NB) | 1051+15.59 (NB) | 3,729.23 | | | | | | | | | | | | | | | | | | |
| 1013+77.26 (SB) | 1051+15.59 (SB) | 3,738.33 | | | | | | | | | | | | | | | | | | |
| 1053+86.09 (NB) | 1103+05.49 (NB) | 4,919.40 | | | | | | | | | | | | | | | | | | |
| 1053+86.09 (SB) | 1102+80.42 (SB) | 4,894.33 | | | | | | | | | | | | | | | | | | |
| 1105+87.98 (NB) | 1203+00.00 (NB) | 9,712.02 | | | | | | | | | | | | | | | | | | |
| 1105+62.91 (SB) | 1203+00.00 (SB) | 9,737.09 | | | | | | | | | | | | | | | | | | |
| PAVEMENT - 3 LANES @ 12.0 ft. | | 43,288.80 | 36.0 | 173,155.20 | | 173,155 | | 43,289 ≠ | 28,859 | 17,316 | 8,653 | 69,262 | | | | | | 173,155 | 8,417 | 7,214 |
| 1260+00.00 (NB) | 1263+00.00 (NB) | 300.00 | | | | | | | | | | | | | | | | | | |
| 1260+00.00 (SB) | 1263+00.00 (SB) | 300.00 | | | | | | | | | | | | | | | | | | |
| PAVEMENT - 2 @ 12.0 ft; 1 @ 13.0 ft. | | 600.00 | 37.0 | 2,466.67 | | 2,467 | | 754 | 411 | 247 | 123 | 987 | | | | | | 2,467 | 120 | 103 |
| 1263+00.00 (NB) | 1267+65.07 (NB) | 465.07 | | | | | | | | | | | | | | | | | | |
| 1263+00.00 (SB) | 1267+65.07 (SB) | 465.07 | | | | | | | | | | | | | | | | | | |
| 1270+06.13 (NB) | 1394+40.00 (NB) | 12,433.87 | | | | | | | | | | | | | | | | | | |
| 1270+06.13 (SB) | 1394+40.00 (SB) | 12,433.87 | | | | | | | | | | | | | | | | | | |
| PAVEMENT - 2 @ 12.0 ft; 1 @ 14.0 ft. | | 25,797.88 | 38.0 | 108,924.38 | | 108,924 | | 33,282 | 18,154 | 10,892 | 5,446 | 43,570 | | | | | | 108,924 | 5,295 | 4,539 |
| 910+05.25 (NB) | 970+35.01 (NB) | 6029.76 | | | | | | | | | | | | | | | | | | |
| 904+05.30 (SB) | 965+95.07 (SB) | 6189.77 | | | | | | | | | | | | | | | | | | |
| PAVEMENT - 1 @ 12.0 ft. | | 12,1219.53 | 12.0 | 16,292.71 | | 16,293 | | 4,979 | 2,715 | 1629 | 815 | 6517 | | | | | | 16,293 | 792 | 679 |
| 930+05.25 (NB) | 938+45.25 (NB) | 840.00 | | | | | | | | | | | | | | | | | | |
| 937+55.07 (SB) | 945+95.07 (SB) | 840.00 | | | | | | | | | | | | | | | | | | |
| TRANSITION FROM 0' TO 12' | | 1,680 | 6.01 | 1,120 | | 1,120 | | 342 | 187 | 112 | 56 | 448 | | | | | | 1,120 | 54 | 47 |
| 910+05.25 (NB) | 930+05.25 (NB) | 2,000 | | | | | | | | | | | | | | | | | | |
| 945+95.07 (SB) | 965+95.07 (SB) | 2,000 | | | | | | | | | | | | | | | | | | |
| PAVEMENT - 1 @ 12.0 ft. | | 4,000 | 12.0 | 5,333.33 | | 5,333 | | 1,630 | 889 | 533 | 267 | 2,133 | | | | | | 5,333 | 259 | 222 |
| ≠ ITEM 880 ASPHALT CONCRETE (7 YEAR WARRANTY) | | | | | | | | | | | | | | | | | | | | |
| **TOTALS CARRIED TO SHEET 134** | | | | | | 459,275 | | 130,715 ≠ | 76,545 | 45,928 ≠ | 22,958 ≠ | 183,711 | | | | | | 466,378 | 22,325 ≠ | 19,136 ≠ |

DESIGN FILE : i:\pd_med_lr7i\dgn\calculations\gci.dgn
USERNAME : jrogers
DATE : 30-NOV-1999
TIME : 11:21

| LOCATION | | LENGTH | WIDTH | TOTAL AREA | | 203 SUBGRADE COMPACTION | 254 PAVEMENT PLANNING | 302 (* 9"THICK) 11" BITUMINOUS AGGREGATE BASE, P-64-22 | 304 6" AGGREGATE BASE | 407 TACK COAT APPLIED @ 0.10 GAL/SQ. YD. | 407 TACK COAT FOR INTERMEDIATE COURSE APPLIED @ 0.05 GAL/SQ. YD. | 408 BITUMINOUS PRIME COAT APPLIED @ 0.40 GAL/SQ. YD. | 452 11" PLAIN CONCRETE PAVEMENT | 611 REINFORCED CONCRETE APPROACH SLAB (7"-12') | 611 REINFORCED CONCRETE APPROACH SLAB (7"-15') | 615 TEMPORARY PAVEMENT, AS PER PLAN | 830 CURB, TYPE 6, As Per Plan | 855 4" ASPHALT TREATED FREE DRAINING BASE | 858 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE 19mm, TYPE A (446) | 858 ½" ASPHALT CONCRETE SURFACE COURSE 12.5mm, TYPE A (446) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAINLINE | | Lin. Ft. | Lin. Ft. | Sq. Yds. | | Sq. Yds. | Sq. Yds. | Cu. Yds. | Cu. Yds. | Gals. | Gals. | Gals. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Lin. Ft. | Sq. Yds. | Cu. Yds. | Cu. Yds. |
| 833+00.00 (NB) | 889+36.74 (NB) | 5,636.74 | | | | | | | | | | | | | | | | | | |
| 833+00.00 (SB) | 889+02.67 (SB) | 5,602.67 | | | | | | | | | | | | | | | | | | |
| 891+50.93 (NB) | 977+00.00 (NB) | 8,549.07 | | | | | | | | | | | | | | | | | | |
| 891+16.87 (SB) | 977+00.00 (SB) | 8,583.13 | | | | | | | | | | | | | | | | | | |
| 1203+00.00 (NB) | 1260+00.00 (NB) | 5,700.00 | | | | | | | | | | | | | | | | | | |
| 1203+00.00 (SB) | 1260+00.00 (SB) | 5,700.00 | | | | | | | | | | | | | | | | | | |
| | SUB-TOTAL | 39,771.61 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Median Shoulders - 10 ft. | | 39,771.61 | 10.0 | 44,190.68 | | 44,191 | | 13,948 | | 4,419 | 2,210 | | | | | | | | 2,149 | 1,841 |
| | | | 10.33 | 45,648.97 | | | | | | | | 18,259 | | | | | | 45,649 | | |
| | | | 11.33 | 50,068.04 | | | | | 8,345 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 977+00.00 (NB) | 986+22.04 (NB) | 922.04 | | | | | | | | | | | | | | | | | | |
| 977+00.00 (SB) | 986+21.74 (SB) | 921.74 | | | | | | | | | | | | | | | | | | |
| 988+72.24 (NB) | 1012+24.34 (NB) | 2,352.10 | | | | | | | | | | | | | | | | | | |
| 988+72.24 (SB) | 1012+34.76 (SB) | 2,362.52 | | | | | | | | | | | | | | | | | | |
| 1013+86.36 (NB) | 1051+15.59 (NB) | 3,729.23 | | | | | | | | | | | | | | | | | | |
| 1013+77.26 (SB) | 1051+15.59 (SB) | 3,738.33 | | | | | | | | | | | | | | | | | | |
| 1053+86.09 (NB) | 1103+05.49 (NB) | 4,919.40 | | | | | | | | | | | | | | | | | | |
| 1053+86.09 (SB) | 1102+80.42 (SB) | 4,894.33 | | | | | | | | | | | | | | | | | | |
| 1105+87.98 (NB) | 1203+00.00 (NB) | 9,712.02 | | | | | | | | | | | | | | | | | | |
| 1105+62.91 (SB) | 1203+00.00 (SB) | 9,737.09 | | | | | | | | | | | | | | | | | | |
| | SUB-TOTAL | 43,288.80 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Median Shoulders - 10 ft. | | 43,288.80 | 10.0 | 48,098.67 | | 48,099 | | 12,421 * | | 4,810 | 2,405 | | | | | | | | 2,338 | 2,004 |
| | | | 10.33 | 49,685.92 | | | | | | | | 19,874 | | | | | | 49,686 | | |
| | | | 11.33 | 54,495.79 | | | | | 9,083 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 1260+00.00 (NB) | 1263+00.00 (NB) | 300.00 | | | | | | | | | | | | | | | | | | |
| 1260+00.00 (SB) | 1263+00.00 (SB) | 300.00 | | | | | | | | | | | | | | | | | | |
| | SUB-TOTAL | 600.00 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Median Shoulders - 11 ft. | | 600.00 | 11.0 | 733.33 | | 733 | | 231 | | 73 | 37 | | | | | | | | 36 | 31 |
| | | | 11.33 | 755.33 | | | | | | | | 302 | | | | | | 755 | | |
| | | | 12.33 | 822.00 | | | | | 137 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 1263+00.00 (NB) | 1267+65.07 (NB) | 465.07 | | | | | | | | | | | | | | | | | | |
| 1263+00.00 (SB) | 1267+65.07 (SB) | 465.07 | | | | | | | | | | | | | | | | | | |
| 1270+06.13 (NB) | 1394+40.00 (NB) | 12,433.87 | | | | | | | | | | | | | | | | | | |
| 1270+06.13 (SB) | 1394+40.00 (SB) | 12,433.87 | | | | | | | | | | | | | | | | | | |
| | SUB-TOTAL | 25,797.88 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Median Shoulders - 12 ft. | | 25,797.88 | 12.0 | 34,397.17 | | 34,397 | | 10,799 | | 3,440 | 1,720 | | | | | | | | 1,672 | 1,433 |
| | | | 12.33 | 35,343.10 | | | | | | | | 14,137 | | | | | | 35,343 | | |
| | | | 13.33 | 38,209.53 | | | | | 6,368 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| # ITEM 880 ASPHALT CONCRETE (7YEAR WARRANTY) | | | | | | | | | | - | | | | | | | | | | |
| TOTALS CARRIED TO SHEET 134 | | | | | | 127,420 | | 37,399 # | 23,933 | 12,742 # | 6,372 # | 52,572 | | | | | | 131,433 | 6,195 # | 5,309 # |

CALCULATED JLM-RC CHECKED BJV

PAVEMENT CALCULATIONS

MED - 71 - 15.78

130
940

DESIGN FILE : i:\pd_med_lr71\dgn\calculations\gc2.dgn
USERNAME : jrogers

DATE : 30-NOV-1999
TIME : 11:21

| LOCATION | | LENGTH | WIDTH | TOTAL AREA | | 203 SUBGRADE COMPACTION | 254 PAVEMENT PLANNING | 302 (* 9" THICK) 11" BITUMINOUS AGGREGATE BASE, PG64-22 | 304 6" AGGREGATE BASE | 407 TACK COAT APPLIED @ 0.10 GAL/SQ. YD. | 407 TACK COAT FOR INTERMEDIATE COURSE APPLIED @ 0.05 GAL/SQ. YD. | 408 BITUMINOUS PRIME COAT APPLIED @ 0.40 GAL/SQ. YD. | 452 11" PLAIN CONCRETE PAVEMENT | 611 REINFORCED CONCRETE APPROACH SLAB (T=12") | 611 REINFORCED CONCRETE APPROACH SLAB (T=15") | 615 TEMPORARY PAVEMENT, AS PER PLAN | 830 CURB, TYPE 6, As Per Plan | 855 4" ASPHALT TREATED FREE DRAINING BASE | 858 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE (19mm, TYPE A (446) | 858 1½" ASPHALT CONCRETE SURFACE COURSE (12.5mm, TYPE A (446) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAINLINE | | | | | | | | | | | | | | | | | | | | |
| | | Lin. Ft. | Lin. Ft. | Sq. Yds. | | Sq. Yds. | Sq. Yds. | Cu. Yds. | Cu. Yds. | Gals. | Gals. | Gals. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Lin. Ft. | Sq. Yds. | Cu. Yds. | Cu. Yds. |
| 833+00.00 (NB) | 889+36.74 (NB) | 5,636.74 | | | | | | | | | | | | | | | | | | |
| 833+00.00 (SB) | 889+02.67 (SB) | 5,602.67 | | | | | | | | | | | | | | | | | | |
| 891+50.93 (NB) | 977+00.00 (NB) | 8,549.07 | | | | | | | | | | | | | | | | | | |
| 891+16.86 (SB) | 977+00.00 (SB) | 8,583.14 | | | | | | | | | | | | | | | | | | |
| 1203+00.00 (NB) | 1267+65.07 (NB) | 6,465.07 | | | | | | | | | | | | | | | | | | |
| 1203+00.00 (SB) | 1267+65.07 (SB) | 6,465.07 | | | | | | | | | | | | | | | | | | |
| 1270+06.13 (NB) | 1394+40.00 (NB) | 12,433.87 | | | | | | | | | | | | | | | | | | |
| 1270+06.13 (SB) | 1394+40.00 (SB) | 12,433.87 | | | | | | | | | | | | | | | | | | |
| [882+91.32 (NB)] | [871+98.87 (NB)] | [1,092.45] | S.R. 18 Ramp C | | | | | | | | | | | | | | | | | |
| [879+70.85 (SB)] | [874+30.14 (SB)] | [540.71] | S.R. 18 Ramp A | | | | | | | | | | | | | | | | | |
| [900+83.51 (NB)] | [910+05.25 (NB)] | [921.74] | S.R. 18 Ramp D | | | | | | | | | | | | | | | | | |
| [899+50.99 (SB)] | [905+07.56 (SB)] | [556.57] | S.R. 18 Ramp B | | | | | | | | | | | | | | | | | |
| [970+35.01 (NB)] | [976+89.82 (NB)] | [654.81] | N.B. IR 271 | | | | | | | | | | | | | | | | | |
| [965+95.07 (SB)] | [973+64.26 (SB)] | [769.19] | S.B. IR 271 | | | | | | | | | | | | | | | | | |
| [1216+25.41 (NB)] | [1233+73.64 (NB)] | [1,748.23] | Rest Area | | | | | | | | | | | | | | | | | |
| [1241+24.26 (SB)] | [1258+38.27 (SB)] | [1,714.01] | S.R. 303 Ramp A | | | | | | | | | | | | | | | | | |
| [1248+58.65 (NB)] | [1260+00.00 (NB)] | [1,141.35] | S.R. 303 Ramp C | | | | | | | | | | | | | | | | | |
| [1264+82.00 (NB)] | [1267+59.43 (NB)] | [277.43] | S.R. 303 Ramp D | | | | | | | | | | | | | | | | | |
| [1269+82.96 (NB)] | [1280+96.23 (NB)] | [1,113.27] | S.R. 303 Ramp D | | | | | | | | | | | | | | | | | |
| [1279+61.02 (SB)] | [1287+55.14 (SB)] | [794.12] | S.R. 303 Ramp B | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | SUB-TOTAL | 54,295.58 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Outside Shoulders - 10 ft. | | 54,295.58 | 10.0 | 60,328.42 | | 60,328 | | 19,138 | | 6,033 | 3,016 | | | | | | | | 2,933 | 2,514 |
| | | | 10.33 | 62,319.26 | | | | | | | | 24,928 | | | | | | 62,319 | | |
| | | | 11.33 | 68,352.10 | | | | | 11,392 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 977+00.00 (NB) | 986+22.04 (NB) | 922.04 | | | | | | | | | | | | | | | | | | |
| 977+00.00 (SB) | 986+21.74 (SB) | 921.74 | | | | | | | | | | | | | | | | | | |
| 988+72.24 (NB) | 1012+24.34 (NB) | 2,352.10 | | | | | | | | | | | | | | | | | | |
| 988+72.24 (SB) | 1012+34.76 (SB) | 2,362.52 | | | | | | | | | | | | | | | | | | |
| 1013+86.36 (NB) | 1051+15.59 (NB) | 3,729.23 | | | | | | | | | | | | | | | | | | |
| 1013+77.26 (SB) | 1051+15.59 (SB) | 3,738.33 | | | | | | | | | | | | | | | | | | |
| 1053+86.09 (NB) | 1103+05.49 (NB) | 4,919.40 | | | | | | | | | | | | | | | | | | |
| 1053+86.09 (SB) | 1102+80.42 (SB) | 4,894.33 | | | | | | | | | | | | | | | | | | |
| 1105+87.98 (NB) | 1203+00.00 (NB) | 9,712.02 | | | | | | | | | | | | | | | | | | |
| 1105+62.91 (SB) | 1203+00.00 (SB) | 9,737.09 | | | | | | | | | | | | | | | | | | |
| [1077+23.10 (SB)] | [1094+15.22 (SB)] | [1,692.12] | S.R. 3 | | | | | | | | | | | | | | | | | |
| [1084+32.42 (NB)] | [1092+35.01 (NB)] | [802.59] | S.R. 3 | | | | | | | | | | | | | | | | | |
| [1116+32.92 (SB)] | [1124+35.52 (SB)] | [802.60] | S.R. 3 | | | | | | | | | | | | | | | | | |
| [1114+39.02 (NB)] | [1131+43.960 (NB)] | [1,704.94] | S.R. 3 | | | | | | | | | | | | | | | | | |
| [1140+37.00 (SB)] | [1156+53.88 (SB)] | [1,616.88] | Rest Area | | | | | | | | | | | | | | | | | |
| [1172+18.51 (NB)] | [1180+18.09 (NB)] | [799.58] | Rest Area | | | | | | | | | | | | | | | | | |
| [1190+46.93 (SB)] | [1198+46.46 (SB)] | [799.53] | Rest Area | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | SUB-TOTAL | 34,706.56 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Outside Shoulders - 10 ft. | | 34,706.56 | 10.0 | 38,562.84 | | 38,562 | | 9641* | | 3,857 | 1,928 | | | | | | | | 1,874 | 1,679 |
| | | | 10.33 | 39,835.42 | | | | | | | | 14,341 | | | | | | 39,835 | | |
| | | | 11.33 | 43,691.70 | | | | | 7,282 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| ≠ ITEM 880 ASPHALT CONCRETE (7 YEAR WARRANTY) | | | | | | | | | | | | | | | | | | | | |
| TOTALS CARRIED TO SHEET 134 | | | | | | 98,890 | | 28779 ≠ | 18,674 | 9,890 ≠ | 4,844 ≠ | 39,269 | | | | | | 102,154 | 5,807 ≠ | 4,121 ≠ |

CALCULATED
CHECKED

# PAVEMENT CALCULATIONS

MED - 71 - 15.78

131
940

DESIGN FILE : I:\pd_med_lr71\dgn\calculations\gc3.dgn
USERNAME : jrogers
DATE : 30-NOV-1999
TIME : 11:21

SCL = SPEED CHANGE LANE

| LOCATION | | SCL AREA | RAMP AREA (ASPHALT) | RAMP AREA (CONCRETE) | TOTAL AREA | 203 SUBGRADE COMPACTION | 254 PAVEMENT PLANNING | 302 (≠ 9" THICK) 1" BITUMINOUS AGGREGATE BASE, PG64-22 | 304 6" AGGREGATE BASE | 407 TACK COAT APPLIED @ 0.10 GAL/SQ. YD. | 407 TACK COAT FOR INTERMEDIATE COURSE APPLIED @ 0.05 GAL/SQ. YD. | 408 BITUMINOUS PRIME COAT APPLIED @ 0.40 GAL/SQ. YD. | 452 1" PLAIN CONCRETE PAVEMENT | 611 REINFORCED CONCRETE APPROACH SLAB (T=12") | 611 REINFORCED CONCRETE APPROACH SLAB (T=15") | 615 TEMPORARY PAVEMENT, AS PER PLAN | 830 CURB, TYPE 6, As Per Plan | 855 4" ASPHALT TREATED FREE DRAINING BASE | 858 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE 19mm, TYPE A (446) | 858 ½" ASPHALT CONCRETE SURFACE COURSE 12.5mm, TYPE A (446) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RAMPS | | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Cu. Yds. | Cu. Yds. | Gals. | Gals. | Gals. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Lin. Ft. | Sq. Yds. | Cu. Yds. | Cu. Yds. |
| SR 18 | SCL | 3437 | | | | 3437 | | 1050 ⊕ | 573 | 344 ⊕ | 172 ⊕ | 1375 | | | | | | 3,437 | 167 ⊕ | 143 ⊕ |
| RAMP A | RAMP AREA | | 1824 | | | | 1824 | | | 182 | 91 | | | | | | | | 89 | 76 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 1502 | 1300 | | 2802 | 1502 | | | | 280 | 140 | | | | | 1300 | | | 136 | 117 |
| | 302, 408, 855 | 1565 | 1534 | | | | | 478 | | | | 626 | | | | | | 1,565 | | |
| | 304 | 1669 | 1444 | | | | | | 278 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| RAMP B | SCL | 2150 | | | | 2150 | | 657 ⊕ | 358 | 215 ⊕ | 108 ⊕ | 860 | | | | | | 2,150 | 105 ⊕ | 90 ⊕ |
| | RAMP AREA | | 1595 | | | | 1595 | | | 160 | 80 | | | | | | | | 77 | 67 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 1340 | 1329 | | 2669 | 1799 | | | | 267 | 133 | | | | | 1329 | | | 129 | 111 |
| | 302, 408, 855 | 1396 | 1384 | | | | | 427 | | | | 750 | | | | | | 1,396 | | |
| | 304 | 1489 | 1447 | | | | | | 333 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| RAMP C | SCL | 1196 | | | | 1196 | | 365 ⊕ | 199 | 120 ⊕ | 60 ⊕ | 478 | | | | | | 1,196 | 58 ⊕ | 50 ⊕ |
| | RAMP AREA | | 2318 | | | | 2318 | | | 232 | 166 | | | | | | | | 112 | 97 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 2839 | 1695 | | 4534 | 3303 | | | | 453 | 227 | | | | | 2318 | | | 198 | 170 |
| | 302, 408, 855 | 2957 | 1765 | | | | | 903 | | | | 1376 | | | | | | 2,957 | | |
| | 304 | 3154 | 1940 | | | | | | 612 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| RAMP D | SCL | 3460 | | | | 3460 | | 1057 ⊕ | 598 | 346 ⊕ | 173 ⊕ | 1384 | | | | | | 3,460 | 168 ⊕ | 144 ⊕ |
| | RAMP AREA | | 2,716 | | | | 2716 | | | 272 | 136 | | | | | | | | 132 | 113 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 2716 | 1466 | | 4182 | 4182 | | | | 418 | 209 | | | | | 2,944 | | | 203 | 175 |
| | 302, 408, 855 | 2831 | 1528 | | | | | 863 | | | | 1132 | | | | | | 2,831 | | |
| | 304 | 3017 | 1,629 | | | | | | 502 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| IR 271 | SCL | 1989 | | | | 1989 | | 608 ⊕ | 331 | 199 ⊕ | 99 ⊕ | 796 | | | | | | 1,989 | 97 ⊕ | 83 ⊕ |
| Eastbound Connector | RAMP AREA | | 1018 | | | | 1018 | | | 102 | 51 | | | | | | | | 50 | 42 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 843 | 564 | | 1407 | 843 | | | | 141 | 70 | | | | | 564 | | | 68 | 59 |
| | 302, 408, 855 | 878 | 587 | | | | | 268 | | | | 351 | | | | | | 887 | | |
| | 304 | 937 | 627 | | | | | | 156 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Westbound Connector | SCL | 3,816 | | | | 3,816 | | 1,167 ⊕ | 635 | 382 ⊕ | 191 ⊕ | 1,526 | | | | | | 3,816 | 185 ⊕ | 159 ⊕ |
| | RAMP AREA | | | | | | | | | | | | | | | | | | | |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 852 | | | | 852 | | | | 158 | 79 | | | | | 674 | | | 77 | 66 |
| | 302, 408, 855 | 887 | | | | | | 271 | | | | 355 | | | | | | 887 | | |
| | 304 | 946 | | | | | | | 156 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| SR 3 | SCL | 3364 | | | | 3364 | | 841 ≠ ⊕ | 561 | 336 ⊕ | 168 ⊕ | 1346 | | | | | | 3,364 | 164 ⊕ | 140 ⊕ |
| RAMP A | RAMP AREA | | 1639 | | | | 1639 | | | 164 | 82 | | | | | | | | 80 | 68 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 1736 | 982 | | 2718 | 1736 | | | | 272 | 136 | | | | | 982 | | | 132 | 113 |
| | 302, 408, 855 | 1808 | 1023 | | | | | 452 ≠ | | | | 723 | | | | | | 1,808 | | |
| | 304 | 1929 | 1091 | | | | | | 321 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| ⊗ ITEM 880 ASPHALT CONCRETE (7 YEAR WARRANTY) | | | | | | | | 5745 | | 1942 | 971 | | | | | | | | 944 | 809 |
| | | | | | | | | | | | | | | | | | | | | |
| TOTALS CARRIED TO SHEET 134 | | | | | | 33,629 | 11,110 | 3662 | 5,593 | 3101 | 1600 | 13,078 | | | | 10,111 | | 31,734 | 1483 | 1274 |

CALCULATED GCR CHECKED DJV

PAVEMENT CALCULATIONS

MED - 71 - 15.78

132
940

DESIGN FILE : i:\pd_med_lr71\dgn\calculations\gc4.dgn
USERNAME : jrogers

DATE : 30-NOV-1999
TIME : 11:20

SCL = SPEED CHANGE LANE

| LOCATION | | SCL AREA | RAMP AREA (ASPHALT) | RAMP AREA (CONCRETE) | TOTAL AREA | 203 SUBGRADE COMPACTION | 254 PAVEMENT PLANNING | 302 (+9"THICK) 1" BITUMINOUS AGGREGATE BASE, P-64-22 | 304 6" AGGREGATE BASE | 407 TACK COAT APPLIED @ 0.10 GAL/SQ. YD. | 407 TACK COAT FOR INTERMEDIATE COURSE APPLIED @ 0.05 GAL/SQ. YD. | 408 BITUMINOUS PRIME COAT APPLIED @ 0.40 GAL/SQ. YD. | 452 1" PLAIN CONCRETE PAVEMENT | 452 1" PLAIN CONCRETE PAVEMENT Type FS | | 615 TEMPORARY PAVEMENT, AS PER PLAN | 830 CURB, TYPE 6 As Per Plan | 855 4" ASPHALT TREATED FREE DRAINING BASE | 858 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE 19mm, TYPE A (446) | 858 1½" ASPHALT CONCRETE SURFACE COURSE 12.5mm, TYPE A (446) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RAMPS | | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Cu. Yds. | Cu. Yds. | Gals. | Gals. | Gals. | Sq. Yds. | Sq. Yds. | | Sq. Yds. | Lin. Ft. | Sq. Yds. | Cu. Yds. | Cu. Yds. |
| SR 3 (Continued) | SCL | 1434 | | | | 1434 | | 359 ≠ ⊕ | 239 | 143 ⊕ | 72 ⊕ | 574 | | | | | | 1,434 | 70 ⊕ | 60 ⊕ |
| RAMP B | RAMP AREA | | 1889 | 493 | | 493 | 1889 | | | 189 | 94 | | 207 | 286 | | | | | 92 | 79 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 635 | 1180 | 295 | | 930 | | | | 182 | 91 | | 295 | | | 1180 | | | 88 | 76 |
| | 302, 408, 855 | 661 | 1229 | 307 | | | | 165 ≠ ⊕ | | | | 264 | | | | | | 661 | | |
| | 304 | 706 | 1311 | 328 | | | | | 172 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| RAMP C | SCL | 1483 | | | | 1483 | | 371 ≠ ⊕ | 247 | 148 ⊕ | 74 ⊕ | 593 | | | | | | 1,483 | 72 ⊕ | 62 ⊕ |
| | RAMP AREA | | 1883 | 545 | | 545 | 1883 | | | 188 | 94 | | 299 | 246 | | | 303 | | 92 | 78 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 613 | 1302 | 334 | | 947 | | | | 192 | 96 | | 334 | | | 1302 | | | 93 | 80 |
| | 302, 408, 855 | 639 | 1356 | 348 | | | | 160 ≠ ⊕ | | | | 256 | | | | | | 639 | | |
| | 304 | 681 | 1447 | 371 | | | | | 175 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| RAMP D | SCL | 3350 | | | | 3350 | | 838 ≠ ⊕ | 558 | 335 ⊕ | 168 ⊕ | 1340 | | | | | | 3,350 | 163 ⊕ | 140 ⊕ |
| | RAMP AREA | | 1690 | | | | 1690 | | | 169 | 85 | | | | | | | | 82 | 70 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 1364 | 1014 | | 2378 | 1364 | | | | 238 | 119 | | | | | 1014 | | | 116 | 99 |
| | 302, 408, 855 | 1421 | 1056 | | | | | 355 ≠ ⊕ | | | | 568 | | | | | | 1,421 | | |
| | 304 | 1516 | 1127 | | | | | | 253 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| SR 303 | SCL | 1435 | | | | 1435 | | 438 ⊕ | 239 | 144 ⊕ | 72 ⊕ | 574 | | | | | | 1,435 | 70 ⊕ | 60 ⊕ |
| RAMP A | RAMP AREA | | 2042 | 394 | | 394 | 2042 | | | 205 | 102 | | 344 | 50 | | | | | 100 | 85 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 | 582 | 1497 | 236 | | 818 | | | | 225 | 113 | | 236 | | | 1497 | | | 109 | 93 |
| | 302, 408, 855 | 606 | 1559 | 246 | | | | 240 | | | | 313 | | | | | | 606 | | |
| | 304 | 647 | 1663 | 262 | | | | | 278 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| RAMP B | SCL | 3400 | | | | 3400 | | 1039 ⊕ | 567 | 340 ⊕ | 170 ⊕ | 1360 | | | | | | 3,400 | 165 ⊕ | 142 ⊕ |
| | RAMP AREA | | 2640 | | | | 2640 | | | 264 | 132 | | | | | | | | 128 | 110 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 452, 858, 615 - | 1512 | 1781 | | 3293 | 1512 | | | | 329 | 165 | | | | | | | | 160 | 137 |
| | 302, 408, 855 | 1452 | 1885 | | | | | 444 | | | | 581 | | | | | | 1,452 | | |
| | 304 | 1680 | 1979 | | | | | | 280 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| RAMP C | SCL | 1500 | | | | 1500 | | 458 ⊕ | 250 | 150 ⊕ | 75 ⊕ | 600 | | | | | | 1,500 | 73 ⊕ | 62 ⊕ |
| | RAMP AREA | | 1806 | 880 | | 880 | 1806 | | | 181 | 90 | | 585 | 295 | | | | | 88 | 75 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| * - varies from 9" to | 203, 407, 452, 858, 615* | 888 | 1406 | 517 | | 1405 | | | | 229 | 115 | | 517 | | | 1406 | | | 112 | 96 |
| 11" for inside shoulder only. | 302, 408, 855 | 925 | 1465 | 539 | | | | 283 | | | | 370 | | | | | | 925 | | |
| | 304 | 987 | 1562 | 574 | | | | | 260 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| RAMP D | SCL | 2466 | | | | 2466 | | 753 ⊕ | 411 | 247 ⊕ | 123 ⊕ | 986 | | | | | | 2,466 | 120 ⊕ | 103 ⊕ |
| | RAMP AREA | | 2640 | | | | 2640 | | | 264 | 132 | | | | | | | | 128 | 110 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | |
| * - varies from 9" to | 203, 407, 452, 858, 6158 | 1253 | 1781 | | 3034 | 1253 | | | | 303 | 152 | | | | | 1781 | | | 147 | 126 |
| 11" for inside shoulder only. | 302, 408, 855 | 1305 | 1855 | | | | | 399 | | | | 522 | | | | | | 1,305 | | |
| | 304 | 1392 | 1979 | | | | | | 232 | | | | | | | | | | | |
| ⊕ ITEM 808 ASPHALT | CONCRETE (7 YEAR WARRANTY) | | | | | | | 4936 | | 1507 | 754 | | | | | | | | 733 | 629 |
| TOTALS CARRIED TO SHEET 134 | | | | | | 25609 | 14590 | 1366 | 4161 | 3158 | 1580 | 8901 | 2817 | 887 | | 8180 | 303 | 22,077 | 1535 | 1314 |

CALCULATED Sam2 CHECKED DJV

PAVEMENT CALCULATIONS

MED - 71 - 15.78

133
940

DESIGN FILE : i:\pd_MED_IR71\L calculations\gc5.dgn
USERNAME : p.fought
DATE : 01-DEC-1999
TIME : 11:26

SCL = SPEED CHANGE LANE

| LOCATION | | SCL AREA | RAMP AREA (ASPHALT) | RAMP AREA (CONCRETE) | TOTAL AREA | 203 SUBGRADE COMPACTION | 254 PAVEMENT PLANNING | 302 (± 9" THICK) II" BITUMINOUS AGGREGATE BASE, PG64-22 | 304 6" AGGREGATE BASE | 407 TACK COAT APPLIED @ 0.10 GAL/SQ. YD. | 407 TACK COAT FOR INTERMEDIATE COURSE APPLIED @ 0.05 GAL/SQ. YD. | 408 BITUMINOUS PRIME COAT APPLIED @ 0.40 GAL/SQ. YD. | 452 II" PLAIN CONCRETE PAVEMENT | 452 II" PLAIN CONCRETE PAVEMENT Type FS | 611 REINFORCED CONCRETE APPROACH SLAB (T=12") | 611 REINFORCED CONCRETE APPROACH SLAB (T=15") | 615 TEMPORARY PAVEMENT, AS PER PLAN | 830 CURB, TYPE 6 As Per Plan | 855 4" ASPHALT TREATED FREE DRAINING BASE | 858 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE 19mm, TYPE A (446) | 858 ½" ASPHALT CONCRETE SURFACE COURSE 12.5mm, TYPE A (446) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RAMPS | | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Cu. Yds. | Cu. Yds. | Gals. | Gals. | Gals. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Sq. Yds. | Lin. Ft. | Sq. Yds. | Cu. Yds. | Cu. Yds. |
| Rest Area - Southbound | SCL | 1454 | | | | 1454 | | 444 ± ⊕ | 242 | 145 ⊕ | 73 ⊕ | 582 | | | | | | | 1,454 | 71 ⊕ | 61 ⊕ |
| OFF RAMP | RAMP AREA | | 1005 | | | | 1005 | | | 101 | 50 | | | | | | | | | 49 | 42 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 615, 858 | 638 | 635 | | 1273 | 638 | | | | 127 | 64 | | | | | | 635 | | | 62 | 53 |
| | 302, 408, 855 | 665 | 661 | | | | | 203 ± ⊕ | | | | | | | | | | | 665 | | |
| | 304 | 709 | 706 | | | | | | 118 | | | 266 | | | | | | | | | |
| ON RAMP | SCL | 3094 | | | | 3094 | | 945 ± ⊕ | 516 | 309 ⊕ | 155 ⊕ | 1238 | | | | | | | 3,054 | 150 ⊕ | 129 ⊕ |
| | RAMP AREA | | 906 | | | | 906 | | | 91 | 45 | | | | | | | | | 44 | 38 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 615, 858 | 1515 | 591 | | 2106 | 1515 | | | | 211 | 105 | | | | | | 591 | | | 102 | 88 |
| | 302, 408, 855 | 1578 | 616 | | | | | 482 ± ⊕ | | | | | | | | | | | 1,578 | | |
| | 304 | 1683 | 657 | | | | | | 280 | | | 631 | | | | | | | | | |
| Rest Area - Northbound | SCL | 1454 | | | | 1454 | | 444 ± ⊕ | 242 | 145 ⊕ | 73 ⊕ | 582 | | | | | | | 1,454 | 71 ⊕ | 61 ⊕ |
| OFF RAMP | RAMP AREA | | 1412 | | | | 1412 | | | 141 | 71 | | | | | | | | | 69 | 59 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 615, 858 | 619 | 904 | | 1523 | 619 | | | | 152 | 76 | | | | | | 904 | | | 74 | 63 |
| | 302, 408, 855 | 645 | 942 | | | | | 197 ± ⊕ | | | | | | | | | | | 645 | | |
| | 304 | 688 | 1000 | | | | | | 115 | | | 258 | | | | | | | | | |
| ON RAMP | SCL | 3477 | | | | 3477 | | 1062 ⊕ | 579 | 348 ⊕ | 174 ⊕ | 1391 | | | | | | | 3,477 | 169 ⊕ | 145 ⊕ |
| | RAMP AREA | | 907 | | | | 907 | | | 91 | 45 | | | | | | | | | 44 | 38 |
| | SHOULDERS | | | | | | | | | | | | | | | | | | | | |
| | 203, 407, 615, 858 | 1409 | 604 | | 2013 | 1409 | | | | 201 | 101 | | | | | | 604 | | | 98 | 84 |
| | 302, 408, 855 | 1467 | 629 | | | | | 445 ⊕ | | | | | | | | | | | 1,467 | | |
| | 304 | 1566 | 671 | | | | | | 261 | | | 583 | | | | | | | | | |
| APPROACH SLABS | | | | | | | | | | | | | | | | | | | | | |
| 889+02.67 | 891+50.93 | MED-71-1685 | | | | | | | 180 | | | | | | | 678 | | | | | |
| 986+21.74 | 988+72.24 | MED-71-1870 | | | | | | | 180 | | | | | | | 678 | | | | | |
| 1012+24.34 | 1013+86.36 | MED-71-1918 | | | | | | | 180 | | | | | | | 678 | | | | | |
| 1051+15.59 | 1053+61.09 | MED-71-1992 | | | | | | | 180 | | | | | | | 678 | | | | | |
| 1102+80.42 | 1105+87.98 | MED-71-2090 | | | | | | | 180 | | | | | | | 711 | | | | | |
| 1267+66.10 | 1270+06.13 | MED-71-2402 | | | | | | | 210 | | | | | | | 828 | | | | | |
| 81+41.97 Ramp B | 82+84.69 Ramp B | MED-71-2088E | | | | | | | 78 | | | | | | 222 | | | | | | |
| 83+48.24 Ramp C | 84+51.76 Ramp C | MED-71-2092W | | | | | | | 72 | | | | | | 208 | | | | | | |
| | SHEET TOTALS ⊕ | | | | | | | 4222 ⊕ | | 947 ⊕ | 475 ⊕ | | | | | | | | | 461 ⊕ | 396 ⊕ |
| SHEET TOTALS | | | | | | 13,660 | 4,230 | | 3,613 | 1115 | 557 | 5,531 | | | 430 | 4,251 | 2,734 | | 13,834 | 542 | 465 |
| TOTALS CARRIED FORWARD FROM SHEET 129 | | | | | | 459,275 | | 130,715 ⊕ | 76,545 | 45,928 ⊕ | 22,958 ⊕ | 183,711 | | | | | | | 466,378 | 22,325 ⊕ | 19,136 ⊕ |
| TOTALS CARRIED FORWARD FROM SHEET 130 | | | | | | 127,420 | | 37,399 ⊕ | 23,933 | 12,742 ⊕ | 6,372 ⊕ | 52,572 | | | | | | | 131,433 | 6,195 ⊕ | 5,309 ⊕ |
| TOTALS CARRIED FORWARD FROM SHEET 131 | | | | | | 98,890 | | 28779 ⊕ | 18,674 | 9,980 ⊕ | 4,844 ⊕ | 39,269 | | | | | | | 102,154 | 5,807 ⊕ | 4,121 ⊕ |
| TOTALS CARRIED FORWARD FROM SHEET 132 | | | | | | 33,629 | 11,110 | 3662 | 5,593 | 3101 | 1600 | 13,078 | | | | | 10,111 | | 31,734 | 1483 | 1274 |
| TOTALS CARRIED FORWARD FROM SHEET 133 | | | | | | 25,609 | 14,590 | 1366 | 4,161 | 3158 | 1580 | 8,901 | 2,817 | 887 | | | 8,180 | 303 | 22,077 | 1535 | 1314 |
| ⊕ ITEM 880 ASPHALT CONCRETE (7 YEAR WARRANTY) TOTALS (FOR INFORMATION ONLY) | | | | | | | | 211,796 | | 73,046 | 36,374 | | | | | | | | | 36,465 | 30,400 |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | | | 758,483 | 29,930 | 5028 | 132,519 | 7374 | 3737 | 302,062 | 2,817 | 887 | 430 | 4,251 | 19,479 | 303 | 767,610 | 3560 | 3053 |

CALCULATED jmp CHECKED DJV

PAVEMENT CALCULATIONS AND SUBSUMMARY

MED - 71 - 15.78



DESIGN FILE : i:\pd_MED_IR71 calculations\gc6.dgn
USERNAME : pfought
DATE : 01-DEC-1999
TIME : 13:00

REF.FILE #1 LEVELS ON:
REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:
REF.FILE #4 LEVELS ON:
DESIGN FILE : i:\pd_med.ir71\dgn\pvmntrepr_gmudgn
USERNAME : nvondere
DATE : 29-NOV-1999
TIME : 10:30
FILENAME: i:\pd_med.ir71\dgn\pvmntrepr_gmudgn
DATE & TIME: 29-NOV-1999 10:30
USERNAME: nvondere
PROJECT: NONE
LEVELS ON: [1-64]
PLOT QUEUE: \\OOPILOT\oce
PEN TABLE: i:\data\dot\pen\OceCross_OCE.pen

# REST AREA PAVEMENT CALCULATIONS

Southbound Roadside Rest Area Parking Lot
Area of Pavement = 34249 Square Feet
Length of Curb = 1508 Feet

Northbound Roadside Rest Area Parking Lot
Area of Pavement = 33811 Square Feet
Length of Curb = 1511 Feet
Total Area of Pavement = 68060 Square Feet
Total Length of Curb = 3019 Feet

451 9" Reinforced Concrete Pavement
[(9"/12)X(68060 FT²)]/27 = 1890.56 Cubic Yard

304 6" Aggregate Base
[(6"/12)X(71079 FT²)]/27 = 1316.28 Cubic Yard

203 Subgrade Compaction
[(68060 FT²)]/9 = 7562.22 Square Yard

203 Excavation
[(6"/12)X(68060 FT²)]/27 = 1260.37 Cubic Yard

202 Pavement Removed
(68060 FT²)/9 = 7562.22 Square Yard

(Quantities above carried to "Pavement Table", this sheet.)

# LINEAR GRADING

| Location | Station | Side | 203 Linear Grading |
|---|---|---|---|
| | | | Station |
| I.R. 71 | 1398+00 to 1408+40 | Lt. | 10.4 |
| Total (Carried to Gen Summary) | | | 11 |

# PAVEMENT REMOVAL

| Location | Total Ln. Ft. x2 (2 Directions) | 202 Pavement Removed (2 Lanes) |
|---|---|---|
| | Linear Feet | Square Yard |
| 833+00.00 to 1394+40.00 | 112,280 | 299,413 |
| Deductions for Structures | | |
| S.R. 18 | (428.38) | |
| I.R. 271 | (500.40) | |
| Wilbur Rd. | (304.45) | |
| Rocky River | (580.45) | |
| S.R. 3 | (567.76) | |
| S.R. 303 | (482.12) | |
| Deduction Sub-Total | (2863.56) | (7636) |
| Add for Ramps | | |
| S.R. 18 Ramp A | | 3437 |
| Ramp B | | 2150 |
| Ramp C | | 1196 |
| Ramp D | | 3460 |
| I.R. 271 Connector W | | 3816 |
| Connector E | | 1989 |
| S.R. 3 Ramp A | | 3364 |
| Ramp B | | 4152 |
| Ramp C | | 3861 |
| Ramp D | | 3350 |
| S.R. 303 Ramp A | | 6693 |
| Ramp B | | 1435 |
| Ramp C | | 4534 |
| Ramp D | | 2466 |
| Rest Area Southbound | | 4544 |
| Northbound | | 4931 |
| S.R. 3 897+35 to 903+85 | | 190 |
| Total (Carried to General Summary) | | 347,345 |

# REST AREA PAVEMENT TABLE

| N.B. and S.B. Rest Area Parking Lots | 202 Pavement Removed | 202 Curb Removed | 203 Excavation Not Including Embankment Construction | 203 Subgrade Compaction | 304 Aggregate Base (Th.=6") | 451 9" Reinforced Concrete Pavement | 830 Curb, Type 6, as per plan |
|---|---|---|---|---|---|---|---|
| | Square Yard | Linear Feet | Cubic Yard | Square Yard | Cubic Yard | Cubic Yard | Linear Feet |
| | 7562.22 | 3019 | 1260.37 | 7562.22 | 1316.28 | 1890.56 | 3019 |
| Totals | 7562 | 3019 | 1260 | 7562 | 1316 | 1891 | 3019 |

(Totals Carried to General Summary)

# S.R. 3 & S.R. 303 PAVEMENT TABLE

| Location | Side | 203 Excavation Not Including Embankment Construction | 203 Subgrade Compaction | 301 Bituminous Aggregate Base, PG64-22 (Th.=6") | 304 Aggregate Base (Th.=6") | 407 Tack Coat | 407 Tack Coat for Intermediate Course | 408 Bituminous Prime Coat applied at 0.40 Gallon/Sq Yd | 448 Asphalt Concrete Intermed. Course, Type 2, PG64-22, (Th.=3/4") | 448 Asphalt Concrete Surface Course, Type 1, PG64-22, (Th.=1/4") |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Cubic Yard | Square Yard | Cubic Yard | Cubic Yard | Gallon | Gallon | Gallon | Cubic Yard | Cubic Yard |
| S.R. 3 | ℄ | 300 | 805 | 134 | 134 | 80 | 40 | 322 | 39 | 28 |
| S.R. 303 | ℄ | 860 | 1629 | 272 | 272 | 164 | 82 | 652 | 79 | 57 |
| Totals | | 1160 | 2434 | 406 | 406 | 244 | 122 | 974 | 118 | 85 |

(Totals Carried to General Summary)

CALCULATED JCL CHECKED DJV

MISCELLANEOUS PAVEMENT CALCULATIONS & TABLES

MED-71-15.78

# EARTHWORK AND SEEDING

| Sheet No. | Pavement Location | 203 Excavation Not Including Embankment Construction Cu Yd | 203 Embankment Cu Yd | | 870 Seeding and Mulching Lin Ft |
|---|---|---|---|---|---|
| 219 | Med 71 | 1595 | 66 | | 4567 |
| 220 | | 3519 | 213 | | 4978 |
| 221 | | 4462 | 153 | | 5699 |
| 222 | | 2751 | 222 | | 4278 |
| 223 | | 3763 | 259 | | 5545 |
| 224 | | 2397 | 393 | | 3812 |
| 225 | | 1526 | 744 | | 2855 |
| 226 | | 2474 | 541 | | 4323 |
| 227 | | 3033 | 667 | | 5534 |
| 228 | | 2579 | 670 | | 4533 |
| 229 | | 1985 | 614 | | 3344 |
| 230 | | 3095 | 533 | | 4400 |
| 231 | | 3062 | 538 | | 4256 |
| 232 | | 2668 | 594 | | 3857 |
| 233 | | 1101 | 1389 | | 3401 |
| 234 | | 19 | 5454 | | 4211 |
| 235 | | 0 | 3100 | | 2300 |
| 236 | | 15 | 4981 | | 3099 |
| 237 | | 677 | 2127 | | 4156 |
| 238 | | 2209 | 1015 | | 3440 |
| 239 | | 2258 | 1351 | | 3489 |
| 240 | | 2415 | 1225 | | 3334 |
| 241 | | 2090 | 2968 | | 4489 |
| 242 | | 2235 | 2274 | | 3644 |
| 243 | | 5084 | 911 | | 5478 |
| 244 | | 6277 | 555 | | 5278 |
| 245 | | 5074 | 429 | | 3378 |
| 246 | | 6167 | 999 | | 5044 |
| 247 | | 1907 | 6137 | | 6100 |
| 248 | | 4036 | 589 | | 4056 |
| 249 | | 7871 | 526 | | 6522 |
| 250 | | 3027 | 2774 | | 4755 |
| 251 | | 2571 | 4733 | | 4789 |
| 252 | | 2647 | 5867 | | 5247 |
| 253 | | 2600 | 1585 | | 4155 |
| 254 | | 4807 | 930 | | 4589 |
| 255 | | 5870 | 896 | | 4933 |
| 256 | | 7880 | 214 | | 6733 |
| 257 | | 5286 | 723 | | 5977 |
| 258 | | 2631 | 896 | | 4088 |
| 259 | | 2116 | 721 | | 2898 |
| 260 | | 1686 | 433 | | 2978 |
| 261 | | 2171 | 815 | | 4034 |
| 262 | | 494 | 424 | | 1633 |
| 263 | | 189 | 415 | | 1423 |
| 264 | | 681 | 542 | | 1738 |
| 265 | | 1629 | 600 | | 2488 |
| 266 | | 1148 | 548 | | 1900 |
| 267 | | 1652 | 767 | | 2844 |
| 268 | | 1030 | 1678 | | 3234 |

Continued

| Sheet No. | Pavement Location | 203 Excavation Not Including Embankment Construction Cu Yd | 203 Embankment Cu Yd | | 870 Seeding and Mulching Lin Ft |
|---|---|---|---|---|---|
| 269 | Med 71 | 285 | 1318 | | 3022 |
| 270 | | 426 | 800 | | 3367 |
| 271 | | 1322 | 1252 | | 4644 |
| 272 | | 1415 | 611 | | 3089 |
| 273 | | 2267 | 907 | | 5167 |
| 274 | | 2522 | 1148 | | 5600 |
| 275 | | 1718 | 811 | | 4078 |
| 276 | | 2745 | 1211 | | 5812 |
| 277 | | 2189 | 956 | | 5211 |
| 278 | | 2034 | 1203 | | 5011 |
| 279 | | 2265 | 1267 | | 5099 |
| 280 | | 746 | 348 | | 1517 |
| 281 | | 863 | 685 | | 1589 |
| 282 | | 1493 | 411 | | 2256 |
| 283 | | 2498 | 619 | | 4134 |
| 284 | | 2843 | 511 | | 4645 |
| 285 | | 2630 | 296 | | 3933 |
| 286 | | 4698 | 386 | | 6210 |
| 287 | | 5722 | 129 | | 6932 |
| 288 | | 3420 | 815 | | 5511 |
| 289 | | 1210 | 974 | | 2545 |
| 290 | | 2110 | 1293 | | 5722 |
| 291 | | 2474 | 1177 | | 4919 |
| 292 | | 1603 | 976 | | 3619 |
| 293 | | 274 | 2244 | | 4245 |
| 294 | | 69 | 2769 | | 4028 |
| 295 | | 150 | 300 | | 700 |
| 296 | | 48 | 3310 | | 4766 |
| 297 | | 544 | 1455 | | 3855 |
| 298 | | 2004 | 566 | | 3395 |
| 299 | | 1731 | 691 | | 2983 |
| 300 | | 2837 | 698 | | 4867 |
| 301 | | 2218 | 871 | | 4934 |
| 302 | | 2680 | 463 | | 4589 |
| 303 | | 3833 | 392 | | 5194 |
| 304 | | 3925 | 581 | | 6127 |
| 305 | | 4064 | 687 | | 5777 |
| 306 | | 3843 | 287 | | 4968 |
| 307 | | 3901 | 367 | | 5022 |
| 308 | | 3393 | 383 | | 4556 |
| 309 | | 4363 | 197 | | 6000 |
| 310 | | 2467 | 460 | | 4000 |
| 311 | | 2524 | 501 | | 4179 |
| 312 | | 3011 | 499 | | 5049 |
| 313 | | 3098 | 845 | | 5249 |
| 314 | | 2390 | 745 | | 4638 |
| 315 | | 3832 | 377 | | 5856 |
| 316 | | 4565 | 307 | | 6323 |
| 317 | | 3509 | 186 | | 5149 |
| 318 | | 2475 | 699 | | 5178 |

Continued

| Sheet No. | Pavement Location | 203 Excavation Not Including Embankment Construction Cu Yd | 203 Embankment Cu Yd | | 870 Seeding and Mulching Lin Ft |
|---|---|---|---|---|---|
| 319 | Med 71 | 1932 | 1025 | | 3655 |
| 320 | | 1712 | 711 | | 2989 |
| 321 | | 1842 | 737 | | 3722 |
| 322 | | 2848 | 1093 | | 5289 |
| 323 | | 4305 | 767 | | 5867 |
| 324 | | 4313 | 523 | | 5700 |
| 325 | | 4196 | 669 | | 5611 |
| 326 | | 2991 | 799 | | 5489 |
| 327 | | 3888 | 529 | | 6633 |
| 328 | | 5630 | 370 | | 6978 |
| 329 | | 3658 | 489 | | 4967 |
| 330 | | 3603 | 615 | | 5390 |
| 331 | | 2694 | 410 | | 4701 |
| 332 | | 1965 | 825 | | 4056 |
| 333 | | 3185 | 304 | | 5044 |
| 334 | | 2363 | 622 | | 4633 |
| 335 | | 1518 | 1513 | | 3690 |
| 336 | | 1774 | 1973 | | 4272 |
| 337 | | 792 | 1769 | | 4145 |
| 338 | | 258 | 1121 | | 2821 |
| 339 | | 145 | 447 | | 1403 |
| 340 | | 424 | 1334 | | 3622 |
| 341 | | 800 | 920 | | 2622 |
| 342 | | 1421 | 1916 | | 4196 |
| 343 | | 1829 | 1596 | | 4078 |
| 344 | | 1591 | 765 | | 3055 |
| 345 | | 1985 | 849 | | 4037 |
| 346 | | 1977 | 717 | | 3666 |
| 347 | | 2116 | 654 | | 3389 |
| 348 | | 2059 | 747 | | 3089 |
| 349 | | 1318 | 1257 | | 3495 |
| 350 | | 1294 | 789 | | 1911 |
| 351 | | 1776 | 735 | | 2661 |
| 352 | | 2520 | 637 | | 4394 |
| 353 | | 2374 | 535 | | 4145 |
| 354 | | 2030 | 585 | | 3972 |
| 355 | | 2872 | 867 | | 5489 |
| 356 | | 1769 | 790 | | 3773 |
| 357 | | 2208 | 961 | | 4522 |
| 358 | | 2724 | 944 | | 5044 |
| 359 | | 1896 | 685 | | 3883 |
| 360 | | 1993 | 1057 | | 4413 |
| 361 | | 1814 | 1244 | | 4550 |
| 362 | | 1456 | 829 | | 3100 |
| 363 | | 1813 | 732 | | 3789 |
| 364 | | 1892 | 2205 | | 5340 |
| 365 | | 1035 | 1544 | | 3589 |
| 366 | | 1393 | 2075 | | 4844 |
| 367 | | 1571 | 1382 | | 4571 |
| 368 | | 1183 | 1202 | | 3494 |

Continued

| Sheet No. | Pavement Location | 203 Excavation Not Including Embankment Construction Cu Yd | 203 Embankment Cu Yd | | 870 Seeding and Mulching Lin Ft |
|---|---|---|---|---|---|
| 369 | Med 71 | 1557 | 1892 | | 5044 |
| 370 | | 1500 | 1743 | | 4800 |
| 371 | | 1504 | 655 | | 3361 |
| 372 | | 2973 | 757 | | 5150 |
| 373 | | 2769 | 834 | | 5366 |
| 374 | | 953 | 308 | | 2044 |
| | | | S.R. 18 | | |
| * | Ramp A | 425 | 20 | | 2000 |
| * | Ramp B | 450 | 20 | | 1900 |
| * | Ramp C | 550 | 200 | | 2900 |
| 396 | Ramp D | 216 | 54 | | 433 |
| 397 | | 890 | 176 | | 1644 |
| 398 | | 475 | 487 | | 1544 |
| 399 | | 253 | 656 | | 1295 |
| * | 271 Exit | 175 | 5 | | 800 |
| | | | S.R. 3 | | |
| * | Ramp A | 325 | 50 | | 1800 |
| * | Ramp B | 525 | 100 | | 3000 |
| * | Ramp C | 575 | 110 | | 3400 |
| * | Ramp D | 300 | 50 | | 1900 |
| | | | Rest Area SB | | |
| * | Exit | 200 | 10 | | 1200 |
| * | Ent | 200 | 10 | | 1200 |
| | | | Rest Area NB | | |
| * | Exit | 275 | 20 | | 1700 |
| * | Ent | 200 | 20 | | 1200 |
| 478 | Rest Area | 28 | 294 | | 702 |
| | | | S.R. 303 | | |
| * | Ramp A | 475 | 25 | | 2800 |
| * | Ramp B | 450 | 50 | | 2600 |
| 494 | Ramp C | 324 | 309 | | 1499 |
| 495 | | 370 | 324 | | 1555 |
| 496 | | 608 | 96 | | 1011 |
| 497 | Ramp CD | 2996 | 121 | | 2344 |
| * | Ramp D | 850 | 400 | | 2500 |
| | Totals | 387,841 | 166,442 | | 707,575 |
| Totals Carried to General Summary | | | | | |

(Carried to "Item 870 Seeding and Mulching" General Note)

* Estimated Quantity for Shoulder Replacement along Ramp

## MISCELLANEOUS CALCULATIONS

**870 COMMERCIAL FERTILIZER**

Net Seeding and Mulching (From Gen Notes) = 740,379 Sq Yd
(740,379)(9)(1/1000)(20)(1/2000) = 66.63 Ton
(Quantity Carried to General Summary)

**870 WATER**

(2)(740,379)(9)(1/1000)(120)(1/1000) = 1599 M Gal
(Carried to "Watering Permanent Seeded Areas" General Note)

**870 MOWING**

(740,379)(9)(0.25)(1/1000) = 1666 M Gal
(Carried to "Watering Permanent Seeded Areas" General Note)

CALCULATED NJV
CHECKED JWM

EARTHWORK AND SEEDING TABLE

MED-71-15.78

136
940

DESIGN FILE : i:\pd_med_lr71\dgn\xssum.dgn
USERNAME : nvonderre

DATE : 03-DEC-1999
TIME : 12:23

REF-FILE #1 LEVELS ON:
REF-FILE #2 LEVELS ON:
REF-FILE #3 LEVELS ON:
REF-FILE #4 LEVELS ON:
DESIGN FILE : i:\pd_med_ir71\dgn\pvmntrpr\pvmntrepr_gmdgn
USERNAME : nvonder
DATE : 29-NOV-1999
TIME : 10:32
FILENAME: i:\pd_med_ir71\dgn\pvmntrpr\pvmntrepr_gmdgn
DATE & TIME: 29-NOV-1999 10:32
USERNAME: nvonder
PROJECT: NONE
LEVELS ON: 1-64
PEN TABLE: \\OPLOT\oce
i:\pd\data\plotfiles\oce_pen

## RAMP PAVEMENT REPAIR FOR JOINT QUANTITIES

| Location | Width | Length | 255 Full Depth Pavement Removal and Rigid Replacement, Class FS | 255 Full Depth Pavement Sawing |
|---|---|---|---|---|
| | L.F. | L.F. | Square Yard | Linear Feet |
| Ramp D @ S.R. 3 | 16 | 10 | 18 | 32 |
| Ramp SB S.B. Rest Area | 16 | 14 | 24 | 32 |
| Ramp B @ S.R. 303 | 16 | 8 | 14 | 32 |
| Ramp D @ S.R. 303 | 16 | 6 | 10 | 32 |
| Crack Repair Sub-Total | | | 66 | 128 |

## RAMP PAVEMENT REPAIR FOR JOINT QUANTITIES

| Location | Estimated No. of Repairs | 255 Full Depth Pavement Removal and Rigid Replacement, Class FS | 255 Full Depth Pavement Sawing |
|---|---|---|---|
| | | Square Yard | Linear Feet |
| Ramps A, B, C, D @ S.R. 3 | 14 | 149 | 448 |
| S.B. Rest Area Entrance/Exit | 4 | 43 | 128 |
| N.B. Rest Area Entrance/Exit | 4 | 43 | 128 |
| Ramps A, B, C, D @ S.R. 303 | 14 | 149 | 448 |
| 25% Contingency *** | 9 | 96 | 288 |
| Joint Repair Sub-Total | | 480 | 1440 |

*** CONTINGENCY QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER.

Note: For estimating purposes, joint repairs on the ramps are to be 6' long and 16' wide.

ITEM 255 FULL DEPTH PAVEMENT AND RIGID REPLACEMENT, CLASS FS = 480 + 66 = 546 SQ. YD.

ITEM 255 FULL DEPTH PAVEMENT SAWING = 1440 + 128 = 1568 SQ. YD.

(Totals Carried to General Summary)

## CURB REMOVED

| Reference No. | Location | Station | 202 Curb Removed |
|---|---|---|---|
| | | | Linear Feet |
| 1-R | Ramp C @ S.R. 18 | 882+50 to 884+50 | 200 |
| 2-R | Ramp B @ S.R. 18 | 897+50 to 899+50 | 200 |
| 3-R | Connector E @ S.R. 271 | 976+47 to 978+53 | 206 |
| 4-R | Ramp B @ S.R. 3 | 1091+72 to 1092+78 | 206 |
| 5-R | Ramp C @ S.R. 3 | 1114+97 to 1117+03 | 206 |
| 6-R | Ramp SA S.B. Rest Area | 1170+97 to 1173+03 | 206 |
| 7-R | Ramp NA N.B. Rest Area | 1197+97 to 1200+03 | 206 |
| 8-R | Ramp C @ S.R. 303 | 1255+72 to 1257+78 | 206 |
| 9-R | Ramp B @ S.R. 303 | 1277+97 to 1280+03 | 206 |
| 10-R | S.R. 3 | 897+35 to 903+85 | 1308 |
| | Total (Carried to General Summary) | | 3150 |

## CURB "C"

| Reference No. | Station From | Station To | Side | | 830 Curb, Type 6, as per Plan |
|---|---|---|---|---|---|
| | | | | | Linear Feet |
| 1-C | 888+65 | 888+95 | Lt. | | 30 |
| 2-C | 888+98 | 889+14 | Lt. | | 16 |
| 3-C | 889+09 | 889+25 | Rt. | | 16 |
| 4-C | 889+28 | 889+44 | Rt. | | 16 |
| 5-C | 988+30 | 988+46 | Lt. | | 16 |
| 6-C | 988+65 | 988+81 | Lt. | | 16 |
| 7-C | 988+86 | 989+00 | Rt. | | 16 |
| 8-C | 989+20 | 989+36 | Rt. | | 16 |
| 9-C | 1013+86 | 1014+02 | Lt. | | 16 |
| 10-C | 1013+80 | 1013+96 | Lt. | | 16 |
| 11-C | 1013+84 | 1014+00 | Rt. | | 16 |
| 12-C | 1013+78 | 1013+94 | Rt. | | 16 |
| 13-C | 1053+96 | 1054+12 | Lt. | | 16 |
| 14-C | 1053+89 | 1054+05 | Lt. | | 16 |
| 15-C | 1053+85 | 1054+01 | Rt. | | 16 |
| 16-C | 1053+78 | 1053+94 | Rt. | | 16 |
| 17-C | 1102+52 | 1102+68 | Lt. | | 16 |
| 18-C | 1102+83 | 1102+99 | Lt. | | 16 |
| 19-C | 1102+71 | 1102+87 | Rt. | | 16 |
| 20-C | 1102+02 | 1103+18 | Rt. | | 16 |
| 21-C | 1270+26 | 1270+42 | Lt. | | 16 |
| 22-C | 1270+10 | 1270+26 | Lt. | | 16 |
| 23-C | 1270+03 | 1270+19 | Rt. | | 16 |
| 24-C | 1269+83 | 1269+99 | Rt. | | 16 |
| | | Total (Carried to General Summary) | | | 398 |

## PRESSURE RELIEF JOINTS "PRJ"

| Reference No. | Station | Special Item Special Pressure Relief Joint, Type A | 603 Conduit, Type F | 605 6" Shallow Pipe Underdrain, 707.31 or 707.41 |
|---|---|---|---|---|
| | | Linear Feet | Linear Feet | Linear Feet |
| 1-PRJ | 82+84.7 Ramp B SR 3 | 26 | 20 | 26 |
| 2-PRJ | 83+48 Ramp C SR 3 | 26 | 20 | 26 |
| Total (Carried to Gen Summary) | | 52 | 40 | 52 |

## WEARING COURSE REMOVED

| Location | 202 Wearing Course Removed |
|---|---|
| | Square Yard |
| Structure No. Med-71-1685 L & R @ S.R. 18 | 1699 |
| Structure No. Med-71-1870 L & R @ I.R. 271 | 1717 |
| Structure No. Med-71-1918 L & R @ Wilbur Rd. | 888 |
| Structure No. Med-71-1992 L & R @ Rocky River | 1926 |
| Structure No. Med-71-2088 @ S.R. 3 Ramp B | 344 |
| Structure No. Med-71-2090 L & R @ S.R. 3 | 2149 |
| Structure No. Med-71-2092 @ S.R. 3 Ramp C | 205 |
| Structure No. Med-71-2402 L & R @ S.R. 303 | 2289 |
| Total (Carried to General Summary) | 11,217 |

## DITCH CLEANOUT

| Location | 203 Excavation Not Including Embankment Construction | 670 Ditch Erosion Protection |
|---|---|---|
| | Cubic Yard | Square Yard |
| Side Ditches along Wilbur Rd. | 100 | 900 |
| Side Ditches along Remsen Rd. | 15 | 200 |
| Side Ditches along Sleepy Hollow Rd. | 15 | 200 |
| Side Ditches along Laurel Rd. | 20 | 250 |
| Total (Carried to Gen Summary) | 150 | 1550 |

CALCULATED DJV CHECKED

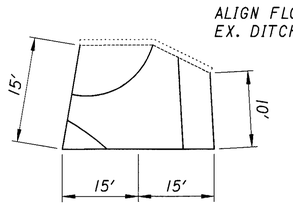
MISCELLANEOUS CALCULATIONS & TABLES

MED-71-15.78

(8-D) SEE P&P SHEET NO. 174

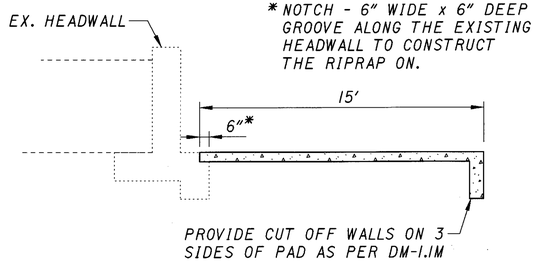
**ROCK CHANNEL PROTECTION CALCULATION**

STA. 851+25, RT. TO STA. 853+25, RT.




RIPRAP USING 6" REINFORCED CONCRETE PAD

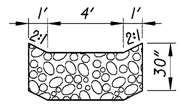
| | | |
|---|---|---|
| 15 x 15 = | 225 | SQ. FEET |
| [0.5 x (15 + 10)] x 15 = | 187.5 | SQ. FEET |
| | 412.5 | SQ. FEET |
| / | 9 | |
| | 45.83 | SQ. YARDS |




RCP TYPE B WITH FILTER

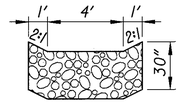
(BACK)

| | | |
|---|---|---|
| 88 x 4 = | 352 | SQ. FEET |
| 2 x 88 x 1.12 = | 197.12 | SQ. FEET |
| | 549.12 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 50.84 | CU. YARDS |



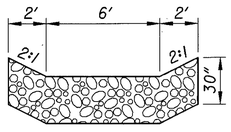

(AHEAD)

| | | |
|---|---|---|
| 110 x 4 = | 440 | SQ. FEET |
| 2 x 110 x 1.12 = | 246.4 | SQ. FEET |
| | 686.4 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 63.56 | CU. YARDS |




(MAIN CHANNEL)

| | | |
|---|---|---|
| 30 x 6 = | 180 | SQ. FEET |
| 2 x 30 x 2.24 = | 134.4 | SQ. FEET |
| | 314.4 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 29.11 | CU. YARDS |




**TOTAL: 143.51 CU. YARDS**

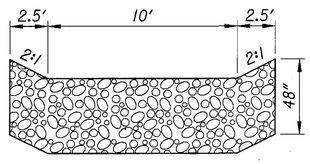
(10-D) SEE P&P SHEET NO. 174

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 853+65, LT.

RCP TYPE A WITH FILTER

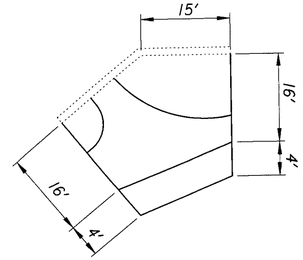
| | | |
|---|---|---|
| 26 x 10 = | 260 | SQ. FEET |
| 2 x 26 x 2.8 = | 145.6 | SQ. FEET |
| | 405.6 | SQ. FEET |
| x | 4 | |
| / | 27 | |
| | 60.09 | CU. YARDS |




(14-D) SEE P&P SHEET NO. 175

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 868+50, RT. TO STA. 869+70, RT.

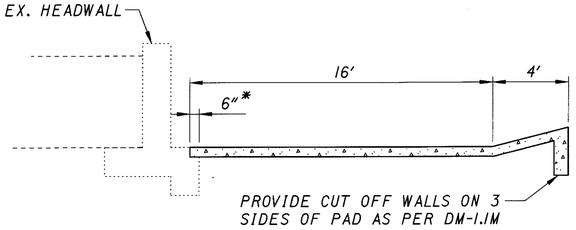



ALIGN FLOW LINE WITH EX. DITCH (TYP.)

* NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE EXISTING HEADWALL TO CONSTRUCT THE RIPRAP ON.

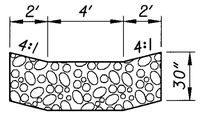
RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 0.5 x 20.12 x 15 = | 150.9 | SQ. FEET |
| 0.5 x (20.12 + 25.12) x 16 = | 361.92 | SQ. FEET |
| | 512.82 | SQ. FEET |
| / | 9 | |
| | 56.98 | SQ. YARDS |




RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 100 x 4 = | 400 | SQ. FEET |
| 2 x 100 x 2.06 = | 412 | SQ. FEET |
| | 812 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 75.19 | CU. YARDS |



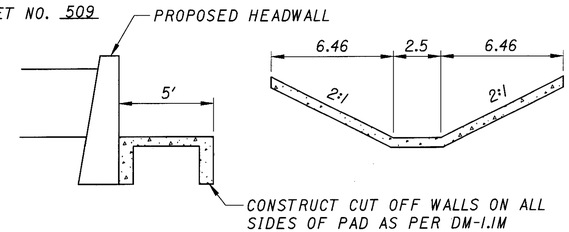

(16-D) SEE P&P SHEET NO. 176 ; DRAINAGE DETAIL SHEET NO. 509

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 884+32, RT.

RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 5 x 2.5 = | 12.5 | SQ. FEET |
| 2 x 5 x 7.22 = | 72.2 | SQ. FEET |
| | 84.7 | SQ. FEET |
| / | 9 | |
| | 9.41 | SQ. YARDS |



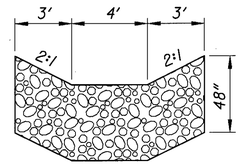

(20-D) SEE P&P SHEET NO. 176 ; DRAINAGE DETAIL SHEET NO. 517

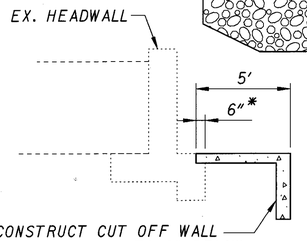
**ROCK CHANNEL PROTECTION CALCULATION**

STA. 888+05, LT.

RCP TYPE A WITH FILTER

| | | |
|---|---|---|
| 20 x 5 = | 100 | SQ. FEET |
| 2 x 20 x 3.91 = | 156.4 | SQ. FEET |
| | 256.4 | SQ. FEET |
| x | 4 | |
| / | 27 | |
| | 37.99 | SQ. YARDS |

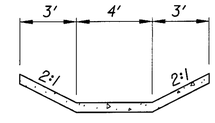



* NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE EXISTING HEADWALL TO CONSTRUCT THE RIPRAP ON.

RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 5 x 5 = | 25.0 | SQ. FEET |
| 2 x 5 x 3.91 = | 39.1 | SQ. FEET |
| | 64.1 | SQ. FEET |
| / | 9 | |
| | 7.12 | SQ. YARDS |



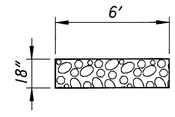

(21-D) SEE P&P SHEET NO. 177

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 888+70, LT. OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |




CALCULATED PS CHECKED W.JC

DRAINAGE CALCULATIONS

MED - 71 - 15.78

138
940

7885DMD.DGN 12/7/99 CAR I

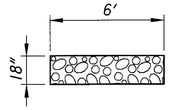
(23-D) SEE P&P SHEET NO. 177

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 889+35, RT. OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE C WITH FILTER

6 x 6 = 36 SQ. FEET
36 SQ. FEET
x 1.5
/ 27
2 CU. YARDS



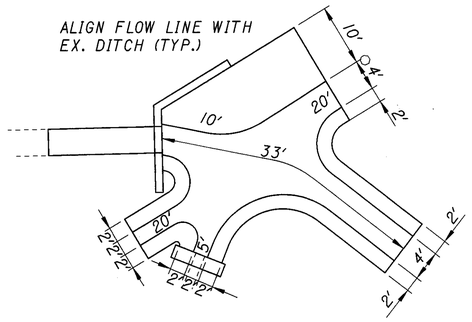

(26-D) SEE P&P SHEET NO. 177 ; DRAINAGE DETAIL SHEET NO. 516

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1+20 RT. TO STA 1+80 RT. RAMP D (S.R. 18)

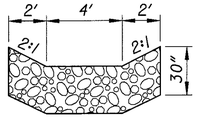
RIPRAP USING 6" REINFORCED CONCRETE PAD

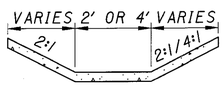
35 x 4 = 140 SQ. FEET
20 x 4 = 80 SQ. FEET
20 x 2 = 40 SQ. FEET
5 x 2 = 10 SQ. FEET
2 x 20 x 2.24 = 89.6 SQ. FEET
20 x 10 = 200 SQ. FEET
20 x 2.24 = 44.8 SQ. FEET
16 x 2.24 = 35.84 SQ. FEET
16 x 4.12 = 65.92 SQ. FEET
706.19 SQ. FEET
/ 9
78.46 SQ. YARDS

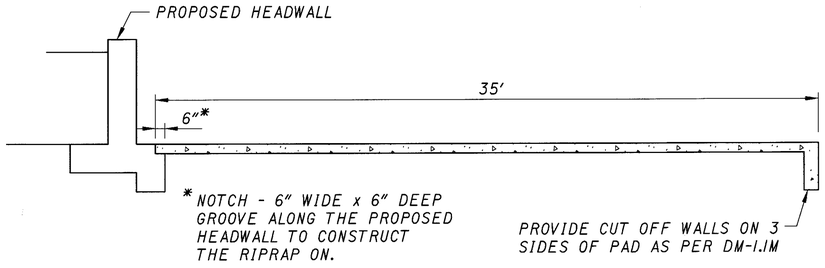



RCP TYPE B WITH FILTER

15 x 4 = 60 SQ. FEET
2 x 15 x 2.24 = 67.2 SQ. FEET
127.2 SQ. FEET
x 2.5
/ 27
11.78 CU. YARDS



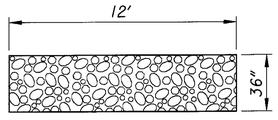

(18-D) SEE P&P SHEET NO. 176 ; DRAINAGE DETAIL SHEET NO. 530

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 25+30, LT. RAMP A (S.R. 18)

RCP TYPE A WITH FILTER

30 x 12 = 360 SQ. FEET
360 SQ. FEET
x 3
/ 27
40 CU. YARDS




(24-D) SEE P&P SHEET NO. 176 ; DRAINAGE DETAIL SHEET NO. 529

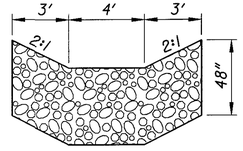
**ROCK CHANNEL PROTECTION CALCULATION**

STA. 19+80, LT. RAMP C (S.R. 18)

AT 42" OUTLET

RCP TYPE A WITH FILTER

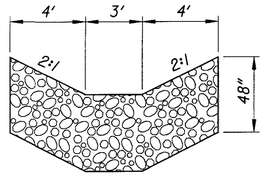
35 x 4 = 140 SQ. FEET
2 x 35 x 3.35 = 234.5 SQ. FEET
374.5 SQ. FEET
x 4
/ 27
55.48 CU. YARDS




AT 36" OUTLET

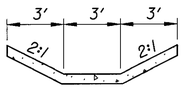
RCP TYPE A WITH FILTER

20 x 3 = 60 SQ. FEET
2 x 20 x 4.47 = 178.8 SQ. FEET
238.8 SQ. FEET
x 4
/ 27
35.38 CU. YARDS



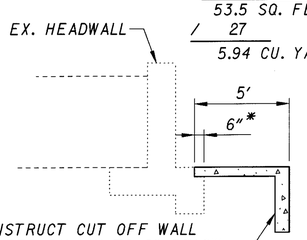

**TOTAL: 90.86 CU. YARDS**

* NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE EXISTING HEADWALL TO CONSTRUCT THE RIPRAP ON.




RIPRAP USING 6" REINFORCED CONCRETE PAD

5 x 4 = 20 SQ. FEET
2 x (5 X 3.35) = 33.5 SQ. FEET
53.5 SQ. FEET
/ 27
5.94 CU. YARDS




RIPRAP USING 6" REINFORCED CONCRETE PAD

5 x 3 = 15.0 SQ. FEET
2 x (5 x 4.47) = 44.7 SQ. FEET
59.7 SQ. FEET
/ 9
6.63 SQ. YARDS

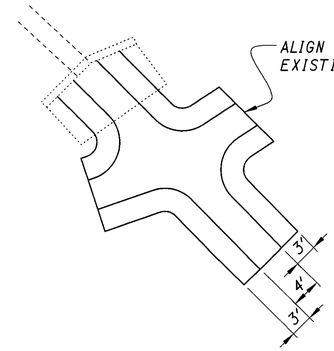
(28-D) SEE P&P SHEET NO. 177 ;
DRAINAGE DETAIL SHEET NO. 576

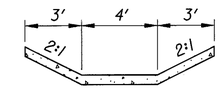
**ROCK CHANNEL PROTECTION CALCULATION**

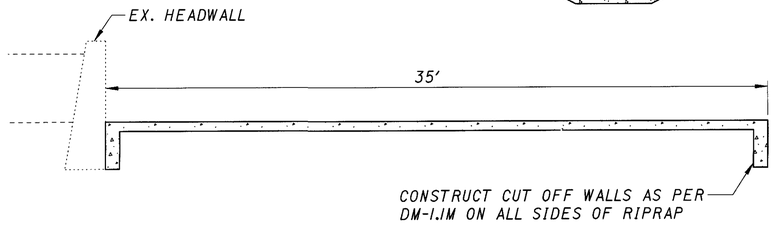
STA. 898+50, LT. TO 899+68, RT.

RIPRAP USING 6" REINFORCED CONCRETE PAD

35 x 4 = 140 SQ. FEET
2 x (35 x 3.35) = 234.5 SQ. FEET
374.5 SQ. FEET
/ 9
41.61 SQ. YARDS



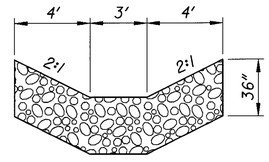




OUTLET

RCP TYPE A WITH FILTER

20 x 3 = 60 SQ. FEET
2 x 20 x 4.47 = 178.8 SQ. FEET
238.8 SQ. FEET
x 3
/ 27
26.53 CU. YARDS




CALCULATED PS CHECKED WJC

DRAINAGE CALCULATIONS

MED - 71 - 15.78

139
940

7885DMD.DGN 12/7/99 CAR 2

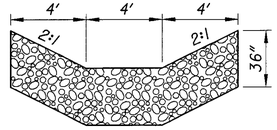
(29-D) SEE P&P SHEET NO. 178 ; DRAINAGE DETAIL SHEET NO. 518

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 902+12, LT.

RCP TYPE A WITH FILTER

| | | |
|---|---|---|
| 20 x 4 = | 80 | SQ. FEET |
| 2 x 20 x 4.47 = | 178.8 | SQ. FEET |
| | 258.8 | SQ. FEET |
| x | 3 | |
| / | 27 | |
| | 28.76 | CU. YARDS |



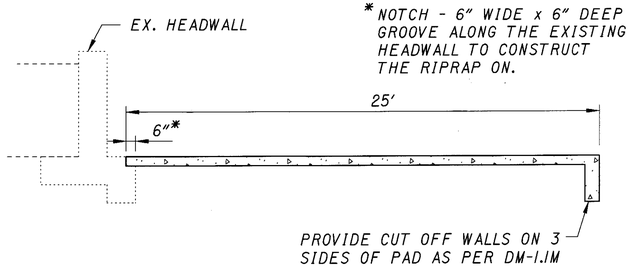

(30-D) SEE P&P SHEET NO. 178

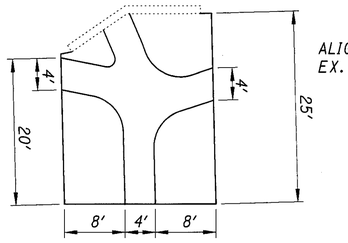
**ROCK CHANNEL PROTECTION CALCULATION**

STA. 903+20, RT. TO STA. 905+20, RT.

RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 25 x 4 = | 100 | SQ. FEET |
| 25 x 8.94 = | 223.5 | SQ. FEET |
| 0.5 x (25 + 20) x 8.94 = | 201.15 | SQ. FEET |
| | 524.65 | SQ. FEET |
| / | 9 | |
| | 58.29 | SQ. YARDS |




ALIGN FLOW LINE WITH EX. DITCH (TYP.)

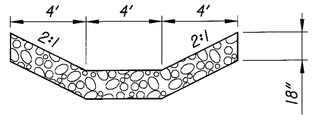
RCP TYPE C WITH FILTER

BACK

| | | |
|---|---|---|
| 105 x 4 = | 420 | SQ. FEET |
| 2 x 105 x 4.12 = | 865.2 | SQ. FEET |

AHEAD

| | | |
|---|---|---|
| 80 x 4 = | 320 | SQ. FEET |
| 2 x 80 x 4.12 = | 659.2 | SQ. FEET |
| | 2264.4 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 125.8 | CU. YARDS |



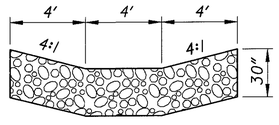

(32-D) SEE P&P SHEET NO. 178 , DRAINAGE DETAIL SHEET NO. 513

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 913+00, LT. TO STA. 915+65, LT.

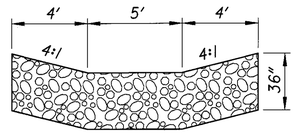
RCP TYPE B WITH FILTER - DITCH

| | | |
|---|---|---|
| 150x 4 = | 600 | SQ. FEET |
| 2 x 150 x 4.12 = | 1,236 | SQ. FEET |
| 100 x 4 = | 400 | SQ. FEET |
| 2 x 100 x 4.12 = | 824 | SQ. FEET |
| | 3,060 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 283.33 | CU. YARDS |




RCP TYPE A WITH FILTER - OUTLET

| | | |
|---|---|---|
| 50 x 5 = | 250 | SQ. FEET |
| 2 x 50 x 4.12 = | 412 | SQ. FEET |
| | 662 | SQ. FEET |
| x | 3 | |
| / | 27 | |
| | 73.56 | CU. YARDS |



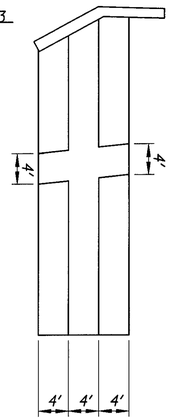

(34-D) SEE P&P SHEET NO. 179 , DRAINAGE DETAIL SHEET NO. 513

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 915+45, RT. TO STA. 917+25, RT.

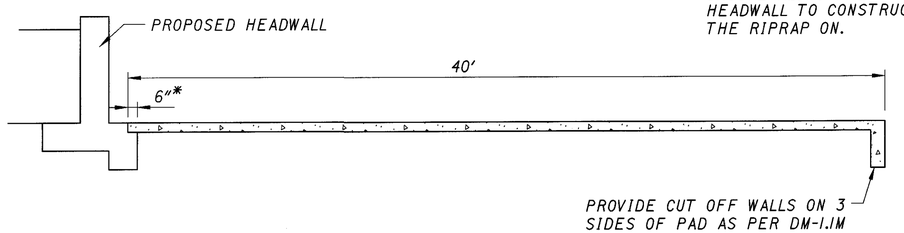
RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 40 x 4 = | 160 | SQ. FEET |
| 2 x 40 x 4.47 = | 357.6 | SQ. FEET |
| | 517.6 | SQ. FEET |
| / | 9 | |
| | 57.51 | SQ. YARDS |



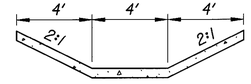

ALIGN FLOWLINES WITH EXISTING DITCH (TYP.)

* NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE PROPOSED HEADWALL TO CONSTRUCT THE RIPRAP ON.




RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 160 x 4 = | 640 | SQ. FEET |
| 2 x 160 x 4.12 = | 1318.4 | SQ. FEET |
| | 1958.4 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 181.33 | CU. YARDS |




(36-D) SEE P&P SHEET NO. 179 , DRAINAGE DETAIL SHEET NO. 513

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 921+88, LT.

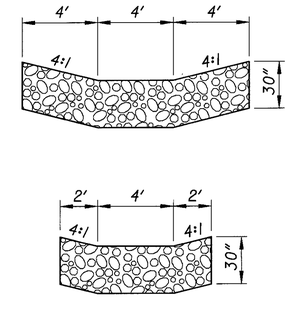
RCP TYPE B WITH FILTER

OUTLET

| | | |
|---|---|---|
| 25 x 4 = | 100 | SQ. FEET |
| 2 x 25 x 2.06 = | 103 | SQ. FEET |

DITCH

| | | |
|---|---|---|
| 10 x 4 = | 40 | SQ. FEET |
| 10 x 4 = | 40 | SQ. FEET |
| 2 x 10 x 2.06 = | 41.2 | SQ. FEET |
| 2 x 10 x 2.06 = | 41.2 | SQ. FEET |
| | 365.4 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 33.83 | CU. YARDS |




CALCULATED PS CHECKED WJC

DRAINAGE CALCULATIONS

MED - 71 - 15.78

140/940

7885DMD.DGN 12/7/99 CAR 3

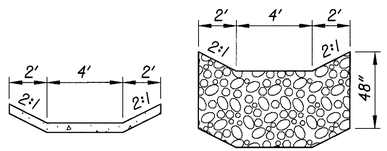
(39-D) SEE P&P SHEET NO. 180 , DRAINAGE DETAIL NO. 514, 519

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 932+25, LT. TO STA. 932+62, RT.

RIPRAP USING 6" REINFORCED CONCRETE PAD

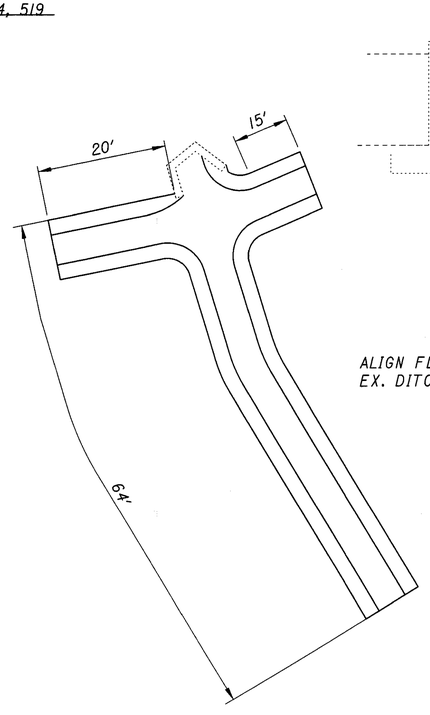
| | | |
|---|---|---|
| 64 x 4 = | 256 | SQ. FEET |
| 2 x 64 x 2.24 = | 286.72 | SQ. FEET |
| 15 x 4 = | 60 | SQ. FEET |
| 2 x 15 x 2.24 = | 67.2 | SQ. FEET |
| 20 x 4 = | 80 | SQ. FEET |
| 2 x 20 x 2.24 = | 89.6 | SQ. FEET |
| | 839.52 | SQ. FEET |
| / | 9 | |
| | 93.28 | SQ. YARDS |



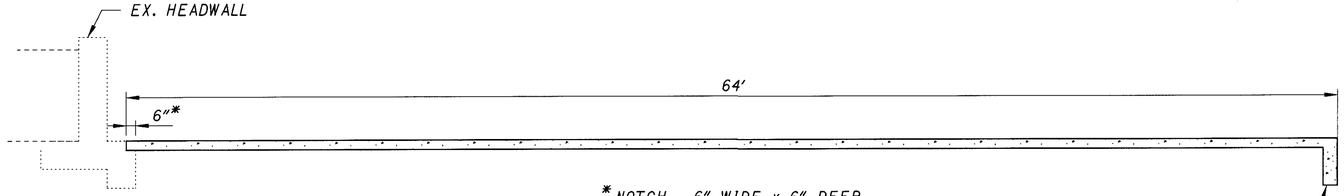

OUTLET

RCP TYPE A WITH FILTER

| | | |
|---|---|---|
| 30 x 4 = | 120 | SQ. FEET |
| 2 x 30 x 2.24 = | 134.4 | SQ. FEET |
| 10 x 4 = | 40 | SQ. FEET |
| 2 x 10 x 2.24 = | 44.8 | SQ. FEET |
| 10 x 4 = | 40 | SQ. FEET |
| 2 x 10 x 2.24 = | 44.8 | SQ. FEET |
| | 424 | SQ. FEET |
| x | 4 | |
| / | 27 | |
| | 62.81 | CU. YARDS |




ALIGN FLOW LINE WITH EX. DITCH (TYP.)




*NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE EXISTING HEADWALL TO CONSTRUCT THE RIPRAP ON.

PROVIDE CUT OFF WALLS ON 3 SIDES OF PAD AS PER DM-1.IM

(38-D) SEE P&P SHEET NO. 180 , DRAINAGE DETAIL SHEET NO. 513

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 931+68, LT.

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |



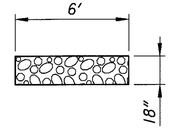

(40-D) SEE P&P SHEET NO. 181

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 944+68, LT.

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |



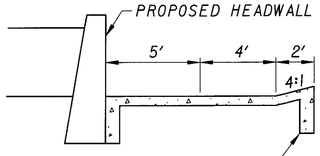

(41-D) SEE P&P SHEET NO. 181 , DRAINAGE DETAIL SHEET NO. 514

**ROCK CHANNEL PROTECTION CALCULATION**

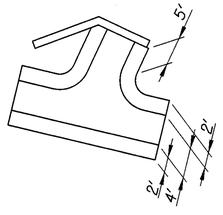
STA. 943+45, RT.

RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 5 x 4 = | 20 | SQ. FEET |
| 20 x 4 = | 80 | SQ. FEET |
| 2 x 20 x 2.06 = | 82.4 | SQ. FEET |
| | 182.4 | SQ. FEET |
| / | 9 | |
| | 20.27 | SQ. YARDS |



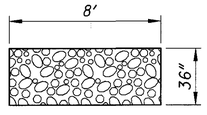

CONSTRUCT CUT OFF WALLS AS PER DM-1.IM ON ALL SIDES OF RIPRAP




ALIGN FLOW LINE WITH EX. DITCH (TYP.)

RCP TYPE A WITH FILTER

| | | |
|---|---|---|
| 15 x 8 = | 120 | SQ. FEET |
| | 120 | SQ. FEET |
| x | 3 | |
| / | 27 | |
| | 13.33 | CU. YARDS |



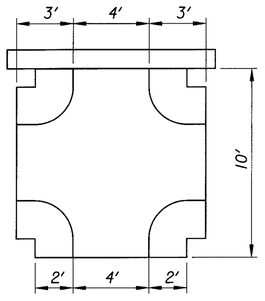

(41A-D) SEE P&P SHEET NO. 181 , DRAINAGE DETAIL SHEET NO. 515

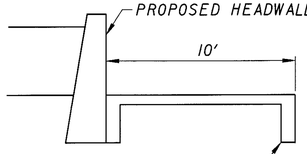
**ROCK CHANNEL PROTECTION CALCULATION**

STA. 947+50, RT. TO STA. 947+50 LT.

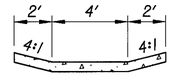
RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 10 x 4 = | 40 | SQ. FEET |
| 2 x 10 x 2.06 = | 41.2 | SQ. FEET |
| 6 x 4 = | 24 | SQ. FEET |
| 2 x 6 x 2.06 = | 24.72 | SQ. FEET |
| | 129.97 | SQ. FEET |
| / | 9 | |
| | 14.44 | SQ. YARDS |



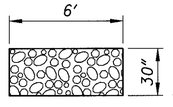

CONSTRUCT CUT OFF WALLS AS PER DM-1.IM ON ALL SIDES OF RIPRAP




OUTLET

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 14 x 6 = | 84 | SQ. FEET |
| | 84 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 7.78 | CU. YARDS |




CALCULATED PS CHECKED WJC

DRAINAGE CALCULATIONS

MED - 71 - 15.78

141 / 940

7885DMD.DGN 12/7/99 CAR 4

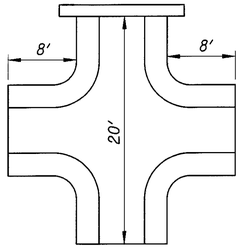
(42-D) SEE P&P SHEET NO. 182 ; DRAINAGE DETAIL SHEET NO. 515

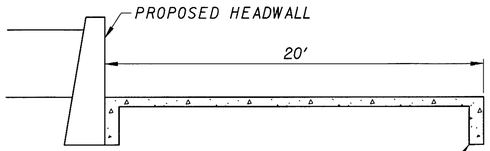
**ROCK CHANNEL PROTECTION CALCULATION**

STA. 952+68, RT. TO STA. 952+68 LT.

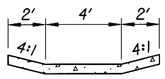
RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 20 x 4 = | 80 | SQ. FEET |
| 2 x 20 x 2.06 = | 82.4 | SQ. FEET |
| 16 x 4 = | 64 | SQ. FEET |
| 2 x 16 x 2.06 = | 65.92 | SQ. FEET |
| | 292.32 | SQ. FEET |
| / | 9 | |
| | 32.48 | SQ. YARDS |



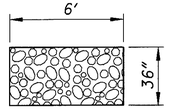

ALIGN FLOW LINE WITH EX. DITCH (TYP.)




OUTLET

RCP TYPE A WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 3 | |
| / | 27 | |
| | 4 | CU. YARDS |



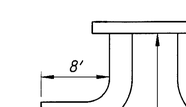

(43-D) SEE P&P SHEET NO. 182 ; DRAINAGE DETAIL SHEET NO. 516

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 955+60, LT.

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 20 x 4 = | 80 | SQ. FEET |
| 2 x 20 x 1.11 = | 44.4 | SQ. FEET |
| 15 x 4 = | 60 | SQ. FEET |
| 2 x 15 x 1.11 = | 33.3 | SQ. FEET |
| | 217.7 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 20.16 | CU. YARDS |




(52-D) SEE P&P SHEET NO. 184-185

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 988+40, LT. OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |

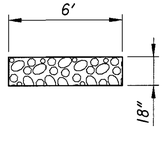
(54-D) SEE P&P SHEET NO. 184-185

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 989+30, RT. OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |



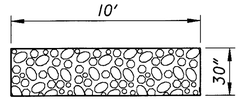

(55-D) SEE P&P SHEET NO. 185

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 993+68, RT.

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 10 x 4 = | 40 | SQ. FEET |
| | 40 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 3.70 | CU. YARDS |




(57-D) SEE P&P SHEET NO. 185 ; DRAINAGE DETAIL SHEET NO, 520

**ROCK CHANNEL PROTECTION CALCULATION**

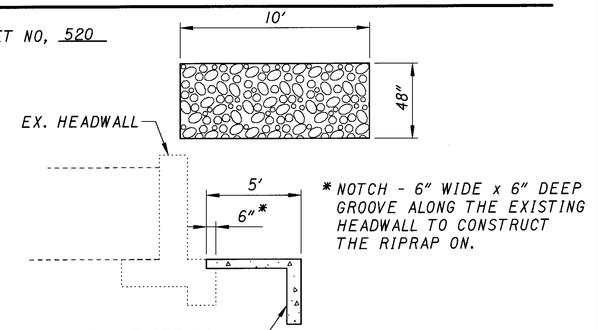
STA. 999+20, RT. TO STA. 999+35, RT.

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 14 x 10 = | 140 | SQ. FEET |
| 20 x 10 = | 200 | SQ. FEET |
| | 340 | SQ. FEET |
| x | 4 | |
| / | 27 | |
| | 50.37 | CU. YARDS |

RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 5 x 10 = | 50.0 | SQ. FEET |
| | 50.0 | SQ. FEET |
| / | 9 | |
| | 5.56 | SQ. YARDS |




*NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE EXISTING HEADWALL TO CONSTRUCT THE RIPRAP ON.

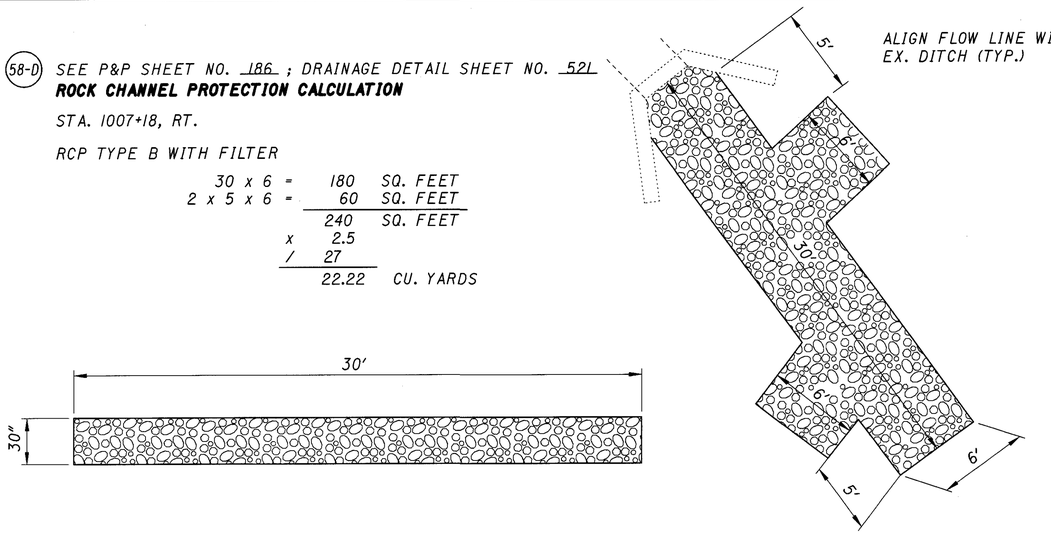
(58-D) SEE P&P SHEET NO. 186 ; DRAINAGE DETAIL SHEET NO. 521

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1007+18, RT.

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 30 x 6 = | 180 | SQ. FEET |
| 2 x 5 x 6 = | 60 | SQ. FEET |
| | 240 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 22.22 | CU. YARDS |



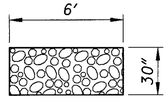

(61A-D) SEE P&P SHEET NO. 186-187

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1013+20, ℄ I.R. 71; STA. 49+85 WILBUR ROAD OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 3.34 | CU. YARDS |




CALCULATED PS CHECKED WJC

DRAINAGE CALCULATIONS

MED - 71 - 15.78

142 / 940

7885DMD.DGN 12/1/99 CAR 5

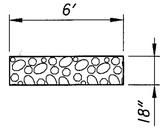
(60-D) SEE P&P SHEET NO. 187

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1013+95, LT. OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |



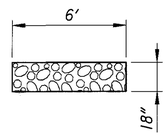

(64-D) SEE P&P SHEET NO. 187

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1013+90, RT. OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |



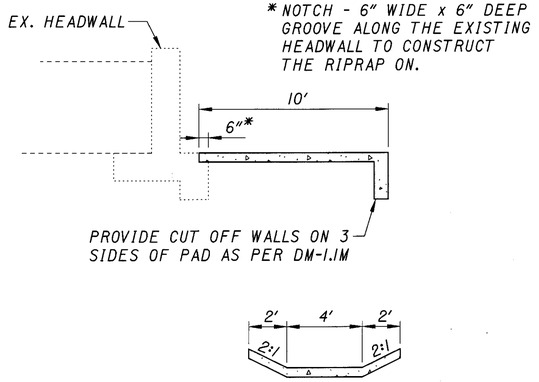

(68-D) SEE P&P SHEET NO. 189 , DRAINAGE DETAIL SHEET NO. 522

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1048+70, RT.

RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 10 x 4 = | 40 | SQ. FEET |
| 2 x 10 x 2.23 = | 44.6 | SQ. FEET |
| | 84.6 | SQ. FEET |
| / | 9 | |
| | 9.4 | SQ. YARDS |



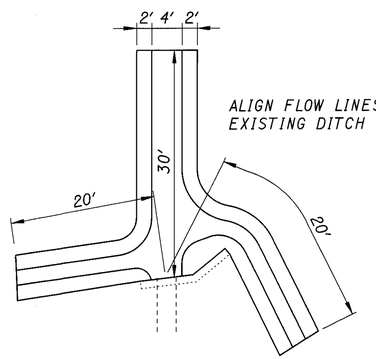

(69-D) SEE P&P SHEET NO. 189 ; DRAINAGE SHEET NO. 522

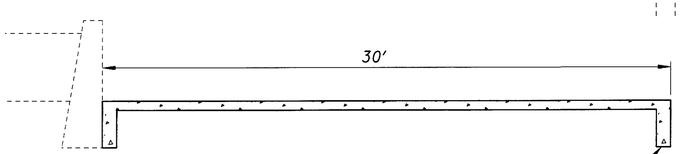
**ROCK CHANNEL PROTECTION CALCULATION**

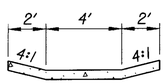
STA. 1049+30, LT. TO STA. 1050+55, LT.

RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 30 x 4 = | 120 | SQ. FEET |
| 2 x 30 x 2.06 = | 123.6 | SQ. FEET |
| 30 x 4 = | 64 | SQ. FEET |
| 2 x 16 x 2.06 = | 65.92 | SQ. FEET |
| 30 x 4 = | 64 | SQ. FEET |
| 2 x 16 x 2.06 = | 65.92 | SQ. FEET |
| | 503.44 | SQ. FEET |
| / | 9 | |
| | 55.94 | SQ. YARDS |



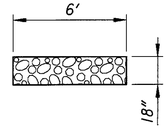

(71-D) SEE P&P SHEET NO. 190

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1054+05, LT. OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |



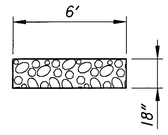

(72-D) SEE P&P SHEET NO. 190

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1053+90, RT. OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |




(74-D) SEE P&P SHEET NO. 191

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1067+40, RT.

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 10 x 4 = | 40 | SQ. FEET |
| | 40 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 3.7 | CU. YARDS |




DITCHES

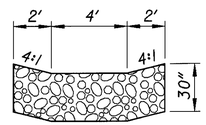
RCP TYPE B WITH FILTER

BACK

| | | |
|---|---|---|
| 60 x 4 = | 240 | SQ. FEET |
| 2 x 60 x 2.06 = | 247.2 | SQ. FEET |

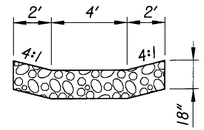
AHEAD

| | | |
|---|---|---|
| 30 x 4 = | 120 | SQ. FEET |
| 2 x 30 x 2.06 = | 123.6 | SQ. FEET |
| | 730.8 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 67.67 | CU. YARDS |




RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 30 x 4 = | 120 | SQ. FEET |
| 2 x 30 x 2.06 = | 123.6 | SQ. FEET |
| | 243.6 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 13.53 | CU. YARDS |




CALCULATED PS
CHECKED WJC

DRAINAGE CALCULATIONS

MED - 71 - 15.78

143
940

7885DMD.DGN 12/7/99 CAR 6

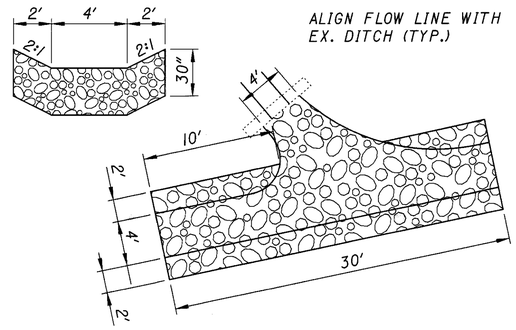
(78-D) SEE P&P SHEET NO. 191

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1075+85, RT.

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 10 x 4 = | 40 | SQ. FEET |
| 30 x 4 = | 120 | SQ. FEET |
| 2 x 30 x 2.24 = | 134.4 | SQ. FEET |
| | 294 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 27.22 | CU. YARDS |



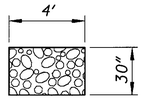

(82-D) SEE P&P SHEET NO. 192 ; DRAINAGE DETAIL SHEET NO. 523

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1082+95, RT.

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 10 x 4 = | 40 | SQ. FEET |
| | 40 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 3.70 | CU. YARDS |



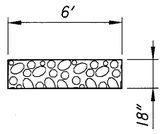

(85-D) SEE P&P SHEET NO. 194

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1102+60, LT. OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |



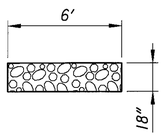

(87-D) SEE P&P SHEET NO. 194

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1103+10, RT. OUTLET FOR STRUCTURE CATCH BASIN

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |



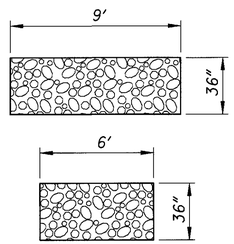

(90-D) SEE P&P SHEET NO. 195

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1116+00, LT. TO STA. 1116+80, LT.

RCP TYPE A WITH FILTER

| | | |
|---|---|---|
| MAIN DITCH | | |
| 100 x 9 = | 900 | SQ. FEET |
| SIDE DITCH | | |
| 10 x 6 = | 60 | SQ. FEET |
| | 960 | SQ. FEET |
| x | 3 | |
| / | 27 | |
| | 106.67 | CU. YARDS |



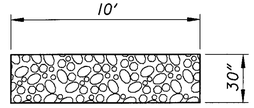

(92-D) SEE P&P SHEET NO. 196

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1127+30, RT.

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 10 x 5 = | 50 | SQ. FEET |
| | 50 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 4.63 | CU. YARDS |



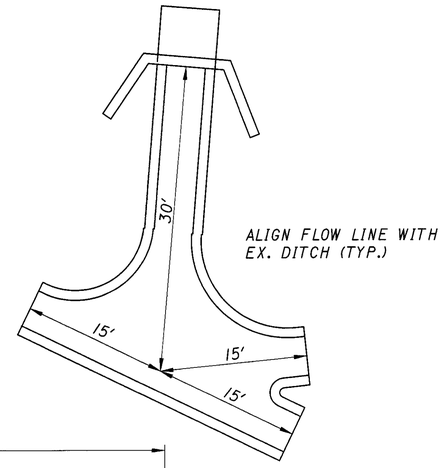

(102-D) SEE P&P SHEET NO. 198

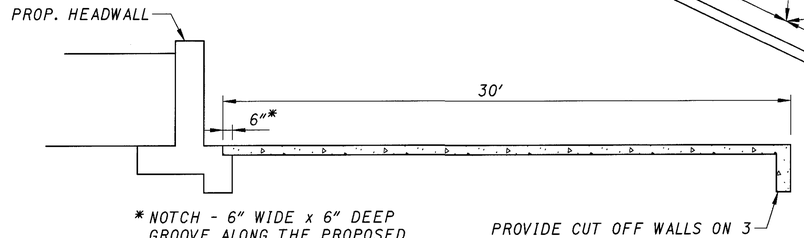
**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1156+85, RT. TO STA. 1158+80, RT.

RIPRAP USING 6" REINFORCED CONCRETE PAD

| | | |
|---|---|---|
| 30 x 4 = | 120 | SQ. FEET |
| 2 x 30 x 2.06 = | 134.4 | SQ. FEET |
| 15 x 4 = | 60 | SQ. FEET |
| 15 x 4 = | 60 | SQ. FEET |
| 2 x 30 x 2.24 = | 134.4 | SQ. FEET |
| 15 x 4 = | 60 | SQ. FEET |
| 2 x 30 x 2.24 = | 134.4 | SQ. FEET |
| | 703.2 | SQ. FEET |
| / | 9 | |
| | 78.13 | SQ. YARDS |



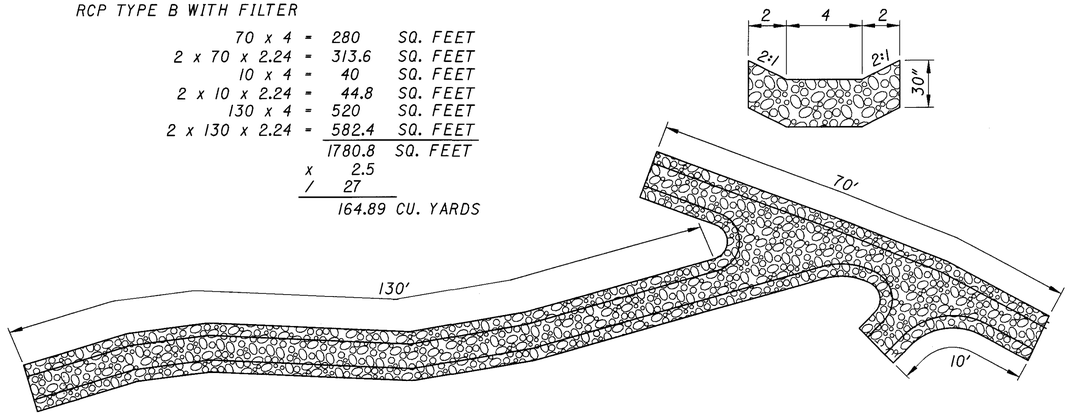




* NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE PROPOSED HEADWALL TO CONSTRUCT THE RIPRAP ON.

PROVIDE CUT OFF WALLS ON 3 SIDES OF PAD AS PER DM-1.1M

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 70 x 4 = | 280 | SQ. FEET |
| 2 x 70 x 2.24 = | 313.6 | SQ. FEET |
| 10 x 4 = | 40 | SQ. FEET |
| 2 x 10 x 2.24 = | 44.8 | SQ. FEET |
| 130 x 4 = | 520 | SQ. FEET |
| 2 x 130 x 2.24 = | 582.4 | SQ. FEET |
| | 1780.8 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 164.89 | CU. YARDS |




CALCULATED PS CHECKED WJC

DRAINAGE CALCULATIONS

MED - 71 - 15.78

144
940

7885DMD.DGN 12/7/99 CAR 7

(112-D) SEE P&P SHEET NO. 201 ; DRAINAGE SHEET NO. 524

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1193+00, LT.

RCP TYPE A WITH FILTER

OUTLET

30 x 7 = 210 SQ. FEET

SIDE DITCH

5 x 8 = 40 SQ. FEET

250 SQ. FEET

x 4

/ 27

37.04 CU. YARDS

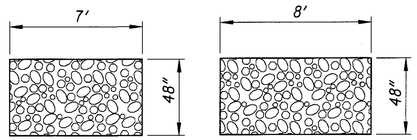
RIPRAP USING 6" REINFORCED CONCRETE PAD

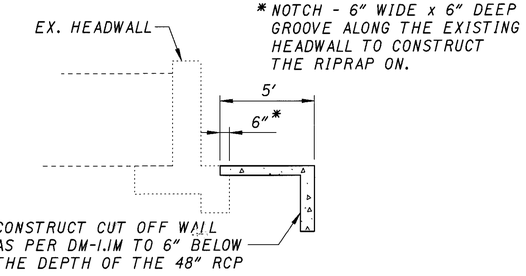
5 x 7 = 35.0 SQ. FEET

35.0 SQ. FEET

/ 9

3.89 SQ. YARDS




* NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE EXISTING HEADWALL TO CONSTRUCT THE RIPRAP ON.

(114-D) SEE P&P SHEET NO. 201 , DRAINAGE DETAIL SHEET NO. 511

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1198+41, LT.

RCP TYPE C WITH FILTER

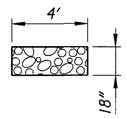
10 x 4 = 40 SQ. FEET

40 SQ. FEET

x 1.5

/ 27

2.22 CU. YARDS




(115-D) SEE P&P SHEET NO. 201

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1199+20, LT.

RCP TYPE A WITH FILTER

OUTLET

10 x 11 = 275 SQ. FEET

DITCH

30 x 11 = 330 SQ. FEET

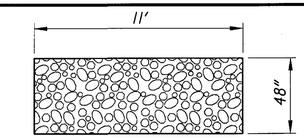
30 x 2.06 = 61.8 SQ. FEET

666.8 SQ. FEET

x 4

/ 27

98.79 CU. YARDS







(117-D) SEE P&P SHEET NO. 201

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1200+48, RT.

RIPRAP USING 6" REINFORCED CONCRETE PAD

47 x 7 = 329 SQ. FEET

2 x 47 x 2.23 = 209.62 SQ. FEET

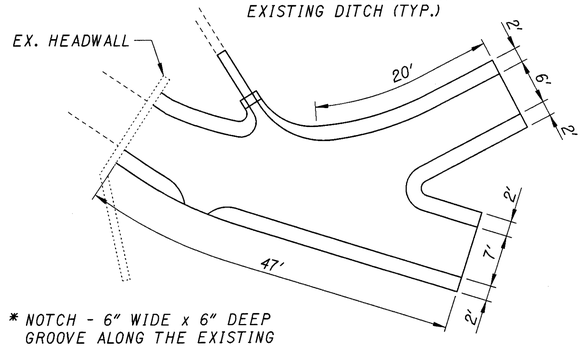
20 x 6 = 120 SQ. FEET

2 x 20 x 2.23 = 89.2 SQ. FEET

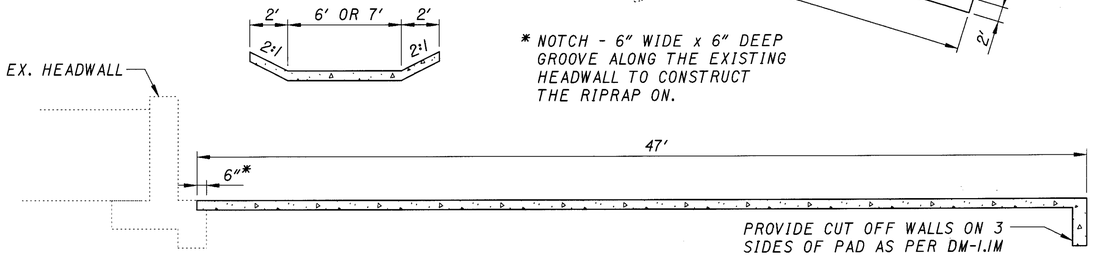
83.09 SQ. FEET

/ 9

83.09 SQ. YARDS




* NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE EXISTING HEADWALL TO CONSTRUCT THE RIPRAP ON.




(118-D) SEE P&P SHEET NO. 202 ; DRAINAGE DETAIL SHEET NO. 525

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1201+65, LT.

RCP TYPE A WITH FILTER

DITCH

20 x 4 = 80 SQ. FEET

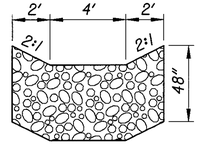
2 x 20 x 2.24 = 89.6 SQ. FEET

169.6 SQ. FEET

x 4

/ 27

25.13 CU. YARDS




PIPE OUTLET

RIPRAP USING 6" REINFORCED CONCRETE PAD

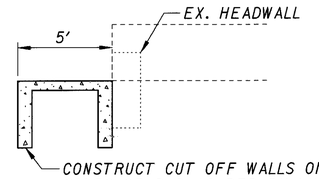
5 x 4 = 20 SQ. FEET

2 x 5 x 2.24 = 22.4 SQ. FEET

42.4 SQ. FEET

/ 9

4.77 SQ. YARDS




(120-D) SEE P&P SHEET NO. 202

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1205+75, RT. NORTHBOUND REST AREA

RCP TYPE B WITH FILTER

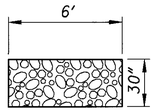
20 x 6 = 120 SQ. FEET

120 SQ. FEET

x 2.5

/ 27

11.11 CU. YARDS




(131-D) SEE P&P SHEET NO. 204

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1230+79, RT.

RIPRAP USING 6" REINFORCED CONCRETE PAD

60 x 5 = 300 SQ. FEET

2 x 60 x 2.06 = 247.2 SQ. FEET

10 x 4 = 40 SQ. FEET

2 x 10 x 2.06 = 41.2 SQ. FEET

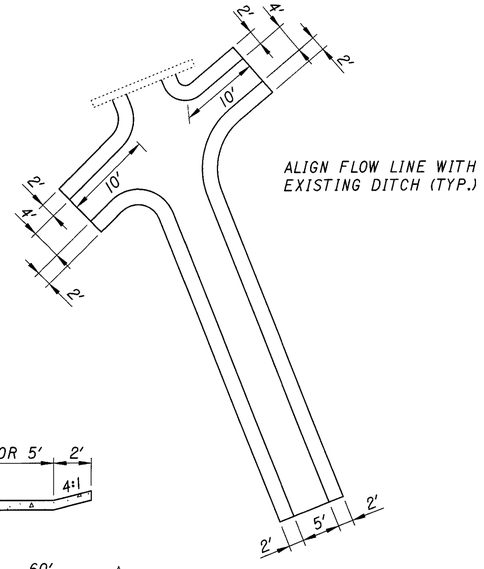
10 x 4 = 40 SQ. FEET

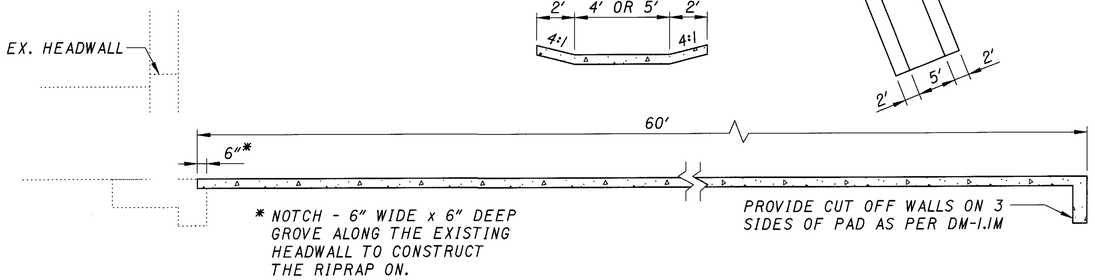
2 x 10 x 2.06 = 41.2 SQ. FEET

709.6 SQ. FEET

/ 9

78.84 SQ. YARDS




CALCULATED PS CHECKED WJC

DRAINAGE CALCULATIONS

MED - 71 - 15.78

145 940

7885DMD.DGN 12/7/99 CAR 8

(134-D) SEE P&P SHEET NO. 205 ; DRAINAGE DETAIL SHEET NO. 526

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1240+74, LT.

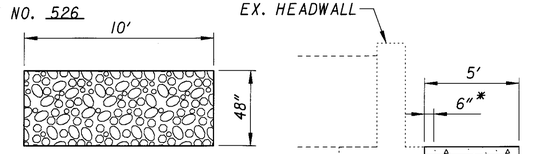
RCP TYPE A WITH FILTER

25 x 10 = 250 SQ. FEET
250 SQ. FEET
x 4
/ 27
37.04 CU. YARDS

OUTLET

RIPRAP USING 6" REINFORCED CONCRETE PAD

5 x 10 = 50.0 SQ. FEET
/ 9
5.56 SQ. YARDS




* NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE EXISTING HEADWALL TO CONSTRUCT THE RIPRAP ON.




(135-D) SEE P&P SHEET NO. 205

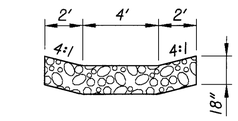
**ROCK CHANNEL PROTECTION CALCULATION**

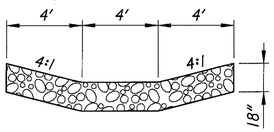
STA. 1242+34, LT.

RCP TYPE C WITH FILTER

OUTLET
4 x 4 = 16 SQ. FEET
2 x 4 x 2.06 = 16.48 SQ. FEET

DITCH
20 x 4 = 80 SQ. FEET
2 x 20 x 4.12 = 164.8 SQ. FEET
277.28 SQ. FEET
x 1.5
/ 27
15.4 CU. YARDS




(137-D) SEE P&P SHEET NO. 206 ; DRAINAGE DETAIL SHEET NO. 527

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1263+40, LT.

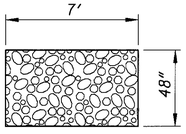
RCP TYPE A WITH FILTER

15 x 7 = 150 SQ. FEET
150 SQ. FEET
x 4
/ 27
22.22 CU. YARDS

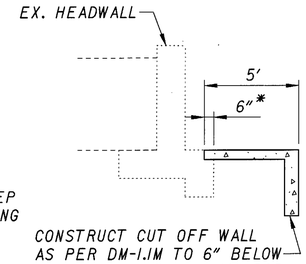
OUTLET

RIPRAP USING 6" REINFORCED CONCRETE PAD

5 x 7 = 35.0 SQ. FEET
/ 9
4.11 SQ. YARDS




* NOTCH - 6" WIDE x 6" DEEP GROOVE ALONG THE EXISTING HEADWALL TO CONSTRUCT THE RIPRAP ON.



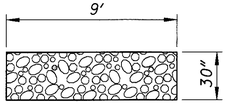

(139-D) SEE P&P SHEET NO. 207

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1267+34, LT.

RCP TYPE B WITH FILTER

15 x 6 = 90 SQ. FEET
90 SQ. FEET
x 2.5
/ 27
8.33 CU. YARDS



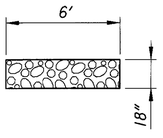

(140-D) SEE P&P SHEET NO. 207

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1270+00, RT.

RCP TYPE B WITH FILTER

6 x 6 = 36 SQ. FEET
36 SQ. FEET
x 1.5
/ 27
2 CU. YARDS



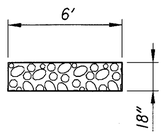

(142-D) SEE P&P SHEET NO. 207

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1270+00, LT.

RCP TYPE C WITH FILTER

6 x 6 = 36 SQ. FEET
36 SQ. FEET
x 1.5
/ 27
2 CU. YARDS



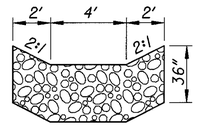

(143-D) SEE P&P SHEET NO. 207 ; DRAINAGE DETAIL SHEET NO. 528

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1271+68, LT.

RCP TYPE B WITH FILTER

25 x 4 = 100 SQ. FEET
2 x 25 x 2.24 = 112 SQ. FEET
212 SQ. FEET
x 3
/ 27
23.56 CU. YARDS



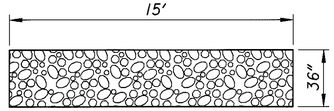

(144-D) SEE P&P SHEET NO. 208

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1278+34, LT.

RCP TYPE A WITH FILTER

30 x 15 = 450 SQ. FEET
450 SQ. FEET
x 3
/ 27
50 CU. YARDS



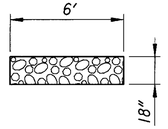

(167-D) SEE P&P SHEET NO. 183

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 51+10, RT. GRANGER ROAD

RCP TYPE C WITH FILTER

6 x 6 = 36 SQ. FEET
36 SQ. FEET
x 1.5
/ 27
2 CU. YARDS



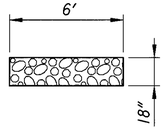

(168-D) SEE P&P SHEET NO. 183

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 51+20.15, LT. GRANGER ROAD

RCP TYPE C WITH FILTER

6 x 6 = 36 SQ. FEET
36 SQ. FEET
x 1.5
/ 27
2 CU. YARDS



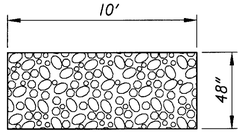

(169-D) SEE P&P SHEET NO. 194 , DRAINAGE DETAIL SHEET NO. 512

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 899+00, 10' LT. S.R.3

RCP TYPE A WITH FILTER

37 x 10 = 370 SQ. FEET
370 SQ. FEET
x 4
/ 27
54.81 CU. YARDS



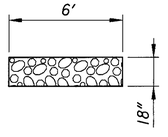

(171-D) SEE P&P SHEET NO. 198

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 1161+61.27, LT. SOUTHBOUND REST AREA

RCP TYPE C WITH FILTER

6 x 6 = 36 SQ. FEET
36 SQ. FEET
x 1.5
/ 27
2 CU. YARDS




CALCULATED PS
CHECKED WJC

DRAINAGE CALCULATIONS

MED - 71 - 15.78



7885DMD.DGN 12/7/99 CAR 9

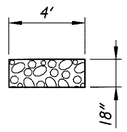
(175-D) SEE P&P SHEET NO. 207 , SEE DETAIL SHEET NO. 536

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 48+75, LT. S.R. 303

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 15 x 4 = | 60 | SQ. FEET |
| | 60 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 3.33 | CU. YARDS |



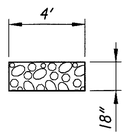

(178-D) SEE P&P SHEET NO. 207 , SEE DETAIL SHEET NO. 536

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 48+80, RT. S.R. 303

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 15 x 4 = | 60 | SQ. FEET |
| | 60 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 3.33 | CU. YARDS |



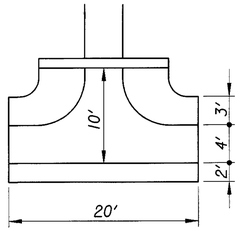

(180C-D) SEE P&P SHEET NO. 491-492 , SEE DETAIL SHEET NO. 516

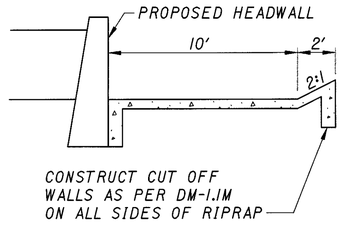
**ROCK CHANNEL PROTECTION CALCULATION**

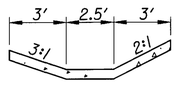
STA. 46+84.54, RT. S.R. 303 RAMP C-D

RIPRAP USING 6" REINFORCED CONCRETE PAD

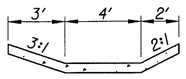
| | | |
|---|---|---|
| 20 x 4 = | 80.0 | SQ. FEET |
| 20 x 2.24 = | 44.8 | SQ. FEET |
| 11.5 x 3.16 = | 36.34 | SQ. FEET |
| 6 x 2.5 = | 15.0 | SQ. FEET |
| 2 x 6 x 3.35 = | 40.2 | SQ. FEET |
| | 216.34 | SQ. FEET |
| / | 9 | |
| | 24.04 | SQ. YARDS |




@ HEADWALL

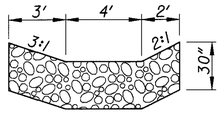



CHANNEL

BACK

RCP TYPE B WITH FILTER

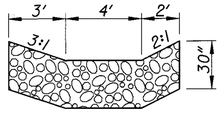
| | | |
|---|---|---|
| 50 x 4 = | 200 | SQ. FEET |
| 50 x 2.24 = | 112 | SQ. FEET |
| 50 x 3.16 = | 158 | SQ. FEET |
| | 470 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 43.52 | CU. YARDS |




AHEAD

RCP TYPE B WITH FILTER

| | | |
|---|---|---|
| 75 x 4 = | 300 | SQ. FEET |
| 75 x 2.24 = | 168 | SQ. FEET |
| 75 x 3.16 = | 237 | SQ. FEET |
| | 705 | SQ. FEET |
| x | 2.5 | |
| / | 27 | |
| | 65.28 | CU. YARDS |



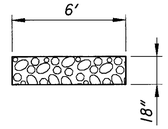

(170A-D) SEE P&P SHEET NO. 207 ; DETAIL SHEET NO, 535

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 81+33, S.R. 3 RAMP B

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |



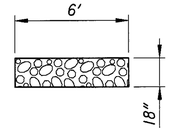

(170B-D) SEE P&P SHEET NO. 207 ; DETAIL SHEET NO. 535

**ROCK CHANNEL PROTECTION CALCULATION**

STA. 83+34.91, S.R. 3 RAMP C

RCP TYPE C WITH FILTER

| | | |
|---|---|---|
| 6 x 6 = | 36 | SQ. FEET |
| | 36 | SQ. FEET |
| x | 1.5 | |
| / | 27 | |
| | 2 | CU. YARDS |




CALCULATED PS CHECKED WJC

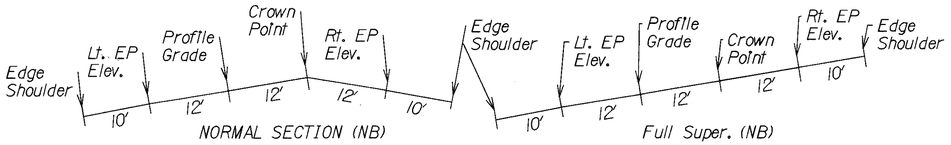
DRAINAGE CALCULATIONS

MED - 71 - 15.78

146A
940

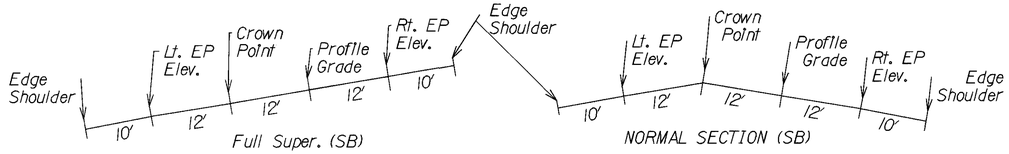
7885DMD.DGN 12/7/99 CAR 10

| NORTHBOUND IR-71 - SUPERELEVATION TRANSITION IN - CURVE 1 | | | | | | | |
|---|---|---|---|---|---|---|---|
| STATION | LT. E/P ELEV. | GRADE | PROFILE GRADE | GRADE | CROWN POINT | GRADE | RT. E/P ELEV. |
| 856+74.00 | 1046.216 | -0.016 | 1046.408 | 0.016 | 1046.600 | -0.016 | 1046.408 |
| 856+84.00 | 1046.300 | -0.016 | 1046.492 | 0.016 | 1046.684 | -0.014 | 1046.511 |
| 856+94.00 | 1046.387 | -0.016 | 1046.579 | 0.016 | 1046.771 | -0.013 | 1046.617 |
| 857+04.00 | 1046.475 | -0.016 | 1046.667 | 0.016 | 1046.851 | -0.011 | 1046.725 |
| 857+14.00 | 1046.565 | -0.016 | 1046.757 | 0.016 | 1046.949 | -0.010 | 1046.834 |
| 857+24.00 | 1046.656 | -0.016 | 1046.848 | 0.016 | 1047.040 | -0.008 | 1046.944 |
| 857+34.00 | 1046.750 | -0.016 | 1046.942 | 0.016 | 1047.134 | -0.006 | 1047.057 |
| 857+44.00 | 1046.846 | -0.016 | 1047.038 | 0.016 | 1047.230 | -0.005 | 1047.172 |
| 857+54.00 | 1046.944 | -0.016 | 1047.136 | 0.016 | 1047.328 | -0.003 | 1047.290 |
| 857+64.00 | 1047.043 | -0.016 | 1047.235 | 0.016 | 1047.427 | -0.002 | 1047.408 |
| 857+74.00 | 1047.145 | -0.016 | 1047.337 | 0.016 | 1047.529 | 0.000 | 1047.529 |
| 857+84.00 | 1047.248 | -0.016 | 1047.440 | 0.016 | 1047.632 | 0.002 | 1047.651 |
| 857+94.00 | 1047.354 | -0.016 | 1047.546 | 0.016 | 1047.738 | 0.003 | 1047.776 |
| 858+04.00 | 1047.461 | -0.016 | 1047.653 | 0.016 | 1047.845 | 0.005 | 1047.903 |
| 858+14.00 | 1047.570 | -0.016 | 1047.762 | 0.016 | 1047.954 | 0.006 | 1048.031 |
| 858+24.00 | 1047.681 | -0.016 | 1047.873 | 0.016 | 1048.065 | 0.008 | 1048.161 |
| 858+34.00 | 1047.794 | -0.016 | 1047.986 | 0.016 | 1048.178 | 0.010 | 1048.293 |
| 858+44.00 | 1047.909 | -0.016 | 1048.101 | 0.016 | 1048.293 | 0.011 | 1048.427 |
| 858+54.00 | 1048.026 | -0.016 | 1048.218 | 0.016 | 1048.410 | 0.013 | 1048.564 |
| 858+64.00 | 1048.145 | -0.016 | 1048.337 | 0.016 | 1048.529 | 0.014 | 1048.702 |
| 858+74.00 | 1048.266 | -0.016 | 1048.458 | 0.016 | 1048.650 | 0.016 | 1048.842 |
| 858+84.00 | 1048.370 | -0.018 | 1048.581 | 0.018 | 1048.792 | 0.018 | 1049.004 |
| 858+86.00 | 1048.394 | -0.018 | 1048.610 | 0.018 | 1048.825 | 0.018 | 1049.041 |
| | | | | | | | |




| NORTHBOUND IR-71 - SUPERELEVATION TRANSITION OUT - CURVE 1 | | | | | | | |
|---|---|---|---|---|---|---|---|
| STATION | LT. E/P ELEV. | GRADE | PROFILE GRADE | GRADE | CROWN POINT | GRADE | RT. E/P ELEV. |
| 891+63.00 | 1119.034 | -0.018 | 1119.250 | 0.018 | 1119.465 | 0.018 | 1119.681 |
| 891+65.00 | 1119.058 | -0.018 | 1119.270 | 0.018 | 1119.481 | 0.018 | 1119.693 |
| 891+75.00 | 1119.195 | -0.016 | 1119.387 | 0.016 | 1119.579 | 0.016 | 1119.771 |
| 891+85.00 | 1119.310 | -0.016 | 1119.502 | 0.016 | 1119.694 | 0.014 | 1119.867 |
| 891+95.00 | 1119.422 | -0.016 | 1119.614 | 0.016 | 1119.806 | 0.013 | 1119.960 |
| 892+05.00 | 1119.532 | -0.016 | 1119.724 | 0.016 | 1119.916 | 0.011 | 1120.050 |
| 892+15.00 | 1119.639 | -0.016 | 1119.831 | 0.016 | 1120.023 | 0.010 | 1120.138 |
| 892+25.00 | 1119.743 | -0.016 | 1119.935 | 0.016 | 1120.127 | 0.008 | 1120.223 |
| 892+35.00 | 1119.854 | -0.016 | 1120.037 | 0.016 | 1120.229 | 0.006 | 1120.306 |
| 892+45.00 | 1119.943 | -0.016 | 1120.135 | 0.016 | 1120.327 | 0.005 | 1120.385 |
| 892+55.00 | 1120.040 | -0.016 | 1120.232 | 0.016 | 1120.424 | 0.003 | 1120.462 |
| 892+65.00 | 1120.133 | -0.016 | 1120.325 | 0.016 | 1120.517 | 0.002 | 1120.536 |
| 892+75.00 | 1120.224 | -0.016 | 1120.416 | 0.016 | 1120.608 | 0.000 | 1120.608 |
| 892+85.00 | 1120.313 | -0.016 | 1120.505 | 0.016 | 1120.697 | -0.002 | 1120.678 |
| 892+95.00 | 1120.398 | -0.016 | 1120.590 | 0.016 | 1120.782 | -0.003 | 1120.744 |
| 893+05.00 | 1120.481 | -0.016 | 1120.673 | 0.016 | 1120.865 | -0.005 | 1120.807 |
| 893+15.00 | 1120.562 | -0.016 | 1120.754 | 0.016 | 1120.946 | -0.006 | 1120.869 |
| 893+25.00 | 1120.639 | -0.016 | 1120.831 | 0.016 | 1121.023 | -0.008 | 1120.927 |
| 893+35.00 | 1120.714 | -0.016 | 1120.906 | 0.016 | 1121.098 | -0.010 | 1120.983 |
| 893+45.00 | 1120.787 | -0.016 | 1120.979 | 0.016 | 1121.171 | -0.011 | 1121.037 |
| 893+55.00 | 1120.856 | -0.016 | 1121.048 | 0.016 | 1121.240 | -0.013 | 1121.086 |
| 893+65.00 | 1120.924 | -0.016 | 1121.116 | 0.016 | 1121.308 | -0.014 | 1121.135 |
| 893+75.00 | 1120.988 | -0.016 | 1121.180 | 0.016 | 1121.372 | -0.016 | 1121.180 |
| | | | | | | | |

| SOUTHBOUND IR-71 - SUPERELEVATION TRANSITION IN - CURVE 1 | | | | | | | |
|---|---|---|---|---|---|---|---|
| STATION | LT. E/P ELEV. | GRADE | CROWN POINT | GRADE | PROFILE GRADE | GRADE | RT. E/P ELEV. |
| 856+74.00 | 1042.139 | -0.016 | 1042.331 | 0.016 | 1042.139 | -0.016 | 1041.947 |
| 856+84.00 | 1042.288 | -0.016 | 1042.480 | 0.016 | 1042.307 | -0.014 | 1042.134 |
| 856+94.00 | 1042.439 | -0.016 | 1042.631 | 0.016 | 1042.477 | -0.013 | 1042.323 |
| 857+04.00 | 1042.591 | -0.016 | 1042.783 | 0.016 | 1042.649 | -0.011 | 1042.515 |
| 857+14.00 | 1042.747 | -0.016 | 1042.939 | 0.016 | 1042.824 | -0.010 | 1042.709 |
| 857+24.00 | 1042.904 | -0.016 | 1043.096 | 0.016 | 1043.000 | -0.008 | 1042.904 |
| 857+34.00 | 1043.063 | -0.016 | 1043.255 | 0.016 | 1043.187 | -0.006 | 1043.101 |
| 857+44.00 | 1043.223 | -0.016 | 1043.415 | 0.016 | 1043.357 | -0.005 | 1043.299 |
| 857+54.00 | 1043.385 | -0.016 | 1043.577 | 0.016 | 1043.539 | -0.003 | 1043.501 |
| 857+64.00 | 1043.550 | -0.016 | 1043.742 | 0.016 | 1043.723 | -0.002 | 1043.704 |
| 857+74.00 | 1043.717 | -0.016 | 1043.909 | 0.016 | 1043.909 | 0.000 | 1043.909 |
| 857+84.00 | 1043.885 | -0.016 | 1044.077 | 0.016 | 1044.096 | 0.002 | 1044.115 |
| 857+94.00 | 1044.056 | -0.016 | 1044.248 | 0.016 | 1044.284 | 0.003 | 1044.324 |
| 858+04.00 | 1044.227 | -0.016 | 1044.419 | 0.016 | 1044.477 | 0.005 | 1044.535 |
| 858+14.00 | 1044.401 | -0.016 | 1044.593 | 0.016 | 1044.670 | 0.006 | 1044.747 |
| 858+24.00 | 1044.578 | -0.016 | 1044.770 | 0.016 | 1044.866 | 0.008 | 1044.962 |
| 858+34.00 | 1044.756 | -0.016 | 1044.948 | 0.016 | 1045.063 | 0.010 | 1045.178 |
| 858+44.00 | 1044.936 | -0.016 | 1045.128 | 0.016 | 1045.262 | 0.011 | 1043.396 |
| 858+54.00 | 1045.117 | -0.016 | 1045.309 | 0.016 | 1045.463 | 0.013 | 1045.617 |
| 858+64.00 | 1045.301 | -0.016 | 1045.493 | 0.016 | 1045.666 | 0.014 | 1045.836 |
| 858+74.00 | 1045.487 | -0.016 | 1045.679 | 0.016 | 1045.871 | 0.016 | 1046.063 |
| 858+84.00 | 1045.655 | -0.018 | 1045.867 | 0.018 | 1046.078 | 0.018 | 1046.290 |
| 858+86.00 | 1045.689 | -0.018 | 1045.905 | 0.018 | 1046.120 | 0.018 | 1046.336 |
| | | | | | | | |




| SOUTHBOUND IR-71 - SUPERELEVATION TRANSITION OUT - CURVE 1 | | | | | | | |
|---|---|---|---|---|---|---|---|
| STATION | LT. E/P ELEV. | GRADE | CROWN POINT | GRADE | PROFILE GRADE | GRADE | RT. E/P ELEV. |
| 891+63.00 | 1118.819 | -0.018 | 1119.034 | 0.018 | 1119.250 | 0.018 | 1119.466 |
| 891+65.00 | 1118.847 | -0.018 | 1119.058 | 0.018 | 1119.270 | 0.018 | 1119.482 |
| 891+75.00 | 1119.003 | -0.016 | 1119.195 | 0.016 | 1119.387 | 0.016 | 1119.579 |
| 891+85.00 | 1119.137 | -0.016 | 1119.329 | 0.016 | 1119.502 | 0.014 | 1119.675 |
| 891+95.00 | 1119.268 | -0.016 | 1119.460 | 0.016 | 1119.614 | 0.013 | 1119.768 |
| 892+05.00 | 1119.398 | -0.016 | 1119.590 | 0.016 | 1119.724 | 0.011 | 1119.858 |
| 892+15.00 | 1119.524 | -0.016 | 1119.716 | 0.016 | 1119.831 | 0.010 | 1119.946 |
| 892+25.00 | 1119.647 | -0.016 | 1119.839 | 0.016 | 1119.935 | 0.008 | 1120.031 |
| 892+35.00 | 1119.768 | -0.016 | 1119.960 | 0.016 | 1120.037 | 0.006 | 1120.114 |
| 892+45.00 | 1119.885 | -0.016 | 1120.077 | 0.016 | 1120.135 | 0.005 | 1120.193 |
| 892+55.00 | 1120.002 | -0.016 | 1120.194 | 0.016 | 1120.232 | 0.003 | 1120.270 |
| 892+65.00 | 1120.114 | -0.016 | 1120.306 | 0.016 | 1120.325 | 0.002 | 1120.344 |
| 892+75.00 | 1120.224 | -0.016 | 1120.416 | 0.016 | 1120.416 | 0.000 | 1120.416 |
| 892+85.00 | 1120.332 | -0.016 | 1120.524 | 0.016 | 1120.505 | -0.002 | 1120.486 |
| 892+95.00 | 1120.436 | -0.016 | 1120.628 | 0.016 | 1120.590 | -0.003 | 1120.552 |
| 893+05.00 | 1120.539 | -0.016 | 1120.731 | 0.016 | 1120.673 | -0.005 | 1120.615 |
| 893+15.00 | 1120.639 | -0.016 | 1120.831 | 0.016 | 1120.754 | -0.006 | 1120.677 |
| 893+25.00 | 1120.735 | -0.016 | 1120.927 | 0.016 | 1120.831 | -0.008 | 1120.735 |
| 893+35.00 | 1120.829 | -0.016 | 1121.021 | 0.016 | 1120.906 | -0.010 | 1120.791 |
| 893+45.00 | 1120.921 | -0.016 | 1121.113 | 0.016 | 1120.979 | -0.011 | 1120.845 |
| 893+55.00 | 1121.010 | -0.016 | 1121.202 | 0.016 | 1121.048 | -0.013 | 1120.894 |
| 893+65.00 | 1121.097 | -0.016 | 1121.289 | 0.016 | 1121.116 | -0.014 | 1120.943 |
| 893+75.00 | 1121.180 | -0.016 | 1121.372 | 0.016 | 1121.180 | -0.016 | 1120.988 |
| | | | | | | | |

CALCULATED DJV CHECKED JWR

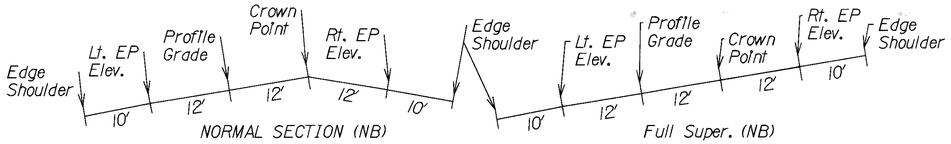
SUPERELEVATION TABLES

MED-71-15.78

147
940

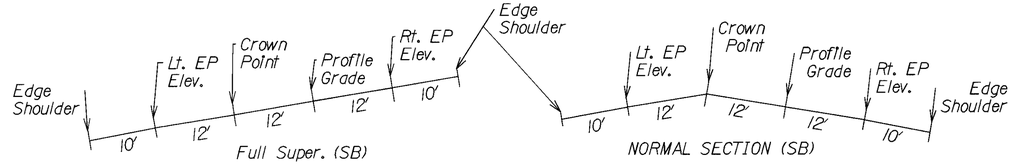
DESIGN FILE : i:\pd_MED_IR71\DGN\Calculations\gel.dgn
USERNAME : pfought
DATE : 02-DEC-1999
TIME : 13:20

| NORTHBOUND IR-71 - SUPERELEVATION TRANSITION IN - CURVE 4 | | | | | | | |
|---|---|---|---|---|---|---|---|
| STATION | LT. E/P ELEV. | GRADE | PROFILE GRADE | GRADE | CROWN POINT | GRADE | RT. E/P ELEV. |
| 1201+69.00 | 1140.418 | -0.016 | 1140.610 | 0.016 | 1140.802 | -0.016 | 1140.610 |
| 1201+79.00 | 1140.485 | -0.016 | 1140.677 | 0.016 | 1140.869 | -0.014 | 1140.696 |
| 1201+89.00 | 1140.551 | -0.016 | 1140.743 | 0.016 | 1140.935 | -0.013 | 1140.782 |
| 1201+99.00 | 1140.618 | -0.016 | 1140.810 | 0.016 | 1141.002 | -0.011 | 1140.868 |
| 1202+09.00 | 1140.685 | -0.016 | 1140.877 | 0.016 | 1141.069 | -0.010 | 1140.954 |
| 1202+19.00 | 1140.752 | -0.016 | 1140.944 | 0.016 | 1141.136 | -0.008 | 1141.040 |
| 1202+29.00 | 1140.818 | -0.016 | 1141.010 | 0.016 | 1141.202 | -0.006 | 1141.125 |
| 1202+39.00 | 1140.885 | -0.016 | 1141.077 | 0.016 | 1141.269 | -0.005 | 1141.211 |
| 1202+49.00 | 1140.952 | -0.016 | 1141.144 | 0.016 | 1141.336 | -0.003 | 1141.297 |
| 1202+59.00 | 1141.018 | -0.016 | 1141.210 | 0.016 | 1141.402 | -0.002 | 1141.383 |
| 1202+69.00 | 1141.085 | -0.016 | 1141.277 | 0.016 | 1141.469 | 0.000 | 1141.469 |
| 1202+79.00 | 1141.152 | -0.016 | 1141.344 | 0.016 | 1141.536 | 0.002 | 1141.555 |
| 1202+89.00 | 1141.218 | -0.016 | 1141.410 | 0.016 | 1141.602 | 0.003 | 1141.641 |
| 1202+99.00 | 1141.285 | -0.016 | 1141.477 | 0.016 | 1141.669 | 0.005 | 1141.727 |
| 1203+09.00 | 1141.352 | -0.016 | 1141.544 | 0.016 | 1141.736 | 0.006 | 1141.813 |
| 1203+19.00 | 1141.419 | -0.016 | 1141.611 | 0.016 | 1141.803 | 0.008 | 1141.899 |
| 1203+29.00 | 1141.485 | -0.016 | 1141.677 | 0.016 | 1141.869 | 0.010 | 1141.984 |
| 1203+39.00 | 1141.552 | -0.016 | 1141.744 | 0.016 | 1141.936 | 0.011 | 1142.070 |
| 1203+49.00 | 1141.619 | -0.016 | 1141.811 | 0.016 | 1142.003 | 0.013 | 1142.156 |
| 1203+59.00 | 1141.685 | -0.016 | 1141.877 | 0.016 | 1142.069 | 0.014 | 1142.242 |
| 1203+69.00 | 1141.752 | -0.016 | 1141.944 | 0.016 | 1142.136 | 0.016 | 1142.328 |
| 1203+79.00 | 1141.799 | -0.018 | 1142.011 | 0.018 | 1142.222 | 0.018 | 1142.434 |
| 1203+81.00 | 1141.808 | -0.018 | 1142.024 | 0.018 | 1142.239 | 0.018 | 1142.455 |
| | | | | | | | |




| NORTHBOUND IR-71 - SUPERELEVATION TRANSITION OUT - CURVE 4 | | | | | | | |
|---|---|---|---|---|---|---|---|
| STATION | LT. E/P ELEV. | GRADE | PROFILE GRADE | GRADE | CROWN POINT | GRADE | RT. E/P ELEV. |
| 1233+62.00 | 1160.969 | -0.018 | 1161.185 | 0.018 | 1161.400 | 0.018 | 1161.616 |
| 1233+64.00 | 1161.039 | -0.018 | 1161.251 | 0.018 | 1161.463 | 0.018 | 1161.675 |
| 1233+74.00 | 1161.126 | -0.016 | 1161.318 | 0.016 | 1161.510 | 0.016 | 1161.702 |
| 1233+84.00 | 1161.193 | -0.016 | 1161.385 | 0.016 | 1161.577 | 0.014 | 1161.750 |
| 1233+94.00 | 1161.259 | -0.016 | 1161.451 | 0.016 | 1161.643 | 0.013 | 1161.797 |
| 1234+04.00 | 1161.326 | -0.016 | 1161.518 | 0.016 | 1161.710 | 0.011 | 1161.845 |
| 1234+14.00 | 1161.393 | -0.016 | 1161.585 | 0.016 | 1161.777 | 0.010 | 1161.892 |
| 1234+24.00 | 1161.460 | -0.016 | 1161.652 | 0.016 | 1161.844 | 0.008 | 1161.940 |
| 1234+34.00 | 1161.526 | -0.016 | 1161.718 | 0.016 | 1161.910 | 0.006 | 1161.987 |
| 1234+44.00 | 1161.593 | -0.016 | 1161.785 | 0.016 | 1161.977 | 0.005 | 1162.035 |
| 1234+54.00 | 1161.660 | -0.016 | 1161.852 | 0.016 | 1162.044 | 0.003 | 1162.082 |
| 1234+64.00 | 1161.726 | -0.016 | 1161.918 | 0.016 | 1162.110 | 0.002 | 1162.130 |
| 1202+74.00 | 1161.793 | -0.016 | 1161.985 | 0.016 | 1162.177 | 0.000 | 1162.177 |
| 1234+84.00 | 1161.860 | -0.016 | 1162.052 | 0.016 | 1162.244 | -0.002 | 1162.225 |
| 1234+94.00 | 1161.926 | -0.016 | 1162.118 | 0.016 | 1162.310 | -0.003 | 1162.272 |
| 1235+04.00 | 1161.993 | -0.016 | 1162.185 | 0.016 | 1162.377 | -0.005 | 1162.320 |
| 1235+14.00 | 1162.060 | -0.016 | 1162.252 | 0.016 | 1162.444 | -0.006 | 1162.367 |
| 1235+24.00 | 1162.127 | -0.016 | 1162.319 | 0.016 | 1162.511 | -0.008 | 1162.415 |
| 1235+34.00 | 1162.193 | -0.016 | 1162.385 | 0.016 | 1162.577 | -0.010 | 1162.462 |
| 1235+44.00 | 1162.260 | -0.016 | 1162.452 | 0.016 | 1162.644 | -0.011 | 1162.510 |
| 1235+54.00 | 1162.327 | -0.016 | 1162.519 | 0.016 | 1162.711 | -0.013 | 1162.557 |
| 1235+64.00 | 1162.393 | -0.016 | 1162.585 | 0.016 | 1162.777 | -0.014 | 1162.605 |
| 1235+74.00 | 1162.407 | -0.016 | 1162.599 | 0.016 | 1162.791 | -0.016 | 1162.599 |
| | | | | | | | |

| SOUTHBOUND IR-71 - SUPERELEVATION TRANSITION IN - CURVE 4 | | | | | | | |
|---|---|---|---|---|---|---|---|
| STATION | LT. E/P ELEV. | GRADE | CROWN POINT | GRADE | PROFILE GRADE | GRADE | RT. E/P ELEV. |
| 1201+69.00 | 1140.610 | -0.016 | 1140.802 | 0.016 | 1140.610 | -0.016 | 1140.418 |
| 1201+79.00 | 1140.658 | -0.016 | 1140.850 | 0.016 | 1140.677 | -0.014 | 1140.504 |
| 1201+89.00 | 1140.705 | -0.016 | 1140.897 | 0.016 | 1140.743 | -0.013 | 1140.590 |
| 1201+99.00 | 1140.753 | -0.016 | 1140.945 | 0.016 | 1140.810 | -0.011 | 1140.676 |
| 1202+09.00 | 1140.800 | -0.016 | 1140.992 | 0.016 | 1140.877 | -0.010 | 1140.762 |
| 1202+19.00 | 1140.848 | -0.016 | 1141.040 | 0.016 | 1140.944 | -0.008 | 1140.848 |
| 1202+29.00 | 1140.895 | -0.016 | 1141.087 | 0.016 | 1141.010 | -0.006 | 1140.933 |
| 1202+39.00 | 1140.943 | -0.016 | 1141.135 | 0.016 | 1141.077 | -0.005 | 1141.019 |
| 1202+49.00 | 1140.990 | -0.016 | 1141.182 | 0.016 | 1141.144 | -0.003 | 1141.105 |
| 1202+59.00 | 1141.038 | -0.016 | 1141.230 | 0.016 | 1141.210 | -0.002 | 1141.191 |
| 1202+69.00 | 1141.085 | -0.016 | 1141.277 | 0.016 | 1141.277 | 0.000 | 1141.277 |
| 1202+79.00 | 1141.133 | -0.016 | 1141.325 | 0.016 | 1141.344 | 0.002 | 1141.363 |
| 1202+89.00 | 1141.180 | -0.016 | 1141.372 | 0.016 | 1141.410 | 0.003 | 1141.449 |
| 1202+99.00 | 1141.228 | -0.016 | 1141.420 | 0.016 | 1141.477 | 0.005 | 1141.535 |
| 1203+09.00 | 1141.275 | -0.016 | 1141.467 | 0.016 | 1141.544 | 0.006 | 1141.621 |
| 1203+19.00 | 1141.323 | -0.016 | 1141.515 | 0.016 | 1141.611 | 0.008 | 1141.707 |
| 1203+29.00 | 1141.370 | -0.016 | 1141.562 | 0.016 | 1141.677 | 0.010 | 1141.792 |
| 1203+39.00 | 1141.418 | -0.016 | 1141.610 | 0.016 | 1141.744 | 0.011 | 1141.878 |
| 1203+49.00 | 1141.465 | -0.016 | 1141.657 | 0.016 | 1141.811 | 0.013 | 1141.964 |
| 1203+59.00 | 1141.513 | -0.016 | 1141.705 | 0.016 | 1141.877 | 0.014 | 1142.050 |
| 1203+69.00 | 1141.560 | -0.016 | 1141.752 | 0.016 | 1141.944 | 0.016 | 1142.136 |
| 1203+79.00 | 1141.587 | -0.018 | 1141.799 | 0.018 | 1142.011 | 0.018 | 1142.223 |
| 1203+81.00 | 1141.645 | -0.018 | 1141.861 | 0.018 | 1142.077 | 0.018 | 1142.293 |
| | | | | | | | |




| SOUTHBOUND IR-71 - SUPERELEVATION TRANSITION OUT - CURVE 4 | | | | | | | |
|---|---|---|---|---|---|---|---|
| STATION | LT. E/P ELEV. | GRADE | CROWN POINT | GRADE | PROFILE GRADE | GRADE | RT. E/P ELEV. |
| 1233+62.00 | 1160.753 | -0.018 | 1160.969 | 0.018 | 1161.185 | 0.018 | 1161.401 |
| 1233+64.00 | 1160.774 | -0.018 | 1160.986 | 0.018 | 1161.198 | 0.018 | 1161.410 |
| 1233+74.00 | 1160.881 | -0.016 | 1161.073 | 0.016 | 1161.265 | 0.016 | 1161.457 |
| 1233+84.00 | 1160.967 | -0.016 | 1161.159 | 0.016 | 1161.332 | 0.014 | 1161.505 |
| 1233+94.00 | 1161.053 | -0.016 | 1161.245 | 0.016 | 1161.398 | 0.013 | 1161.552 |
| 1234+04.00 | 1161.139 | -0.016 | 1161.331 | 0.016 | 1161.465 | 0.011 | 1161.600 |
| 1234+14.00 | 1161.225 | -0.016 | 1161.417 | 0.016 | 1161.532 | 0.010 | 1161.647 |
| 1234+24.00 | 1161.311 | -0.016 | 1161.503 | 0.016 | 1161.599 | 0.008 | 1161.695 |
| 1234+34.00 | 1161.396 | -0.016 | 1161.588 | 0.016 | 1161.665 | 0.006 | 1161.742 |
| 1234+44.00 | 1161.482 | -0.016 | 1161.674 | 0.016 | 1161.732 | 0.005 | 1161.790 |
| 1234+54.00 | 1161.568 | -0.016 | 1161.760 | 0.016 | 1161.799 | 0.003 | 1161.837 |
| 1234+64.00 | 1161.654 | -0.016 | 1161.846 | 0.016 | 1161.865 | 0.002 | 1161.885 |
| 1202+74.00 | 1161.740 | -0.016 | 1161.932 | 0.016 | 1161.932 | 0.000 | 1161.932 |
| 1234+84.00 | 1161.826 | -0.016 | 1162.018 | 0.016 | 1161.999 | -0.002 | 1161.980 |
| 1234+94.00 | 1161.912 | -0.016 | 1162.104 | 0.016 | 1162.065 | -0.003 | 1162.027 |
| 1235+04.00 | 1161.998 | -0.016 | 1162.190 | 0.016 | 1162.132 | -0.005 | 1162.075 |
| 1235+14.00 | 1162.084 | -0.016 | 1162.276 | 0.016 | 1162.199 | -0.006 | 1162.122 |
| 1235+24.00 | 1162.127 | -0.016 | 1162.362 | 0.016 | 1162.266 | -0.008 | 1162.170 |
| 1235+34.00 | 1162.255 | -0.016 | 1162.447 | 0.016 | 1162.332 | -0.010 | 1162.217 |
| 1235+44.00 | 1162.341 | -0.016 | 1162.533 | 0.016 | 1162.399 | -0.011 | 1162.265 |
| 1235+54.00 | 1162.427 | -0.016 | 1162.619 | 0.016 | 1162.466 | -0.013 | 1162.312 |
| 1235+64.00 | 1162.513 | -0.016 | 1162.705 | 0.016 | 1162.532 | -0.014 | 1162.360 |
| 1235+74.00 | 1162.599 | -0.016 | 1162.791 | 0.016 | 1162.599 | -0.016 | 1162.407 |
| | | | | | | | |

CALCULATED DJV CHECKED JWR

SUPERELEVATION TABLES

MED-71-15.78

148
940

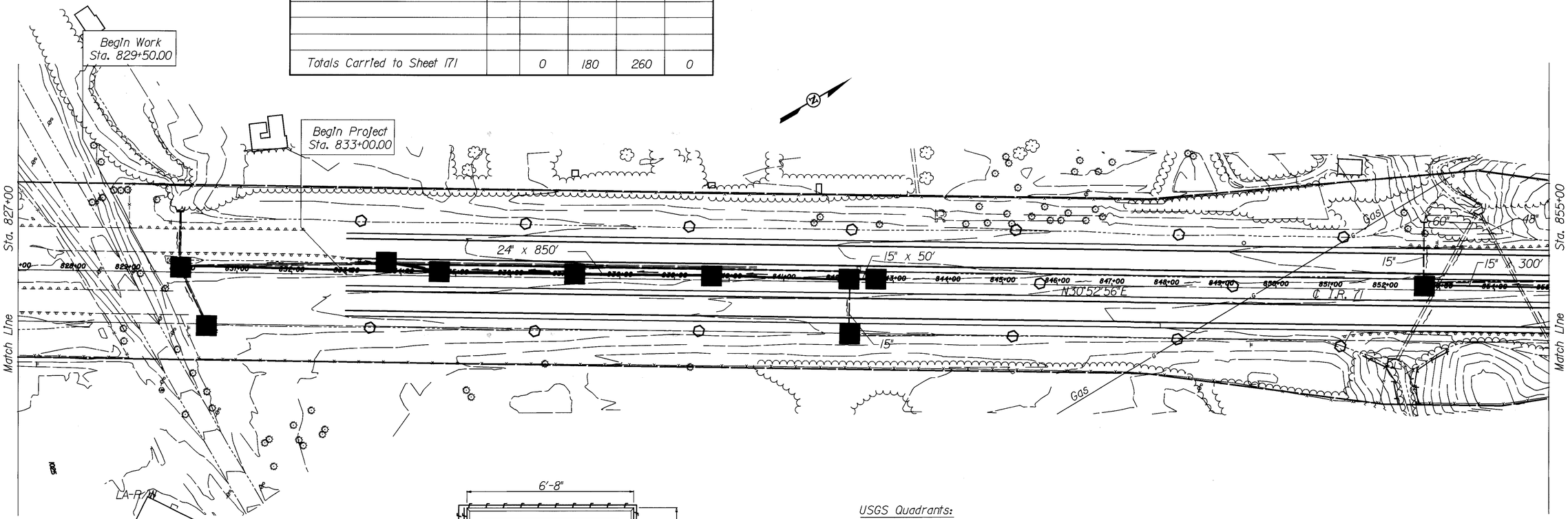
DATE : 02-DEC-1999
TIME : 13:30
DESIGN FILE : i:\pd_MED_IR71\DGN\Calculations\ge2.dgn
USERNAME : pfought

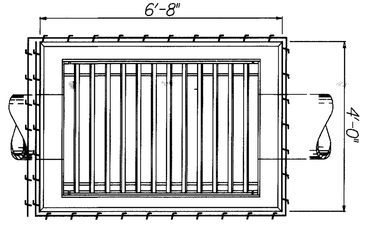
## ESTIMATED QUANTITIES

| Location | Side | 877 Temporary Perimeter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Protection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|
| | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | 180 | | |
| At inlet protection this sheet | | | | 260 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Totals Carried to Sheet 171 | | 0 | 180 | 260 | 0 |

## PROJECT DATA

| | |
|---|---|
| Total Area (Right of Way) | 6.10 Acres |
| Area to Undergo Excavation, Filling or Grading | 6.10 Acres |
| Runoff coefficient for Pre-Construction Site | 0.3-0.6 |
| Runoff coefficient for Post-Construction Site | 0.5 |
| Soil Data | See Soil Profile |
| Immediate Receiving Waters | Plum Creek, West Branch Rocky River, Healy Creek |
| Subsequent Receiving Waters | West Branch Rocky River, East Branch Rocky River, Rocky River, Lake Erie |




## INLET FILTER FABRIC DETAIL

Note: Drawing not to scale

The Filter Fabric Fence shall overlap on the upstream (short) side of the catch basin

USGS Quadrants:

Medina NE, Medina SE, Berea SE (Beara)

Longitude: W81°47'30" *
Latitude: N41°08'38" *

* Longitude and Latitude to Approximate Center of Project

PROJECT DESCRIPTION

Reconstruction of existing lanes and construction of additional lanes, and auxiliary lanes including, but not limited to new underdrains, guardrail, fencing, signing, lighting and rehabilitation and/or replacement of existing bridges.

Legend

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

0 50 100 200 SCALE IN FEET

CALCULATED JAP CHECKED

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 827+00 to Sta. 855+00

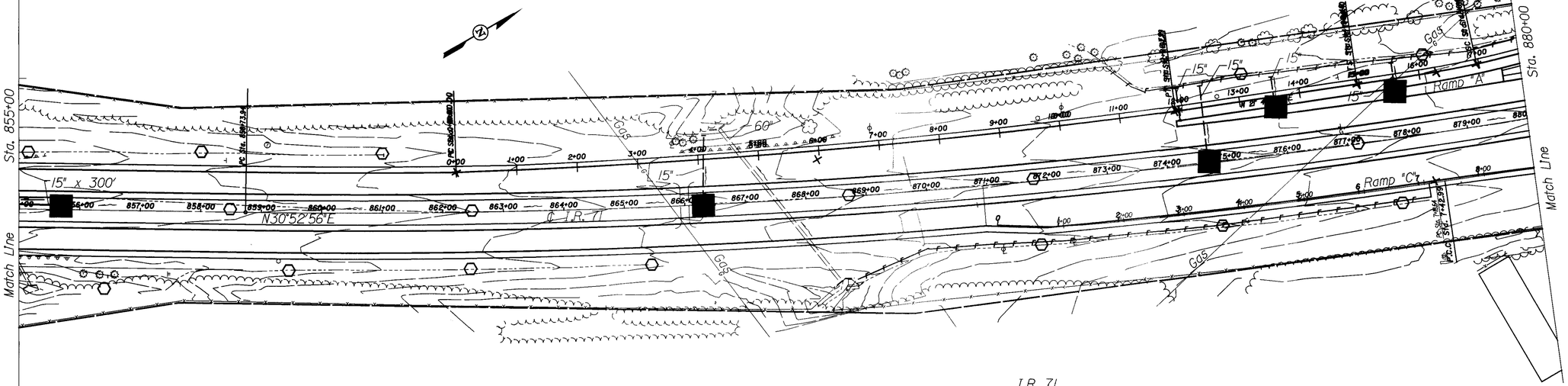
MED-71-15.78

149
940

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71swl.dgn
USERNAME : rswift
DATE : 24-NOV-1999
TIME : 15:24

# ESTIMATED QUANTITIES

| Location | | Side | 877 Temporary Peremiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Protection Filter Fabric Fence | 877 Temporary Dams & Sedtment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 204 | | |
| At Inlet protection this sheet | | | | | 130 | |
| From | To | | | | | |
| Sta. 868+88 | Sta. 878+25 | Rt. | 937 | | | |
| Sta. 10+88 (A) | Sta. 17+68 (A) | Lt. | 696 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 1633 | 204 | 130 | 0 |




Ramp A
P.I. Sta = 5+96.87
Δ = 5° 35' 47" (LT)
Dc = 0° 28' 09"
R = 12,211.62'
T = 596.87'
L = 1,192.79'
E = 14.58'

I.R. 71
P.I. Sta. = 873+38.41
Δ = 13° 36' 15" (LT)
Dc = 00° 28' 00"
R = 12,277.67
T = 1,464.48
L = 2,915.18
E = 87.03'
Max. Super Rate = 0.018

Ramp C
P.I. Sta = 13+07.95
Δ = 12° 41' 06" (RT)
Dc = 7° 30' 00"
R = 763.94'
Δc = 7° 03' 49" (RT)
Lc = 94.18'
Es = 200.88'

Ramp C
P.I. Sta = 18+40.74
Δ = 47° 29' 36" (LT)
Dc = 24° 00' 00"
R = 238.73'
Δc = 17° 29' 36" (LT)
Lc = 72.89'
Es = 25.19'

**Legend**

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- Filter Fabric Fence
- Sedtment Basin
- Sedtment Dam
- Drainage Ditch or Temporary Diversion

SCALE IN FEET 0 50 100 200

CALCULATED JAP CHECKED

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 855+00 to Sta. 880+00

MED-71-15.78

150
940

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71sw2.dgn
USERNAME : rswift
DATE : 24-NOV-1999
TIME : 14:27

DESIGN FILE : i:\pd_med_lr71\dgn\erosion\med71sw3.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 14:27

Legend

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

Ramp "A"
P.I. Sta = 5+96.87
Δ = 5° 35′ 47" (LT)
Dc = 0° 28′ 09"
R = 12,211.62′
T = 596.87′
L = 1,192.79′
E = 14.58′

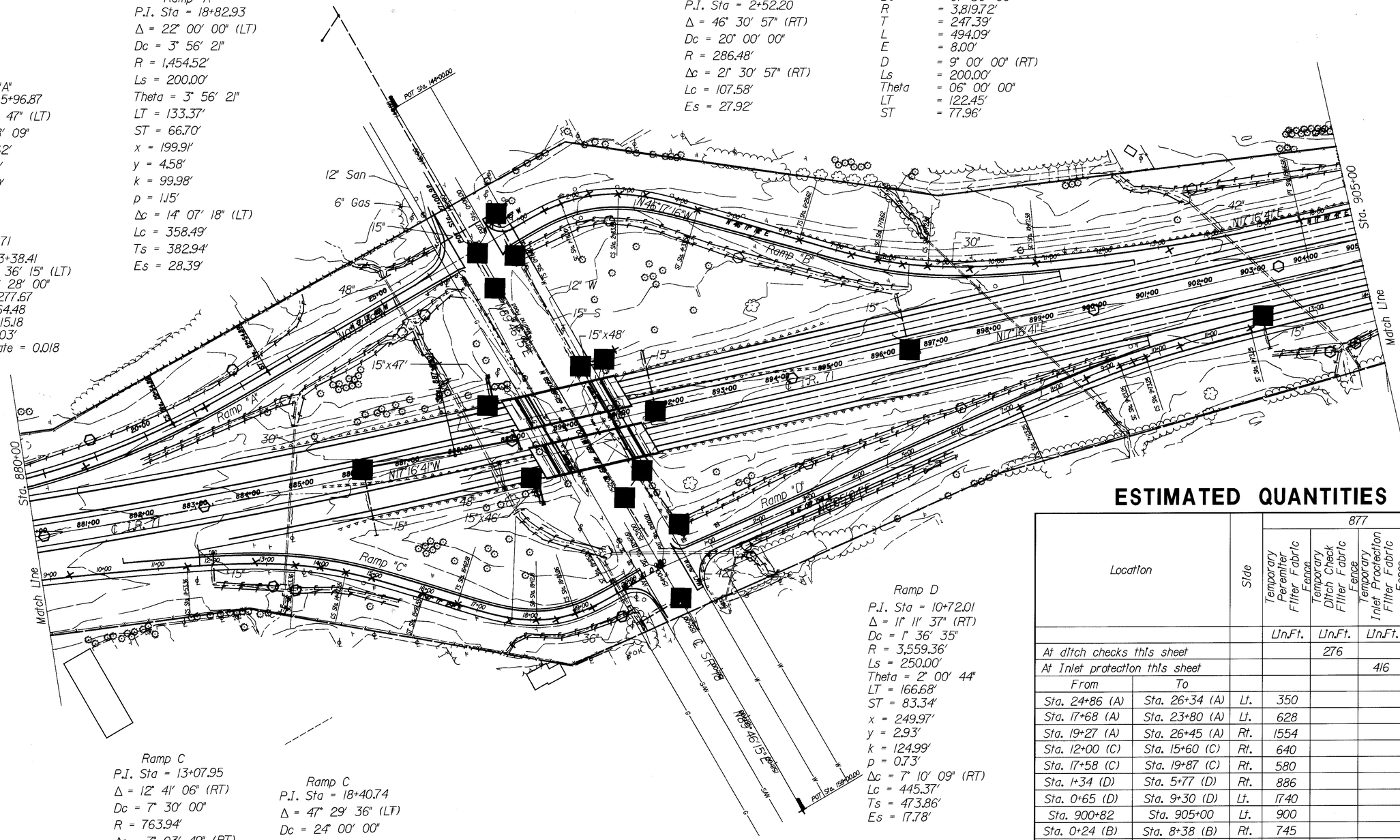
I.R. 71
P.I. Sta. = 873+38.41
Δ = 13° 36′ 15" (LT)
Dc = 00° 28′ 00"
R = 12,277.67
T = 1,464.48
L = 2,915.18
E = 87.03′
Max. Super Rate = 0.018

Ramp "A"
P.I. Sta = 18+82.93
Δ = 22° 00′ 00" (LT)
Dc = 3° 56′ 21"
R = 1,454.52′
Ls = 200.00′
Theta = 3° 56′ 21"
LT = 133.37′
ST = 66.70′
x = 199.91′
y = 4.58′
k = 99.98′
p = 1.15′
Δc = 14° 07′ 18" (LT)
Lc = 358.49′
Ts = 382.94′
Es = 28.39′

Ramp B
P.I. Sta = 9+79.62
Δ = 5° 11′ 09" (LT)
Dc = 7° 30′ 00"
R = 763.94′
Δc = 6° 58′ 20" (LT)
Lc = 92.96′
Es = 49.15′

Ramp B
P.I. Sta = 2+52.20
Δ = 46° 30′ 57" (RT)
Dc = 20° 00′ 00"
R = 286.48′
Δc = 21° 30′ 57" (RT)
Lc = 107.58′
Es = 27.92′

Ramp B
P. I. Sta. = 13+19.97
Δ = 7° 24′ 41" (LT)
Dc = 01° 30′ 00"
R = 3,819.72′
T = 247.39′
L = 494.09′
E = 8.00′
D = 9° 00′ 00" (RT)
Ls = 200.00′
Theta = 06° 00′ 00"
LT = 122.45′
ST = 77.96′




Ramp C
P.I. Sta = 13+07.95
Δ = 12° 41′ 06" (RT)
Dc = 7° 30′ 00"
R = 763.94′
Δc = 7° 03′ 49" (RT)
Lc = 94.18′
Es = 200.88′

Ramp C
P.I. Sta = 18+40.74
Δ = 47° 29′ 36" (LT)
Dc = 24° 00′ 00"
R = 238.73′
Δc = 17° 29′ 36" (LT)
Lc = 72.89′
Es = 25.19′

Ramp D
P.I. Sta = 10+72.01
Δ = 11° 11′ 37" (RT)
Dc = 1° 36′ 35"
R = 3,559.36′
Ls = 250.00′
Theta = 2° 00′ 44"
LT = 166.68′
ST = 83.34′
x = 249.97′
y = 2.93′
k = 124.99′
p = 0.73′
Δc = 7° 10′ 09" (RT)
Lc = 445.37′
Ts = 473.86′
Es = 17.78′

## ESTIMATED QUANTITIES

| Location | | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Proctection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 276 | | |
| At Inlet protection this sheet | | | | | 416 | |
| From | To | | | | | |
| Sta. 24+86 (A) | Sta. 26+34 (A) | Lt. | 350 | | | |
| Sta. 17+68 (A) | Sta. 23+80 (A) | Lt. | 628 | | | |
| Sta. 19+27 (A) | Sta. 26+45 (A) | Rt. | 1554 | | | |
| Sta. 12+00 (C) | Sta. 15+60 (C) | Rt. | 640 | | | |
| Sta. 17+58 (C) | Sta. 19+87 (C) | Rt. | 580 | | | |
| Sta. 1+34 (D) | Sta. 5+77 (D) | Rt. | 886 | | | |
| Sta. 0+65 (D) | Sta. 9+30 (D) | Lt. | 1740 | | | |
| Sta. 900+82 | Sta. 905+00 | Lt. | 900 | | | |
| Sta. 0+24 (B) | Sta. 8+38 (B) | Rt. | 745 | | | |
| Sta. 12+00 (D) | Sta. 14+00 (D) | Rt. | 500 | | | |
| Sta. 17+77 (C) | Sta. 19+85 (C) | Lt. | 360 | | | |
| Totals Carried to Sheet 171 | | | 8883 | 276 | 416 | 0 |

SCALE IN FEET 0 50 100 200

CALCULATED SAP CHECKED JWR

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 880+00 to Sta. 905+00

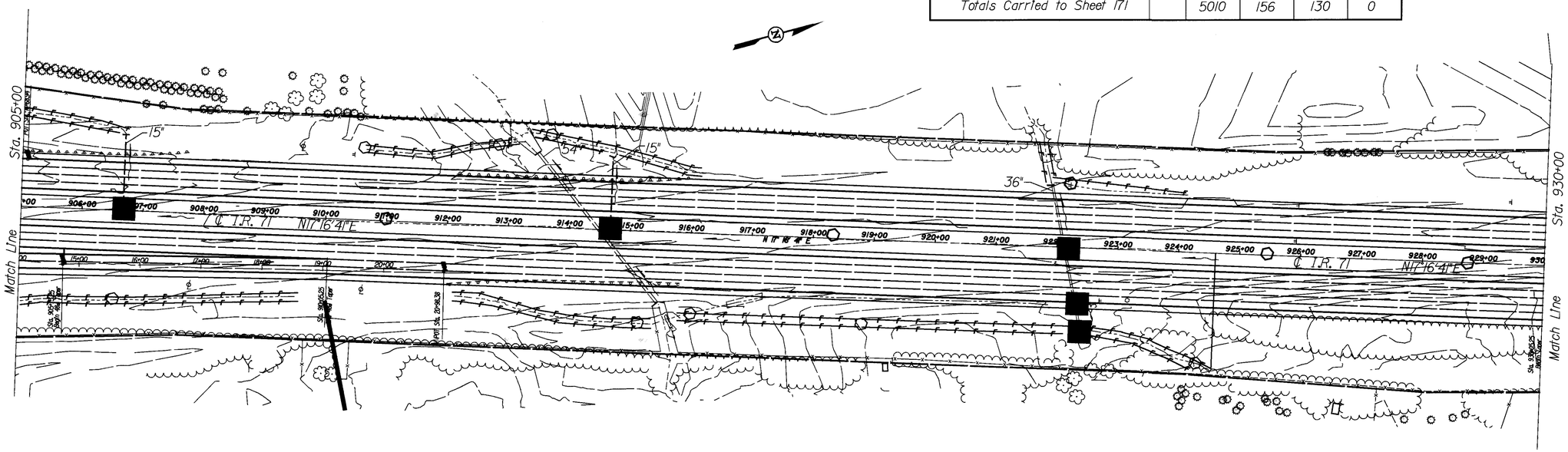
MED-71-15.78

# ESTIMATED QUANTITIES

| Location | | Side | 877 Temporary Perimiter Fliter Fabric Fence | 877 Temporary Ditch Check Fliter Fabric Fence | 877 Temporary Inlet Proctection Fliter Fabric Fence | 877 Temporary Dams & Sedlment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 156 | | |
| At Inlet protection this sheet | | | | | 130 | |
| From | To | | | | | |
| Sta. 905+00 | Sta. 906+68 | Lt. | 340 | | | |
| Sta. 14+00 (D) | Sta. 18+60 (D) | Rt. | 920 | | | |
| Sta. 910+57 | Sta. 916+32 | Lt. | 1090 | | | |
| Sta. 912+12 | Sta. 924+60 | Rt. | 2320 | | | |
| Sta. 921+65 | Sta. 924+10 | Lt. | 340 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 5010 | 156 | 130 | 0 |

*Legend*

- Inlet Fliter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- —F— Fliter Fabric Fence
- Sedlment Basin
- Sedlment Dam
- Drainage Ditch or Temporary Diversion




DESIGN FILE : i:\pd_med_lr71\dgn\erosion\med71lsw4.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 14:28

SCALE IN FEET 0 50 100 200

CALCULATED JAP
CHECKED

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 905+00 to Sta. 930+00

MED-71-15.78

152
940

# ESTIMATED QUANTITIES

| Location | | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Protection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 312 | | |
| At inlet protection this sheet | | | | | 52 | |
| From | To | | | | | |
| Sta. 930+47 | Sta. 931+65 | Lt. | 230 | | | |
| Sta. 932+26 | Sta. 944+80 | Lt. | 2520 | | | |
| | | | | | | |
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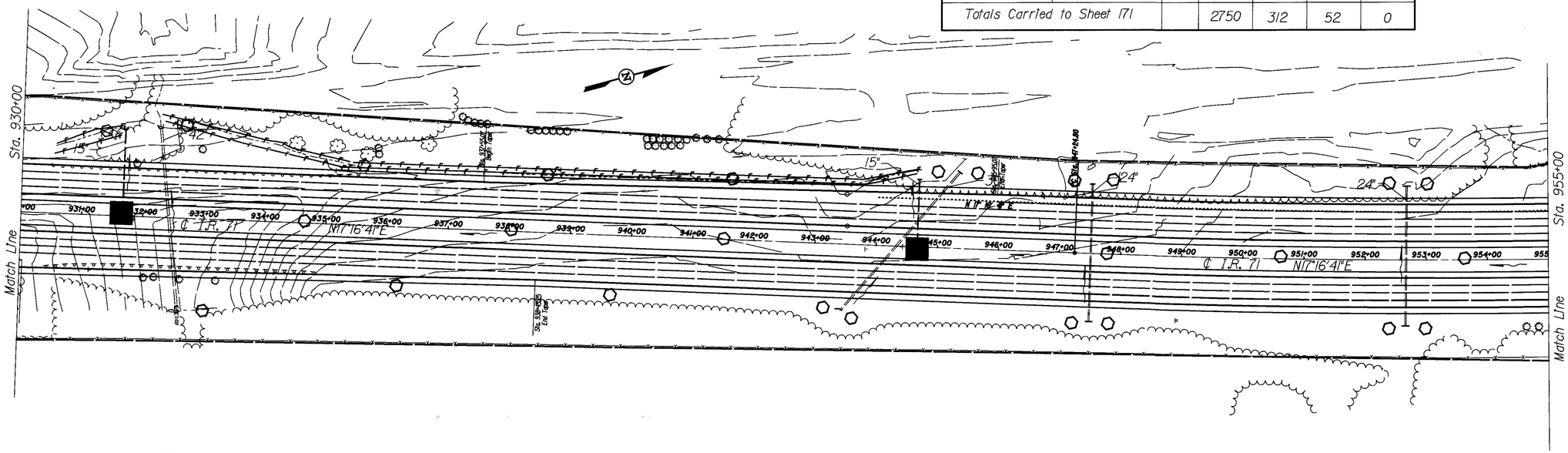
| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 2750 | 312 | 52 | 0 |

*Legend*

- ■ *Inlet Filter Barrier, 26 Lin. feet*
- ○ *Ditch Check, 12 Lin. feet*
- —F— *Filter Fabric Fence*
- *Sediment Basin*
- *Sediment Dam*
- *Drainage Ditch or Temporary Diversion*




DESIGN FILE : i:\pd_med_lr71\dgn\erosion\med71sw5.dgn
USERNAME : rswift
DATE : 24-NOV-1999
TIME : 14:28

SCALE IN FEET 0 50 100 200

CALCULATED JAP CHECKED JWP

**STORM WATER POLLUTION PREVENTION PLAN**
**Sta. 930+00 to Sta. 955+00**

**MED-71-15.78**

153
940

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71sw6.dgn
USERNAME : rswift
DATE : 24-NOV-1999
TIME : 14:28

Connector W
P.I. Sta = 955+61.72
Δ = 6° 11′ 21″ (LT)
Dc = 0° 22′ 08″
R = 15,536.07′
T = 839.92′
L = 1,678.20′
E = 22.69′

Connector W
P.I. Sta = 968+15.48
Δ = 4° 54′ 48″ (LT)
Dc = 0° 50′ 33″
R = 6,800.00′
T = 291.74′
L = 583.12′
E = 6.26′

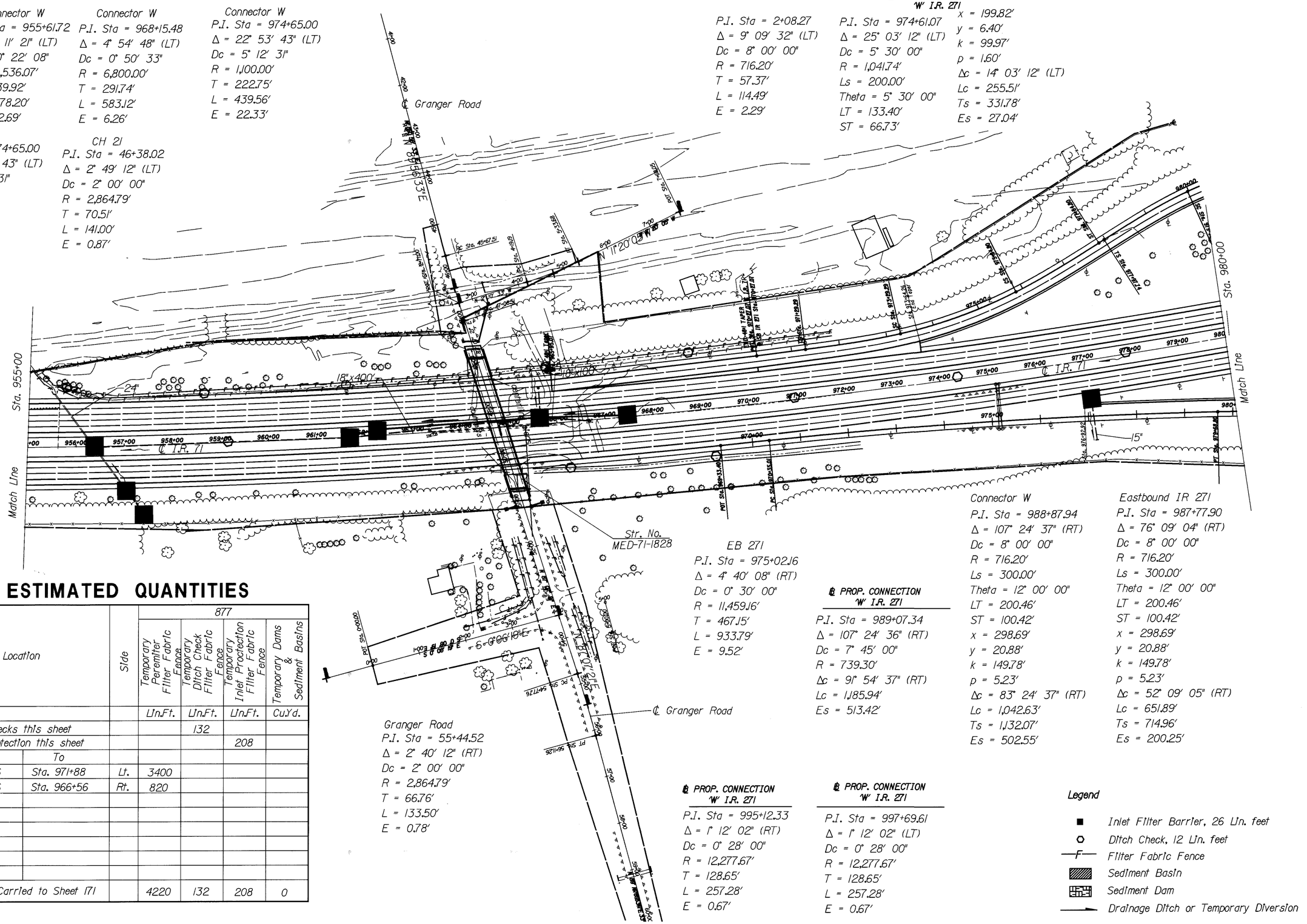
Connector W
P.I. Sta = 974+65.00
Δ = 22° 53′ 43″ (LT)
Dc = 5° 12′ 31″
R = 1,100.00′
T = 222.75′
L = 439.56′
E = 22.33′

IR 71
P.I. Sta = 974+65.00
Δ = 22° 53′ 43″ (LT)
Dc = 5° 12′ 31″
R = 1,100.00′
T = 222.75′
L = 7298.08′
E = 22.33′

CH 21
P.I. Sta = 46+38.02
Δ = 2° 49′ 12″ (LT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 70.51′
L = 141.00′
E = 0.87′

℄ PROP. CONNECTION
'W' I.R. 271
P.I. Sta = 2+08.27
Δ = 9° 09′ 32″ (LT)
Dc = 8° 00′ 00″
R = 716.20′
T = 57.37′
L = 114.49′
E = 2.29′

℄ PROP. CONNECTION
'W' I.R. 271
P.I. Sta = 974+61.07
Δ = 25° 03′ 12″ (LT)
Dc = 5° 30′ 00″
R = 1,041.74′
Ls = 200.00′
Theta = 5° 30′ 00″
LT = 133.40′
ST = 66.73′
x = 199.82′
y = 6.40′
k = 99.97′
p = 1.60′
Δc = 14° 03′ 12″ (LT)
Lc = 255.51′
Ts = 331.78′
Es = 27.04′




EB 271
P.I. Sta = 975+02.16
Δ = 4° 40′ 08″ (RT)
Dc = 0° 30′ 00″
R = 11,459.16′
T = 467.15′
L = 933.79′
E = 9.52′

Granger Road
P.I. Sta = 55+44.52
Δ = 2° 40′ 12″ (RT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 66.76′
L = 133.50′
E = 0.78′

℄ PROP. CONNECTION
'W' I.R. 271
P.I. Sta = 989+07.34
Δ = 107° 24′ 36″ (RT)
Dc = 7° 45′ 00″
R = 739.30′
Δc = 91° 54′ 37″ (RT)
Lc = 1,185.94′
Es = 513.42′

Connector W
P.I. Sta = 988+87.94
Δ = 107° 24′ 37″ (RT)
Dc = 8° 00′ 00″
R = 716.20′
Ls = 300.00′
Theta = 12° 00′ 00″
LT = 200.46′
ST = 100.42′
x = 298.69′
y = 20.88′
k = 149.78′
p = 5.23′
Δc = 83° 24′ 37″ (RT)
Lc = 1,042.63′
Ts = 1,132.07′
Es = 502.55′

Eastbound IR 271
P.I. Sta = 987+77.90
Δ = 76° 09′ 04″ (RT)
Dc = 8° 00′ 00″
R = 716.20′
Ls = 300.00′
Theta = 12° 00′ 00″
LT = 200.46′
ST = 100.42′
x = 298.69′
y = 20.88′
k = 149.78′
p = 5.23′
Δc = 52° 09′ 05″ (RT)
Lc = 651.89′
Ts = 714.96′
Es = 200.25′

℄ PROP. CONNECTION
'W' I.R. 271
P.I. Sta = 995+12.33
Δ = 1° 12′ 02″ (RT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 128.65′
L = 257.28′
E = 0.67′

℄ PROP. CONNECTION
'W' I.R. 271
P.I. Sta = 997+69.61
Δ = 1° 12′ 02″ (LT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 128.65′
L = 257.28′
E = 0.67′

## ESTIMATED QUANTITIES

| Location | | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Proctection Filter Fabric Fence | Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 132 | | |
| At Inlet protection this sheet | | | | | 208 | |
| From | To | | | | | |
| Sta. 955+16 | Sta. 971+88 | Lt. | 3400 | | | |
| Sta. 964+46 | Sta. 966+56 | Rt. | 820 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 4220 | 132 | 208 | 0 |

Legend
- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- F — Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 955+00 to Sta. 980+00

SCALE IN FEET 0 50 100 200

CALCULATED JAP CHECKED jmr

MED-71-15.78

Connector W
P.I. Sta = 955+61.72
Δ = 6° 11' 21" (LT)
Dc = 0° 22' 08"
R = 15,536.07'
T = 839.92'
L = 1,678.20'
E = 22.69'

Connector W
P.I. Sta = 968+15.48
Δ = 4° 54' 48" (LT)
Dc = 0° 50' 33"
R = 6,800.00'
T = 291.74'
L = 583.12'
E = 6.26'

Connector W
P.I. Sta = 974+65.00
Δ = 22° 53' 43" (LT)
Dc = 5° 12' 31"
R = 1,100.00'
T = 222.75'
L = 439.56'
E = 22.33'

IR 71
P.I. Sta = 974+65.00
Δ = 22° 53' 43" (LT)
Dc = 5° 12' 31"
R = 1,100.00'
T = 222.75'
L = 7298.08'
E = 22.33'

CH 21
P.I. Sta = 46+38.02
Δ = 2° 49' 12" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 70.51'
L = 141.00'
E = 0.87'

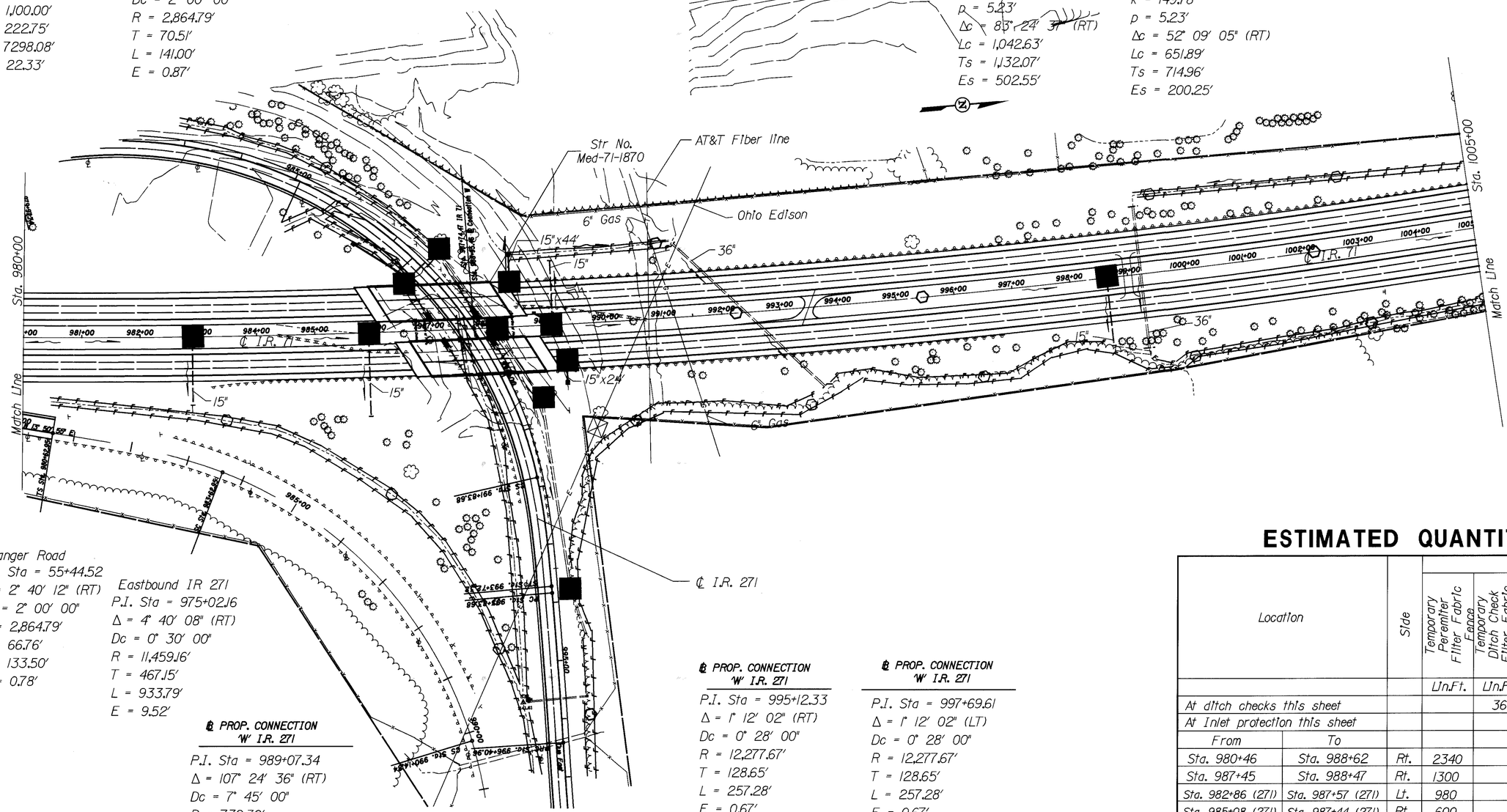
℄ PROP. CONNECTION 'W' I.R. 271
P.I. Sta = 2+08.27
Δ = 9° 09' 32" (LT)
Dc = 8° 00' 00"
R = 716.20'
T = 57.37'
L = 114.49'
E = 2.29'

℄ PROP. CONNECTION 'W' I.R. 271
P.I. Sta = 974+61.07
Δ = 25° 03' 12" (LT)
Dc = 5° 30' 00"
R = 1,041.74'
Ls = 200.00'
Theta = 5° 30' 00"
LT = 133.40'
ST = 66.73'
x = 199.82'
y = 6.40'
k = 99.97'
p = 1.60'
Δc = 14° 03' 12" (LT)
Lc = 255.51'
Ts = 331.78'
Es = 27.04'

Connector W
P.I. Sta = 988+87.94
Δ = 107° 24' 37" (RT)
Dc = 8° 00' 00"
R = 716.20'
Ls = 300.00'
Theta = 12° 00' 00"
LT = 200.46'
ST = 100.42'
x = 298.69'
y = 20.88'
k = 149.78'
p = 5.23'
Δc = 83° 24' 37" (RT)
Lc = 1,042.63'
Ts = 1,132.07'
Es = 502.55'

Eastbound IR 271
P.I. Sta = 987+77.90
Δ = 76° 09' 04" (RT)
Dc = 8° 00' 00"
R = 716.20'
Ls = 300.00'
Theta = 12° 00' 00"
LT = 200.46'
ST = 100.42'
x = 298.69'
y = 20.88'
k = 149.78'
p = 5.23'
Δc = 52° 09' 05" (RT)
Lc = 651.89'
Ts = 714.96'
Es = 200.25'

Legend
- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion




## ESTIMATED QUANTITIES

| Location | | Side | 877 | | | |
|---|---|---|---|---|---|---|
| | | | Temporary Perimiter Filter Fabric Fence | Temporary Ditch Check Filter Fabric Fence | Temporary Inlet Protection Filter Fabric Fence | Temporary Dams & Sediment Basins |
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 36 | | |
| At inlet protection this sheet | | | | | 75 | |
| From | To | | | | | |
| Sta. 980+46 | Sta. 988+62 | Rt. | 2340 | | | |
| Sta. 987+45 | Sta. 988+47 | Rt. | 1300 | | | |
| Sta. 982+86 (271) | Sta. 987+57 (271) | Lt. | 980 | | | |
| Sta. 985+08 (271) | Sta. 987+44 (271) | Rt. | 600 | | | |
| Sta. 988+44 | Sta. 991+14 | Lt. | 540 | | | |
| Sta. 989+40 | Sta. 1005+00 | Rt. | 4103 | | | |
| Sta. 999+26 | Sta. 1005+00 | Lt. | 1140 | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 11003 | 36 | 75 | 0 |

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 980+00 to Sta. 1005+00

MED-71-15.78

155
940

CALCULATED JAP
CHECKED

SCALE IN FEET 0 50 100 200

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71sw7.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 14:26

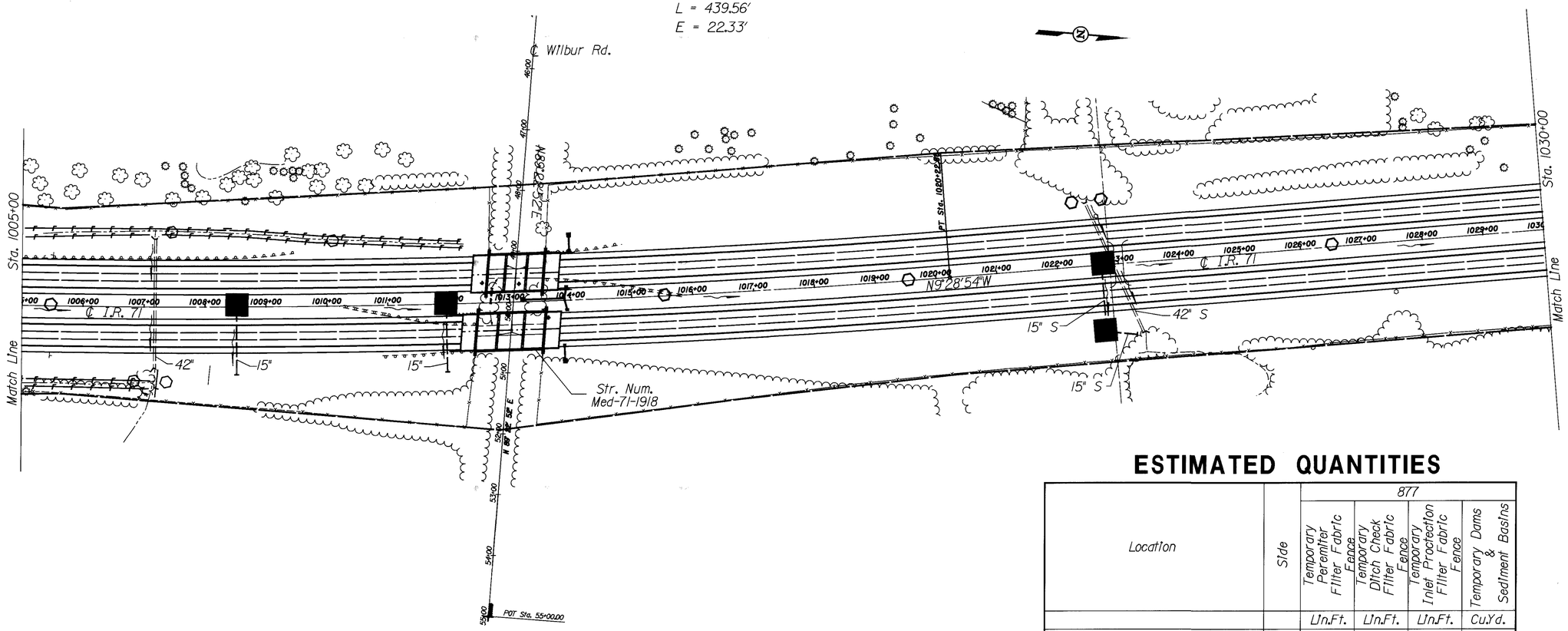
DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71sw8.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 12:24

*Legend*

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

IR 71
P.I. Sta = 974+65.00
Δ = 22° 53′ 43″ (LT)
Dc = 5° 12′ 31″
R = 1,100.00′
T = 222.75′
L = 439.56′
E = 22.33′




## ESTIMATED QUANTITIES

| Location | | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Proctection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 120 | | |
| At Inlet protection this sheet | | | | | 104 | |
| From | To | | | | | |
| Sta. 1005+00 | Sta. 1012+30 | Lt. | 1500 | | | |
| Sta. 1005+00 | Sta. 1007+21 | Rt. | 525 | | | |
| | | | | | | |
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| | | | | | | |
| Totals Carried to Sheet 171 | | | 2025 | 120 | 104 | 0 |

N

0 50 100 200 SCALE IN FEET

CALCULATED JAP CHECKED gwr

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 1005+00 to Sta. 1030+00

MED-71-15.78

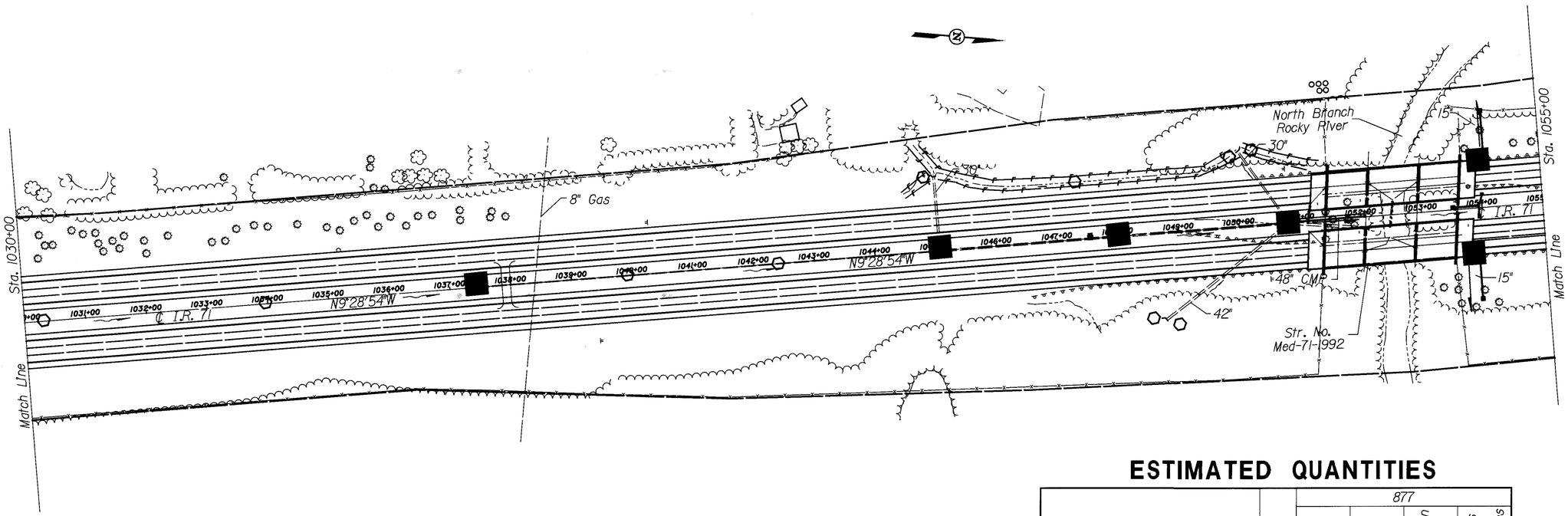
156
940

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71sw9.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 12:26

*Legend*

- ■ *Inlet Filter Barrier, 26 Lin. feet*
- ○ *Ditch Check, 12 Lin. feet*
- —F— *Filter Fabric Fence*
- *Sediment Basin*
- *Sediment Dam*
- *Drainage Ditch or Temporary Diversion*




## ESTIMATED QUANTITIES

| Location | | Side | 877 | | | |
|---|---|---|---|---|---|---|
| | | | Temporary Perimiter Filter Fabric Fence | Temporary Ditch Check Filter Fabric Fence | Temporary Inlet Proctection Filter Fabric Fence | Temporary Dams & Sediment Basins |
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 120 | | |
| At Inlet protection this sheet | | | | | 156 | |
| From | To | | | | | |
| Sta. 1044+21 | Sta. 1051+40 | Lt. | 1360 | | | |
| | | | | | | |
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| | | | | | | |
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| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 1360 | 120 | 156 | 0 |

N

0 50 100 200 SCALE IN FEET

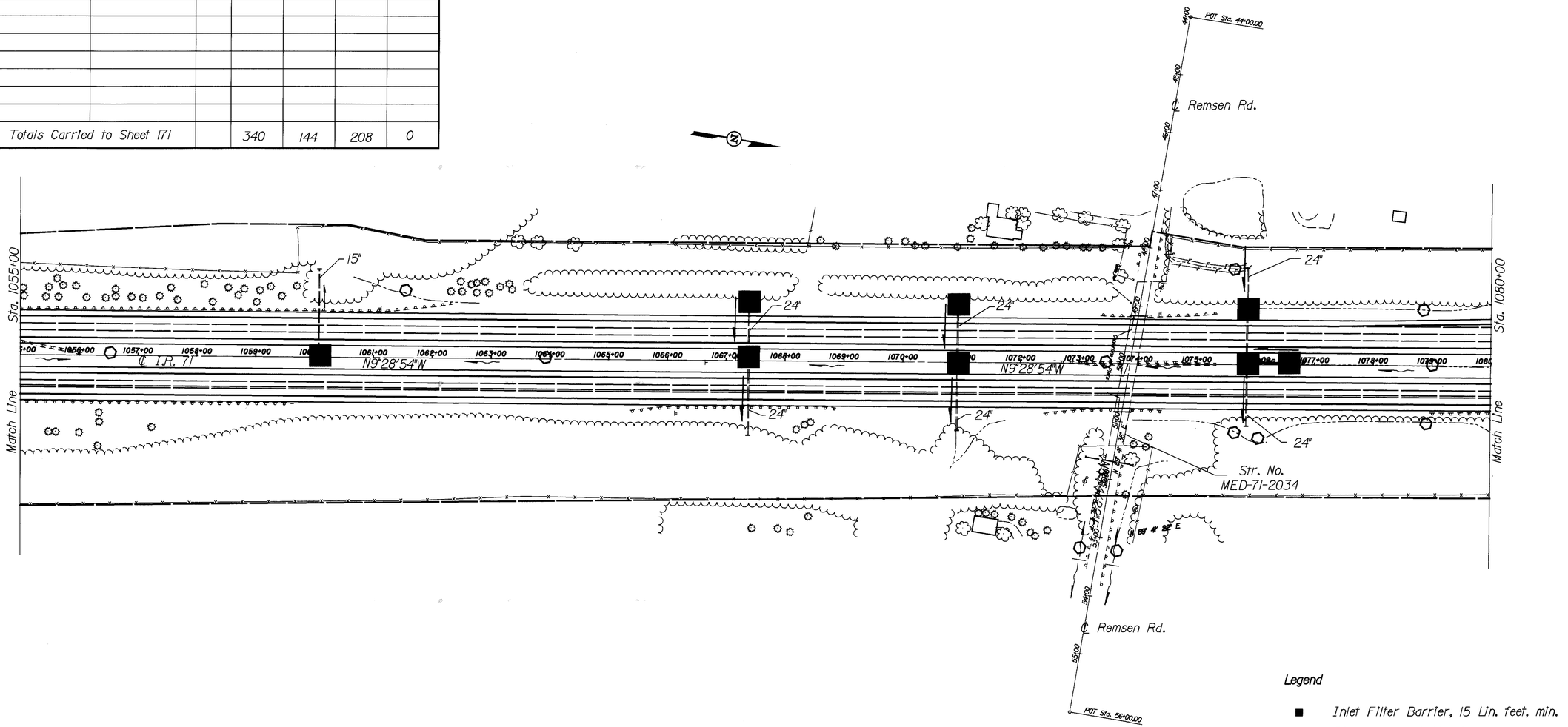
CALCULATED JAP CHECKED

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 1030+00 to Sta. 1055+00

## MED-71-15.78

# ESTIMATED QUANTITIES

| Location | | Side | 877 | | | |
|---|---|---|---|---|---|---|
| | | | Temporary Peremiter Filter Fabric Fence | Temporary Ditch Check Filter Fence | Temporary Inlet Proctection Filter Fence | Temporary Dams & Sediment Basins |
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 144 | | |
| At Inlet protection this sheet | | | | | 208 | |
| From | To | | | | | |
| Sta. 1074+48 | Sta. 1074+48 | Lt. | 340 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 340 | 144 | 208 | 0 |




Legend

- Inlet Filter Barrier, 15 Lin. feet, min.
- Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

N

0 50 100 200 SCALE IN FEET

CALCULATED JAP CHECKED JWR

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 1055+00 to Sta. 1080+00

## MED-71-15.78

158
940

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71sw10.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 12:28

# ESTIMATED QUANTITIES

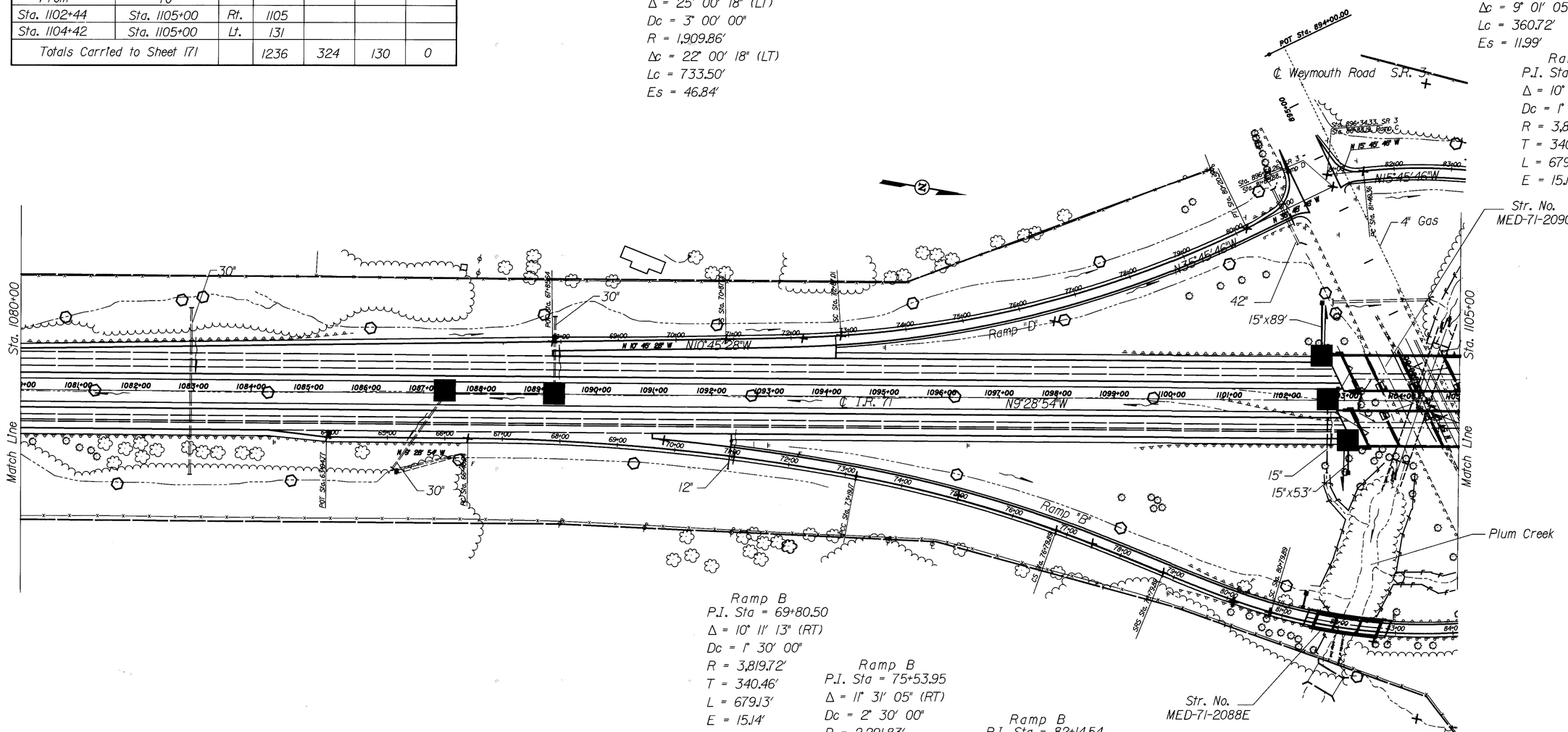
| Location | | Side | 877 | | | |
|---|---|---|---|---|---|---|
| | | | Temporary Perimiter Filter Fabric Fence | Temporary Ditch Check Filter Fabric Fence | Temporary Inlet Protection Filter Fabric Fence | Temporary Dams & Sediment Basins |
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 324 | | |
| At inlet protection this sheet | | | | | 130 | |
| From | To | | | | | |
| Sta. 1102+44 | Sta. 1105+00 | Rt. | 1105 | | | |
| Sta. 1104+42 | Sta. 1105+00 | Lt. | 131 | | | |
| Totals Carried to Sheet 171 | | | 1236 | 324 | 130 | 0 |

Ramp C
P.I. Sta = 83+88.05
Δ = 27° 59' 10" (RT)
Dc = 6° 00' 00"
R = 954.93'
Δc = 21° 59' 10" (RT)
Lc = 366.44'
Es = 30.11'

Ramp C
P.I. Sta = 90+40.36
Δ = 11° 31' 05" (LT)
Dc = 2° 30' 00"
R = 2,291.83'
Δc = 9° 01' 05" (LT)
Lc = 360.72'
Es = 11.99'

Ramp C
P.I. Sta = 96+13.98
Δ = 10° 11' 13" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 340.46'
L = 679.13'
E = 15.14'

Ramp D
P.I. Sta = 76+08.62
Δ = 25° 00' 18" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
Δc = 22° 00' 18" (LT)
Lc = 733.50'
Es = 46.84'




Ramp B
P.I. Sta = 69+80.50
Δ = 10° 11' 13" (RT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 340.46'
L = 679.13'
E = 15.14'

Ramp B
P.I. Sta = 75+53.95
Δ = 11° 31' 05" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
Δc = 9° 01' 05" (RT)
Lc = 360.72'
Es = 11.99'

Ramp B
P.I. Sta = 82+14.54
Δ = 27° 59' 10" (LT)
Dc = 6° 00' 00"
R = 954.93'
Δc = 21° 59' 10" (LT)
Lc = 366.44'
Es = 30.11'

*Legend*

- ■ Inlet Filter Barrier, 15 Lin. feet, min.
- ⬡ Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

SCALE IN FEET 0 50 100 200

CALCULATED DAP CHECKED DWP

**STORM WATER POLLUTION PREVENTION PLAN**
**Sta. 1080+00 to Sta. 1105+00**

**MED-71-15.78**

159
940

DESIGN FILE : i:\pd_med_lr71\dgn\erosion\med71swll.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 12:30

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71swl2.dgn
USERNAME : rswift
DATE : 24-NOV-1999
TIME : 12:32

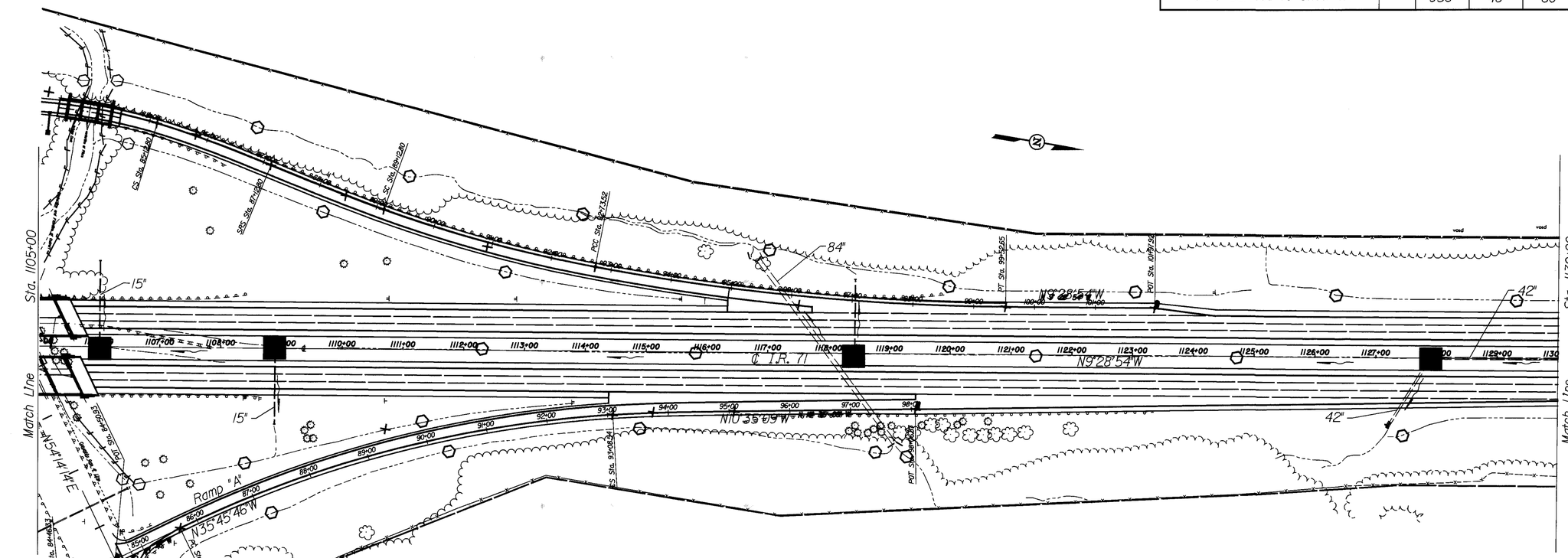
Ramp C
P.I. Sta = 83+88.05
Δ = 27° 59′ 10″ (RT)
Dc = 6° 00′ 00″
R = 954.93′
Δc = 21° 59′ 10″ (RT)
Lc = 366.44′
Es = 30.11′

Ramp C
P.I. Sta = 90+40.36
Δ = 11° 31′ 05″ (LT)
Dc = 2° 30′ 00″
R = 2,291.83′
Δc = 9° 01′ 05″ (LT)
Lc = 360.72′
Es = 11.99′

Ramp C
P.I. Sta = 96+13.98
Δ = 10° 11′ 13″ (LT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 340.46′
L = 679.13′
E = 15.14′

## ESTIMATED QUANTITIES

| Location | | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Proctection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 48 | | |
| At Inlet protection this sheet | | | | | 60 | |
| From | To | | | | | |
| Sta. 1105+43 | Sta. 1106+61 | Rt. | 186 | | | |
| Sta. 1105+00 | Sta. 1106+00 | Lt. | 770 | | | |
| Totals Carried to Sheet 171 | | | 956 | 48 | 60 | 0 |




Ramp A
P.I. Sta = 89+43.61
Δ = 25° 10′ 37″ (RT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 739.23′
L = 739.23′
E = 47.49′

Ramp B
P.I. Sta = 69+80.50
Δ = 10° 11′ 13″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 340.46′
L = 679.13′
E = 15.14′

Ramp B
P.I. Sta = 75+53.95
Δ = 11° 31′ 05″ (RT)
Dc = 2° 30′ 00″
R = 2,291.83′
Δc = 9° 01′ 05″ (LT)
Lc = 360.72′
Es = 11.99′

Ramp B
P.I. Sta = 82+14.54
Δ = 27° 59′ 10″ (LT)
Dc = 6° 00′ 00″
R = 954.93′
Δc = 21° 59′ 10″ (LT)
Lc = 366.44′
Es = 30.11′

*Legend*

- Inlet Filter Barrier, 15 Lin. feet, min.
- Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

N

0 50 100 200 SCALE IN FEET

CALCULATED JAP CHECKED JWR

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 1105+00 to Sta. 1130+00

MED-71-15.78

160
940

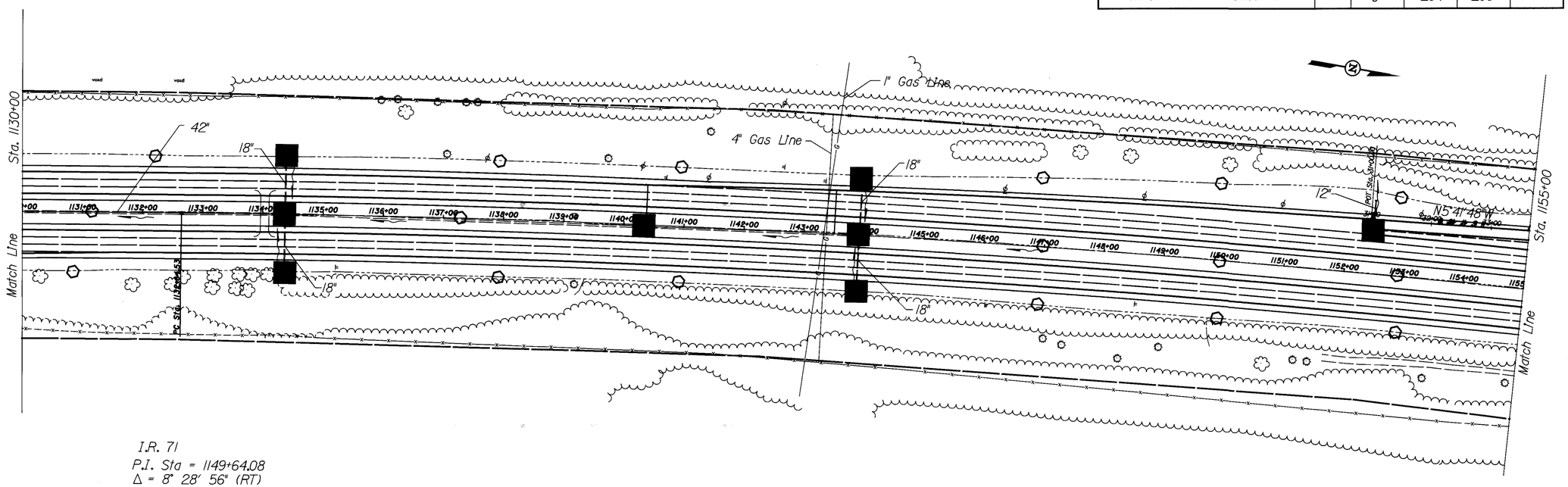
DESIGN FILE : i:\pd_med_lr71\dgn\erosion\med71swl3.dgn
USERNAME : rswift
DATE : 24-NOV-1999
TIME : 12:34

## ESTIMATED QUANTITIES

| Location | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Proctection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|
| | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | 204 | | |
| At Inlet protection this sheet | | | | 208 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Totals Carried to Sheet 171 | | 0 | 204 | 208 | 0 |

*Legend*

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion




I.R. 71
P.I. Sta = 1149+64.08
Δ = 8° 28' 56" (RT)
Dc = 0° 15' 00"
R = 22,918.23'
T = 1,699.54'
L = 3,392.88'
E = 62.93'

SCALE IN FEET 0 100 200 50

CALCULATED DAP CHECKED JWR

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 1130+00 to Sta. 1155+00

MED-71-15.78

I.R. 71
P.I. Sta = 1149+64.08
Δ = 8° 28′ 56″ (RT)
Dc = 0° 15′ 00″
R = 22,918.23′
T = 1,699.54′
L = 3,392.88′
E = 62.93′

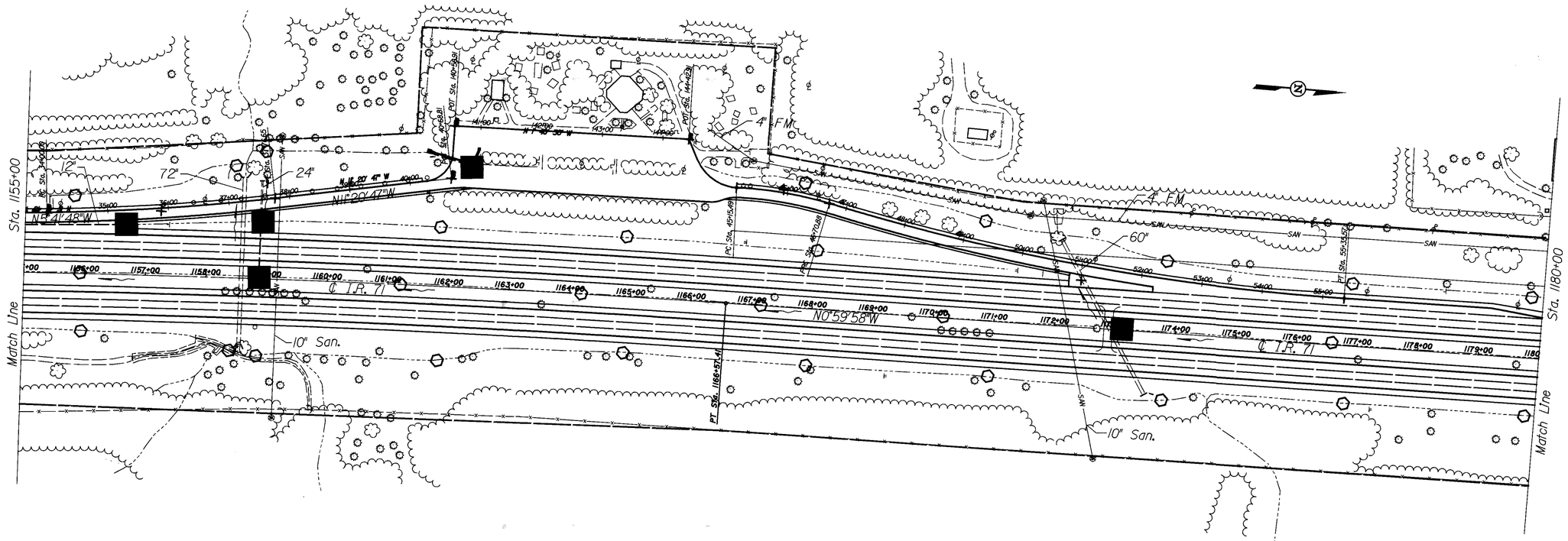
S.B. Rest Area
P.I. Sta = 35+88.48
Δ = 5° 38′ 59″ (LT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 188.48′
L = 376.65′
E = 4.65′

S.B. Rest Area
P.I. Sta = 45+93.57
Δ = 13° 59′ 08″ (RT)
Dc = 9° 00′ 00″
R = 636.62′
T = 78.08′
L = 155.39′
E = 4.77′

S.B. Rest Area
P.I. Sta = 51+05.08
Δ = 12° 58′ 13″ (LT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 434.20′
L = 864.69′
E = 24.60′

# ESTIMATED QUANTITIES

| Location | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Protection Filter Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|
| | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks on this sheet | | | 324 | | |
| At all catch basins on this sheet | | | | 130 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Totals Carried to Sheet 171 | | 0 | 324 | 130 | 0 |




Legend

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

SCALE IN FEET 0 50 100 200

CALCULATED JAP CHECKED

# STORM WATER POLLUTION PREVENTION PLAN
Sta. 1155+00 to Sta. 1180+00

MED-71-15.78

162
940

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71siw14.dgn
USERNAME : rswift
DATE : 24-NOV-1999
TIME : 12:42

DESIGN FILE : i:\pd_med_lr71\dgn\erosion\med71slw15.dgn
USERNAME : rswift
DATE : 24-NOV-1999
TIME : 12:45

# ESTIMATED QUANTITIES

| Location | | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Proctection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 252 | | |
| At Inlet protection this sheet | | | | | 182 | |
| From | To | | | | | |
| Sta. 1185+76 | Sta. 1185+96 | Lt. | 136 | | | |
| Sta. 1192+99 | Sta. 1193+27 | Lt. | 176 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 312 | 252 | 182 | 0 |

*Legend*

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

Sleepy Hollow Rd.
P.I. Sta = 43+22.85
Δ = 22° 23′ 00″ (LT)
Dc = 3° 32′ 12″
R = 1,620.05′
T = 320.53′
L = 632.89′
E = 31.41′

℄ Sleepy Hollow Road

PC Sta. 40+02.32

PT Sta. 46+35.21

I.R. 71
P.I. Sta = 1218+79.02
Δ = 14° 01′ 13″ (LT)
Dc = 0° 28′ 00″
R = 12,277.63′
T = 1,509.71′
L = 3,004.33′
E = 92.47′

Str. No. Med-71-2242

℄ I.R. 71

N0°59′58″W

Match Line Sta. 1205+00

N.B. Rest Area
P.I. Sta = 75+65.38
Δ = 9° 26′ 24″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 315.38′
L = 629.33′
E = 13.00′

N.B. Rest Area
P.I. Sta = 83+01.31
Δ = 11° 54′ 49″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
T = 199.28′
L = 397.12′
E = 10.37′

N.B. Rest Area
P.I. Sta = 93+54.23
Δ = 5° 18′ 31″ (RT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 265.62′
L = 530.86′
E = 6.15′

SCALE IN FEET 0 50 100 200

CALCULATED JAP CHECKED JWH

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 1180+00 to Sta. 1205+00

## MED-71-15.78

163
940

DESIGN FILE : I:\pd_med_lr71\dgn\erosion\med71swl6.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 15:14

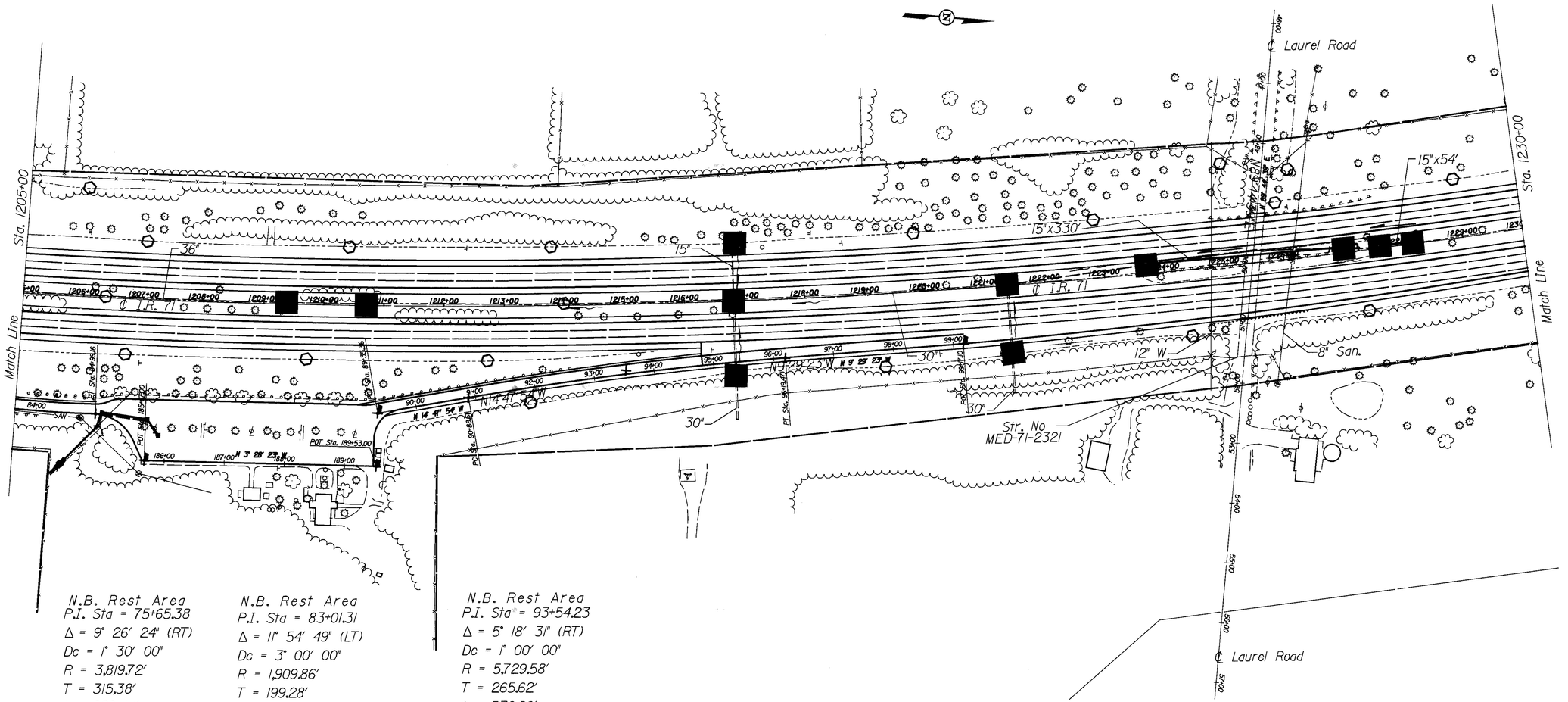
I.R. 71
P.I. Sta = 1218+79.02
Δ = 14° 01′ 13" (LT)
Dc = 0° 28′ 00"
R = 12,277.63′
T = 1,509.71′
L = 3,004.33′
E = 92.47′

**Legend**

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

## ESTIMATED QUANTITIES

| Location | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Proctection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|
| | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | 228 | | |
| At Inlet protection this sheet | | | | 286 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Totals Carried to Sheet 171 | | 0 | 228 | 286 | 0 |




**N.B. Rest Area**
P.I. Sta = 75+65.38
Δ = 9° 26′ 24" (RT)
Dc = 1° 30′ 00"
R = 3,819.72′
T = 315.38′
L = 629.33′
E = 13.00′

**N.B. Rest Area**
P.I. Sta = 83+01.31
Δ = 11° 54′ 49" (LT)
Dc = 3° 00′ 00"
R = 1,909.86′
T = 199.28′
L = 397.12′
E = 10.37′

**N.B. Rest Area**
P.I. Sta = 93+54.23
Δ = 5° 18′ 31" (RT)
Dc = 1° 00′ 00"
R = 5,729.58′
T = 265.62′
L = 530.86′
E = 6.15′

0 50 100 200 SCALE IN FEET

CALCULATED JAP CHECKED Grize

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 1205+00 to Sta. 1230+00

MED-71-15.78

164
940

# ESTIMATED QUANTITIES

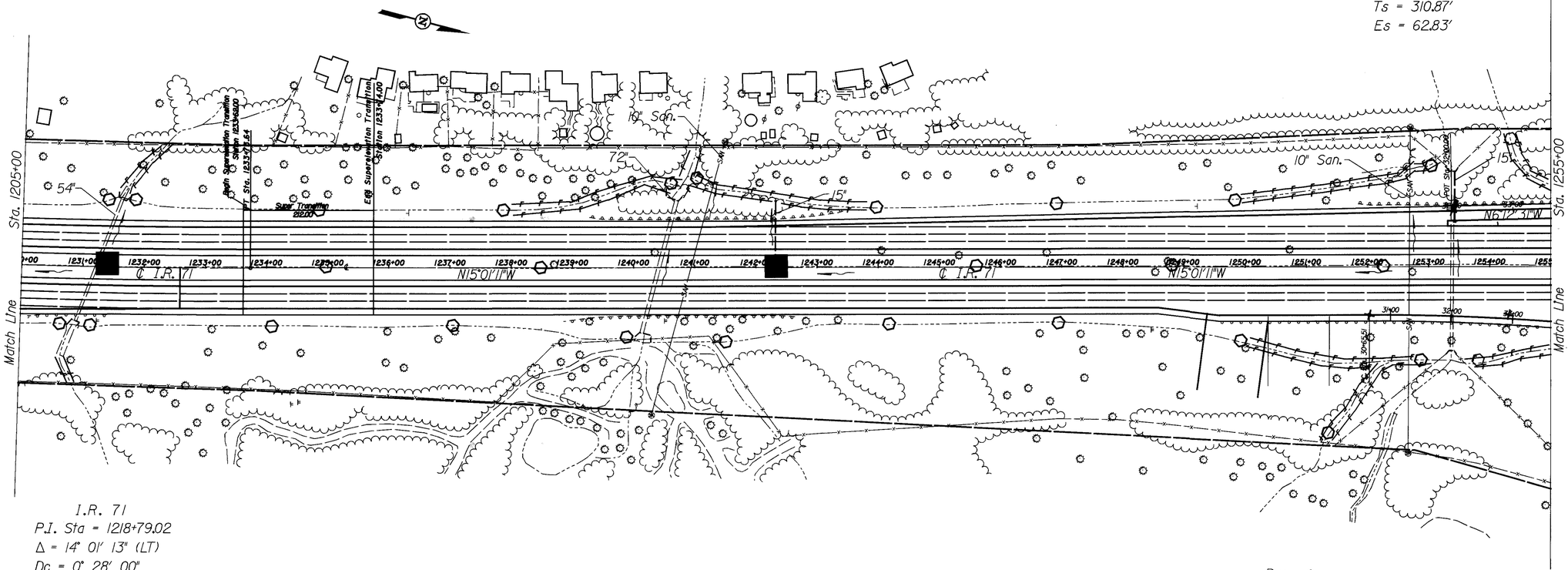
| Location | | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Protection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 60 | | |
| At inlet protection this sheet | | | | | 30 | |
| From | To | | | | | |
| Sta. 1238+00 | Sta. 1244+00 | Lt. | 1276 | | | |
| Sta. 1231+58 | Sta. 1231+74 | Lt. | 200 | | | |
| Sta. 1230+58 | Sta. 1230+90 | Rt. | 100 | | | |
| Sta. 1255+02 | Sta. 1255+00 | Rt. | 1178 | | | |
| Sta. 1250+00 | Sta. 1253+20 | Lt. | 650 | | | |
| Sta. 1254+22 | Sta. 1255+00 | Lt. | 240 | | | |
| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 3644 | 60 | 30 | 0 |

**Legend**

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

Ramp "A"
P.I. Sta = 45+87.41
Δ = 8° 28' 44" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
T = 169.89'
L = 339.16'
E = 6.29'

Ramp "A"
P.I. Sta = 48+31.13
Δ = 61° 31' 16" (LT)
Dc = 16° 22' 13"
R = 350.00'
Ls = 200.00'
Theta = 16° 22' 13"
LT = 133.91'
ST = 67.19'
x = 198.37'
y = 18.94'
k = 99.73'
p = 4.75'
Δc = 28° 46' 50" (LT)
Lc = 175.81'
Ts = 310.87'
Es = 62.83'




I.R. 71
P.I. Sta = 1218+79.02
Δ = 14° 01' 13" (LT)
Dc = 0° 28' 00"
R = 12,277.63'
T = 1,509.71'
L = 3,004.33'
E = 92.47'

Ramp C
P.I. Sta. = 38+62.39
Δ = 34° 01' 48" (RT)
Dc = 9° 00'
R = 636.62'
Ls = 200.00'
Theta = 9° 00'
LT = 133.51'
ST = 66.82'
x = 199.51'
y = 10.45'
k = 99.92'
p = 2.62'
Δc = 25° 01' 48" (RT)
Lc = 278.11'
Ec = 15.49'
Tc = 141.31'

DESIGN FILE : i:\pd_med_lr71\dgn\erosion\med71swl7.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 15:12

SCALE IN FEET 0 50 100 200

CALCULATED SAP CHECKED

# STORM WATER POLLUTION PREVENTION PLAN

## MED-71-15.78

## Sta. 1230+00 to Sta. 1255+00

165
940

# ESTIMATED QUANTITIES

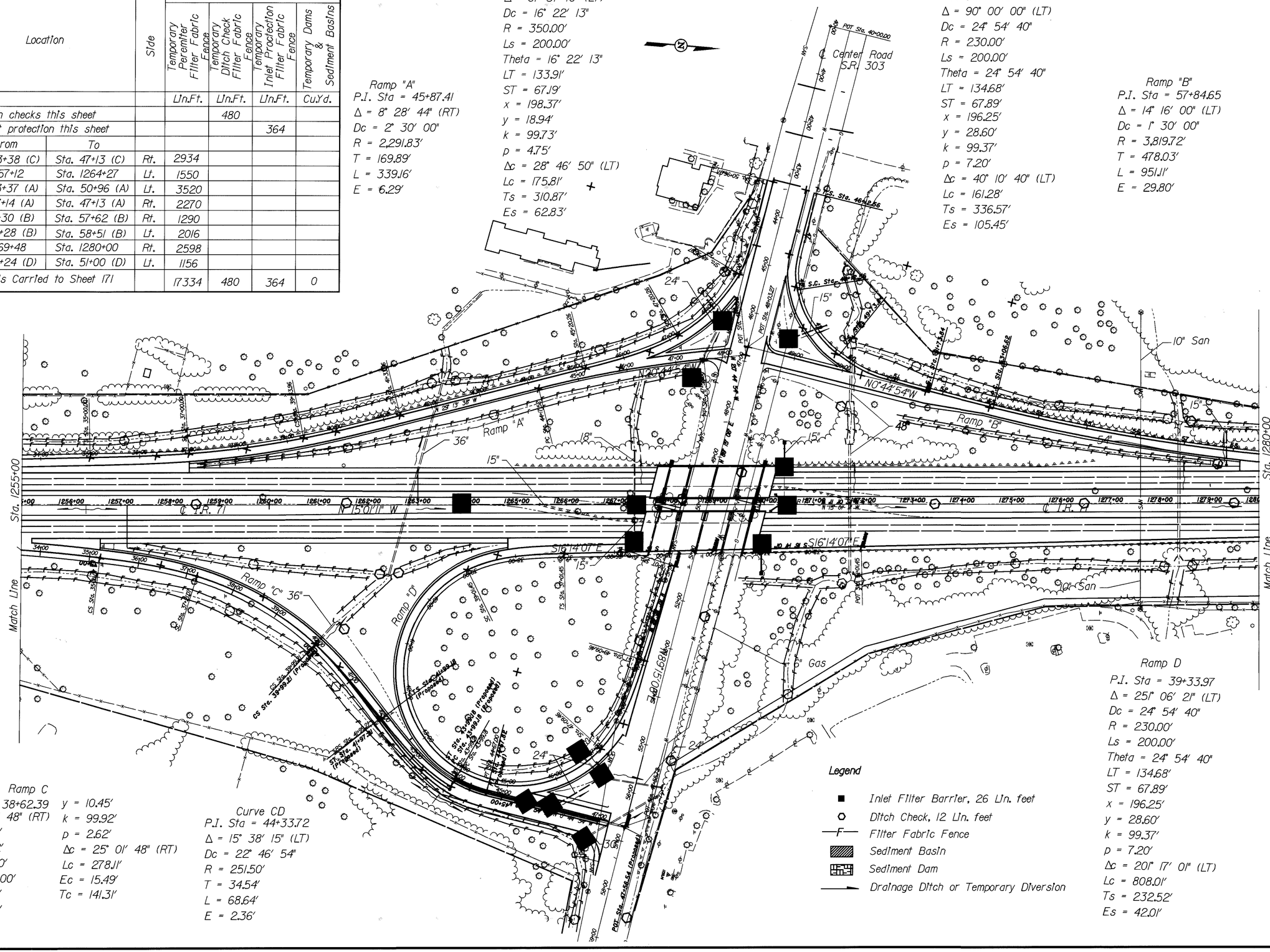
| Location | | Side | 877 | | | |
|---|---|---|---|---|---|---|
| | | | Temporary Perenifter Filter Fabric Fence | Temporary Ditch Check Filter Fabric Fence | Temporary Inlet Protection Filter Fabric Fence | Temporary Dams & Sediment Basins |
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 480 | | |
| At Inlet protection this sheet | | | | | 364 | |
| From | To | | | | | |
| Sta. 33+38 (C) | Sta. 47+13 (C) | Rt. | 2934 | | | |
| Sta. 1257+12 | Sta. 1264+27 | Lt. | 1550 | | | |
| Sta. 33+37 (A) | Sta. 50+96 (A) | Lt. | 3520 | | | |
| Sta. 37+14 (A) | Sta. 47+13 (A) | Rt. | 2270 | | | |
| Sta. 51+30 (B) | Sta. 57+62 (B) | Rt. | 1290 | | | |
| Sta. 47+28 (B) | Sta. 58+51 (B) | Lt. | 2016 | | | |
| Sta. 1269+48 | Sta. 1280+00 | Rt. | 2598 | | | |
| Sta. 44+24 (D) | Sta. 51+00 (D) | Lt. | 1156 | | | |
| Totals Carried to Sheet 171 | | | 17334 | 480 | 364 | 0 |

Ramp "A"
P.I. Sta = 48+31.13
Δ = 61° 31′ 16" (LT)
Dc = 16° 22′ 13"
R = 350.00′
Ls = 200.00′
Theta = 16° 22′ 13"
LT = 133.91′
ST = 67.19′
x = 198.37′
y = 18.94′
k = 99.73′
p = 4.75′
Δc = 28° 46′ 50" (LT)
Lc = 175.81′
Ts = 310.87′
Es = 62.83′

Ramp "A"
P.I. Sta = 45+87.41
Δ = 8° 28′ 44" (RT)
Dc = 2° 30′ 00"
R = 2,291.83′
T = 169.89′
L = 339.16′
E = 6.29′

Ramp "B"
P.I. Sta = 49+49.13
Δ = 90° 00′ 00" (LT)
Dc = 24° 54′ 40"
R = 230.00′
Ls = 200.00′
Theta = 24° 54′ 40"
LT = 134.68′
ST = 67.89′
x = 196.25′
y = 28.60′
k = 99.37′
p = 7.20′
Δc = 40° 10′ 40" (LT)
Lc = 161.28′
Ts = 336.57′
Es = 105.45′

Ramp "B"
P.I. Sta = 57+84.65
Δ = 14° 16′ 00" (LT)
Dc = 1° 30′ 00"
R = 3,819.72′
T = 478.03′
L = 951.11′
E = 29.80′




DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71sw18.dgn
USERNAME : rswift
DATE : 24-NOV-1999
TIME : 13:16

SCALE IN FEET 0 50 100 200
CALCULATED JAP CHECKED jwr

# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 1255+00 to Sta. 1280+00

MED-71-15.78

166
940

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71swl9.dgn
USERNAME : rswlft

DATE : 24-NOV-1999
TIME : 13:18

Ramp "B"
P.I. Sta = 49+49.13
Δ = 90° 00' 00" (LT)
Dc = 24° 54' 40"
R = 230.00'
Ls = 200.00'
Theta = 24° 54' 40"
LT = 134.68'
ST = 67.89'
x = 196.25'
y = 28.60'
k = 99.37'
p = 7.20'
Δc = 40° 10' 40" (LT)
Lc = 161.28'
Ts = 336.57'
Es = 105.45'

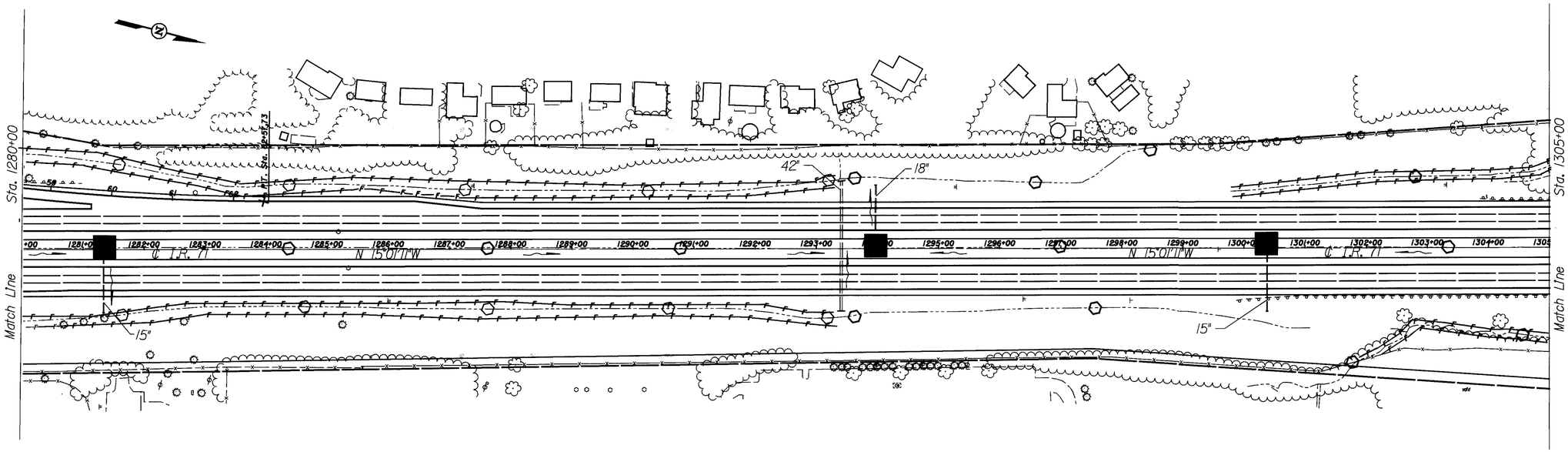
Ramp "B"
P.I. Sta = 57+84.65
Δ = 14° 16' 00" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 478.03'
L = 951.11'
E = 29.80'

*Legend*

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

## ESTIMATED QUANTITIES

| Location | | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Protection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 276 | | |
| At inlet protection this sheet | | | | | 78 | |
| From | To | | | | | |
| Sta. 58+51 (A) | Sta. 1293+31 | Lt. | 2650 | | | |
| Sta. 1280+00 | Sta. 1293+34 | Rt. | 2680 | | | |
| Sta. 1299+80 | Sta. 1305+00 | Lt. | 1048 | | | |
| Sta. 1301+89 | Sta. 1305+00 | Rt. | 640 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 7018 | 276 | 78 | 0 |




# STORM WATER POLLUTION PREVENTION PLAN
## Sta. 1280+00 to Sta. 1305+00

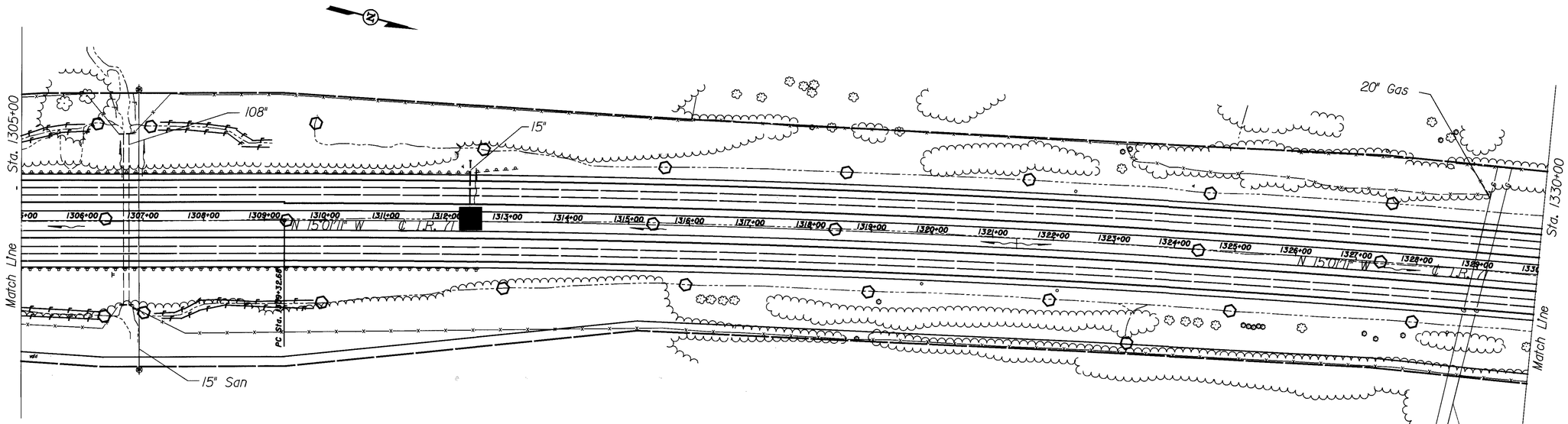
MED-71-15.78

CALCULATED JAP
CHECKED

SCALE IN FEET
0 50 100 200

# ESTIMATED QUANTITIES

| Location | | Side | 877 | | | |
|---|---|---|---|---|---|---|
| | | | Temporary Perimiter Filter Fabric Fence | Temporary Ditch Check Filter Fabric Fence | Temporary Inlet Protection Filter Fabric Fence | Temporary Dams & Sediment Basins |
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 300 | | |
| At Inlet protection this sheet | | | | | 26 | |
| From | To | | | | | |
| Sta. 1305+00 | Sta. 1309+13 | Lt. | 630 | | | |
| Sta. 1305+00 | Sta. 1309+81 | Rt. | 810 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 1440 | 300 | 26 | 0 |




*Legend*

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

I.R. 71
P.I. Sta = 1331+20.40
Δ = 10° 54′ 20" (RT)
Dc = 0° 15′ 00"
R = 22,918.23′
T = 2,187.71′
L = 4,362.21′
E = 104.18′

SCALE IN FEET 0 50 100 200

CALCULATED JAP CHECKED

**STORM WATER POLLUTION PREVENTION PLAN**
**Sta. 1305+00 to Sta. 1330+00**

**MED-71-15.78**

168
940

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71sw20.dgn
USERNAME : rswift

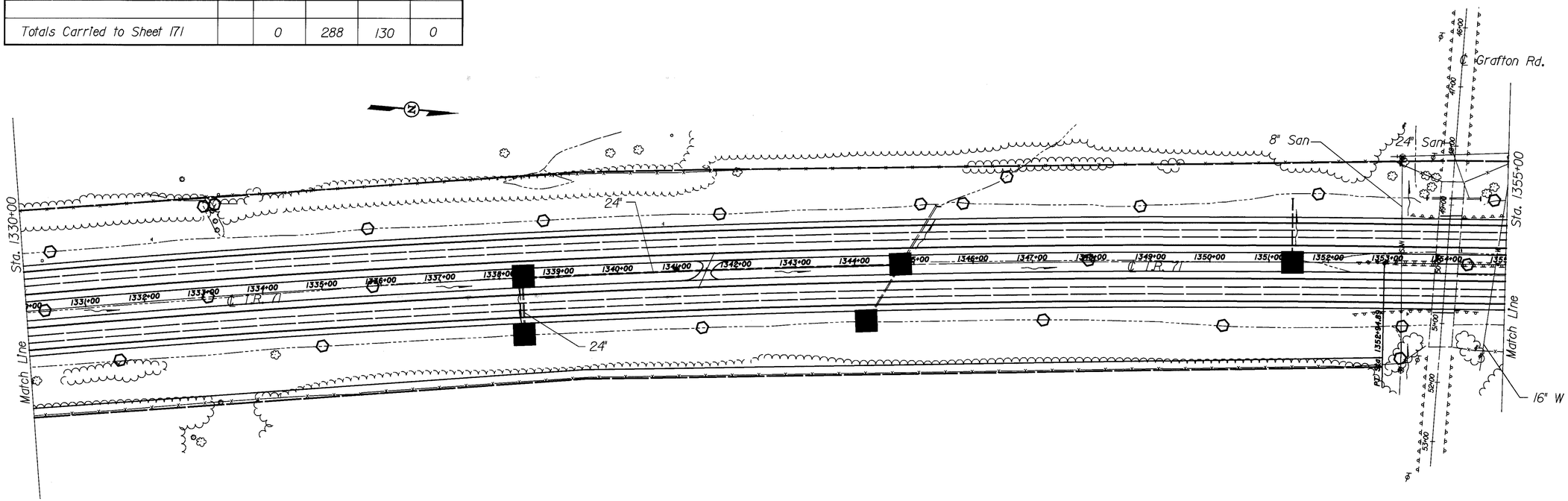
DATE : 24-NOV-1999
TIME : 13:21

# ESTIMATED QUANTITIES

| Location | Side | 877 | | | |
|---|---|---|---|---|---|
| | | Temporary Perimiter Filter Fabric Fence | Temporary Ditch Check Filter Fabric Fence | Temporary Inlet Proctection Filter Fabric Fence | Temporary Dams & Sediment Basins |
| | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | 288 | | |
| At Inlet protection this sheet | | | | 130 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Totals Carried to Sheet 171 | | 0 | 288 | 130 | 0 |

**Legend**

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion




*I.R. 71*
*P.I. Sta = 1331+20.40*
*Δ = 10° 54' 20" (RT)*
*Dc = 0° 15' 00"*
*R = 22,918.23'*
*T = 2,187.71'*
*L = 4,362.21'*
*E = 104.18'*

N

0 50 100 200 SCALE IN FEET

CALCULATED JAP CHECKED DWR

**STORM WATER POLLUTION PREVENTION PLAN**
**Sta. 1330+00 to Sta. 1355+00**

**MED-71-15.78**

169
940

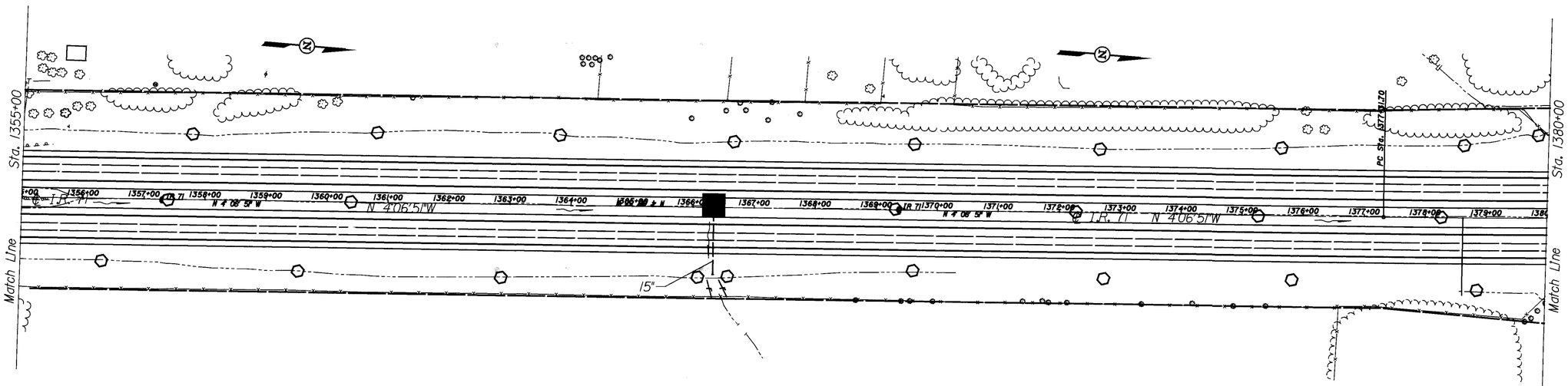
DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71sw2i.dgn
USERNAME : rswift
DATE : 24-NOV-1999
TIME : 13:22

# ESTIMATED QUANTITIES

| Location | | Side | 877 | | | |
|---|---|---|---|---|---|---|
| | | | Temporary Perimiter Filter Fabric Fence | Temporary Ditch Check Filter Fabric Fence | Temporary Inlet Protection Filter Fabric Fence | Temporary Dams & Sediment Basins |
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 288 | | |
| At inlet protection this sheet | | | | | 26 | |
| From | To | | | | | |
| Sta. 1366+24 | Sta. 1366+58 | Rt. | 72 | | | |
| Sta. 1375+20 | Sta. 1380+00 | Lt. | 824 | | | |
| Sta. 1378+61 | Sta. 1380+00 | Rt. | 280 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Totals Carried to Sheet 171 | | | 1176 | 288 | 26 | 0 |

*Legend*

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- —F— Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion




*I.R. 71*
*P.I. Sta = 1387+79.99*
*Δ = 5° 14' 16" (LT)*
*Dc = 0° 15' 00"*
*T = 1,048.28'*
*R = 22,918.23'*
*L = 2,095.10'*
*E = 23.96'*

DESIGN FILE : i:\pd_med_ir71\dgn\erosion\med71sw22.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 13:24

SCALE IN FEET 0 50 100 200

CALCULATED JAP CHECKED

**STORM WATER POLLUTION PREVENTION PLAN**
**Sta. 1355+00 to Sta. 1380+00**

**MED-71-15.78**

170
940

# ESTIMATED QUANTITIES

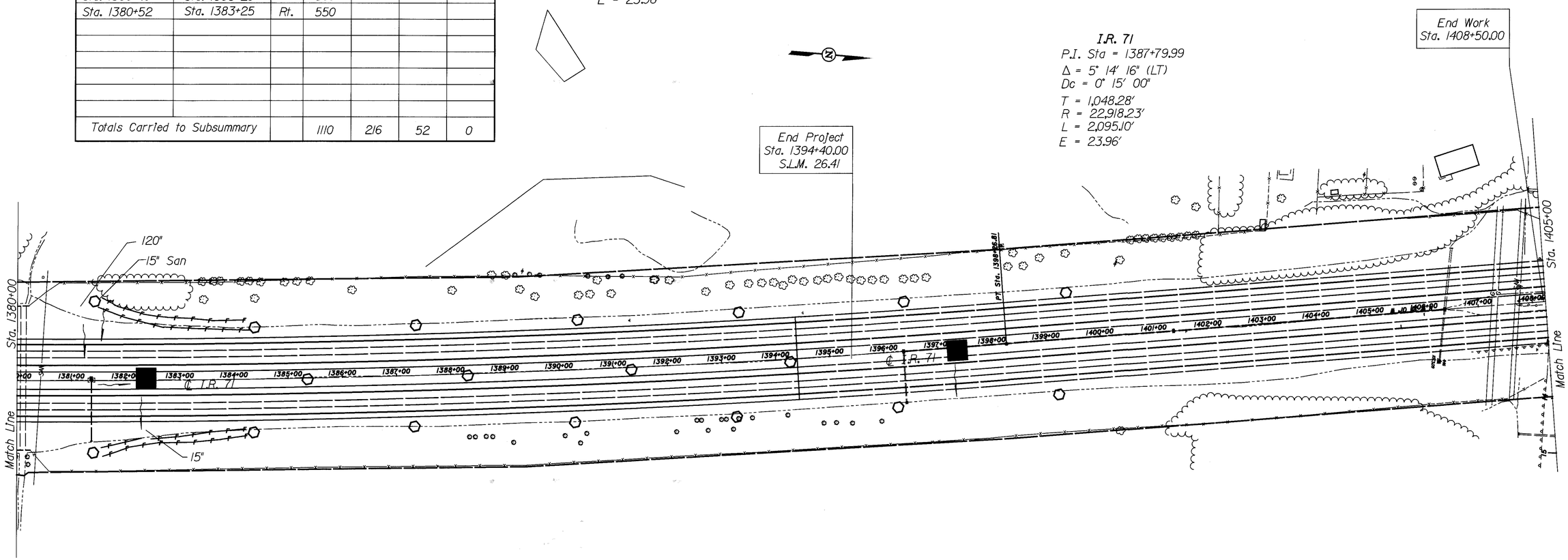
| Location | | Side | 877 Temporary Perimiter Filter Fabric Fence | 877 Temporary Ditch Check Filter Fabric Fence | 877 Temporary Inlet Proctection Filter Fabric Fence | 877 Temporary Dams & Sediment Basins |
|---|---|---|---|---|---|---|
| | | | Lin.Ft. | Lin.Ft. | Lin.Ft. | Cu.Yd. |
| At ditch checks this sheet | | | | 216 | | |
| At inlet protection this sheet | | | | | 52 | |
| From | To | | | | | |
| Sta. 1380+49 | Sta. 1383+28 | Lt. | 560 | | | |
| Sta. 1380+52 | Sta. 1383+25 | Rt. | 550 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Totals Carried to Subsummary | | | 1110 | 216 | 52 | 0 |

P.I. Sta = 1387+79.99
Δ = 5° 14' 16" (LT)
Dc = 0° 15' 00"
R = 22,918.23'
T = 1,048.28'
L = 2,095.10'
E = 23.96'

**Legend**

- Inlet Filter Barrier, 26 Lin. feet
- Ditch Check, 12 Lin. feet
- Filter Fabric Fence
- Sediment Basin
- Sediment Dam
- Drainage Ditch or Temporary Diversion

I.R. 71
P.I. Sta = 1387+79.99
Δ = 5° 14' 16" (LT)
Dc = 0° 15' 00"
T = 1,048.28'
R = 22,918.23'
L = 2,095.10'
E = 23.96'




# SWSPP SUB-SUMMARY

| SHEET NUMBER | | | | | | | | | | | | | | | | | | | | | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | EROSION CONTROL |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 1633 | 8883 | 5010 | 2750 | 4220 | 11003 | 2025 | 1360 | 340 | 1236 | 956 | 0 | 0 | 312 | 0 | 3644 | 17334 | 7018 | 1440 | 0 | 1176 | 1110 | 877 | 30100 | 71450 | LIN FT | TEMPORARY PERIMETER FILTER FABRIC FENCE |
| 180 | 204 | 276 | 156 | 312 | 132 | 36 | 120 | 120 | 144 | 324 | 48 | 204 | 324 | 252 | 228 | 60 | 480 | 276 | 300 | 288 | 288 | 216 | 877 | 30200 | 4968 | LIN FT | TEMPORARY DITCH CHECK FILTER FABRIC FENCE |
| 260 | 130 | 416 | 130 | 52 | 208 | 75 | 104 | 156 | 208 | 130 | 60 | 208 | 130 | 182 | 286 | 30 | 364 | 78 | 26 | 130 | 26 | 52 | 877 | 30300 | 3441 | LIN FT | TEMPORARY INLET PROTECTION FILTER FABRIC FENCE |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Totals carried to General Summary | | | | | | | | | | | | | | | | | | | | | | | | | | |

SCALE IN FEET 0 50 100 200

CALCULATED JAP CHECKED Jayne

**STORM WATER POLLUTION PREVENTION PLAN**
**Sta. 1380+00 to Sta. 1405+00**

**MED-71-15.78**

17
940

DESIGN FILE : i:\pr_med_ir71\dgn\erosion\med71sw23.dgn
USERNAME : rswift

DATE : 24-NOV-1999
TIME : 13:26

# PLAN AND PROFILE
# STA 826+00 TO STA 838+50

MED - 71 - 15.78

172
940

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Begin Work
Sta 829+30.29

Begin Project
Sta 833+00.00
S.L.M. 15.78

Begin Sheet

Sta. 826+00

Match Line

Sta. 838+50

TR 60
Ridgewood Road

LA R/W

+ 30.29
36' Lt.

+66, ℄
Type I-98

+00, 14' Rt.
Type B-98

℄ IR 71

N 30° 52' 56" E

EX. 6" GAS LINE
(COLUMBIA GAS)

OVERHEAD ELECTRIC
DISTRIBUTION LINE
(OHIO EDISON)

4-SW NOT USED

4-NW NOT USED

**UNDERDRAIN KEY**

SS - SOUTHBOUND OUTSIDE SHOULDER UNDERDRAIN
SO - SOUTHBOUND OUTSIDE PAVEMENT UNDERDRAIN
SI - SOUTHBOUND INSIDE PAVEMENT UNDERDRAIN
SM - SOUTHBOUND INSIDE SHOULDER UNDERDRAIN
NM - NORTHBOUND INSIDE SHOULDER UNDERDRAIN
NI - NORTHBOUND INSIDE PAVEMENT UNDERDRAIN
NO - NORTHBOUND OUTSIDE PAVEMENT UNDERDRAIN
NS - NORTHBOUND OUTSIDE SHOULDER UNDERDRAIN
TS - NORTHBOUND TRANSVERSE OUTSIDE UNDERDRAIN
TM - NORTHBOUND TRANSVERSE INSIDE UNDERDRAIN
TI - SOUTHBOUND TRANSVERSE INSIDE UNDERDRAIN
TO - SOUTHBOUND TRANSVERSE OUTSIDE UNDERDRAIN
UD - MISC. RAMP UD

STA. 829+95, 110' LT.
FL. EX. 24" (E)
OUTLET EL. 1014.9±

STA. 829+95, 10' LT.
EX. M.H.
TOP OF GRATE EL. 1021.0±
FL. EX. 15" (N.E.) EL. 1015.0±
FL. EX. 15" (S.W.) EL. 1015.0±
FL. EX. & PROP. 24" (N.) EL. 1015.0±
FL. EX. 24" (W.) EL. 1015.0±

STA. 829+80, 20' LT.
EX. C.B.
TOP OF GRATE EL. 1018.2±
FL. EX. 15" (N.E.) EL. 1015.5±

315' - 24" CONDUIT
TYPE C @ 0.70%

STA. 833+70, 20 LT.
EX. C.B. NO. 4 (TO BE REMOVED)
TOP OF GRATE EL. 1021.3±
FL. EX. 24" (N & S.) EL. 1017.6±

STA. 830+45, 98' RT.
EX. C.B.
TOP OF GRATE EL. 1023.6±
FL. EX. 15" (W.) EL. 1021.1±

Butt Joint as per Std. Dwg. BP 3.1M

STA. 833+10, 4' LT.
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1019.87
FL. 24" (S.W. & N.E.) EL. 1017.21

410' - 24" CONDUIT
TYPE C @ 0.70%

250' - 24" CONDUIT
TYPE C @ 0.70%

STA. 837+20, 4' LT.
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1022.70
FL. 24" (N.E. & S.W.) EL. 1020.08

N.B. +0.69 %

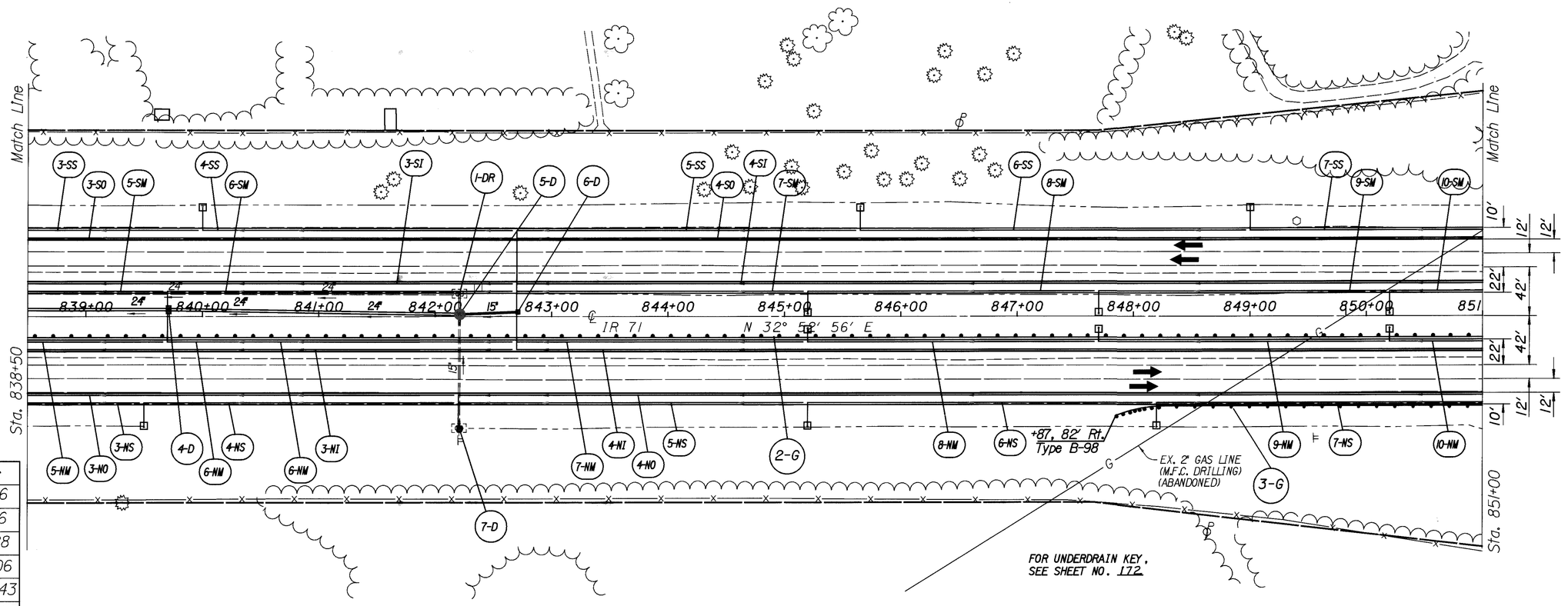
S.B. +0.69 %

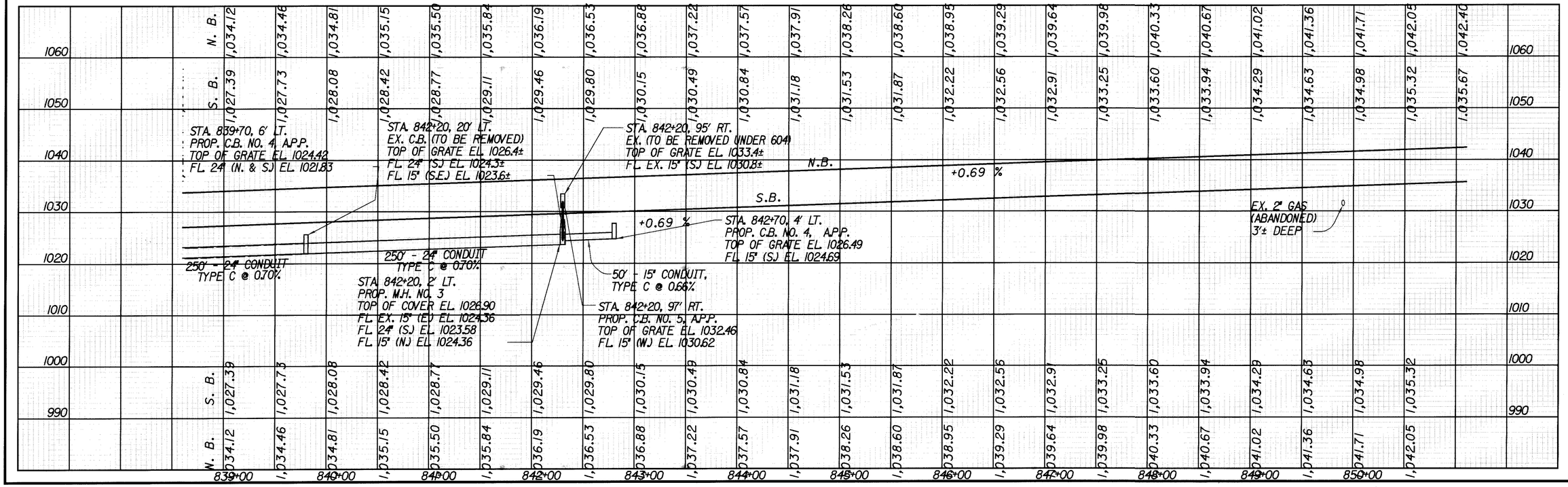
| | N. B. | | | | | | | S. B. | | | | | | | | N. B. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1,025.15 | 1,025.49 | 1,025.84 | 1,026.18 | 1,026.53 | 1,026.87 | 1,027.22 | 1,027.56 | 1,020.55 | 1,027.91 | 1,021.07 | 1,028.25 | 1,021.48 | 1,028.60 | 1,021.85 | 1,028.94 | 1,022.23 | 1,029.29 | 1,022.58 | 1,029.63 | 1,022.91 | 1,029.98 | 1,023.25 | 1,030.32 | 1,023.59 | 1,030.67 | 1,023.94 | 1,031.01 | 1,024.28 | 1,031.36 | 1,024.63 | 1,031.70 | 1,024.97 | 1,032.05 | 1,025.32 | 1,032.39 | 1,025.66 | 1,032.74 | 1,026.01 | 1,033.08 | 1,026.35 | 1,033.43 | 1,026.70 | 1,033.77 | 1,027.04 | 1,033.77 |
| 1050 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1040 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1030 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 990 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 980 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 826+00 | | 827+00 | | 828+00 | | 829+00 | | 830+00 | | 831+00 | | 832+00 | | 833+00 | | 834+00 | | 835+00 | | 836+00 | | 837+00 | | 838+00 | | | | | | | | | | | | | | | | | | | | |

DESIGN FILE : i:\pd_med_lr71\dgn\planprofile\gpl.dgn
USERNAME : jrogers

DATE : 09-DEC-1999
TIME : 07:07

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




| | 839+00 | 840+00 | 841+00 | 842+00 | 843+00 | 844+00 | 845+00 | 846+00 | 847+00 | 848+00 | 849+00 | 850+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N. B. | 1,034.12 | 1,034.46 | 1,034.81 | 1,035.15 | 1,035.50 | 1,035.84 | 1,036.19 | 1,036.53 | 1,036.88 | 1,037.22 | 1,037.57 | 1,037.91 |
| S. B. | 1,027.39 | 1,027.73 | 1,028.08 | 1,028.42 | 1,028.77 | 1,029.11 | 1,029.46 | 1,029.80 | 1,030.15 | 1,030.49 | 1,030.84 | 1,031.18 |

| | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N. B. | 1,038.26 | 1,038.60 | 1,038.95 | 1,039.29 | 1,039.64 | 1,039.98 | 1,040.33 | 1,040.67 | 1,041.02 | 1,041.36 | 1,041.71 | 1,042.05 |
| S. B. | 1,031.53 | 1,031.87 | 1,032.22 | 1,032.56 | 1,032.91 | 1,033.25 | 1,033.60 | 1,033.94 | 1,034.29 | 1,034.63 | 1,034.98 | 1,035.32 |

| | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N. B. | 1,042.40 | 1,042.74 | 1,043.09 | 1,043.43 | 1,043.78 | 1,044.12 | 1,044.47 | 1,044.81 | 1,045.16 | 1,045.50 | 1,045.85 | 1,046.19 |
| S. B. | 1,035.67 | 1,036.01 | 1,036.36 | 1,036.70 | 1,037.05 | 1,037.39 | 1,037.74 | 1,038.08 | 1,038.43 | 1,038.77 | 1,039.12 | 1,039.46 |

DESIGN FILE : I:\dot_med_lr71\dgn\vplanprofile\gp2.dgn
USERNAME : jrogers

DATE : 09-DEC-1999
TIME : 07h2

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

PLAN AND PROFILE
STA 838+50 TO STA 851+00

MED - 71 - 15.78

173
940

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Ramp "A" Curve Data

P.I. Sta = 5+96.87
Δ = 5° 35' 47" (LT)
Dc = 0° 28' 09"
R = 12,211.62'
T = 596.87'
L = 1,192.79'
E = 14.58'

Match Line

+00, 78' Lt. Type T

EX. 2" GAS LINE (M.F.C. DRILLING) (ABANDONED)

+40, 78' Lt. Type B-98

LA R/W

PC Sta. 858+73.94

PC Sta. 0+00.00 @ Ramp A

Match Line

Sta. 851+00

Sta. 863+50

852+00 853+00 854+00 855+00 856+00 857+00 IR 71 858+00 859+00 860+00 861+00 862+00 863+00

N 30° 52' 56" E

+00, 18' Rt.-Type T

+50, 78' Rt. Type T

Ground Fence

LA R/W

EX. 69 kv ELECTRIC TRANSMISSION LINE (OHIO EDISON)

10' 12' 12' 22' 42' 22' 42' 12' 12' 10'

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

IR 71 Curve Data

P.I. Sta = 873+38.41
Δ = 13° 36' 15" (LT)
Dc = 0° 28' 00"
R = 12,277.62'
T = 1,464.47'
L = 2,915.17'
E = 87.03'
Emax = 0.018'

STA. 852+70, 6' LT.
EX. C.B. (TO BE REMOVED)
TOP OF GRATE EL. 1034.9±
FL. EX. 18" (W.J) EL. 1030.7±
FL. EX. 15" (N.J) EL. 1031.0±

STA. 852+70, 95' LT.
FL. EX. 18" (E.J)
OUTLET EL. 1029.00

STA. 852+70, 4' LT.
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1033.52
FL. 18" (W.J) EL. 1030.74
FL. 15" (N.J) EL. 1030.99 S.B.

STA. 855+70, 20' LT.
EX. C.B. (TO BE REMOVED)
TOP OF GRATE EL. 1038.0±
FL. EX. 15" (S.J) EL. 1035.5±
N.B.

STA. 855+70, 35' LT.
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1037.13
FL. 15" (S.J) EL. 1035.64

+0.69 % +2.23 %

V.P.I. Sta. 860+00.08 Elev. = 1,048.61

800' V.C.

PVC STA=856+00.08

300' - 15" CONDUIT TYPE C @ 1.5%

V.P.I. Sta. 855+63.07 Elev. = 1,038.86

800' V.C.

PVT STA=859+63.07

STA. 852+25, 130' RT.
FL. EX. 60" (N.W.J)
INLET EL. 1009.8±

PVC STA=851+63.07

STA. 853+65, 140' LT.
FL. EX. 60" (S.E.J)
OUTLET EL. 1000.3±

STA. 853+65, 140' LT.
FL. EX. 48" (S.E.J)
OUTLET EL. 1001.2±

STA. 855+20, 125' RT.
FL. EX. 48" (S.W.J)
INLET EL. 1009.8±

| | N. B. | S. B. |
|---|---|---|
| 851+00 | 1,042.40 | 1,035.67 |
| 852+00 | 1,042.74 | 1,036.01 |
| 853+00 | 1,043.09 | 1,036.37 |
| 854+00 | 1,043.43 | 1,036.77 |
| 855+00 | 1,043.78 | 1,037.23 |
| 856+00 | 1,044.12 | 1,037.73 |
| 857+00 | 1,044.47 | 1,038.28 |
| 858+00 | 1,044.81 | 1,038.87 |
| 859+00 | 1,045.16 | 1,039.52 |
| 860+00 | 1,045.50 | 1,040.21 |
| 861+00 | 1,045.85 | 1,040.95 |
| 862+00 | 1,046.02 | 1,041.34 |
| 863+00 | 1,046.21 | 1,041.74 |
| | 1,046.42 | 1,042.16 |
| | 1,046.63 | 1,042.58 |
| | 1,046.86 | 1,043.02 |
| | 1,047.10 | 1,043.47 |
| | 1,047.35 | 1,043.93 |
| | 1,047.61 | 1,044.40 |
| | 1,047.88 | 1,044.89 |
| | 1,048.17 | 1,045.38 |
| | 1,048.47 | 1,045.89 |
| | 1,048.78 | 1,046.41 |
| | 1,049.10 | 1,046.95 |
| | 1,049.44 | 1,047.49 |
| | 1,049.79 | |
| | 1,050.14 | 1,048.60 |
| | 1,050.52 | 1,049.72 |
| | 1,050.90 | 1,050.83 |
| | 1,051.29 | |
| | 1,051.70 | 1,053.06 |
| | 1,052.12 | 1,051.95 |
| | 1,052.55 | |
| | 1,052.99 | 1,053.45 |
| | 1,053.45 | 1,053.92 |
| | 1,053.92 | 1,054.40 |
| | 1,054.40 | 1,054.89 |
| | 1,054.89 | 1,055.39 |
| | 1,055.39 | 1,055.91 |
| | 1,055.91 | 1,056.41 |
| | 1,056.43 | |

1070 1060 1050 1040 1030 1020 1010 1000

851+00 852+00 853+00 854+00 855+00 856+00 857+00 858+00 859+00 860+00 861+00 862+00 863+00

HORIZONTAL SCALE IN FEET 0 50 100

CALCULATED CHECKED

PLAN AND PROFILE
STA 851+00 TO STA 863+50

MED - 71 - 15.78

174
940

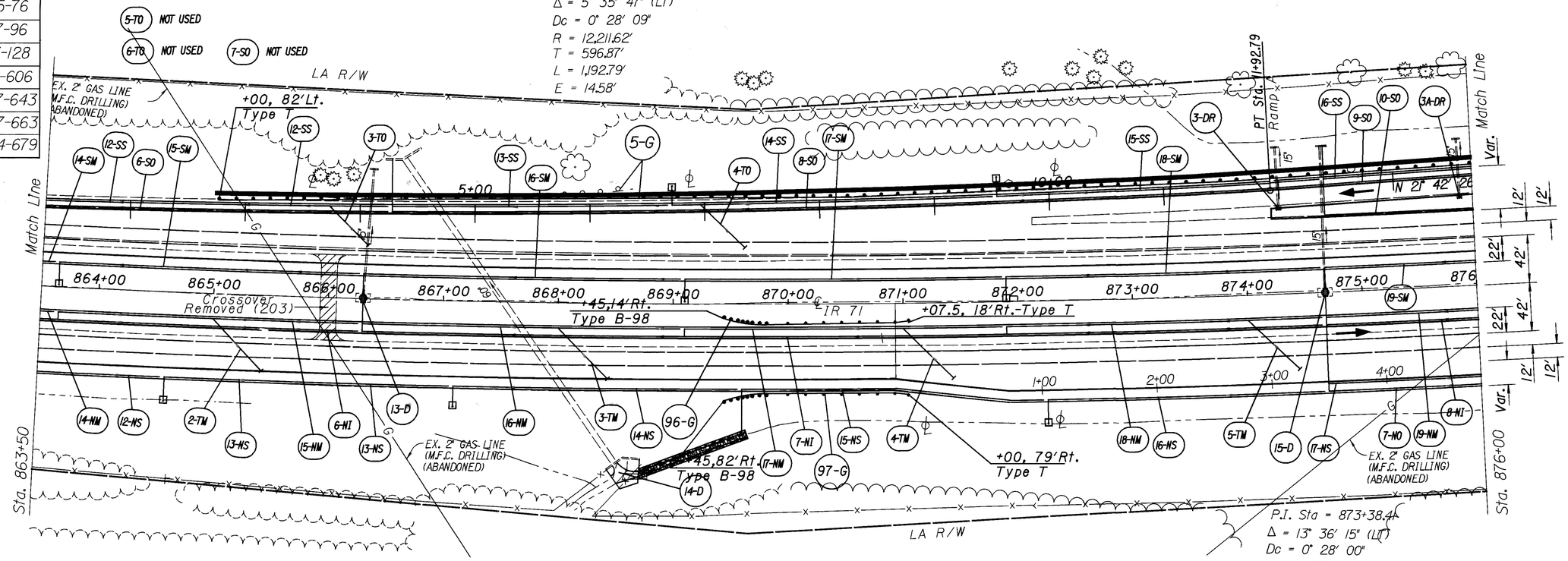
DESIGN FILE : I:\pd_med_ir71\dgn\planprofile\gp3.dgn
USERNAME : jrogers

DATE : 09-DEC-1999
TIME : 07:18

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

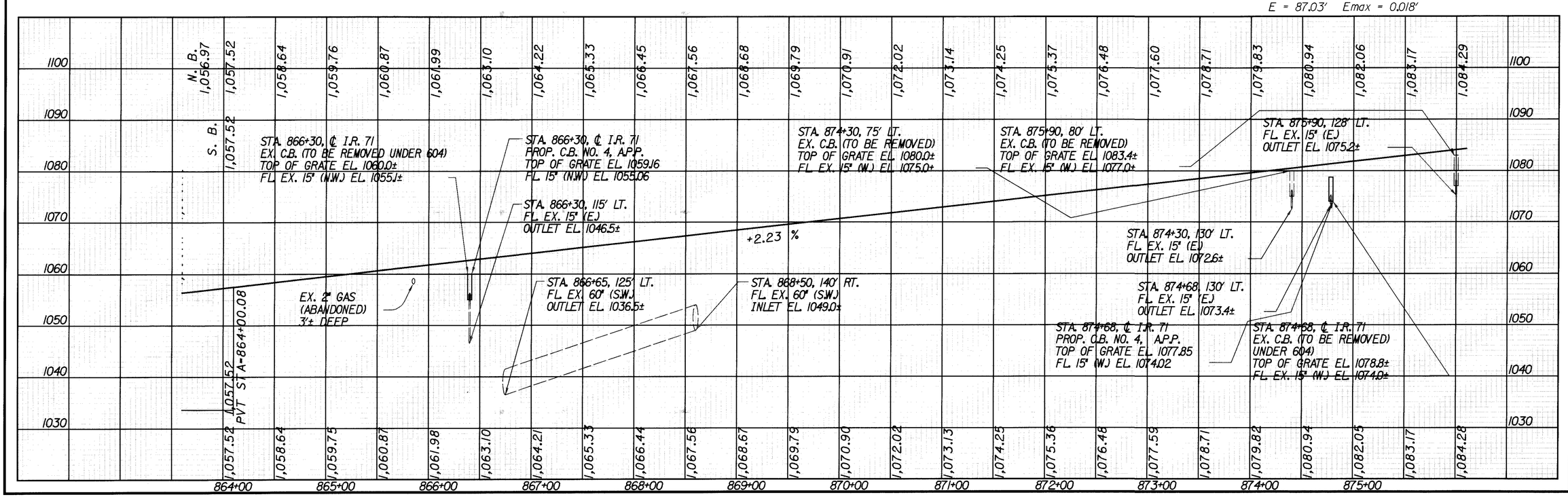
## RAMP A

P.I. Sta = 5+96.87
Δ = 5° 35' 47" (LT)
Dc = 0° 28' 09"
R = 12,211.62'
T = 596.87'
L = 1,192.79'
E = 14.58'




FOR UNDERDRAIN KEY, SEE SHEET NO. 172

P.I. Sta = 873+38.41
Δ = 13° 36' 15" (LT)
Dc = 0° 28' 00"
R = 12,277.62'
T = 1,464.47'
L = 2,915.17'
E = 87.03' Emax = 0.018'




HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
# STA 863+50 TO STA 876+00

MED - 71 - 15.78

175
940

DESIGN FILE : i:\pd_med_ir71\dgn\planprofile\pp4.dgn
USERNAME : jrogers
DATE : 09-DEC-1999
TIME : 07:20

Ramp "A"
P.I. Sta = 18+82.93
Δ = 22° 00' 00" (LT)
Dc = 3° 56' 21"
R = 1,454.52'
Ls = 200.00'
Theta = 3° 56' 21"
LT = 133.37'
ST = 66.70'
x = 199.91'
y = 4.58'
k = 99.98'
p = 1.15'
Δc = 14° 07' 18" (LT)
Lc = 358.49'
Ts = 382.94'
Es = 28.39'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Ramp "C"
P.I. Sta = 13+07.95
Δ = 12° 41' 06" (RT)
Dc = 7° 30' 00"
R = 763.94'
Δc = 7° 03' 49" (RT)
Lc = 94.18'
Es = 200.88'

IR 71 Mainline
P.I. Sta = 873+38.41
Δ = 13° 36' 15" (LT) T = 1,464.47'
Dc = 0° 28' 00" L = 2,915.17'
R = 12,277.62' E = 87.03'

(18-SS) NOT USED — FOR UNDERDRAIN KEY, SEE SHEET NO. ____

Pavement Replacement — Butt Joint — Ramp Pavement Planing and Resurfacing

Match Line

TS Sta. 14+96.40 — SC Sta. 16+96.40 — ST Sta. 20+54.89 — ST Sta. 22+54.89

EX. 2" GAS LINE (M.F.C. DRILLING) (ABANDONED)

LA R/W

Noise Barrier

RAMP A

+50, 10' Lt. Type E-98

+03.4, 78' Lt. Type T

+40.23', 3' Rt. Type T-98

+21.31, 82' Rt. Type B-98

14+00 RAMP C

IR 71

Sta. 876+00 — 877+00 — 878+00 — 879+00 — 880+00 — 881+00 — 882+00 — 883+00 — 884+00 — 885+00 — 886+00 — 887+00 — 888+00 — Sta. 888+50

PC Sta. 7+18.64 — CS Sta. 11+53.36 — SC Sta. 13+53.36 — CS Sta. 14+41.55 — ST Sta. 15+97.55 — TS Sta. 16+62.18

For noise wall details, see sht. 664

V.P.I. Sta. 880+00.00 Elev. = 1,120.26 1,000' V.C.

PVC STA=882+40 — V.P.I. Sta. 883+40.00 Elev. = 1,100.79 200' V.C. — VPT STA=884+40 — PVC STA=885+00

+2.23 % — +2.95 %

STA. 877+90, 90' LT.
EX. C.B. (TO BE REMOVED)
TOP OF GRATE EL. 1087.7±
FL. EX. 15" (W.) EL. 1082.7±

EX. 2" GAS (ABANDONED) 3'± DEEP

STA. 877+90, 125' LT.
FL. EX. 15" (E.)
OUTLET EL. 1081.7±

STA. 883+15, 85' RT.
EX. C.B. (TO BE REMOVED)
TOP OF GRATE EL. 1099.0±
FL. EX. 15" (S.E.) EL. 1095.5±

STA. 883+10, 145' RT.
FL. EX. 15" (N.W.)
OUTLET EL. 1094.8±

STA. 884+32, 168' RT.
FL. EX. 30" (N.W.)
INLET EL. 1092.7±

STA. 885+08, 115' LT.
FL. EX. 30" (S.E.)
OUTLET EL. 1084.4±

STA. 886+18, 112' RT.
FL. EX. 15" (W.)
OUTLET EL. 1095.0±

STA. 886+18, 5' LT.
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1106.04
FL. 15" (N. & E.) EL. 1100.16

STA. 886+18, 5' LT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1106.0±
FL. EX. 15" (E.) EL. 1100.2±

15" 292'-15" CONDUIT, TYPE C @ 2.89%

STA. 888+05, 135' LT.
FL. EX. 48" (N.E.)
OUTLET EL. 1080.0±

1120 / 1110 / 1100 / 1090 / 1080 / 1070 / 1060 / 1050

1,085.40 1,086.52 1,087.63 1,088.75 1,089.86 1,090.98 1,092.09 1,093.21 1,094.32 1,095.44 1,096.55 1,097.67 1,098.79 1,099.36 1,099.96 1,100.59 1,101.23 1,101.90 1,102.59 1,103.30 1,104.04 1,105.51 1,106.24 1,106.95 1,107.65 1,108.33 1,108.99 1,109.64 1,110.27 1,110.88 1,111.48 1,112.06 1,112.62 1,113.17 1,113.70 1,114.21

1,085.40 1,086.51 1,087.63 1,088.74 1,089.86 1,090.97 1,092.09 1,093.20 1,094.32 1,095.43 1,096.55 1,097.66 1,098.78 1,099.89 1,101.01 1,102.12 1,103.22 1,104.29 1,105.33 1,106.34 1,107.32 1,108.28 1,109.21 1,110.11 1,110.99

876+00 — 877+00 — 878+00 — 879+00 — 880+00 — 881+00 — 882+00 — 883+00 — 884+00 — 885+00 — 886+00 — 887+00 — 888+00

HORIZONTAL SCALE IN FEET 0 50 100

CALCULATED — CHECKED

# PLAN AND PROFILE
# STA 876+00 TO STA 888+50

MED - 71 - 15.78

176
940

DESIGN FILE : I:\od_med_ir71\dgn\planprofile\gp5.dgn
USERNAME : jrogers

DATE : 09-DEC-1999
TIME : 07:22

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

16'-6" Required Minimum Vertical Clearance
16'-6" Actual Minimum Vertical Clearance

OVERHEAD ELECTRIC DISTRIBUTION LINES (OHIO EDISON) CATV (ARMSTRONG CABLE)
OVERHEAD TELEPHONE LINES (GTE)
EX. 6" GAS LINE IN 10" CASING (COLUMBIA GAS)

23-NS NOT USED
8-NO NOT USED
23-SS NOT USED
24-NS NOT USED

1st Post +83.71
1st Post +18.69
1st Post +37.62
1st Post +13.98
1st Post +67.89
1st Post +32.91

End Approach Slab Sta 889+20.43
End Approach Slab Sta 889+54.49
Begin Approach Slab Sta 890+97.11
Begin Approach Slab Sta 891+31.17

Match Line
Sta. 888+50
Sta. 901+00

Ramp B
P.I. Sta = 9+79.62
Δ = 5° 11' 09" (LT)
Dc = 7° 30' 00"
R = 763.94'
Δc = 6° 58' 20" (LT)
Lc = 92.96'
Es = 49.15'

Ramp D

+29, 12' Lt. Type T
+11.37, 3' Lt. Type 1-98
+36.44, 78' Lt. Type B-98
+171.5, 18' Lt. Type T
+98.15, 78' Rt. Type T

Ramp Pavement Planing and Resurfacing
Pavement Replacement
Butt Joint
SC Sta. 10+72.58

15' 889+00 890+00 891+00 892+00 893+00 894+00 895+00 896+00 897+00 898+00 899+00 900+00 901

℄ IR 71 N 17° 16' 41" W

Varies 12' 12' 22' 42' 22' 42' 12' 12' Varies

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

Str. Num. MED-71-1685 L&R

For S.R. 18, see shts. 371-401.

LA R/W

EX. 6" GAS IN 10" CASING
EX. 12" SAN. EL. 1083.6±
EX. 12" WATERLINE EL. 1090.0±
16'-6" Actual Min. Vertical Clearance

V.P.I. Sta. 890+00.00 Elev. = 1,120.26
1,000' V.C.
+2.95 % +0.30 %

STA. 888+80, 130' RT.
FL. EX. 48" (S.W.) INLET EL. 1084.0±

STA. 889+10, ℄ I.R. 71
PROP. M.H. NO. 1
TOP OF COVER EL. 1111.27
FL. 15" (S.) EL. 1108.59
FL. 15" (E. & W.) EL. 1108.59

STA. 891+70, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1115.54
FL. 15" (W.) EL. 1108.53

STA. 891+70, 115' LT.
FL. EX. 15" (E.)
OUTLET EL. 1101.0±

STA. 891+70, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1140.0±
FL. EX. 15" (W.) EL. 1108.5±

PVT STA 895+00

STA. 896+50, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1118.9±
FL. EX. 15" (W.) EL. 1113.8±

STA. 896+50, 112' LT.
FL. EX. 15" (E.)
OUTLET EL. 1110.0±

STA. 896+50, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1118.15
FL. 15" (W.) EL. 1113.77

PVC STA 897+50

+0.30 % +0.75 %
V.P.I. Sta. 898+50.00
Elev. = 1,122.81
200' V.C.

PVT STA 899+50

STA. 897+25, 200' LT.
FL. EX. 30" CONC. (N.E.)
OUTET EL. 1096.8±

STA. 899+68, 110' RT.
FL. EX. 30" CONC. (S.W.)
INLET EL. 1108.6±

1140 1130 1120 1110 1100 1090 1080 1070

1,114.71 1,115.19 1,115.66 1,116.10 1,116.53 1,116.95 1,117.35 1,117.73 1,118.09 1,118.44 1,118.77 1,119.09 1,119.39 1,119.67 1,119.93 1,120.18 1,120.42 1,120.63 1,120.83 1,121.01 1,121.18 1,121.33 1,121.46 1,121.58 1,121.68 1,121.76 1,121.91 1,122.06 1,122.21 1,122.36 1,122.51 1,122.59 1,122.69 1,122.80 1,122.92 1,123.06 1,123.22 1,123.38 1,123.56 1,123.94 1,124.31 1,124.69

1,111.84 1,112.66 1,113.45 1,114.22 1,114.96 1,115.67 1,116.35 1,117.01 1,117.64 1,118.24 1,118.81 1,119.36 1,119.88 1,120.37 1,120.83 1,121.27 1,121.68 1,122.06 1,122.44 1,122.81 1,123.19 1,123.56 1,123.94 1,124.31 1,124.69

889+00 890+00 891+00 892+00 893+00 894+00 895+00 896+00 897+00 898+00 899+00 900+00

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
# STA 888+50 TO STA 901+00

MED - 71 - 15.78

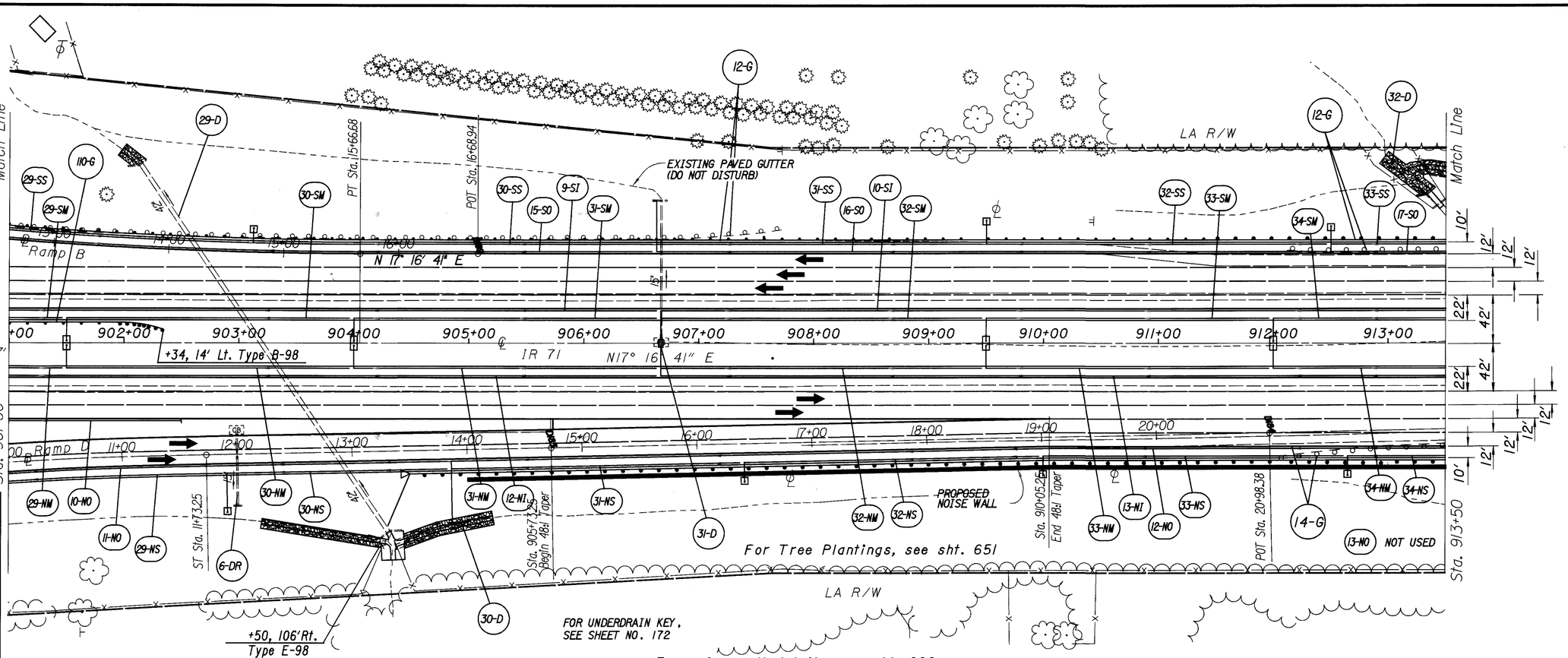
177
940

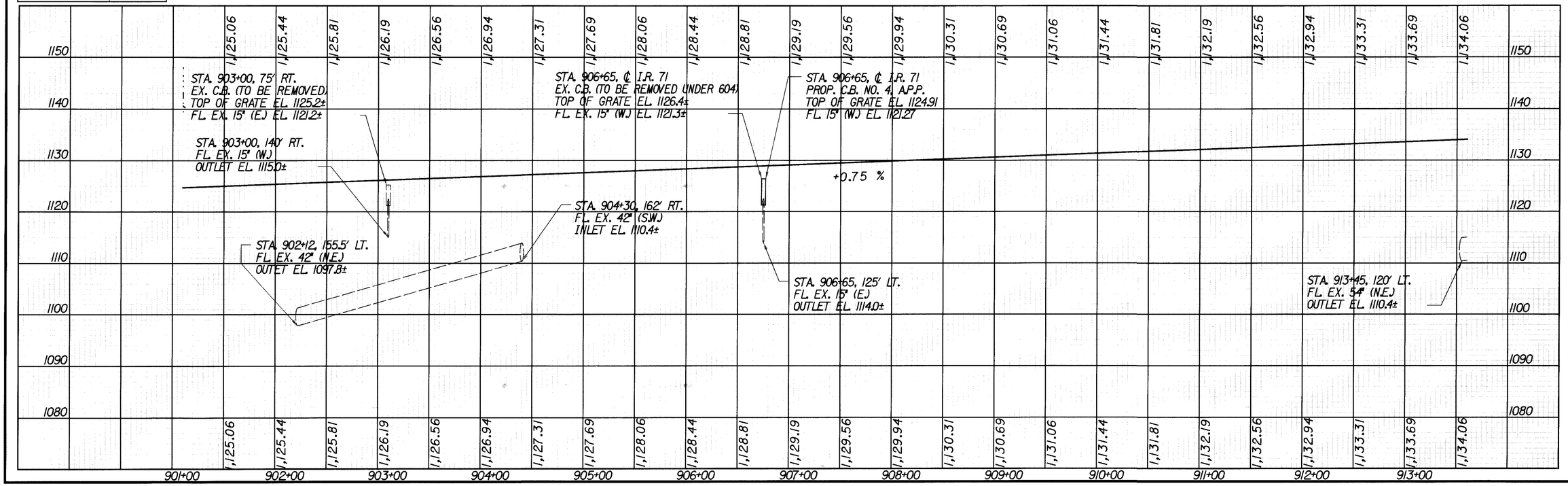
DESIGN FILE : H:\pd_med_lr71\dgn\planprofile\pp6.dgn
USERNAME : jrogers
DATE : 28-DEC-1999
TIME : 08:44

Ramp B
P. I. Sta. = 13+19.97
Δ = 7° 24' 41" (LT)
Dc = 01° 30' 00"
R = 3,819.72'
T = 247.39'
L = 494.09'
E = 8.00'
D = 9° 00' 00" (RT)
Ls = 200.00'
Theta = 06° 00' 00"
LT = 122.45'
ST = 77.96'

Ramp D
P.I. Sta = 10+72.01
Δ = 11° 11' 37" (RT)
Dc = 1° 36' 35"
R = 3,559.36' p = 0.73'
Ls = 250.00' Lc = 445.37'
Theta = 2° 00' 44"
LT = 166.68' Ts = 473.86'
ST = 83.34' Es = 17.78'
x = 249.97'
y = 2.93'
k = 124.99'
Δ c = 7° 10' 09" (RT)

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |



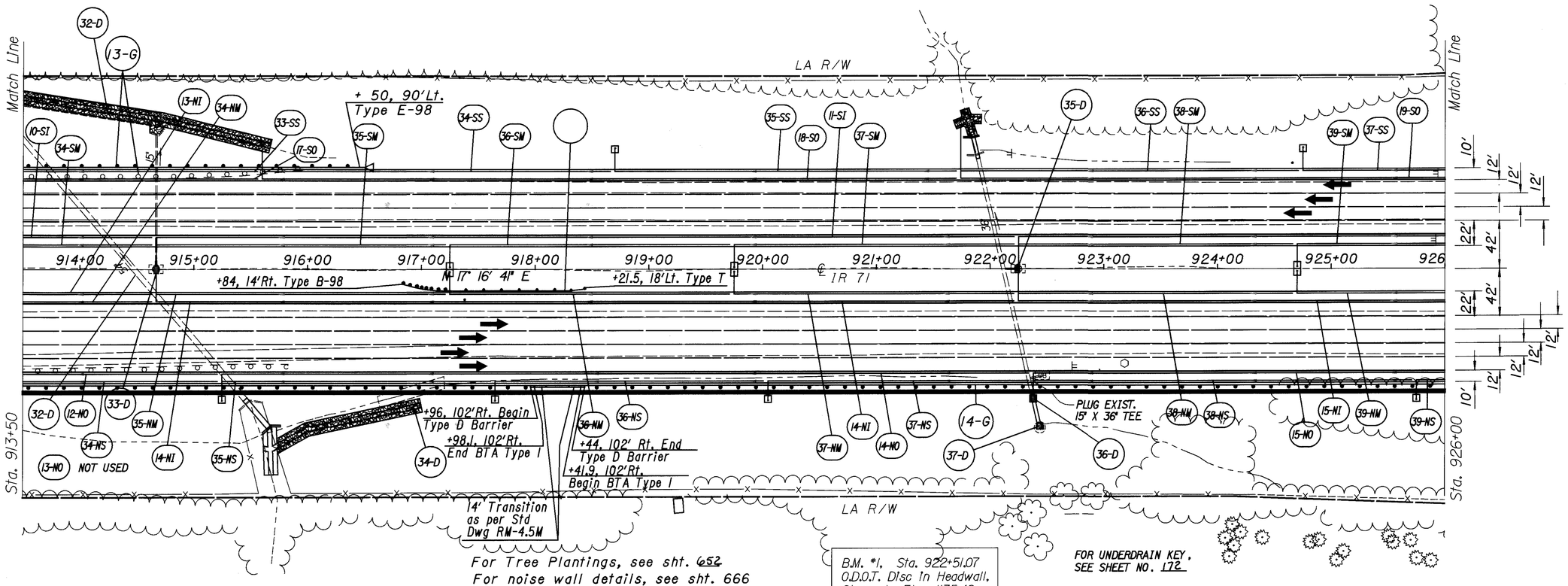

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
901+00 TO STA 913+50

MED - 71 - 15.78

178
940

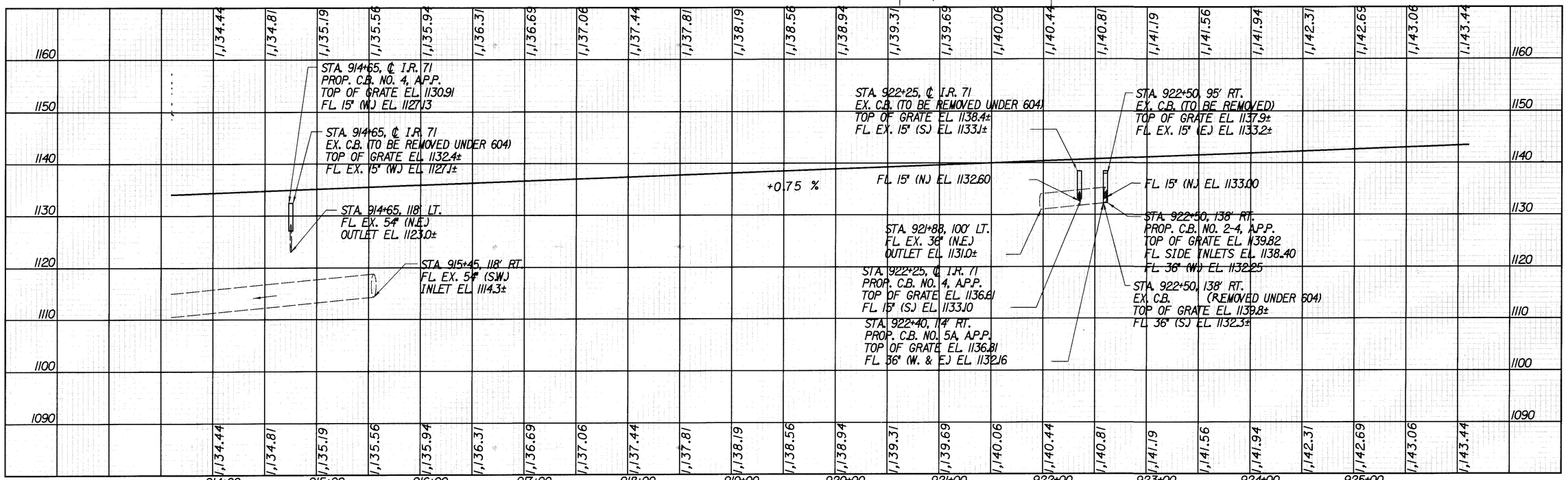
DESIGN FILE : i:\pd_med_ir-71\dgn\planprofile\gp1.dgn
USERNAME : jrogers
DATE : 28-DEC-1999
TIME : 08:12




For Tree Plantings, see sht. 652
For noise wall details, see sht. 666

B.M. #1, Sta. 922+51.07
O.D.O.T. Disc In Headwall,
Stamped Elev. 1135.48

FOR UNDERDRAIN KEY,
SEE SHEET NO. 172

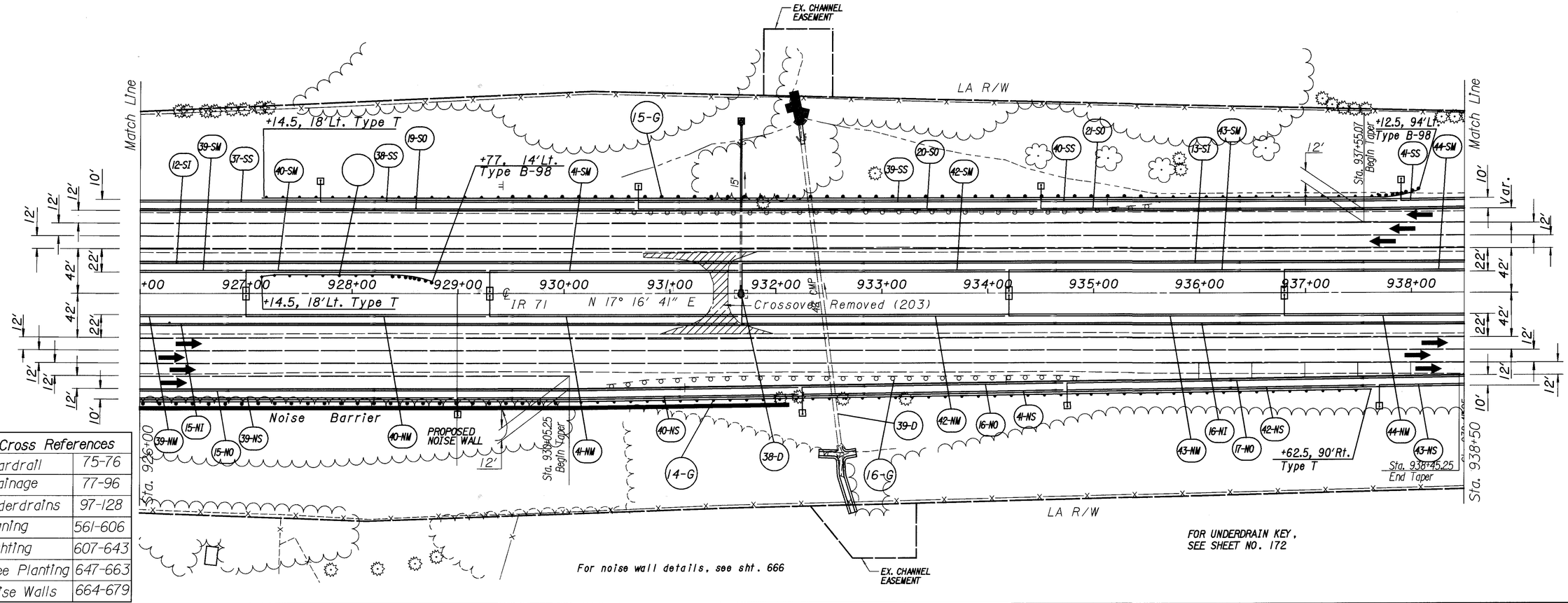



DESIGN FILE : i:\pd_med_lr71\dgn\planprofile\gp8.dgn
USERNAME : jrogers
DATE : 09-DEC-1999
TIME : 07:30

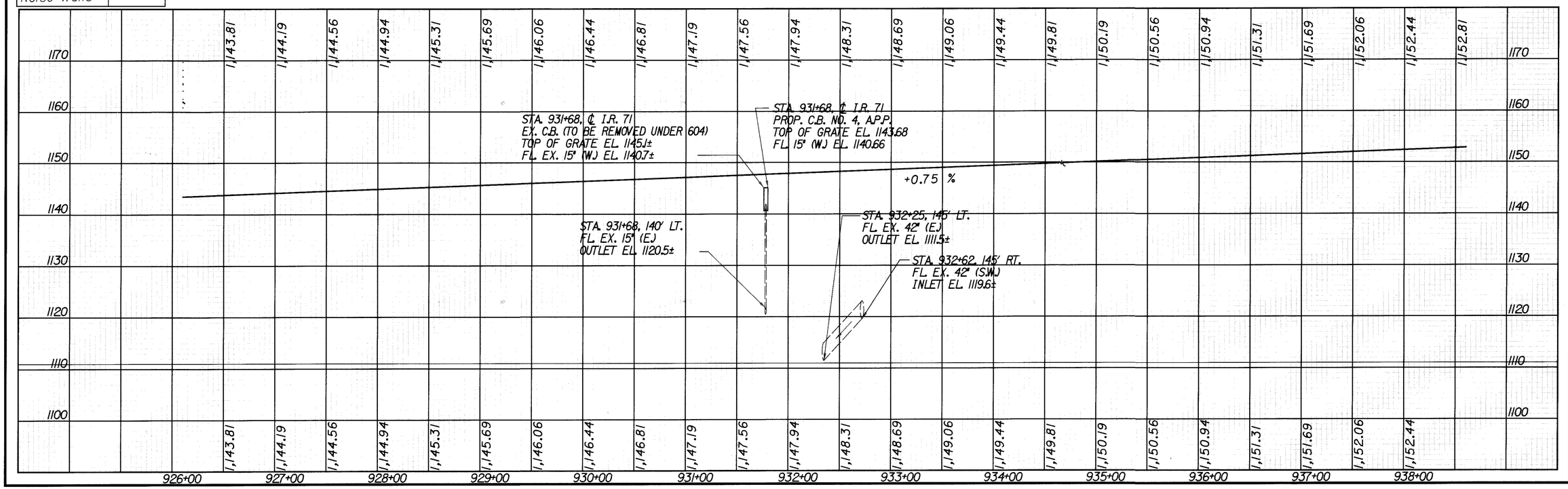
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
# STA 913+50 TO STA 926+00

MED - 71 - 15.78




| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




PLAN AND PROFILE
STA 926+00 TO STA 938+50

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

MED - 71 - 15.78

180
940

DESIGN FILE : h:\pod_med_lr71\dgn\planprofile\gp9.dgn
USERNAME : jrogers
DATE : 28-DEC-1999
TIME : 08:08

IR 71 Mainline
P.I. Sta = 955+61.72
Δ = 6° 11' 21" (LT)
Dc = 0° 22' 08"
R = 15,536.07'
T = 839.92'
L = 1,678.20'
E = 22.69'

Match Line
Sta. 938+50
Sta. 938+95.00 End Taper
Sta. 945+95.00 End Taper
PC Sta. 947+24.80
Match Line
Sta. 951+00
LA R/W
LA R/W
12'
24'
939+00 940+00 941+00 942+00 943+00 944+00 945+00 946+00 947+00 948+00 949+00 950+00 951
℄ IR 71 N 17° 16' 41" E
+66, 14'Rt. Type B-98
+28.5, 18'Rt. Type T
+50, 90'Lt. Type T
+66, 94'Rt. Type B-98
+28.5, 90'Rt. Type T
N 17° 16' 41" E
10' 12' 12' 12' 12' 22' 42' 22' 42' 12' 12' 12' 10'

41-SS 44-SM 45-SM 21-SO 13-SI 42-SS 46-SM 17-G 43-SS 47-SM 41A-D 44-SS 22-SO 14-SI 48-SM 49-SM 45-SS 23-SO
44-NM 43-NS 45-NM 16-NI 17-NO 44-NS 46-NM 40-D 45-NS 47-NM 17-NI 18-NO 46-NS 48-NM 19-NO 47-NS 49-NM 48-NS
41-D

+00 Dual Loop ATR Location
For Details, see sht. 553

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

13-G

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

B.M. #2, Sta. 942+75.07
O.D.O.T. Disc In Headwall,
Stamped Elev. 1149.50

1180 1170 1160 1150 1140 1130 1120 1110

1,153.19 1,153.56 1,153.94 1,154.31 1,154.69 1,155.06 1,155.44 1,155.81 1,156.19 1,156.56 1,156.94 1,157.31 1,157.69 1,158.06 1,158.44 1,158.81 1,159.19 1,159.56 1,159.94 1,160.31 1,160.50 1,160.68 1,160.86 1,161.04 1,161.21 1,161.38 1,161.54 1,161.70 1,161.86 1,162.02

939+00 940+00 941+00 942+00 943+00 944+00 945+00 946+00 947+00 948+00 949+00 950+00

STA. 943+45, 105' RT.
FL. EX. 30" (NW)
INLET EL. 1146.0±

STA. 944+68, 5' RT.
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1153.43
FL. 15" (W) EL. 1149.96

STA. 944+68, 5' RT.
EX. C.B. (TO BE REMOVED UDNER 604)
TOP OF GRATE EL. 1154.9±
FL. EX. 15" (W.) EL. 1150.0±

STA. 944+68, 110' LT.
FL. EX. 15" (E)
OUTLET EL. 1142.0±

STA. 945+33, 125' LT.
FL. EX. 30" (SE)
OUTLET EL. 1137.2±

PVC STA 948+63.07

V.P.I. Sta. 950+63.07 El
400' V.C.
+0.75 % +0.51

STA. 947+50, 112' LT.
FL. EX. 24" (E)
INLET EL. 1148.9±

STA. 947+50, 112' RT.
FL. EX. 24" (W)
OUTLET EL. 1140.0±

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA 938+50 TO STA 951+00

MED - 71 - 15.78

181
940

DESIGN FILE : H:\pdA_med_ir71\dgn\planprofile\gpl0.dgn
USERNAME : jrogers
DATE : 09-DEC-1999
TIME : 07:42

IR 71 Curve Data
P.I. Sta = 984+41.65
Δ = 26° 45' 35" (LT)
Dc = 0° 22' 00"
R = 15,626.07'
T = 3,716.85'
L = 7,298.08'
E = 435.97'

Match Line

Sta. 951+00

Sta. 963+50

LA R/W

+00, 98' Lt.
Type B-98

EX. FIBER OPTIC LINE (AT&T) (2 - 4" DUCTS)

IR 71

+55, 18' Lt. Type T

+17.5, 14' Lt. Type B-98

+16.75, ℄
Type I-98

ABANDON AND CONNECT THROUGH

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

B.M. #3, Sta. 954+80.07
O.D.O.T. Disc in Headwall, Stamped Elev. 1157.18

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

STA. 956+38, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1161.57
FL. 24" (S.W.) EL. 1155.94
FL. 18" (N.) EL. 1156.68
FL. 18" (N.E.) EL. 1156.14

STA. 957+10, 101.5' RT.
PROP. C.B. NO. 5, A.P.P.
TOP OF GRATE EL. 1162.85
FL. 24" (S.W.) EL. 1159.28
FL. 18" (N.E.) EL. 1159.28

STA. 957+40, 145' RT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1173.0±
FL. EX. 18" (S.W.) EL. 1170.4±

16 - 18" CONDUIT, TYPE C @ 1.00%

STA. 957+40, 145' RT.
PROP. C.B. NO. 5, A.P.P.
TOP OF GRATE EL. 1173.00
FL. 18" (N. & S.W.) EL. 1170.00

STA. 957+05, 95' RT.
EX. C.B. (ABANDON AND CONNECT THROUGH)
TOP OF GRATE EL. 1162.3±
FL. EX. 24" (S.W.) EL. 1159.1±
FL. EX. 18" (N.E.) EL. 1159.1±

STA. 961+68, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1163.65
FL. 18" (S. & N.W.) EL. 1159.60

STA. 961+68, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1164.5±
FL. EX. 18" (S. & N.W.) EL. 1159.4±

V.P.I. Sta. 961+25.00
Elev. = 1,167.27
200' V.C.

60' - 18" CONDUIT, TYPE C @ 0.50%

342' - 18" CONDUIT, TYPE C @ 0.50%

PVC STA 960+25

PVT STA 962+25

PVC STA 962+25

V.P.I. Sta. 963
Elev. = 1,167.
200' V.C.

+0.51 % -0.13 %

-0.13 % +0.

STA. 952+68, 120' LT.
FL. EX. 24" (E.) INLET EL. 1152.5±

STA. 952+68, 108' RT.
FL. EX. 24" (W.) OUTLET EL. 1141.0±

PVT STA 952+63.07

STA. 955+60, 108' LT.
FL. EX. 24" (N.E.) OUTLET EL. 1154.0±

STA. 962+28, 10' LT.
PROP. M.H. NO. 3
TOP OF COVER EL. 1164.81
FL. 18" (N. & S.E.) EL. 1159.69

EX. TELE. LINES (FIBER OPTIC)

1190 / 1180 / 1170 / 1160 / 1150 / 1140 / 1130 / 1120

1,162.16 1,162.31 1,162.45 1,162.59 1,162.72 1,162.85 1,163.11 1,163.36 1,163.61 1,163.86 1,164.12 1,164.37 1,164.62 1,164.87 1,165.13 1,165.38 1,165.63 1,165.88 1,166.14 1,166.39 1,166.64 1,166.88 1,166.98 1,167.06 1,167.11 1,167.15 1,167.17 1,167.16 1,167.14 1,167.12 1,167.12 1,167.13 1,167.17 1,167.23

951+00 952+00 953+00 954+00 955+00 956+00 957+00 958+00 959+00 960+00 961+00 962+00 963+00

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USERNAME : jrogers
DATE : 28-DEC-1999
TIME : 08:06

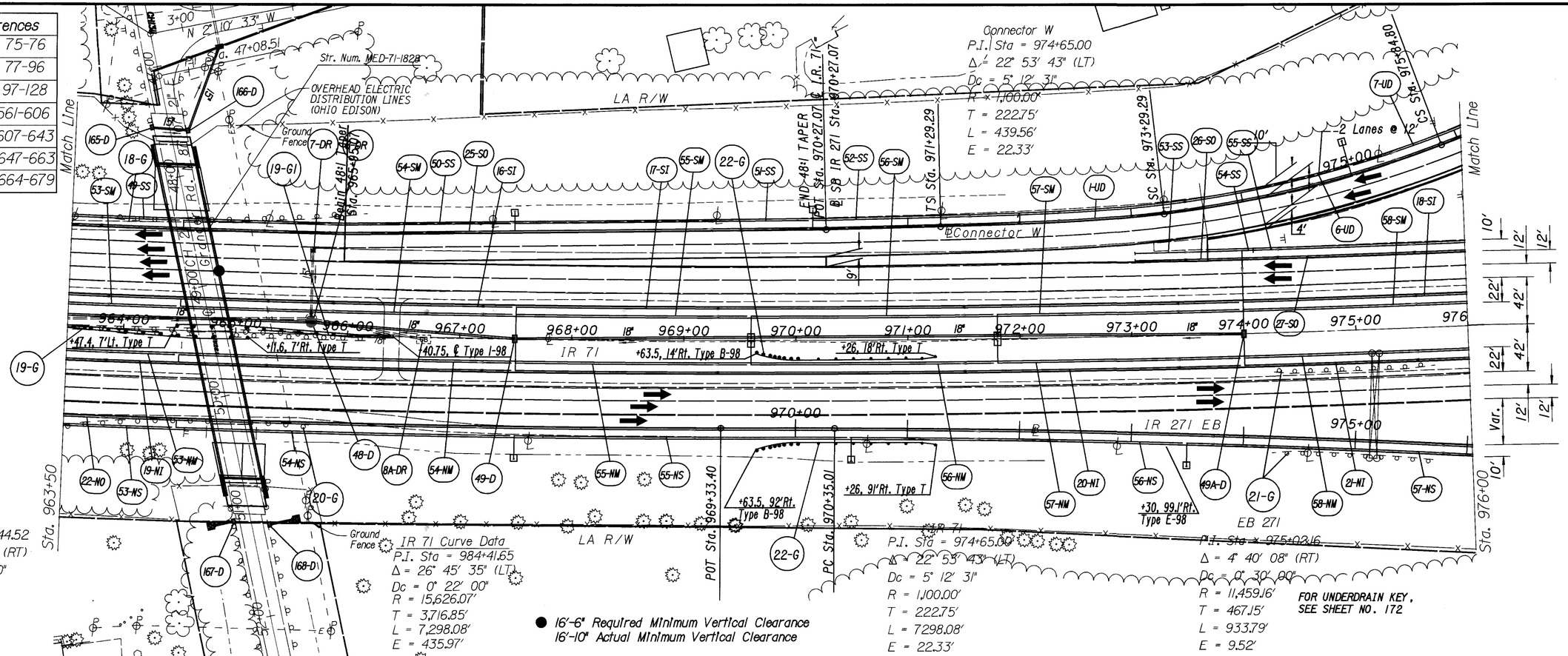
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA 951+00 TO STA 963+50

MED - 71 - 15.78

182
940

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

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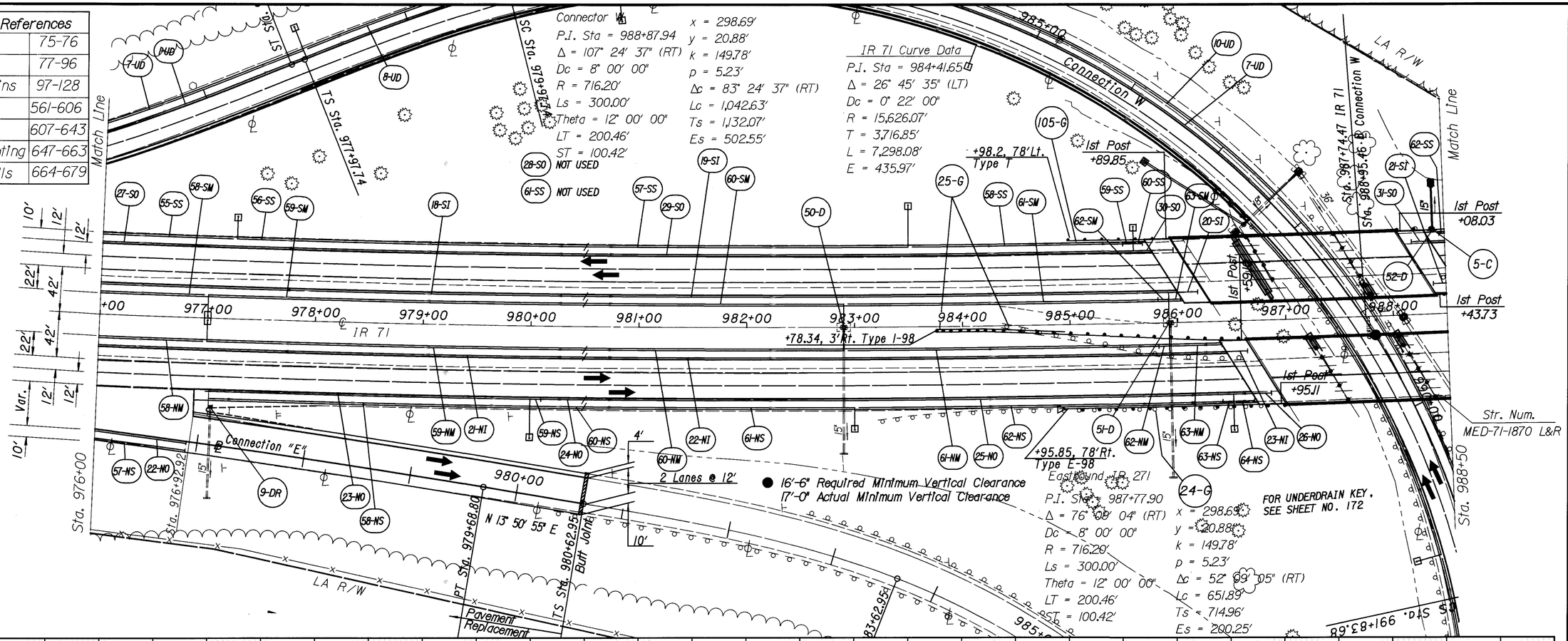
DATE : 28-DEC-1999
TIME : 08:05

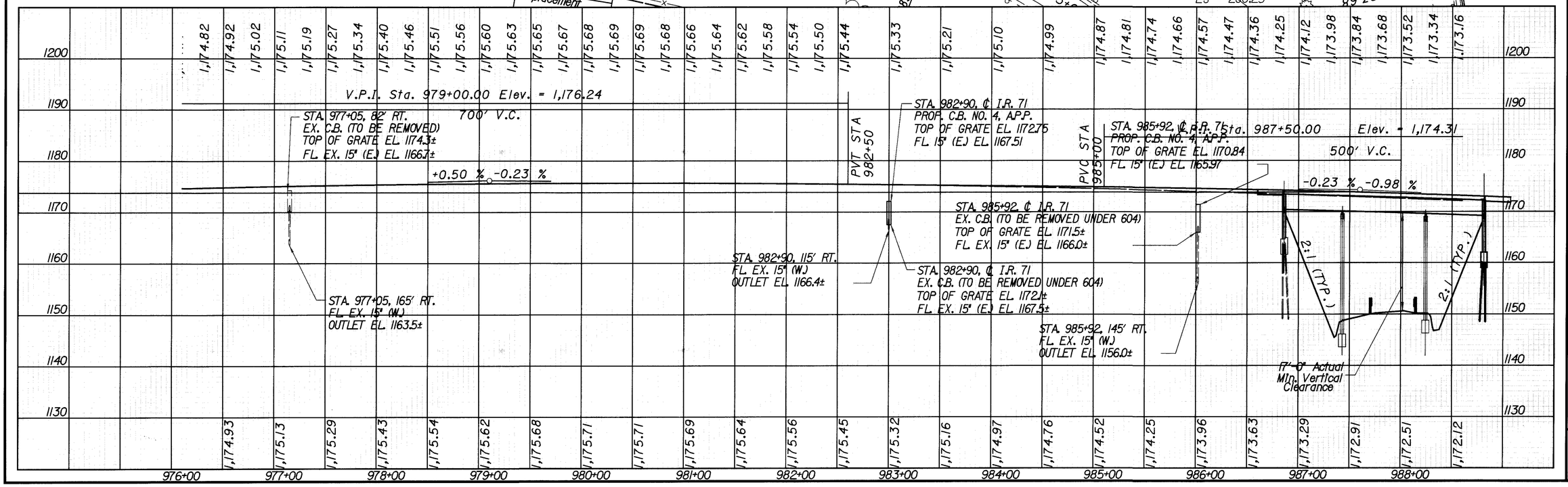
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
## STA. 963+50 TO STA. 976+00

MED - 71 - 15.78

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




PLAN AND PROFILE
STA 976+00 TO STA 988+50

MED - 71 - 15.78

184
940

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

DESIGN FILE : I:\pd_med_ir71\dgn\planprofile\gpl3.dgn
USERNAME : jrogers
DATE : 28-DEC-1999
TIME : 08:04

Eastbound IR 271
P.I. Sta = 987+77.90
Δ = 76° 09′ 04″ (RT)
Dc = 8° 00′ 00″
R = 716.20′
Ls = 300.00′
Theta = 12° 00′ 00″
LT = 200.46′
ST = 100.42′
x = 298.69′
y = 20.88′
k = 149.78′
p = 5.23′
Δc = 52° 09′ 05″ (RT)
Lc = 651.89′
Ts = 714.96′
Es = 200.25′

**℄ PROP. CONNECTION 'W' I.R. 271**
P.I. Sta = 995+12.33
Δ = 1° 12′ 02″ (RT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 128.65′
L = 257.28′
E = 0.67′

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

EX. 345 kv ELECTRIC TRANSMISSION LINE (OHIO EDISON)
LA R/W
Ground Fence
Match Line
64-NM 64-SM 66-SM 65-NI NOT USED
+50 Median Crossover
Remove Crossover (203)
℄ IR 71
+24.87, 3′Lt. Type 3-98
Sta. 988+50
Sta. 1001+00
1st Post +99.48
EX. TELEPHONE LINE (AT&T) (1 - 4" DUCT)
EX. 6" GAS LINE IN 10" CASING (GATHERCO INC.)
℄ PROP. CONNECTION 'W' I.R. 271
P.I. Sta = 997+69.61
Δ = 5° 42′ 02″ (LT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 128.65′
L = 257.28′
E = 0.67′
EXISTING PAVED GUTTER (DO NOT DISTURB)
FOR UNDERDRAIN KEY, SEE SHEET NO. 172

IR 71 Curve Data
P.I. Sta = 984+41.65
Δ = 26° 45′ 35″ (LT)
Dc = 0° 22′ 00″
R = 15,626.07′
T = 3,716.85′
L = 7,298.08′
E = 435.97′

B.M. *1, Sta. 990+93.07
O.D.O.T. Disc In Headwall, Stamped Elev. 1149.65

B.M. *5, Sta. 999+30.07
O.D.O.T. Disc In Headwall, Stamped Elev. 1146.28

STA. 989+10, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1169.06
FL. 15" (W) EL. 1163.18
FL. 15" (S.E. & S.W.) EL. 1163.18

PVT STA 990+00

STA. 989+10, 110′ LT.
FL. EX. 15" (W)
OUTLET EL. 1161.0±

STA. 989+10, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1169.1±
FL. EX. 15" (W) EL. 1163.2±

EX. TELE. LINE (10′± DEEP)

STA. 991+35, 125′ LT.
FL. EX. 36" (N.E.)
INLET EL. 1145.5±

EX. 6" GAS LINE IN 10" CASING (21′± DEEP)

STA. 993+00, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1164.66
FL. 15" (N.) EL. 1161.92

-0.98 % -0.79 %

PVC STA 994+00
V.P.I. Sta. 995+00.00
Elev. = 1,166.96
200′ V.C.
PVT STA 996+00

STA. 993+68, 135′ RT.
FL. EX. 36" (S.W.)
OUTLET EL. 1138.3±

565′ - 15" CONDUIT, TYPE C @ 1.00%

STA. 998+65, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1161.5±
FL. EX. 15" (S. & E.) EL. 1156.3±

STA. 998+65, 115′ RT.
FL. EX. 15" (W)
OUTLET EL. 1139.8±

STA. 998+65, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1162.36
FL. 15" (S. & E.) EL. 1156.27

STA. 999+22, 118′ LT.
FL. EX. 36" (E.)
INLET EL. 1142.0±

STA. 999+22, 128′ RT.
FL. EX. 36" (W)
OUTLET EL. 1134.9±

1190 1180 1170 1160 1150 1140 1130 1120

1,172.97 1,172.76 1,172.55 1,172.33 1,172.10 1,171.86 1,171.37 1,170.88 1,170.39 1,169.90 1,169.41 1,168.92 1,168.43 1,167.94 1,167.70 1,167.46 1,167.23 1,167.01 1,166.79 1,166.58 1,166.37 1,166.17 1,165.77 1,165.38 1,164.98 1,164.58 1,164.19 1,163.79 1,163.39 1,163.00 1,162.60 1,162.20

1,171.72 1,171.32 1,170.93 1,170.53 1,170.14 1,169.74 1,169.34 1,168.95 1,168.55 1,168.15 1,167.76 1,167.36 1,166.96 1,166.57 1,166.17 1,165.77 1,165.38 1,164.98 1,164.58 1,164.19 1,163.79 1,163.39 1,163.00 1,162.60 1,162.21

989+00 990+00 991+00 992+00 993+00 994+00 995+00 996+00 997+00 998+00 999+00 1000+00

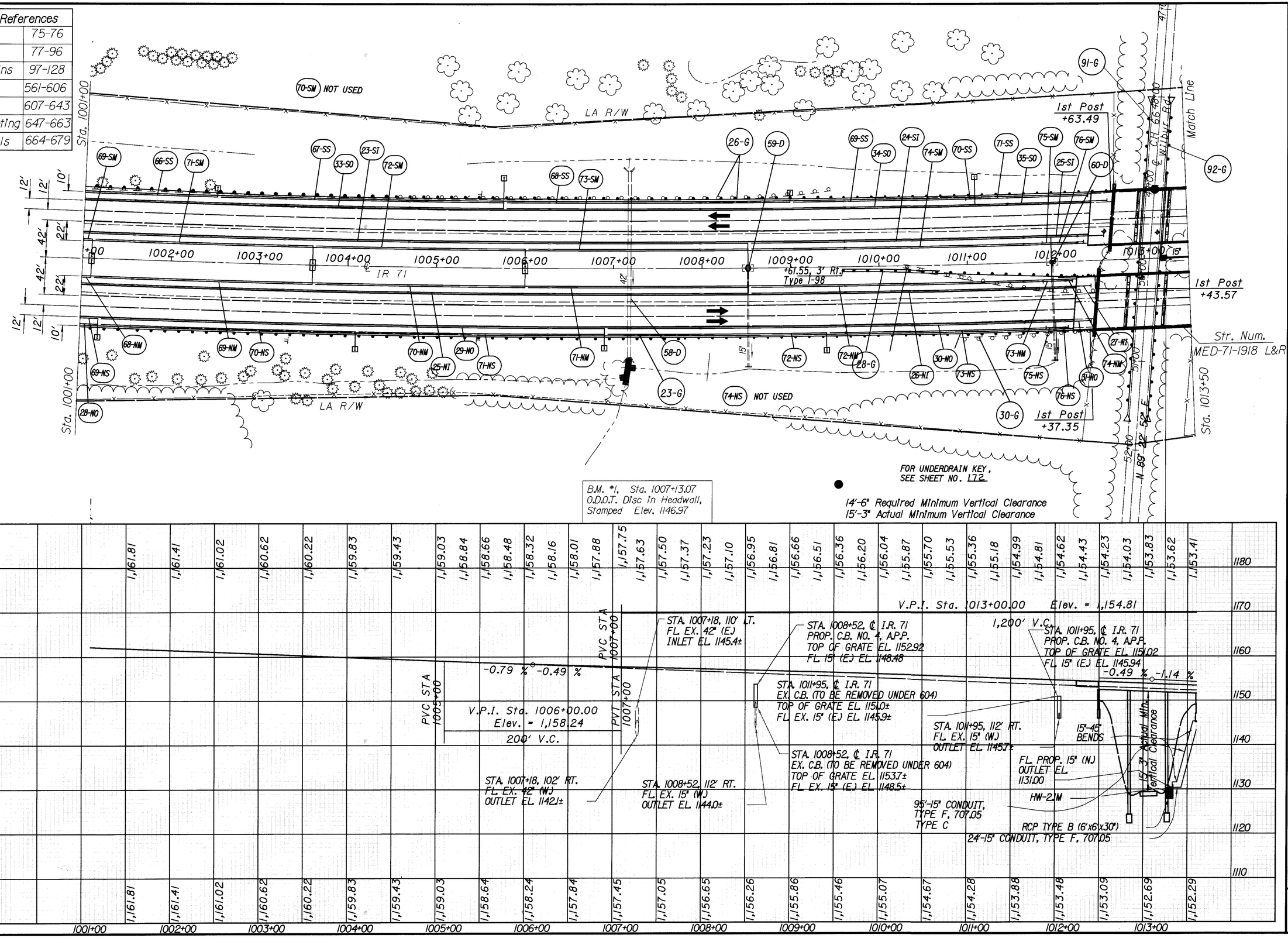
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
# STA 988+50 TO STA 1001+00
# MED - 71 - 15.78

185
940

DESIGN FILE : i:\pa_med_ir71\dgn\planprofile\pp14.dgn
USERNAME : jrogers
DATE : 28-DEC-1999
TIME : 08:02

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

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USERNAME : pfought
DATE : 09-DEC-1999
TIME : 08:13

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA 1001+00 TO STA 1013+50

MED - 71 - 15.78

72-SS NOT USED 77-SM NOT USED
77-NS NOT USED
74-SS NOT USED
Match Line
LA R/W
EX. TELEPHONE LINE (AT&T) (1 - 4" DUCT)
1st Post +64.77
1st Post +58.07
+59.68, 82' Lt. Type B-98
+40.2, 3' Lt. Type I-98
PT Sta. 1020+22.88
℄ IR 71 N 09° 28' 54"W
Remove Crossover (203)
Sta. 1013+50
Sta. 1026+00
9-C 61-D 60A-D 29-G 36-SO 73-SS 78-SM 26-SI 75-SS 79-SM 36A-SO 26A-SI 76-SS 36B-SO 26B-SI 80-SM 62-D 37-SO 27-SI 77-SS 37A-SO 27A-SI 81-SM 27B-SI 78-SS 82-SM 37B-SO 10-TO H1
10-C 11-C 12-C 61A-D 64-D 64A-D 31-G 28-NI 76-NW 78-NS 32-NO 77-NW 79-NS 28A-NI 78-NW 28B-NI 33-NO 80-NS 34-NO NOT USED 63-D 29-NI 81-NS 29A-NI 79-NW 35-NO 29B-NI 82-NS 80-NW 1-TS 9-TM
10' 12' 12' 22' 42' 22' 42' 12' 12' 10'
15' 24' 15'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

IR 71 Curve Data
P.I. Sta = 984+41.65
Δ = 26° 45' 35" (LT)
Dc = 0° 22' 00"
R = 15,626.07'
T = 3,716.85'
L = 7,298.08'
E = 435.97'

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

B.M. #7, Sta. 1023+61.99
O.D.O.T. Disc In Headwall, Stamped Elev. 1133.15

1,153.20 1,152.99 1,152.77 1,152.54 1,152.32 1,152.09 1,151.85 1,151.62 1,151.38 1,151.13 1,150.89 1,150.64 1,150.38 1,150.13 1,149.86 1,149.60 1,149.33 1,149.06 1,148.79 1,148.51 1,148.23 1,147.94 1,147.37 1,146.80 1,146.23 1,145.93 1,145.63 1,145.30 1,144.97 1,144.62 1,144.25 1,143.87 1,143.47 1,143.07 1,142.64 1,142.20 1,141.75 1,141.28 1,140.80 1,140.30 1,139.79 1,139.27 1,138.73 1,138.17 1,137.61 1,137.02 1,136.42

1170 1160 1150 1140 1130 1120 1110 1100

V.P.I. Sta. 1013+00.00 Elev. = 1,154.81
1,200' V.C.
PVT STA 1019+00
PVC STA 1020+50
V.P.I. Sta. 1024+50.00 Elev. = 1,141.65
800' V.C.

38"-15" CONDUIT, TYPE C @ 0.60%

STA. 1013+90, ℄ I.R. 71
PROP. M.H. NO. 1
TOP OF COVER EL. 1149.47
FL. 15" (S.) EL. 1144.60
FL. 15" (E. & W.) EL. 1144.60

STA. 1022+72, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1140.4±
FL. EX. 15" (E.) EL. 1135.2±

STA. 1022+72, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1139.17
FL. 15" (E.) EL. 1135.16

STA. 1022+72, 110' RT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1134.0±
FL. EX. 15" (N. & W.) EL. 1131.5±

STA. 1022+72, 110' RT.
PROP. C.B. NO. 5, A.P.P.
TOP OF GRATE EL. 1134.00
FL. 15" (N. & W.) EL. 1131.50

STA. 1022+50, 105' LT.
FL. EX. 42" (N.E.)
INLET EL. 1135.5±
-1.14 % -3.00 %

STA. 1023+35, 115' RT.
FL. EX. 42" (S.W.)
OUTLET EL. 1128.2±

STA. 1023+25, 115' RT.
FL. EX. 15" (W.)
OUTLET EL. 1128.0±

EX. TELE. LINE (10± DEEP)

1,151.90 1,151.50 1,151.10 1,150.71 1,150.31 1,149.91 1,149.52 1,149.12 1,148.72 1,148.33 1,147.92 1,147.45 1,146.93 1,146.36 1,145.73 1,145.04 1,144.30 1,143.50 1,142.65 1,141.75 1,140.79 1,139.77 1,138.70 1,137.57 1,136.39

1014+00 1015+00 1016+00 1017+00 1018+00 1019+00 1020+00 1021+00 1022+00 1023+00 1024+00 1025+00

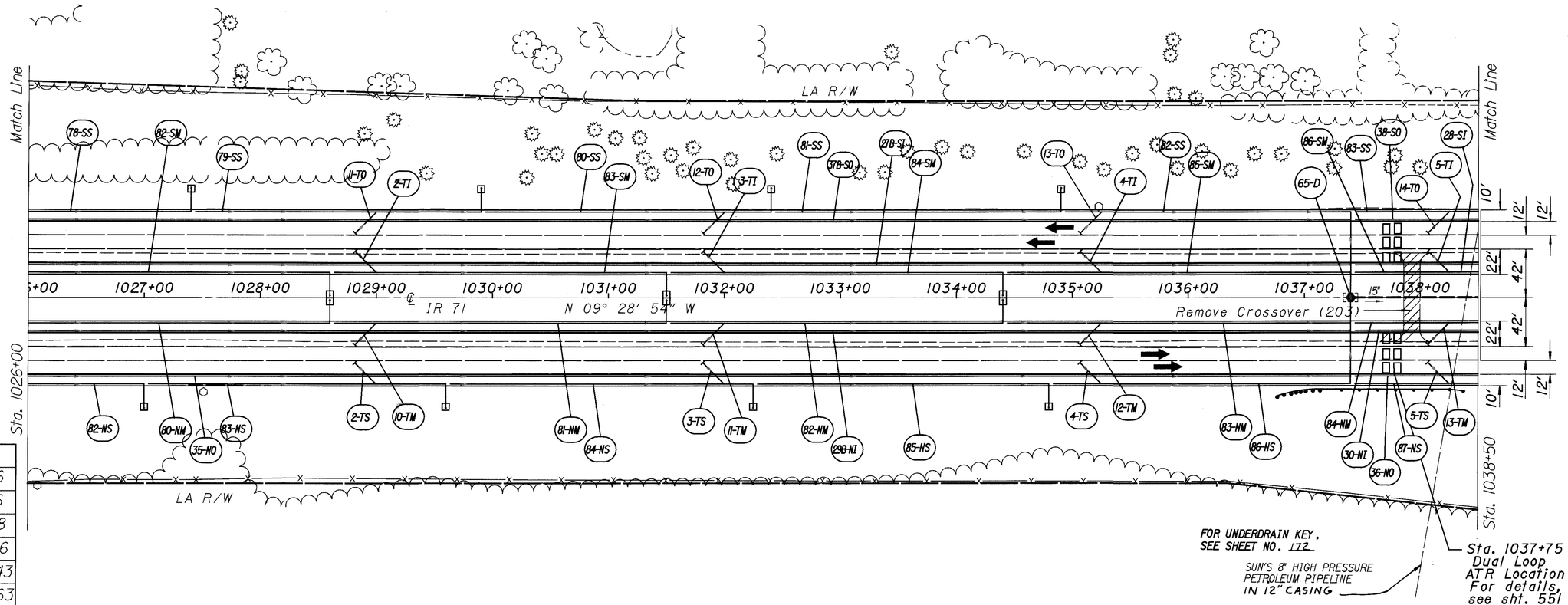
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED CHECKED

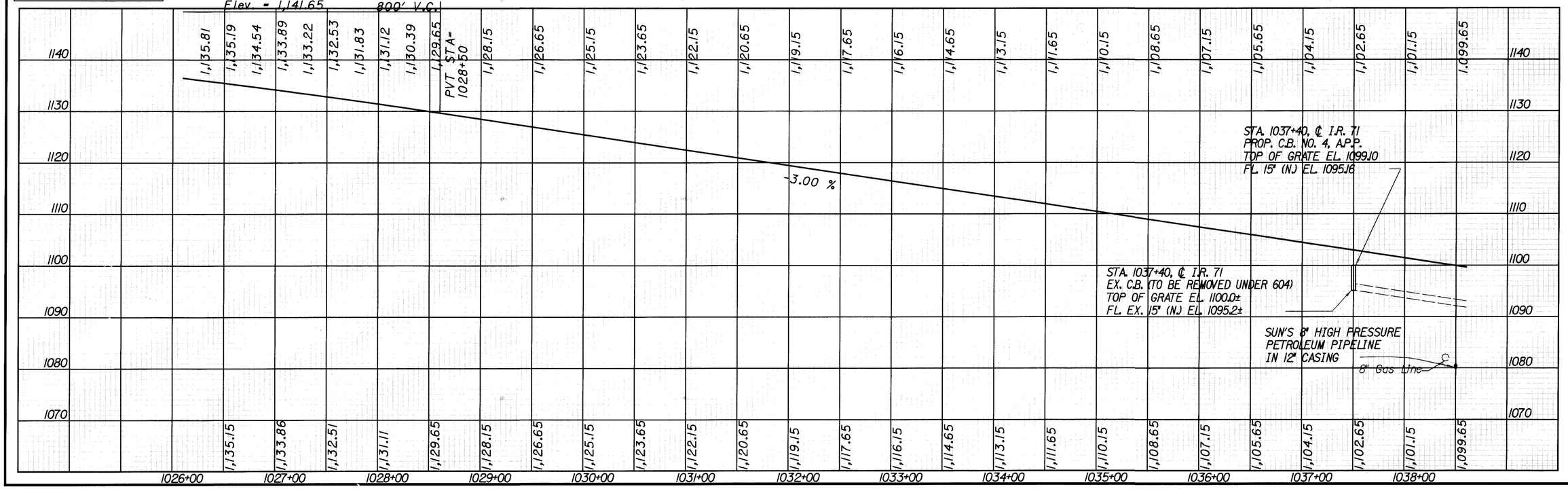
PLAN AND PROFILE
STA 1013+50 TO STA 1026+00
MED - 71 - 15.78

187
940

DESIGN FILE : h:\pd_med_ir71\dgn\planprofile\gpl6.dgn
USERNAME : jrogers
DATE : 09-DEC-1999
TIME : 07:59

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gpi7.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 08:17

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
## 1026+00 TO STA 1038+50

MED - 71 - 15.78

SUN'S 8" HIGH PRESSURE PETROLEUM PIPELINE IN 12" CASING

LA R/W

Match Line

Sta. 1038+50

Sta. 1051+00

1039+00 | 1040+00 | 1041+00 | 1042+00 | 1043+00 | 1044+00 | 1045+00 | 1046+00 | 1047+00 | 1048+00 | 1049+00 | 1050+00 | 1051

℄ I.R. 71

N 09° 28' 54" W

+20.85, 78' Lt. Type T

+53.85, 3' Rt. Type I-98

+52.58, 78' Rt. Type E-98

83-SS, 38-SO, 28-SI, 86-SM, 84-SS, 87-SM, 15-TO, 6-TI, 85-SS, 88-SM, 16-TO, 7-TI, 86-SS, 89-SM, 17-TO, 8-TI, 67-D, 87-SS, 39-SO, 29-SI, 90-SM, 18-TO, 69-D, 33-G, 9-TI, 91-SM, 88-SS, 30-SI

84-NW, 30-NI, 87-NS, 85-NW, 88-NS, 6-TS, 14-TM, 86-NW, 36-NO, 89-NS, 7-TS, 15-TM, 66-D, 87-NW, 31-NI, 37-NO, 90-NS, 8-TS, 16-TM, 88-NW, 91-NS, 68-D, 32-G, 34-G, 9-TS, 17-TM, 70-D, 32-NI, 89-NM, 92-NS

10' 12' 12' 22' 42' 22' 42' 12' 12' 10'

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

B.M. #8, Sta. 1044+03.99
O.D.O.T. Disc In Headwall,
Stamped Elev. 1052.83

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

1,098.15 | 1,096.65 | 1,095.15 | 1,093.65 | 1,092.15 | 1,090.65 | 1,089.15 | 1,087.65 | 1,086.15 | 1,084.65 | 1,083.15 | 1,081.65 | 1,080.15 | 1,078.65 | 1,077.15 | 1,075.65 | 1,074.15 | 1,072.65 | 1,071.15 | 1,069.65 | 1,068.15 | 1,066.65 | 1,065.15 | 1,063.65 | 1,062.15

1110 | 1100 | 1090 | 1080 | 1070 | 1060 | 1050 | 1040

STA. 1045+08 ℄ I.R. 71
PROP. C.B. NO. 4A, A.P.P.
TOP OF GRATE EL. 1076.06
FL. 15" (S.) EL. 1071.61
FL. 36" (W.) EL. 1066.45
FL. 36" (N.) EL. 1066.25

-3.00 %

STA. 1045+08 ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1076.61
FL. EX. 15" (S.) EL. 1071.61
FL. EX. 36" (W.) EL. 1066.45
FL. EX. 36" (N.) EL. 1066.25

STA. 1045+08, 122' LT.
FL. EX. 36" (E.)
OUTLET EL. 1066.5±

STA. 1047+55, ℄ I.R. 71
PROP. C.B. NO. 4A, A.P.P.
TOP OF GRATE EL. 1068.40
FL. 36" (N. & S.) EL. 1061.43

STA. 1048+00, ℄ I.R. 71
EX. C.B. (ABANDONED & CONNECT THROUGH)
TOP OF GRATE EL. 1068.1±
FL. EX. 36" (N.) EL. 1060.5±
FL. EX. 36" (S.) EL. 1060.7±

STA. 1048+70, 145' RT.
FL. EX. 42" (N.W.)
OUTLET EL. 1034.2±

STA. 1050+05, 125' LT.
FL. EX. 30" (N.E.)
OUTLET EL. 1049.1±

STA. 1050+70, ℄ I.R. 71
EX. M.H.
TOP OF COVER EL. 1057.84
RECONSTRUCT TO EL. 1059.63
FL. EX. 48" (N.) EL. 1020.0±
FL. EX. 42" (S.E.) EL. 1020.7±
FL. EX. 30" (S.W.) EL. 1021.7±

STA. 1050+65, ℄ I.R. 71
EX. C.B. NO. 4
TOP OF GRATE EL. 1057.1±
RECONSTRUCT TO EL. 1059.76
FL. EX. 36" (S.) EL. 1052.3±

1039+00 | 1040+00 | 1041+00 | 1042+00 | 1043+00 | 1044+00 | 1045+00 | 1046+00 | 1047+00 | 1048+00 | 1049+00 | 1050+00

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

# PLAN AND PROFILE
## STA 1038+50 TO STA 1051+00

MED - 71 - 15.78

189
940

DESIGN FILE : I:\pd_MED_IR71\DGN\PlanProfile\gpl8.dgn
USERNAME : pfought

DATE : 09-DEC-1999
TIME : 08:20

94-SM 89-SS 90-NM NOT USED
91-NM 90-SS 92-SM NOT USED
92-NM 94-NS NOT USED

NORTH BRANCH ROCKY RIVER

LA R/W

Match Line

Sta. 1051+00

Sta. 1063+50

1st Post +45.30

1st Post +74.10

1st Post +67.32

1st Post +34.36

1st Post +27.58

1st Post +56.38

1051+00 1052+00 1053+00 1054+00 1055+00 1056+00 1057+00 1058+00 1059+00 1060+00 1061+00 1062+00 1063+00

℄ IR 71

+4815, 3' Lt.
Type 1-98

N 09°28'54" W

+98.03, 78' Rt.
Type T

10' 12' 12' 22' 42' 22' 42' 12' 12' 10'

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

Str. Num. MED-71-1992 L&R

B.M. #9, Sta. 1058+98.99
O.D.O.T. Disc In Headwall,
Stamped Elev. 1041.83

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

1,060.65 1,059.15 1,057.65 1,056.15 1,054.65 1,053.90 1,053.18 1,052.49 1,051.82 1,051.18 1,050.57 1,049.98 1,049.42 1,048.90 1,048.39 1,047.92 1,047.47 1,047.06 1,046.66 1,046.30 1,045.97 1,045.66 1,045.38 1,045.13 1,044.90 1,044.70 1,044.54 1,044.39 1,044.28 1,044.19 1,044.13 1,044.10 1,044.10 1,044.12 1,044.18 1,044.26 1,044.36 1,044.63 1,044.90 1,045.17 1,045.45

1070 1060 1050 1040 1030 1020 1010 1000

FL. PROP. 15" (N)
OUTLET EL. 1145.50

STA. 1053+95, ℄ I.R. 71
PROP. M.H. NO. 1
TOP OF COVER EL. 1150.01
FL. 15" (S) EL. 1145.90
FL. 15" (E. & W.) EL. 1145.90

45' - 15" CONDUIT, TYPE C @ 0.08%

HW-2.1M

PVC STA=1053+63.07

-3.00 % +0.54 %

V.P.I. Sta. 1057+63.07 Elev. = 1,042.26

PVT STA=1061+63.07

STA. 1060+08, ℄ I.R. 71
PROP. C.B. NO. 4, APP.
TOP OF GRATE EL. 1040.07
FL. 15" (E) EL. 1035.49

STA. 1060+08, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1041.8±
FL. EX. 15" (W) EL. 1035.5±

STA. 1052+15, 18' RT.
FL. EX. 48" (S)
OUTLET EL. 1018.1±

STA. 1052+15, ℄ I.R. 71
FL. 48" (S)
OUTLET EL. 1018.08

STA. 1060+08, 150' LT.
FL. EX. 15" (E)
OUTLET EL. 1015.0±

1051+00 1052+00 1053+00 1054+00 1055+00 1056+00 1057+00 1058+00 1059+00 1060+00 1061+00 1062+00 1063+00

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED CHECKED

# PLAN AND PROFILE
## STA 1051+00 TO STA 1063+50

MED - 71 - 15.78

190
940

DESIGN FILE : k:\pd\...MED_IR71\DGN\PlanProfile vpi9.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 08:23

# PLAN AND PROFILE
# STA 1063+50 TO STA 1076+00
# MED - 71 - 15.78

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Match Line
Sta. 1063+50
Sta. 1076+00
Ground Fence
OVERHEAD ELECTRIC DISTRIBUTION LINE (OHIO EDISON)
CATV (ARMSTRONG CABLE)
OVERHEAD TELEPHONE LINES (GTE)
℄ Remsen Road
49+00 CH 37
48+00
52+00
N 38° 41' 36" E
+65.75, 78' Lt. Type E-98
+36.44, 78' Lt. First Post
+80.19, 78' Lt. Type E-98
+88.29 78' Lt.
+62.53, ℄ Type I-98
+11.23, ℄ Type I-98
+68.53, 8' Lt. Type T
+05.23, 8' Rt. Type T
+37.5, 82' Rt. Type B-98
+00, 78' Rt. Type T
+98.84, 78' Rt. Type E-98
+42.59, 78' Rt. First Post
90.74, 78' Rt.
Str. No. MED-71-2034
Remove Crossover (203)
℄ IR 71
N 09° 28' 54" W
1064+00 1065+00 1066+00 1067+00 1068+00 1069+00 1070+00 1071+00 1072+00 1073+00 1074+00 1075+00 1076
24' 22' 42' 12' 10'
75-D 77-D 74-D 76-D 78-D 79-D
94-SS 95-SS 96-SS 97-SS 98-SS 99-SS 100-SS 101-SS
97-SM 98-SM 99-SM 100-SM
32-SI 33-SI 34-SI 35-SI 36-SI
43-SO 44-SO 45-SO
39-G 40-G 41-G
96-NW 97-NW 98-NW 99-NW 100-NW 101-NW 102-NW
98-NS 99-NS 100-NS 101-NS
34-NI 36-NI
41-NO 42-NO 43-NO
38-G 39-GI
FOR UNDERDRAIN KEY, SEE SHEET NO. 172
● Point of Minimum Clearance
Existing - 16'-0"
Proposed - 16'-7"
Req'd - 16'-6"

STA. 1067+40, 95' LT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1043.4±
FL. EX. 24" (E) EL. 1041.0±

STA. 1067+40, 91' LT.
PROP. C.B. NO. 5, A.P.P.
TOP OF GRATE EL. 1045.21
FL. 24" (E) EL. 1040.93

STA. 1067+40, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1043.53
FL. 24" (W.) EL. 1039.27
FL. 24" (E.) EL. 1039.07

STA. 1067+40, 126' RT.
FL. EX. 24" (W.)
OUTLET EL. 1025.0±

STA. 1067+40, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1045.4±
FL. EX. 24" (W.) EL. 1039.3±
FL. EX. 24" (E.) EL. 1039.1±

STA. 1070+92, 91' LT.
PROP. C.B. NO. 5, A.P.P.
TOP OF GRATE EL. 1046.83
FL. 24" (E.) EL. 1043.72

PVC STA 1069+25
V.P.I. Sta. 1070+25.00
Elev. - 1,049.11
200' V.C.
+0.54 % +0.17 %

STA. 1071+92, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1047.5±
FL. EX. 24" (W. & E.) EL. 1041.4±

STA. 1070+92, 95' LT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1047.0±
FL. EX. 24" (E.) EL. 1043.8±

STA. 1070+92, 115' RT.
FL. EX. 24" (W.)
OUTLET EL. 1039.5±

PVC ℄ STA-1071+25
PVT STA-1071+25
STA. 1070+92, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1045.16
FL. 24" (W. & E.) EL. 1041.35

STA. 1075+85, 165' LT.
FL. EX. 24" (E.)
INLET EL. 1061.0±

STA. 1075+85, 95' LT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1049.7±
FL. 24" (W.) EL. 1046.5±
FL. 24" (E.) EL. 1046.3±

PVT STA-1073+25
V.P.I. Sta. 1072+25.00
Elev. - 1,049.46
200' V.C.
+0.17 % +0.54 %

STA. 1075+85, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1052.3±
FL. 24" (W. & E.) EL. 1044.0±

PVC STA 1074+50
Point of Minimum Clearance - 16'-7"

STA. 1075+85, 95' LT.
PROP. C.B. NO. 5, A.P.P.
TOP OF GRATE EL. 1049.21
FL. 24" (W.) EL. 1046.41
FL. 24" (E.) EL. 1046.21

V.P.I. Sta. 1075+
Elev. - 1,051.22 200'
70' - 15" CONDUIT, TYPE C @ 1.00%

STA. 1075+85, 115' RT.
FL. EX. 24" (W.)
OUTLET EL. 1039.0±

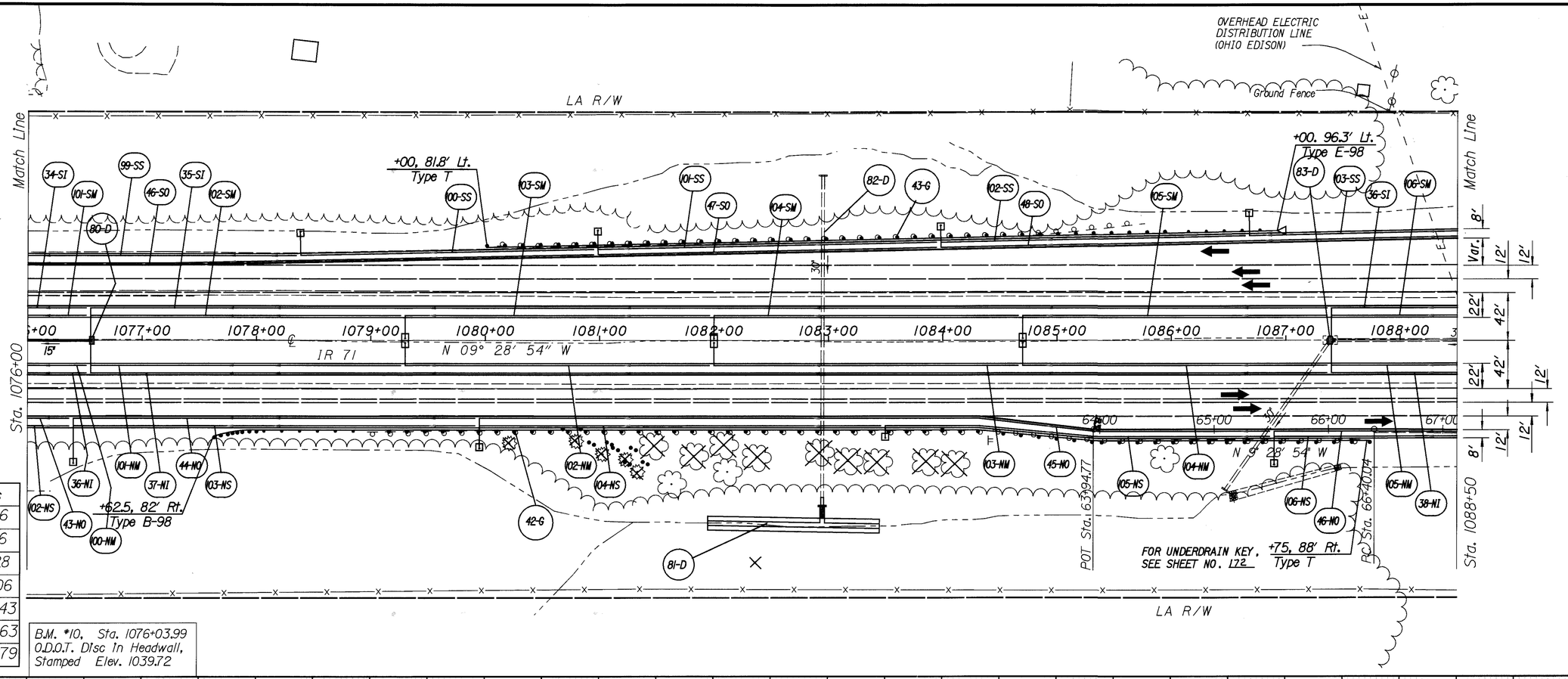
STA. 1075+85, ℄ I.R. 71
PROP. M.H. NO. 3
TOP OF COVER EL. 1048.80
FL. 24" (E. & W.) EL. 1044.04
FL. 15" (N.) EL. 1045.00

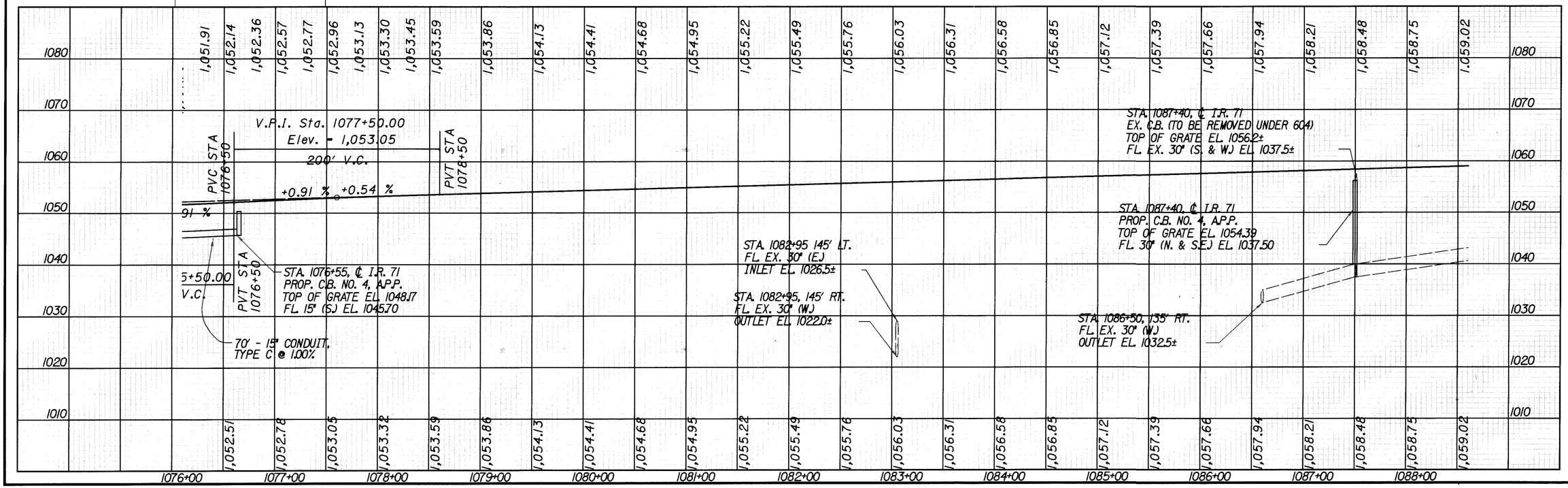
1,045.72 1,045.99 1,046.26 1,046.53 1,046.80 1,047.08 1,047.35 1,047.62 1,047.89 1,048.16 1,048.43 1,048.70 1,048.82 1,048.92 1,049.02 1,049.10 1,049.18 1,049.24 1,049.29 1,049.33 1,049.40 1,049.47 1,049.55 1,049.65 1,049.75 1,049.87 1,050.00 1,050.14 1,050.41 1,050.68 1,050.82 1,050.98 1,051.14 1,051.32 1,051.50 1,051.70
1,045.72 1,045.99 1,046.26 1,046.53 1,046.80 1,047.08 1,047.35 1,047.62 1,047.89 1,048.16 1,048.43 1,048.70 1,048.98 1,049.25 1,049.52 1,049.79 1,050.06 1,050.33 1,050.60 1,050.88 1,051.15 1,051.42 1,051.69 1,051.96 1,052.23
1070 1060 1050 1040 1030 1020 1010 1000
1064+00 1065+00 1066+00 1067+00 1068+00 1069+00 1070+00 1071+00 1072+00 1073+00 1074+00 1075+00

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp20.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 08:27

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

B.M. #10, Sta. 1076+03.99
O.D.O.T. Disc In Headwall,
Stamped Elev. 1039.72




HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
## STA 1076+00 TO STA 1088+50

MED - 71 - 15.78

192
940

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp21.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 08:31

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

UNDERGROUND TELEPHONE LINES (1 CABLE & 1 FIBER OPTIC IN 1" SUBDUCT - GTE)

Pavement Replacement — Butt Joint — Ramp Pavement Planing and Resurfacing

106-SS NOT USED

LA R/w

Match Line — Sta. 1088+50

POT Sta. 67+85.64

TS Sta. 70+87.01

SC Sta. 72+87.01

N 10° 45' 28" W — Ramp D

P.I. Sta = 75+53.95
Δ = 11° 31' 05" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
Δc = 9° 01' 05" (RT)
Lc = 360.72'
Es = 11.99'

Ramp D
P.I. Sta = 76+08.62
Δ = 25° 00' 18" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
Δc = 22° 00' 18" (LT)
Lc = 733.50'
Es = 46.84'

+96.23, 78' Lt. Type T

+13.57, 3' Rt. Type 1-98

+86.7, 82' Rt. Type B-98

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

IR 71 — N 09° 28' 54" W

Ramp B
P.I. Sta = 69+80.50
Δ = 10° 11' 13" (RT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 340.46'
L = 679.13'
E = 15.14'

Ramp B
P.I. Sta = 75+53.95
Δ = 11° 31' 05" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
Δc = 9° 01' 05" (RT)
Lc = 360.72'
Es = 11.99'

Ramp B
P.I. Sta = 82+14.54
Δ = 27° 59' 10" (LT)
Dc = 6° 00' 00"
R = 954.93'
Δc = 21° 59' 10" (LT)
Lc = 366.44'
Es = 30.11'

Ramp "B" — Ramp "D"

Ground Fence

OVERHEAD ELECTRIC DISTRIBUTION LINE (OHIO EDISON)

OVERHEAD TELEPHONE LINES (GTE)

Butt Joint — Ramp Pavement Planing and Resurfacing — Pavement Replacement

LA R/w

Sta. 1101+00

B.M. #11, Sta. 1089+23.99
O.D.O.T. Disc In Headwall, Stamped Elev. 1047.95

| | 1089+00 | 1090+00 | 1091+00 | 1092+00 | 1093+00 | 1094+00 | 1095+00 | 1096+00 | 1097+00 | 1098+00 | 1099+00 | 1100+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Existing | 1,059.29 | 1,059.56 | 1,059.84 | 1,060.11 | 1,060.38 | 1,060.65 | 1,060.92 | 1,061.19 | 1,061.47 | 1,061.61 | 1,061.77 | 1,061.92 |
| Proposed | 1,059.29 | 1,059.56 | 1,059.84 | 1,060.11 | 1,060.38 | 1,060.65 | 1,060.92 | 1,061.19 | 1,061.46 | 1,061.74 | 1,062.01 | 1,062.28 |

| | 1,062.09 | 1,062.26 | 1,062.44 | 1,062.62 | 1,062.81 | 1,063.18 | 1,063.56 | 1,063.93 | 1,064.31 | 1,064.68 | 1,065.06 | 1,065.24 | 1,065.43 | 1,065.61 | 1,065.79 | 1,065.96 | 1,066.14 | 1,066.31 | 1,066.48 | 1,066.65 | 1,066.82 | 1,066.99 | 1,067.15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1,062.55 | 1,062.82 | 1,063.09 | 1,063.37 | 1,063.64 | 1,063.91 | 1,064.18 | 1,064.45 | 1,064.72 | 1,064.99 | 1,065.27 | 1,065.54 | 1,065.81 | | | | | | | | | | |

STA. 1089+28, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1057.2±
FL. 30" (S. & W.) EL. 1042.8±

STA. 1089+28, 78' LT.
EX. C.B. (TO BE REMOVED)
TOP OF GRATE EL. 1059.5±
FL. EX. 30" (W. & E.) EL. 1045.4±

EX. TELE. LINES (8'± DEEP)

STA. 1089+28, 135' LT.
FL. EX. 30" (E.)
OUTLET EL. 1047.1±

STA. 1089+28, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1055.40
FL. 30" (S. & W.) EL. 1042.81

STA. 1092+35, 80' RT.
EX. C.B. (TO BE REMOVED)
TOP OF GRATE EL. 1060.4±
FL. 12" (E.) EL. 1057.0±

STA. 1092+30, 125' RT.
FL. EX. 12" (W.)
OUTLET EL. 1056.6±

PVC STA=1092+75

+0.54 % +0.75 %

V.P.I. Sta. 1093+75.00
Elev. = 1,061.87
200' V.C.

PVT STA=1094+75

PVC STA 1097+75

DESIGN FILE : h:\pd_med_lr71\dgn\planprofile\gp22.dgn
USERNAME : jrogers

DATE : 09-DEC-1999
TIME : 07:55

PLAN AND PROFILE
STA 1088+50 TO STA 1101+00

MED - 71 - 15.78

193
940

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Match Line Sta. 1101+00

Match Line Sta. 1113+50

Ramp C
P.I. Sta = 90+40.36
Δ = 11° 31' 05" (LT)
Dc = 2° 30' 00"
R = 2,291.83'
Δc = 9° 01' 05" (LT)
Lc = 360.72'
Es = 11.99'

Str. Num. MED-71-2090 L&R

SRS Sta. 87+12.80

Ramp "C"

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

+81.71, 82' Lt. Type B-98

+54.83, 3' Lt. Type 1-98

+67.9, 78' Rt. Type T

Ramp "A"

P.I. Sta = 89+97.86
Δ = 25° 05' 01" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
Δc = 22° 10' 37" (RT)
Lc = 739.23'
Es = 47.49'

B.M. #12, Sta. 1110+35.99
O.D.O.T. Disc In Headwall, Stamped Elev. 1069.77

LA R/W

IR 71 N 09° 28' 54" W

Plum Creek

Columbia Gas 4" Line

EX. 4" GAS LINE (COLUMBIA GAS)

15'-6" Required Minimum Vertical Clearance
16'-0" Actual Minimum Vertical Clearance

NOT USED: 40-NI, 111-NW, 113-NS, 42-NI, 39-SI

1st Post +75.43
1st Post +44.21
1st Post +94.57
1st Post +73.83
1st Post +24.20
1st Post +92.98

1,400' V.C.
V.P.I. Sta. 1104+75.00 Elev. = 1,070.12
+0.75 % +0.33 %

16'-0" Actual Min. Vertical Clearance

STA. 1102+70, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1065.4±
FL. EX. 15" (E) EL. 1059.1±

STA. 1102+70, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1064.52
FL. 15" (E) EL. 1059.05

STA. 1102+70, 125' RT.
FL. EX. 15" (W)
OUTLET EL. 1144.5±

EX. 4" GAS EL. 1044.5±

STA. 1106+00, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1066.8±
FL. EX. 15" (W) EL. 1061.6±

STA. 1106+00, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1065.99
FL. 15" (W) EL. 1061.8

STA. 1106+00, 140' LT.
FL. EX. 15" (E)
OUTLET EL. 1055.2±

STA. 1108+80, ℄ I.R. 71
EX. C.B. (TO BE REMOVED)
TOP OF GRATE EL. 1068.2±
FL. EX. 15" (E) EL. 1062.6±

PVT STA 1111+76.5

STA. 1108+80, 8' RT.
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1068.22
FL. 15" (E) EL. 1062.64

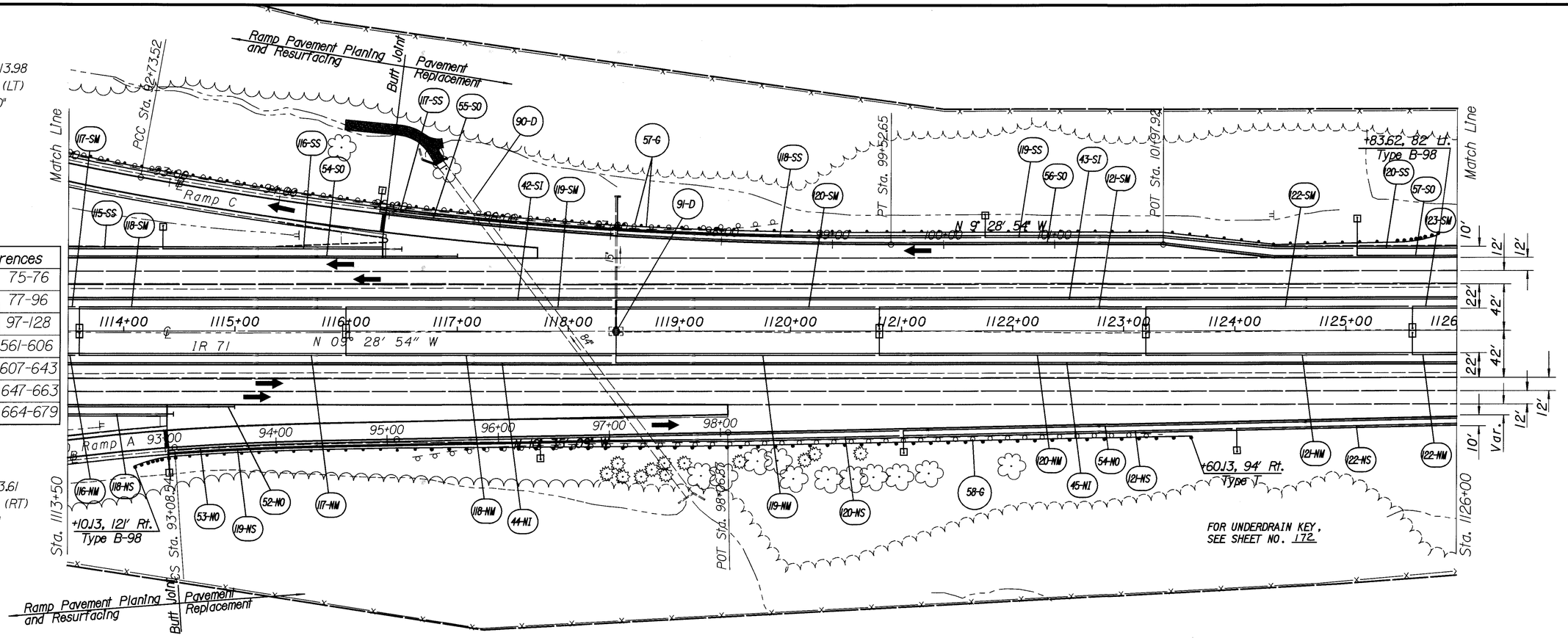
STA. 1108+80, 125' LT.
FL. EX. 15" (W)
OUTLET EL. 1058.6±

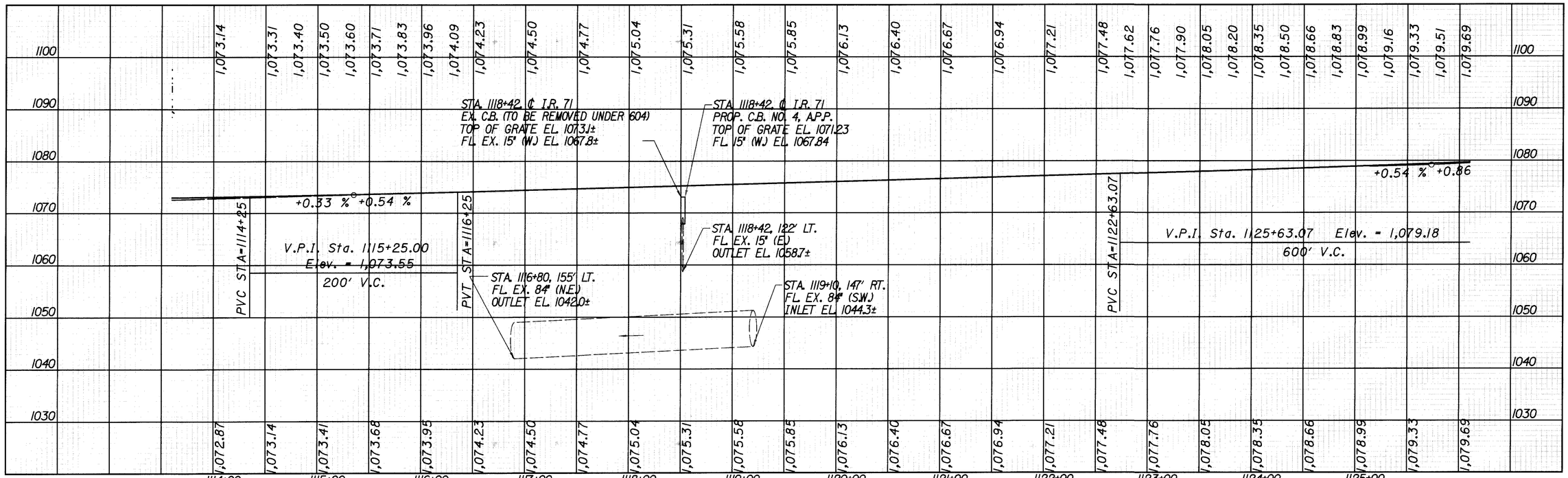
| | | |

Ramp C
P.I. Sta = 96+13.98
Δ = 10° 11' 13" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 340.46'
L = 679.13'
E = 15.14'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Ramp A
P.I. Sta = 89+43.61
Δ = 25° 10' 37" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 739.23'
L = 739.23'
E = 47.49'




DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp24.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 08:38

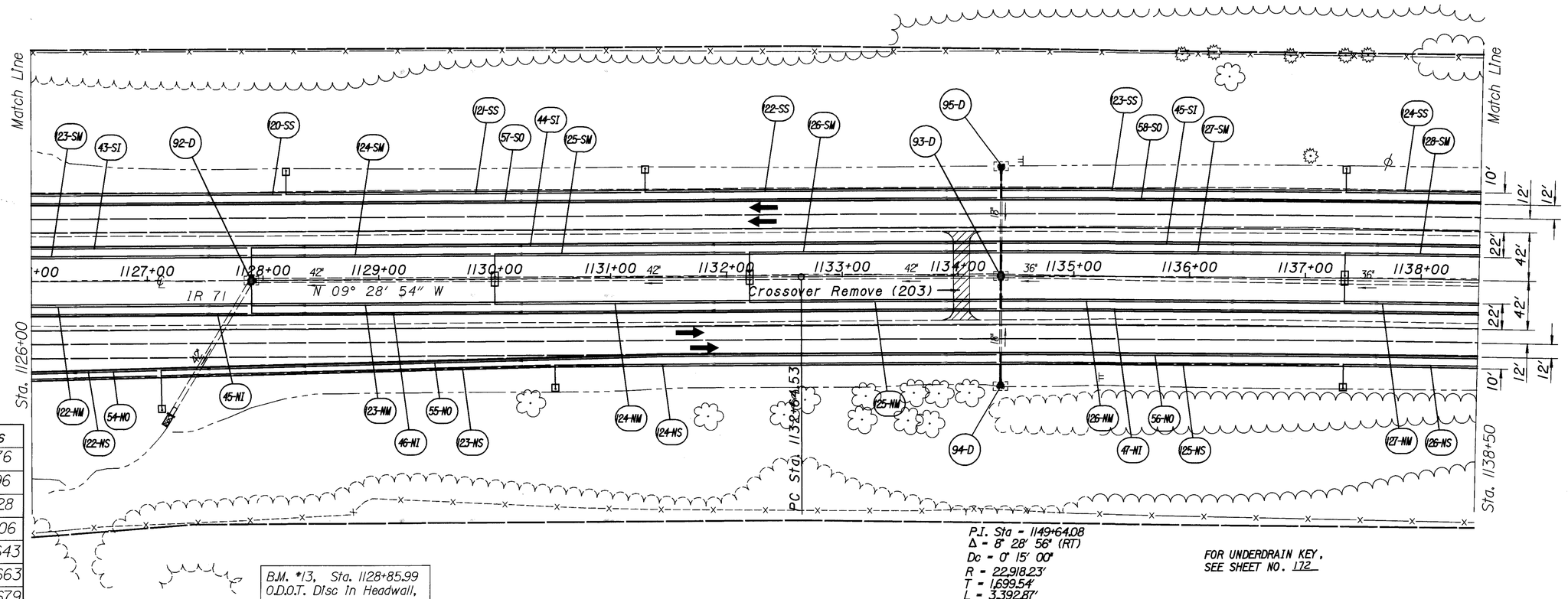
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
## STA 1113+50 TO STA 1126+00

MED - 71 - 15.78

195
940

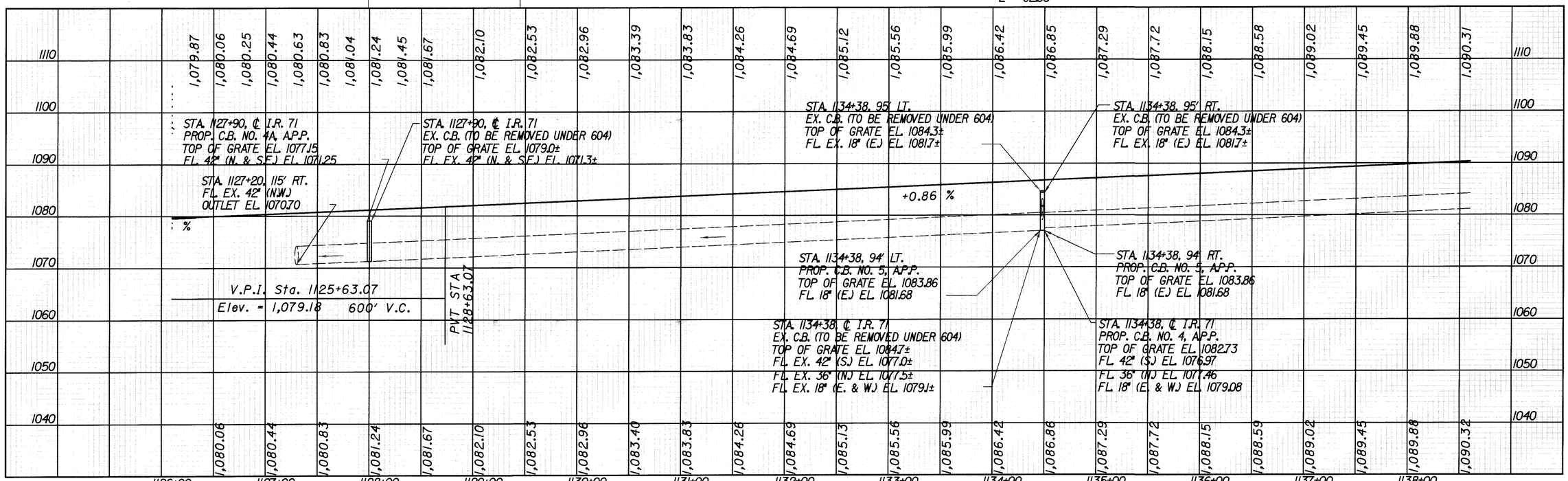
| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




B.M. #13, Sta. 1128+85.99
O.D.O.T. Disc In Headwall,
Stamped Elev. 1081.32

P.I. Sta = 1149+64.08
Δ = 8° 28' 56" (RT)
Dc = 0° 15' 00"
R = 22,918.23'
T = 1,699.54'
L = 3,392.87'
E = 62.93'

FOR UNDERDRAIN KEY,
SEE SHEET NO. 172




HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA 1126+00 TO STA 1138+50

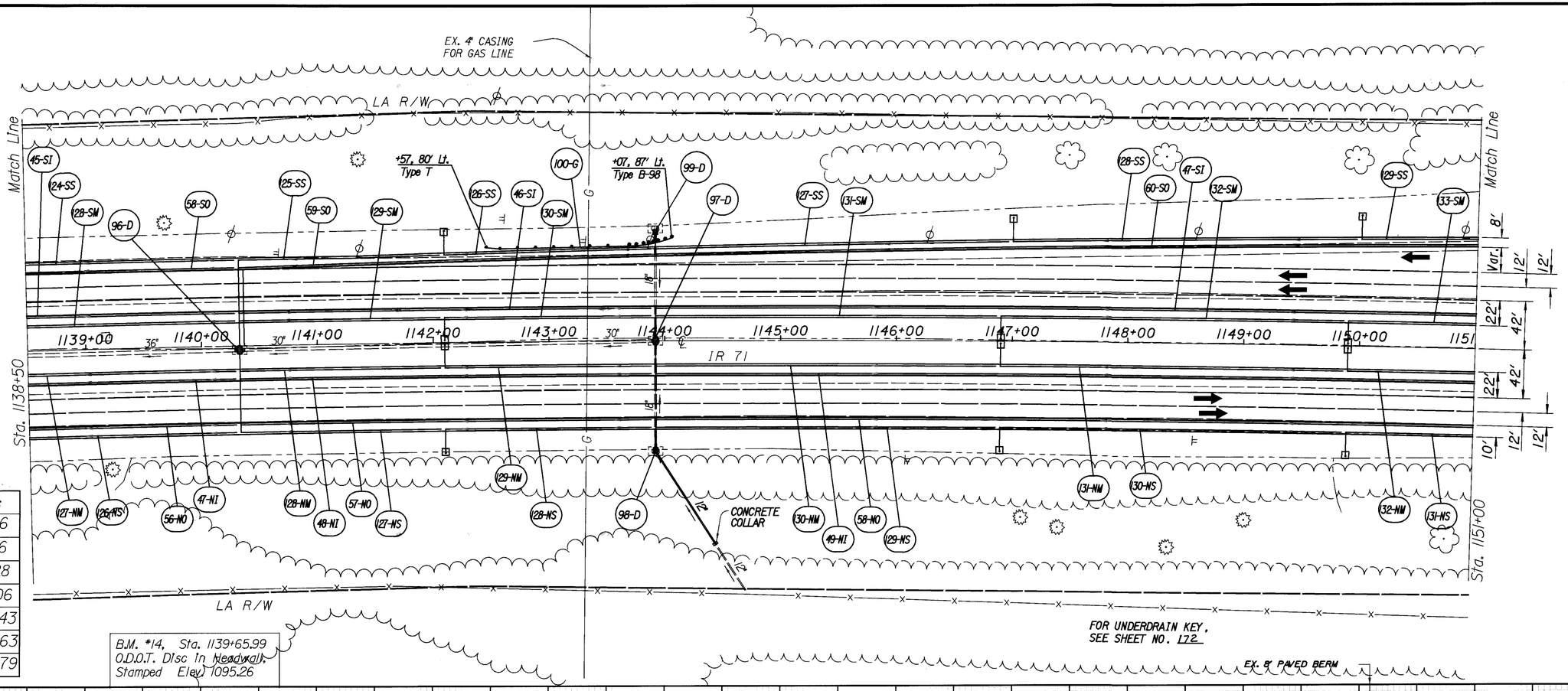
MED - 71 - 15.78

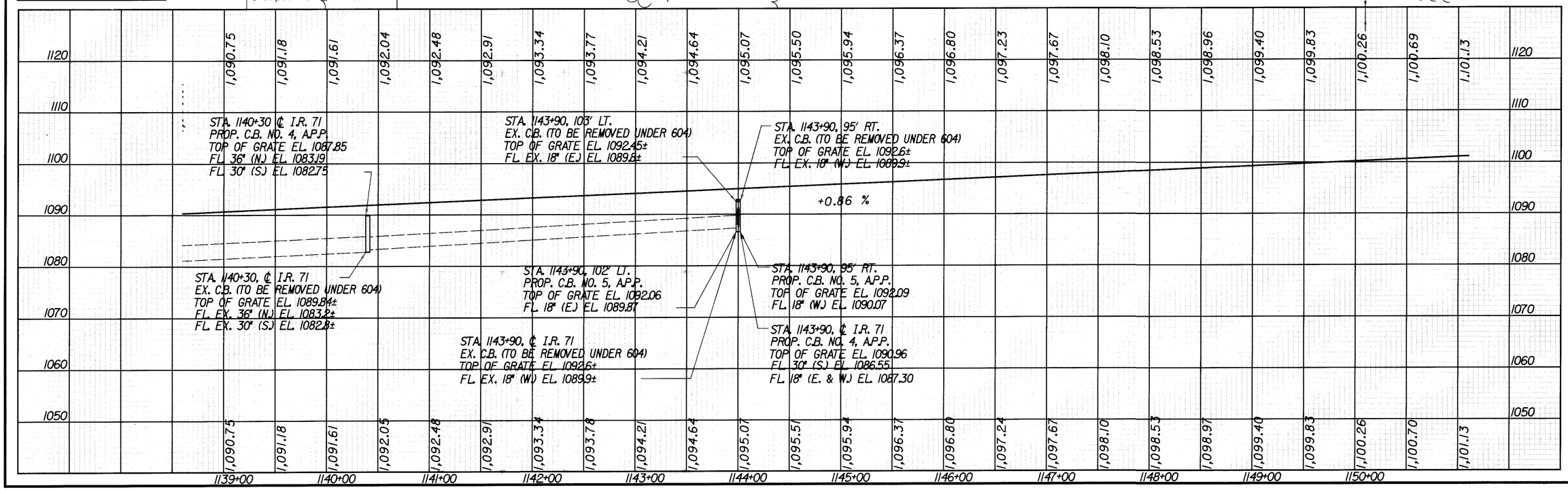
196
940

DESIGN FILE : N:\pd_med_ir71\dgn\planprofile\gp25.dgn
USERNAME : jrogers
DATE : 09-DEC-1999
TIME : 08:01

I.R. 71
P.I. Sta = 1149+64.08
Δ = 8° 28' 56" (RT)
Dc = 0° 15' 00"
R = 22,918.23'
T = 1,699.54'
L = 3,392.88'
E = 62.93'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




CALCULATED
CHECKED

HORIZONTAL SCALE IN FEET
0 50 100

# PLAN AND PROFILE
## STA 1138+50 TO STA 1151+00

MED - 71 - 15.78

197
940

DESIGN FILE : k:\pd_med_ir71\dgn\planprofile\gp26.dgn
USERNAME : jroger6
DATE : 09-DEC-1999
TIME : 08:08

I.R. 71
P.I. Sta = 1149+64.08
Δ = 8° 28' 56" (RT)
Dc = 0° 15' 00"
R = 22,918.23'
T = 1,699.54'
L = 3,392.88'
E = 62.93'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Match Line
Sta. 1151+00
Sta. 1163+50
1151+00 1152+00 1153+00 1154+00 1155+00 1156+00 1157+00 1158+00 1159+00 1160+00 1161+00 1162+00 1163+00
IR 71
POT Sta. 31+00.00
RC Sta. 34+00.00
Pavement Replacement
Butt Joint
Ramp Pavement Planing and Resurfacing
LA R/W
EX. 10" SAN.
EX. 8" SAW
EX. 10" SAW
EX. 24" SAW
EX. 15" SAW
EX. 18" SAW
S.B. Rest Area
P.I. Sta = 35+88.48
Δ = 5° 38' 59" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 188.48'
L = 376.65'
E = 4.65'
Do Not Disturb Landscaping
10' Match Line
N 1° 20' 47" W 340.00'
N 1° 40' W
FOR UNDERDRAIN KEY, SEE SHEET NO. 172
NOT USED
B.M. #15, Sta. 1158+40.99
O.D.O.T. Disc In Headwall, Stamped Elev. 1101.22

STA. 1152+40, 75' LT.
EX. C.B. NO. 2-2B
TOP OF GRATE EL. 1102.3±
RECONSTRUCTED TOP OF GRATE EL. 1102.18
FL. EX. 12" (N. & W.) EL. 1098.0±

STA. 1152+40, 122' LT.
FL. EX. 12" (E)
OUTLET EL. 1097.7±

STA. 1156+64, 82' LT.
EX. C.B. NO. 2-2B
TOP OF GRATE EL. 1105.0±
RECONST. TOP OF GRATE EL. 1105.21
FL. EX. 12" (S.) EL. 1101.8±
8' PAVED BERM

STA. 1158+84, 174' LT.
FL. EX. 24" (E)
OUTLET EL. 1097.8±

STA. 1158+55, 173' LT.
FL. EX. 72" (E)
OUTLET EL. 1093.5±

+0.86 %

STA. 1158+55, 100' RT.
FL. EX. 72" (W.)
INLET EL. 1095.1±

EX. 10" SAN.
EL. 1087.8±

STA. 1158+84, 94' LT.
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1104.75
FL. 24" (W.) EL. 1099.81
FL. 15" (E) EL. 1100.58±

STA. 1161+61.27, 216.93 LT.
FL. PROP. 18" (N.E.)
OUTLET EL. 1106.43

STA. 1158+84, 92' LT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1105.6±
FL. EX. 24" (W.) EL. 1099.8±
FL. EX. 15" (E) EL. 1100.6±

STA. 1158+84, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1105.6±
FL. EX. 15" (W.) EL. 1101.0±

STA. 1158+84, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1103.90
FL. 15" (W.) EL. 1100.96

STA. 1162+29.92, 200.70' LT.
PROP. C.B. NO. 3A
TOP OF GRATE EL. 1112.07
FL. 15" (N.W.) EL. 1107.25
FL. 18" (S.W.) EL. 1107.10
69' - 18" CONDUIT, TYPE C @ 0.09%

STA. 1162+29.92, 200.70' LT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1112.1±
FL. EX. 15" (N.W.) EL. 1107.3±
FL. EX. 18" (S.W.) EL. 1107.1±

STA. 1162+39.09, 226.83' LT.
PROP. C.B. NO. 3A, A.P.P.
TOP OF GRATE EL. 1112.25
FL. 15" (S.E.) EL. 1107.93

STA. 1162+39.09, 226.83' LT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1112.3±
FL. EX. 15" (S.E.) EL. 1107.9±

1130 1120 1110 1100 1090 1080 1070 1060

1,101.56 1,101.99 1,102.42 1,102.86 1,103.29 1,103.72 1,104.15 1,104.59 1,105.02 1,105.45 1,105.88 1,106.32 1,106.75 1,107.18 1,107.61 1,108.05 1,108.48 1,108.91 1,109.34 1,109.78 1,110.21 1,110.64 1,111.07 1,111.51 1,111.94

1,101.56 1,101.99 1,102.43 1,102.86 1,103.29 1,103.72 1,104.16 1,104.59 1,105.02 1,105.45 1,105.89 1,106.32 1,106.75 1,107.18 1,107.62 1,108.05 1,108.48 1,108.91 1,109.35 1,109.78 1,110.21 1,110.64 1,111.08 1,111.51 1,111.94

1151+00 1152+00 1153+00 1154+00 1155+00 1156+00 1157+00 1158+00 1159+00 1160+00 1161+00 1162+00 1163+00

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA 1151+00 TO STA 1163+50

MED - 71 - 15.78

198
940

DESIGN FILE : I:\pd_med_ir71\dgn\planprofile\gp27.dgn
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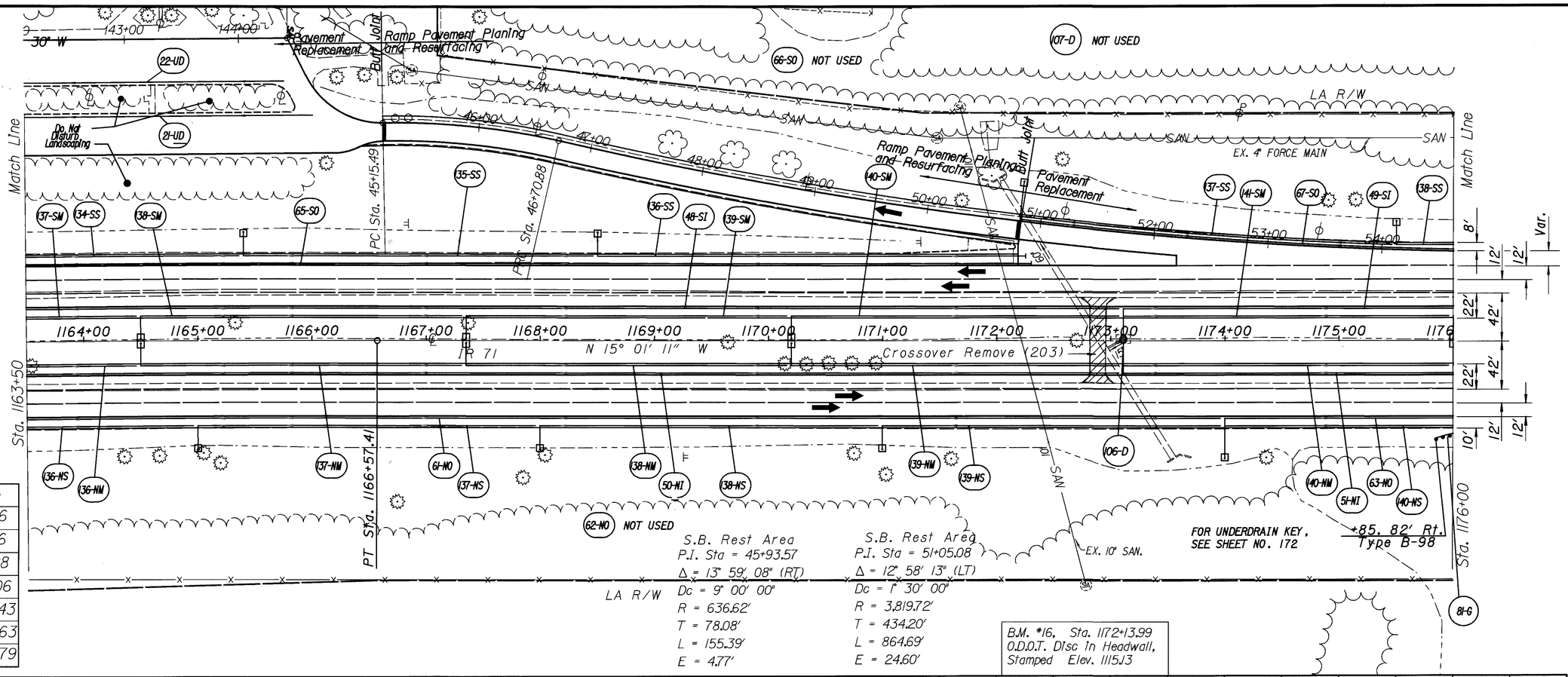
DATE : 09-DEC-1999
TIME : 08:11



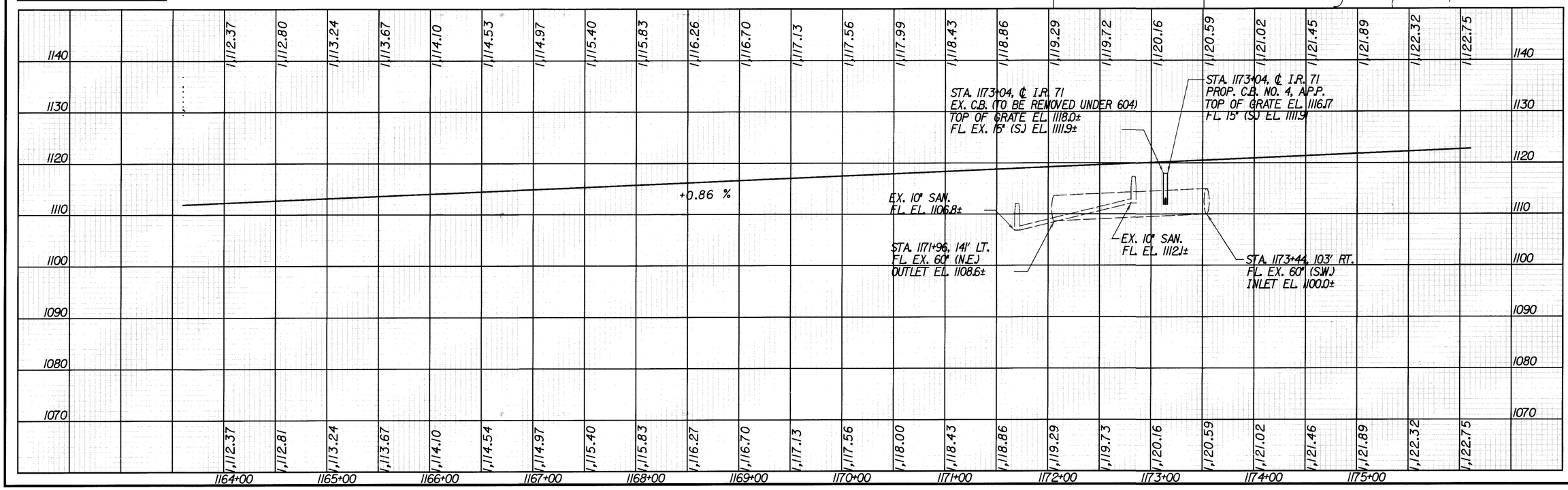

I.R. 71
P.I. Sta = 1149+64.08
Δ = 8° 28' 56" (RT)
Dc = 0° 15' 00"
R = 22,918.23'
T = 1,699.54'
L = 3,392.88'
E = 62.93'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

S.B. Rest Area
P.I. Sta = 45+93.57
Δ = 13° 59' 08" (RT)
Dc = 9° 00' 00"
R = 636.62'
T = 78.08'
L = 155.39'
E = 4.77'

S.B. Rest Area
P.I. Sta = 51+05.08
Δ = 12° 58' 13" (LT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 434.20'
L = 864.69'
E = 24.60'

B.M. #16, Sta. 1172+13.99
O.D.O.T. Disc In Headwall,
Stamped Elev. 1115.13




PLAN AND PROFILE
STA 1163+50 TO 1176+00

MED - 71 - 15.78

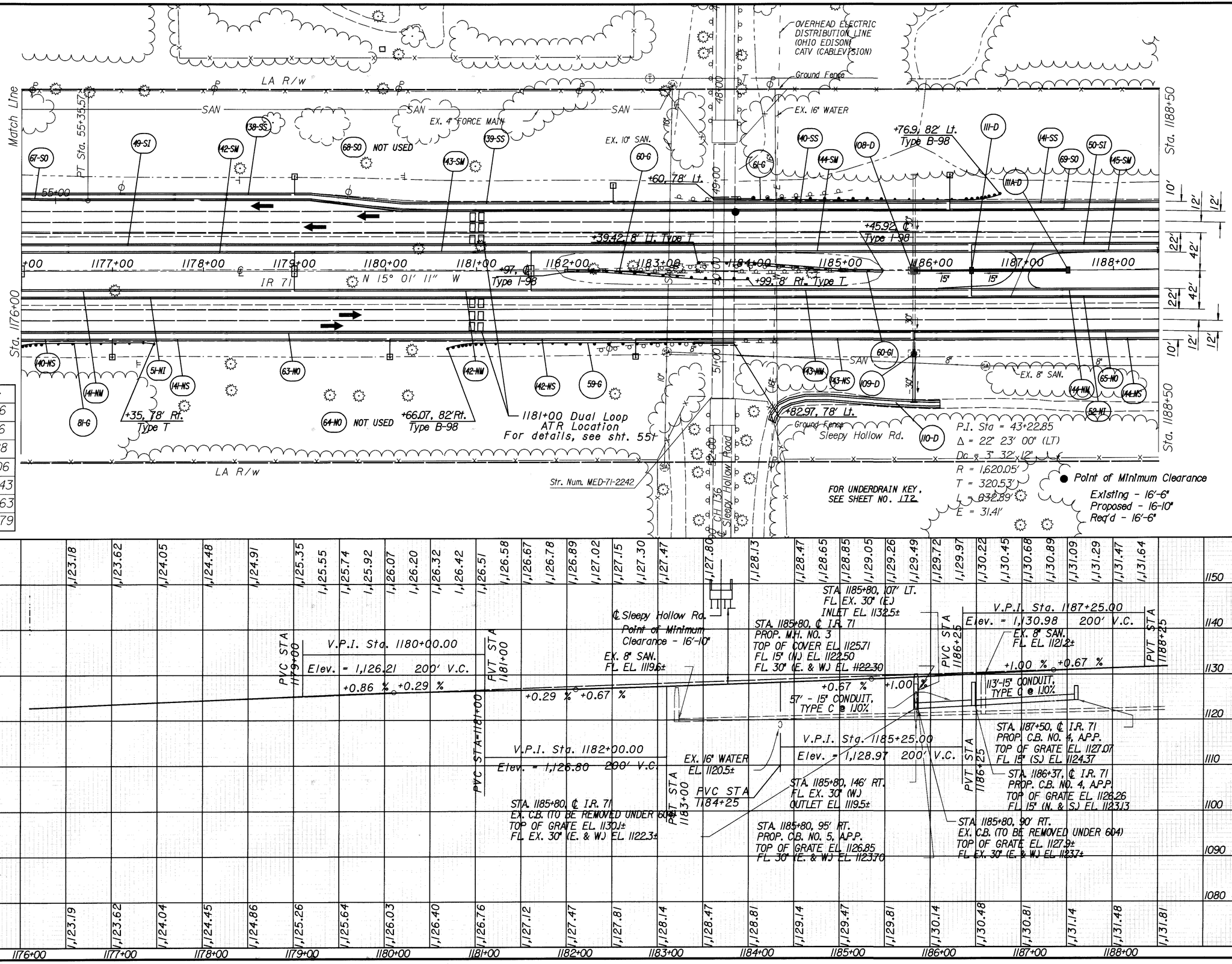
199
940

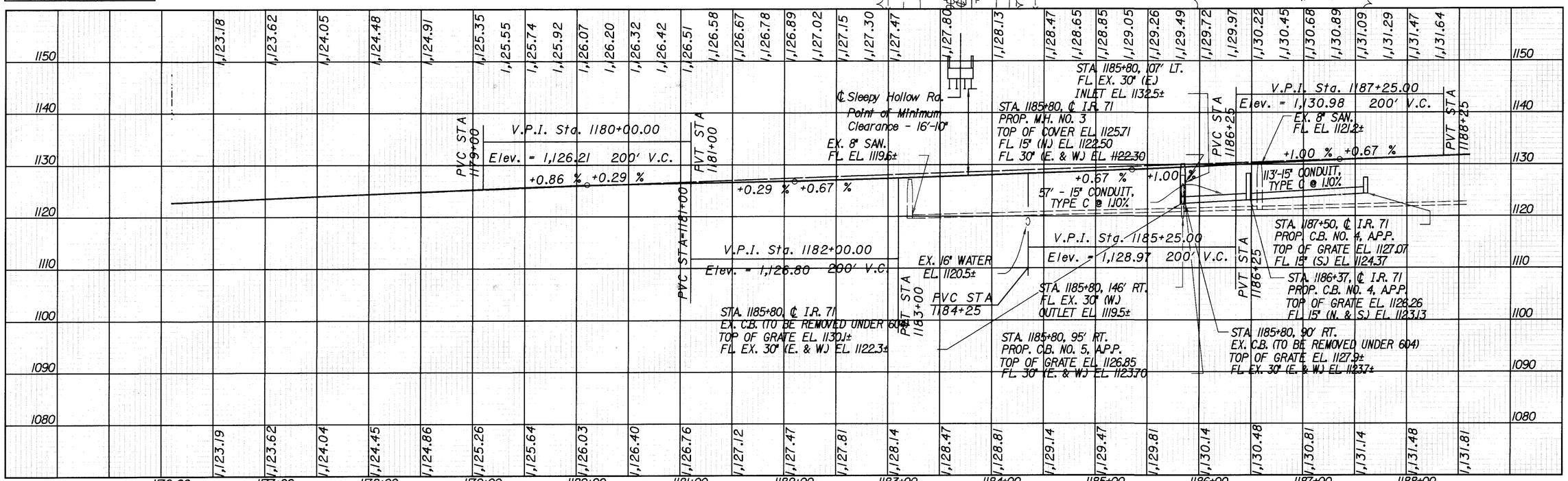
HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp28.dgn
USERNAME : jrogers
DATE : 30-DEC-1999
TIME : 13:11

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

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USERNAME : jrogers
DATE : 09-DEC-1999
TIME : 08:17

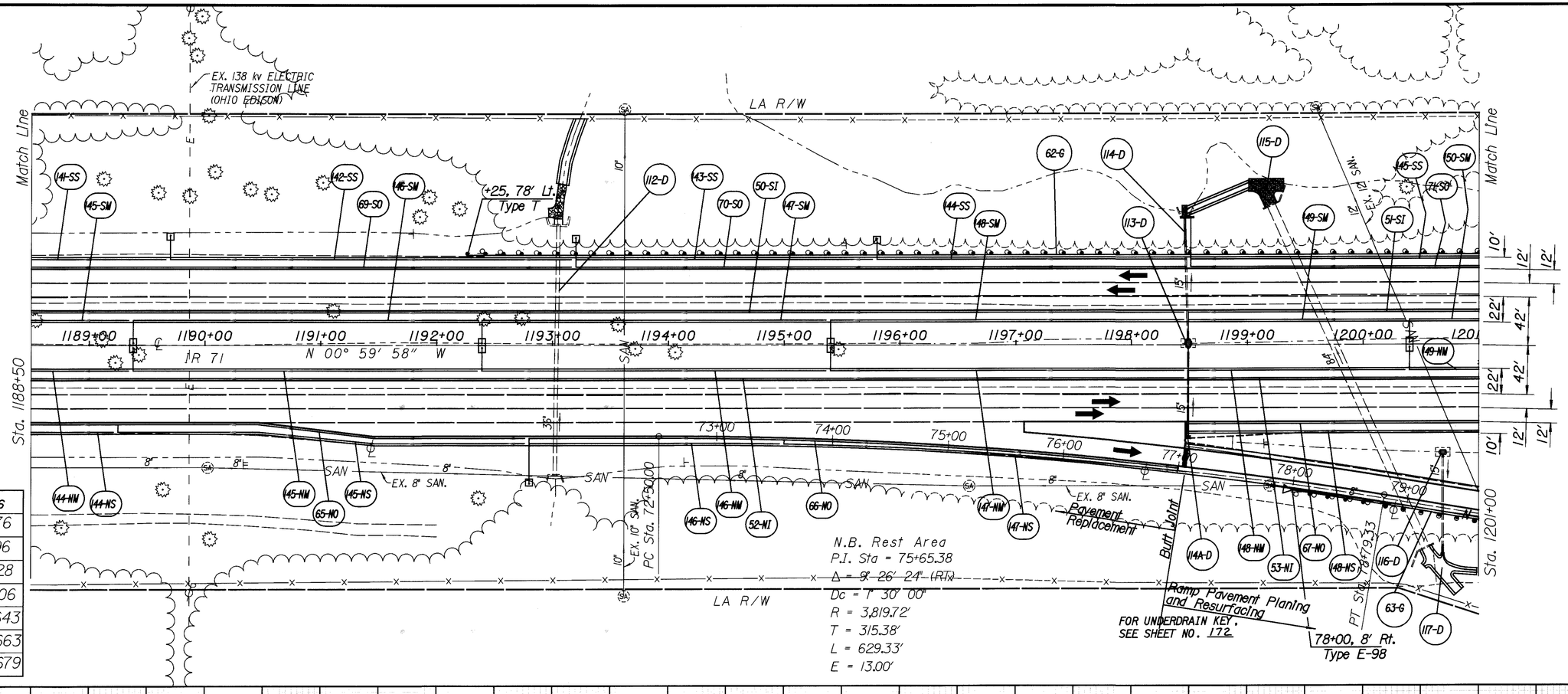
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

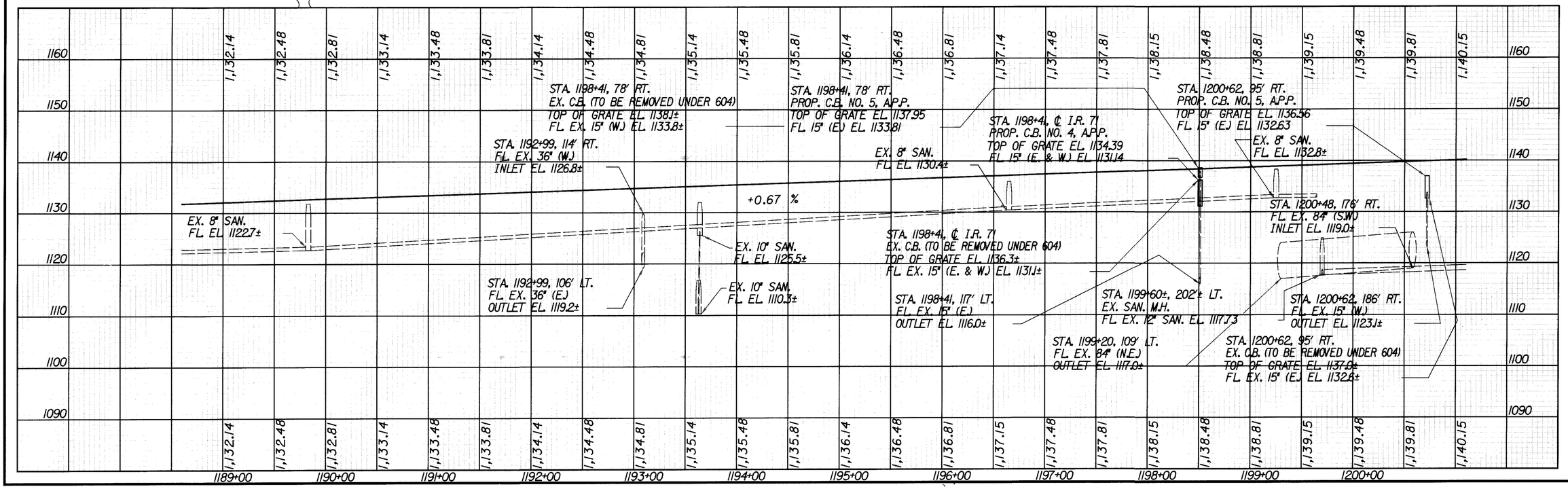
# PLAN AND PROFILE
## STA 1176+00 TO STA 1188+50

MED - 71 - 15.78

200
940

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




DATE : 09-DEC-1999
TIME : 08:27
DESIGN FILE : i:\pa_med_lr71\dgn\planprofile\gp30.dgn
USERNAME : jrogers

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
## STA 1188+50 TO STA 1201+00

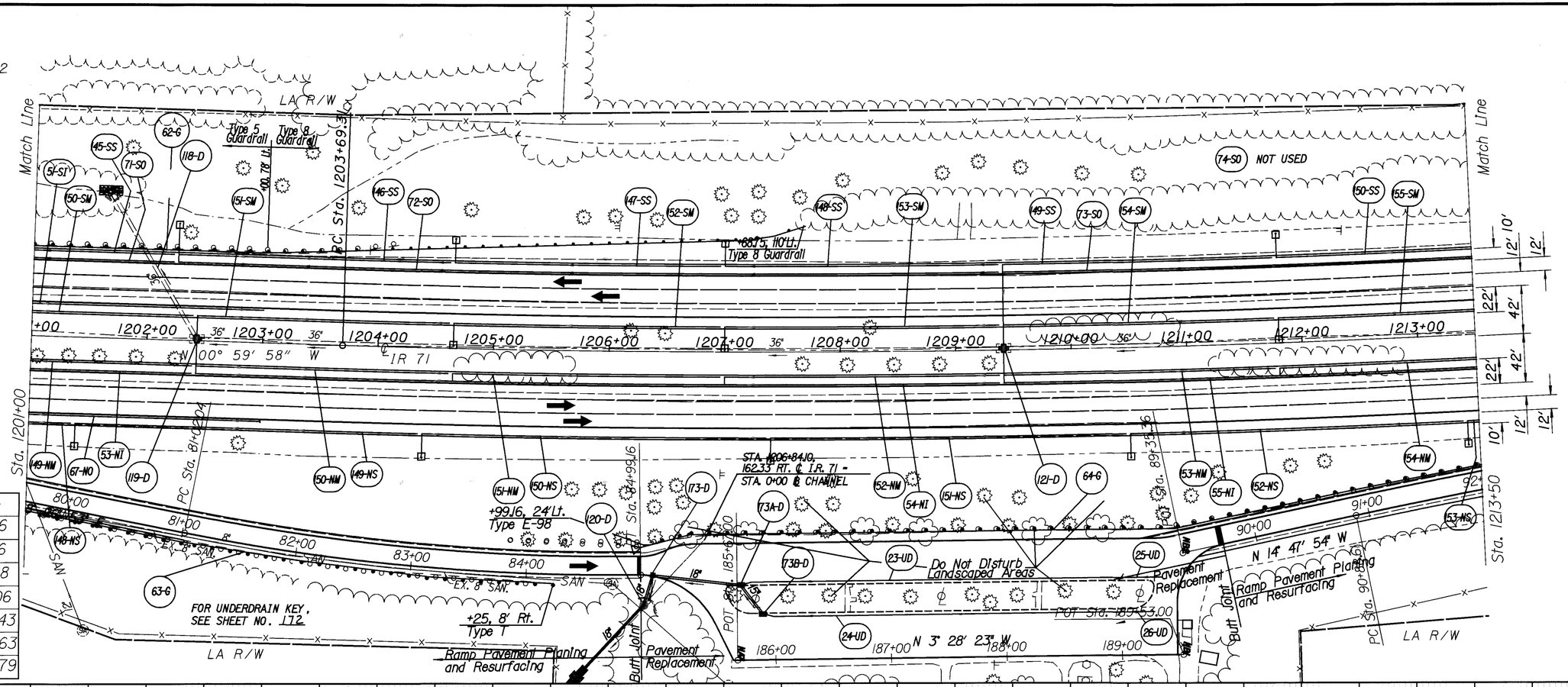
MED - 71 - 15.78

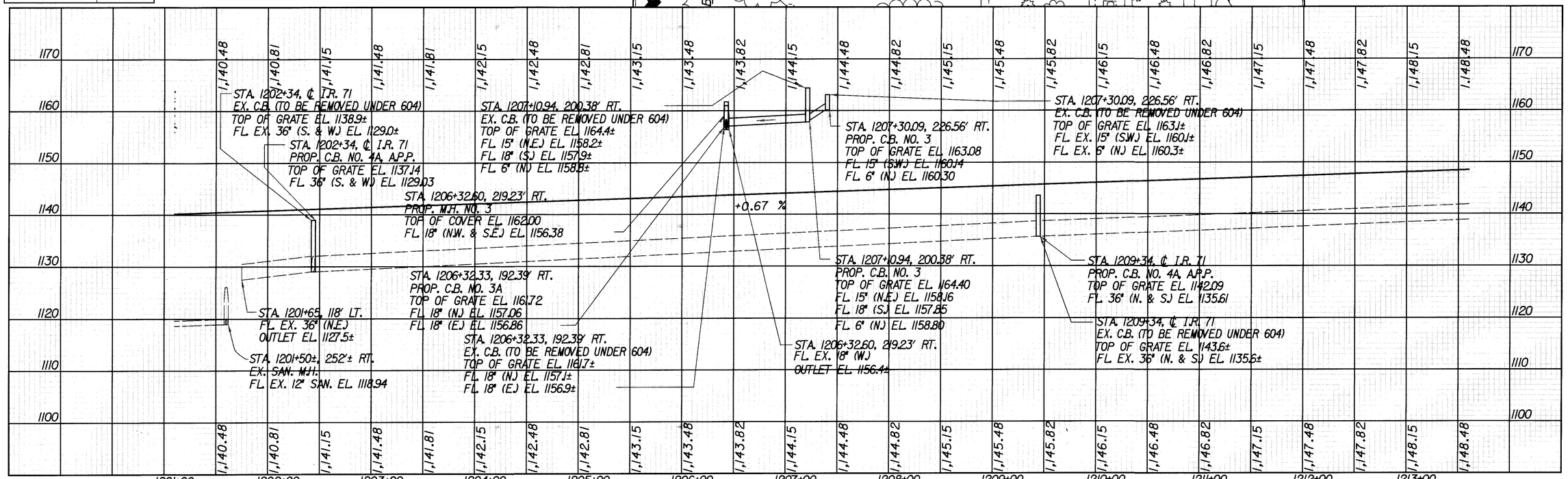
201
940

I.R. 71
P.I. Sta = 1218+79.02
Δ = 14° 01' 13" (LT)
Dc = 0° 28' 00"
R = 12,277.63'
T = 1,509.71'
L = 3,004.33'
E = 92.47'

N.B. Rest Area
P.I. Sta = 83+01.31
Δ = 11° 54' 49" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 199.28'
L = 397.12'
E = 10.37'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
## STA 1201+00 TO STA 1213+50

MED - 71 - 15.78

202
940

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp3ld.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 08:59

N.B. Rest Area
P.I. Sta = 93+54.23
Δ = 5° 18' 31" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 265.62'
L = 530.86'
E = 6.15'

I.R. 71
P.I. Sta = 1218+79.02
Δ = 14° 01' 13" (LT)
Dc = 0° 28' 00"
R = 12,277.63'
T = 1,509.71'
L = 3,004.33'
E = 92.47'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Str. Num. MED-71-2321

74-SO NOT USED

OVERHEAD TELEPHONE LINES (GTE)

LA R/W

Match Line

Sta. 1213+50

1214+00 1215+00 1216+00 1217+00 1218+00 1219+00 1220+00 1221+00 1222+00 1223+00 1224+00 1225+00 1226+00

IR 71

N 9° 29' 23" W

POT Sta. 99+71.10

PT Sta. 96+19.47

Ramp Pavement Planing and Resurfacing

Butt Joint

Pavement Replacement

+50.4, 78' Lt.

+16.5, 8' Lt. Type T1

+68.37, ℄ Type 1-98

+74.8, 8' Rt. Type T1

+46.7, 92' Lt.

+04.8, 106' Rt. Type B-98

Ground Fence

Match Line

Sta. 1226+00

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

OVERHEAD ELECTRIC DISTRIBUTION LINE (OHIO EDISON) CATV (CABLEVISION)

TR 138 - 55.00

℄ Laurel Road

● Point of Minimum Clearance
Existing - 16'-4"
Proposed - 16-8½"
Req'd - 16'-6"

STA. 1216+76, 98' LT.
PROP C.B. NO. 5, A.P.P.
TOP OF GRATE EL. 1147.52
FL. EX. 15" (E) EL. 1145.73

STA. 1216+76, 125' RT.
EX C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1148.2±
FL. EX. 30" (E. & W.) EL. 1142.5±

STA. 1216+76, 190' RT.
FL. 30" (W.) EL. 1164.04

STA. 1216+76, 125' RT.
PROP C.B. NO. 5A
TOP OF GRATE EL. 1147.32
FL. 30" (E. & W.) EL. 1142.52

STA. 1216+76, 95' LT.
EX C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1148.2±
FL. EX. 15" (E) EL. 1145.9±

STA. 1216+76, ℄ I.R. 71
EX C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1148.6±
FL. 36" (S.) EL. 1141.4±
FL. 30" (N. & E.) EL. 1141.9±
FL. 15" (W.) EL. 1143.2±

STA. 1216+76, ℄ I.R. 71
PROP. C.B. NO. 4A, A.P.P.
TOP OF GRATE EL. 1147.04
FL. 36" (S.) EL. 1141.35
FL. 30" (N. & E.) EL. 1141.89
FL. 15" (W.) EL. 1143.24

STA. 1221+34, ℄ I.R. 71
PROP. C.B. NO. 4A, A.P.P.
TOP OF GRATE EL. 1150.07
FL. 30" (S.) EL. 1145.08
FL. 30" (E.) EL. 1145.28
FL. 15" (N.) EL. 1146.30

STA. 1221+34, 179' RT.
FL. 30" (W.) EL. 1167.01

STA. 1221+34, 116' RT.
PROP C.B. NO. 5A
TOP OF GRATE EL. 1150.81
FL. 30" (W.) EL. 1147.26
FL. 30" (E.) EL. 1147.46

STA. 1221+34, ℄ I.R. 71
EX C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1151.6±
FL. EX. 30" (S.) EL. 1145.1±
FL. EX. 30" (E.) EL. 1145.3±
FL. EX. 15" (N.) EL. 1146.3±

PVC STA=1220+75
V.P.I. Sta. 1221+75.00
Elev. = 1,153.99 200' V.C.
+0.67 % +0.48 %
PVC STA 1222+75

PVT STA=1222+75
+0.48 % +0.67 %
PVT STA 1224+75

STA. 1223+69, 125' LT.
PROP. M.H. NO. 5
TOP OF COVER EL. 1153.99
FL. 15" (N.) EL. 1147.90
FL. EX. 15" (S.) EL. 1147.80

V.P.I. Sta. 1223+75.00
Elev. = 1,154.95 200' V.C.

STA. 1221+34, 114' RT.
EX C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1150.9±
FL. 30" (W.) EL. 1147.2±
FL. 30" (E.) EL. 1147.4±

℄ Laurel Rd.

Point of Minimum Clearance - 16'-8½"

EX. 12" WATER LINE EL. 1146.7±

330' 15" CONDUIT, TYPE C @ 0.70%

1,148.82 1,149.15 1,149.48 1,149.82 1,150.15 1,150.49 1,150.82 1,151.15 1,151.49 1,151.82 1,152.15 1,152.49 1,152.82 1,153.15 1,153.48 1,153.64 1,153.79 1,153.94 1,154.08 1,154.22 1,154.35 1,154.47 1,154.59 1,154.72 1,154.86 1,155.00 1,155.14 1,155.30 1,155.45 1,155.62 1,155.78 1,156.12 1,156.45

1180 1170 1160 1150 1140 1130 1120 1110

1214+00 1215+00 1216+00 1217+00 1218+00 1219+00 1220+00 1221+00 1222+00 1223+00 1224+00 1225+00

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp32.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 09:01

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED CHECKED

PLAN AND PROFILE
STA 1213+50 TO STA 1226+00

MED - 71 - 15.78

203
940

NOTE: DO NOT DISTURB THE EXISTING R/W FENCE FROM APPROXIMATELY STA. 1237+00 LT. TO STA. 1239+00 LT

I.R. 71
P.I. Sta = 1218+79.02
Δ = 14° 01' 13" (LT)
Dc = 0° 28' 00"
R = 12,277.63'
T = 1,509.71'
L = 3,004.33'
E = 92.47'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

160-NW NOT USED
159-NI NOT USED
161-SW NOT USED
132-D NOT USED
163-NW NOT USED

Match Line
Sta. 1226+00
Match Line
Sta. 1238+50
LA R/W
LA R/W
IR 71
PT Sta. 1233+73.64
Ex. Ground Fence
+43, 82' Lt. Type B-98
+10.5, ℄ Type I-98
+75, 95' Rt. Type B-98
+50, 79' Rt. Type T
+86.2, 82' Rt. Type B-98
1227+00
1228+00
1229+00
1230+00
1231+00
1232+00
1233+00
1234+00
1235+00
1236+00
1237+00
1238+00
10' 12' 12' 22' 42' 22' 42' 12' 12' 10'

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

B.M. #17, Sta. 1230+83.99
O.D.O.T. Disc in Headwall,
Stamped Elev. 1157.86

1,156.79 1,156.96 1,157.14 1,157.33 1,157.52 1,157.72 1,157.93 1,158.14 1,158.35 1,158.55 1,158.75 1,158.94 1,159.13 1,159.31 1,159.49 1,159.66 1,159.82 1,160.16 1,160.49 1,160.82 1,161.16 1,161.49 1,161.82 1,162.16 1,162.49 1,162.82 1,163.16 1,163.49 1,163.82 1,164.16 1,164.49 1,164.83 1,165.16

1190 1180 1170 1160 1150 1140 1130 1120

STA. 1227+59, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1158.2±
FL. EX. 15" (N.) EL. 1152.0±
FL. EX. 15" (S.) EL. 1150.8±

330' - 15" CONDUIT, TYPE C @ 0.70%

+0.67 %

PVC STA 1226+25

V.P.I. Sta. 1227+25.00
Elev. = 1,157.28 200' V.C.

EX. 8" SAN. EL. 1147.0±

STA. 1227+00, 6' LT.
PROP. MH. NO. 3
TOP OF COVER EL. 1157.15
FL. EX. 15" (N.) EL. 1150.40
FL. EX. 15" (S.) EL. 1150.30

PVC STA=1228+25

+0.85 %

PVT STA=1228+25

V.P.I. Sta. 1229+25.00
Elev. = 1,158.99 200' V.C.

PVT STA=1230+25

+0.67 %

54' - 15" CONDUIT, TYPE C @ 1.00%

STA. 1228+13, ℄ I.R. 71
PROP. C.B. NO. 4 A.P.P.
TOP OF GRATE EL. 1154.42
FL. 15" (S.) EL. 1152.54

STA. 1227+59, ℄ I.R. 71
PROP. MH. NO. 3
TOP OF COVER EL. 1154.39
FL. 15" (N.) EL. 1152.00
FL. EX. 15" (S.) EL. 1150.78

STA. 1231+34, 5' LT.
PROP. C.B. NO. 4 A.P.P.
TOP OF GRATE EL. 1156.96
FL. 15" (S.) EL. 1152.62

STA. 1231+34, 5' LT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1158.3±
FL. EX. 15" (S.) EL. 1152.6±

STA. 1231+54, 108' LT.
FL. EX. 54" (S.E.)
OUTET EL. 1150.8±

STA. 1230+79, 87' RT.
FL. EX. 54" (N.W.)
INLET EL. 1152.0±

1,157.16 1,157.49 1,157.82 1,158.16 1,158.49 1,158.82 1,159.16 1,159.49 1,159.82 1,160.16 1,160.49 1,160.82 1,161.16 1,161.49 1,161.82 1,162.16 1,162.49 1,162.82 1,163.16 1,163.49 1,163.83 1,164.16 1,164.49 1,164.83 1,165.16

1226+00 1227+00 1228+00 1229+00 1230+00 1231+00 1232+00 1233+00 1234+00 1235+00 1236+00 1237+00 1238+00

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

# PLAN AND PROFILE
# STA 1226+00 TO STA 1238+50

MED - 71 - 15.78

204
940

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp33.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 09:04

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Match Line — Sta. 1238+50

LA R/W

+28.04, 78' Lt. Type T

+53.04, 95' Lt. Type E-98

+53, 81' Lt. Type E-98

+61.2, 78' Rt. Type T

+41.2, 82' Rt. Type B-98

℄ IR 71

N 15° 01' 11" W

1239+00 1240+00 1241+00 1242+00 1243+00 1244+00 1245+00 1246+00 1247+00 1248+00 1249+00 1250+00 1251

Sta. 1251+00

8' Var. 12' 12' 22' 42' 22' 42' 12' 12' 12' 8'

60-SS 78-SO 56-SW 61-SS 79-SO 67-SW 70-G 52-SI 62-SS 68-SW 63-SS 69-SW 64-SS 80-SO 53-SI 70-SW 65-SS 171-SW

65-NW 71-WO 69-G 66-NW 61-NS 70-WO 62-NS 34-D 61-WI 35-D 67-NW 62-WI 72-WO 64-NS 65-NS 68-NW 73-WO 69-NW 71-G 70-NW 66-NS

63-NS NOT USED

Ramp C
P.I. Sta. = 38+62.39
Δ = 34° 01' 48" (RT)
Dc = 9° 00'
R = 636.62'
Ls = 200.00'
Theta = 9° 00'
LT = 133.51'
ST = 66.82'
x = 199.51'
y = 10.45'
k = 99.92'
p = 2.62'
Δc = 25° 01' 48" (RT)
Lc = 278.11'
Ec = 15.49'
Ts = 141.31'

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

B.M. "B", Sta. 1240+13.99
Q.D.O.T. Disc In Headwall, Stamped Elev. 1153.44

STA. 1242+34, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1165.6±
FL. EX. 15" (W.) EL. 1160.7±

STA. 1242+34, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1163.69
FL. 15" (W.) EL. 1160.69

PVC STA 1245+00

+0.67 %

STA. 1242+34, 108' LT.
FL. EX. 15" (E.)
OUTLET EL. 1158.3±

STA. 1240+74, 116' RT.
FL. EX. 72" (S.E.)
OUTLET EL. 1144.2±

STA. 1241+50±, 202'± LT.
EX. SAN. M.H.
FL. EX. 10" SAN. EL. 1141.40

STA. 1240+15, 104' RT.
FL. EX. 72" (N.W.)
INLET EL. 1146.0±

STA. 1240+28±, 240'± RT.
EX. SAN. M.H.
FL. EX. 10" SAN. EL. 1136.30

| | 1239+00 | 1240+00 | 1241+00 | 1242+00 | 1243+00 | 1244+00 | 1245+00 | 1246+00 | 1247+00 | 1248+00 | 1249+00 | 1250+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1190 | 1,165.49 | 1,165.83 | 1,166.16 | 1,166.49 | 1,166.83 | 1,167.16 | 1,167.49 | 1,167.83 | 1,168.16 | 1,168.49 | 1,168.83 | 1,169.16 |
| 1180 | | | | | | | | | | | | |
| 1170 | | | | | | | | | | | | |
| 1160 | | | | | | | | | | | | |
| 1150 | | | | | | | | | | | | |
| 1140 | | | | | | | | | | | | |
| 1130 | | | | | | | | | | | | |
| 1120 | | | | | | | | | | | | |
| | 1,165.49 | 1,165.83 | 1,166.16 | 1,166.49 | 1,166.83 | 1,167.16 | 1,167.49 | 1,167.83 | 1,168.16 | 1,168.49 | 1,168.83 | 1,169.16 |

| | 1239+00 | 1240+00 | 1241+00 | 1242+00 | 1243+00 | 1244+00 | 1245+00 | 1246+00 | 1247+00 | 1248+00 | 1249+00 | 1250+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1190 | 1,169.49 | 1,169.66 | 1,169.82 | 1,169.98 | 1,170.13 | 1,170.28 | 1,170.43 | 1,170.57 | 1,170.71 | 1,170.84 | 1,170.98 | 1,171.10 |
| 1180 | | | | | | | | | | | | |
| 1170 | | | | | | | | | | | | |
| 1160 | | | | | | | | | | | | |
| 1150 | | | | | | | | | | | | |
| 1140 | | | | | | | | | | | | |
| 1130 | | | | | | | | | | | | |
| 1120 | | | | | | | | | | | | |
| | 1,169.49 | 1,169.83 | 1,170.16 | 1,170.47 | 1,170.76 | 1,171.04 | 1,171.30 | 1,171.55 | 1,171.78 | 1,171.99 | 1,172.18 | 1,172.35 |

| | 1239+00 | 1240+00 | 1241+00 | 1242+00 | 1243+00 | 1244+00 | 1245+00 | 1246+00 | 1247+00 | 1248+00 | 1249+00 | 1250+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1190 | 1,171.23 | 1,171.35 | 1,171.46 | 1,171.58 | 1,171.69 | 1,171.79 | 1,171.89 | 1,171.99 | 1,172.09 | 1,172.18 | 1,172.26 | 1,172.35 |
| 1180 | | | | | | | | | | | | |
| 1170 | | | | | | | | | | | | |
| 1160 | | | | | | | | | | | | |
| 1150 | | | | | | | | | | | | |
| 1140 | | | | | | | | | | | | |
| 1130 | | | | | | | | | | | | |
| 1120 | | | | | | | | | | | | |
| | 1,171.23 | 1,171.35 | 1,171.46 | 1,171.58 | 1,171.69 | 1,171.79 | 1,171.89 | 1,171.99 | 1,172.09 | 1,172.18 | 1,172.26 | 1,172.35 |

| | 1239+00 | 1240+00 | 1241+00 | 1242+00 | 1243+00 | 1244+00 | 1245+00 | 1246+00 | 1247+00 | 1248+00 | 1249+00 | 1250+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1190 | 1,172.43 | | | | | | | | | | | |
| 1180 | | | | | | | | | | | | |
| 1170 | | | | | | | | | | | | |
| 1160 | | | | | | | | | | | | |
| 1150 | | | | | | | | | | | | |
| 1140 | | | | | | | | | | | | |
| 1130 | | | | | | | | | | | | |
| 1120 | | | | | | | | | | | | |
| | 1,172.43 | | | | | | | | | | | |

| | 1239+00 | 1240+00 | 1241+00 | 1242+00 | 1243+00 | 1244+00 | 1245+00 | 1246+00 | 1247+00 | 1248+00 | 1249+00 | 1250+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1,172.51 | | | | | | | | | | | |

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

# PLAN AND PROFILE
# STA 1238+50 TO STA 1251+00

MED - 71 - 15.78

205
940

DESIGN FILE : I:\pot_MED_IR71\DGN\PlanProfile\gp34.dgn
USERNAME : pfought

DATE : 09-DEC-1999
TIME : 09:08

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Match Line

Sta. 1251+00

Match Line

Sta. 1263+50

LA R/W

Pavement Replacement

Butt Joint

Ramp Pavement Planing and Resurfacing

+93.96, 99' Lt. Type T

℄ Ramp A

℄ IR 71 N 15° 01' 11" W

+00 1252+00 1253+00 1254+00 1255+00 1256+00 1257+00 1258+00 1259+00 1260+00 1261+00 1262+00 1263+00

31+00 32+00 33+00 Ramp C 34+00 35+00 36+00 37+00 38+00 39+00

+91.2, 101' Rt. Type T

PC Sta. 30+65.51

EXT TO SAW.

SAW

POT Sta. 32+00.00

TS Sta. 35+00.00

CS Sta. 35+21.07

SC Sta. 37+00.00

CS Sta. 39+53.96

ST Sta. 41+33.96

3-DR 53-SI 81-SO 72-SM 72-G 67-SS 82-SO 73-SM 68-SS 83-SO 54-SI 74-SM 69-SS 75-SM 37-D 65-SS 171-SM 80-SO 66-SS 70-NM 73-NO 166-NS 67-NS 71-G 171-NM 62-NI 72-NM 168-NS 73-NM 63-NI 74-NO 169-NS 74-NM 170-NS 75-NO 171-NS

36-D NOT USED

B.M. #19, Sta. 1253+33.99
O.D.O.T. Disc In Headwall, Stamped Elev. 1149.92

B.M. #20, Sta. 1262+53.96
O.D.O.T. Disc In Headwall, Stamped Elev. 1157.52

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

V.P.I. Sta. 1253+50.00 Elev. = 1,175.16
1,700' V.C.
+0.67 % -0.34 %

PVT STA 1262+00
PVC STA 1262+00

STA. 1253+34, 136' RT.
FL EX. 54" (W.)
INLET EL. 1166.0±

STA. 1253+34, 155' LT.
FL. EX. 54" (E.)
OUTLET EL. 1155.2±

STA. 1253+39, 75' LT.
EX. C.B. (TO BE REMOVED)
TOP OF GRATE EL. 1170.0±
FL. EX. 15" (W.) EL. 1166.0±

STA. 1252+80, 310' RT.
EX. 10" SAN. EL. 1140.04

STA. 1252+80, 230' LT.
EX. 10" SAN. EL. 1136.30

STA. 1262+35, 137' RT.
FL. EX. 36" (S.E.)
INLET EL. 1156.0±

STA. 1263+40, 246' LT.
FL. EX. 36" (N.W.)
OUTLET EL. 1136.9±

1200 1190 1180 1170 1160 1150 1140 1130

1,172.50 1,172.57 1,172.64 1,172.71 1,172.77 1,172.83 1,172.88 1,172.93 1,172.97 1,173.02 1,173.06 1,173.09 1,173.12 1,173.15 1,173.17 1,173.19 1,173.21 1,173.22 1,173.23 1,173.24 1,173.24 1,173.23 1,173.23 1,173.22 1,173.21 1,173.19 1,173.17 1,173.14 1,173.12 1,173.08 1,173.05 1,173.01 1,172.96 1,172.92 1,172.87 1,172.81 1,172.76 1,172.69 1,172.63 1,172.56 1,172.49 1,172.41 1,172.33 1,172.25 1,172.16 1,172.06 1,171.96 1,171.86 1,171.75 1,171.63

1,172.66 1,172.78 1,172.89 1,172.98 1,173.05 1,173.11 1,173.15 1,173.17 1,173.18 1,173.16 1,173.14 1,173.09 1,173.03 1,172.95 1,172.85 1,172.74 1,172.61 1,172.46 1,172.29 1,172.11 1,171.91 1,171.70 1,171.46 1,171.21 1,170.94

1251+00 1252+00 1253+00 1254+00 1255+00 1256+00 1257+00 1258+00 1259+00 1260+00 1261+00 1262+00 1263+00

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED CHECKED

PLAN AND PROFILE
STA 1251+00 TO STA 1263+50

MED - 71 - 15.78

206
940

DESIGN FILE : I:\pd_MED_IR71\DGN\PlanProfile\gp35.dgn
USERNAME : pfought

DATE : 09-DEC-1999
TIME : 09h10

Ramp "A"
P.I. Sta = 45+87.41
Δ = 8° 28' 44" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
T = 169.89'
L = 339.16'
E = 6.29'

15'-6" Required Minimum Vertical Clearance
16'-0" Actual Minimum Vertical Clearance

Str. Num. MED-71-2402 L&R

+92.25, 78' Lt. Type T

+00.08, 14' Lt. Type T

1st Post +06.17

1st Post +89.48

1st Post +88.42

1st Post +49.55

1st Post +82.77

1st Post +59.50

+01.36, 3' Rt. Type 1-98

+73.57, 3' Lt. Type 1-98

+15.08, 12' Rt. Type B-98

Match Line

Ramp B

Ramp C

Ramp D

Ramp A

Center Road

Sta. 1263+50

Sta. 1276+00

P.C. Sta. 41+58.68

P.C. Sta. 44+17.52

T.S. Sta. 39+01.45

S.C. Sta. 40+90.45

S.T. Sta. 54+01.45

R.C. Sta. 54+39.97

Ramp C
P.I. Sta. = 38+62.39
Δ = 34° 01' 48" (RT)
Dc = 9° 00'
R = 636.62'
Ls = 200.00'
Theta = 9° 00'
LT = 133.51'
ST = 66.82'

FOR UNDERDRAIN KEY, SEE SHEET NO. 172
x = 99.92'
y = 10.45'
p = 2.62'
Δc = 25° 01' 48" (RT)
Lc = 278.11'
Ec = 15.49'
Tc = 141.31'
x = 199.51'

Ramp "A"
P.I. Sta 57+84.65
Δ = 14° 16' 00" (LT)
Dc 29° 30' 00"
R = 3,819.72'
T = 478.03'
L = 951.11'
E = 29.80'

Curve CD
P.I. Sta = 44+33.72
Δ = 15° 38' 15" (LT)
Dc = 22° 46' 54"
R = 251.50'
T = 34.54'
L = 68.64'
E = 2.36'

Ramp "B"
P.I. Sta = 49+49.13
Δ = 90°00'00" (LT)
Dc = 24° 54' 40"
R = 230.00'
Ls = 200.00'
Theta = 24° 54' 40"
LT = 134.68'
ST = 67.89'
x = 196.25'
y = 28.60'
k = 99.37'
p = 7.20'
Δc = 40°10'40" (LT)
Lc = 161.28'
Ts = 336.57'
Es = 105.45'

Ramp D
P.I. Sta 39+33.97
Δ= 25° 06' 21" (LT)
Dc = 24° 54' 40"
R = 230.00'
Ls = 200.00'
LT = 134.68'
ST = 67.89'
x = 196.25'
Theta = 24° 54' 40"
Lc = 808.01'

Ramp D
P.I. Sta 39+33.97
Δ= 201° 17' 01" (LT)
p = 7.20'
Ts = 232.52'
Es = 42.01'

N 89° 15' 06" E

N 75° 01' 11" W

I.R. 71

L.A. R/W

S.T. Sta. 54+01.45

R.C. Sta. 54+39.97

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

OVERHEAD ELECTRIC DISTRIBUTION LINE (OHIO EDISON) CATV (CABLEVISION)

UNDERGROUND ELECTRIC FOR LIGHTING (OHIO EDISON)

UNDERGROUND CATV (CABLEVISION)

EX. UNDERGROUND ELECTRIC FOR LIGHTING

EX. 6" GAS LINE (COLUMBIA GAS)

EX. 16" WATER LINE

OVERHEAD TELEPHONE LINES (GTE)

OVERHEAD ELECTRIC DISTRIBUTION LINE (OHIO EDISON) CATV (CABLEVISION)

EX. 10" SAN.

73-SS NOT USED
57-SI NOT USED
78-NO NOT USED y = 28.60'
75-NS NOT USED k = 99.37'
79-SM NOT USED Δc = 201° 17' 01" (LT)
p = 7.20'
Ts = 232.52'
Es = 42.01'

B.M. #21, Sta. 1271+68.99
O.D.O.T. Disc In Headwall,
Stamped Elev. 1144.04 CB

1,171.51 1,171.38 1,171.25 1,171.11 1,170.97 1,170.82 1,170.66 1,170.50 1,170.33 1,170.16 1,169.99 1,169.80 1,169.61 1,169.42 1,169.22 1,169.02 1,168.81 1,168.59 1,168.37 1,168.14 1,167.91 1,167.67 1,167.43 1,167.18 1,166.92 1,166.66 1,166.14 1,165.61 1,165.08 1,164.56 1,164.03 1,163.50 1,162.98 1,162.45 1,161.93 1,161.40 1,160.87 1,160.35

1,170.66 1,170.36 1,170.04 1,169.70 1,169.35 1,168.98 1,168.60 1,168.19 1,167.77 1,167.33 1,166.88 1,166.41 1,165.92 1,165.44 1,164.95 1,164.47 1,163.98 1,163.50 1,163.01 1,162.53 1,162.04 1,161.56 1,161.07 1,160.59 1,160.10

1264+00 1265+00 1266+00 1267+00 1268+00 1269+00 1270+00 1271+00 1272+00 1273+00 1274+00 1275+00

V.P.I. Sta. 1266+00.00 Elev. = 1,170.87
800' V.C.
-0.34 % -1.05 %
PVT STA 1270+00

STA. 1263+84, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1167.92
FL. 15" (N) EL. 1162.90

STA. 1263+84, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1168.5±
FL. EX. 15" (N) EL. 1162.9±

STA. 1267+34, 75' RT.
EX. C.B. (TO BE REMOVED)
TOP OF GRATE EL. 1167.2±
FL. EX. 15" (W.) EL. 1162.4±

STA. 1267+34, 110' LT.
FL. EX. 18" (E.)
OUTLET EL. 1151.0±

STA. 1267+34, 4.5' LT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1166.1±
FL. EX. 18" (W.) EL. 1160.2±
FL. EX. 15" (S. & E.) EL. 1160.5±

16'-0" Actual Min. Vertical Clearance

EX. 10" SAN. EL. 1140±

EX. 6" GAS (2.5± DEEP)

EX. 16" WATER EL. 1140.0±

EX. CATV

STA. 1267+34, 4.5 LT.
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1165.63
FL. 18" (W.) EL. 1160.17
FL. 15" (S. & E.) EL. 1160.47

STA. 1270+34, 4.5 LT.
PROP. C.B. NO. 4 A.P.P.
TOP OF GRATE EL. 1163.23
FL. 15" (W.) EL. 1158.40
FL. 15" (SW. & S.E.) EL. 1159.05

STA. 1270+34, 4.5 LT.
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1163.23
FL. EX. 15" (W.) EL. 1158.4±

STA. 1271+68, 141' RT.
FL. EX. 48" (W.)
INLET EL. 1138.0±

STA. 1271+68, 128' LT.
FL. EX. 48" (E.)
OUTLET EL. 1135.3±

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

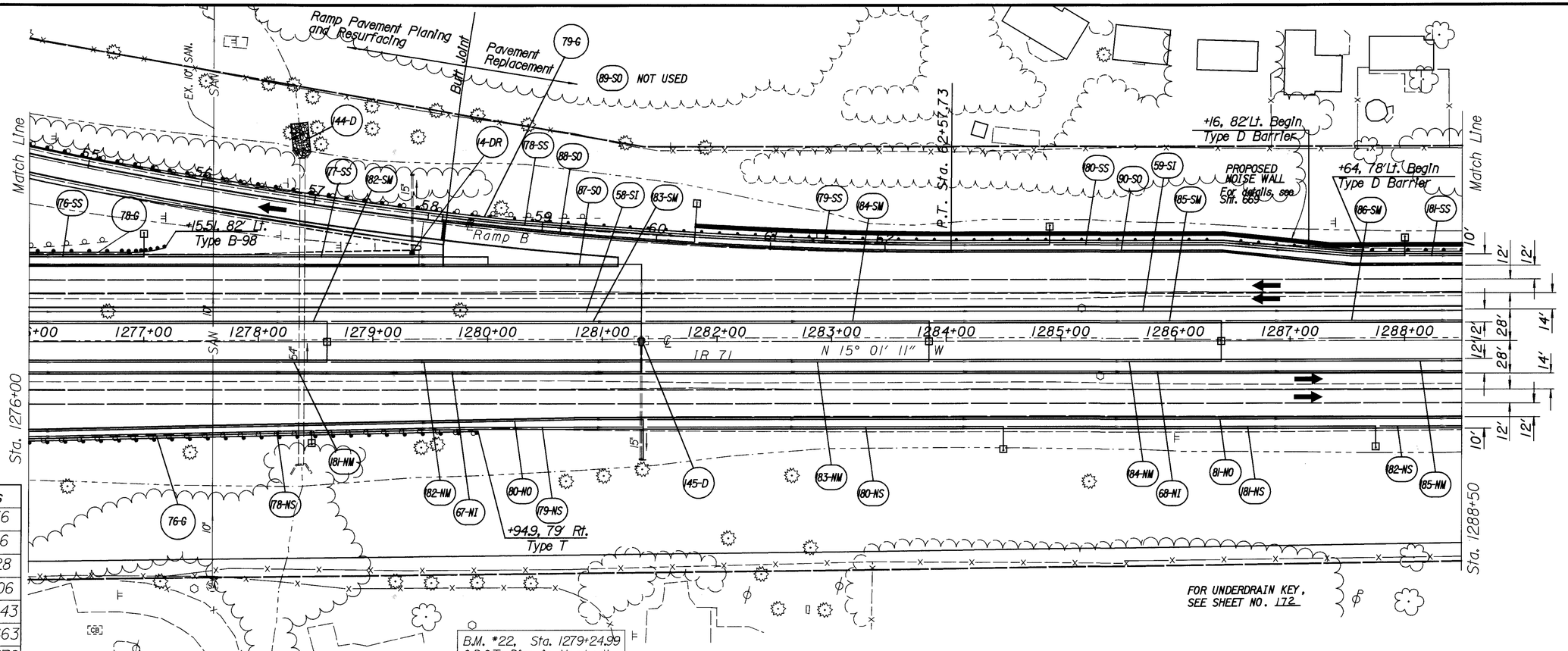
PLAN AND PROFILE
STA 1263+50 TO STA 1276+00

MED - 71 - 15.78

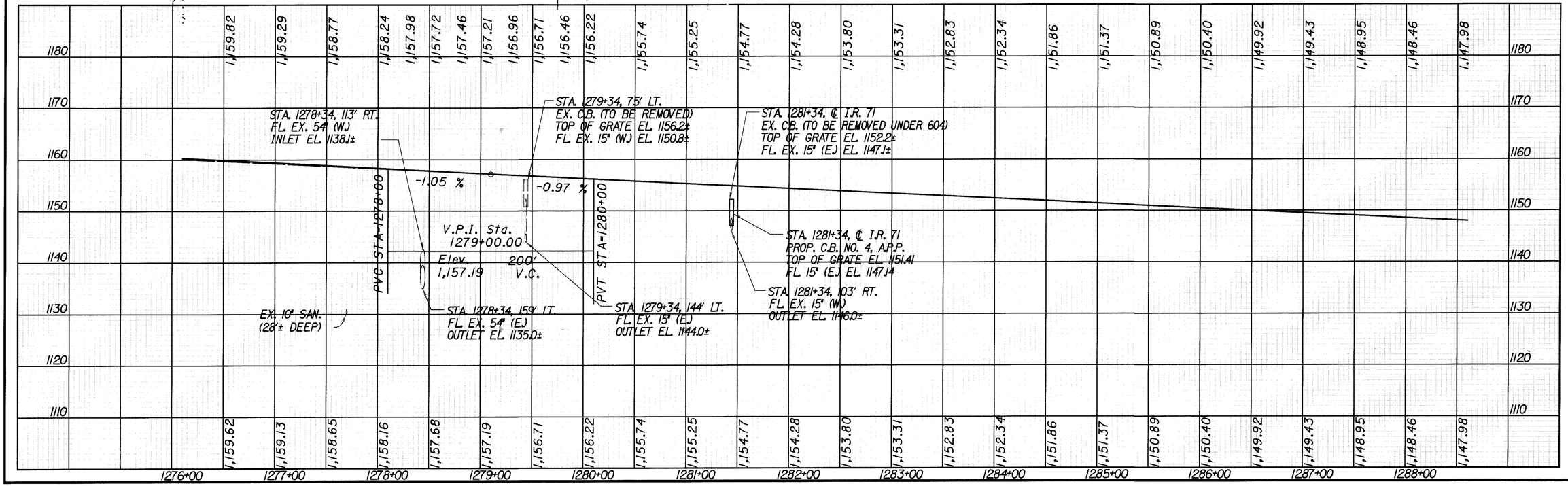
207
940

DESIGN FILE : N:\pd_med_ir-71\dgn\planprofile\gp36.dgn
USERNAME : jrogers

DATE : 28-DEC-1999
TIME : 07:56




| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

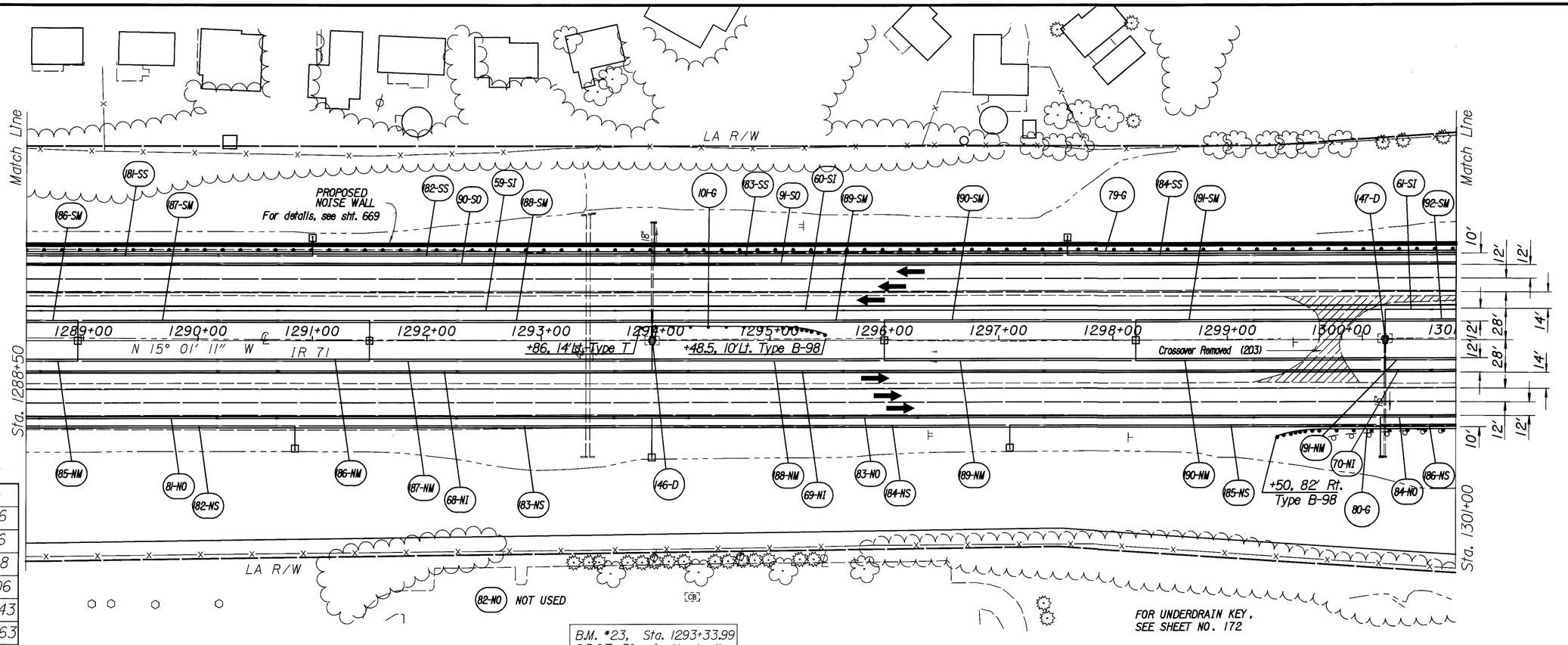
# PLAN AND PROFILE
## STA 1276+00 TO STA 1288+50

MED - 71 - 15.78

208
940

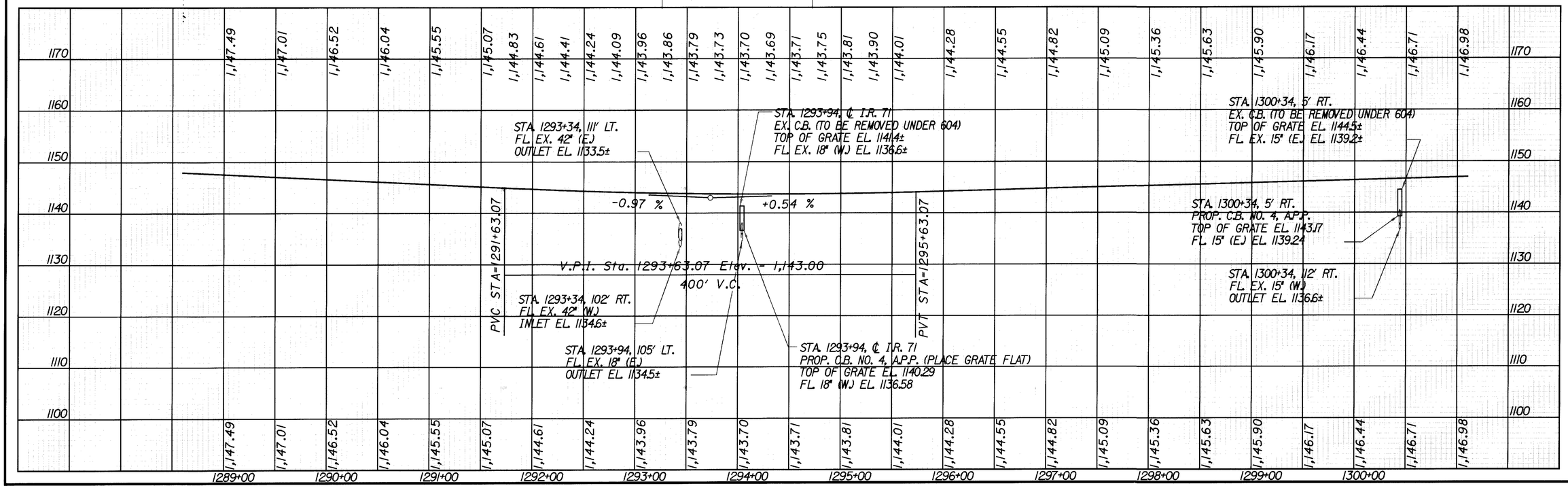
DESIGN FILE : i:\pd_MED.IR71\DGN\PlanProfile\gp37.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 09:17

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




FOR UNDERDRAIN KEY, SEE SHEET NO. 172

B.M. #23, Sta. 1293+33.99
O.D.O.T. Disc In Headwall,
Stamped Elev. 1136.82




HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

# PLAN AND PROFILE
## STA 1288+50 TO STA 1301+00

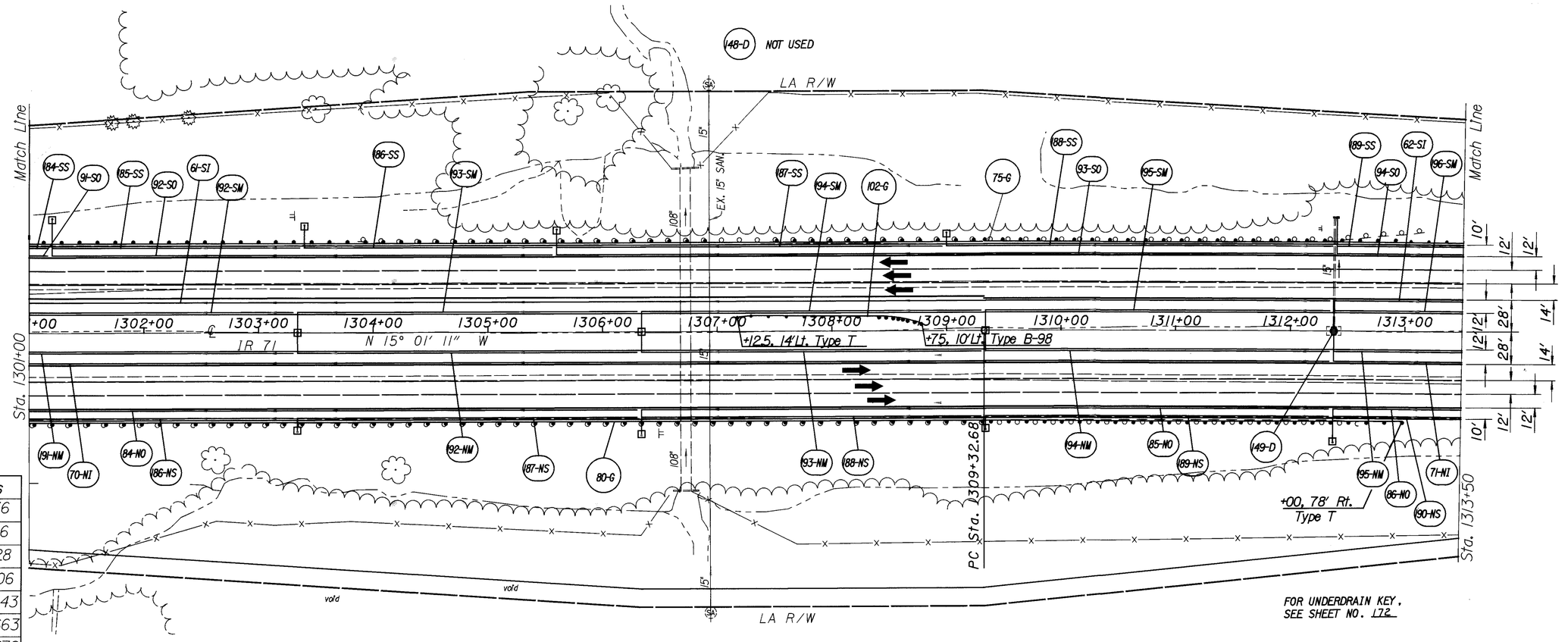
MED - 71 - 15.78

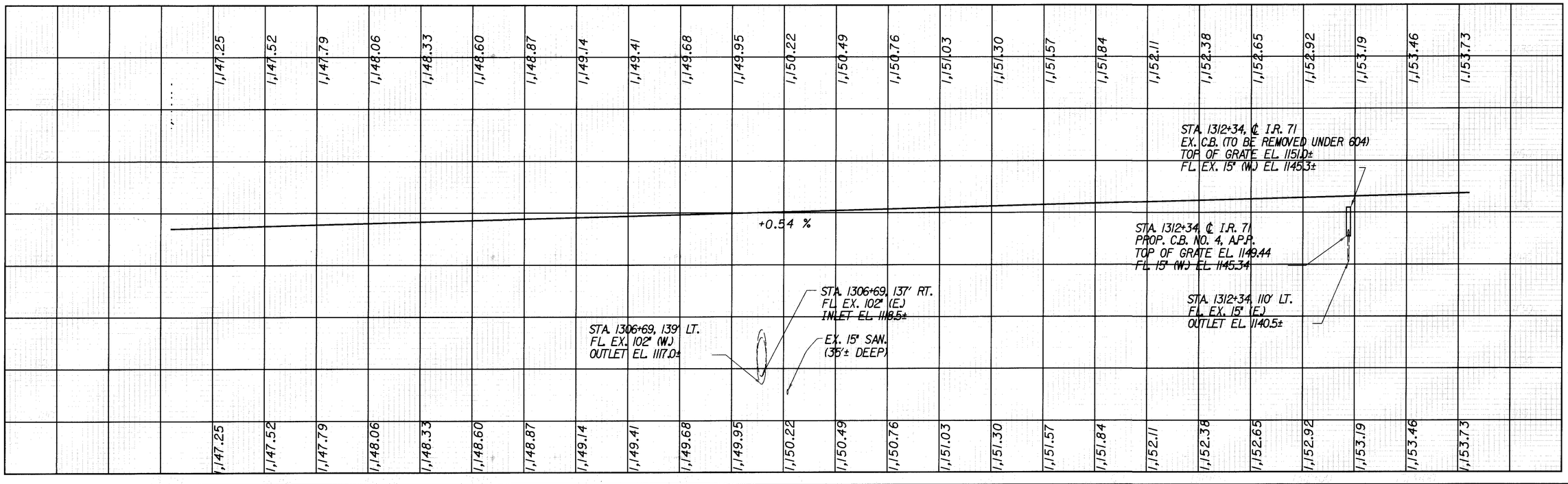
209
940

DESIGN FILE : I:\pd_med_lr71\dgn\planprofile\gp38.dgn
USERNAME : jrogers

DATE : 28-DEC-1999
TIME : 07:55

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |



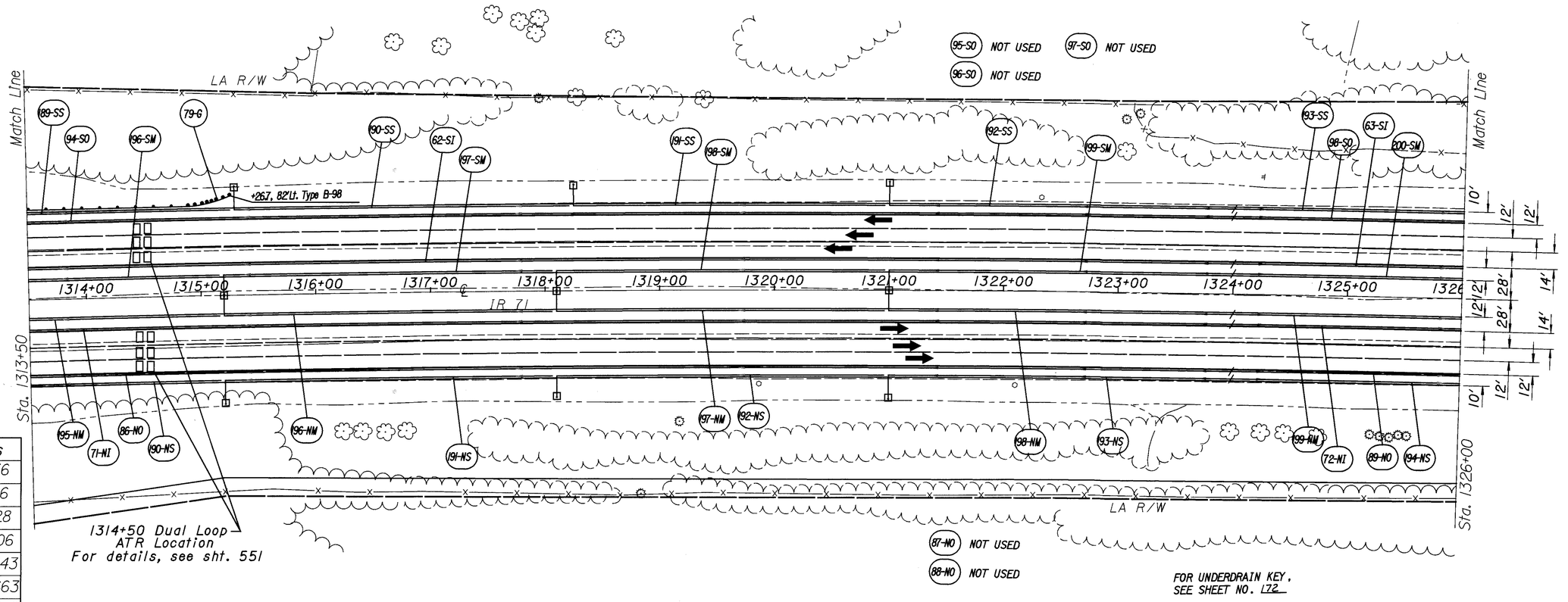

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
## STA 1301+00 TO STA 1313+50

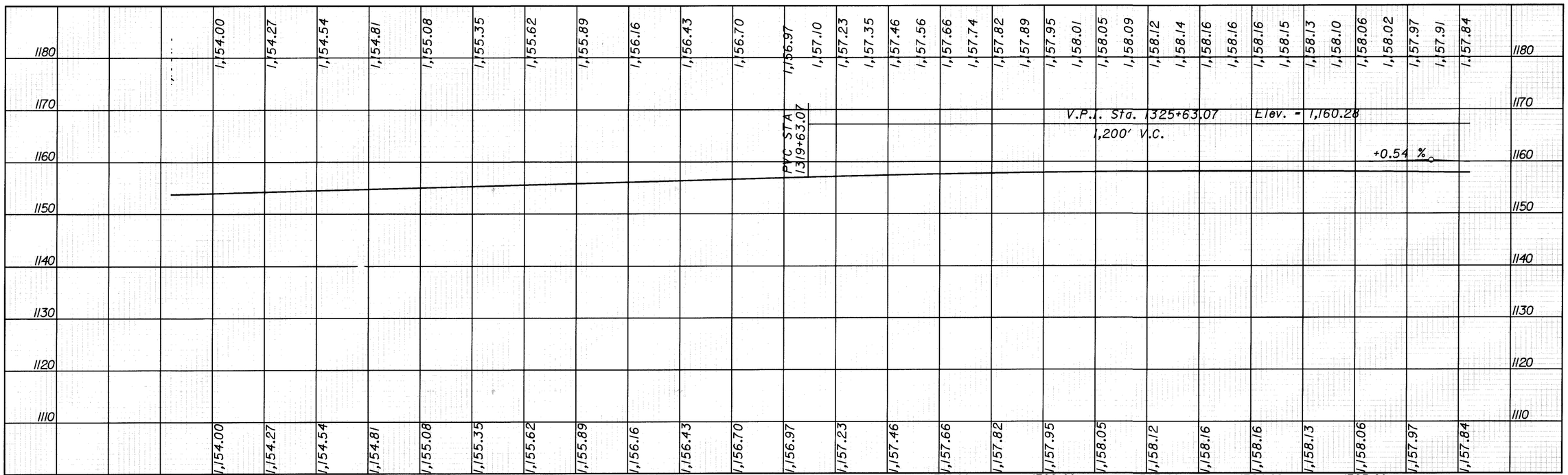
MED - 71 - 15.78

210
940

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp39.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 09:19




| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

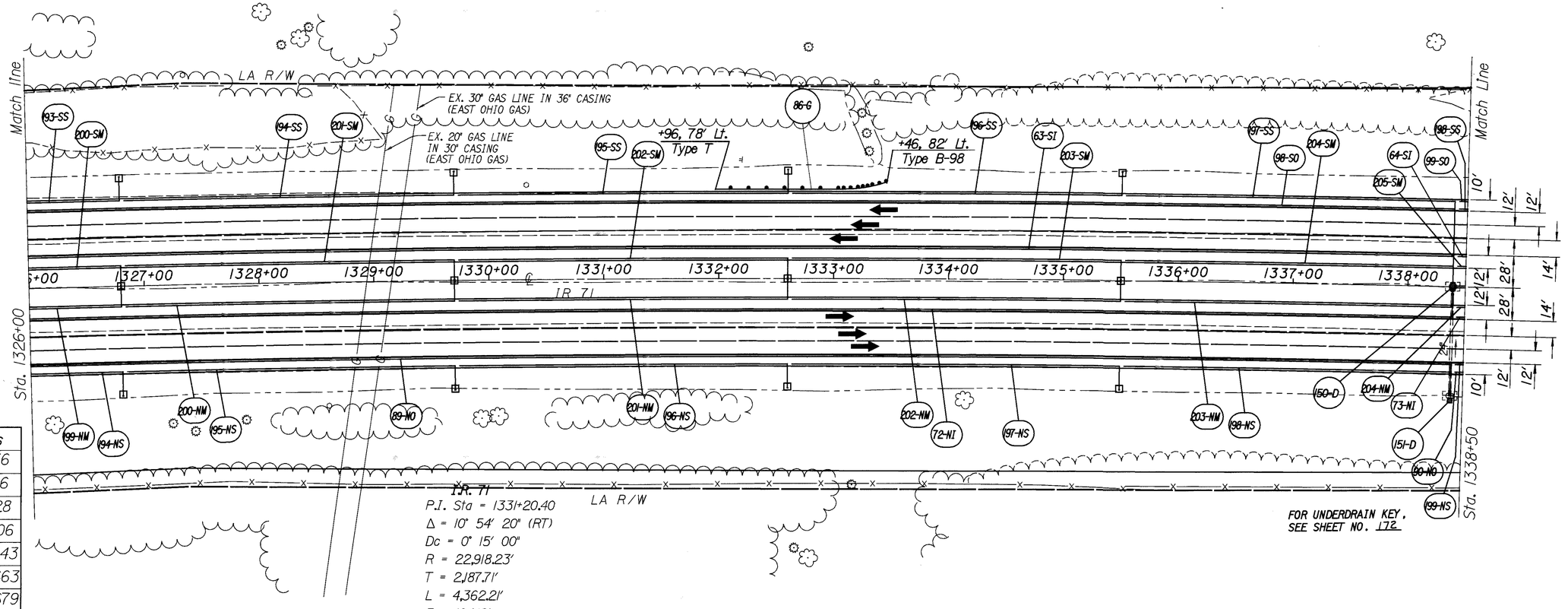



DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp40.dgn
USERNAME : prought
DATE : 09-DEC-1999
TIME : 09:24

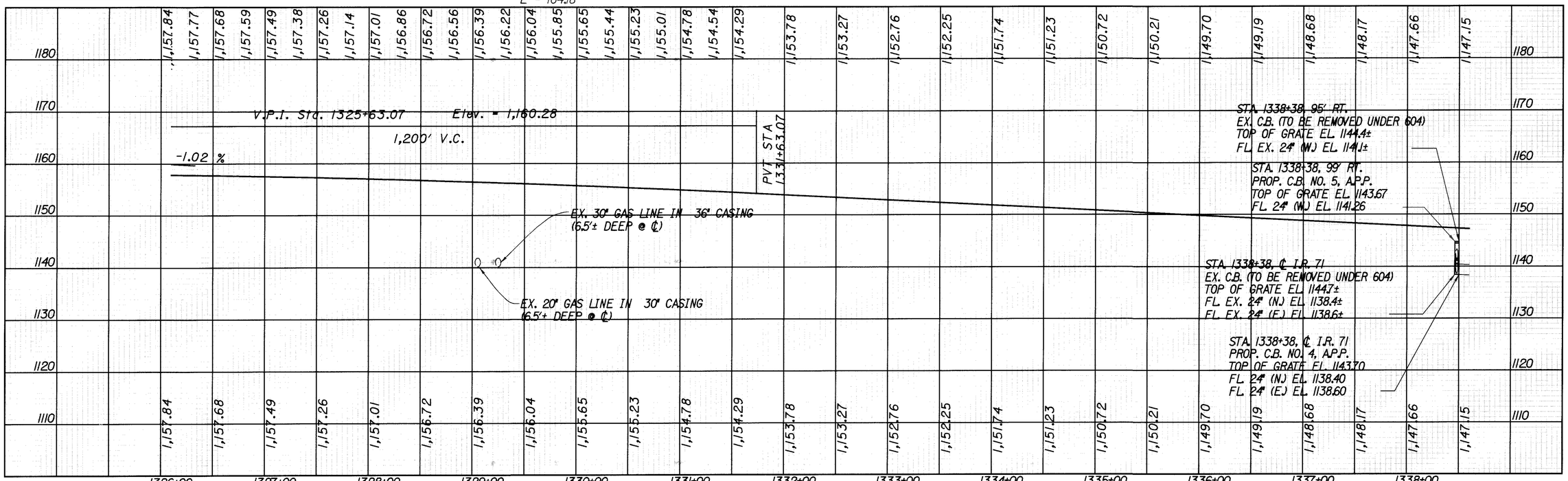
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# PLAN AND PROFILE
## STA 1313+50 TO STA 1326+50

MED - 71 - 15.78




| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |



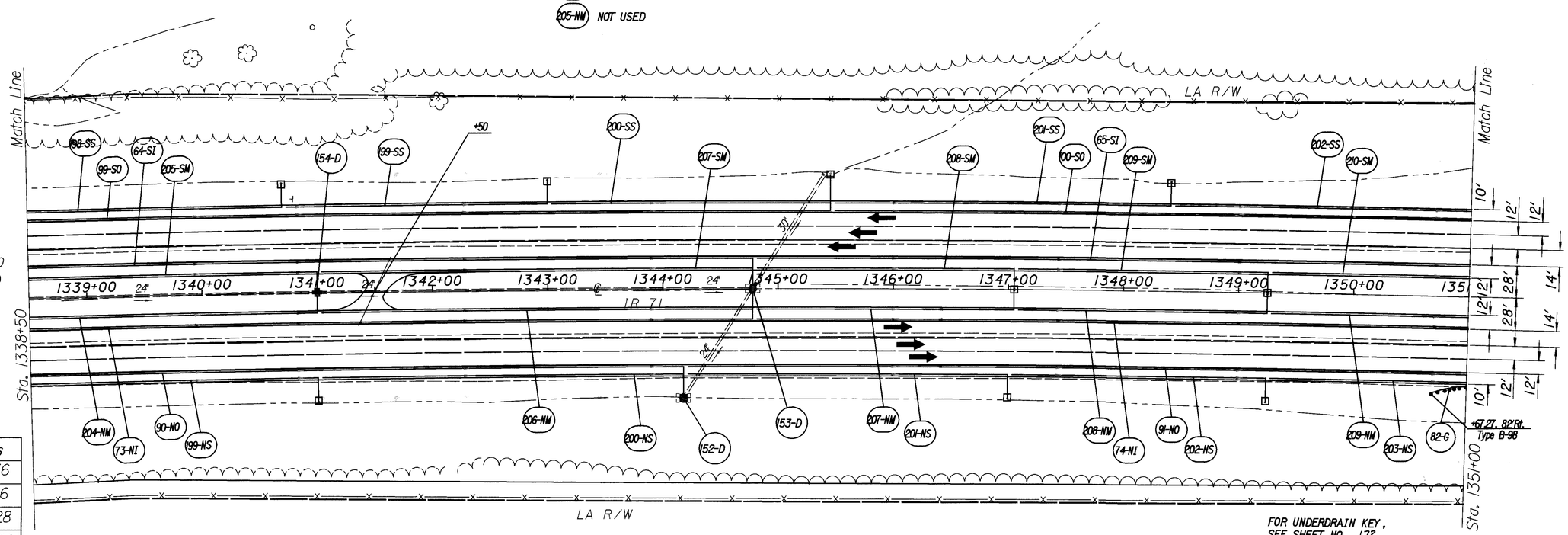

DESIGN FILE : I:\pd_MED_IR71\DGN\PlanProfile\gpdl.dgn
USERNAME : ptought
DATE : 09-DEC-1999
TIME : 09:28

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA 1326+00 TO STA 1338+50

MED - 71 - 15.78

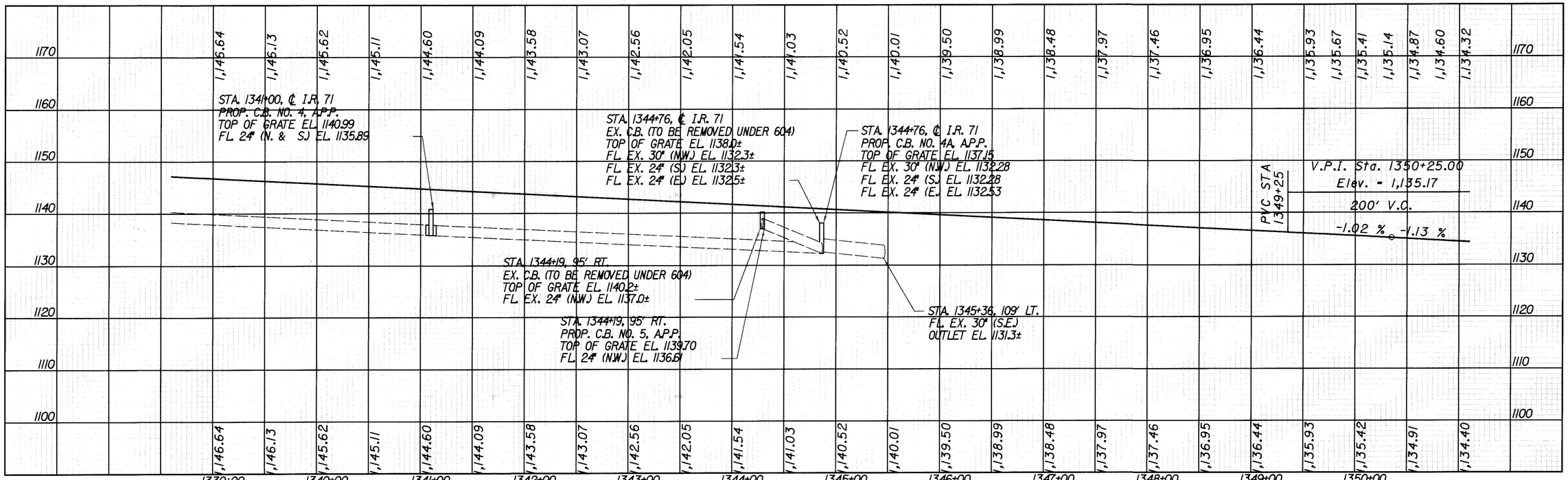
206-SM NOT USED
205-NM NOT USED




FOR UNDERDRAIN KEY, SEE SHEET NO. 172

I.R. 71
P.I. Sta = 1331+20.40
Δ = 10° 54' 20" (RT)
Dc = 0° 15' 00"
R = 22,918.23'
T = 2,187.71'
L = 4,362.21'
E = 104.18'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

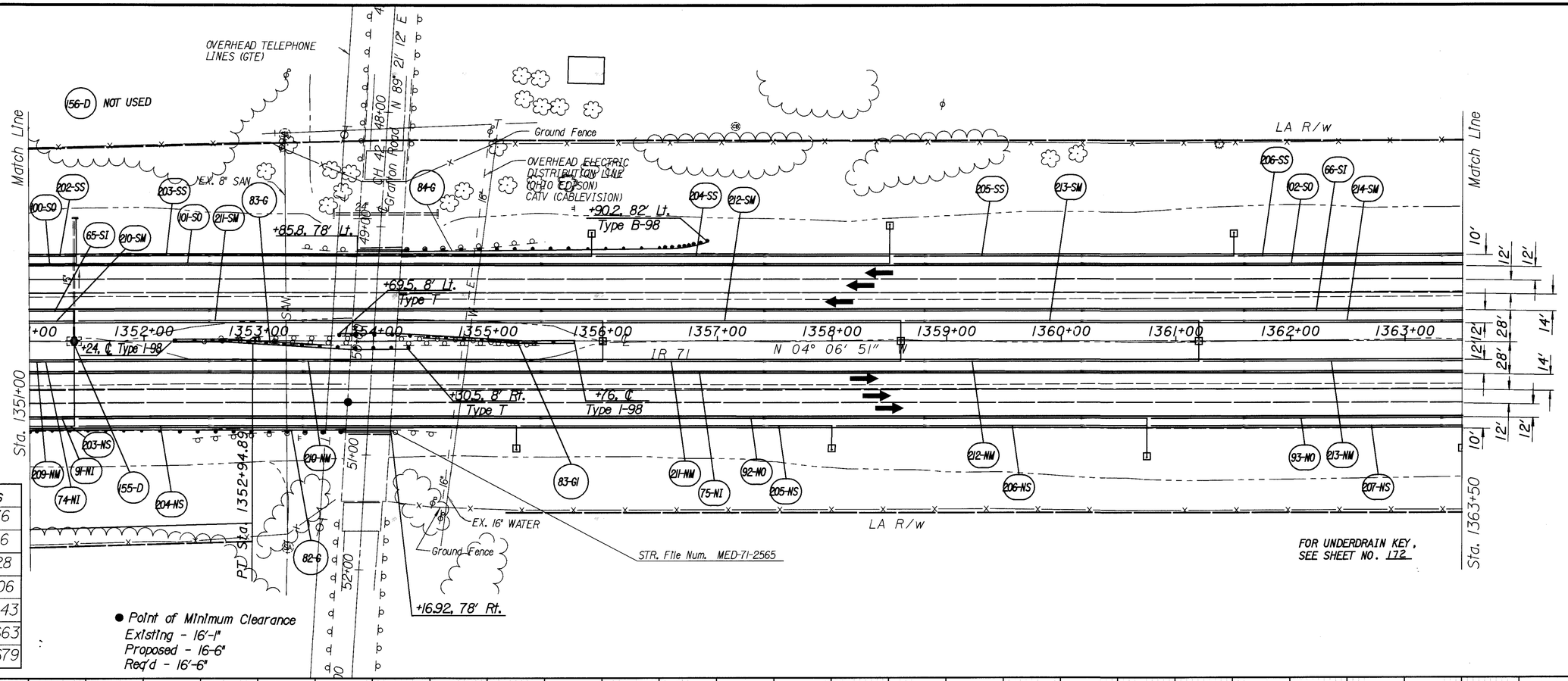
PLAN AND PROFILE
STA 1338+50 TO STA 1351+00

MED - 71 - 15.78

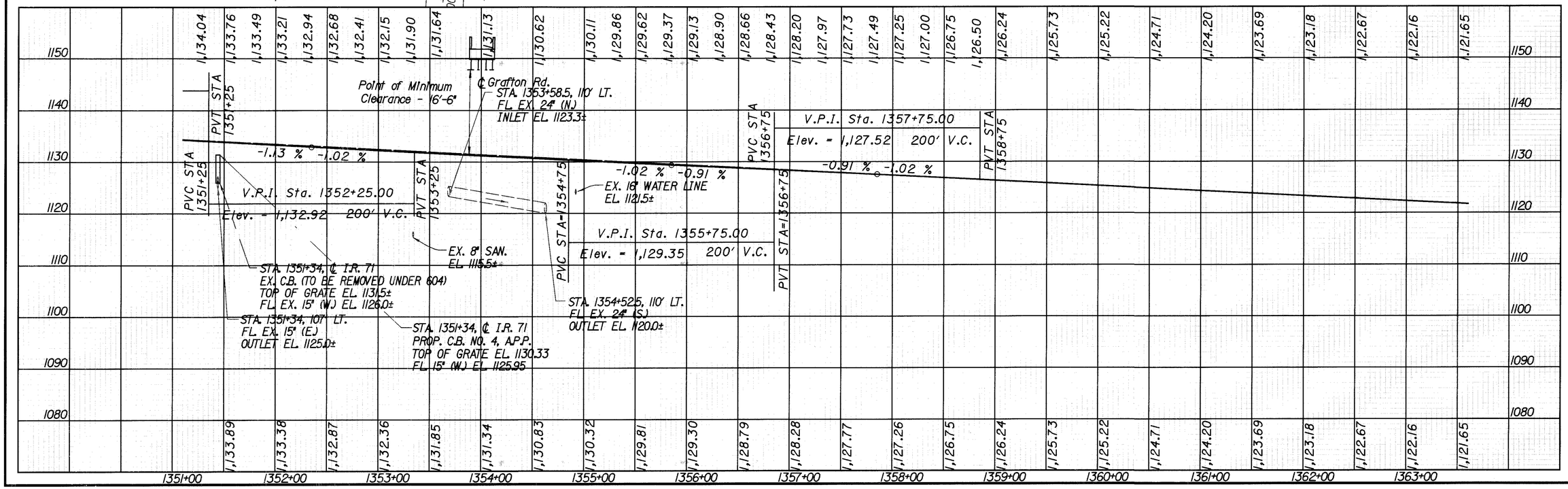
213
940

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp42.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 09:48

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




● Point of Minimum Clearance
Existing - 16'-1"
Proposed - 16-6"
Req'd - 16'-6"



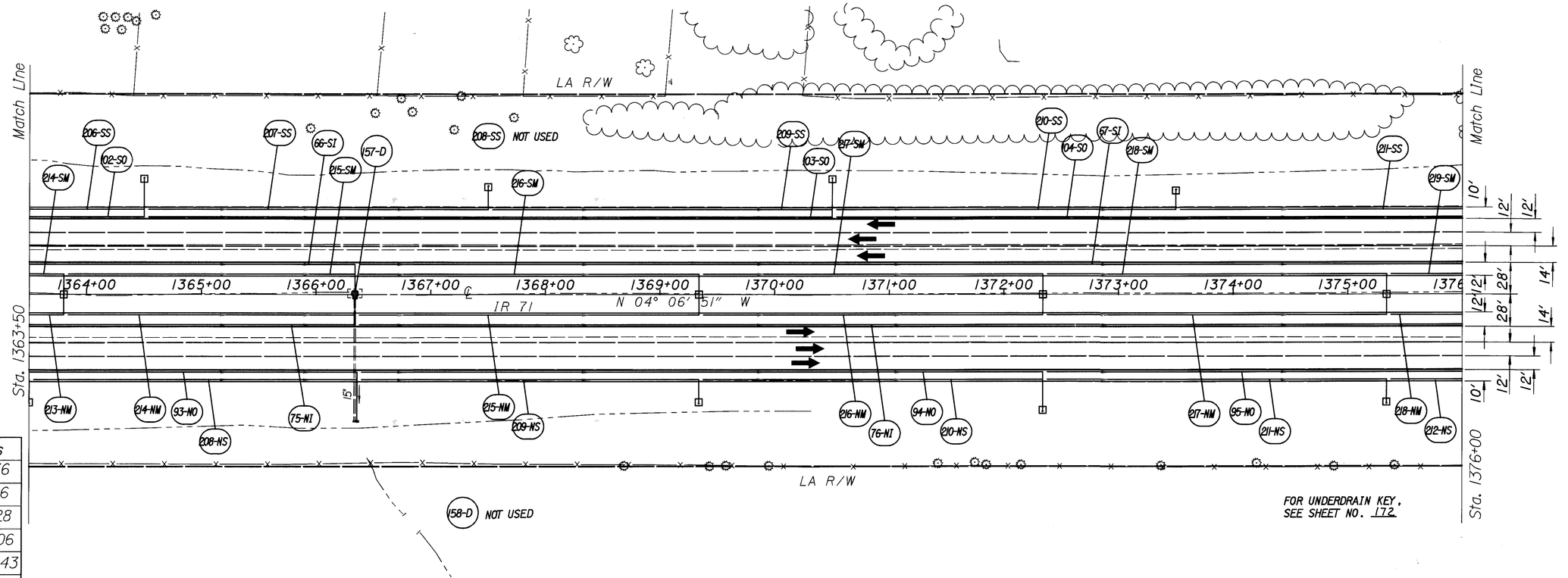

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA 1351+00 TO STA 1363+50

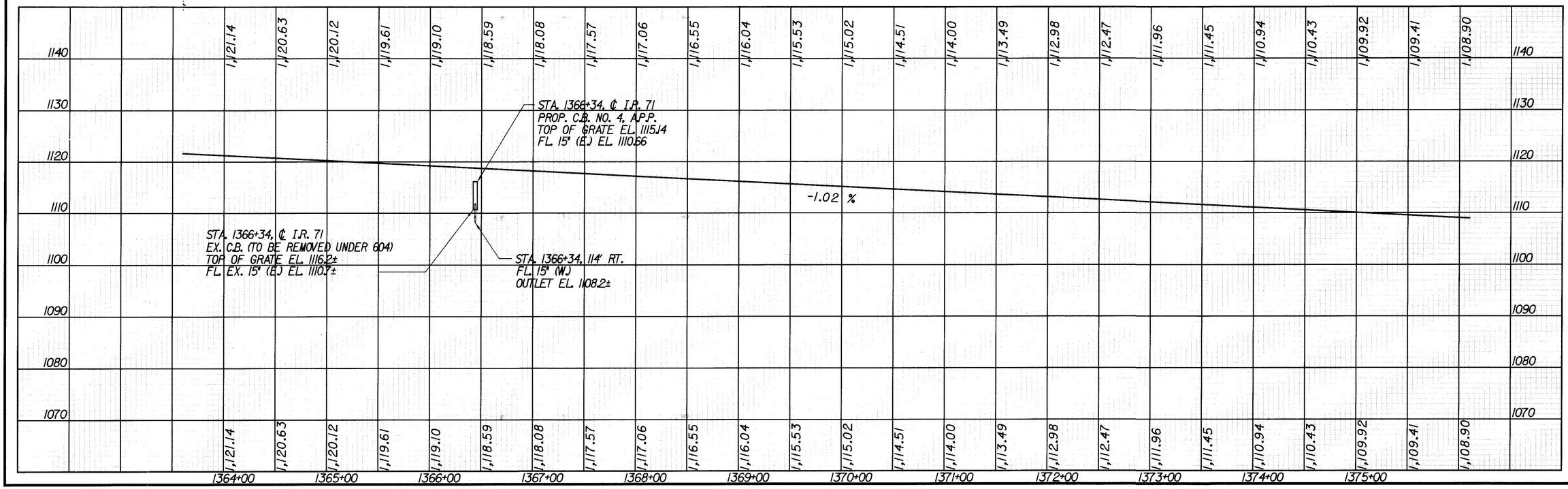
MED - 71 - 15.78

214
940

DESIGN FILE : I:\pd_MED_IR71\DGN\PlanProfile\gp43.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 09:52




| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

# PLAN AND PROFILE
## STA 1363+50 TO STA 1376+00

MED - 71 - 15.78

215
940

DESIGN FILE : I:\pd_MED.IR71\DGN\PlanProfile\gp44.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 09:56

I.R. 71
P.I. Sta = 1387+79.99
Δ = 5° 14' 16" (LT)
Dc = 0° 15' 00"
T = 1,048.28'
R = 22,918.23'
L = 2,095.10'
E = 23.96'

159-D NOT USED

I.R. 71
P.I. Sta = 1331+20.40
Δ = 10° 54' 20" (RT)
Dc = 0° 15' 00"
R = 22,918.23'
T = 2,187.71'
L = 4,362.21'
E = 104.18'

Match Line
PC Sta. 1377+31.70
Sta. 1376+00
Match Line
Sta. 1388+50
LA R/W
LA R/W
N 04° 06' 51" W
I.R. 71
1376+00 1377+00 1378+00 1379+00 1380+00 1381+00 1382+00 1383+00 1384+00 1385+00 1386+00 1387+00 1388+00
120' 15' EX. 15" SAN.
120' 15' SAN.
10' 12' 12' 12' 28' 14' 12' 12' 28' 14' 10'

104-SO 211-SS 212-SS 219-SM 67-SI 220-SM 213-SS 105-SO 221-SM 214-SS 106-SO 68-SI 222-SM 215-SS 223-SM
95-NO 218-NM 212-NS 96-NO 219-NM 76-NI 213-NS 160-D 220-NM 214-NS 221-NM 77-NI 97-NO 215-NS 216-NS 222-NM

FOR UNDERDRAIN KEY, SEE SHEET NO. 172

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

B.M. #24, Sta. 1379+98.99
O.D.O.T. Disc In Headwall,
Stamped Elev. 1092.43

1,108.39 1,107.88 1,107.37 1,106.86 1,106.35 1,105.84 1,105.33 1,104.82 1,104.31 1,104.06 1,103.80 1,103.54 1,103.28 1,103.02 1,102.76 1,102.50 1,102.24 1,101.97 1,101.71 1,101.44 1,101.17 1,100.90 1,100.63 1,100.36 1,100.08 1,099.53 1,098.98 1,098.43 1,097.88 1,097.33 1,096.78 1,096.23 1,095.68

1130 1120 1110 1100 1090 1080 1070 1060

STA. 1380+10, EX. 102" ℄ EL. 1089.0±
PVC STA 1380+63.07
V.P.I. Sta. 1382+63.07 Elev. = 1,102.14
400' V.C.
-1.02 % -1.10 %
PVT STA 1384+63.07
STA. 1381+34, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
TOP OF GRATE EL. 1100.8±
FL. EX. 15" (E) EL. 1095.4±
EX. 15" SAN. EL. 1087.0±
STA. 1381+34, 103' RT.
FL. 15" (W)
OUTLET EL. 1086.8±
STA. 1381+34, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1099.84
FL. 15" (E) EL. 1095.37

1376+00 1377+00 1378+00 1379+00 1380+00 1381+00 1382+00 1383+00 1384+00 1385+00 1386+00 1387+00 1388+00

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\gp45.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 10:00

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA 1376+00 TO STA 1388+50

MED - 71 - 15.78

216
940

I.R. 71
P.I. Sta = 1387+79.99
Δ = 5° 14′ 16″ (LT)
Dc = 0° 15′ 00″
T = 1,048.28′
R = 22,918.23′
L = 2,095.10′
E = 23.96′

End Project
Sta. 1394+40.00
S.L.M. 26.41

Match Line

LA R/W

216-SS 223-SM 106-SD 224-SM 217-SS 68-SI 225-SM 60A-D

+04.63, 78′ Lt.
Type T

Sta. 1398+26.81

PROPOSED NOISE WALL
For details, see sht. 671

87-G

1389+00 1390+00 1391+00 1392+00 1393+00 1394+00 1395+00 1396+00 1397+00 1398+00 1399+00 1400+00 1401

IR 71

N 09° 21′ 07″ W

Sta. 1388+50

222-NM 223-NM 216-NS 224-NM 77-NI 97-NO 217-NS

Butt Joint
+34.994

Sta. 1401+00

10′ 12′ 12′ 28′ 14′ 12′ 12′ 28′ 14′ 10′ 12′ 12′

30″ 18″ 2″

FOR UNDERDRAIN KEY,
SEE SHEET NO. 172

Wearing Course Removed

Quantities
202 Wearing Course Removed (1½″) = 400 Sq. Yds.
407 Tack Coat = 40 Gals.
448 Asphalt Concrete Surface Course, Type IH = 167 Cu. Yds.

NOTE: Quantities Carried to General Summary

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

1,095.13 1,094.58 1,094.03 1,093.48 1,092.93 1,092.38 1,091.83 1,091.28 1,090.73 1,090.18 1,089.63 1,089.08 1,088.53 1,087.98 1,087.43 1,086.88 1,086.33 1,085.78 1,085.23 1,084.68 1,084.13 1,083.58 1,083.03 1,082.48 1,081.93

1110 1100 1090 1080 1070 1060 1050 1040

STA. 1394+35, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
TOP OF GRATE EL. 1085.64
FL. 18″ (N.) EL. 1080.71

-1.10 %

Existing

199′ - 18″ CONDUIT
TYPE C @ 150%

STA. 1396+34, ℄ I.R. 71
EX. C.B.
TOP OF GRATE EL. 1084.4±
FL. EX. 21″ (N.) EL. 1077.5±
FL. EX. 18″ (E.) EL. 1077.72±

STA. 1396+34, 95′ RT.
EX. C.B.
TOP OF GRATE EL. 1084.1±
FL. EX. 18″ (W.) EL. 1079.0±

1389+00 1390+00 1391+00 1392+00 1393+00 1394+00 1395+00 1396+00 1397+00 1398+00 1399+00 1400+00

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED gwr CHECKED RLS

PLAN AND PROFILE
STA 1388+50 TO STA 1401+00

MED - 71 - 15.78

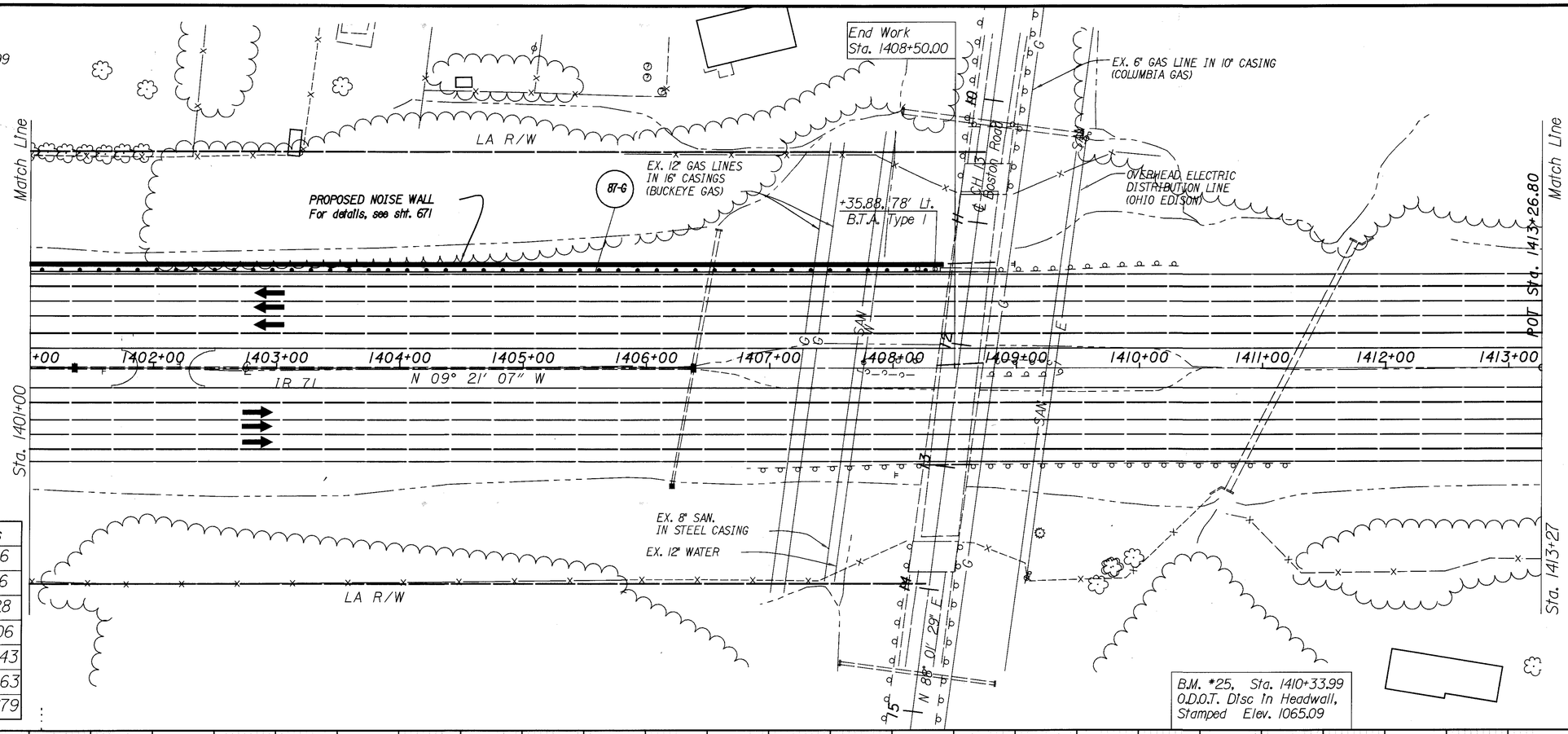
217
940

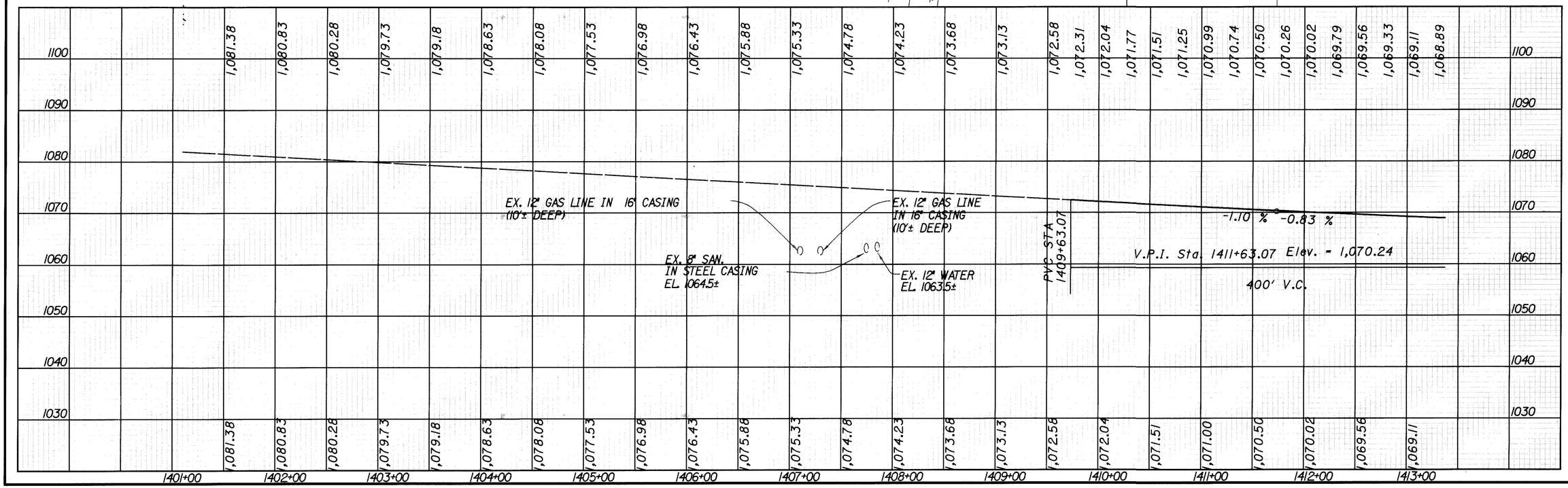
DESIGN FILE : h:\pdh_med_ir71\dgn\planprofile\gp46.dgn
USERNAME : jrogers

DATE : 29-DEC-1999
TIME : 09:36

I.R. 71
P.I. Sta = 1387+79.99
Δ = 5° 14' 16" (LT)
Dc = 0° 15' 00"
T = 1,048.28'
R = 22,918.23'
L = 2,095.10'
E = 23.96'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

PLAN AND PROFILE
STA 1401+00 TO STA 1413+27

MED - 71 - 15.78

218
940

DESIGN FILE : h:\pd_MED_IR71\DGN\PlanProfile\gp47.dgn
USERNAME : pfought
DATE : 09-DEC-1999
TIME : 10:07

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| | 106 |
| | 1189 |
| | 108 |
| | 1244 |
| | 116 |
| | 1200 |
| | 100 |
| | 556 |
| 100 | +50 |
| | 378 |
| 36 | Abd. |
| | 4567 SHEET TOTAL |




| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| | | | |
| 220 | 12 | | |
| | | | |
| | | 874 | 44 |
| | | | |
| Abd. | 252 | 12 | |
| Bk. | 122 | 12 | |
| | | | |
| | | 389 | 22 |
| | | | |
| 88 | 0 | | |
| | | 241 | 0 |
| 42 | 0 | | |
| | | 65 | 0 |
| 50 | 28 | 0 | |
| | | 26 | 0 |
| Abd. | 0 | 0 | |
| SHEET TOTAL | | 1595 | 66 |

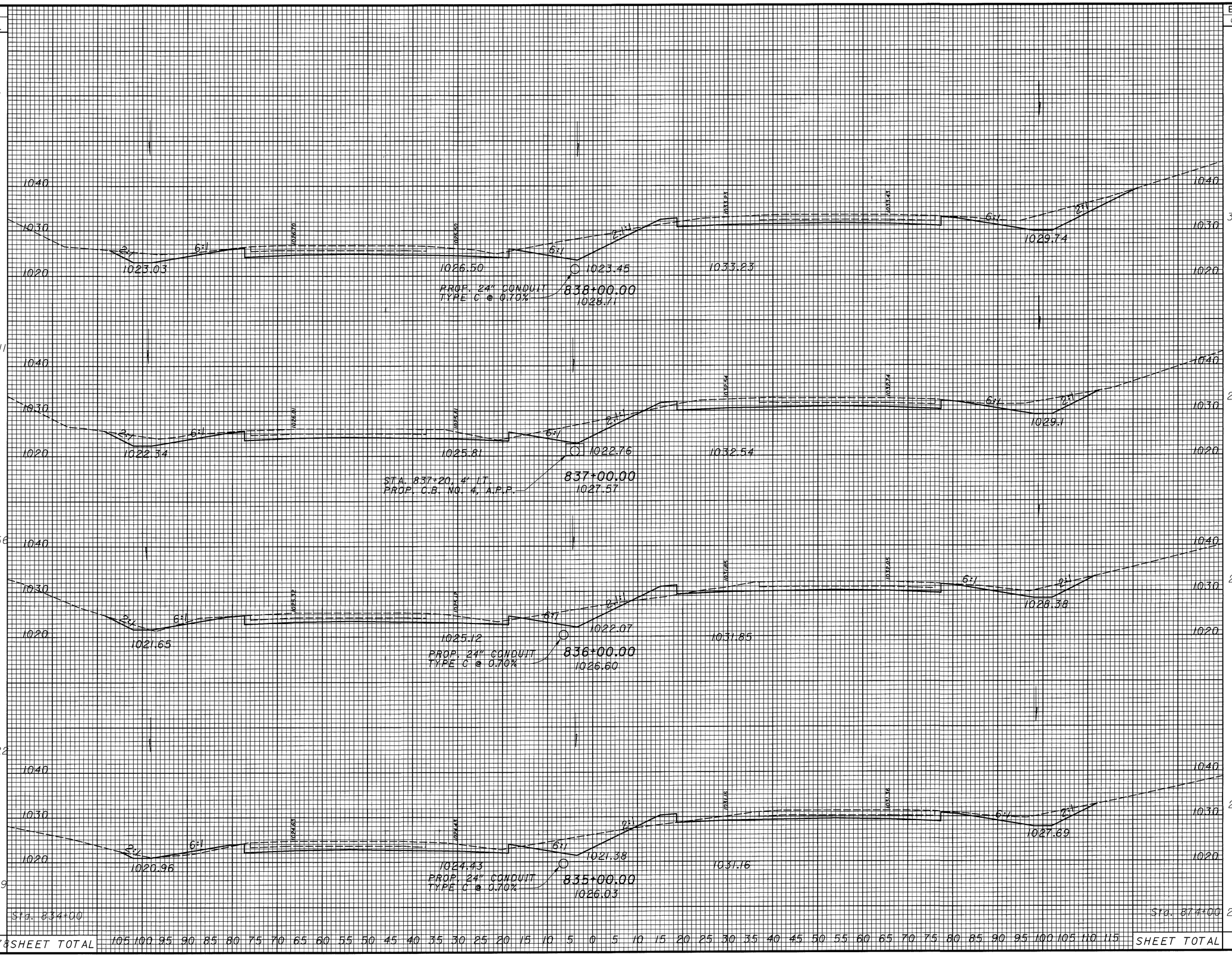
105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 830+00 TO STA. 834+00

MED-71-15.78

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| | | | | | |
| 122 | | 300 | 5 | | |
| | 1311 | | | 1046 | 22 |
| 114 | | 265 | 7 | | |
| | | | | 880 | 46 |
| 112 | 1256 | 210 | 18 | | |
| | | | | 787 | 78 |
| 108 | 1222 | 215 | 24 | | |
| | | | | 806 | 67 |
| 106 | 1189 | 220 | 12 | | |
| SHEET TOTAL | 4978 | | | 3519 | 213 |




CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 835+00 TO STA. 838+00

MED-71-15.78

220
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 124 | 1411 |
| 130 | 1444 |
| 130 | 1400 |
| 122 | |
| | 5699 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | 294 | 14 | |
| | | | 1085 44 |
| | 222 | 0 | |
| | | | 1078 37 |
| | 293 | 10 | |
| | | | 1143 41 |
| | 324 | 10 | |
| | | | 1156 31 |
| | 300 | 5 | |
| SHEET TOTAL | | | 4462 153 |

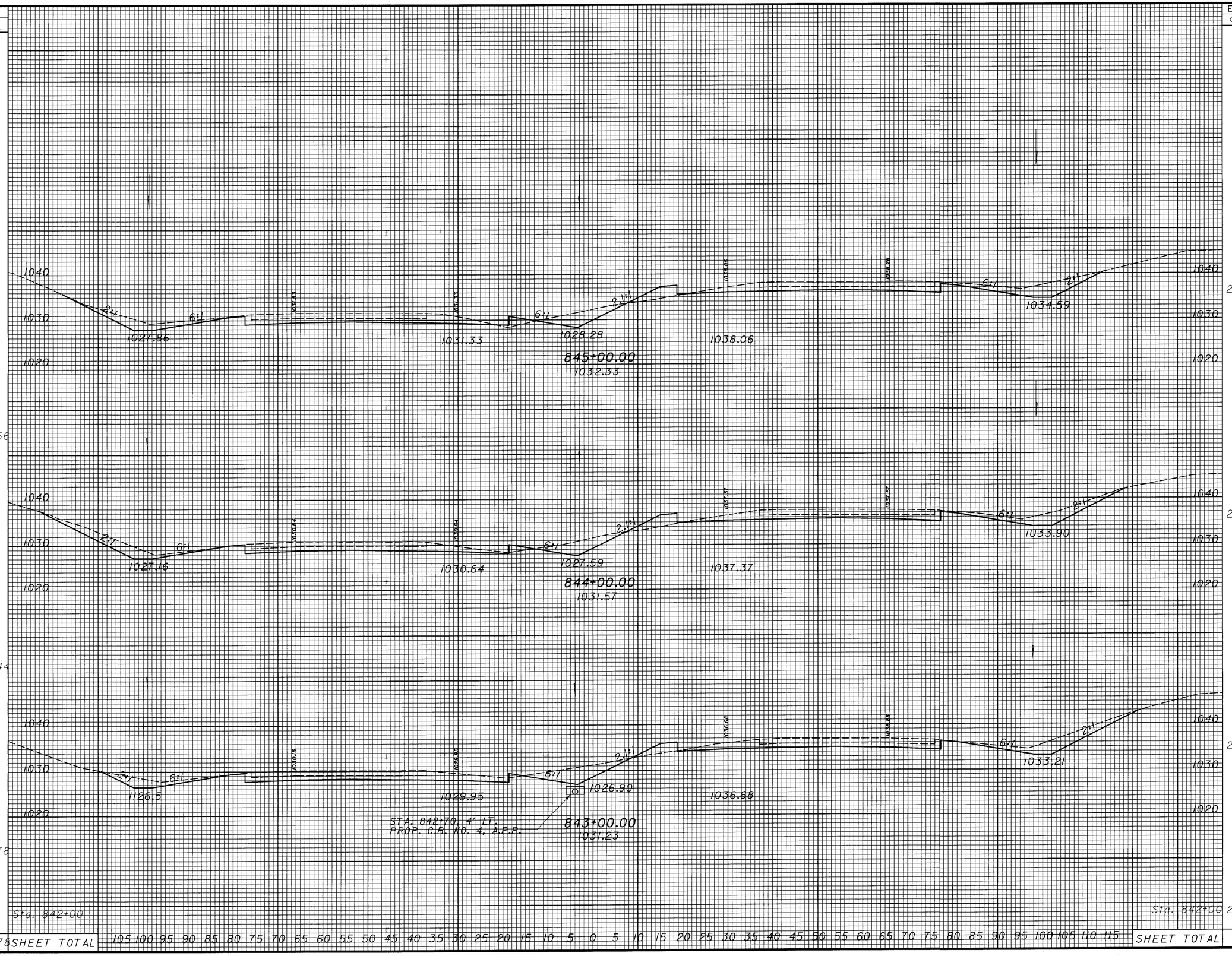
CALCULATED N.J.V
CHECKED J.W.R

# CROSS SECTIONS
## STA. 839+00 TO STA. 842+00

MED-71-15.78

221
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 126 | |
| 1456 | |
| 136 | |
| 1444 | |
| 136 | |
| 1378 | |
| 124 | |
| | 4278 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 234 | 28 | | |
| | | 870 | 94 |
| 236 | 23 | | |
| | | 887 | 72 |
| 243 | 16 | | |
| | | 994 | 56 |
| 294 | 14 | | |
| SHEET TOTAL | | 2751 | 222 |

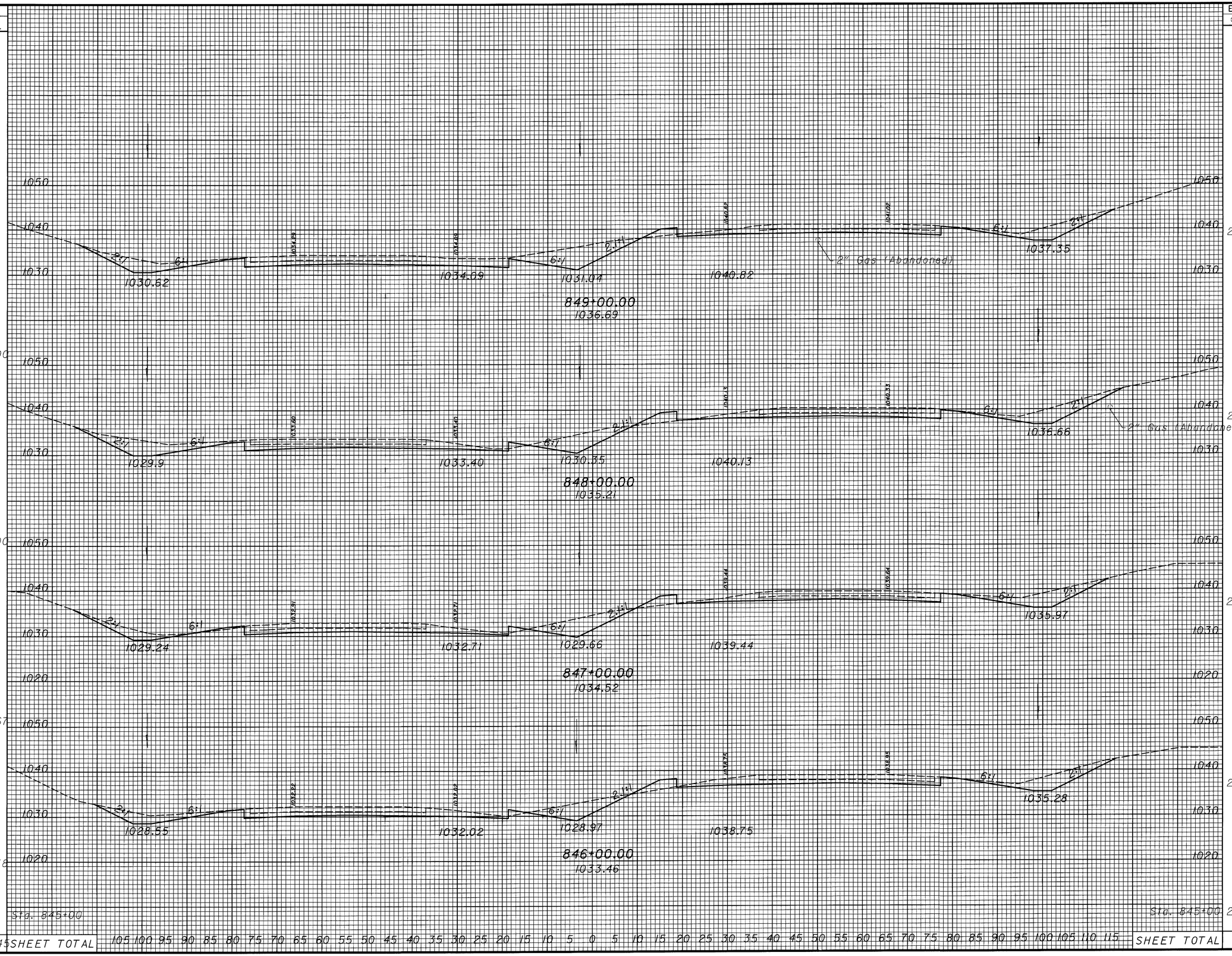
CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 843+00 TO STA. 845+00

MED-71-15.78

222
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 124 | |
| | 1400 |
| 128 | |
| 124 | |
| | 1400 |
| 122 | |
| | 1378 |
| 126 | |
| | 5545 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 290 | 8 | | |
| | | 1044 | 46 |
| 274 | 17 | | |
| | | 937 | 63 |
| 232 | 17 | | |
| | | 889 | 65 |
| 248 | 18 | | |
| | | 893 | 85 |
| 234 | 28 | | |
| | | 3763 | 259 |

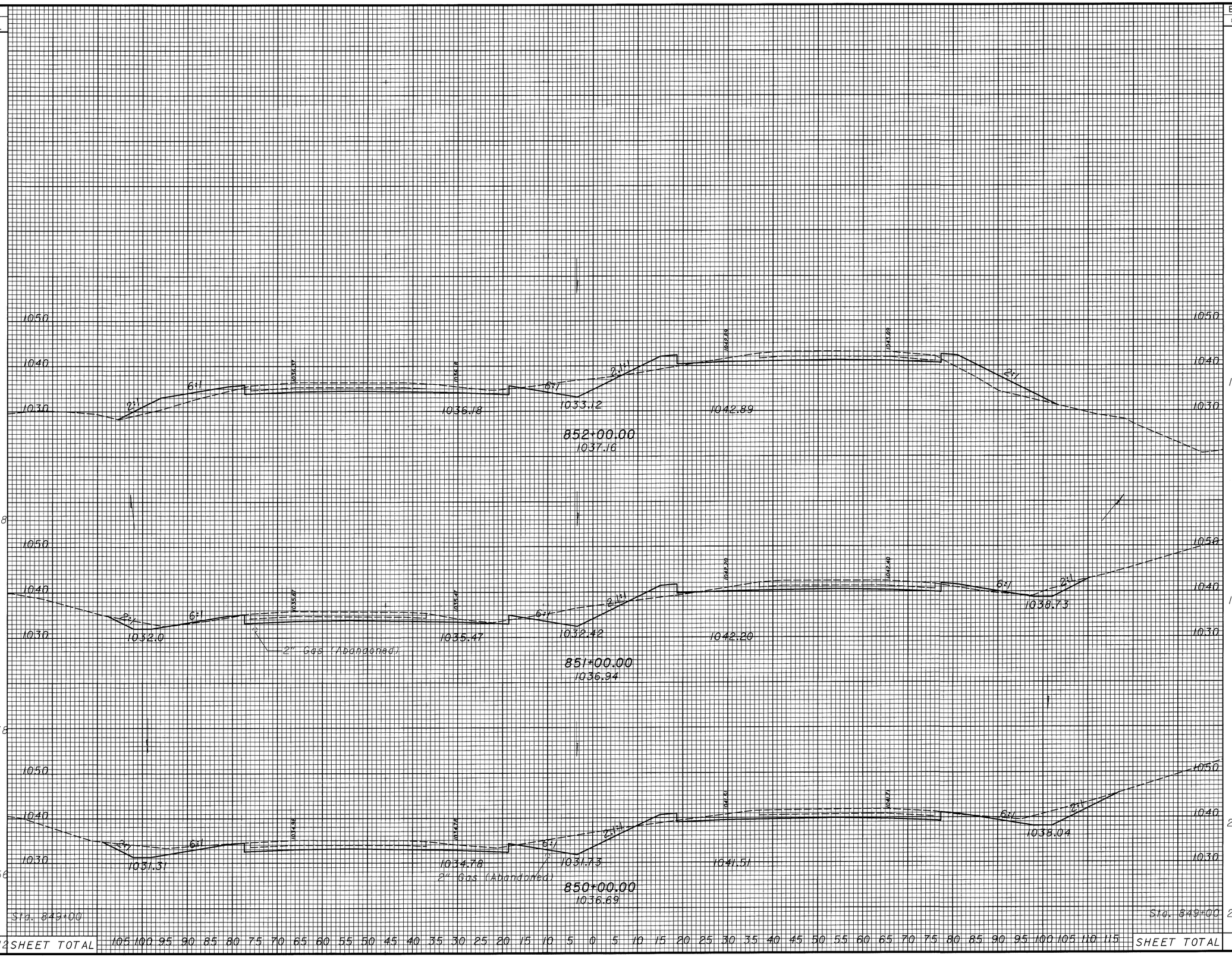
CALCULATED N.J.V
CHECKED J.W.R

# CROSS SECTIONS
## STA. 846+00 TO STA. 849+00

MED-71-15.78

223
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 102 | |
| 1178 | |
| 110 | |
| 1278 | |
| 120 | |
| 1356 | |
| 124 | |
| Sta. 849+00 | |
| | 3812 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 140 | 120 | | |
| | | 578 | 278 |
| 172 | 30 | | |
| | | 800 | 78 |
| 260 | 12 | | |
| | | 1019 | 37 |
| 290 | 8 | | |
| SHEET TOTAL | | 2397 | 393 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

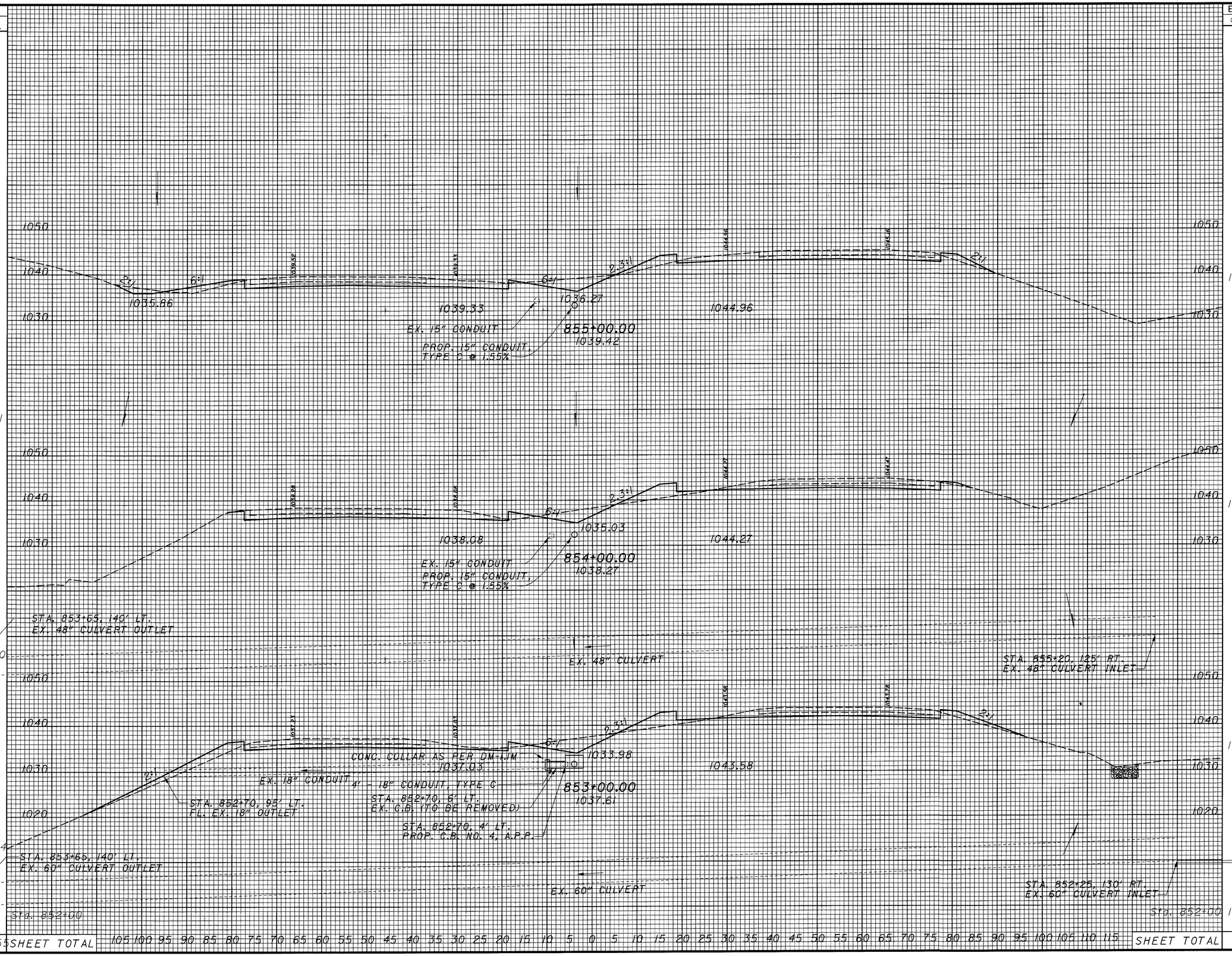
CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 850+00 TO STA. 852+00

MED-71-15.78

224
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 88 | |
| 811 | |
| 58 | |
| 900 | |
| 104 | |
| 1144 | |
| 102 | |
| 2855 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 164 | 42 | | |
| | | 552 | 148 |
| 134 | 38 | | |
| | | 481 | 222 |
| 126 | 82 | | |
| | | 493 | 374 |
| 140 | 120 | | |
| | | 1526 | 744 |

SHEET TOTAL

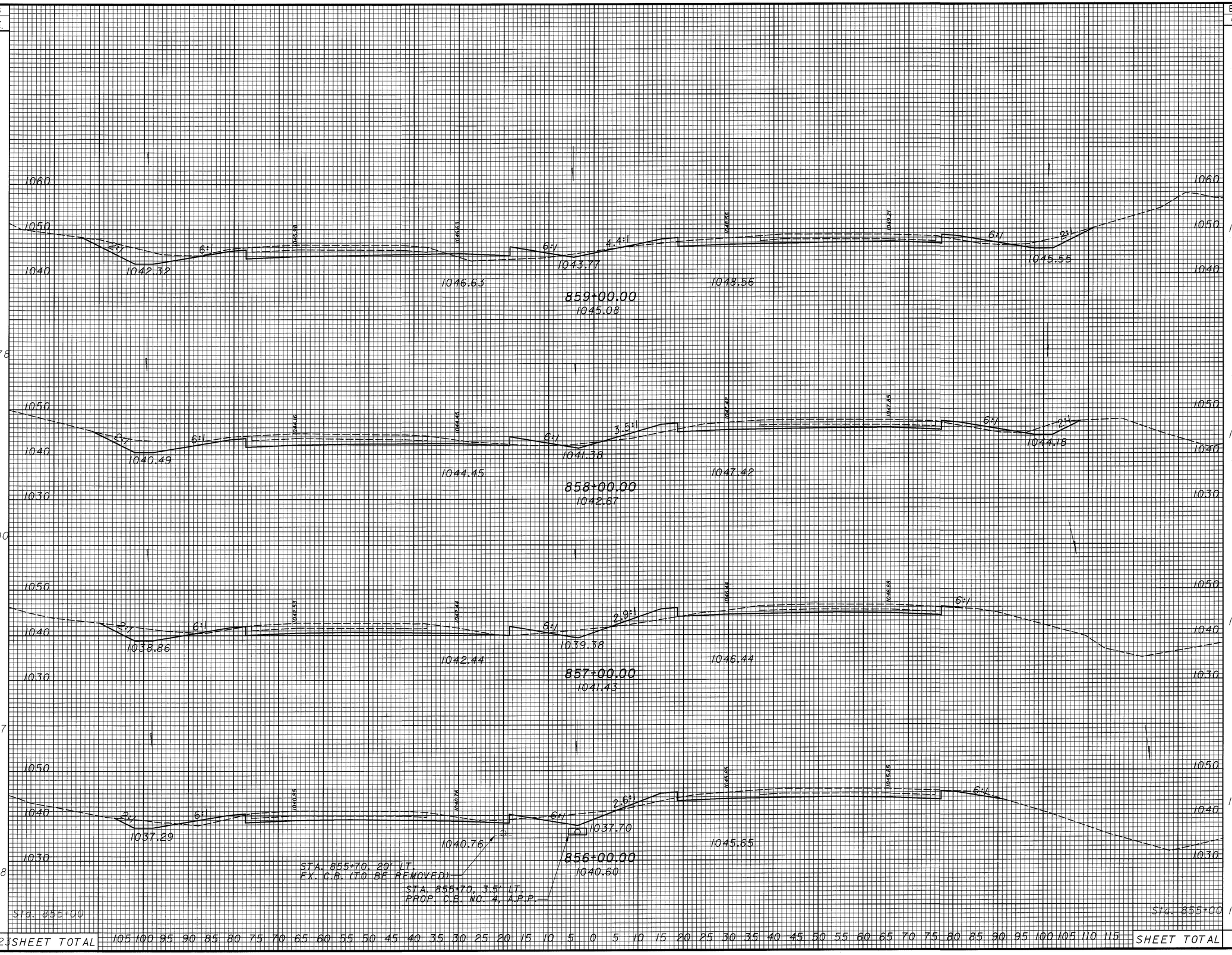
CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 853+00 TO STA. 855+00

MED-71-15.78

225
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 118 | 1278 |
| 112 | |
| 86 | 967 |
| 88 | 978 |
| 88 | |
| | 4323 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 180 | 50 | | |
| | | 685 | 167 |
| 190 | 40 | | |
| | | 626 | 130 |
| 148 | 30 | | |
| | | 567 | 111 |
| 158 | 30 | | |
| | | 596 | 133 |
| 164 | 42 | | |
| SHEET TOTAL | | 2474 | 541 |

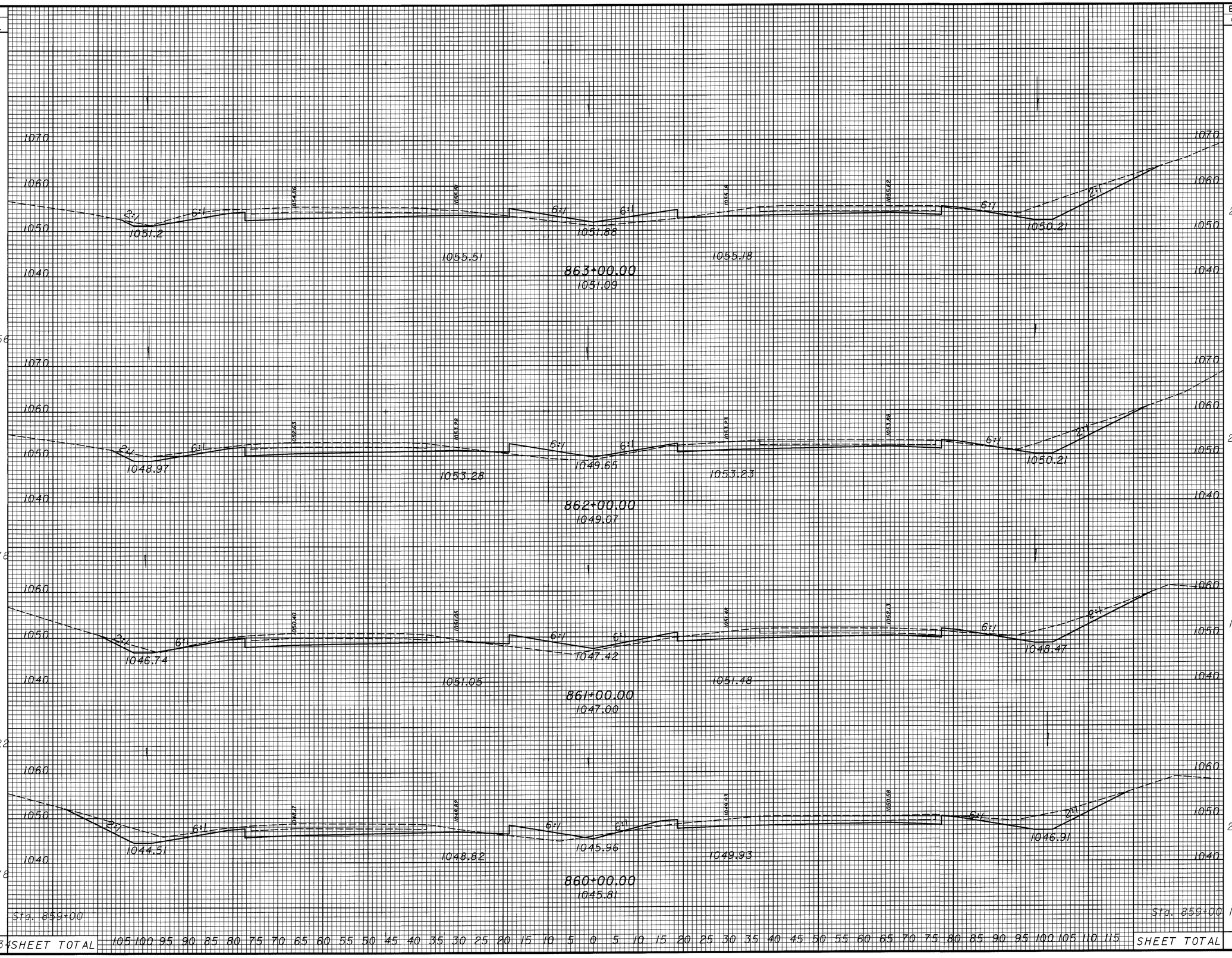
CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 856+00 TO STA. 859+00

MED-71-15.78

226
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 122 | |
| | 1356 |
| 122 | |
| | 1378 |
| 126 | |
| | 1422 |
| 130 | |
| | 1378 |
| 118 | |
| | 5534 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 210 | 50 | | |
| | | 759 | 167 |
| 200 | 40 | | |
| | | 715 | 174 |
| 186 | 54 | | |
| | | 785 | 167 |
| 238 | 36 | | |
| | | 774 | 159 |
| 180 | 50 | | |
| SHEET TOTAL | | 3033 | 667 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 860+00 TO STA. 863+00

MED-71-15.78

227
940

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| | 74 |
| | 900 |
| | 88 |
| | 1078 |
| | 106 |
| | 1233 |
| | 116 |
| | 1322 |
| | 122 |
| SHEET TOTAL | 4533 |

STA. 866+65, 125' LT.
EX. 60" CULVERT OUTLET

EX. 60" CULVERT

STA. 868+50, 140' RT.
EX. 60" CULVERT INLET

CONC. COLLAR AS PER DM-1.IM

EX. 15" CONDUIT

4' - 15" CONDUIT, TYPE C
STA. 866+30, 0 I.R. 11
PROP. C.B. NO. 4, A.P.P.

STA. 866+30, 0 I.R. 11
EX. C.B. (TO BE REMOVED UNDER 604)

2" Gas (Abandoned)
(3'± Deep)

STA. 866+30, 115' LT.
FL. EX. 15" OUTLET

2" Gas (Abandoned)
(3'± Deep)

| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| | | | |
| 115 | 68 | | |
| | | 520 | 169 |
| 166 | 23 | | |
| | | 656 | 124 |
| 188 | 44 | | |
| | | 681 | 183 |
| 180 | 55 | | |
| | | 722 | 194 |
| 210 | 50 | | |
| SHEET TOTAL | | 2579 | 670 |

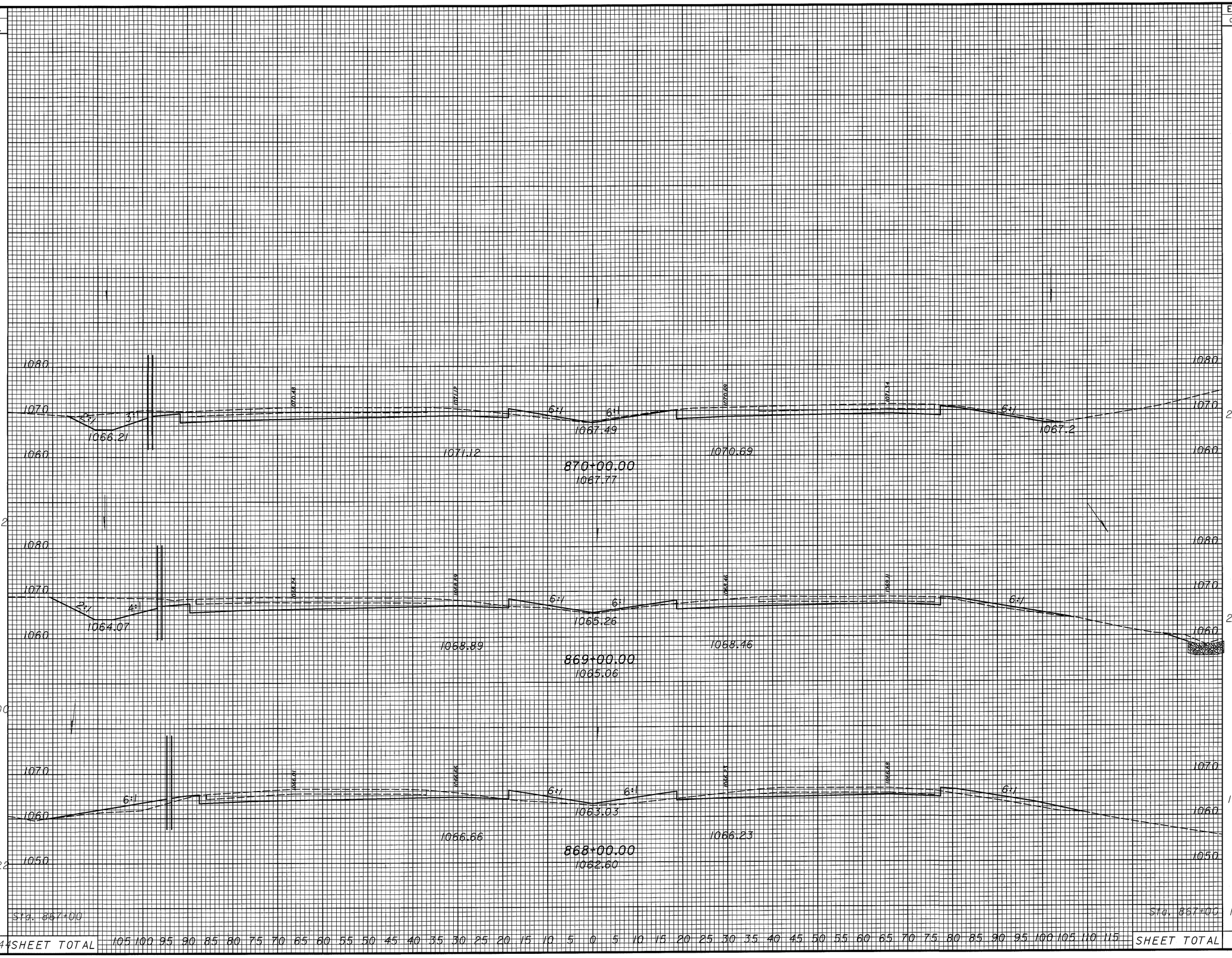
CALCULATED N.J.V
CHECKED J.W.R

# CROSS SECTIONS
## STA. 864+00 TO STA. 867+00

MED-71-15.78

228
940

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 96 | | 235 | 12 | | |
| 1122 | | | | 870 | 85 |
| 106 | | 235 | 34 | | |
| 1200 | | | | 669 | 233 |
| 110 | | 126 | 92 | | |
| 1022 | | | | 446 | 296 |
| 74 | | 115 | 68 | | |
| 3344 | SHEET TOTAL | | | 1985 | 614 |




CALCULATED NJV

CHECKED JWR

# CROSS SECTIONS
## STA. 868+00 TO STA. 870+00

MED-71-15.78

229
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| 96 | |
| 102 | |
| 102 | |
| 96 | |
| 96 | |
| | 4400 |




| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| | | | |
| 200 | 20 | | |
| | | 760 | 170 |
| 210 | 72 | | |
| | | 731 | 200 |
| 185 | 36 | | |
| | | 756 | 104 |
| 223 | 20 | | |
| | | 848 | 59 |
| 235 | 12 | | |
| | | 3095 | 533 |

CALCULATED N.J.V
CHECKED J.W.R

# CROSS SECTIONS
# STA. 871+00 TO STA. 874+00

MED-71-15.78

230
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

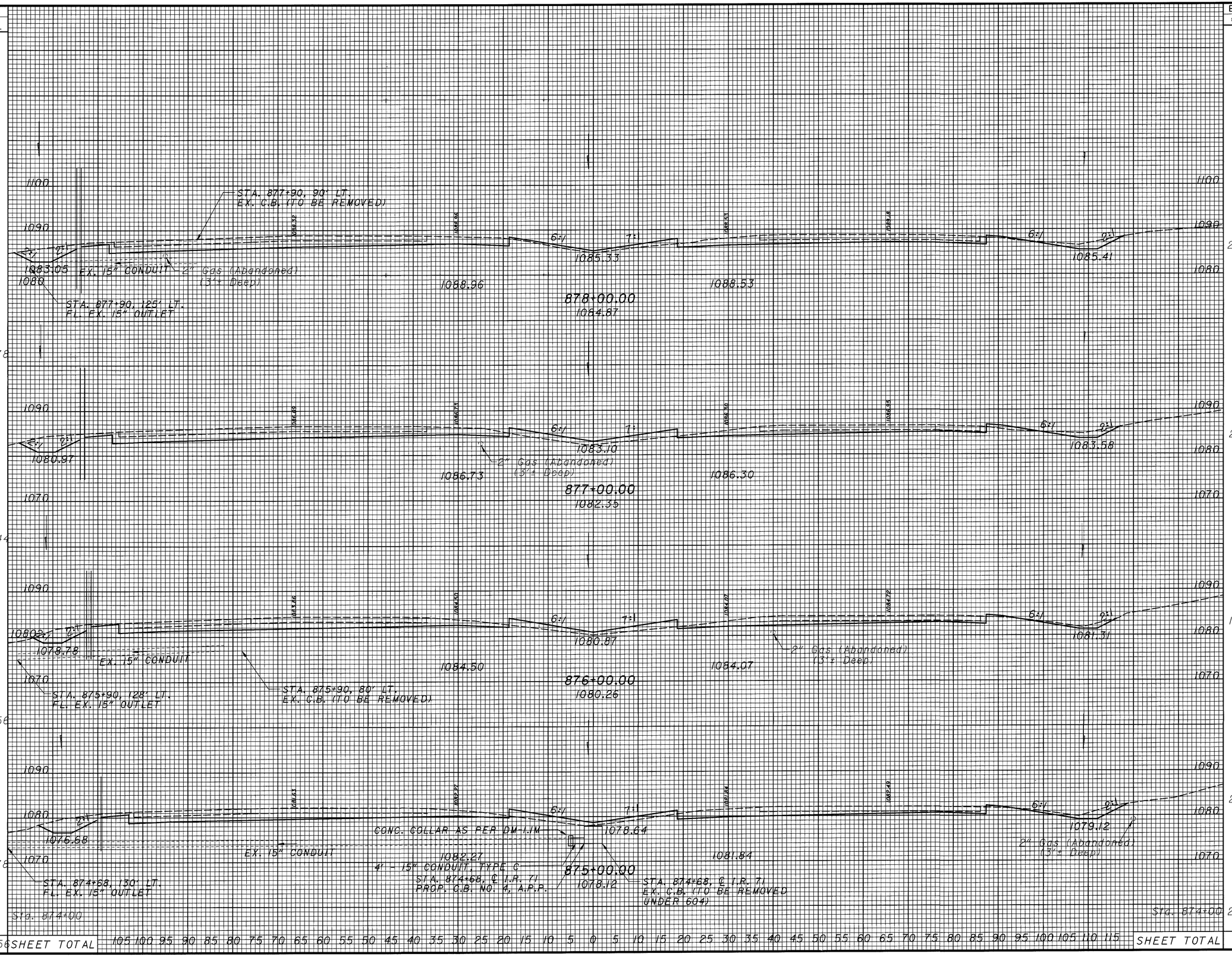
# CROSS SECTIONS
## STA. 875+00 TO 878+00

CALCULATED N.J.V. CHECKED J.W.R.

MED-71-15.78

231/940

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 98 | | 226 | 22 | 822 | 130 |
| 96 | | 218 | 48 | 744 | 163 |
| 92 | | 184 | 40 | 733 | 141 |
| 98 | | 212 | 36 | 763 | 104 |
| 96 | | 200 | 20 | | |
| SHEET TOTAL | 4256 | | | 3062 | 538 |



DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|---|
| 76 | | 1100 / 1090 / 1080 — 1092.24, 1087.89, 1087.69, 1094.60, 1097.45, 1091.10, 1094.05 — 6:1, 7:1, 6:1, 2:1 — 882+00.00 1093.88 | | | | |
| | 844 | | 170 | 24 | 593 | 130 |
| 76 | | 1100 / 1090 / 1080 — 1091.01, 1095.66, 1095.22, 1092.37, 1091.95 — 6:1, 7:1, 6:1, 2:1 — 881+00.00 1091.10 | 150 | 46 | | |
| | 867 | | 519 | 163 | | |
| 80 | | 1100 / 1090 / 1080 — 1092.78, 1091.41, 1092.49, 1091.64, 1090.14, 1089.87 — 6:1, 7:1, 6:1, 2:1 — 880+00.00 1089.11 | 130 | 42 | | |
| | 303 | | | | 145 | 47 |
| 108 | Abd., Sta. 879+71 | | 140 | 46 | | |
| 98 | Bk., Sta. 879+71 | | 225 | 46 | | |
| | 765 | | | | 585 | 124 |
| 96 | | 1090 / 1080 — 1091.55, 1091.20, 1090.76, 1091.41, 1087.91, 1087.6 — 6:1, 7:1, 6:1, 2:1 — 879+00.00 1086.80 — 1085.25 | 220 | 48 | | |
| 1078 | | | | | 826 | 130 |
| 98 | Sta. 878+00 | | 226 | 22 | | |
| | 3857 | SHEET TOTAL 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 | SHEET TOTAL | | 2668 | 594 |

CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 879+00 TO STA. 882+00

MED-71-15.78

DESIGN FILE : $$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 80 | 833 |
| 70 | 778 |
| 70 | 981 |
| 92 | 809 |
| 84 | |
| 76 | |
| | 340 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 10 | 270 | | |
| | | 37 | 722 |
| 10 | 120 | | |
| | | 170 | 352 |
| 82 | 70 | | |
| | | 388 | 214 |
| 110 | 36 | | |
| 130 | 36 | | |
| | | 506 | 101 |
| 170 | 24 | | |
| | | 1101 | 1389 |

CALCULATED N.J.V
CHECKED J.W.R

# CROSS SECTIONS STA. 883+00 TO STA. 886+00

MED-71-15.78

233
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| 154 | |
| | 1711 |
| 154 | |
| 145 | |
| 108 | |
| 80 | |
| | 4211 |

FOR STRUCTURE END DRAINAGE PROFILES SEE SHEET 531

STA. 889+10, ℄ I.R. 71
PROP. M.H. NO. 1
1115.41

889+00.00
1109.26

1114.98

STA. 888+05, 135' LT.
FL. EX. 48" OUTLET

PROP. 15" CONDUIT, TYPE C @ 2.89%

1113.39

888+00.00
1105.08

1112.95

EX. 48" CONDUIT

STA. 888+80, 130' RT.
FL. EX. 48" INLET

1111.10

PROP. 15" CONDUIT, TYPE C @ 2.89%

887+00.00
1104.91

1110.67

Sta. 886+00

SHEET TOTAL

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| BK. | 0 | 675 | |
| | | | 0 234 |
| | 0 | 590 | |
| | 0 | | 1852 |
| | 0 | 410 | |
| | | 19 | 1259 |
| | 10 | 270 | |
| | | 19 | 5454 |

CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
# STA. 887+00 TO STA. 889+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$DESIGNFILE$SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 80 | Ahd. |
| 2300 | Seeding For Bridge between Sta. 889+00 to Sta. 892+00 |
| | SHEET TOTAL |

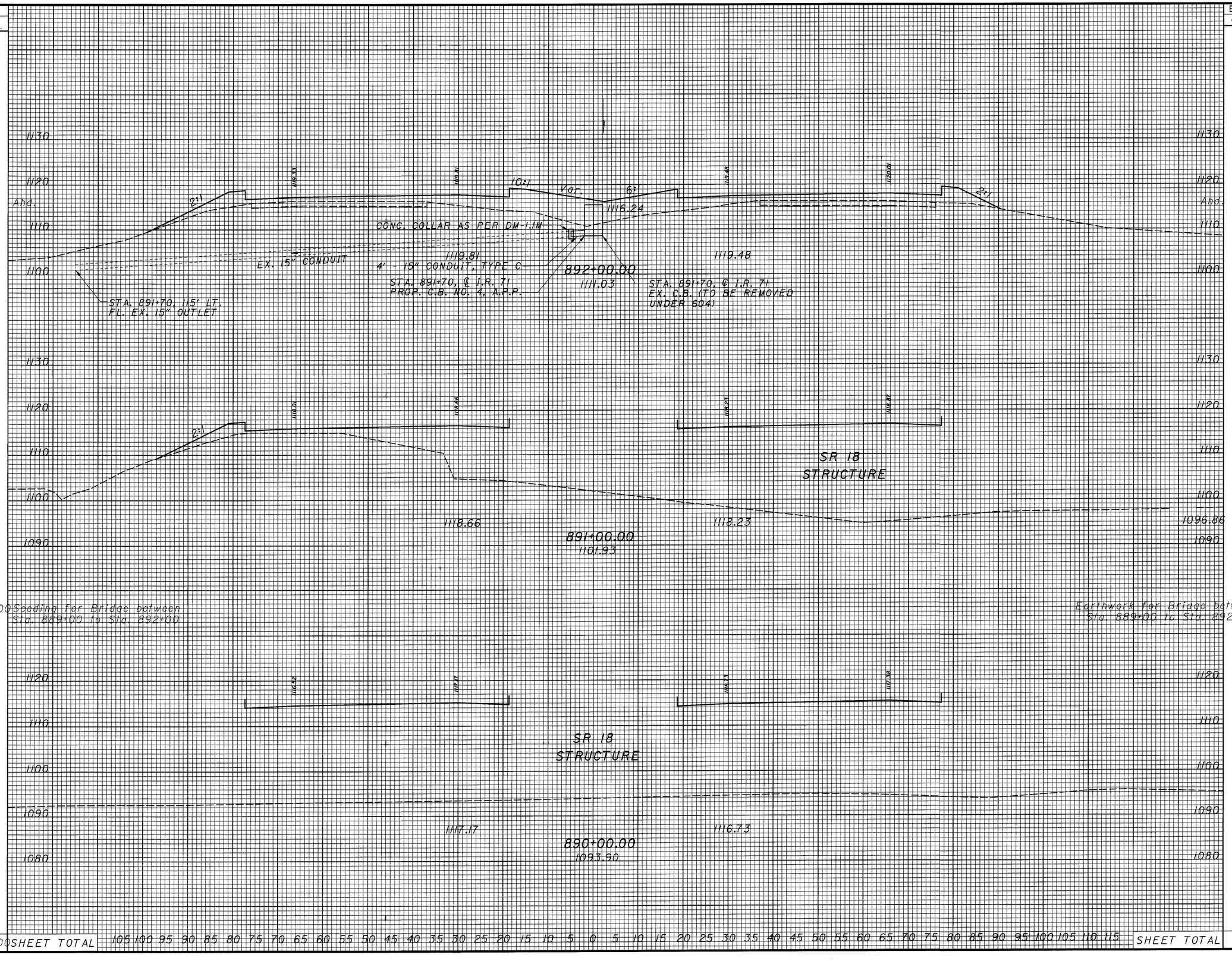
| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 0 | 525 | | |
| | | 0 | 3100 |
| | | 0 | 3100 |

CALCULATED NJV
CHECKED JWR

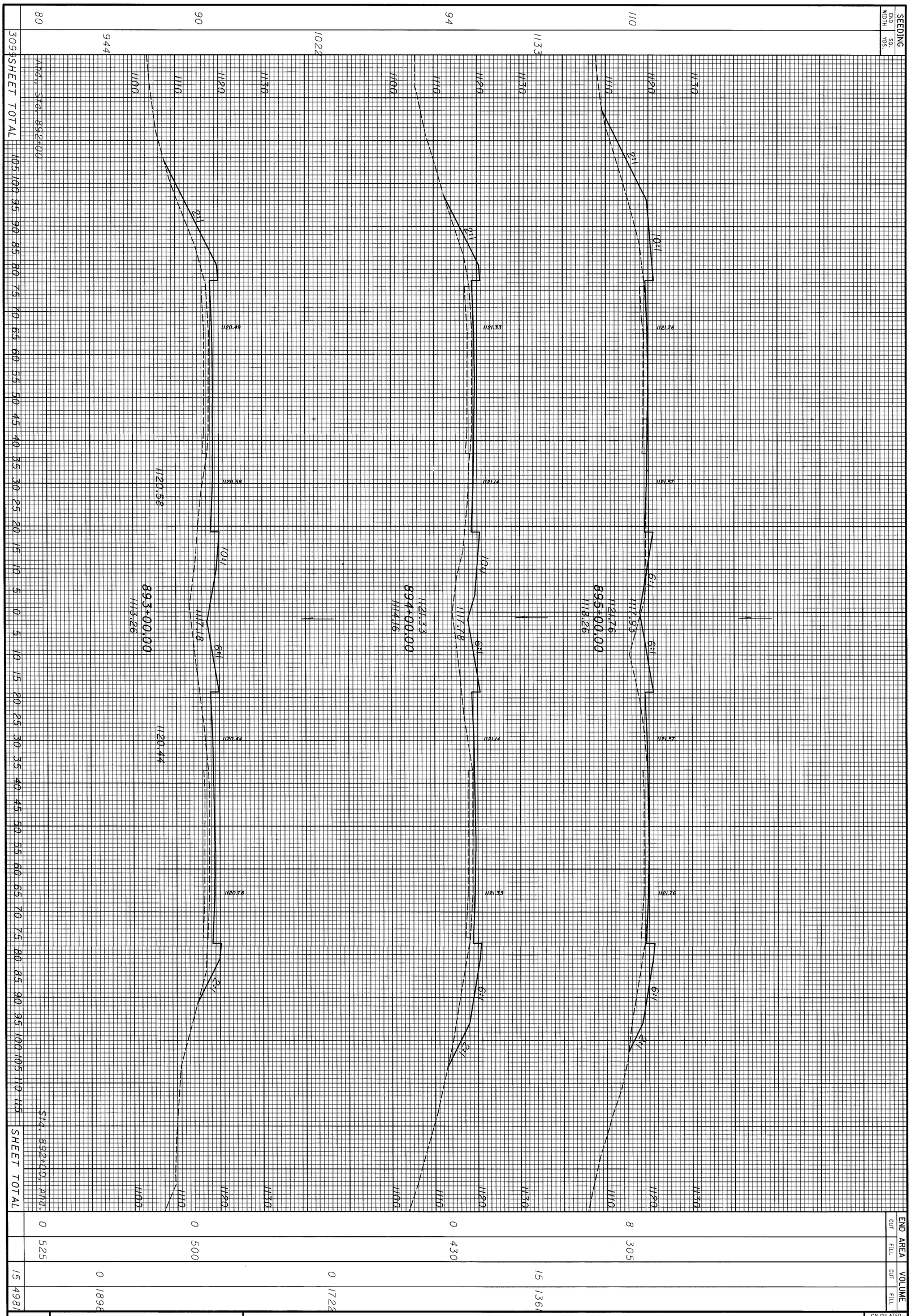
# CROSS SECTIONS
## STA. 890+00 TO STA. 892+00

MED-71-15.78

235
940



DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




236
940

**MED-71-15.78**

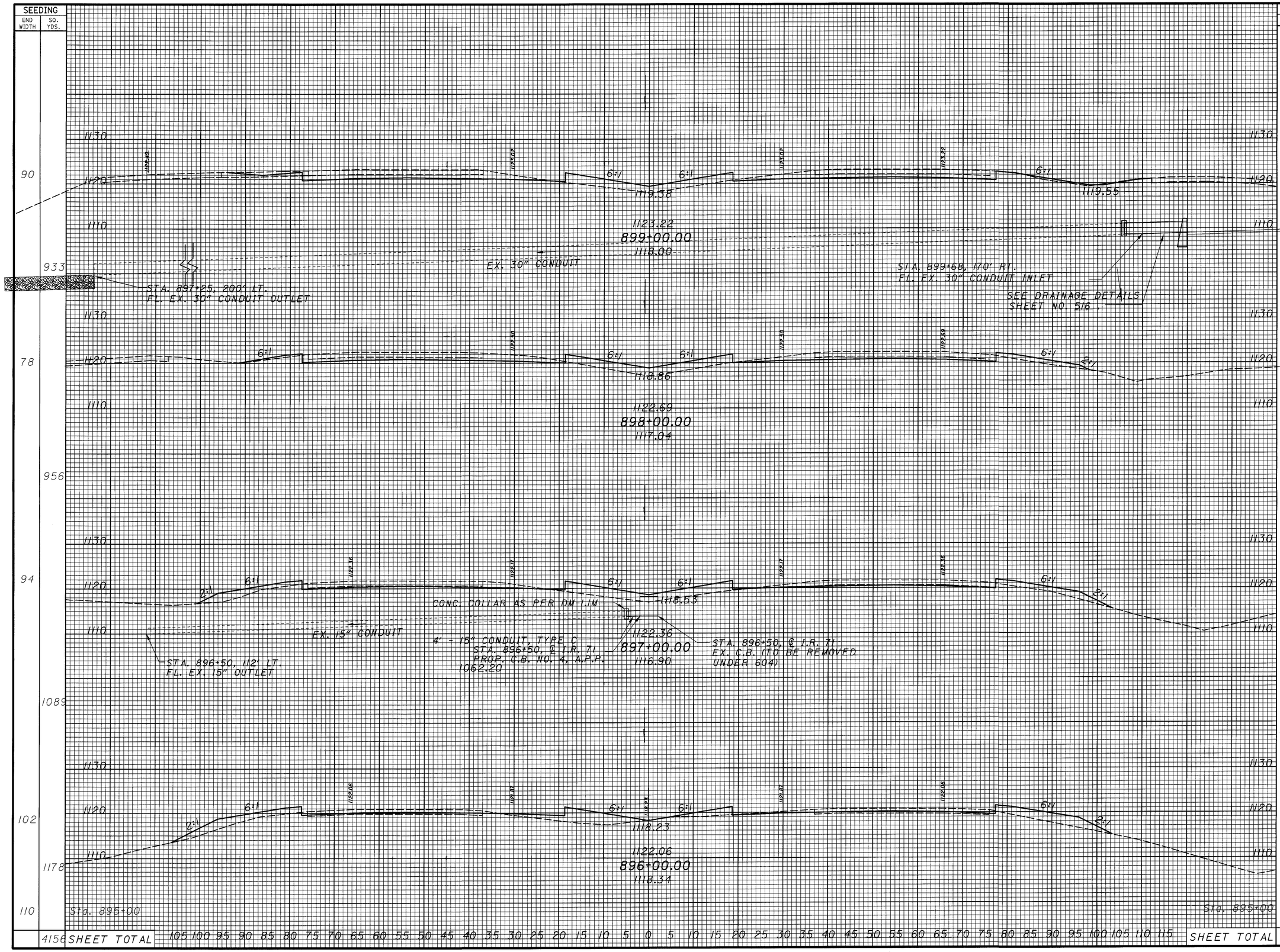
# CROSS SECTIONS
## STA. 893+00 TO STA. 895+00

CALCULATED NJV
CHECKED JWR

DESIGN FILE : $$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 90 | 933 |
| 78 | 956 |
| 94 | 1089 |
| 102 | 1178 |
| 110 | 4156 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 102 | 78 | | |
| | | 344 | 307 |
| 84 | 88 | | |
| 36 | 125 | 222 | 394 |
| 8 | 170 | 81 | 546 |
| | | 30 | 880 |
| 8 | 305 | 677 | 2127 |

CALCULATED NJV
CHECKED JWR

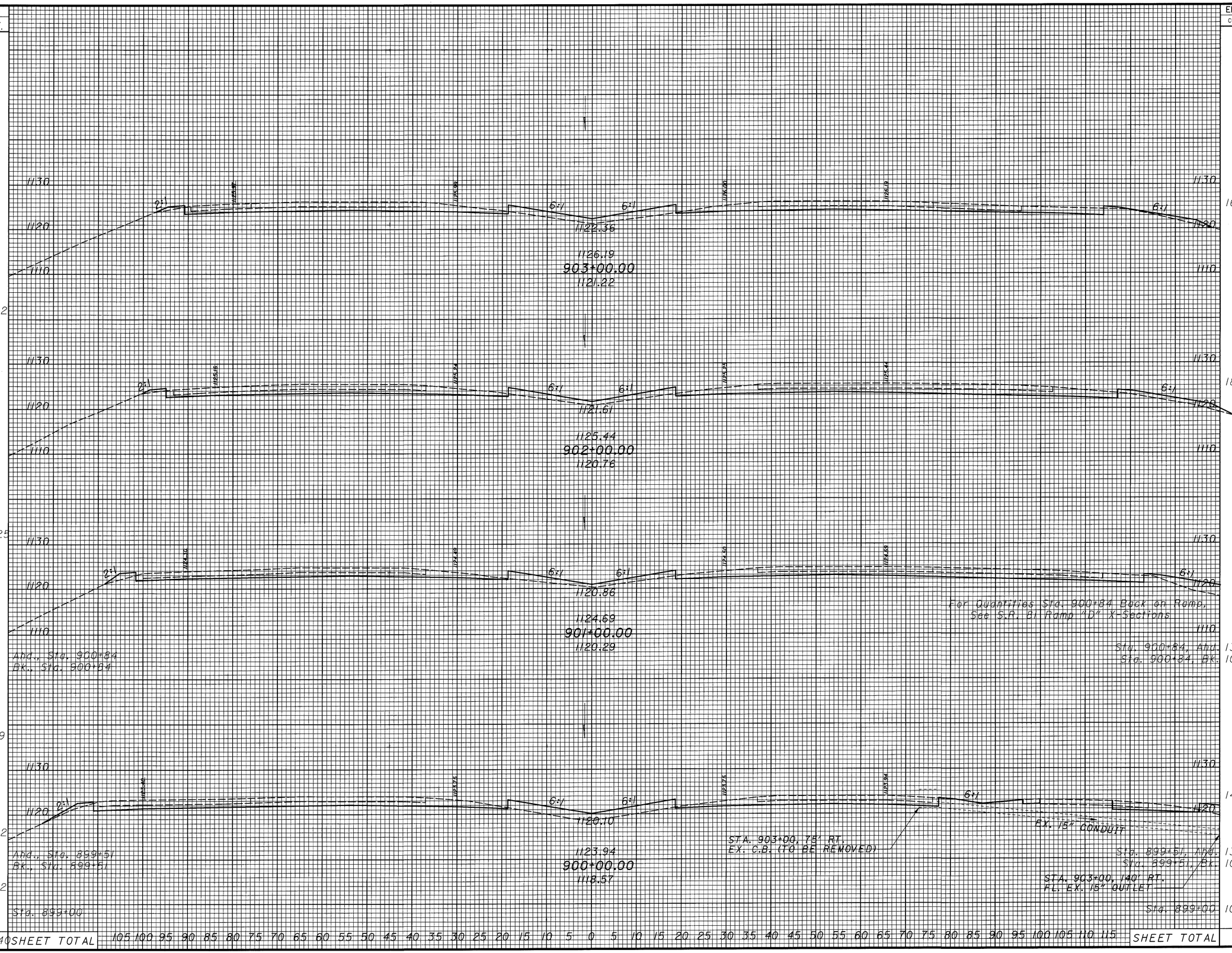
# CROSS SECTIONS
# STA. 896+00 TO STA. 899+00

MED-71-15.78

237
940

DESIGN FILE : $$$$$$$$$$DESIGNFILLSPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 74 | | 160 | 60 | | |
| | 822 | | | 630 | 222 |
| 74 | | 180 | 60 | | |
| | 1025 | | | 752 | 322 |
| 85 | | 135 | 90 | | |
| 80 | | 105 | 50 | | |
| | 719 | | | 381 | 186 |
| 74 | | 140 | 70 | | |
| | 392 | | | 250 | 136 |
| 70 | | 135 | 80 | | |
| 80 | | 105 | 80 | | |
| | 482 | | | 196 | 149 |
| 90 | | 102 | 78 | | |
| | 3440 SHEET TOTAL | | SHEET TOTAL | 2209 | 1015 |




CALCULATED NJV
CHECKED JWR

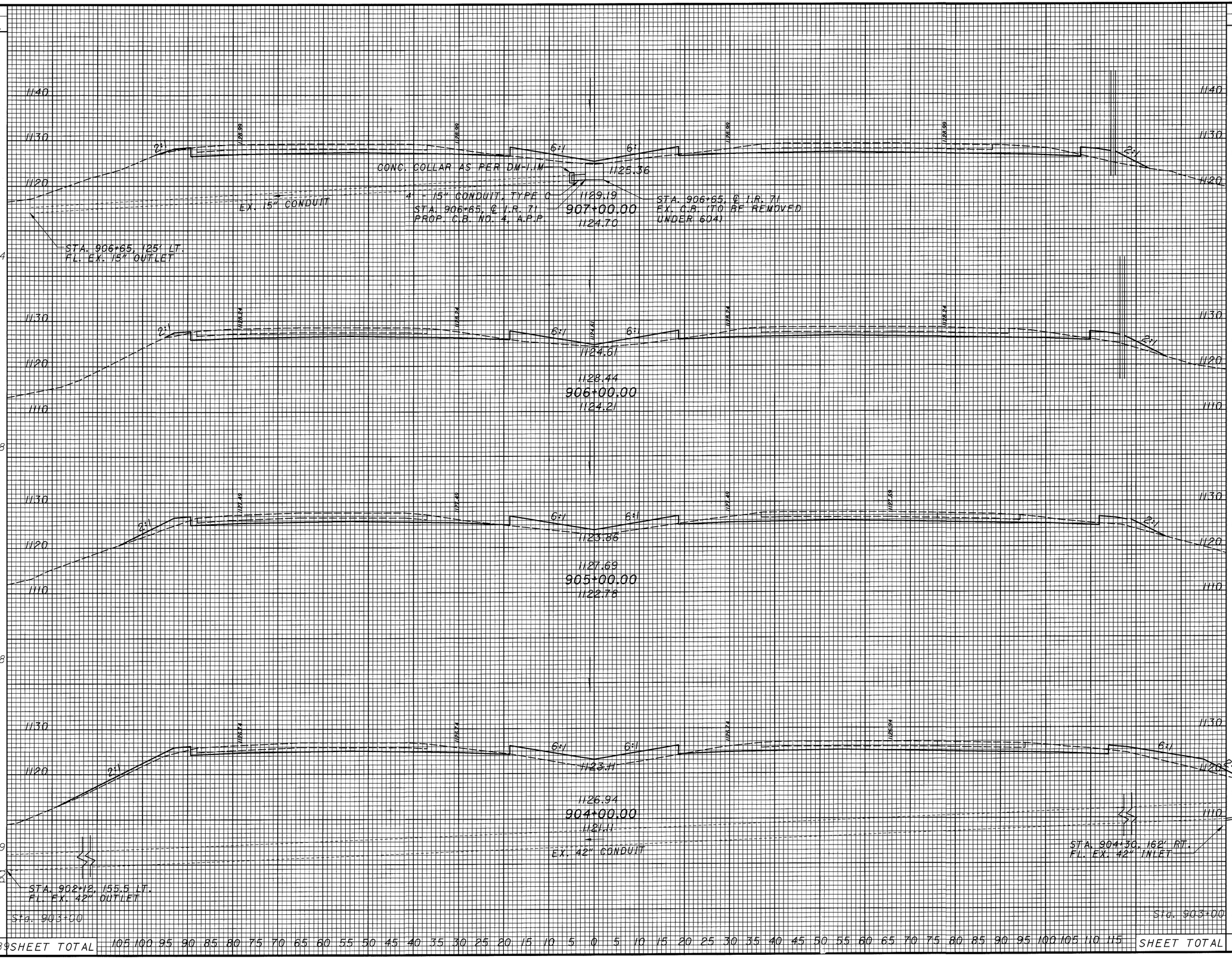
# CROSS SECTIONS
## STA. 900+00 TO STA. 903+00

MED-71-15.78

238
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 66 | 744 |
| 68 | 778 |
| 72 | 978 |
| 104 | 989 |
| 74 | |
| | 3489 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 158 | 70 | | |
| | | 581 | 259 |
| 156 | 70 | | |
| | | 548 | 296 |
| 140 | 90 | | |
| | | 546 | 426 |
| 155 | 140 | | |
| | | 583 | 370 |
| 160 | 60 | | |
| SHEET TOTAL | | 2258 | 1351 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 904+00 TO STA. 907+00

MED-71-15.78

239
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 94 | | 150 | 120 | | |
| | 978 | | | 556 | 374 |
| 82 | | 150 | 82 | | |
| | 833 | | | 611 | 285 |
| 68 | | 180 | 72 | | |
| | 767 | | | 644 | 285 |
| 70 | | 168 | 82 | | |
| | 756 | | | 604 | 281 |
| 66 | | 158 | 70 | | |
| | 3334 SHEET TOTAL | | | 2415 | 1225 |




CALCULATED NJV
CHECKED JWR

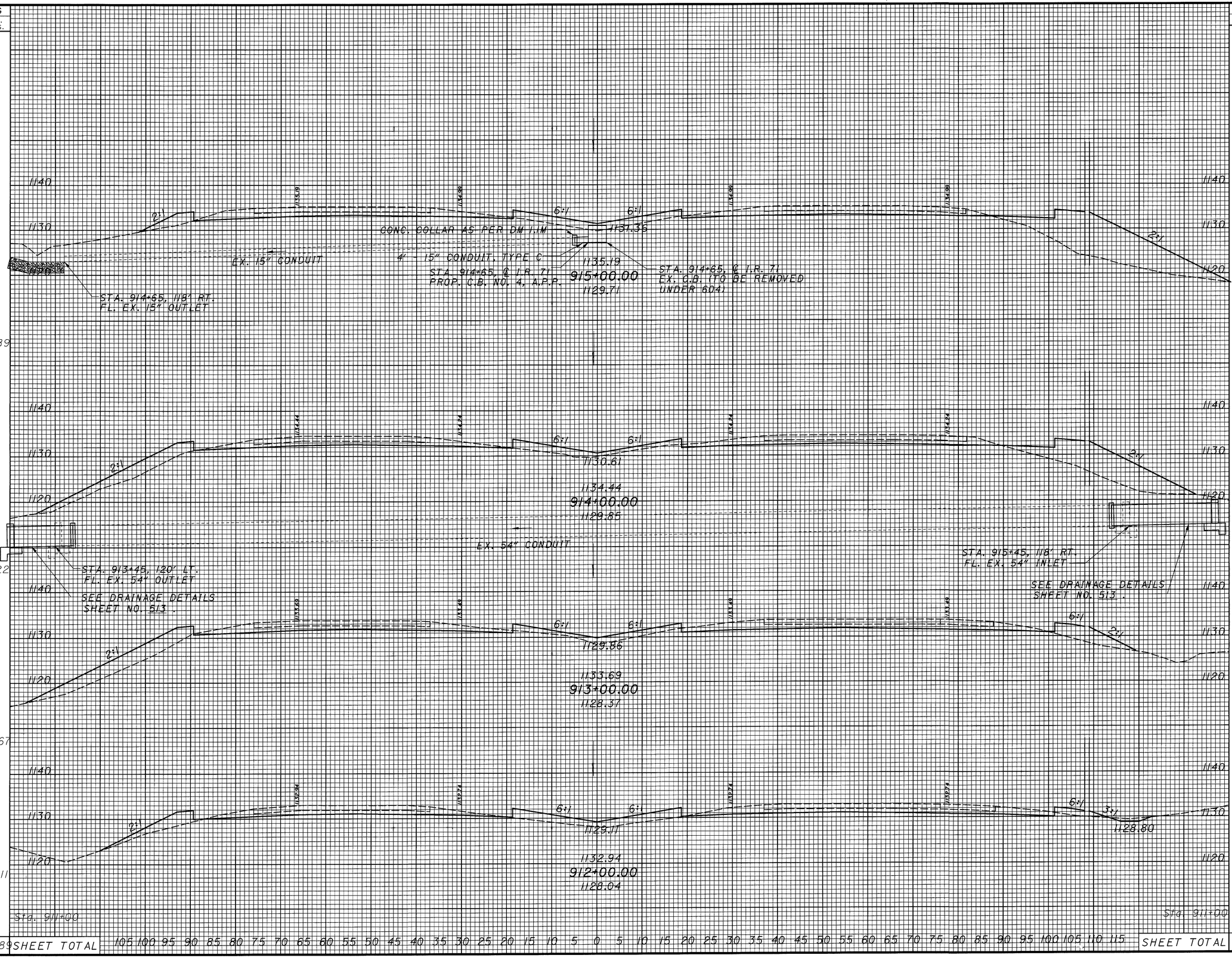
# CROSS SECTIONS STA. 908+00 TO STA. 911+00

MED-71-15.78

240
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| 98 | 1189 |
| 116 | 1222 |
| 104 | 1067 |
| 88 | 1011 |
| 94 | 448 |




| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| 134 | 350 | | |
| | | 489 | 1167 |
| 130 | 280 | | |
| 530 | 852 | | |
| 156 | 180 | | |
| 541 | 530 | | |
| 136 | 106 | | |
| 530 | 419 | | |
| 150 | 120 | | |
| | | 2090 | 2968 |

4489 SHEET TOTAL — 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 — SHEET TOTAL

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 912+00 TO STA. 915+00

MED-71-15.78

241
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | | |
|---|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL | |
| 118 | | 315 | 70 | | | 11140 / 11130 / 11120 — 2:1, 6:1, 6:1, 2:1 — 11133.27, 11137.44, 11137.24, 11133.61, 11137.44, 11137.24, 11133.5 — 11137.44 / 918+00.00 / 11131.88 |
| | 1244 | | | 981 | 322 | |
| 106 | | 215 | 104 | | | 11140 / 11130 / 11120 — 2:1, 6:1, 6:1, 2:1 — 11132.5, 11136.89, 11136.89, 11132.86, 11136.89, 11136.89, 11130.7 — 11136.69 / 917+00.00 / 11131.66 |
| | 1222 | | | 702 | 748 | |
| 114 | | 164 | 300 | | | 11140 / 11130 / 11120 — 2:1, 2:1, 6:1, 6:1, 2:1 — 11131.8, 11135.94, 11135.74, 11132.11, 11135.74, 11135.74 — 11135.94 / 916+00.00 / 11130.66 |
| | 1178 | | | 552 | 1204 | |
| 98 | Sta. 915+00 | 134 | 350 | Sta. 915+00 | | |
| | 3644 SHEET TOTAL | | | SHEET TOTAL | 2235 | 2274 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 916+00 TO STA. 918+00

MED-71-15.78

242
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 100 | 1222 |
| 120 | 1389 |
| 130 | 1467 |
| 134 | 1400 |
| 118 | Sta. 918+00 |
| | 5478 |

STA. 922+88, 100' LT.
FL. EX. 36" OUTLET
SEE DRAINAGE DETAILS
SHEET NO. 513.

EX. 36" CONDUIT

STA. 922+25, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.

STA. 922+25, ℄ I.R. 71
EX. C.B. (TO BE REMOVED
UNDER 604)

STA. 922+40, 114' RT.
PROP. C.B. NO. 5A, A.P.P.

STA. 922+50, 95' RT.
EX. C.B. (TO BE REMOVED)

STA. 922+50, 138' RT.
EX. C.B. (TO BE REMOVED
UNDER 604)

EX. 36" CONDUIT
CONC. COLLAR AS PER DW-LIN
1" - 36" CONDUIT, TYPE C

STA. 922+50, 138' RT.
PROP. C.B. NO. 2-4, A.P.P.

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 240 | 82 | | |
| | | 1037 | 226 |
| 320 | 40 | | |
| | | 1306 | 185 |
| 385 | 60 | | |
| | | 1435 | 241 |
| 390 | 70 | | |
| | | 1306 | 259 |
| 315 | 70 | | |
| SHEET TOTAL | | 5084 | 911 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 919+00 TO STA. 922+00

MED-71-15.78

243
940

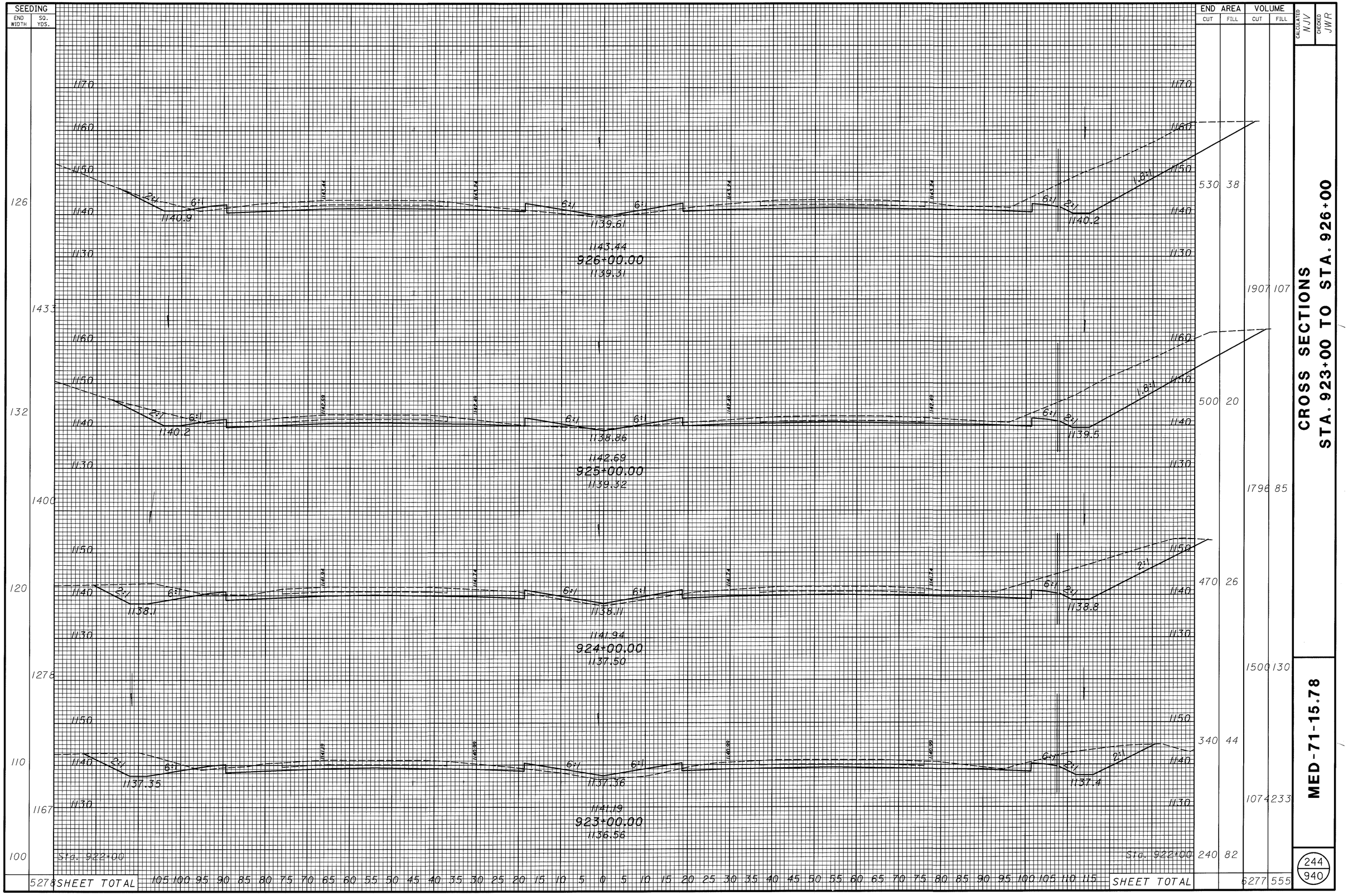
DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

# CROSS SECTIONS
# STA. 923+00 TO STA. 926+00

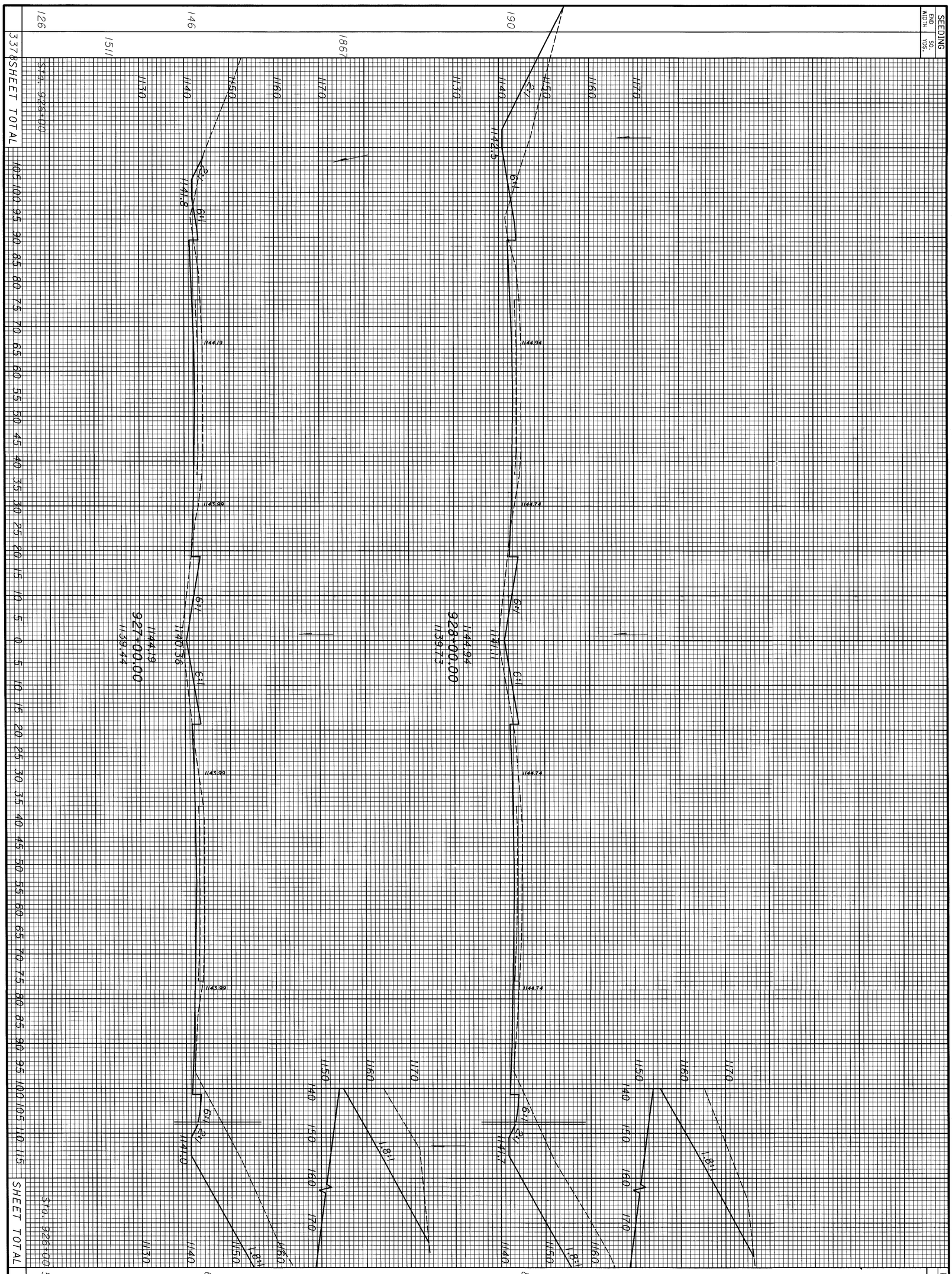
CALCULATED NJV
CHECKED JWR

**MED-71-15.78**

244
940



DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$



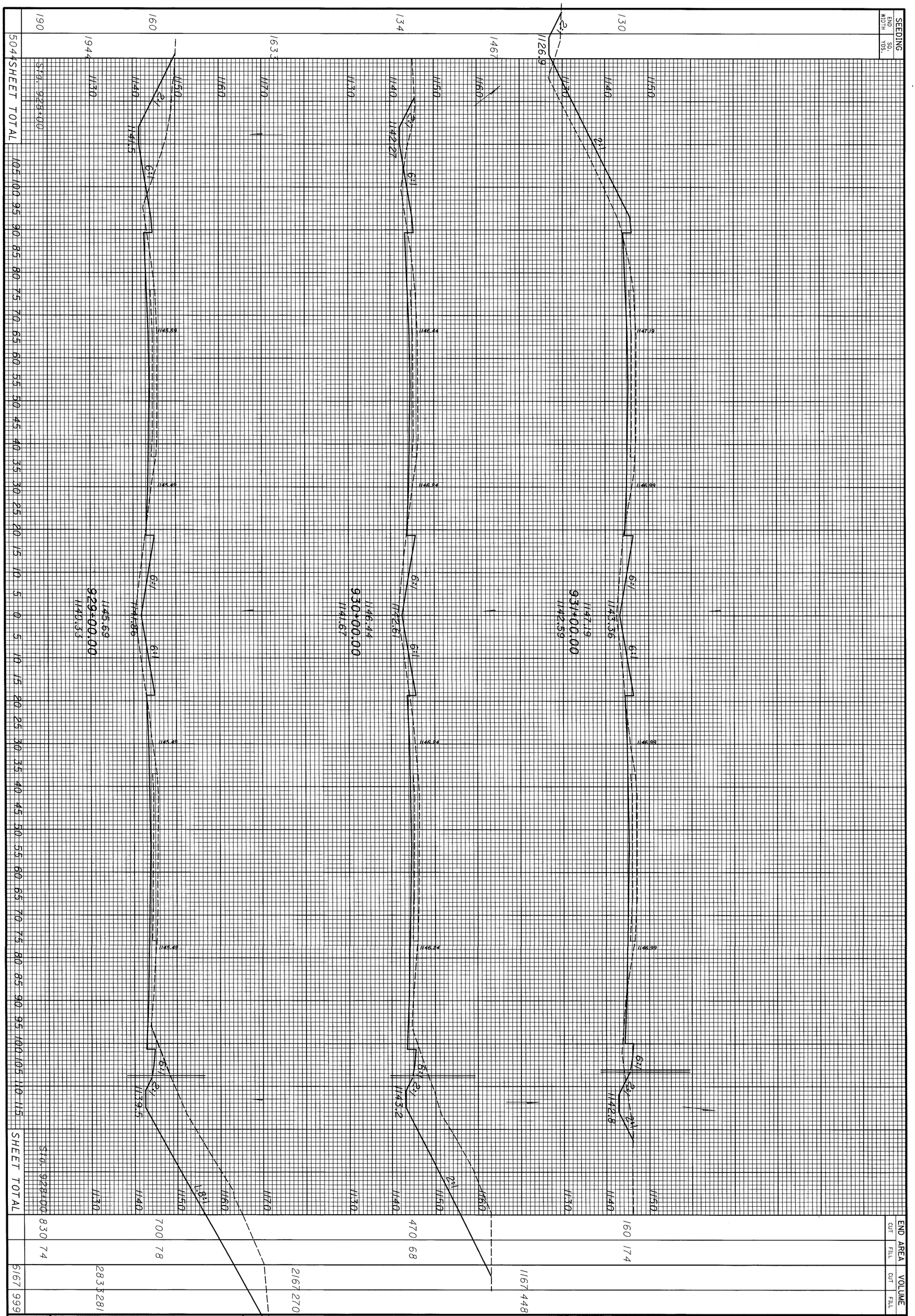

245
940

**MED-71-15.78**

# CROSS SECTIONS
## STA. 927+00 TO STA. 928+00

CALCULATED NJV
CHECKED JWR

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




246/940

**MED-71-15.78**

# CROSS SECTIONS
## STA. 929+00 TO STA. 931+00

CALCULATED NJV
CHECKED JWR

DESIGN FILE : $$$$$$$$$$DESIGNFILES\SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| 80 | 1189 |
| 134 | 1633 |
| 160 | 1722 |
| 150 | 1556 |

| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| 130 | 100 | | |
| | | 463 | 981 |
| 120 | 430 | | |
| | | 444 | 1981 |
| 120 | 640 | | |
| | | 0 | 0 |
| 130 | 450 | | |
| | | 537 | 1156 |
| 160 | 174 | | |
| SHEET TOTAL | | 1907 | 6137 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 932+00 TO STA. 935+00

1160 / 1150 / 1140 / 1130

2:1 — 6:1 — 6:1 — 2:1

1150.19 — 1148.98 — 1148.98 — 1148.98 — 1148.98

1146.36

1150.19
935+00.00
1145.65

1143.8

1149.44 — 1149.44 — 1149.44 — 1149.44

1145.61

1149.44
934+00.00
1145.20

1131.5

1.8:1 — 6:1 — 6:1 — 2:1

1148.53 — 1148.46 — 1148.46 — 1148.46 — 1148.46

1144.86

1148.69
933+00.00
1143.64

STA. 932+25, 145' LT.
FL. EX. 42" OUTLET

SEE DRAINAGE DETAILS
SHEET NO. 514.

EX. 42" CONDUIT

STA. 932+62, 145' RT.
FL. EX. 42" INLET

1.8:1 — 6:1 — 6:1 — 2:1

1147.94 — 1147.94 — 1147.94 — 1147.94

CONC. COLLAR AS PER DM-11.11

1144.11

1147.94
932+00.00
1143.51

EX. 15" CONDUIT 4' - 15" CONDUIT, TYPE C

STA. 931+68, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.

STA. 931+68, 140' LT.
EX. C.B. (TO BE REMOVED UNDER 604)

SEE DRAINAGE DETAILS
SHEET NO. 513.

STA. 931+68, 140' LT.
FL. EX. 15" OUTLET

Sta. 931+00

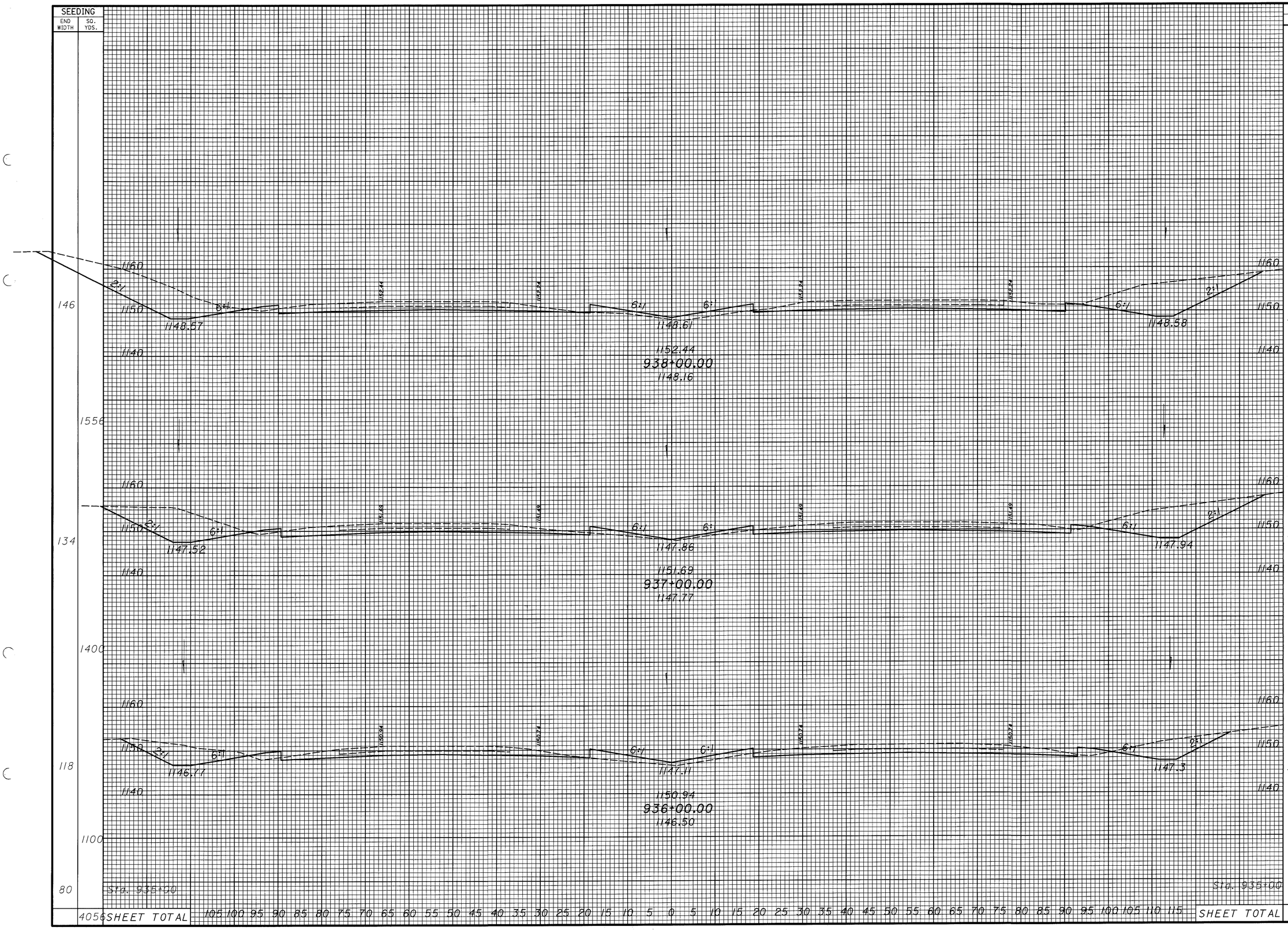
105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILLSPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 146 | 1556 |
| 134 | 1400 |
| 118 | 1100 |
| 80 | 4056 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 530 | 42 | 1833 | 130 |
| 460 | 28 | 1407 | 163 |
| 300 | 60 | 796 | 296 |
| 130 | 100 | 4036 | 589 |

SHEET TOTAL

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 936+00 TO STA. 938+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 128 | 1489 | 380 | 54 | 1630 | 163 |
| 140 | 1633 | 500 | 34 | 2037 | 93 |
| 154 | 1722 | 600 | 16 | 2167 | 111 |
| 156 | 1678 | 570 | 44 | 2037 | 159 |
| 146 | | 530 | 42 | | |
| 6522 SHEET TOTAL | | SHEET TOTAL | | 7871 | 526 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 939+00 TO STA. 942+00

MED-71-15.78

249
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 104 | 1189 | 154 | 340 | 526 | 1259 |
| 110 | 1333 | 130 | 340 | 556 | 874 |
| 90 | 1122 | 170 | 132 | 778 | 393 |
| 112 | 1333 | 250 | 80 | 1167 | 248 |
| 128 | 4755 | 380 | 54 | 3027 | 2774 |
| | SHEET TOTAL | | | SHEET TOTAL | |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 943+00 TO STA. 946+00

MED-71-15.78

250
940

Sta. 942+00

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

Sta. 942+00

1170 1160 1150 1140

1158.44
946+00.00
1154.06

1154.61

1154.58

6:1 6:1 6:1 2:1 2:1

STA. 944+68, 5' RT.
PROP. C.B. NO. 4, A.P.P.

CONC. COLLAR AS PER DM-1.IM

1153.86

1151.69
945+00.00
1153.63

EX. 15" CONDUIT 4' - 15" CONDUIT, TYPE C

1153.83

STA. 944+68, 5' RT.
EX. C.B. (TO BE REMOVED UNDER 604)

STA. 944+68, 110' LT.
FL. EX. 15" OUTLET

SEE DRAINAGE DETAILS SHEET NO. 514 .

1156.94
944+00.00
1155.35

1153.11

EX. 30" CONDUIT

STA. 945+45, 105' RT.
FL. EX. 30" INLET

SEE DRAINAGE DETAILS SHEET NO. 514 .

SEE DRAINAGE DETAILS SHEET NO. 515 .

STA. 945+33, 125' LT.
FL. EX. 30" OUTLET

1156.19
943+00.00
1152.02

1152.36

1152.20

1151.3

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 118 | 1233 |
| 104 | 1200 |
| 112 | 1200 |
| 104 | 1156 |
| 104 | |
| 4789 | SHEET TOTAL |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 280 | 236 | | |
| | | 896 | 900 |
| 204 | 250 | | |
| | | 619 | 1241 |
| 130 | 420 | | |
| | | 506 | 1370 |
| 143 | 320 | | |
| | | 550 | 1222 |
| 154 | 340 | | |
| | | 257 | 4733 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 947+00 TO STA. 950+00

MED-71-15.78

251
940

Sta. 1099+00

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

Sta. 946+00

SHEET TOTAL

1170 1160 1150

2:1 6:1 6:1 2:1

1161.38 1161.18 1161.18 1160.78

1158.53

1161.38
950+00.00
1156.70

1157.52

1160.58 1160.38 1160.38 1160.18

1157.63

1160.68
949+00.00
1156.59

1156.82

1159.94 1159.74 1159.74 1159.54

1156.89

1159.94
948+00.00
1155.83

1153.9

FX. 24" CONDUIT

STA. 947+50, 112' LT.
FL. EX. 24" OUTLET

SEE DRAINAGE DETAILS
SHEET NO. 514.

STA. 947+50, 112' RT.
FL. EX. 24" INLET

SEE DRAINAGE DETAILS
SHEET NO. 515.

1159.19 1158.99 1158.99 1158.79

1156.14

1159.19
947+00.00
1155.16

1153.6

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 134 | 1356 |
| 110 | 1222 |
| 110 | 1311 |
| 126 | 1356 |
| 118 | 1245 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 134 | 300 | | |
| | | 507 | 1463 |
| 140 | 490 | | |
| | | 507 | 1796 |
| 134 | 480 | | |
| | | 681 | 1530 |
| 234 | 346 | | |
| | | 952 | 1078 |
| 280 | 236 | | |
| SHEET TOTAL | | 2647 | 5867 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 951+00 TO STA. 954+00

MED-71-15.78

252
940

Sta. 950+00

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

Sta. 950+00

SHEET TOTAL

STA. 952+68, 120' LT.
FL. EX. 24" OUTLET
SEE DRAINAGE DETAILS
SHEET NO. 5/5

EX. 24" CONDUIT

STA. 952+68, 108' RT.
FL. EX. 24" INLET
SEE DRAINAGE DETAILS
SHEET NO. 5/5

1170 1160 1150 1140
2:1 6:1
1163.61 1163.42 1163.42 1163.42
1160.56 1159.75
954+00.00
1158.97

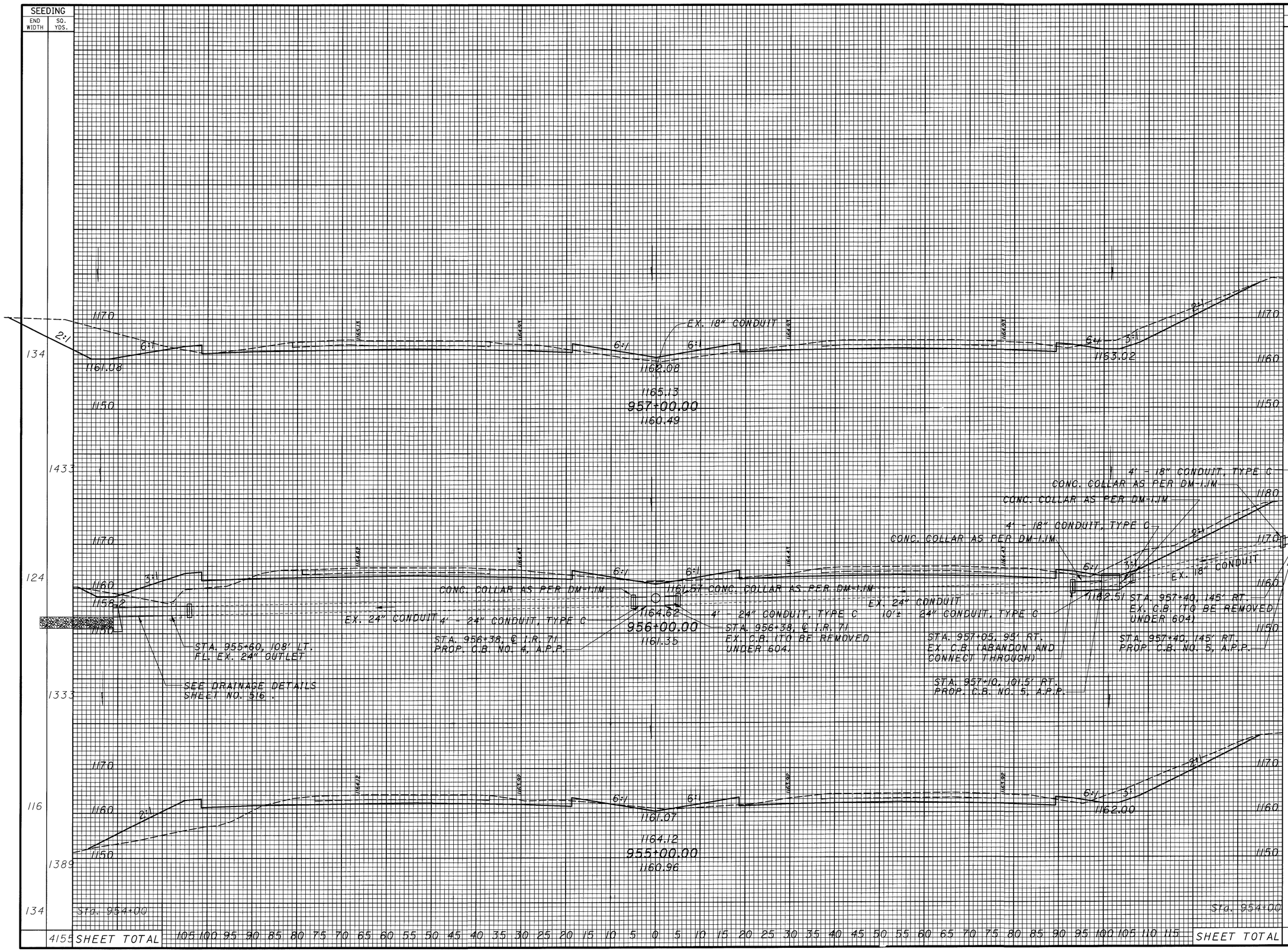
1163.11 1162.91 1162.91 1162.91
1160.06
953+00.00
1158.93

1162.59 1162.40 1162.40 1162.40
1159.54
952+00.00
1158.81

1162.02 1161.83 1161.83 1161.83
1158.97 1158.16
951+00.00
1156.64

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 134 | 1433 |
| 124 | 1333 |
| 116 | 1389 |
| 134 | |
| SHEET TOTAL | 4155 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 366 | 56 | | |
| | | 1115 | 270 |
| 236 | 90 | | |
| | | 837 | 463 |
| 216 | 160 | | |
| | | 648 | 852 |
| 134 | 300 | | |
| SHEET TOTAL | | 2600 | 1585 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
# STA. 955+00 TO STA. 957+00

MED-71-15.78

253
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 136 | | 450 | 106 | | |
| | | | | 1759 | 367 |
| 156 | | | | | |
| 144 | | 500 | 92 | | |
| | | | | 1648 | 315 |
| 154 | | | | | |
| 134 | | 390 | 78 | | |
| | | | | 1400 | 248 |
| 148 | | | | | |
| 134 | | 366 | 56 | | |
| | 4589 SHEET TOTAL | | | 4807 | 930 |

CALCULATED NJV
CHECKED JWR

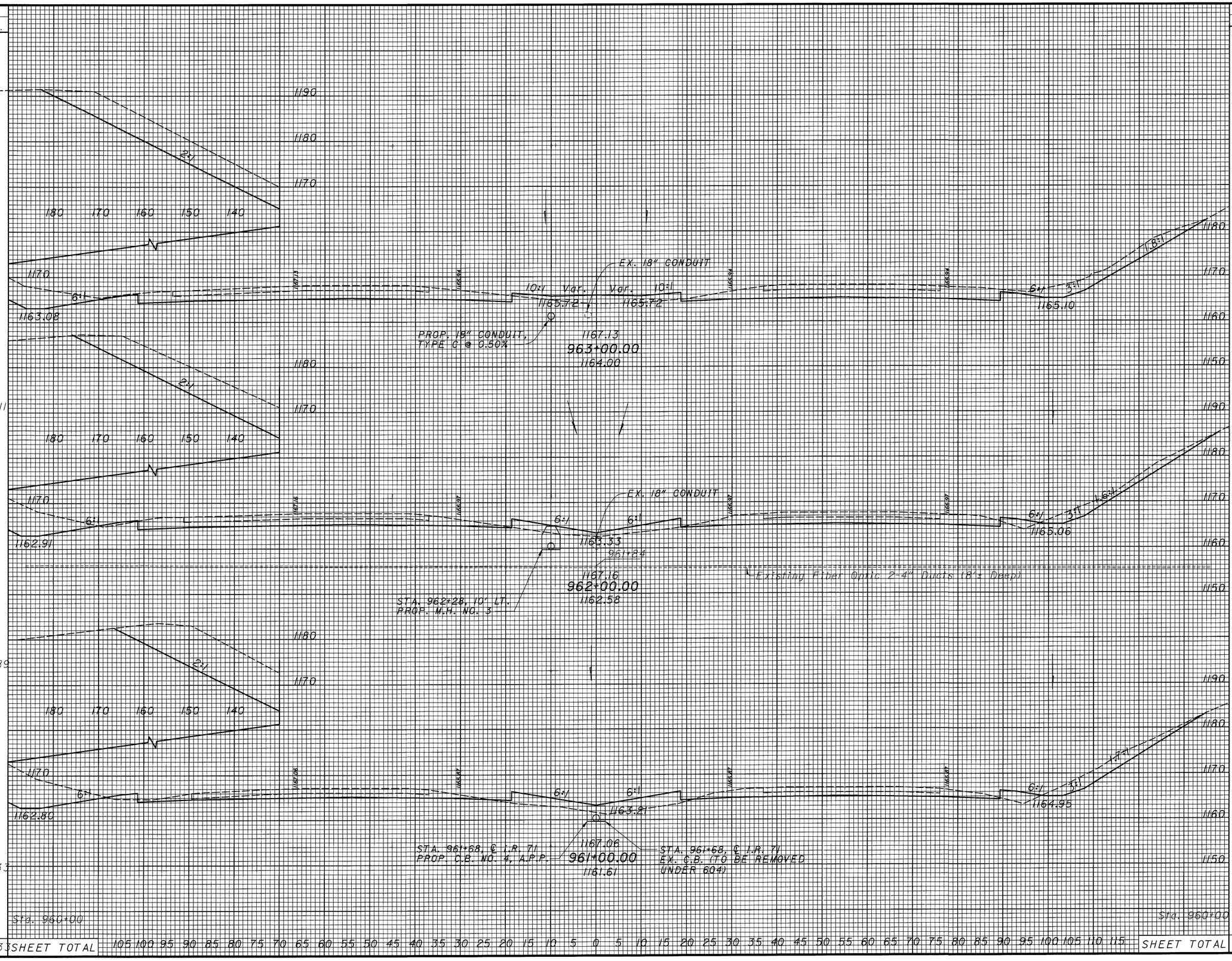
# CROSS SECTIONS
## STA. 958+00 TO STA. 960+00

MED-71-15.78

254
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | | CALCULATED | CHECKED |
|---|---|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL | NJV | JWR |




| | | |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 160 | 1889 |
| 180 | 1700 |
| 126 | 1422 |
| 130 | 1722 |
| 180 | |
| SHEET TOTAL | 6733 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 575 | 50 | | |
| | | 2213 | 96 |
| 620 | 2 | | |
| | | 1944 | 11 |
| 430 | 4 | | |
| | | 1667 | 11 |
| 470 | 2 | | |
| | | 2056 | 96 |
| 640 | 50 | | |
| SHEET TOTAL | | 7880 | 214 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 964+00 TO STA. 967+00

MED-71-15.78

256
940

DESIGN FILE : $$$$$$$$$$DESIGNFILE$SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |

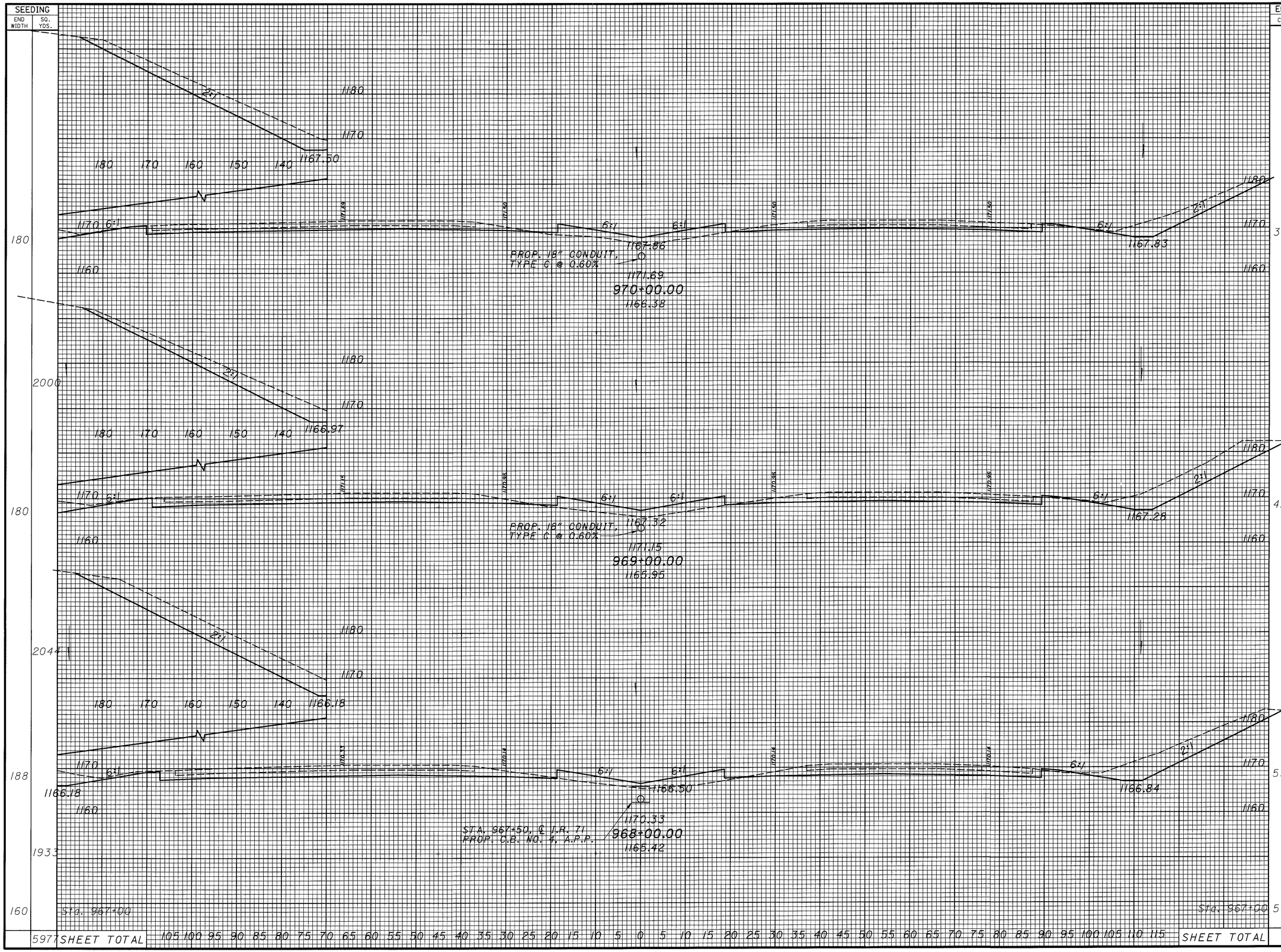
| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 968+00 TO STA. 970+00

MED-71-15.78

257
940



DESIGN FILE : $$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 74 | | 140 | 44 | | |
| | | | | 166 | 55 |
| | 856 | 150 | 52 | | |
| | | 140 | 52 | | |
| | | | | 390 | 141 |
| 80 | | 165 | 58 | | |
| | | | | 676 | 215 |
| 95 | | 200 | 58 | | |
| | | | | 630 | 233 |
| 84 | | 140 | 68 | | |
| | | | | 399 | 184 |
| 95 | | 155 | 68 | | |
| 180 | | 360 | 68 | | |
| | | | | 370 | 68 |
| 180 | | 380 | 68 | | |
| | 4088 SHEET TOTAL | SHEET TOTAL | | 2631 | 896 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 971+00 TO STA. 974+00

MED-71-15.78

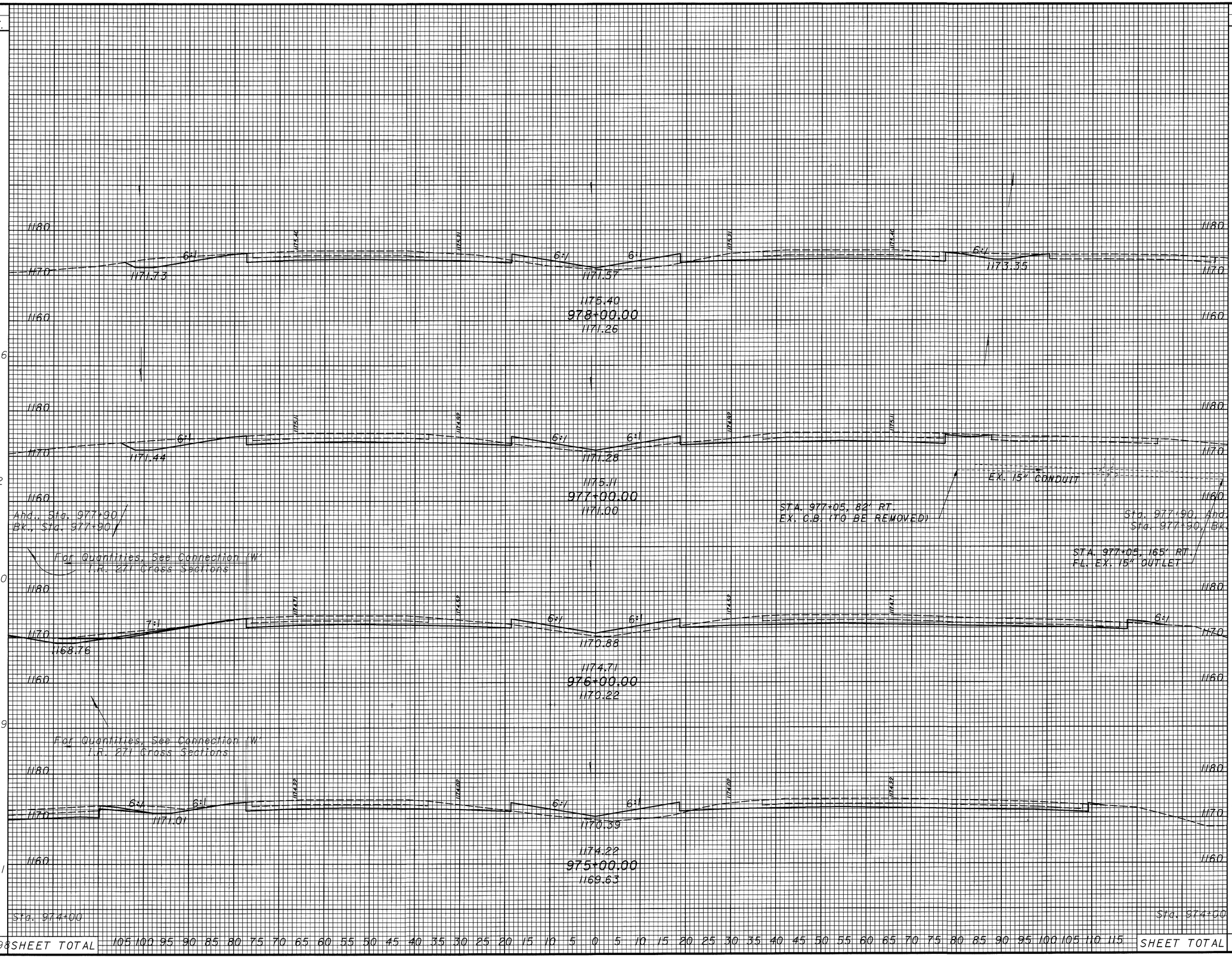
258
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 92 | | | | | |
| | | 158 | 48 | | |
| | 956 | | | 556 | 163 |
| 80 | | 142 | 40 | | |
| 92 | | | | 52 | 15 |
| 86 | | 140 | 42 | | |
| 78 | | 165 | 42 | | |
| | 650 | | | 508 | 143 |
| 52 | | 140 | 44 | | |
| | 539 | | | 500 | 200 |
| 45 | | 130 | 64 | | |
| | 661 | | | 500 | 200 |
| 74 | | 140 | 44 | | |
| | 2898 SHEET TOTAL | | | 2116 | 721 |

CALCULATED NJV
CHECKED JWR

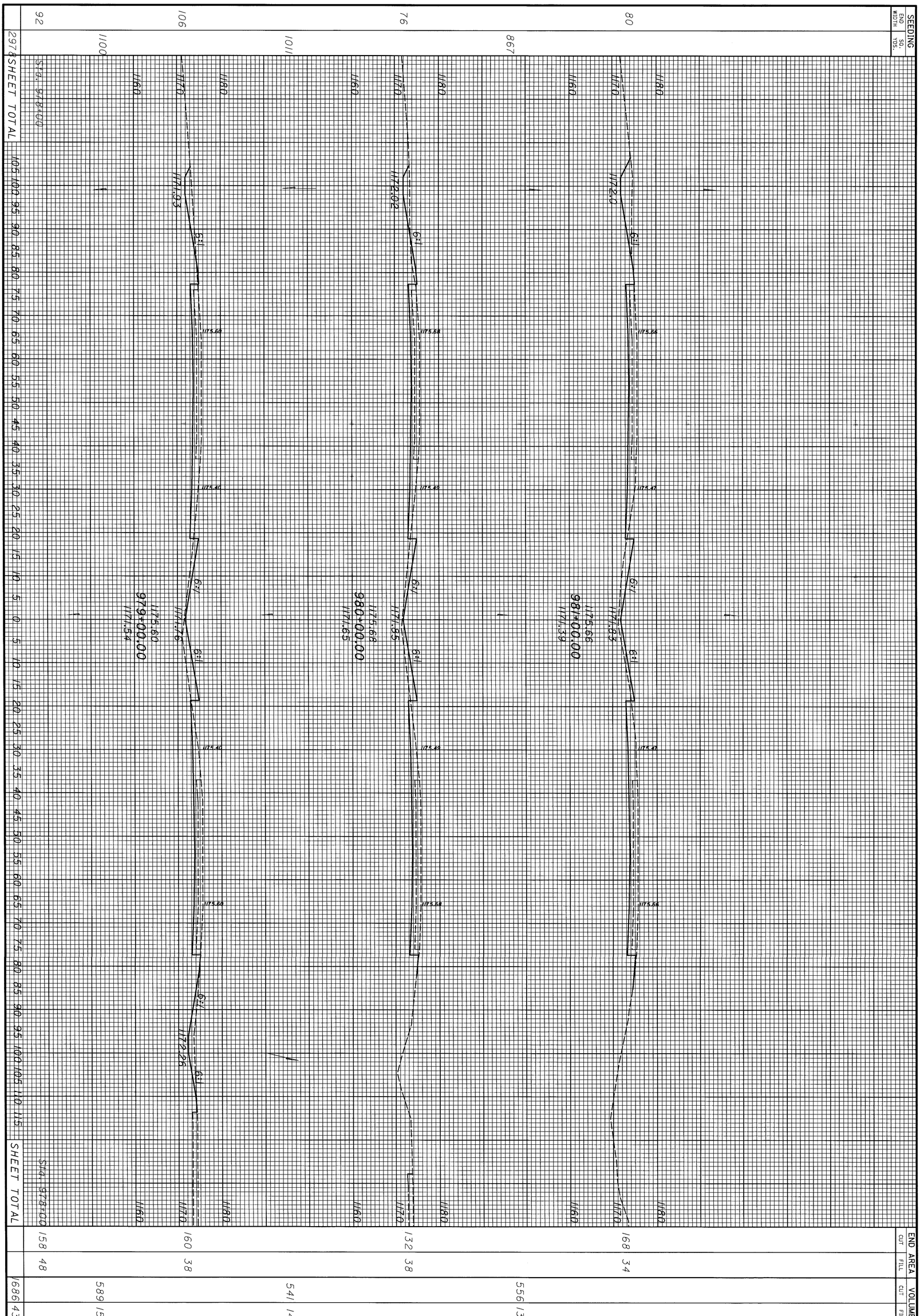
# CROSS SECTIONS
## STA. 975+00 TO STA. 978+00




MED-71-15.78

259
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$



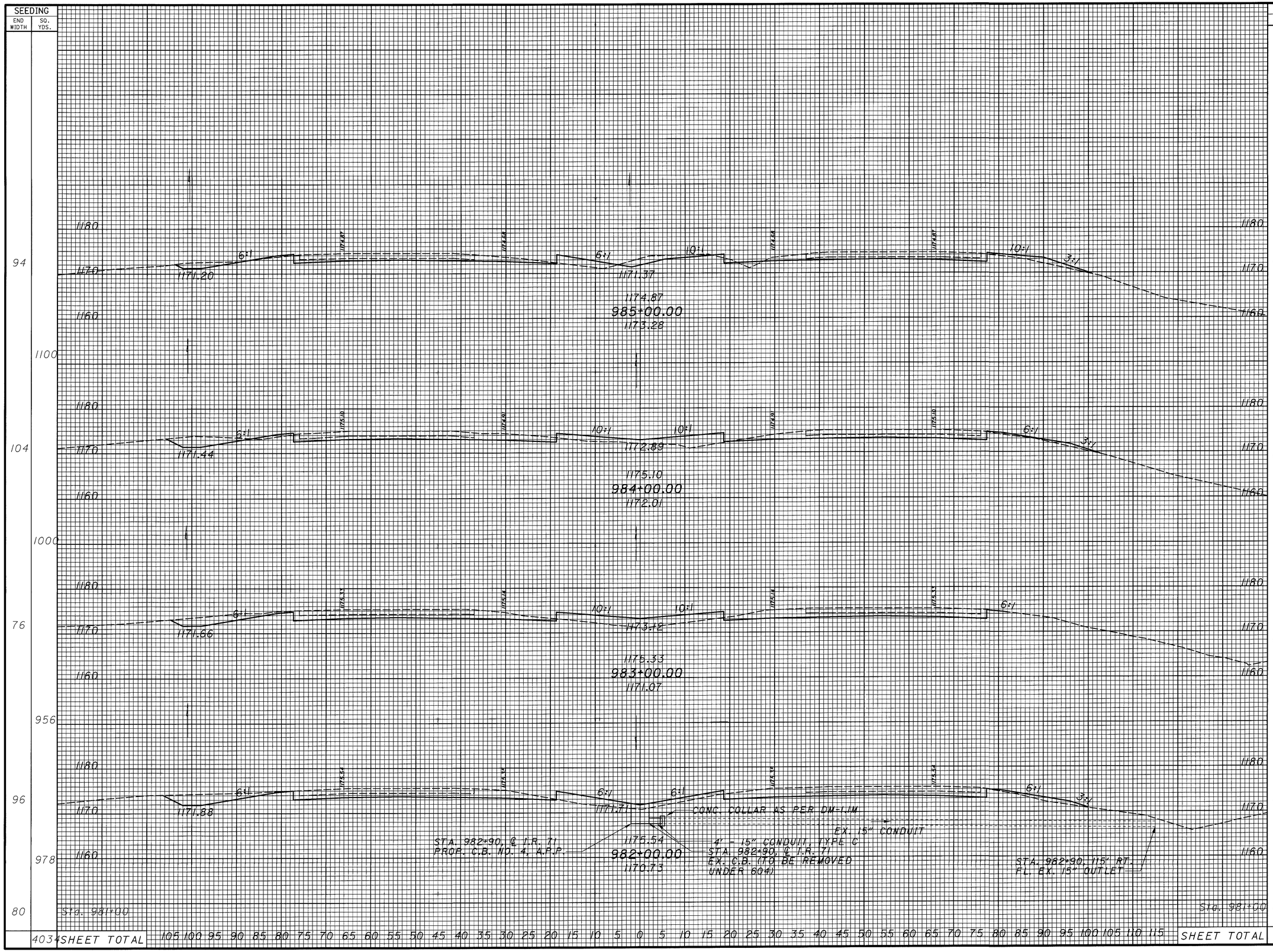

260/940

**MED-71-15.78**

# CROSS SECTIONS
## STA. 979+00 TO STA. 981+00

CALCULATED NJV
CHECKED JWR

DESIGN FILE : $$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 100 | 38 | | |
| | | 419 | 189 |
| 126 | 64 | | |
| | | 526 | 241 |
| 158 | 66 | | |
| | | 604 | 222 |
| 168 | 54 | | |
| | | 622 | 163 |
| 168 | 34 | | |
| | | 2171 | 815 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 982+00 TO STA. 985+00

MED-71-15.78

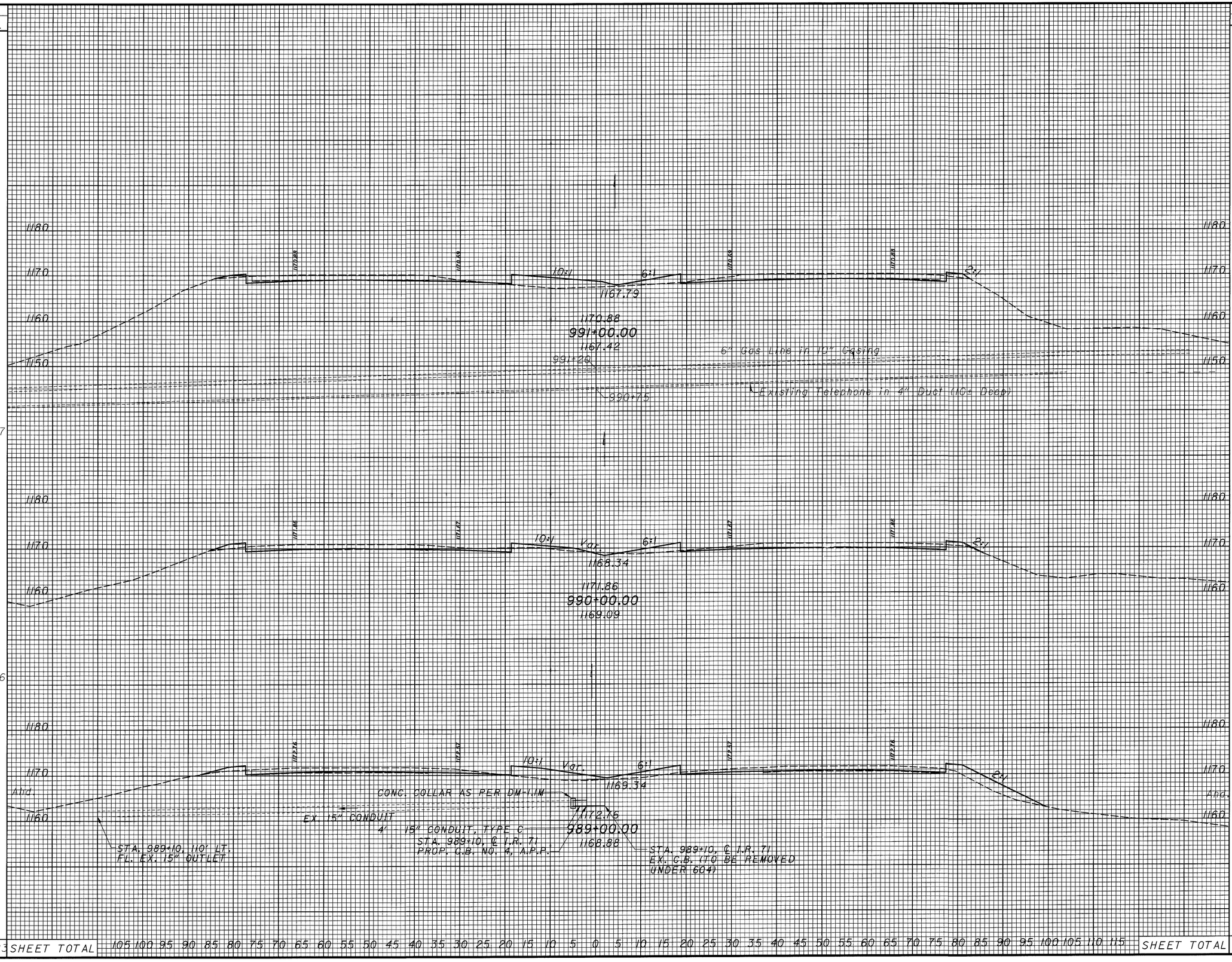
261
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | |
| | |
| |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 60 | |
| | 667 |
| 60 | |
| | 756 |
| 76 | |
| | 1423 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 30 | 60 | | |
| | | 104 | 167 |
| 26 | 30 | | |
| | | 85 | 248 |
| Add. | 20 | 104 | |
| SHEET TOTAL | | 189 | 415 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 SHEET TOTAL

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 989+00 TO STA. 991+00

MED-71-15.78

263
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 56 | 622 |
| 56 | 622 |
| 56 | 644 |
| 60 | 1738 |

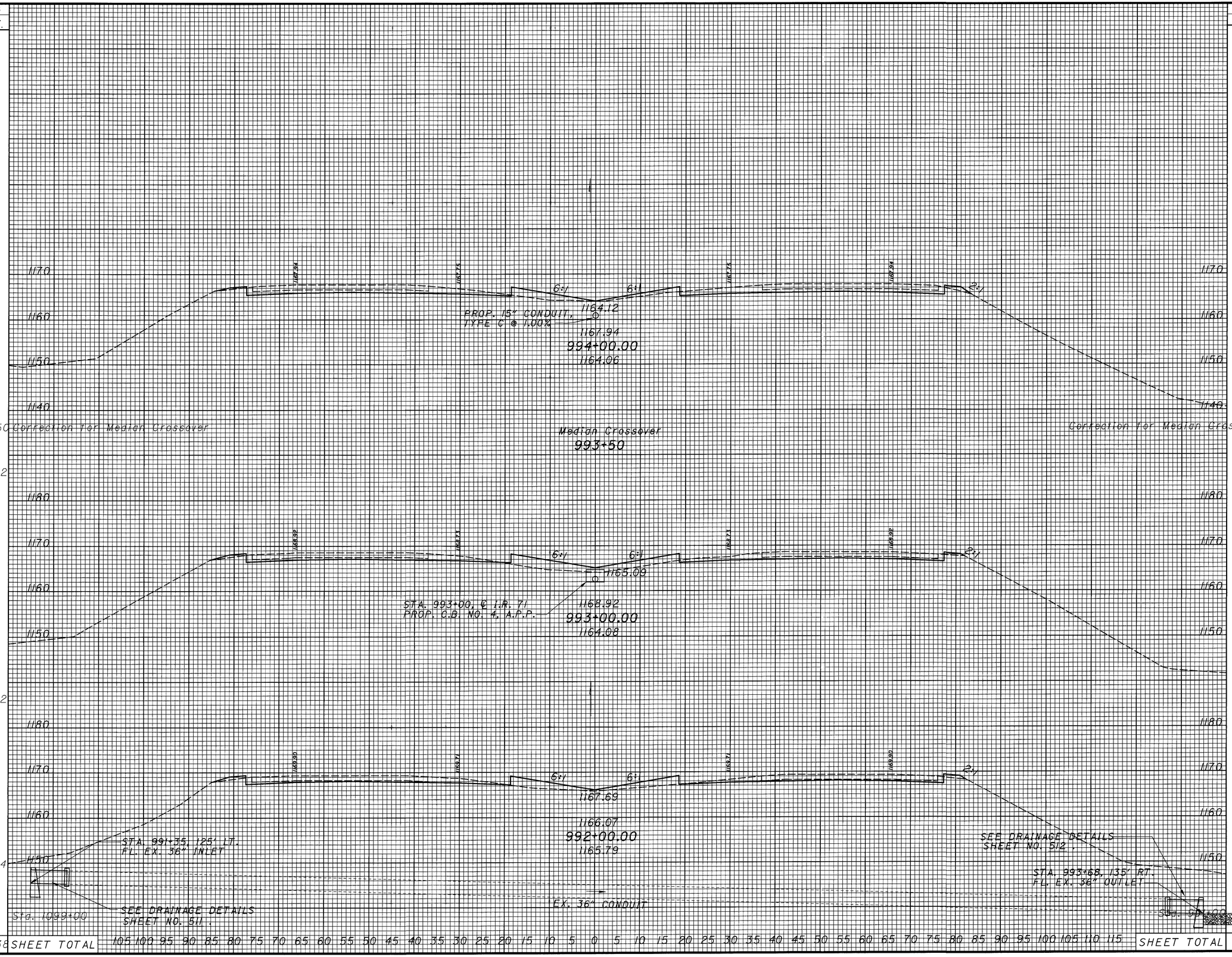
| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 98 | 36 | | |
| | | 0 | -50 |
| | | 311 | 185 |
| 70 | 64 | | |
| | | 222 | 207 |
| 50 | 48 | | |
| | | 148 | 200 |
| | | 30 | 60 |
| | | 681 | 542 |

CALCULATED NJV
CHECKED JWR

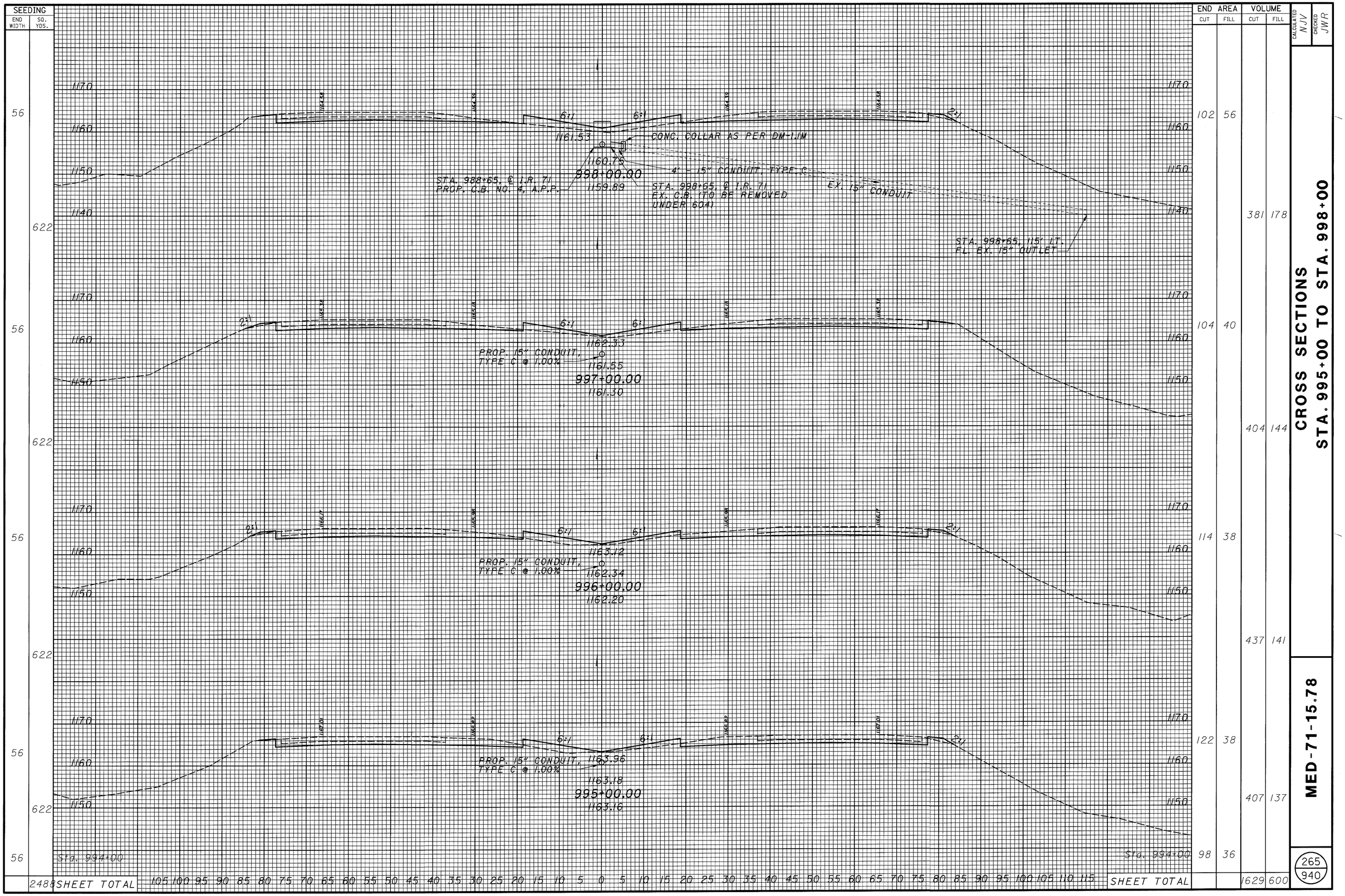
# CROSS SECTIONS
## STA. 992+00 TO STA. 994+00

MED-71-15.78

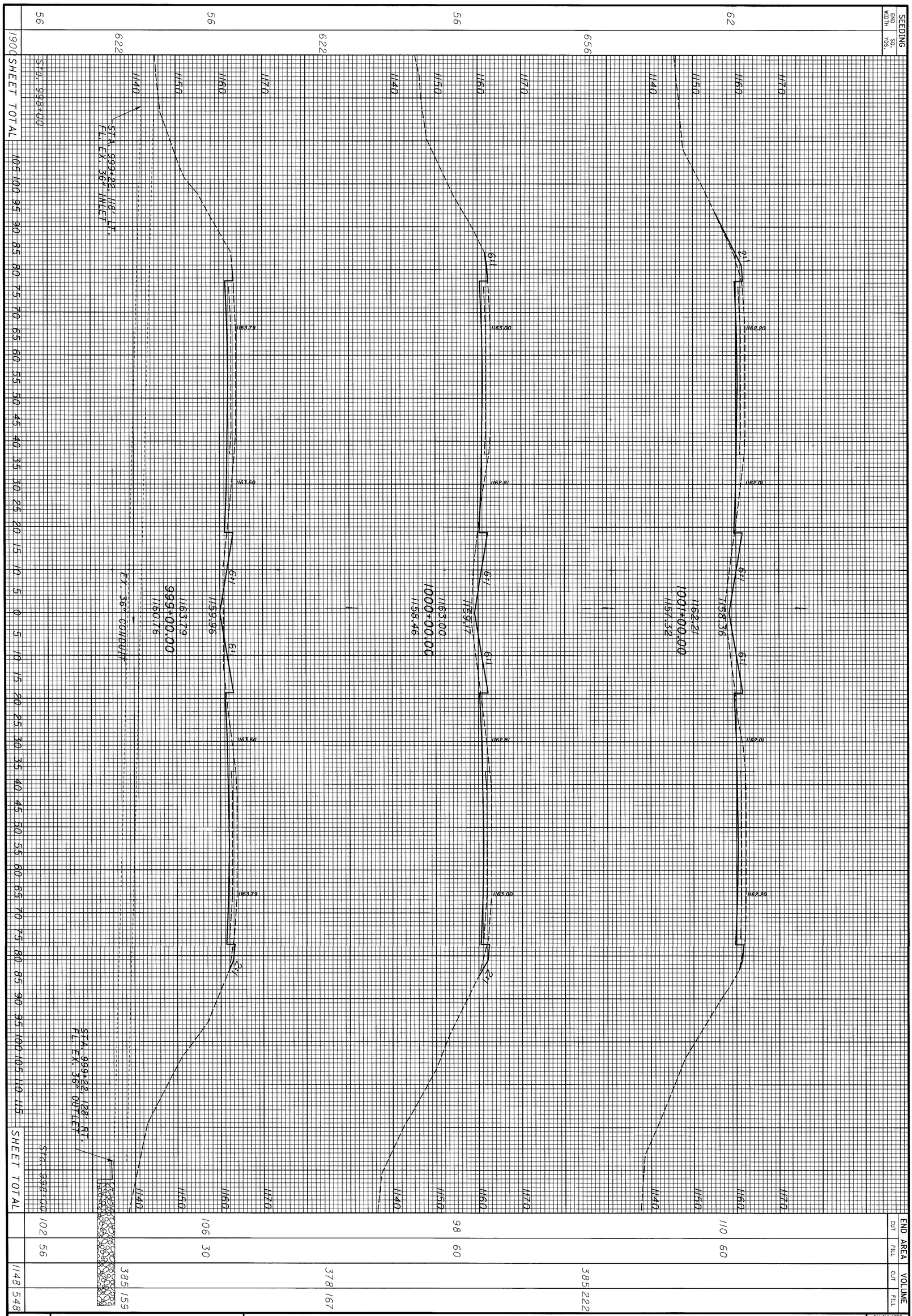
264
940



DESIGN FILE : $$$$$$$$$$DESIGNFILLESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$



DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$



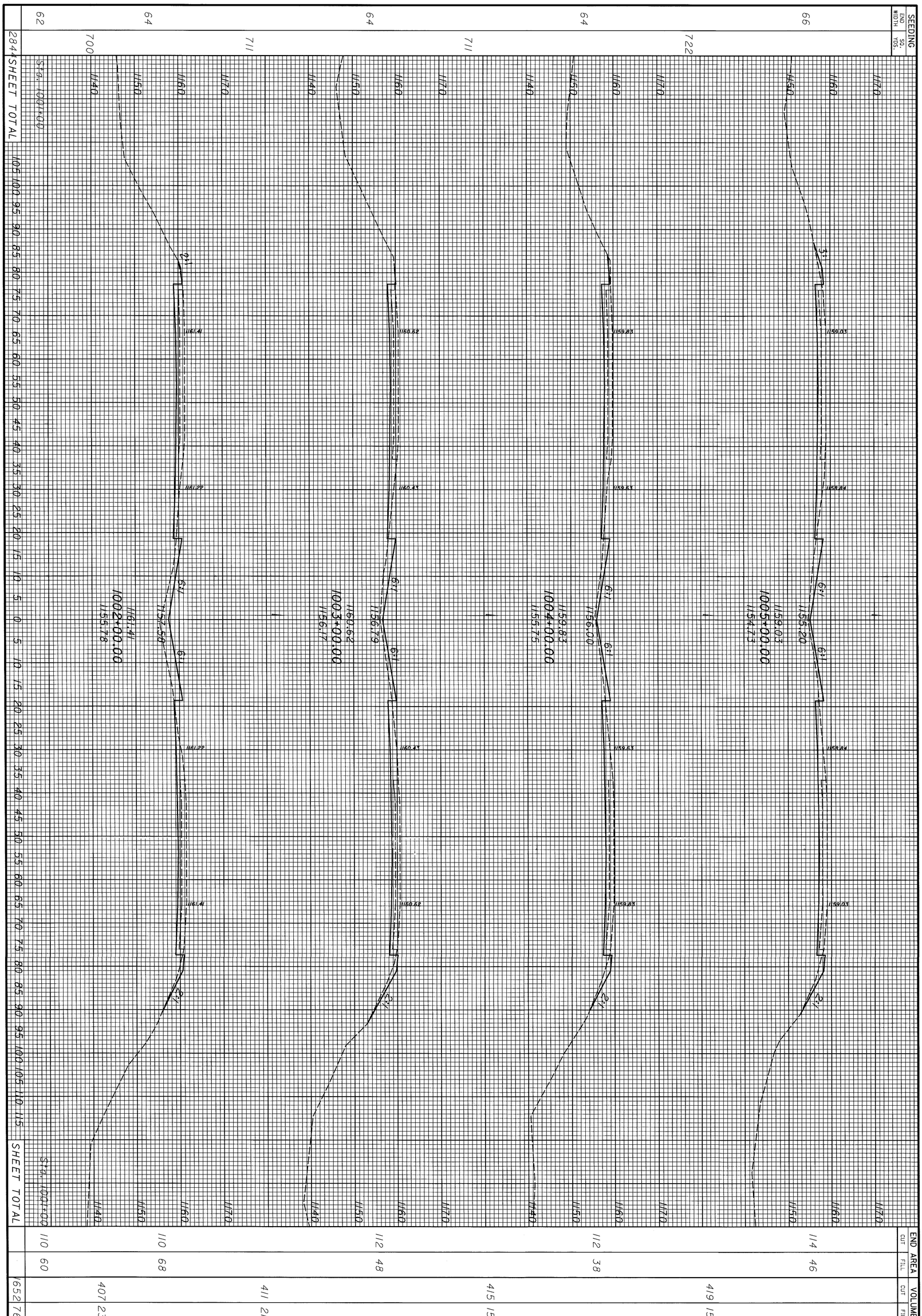

266
940

**MED-71-15.78**

# CROSS SECTIONS
## STA. 999+00 TO STA. 1001+00

CALCULATED NJV
CHECKED JWR

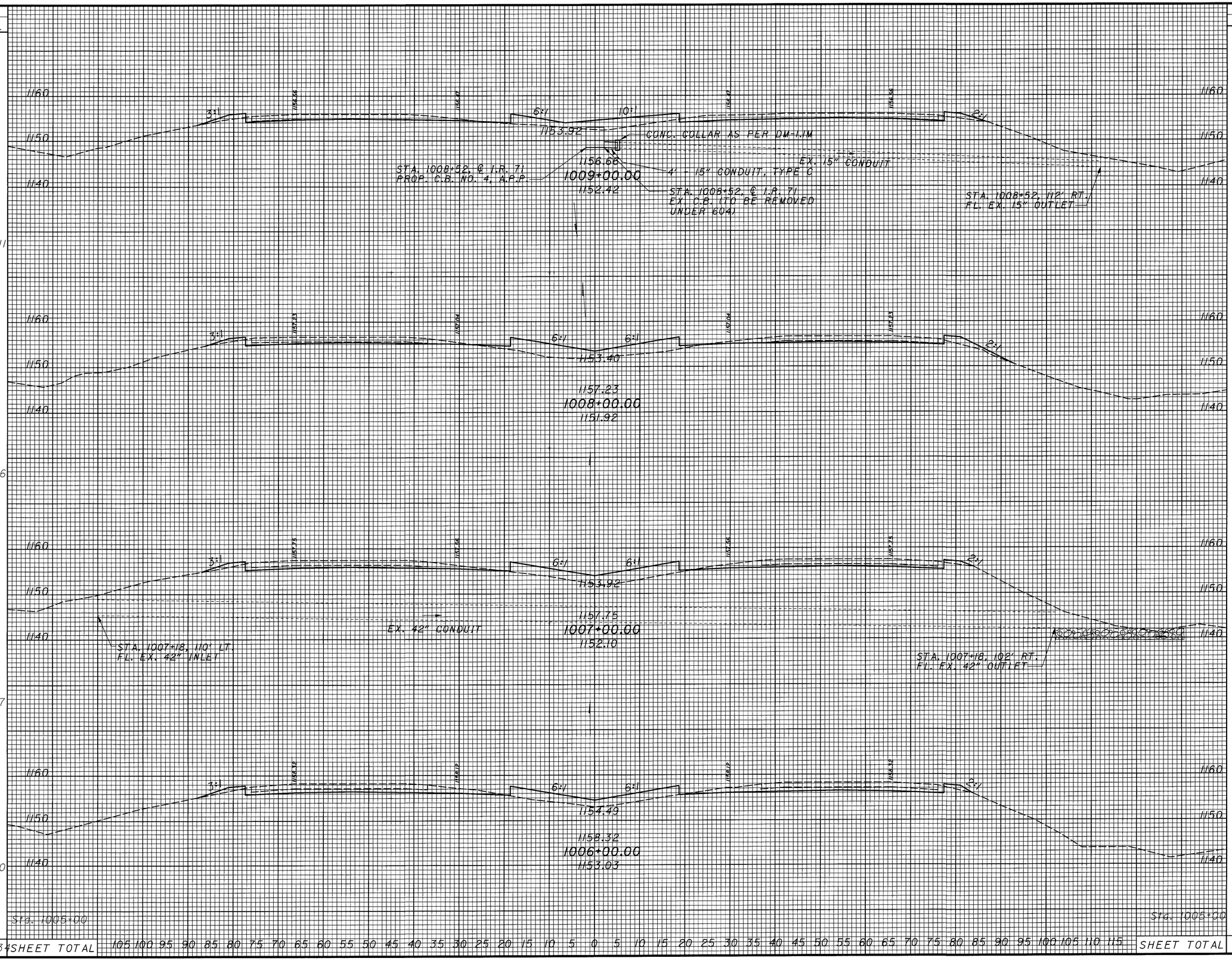
DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




| | | | |
|---|---|---|---|
| 267 / 940 | MED-71-15.78 | CROSS SECTIONS<br>STA. 1002+00 TO STA. 1005+00 | CALCULATED NJV<br>CHECKED JWR |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| | 88 |
| | 1011 |
| | 94 |
| | 856 |
| | 60 |
| | 667 |
| | 60 |
| | 700 |
| | 66 |
| SHEET TOTAL | 3234 |




| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| 34 | 120 | | |
| | | 137 | 600 |
| 40 | 204 | | |
| | | 200 | 541 |
| 68 | 88 | | |
| | | 304 | 307 |
| 96 | 78 | | |
| | | 389 | 230 |
| 114 | 46 | | |
| SHEET TOTAL | | 1030 | 1678 |

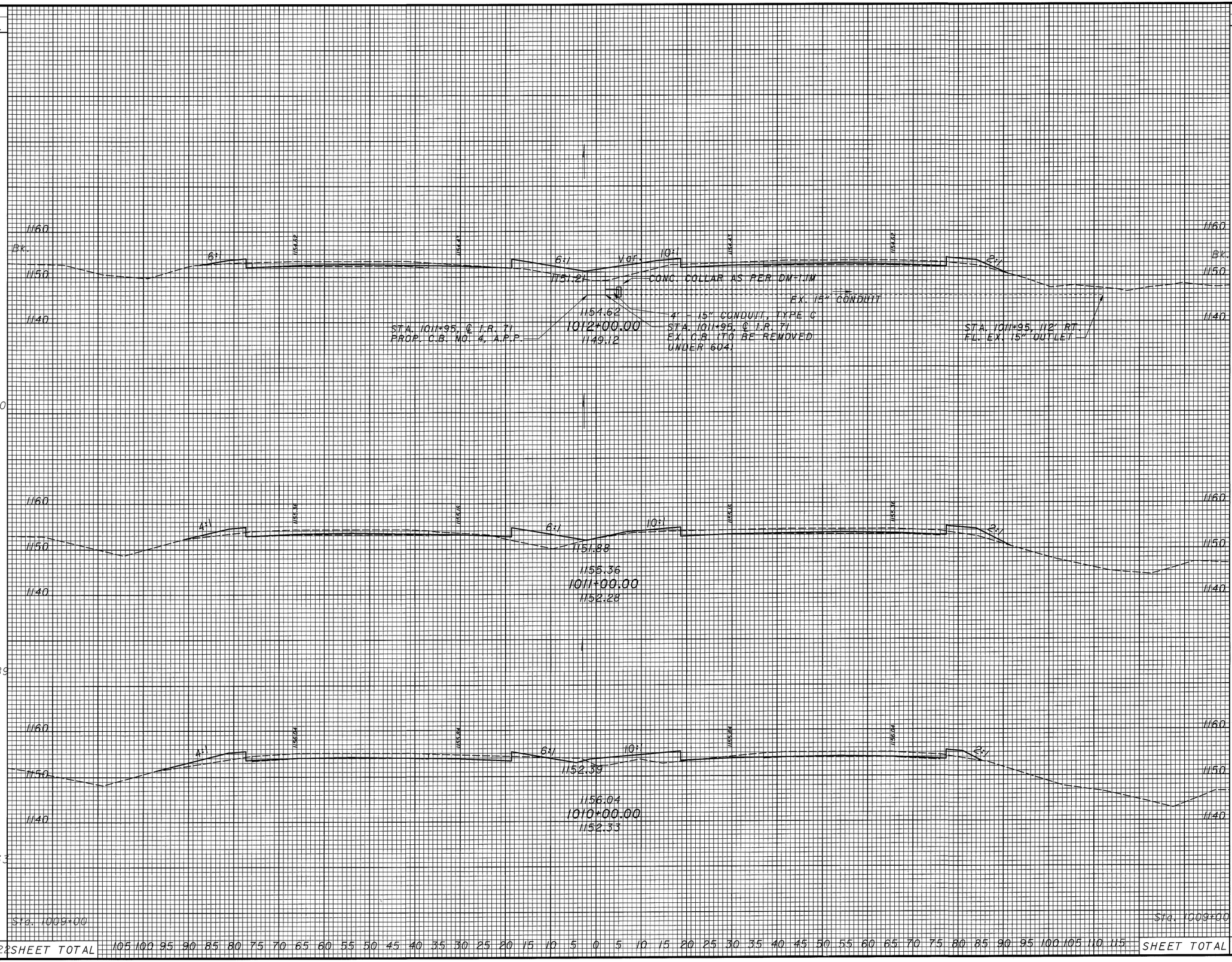
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1006+00 TO STA. 1009+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 64 | | 16 | 104 | | |
| | 900 | | | 74 | 422 |
| 98 | | 24 | 124 | | |
| | 1089 | | | 96 | 452 |
| 98 | | 28 | 120 | | |
| | 1033 | | | 115 | 444 |
| 88 | | 34 | 120 | | |
| | 3022 SHEET TOTAL | | | 285 | 1318 |




CALCULATED NJV
CHECKED JWR

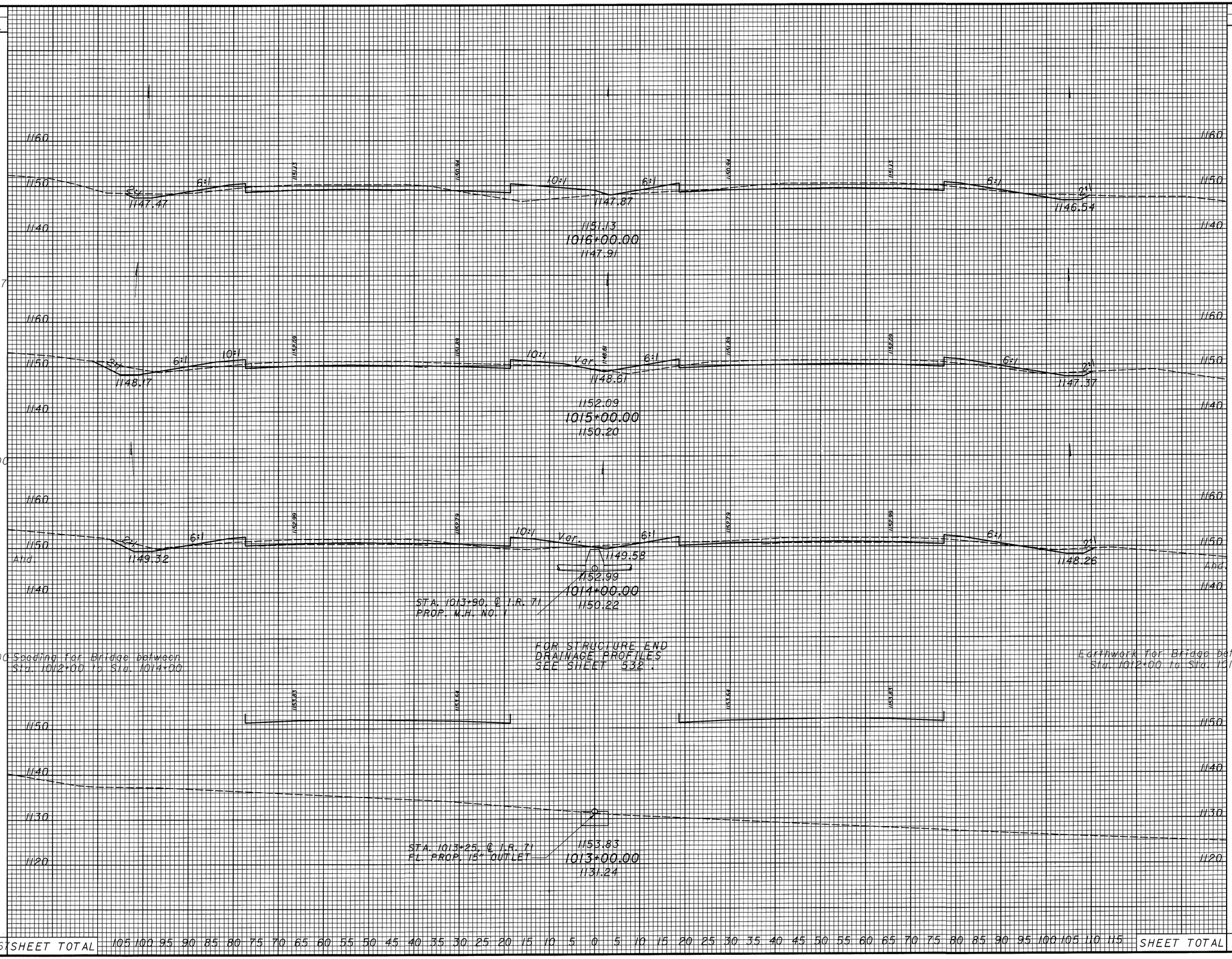
# CROSS SECTIONS
# STA. 1010+00 TO STA. 1012+00

MED-71-15.78

269
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 102 | |
| 108 | |
| 1167 | |
| 108 | |
| 1200 | |
| 108 | |
| 1000 | Seeding for Bridge between Sta. 1012+00 to Sta. 1014+00 |
| 3367 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 34 | 84 | | |
| | | | |
| | | 159 | 267 |
| | | | |
| 52 | 60 | | |
| | | | |
| | | 167 | 233 |
| | | | |
| And. | 38 | 66 | |
| | | | |
| | | 100 | 300 |
| | | | |
| SHEET TOTAL | | 426 | 800 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

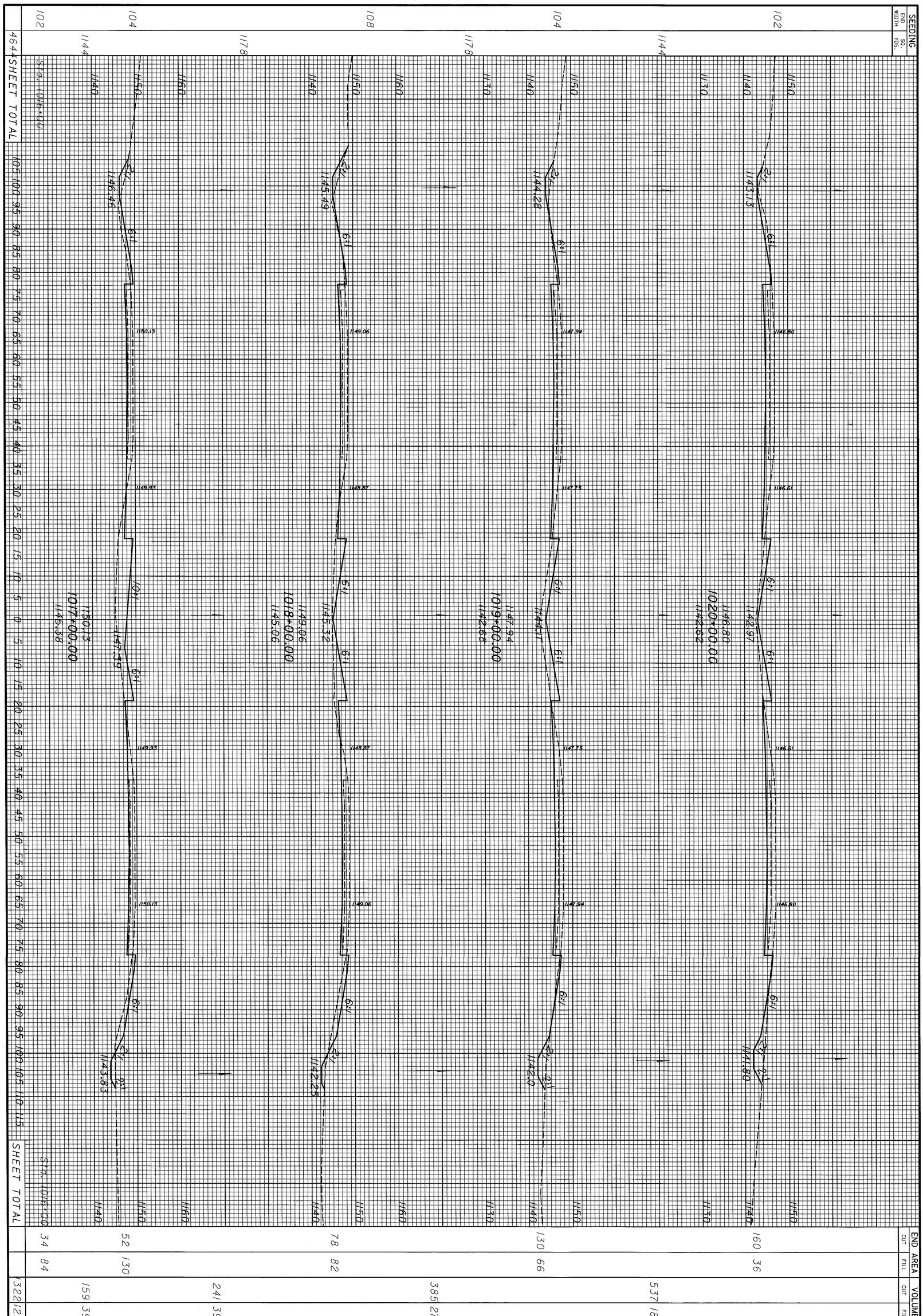
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS STA. 1013+00 TO STA. 1016+00

MED-71-15.78

270
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




271
940

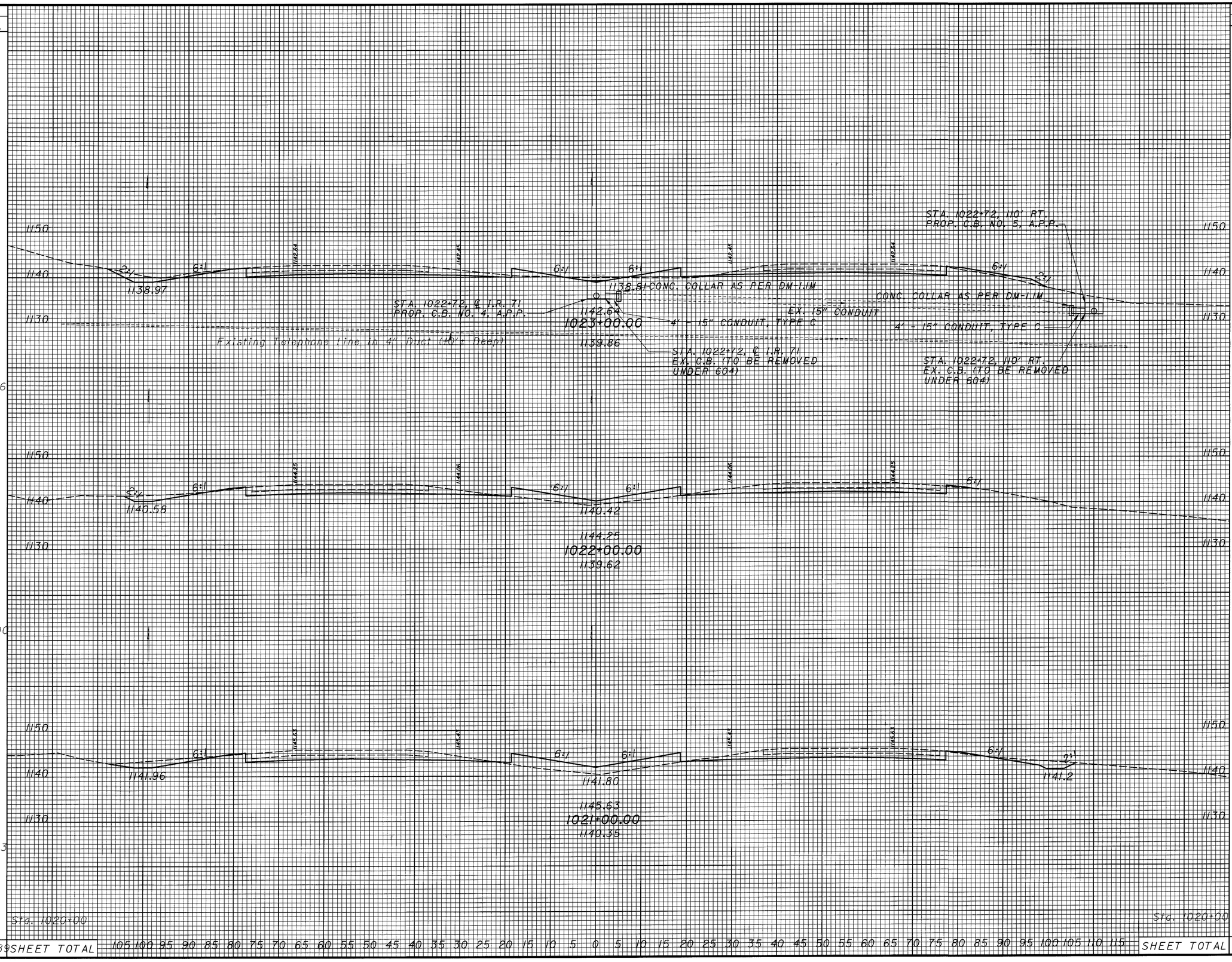
**MED-71-15.78**

# CROSS SECTIONS
## STA. 1017+00 TO STA. 1020+00

CALCULATED NJV
CHECKED JWR

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| | 94 |
| | 956 |
| | 78 |
| | 1000 |
| | 102 |
| | 1133 |
| | 102 |
| SHEET TOTAL | 3089 |




| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| | | | |
| 128 | 30 | | |
| | | 452 | 167 |
| 116 | 60 | | |
| | | 441 | 244 |
| 122 | 72 | | |
| | | 522 | 200 |
| 160 | 36 | | |
| | SHEET TOTAL | 1415 | 611 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

Sta. 1020+00 — Sta. 1020+00

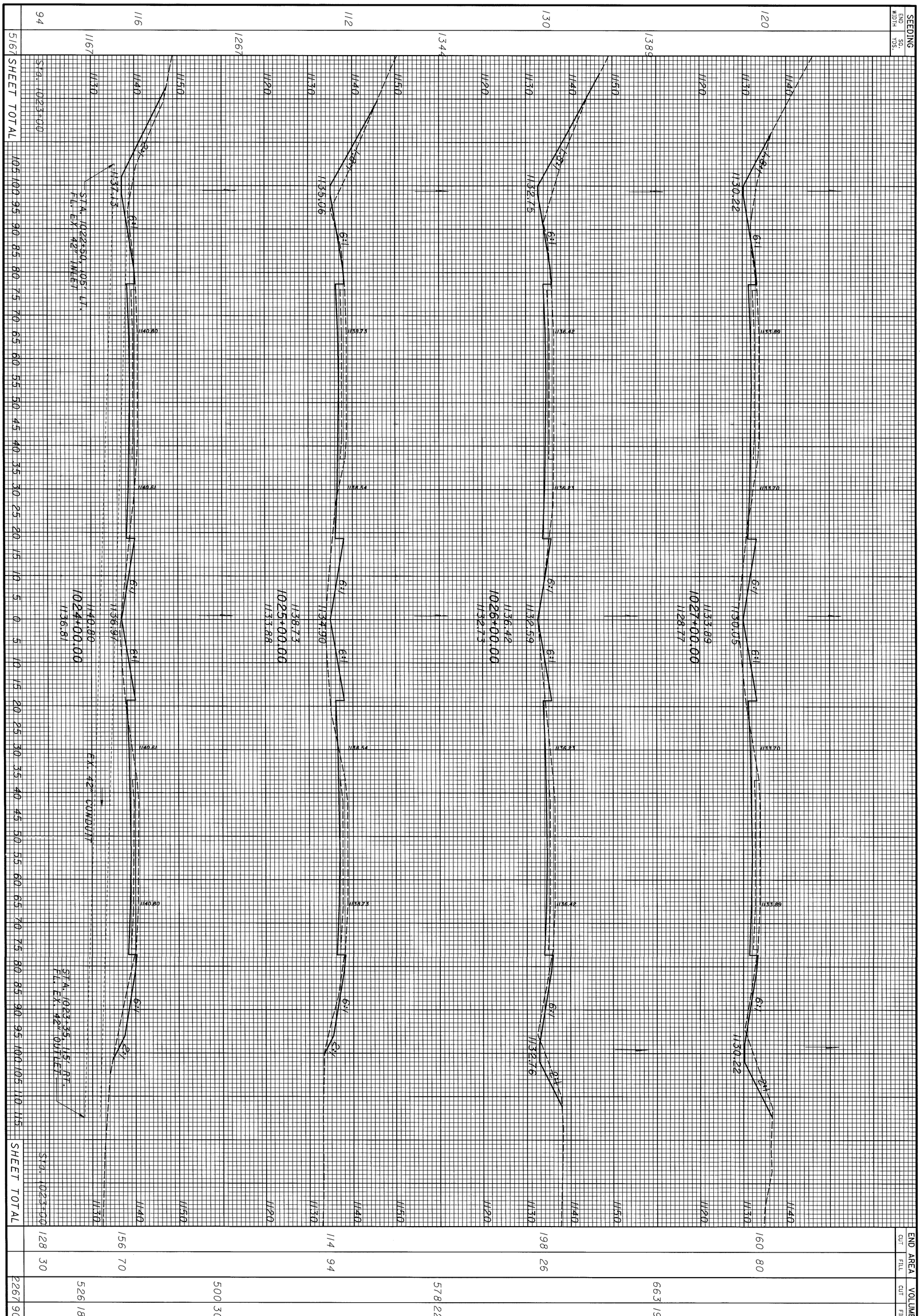
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1021+00 TO STA. 1023+00

MED-71-15.78

272
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$



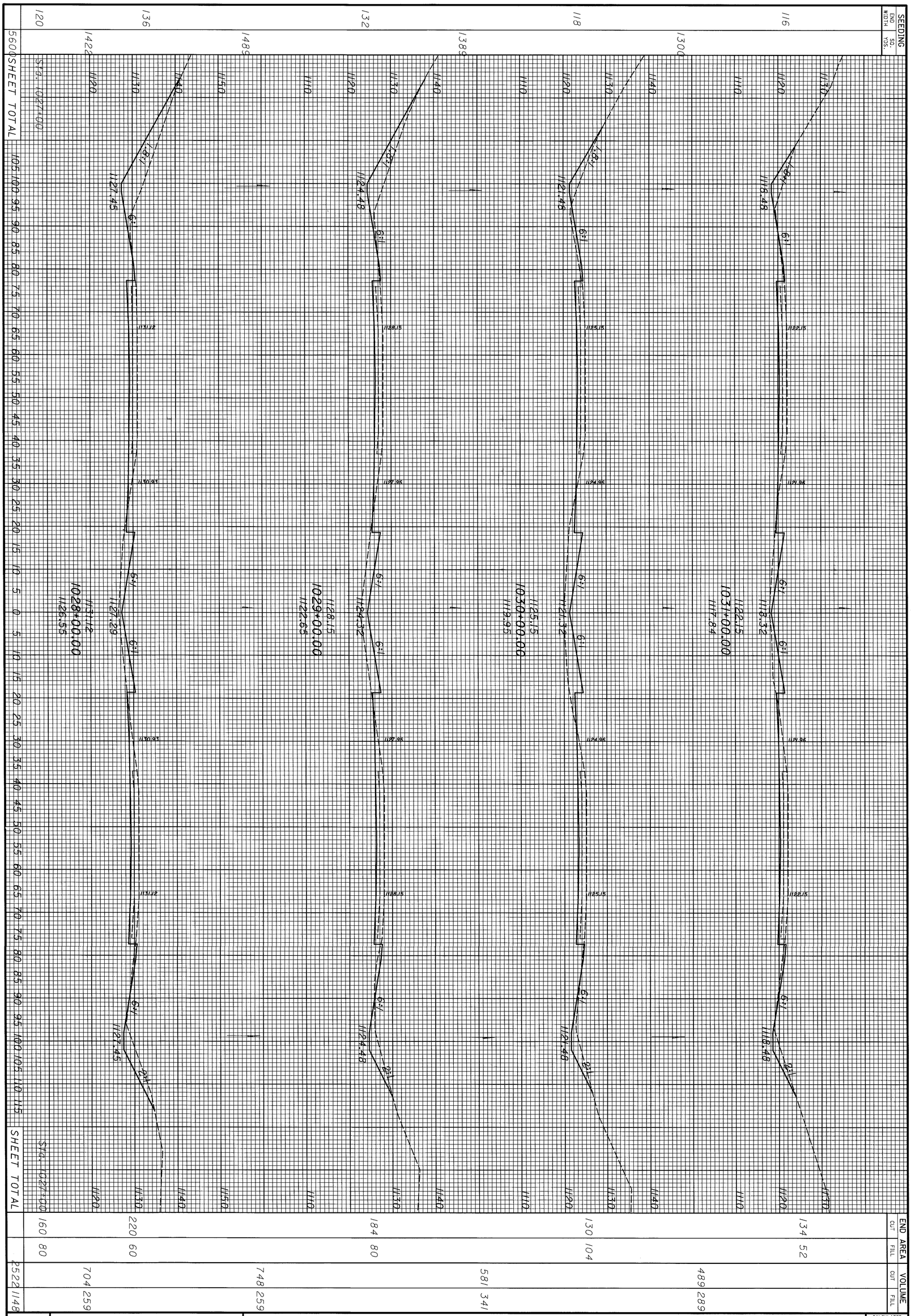

273
940

**MED-71-15.78**

# CROSS SECTIONS
## STA. 1024+00 TO STA. 1027+00

CALCULATED NJV
CHECKED JWR

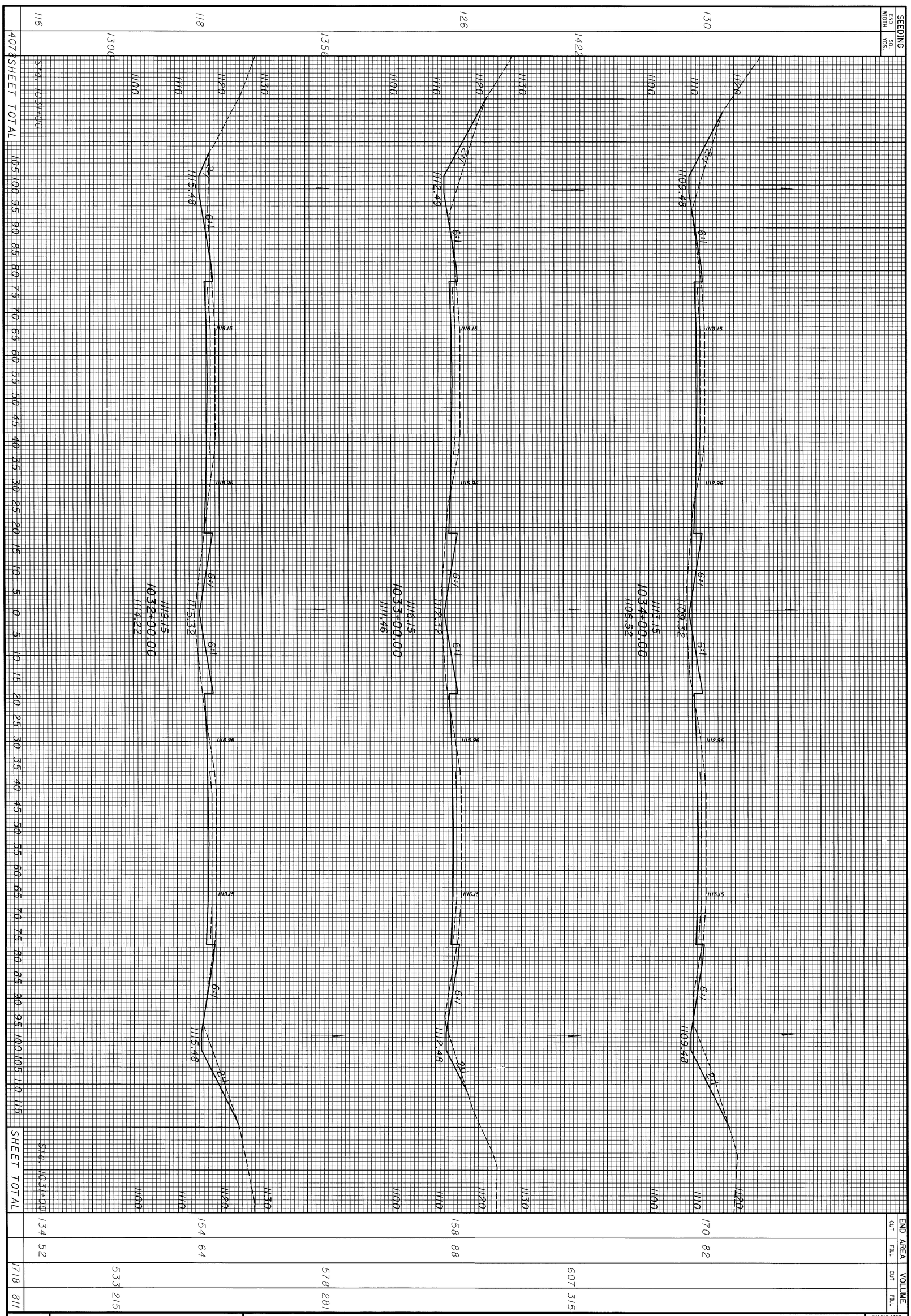
DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




| | | |
|---|---|---|
| 274/940 | MED-71-15.78 | CROSS SECTIONS<br>STA. 1028+00 TO STA. 1031+00 |

CALCULATED NJV
CHECKED JWR

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




| | | | |
|---|---|---|---|
| 275/940 | MED-71-15.78 | CROSS SECTIONS<br>STA. 1032+00 TO STA. 1034+00 | CALCULATED NJV<br>CHECKED JWR |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 116 | | 156 | 60 | | |
| 138 | | 204 | 50 | | |
| 128 | | 194 | 56 | | |
| 134 | | 180 | 50 | | |
| 130 | | 170 | 82 | | |
| | 5812 SHEET TOTAL | | | 2745 | 1211 |

Sta. 1034+00

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

1110 1100 1090

6:1 2:1

1097.48 1097.32 1097.48

EX. 15" CONDUIT
1101.15
1038+00.00
1096.88

Ex. 8" High Pressure Petroleum Line in 12" Casing (On Skew)

1038+40

1100.48 1100.32 1100.48

STA. 1037+40, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
1104.15
1037+00.00
1100.10

STA. 1037+40, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)

1103.48 1103.32 1103.48

1107.15
1036+00.00
1103.14

1106.48 1106.32 1106.48

1110.15
1035+00.00
1105.64

1100.96 1104.15 1107.15

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1035+00 TO STA. 1038+00

MED-71-15.78

276
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 110 | 1200 |
| 106 | 1300 |
| 128 | 1389 |
| 122 | 1322 |
| 116 | 521 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 146 | 72 | | |
| | | 496 | 237 |
| 122 | 56 | | |
| | | 541 | 226 |
| 170 | 66 | | |
| | | 589 | 252 |
| 148 | 70 | | |
| | | 563 | 241 |
| 156 | 60 | | |
| | | 2189 | 956 |

CALCULATED NJV
CHECKED JWR

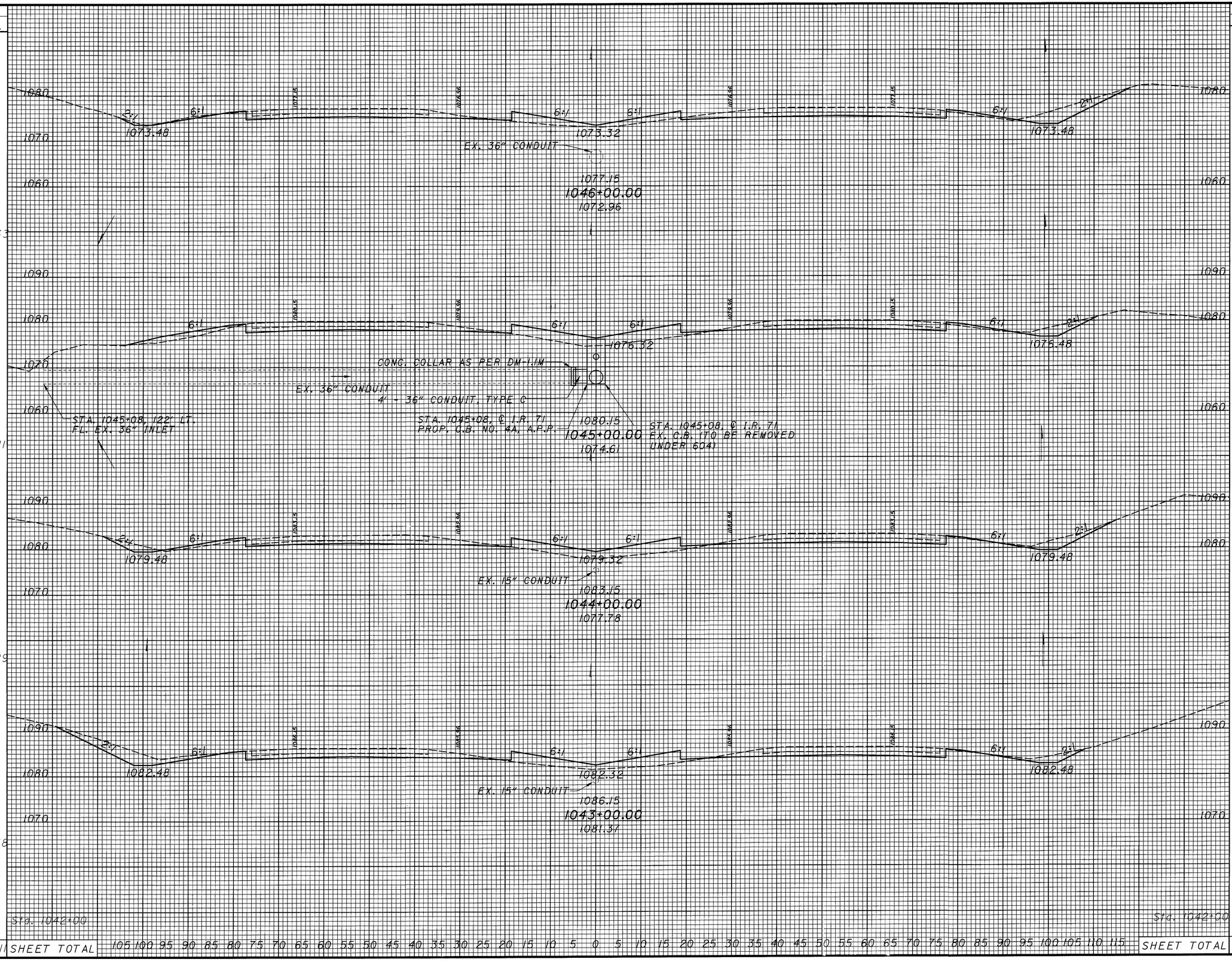
# CROSS SECTIONS
## STA. 1039+00 TO STA. 1042+00

MED-71-15.78

277
940

DESIGN FILE : $$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 116 | 1233 |
| 106 | 1211 |
| 112 | 1289 |
| 120 | 1278 |
| 110 | |
| 501 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 145 | 50 | | |
| | | 483 | 296 |
| 116 | 110 | | |
| | | 448 | 363 |
| 126 | 86 | | |
| | | 533 | 285 |
| 162 | 68 | | |
| | | 570 | 259 |
| 146 | 72 | | |
| | SHEET TOTAL | 2034 | 1203 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1043+00 TO STA. 1046+00

MED-71-15.78

278
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | 76 | | | | |
| | | 98 | 94 | | |
| | 1244 | | | 515 | 396 |
| | 148 | | | 180 | 120 |
| | 1444 | | | 633 | 374 |
| | 112 | 162 | 82 | | |
| | 1200 | | | 574 | 278 |
| | 102 | 148 | 68 | | |
| | 1211 | | | 543 | 219 |
| | 116 | 145 | 50 | | |
| 5099 SHEET TOTAL | | | | 2265 | 1267 |

STA. 1050+65, ℄ I.R. 71
EX. C.B. NO. 4
RECONSTRUCTED TO GRADE
1050+00.00
1060.61
1065.15

STA. 1050+05, 125' LT.
FL. EX. 30" INLET

EX. 30" CONDUIT

STA. 1050+70, ℄ I.R. 71
EX. M.H.
RECONSTRUCTED TO GRADE

EX. 42" CONDUIT

STA. 1048+75, 145' RT.
FL. EX. 42" INLET

EX. 36" CONDUIT

1049+00.00
1066.44
1068.15

STA. 1048+00, ℄ I.R. 71
EX. C.B. (ABANDON AND CONNECT THROUGH)
1048+00.00
1066.68
1071.15

STA. 1047+55, ℄ I.R. 71
PROP. C.B. NO. 4A, A.P.R.
1047+00.00
1069.59
1074.15

Sta. 1046+00

Sta. 1046+00

SHEET TOTAL

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1047+00 TO STA. 1050+00

MED-71-15.78

279
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | | CALCULATED | CHECKED |
|---|---|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL | NJV | JWR |

650 Seeding for Bridge between Sta. 1051+00 to Sta. 1054+00

Earthwork for Bridge between Sta. 1051+00 to Sta. 1054+00 — 350 100

STA. 1053+55, ℄ I.R. 71
FL. PROP. 15" OUTLET

1056.15
**1053+00.00**
1018.38

STA. 1052+15, ℄ I.R. 71
FL. PROP. 48" OUTLET
SEE DRAINAGE DETAILS SHEET NO. 522.

1059.15
**1052+00.00**
1027.76

STA. 1052+15, 18" RT.
FL. EX. 48" OUTLET

80 Bk. — 116 40

2:1 — 1056.48 — 6:1 — 6:1 Var. 10:1 — 1058.75

1062.15
**1051+00.00**
1058.89

867 — 396 248

76 Sta. 1050+00 — Sta. 1050+00 — 98 94

1517 SHEET TOTAL 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 SHEET TOTAL — 746 348

# CROSS SECTIONS
# STA. 1051+00 TO STA. 1053+00

MED-71-15.78

280
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 54 | | 134 | 18 | | |
| | 711 | | | 470 | 244 |
| 74 | | 120 | 114 | | |
| | 878 | | | 393 | 441 |
| 84 | Abd. | Abd. | 92 | 124 | |
| 1589 | SHEET TOTAL | | | 863 | 685 |




105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1054+00 TO STA. 1056+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 76 | |
| | 778 |
| 64 | |
| 74 | |
| | 711 |
| 54 | |
| | 2256 |



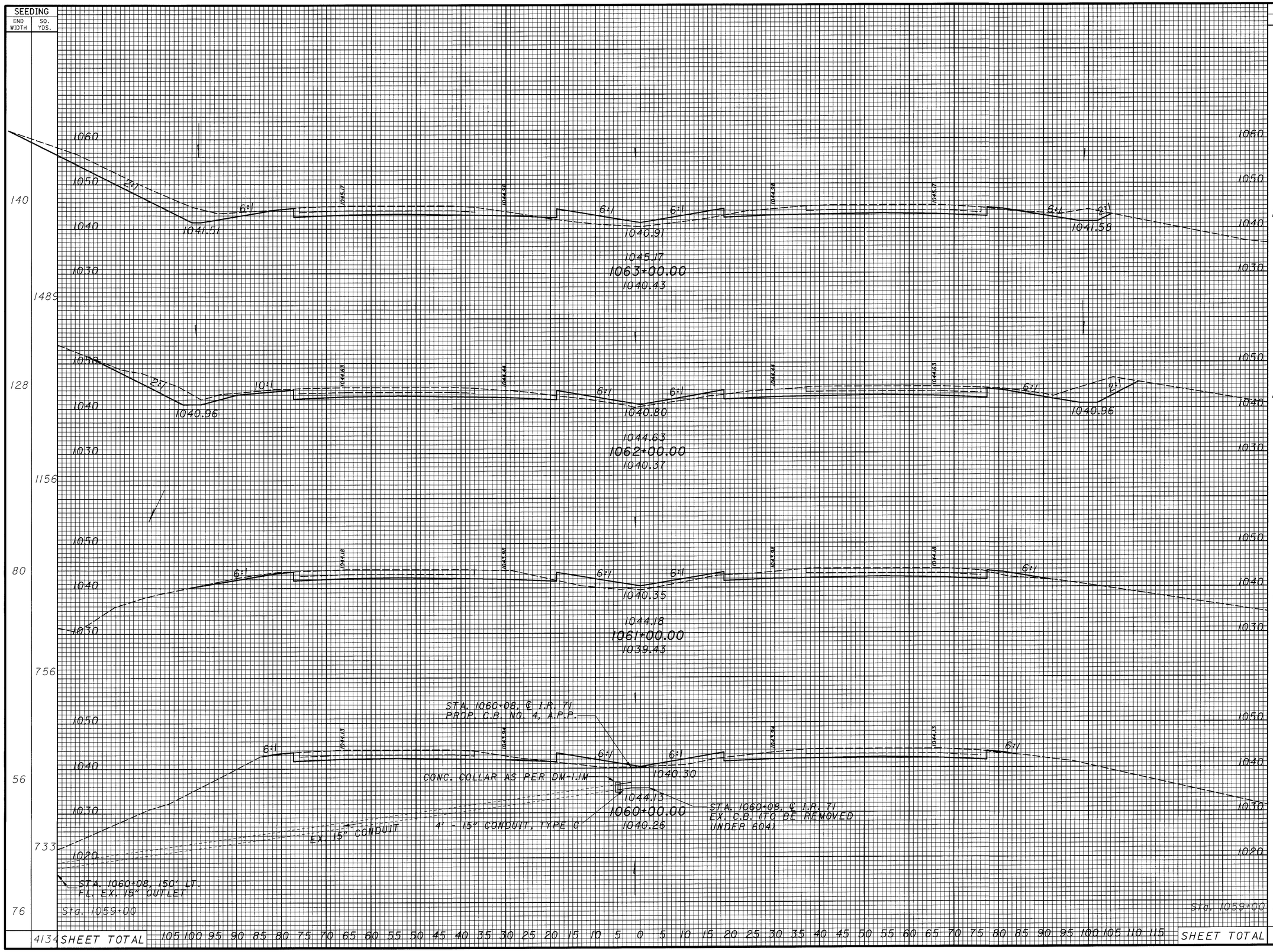

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 136 | 40 | | |
| | | 504 | 115 |
| 136 | 22 | | |
| | | 496 | 152 |
| 132 | 60 | | |
| | | 493 | 144 |
| 134 | 18 | | |
| SHEET TOTAL | | 1493 | 411 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1057+00 TO STA. 1059+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$




| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| 140 | 1489 |
| 128 | 1156 |
| 80 | 756 |
| 56 | 733 |
| 76 | 4134 |

| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| 245 | 58 | 898 | 156 |
| 240 | 26 | 689 | 141 |
| 132 | 50 | 452 | 170 |
| 112 | 42 | 459 | 152 |
| 136 | 40 | 2498 | 619 |

SHEET TOTAL 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 SHEET TOTAL

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1060+00 TO STA. 1063+00

MED-71-15.78

283
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 132 | 1467 | 210 | 42 | 778 | 148 |
| 132 | 1567 | 210 | 38 | 1000 | 163 |
| 150 | 1611 | 330 | 50 | 1065 | 200 |
| 140 | 4645 | 245 | 58 | 2843 | 511 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1064+00 TO STA. 1066+00

MED-71-15.78

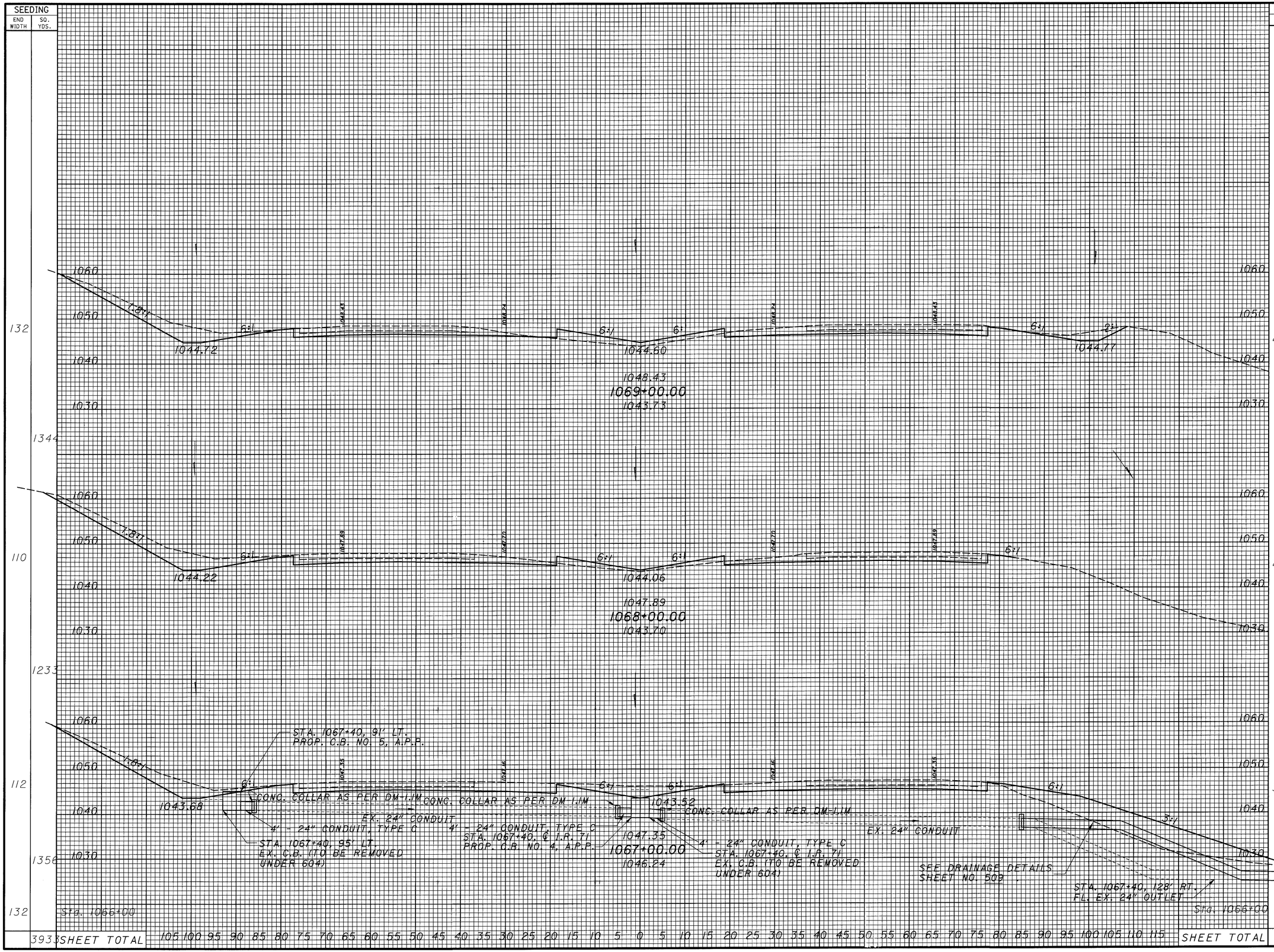
284
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

# CROSS SECTIONS STA. 1067+00 TO STA. 1069+00

CALCULATED NJV
CHECKED JWR

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 132 | | 222 | 46 | | |
| | | | | 826 | 144 |
| 110 | | 224 | 32 | | |
| | | | | 915 | 67 |
| 112 | | 363 | 4 | | |
| | | | | 1061 | 85 |
| 132 | | 210 | 42 | | |
| 393 | SHEET TOTAL | | | 2802 | 296 |




MED-71-15.78

285
940

DESIGN FILE : $$$$$$$$$$DESIGNFILES\SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

# CROSS SECTIONS
# STA. 1070+00 TO STA. 1073+00

CALCULATED NJV
CHECKED JWR

MED-71-15.78

286
940

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 150 | 1633 | 475 | 2 | 1546 | 6 |
| 144 | 1522 | 360 | 1 | 1185 | 17 |
| 130 | 1522 | 280 | 8 | 1037 | 74 |
| 144 | 1533 | 280 | 32 | 930 | 289 |
| 132 | 621 | 222 | 46 | 4698 | 386 |
| SHEET TOTAL | | | | | |

1073+00.00
1049.87
1050.48

1072+00.00
1049.47
1046.16

1071+00.00
1049.24
1045.75

1070+00.00
1048.92
1044.94

STA. 1070+92, 91' LT.
PROP. C.B. NO. 5, A.P.P.

CONC. COLLAR AS PER DM-1.1M

EX. 24" CONDUIT

4' - 24" CONDUIT, TYPE C
STA. 1070+92, 95' LT.
EX. C.B. (TO BE REMOVED UNDER 604)

4' - 24" CONDUIT, TYPE C
STA. 1070+92, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.

CONC. COLLAR AS PER DM-1.1M

4' - 24" CONDUIT, TYPE C
STA. 1070+92, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)

EX. 24" CONDUIT

STA. 1070+92, 115' RT.
FL. EX. 24" OUTLET

Sta. 1069+00

SHEET TOTAL 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 SHEET TOTAL

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 150 | 1633 |
| 144 | 1722 |
| 166 | 1833 |
| 164 | 1744 |
| 150 | |
| 6932 | SHEET TOTAL |

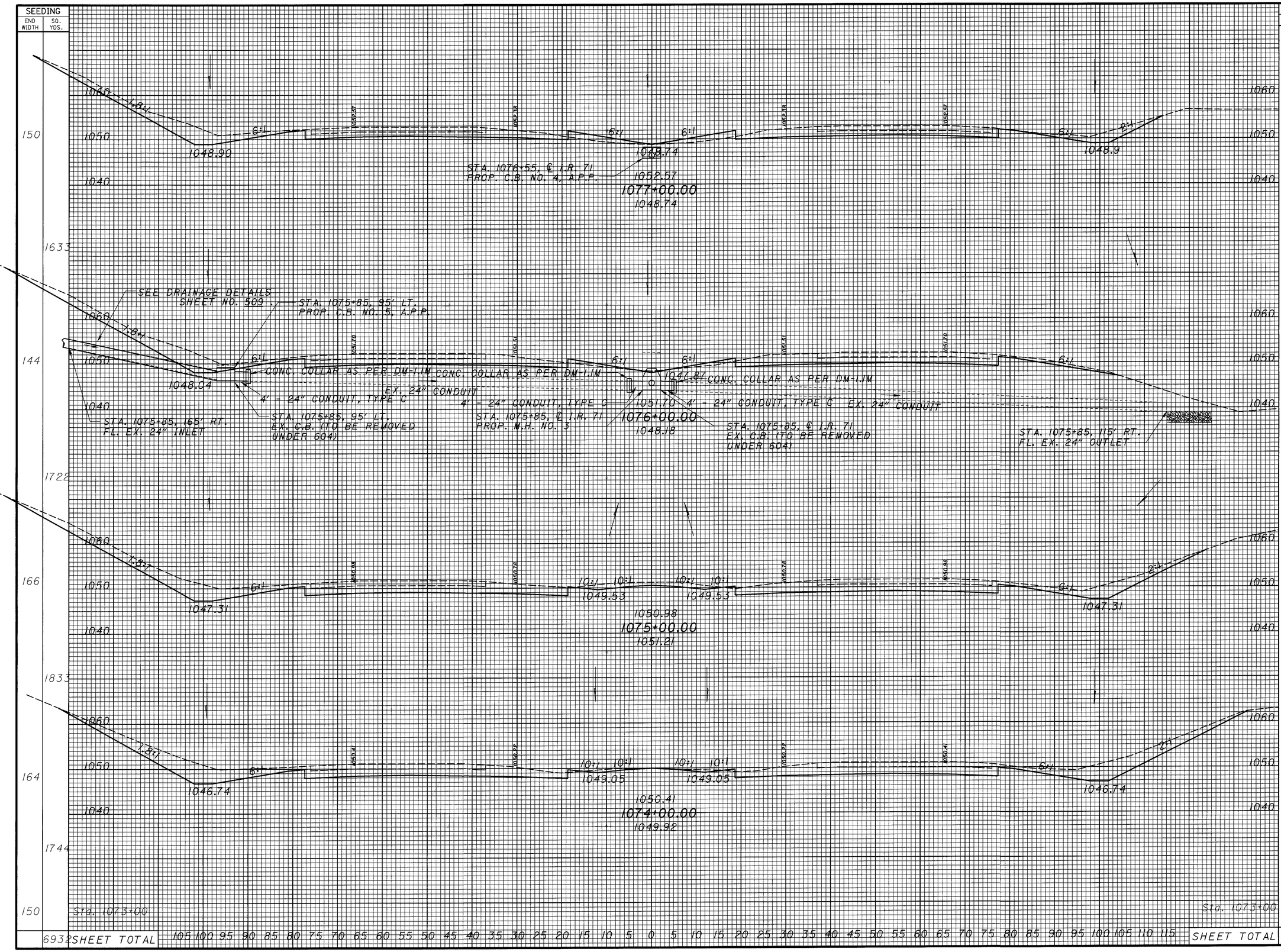
| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 275 | 32 | | |
| | | 1102 | 85 |
| 320 | 14 | | |
| | | 1370 | 30 |
| 420 | 2 | | |
| | | 1574 | 7 |
| 430 | 2 | | |
| | | 1676 | 7 |
| 475 | 2 | | |
| | SHEET TOTAL | 5722 | 129 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS STA. 1074+00 TO STA. 1077+00

MED-71-15.78

287
940



DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 58 | | 108 | 68 | | |
| | 767 | | | 426 | 222 |
| 80 | | 122 | 52 | | |
| | 1178 | | | 707 | 222 |
| 132 | | 260 | 68 | | |
| | 1733 | | | 1130 | 219 |
| 180 | | 350 | 50 | | |
| | 1833 | | | 1157 | 152 |
| 150 | | 275 | 32 | | |
| 551 | SHEET TOTAL | | | 3420 | 815 |

CALCULATED NJV
CHECKED JWR

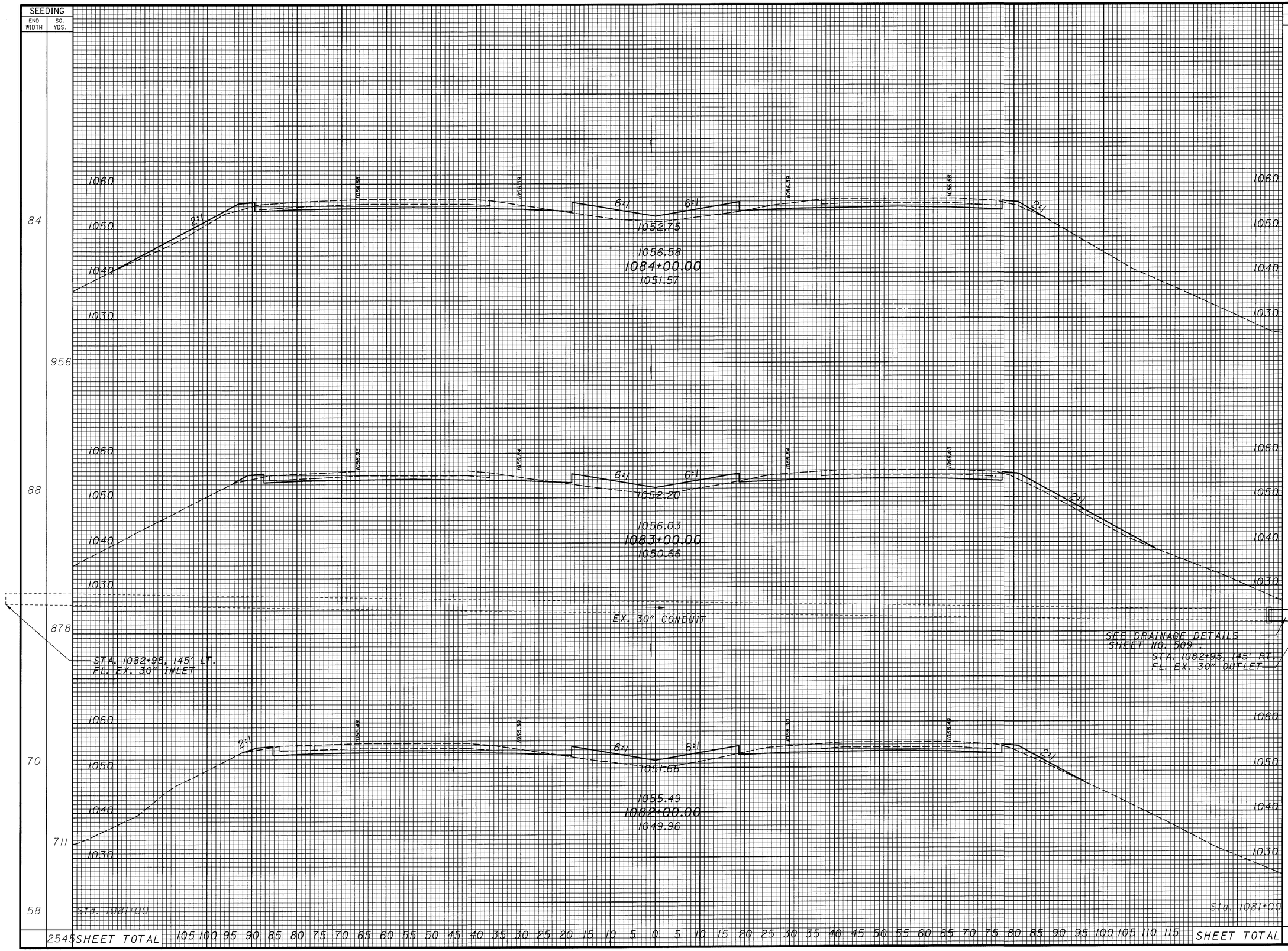
# CROSS SECTIONS
## STA. 1078+00 TO STA. 1081+00

MED-71-15.78

288
940

DESIGN FILE : $$$$$$$$$$DESIGNFILES\SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | |
| 84 | |
| | 956 |
| 88 | |
| | 878 |
| 70 | |
| | 711 |
| 58 | |
| 2545 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 106 | 98 | | |
| | | 396 | 367 |
| 108 | 100 | | |
| | | 407 | 333 |
| 112 | 80 | | |
| | | 407 | 274 |
| 108 | 68 | | |
| | | 1210 | 974 |

CALCULATED NJV
CHECKED JWR

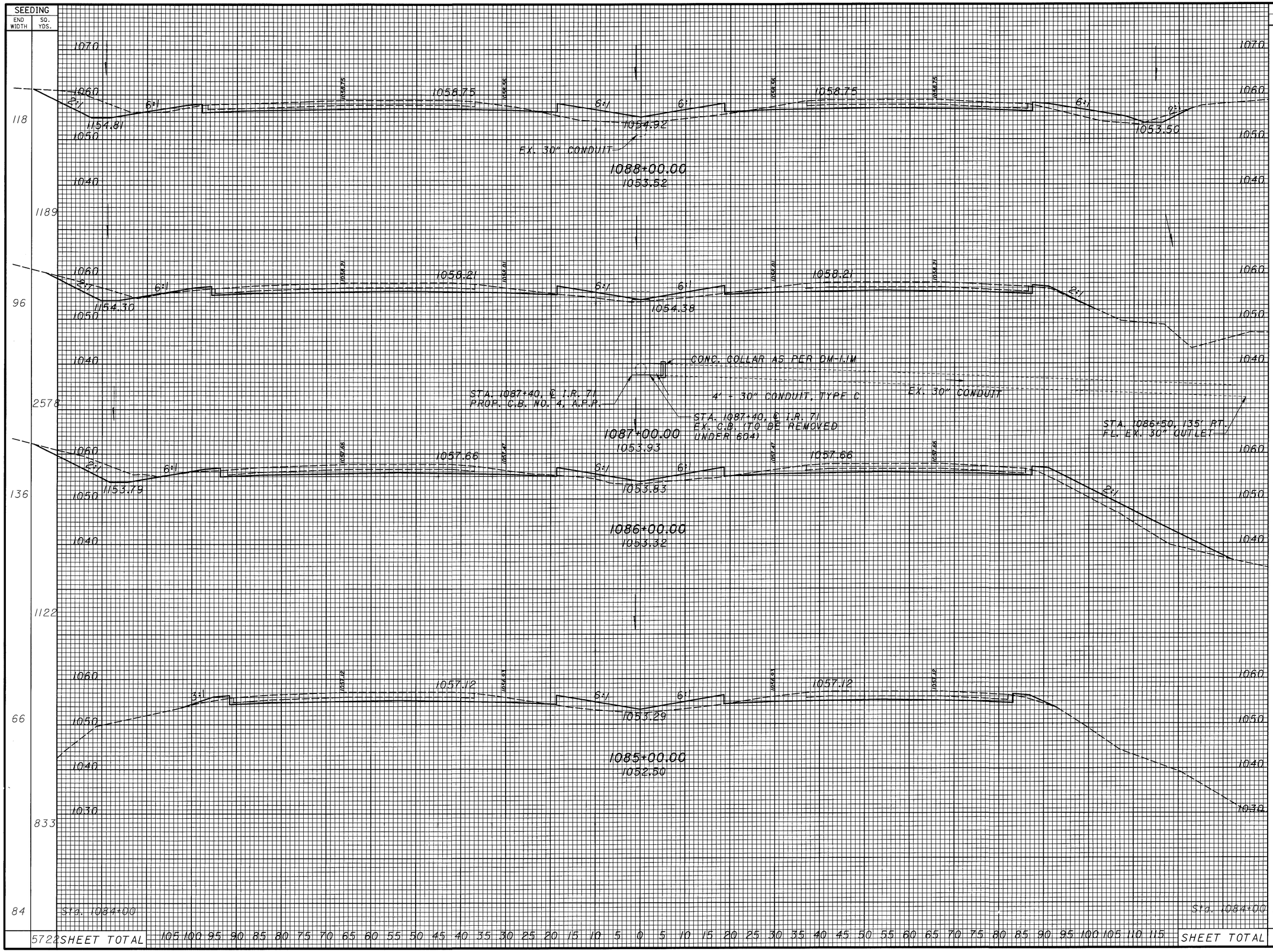
# CROSS SECTIONS
# STA. 1082+00 TO STA. 1084+00

MED-71-15.78

289
940

DESIGN FILE : $$$$$$$$$$DESIGNFILES\PECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$




| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 118 | 1189 | 180 | 120 | 615 | 315 |
| 96 | 2578 | 152 | 50 | 581 | 352 |
| 136 | 1122 | 162 | 140 | 507 | 380 |
| 66 | 833 | 112 | 65 | 407 | 246 |
| 84 | 5722 | 108 | 68 | 2110 | 1293 |
| | SHEET TOTAL | | | | |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1085+00 TO STA. 1088+00

MED-71-15.78

290
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 112 | | Ahd., Sta. 1092+35 | | | |
| 104 | | Bk., Sta. 1092+35 | | | |
| | | Sta. 1092+35, Ahd. | 150 | 60 | |
| | | Sta. 1092+35, Bk. | 175 | 60 | |
| | 397 | | | | 222 80 |
| 100 | | | 168 | 64 | |
| | 1078 | | | | 622 193 |
| 94 | | | 168 | 40 | |
| | 1067 | | | | 570 219 |
| 98 | | | 140 | 78 | |
| | 1133 | | | | 493 304 |
| 106 | | | 126 | 86 | |
| | 1244 | | | | 567 381 |
| 118 | | Sta. 1088+00 | 180 | 120 | |
| | 4919 | SHEET TOTAL | | | 2474 1177 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 SHEET TOTAL

1070 1060 1050

6:1 3:1 2%

1060.92 1060.92 1060.92 1060.92 1060.73 1060.32 1060.74

1056.92 1057.09 1056.86

1092+00.00
1056.46

STA. 1092+35, 80' RT.
EX. C.B. (TO BE REMOVED)

STA. 1092+30, 125' RT.
FL. EX. 12" OUTLET

EX. 12" CONDUIT

1060.38 1060.38 1060.38 1060.38 1060.18 1060.18

1056.55 1056.48

1091+00.00
1056.40

1059.84 1059.84 1059.84 1059.84 1059.64 1059.64

1058.07 1056.05

1090+00.00
1054.78

1059.29 1059.29 1059.29 1059.29 1059.10 1059.10

1055.46 1055.52

STA. 1089+28, 78' LT.
EX. C.B. (TO BE REMOVED
UNDER 604)

STA. 1089+28, 135' LT.
FL. EX. 30" INLET

STA. 1089+28, ℄ I.R. 71
EX. C.B. (TO BE REMOVED
UNDER 604)

CONC. COLLAR AS PER DM-1.1M

EX. 30" CONDUIT

EX. 30" CONDUIT
4'-30" CONDUIT, TYPE C

STA. 1089+28, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.

1089+39.5

1089+00.00
1054.74

Telephone Cable, Fiber Optic in 1" Subduct (8'± Deep)

CALCULATED NJV
CHECKED JWR

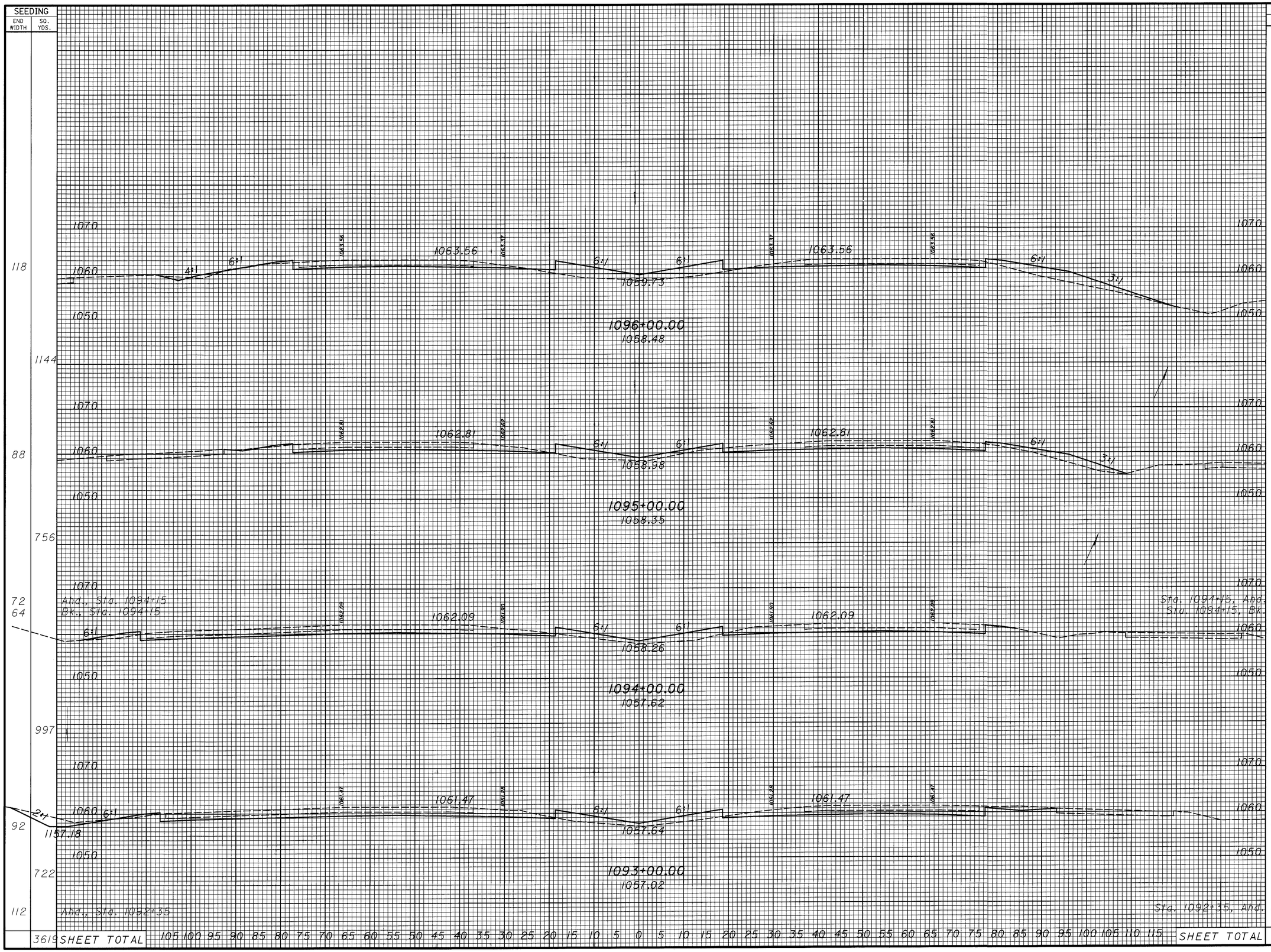
# CROSS SECTIONS
## STA. 1089+00 TO STA. 1092+00

MED-71-15.78

291
940

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$
DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

| SEEDING | | END AREA | | VOLUME | | CALCULATED | |
|---|---|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL | NJV | JWR |




| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 56 | 138 | |
| 118 | | | | | | | | |
| | 1144 | | | | | | | 270 404 |
| 88 | | | | | | | | |
| | | | | | | 90 | 80 | |
| 756 | | | | | | | | 315 211 |
| 72 | | Ahd., Sta. 1094+15 | | | | Sta. 1094+15, Ahd. | 110 | 54 |
| 64 | | Bk., Sta. 1094+15 | | | | Sta. 1094+15, Bk. | 135 | 54 |
| | 997 | | | | | | | 639 226 |
| 92 | | 1157.18 | | | | | 165 | 52 |
| | 722 | | | | | | | 379 135 |
| 112 | | Ahd., Sta. 1092+35 | | | | Sta. 1092+35, Ahd. | 150 | 60 |
| | 3619 | SHEET TOTAL | | | | SHEET TOTAL | | 1603 976 |

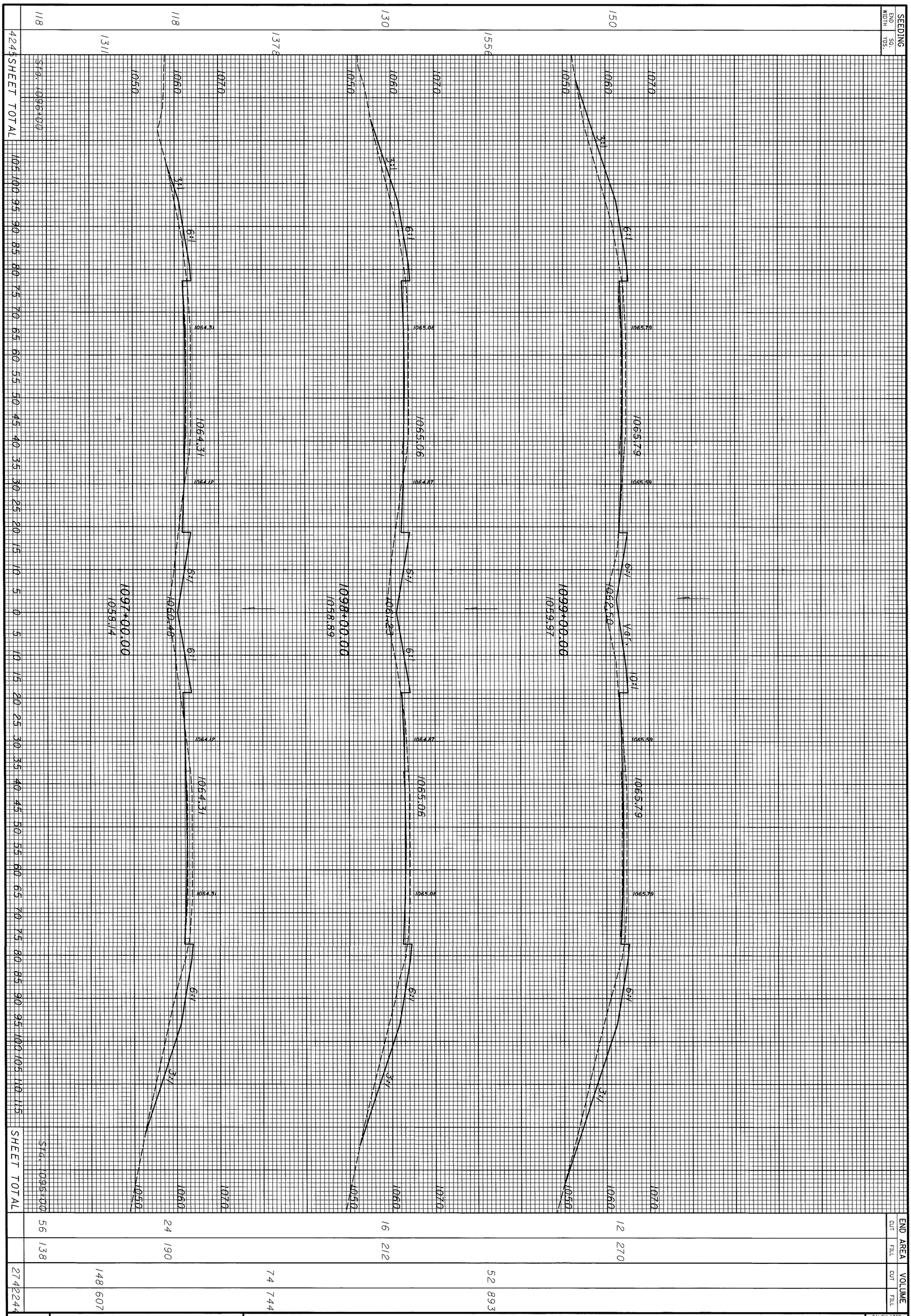
105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

# CROSS SECTIONS
# STA. 1093+00 TO STA. 1096+00

MED-71-15.78

292
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




293
940

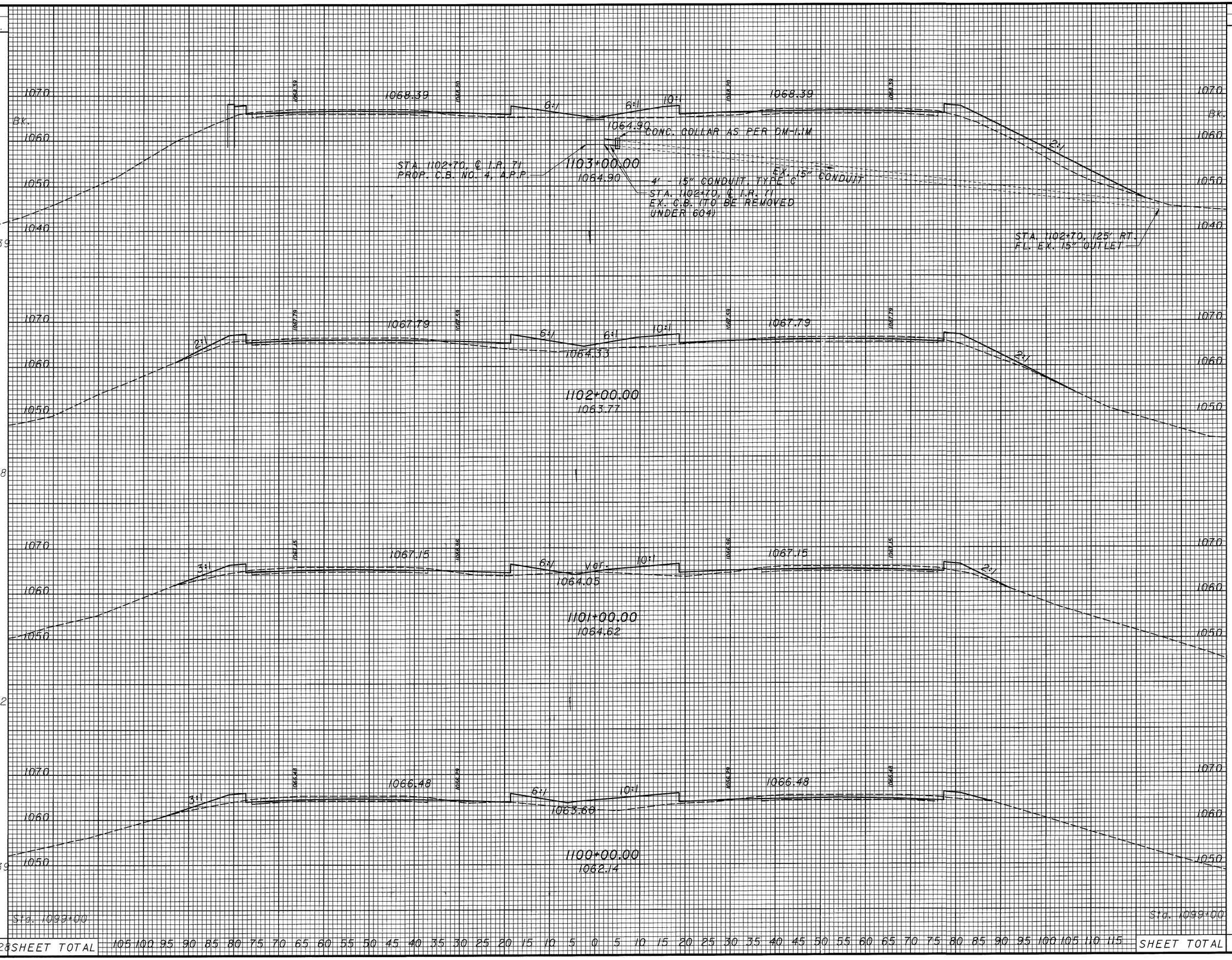
**MED-71-15.78**

# CROSS SECTIONS
## STA. 1097+00 TO STA. 1099+00

CALCULATED NJV
CHECKED JWR

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 95 | Bk. | 3 | 200 | | |
| | | | | 11 | 902 |
| 92 | | 3 | 172 | | |
| | | | | 13 | 567 |
| 75 | | 4 | 134 | | |
| | | | | 15 | 524 |
| 73 | | 4 | 149 | | |
| | | | | 30 | 776 |
| 150 | Sta. 1099+00 | 12 | 270 | | |
| | 4028 SHEET TOTAL | | | 69 | 2769 |




CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1100+00 TO STA. 1103+00

MED-71-15.78

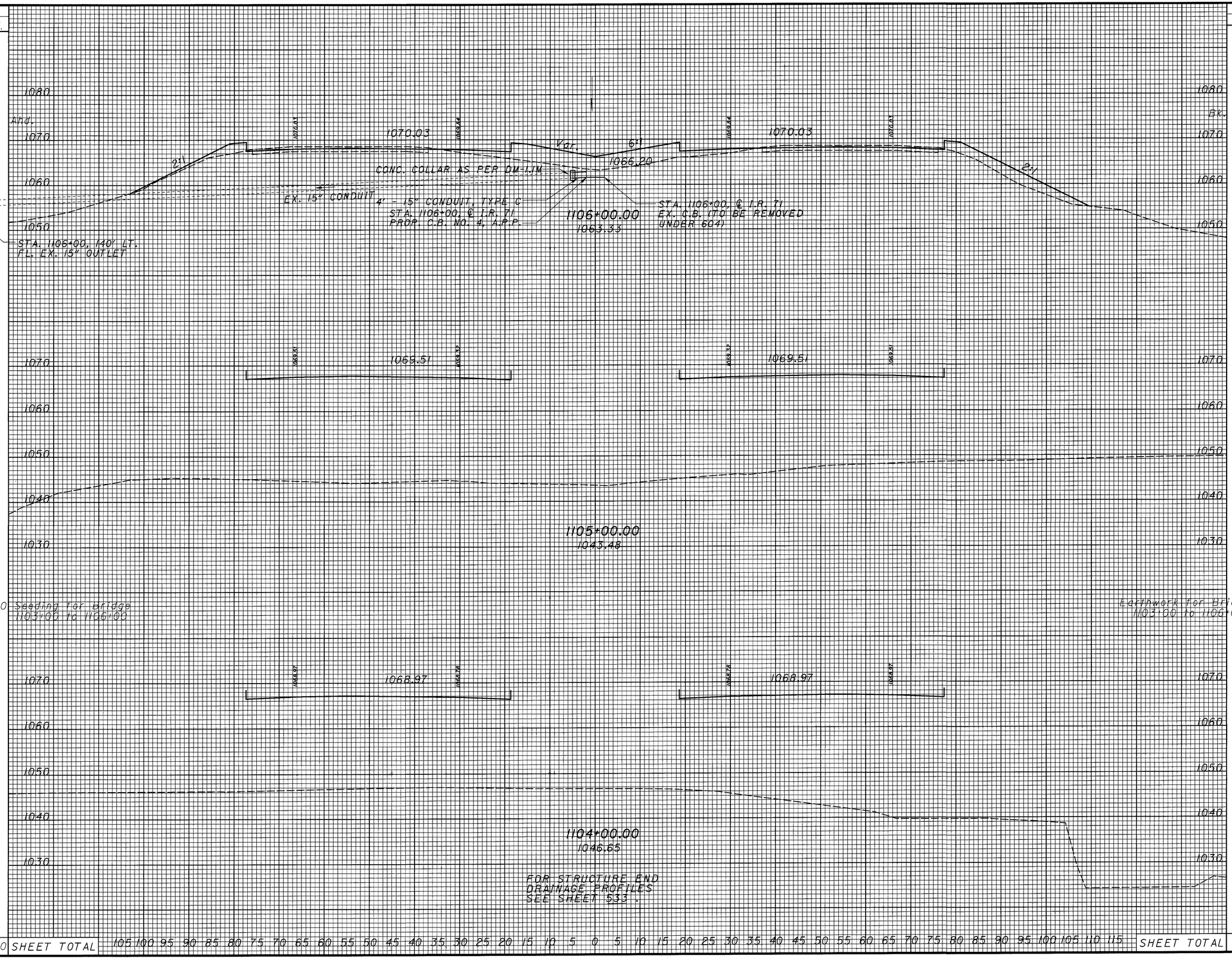
294
940

DESIGN FILE : $$$$$$$$$$DESIGNFILE$SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 106 | Ahd. |
| 700 | Seeding for Bridge 1103+00 to 1106+00 |
| 700 | SHEET TOTAL |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| Bk. 3 | 200 | | |
| | | 150 | 300 |
| SHEET TOTAL | | 150 | 300 |

CALCULATED NJV
CHECKED JWR




105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

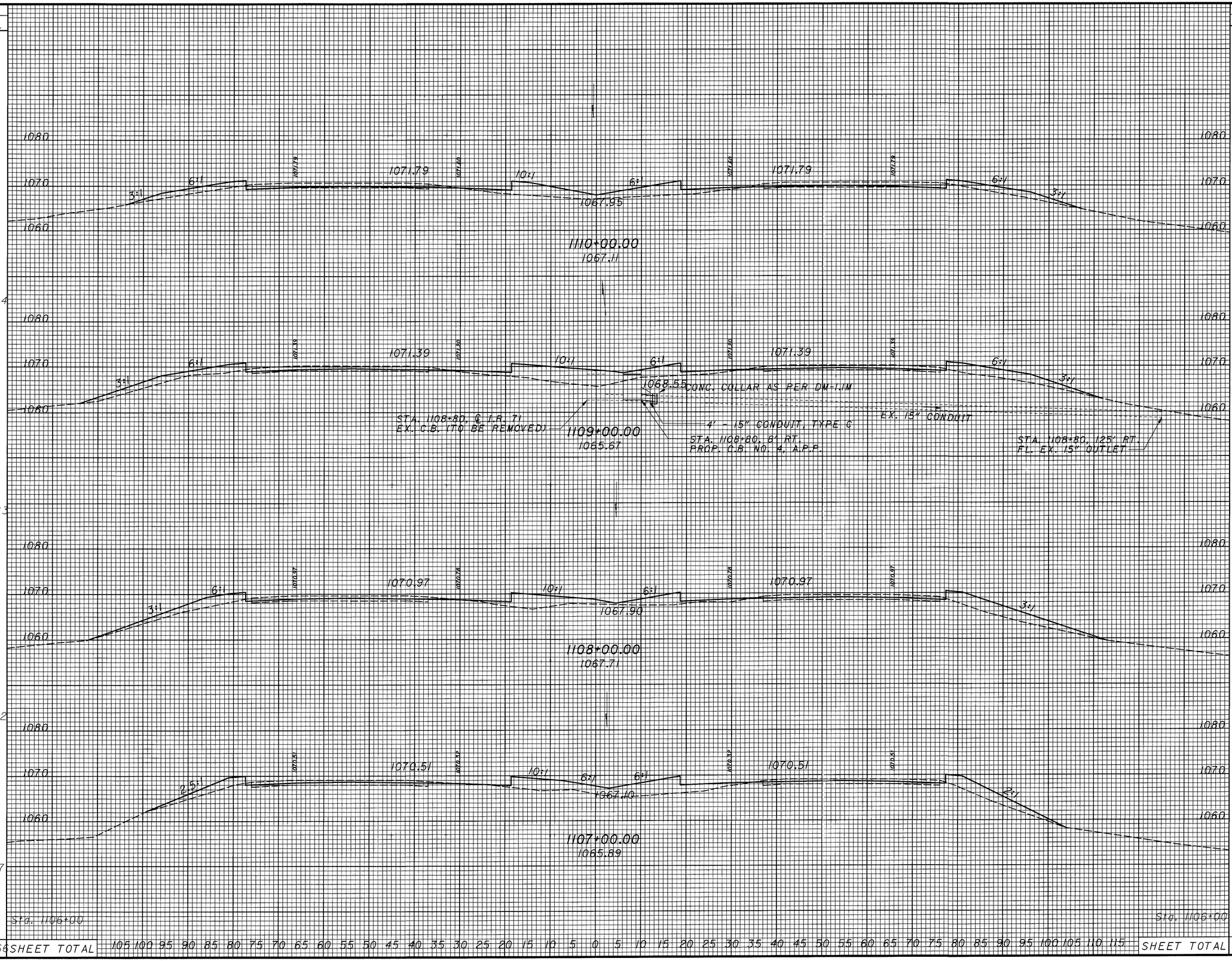
# CROSS SECTIONS STA. 1104+00 TO STA. 1106+00

MED-71-15.78

295
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 100 | 1194 |
| 115 | 1283 |
| 116 | 1172 |
| 95 | 1117 |
| 106 | |
| SHEET TOTAL | 4766 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 4 | 170 | | |
| | | 15 | 748 |
| 4 | 234 | | |
| | | 15 | 822 |
| 4 | 210 | | |
| | | 11 | 796 |
| 2 | 220 | | |
| | | 7 | 944 |
| 2 | 290 | | |
| | | 48 | 3310 |
| SHEET TOTAL | | | |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1107+00 TO STA. 1110+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 68 | | 86 | 38 | | |
| | 794 | | | 272 | 198 |
| 75 | | 61 | 69 | | |
| | 917 | | | 174 | 304 |
| 90 | | 33 | 95 | | |
| | 1044 | | | 76 | 407 |
| 98 | | 8 | 125 | | |
| | 1100 | | | 22 | 546 |
| 100 | | 4 | 170 | | |
| | 3855 | | | 544 | 1455 |




Sta. 1100+00

SHEET TOTAL 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 SHEET TOTAL

Sta. 1110+00

CALCULATED N.J.V.

CHECKED J.W.R.

# CROSS SECTIONS STA. 1111+00 TO STA. 1114+00

MED-71-15.78

297
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$$

# CROSS SECTIONS
# STA. 1115+00 TO STA. 1118+00

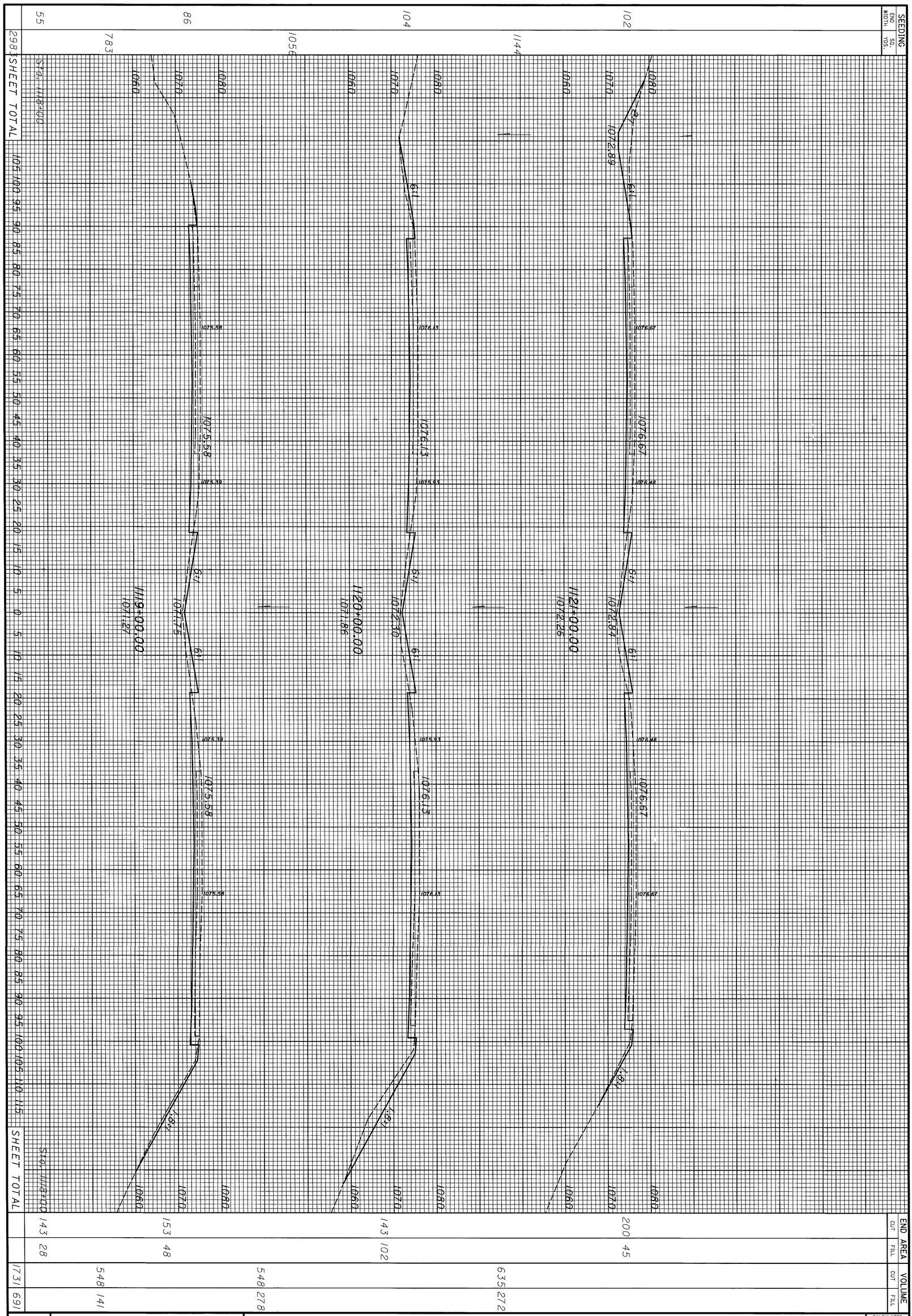
CALCULATED NJV
CHECKED JWR

| SEEDING END WIDTH | SEEDING SQ. YDS. | | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|---|
| 55 | 761 | STA. 1118+00 | 143 | 28 | 561 | 107 |
| 82 | 622 | STA. 1117+00 | 160 | 30 | 378 | 77 |
| 85 | 255 | Ahd., Sta. 1116+33 | 145 | 32 | 163 | 46 |
| 65 | | Bk., Sta. 1116+33 | 135 | 32 | | |
| 74 | 900 | STA. 1116+00 | 132 | 43 | 491 | 176 |
| 88 | 569 | STA. 1115+00 | 133 | 52 | 280 | 104 |
| 80 | 288 | Ahd., Sta. 1114+39 | 115 | 40 | 131 | 56 |
| 65 | | Bk., Sta. 1114+39 | 95 | 40 | | |
| 68 | | Sta. 1114+00 | 86 | 38 | | |
| | 3395 | SHEET TOTAL | | | 2004 | 566 |



MED-71-15.78

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




MED-71-15.78

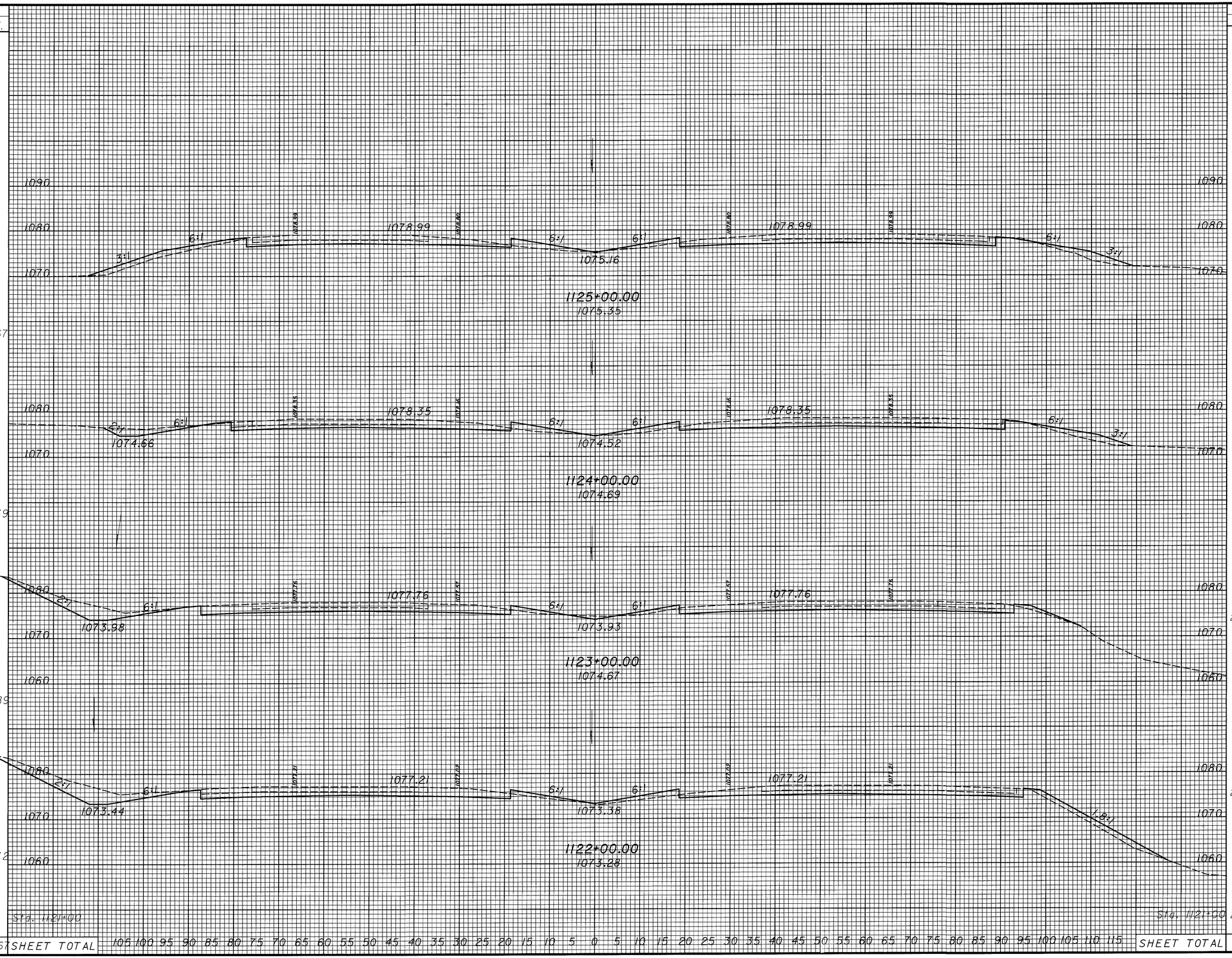
# CROSS SECTIONS
## STA. 1119+00 TO STA. 1121+00

CALCULATED NJV
CHECKED JWR

299
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 110 | 1167 |
| 100 | |
| 105 | 1289 |
| 127 | |
| 102 | 1272 |
| | 4867 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 132 | 80 | | |
| | | 526 | 237 |
| 152 | 48 | | |
| 694 | 130 | | |
| 223 | 22 | | |
| 830 | 144 | | |
| 225 | 56 | | |
| 787 | 187 | | |
| 200 | 45 | | |
| | | 2837 | 698 |

CALCULATED NJV
CHECKED JWR

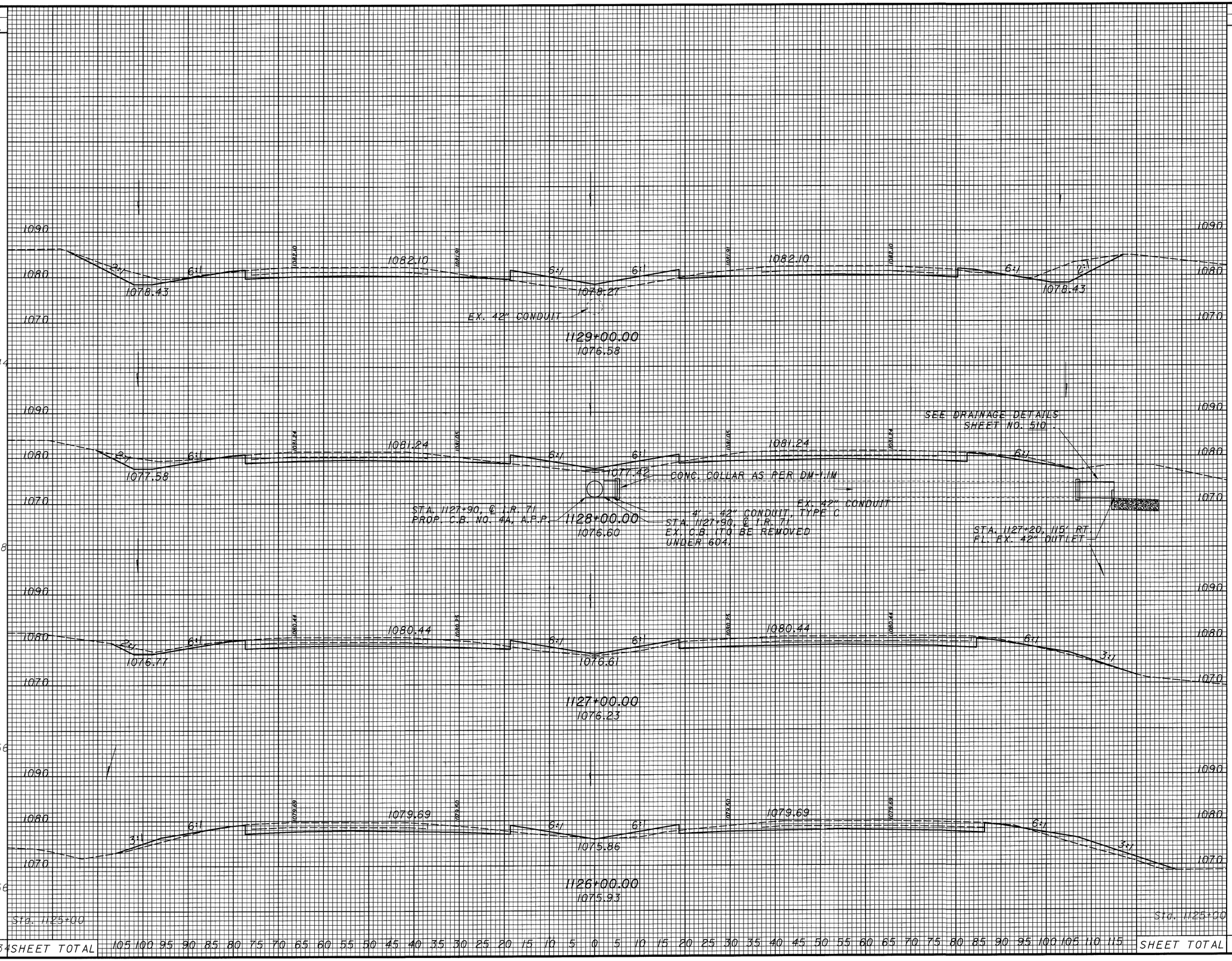
# CROSS SECTIONS
# STA. 1122+00 TO STA. 1125+00

MED-71-15.78

300
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 122 | |
| | 1244 |
| 102 | |
| 1178 | |
| 110 | |
| 1256 | |
| 116 | |
| 1256 | |
| 110 | |
| 4934 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 184 | 72 | | |
| | | 635 | 230 |
| 159 | 52 | | |
| | | 587 | 165 |
| 158 | 37 | | |
| | | 522 | 198 |
| 124 | 70 | | |
| | | 474 | 278 |
| 132 | 80 | | |
| SHEET TOTAL | | 2218 | 871 |

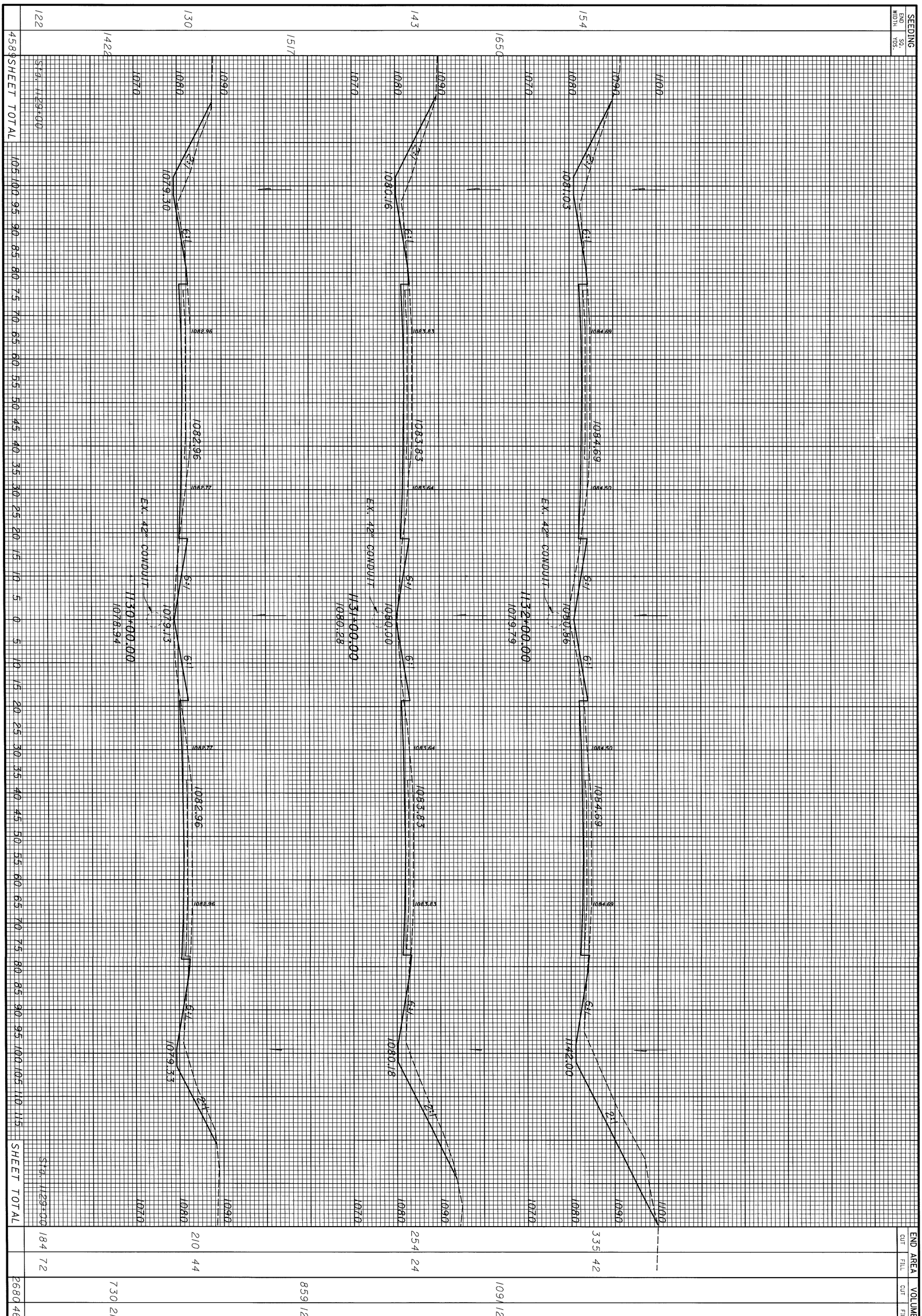
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1126+00 TO STA. 1129+00

MED-71-15.78

301
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




| | | | |
|---|---|---|---|
| 302 940 | MED-71-15.78 | CROSS SECTIONS STA. 1130+00 TO STA. 1132+00 | CALCULATED NJV CHECKED JWR |

DESIGN FILE : $$$$$$$$$$DESIGNFILES\SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 157 | 1744 |
| | 1733 |
| 157 | 1717 |
| 155 | |
| 154 | |
| | 5194 |

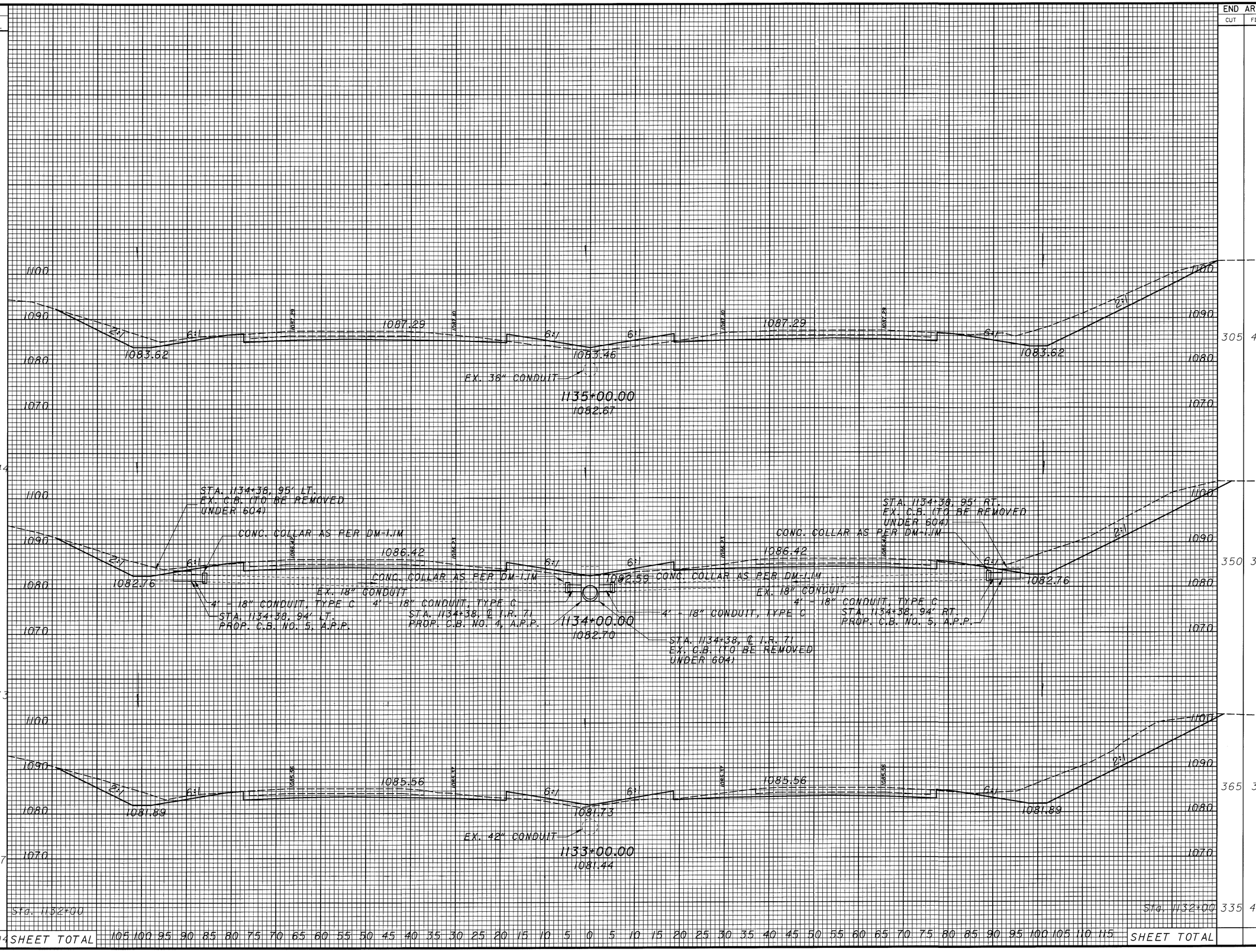
| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 305 | 48 | | |
| | | 1213 | 144 |
| 350 | 30 | | |
| | | 1324 | 113 |
| 365 | 31 | | |
| | | 1296 | 135 |
| 335 | 42 | | |
| SHEET TOTAL | | 3833 | 392 |

CALCULATED N.J.V
CHECKED J.W.R

# CROSS SECTIONS
## STA. 1133+00 TO STA. 1135+00

MED-71-15.78

303
940



DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$

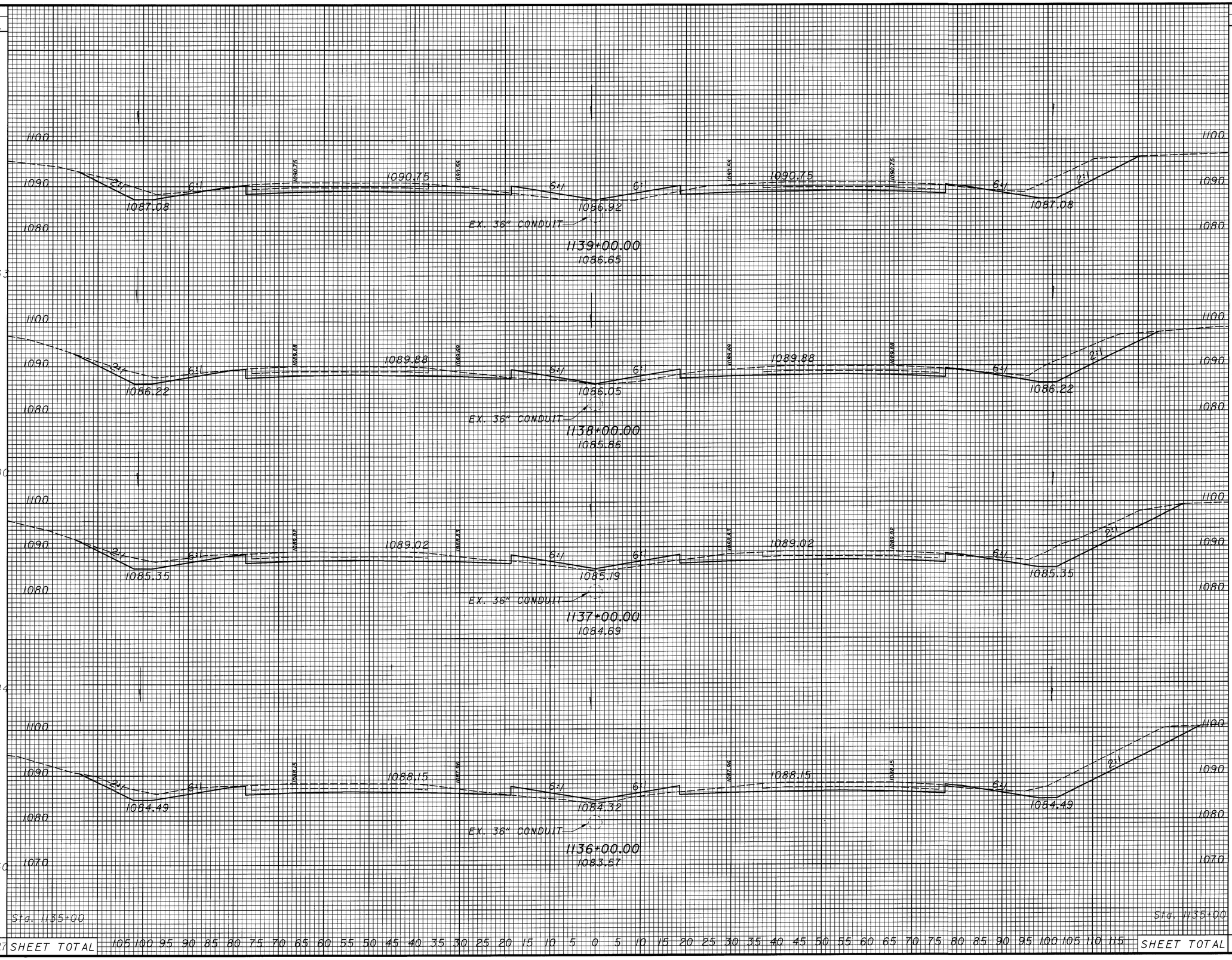
DATE : $$$$$DATE$$$$$
TIME : $$$$$TIME$$$$$

# CROSS SECTIONS
# STA. 1136+00 TO STA. 1139+00

CALCULATED NJV
CHECKED JWR

MED-71-15.78

304
940



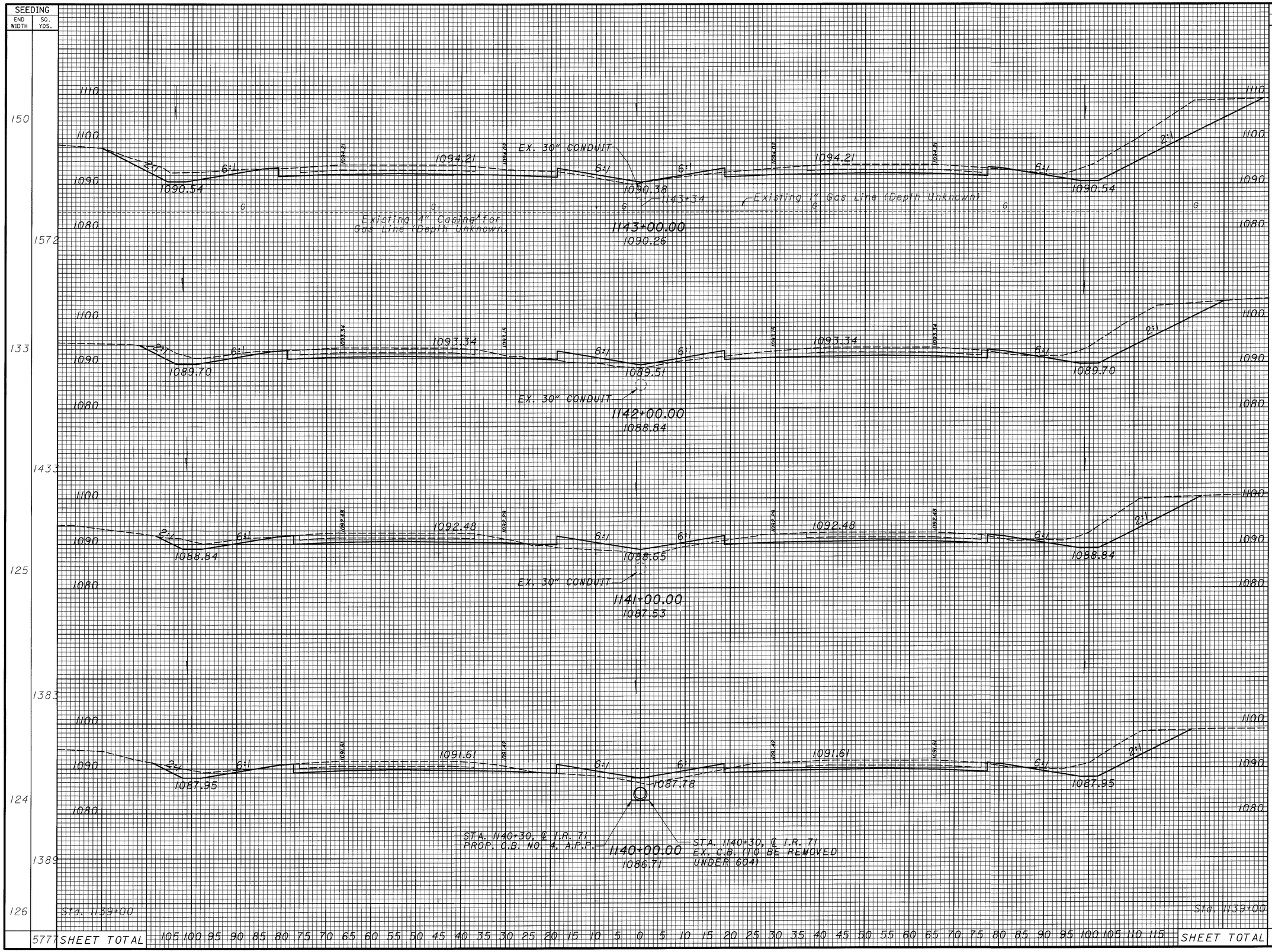

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 126 | | 242 | 42 | | |
| | 1433 | | | 911 | 139 |
| 132 | | 250 | 33 | | |
| | 1500 | | | 952 | 126 |
| 138 | | 264 | 35 | | |
| | 1544 | | | 993 | 146 |
| 140 | | 272 | 44 | | |
| 157 | 1650 | 305 | 48 | 1069 | 170 |
| Sta. 1135+00 | | Sta. 1135+00 | | | |
| 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 | 6127 SHEET TOTAL | SHEET TOTAL | | 3925 | 581 |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

# CROSS SECTIONS
# STA. 1140+00 TO STA. 1143+00

CALCULATED NJV
CHECKED JWR

MED-71-15.78




| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 150 | 1572 | 365 | 23 | 1220 | 128 |
| 133 | 1433 | 294 | 46 | 1035 | 185 |
| 125 | 1383 | 265 | 54 | 926 | 198 |
| 124 | 1389 | 235 | 53 | 883 | 176 |
| 126 | Sta. 1139+00 | 242 | 42 | | |
| | 5777 SHEET TOTAL | | | 4064 | 687 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 148 | |
| 1656 | |
| 150 | |
| 1656 | |
| 148 | |
| 1656 | |
| 150 | |
| 4968 | SHEET TOTAL |

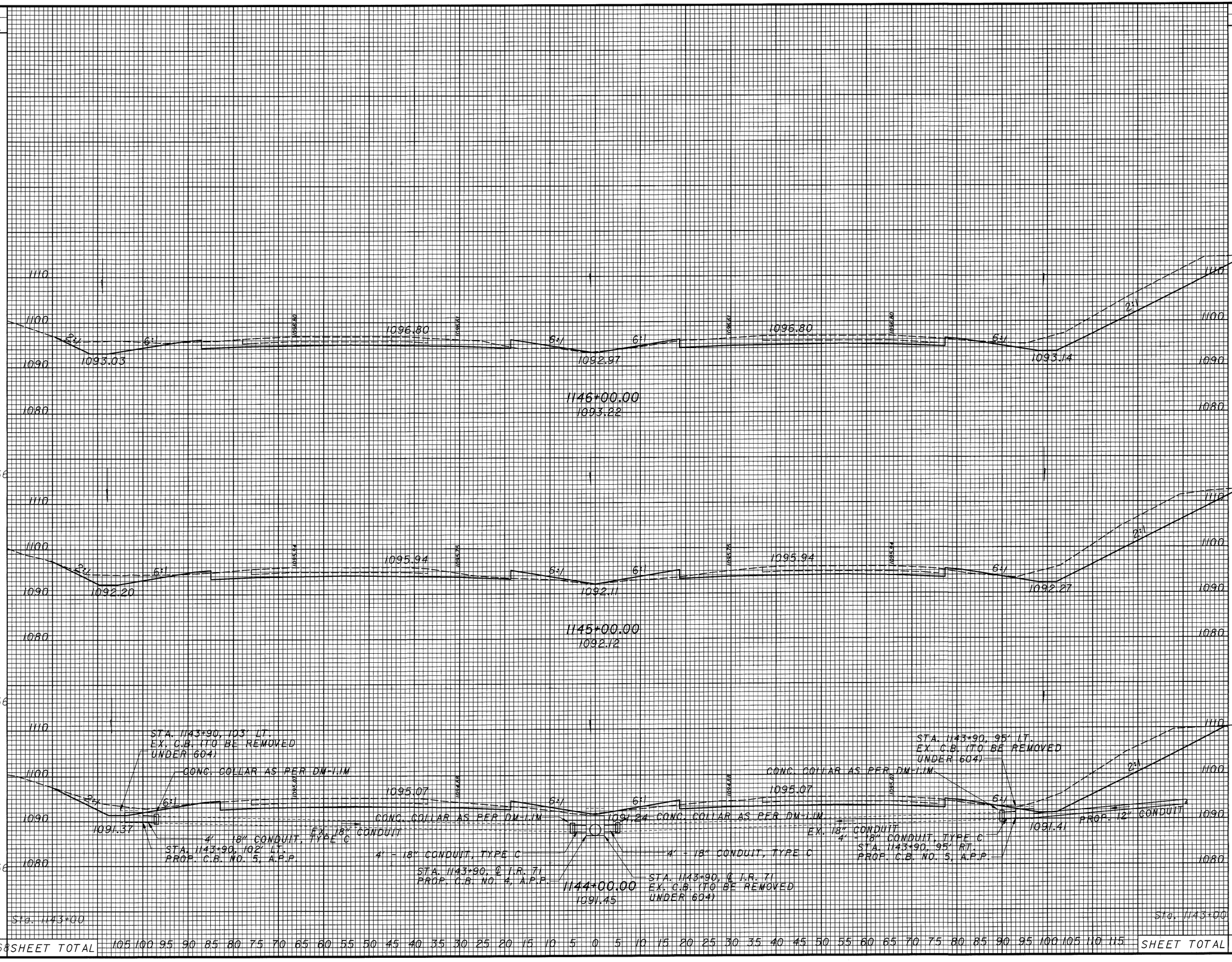
| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| | | 360 | 20 |
| | | 1287 | 96 |
| | | 335 | 32 |
| | | 1250 | 104 |
| | | 340 | 24 |
| | | 1306 | 87 |
| | | 365 | 23 |
| | | 3843 | 287 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1144+00 TO STA. 1146+00

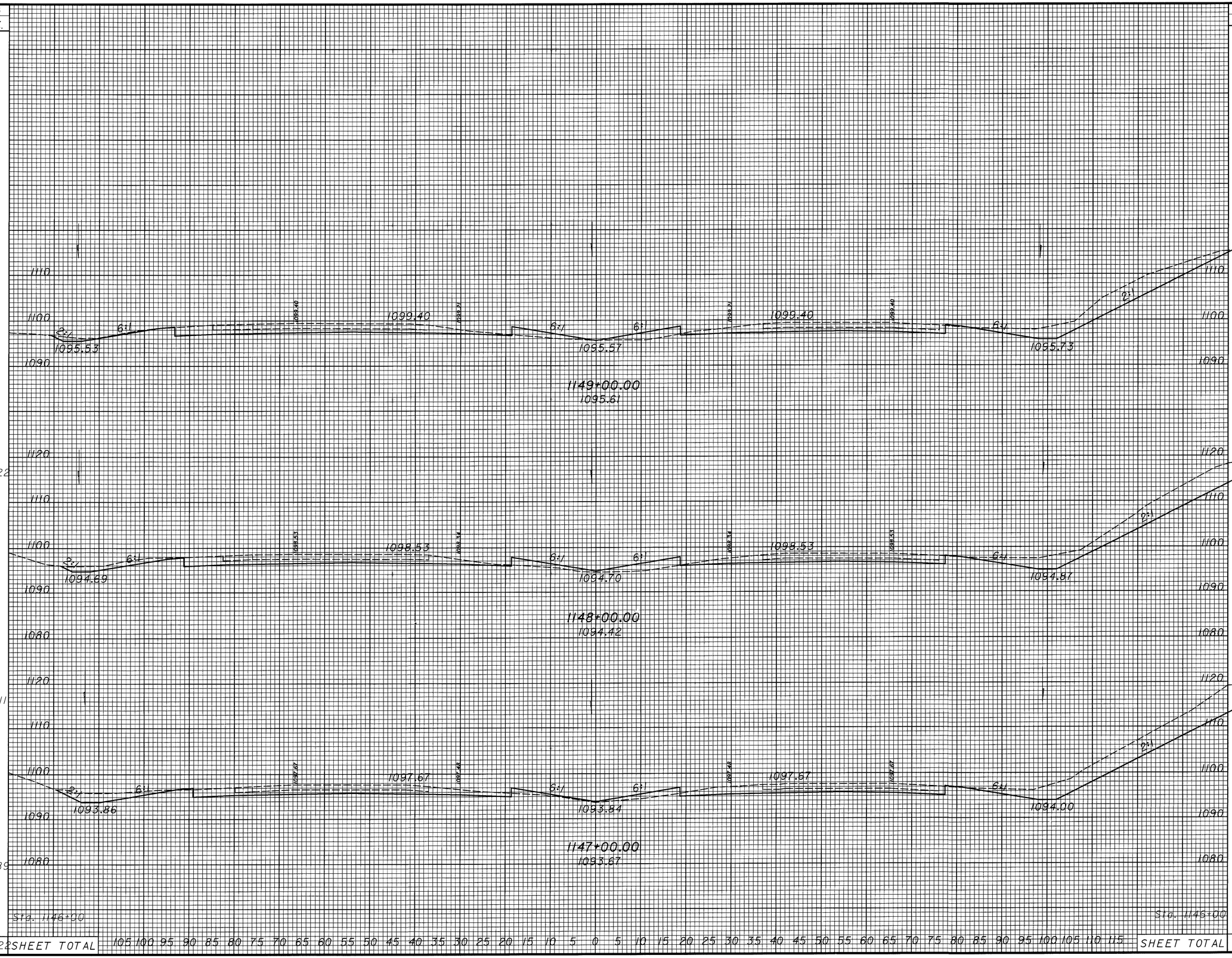
MED-71-15.78

306
940



DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 140 | 1622 |
| 152 | 1711 |
| 156 | 1689 |
| 148 | |
| | 5022 SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 267 | 40 | | |
| 1124 | 154 | | |
| 340 | 43 | | |
| 1370 | 128 | | |
| 400 | 26 | | |
| 1407 | 85 | | |
| 360 | 20 | | |
| SHEET TOTAL | | 3901 | 367 |

CALCULATED N.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 1147+00 TO STA. 1149+00

MED-71-15.78

307
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 140 | 1556 |
| 140 | 1500 |
| 130 | 1500 |
| 140 | |
| | 4556 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 375 | 15 | | |
| | | 1306 | 94 |
| 330 | 36 | | |
| | | 1102 | 141 |
| 265 | 40 | | |
| | | 985 | 148 |
| 267 | 40 | | |
| | | 3393 | 383 |

CALCULATED NJV
CHECKED JWR

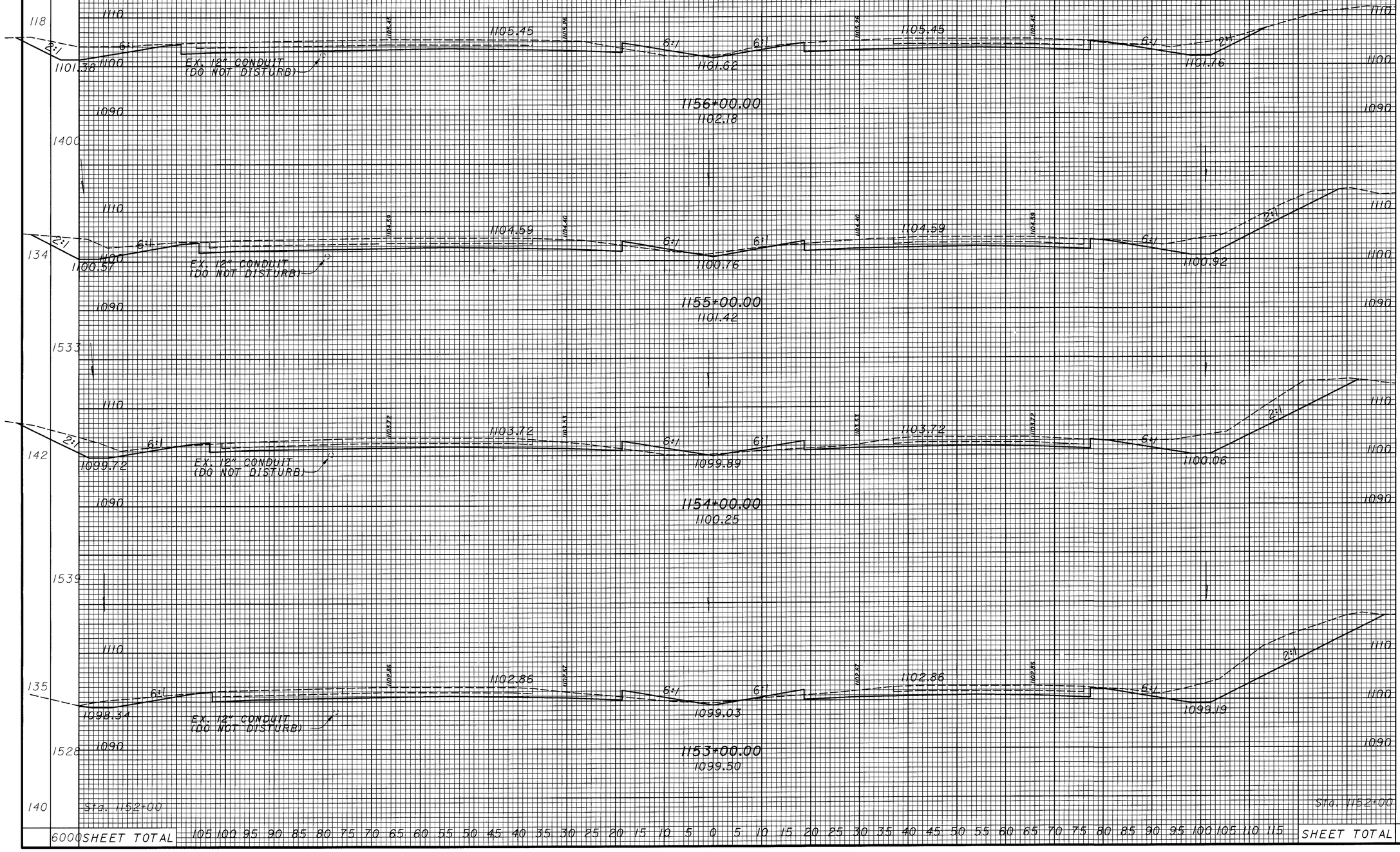
# CROSS SECTIONS
# STA. 1150+00 TO STA. 1152+00

MED-71-15.78

308
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| | | | | | |
| 118 | | 275 | 15 | | |
| | | | | 1102 | 43 |
| 134 | | 320 | 8 | | |
| | | | | 931 | 37 |
| 142 | | 183 | 12 | | |
| | | | | 987 | 56 |
| 135 | | 350 | 18 | | |
| | | | | 1343 | 61 |
| 140 | Sta. 1152+00 | 375 | 15 | | |
| 6000 | SHEET TOTAL | | | 4363 | 197 |




105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED NJV
CHECKED JWR

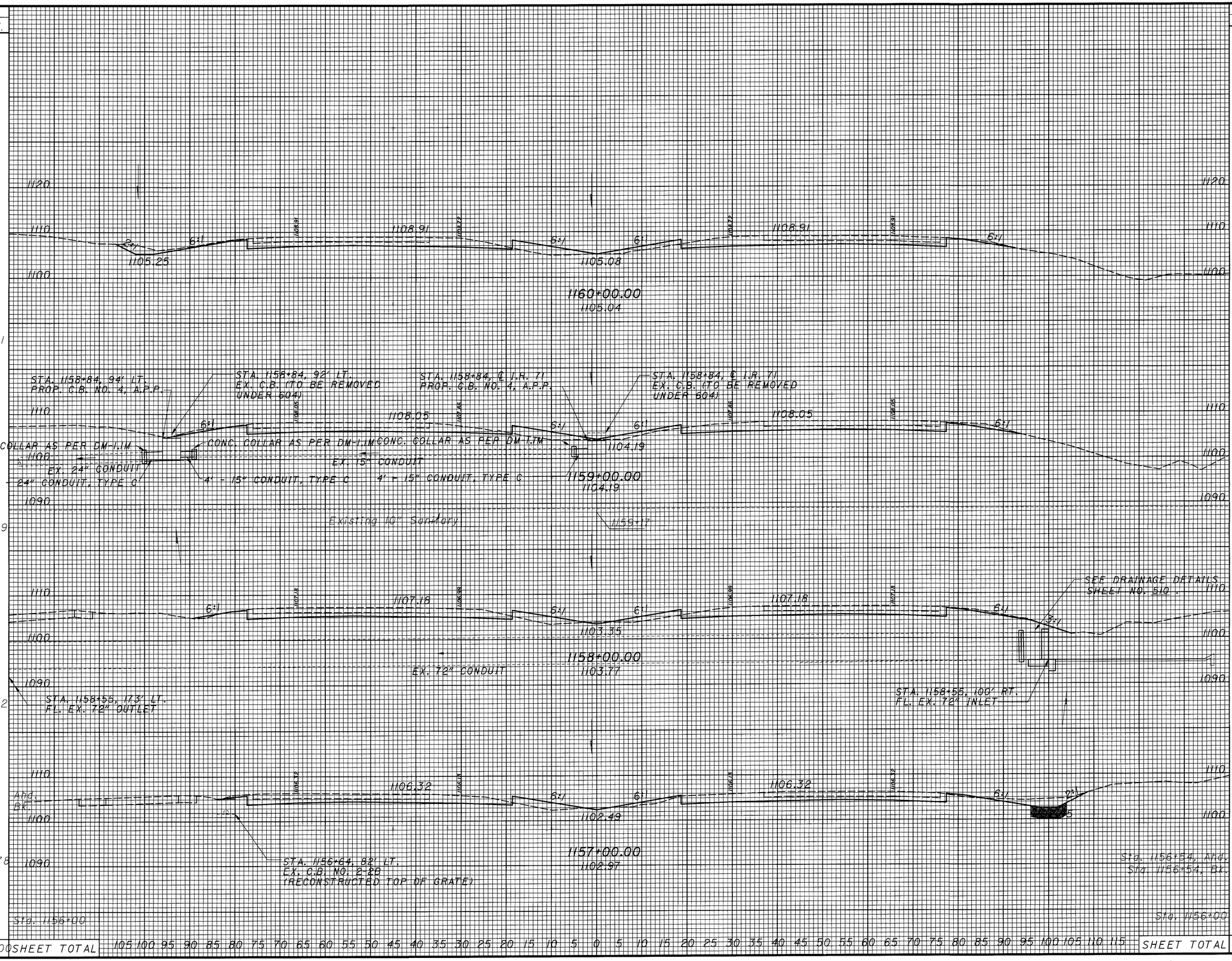
# CROSS SECTIONS
## STA. 1153+00 TO STA. 1156+00

MED-71-15.78

309
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 88 | |
| | 911 |
| 76 | |
| 889 | |
| 84 | |
| 922 | |
| 82 | |
| 112 | |
| 1278 | |
| 118 | |
| 4000 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 152 | 41 | | |
| | | 541 | 144 |
| 140 | 37 | | |
| | | | |
| 509 | 130 | | |
| 135 | 33 | | |
| | | 541 | 111 |
| 157 | 27 | | |
| | | 321 | 40 |
| Sta. 1156+54, Ahd. 280 | 20 | | |
| Sta. 1156+54, Bk. 280 | 20 | | |
| | | 555 | 35 |
| Sta. 1156+00 275 | 15 | | |
| SHEET TOTAL | | 2467 | 460 |

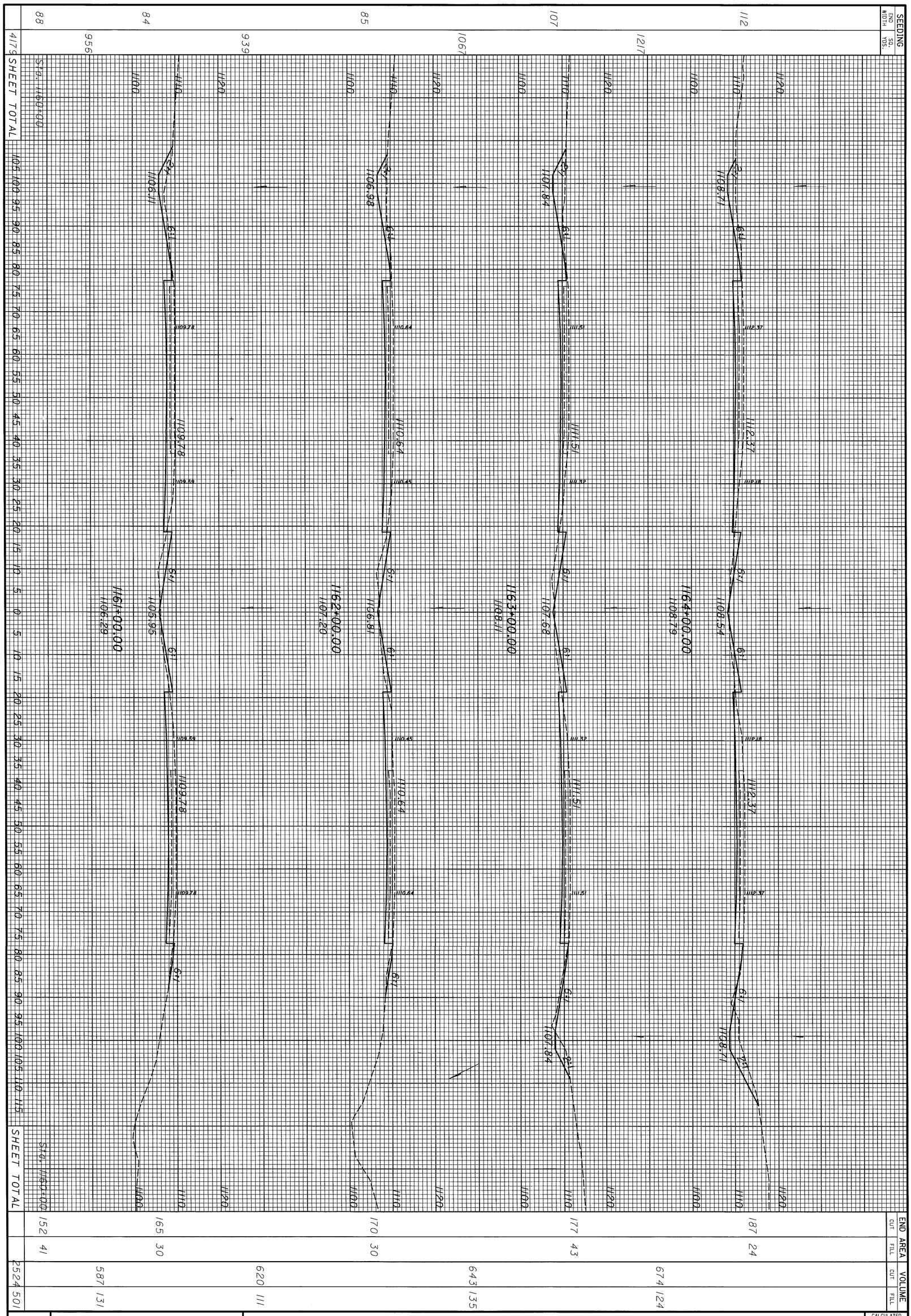
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1157+00 TO STA. 1160+00

MED-71-15.78

310
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




| | | |
|---|---|---|
| 311 / 940 | MED-71-15.78 | CROSS SECTIONS<br>STA. 1161+00 TO STA. 1164+00 |

CALCULATED NJV
CHECKED JWR

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 123 | 1322 |
| 115 | 1261 |
| 112 | 1233 |
| 110 | 1233 |
| 112 | |
| SHEET TOTAL | 5049 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 205 | 50 | | |
| | | 759 | 178 |
| 205 | 46 | | |
| | | 772 | 144 |
| 212 | 32 | | |
| | | 763 | 96 |
| 200 | 20 | | |
| | | 717 | 81 |
| 187 | 24 | | |
| | | 3011 | 499 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1165+00 TO STA. 1168+00

MED-71-15.78

312
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

# CROSS SECTIONS
# STA. 1169+00 TO STA. 1172+00

CALCULATED NJV | CHECKED JWR

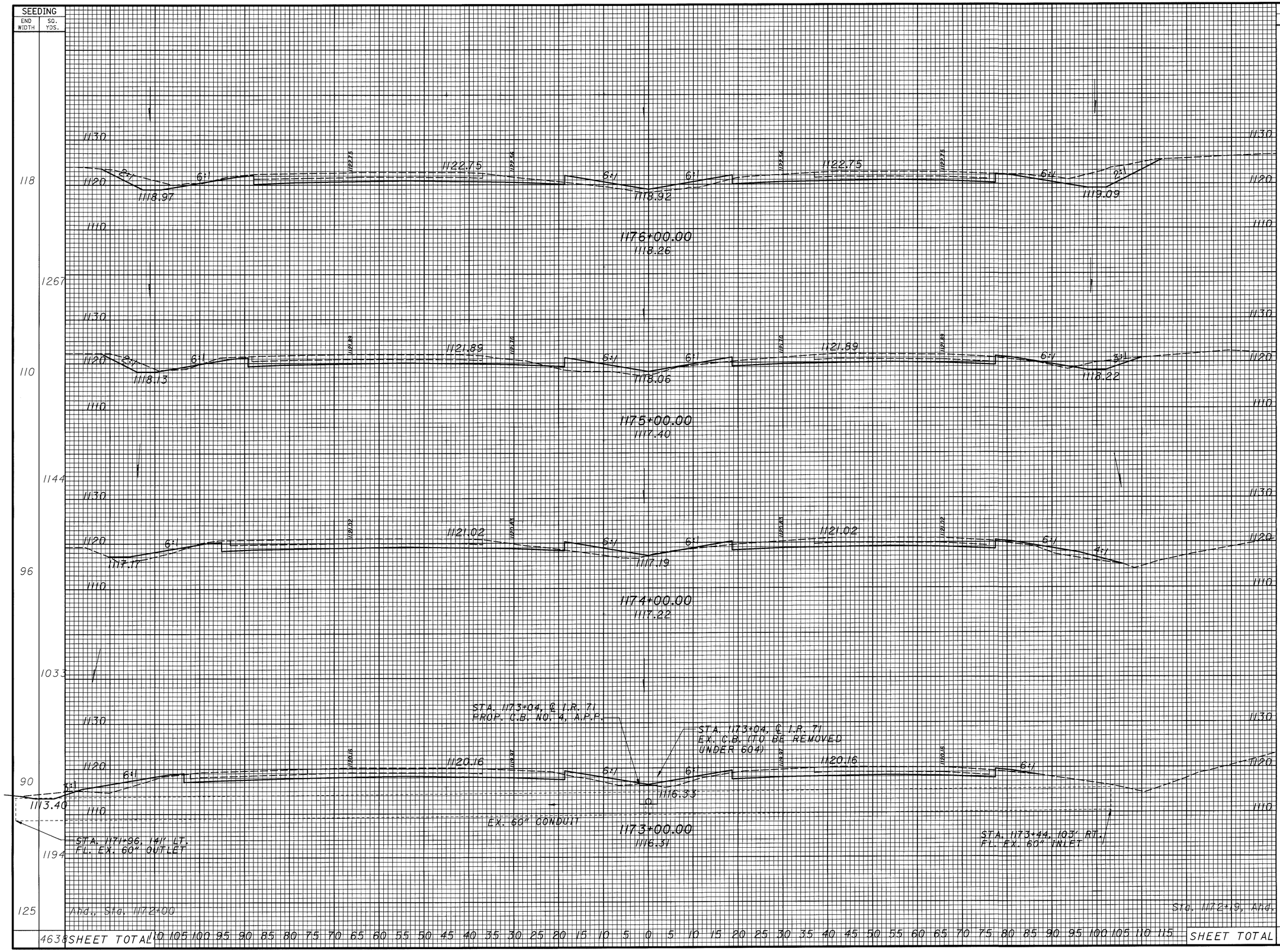
MED-71-15.78

313/940

| SEEDING END WIDTH | SEEDING SQ. YDS. | | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|---|
| | | Sta. 1172+19, Ahd. | 240 | 45 | | |
| | | Sta. 1172+19, Bk. | 210 | 32 | | |
| | | | | | 144 | 23 |
| 125 | | Ahd. | 210 | 32 | | |
| 102 | | Bk. | | | | |
| | 1144 | | | | 741 | 161 |
| 104 | | | 190 | 55 | | |
| | 1289 | | | | 715 | 228 |
| 128 | | | 196 | 68 | | |
| | 1422 | | | | 741 | 233 |
| 128 | | | 204 | 58 | | |
| | 1394 | | | | 757 | 200 |
| 123 | | Sta. 1168+00 | 205 | 50 | | |
| | 5249 | SHEET TOTAL | | | 3098 | 845 |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 118 | 1267 |
| 110 | 1144 |
| 96 | 1033 |
| 90 | 1194 |
| 125 | |
| 4638 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 225 | 42 | | |
| | | 704 | 167 |
| 155 | 48 | | |
| | | 535 | 209 |
| 134 | 65 | | |
| | | 548 | 220 |
| 162 | 54 | | |
| | | 603 | 149 |
| 240 | 45 | | |
| | | 2390 | 745 |

Sta. 1172+00, Ahd. | Sta. 1172+19, Ahd. | SHEET TOTAL

10 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 1173+00 TO STA. 1176+00

MED-71-15.78

314
940

DESIGN FILE : $$$$$$$$$$DESIGNFILE$SPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$$DATE$$$$$
TIME : $$$$TIME$$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 132 | |
| | 1500 |
| 138 | |
| | 1500 |
| 132 | |
| | 1467 |
| 132 | |
| | 1389 |
| 118 | |
| | 5856 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 245 | 20 | | |
| | | 972 | 81 |
| 280 | 24 | | |
| | | 981 | 81 |
| 250 | 20 | | |
| | | 981 | 87 |
| 280 | 27 | | |
| | | 898 | 128 |
| 205 | 42 | | |
| | | 3832 | 377 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1177+00 TO STA. 1180+00

MED-71-15.78

315
940

Sta. 1176+00

SHEET TOTAL

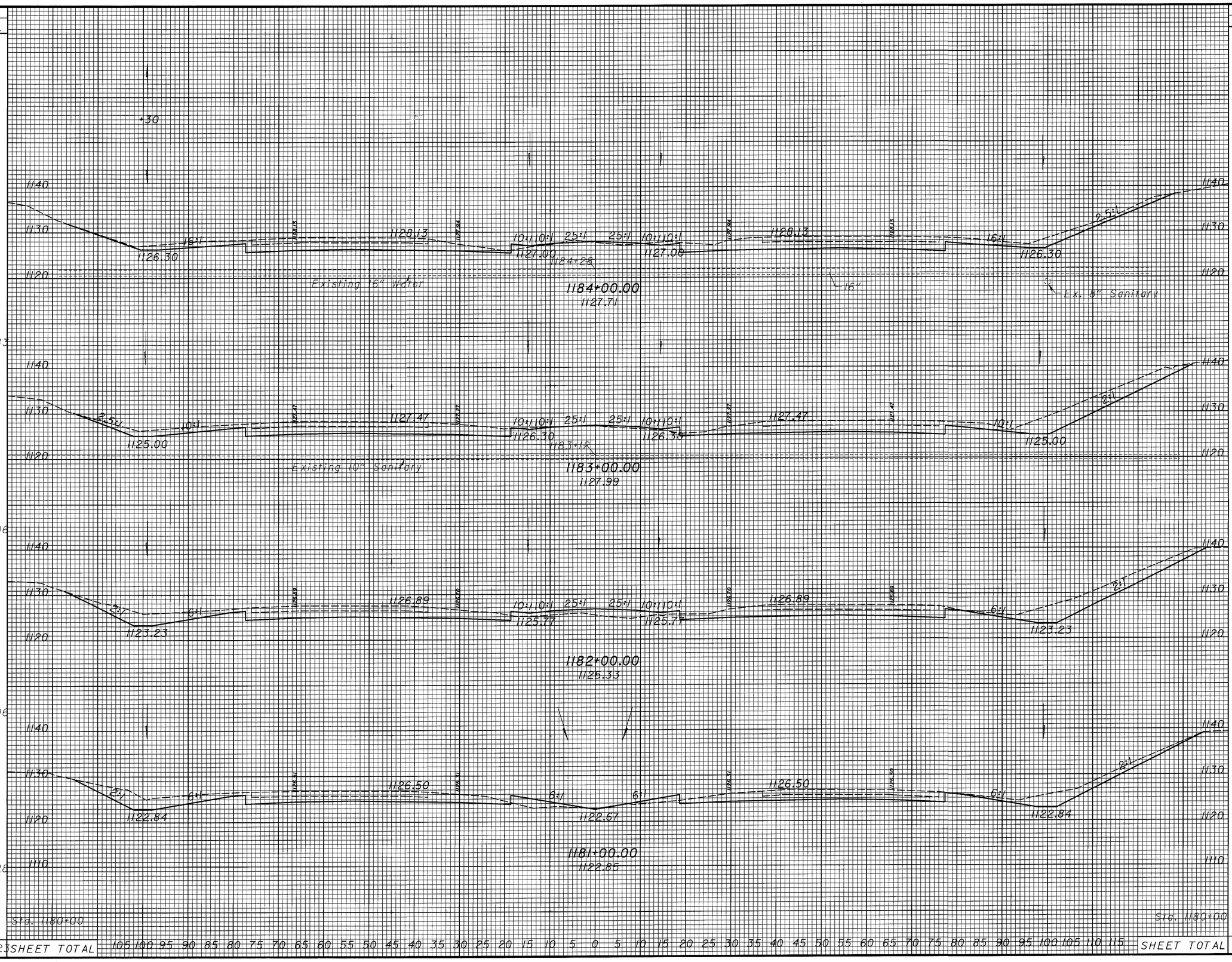
105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

Sta. 1176+00

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 142 | 1583 |
| 143 | |
| 146 | 1606 |
| 143 | 1528 |
| 132 | 1606 |
| | 6323 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 270 | 8 | | |
| 350 | 8 | 1148 | 30 |
| 1306 | 83 | | |
| 355 | 37 | | |
| 1157 | 113 | | |
| 270 | 24 | | |
| 954 | 81 | | |
| 245 | 20 | | |
| 4565 | 307 | | |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

SHEET TOTAL

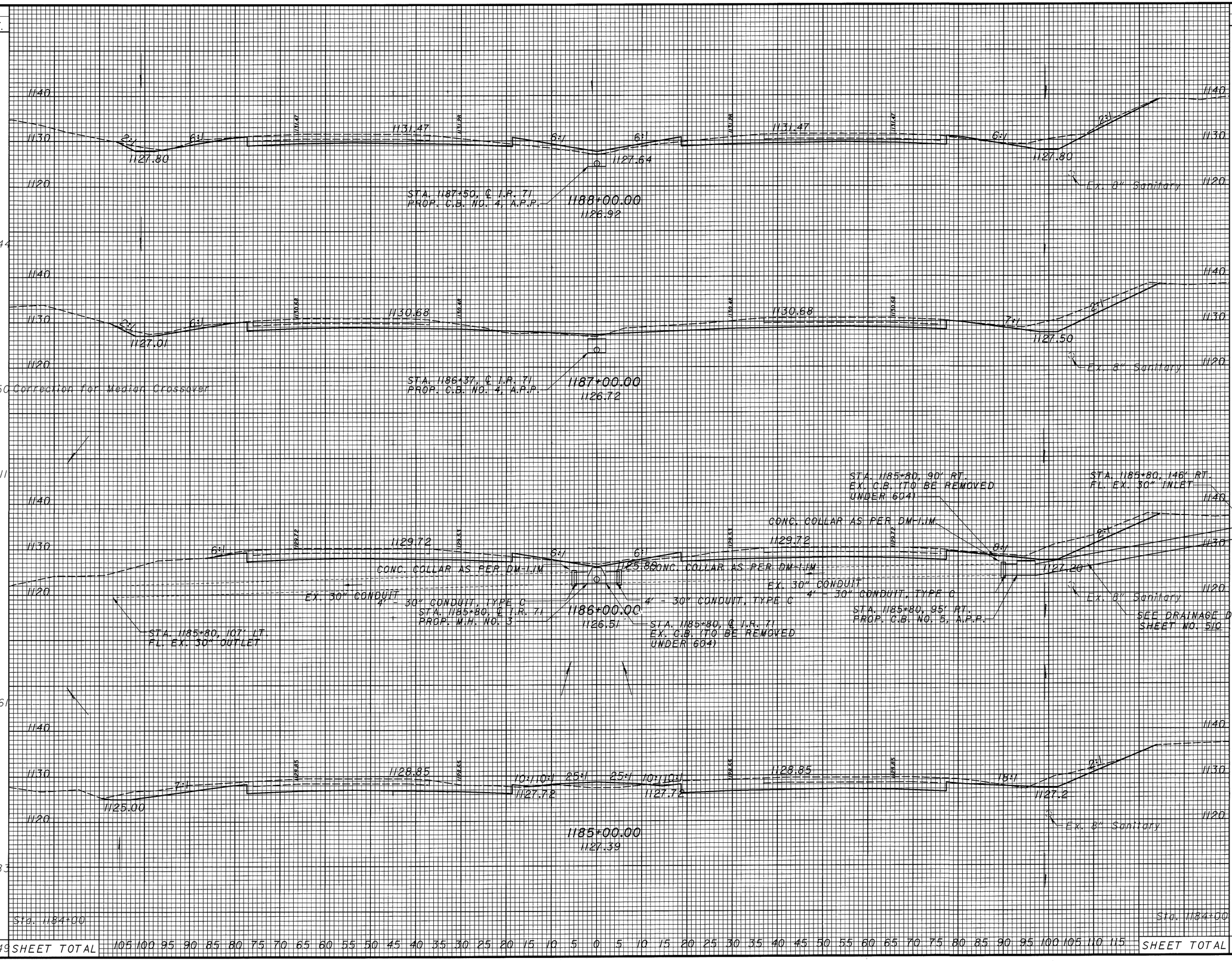
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1181+00 TO STA. 1184+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 122 | 1344 |
| 120 | 1211 |
| -150 Correction for Median Crossover | |
| 102 | 1261 |
| 125 | 1483 |
| 142 | 5149 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 165 | 30 | | |
| | | 713 | 67 |
| 220 | 6 | | |
| | | 843 | 30 |
| 235 | 10 | | |
| | | 944 | 46 |
| 275 | 15 | | |
| | | 1009 | 43 |
| 270 | 8 | | |
| SHEET TOTAL | | 3509 | 186 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

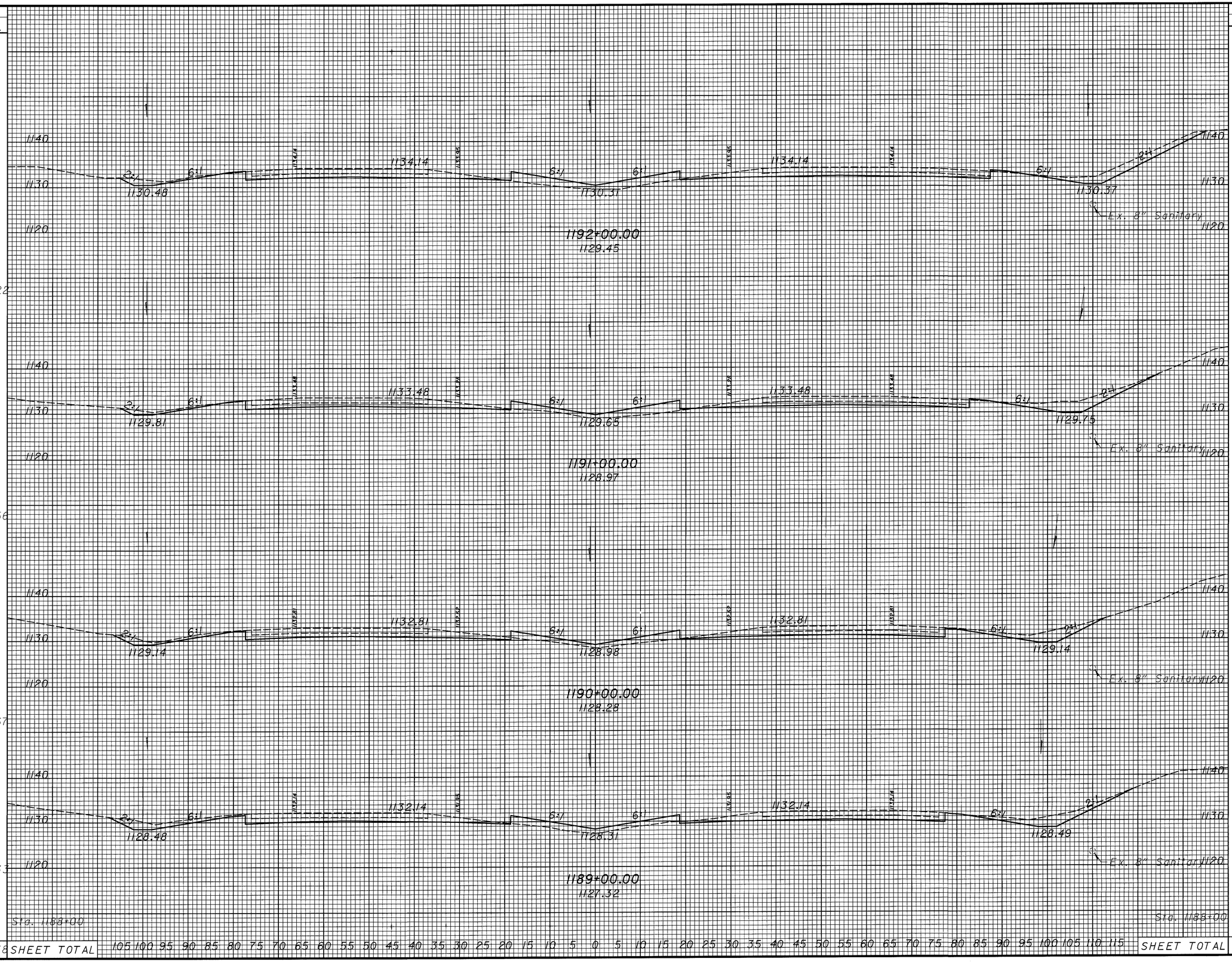
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1185+00 TO STA. 1188+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 122 | 1322 |
| 116 | |
| 1256 | |
| 110 | 1267 |
| 118 | |
| 1333 | |
| 122 | |
| 5178 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 170 | 60 | | |
| | | 611 | 207 |
| 160 | 52 | | |
| | | 611 | 178 |
| 170 | 44 | | |
| | | 631 | 170 |
| 177 | 48 | | |
| | | 622 | 144 |
| 165 | 30 | | |
| SHEET TOTAL | | 2475 | 699 |

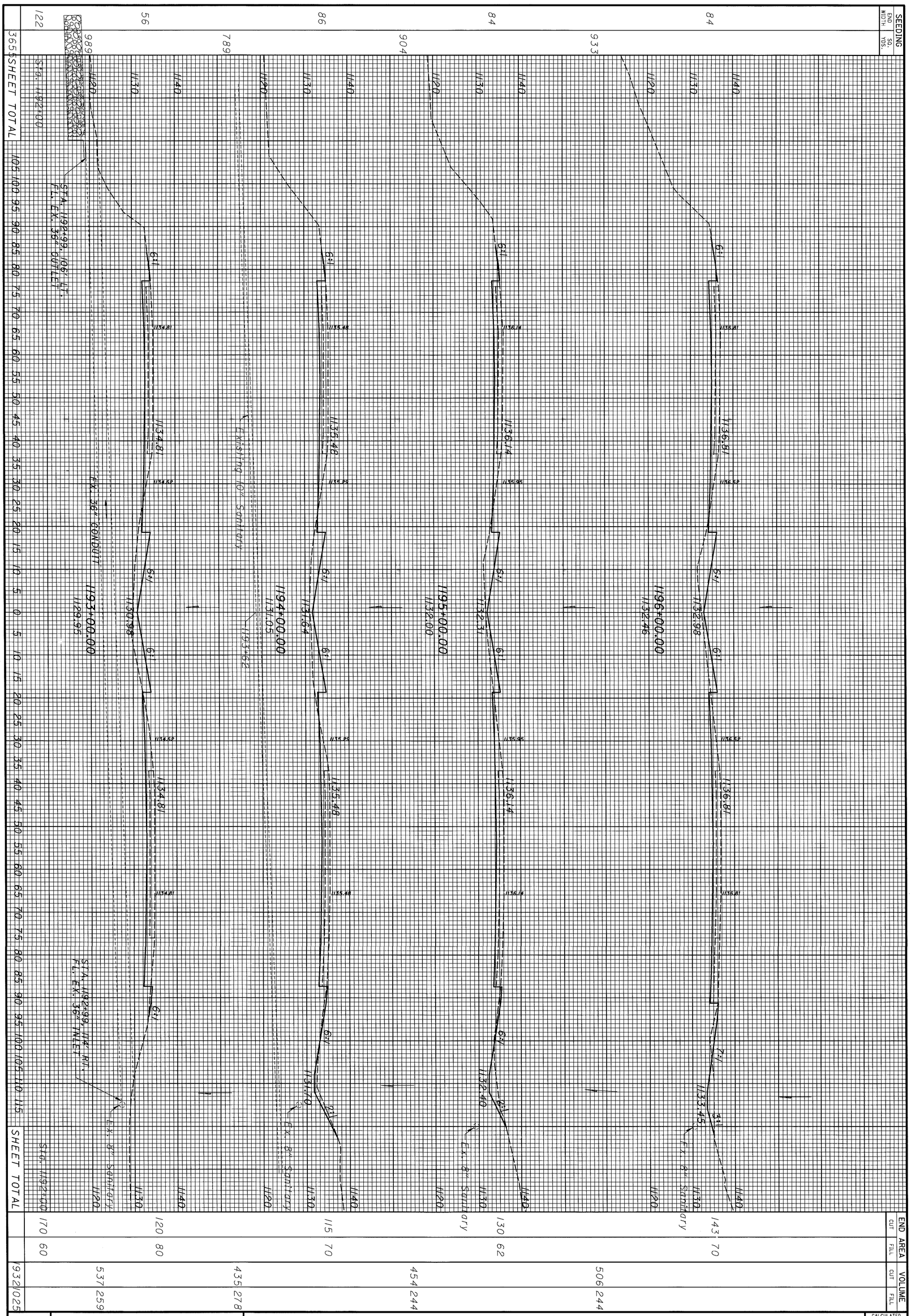
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1189+00 TO STA. 1192+00

MED-71-15.78

318
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




319
940

**MED-71-15.78**

# CROSS SECTIONS
## STA. 1193+00 TO STA. 1196+00

CALCULATED NJV
CHECKED JWR

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | 64 |
| | 90 |
| | 1022 |
| | 94 |
| | 1011 |
| | 88 |
| | 956 |
| | 84 |
| | 2989 |

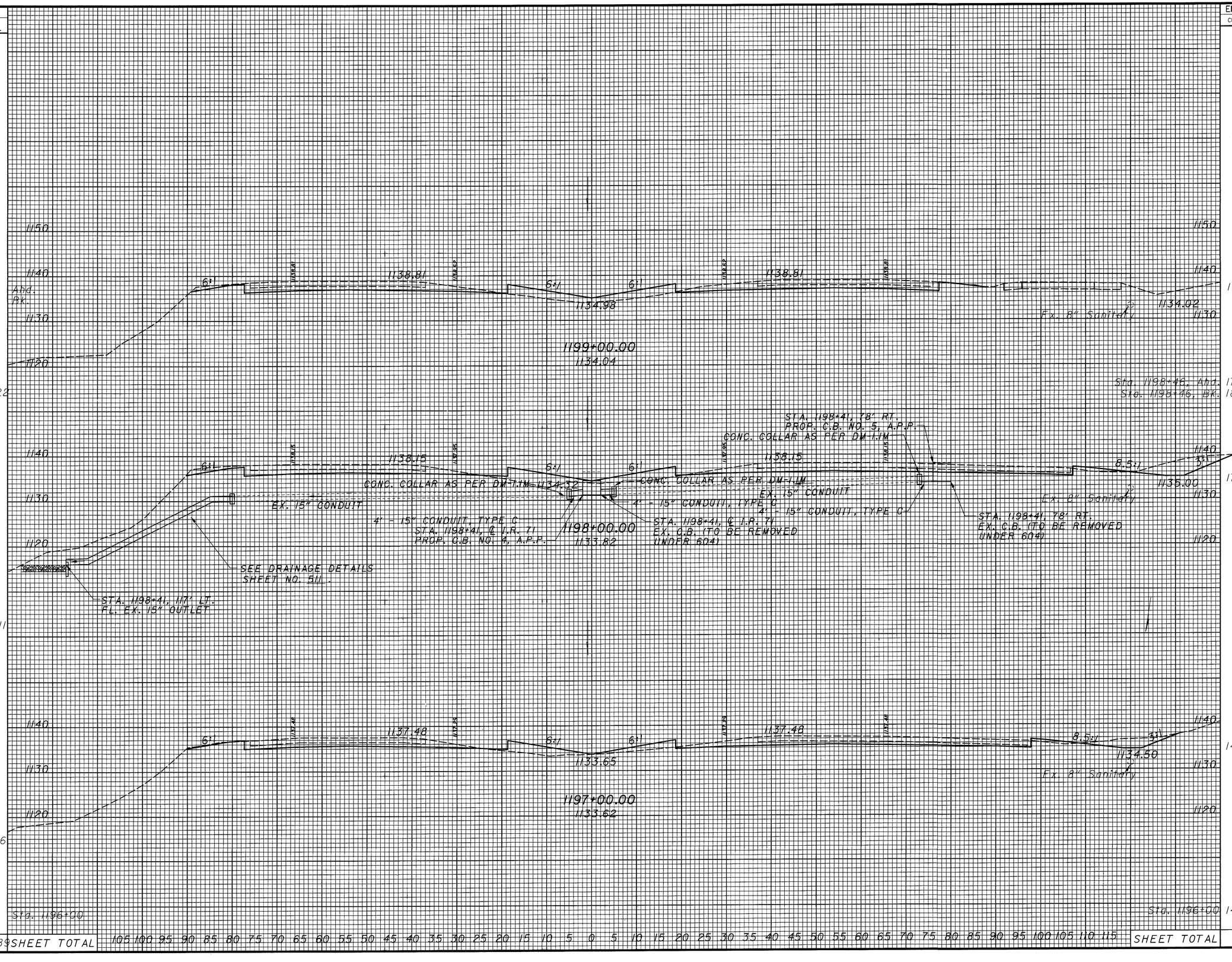
| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 115 | 62 | | |
| | | 285 | 132 |
| 170 | 70 | | |
| 180 | 70 | | |
| | | 304 | 124 |
| 177 | 76 | | |
| | | 593 | 233 |
| 143 | 50 | | |
| | | 530 | 222 |
| 143 | 70 | | |
| SHEET TOTAL | | 1712 | 711 |

CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
# STA. 1197+00 TO STA. 1199+00

MED-71-15.78

320
940



DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 98 | 1111 | 144 | 62 | 522 | 193 |
| 102 | | 138 | 42 | | |
| 106 | 7 | | | 496 | 148 |
| 90 | | 130 | 38 | | |
| 84 | 4 | | | 426 | 176 |
| 62 | | 100 | 57 | | |
| 70 | 0 | 115 | 62 | 398 | 220 |
| 372 | SHEET TOTAL | | | 1842 | 737 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1200+00 TO STA. 1203+00

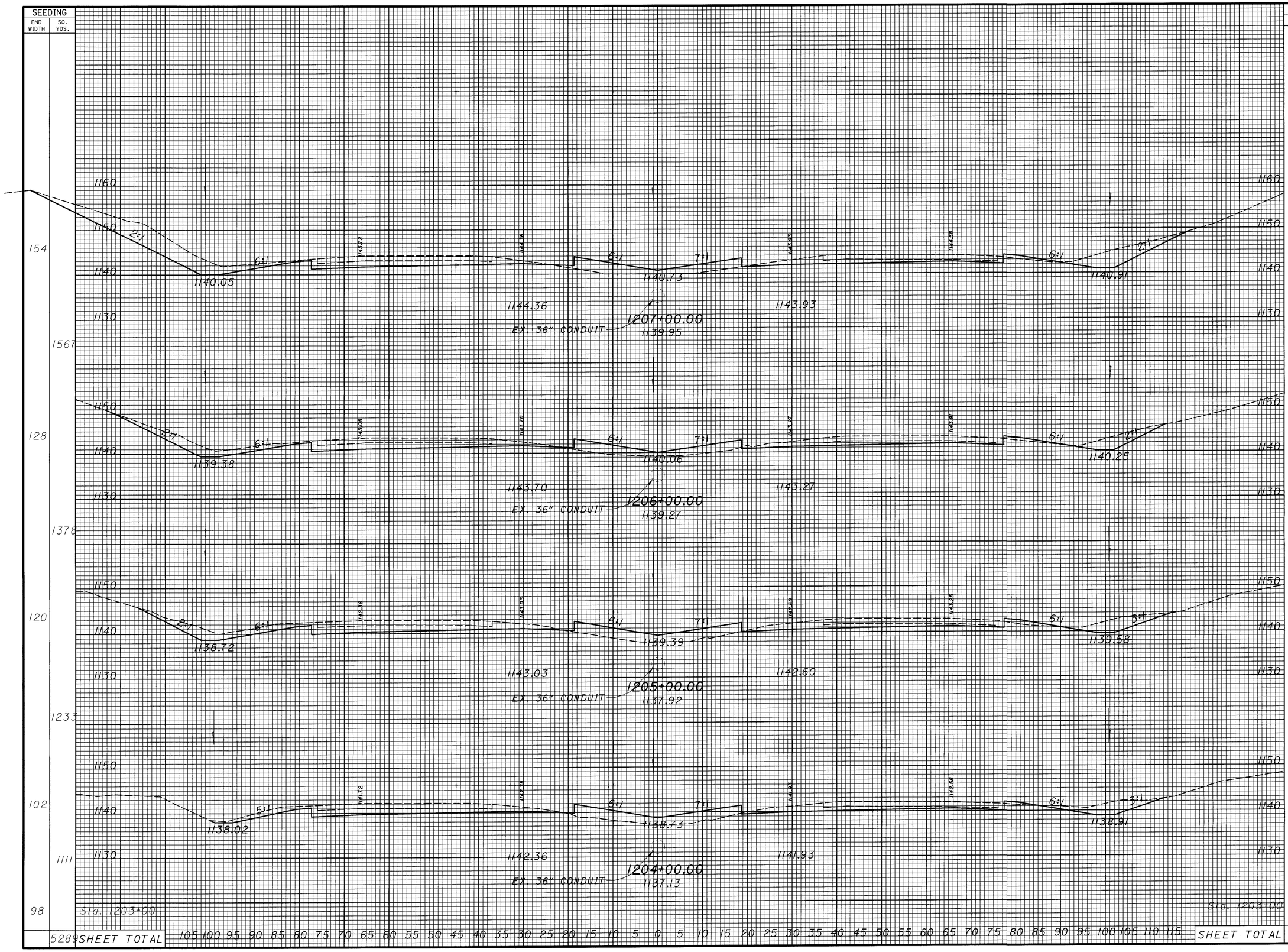
MED-71-15.78

321
940

1203+00.00
1137.02
1141.54
1141.29
EX. 36" CONDUIT
1202+00.00
1137.52
1137.90
1138.07
1137.04
1137.21
1140.68
1140.62
CONC. COLLAR AS PER DM-1.1M
EX. 36" CONDUIT
4' - 36" CONDUIT, TYPE C
STA. 1202+34, ℄ I.R. 71
PROP. C.B. NO. 4A, A.P.P.
STA. 1201+65, 118' LT.
FL. EX. 36" OUTLET
STA. 1202+34, ℄ I.R. 71
EX. C.B. (TO BE REMOVED
UNDER 604)
STA. 1200+62, 95' RT.
PROP. C.B. NO. 5, A.P.P.
1201+00.00
1136.89
1140.15
1140.15
1136.32
1140.15
1136.48
CONC. COLLAR AS PER DM-1.1M
EX. 15" CONDUIT
4' - 15" CONDUIT, TYPE C
STA. 1200+62, 95' RT.
EX. C.B. (TO BE REMOVED
UNDER 604)
Existing 12" Sanitary
(On Skew)
1200+45
1200+00.00
1135.61
1139.48
1139.48
1135.63
1139.48
1134.02
EX. 8" Sanitary
STA. 1200+48, 176' RT.
FL. EX. 84" INLET
STA. 1199+20, 109' LT.
FL. EX. 84" OUTLET
Sta. 1199+00
EX. 84" CONDUIT
Sta. 1199+00
6:1
3:1
105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115
SHEET TOTAL

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 154 | 1567 |
| 128 | 1378 |
| 120 | 1233 |
| 102 | 1111 |
| 98 | |
| 5289 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 300 | 70 | | |
| | | 907 | 254 |
| 190 | 67 | | |
| | | 717 | 285 |
| 197 | 87 | | |
| | | 661 | 300 |
| 160 | 75 | | |
| | | 563 | 254 |
| 144 | 62 | | |
| | SHEET TOTAL | 2848 | 1093 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED NJV
CHECKED JWR

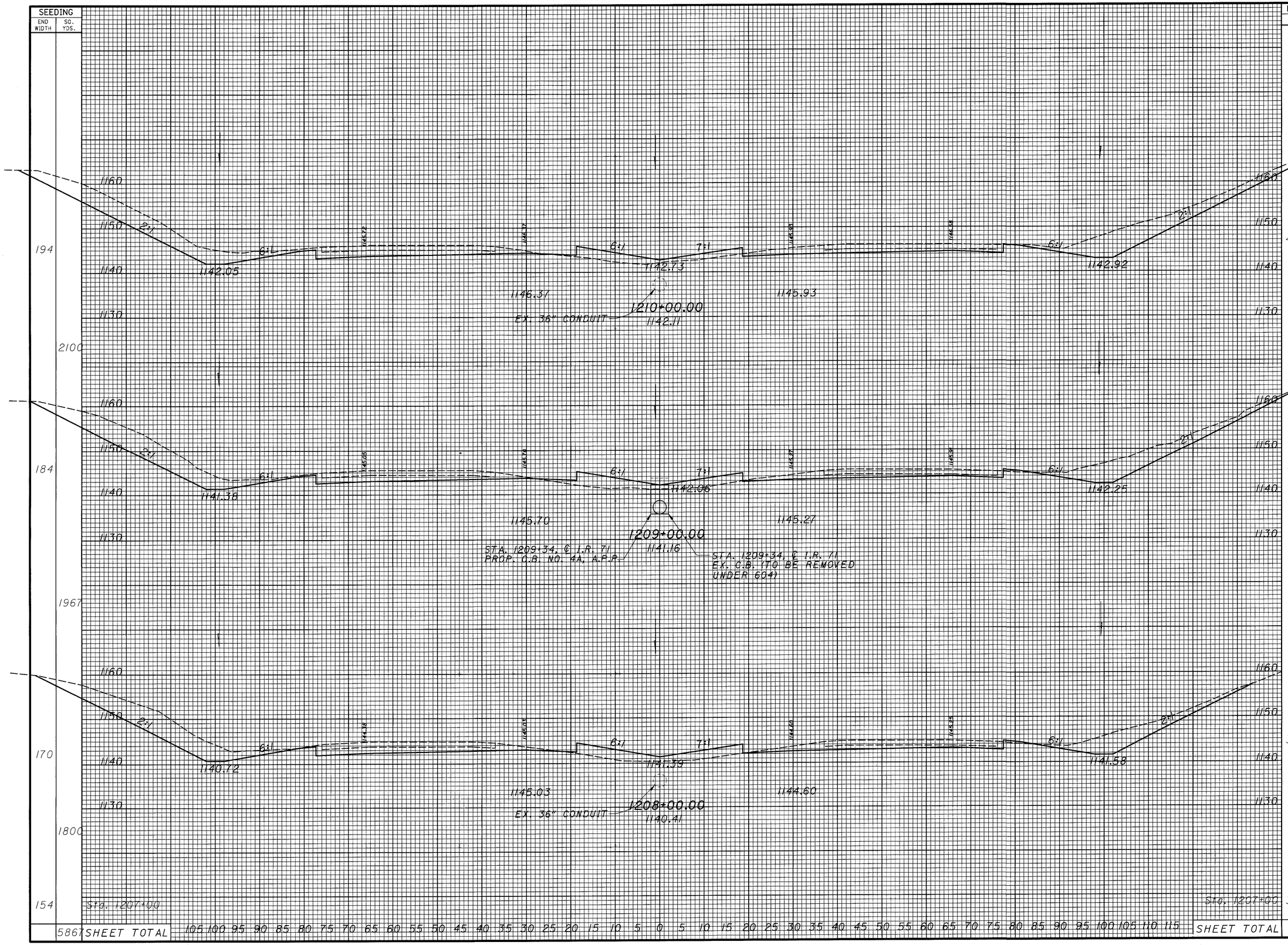
# CROSS SECTIONS
## STA. 1204+00 TO STA. 1207+00

MED-71-15.78

322
940

: $$$$$$$$$$DESIGNFILE$PECIFICATION$$$$$$$$$$
DESIGN FILE : $$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 194 | |
| | 2100 |
| 184 | |
| | 1967 |
| 170 | |
| | 1800 |
| 154 | |
| | 5867 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 455 | 56 | | |
| | | 1602 | 244 |
| 410 | 76 | | |
| | | 1453 | 267 |
| 375 | 68 | | |
| | | 1250 | 256 |
| 300 | 70 | | |
| | | 4305 | 767 |

CALCULATED N.J.V.
CHECKED J.W.R.

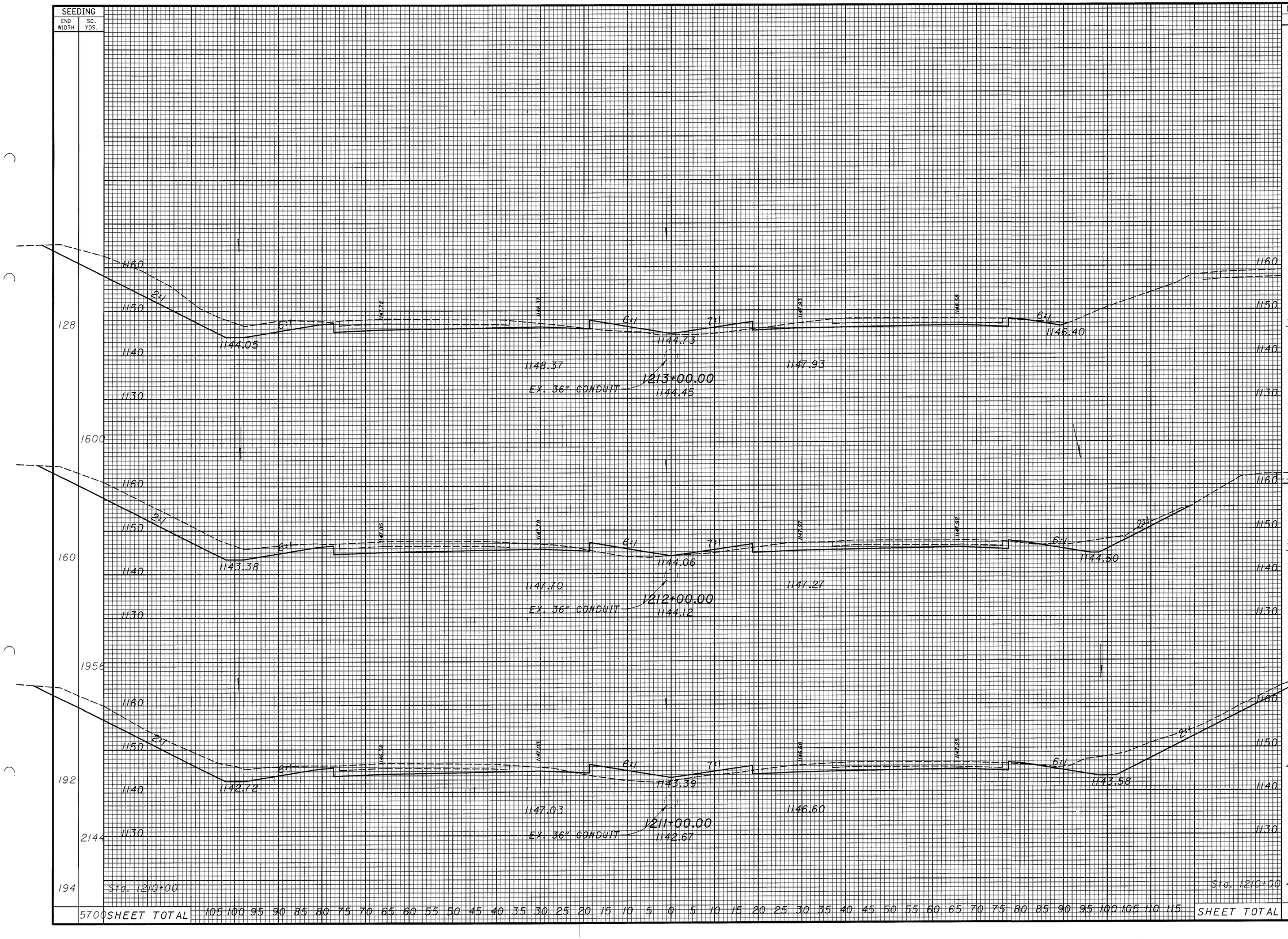
# CROSS SECTIONS
# STA. 1208+00 TO STA. 1210+00

MED-71-15.78

323
940

DESIGN FILE : $$$$$$$$$$DESIGNFILE$SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 128 | |
| 1600 | |
| 160 | |
| 1956 | |
| 192 | |
| 2144 | |
| 194 | |
| 5700 | SHEET TOTAL |




| 105 | 100 | 95 | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

SHEET TOTAL

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 330 | 44 | | |
| 352 | 36 | | |
| | | 1263 | 148 |
| | | 1430 | 169 |
| 420 | 55 | | |
| | | 1620 | 206 |
| 455 | 56 | | |
| SHEET TOTAL | | 4313 | 523 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1211+00 TO STA. 1213+00

MED-71-15.78

324
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

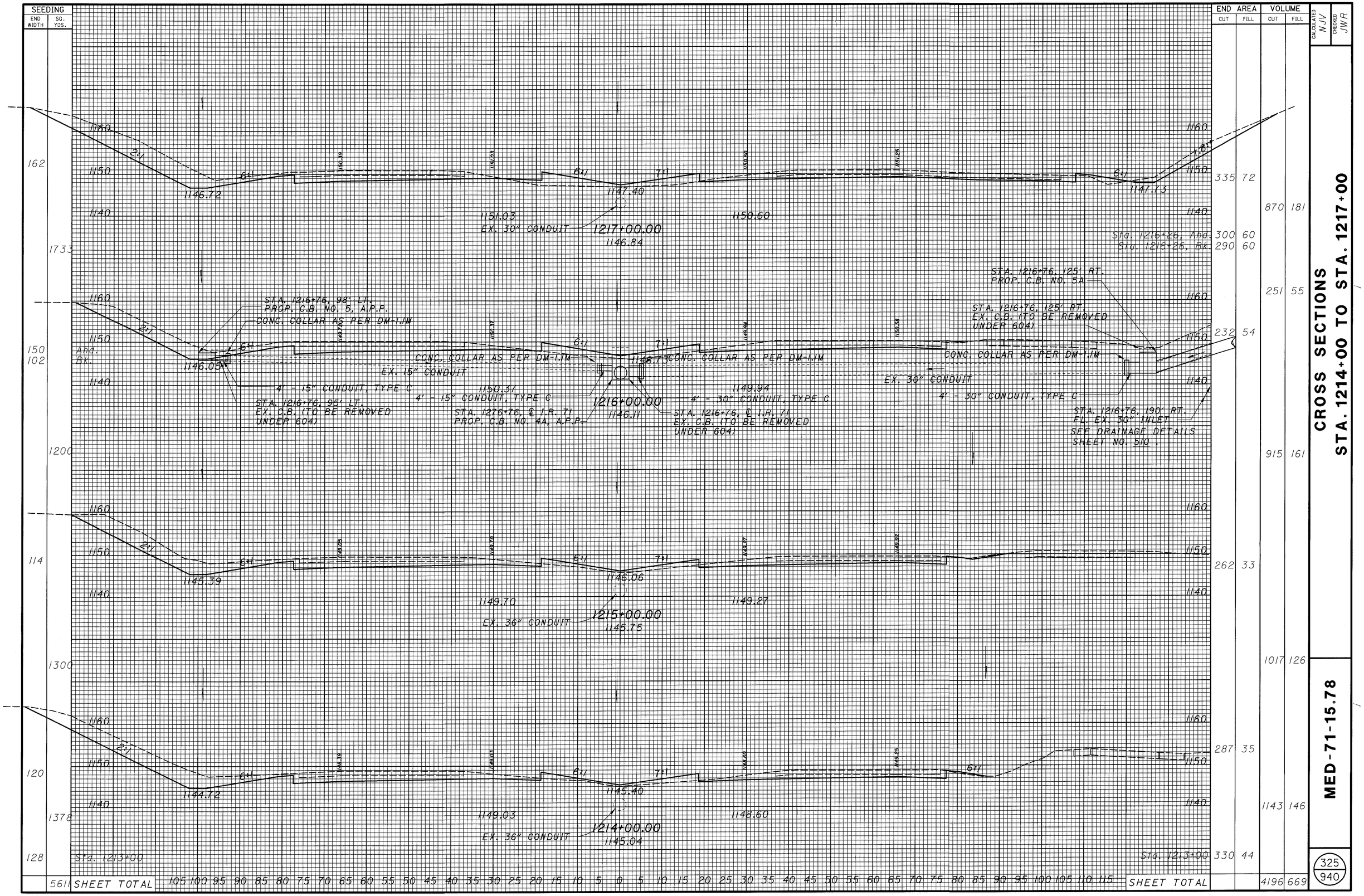
# CROSS SECTIONS STA. 1214+00 TO STA. 1217+00

CALCULATED NJV
CHECKED JWR

MED-71-15.78

325
940

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 162 | | 335 | 72 | | |
| | | | | 870 | 181 |
| 173 | | 300 | 60 | | |
| | | 290 | 60 | | |
| | | | | 251 | 55 |
| 150 | | 232 | 54 | | |
| 102 | | | | | |
| | | | | 915 | 161 |
| 114 | | 262 | 33 | | |
| | | | | 1017 | 126 |
| 130 | | 287 | 35 | | |
| | | | | 1143 | 146 |
| 120 | | 330 | 44 | | |
| 137 | | | | | |
| 128 | | | | | |
| | 561 SHEET TOTAL | | | 4196 | 669 |



DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 170 | 1789 |
| 152 | 1822 |
| 176 | 1878 |
| 162 | |
| | 5489 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 200 | 120 | 852 | 333 |
| 260 | 60 | 991 | 222 |
| 285 | 60 | 1148 | 244 |
| 335 | 72 | 1299 | 799 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1218+00 TO STA. 1220+00

MED-71-15.78

326
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 154 | 1800 |
| 170 | 1778 |
| 150 | 1472 |
| 115 | 1583 |
| 170 | |
| SHEET TOTAL | 6633 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 350 | 28 | | |
| | | 1389 | 85 |
| 400 | 18 | | |
| | | 1194 | 100 |
| 245 | 36 | | |
| | | 694 | 94 |
| 130 | 15 | | |
| | | 611 | 250 |
| 200 | 120 | | |
| SHEET TOTAL | | 3888 | 529 |

CALCULATED N.J.V
CHECKED J.W.R

# CROSS SECTIONS
## STA. 1221+00 TO STA. 1224+00

MED-71-15.78

327
940

1224+00.00
1153.90
STA. 1223+68, 12.5' LT.
PROP. M.H. NO. 3
1155.36
1154.18
1154.93
1154.78
1155.47
1155.16
1155.93
1155.67
1161.04
1152.54
8:1 10:1 25:1 25:1 8:1 10:1 6:1 6:1 2:1

1223+00.00
1152.09
EX. 15" CONDUIT
1154.81
1154.38
1154.16
1154.81
1155.02
1154.38
1150.49
1151.17
1151.95
6:1 6:1 7:1 6:1 6:1 2:1

1222+00.00
1150.69
EX. 15" CONDUIT
1154.30
1153.87
1153.65
1154.17
1153.87
1154.31
1149.98
1151.41
6:1 6:1 7:1 6:1 6:1 2:1

1221+00.00
1150.97
STA. 1221+34, ℄ I.R. 71
PROP. C.B. NO. 4A, A.P.P.
1153.70
1153.27
1153.05
1153.27
1153.92
1149.39
1150.80
6:1 6:1 7:1 6:1 6:1 2:1

CONC. COLLAR AS PER DM-1.IM
EX. 30" CONDUIT
4' - 30" CONDUIT, TYPE C
STA. 1221+34, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
4' - 30" CONDUIT, TYPE C
STA. 1221+34, 179' RT.
FL. EX. 30" INLET
SEE DRAINAGE DETAILS SHEET NO. 5III.
STA. 1221+34, 116' RT.
PROP. C.B. NO. 5A
STA. 1221+34, 114' RT.
EX. C.B. (TO BE REMOVED UNDER 604)

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

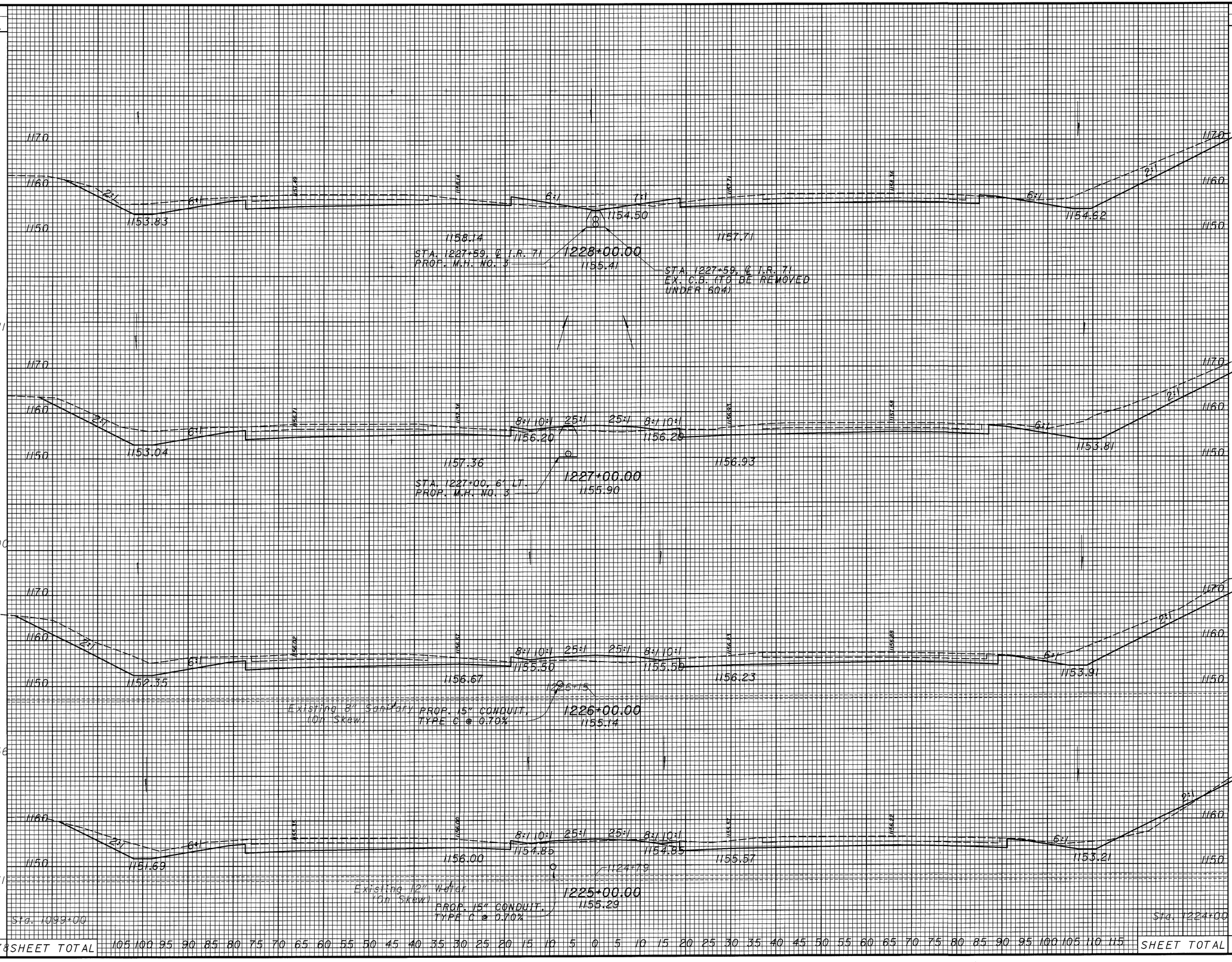
Sta. 1220+00
Sta. 1220+00

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

# CROSS SECTIONS
# STA. 1225+00 TO STA. 1228+00

CALCULATED NJV
CHECKED JWR

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 146 | | | | | |
| | 1711 | 380 | 18 | 1519 | 78 |
| 162 | | 440 | 24 | | |
| 162 | | 435 | 30 | | |
| 154 | | 280 | 23 | | |
| | 1711 | | | 1167 | 94 |
| 154 | | 350 | 28 | | |
| | 6978 SHEET TOTAL | SHEET TOTAL | | 5630 | 370 |
| | | | | 1620 | 100 |
| | | | | 1324 | 98 |




MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| 112 | 1100 |
| 86 | 1056 |
| 104 | 1289 |
| 128 | 1522 |
| 146 | |
| SHEET TOTAL | 4967 |




| | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|
| | 225 | 26 | | |
| | | | 713 | 104 |
| | 160 | 30 | | |
| | | | 667 | 152 |
| | 200 | 52 | | |
| | | | 972 | 148 |
| | 325 | 28 | | |
| | | | 1306 | 85 |
| | 380 | 18 | | |
| SHEET TOTAL | | | 3658 | 489 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

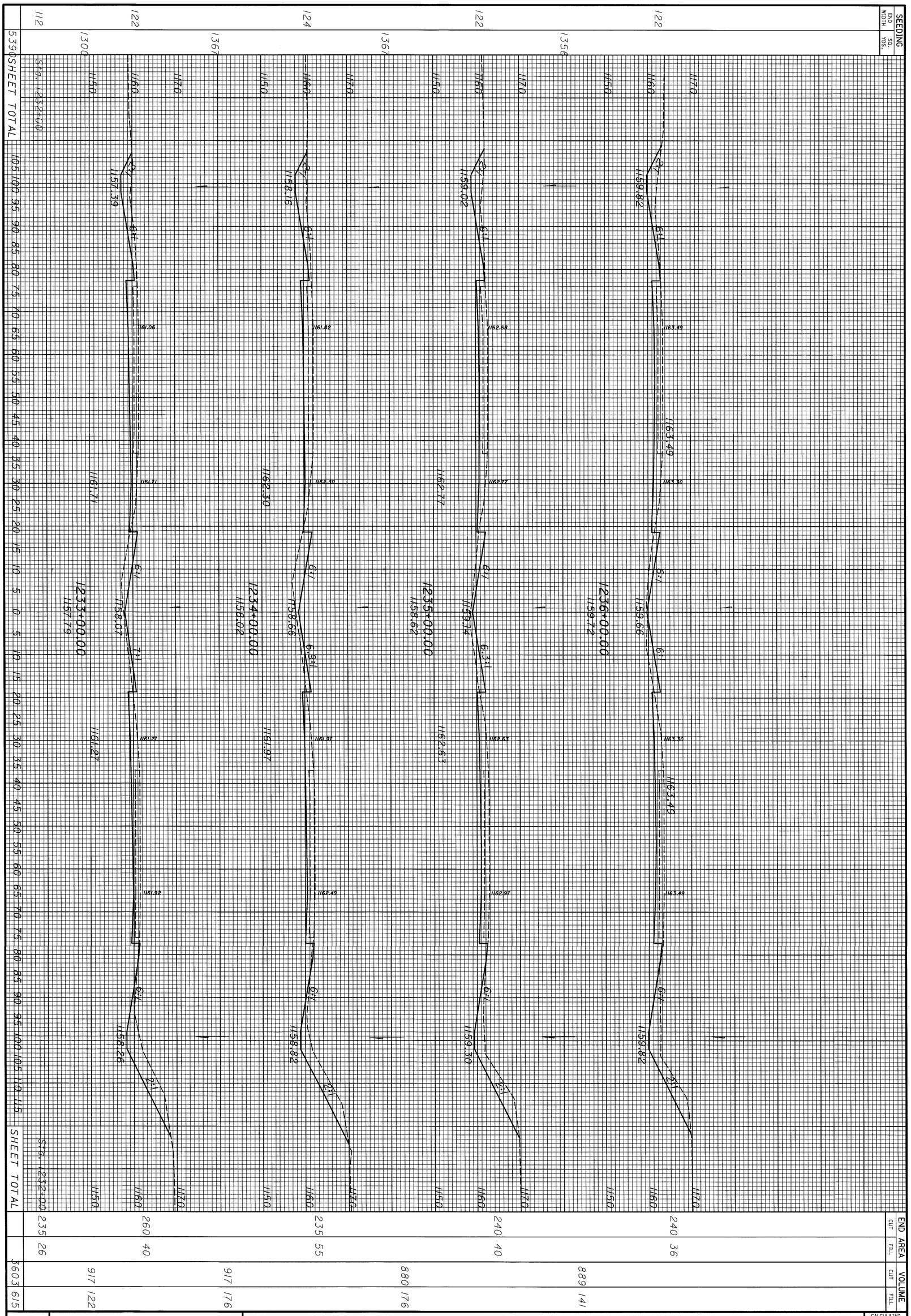
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS STA. 1229+00 TO STA. 1232+00

MED-71-15.78

329
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




330
940

**MED-71-15.78**

## CROSS SECTIONS
## STA. 1233+00 TO STA. 1236+00

CALCULATED NJV
CHECKED JWR

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | |
| 88 | |
| | |
| 989 | |
| 90 | |
| | |
| 1089 | |
| 106 | |
| | |
| 1267 | |
| 122 | |
| | |
| 1356 | |
| 122 | |
| 470 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 115 | 50 | | |
| | | 457 | 137 |
| 132 | 24 | | |
| | | 578 | 70 |
| 180 | 14 | | |
| | | 774 | 81 |
| 238 | 30 | | |
| | | 885 | 122 |
| 240 | 36 | | |
| | | 2694 | 410 |

CALCULATED NJV
CHECKED JWR

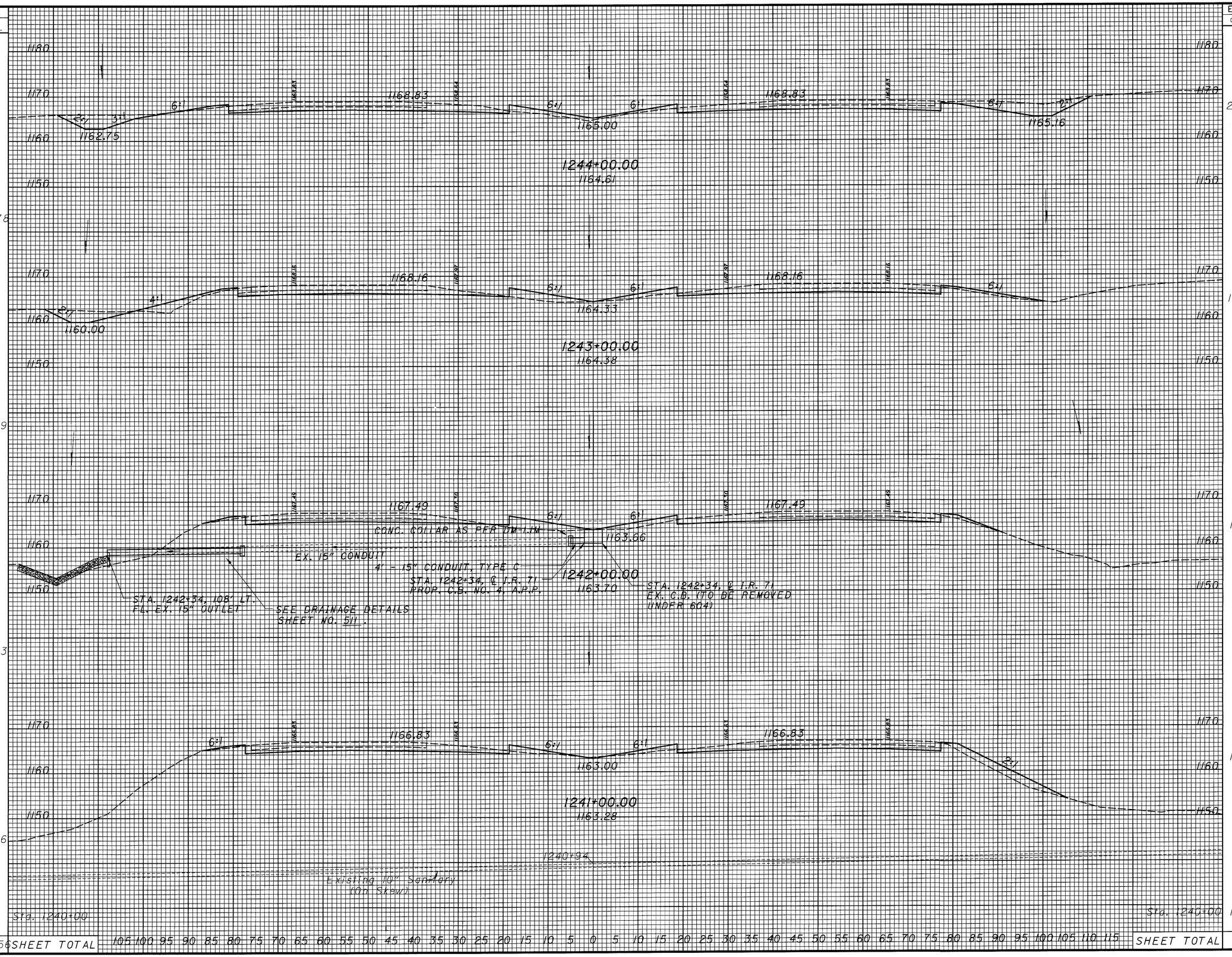
# CROSS SECTIONS
## STA. 1237+00 TO STA. 1240+00

MED-71-15.78

331
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 118 | 1278 |
| 112 | 989 |
| 66 | 833 |
| 84 | 956 |
| 88 | 406 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 220 | 32 | | |
| | | 663 | 189 |
| 138 | 70 | | |
| | | 459 | 222 |
| 110 | 50 | | |
| | | 417 | 207 |
| 115 | 62 | | |
| | | 426 | 207 |
| 115 | 50 | | |
| | | 1965 | 825 |

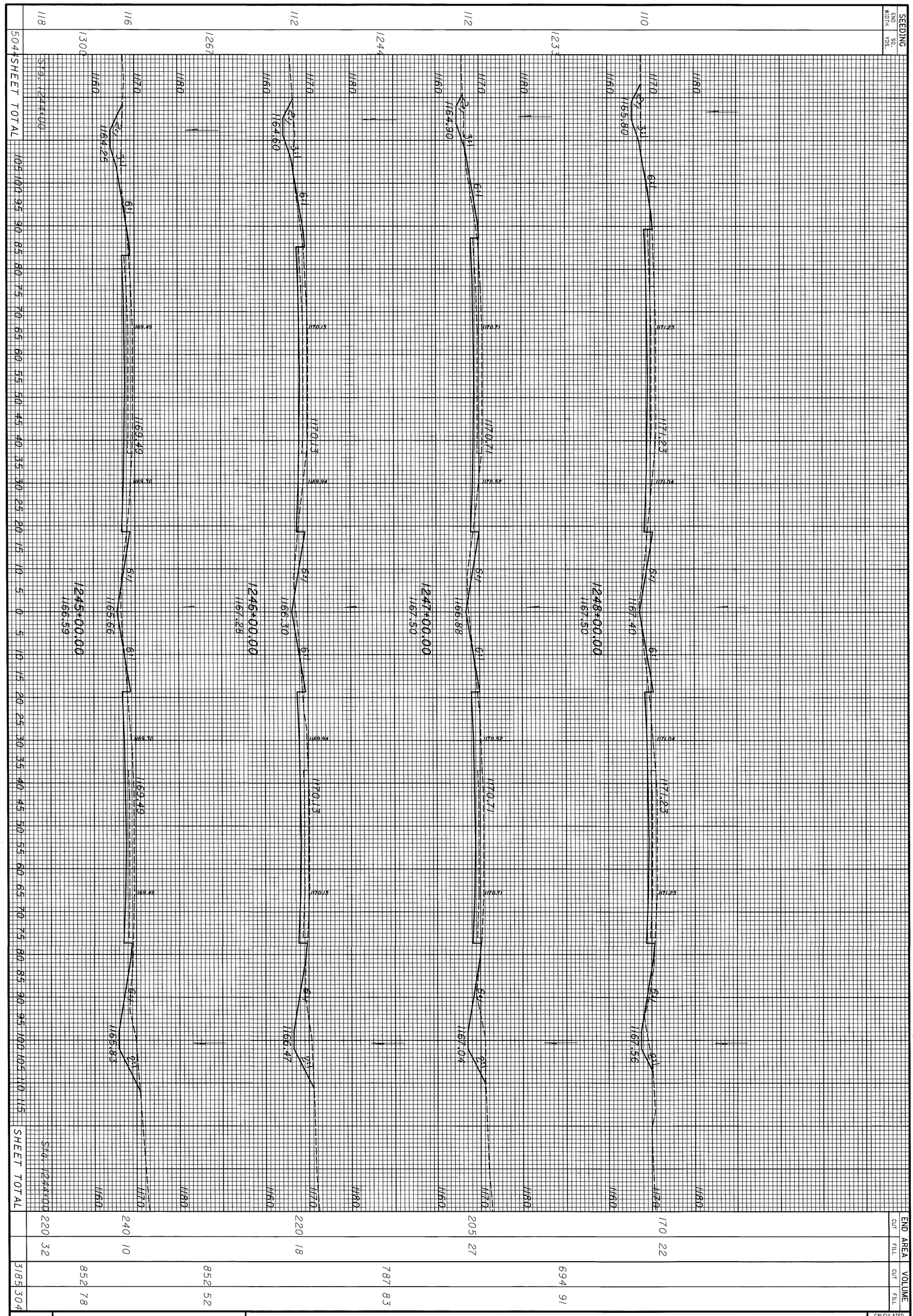
CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 1241+00 TO STA. 1244+00

MED-71-15.78

332
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




333
940

**MED-71-15.78**

# CROSS SECTIONS
## STA. 1245+00 TO STA. 1248+00

CALCULATED NJV
CHECKED JWR

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | |
| 108 | |
| | 1133 |
| 96 | |
| | 1100 |
| 102 | |
| | 1178 |
| 110 | |
| | 1222 |
| 110 | |
| | 4633 |




SHEET TOTAL

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 146 | 66 | | |
| | | 585 | 196 |
| 170 | 40 | | |
| | | 602 | 144 |
| 155 | 38 | | |
| | | 574 | 156 |
| 155 | 46 | | |
| | | 602 | 126 |
| 170 | 22 | | |
| SHEET TOTAL | | 2363 | 622 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1249+00 TO STA. 1252+00

MED-71-15.78

334
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 100 | 1267 | 134 | 142 | 507 | 599 |
| 128 | 1267 | 140 | 160 | 500 | 544 |
| 100 | 1156 | 130 | 134 | 511 | 370 |
| 108 | 1252 | 146 | 66 | | |
| | 3690 SHEET TOTAL | | | 1518 | 1513 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1253+00 TO STA. 1255+00

MED-71-15.78

335
940

DESIGN FILE : $$$$$$$$$DESIGNFILE$SPECIFICATION$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 80 | | 85 | 65 | | |
| | 534 | | | 201 | 212 |
| 75 | Sta. 1258+38 | 90 | 120 | | |
| 95 | Sta. 1258+38 | 115 | 120 | | |
| | 395 | | | 158 | 165 |
| 92 | | 110 | 115 | | |
| | 1089 | | | 426 | 481 |
| 104 | | 120 | 145 | | |
| | 487 | | | 182 | 220 |
| 110 | Sta. 1256+59 | 120 | 145 | | |
| 100 | Sta. 1256+59 | 140 | 162 | | |
| | 1767 | | | 807 | 895 |
| 100 | Sta. 1255+00 | 134 | 142 | | |
| | 4272 SHEET TOTAL | | | 1774 | 1973 |

1258+00.00

1259+00.00

1257+00.00

1256+00.00

For Ramp Quantities Sta. 1256+59 Ahd.
See S.H. 303 Ramp C X-Sections

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

CALCULATED NJV
CHECKED JWR

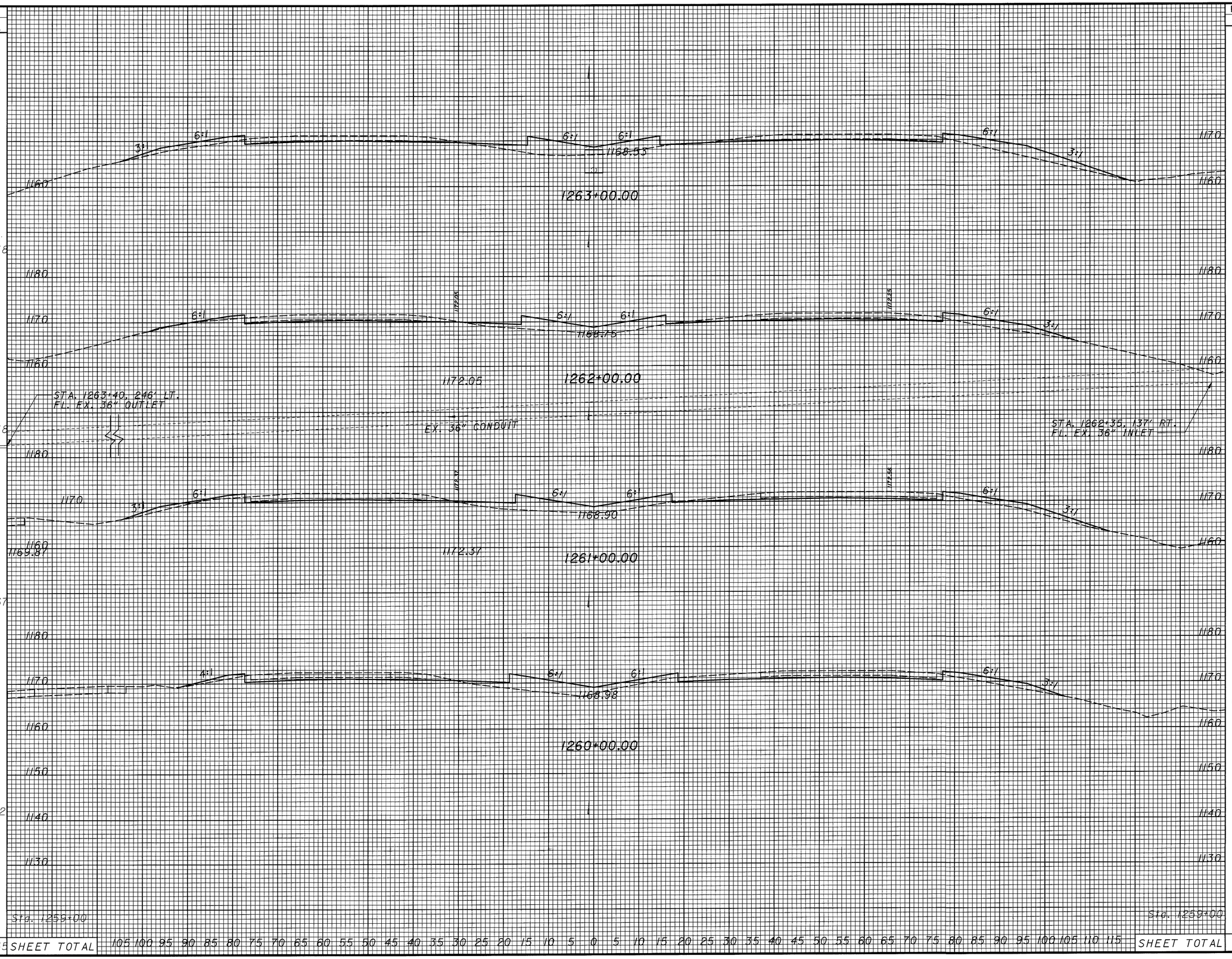
# CROSS SECTIONS STA. 1256+00 TO STA. 1259+00

MED-71-15.78

336
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 106 | 1078 |
| 88 | 1078 |
| 106 | 1067 |
| 86 | 922 |
| 80 | 4145 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 30 | 170 | | |
| 40 | 115 | 130 | 528 |
| 50 | 135 | 167 | 463 |
| 66 | 110 | 215 | 454 |
| 85 | 65 | 280 | 324 |
| | | 792 | 1769 |

CALCULATED NJV
CHECKED JWR

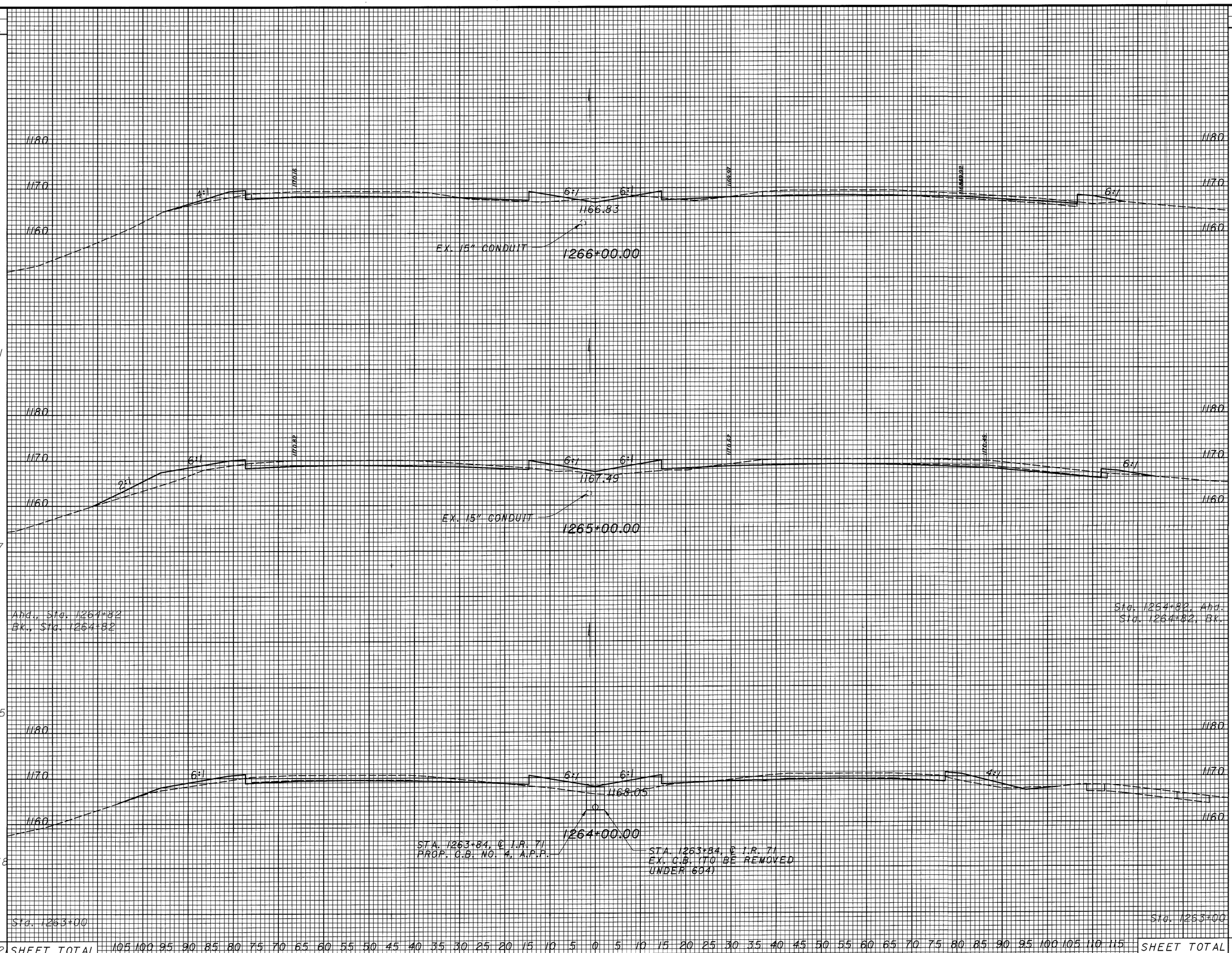
# CROSS SECTIONS STA. 1260+00 TO STA. 1263+00

MED-71-15.78

337
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 64 | | 10 | 50 | | |
| | 811 | | | 56 | 269 |
| 82 | | 20 | 95 | | |
| 167 | | | | 15 | 63 |
| 85 | | 25 | 95 | | |
| 80 | | 20 | 90 | | |
| | 765 | | | 76 | 289 |
| 88 | | 30 | 100 | | |
| | 1078 | | | 111 | 500 |
| 106 | | 30 | 170 | | |
| 282 | SHEET TOTAL | | | 258 | 1121 |




CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1264+00 TO STA. 1266+00

MED-71-15.78

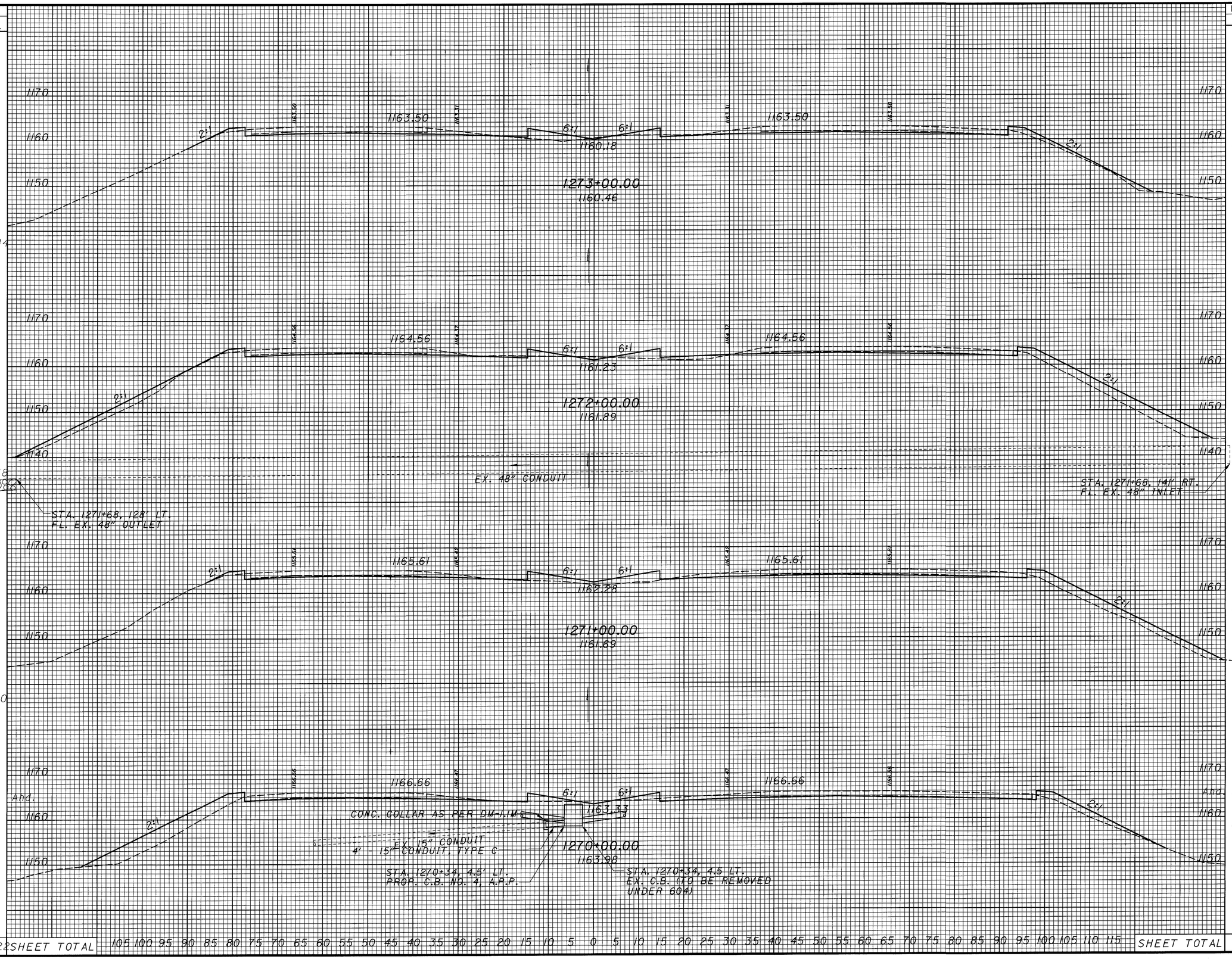
338
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | |
| | |
| |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 84 | 1244 |
| 140 | 1278 |
| 92 | 1100 |
| 106 | Abd. |
| 3622 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 52 | 50 | | |
| | | 170 | 380 |
| 40 | 155 | | |
| | | 139 | 491 |
| 35 | 110 | | |
| | | 115 | 463 |
| Abd. | 27 | 140 | |
| | SHEET TOTAL | 424 | 1334 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1270+00 TO STA. 1273+00

MED-71-15.78

340
940

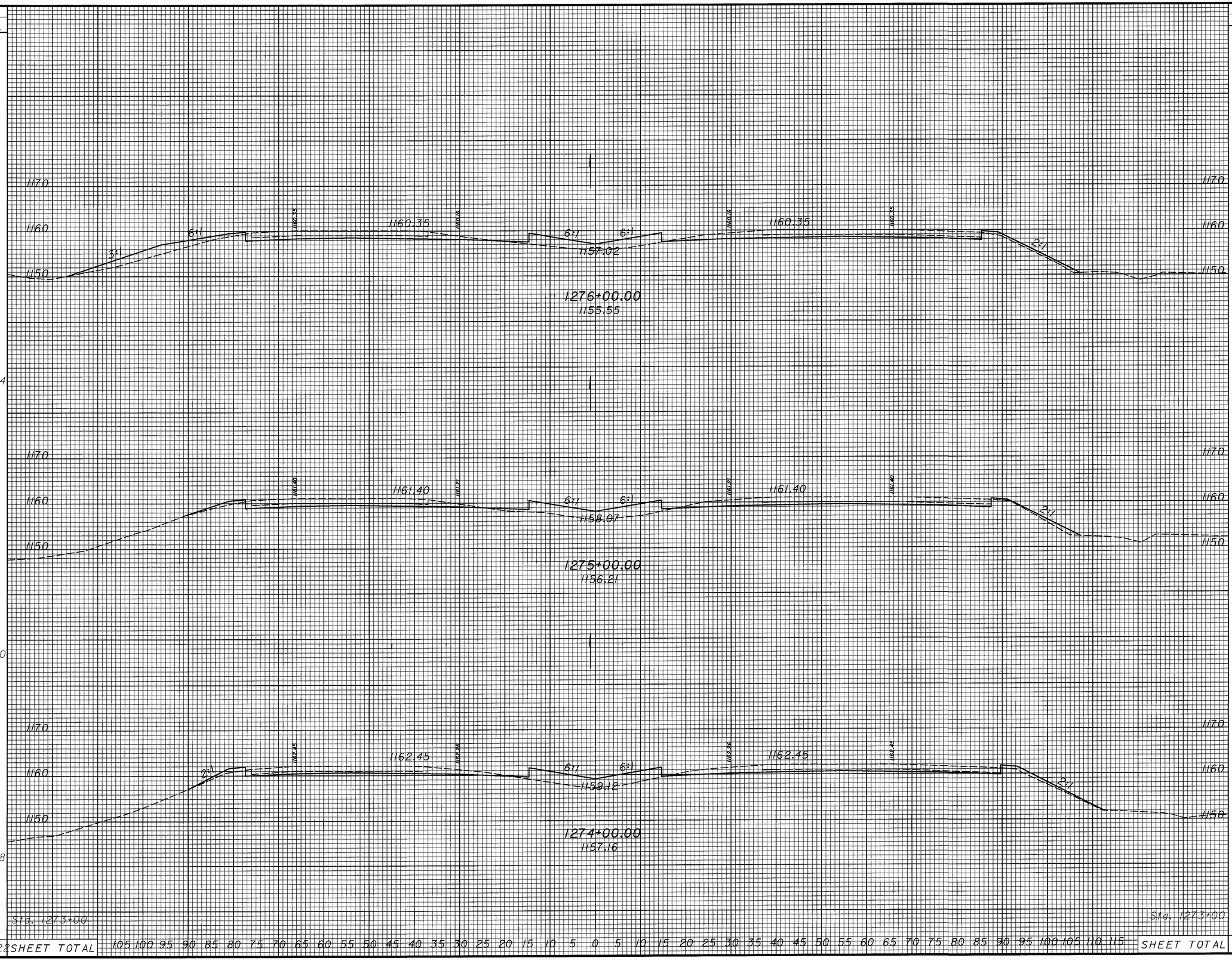
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$
DESIGN FILE : $$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

# CROSS SECTIONS
## STA. 1274+00 TO STA. 1276+00

CALCULATED NJV
CHECKED JWR

MED-71-15.78






| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 100 | | 84 | 115 | | |
| | 944 | | | 300 | 369 |
| 70 | | 78 | 84 | | |
| | 800 | | | 274 | 307 |
| 74 | | 70 | 82 | | |
| | 878 | | | 226 | 244 |
| 84 | | 52 | 50 | | |
| | 2622 SHEET TOTAL | | | 800 | 920 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 116 | 468 |
| 100 | 651 |
| 110 | |
| 82 | 944 |
| 88 | 1033 |
| 98 | 1100 |
| 100 | |
| | 4196 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 145 | 200 | | |
| | | 202 | 264 |
| 135 | 165 | | |
| 105 | 145 | | |
| | | 241 | 261 |
| 108 | 86 | | |
| | | 363 | 419 |
| 88 | 140 | | |
| | | 311 | 509 |
| 80 | 135 | | |
| | | 304 | 463 |
| 84 | 115 | | |
| | | 1421 | 1916 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1277+00 TO STA. 1280+00

MED-71-15.78

342
940

1160 1150 1140

1280+00.00
1151.48

11156.22 11156.03 11156.22 11156.03 11156.22
11152.89
2:1 6:1 6:1 6:1 3:1 2:1
11143.10

Sta. 1279+61, Ahd.
Sta. 1279+61, Bk.

Ahd., Sta. 1279+61
Bk., Sta. 1279+61

1279+00.00
1152.71

11157.21 11157.02 11157.02 11157.21
11153.88
6:1 6:1 2:1

EX. 15" CONDUIT

STA. 1279+34, 75' LT.
EX. C.B. (TO BE REMOVED)

STA. 1279+34, 144' LT.
FL. EX. 15" OUTLET

1278+00.00
1153.52

11158.24 11158.05 11158.05 11158.24
11154.91
6:1 6:1 2:1

EX. 54" CONDUIT

1277+60

Existing 10" Sanitary (28'± Deep)

STA. 1278+34, 159' LT.
FL. EX. 54" OUTLET

STA. 1278+34, 113' RT.
FL. EX. 54" INLET

1277+00.00
1154.53

11159.29 11159.10 11159.10 11159.29
11155.97
3:1 6:1 6:1 2:1

Sta. 1276+00 Sta. 1276+00

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL SHEET TOTAL

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 90 | |
| | 889 |
| 70 | |
| 90 | |
| | 1078 |
| 104 | |
| | 1222 |
| 116 | |
| | 4078 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 135 | 68 | | |
| | | 472 | 252 |
| 120 | 68 | | |
| | | 433 | 281 |
| 114 | 84 | | |
| | | 433 | 424 |
| 120 | 145 | | |
| | | 491 | 639 |
| 145 | 200 | | |
| | | 1829 | 1596 |

CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 1281+00 TO STA. 1284+00

MED-71-15.78

343
940

1284+00.00
1148.18
11148.57
11152.34
11149.01
11148.67

1283+00.00
1149.10
11153.31
11149.98
11149.64

1282+00.00
1150.23
11154.28
11150.95
11148.90

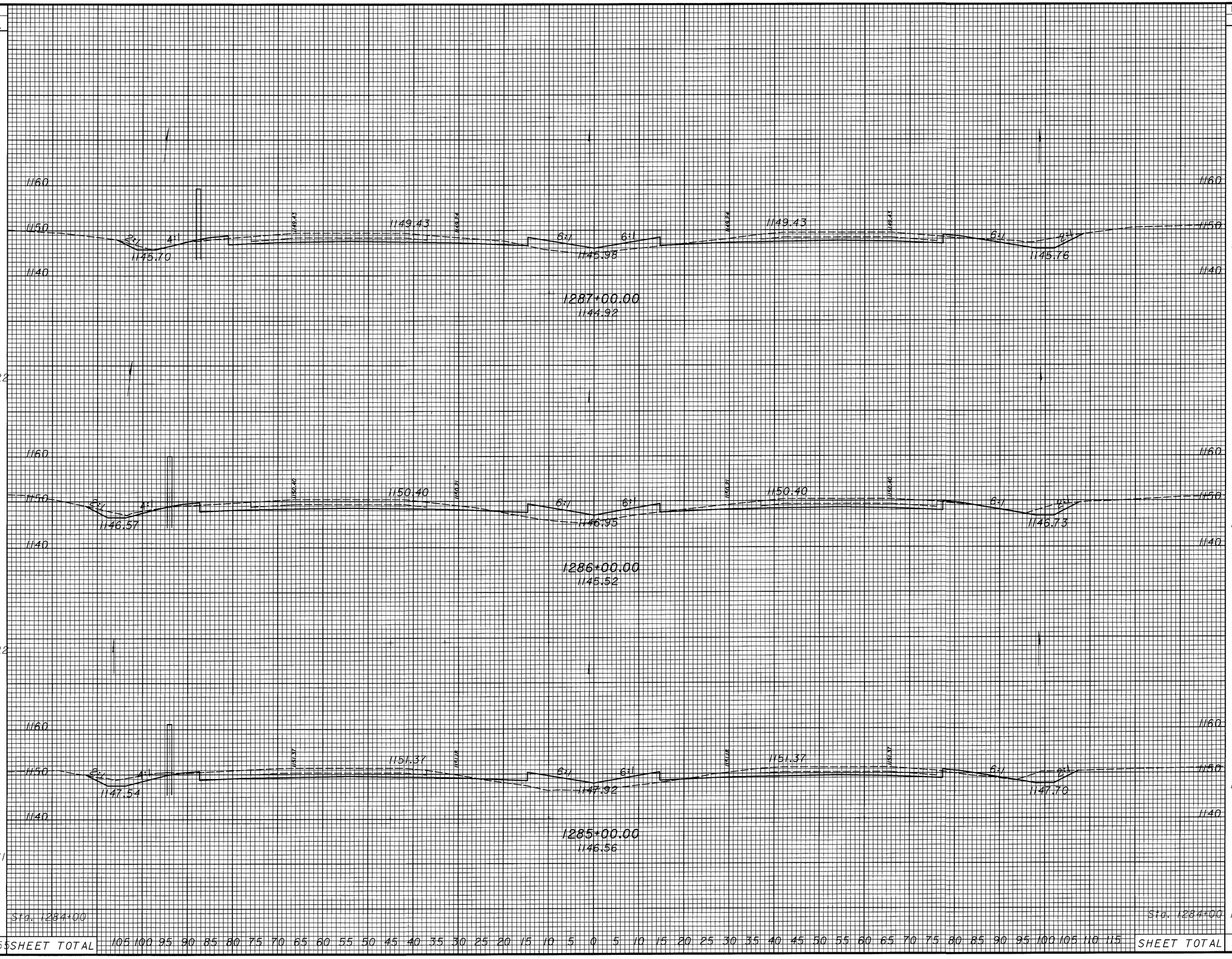
1281+00.00
1149.98
11155.25
11151.92
11146.60
CONC. COLLAR AS PER DM-1.IM
EX. 15" CONDUIT
4' 15" CONDUIT, TYPE C
STA. 1281+34, ℄ I.R. 71
PROP. C.B. NO. 4, A.P.P.
STA. 1281+34, ℄ I.R. 71
EX. C.B. (TO BE REMOVED UNDER 604)
STA. 1281+34, 103' RT.
FL. EX. 15" OUTLET

Sta. 1280+00

SHEET TOTAL 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 SHEET TOTAL

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 92 | | 140 | 55 | | |
| | 1022 | | | 513 | 222 |
| 92 | | 137 | 65 | | |
| | 1022 | | | 541 | 269 |
| 92 | | 155 | 80 | | |
| | 1011 | | | 537 | 274 |
| 90 | | 135 | 68 | | |
| 305 | SHEET TOTAL | | | 1591 | 765 |




CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS STA. 1285+00 TO STA. 1287+00

MED-71-15.78

344
940

DESIGN FILE : $$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| 89 | |
| | 1017 |
| 94 | |
| | 1028 |
| 91 | |
| | 1011 |
| 91 | |
| | 1017 |
| 92 | |
| | 4073 |




| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| 134 | 49 | | |
| | | 507 | 189 |
| 140 | 53 | | |
| | | 500 | 215 |
| 130 | 63 | | |
| | | 480 | 230 |
| 129 | 61 | | |
| | | 498 | 215 |
| 140 | 55 | | |
| | | 1985 | 849 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS STA. 1288+00 TO STA. 1291+00

MED-71-15.78

345
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

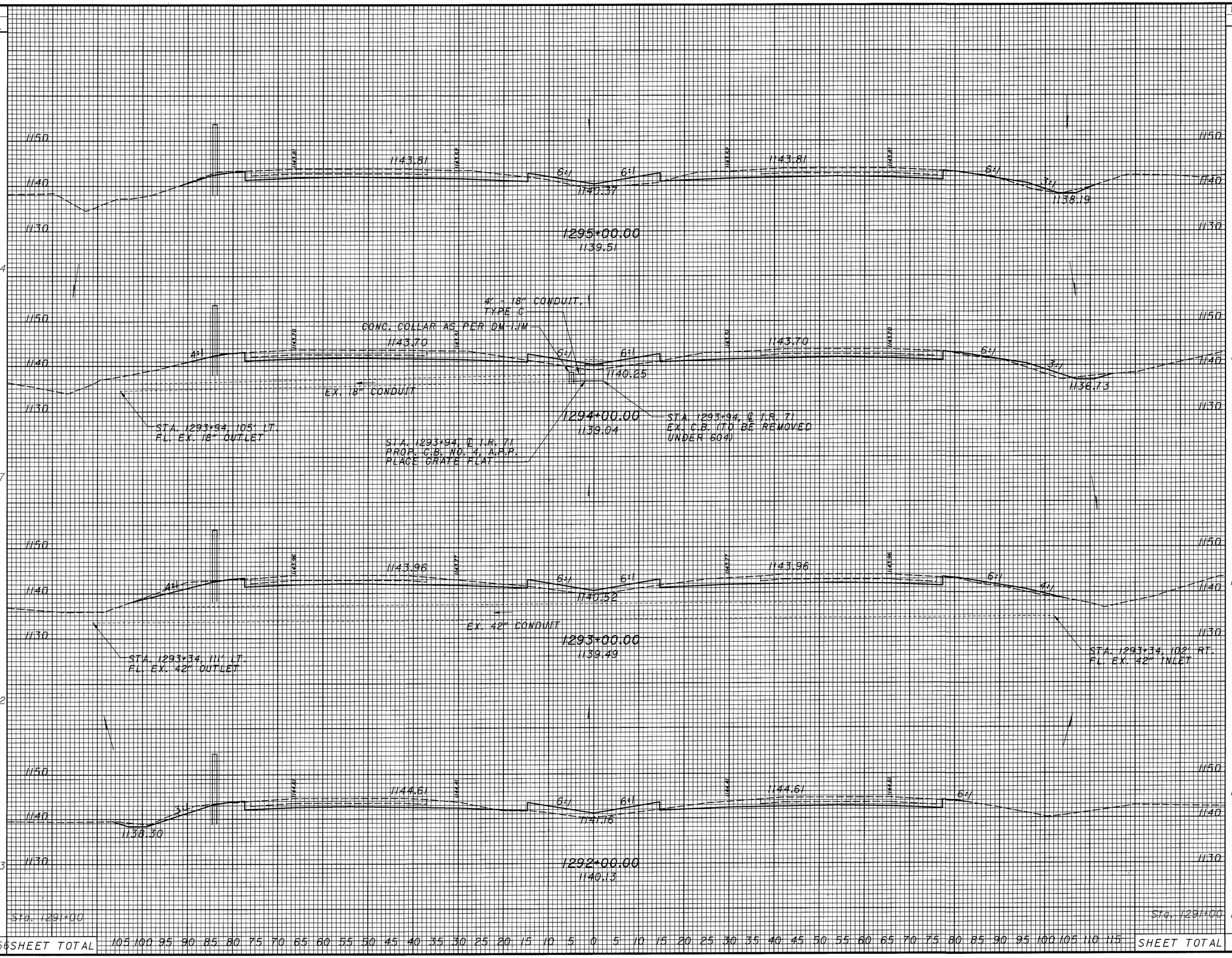
# CROSS SECTIONS
# STA. 1292+00 TO STA. 1295+00

CALCULATED NJV
CHECKED JWR

MED-71-15.78

346
940

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 83 | 944 | 144 | 42 | 515 | 180 |
| 87 | 967 | 134 | 55 | 494 | 191 |
| 87 | 872 | 133 | 48 | 483 | 170 |
| 70 | 883 | 128 | 44 | 485 | 176 |
| 89 | | 134 | 49 | | |
| 3666 SHEET TOTAL | | | | 1977 | 717 |

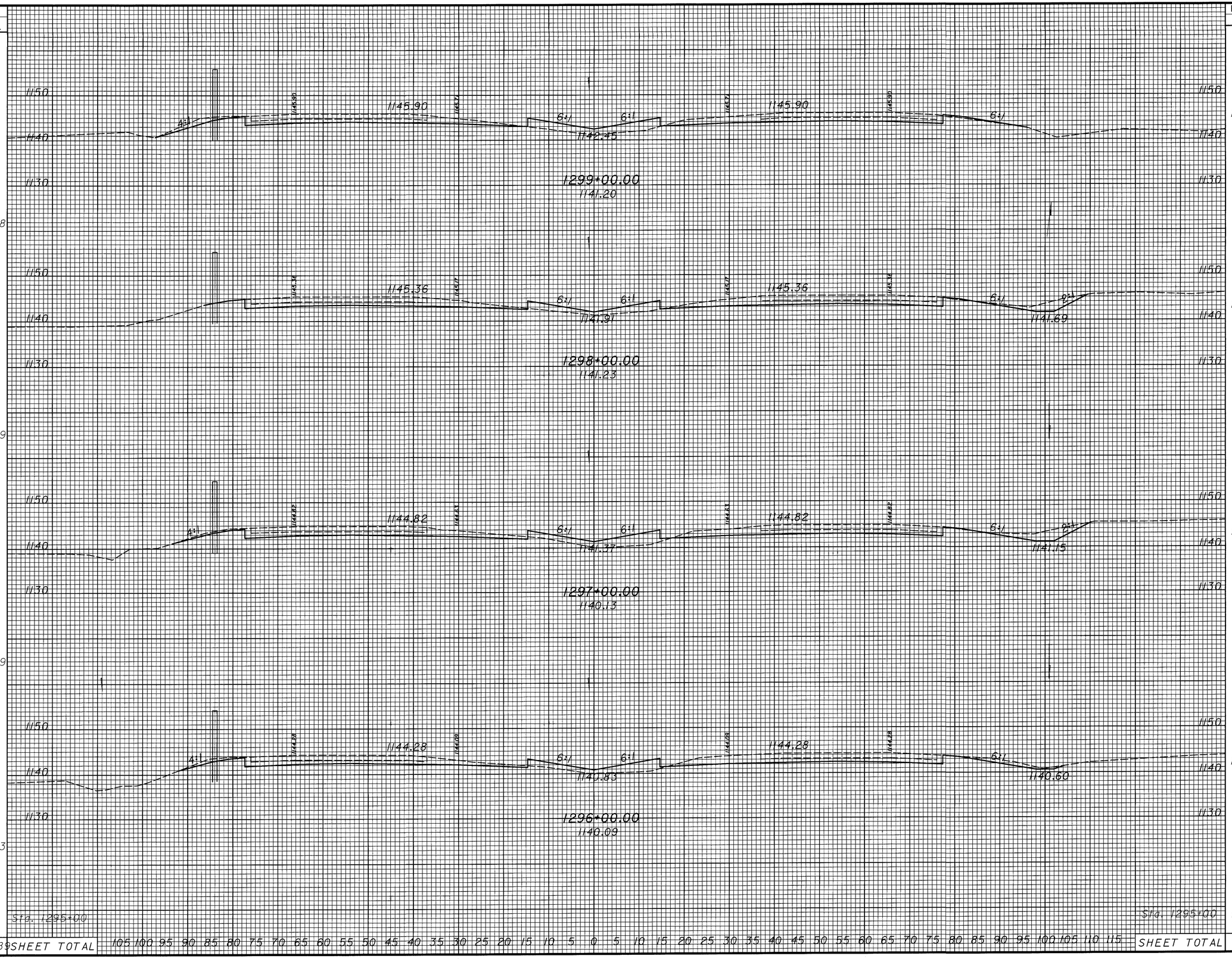


$$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
$$$$INSTRUCTIONS$$$$$

DESIGN FILE : $$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 73 | 828 |
| 76 | 839 |
| 75 | 839 |
| 76 | 883 |
| 83 | |
| | 3389 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 125 | 53 | | |
| | | 494 | 167 |
| 142 | 37 | | |
| | | 554 | 161 |
| 157 | 50 | | |
| | | 546 | 170 |
| 138 | 42 | | |
| | | 522 | 156 |
| 144 | 42 | | |
| | | 2116 | 654 |

CALCULATED NJV
CHECKED JWR

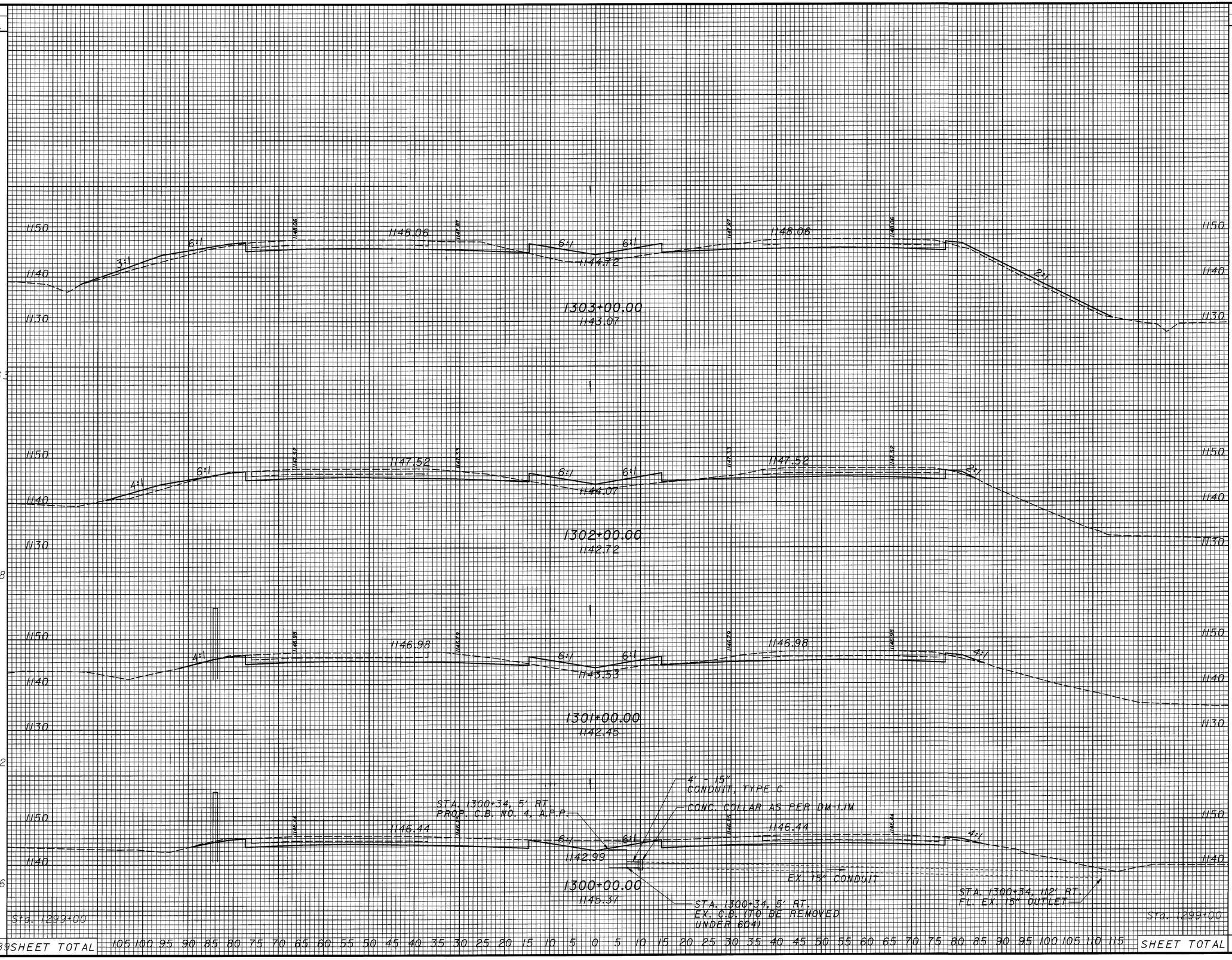
# CROSS SECTIONS
## STA. 1296+00 TO STA. 1299+00

MED-71-15.78

347
940

DESIGN FILE : $$$$$$$$$$DESIGNFILE\SPECIFICATION$$$$$$$$$$
USERNAME : $$$$\INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| 113 | 1033 |
| 73 | 728 |
| 58 | 622 |
| 54 | 706 |
| 73 | |
| SHEET TOTAL | 3089 |




| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| 123 | 112 | | |
| | | 441 | 337 |
| 115 | 70 | | |
| | | 444 | 213 |
| 125 | 45 | | |
| | | 587 | 91 |
| 192 | 4 | | |
| | | 587 | 106 |
| 125 | 53 | | |
| SHEET TOTAL | | 2059 | 747 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

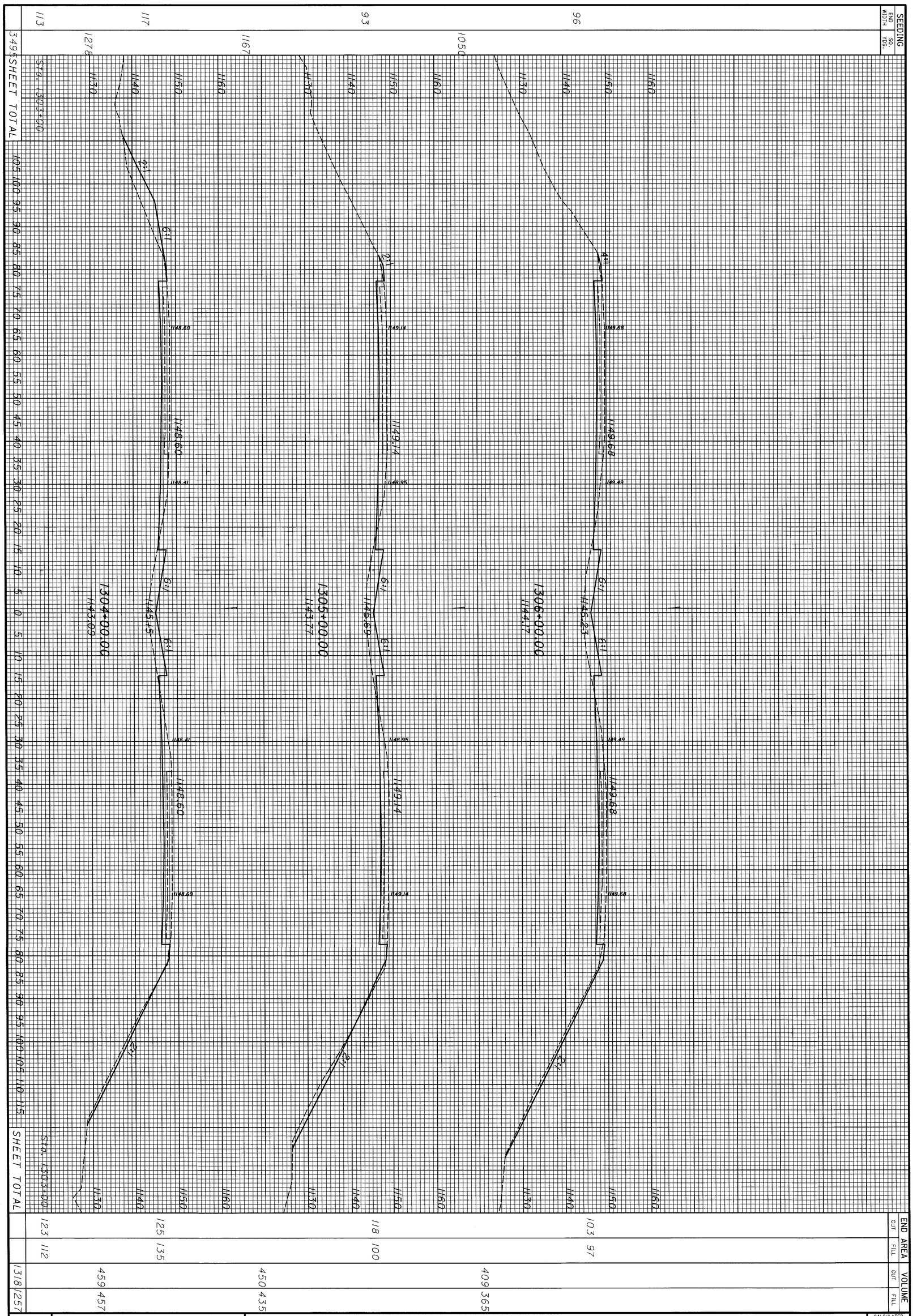
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1300+00 TO STA. 1303+00

MED-71-15.78

348
940

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




| | |
|---|---|
| 349/940 | |
| MED-71-15.78 | CROSS SECTIONS<br>STA. 1304+00 TO STA. 1306+00 |
| | CALCULATED NJV<br>CHECKED JWR |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 48 | |
| | 544 |
| 50 | |
| | 556 |
| 50 | |
| 96 | |
| | 1911 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 118 | 59 | | |
| | | 444 | 215 |
| 122 | 57 | | |
| | | 443 | 250 |
| 117 | 78 | | |
| | | 407 | 324 |
| 103 | 97 | | |
| | | 1294 | 789 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1307+00 TO STA. 1309+00

MED-71-15.78

350
940

1160
1150
1140
1130

1309+00.00
1146.54
4:1
1151.30
1151.11
6:1
1147.85

1308+00.00
1145.63
6:1
1150.76
1150.57
1147.31

1307+00.00
1144.41
1150.22
1150.03
1146.47

STA. 1306+69, 139' LT
FL. EX. 108" OUTLET

STA. 1306+69, 137' RT.
FL. EX. 108" INLET

1306+94
EX. 108" CONDUIT

Existing 15" Sanitary (35'± Deep)

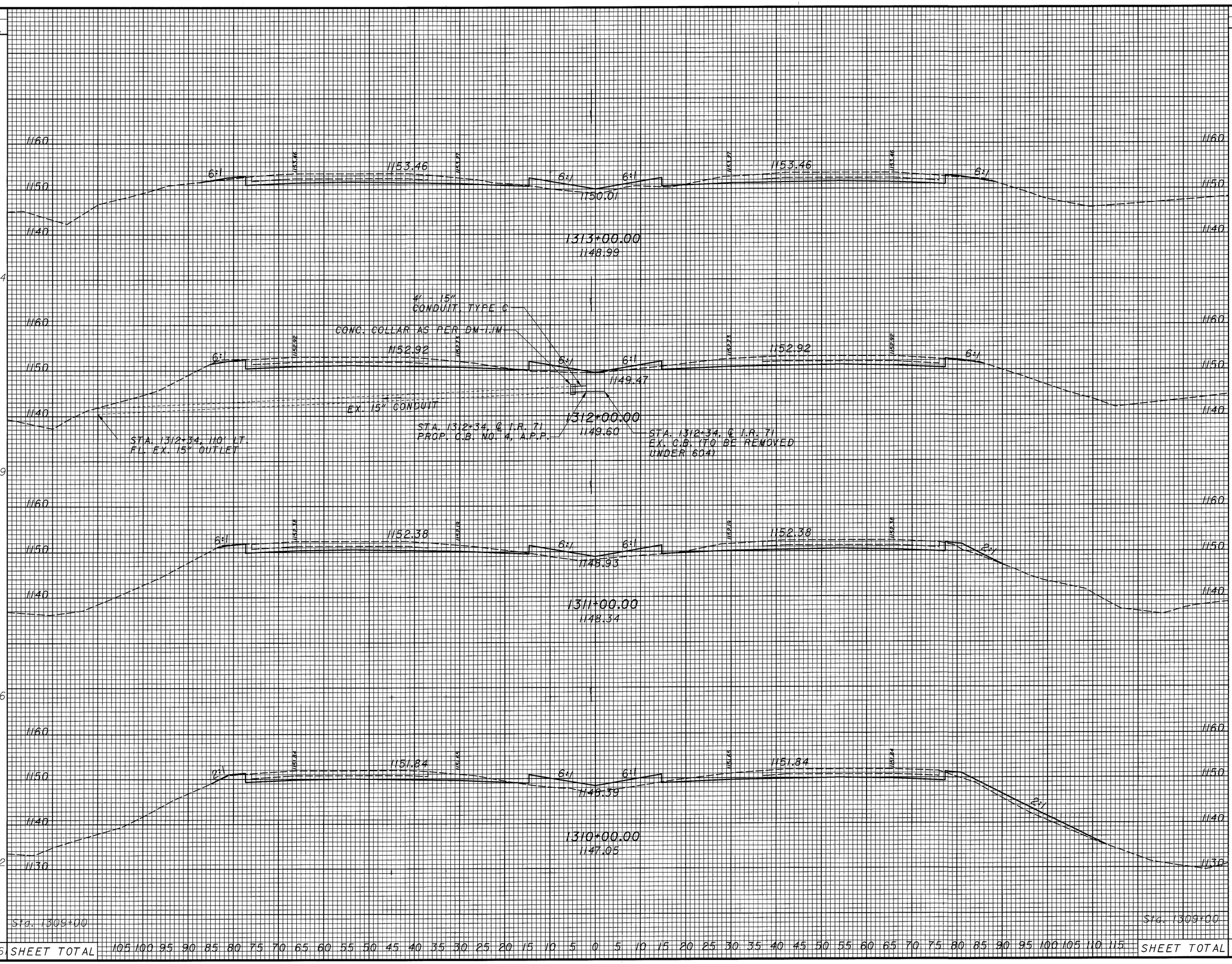
Sta. 1306+00

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

DESIGN FILE : $$$$$$$$$$DESIGNFILE\SPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$$DATE$$$$$
TIME : $$$$$TIME$$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 55 | 594 | 115 | 40 | 444 | 120 |
| 52 | 589 | 125 | 25 | 454 | 133 |
| 54 | 756 | 120 | 47 | 441 | 230 |
| 82 | 722 | 118 | 77 | 437 | 252 |
| 48 | 266 | 118 | 59 | 1776 | 735 |
| | SHEET TOTAL | | | | SHEET TOTAL |




CALCULATED NJV
CHECKED JWR

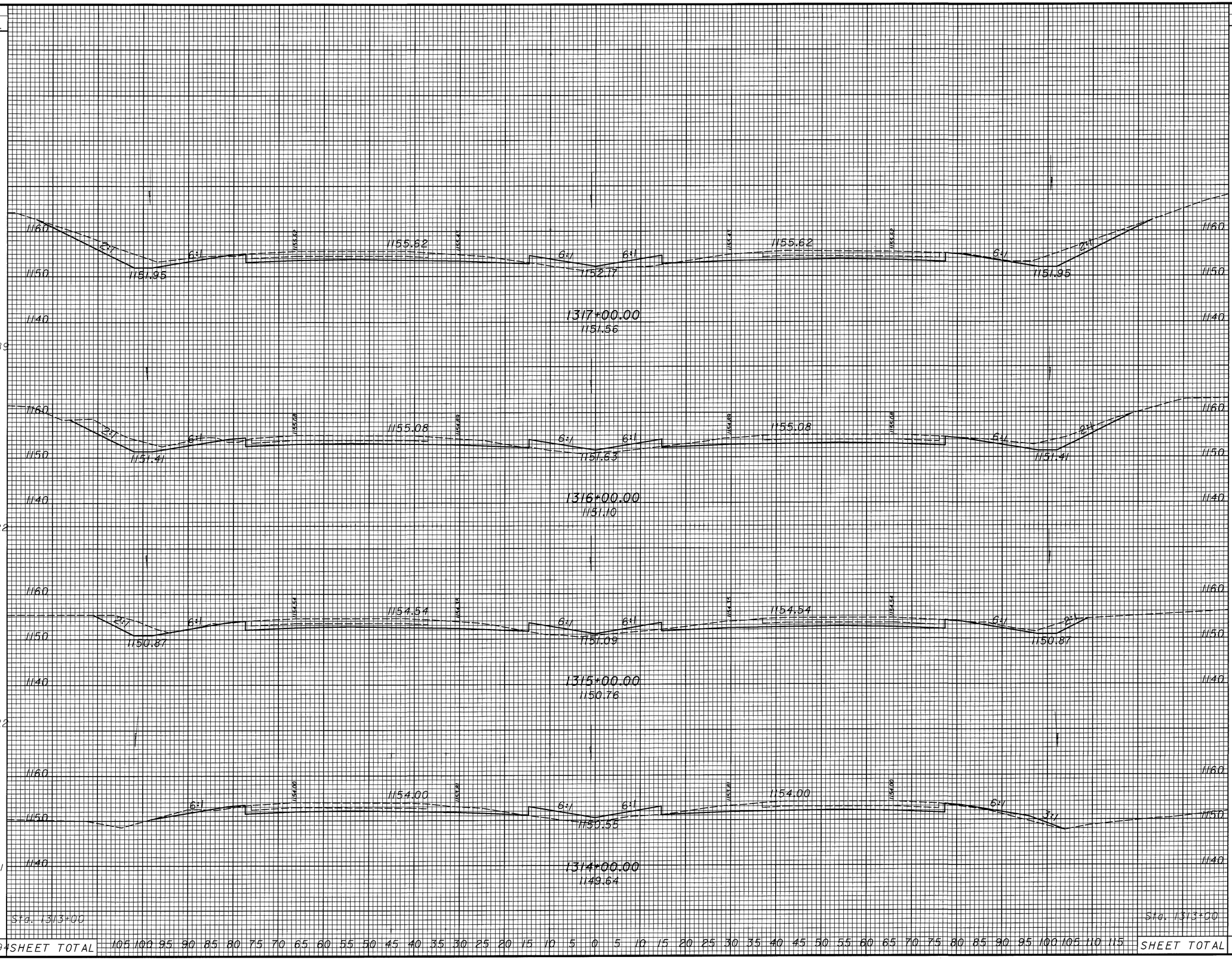
# CROSS SECTIONS STA. 1310+00 TO STA. 1313+00

MED-71-15.78

351
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 132 | | 230 | 42 | | |
| | 1389 | | | 828 | 150 |
| 118 | | 217 | 39 | | |
| | 1222 | | | 731 | 139 |
| 102 | | 178 | 36 | | |
| | 1022 | | | 539 | 170 |
| 82 | | 113 | 56 | | |
| | 761 | | | 422 | 178 |
| 55 | | 115 | 40 | | |
| | 4394 SHEET TOTAL | | | 2520 | 637 |




CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1314+00 TO STA. 1317+00

MED-71-15.78

352
940

DESIGN FILE : $$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

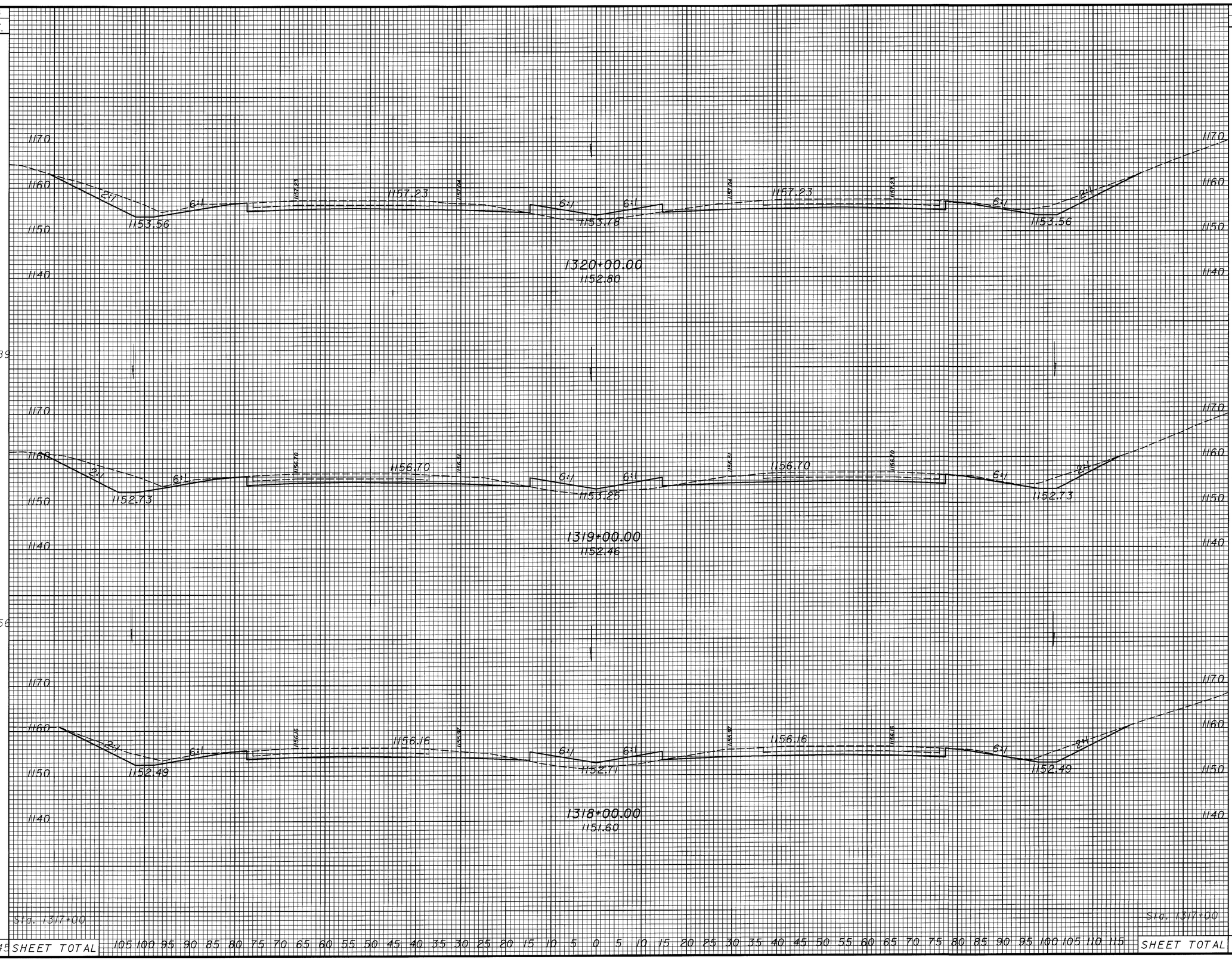
# CROSS SECTIONS
## STA. 1318+00 TO STA. 1320+00

CALCULATED NJV
CHECKED JWR

MED-71-15.78

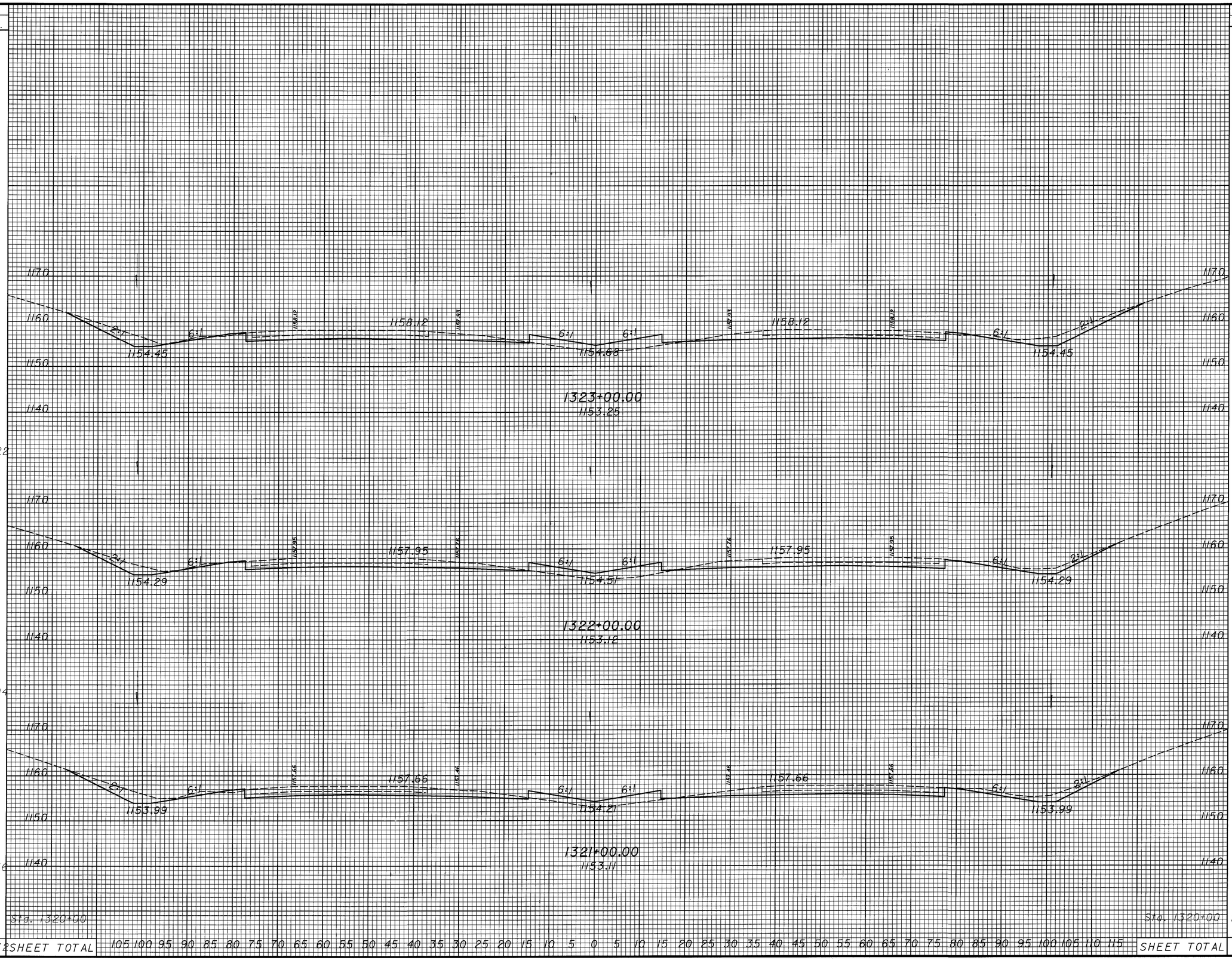
353
940

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| | | | | 1 | |
| 126 | | 220 | 49 | | |
| | 1389 | | | 826 | 178 |
| 124 | | 226 | 47 | | |
| | 1356 | | | 770 | 183 |
| 120 | | 190 | 52 | | |
| 0 | | | | 778 | 174 |
| 132 | | 230 | 42 | | |
| | 4145 SHEET TOTAL | | | 2374 | 535 |



DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | | END AREA | | VOLUME | |
|---|---|---|---|---|---|---|
| | END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| | | | | | | |
| 123 | | | 190 | 57 | | |
| | | | | | | |
| | | | | | | |
| 1322 | | | | | 667 | 211 |
| | | | | | | |
| | | | | | | |
| 115 | | | 170 | 57 | | |
| | | | | | | |
| | | | | | | |
| 1294 | | | | | 635 | 194 |
| | | | | | | |
| | | | | | | |
| 118 | | | 173 | 48 | | |
| | | | | | | |
| | | | | | | |
| 1356 | | | | | 728 | 180 |
| | | | | | | |
| 126 | Sta. 1320+00 | | 220 | 49 | | |
| 3972 | SHEET TOTAL | | | | 2030 | 585 |



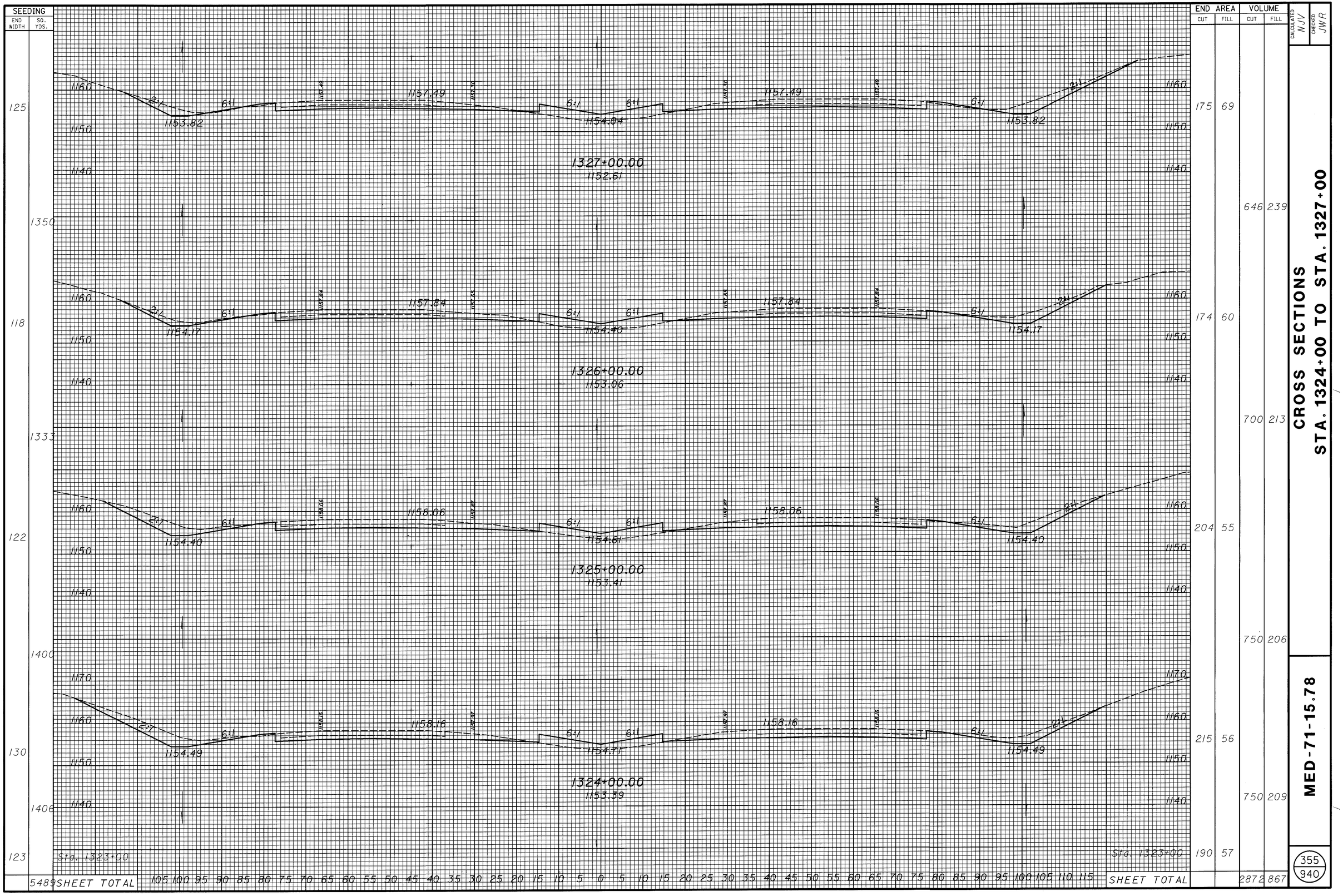

CALCULATED N.J.V
CHECKED J.W.R

# CROSS SECTIONS
# STA. 1321+00 TO STA. 1323+00

MED-71-15.78

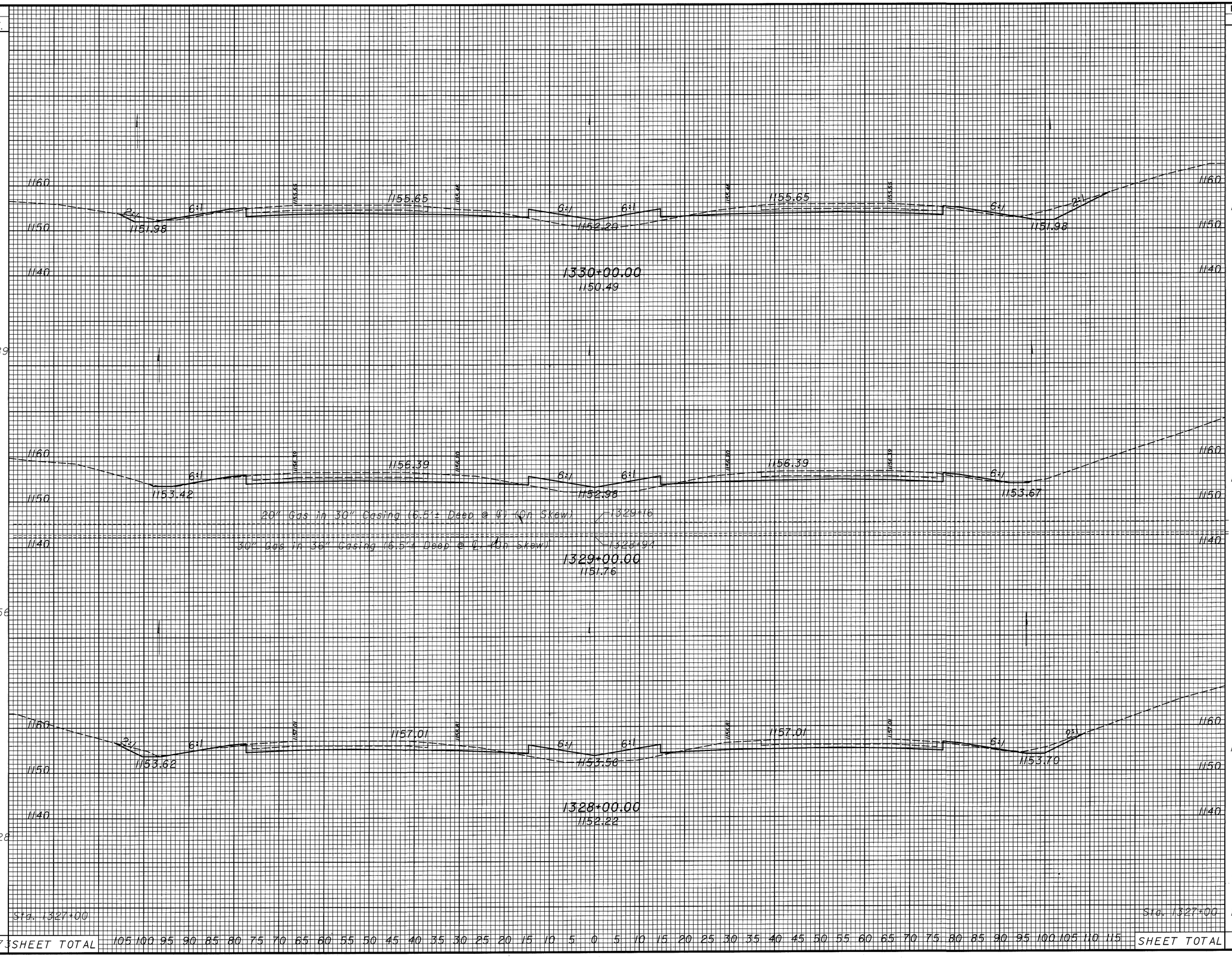
354
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$



DESIGN FILE : $$$$$$$$$$DESIGNFILE$SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 102 | 1189 | 140 | 81 | 565 | 269 |
| 112 | 1256 | 165 | 64 | 593 | 256 |
| 114 | 1328 | 155 | 74 | 611 | 265 |
| 125 | | 175 | 69 | | |
| | 3773 SHEET TOTAL | | | 1769 | 790 |




CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1328+00 TO STA. 1330+00

MED-71-15.78

356
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | |
| 102 | 1089 |
| 94 | |
| 104 | 1172 |
| 107 | 1161 |
| 102 | |
| 4522 | SHEET TOTAL |




105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 SHEET TOTAL

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 155 | 62 | | |
| | | 546 | 237 |
| 140 | 66 | | |
| | | 546 | 226 |
| 155 | 56 | | |
| | | 572 | 226 |
| 154 | 66 | | |
| | | 544 | 272 |
| 140 | 81 | | |
| | | 2208 | 961 |

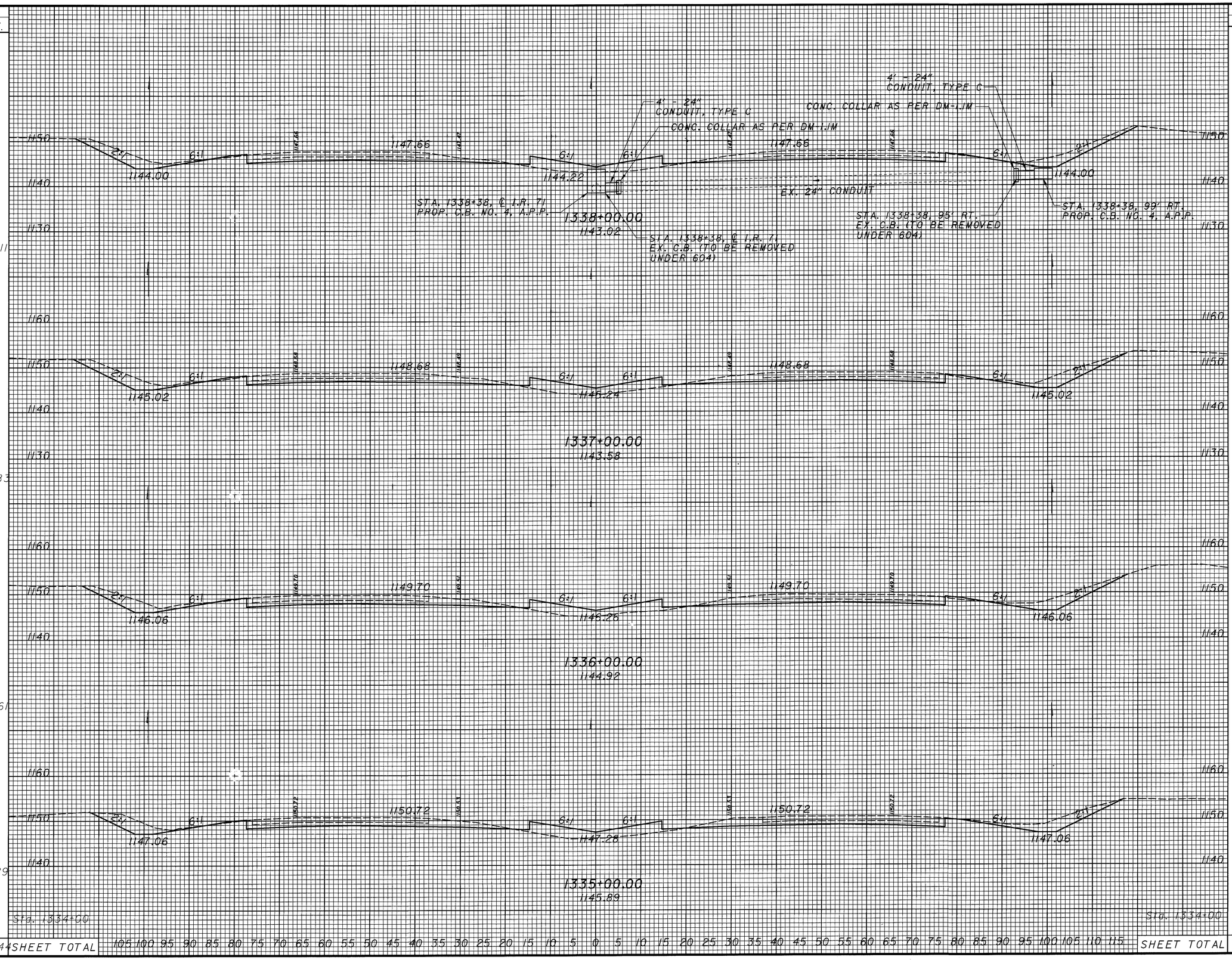
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1331+00 TO STA. 1334+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILES\SPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$$DATE$$$$$
TIME : $$$$$TIME$$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 120 | 1311 |
| 116 | 1283 |
| 115 | 1261 |
| 112 | 1189 |
| 102 | 5044 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 176 | 62 | | |
| | | 674 | 239 |
| 188 | 67 | | |
| | | 691 | 239 |
| 185 | 62 | | |
| | | 707 | 233 |
| 197 | 64 | | |
| | | 652 | 233 |
| 155 | 62 | | |
| SHEET TOTAL | | 2724 | 944 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1335+00 TO STA. 1338+00

MED-71-15.78

358
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 113 | 1278 |
| 117 | 1294 |
| 116 | 1311 |
| 120 | 1388 |

MEDIAN CROSSOVER - 1341+50

STA. 1341+00, ℄ I.R. 71
PROP. C.D. NO. 4, A.P.P.

1341+00.00
1139.89

EX. 24" CONDUIT

1340+00.00
1141.11

EX. 24" CONDUIT

1339+00.00
1141.85

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 172 | 64 | | |
| | | 644 | 224 |
| 176 | 57 | | |
| | | 626 | 226 |
| 162 | 65 | | |
| | | 626 | 235 |
| 176 | 62 | | |
| | | 1896 | 685 |

Sta. 1338+00 — SHEET TOTAL — 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 — SHEET TOTAL — Sta. 1338+00

CALCULATED NJV
CHECKED JWR

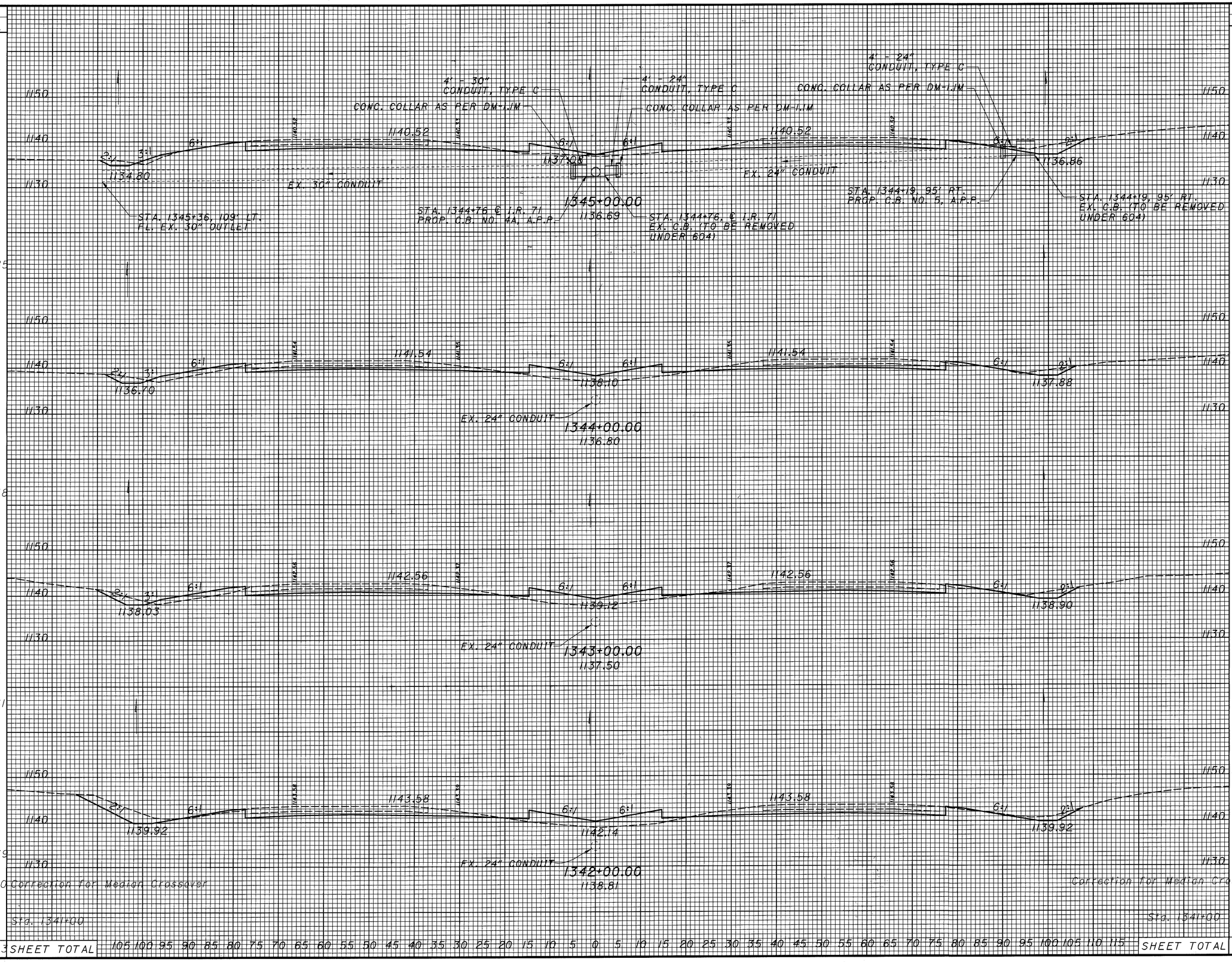
# CROSS SECTIONS
## STA. 1339+00 TO STA. 1341+00

MED-71-15.78

359
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 100 | 1085 |
| 95 | 1078 |
| 99 | 1161 |
| 110 | 1239 |
| -150 | Correction for Median Crossover |
| 113 | Sta. 1341+00 |
| | 4413 SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 130 | 42 | | |
| | | 454 | 239 |
| 115 | 87 | | |
| | | 441 | 330 |
| 123 | 91 | | |
| | | 504 | 294 |
| 149 | 68 | | |
| | | 594 | 244 |
| Correction for Median Crossover | | 0 | -50 |
| 172 | 64 | | |
| SHEET TOTAL | | 1993 | 1057 |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1342+00 TO STA. 1345+00

MED-71-15.78

360
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 95 | 1050 |
| 94 | 1078 |
| 100 | 1211 |
| 108 | 1211 |
| 100 | |
| | 4550 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 120 | 76 | | |
| | | 444 | 289 |
| 120 | 80 | | |
| | | 435 | 333 |
| 115 | 100 | | |
| | | 454 | 365 |
| 130 | 97 | | |
| | | 481 | 257 |
| 130 | 42 | | |
| | SHEET TOTAL | 1814 | 1244 |

CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS
## STA. 1346+00 TO STA. 1349+00

MED-71-15.78

361
940

DESIGN FILE : $$$$$$$$$$DESIGNFILE$$SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

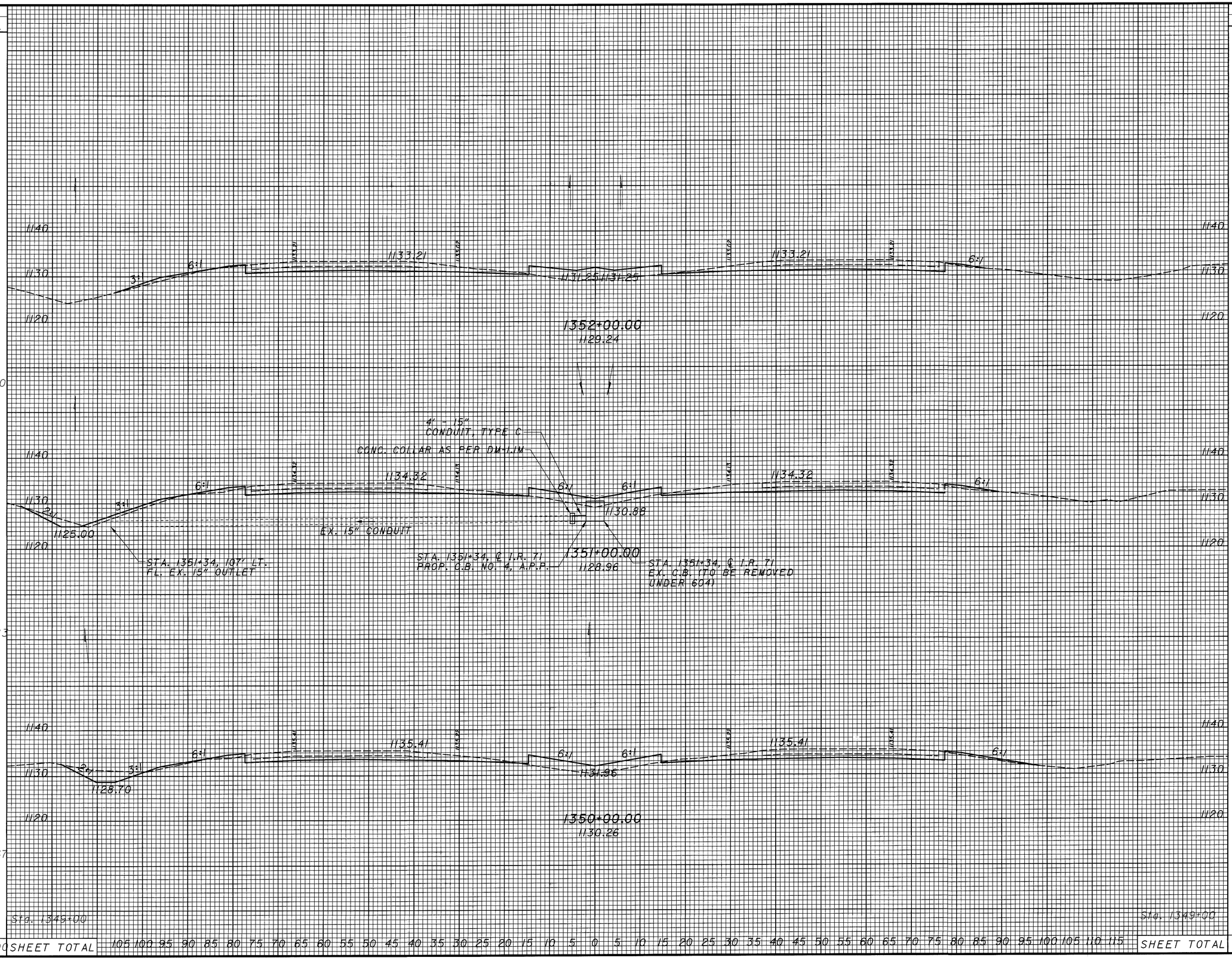
| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 73 | | | | | |
| | 950 | | | 474 | 285 |
| 98 | | 120 | 76 | | |
| | 1083 | | | 506 | 274 |
| 97 | | 136 | 78 | | |
| | | 137 | 70 | | |
| | 1067 | | | 476 | 270 |
| 95 | | 120 | 76 | | |
| | 3100 SHEET TOTAL | | | 1456 | 829 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1350+00 TO STA. 1352+00

MED-71-15.78

362
940



DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| 117 | 1161 |
| 92 | |
| 900 | |
| 70 | |
| 856 | |
| 84 | |
| 872 | |
| 73 | |
| | 3789 |

| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| | | | |
| 147 | 109 | | |
| | | 491 | 289 |
| 118 | 47 | | |
| | | 437 | 130 |
| 118 | 23 | | |
| | | 441 | 107 |
| 120 | 35 | | |
| | | 444 | 206 |
| 120 | 76 | | |
| | | 1813 | 732 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1353+00 TO STA. 1356+00

MED-71-15.78

363
940

Sta. 1352+00

1356+00.00
1124.90

1355+00.00
1128.95

1354+00.00
1130.43

1353+00.00
1131.37

EX. 24" CULVERT

Existing 16" Water
(On Skew)

Existing 8" Sanitary

1353+24

8"

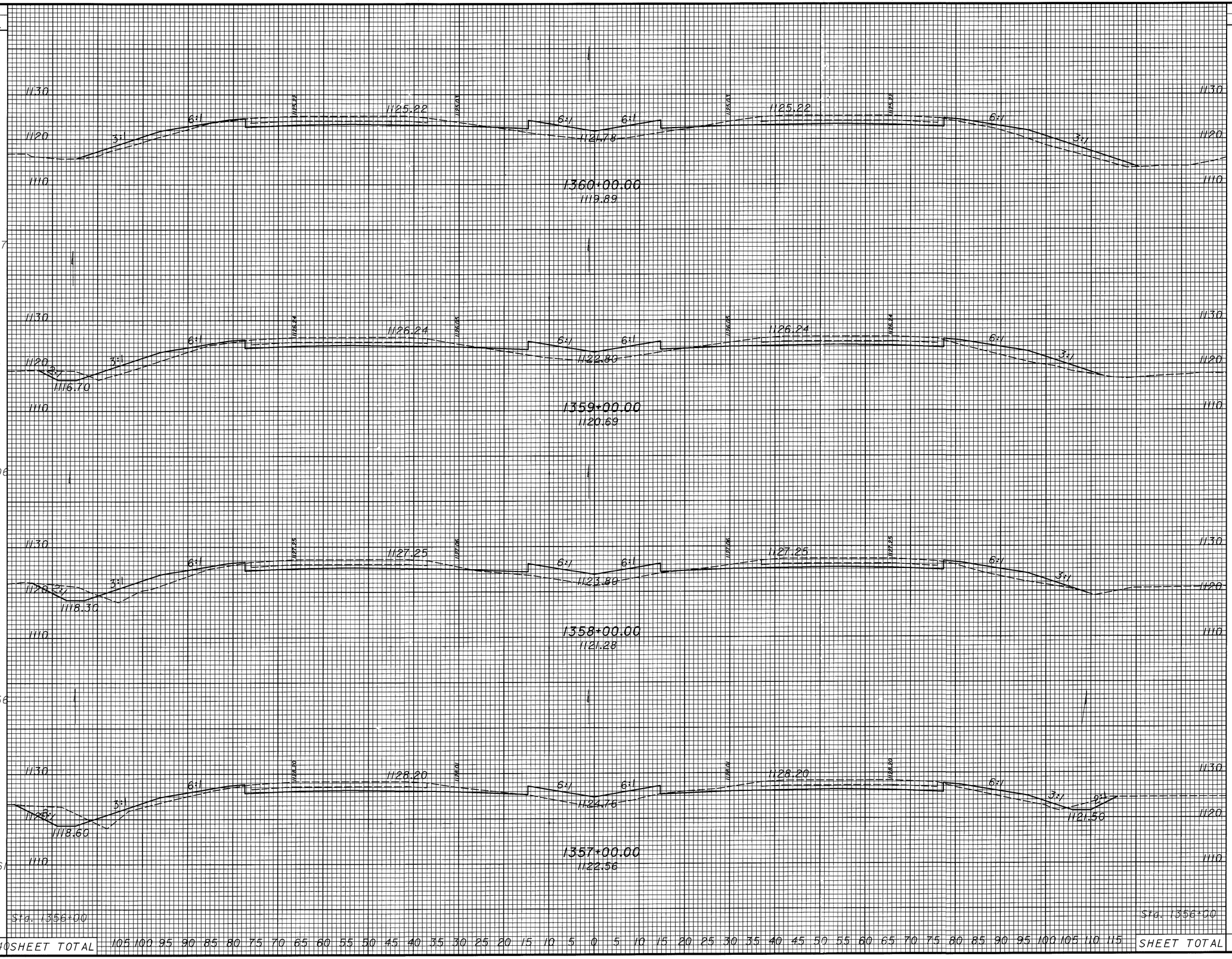
SHEET TOTAL

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

DESIGN FILE : $$$$$$$$$$DESIGNFILES\SPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 118 | | 95 | 162 | | |
| | 1317 | | | 376 | 622 |
| 119 | | 108 | 174 | | |
| | 1306 | | | 422 | 622 |
| 116 | | 120 | 162 | | |
| | 1356 | | | 522 | 530 |
| 128 | | 162 | 124 | | |
| | 1361 | | | 572 | 431 |
| 117 | | 147 | 109 | | |
| | 5340 SHEET TOTAL | | SHEET TOTAL | 1892 | 2205 |




CALCULATED NJV
CHECKED JWR

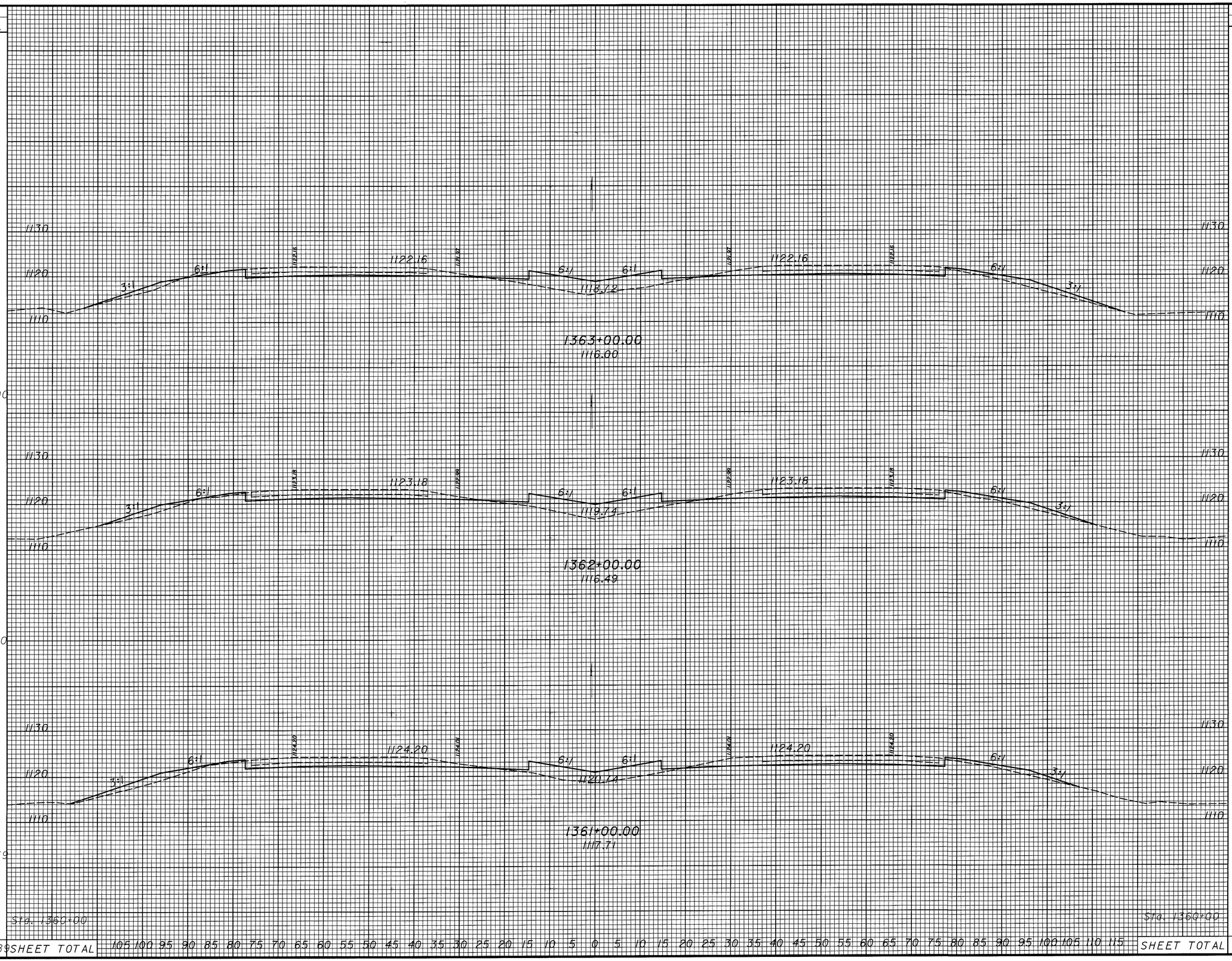
CROSS SECTIONS
STA. 1357+00 TO STA. 1360+00

MED-71-15.78

364
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 112 | |
| | 1200 |
| 102 | |
| | 1150 |
| 105 | |
| | 1239 |
| 118 | |
| | 3589 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 90 | 142 | | |
| | | 333 | 522 |
| 90 | 140 | | |
| | | 346 | 491 |
| 97 | 125 | | |
| | | 356 | 531 |
| 95 | 162 | | |
| | | 1035 | 1544 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1361+00 TO STA. 1363+00

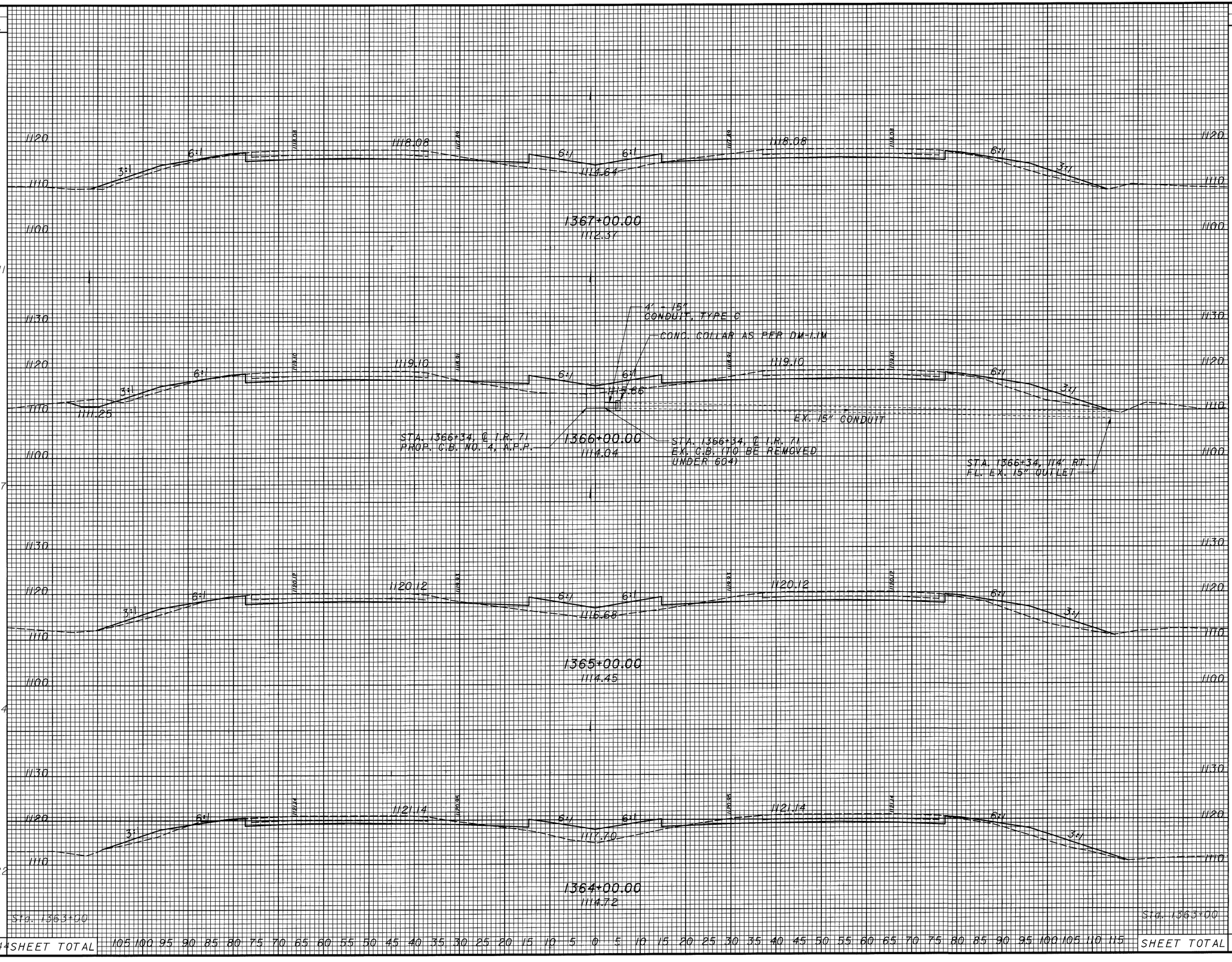
MED-71-15.78

365
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | |
| 106 | 1211 |
| 112 | 1217 |
| 107 | 1194 |
| 108 | 1222 |
| 112 | |
| | 4844 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 102 | 123 | | |
| | | 356 | 496 |
| 90 | 145 | | |
| | | 333 | 533 |
| 90 | 143 | | |
| | | 352 | 524 |
| 100 | 140 | | |
| | | 352 | 522 |
| 90 | 142 | | |
| | | 1393 | 2075 |

Sta. 1363+00

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

Sta. 1363+00

SHEET TOTAL

CALCULATED NJV
CHECKED JWR

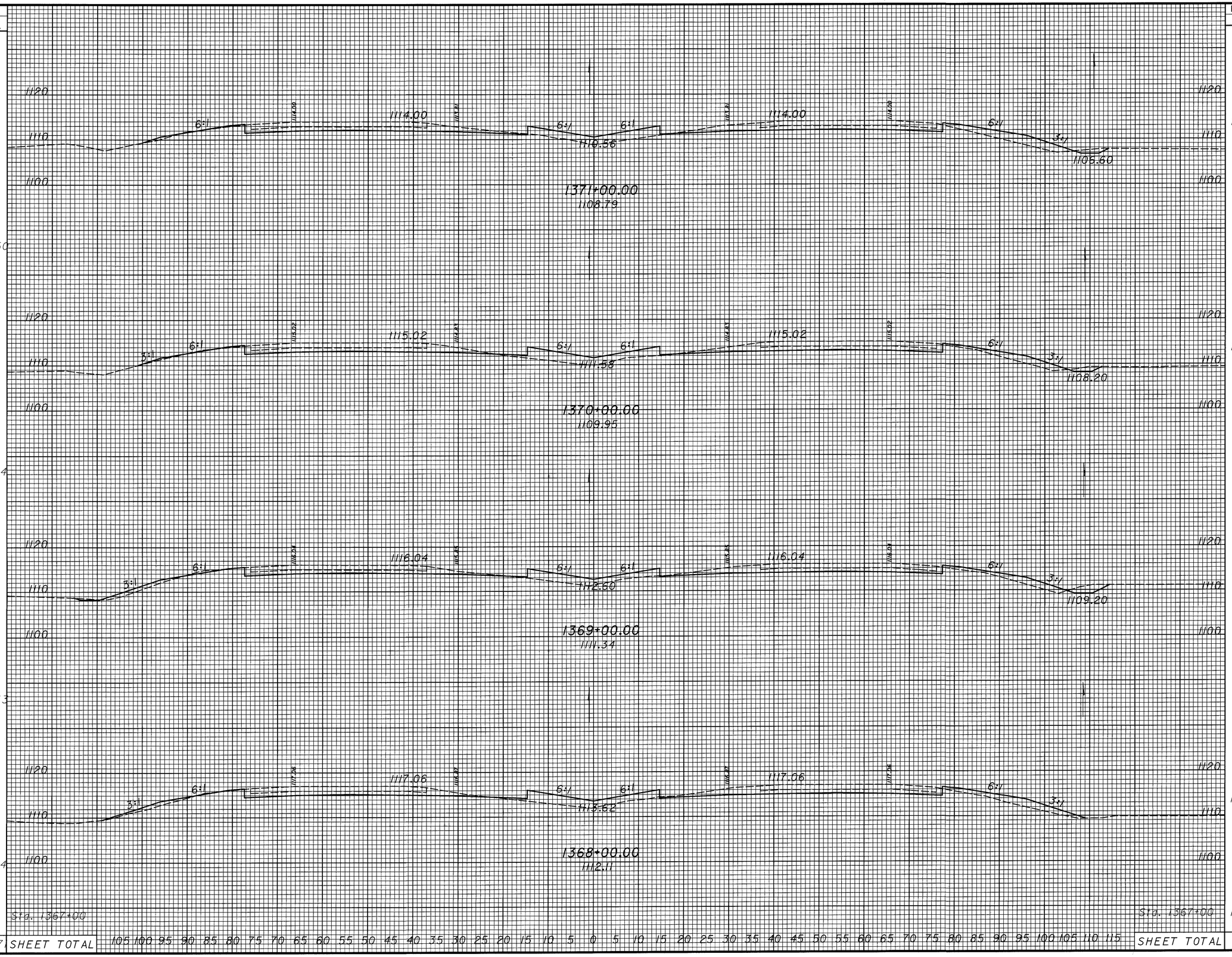
# CROSS SECTIONS
# STA. 1364+00 TO STA. 1367+00

MED-71-15.78

366
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | 95 |
| | 1050 |
| | 94 |
| | 1144 |
| | 112 |
| | 1233 |
| | 100 |
| | 1144 |
| | 106 |
| | 457 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 106 | 94 | | |
| | | 393 | 331 |
| 106 | 85 | | |
| | | 404 | 309 |
| 112 | 82 | | |
| | | 396 | 333 |
| 102 | 98 | | |
| | | 378 | 409 |
| 102 | 123 | | |
| | | 1571 | 1382 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1368+00 TO STA. 1371+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 112 | 1222 |
| 108 | 1172 |
| 103 | 1100 |
| 95 | |
| | 3494 |




Sta. 1371+00

SHEET TOTAL

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

Sta. 1371+00

SHEET TOTAL

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 103 | 125 | | |
| | | 394 | 426 |
| 110 | 105 | | |
| | | 398 | 398 |
| 105 | 110 | | |
| | | 391 | 378 |
| 106 | 94 | | |
| | | 1183 | 1202 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1372+00 TO STA. 1374+00

MED-71-15.78

368
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
DATE : $$$$DATE$$$$ USERNAME : $$$$INSTRUCTIONS$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 104 | 1200 |
| 112 | 1283 |
| 119 | 1300 |
| 115 | 1261 |
| 112 | |
| SHEET TOTAL | 5044 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 102 | 117 | | |
| | | 383 | 452 |
| 105 | 127 | | |
| | | 383 | 494 |
| 102 | 140 | | |
| | | 393 | 487 |
| 110 | 123 | | |
| | | 398 | 459 |
| 103 | 125 | | |
| SHEET TOTAL | | 1557 | 1892 |

CALCULATED NJV
CHECKED JWR

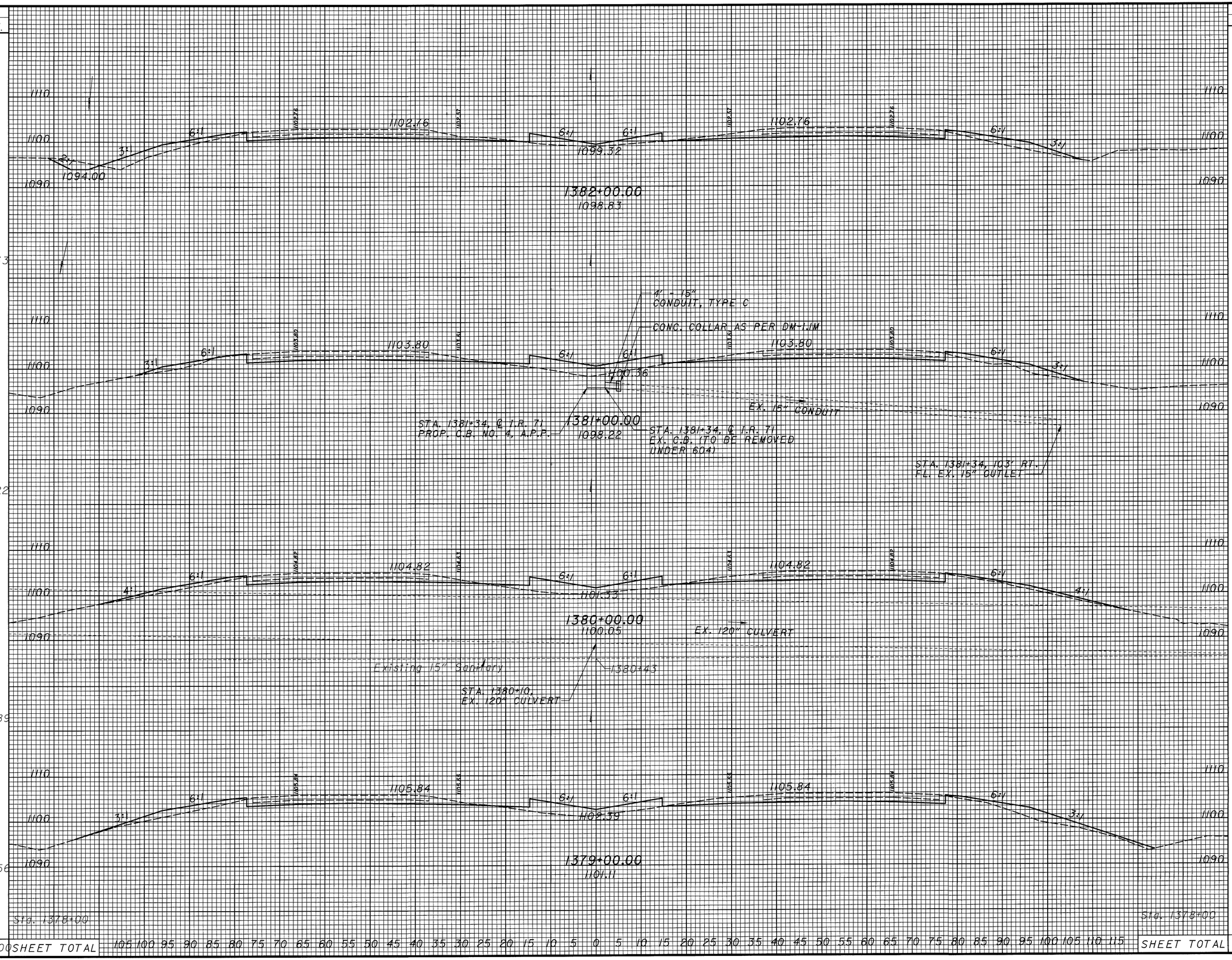
# CROSS SECTIONS
# STA. 1375+00 TO STA. 1378+00

MED-71-15.78

369
940

DESIGN FILE : $$$$$$$$$$DESIGNFILES$PECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 112 | 1133 |
| 92 | 1289 |
| 122 | 1256 |
| 110 | 1122 |
| 104 | |
| 4800 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 112 | 114 | | |
| | | 387 | 426 |
| 97 | 116 | | |
| | | 361 | 407 |
| 98 | 104 | | |
| | | 372 | 443 |
| 103 | 135 | | |
| | | 380 | 467 |
| 102 | 117 | | |
| | | 1500 | 1743 |
| | | SHEET TOTAL | |

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

CALCULATED N.J.V.
CHECKED J.W.R.

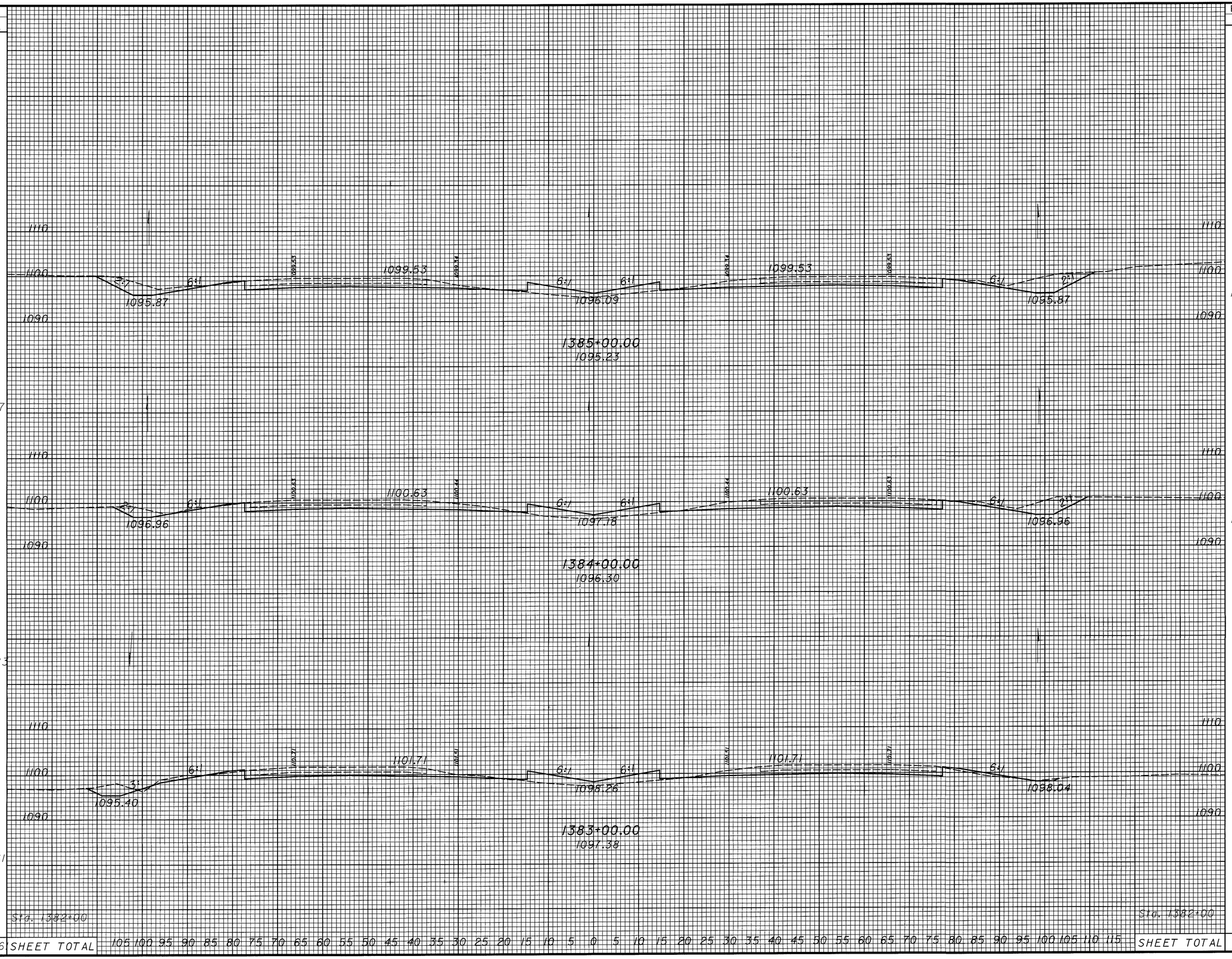
# CROSS SECTIONS
# STA. 1379+00 TO STA. 1382+00

MED-71-15.78

370
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$$

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 103 | | 136 | 40 | | |
| | | | | 567 | 157 |
| 98 | | 170 | 45 | | |
| | | | | 522 | 185 |
| 97 | | 112 | 55 | | |
| | | | | 415 | 313 |
| 112 | | 112 | 114 | | |
| | 336 SHEET TOTAL | | | 1504 | 655 |




CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
# STA. 1383+00 TO STA. 1385+00

MED-71-15.78

371
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 118 | 1328 | 195 | 57 | 756 | 207 |
| 121 | 1339 | 213 | 55 | 813 | 204 |
| 120 | 1289 | 226 | 55 | 785 | 187 |
| 112 | 1194 | 198 | 46 | 619 | 159 |
| 103 | | 136 | 40 | | |
| 5150 | SHEET TOTAL | | | 2973 | 757 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1386+00 TO STA. 1389+00

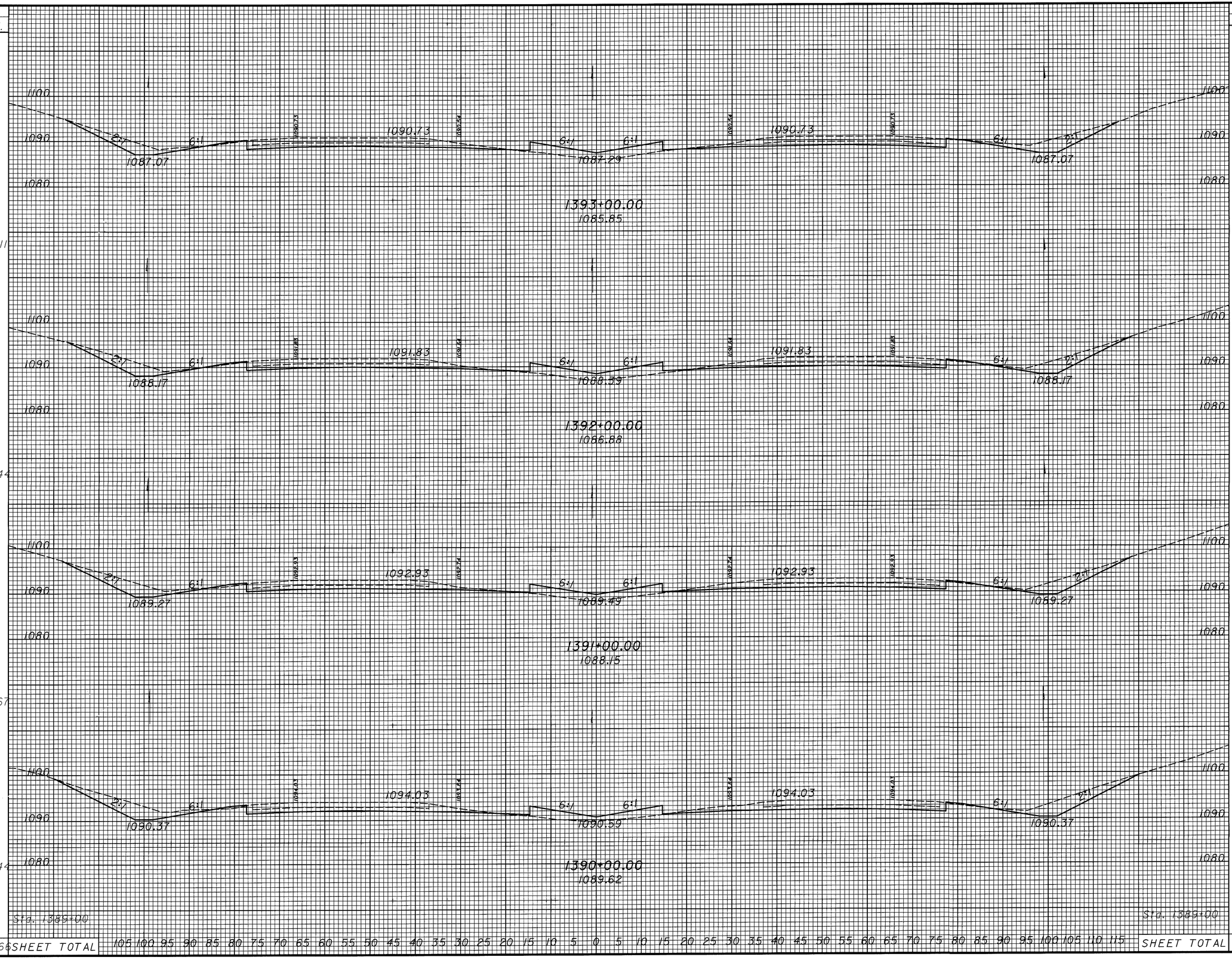
MED-71-15.78

372/940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$$

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 116 | |
| | 1311 |
| 120 | |
| | 1344 |
| 122 | |
| | 1367 |
| 124 | |
| | 1344 |
| 118 | |
| SHEET TOTAL | 5366 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 180 | 57 | | |
| | | 656 | 213 |
| 174 | 58 | | |
| | | 661 | 213 |
| 183 | 57 | | |
| | | 715 | 204 |
| 203 | 53 | | |
| | | 737 | 204 |
| 195 | 57 | | |
| SHEET TOTAL | | 2769 | 834 |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1390+00 TO STA. 1393+00

MED-71-15.78

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$$

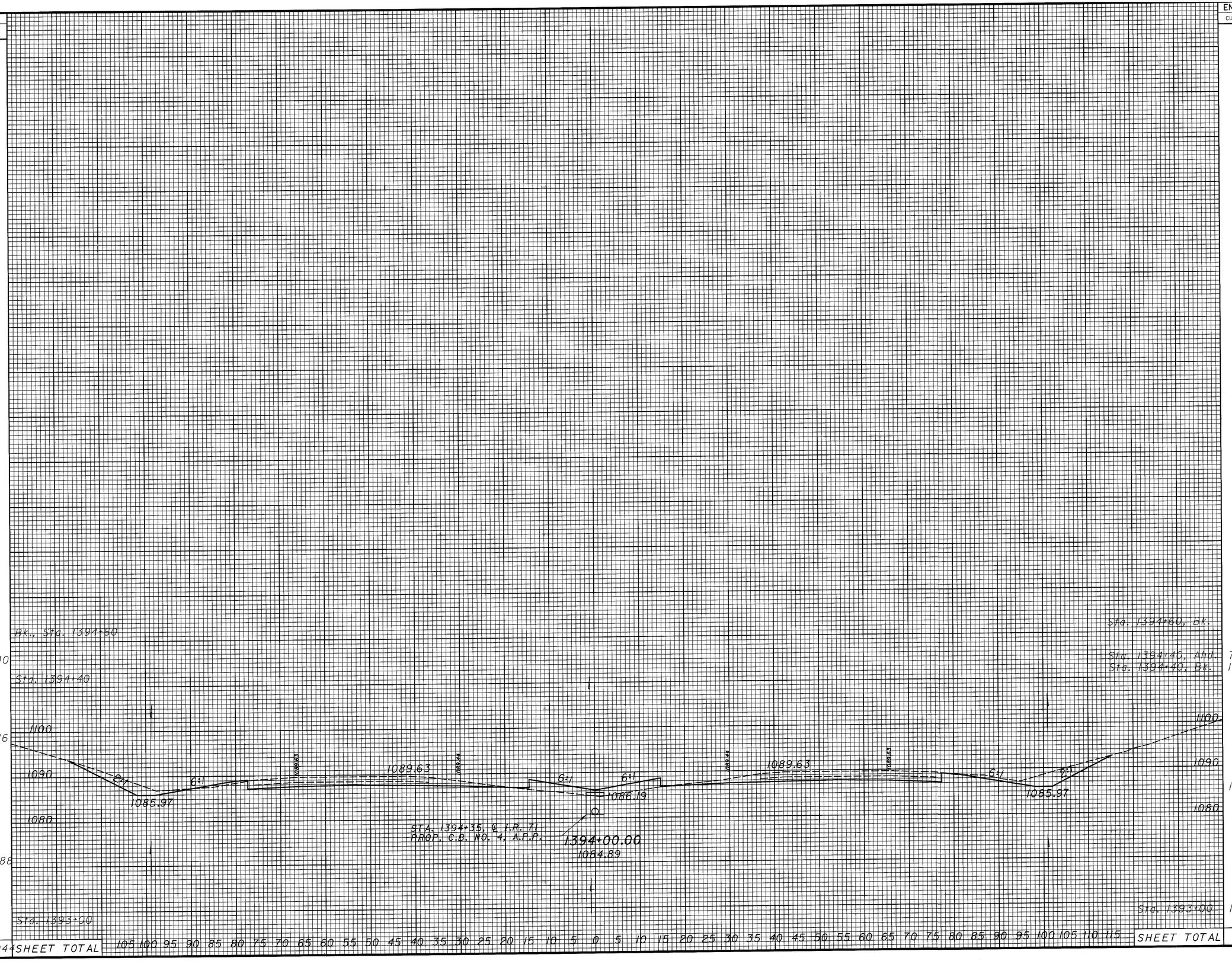
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS
## STA. 1394+00




| | | | | |
|---|---|---|---|---|
| Sta. 1394+60, Bk. | 0 | 0 | | |
| | | | 26 | 19 |
| Sta. 1394+40, Ahd. | 70 | 52 | | |
| Sta. 1394+40, Bk. | 178 | 52 | | |
| | | | 264 | 80 |
| | 178 | 56 | | |
| | | | 663 | 209 |
| Sta. 1393+00 | 180 | 57 | | |
| SHEET TOTAL | | | 953 | 308 |

MED-71-15.78

374
940

| S.R. 18 | | GRANGER ROAD | | | | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | AS PER PLAN SHEET REFERENCE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 376 | | 404 | 406 | 407 | 408 | 409 | | | | | | |
| | | | | | | | | | | | | |
| | | 152 | | | | | 202 | 22900 | 152 | SQ. YDS. | APPROACH SLAB REMOVED | |
| | | 713 | | | | | 202 | 38000 | 713 | LIN. FT. | GUARDRAIL REMOVED | |
| | | | | | | | | | | | | |
| 196 | | | | | 467 | 619 | 203 | 12000 | 1,282 | CU. YDS | EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION | |
| 414 | | | | | 414 | 414 | 203 | 20000 | 1,166 | CU. YDS. | EMBANKMENT | |
| 546 | | | 1,435 | | | | 203 | 50000 | 1,981 | SQ. YDS. | SUBGRADE COMPACTION | |
| | | | | | | | | | | | | |
| | | | 772 | | | | 254 | 01000 | 772 | SQ. YDS. | PAVEMENT PLANING, BITUMINOUS | |
| 122 | | | 295 | | | | 301 | 46000 | 417 | CU. YDS. | BITUMINOUS AGGREGATE BASE, PG64-22 | |
| 103 | | | 250 | | | | 304 | 20000 | 353 | CU. YDS. | AGGREGATE BASE | |
| | | | | | | | | | | | | |
| | | | 20 | | | | 407 | 10000 | 20 | GALLON | TACK COAT | |
| | | | 97 | | | | 407 | 14000 | 97 | GALLON | TACK COAT FOR INTERMEDIATE COARSE | |
| | | | 462 | | | | 408 | 10000 | 462 | GALLON | BITUMINOUS PRIME COAT | |
| | | | 94 | | | | 448 | 46020 | 94 | CU. YDS. | ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 | |
| | | | 67 | | | | 448 | 47020 | 67 | CU. YDS. | ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 | |
| | | | | | | | | | | | | |
| | | 133 | | | | | 605 | 31100 | 133 | LIN. FT. | AGGREGATE DRAIN | |
| | | 875.00 | | | | | 606 | 13000 | 875.00 | LIN. FT. | GUARDRAIL, TYPE 5 | |
| | | 2 | | | | | 606 | 25000 | 2 | EACH | ANCHOR ASSEMBLY, TYPE A | |
| | | 2 | | | | | 606 | 26500 | 2 | EACH | ANCHOR ASSEMBLY, TYPE T | |
| | | 4 | | | | | 606 | 35000 | 4 | EACH | BRIDGE TERMINAL ASSEMBLY, TYPE 1 | |
| | | | | | | | | | | | | |
| | | | 191 | | | | 611 | 25000 | 191 | SQ. YDS. | REINFORCED CONCRETE APPROACH SLAB (T=15") | |
| | | | 9 | | | | 617 | 10100 | 9 | CU. YDS. | COMPACTED AGGREGATE, TYPE A | |
| | | | 135 | | | | 617 | 25000 | 135 | M. GAL. | WATER | |
| | | | | | | | | | | | | |
| | | | | 9 | | | 621 | 00100 | 9 | EACH | RAISED PAVEMENT MARKER | |
| | | | | 0.32 | | | 887 | | 0.32 | MILE | EDGE LINE (5 YEAR WARRANTY) | |
| | | | | 0.15 | | | 887 | | 0.15 | MILE | CENTER LINE (5 YEAR WARRANTY) | |
| | | | | 57 | | | 644 | 00500 | 57 | LIN. FT. | STOP LINE | |
| | | | | | | | | | | | | |
| 4,176 | | | | | 1,809 | 2,633 | 870 | 10000 | 8,618 | SQ. YDS. | SEEDING AND MULCHING (CARRIED TO "ITEM 870 SEEDING AND MULCHING" GENERAL NOTE) | |
| | | | | | | | | | | | | |
| | | 58 | | | | | 830 | 26001 | 58 | LIN. FT. | CURB, TYPE 6, AS PER PLAN | 506 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

(QUANTITIES CARRIED TO GENERAL SUMMARY UNLESS OTHERWISE NOTED)

CALCULATED PS
CHECKED PG

ROADWAY SUBSUMMARY OF QUANTITIES
GRANGER ROAD AND S.R. 18

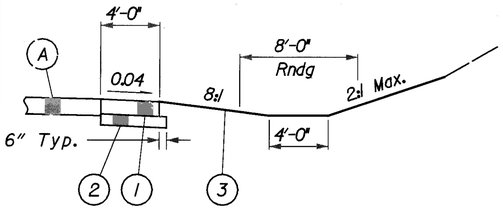
MED-71-15.78

375
940

DESIGN FILE : i:\pd_med_lr71\dgn\relte\finaldrainage\27lrsum.dgn
USERNAME : nvondere

DATE : 06-DEC-1999
TIME : 10:15
27IRSUM

## DITCH REGRADING SECTION




(1) 8" Item 301 Bituminous Aggregate Base

(2) 6" Item 304 Aggregate Base

(3) Item 659 Seeding and Mulching

(A) Existing Pavement (Thickness Unknown)

Note: Subgrade shall be compacted as per 203J3.

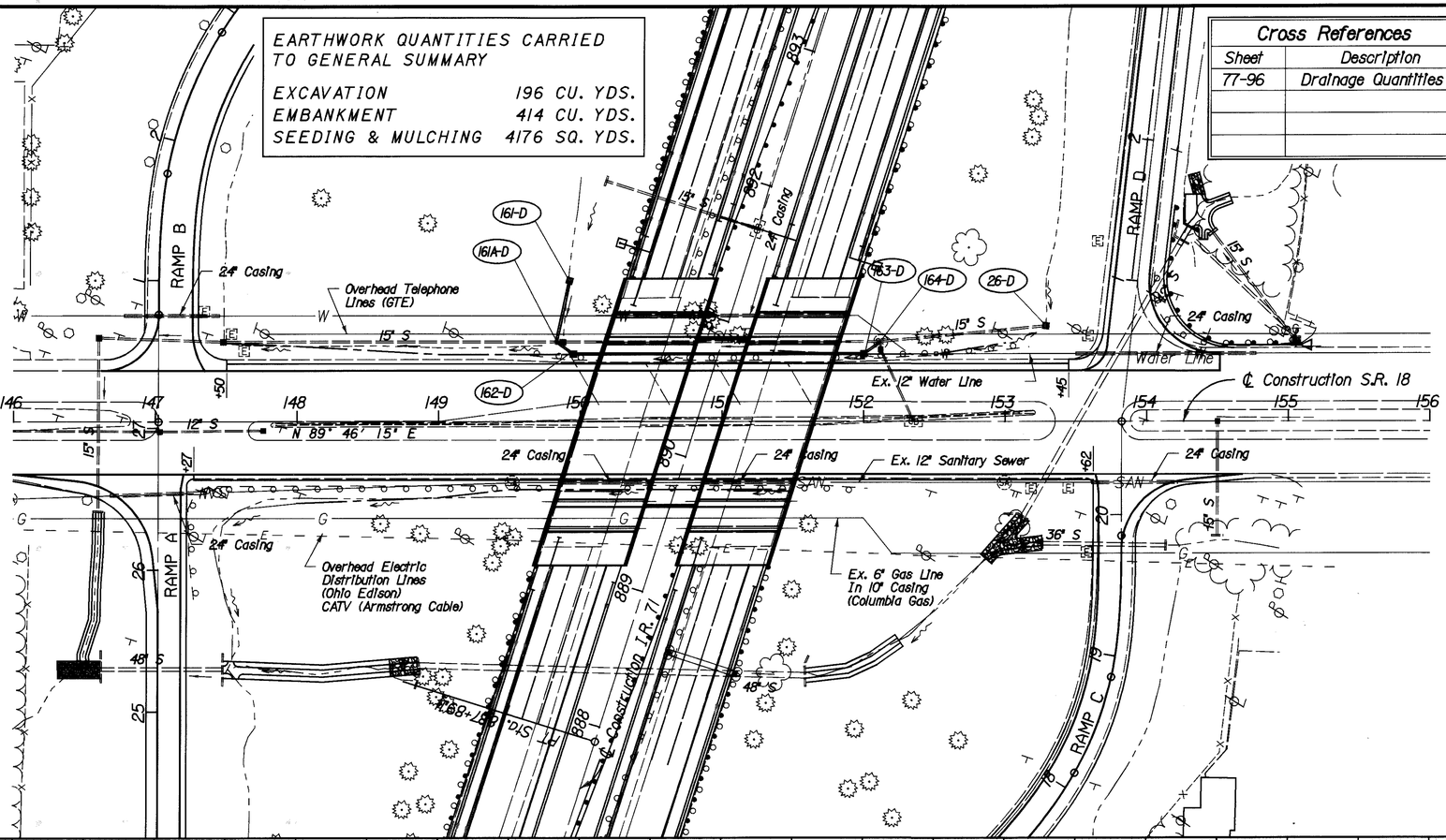
**S.R. 18 PAVEMENT CALCULATIONS**

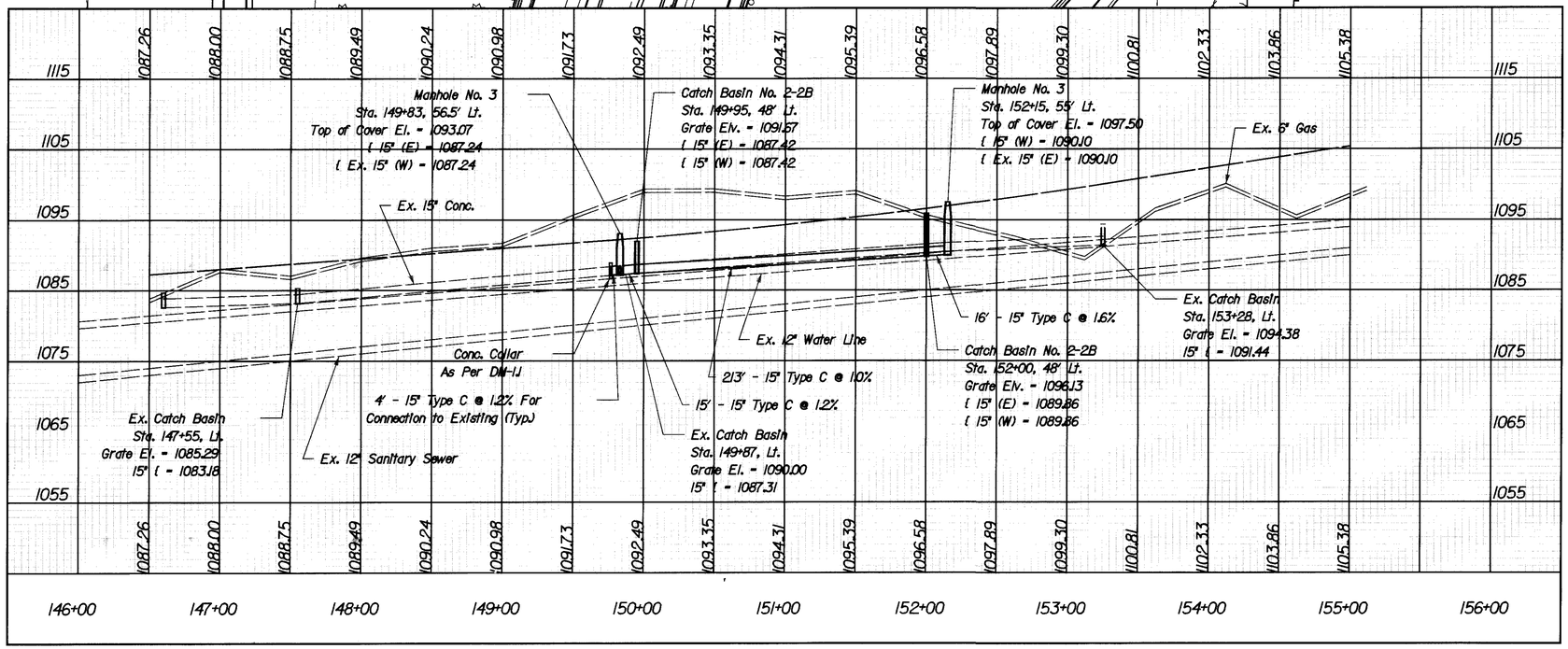
| LOCATION | STATION FROM | STATION TO | LENGTH, L FEET | BEGIN WIDTH, W1 FEET | END WIDTH, W2 FEET | SURFACE AREA, A A=L x[(W1+W2)/2] SQ. FT. | 301 8" BITUMINOUS AGGREGATE BASE, P664-22 CU. YDS. | 304 6" AGGREGATE BASE CU. YDS. |
|---|---|---|---|---|---|---|---|---|
| Shoulder Lt | 147+50 | 153+45 | 595 | 4 | 4 | 2380 | 58.77 | 49.58 |
| Shoulder Rt | 147+27 | 153+62 | 635 | 4 | 4 | 2540 | 62.72 | 52.92 |
| TOTALS CARRIED TO SHEET 375 | | | | | | | 121.49 | 102.50 |

EARTHWORK QUANTITIES CARRIED TO GENERAL SUMMARY

| | |
|---|---|
| EXCAVATION | 196 CU. YDS. |
| EMBANKMENT | 414 CU. YDS. |
| SEEDING & MULCHING | 4176 SQ. YDS. |

| Cross References | |
|---|---|
| Sheet | Description |
| 77-96 | Drainage Quantities |
| | |
| | |
| | |



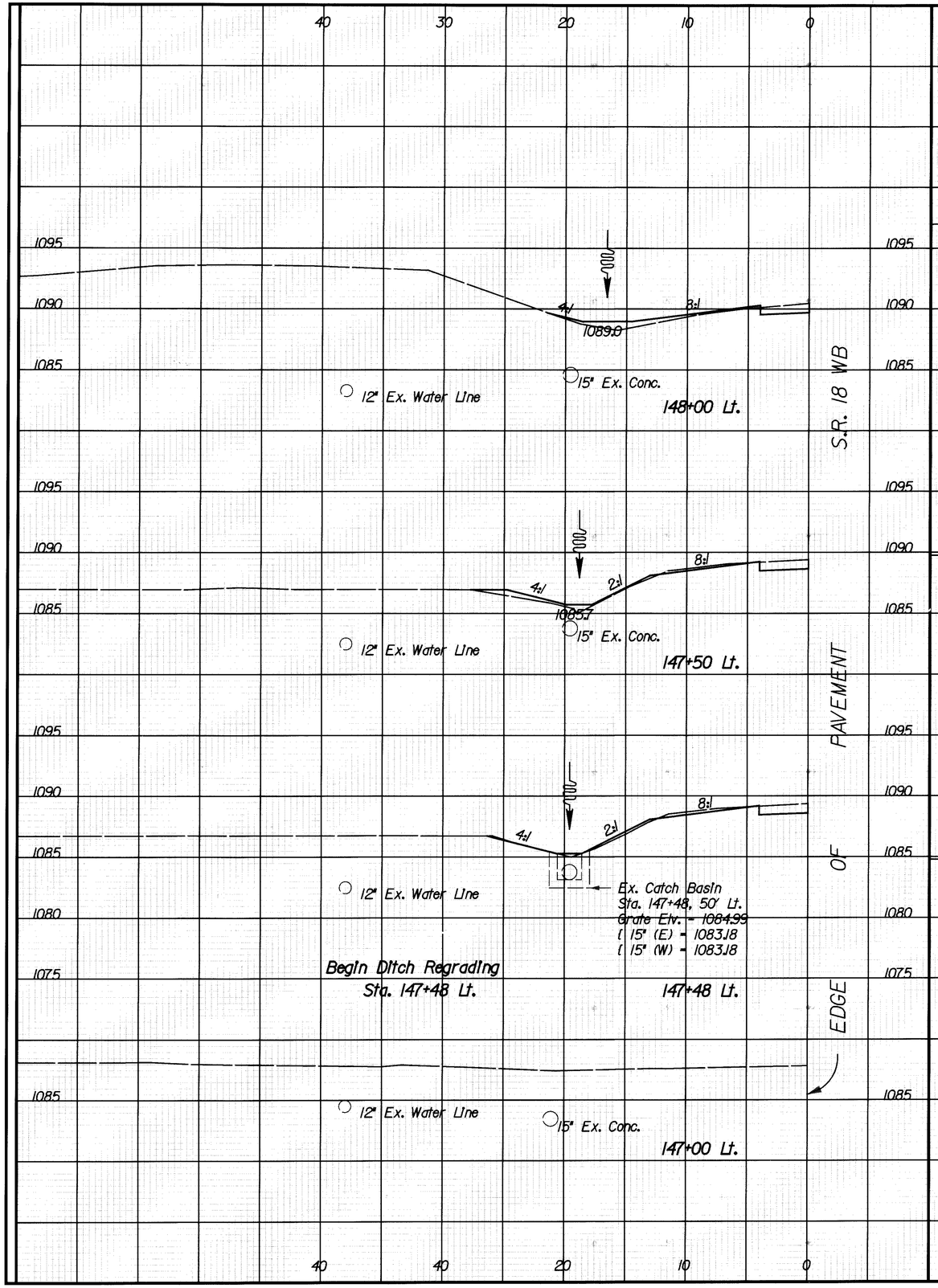

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

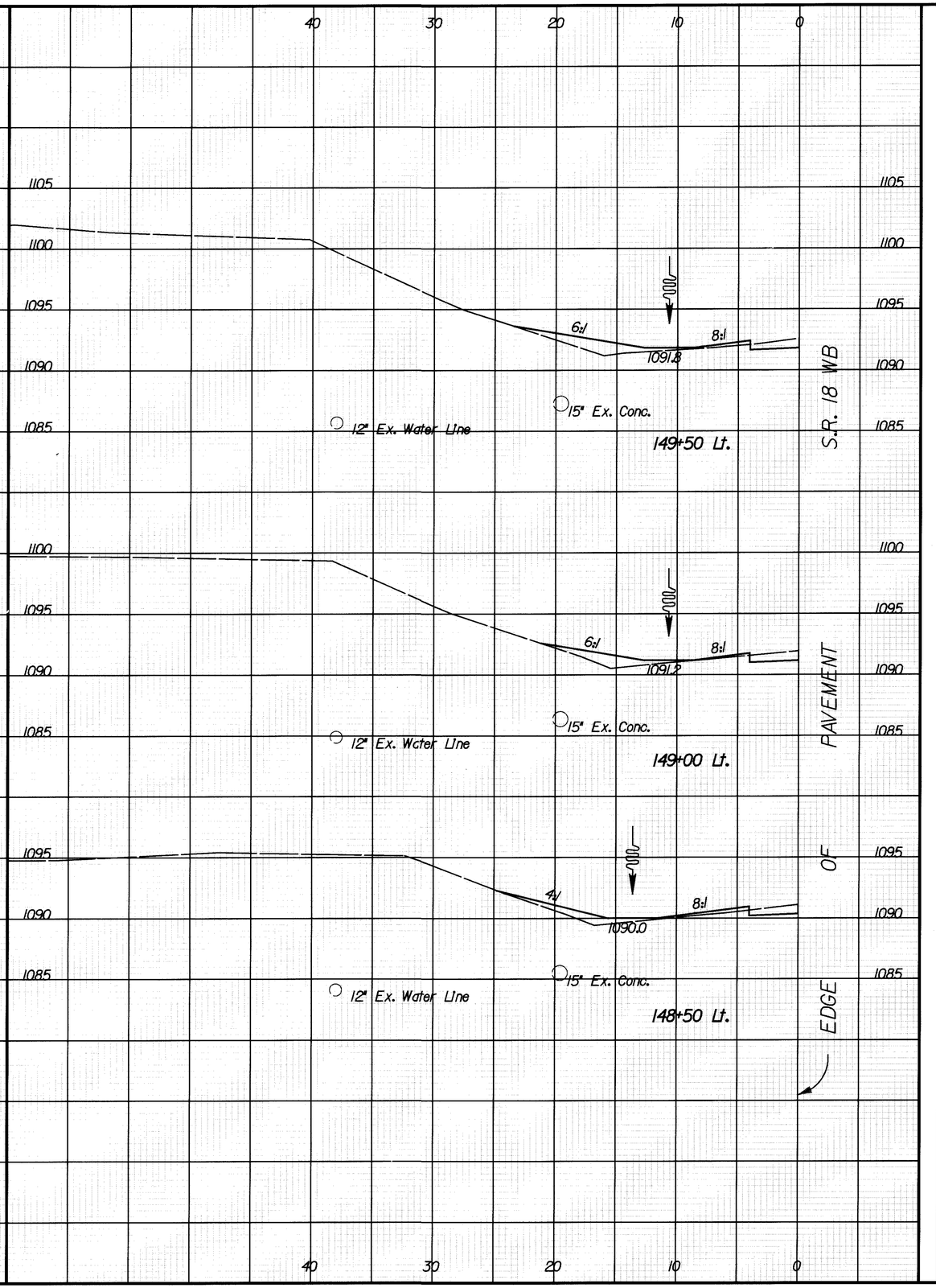
CALCULATED DLW CHECKED

# PLAN AND PROFILE S.R. 18

MED-71-15.94

376 940

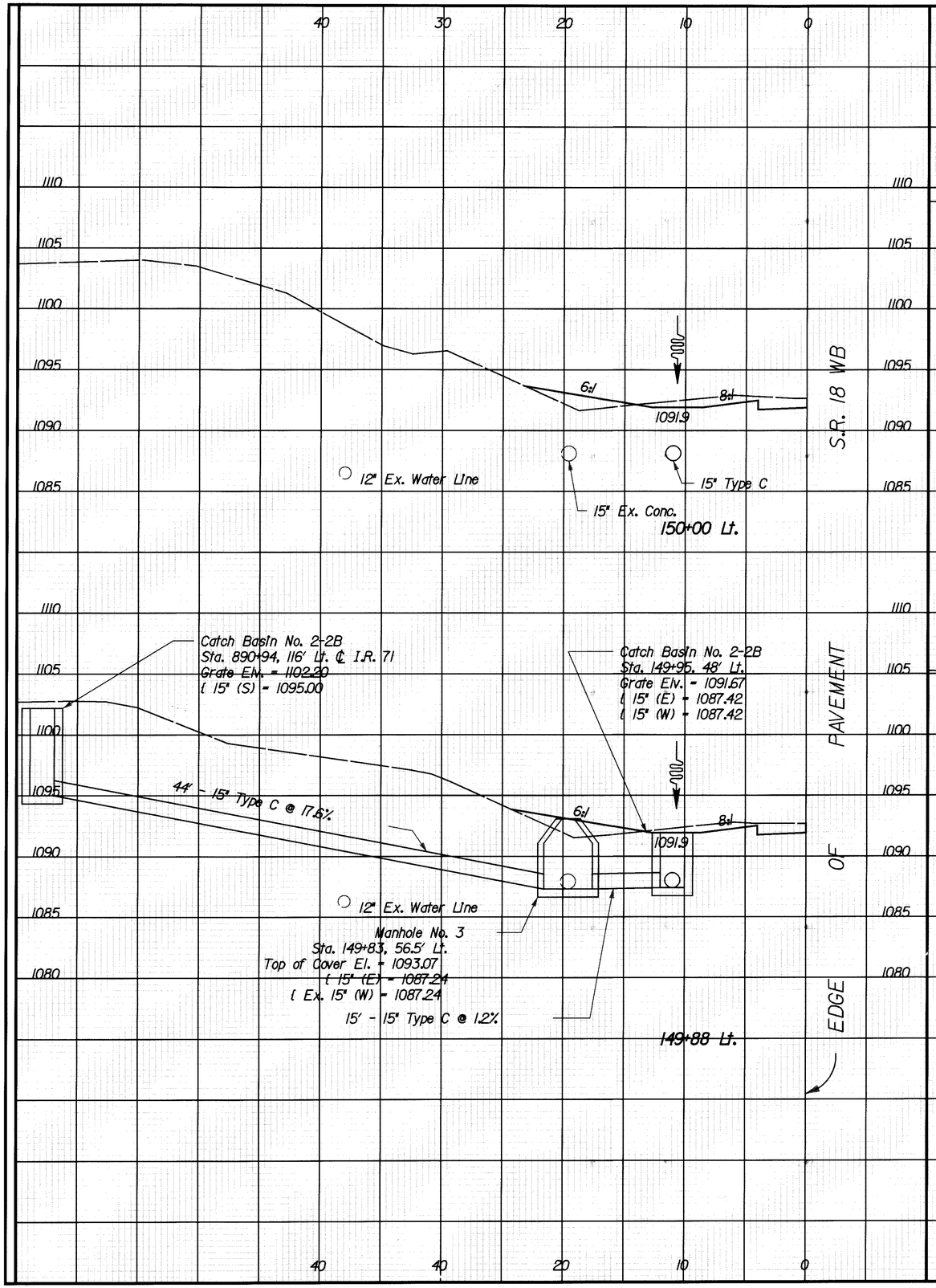



# CROSS SECTIONS
## DITCH REGRADING S.R. 18 LT

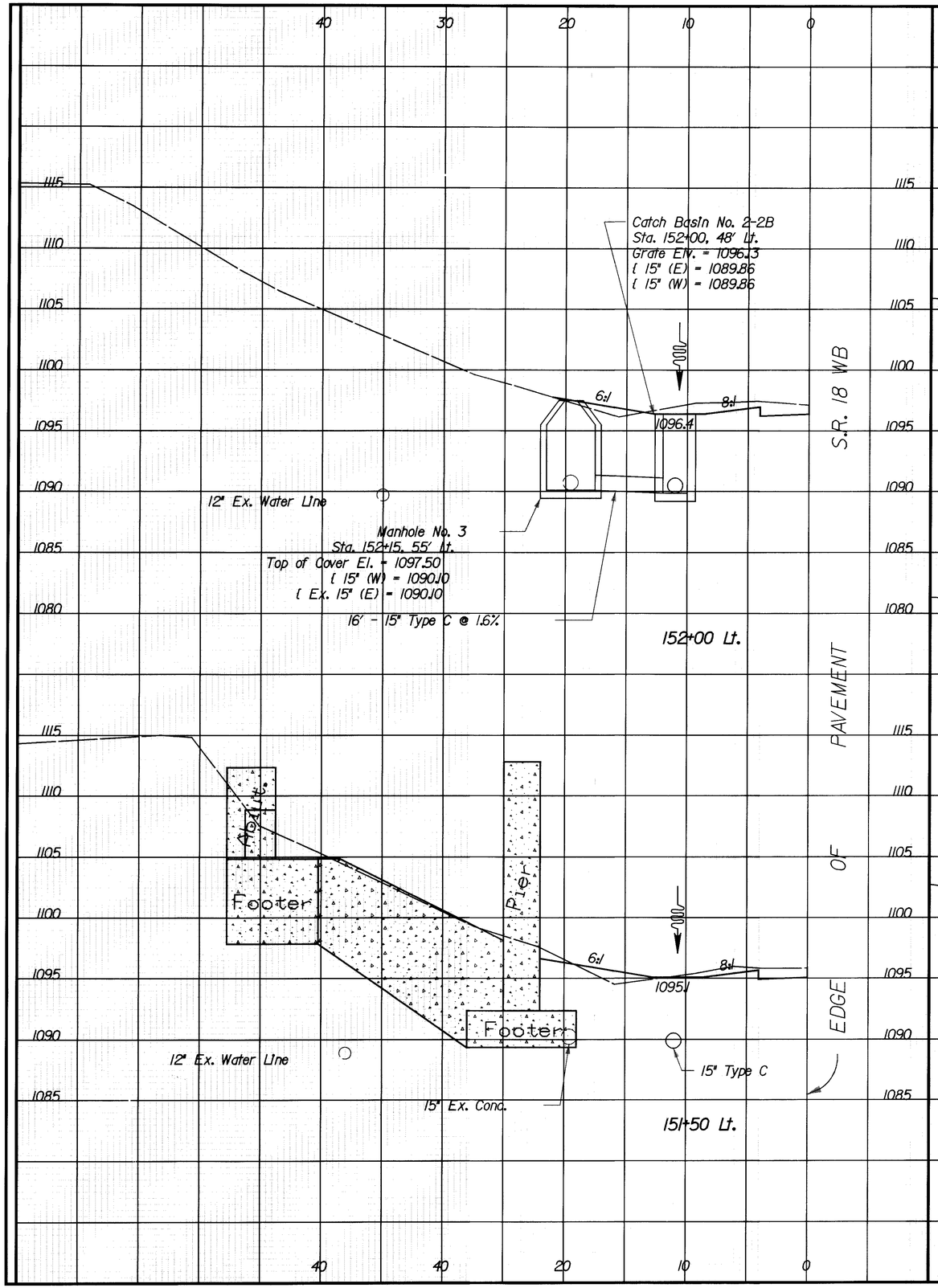
MED-71-15.94

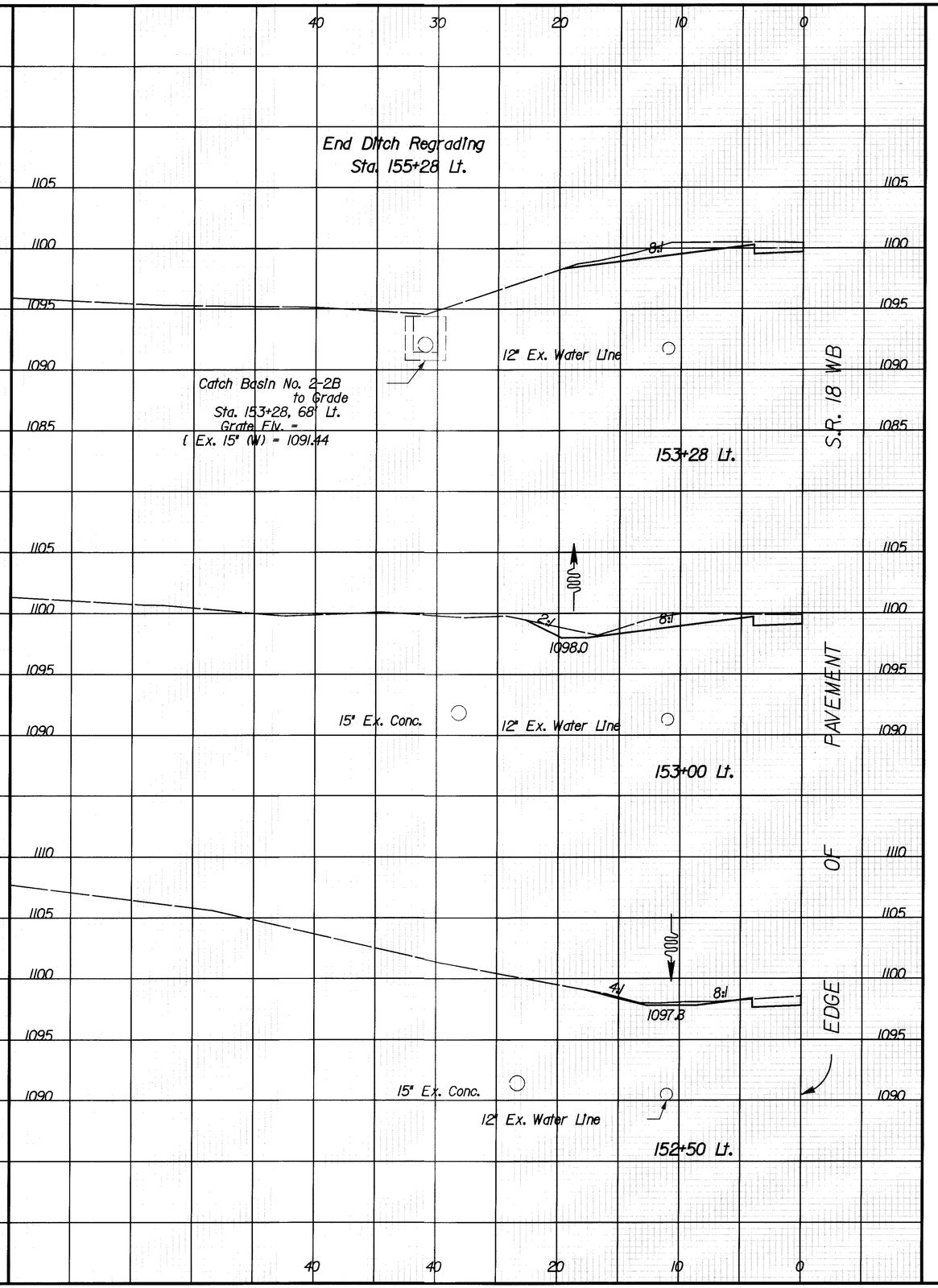
377
940




CROSS SECTIONS
DITCH REGRADING S.R. 18 LT

MED-71-15.94

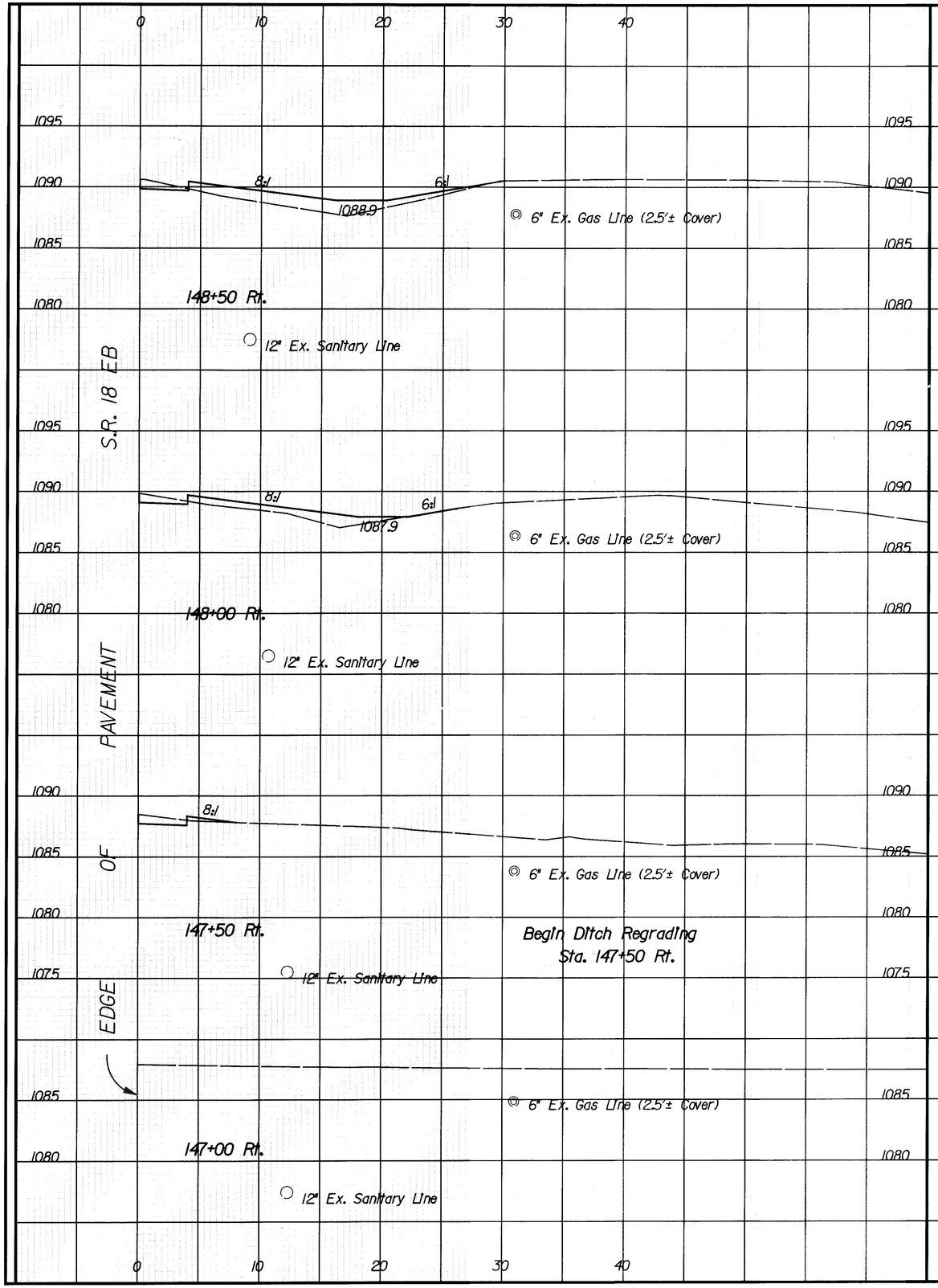


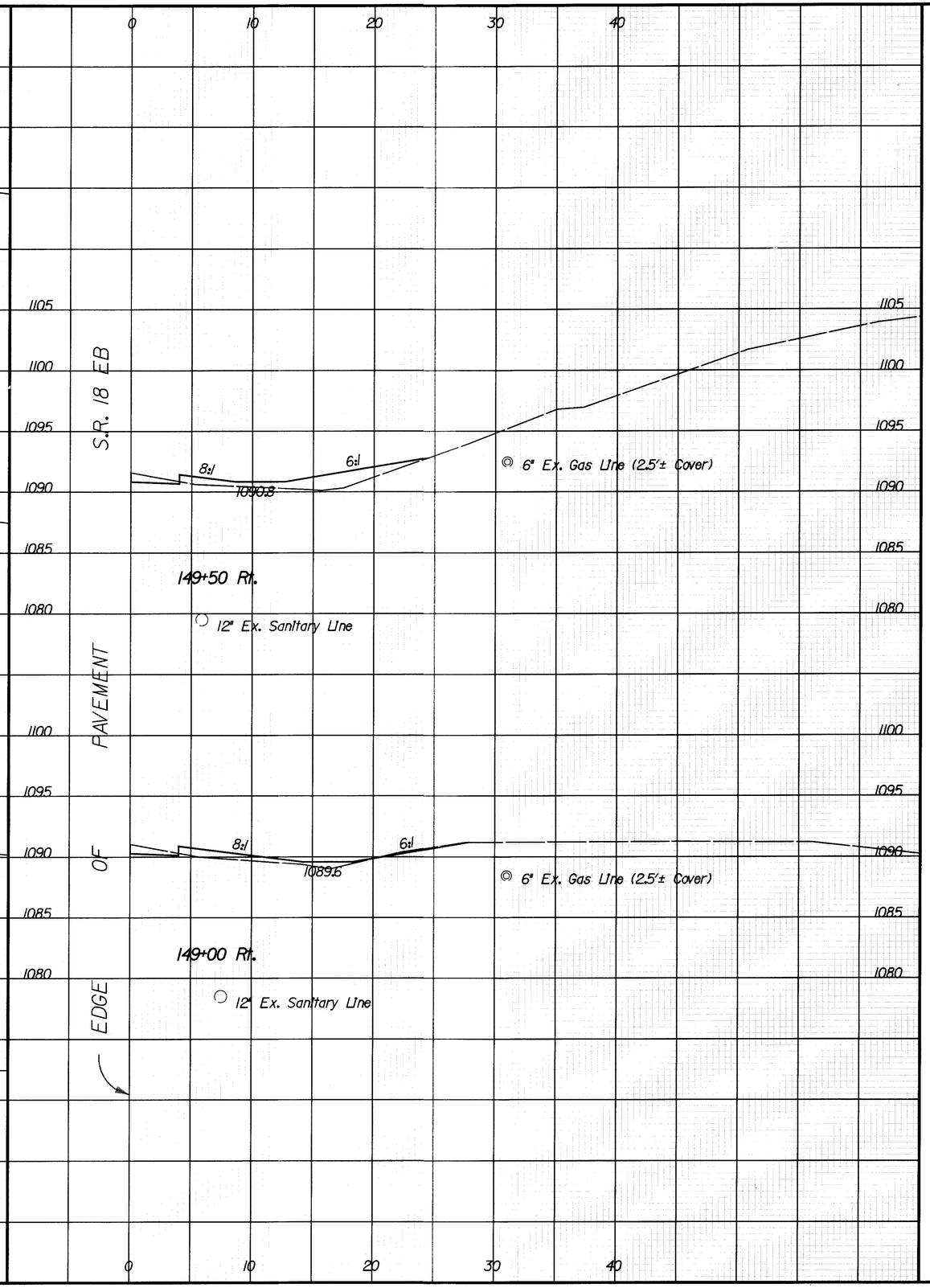




# CROSS SECTIONS
# DITCH REGRADING S.R. 18 LT

MED-71-15.94

379
940




# CROSS SECTIONS
## DITCH REGRADING S.R. 18 RT

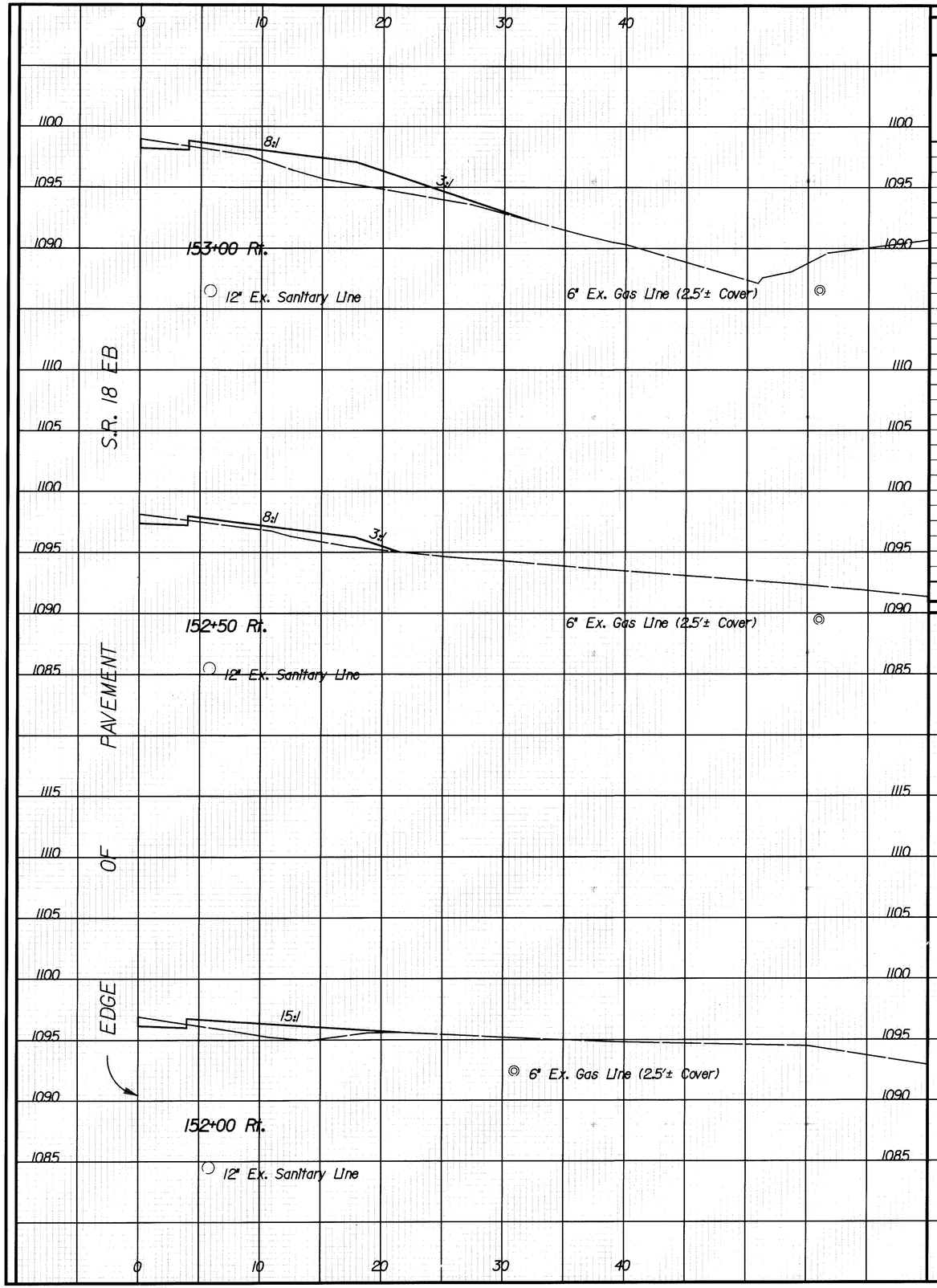
MED-71-15.94

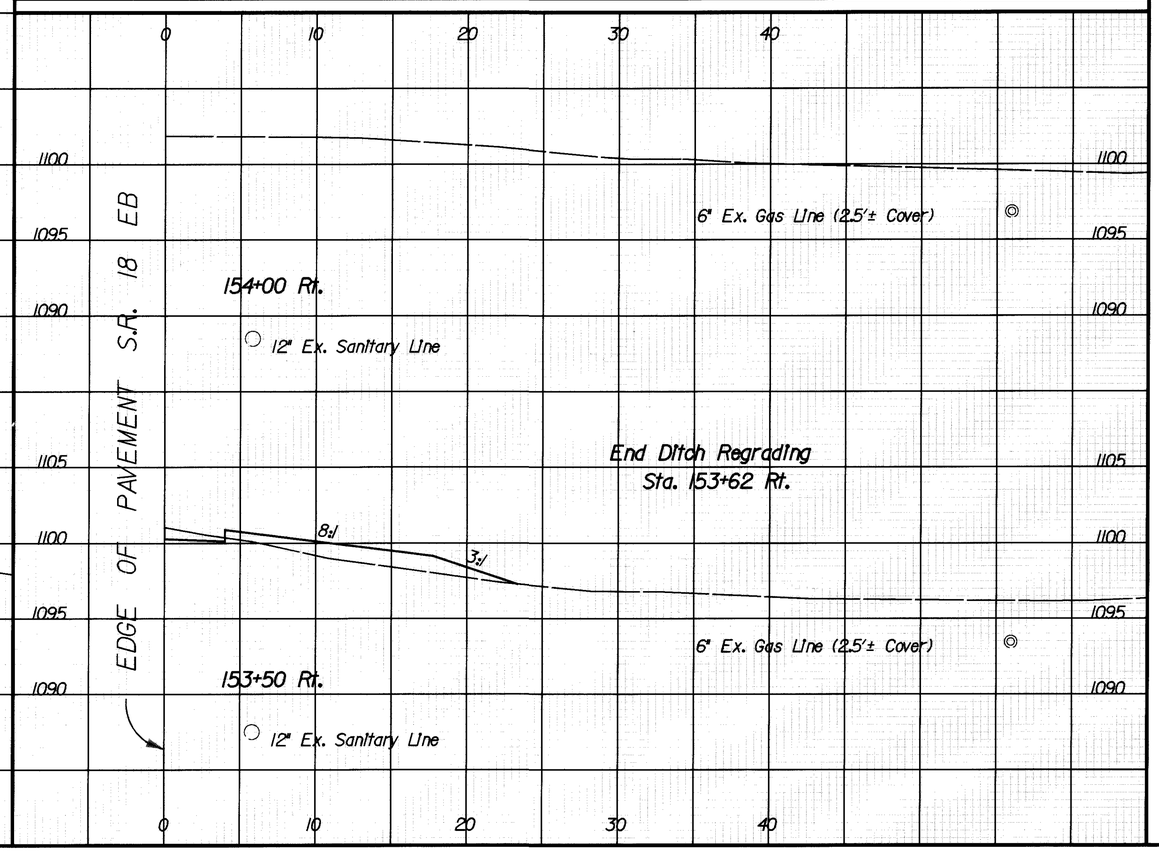
380
940

# CROSS SECTIONS
## DITCH REGRADING S.R. 18 RT

MED-71-15.94

381
940




## S.R. 18 EARTHWORK AND SEEDING QUANTITIES

| STATION | SIDE | END AREA | | VOLUME | | SEEDING | |
|---|---|---|---|---|---|---|---|
| | | Cut | Fill | Cut | Fill | End Width | SQ. YDS. |
| 147+48 | Lt. | 5 | 1 | | | 33 | |
| | | | | 1 | 1 | | 8 |
| 147+50 | Lt. | 4 | 4 | | | 35 | |
| | | | | 6 | 8 | | 175 |
| 148+00 | Lt. | 3 | 5 | | | 28 | |
| | | | | 5 | 11 | | 164 |
| 148+50 | Lt. | 2 | 7 | | | 31 | |
| | | | | 5 | 12 | | 161 |
| 149+00 | Lt. | 3 | 6 | | | 27 | |
| | | | | 5 | 14 | | 158 |
| 149+50 | Lt. | 2 | 9 | | | 30 | |
| | | | | 6 | 12 | | 127 |
| 149+88 | Lt. | 7 | 8 | | | 30 | |
| | | | | 4 | 3 | | 39 |
| 150+00 | Lt. | 9 | 6 | | | 29 | |
| | | | | 15 | 7 | | 161 |
| 150+50 | Lt. | 7 | 2 | | | 29 | |
| | | | | 13 | 5 | | 156 |
| 151+00 | Lt. | 7 | 3 | | | 27 | |
| | | | | 13 | 6 | | 153 |
| 151+50 | Lt. | 7 | 4 | | | 28 | |
| | | | | 16 | 6 | | 153 |
| 152+00 | Lt. | 10 | 3 | | | 27 | |
| | | | | 14 | 7 | | 142 |
| 152+50 | Lt. | 5 | 5 | | | 24 | |
| | | | | 18 | 5 | | 147 |
| 153+00 | Lt. | 14 | 0 | | | 29 | |
| | | | | 13 | 0 | | 86 |
| 153+28 | Lt. | 12 | 0 | | | 26 | |
| TOTALS LEFT SIDE | | | | 134 | 97 | XXXX | 1830 |

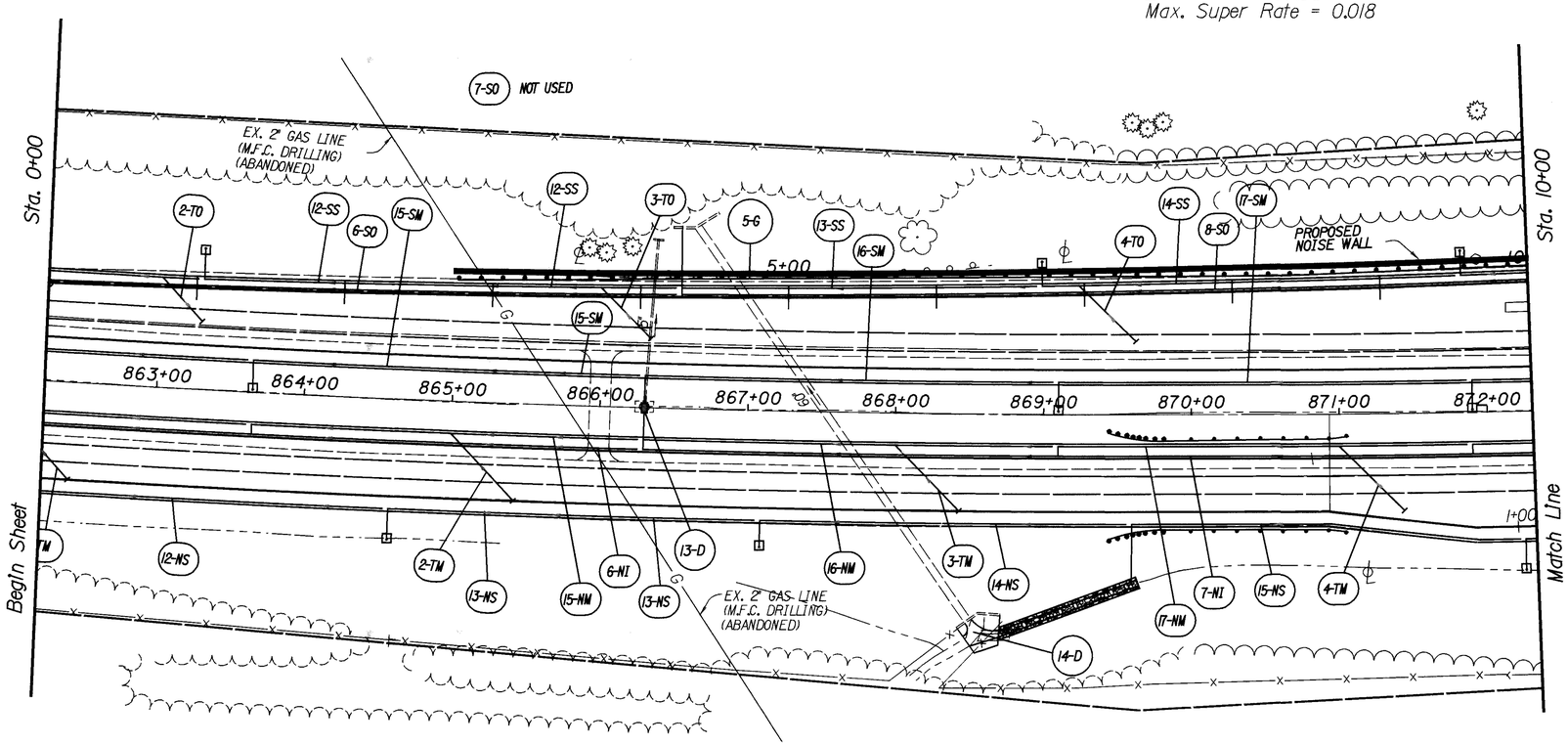
| STATION | SIDE | END AREA | | VOLUME | | SEEDING | |
|---|---|---|---|---|---|---|---|
| | | Cut | Fill | Cut | Fill | End Width | SQ. YDS. |
| 147+50 | Rt. | 2 | 1 | | | 14 | |
| | | | | 4 | 10 | | 128 |
| 148+00 | Rt. | 2 | 10 | | | 32 | |
| | | | | 4 | 26 | | 189 |
| 148+50 | Rt. | 2 | 18 | | | 36 | |
| | | | | 5 | 23 | | 194 |
| 149+00 | Rt. | 3 | 7 | | | 34 | |
| | | | | 5 | 19 | | 181 |
| 149+50 | Rt. | 2 | 14 | | | 31 | |
| | | | | 4 | 26 | | 164 |
| 150+00 | Rt. | 2 | 14 | | | 28 | |
| | | | | 9 | 22 | | 153 |
| 150+50 | Rt. | 3 | 10 | | | 27 | |
| | | | | 6 | 23 | | 156 |
| 151+00 | Rt. | 3 | 15 | | | 29 | |
| | | | | 6 | 33 | | 283 |
| 151+50 | Rt. | 3 | 21 | | | 73 | |
| | | | | 5 | 31 | | 281 |
| 152+00 | Rt. | 2 | 12 | | | 28 | |
| | | | | 4 | 19 | | 156 |
| 152+50 | Rt. | 2 | 8 | | | 28 | |
| | | | | 4 | 31 | | 186 |
| 153+00 | Rt. | 2 | 26 | | | 39 | |
| | | | | 4 | 39 | | 192 |
| 153+50 | Rt. | 2 | 16 | | | 30 | |
| | | | | 2 | 15 | | 83 |
| 154+00 | Rt. | 0 | 0 | | | 0 | |
| TOTALS RIGHT SIDE | | | | 62 | 317 | XXXX | 2346 |
| TOTALS LEFT SIDE | | | | 134 | 97 | XXXX | 1830 |
| TOTALS CARRIED TO 376 | | | | 196 | 414 | XXXX | 4176 |

# CROSS SECTIONS
## DITCH REGRADING S.R. 18 RT

MED-71-15.94

382
940

I.R.71
P. I. Sta. = 873+38.41
Δ = 13° 36′ 15" (LT)
Dc = 00° 28′ 00"
R = 12,277.67
T = 1,464.48
E = 87.03′
Max. Super Rate = 0.018




FOR UNDERDRAIN KEY, SEE SHEET NO. 172

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

SR 18 Ramp A
STA. 0+00 TO STA. 10+00

MED - 71 - 15.78

384
940

DESIGN FILE : i:\dot_MED_IR71\DGN\PlanProfile\sr18rmpal.dgn
USERNAME : pfought
DATE : 02-DEC-1999
TIME : 14:19

Ramp "A"
P. I. Sta. = 18+82.93
△ = 22° 00′ 00" (LT)
Dc = 3° 56′ 21"
R = 1454.52′
LS = 200.00′
Theta = 3° 56′ 21"
LT = 133.37′
ST = 66.70′
x = 199.91′
y = 4.58′
k = 99.98′
p = 1.15′
△c = 14° 07′ 18" (LT)
Lc = 358.49′
Ts = 382.94′
Es = 28.39′

(18-SS) NOT USED FOR UNDERDRAIN KEY, SEE SHEET NO. 172

Sta. 10+00
PT Sta. 11+92.79
TS Sta. 14+98.40
SC Sta. 16+46.19
Sta. 20+00
EX. 2" GAS LINE (M.F.C. DRILLING) (ABANDONED)
PROPOSED NOISE WALL
Ramp A
Ramp C
Match Line
Match Line
EX. 2" GAS LINE (M.F.C. DRILLING) (ABANDONED)
PC Sta. 7+18.64
CS Sta. 11+53.36

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

DESIGN FILE : h:\cd_MED_IR71\DGN\PlanProfile\sr18rmpa1.dgn
USERNAME : pfought
DATE : 02-DEC-1999
TIME : 14:21

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

SR 18 RAMP A
STA. 10+00 TO 20+00

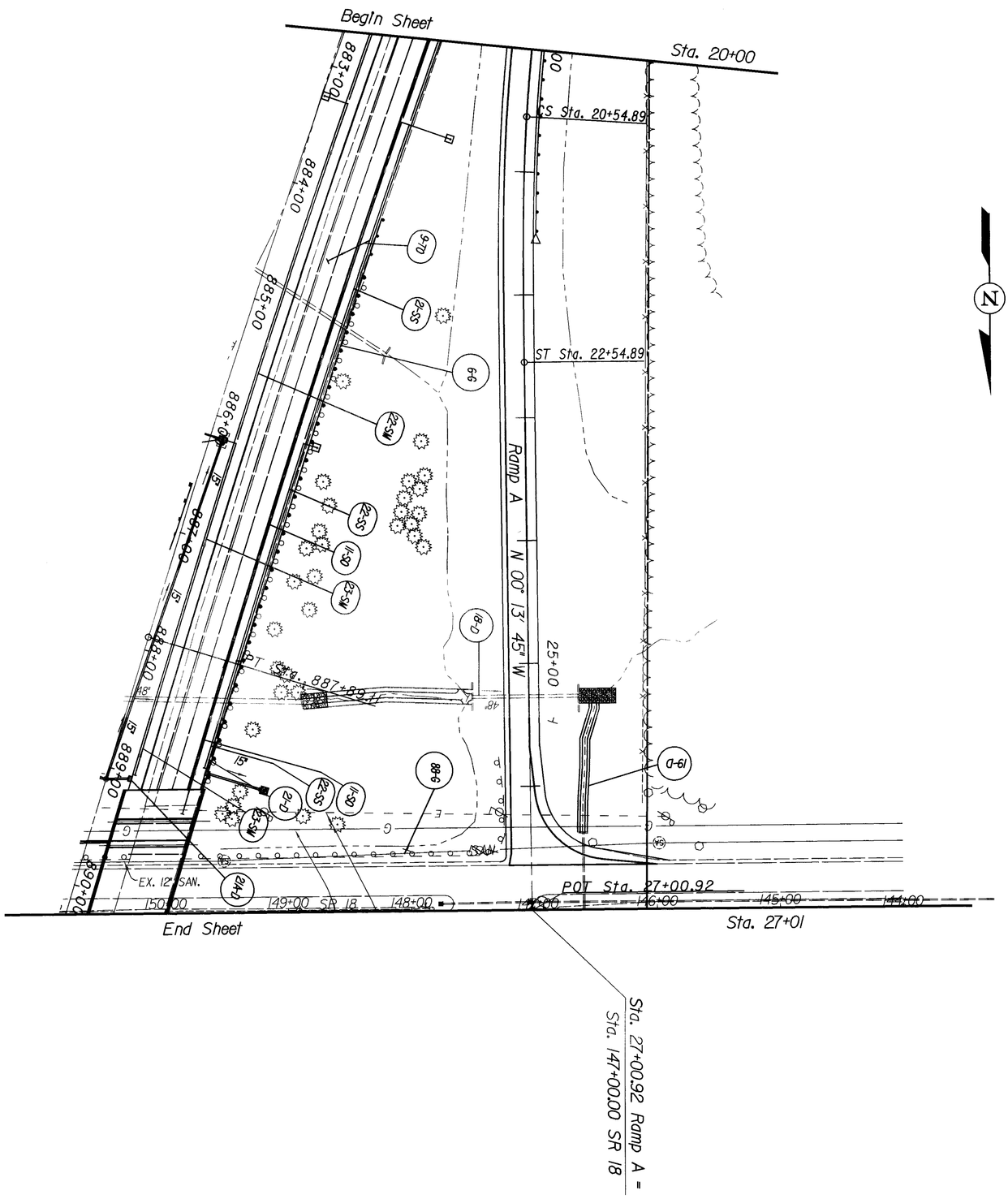
MED - 71 - 15.78

385
940

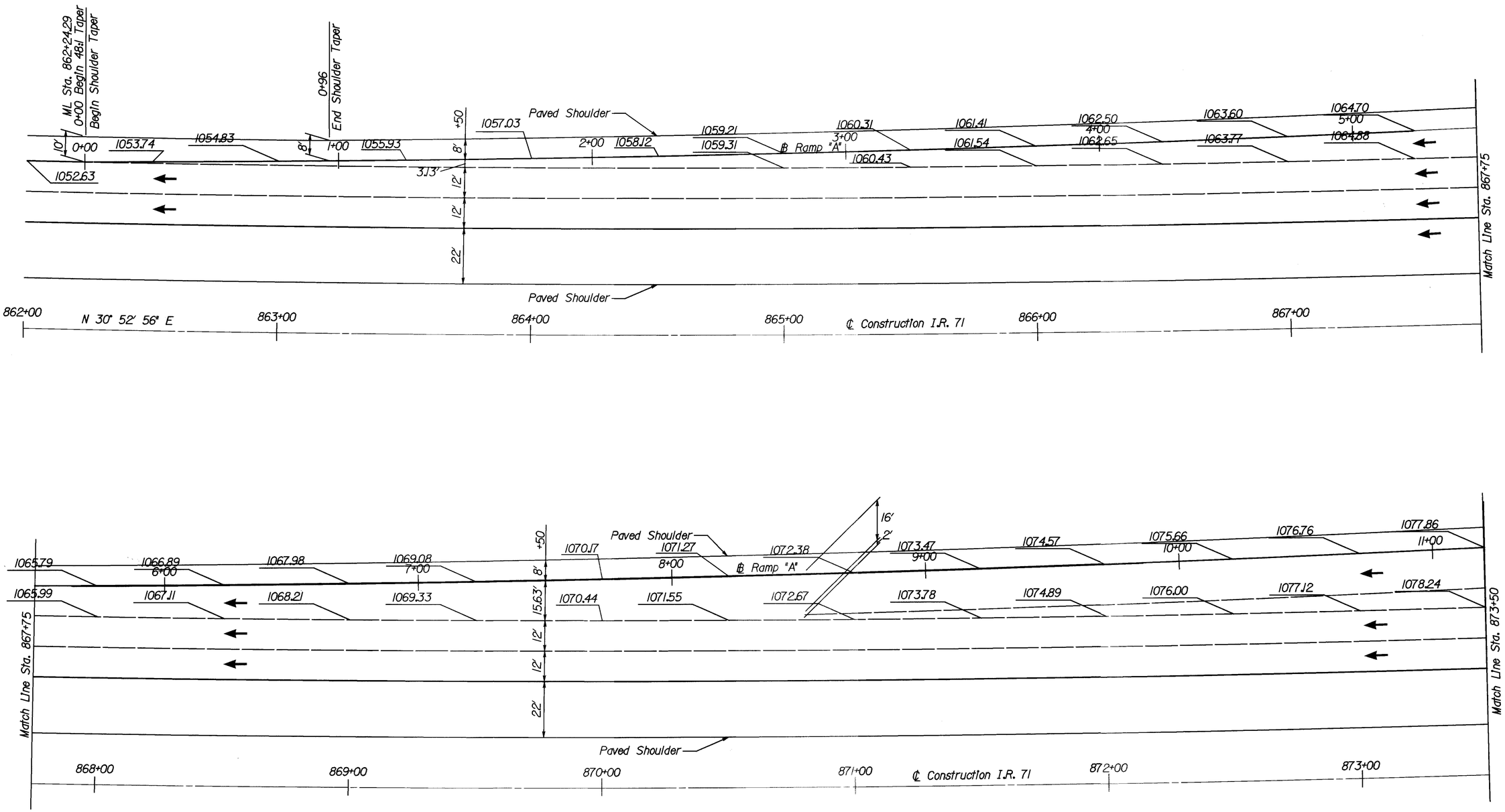
DATE : 02-DEC-1999
TIME : 14:24

DESIGN FILE : I:\pd_MED_IR71\DGN\PlanProfile\sr18rmpal.dgn
USERNAME : pfought

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




| | | | | |
|---|---|---|---|---|
| 386/940 | MED - 71 - 15.78 | SR 18 RAMP A<br>STA. 20+00 TO STA 27+01 | CALCULATED<br>CHECKED | 0 50 100<br>HORIZONTAL SCALE IN FEET |




DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\sr18.dgn
USERNAME : jrogers

DATE : 02-DEC-1999
TIME : 10:54

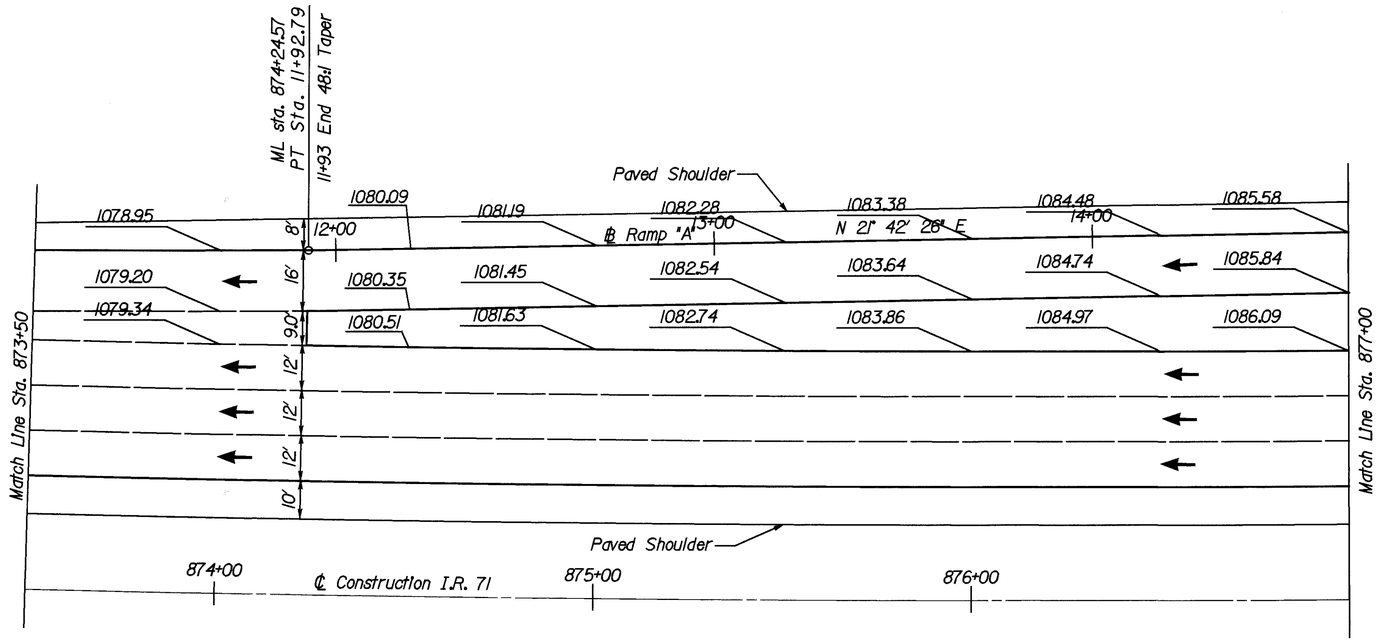
HORIZONTAL SCALE IN FEET
0 10 20 40

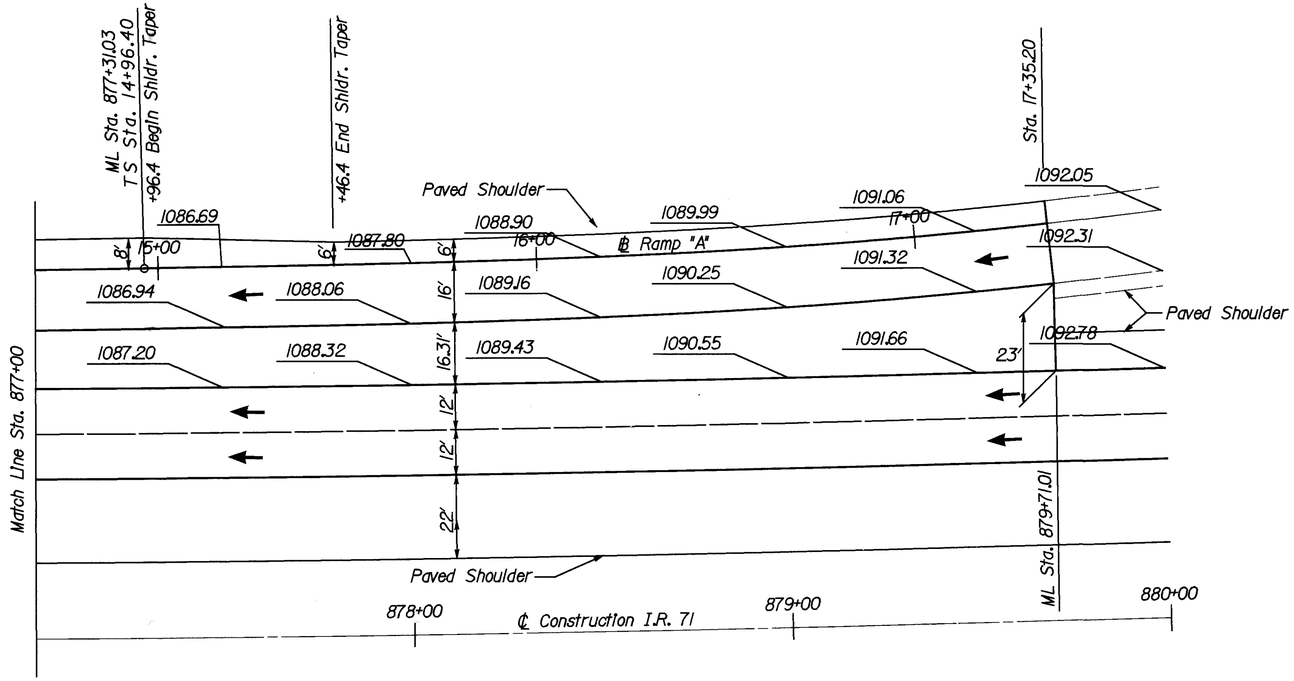
CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL - S. R. 18 RAMP "A"
## Sta. 862+00 to Sta. 873+50

MED-71-15.78

387
940




DATE : 01-DEC-1999
TIME : 09:03
DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\sr18.dgn
USERNAME : jrogers

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL - S. R. 18 RAMP "A"
## Sta. 873+50 to Sta 880+00

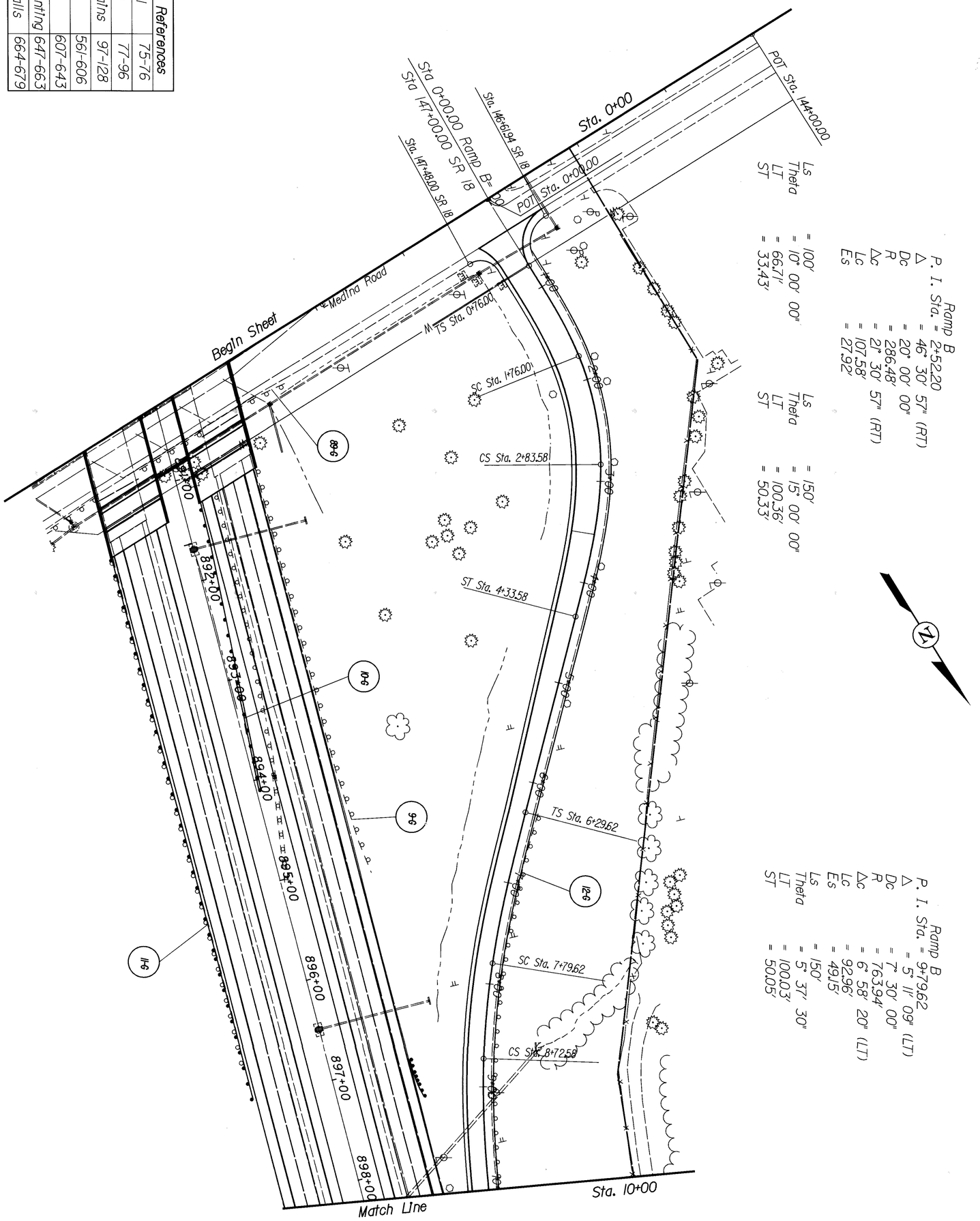
MED-71-15.78

388
940

DATE : 03-DEC-1999
TIME : 08:48

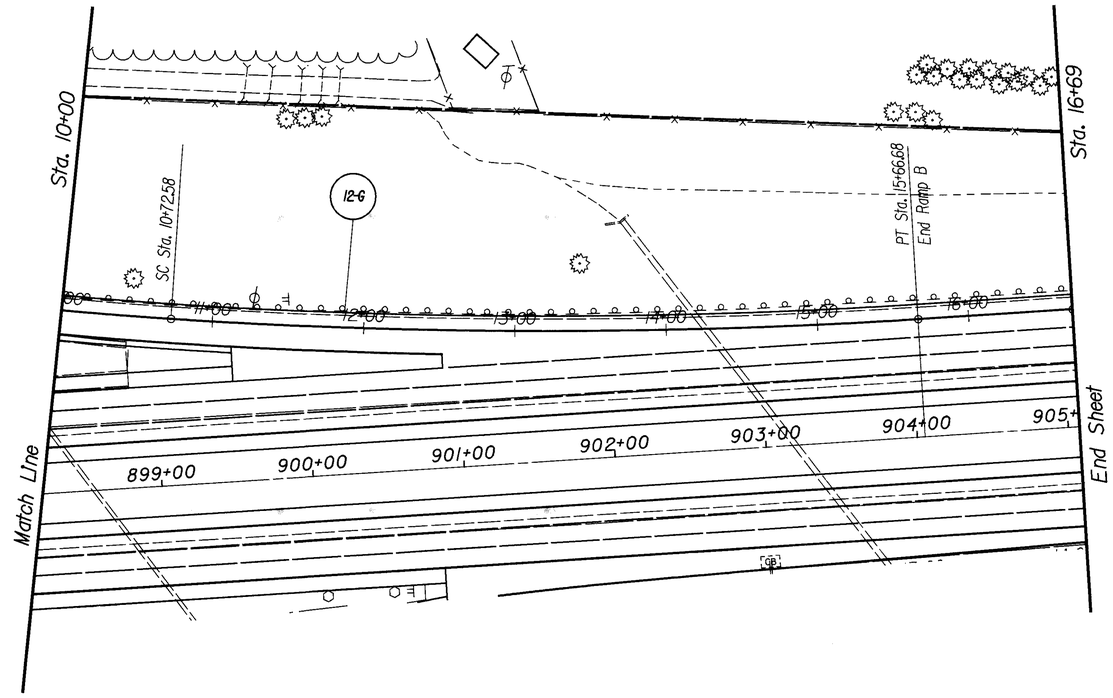
DESIGN FILE : I:\pd\...MED_IR71\DGN\PlanProfile\sr18rmpbl.dgn
USERNAME : pfought

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




| | | | | |
|---|---|---|---|---|
| 389 / 940 | MED - 71 - 15.78 | SR 18 RAMP B<br>STA. 0+00 TO STA 10+00 | CALCULATED<br>CHECKED | 0 50 100<br>HORIZONTAL SCALE IN FEET |

Ramp B
P. I. Sta. = 13+19.97
△ = 7° 24' 41" (LT)
Dc = 01° 30' 00"
R = 3,819.72'
T = 247.39'
L = 494.09'
E = 8.00'
D = 9° 00'00" (RT)
LS = 200.00'
Theta = 06° 00' 00"
LT = 122.45'
ST = 77.96'




| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\sr18rmpbl.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 08:49

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

SR 18 RAMP B
STA. 10+00 TO STA. 16+69

MED - 71 - 15.78

390
940

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL - S. R. 18 RAMP "B"
## Sta. 899+00 to Sta. 906+00

MED-71-15.78

391
940

DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\sr18.dgn
USERNAME : jrogers
DATE : 01-DEC-1999
TIME : 09:02

Ramp C
P. I. Sta. = 13+07.95
Δ = 12° 41′ 06" (RT)
Dc = 7° 30′ 00"
R = 763.94′
Δc = 7° 03′ 49" (RT)
Lc = 94.18′
Es = 200.88′

Ls = 200′
Theta = 6° 00′ 00"
LT = 122.45′
ST = 77.96′

Ls = 150′
Theta = 5° 37′ 30"
LT = 100.05′
ST = 50.05′

Ramp C
P. I. Sta. = 18+40.74
Δ = 47° 29′ 36" (LT)
Dc = 24° 00′ 00"
R = 238.73′
Δc = 17° 29′ 36" (LT)
Lc = 72.89′
Es = 25.19′

Ls = 150′
Theta = 18° 00′ 00"
LT = 100.52′
ST = 50.48′

Ls = 100′
Theta = 12° 00′ 00"
LT = 66.82′
ST = 33.47′

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

DESIGN FILE : I:\pd_MED_IR71\DGN\PlanProfile\sr18rmpcl.dgn
USERNAME : prought
DATE : 03-DEC-1999
TIME : 08:46

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

# SR 18 RAMP C
# STA. 7+00 TO STA. 20+66

MED - 71 - 15.78

392
940

DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\sr18.dgn
USERNAME : jrogers
DATE : 01-DEC-1999
TIME : 09:02

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL - S. R. 18 RAMP "C"
## Sta. 870+00 to Sta. 883+00

MED-71-15.78

393
940

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

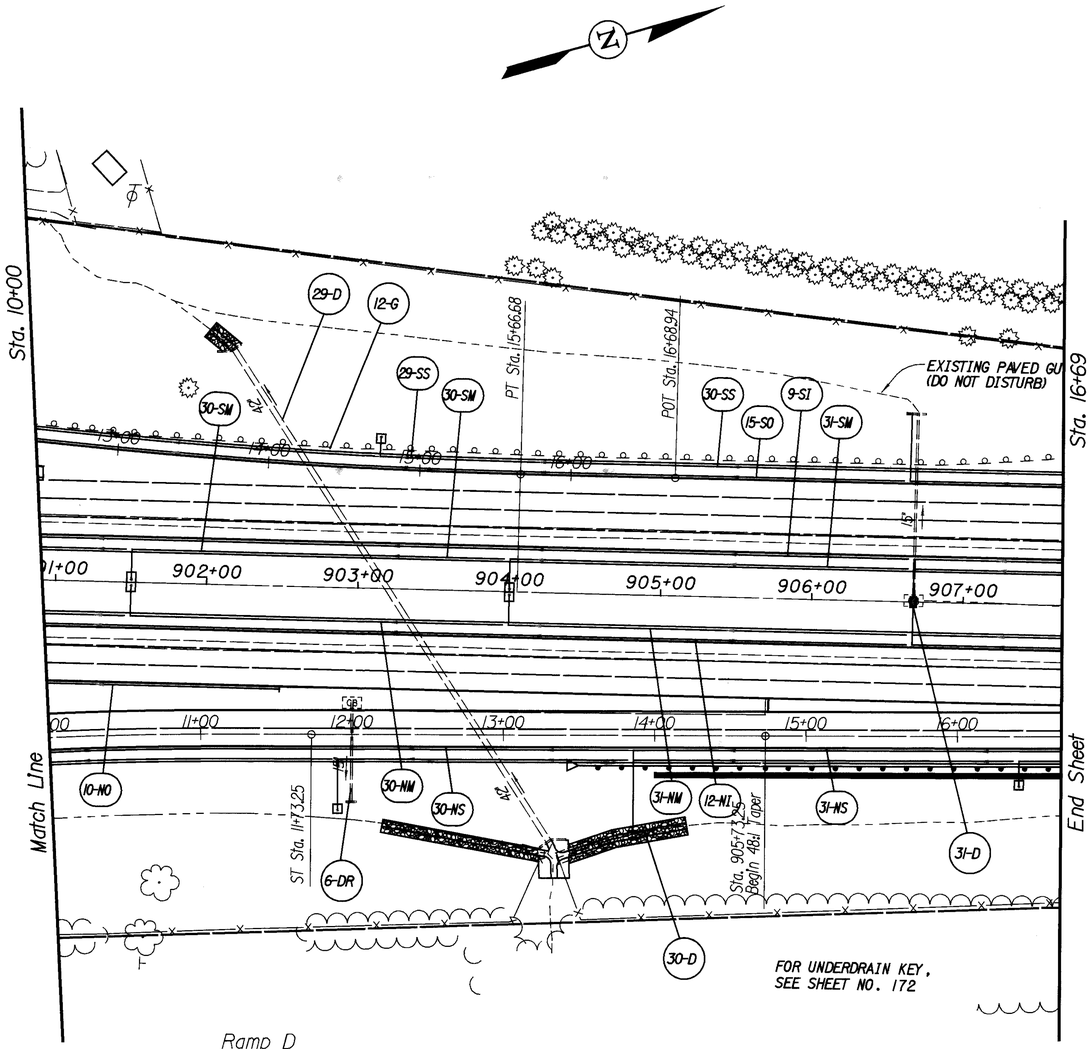
DESIGN FILE : I:\pd_MED_JR71\DGN\PlanProfile\sr18rmpdl.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 08:51

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

SR 18 RAMP D
STA. 0+00 TO STA. 10+00

MED - 71 - 15.78

394
940




Ramp D

| | | |
|---|---|---|
| P. I. Sta. | = | 10+72.01 |
| △ | = | 11° 11′ 37″ (RT) |
| Dc | = | 1° 36′ 35″ |
| R | = | 3,559.36′ |
| LS | = | 200.00′ |
| Theta | = | 2° 00′ 44″ |
| LT | = | 166.68′ |
| ST | = | 83.34′ |
| x | = | 249.97′ |
| y | = | 2.93′ |
| k | = | 124.99′ |
| p | = | 0.73′ |
| △c | = | 7° 10′ 09″ (RT) |
| Lc | = | 445.37′ |
| Ts | = | 473.86′ |
| Es | = | 17.78′ |

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

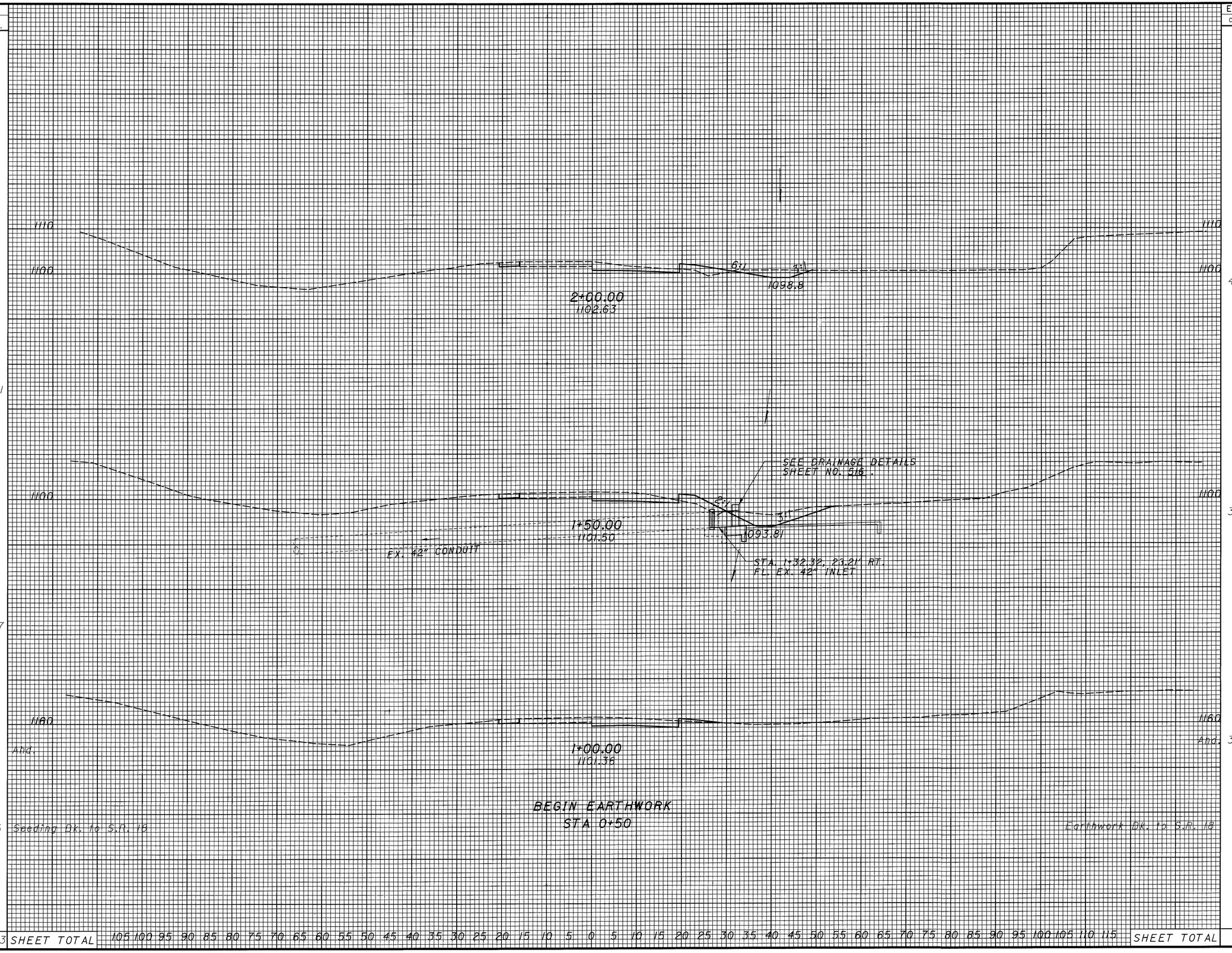
SR 18 RAMP D
STA. 10+00 TO STA 16+69

MED - 71 - 15.78

395
940

DESIGN FILE : I:\pd_MED_IR71\DGN\PlanProfile\sr18rmpd1.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 08:52

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| | | | | | |
| 38 | | 45 | 14 | | |
| | 211 | | | 77 | 30 |
| 38 | | 38 | 18 | | |
| | 147 | | | 69 | 19 |
| 15 | | 36 | 3 | | |
| 75 | Seeding Bk. to S.R. 18 | | | 70 | 5 |
| | 433 SHEET TOTAL | | | 216 | 54 |




CALCULATED NJV
CHECKED JWR

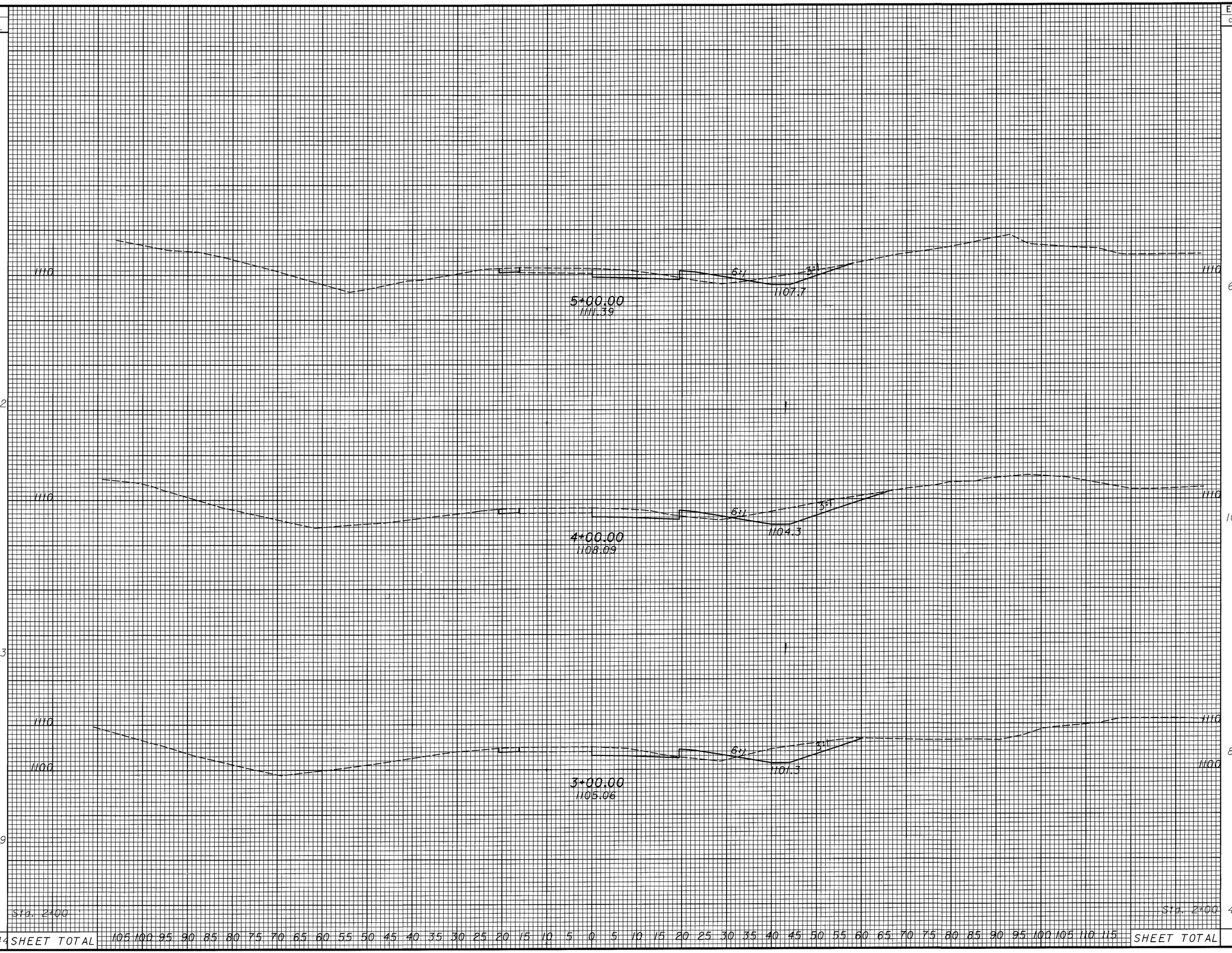
# CROSS SECTIONS - S.R. 18 RAMP D
## STA. 1+00 TO STA. 2+00

MED-71-15.78

396
940

DESIGN FILE : $$$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 48 | 572 |
| 55 | 583 |
| 50 | 489 |
| 38 | Sta. 2+00 |
| | 1644 SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 60 | 21 | | |
| 100 | 12 | 296 | 61 |
| 88 | 18 | 348 | 56 |
| 45 | 14 | 246 | 59 |
| | | 890 | 176 |

SHEET TOTAL

CALCULATED N.J.V.
CHECKED J.W.R.

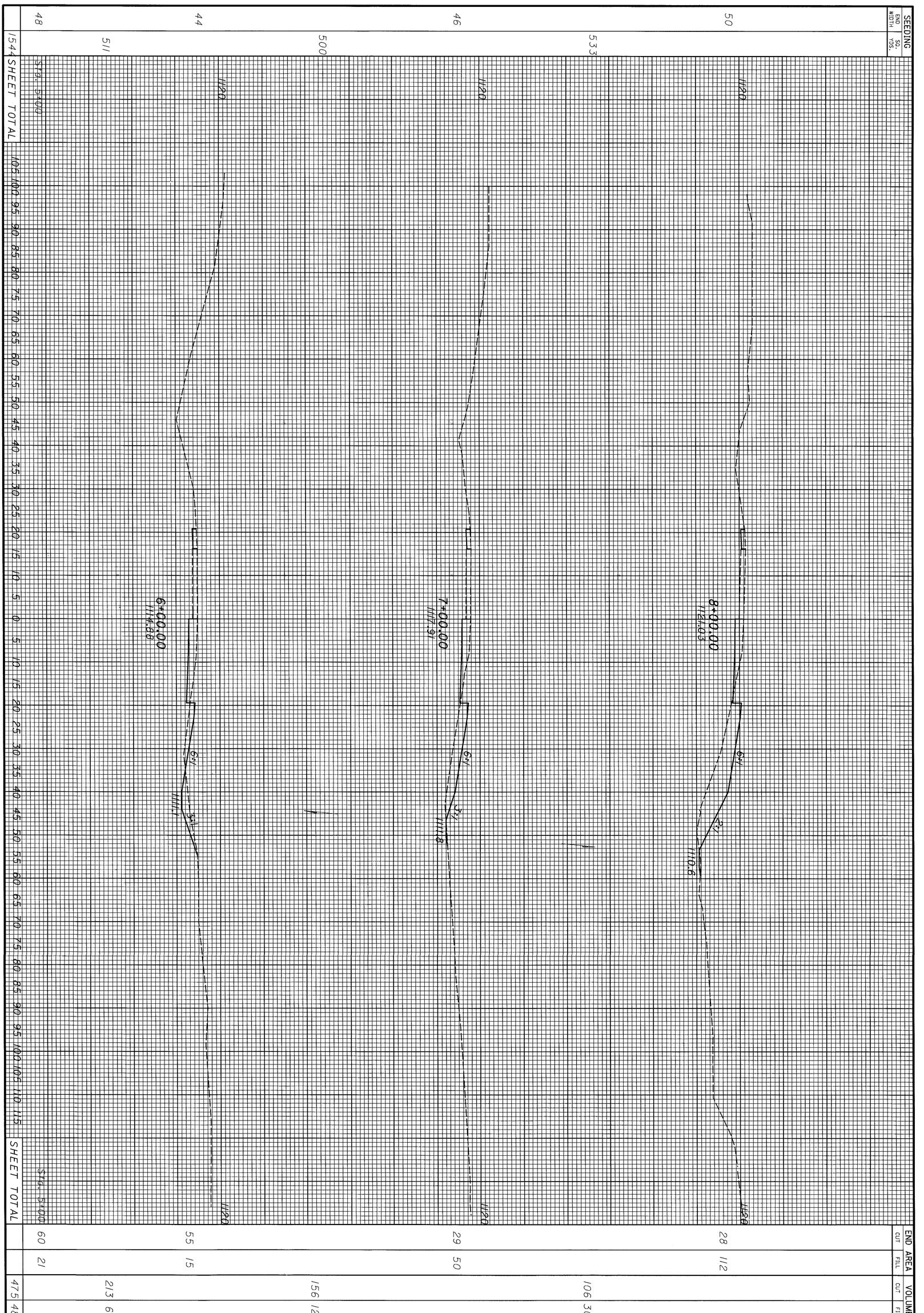
CROSS SECTIONS - S.R. 18 RAMP D
STA. 3+00 TO STA. 5+00

MED-71-15.78

397
940

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




MED-71-15.78

# CROSS SECTIONS - S.R. 18 RAMP D
## STA. 6+00 TO STA. 8+00

398
940

CALCULATED NJV
CHECKED JWR

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 40 | |
| | 171 |
| 48 | |
| | 278 |
| 52 | |
| | 567 |
| 50 | |
| | 279 |
| 50 | |
| 1295 | SHEET TOTAL |

For Quantities Ahead See Mainline 'X' Sections

END EARTHWORK
STA 9+85

Bk., Sta. 9+85

11120

6:1 2:1 2:1

9+50.00
1122.78

1114.6

Sta. 9+85, Bk.

11120

11120

6:1 2:1 2:1

9+00.00
1122.56

1112.4

11120

11120

6:1 2:1 2:1

SEE DRAINAGE DETAILS
SHEET NO. 516.

8+50.00

EX. 30" CONDUIT

1110.4

11120

Sta. 8+00

Sta. 8+00

105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

SHEET TOTAL

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 40 | 40 | | |
| | | 57 | 60 |
| 48 | 52 | | |
| | | 81 | 150 |
| 40 | 110 | | |
| | | 63 | 222 |
| 28 | 130 | | |
| | | 52 | 224 |
| 0 | 0 | | |
| | | 253 | 656 |

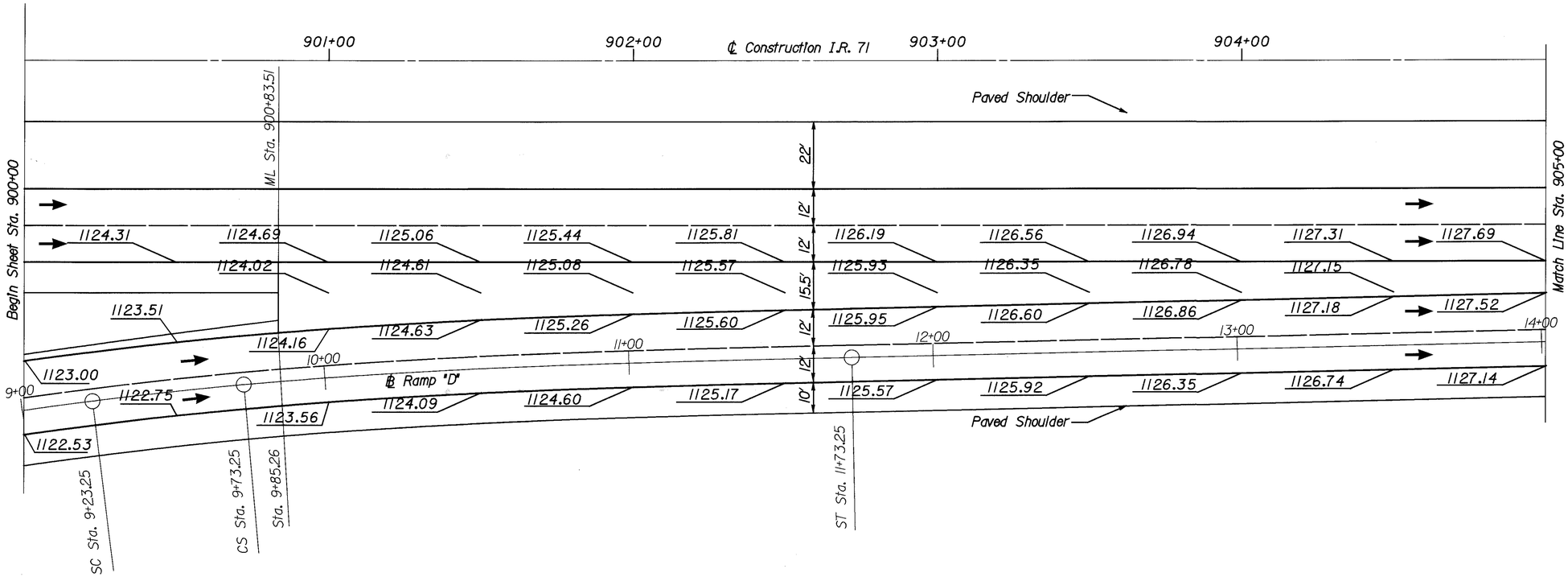
CALCULATED NJV
CHECKED JWR

# CROSS SECTIONS - S.R. 18 RAMP D
## STA. 8+50 TO STA. 9+50

MED-71-15.78

399
940

DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$
DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$$INSTRUCTIONS$$$$




HORIZONTAL SCALE IN FEET
0 10 20 40

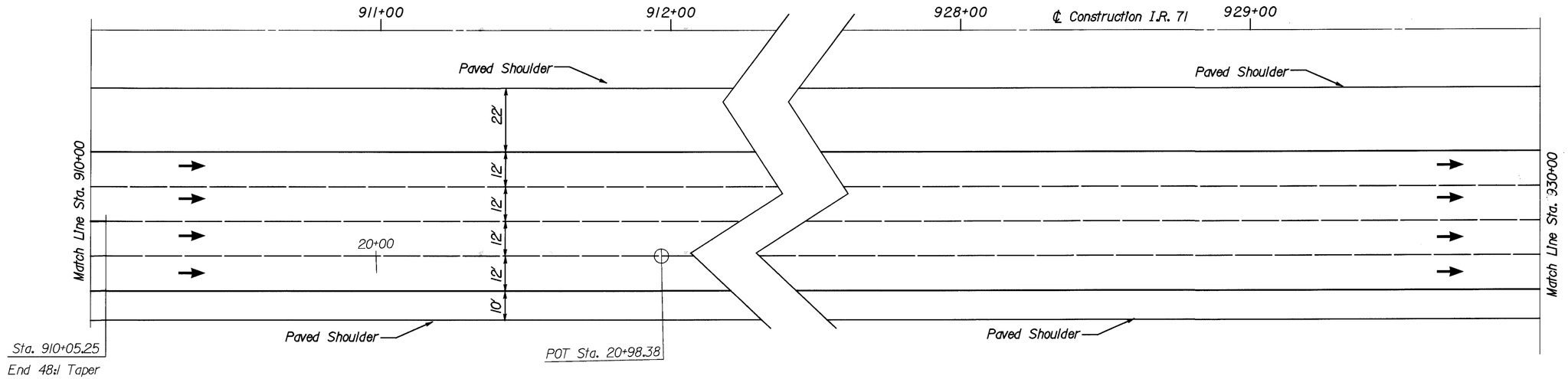
CALCULATED DJV
CHECKED

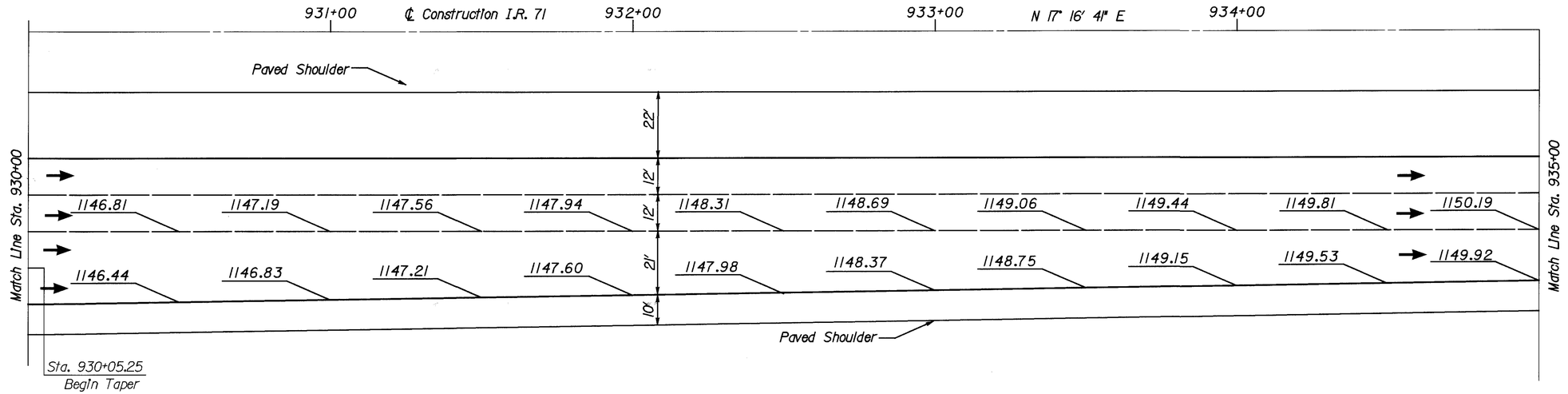
# PAVEMENT DETAIL S.R. 18 RAMP "D"
## STA. 900+00 TO 910+00

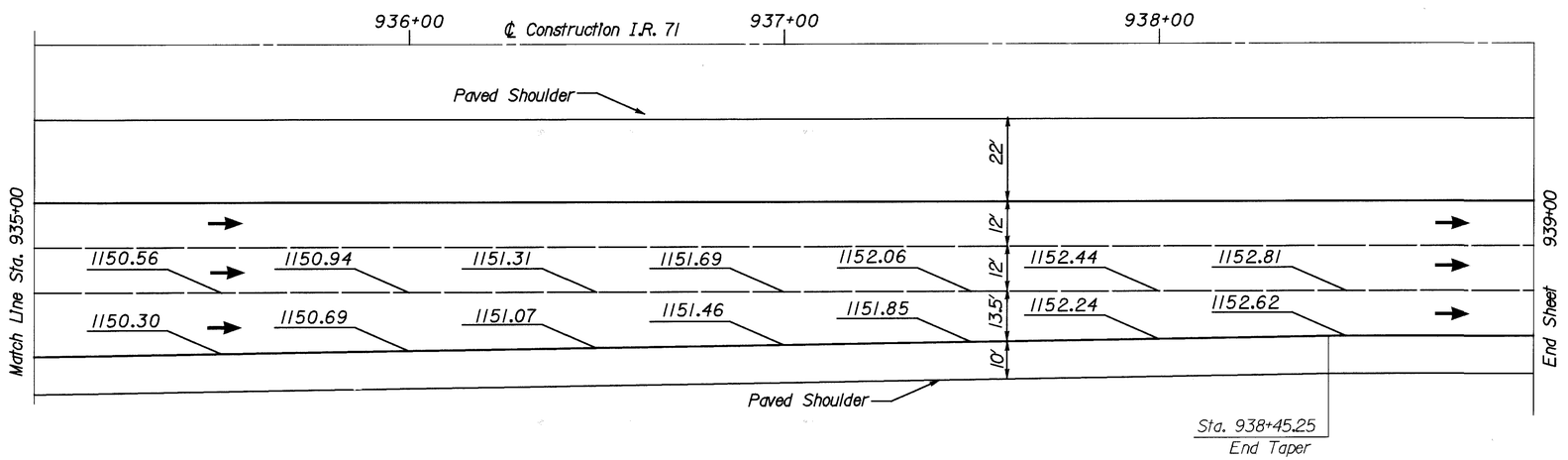
MED-71-15.78

400/940

DATE : 01-DEC-1999
TIME : 09:02
DESIGN FILE : i:\pd_med_lr71\dgn\pavement details\sr18.dgn
USERNAME : jrogers




DESIGN FILE : I:\pd_med_lr71\dgn\pavement details\sr18.dgn
USERNAME : jrogers
DATE : 01-DEC-1999
TIME : 09:03

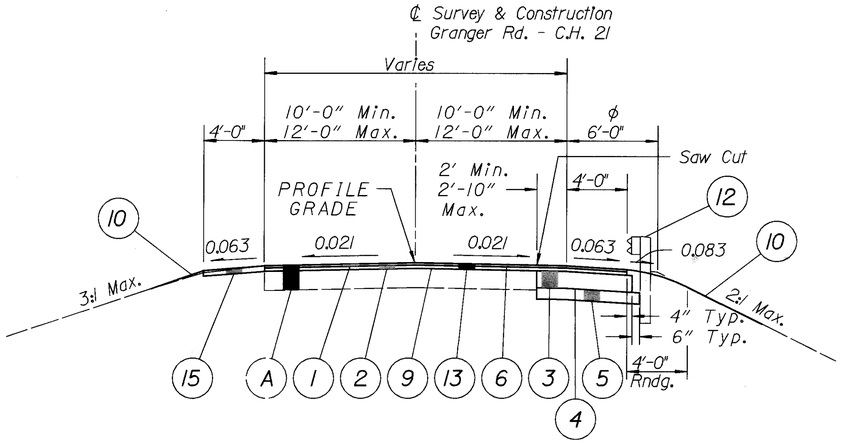
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED

# PAVEMENT DETAIL S.R. 18 RAMP "D"
# STA. 910+00 TO 939+00

MED-71-15.78

401
940

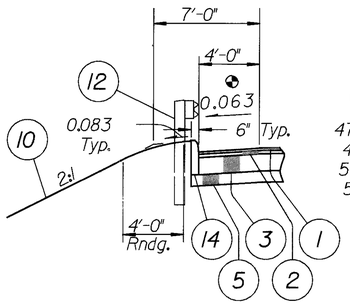



## NORMAL SECTION GRANGER RD. - C.H. 21

**Applies:**

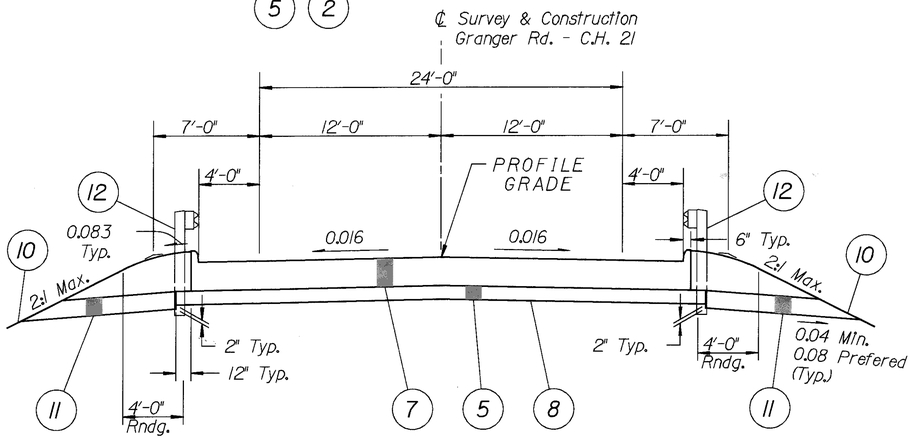
Sta. 45+60 to Sta. 46+78 = 118.00 Lin. Ft.
Sta. 53+06.5 to Sta. 53+75 = 68.50 Lin. Ft.

φ Paved Shoulder Stations and Full Depth Pavement Replacement:
Sta. 45+60 Rt to Sta. 46+78 Rt




## CURB DETAIL

47+48.70 Rt to 47+63.79 Rt
47+58.06 Lt to 47+71.61 Lt
51+00.35 Rt to 51+13.90 Rt
51+08.17 Lt to 51+23.26 Lt



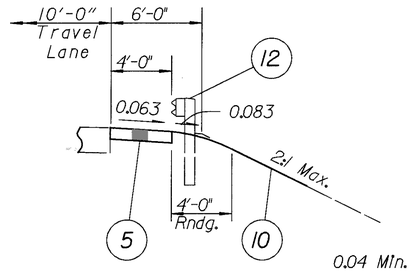

## APPROACH SLAB GRANGER RD. - C.H. 21

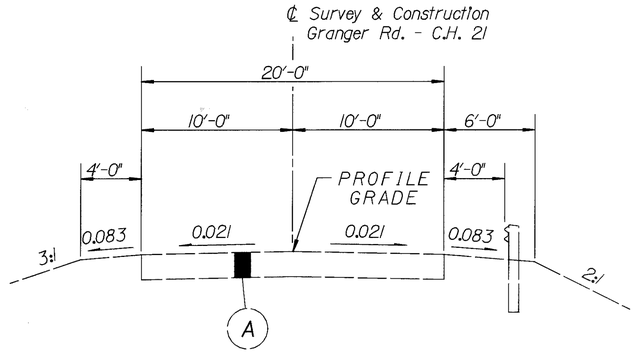
**Applies:**

Sta. 47+67.70 to Sta. 47+92.70 = 25.0 Lin. Ft.
Sta. 50+79.26 to Sta. 51+04.26 = 25.0 Lin. Ft.

## GUARDRAIL DETAIL

44+78.5 Rt C.H. 21 to 45+60 Rt C.H. 21
53+06.5 Rt C.H. 21 to 1+60 Rt C.H. 101

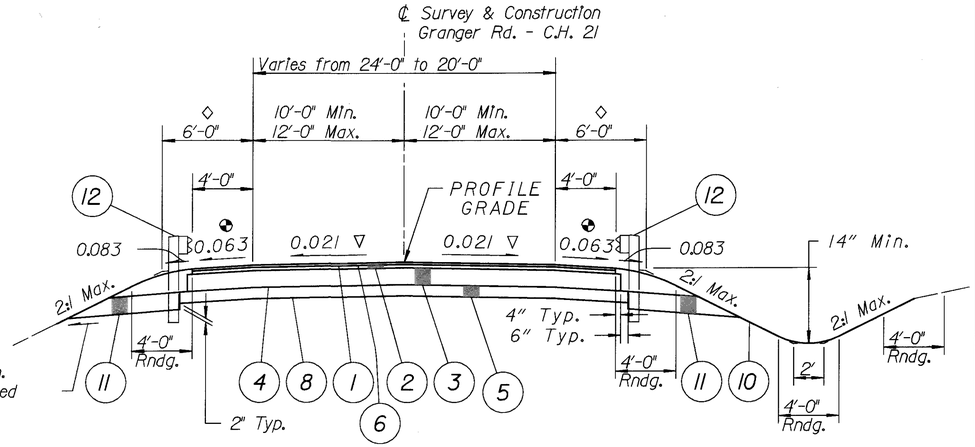



## ADJOINING SECTION GRANGER RD. - C.H. 21

**Applies:**

Sta. 45+60 C.H. 21
Sta. 53+75 C.H. 21




## NORMAL SECTION GRANGER RD. - C.H. 21

**Typical Ditch Section**

**Applies:**

Sta. 46+78 to Sta. 47+67.70 = 89.70 Lin. Ft.
Sta. 51+04.26 to Sta. 53+06.5 = 202.24 Lin. Ft.

◇ Shoulder Stations: 0+65 Rt C.H. 131 to 47+70.63 Lt C.H. 21
46+78 Rt C.H. 21 to 47+64.77 Rt C.H. 21
51+01.33 Rt C.H. 21 to 53+06.5 Rt C.H. 21
51+07.19 Lt C.H. 21 to 53+06.5 Lt C.H. 21

| Lane Width Table | | |
|---|---|---|
| Station | Lt (ft) | Rt (ft) |
| 45+60 | 10 | 10 |
| 46+20 | 10 | 10 |
| 47+30.76 | 12 | 12 |
| 51+40 | 12 | 12 |
| 52+50 | 10 | 10 |
| 53+75 | 10 | 10 |

| ▽ Pavement Cross Slope Table | |
|---|---|
| Station | Cross Slope |
| 45+60 | Match Existing |
| 45+85 | 0.021 |
| 47+53.77 | 0.021 |
| 47+64.77 | 0.016 |
| 51+07.19 | 0.016 |
| 51+18.19 | 0.021 |
| 53+50 | 0.021 |
| 53+75 | Match Existing |

| ◔ Shoulder Cross Slope Table | |
|---|---|
| Station | Cross Slope |
| 45+60 | Match Existing |
| 45+85 | 0.063 |
| 47+29.77 | 0.063 |
| 47+64.77 | 0.016 |
| 51+07.19 | 0.016 |
| 51+42.19 | 0.063 |
| 53+50 | 0.063 |
| 53+75 | Match Existing |

GRADED SHOULDER
NDC = 12'

## LEGEND

(1) 1¼" Item 448 Asphalt Concrete Surface Course, Type 1, PG 64-22
(2) 1¾" Item 448 Asphalt Concrete Intermediate Course, Type 2, PG 64-22
(3) 9" Item 301 Bituminous Aggregate Base, PG64-22
(4) Item 408 Bituminous Prime Coat (Applied at a Rate of 0.40 gal./sq. yd.)
(5) 6" Item 304 Aggregate Base
(6) Item 407 Tack Coat for Intermediate Course (See General Notes)
(7) Item 611 Reinforced Concrete Approach Slab (T=15")
(8) Item 203 Subgrade Compaction
(9) Item 407 Tack Coat (See General Notes)
(10) Item 870 Seeding and Mulching
(11) Item 605 Aggregate Drain
(12) Item 606 Guardrail, Type 5
(13) Item 254 Pavement Planing, Bituminous (Avg. Depth = 3")
(14) Item 830 Curb, Type 6, As Per Plan
(15) Item 617 Compacted Aggregate, Type A, to be used as directed by the Engineer
(A) Existing Asphalt Pavement (±10")

TYPICAL SECTIONS
GRANGER ROAD (C.H. 21)

MED-71-15.78

402
940

DESIGN FILE : i:\pd_med_lr71\dgn\centraloffice\granger rd\ch21gly.dgn
USERNAME : jrogers
DATE : 06-DEC-1999
TIME : 08:55

PAYMENT FOR ALL OF THE WORK REQUIRED BY THE CONTRACTOR FOR TRAFFIC CONTROL NOTED ON THIS SHEET INCLUDING PROVIDING, ERECTING, MAINTAINIING, AND REMOVING ALL FLASHERS, SIGNS, BARRICADES, SUPPORTS AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED ON THIS PLAN.

## PAVEMENT PLANING

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT THE INTERSECTIONS OF GRANGER ROAD WITH NICHOLS ROAD AND WINDFALL ROAD AT ALL TIMES EXCEPT THAT ALTERNATING ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME TO COMPLETE THE GRINDING OF THE EXISTING PAVEMENT AT THE LOCATIONS SHOWN ON SHEET 408 AND 409.

## PLACEMENT OF ASPHALT CONCRETE

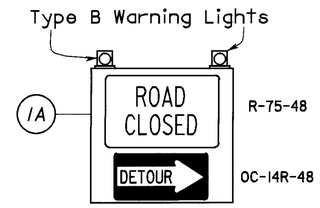
TWO-WAY TRAFFIC SHALL BE MAINTAINED AT THE INTERSECTIONS OF GRANGER ROAD WITH NICHOLS ROAD AND WINDFALL ROAD AT ALL TIMES EXCEPT THAT ALTERNATING ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

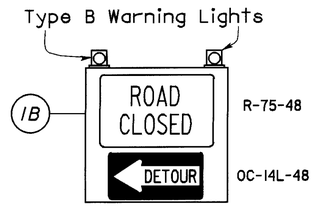
## TEMPORARY WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO SHEET 375 FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF THE STANDARD CONSTRUCTION DRAWINGS:

| ITEM | DESCRIPTION | QTY. | UNIT |
|---|---|---|---|
| 614 | TEMPORARY CENTER LINE, CLASS I (SOLID, DOUBLE) | 0.30 | MILES |
| 614 | TEMPORARY EDGE LINE, CLASS I | 0.64 | MILES |
| 614 | TEMPORARY STOP LINES, CLASS I | 114 | LIN. FT. |

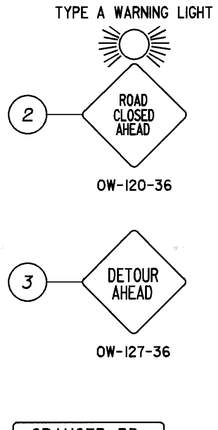
THE ABOVE ITEMS ARE TO BE INSTALLED AFTER PLACEMENT OF THE ASPHALT CONCRETE.

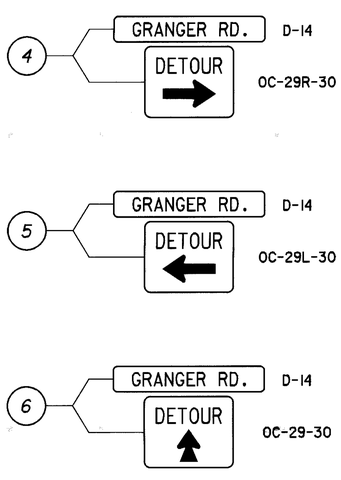


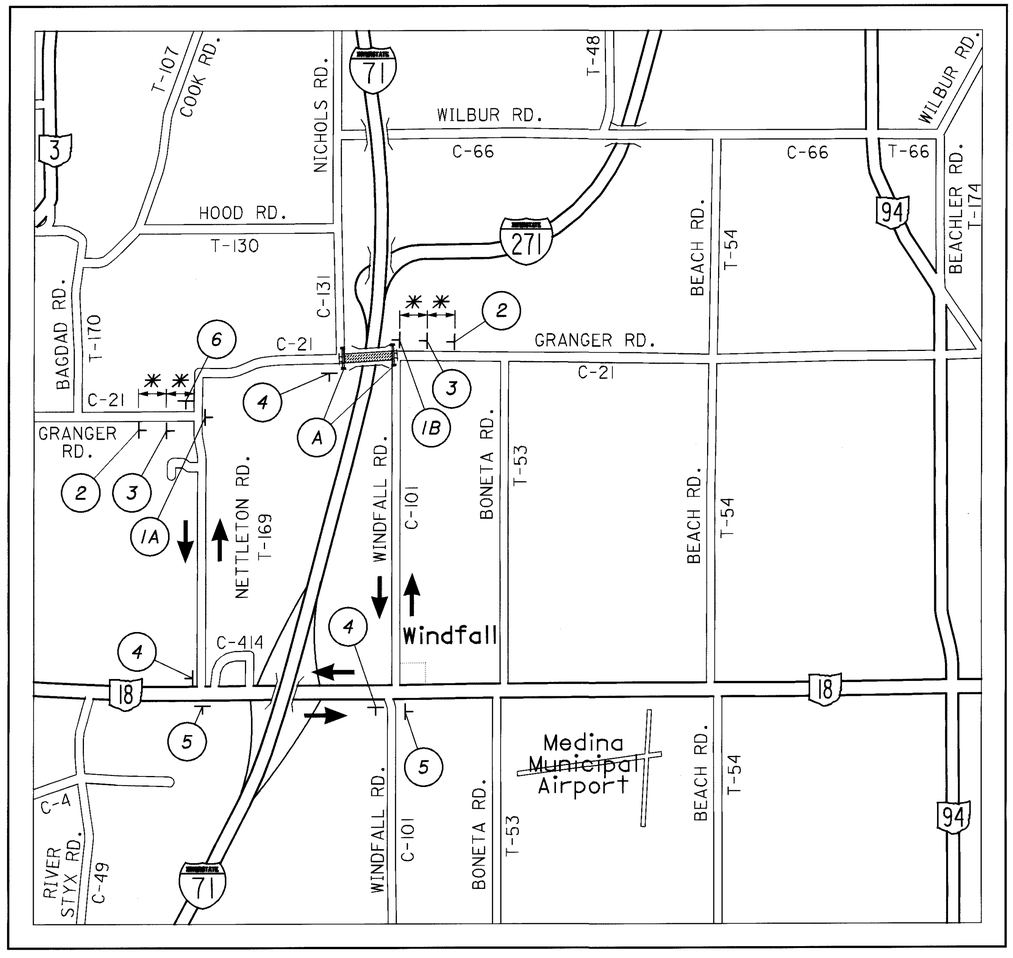




A Gates and Barricades as shown on Standard Drawing MT-101.60M.

Install in accordance with Figure C-5 of O.M.U.T.C.D.




DETOUR

* 500′

AREA TO BE CONSTRUCTED

MAINTENANCE OF TRAFFIC
GRANGER ROAD (C.H. 21) DETOUR

HORIZONTAL SCALE IN MILES 0 0.25 0.5

CALCULATED DLW CHECKED

MED-71-15.78

403
940

i:\pr\project\med71\dgn\ch2lmot.dgn 30-DEC-1999 10:47AM dwalbom

| REF NO. | SHEET NO. | STATION FROM | STATION TO | SIDE | 202 APPROACH SLAB REMOVED SQ. YDS. | 202 GUARDRAIL REMOVED LIN. FT. | | | 605 AGGREGATE DRAINS LIN. FT. | | 606 GUARDRAIL, TYPE 5 LIN. FT. | 606 ANCHOR ASSEMBLY, TYPE A EACH | 606 ANCHOR ASSEMBLY, TYPE T EACH | 606 BRIDGE TERMINAL ASSEMBLY, TYPE I EACH | | 830 CURB, TYPE 6 LIN. FT. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 408 | 46+50 | 47+50 | RT. | | 100 | | | | | | | | | | | | | | | |
| R-2 | 408 | 47+10 | 47+60 | LT. | | 50 | | | | | | | | | | | | | | | |
| R-3 | 408 | 47+43 | 47+68 | | 76 | | | | | | | | | | | | | | | | |
| GR-1 | 408 | 44+78.5 | 47+71.59 | RT. | | | | | | | 243.75 | 1 | | 1 | | | | | | | |
| GR-2 | 408 | 0+91.5± Nichols | 47+80.96 | LT.,RT. | | | | | | | 106.25✣ | 1 | | 1 | | | | | | ✣ 75 L.F. ON 50′ RADIUS | |
| C-1 | 408 | 47+48.70 | 47+63.79 | RT. | | | | | | | | | | | | 15.09 | | | | | |
| C-2 | 408 | 47+58.06 | 47+71.61 | LT. | | | | | | | | | | | | 13.55 | | | | | |
| AD-1 | 408 | 46+78 | | RT. | | | | | 4.7 | | | | | | | | | | | | |
| AD-2 | 408 | 47+15 | | RT. | | | | | 4.7 | | | | | | | | | | | | |
| AD-3 | 408 | 47+67.70 | | RT. | | | | | 16.7 | | | | | | | | | | | | |
| AD-4 | 408 | 47+67.70 | | LT. | | | | | 16.7 | | | | | | | | | | | | |
| R-1 | 409 | 50+82 | 51+07 | | 76 | | | | | | | | | | | | | | | | |
| R-2 | 409 | 51+00 | 53+00 | LT. | | 200 | | | | | | | | | | | | | | | |
| R-3 | 409 | 50+95 | 0+26 Windfall Rd. | RT.,RT. | | 362.5 | | | | | | | | | | | | | | | |
| GR-1 | 409 | 51+00.37 | 53+00± | LT. | | | | | | | 181.25 | | 1 | 1 | | | | | | | |
| GR-2 | 409 | 50+91.01 | 1+59± Windfall Rd. | RT.,RT. | | | | | | | 343.75⊗ | | 1 | 1 | | | | | | ⊗ 75 L.F. ON 50′ RADIUS | |
| C-1 | 409 | 51+00.35 | 51+13.90 | RT. | | | | | | | | | | | | 13.55 | | | | | |
| C-2 | 409 | 51+08.17 | 51+23.26 | LT. | | | | | | | | | | | | 15.09 | | | | | |
| AD-1 | 409 | 51+04.26 | | RT. | | | | | 15.2 | | | | | | | | | | | | |
| AD-2 | 409 | 51+04.26 | | LT. | | | | | 15.2 | | | | | | | | | | | | |
| AD-3 | 409 | 51+25 | | LT. | | | | | 7.7 | | | | | | | | | | | | |
| AD-4 | 409 | 51+50 | | RT. | | | | | 5.1 | | | | | | | | | | | | |
| AD-5 | 409 | 51+75 | | LT. | | | | | 7.7 | | | | | | | | | | | | |
| AD-6 | 409 | 52+00 | | RT. | | | | | 5.1 | | | | | | | | | | | | |
| AD-7 | 409 | 52+25 | | LT. | | | | | 6.4 | | | | | | | | | | | | |
| AD-8 | 409 | 52+50 | | RT. | | | | | 5.1 | | | | | | | | | | | | |
| AD-9 | 409 | 52+65 | | LT. | | | | | 12.0 | | | | | | | | | | | | |
| AD-10 | 409 | 53+00 | | RT. | | | | | 10.0 | | | | | | | | | | | | |
| TOTALS CARRIED TO 375 | | | | | 152 | 712.5 | | | 132.3 | | 875.00 | 2 | 2 | 4 | | 57.28 | | | | | |

CALCULATED DLW CHECKED

SUBSUMMARY

GRANGER ROAD (C.H. 21)

MED-71-15.78

404
940

| LOCATION | STATION FROM | STATION TO | LENGTH, L FEET | BEGIN WIDTH, W1 FEET | END WIDTH, W2 FEET | SURFACE AREA, A A=Lx[(W1+W2)/2] SQ. FT. | CADD MEASURED AREAS SQ. FT. | 203 SUBGRADE COMPACTION SQ. YDS. | 254 PAVEMENT PLANING (AVG. THICKNESS 3") SQ. YDS. | | 301 9" BITUMINOUS AGGREGATE BASE, PG64-22 CU. YDS. | 304 6" AGGREGATE BASE CU. YDS. | 407 TACK COAT (Applied at a Rate of 0.01 gal/sy.) GALLON | 407 TACK COAT FOR INTERMEDIATE COURSE (Applied at a Rate of 0.05 gal/sy.) GALLON | 408 BITUMINOUS PRIME COAT (Applied at a Rate of 0.04 gal/sy.) GALLON | 448 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 CU. YDS. | 448 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I, PG64-22 CU. YDS. | 611 REINFORCED CONCRETE APPROACH SLAB (T=15") SQ. YDS. | 617 COMPACTED AGGREGATE, TYPE A CU. YDS. | 617 WATER M. GAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Berm: C.H. 21 Lt to C.H. 131 Lt (3" Thick) | 45+60.00 | 0+65.00 | 130.00 | 4 | 4 | 520.00 | | | | | | | | | | | | | 4.81 | 72 |
| Shoulder Rt | 44+78.50 | 45+60.00 | 81.50 | 2 | 2 | 163.00 | | | | | | 3.02 | | | | | | | | |
| Mainline Rt * | 45+60.00 | 46+20.00 | 60.00 | 2 | 2 | 120.00 | | 13.33 | | | 3.33 | 2.22 | | | 5.33 | | | | | |
| Shoulder Rt ** | 45+60.00 | 46+20.00 | 60.00 | 4 | 4 | 240.00 | | 26.67 | | | 7.22 | 5.37 | | | 10.67 | | | | | |
| Mainline Rt | 45+60.00 | 46+20.00 | 60.00 | 10 | 10 | 600.00 | | | 53.33 | | | | 0.67 | 3.33 | | 2.31 | 3.24 | | | |
| Shoulder Rt | 45+60.00 | 46+20.00 | 60.00 | 4 | 4 | 240.00 | | | | | | | 0.27 | 1.33 | | 0.93 | 1.30 | | | |
| Mainline Lt | 45+60.00 | 46+20.00 | 60.00 | 10 | 10 | 600.00 | | | 66.67 | | | | 0.67 | 3.33 | | 2.31 | 3.24 | | | |
| Mainline Rt * | 46+20.00 | 46+78.00 | 58.00 | 2 | 3 | 145.00 | | 16.11 | | | 4.03 | 2.69 | | | 6.44 | | | | | |
| Shoulder Rt ** | 46+20.00 | 46+78.00 | 58.00 | 4 | 4 | 232.00 | | 25.78 | | | 6.98 | 5.19 | | | 10.31 | | | | | |
| Mainline Rt | 46+20.00 | 46+78.00 | 58.00 | 10 | 11 | 609.00 | | | 51.56 | | | | 0.68 | 3.38 | | 2.35 | 3.29 | | | |
| Shoulder Rt | 46+20.00 | 46+78.00 | 58.00 | 4 | 4 | 232.00 | | | | | | | 0.26 | 1.29 | | 0.90 | 1.25 | | | |
| Mainline Lt | 46+20.00 | 46+78.00 | 58.00 | 10 | 11 | 609.00 | | | 67.67 | | | | 0.68 | 3.38 | | 2.35 | 3.29 | | | |
| Mainline Rt * | 46+78.00 | 47+30.76 | 52.76 | 11 | 12 | 606.74 | | 67.42 | | | 16.85 | 11.24 | 0.67 | 3.37 | 26.97 | 2.34 | 3.28 | | | |
| Shoulder Rt ** | 46+78.00 | 47+30.76 | 52.76 | 4 | 4 | 211.04 | | 23.45 | | | 6.35 | 4.72 | 0.23 | 1.17 | 9.38 | 0.81 | 1.14 | | | |
| Mainline Lt * | 46+78.00 | 47+30.76 | 52.76 | 11 | 12 | 606.74 | | 67.42 | | | 16.85 | 11.24 | 0.67 | 3.37 | 26.97 | 2.34 | 3.28 | | | |
| C.H. 131 Mainline Lt | 0+13.50 | 0+65.00 | 51.50 | 10 | 10 | 515.00 | | | 57.22 | | | | 0.57 | 2.86 | | 1.99 | 2.78 | | | |
| C.H. 131 CADD Measured Area Lt | 0+13.50 | 0+65.00 | | | | | 546.75 | | 60.75 | | | | 0.61 | 3.04 | | 2.11 | 2.95 | | | |
| C.H. 131 Mainline Rt | 0+13.50 | 0+65.00 | 51.50 | 8 | 8 | 412.00 | | | 45.78 | | | | 0.46 | 2.29 | | 1.59 | 2.23 | | | |
| C.H. 131 Mainline Rt * | 0+13.50 | 0+65.00 | 51.50 | 2 | 2 | 103.00 | | 11.44 | | | 2.86 | 1.91 | 0.11 | 0.57 | 4.58 | 0.40 | 0.56 | | | |
| C.H. 131 Mainline Rt CADD Area | 0+13.50 | 0+65.00 | | | | | 573.00 | 63.67 | | | 15.92 | 10.61 | 0.64 | 3.18 | 25.47 | 2.21 | 3.09 | | | |
| Shoulder along Radius ** | 0+65.00 | 47+30.76 | 78.50 | 4 | 4 | 314.00 | | 34.89 | | | 9.45 | 7.03 | 0.35 | 1.74 | 13.96 | 1.21 | 1.70 | | | |
| Mainline Rt * | 47+30.76 | 47+67.70 | 36.94 | 12 | 12 | 443.28 | | 49.25 | | | 12.31 | 8.21 | 0.49 | 2.46 | 19.70 | 1.71 | 2.39 | | | |
| Mainline Lt * | 47+30.76 | 47+67.70 | 36.94 | 12 | 12 | 443.28 | | 49.25 | | | 12.31 | 8.21 | 0.49 | 2.46 | 19.70 | 1.71 | 2.39 | | | |
| Shoulder Lt ** | 47+30.76 | 47+58.06 | 27.30 | 4 | 4 | 109.20 | | 12.13 | | | 3.29 | 2.44 | 0.12 | 0.61 | 4.85 | 0.42 | 0.59 | | | |
| Shoulder Rt ** | 47+30.76 | 47+48.70 | 17.94 | 4 | 4 | 71.76 | | 7.97 | | | 2.16 | 1.61 | 0.08 | 0.40 | 3.19 | 0.28 | 0.39 | | | |
| Shoulder Lt (Curb) | 47+58.06 | 47+67.70 | 9.64 | 4 | 4 | 38.56 | | 4.82 | | | 1.07 | 0.80 | 0.04 | 0.21 | 1.71 | 0.15 | 0.21 | | | |
| Shoulder Rt (Curb) | 47+48.70 | 47+67.70 | 19.00 | 4 | 4 | 76.00 | | 9.50 | | | 2.11 | 1.58 | 0.08 | 0.42 | 3.38 | 0.29 | 0.41 | | | |
| Approach Slab Lt | 47+67.70 | 47+92.70 | 25.00 | 16 | 16 | 400.00 | | 44.44 | | | | 7.41 | | | | | | 44.44 | | |
| Approach Slab Lt (under curb) | 47+71.60 | 47+80.96 | 9.36 | 0.5 | 0.5 | 4.68 | | 0.52 | | | | 0.26 | | | | | | 0.52 | | |
| Approach Slab Lt (under parapet) | 47+80.96 | 47+96.61 | 15.65 | 1.5 | 1.5 | 23.47 | | 2.61 | | | | 0.43 | | | | | | 2.61 | | |
| Approach Slab Rt | 47+67.70 | 47+92.70 | 25.00 | 16 | 16 | 400.00 | | 44.44 | | | | 7.41 | | | | | | 44.44 | | |
| Approach Slab Rt (under curb) | 47+63.79 | 47+71.59 | 7.80 | 0.5 | 0.5 | 3.90 | | 0.43 | | | | 0.22 | | | | | | 0.43 | | |
| Approach Slab Rt (under parapet) | 47+71.59 | 47+88.79 | 17.20 | 1.5 | 1.5 | 25.80 | | 2.87 | | | | 0.48 | | | | | | 2.87 | | |
| Approach Slab Lt | 50+79.26 | 51+04.26 | 25.00 | 16 | 16 | 400.00 | | 44.44 | | | | 7.41 | | | | | | 44.44 | | |
| Approach Slab Lt (under parapet) | 50+83.17 | 51+00.37 | 17.20 | 1.5 | 1.5 | 25.80 | | 2.87 | | | | 0.48 | | | | | | 2.87 | | |
| Approach Slab Lt (under curb) | 51+00.37 | 51+08.17 | 7.80 | 0.5 | 0.5 | 3.90 | | 0.43 | | | | 0.22 | | | | | | 0.43 | | |
| Approach Slab Rt | 50+79.26 | 51+04.26 | 25.00 | 16 | 16 | 400.00 | | 44.44 | | | | 7.41 | | | | | | 44.44 | | |
| Approach Slab Rt (under parapet) | 50+75.35 | 50+91.01 | 15.66 | 1.5 | 1.5 | 23.49 | | 2.61 | | | | 0.43 | | | | | | 2.61 | | |
| Approach Slab Rt (under curb) | 50+91.01 | 51+00.35 | 9.34 | 0.5 | 0.5 | 4.67 | | 0.52 | | | | 0.26 | | | | | | 0.52 | | |
| **TOTALS CARRIED TO SHEET 406** | | | | | | | | 691.83 | 402.98 | | 123.09 | 120.51 | 8.84 | 44.19 | 192.61 | 30.71 | 43.00 | 190.62 | 4.81 | 72 |

Step Notes:
*301 Step = 0 and 304 Step = 0 (SEE SHEET 406)
**301 Step = 4" and 304 Step = 4" + 6" = 10" (SEE SHEET 406)

CALCULATED DLW
CHECKED

PAVEMENT CALCULATIONS
GRANGER ROAD (C.H. 21)

MED-71-15.78

405
940

| LOCATION | STATION FROM | STATION TO | LENGTH, L FEET | BEGIN WIDTH, W1 FEET | END WIDTH, W2 FEET | SURFACE AREA, A A=Lx[(W1+W2)/2] SQ. FT. | CADD MEASURED AREAS SQ. FT. | 203 SUBGRADE COMPACTION SQ. YDS. | 254 PAVEMENT PLANING (AVG. THICKNESS 3") SQ. YDS. | | 301 9" BITUMINOUS AGGREGATE BASE, PG64-22 CU. YDS. | 304 6" AGGREGATE BASE CU. YDS. | 407 TACK COAT (Applied at a Rate of 0.10 gal/sy.) GALLON | 407 TACK COAT FOR INTERMEDIATE COURSE (Applied at a Rate of 0.05 gal/sy.) GALLON | 408 BITUMINOUS PRIME COAT (Applied at a Rate of 0.40 gal/sy.) GALLON | 448 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 CU. YDS. | 448 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I, PG64-22 CU. YDS. | 611 REINFORCED CONCRETE APPROACH SLAB (T=15") SQ. YDS. | 617 COMPACTED AGGREGATE, TYPE A CU. YDS. | 617 WATER M. GAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mainline Rt * | 51+04.26 | 51+40.00 | 35.74 | 12 | 12 | 428.88 | | 47.65 | | | 11.91 | 7.94 | 0.48 | 2.38 | 19.06 | 1.65 | 2.32 | | | |
| Mainline Lt * | 51+04.26 | 51+40.00 | 35.74 | 12 | 12 | 428.88 | | 47.65 | | | 11.91 | 7.94 | 0.48 | 2.38 | 19.06 | 1.65 | 2.32 | | | |
| Shoulder Lt (Curb) | 51+04.26 | 51+23.26 | 19.00 | 4 | 4 | 76.00 | | 9.50 | | | 2.11 | 1.58 | 0.08 | 0.42 | 3.38 | 0.29 | 0.41 | | | |
| Shoulder Rt (Curb) | 51+04.26 | 51+13.90 | 9.64 | 4 | 4 | 38.56 | | 4.82 | | | 1.07 | 0.80 | 0.04 | 0.21 | 1.71 | 0.15 | 0.21 | | | |
| Shoulder Lt * | 51+23.26 | 51+40.00 | 16.74 | 4 | 4 | 66.96 | | 7.44 | | | 2.01 | 1.50 | 0.07 | 0.37 | 2.98 | 0.26 | 0.36 | | | |
| Shoulder Rt * | 51+13.90 | 51+40.00 | 26.10 | 4 | 4 | 104.40 | | 11.60 | | | 3.14 | 2.34 | 0.12 | 0.58 | 4.64 | 0.40 | 0.56 | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Mainline Rt * | 51+40.00 | 52+50.00 | 110.00 | 12 | 10 | 1210.00 | | 134.44 | | | 33.61 | 22.41 | 1.34 | 6.72 | 53.78 | 4.67 | 6.54 | | | |
| Mainline Lt * | 51+40.00 | 52+50.00 | 110.00 | 12 | 10 | 1210.00 | | 134.44 | | | 33.61 | 22.41 | 1.34 | 6.72 | 53.78 | 4.67 | 6.54 | | | |
| Shoulder Lt * | 51+40.00 | 52+50.00 | 110.00 | 4 | 4 | 440.00 | | 48.89 | | | 13.24 | 9.85 | 0.49 | 2.44 | 19.56 | 1.70 | 2.38 | | | |
| Shoulder Rt * | 51+40.00 | 52+50.00 | 110.00 | 4 | 4 | 440.00 | | 48.89 | | | 13.24 | 9.85 | 0.49 | 2.44 | 19.56 | 1.70 | 2.38 | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Mainline Rt * | 52+50.00 | 53+06.50 | 56.50 | 10 | 10 | 565.00 | | 62.78 | | | 15.69 | 10.46 | 0.63 | 3.14 | 25.11 | 2.18 | 3.05 | | | |
| Mainline Lt * | 52+50.00 | 53+06.50 | 56.50 | 10 | 10 | 565.00 | | 62.78 | | | 15.69 | 10.46 | 0.63 | 3.14 | 25.11 | 2.18 | 3.05 | | | |
| Shoulder Lt * | 52+50.00 | 53+06.50 | 56.50 | 4 | 4 | 226.00 | | 25.11 | | | 6.80 | 5.06 | 0.25 | 1.26 | 10.04 | 0.87 | 1.22 | | | |
| Shoulder Rt * | 52+50.00 | 52+86.88 | 36.88 | 4 | 4 | 147.52 | | 16.39 | | | 4.44 | 3.30 | 0.16 | 0.82 | 6.56 | 0.57 | 0.80 | | | |
| Shoulder along Radius Rt | 52+86.88 | 53+06.50 | 19.62 | 4 | 4 | 78.48 | | 8.72 | | | 2.36 | 1.76 | 0.09 | 0.44 | 3.49 | 0.30 | 0.42 | | | |
| CADD Measured Area Rt | 52+86.88 | 53+06.50 | | | | | 25.77 | 2.86 | | | 0.72 | 0.48 | 0.03 | 0.14 | 1.15 | 0.10 | 0.14 | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Mainline Rt | 53+06.50 | 53+75.00 | 68.50 | 14 | 14 | 959.00 | | | 106.56 | | | | 1.07 | 5.33 | | 3.70 | 5.18 | | | |
| Mainline Lt | 53+06.50 | 53+75.00 | 68.50 | 10 | 10 | 685.00 | | | 76.11 | | | | 0.76 | 3.81 | | 2.64 | 3.70 | | | |
| | | | | | | | | | | | | | | | | | | | | |
| C.H. 101 Mainline Lt | 0+14.00 | 0+60.50 | 46.50 | 10 | 10 | 465.00 | | | 51.67 | | | | 0.52 | 2.58 | | 1.79 | 2.51 | | | |
| C.H. 101 Mainline Rt | 0+14.00 | 0+60.50 | 46.50 | 10 | 10 | 465.00 | | | 51.67 | | | | 0.52 | 2.58 | | 1.79 | 2.51 | | | |
| Cadd Measured Area Rt C.H. 101 | 0+14.00 | 0+60.50 | | | | | 443.00 | | 49.22 | | | | 0.49 | 2.46 | | 1.71 | 2.39 | | | |
| Cadd Measured Area Lt C.H. 101 | 0+14.00 | 0+60.50 | | | | | 296.70 | | 32.97 | | | | 0.33 | 1.65 | | 1.14 | 1.60 | | | |
| | | | | | | | | | | | | | | | | | | | | |
| C.H. 101 Shoulder along Radius Rt | 53+06.50 | 0+60.50 | 58.40 | 4 | 4 | 233.60 | | 25.96 | | | | 4.33 | | | | | | | | |
| C.H. 101 Shoulder Rt | 0+60.50 | 1+56.00 | 95.50 | 4 | 4 | 382.00 | | 42.44 | | | | 7.07 | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| Berm Lt (3" Thick) | 53+06.50 | 53+75.00 | 69.00 | 4 | 4 | 276.00 | | | | | | | | | | | | | 2.56 | 38 |
| Berm: C.H. 101 Lt to C.H. 21 Rt (3" Thick) | 0+60.50 | 53+75.00 | 45.00 | 4 | 4 | 180.00 | | | | | | | | | | | | | 1.67 | 25 |
| | | | | | | | | | | | | | | | | | | | | |
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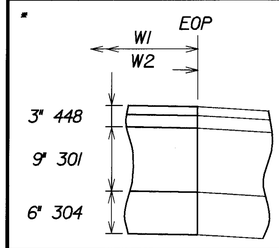
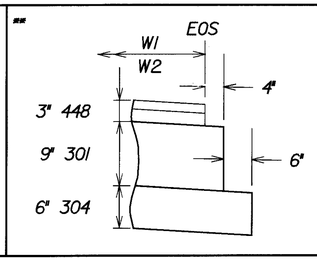
| | | | | | | | | | | | | | | | | | | | | |

STEPS USED IN PAVEMENT CALCULATIONS

* EOP




** EOS



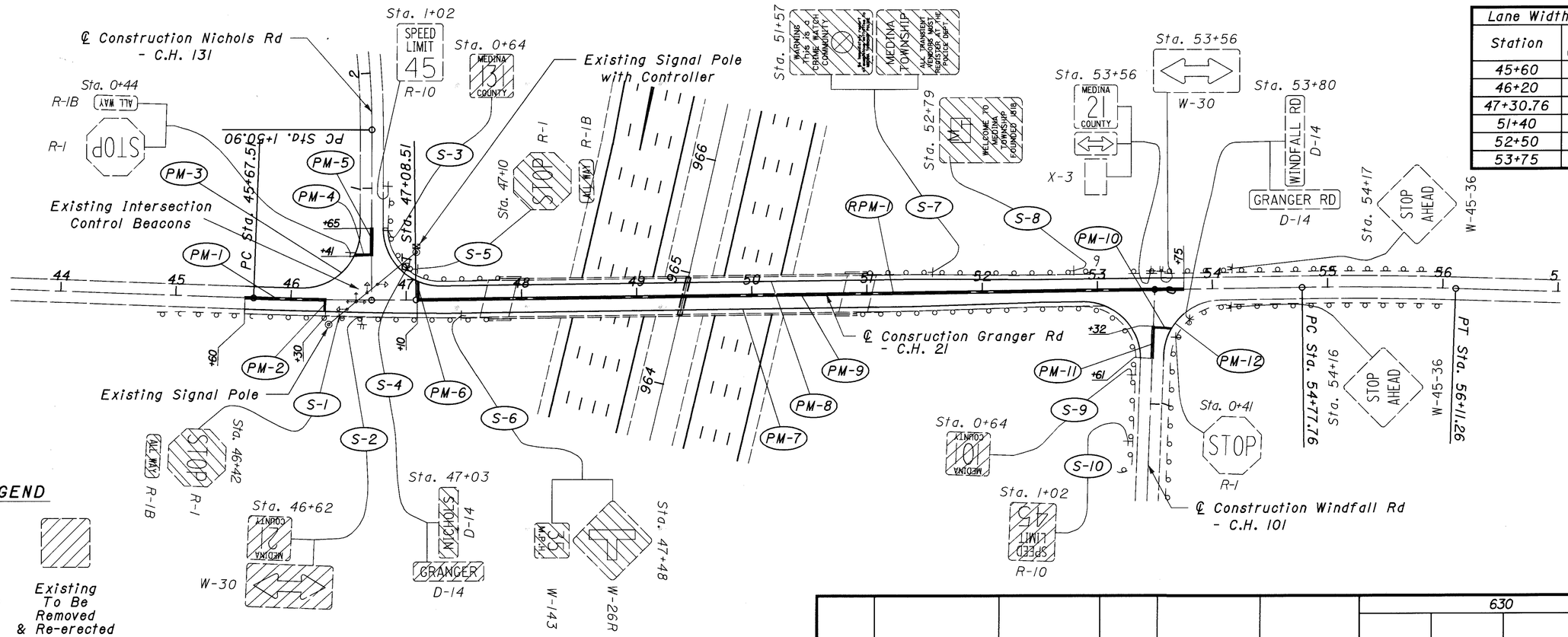

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTALS (THIS SHEET) | 742.36 | 368.20 | | 171.55 | 129.54 | 10.41 | 52.01 | 268.97 | 36.11 | 50.59 | | 4.23 | 63 |
| TOTALS (SHEET 405) | 691.83 | 402.98 | | 123.09 | 120.51 | 8.84 | 44.19 | 192.61 | 30.71 | 43.00 | 190.62 | 4.81 | 72 |
| TOTALS CARRIED TO SHEET 375 | 1434.19 | 771.18 | | 294.64 | 250.05 | 19.25 | 96.20 | 461.58 | 66.82 | 93.59 | 190.62 | 9.04 | 135 |

CALCULATED DLW CHECKED

PAVEMENT CALCULATIONS
GRANGER ROAD (C.H. 21)

MED-71-15.78

406
940




## LEGEND

Existing To Remain

Existing To Be Removed & Re-erected

| Lane Width Table | | |
|---|---|---|
| Station | Lt (ft) | Rt (ft) |
| 45+60 | 10 | 10 |
| 46+20 | 10 | 10 |
| 47+30.76 | 12 | 12 |
| 51+40 | 12 | 12 |
| 52+50 | 10 | 10 |
| 53+75 | 10 | 10 |

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DLW
CHECKED JWK

# TRAFFIC CONTROL PLAN
# GRANGER ROAD (C.H. 21)

MED-71-15.78

407
940

| REFERENCE NO. | LOCATION | STATION FROM | STATION TO | SIDE | 621 RAISED PAVEMENT MARKER, 2-WAY (YELLOW/YELLOW) | | 642 EDGE LINE, TYPE 2, WHITE | 642 CENTER LINE, TYPE 2, DOUBLE, SOLID | 644 STOP LINE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | EACH | | LIN. FT. | LIN. FT. | LIN. FT. |
| PM-1 | Granger Road | 45+60 | 46+30 | | | | | 70 | |
| PM-2 | Granger Road | 46+30 | | RT. | | | | | 10 |
| PM-3 | Granger Rd to Nichols Rd | 45+60 | 0+65 | LT. | | | 128 | | |
| PM-4 | Nichols Road | 0+41 | | LT. | | | | | 15 |
| PM-5 | Nichols Road | 0+41 | 0+65 | | | | | 24 | |
| PM-6 | Granger Road | 47+10 | | LT. | | | | | 16 |
| PM-7 | Granger Rd to Windfall Rd | 45+60 | 0+61 | RT. | | | 806 | | |
| PM-8 | Nichols Rd to Granger Rd | 0+65 | 53+75 | LT. | | | 723 | | |
| PM-9 | Windfall Road | 47+10 | 53+75 | | | | | 665 | |
| PM-10 | Windfall Road | 0+32 | | LT. | | | | | 16 |
| PM-11 | Windfall Road | 0+32 | 0+61 | | | | | 29 | |
| PM-12 | Windfall Road | 0+20 | 0+61 | LT. | | | 45 | | |
| | | | | | | | | | |
| RPM-1 | Granger Road | 47+10 | 53+50 | | 9 | | | | |
| TOTALS CARRIED TO SHEET 375 | | | | | 9 | | 1702 | 788 | 57 |

| REFERENCE NO. | LOCATION | STATION | SIDE | CODE | SIZE | 630 GROUND MOUNTED SUPPORT, NO. 3 | | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION | REMOVAL OF GROUND MOUNTED SUPPORT AND DISPOSAL |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | LIN. FT. | | EACH | EACH |
| S-1 | Granger Road | 46+42 | RT. | R-1 | 36"x36" | 13.5 | | 2 | 1 |
| | | | | R-1B | 18"x6" | | | | |
| S-2 | Granger Road | 46+62 | RT. | W-30 | 48"x24" | 12.5-12.5 | | 2 | 2 |
| | | | | | 15"x15" | | | | |
| S-3 | Nichols Road | 0+64 | RT. | | 18"x18" | 11.0 | | 1 | 1 |
| S-4 | Granger Road | 47+03 | LT. | D-14 | 24"x8" | 12.5 | | 2 | 1 |
| | | | | D-14 | 24"x8" | | | | |
| S-5 | Granger Road | 47+10 | LT. | R-1 | 36"x36" | 13.0 | | 2 | 1 |
| | | | | R-1B | 18"x6" | | | | |
| S-6 | Granger Road | 47+48 | RT. | W-26R | 30"x30" | 14.0 | | 2 | 1 |
| | | | | W-143 | 18"x18" | | | | |
| S-7 | Granger Road | 51+57 | LT. | | 18"x24" | 14.0 | | 2 | 1 |
| | | | | | 18"x24" | | | | |
| S-8 | Granger Road | 52+79 | LT. | | 24"x30" | 12.5 | | 1 | 1 |
| S-9 | Windfall Road | 0+64 | RT. | | 18"x18" | 12.0 | | 1 | 1 |
| S-10 | Windfall Road | 1+02 | RT. | R-10 | 24"x30" | 13.0 | | 1 | 1 |
| TOTALS CARRIED TO SIGNING GENERAL SUMMARY | | | | | | 140.5 | | 16 | 11 |

# GRANGER RD (C.H. 21) PLAN AND PROFILE
## STA. 45+00 TO STA. 50+00

MED-71-15.78

408
940

CALCULATED DLW
CHECKED

HORIZONTAL SCALE IN FEET
0 10 20 40

N

| Cross References | |
|---|---|
| Sheet | Description |
| 404 | Roadway Quantities |
| 77-96 | Drainage Quantities |
| 419 | ℄ References |
| 419 | Intersection Detail |

Plane and Resurfacing
The length may be adjusted in the field to match existing conditions.

P.I. Sta = 46+38.02
℄ Constr. Granger Rd
Δ = 2° 49′ 12″ (LT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 70.51′
L = 141.00′
E = 0.87′

⊗ GATES AND BARRICADES AS SHOWN ON STANDARED DRAWING MT-101.60M.

● LOCATION OF MINIMUM VERTICAL CLEARANCE

N 2° 10′ 33″ W
Ex. AT&T Fiber Optic Line (2 - 4″ Ducts)
℄ Construction Nichols Rd - C.H. 131
Sta. 0+65± C.H. 131
Butt Joint as Per BP-3.1
90° 00′ 00″ To Local Tangent
Sta. 45+60.00 Butt Joint as Per BP-3.1
PC Sta. 45+67.51
Sta. 44+78.15 Begin Guardrail
Construction Limits
N 89° 56′ 33″ E
Saw Cut
Anchor Assembly, Type A
GR-1
R-1
AD-1
BEGIN WORK STA. 44+53
Anchor Assembly, Type A
Sta. 0+98± Begin Guardrail
GR-2
2′ Min.
50′ R
166-D
R-2
R-3
15″
Sta. 47+08.06 PT
+58.06
+70.63
C-2
AD-4
Sta. 47+80.96 Begin Bridge Parapet
Overhead Electric Distribution Lines (Ohio Edison)
Sta. 47+30.76 62.00 ft Lt
Bridge Terminal Assembly, Type I
Sta. 49+41.23 C.H. 21 - Sta. 964+78.75 I.R. 71
76° 16′ 32″ To Local Tangent
℄ Survey & Construction Granger Rd - C.H. 21
N 87° 07′ 21″ E
MATCH LINE STA. 50+00
AD-2
165-D
+48.70
+63.55
Sta. 47+71.59 Begin Bridge Parapet
Bridge Terminal Assembly, Type
C-1
AD-3
Sta. 46+20.00 Begin Pavement Width Taper
Sta. 46+78 Begin Full Depth Pavement
Sta. 47+30.76 End Pavement Width Taper
Begin Approach Slab Sta. 47+67.70
End Approach Slab Sta. 47+92.70
℄ Construction I.R. 71
Ex. AT&T Fiber Optic Line (2 - 4″ Ducts)
Sta. 46+70 C.H. 21 - Sta. 0+02.71 C.H. 131

| EARTHWORK QUANTITIES CARRIED TO GENERAL SUMMARY | |
|---|---|
| EXCAVATION | 467 CU. YDS. |
| EMBANKMENT | 279 CU. YDS. |
| SEEDING & MULCHING | 1809 SQ. YDS. |

**EXISTING STRUCTURE**
Type: Continuous Steel Girder with Reinforced Concrete Deck and Substructure
Spans: 67′-6″, 103′-6″, 84′-0″, 54′-9″
Roadway: 24′-0″ Face to Face of 2′-3″ Safety Curbs
Loading: CF - 130 (57)
Skew: 13°-42′-30″ LF
Wearing Surface: ¾″ Monolithic Concrete
Approach Slabs: AS-1-54 (25′ Long)
Alignment: Tangent
Crown: 3/16″/ft
Date Built: 1964 SFN: 5203635

**PROPOSED STRUCTURE**
Type: Continuous A572 Steel Composite Girder with Reinforced Concrete Deck and Substructures
Spans: 147′-6″, 137′-0″ ℄ Bearing
Roadway: 32′-0″ Toe/Toe Concrete Parapet
Loading: HS20-44 Case II and Alternate Military Loading
Skew: 13°-43′-28″ LF
Wearing Surface: 1″ Monolithic Concrete
Approach Slabs: AS-1-81 (25′ Long), 32′-0″ T/T Curb
Alignment: Tangent
Crown: 3/16″/ft
Coordinates: Latitude: 41°-9′-22″ Longitude: 81°-47′-10″

Match Existing with Butt Joint as Per BP-3.1
200′ Vertical Curve P.V.I. Sta. 46+60.00 Elev. = 1,186.15
Actual Design Speed Met = 29 M.P.H. SSD = 197.37′
600′ Vertical Curve P.V.I. Sta. 50+75.00 Elev. = 1,195.70
Actual Design Speed Met = 49 M.P.H. SSD = 392.97′ (NDC = 450 feet)
+9.16 %
+9.12 %
+2.30 %
Ex. AT&T Fiber Optic Line (2 - 4″ Ducts)
REQUIRED MINIMUM VERTICAL CLEARANCE = 16′-6″
ACTUAL MINIMUM VERTICAL CLEARANCE = 16′-10″
Bridge Limits
Sta. 47+92.70

1177.03 1178.79 1180.41 1181.89 1183.24 1184.45 1185.52 1186.46 1187.26 1187.93 1188.46 1188.91 1189.34 1189.71 1190.04 1190.32 1190.55 1190.74 1190.88 1190.96 1191.01 1191.00 1190.94
1171.54 1176.12 1180.39 1183.90 1186.59 1188.24 1189.49 1190.29 1190.83 1191.11 1191.06
1195 1190 1185 1180 1175 1170 1165
45+00 46+00 47+00 48+00 49+00 50+00

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Plane and Resurfacing
The length may be adjusted in the field to match existing conditions.

Overhead Electric Distribution Lines (Ohio Edison)

| EARTHWORK QUANTITIES CARRIED TO GENERAL SUMMARY | |
|---|---|
| EXCAVATION | 619 CU. YDS. |
| EMBANKMENT | 473 CU. YDS. |
| SEEDING & MULCHING | 2633 SQ. YDS. |

⊗ GATES AND BARRICADES AS SHOWN ON STANDARED DRAWING MT-101.60M.

Sta. 53+49.85 C.H. 21 = Sta. 0+00.00 C.H. 101

P.I. Sta = 55+44.52
℄ Constr. Granger Rd
Δ = 2° 40′ 12″ (RT)
Dc = 2° 00′ 00″
R = 2,864.79′
T = 66.76′
L = 133.50′
E = 0.78′

END WORK STA. 54+00.00

| Cross References | |
|---|---|
| Sheet | Description |
| 404 | Roadway Quantities |
| 77-96 | Drainage Quantities |
| 419 | ℄ References |

MATCH LINE STA. 50+00

℄ Survey & Construction Granger Rd - C.H. 21
N 87° 07′ 21″ E

Begin Approach Slab Sta. 50+79.26

Sta. 51+00.37 End Bridge Parapet

End Approach Slab Sta. 51+04.26

Construction Limits

Flared End

Anchor Assembly, Type T

Sta. 53+02± End Guardrail

Sta. 53+06.5± End Full Depth Pavment

+10.9 Existing Field Drive

Sta. 53+75.00 Butt Joint as Per BP-3.1

Sta. 54+77.76

Bridge Terminal Assembly, Type

Sta. 50+91.01 End Bridge Parapet

Sta. 51+40.00 Begin Pavement Width Taper

Sta. 52+50 End Pavement Width Taper

Sta. 52+86.88
60.00 ft RT

92° 46′ 20″

S0° 06′ 19″ E

Sta. 0+60.5 C.H. 101 Butt Joint as Per BP-3.1

℄ Windfall Rd. C.H. 101

MATCH LINE STA. 1+00

MATCH LINE STA. 1+00

℄ Windfall Rd. C.H. 101

Anchor Assembly, Type T

Flared End

Sta. 1+59± End Guardrail

Res. Drive

Construction Limits

| EXISTING STRUCTURE |
|---|
| Type: Continuous Steel Girder with Reinforced Concrete Deck and Substructure |
| Spans: 67′-6″, 103′-6″, 84′-0″, 54′-9″ |
| Roadway: 24′-0″ Face to Face of 2′-3″ Safety Curbs |
| Loading: CF - 130 (57) |
| Skew: 13°-42′-30″ LF |
| Wearing Surface: ¾″ Monolithic Concrete |
| Approach Slabs: AS-1-54 (25′ Long) |
| Alignment: Tangent |
| Crown: 3/16″/ft |
| Date Built: 1964 SFN: 5203635 |

| PROPOSED STRUCTURE |
|---|
| Type: Continuous A572 Steel Composite Girder with Reinforced Concrete Deck and Substructures |
| Spans: 147′-6″, 137′-0″ ℄ Bearing |
| Roadway: 32′-0″ Toe/Toe Concrete Parapet |
| Loading: HS20-44 Case II and Alternate Military Loading |
| Skew: 13°-43′-28″ LF |
| Wearing Surface: 1″ Monolithic Concrete |
| Approach Slabs: AS-1-81 (25′ Long), 32′-0″ T/T Curb |
| Alignment: Tangent |
| Crown: 3/16″/ft |
| Coordinates: Latitude: 41°-9′-22″ Longitude: 81°-47′-10″ |

+2.30 %  -4.89 %

600′ Vertical Curve P.V.I. Sta. 50+75.00 Elev. = 1,195.70

Actual Design Speed Met = 49 M.P.H. SSD = 392.97′ (NDC = 450 feet)

Match Existing with Butt Joint as Per BP-3.1

-4.89 %

Bridge Limits

Sta. 50+79.26

1190.94 1190.84 1190.69 1190.49 1190.24 1189.95 1189.61 1189.22 1188.78 1188.29 1187.76 1187.18 1186.55 1185.87 1185.14 1184.37 1183.55 1182.68 1181.76 1181.04

1191.06 1189.57 1189.99 1189.29 1187.98 1186.38 1184.40 1182.22 1179.85 1177.41

1195 1190 1185 1180 1175 1170 1165

50+00 51+00 52+00 53+00 54+00 55+00

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED DLW CHECKED

GRANGER RD (C.H. 21) PLAN AND PROFILE
STA. 50+00 TO STA. 55+00

MED-71-15.78

409
940

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| SEEDING | | END AREA | | VOLUME | | CALCULATED DL W | CHECKED |
|---|---|---|---|---|---|---|---|
| END WIDTH | SO. YDS. | CUT | FILL | CUT | FILL | | |
| 22 | 117 | 0 | 6 | 2 | 8 | | |
| 20 | 48 | 1 | 3 | 1 | 1 | | |
| 20 0 | | 0 | 0 | | | | |
| | 165 | | | 3 | 9 | | |

℄ Survey & Construction

60 50 40 30 20 10 0 10 20 30 40 50 60

1180 1175 1170 1165 1160

R/W

100

2:1 3:1

1174.5

1176.11
45+50.00
1176.11

1169.9

1171.54
45+00.00
1171.54

AHD. BK. BEGIN SEEDING STA. 44+78.5

BEGIN EARTHWORK STA. 44+78.5 AHD.

BEGIN WORK
STA. 44+53

℄ Survey & Construction

SHEET TOTAL

# CROSS SECTIONS
# GRANGER ROAD (C.H. 21)

MED-71-15.78

410
940

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 44 | 43 | 15 | 3 | 4 | 1 |
| 45 | 186 | 10 | 5 | 10 | 10 |
| | 229 SHEET TOTAL | | | 14 | 11 |

℄ Survey & Construction

60 50 40 30 20 10 0 10 20 30 40 50 60 70

1195 1190 1185 1180 1175 1170

R/W

100

4:1

2:1

1179.5

1181.06
46+08.61
1180.99

R/W

3:1

2:1

1178.8

1180.41
46+00.00
1180.39

℄ Survey & Construction

60 50 40 30 20 10 0 10 20 30 40 50

SHEET TOTAL

CALCULATED DLW

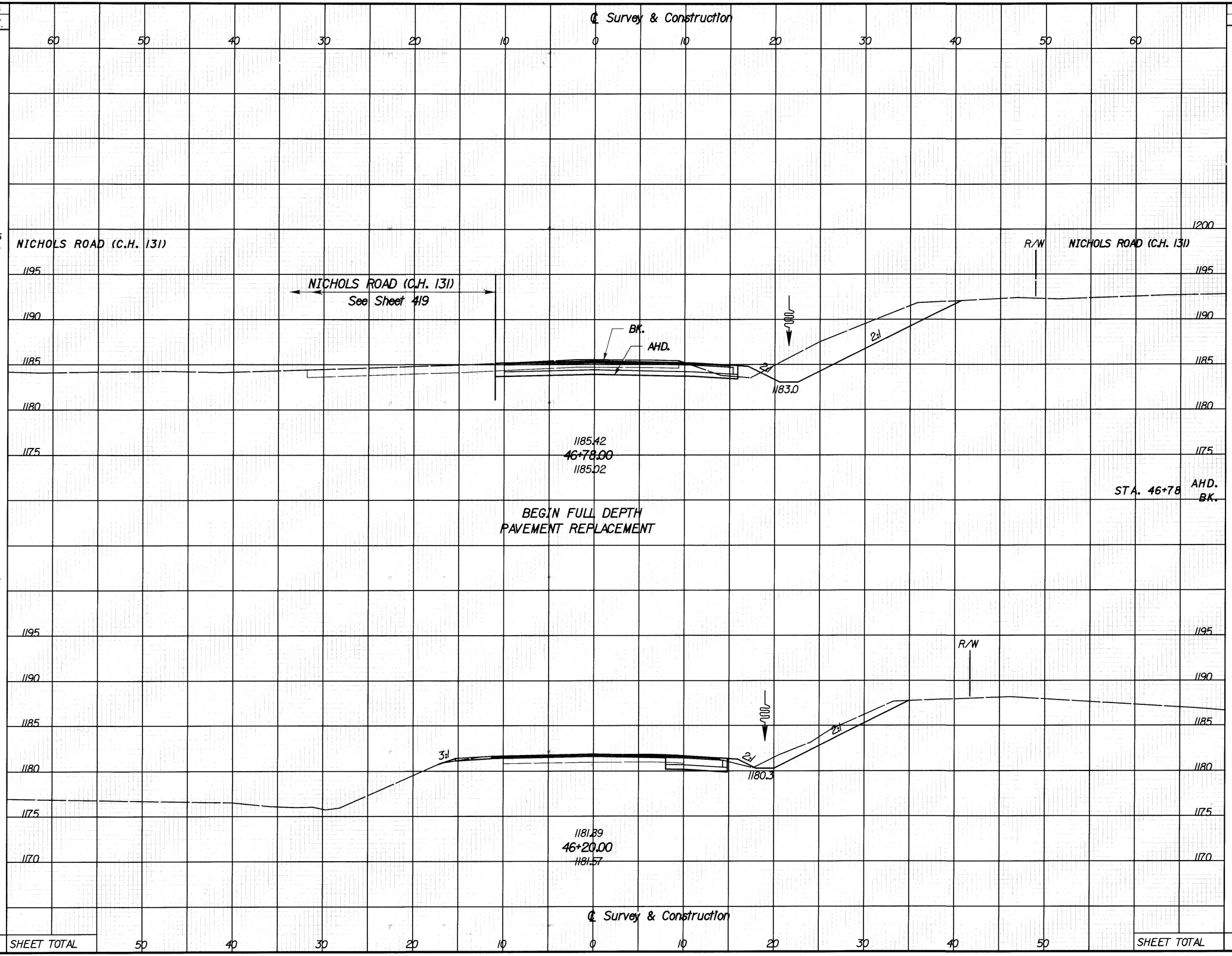
CHECKED

# CROSS SECTIONS
# GRANGER ROAD (C.H. 21)

MED-71-15.78

411
940

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| | 295 |
| | -67 |
| 38 | |
| | 267 |
| 45 | |
| 56 | |
| | 551 |




| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| | | 60 | 7 |
| | | -8 | -3 |
| 89 | 2 | | |
| 56 | 2 | | |
| | | 88 | 3 |
| | | | |
| 26 | 1 | | |
| | | 9 | 1 |
| | | 149 | 8 |

CALCULATED DL W
CHECKED

# CROSS SECTIONS GRANGER ROAD (C.H. 21)

MED-71-15.78

412
940

| SEEDING | | END AREA | | VOLUME | |
|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 39 | 107 | 47 | 8 | 50 | 4 |
| 61 | 290 | 92 | 4 | 176 | 6 |
| | 397 SHEET TOTAL | | SHEET TOTAL | 226 | 10 |

CALCULATED DLW CHECKED

℄ Survey & Construction

60 50 40 30 20 10 0 10 20 30 40 50 60

1190 1185 1180 1175

8:1 0.04 4:1

1188.21
47+50.00
1188.24

1195 1190 1185 1180 1175

8:1 2 2:1

1185.2

1187.64
47+30.73
1187.71

℄ Survey & Construction

60 50 40 30 20 10 0 10 20 30 40 50 60

# CROSS SECTIONS
# GRANGER ROAD (C.H. 21)

MED-71-15.78

413
940

| SEEDING END WIDTH | SEEDING SQ. YDS. | STATION | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|---|
| | | ℄ Survey & Construction | | | | |
| | | 60 50 40 30 20 10 0 10 20 30 40 50 60 | | | | |
| | | (BRIDGE LIMITS STA. 47+92.70 TO STA. 50+79.26) | | | | |
| | | 1195 1190 1185 1180 1175 1170 1165 | | | | |
| | | BK. 0.08 4J:1 2:1 1175.8 | | | | |
| | | BK. 0.08 4J:1 2:1 1175.1 | | | | |
| | | 1189.9 47+92.70 1175.55 SECTION ALONG 13°45'28" SKEW END APPROACH SLAB | | | | |
| 65 | | STA. 47+92.70 BK. | | | | |
| | | BK. STA. 47+92.70 BK. | 11 | 521 | | |
| | | DEDUCT FOR STRUCTURE RELATED ITEMS (WINGWALL, POROUS BACKFILL, ETC.) | | | | -45 |
| | 364 | | | | 37 | 266 |
| | | 1195 1190 1185 1180 1175 | | | | |
| | | 0.04 4J:1 2:1 1185.9 | | | | |
| | | 0.04 4J:1 2:1 1185.7 | | | | |
| | | 32' - 15" Type B @ 1.50% | | | | |
| | | 80' - 15" Type C @ 0.80% | | | | |
| | | Catch Basin No. 3A Sta. 47+61, 16' Lt. Grate Elv. = 1188.02 ℄ 15" (N) = 1181.49 ℄ 15" (S) = 1181.49 | | | | |
| | | 1188.63 47+67.70 AHD. & BK. 1187.83 SECTION ALONG 13°45'28" SKEW BEGIN APPROACH SLAB | | | | |
| | | Catch Basin No. 3A Sta. 47+52, 16' Rt. Grate Elv. = 1187.71 ℄ 15" (N) = 1181.97 | | | | |
| 66 | | | 69 | 54 | | |
| | 103 | | | | 38 | 20 |
| | | ℄ Survey & Construction | | | | |
| | | 50 40 30 20 10 0 10 20 30 40 50 | | | | |
| | 467 | SHEET TOTAL | | | 75 | 241 |

CALCULATED DLW

CHECKED

CROSS SECTIONS
GRANGER ROAD (C.H. 21)

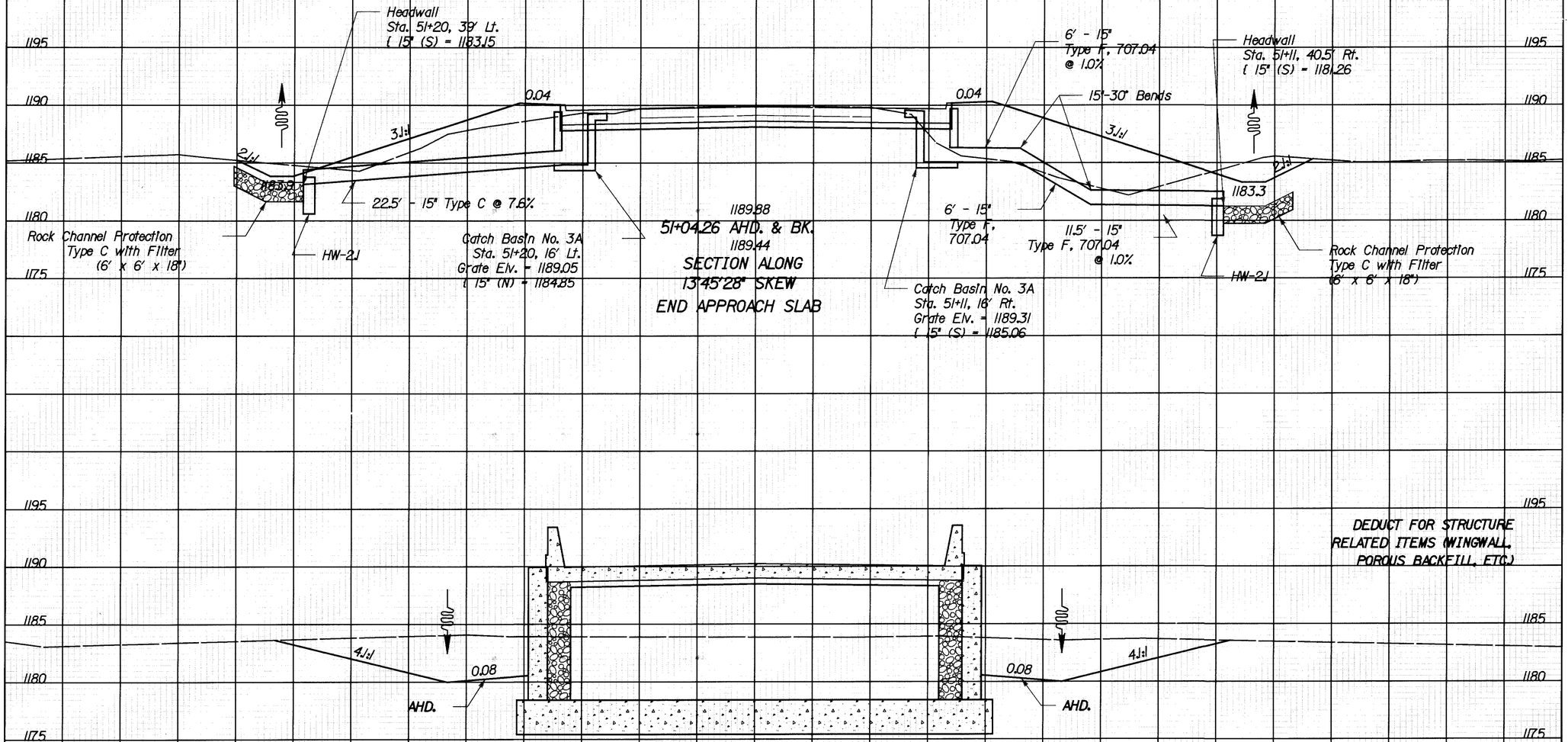
MED-71-15.78

414
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 82 | |
| | 203 |
| 64 | |
| | 203 |

℄ Survey & Construction

60 50 40 30 20 10 0 10 20 30 40 50 60




(BRIDGE LIMITS STA. 47+92.70 TO STA. 50+79.26)

℄ Survey & Construction

STA. 50+79.26 AHD.

STA. 50+79.26 AHD.

| 203 | SHEET TOTAL |
|---|---|

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 68 | 113 | | |
| | | 81 | 134 |
| | | | -19 |
| 107 | 176 | | |
| | | 81 | 115 |

CALCULATED DLW
CHECKED

# CROSS SECTIONS
## GRANGER ROAD (C.H. 21)

MED-71-15.78

415
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 102 | |
| | 533 |
| 90 | |
| | 437 |
| | 970 |

℄ Survey & Construction

60 50 40 30 20 10 0 10 20 30 40 50 60

1190
R/W
1185
1180
1175

3:1
2.5:1
1178.8
1187.76
52+00.00
1187.98
2.5:1
2:1
14:1
1176.9
R/W

3:1
2:1
1181.2
1189.00
51+50.00
1189.29
2.5:1
2:1
1178.6
R/W

| END AREA | |
|---|---|
| CUT | FILL |
| 67 | 59 |
| 76 | 36 |
| SHEET TOTAL | |

| VOLUME | |
|---|---|
| CUT | FILL |
| 132 | 88 |
| 122 | 126 |
| 254 | 214 |

CALCULATED DLW
CHECKED

# CROSS SECTIONS
## GRANGER ROAD (C.H. 21)

MED-71-15.78

416
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 65 | 328 |
| 95 | 547 |
| | 875 |

℄ Survey & Construction

60 50 40 30 20 10 0 10 20 30 40 50 60

1190
1185
1180
1175
1170

R/W

4:1

1184.88
52+86.88
1184.94

2:1

2:1

1171.2

R/W

1186.21
52+50.00
1186.38

2:1

2:1

1175.6

2:1

2:1

1172.5

R/W

℄ Survey & Construction

| END AREA | |
|---|---|
| CUT | FILL |
| 54 | 7 |
| 82 | 30 |
| SHEET TOTAL | |

| VOLUME | |
|---|---|
| CUT | FILL |
| 93 | 25 |
| 138 | 82 |
| 231 | 107 |

CALCULATED DLW

CHECKED

# CROSS SECTIONS
# GRANGER ROAD (C.H. 21)

MED-71-15.78

417
940

| SEEDING END WIDTH | SEEDING SO. YDS. | | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|---|
| | | ℄ Survey & Construction | | | | |
| | | 60 50 40 30 20 10 0 10 20 30 40 50 60 | | | | |
| | | BEGIN WORK STA. 54+00 | | | | |
| | | 1180 1175 1170 R/W | | | | |
| | | 54+00.00 | | | | |
| 0 | | AHD. BK. END SEEDING STA. 53+75 | | | | |
| 14 | | BEGIN EARTHWORK STA. 53+75 BK. | 0 | 0 | | |
| | 372 | WINDFALL ROAD (C.H. 101) | | | 27 | 31 |
| | | WINDFALL ROAD (C.H. 101) | | | | |
| | -25 | Drive @ Sta. 53+10.90, Lt. | | | -12 | |
| | | Drive @ Sta. 53+10.90, Lt. | | | | |
| | 126 | Drive @ Sta. 53+10.90, Lt. See Sheet 419 | | | 3 | 0 |
| | | 1190 1185 1180 1175 R/W 3:1 | | | | |
| | | 1184.11 53+06.50 1183.50 | | | | |
| 19 | | AHD. BK. Sta. 53+06.5 | 1 | 0 | | |
| 38 | | Sta. 53+06.5 AHD. BK. | 42 | 9 | | |
| | 112 | ℄ Survey & Construction | | | 35 | 6 |
| | 585 | SHEET TOTAL 50 40 30 20 10 0 10 20 30 40 50 SHEET TOTAL | | | 53 | 37 |

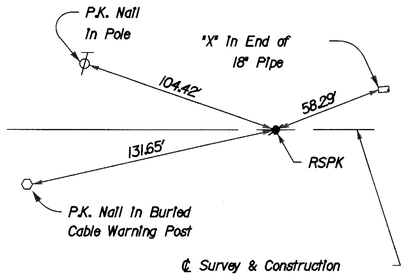
CALCULATED DLW CHECKED

CROSS SECTIONS
GRANGER ROAD (C.H. 21)

MED-71-15.78

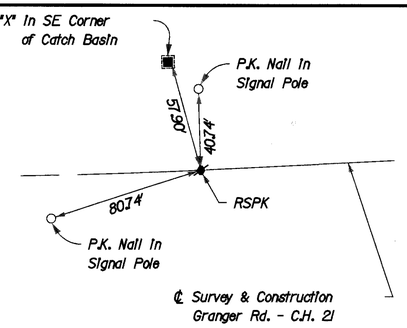
418
940

## ℄ REFERENCE POINTS



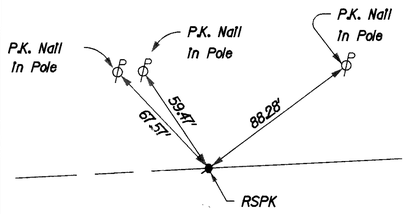

℄ Survey & Construction
Granger Rd. - C.H. 21

REF PT. STA. 45+00.00

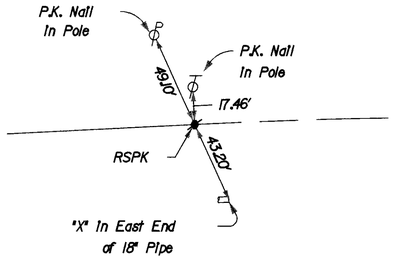



℄ Survey & Construction
Granger Rd. - C.H. 21

REF PT. STA. 47+08.49



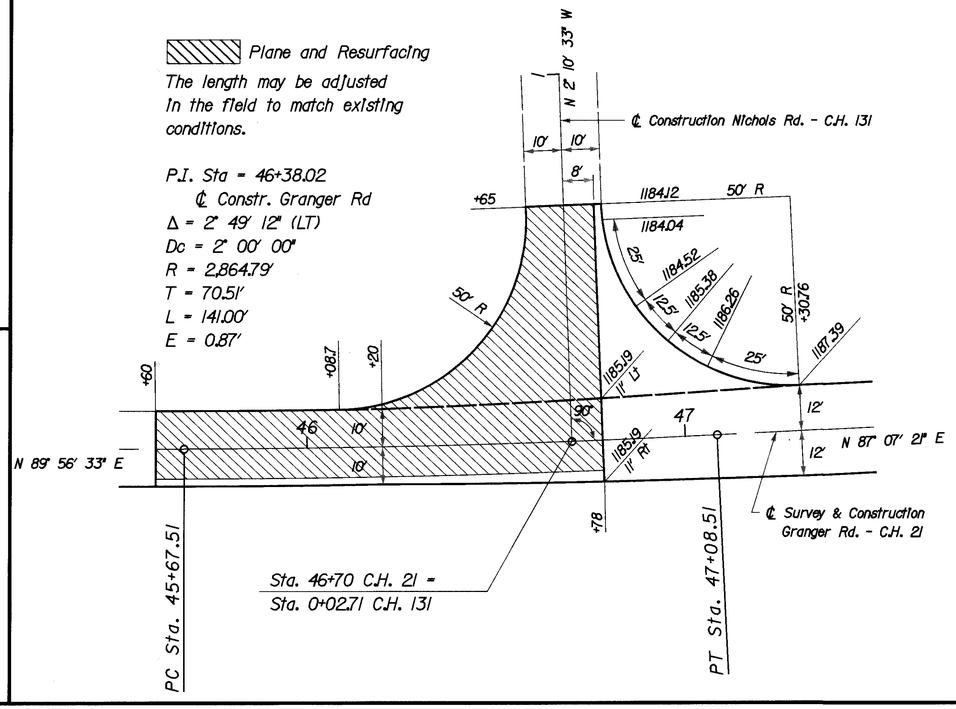

REF PT. STA. 51+50.00



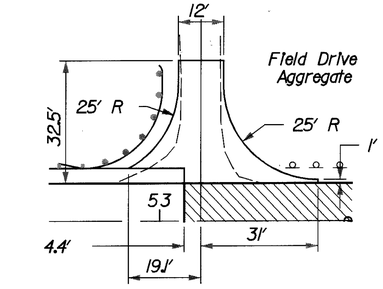

REF PT. STA. 54+77.76

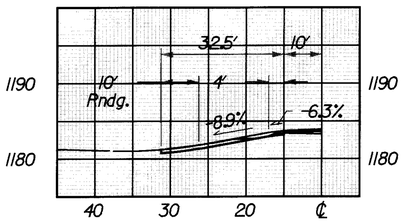
HORIZONTAL SCALE IN FEET
0 20 10 40

## INTERSECTION DETAIL
## GRANGER ROAD & NICHOLS ROAD




## DRIVEWAY PLAN AND PROFILE
Sta. 53+10.90 Lt.




Cadd Measured Area = 626 sq. ft.
Item 304 Aggregate Base
V = (626 sq. ft. x 0.5 ft) ÷ 27
= 11.59 cu. yds.
Total Carried to Sheet 375

CALCULATED DLW
CHECKED

**MISCELLANEOUS DETAILS**
**GRANGER ROAD (C.H. 21)**

**MED-71-15.78**

419
940

| ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | AS PER PLAN SHEET REFERENCE |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| 202 | 23000 | 8140 | SQ. YDS. | PAVEMENT REMOVED | |
| 202 | 38000 | 1000 | LIN. FT. | GUARDRAIL REMOVED | |
| 203 | 12000 | 10756 | CU. YDS | EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION | |
| 203 | 20000 | 434 | CU. YDS. | EMBANKMENT | |
| 203 | 50000 | 8507 | SQ. YDS. | SUBGRADE COMPACTION | |
| | | | | | |
| 254 | 01000 | 106 | SQ. YDS. | PAVEMENT PLANING, BITUMINOUS | |
| | | | | | |
| 304 | 20000 | 2258 | CU. YDS. | AGGREGATE BASE | |
| 407 | 10000 | 11 | GALLON | TACK COAT | |
| | | | | | |
| 408 | 10000 | 4499 | GALLON | BITUMINOUS PRIME COAT | |
| | | | | | |
| 606 | 13000 | 562.5 | LIN. FT. | GUARDRAIL, TYPE 5 | |
| 606 | 13050 | 200 | LIN. FT. | GUARDRAIL, TYPE 5A | |
| 606 | 22000 | 2 | EACH | ANCHOR ASSEMBLY, TYPE B-98 | |
| 606 | 26500 | 2 | EACH | ANCHOR ASSEMBLY, TYPE T | |
| | | | | | |
| 620 | 10300 | 24 | EACH | DELINEATOR, TYPE C, POST MOUNTED | |
| 620 | 15300 | 3 | EACH | DELINEATOR, TYPE D, POST MOUNTED | |
| | | | | | |
| 621 | 00100 | 59 | EACH | RAISED PAVEMENT MARKER | |
| | | | | | |
| 626 | 00100 | 20 | EACH | BARRIER REFLECTOR, TYPE A | |
| | | | | | |
| 887 | | 0.96 | MILE | EDGE LINE (5 YEAR WARRANTY) | |
| 887 | | 0.48 | MILE | LANE LINE (5 YEAR WARRANTY) | |
| | | | | | |
| 855 | 10000 | 11,748 | SQ. YDS. | 4" ASPHALT TREATED FREE DRAINING BASE | |
| 880 | | 4992 | CU. YDS. | ASPHALT CONCRETE (7 YEAR WARRANTY) | |
| | | | | | |
| 870 | 10000 | 24186 | SQ. YDS. | SEEDING AND MULCHING (CARRIED TO "ITEM 870 SEEDING AND MULCHING" GENERAL NOTE) | |
| | | | | | |

(QUANTITIES CARRIED TO GENERAL SUMMARY UNLESS OTHERWISE NOTED)

CALCULATED PS
CHECKED PG

# ROADWAY SUBSUMMARY OF QUANTITIES
## CONNECTION "W" I.R. 271

MED-71-15.78

421
940

DESIGN FILE : i:\pd_med_1r71\dgn\reltd\finaldrainage\271rsum.dgn
USERNAME : nvonderе
DATE : 06-DEC-1999
TIME : 10:5
271RSUM

**CONNECTION 'W' I.R. 271**

| FROM STA. | | TO STA. | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ITEM 202 - PAVEMENT REMOVED** | | | | | | | | | | | | | | | | | | |
| 970 + | 27.07 CONN. W | 973 + | 17 CONN. W | - | 289.93 L.F. | X | ( | 35 + | 43 ) | / | 2 | | | | / | | 9 - | 1256.36 SQ. YDS. |
| 973 + | 17 CONN. W | 998 + | 98.25 CONN. W | - | 2581.25 L.F. | X | | 24 | | | | | | | / | | 9 - | 6883.33 SQ. YDS. |
| | | | | | | | | | | | | | | | | TOTAL | - | **8139.69 SQ. YDS.** |
| **ITEM 203 - SUBGRADE COMPACTION** | | | | | | | | | | | | | | | | | | |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 24 | | | | | | | / | | 9 - | 899.17 SQ. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 10 | | | | | | | / | | 9 - | 374.66 SQ. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | GORE AREA | | - | 4277.11 SQ. FT. | | | | | | / | | 9 - | 475.23 SQ. YDS. |
| 973 + | 64.26 CONN. W | 998 + | 98.25 CONN. W | - | 2533.99 L.F. | X | ( | 24 + | 10 + | | 4 ) | | | | / | | 9 - | 6757.31 SQ. YDS. |
| | | | | | | | | | | | | | | | | TOTAL | - | **8506.37 SQ. YDS.** |
| **ITEM 254 - PAVEMENT PLANING, BITUMINOUS (T = 1 1/2')** | | | | | | | | | | | | | | | | | | |
| 998 + | 98.25 CONN. W | 999 + | 23.25 CONN. W | - | 25 L.F. | X | ( | 24 + | 10 + | | 4 ) | | | | / | | 9 - | 105.56 SQ. YDS. |
| **ITEM 304 - AGGREGATE BASE** | | | | | | | | | | | | | | | | | | |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 24 | | | | X | ( | 6 / | 12 )/ | | 27 - | 149.86 CU. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 11.83 | | | | X | ( | 6 / | 12 )/ | | 27 - | 73.87 CU. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | GORE AREA | | - | 4277.11 SQ. FT. | | | X | ( | 6 / | 12 )/ | | 27 - | 79.21 CU. YDS. |
| 973 + | 64.26 CONN. W | 998 + | 98.25 CONN. W | - | 2533.99 L.F. | X | ( | 24 + | 11.83 + | | 5.83 ) | X | ( | 6 / | 12 )/ | | 27 - | 1954.93 CU. YDS. |
| | | | | | | | | | | | | | | | | TOTAL | - | **2257.87 CU. YDS.** |
| **ITEM 408 - BITUMINOUS PRIME COAT** | | | | | | | | | | | | | | | | | | |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 24 | | | | / | | 9 X | 0.4 GAL./SQ/ YDS. | | - | 359.67 GALLONS |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 8 | | | | / | | 9 X | 0.4 GAL./SQ/ YDS. | | - | 119.89 GALLONS |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | GORE AREA | | - | 4277.11 SQ. FT. | | | / | | 9 X | 0.4 GAL./SQ/ YDS. | | - | 190.09 GALLONS |
| 973 + | 64.26 CONN. W | 998 + | 98.25 CONN. W | - | 2533.99 L.F. | X | ( | 24 + | 8 + | | 2 ) | / | | 9 X | 0.4 GAL./SQ/ YDS. | | - | 3829.14 GALLONS |
| | | | | | | | | | | | | | | | | TOTAL | - | 4498.79 GALLONS |
| **ITEM 302 - BITUMINOUS AGGREGATE BASE, PG 64-22** | | | | | | | | | | | | | | | | | | |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 24 | | | | X | ( | 11 / | 12 )/ | | 27 - | 274.75 CU. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 10.33 | | | | X | ( | 11 / | 12 )/ | | 27 - | 118.26 CU. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | GORE AREA | | - | 4277.11 SQ. FT. | | | X | ( | 11 / | 12 )/ | | 27 - | 145.21 CU. YDS. |
| 973 + | 64.26 CONN. W | 998 + | 98.25 CONN. W | - | 2533.99 L.F. | X | ( | 24 + | 10.33 + | | 4.33 ) | X | ( | 11 / | 12 )/ | | 27 - | 3325.94 CU. YDS. |
| | | | | | | | | | | | | | | | | TOTAL | - | **3864.16 CU. YDS.** ⊗ |
| **ITEM 855 - 4" ASPHALT TREATED FREE DRAINING BASE** | | | | | | | | | | | | | | | | | | |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 24 | | | | | | | / | | 9 - | 899.17 SQ. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 11.33 | | | | | | | / | | 9 - | 424.48 SQ. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | GORE AREA | | - | 4277.11 SQ. FT. | | | | | | / | | 9 - | 475.23 SQ. YDS. |
| 973 + | 64.26 CONN. W | 998 + | 98.25 CONN. W | - | 2533.99 L.F. | X | ( | 24 + | 11.33 + | | 5.33 ) | | | | / | | 9 - | 9,948.82 SQ. YDS. |
| | | | | | | | | | | | | | | | | TOTAL | - | **11,747.70 SQ. YDS.** |
| **ITEM 407 - TACK COAT** | | | | | | | | | | | | | | | | | | |
| 998 + | 98.25 CONN. W | 999 + | 23.25 CONN. W | - | 25 L.F. | X | ( | 24 + | 10 + | | 4 ) | / | | 9 X | 0.1 GAL./SQ/ YDS. | | - | 10.56 GALLONS |
| **ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE** | | | | | | | | | | | | | | | | | | |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 24 | | | | / | | 9 X | 0.05 GAL./SQ/ YDS. | | - | 44.96 GALLONS |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 10 | | | | / | | 9 X | 0.05 GAL./SQ/ YDS. | | - | 18.73 GALLONS |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | GORE AREA | | - | 4277.11 SQ. FT. | | | / | | 9 X | 0.05 GAL./SQ/ YDS. | | - | 23.76 GALLONS |
| 973 + | 64.26 CONN. W | 998 + | 98.25 CONN. W | - | 2533.99 L.F. | X | ( | 24 + | 10 + | | 4 ) | / | | 9 X | 0.05 GAL./SQ/ YDS. | | - | 534.95 GALLONS |
| | | | | | | | | | | | | | | | | TOTAL | - | **622.4 GALLONS** ⊗ |
| **ITEM 858 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, TYPE A** | | | | | | | | | | | | | | | | | | |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 24 | | | | X | ( | 1.75 / | 12 )/ | | 27 - | 43.71 CU. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 10 | | | | X | ( | 1.75 / | 12 )/ | | 27 - | 18.21 CU. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | GORE AREA | | - | 4277.11 SQ. FT. | | | X | ( | 1.75 / | 12 )/ | | 27 - | 23.1 CU. YDS. |
| 973 + | 64.26 CONN. W | 998 + | 98.25 CONN. W | - | 2533.99 L.F. | X | ( | 24 + | 10 + | | 4 ) | X | ( | 1.75 / | 12 )/ | | 27 - | 520.09 CU. YDS. |
| | | | | | | | | | | | | | | | | TOTAL | - | **605.11 CU. YDS.** ⊗ |
| **ITEM 858 - ASPHALT CONCRETE SURFACE COURSE, 12.5 mm, TYPE A** | | | | | | | | | | | | | | | | | | |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 24 | | | | X | ( | 1.5 / | 12 )/ | | 27 - | 37.47 CU. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | X | | 10 | | | | X | ( | 1.5 / | 12 )/ | | 27 - | 15.61 CU. YDS. |
| 970 + | 27.07 CONN. W | 973 + | 64.26 CONN. W | - | 337.19 L.F. | GORE AREA | | - | 4277.11 SQ. FT. | | | X | ( | 1.5 / | 12 )/ | | 27 - | 19.8 CU. YDS. |
| 973 + | 64.26 CONN. W | 999 + | 23.25 CONN. W | - | 2558.99 L.F. | X | ( | 24 + | 10 + | | 4 ) | X | ( | 1.5 / | 12 )/ | | 27 - | 450.19 CU. YDS. |
| | | | | | | | | | | | | | | | | TOTAL | - | **523.07 CU. YDS.** ⊗ |
| **ITEM 202 - GUARDRAIL REMOVED** | | | | | | | | | | | | | | | | | | |
| 987 + | 38.37 CONN. W | 992 + | 64.37 CONN. W | LT. | - 526 L.F. | | | | | | | | | | | | - | 525 LIN. FT. |
| 987 + | 38.16 CONN. W | 992 + | 21.64 CONN. W | RT. | - 483.48 L.F. | | | | DEDUCT FOR CURVE | | | | | | | | - | 475 LIN. FT. |
| | | | | | | | | | | | | | | | | TOTAL | - | **1000 LIN. FT.** |
| **ITEM 606 - GUARDRAIL, TYPE 5** | | | | | | | | | | | | | | | | | | |
| 990 + | 21.1 CONN. W | 991 + | 43.5 CONN. W | LT. | - 143.5 L.F. | | | | DEDUCT TYPE B ANCHOR ASSEMBLY | | | | | | | | - | 125 LIN. FT. |
| 987 + | 70.5 CONN. W | 992 + | 28.5 CONN. W | RT. | - 458 L.F. | | | | DEDUCT TYPE B ANCHOR ASSEMBLY | | | | | | | | - | 437.5 LIN. FT. |
| | | | | | | | | | | | | | | | | TOTAL | - | **562.5 LIN. FT.** |

⊗ Quantities shown for information only. A quantity of 4992 Cu.Yd. of Item 880 Asphalt Concrete (7 Year Warranty) is carried to Sheet 421.

Quantities Carried to Roadway SubSummary for Connection "W" I.R. 271, See Sht. 421.

CALCULATED PG CHECKED PS

# CALCULATIONS CONNECTION "W" I.R. 271

MED-71-15.78

422
940

DESIGN FILE : i:\pd_med_1r71\dgn\reitd\finaldrainage\271cal.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 10:31
271CAL.DGN

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ITEM 606 - GUARDRAIL, TYPE 5A** | | | | | | | | | | | | | | | |
| 988 + | 24.5 | CONN. W | 990 + | 21.1 | CONN. W | LT. | - | 196.6 L.F. | | | | | | - | 200 LIN. FT. |
| **ITEM 606 - ANCHOR ASSEMBLY, TYPE B-98** | | | | | | | | | | | | | | | |
| 991 + | 43.5 | CONN. W | 991 + | 81 | CONN. W | | - | 37.5 L.F. | | | | | | - | 1 EACH |
| 992 + | 28.5 | CONN. W | 992 + | 66 | CONN. W | RT. | - | 37.5 L.F. | | | | | | - | 1 EACH |
| | | | | | | | | | | | | | TOTAL | - | 2 EACH |
| **ITEM 606 - ANCHOR ASSEMBLY, TYPE T** | | | | | | | | | | | | | | | |
| 988 + | 12 | CONN. W | 988 + | 24.5 | CONN. W | LT. | - | 12.5 L.F. | | | | | | - | 1 EACH |
| 987 + | 58 | CONN. W | 987 + | 70.5 | CONN. W | RT. | - | 12.5 L.F. | | | | | | - | 1 EACH |
| | | | | | | | | | | | | | TOTAL | - | 2 EACH |
| **ITEM 626 - BARRIER REFLECTORS, TYPE A (WHITE)** | | | | | | | | | | | | | | | |
| 988 + | 12 | CONN. W | 991 + | 81 | CONN. W | LT. | - | 375 L.F. | | | | / | 50 + 1 | - | 9 EACH |
| **ITEM 626 - BARRIER REFLECTORS, TYPE A (YELLOW)** | | | | | | | | | | | | | | | |
| 987 + | 58 | CONN. W | 992 + | 66 | CONN. W | RT. | - | 487.5 L.F. | | | | / | 50 + 1 | - | 11 EACH |
| **ITEM 620 - DELINEATORS, POST MOUNTED, TYPE C (WHITE)** | | | | | | | | | | | | | | | |
| 973 + | 64.26 | CONN. W | 977 + | 97.74 | CONN. W | LT. | - | 433.48 L.F. | | | | / | 200 | - | 2 EACH |
| 977 + | 97.41 | CONN. W | 993 + | 72.32 | CONN. W | LT. | - | 1574.91 L.F. | ADD CURVE LENGTH | 16.04 | | / | 80 | - | 20 EACH |
| 993 + | 72.32 | CONN. W | 999 + | 23.25 | CONN. W | LT. | - | 550.93 L.F. | | | | / | 200 | - | 2 EACH |
| | | | | | | | | | | | | | TOTAL | - | 24 EACH |
| **ITEM 620 - DELINEATORS, POST MOUNTED, TYPE D (YELLOW)** | | | | | | | | | | | | | | | |
| 973 + | 64.26 | CONN. W | 977 + | 97.74 | CONN. W | RT. | - | 433.48 L.F. | | | | / | 200 + 1 | - | 3 EACH |
| **ITEM 621 - RAISED PAVEMENT MARKER (ONE WAY WHITE)** | | | | | | | | | | | | | | | |
| 973 + | 64.26 | CONN. W | 993 + | 72.32 | CONN. W | - | | 2008.06 L.F. | SUBTRACT CURVE LENGTH | 19.25 | | / | 40 | - | 51 EACH |
| 993 + | 72.32 | CONN. W | 999 + | 23.25 | CONN. W | - | | 550.93 L.F. | | | | / | 80 | - | 8 EACH |
| | | | | | | | | | | | | | TOTAL | - | 59 EACH |
| **ITEM 887- EDGE LINE (WHITE)** | | | | | | | | | | | | | | | |
| 973 + | 64.26 | CONN. W | 999 + | 23.25 | CONN. W | LT. | - | 2558.99 L.F. | | | | / | 5280 | - | 0.48 MILE |
| **ITEM 887 - EDGE LINE (YELLOW)** | | | | | | | | | | | | | | | |
| 973 + | 64.26 | CONN. W | 999 + | 23.25 | CONN. W | RT. | - | 2558.99 L.F. | SUBTRACT CURVE LENGTH | 38.5 | | / | 5280 | - | 0.48 MILE |
| **ITEM 887- LANE LINE** | | | | | | | | | | | | | | | |
| 973 + | 64.26 | CONN. W | 999 + | 23.25 | CONN. W | - | | 2558.99 L.F. | SUBTRACT CURVE LENGTH | 19.25 | | / | 5280 | - | 0.48 MILE |

*Quantities Carried to Roadway SubSummary for Connection "W" I.R. 271, See Sht. 421.*

CALCULATED PG
CHECKED PS

**CALCULATIONS**
**CONNECTION "W" I.R. 271**

**MED-71-15.78**



DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\271cal.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 10:31
271CAL.DGN

# CONNECTION 'W' I.R. 271 SUPERELEVATION TABLE

| STATION | B.L. CONST. STATION | OUTSIDE E.O.P. ELEV. P.G. | CROSS SLOPE | WIDTH | CENTER OF LANES ELEVATION | WIDTH | CROSS SLOPE | INSIDE E.O.P. ELEV. |
|---|---|---|---|---|---|---|---|---|
| STA. EQN. - BEGIN BL. & SUPER TRANS. | 970 + 27.07 | 1171.30 | 0.016 | 12 | 1171.49 | 12 | 0.016 | 1171.68 |
| | 970 + 50.00 | 1171.34 | 0.019 | 12 | 1171.57 | 12 | 0.019 | 1171.80 |
| | 970 + 75.00 | 1171.38 | 0.024 | 12 | 1171.67 | 12 | 0.024 | 1171.96 |
| | 971 + 0.00 | 1171.42 | 0.029 | 12 | 1171.77 | 12 | 0.029 | 1172.12 |
| | 971 + 25.00 | 1171.58 | 0.035 | 12 | 1172.00 | 12 | 0.035 | 1172.42 |
| TS | 971 + 29.29 | 1171.45 | 0.036 | 12 | 1171.88 | 12 | 0.036 | 1172.31 |
| | 971 + 50.00 | 1171.47 | 0.040 | 12 | 1171.95 | 12 | 0.040 | 1172.43 |
| | 971 + 75.00 | 1171.48 | 0.045 | 12 | 1172.02 | 12 | 0.045 | 1172.56 |
| | 972 + 0.00 | 1171.47 | 0.050 | 12 | 1172.07 | 12 | 0.050 | 1172.67 |
| | 972 + 25.00 | 1171.45 | 0.055 | 12 | 1172.11 | 12 | 0.055 | 1172.77 |
| | 972 + 50.00 | 1171.42 | 0.060 | 12 | 1172.14 | 12 | 0.060 | 1172.86 |
| | 972 + 75.00 | 1171.37 | 0.066 | 12 | 1172.16 | 12 | 0.066 | 1172.95 |
| | 973 + 0.00 | 1171.31 | 0.071 | 12 | 1172.16 | 12 | 0.071 | 1173.01 |
| | 973 + 25.00 | 1171.24 | 0.076 | 12 | 1172.15 | 12 | 0.076 | 1173.06 |
| BEGIN FULL SUPER SC | 973 + 29.29 | 1171.23 | 0.077 | 12 | 1172.15 | 12 | 0.077 | 1173.08 |
| | 973 + 50.00 | 1171.16 | 0.077 | 12 | 1172.08 | 12 | 0.077 | 1173.01 |
| | 973 + 75.00 | 1171.06 | 0.077 | 12 | 1171.98 | 12 | 0.077 | 1172.91 |
| | 974 + 0.00 | 1170.95 | 0.077 | 12 | 1171.87 | 12 | 0.077 | 1172.80 |
| | 974 + 25.00 | 1170.82 | 0.077 | 12 | 1171.74 | 12 | 0.077 | 1172.67 |
| | 974 + 50.00 | 1170.68 | 0.077 | 12 | 1171.60 | 12 | 0.077 | 1172.53 |
| | 974 + 75.00 | 1170.53 | 0.077 | 12 | 1171.45 | 12 | 0.077 | 1172.38 |
| | 975 + 0.00 | 1170.37 | 0.077 | 12 | 1171.29 | 12 | 0.077 | 1172.22 |
| | 975 + 25.00 | 1170.19 | 0.077 | 12 | 1171.11 | 12 | 0.077 | 1172.04 |
| | 975 + 50.00 | 1170.00 | 0.077 | 12 | 1170.92 | 12 | 0.077 | 1171.85 |
| | 975 + 75.00 | 1169.80 | 0.077 | 12 | 1170.72 | 12 | 0.077 | 1171.65 |
| END FULL SUPER CS | 975 + 84.80 | 1169.71 | 0.077 | 12 | 1170.63 | 12 | 0.077 | 1171.56 |
| | 976 + 0.00 | 1169.58 | 0.071 | 12 | 1170.43 | 12 | 0.071 | 1171.28 |
| | 976 + 25.00 | 1169.35 | 0.062 | 12 | 1170.09 | 12 | 0.062 | 1170.84 |
| | 976 + 50.00 | 1169.11 | 0.053 | 12 | 1169.75 | 12 | 0.053 | 1170.38 |
| | 976 + 75.00 | 1168.85 | 0.043 | 12 | 1169.37 | 12 | 0.043 | 1169.88 |
| | 977 + 0.00 | 1168.58 | 0.034 | 12 | 1168.99 | 12 | 0.034 | 1169.40 |
| | 977 + 25.00 | 1168.30 | 0.025 | 12 | 1168.60 | 12 | 0.025 | 1168.90 |
| | 977 + 50.00 | 1168.01 | 0.015 | 12 | 1168.19 | 12 | 0.015 | 1168.37 |
| | 977 + 75.00 | 1167.70 | 0.006 | 12 | 1167.77 | 12 | 0.006 | 1167.84 |
| ST | 977 + 84.80 | 1167.57 | 0.002 | 12 | 1167.59 | 12 | 0.002 | 1167.62 |
| END TRANS BK. / BEGIN TRANS AHD. | 977 + 91.27 | 1167.49 | 0.000 | 12 | 1167.49 | 12 | 0.000 | 1167.49 |
| TS | 977 + 97.74 | 1167.41 | -0.003 | 12 | 1167.37 | 12 | -0.003 | 1167.34 |
| | 978 + 0.00 | 1167.38 | -0.004 | 12 | 1167.33 | 12 | -0.004 | 1167.28 |
| | 978 + 25.00 | 1167.04 | -0.014 | 12 | 1166.87 | 12 | -0.014 | 1166.70 |
| | 978 + 50.00 | 1166.69 | -0.024 | 12 | 1166.40 | 12 | -0.024 | 1166.11 |
| | 978 + 75.00 | 1166.33 | -0.034 | 12 | 1165.92 | 12 | -0.034 | 1165.51 |
| | 979 + 0.00 | 1165.96 | -0.044 | 12 | 1165.43 | 12 | -0.044 | 1164.90 |
| | 979 + 25.00 | 1165.58 | -0.054 | 12 | 1164.93 | 12 | -0.054 | 1164.28 |
| | 979 + 50.00 | 1165.20 | -0.064 | 12 | 1164.43 | 12 | -0.064 | 1163.66 |
| | 979 + 75.00 | 1164.82 | -0.074 | 12 | 1163.93 | 12 | -0.074 | 1163.04 |
| BEGIN FULL SUPER SC | 979 + 97.74 | 1164.47 | -0.083 | 12 | 1163.47 | 12 | -0.083 | 1162.47 |
| | 980 + 0.00 | 1164.43 | -0.083 | 12 | 1163.43 | 12 | -0.083 | 1162.43 |
| | 980 + 25.00 | 1164.05 | -0.083 | 12 | 1163.05 | 12 | -0.083 | 1162.05 |
| | 980 + 50.00 | 1163.67 | -0.083 | 12 | 1162.67 | 12 | -0.083 | 1161.67 |
| | 980 + 75.00 | 1163.29 | -0.083 | 12 | 1162.29 | 12 | -0.083 | 1161.29 |
| | 981 + 0.00 | 1162.91 | -0.083 | 12 | 1161.91 | 12 | -0.083 | 1160.91 |
| | 981 + 25.00 | 1162.53 | -0.083 | 12 | 1161.53 | 12 | -0.083 | 1160.53 |
| | 981 + 50.00 | 1162.15 | -0.083 | 12 | 1161.15 | 12 | -0.083 | 1160.15 |
| | 981 + 75.00 | 1161.77 | -0.083 | 12 | 1160.77 | 12 | -0.083 | 1159.77 |

| STATION | B.L. CONST. STATION | OUTSIDE E.O.P. ELEV. P.G. | CROSS SLOPE | WIDTH | CENTER OF LANES ELEVATION | WIDTH | CROSS SLOPE | INSIDE E.O.P. ELEV. |
|---|---|---|---|---|---|---|---|---|
| | 982 + 0.00 | 1161.39 | -0.083 | 12 | 1160.39 | 12 | -0.083 | 1159.39 |
| | 982 + 25.00 | 1161.01 | -0.083 | 12 | 1160.01 | 12 | -0.083 | 1159.01 |
| | 982 + 50.00 | 1160.63 | -0.083 | 12 | 1159.63 | 12 | -0.083 | 1158.63 |
| | 982 + 75.00 | 1160.25 | -0.083 | 12 | 1159.25 | 12 | -0.083 | 1158.25 |
| | 983 + 0.00 | 1159.87 | -0.083 | 12 | 1158.87 | 12 | -0.083 | 1157.87 |
| | 983 + 25.00 | 1159.48 | -0.083 | 12 | 1158.48 | 12 | -0.083 | 1157.48 |
| | 983 + 50.00 | 1159.10 | -0.083 | 12 | 1158.10 | 12 | -0.083 | 1157.10 |
| | 983 + 75.00 | 1158.72 | -0.083 | 12 | 1157.72 | 12 | -0.083 | 1156.72 |
| | 984 + 0.00 | 1158.34 | -0.083 | 12 | 1157.34 | 12 | -0.083 | 1156.34 |
| | 984 + 25.00 | 1157.96 | -0.083 | 12 | 1156.96 | 12 | -0.083 | 1155.96 |
| | 984 + 50.00 | 1157.58 | -0.083 | 12 | 1156.58 | 12 | -0.083 | 1155.58 |
| | 984 + 75.00 | 1157.20 | -0.083 | 12 | 1156.20 | 12 | -0.083 | 1155.20 |
| | 985 + 0.00 | 1156.82 | -0.083 | 12 | 1155.82 | 12 | -0.083 | 1154.82 |
| | 985 + 25.00 | 1156.44 | -0.083 | 12 | 1155.44 | 12 | -0.083 | 1154.44 |
| | 985 + 50.00 | 1156.06 | -0.083 | 12 | 1155.06 | 12 | -0.083 | 1154.06 |
| | 985 + 75.00 | 1155.68 | -0.083 | 12 | 1154.68 | 12 | -0.083 | 1153.68 |
| | 986 + 0.00 | 1155.30 | -0.083 | 12 | 1154.30 | 12 | -0.083 | 1153.30 |
| | 986 + 25.00 | 1154.92 | -0.083 | 12 | 1153.92 | 12 | -0.083 | 1152.92 |
| | 986 + 50.00 | 1154.57 | -0.083 | 12 | 1153.57 | 12 | -0.083 | 1152.57 |
| | 986 + 75.00 | 1154.22 | -0.083 | 12 | 1153.22 | 12 | -0.083 | 1152.22 |
| | 987 + 0.00 | 1153.90 | -0.083 | 12 | 1152.90 | 12 | -0.083 | 1151.90 |
| | 987 + 25.00 | 1153.59 | -0.083 | 12 | 1152.59 | 12 | -0.083 | 1151.59 |
| | 987 + 50.00 | 1153.29 | -0.083 | 12 | 1152.29 | 12 | -0.083 | 1151.29 |
| | 987 + 75.00 | 1153.01 | -0.083 | 12 | 1152.01 | 12 | -0.083 | 1151.01 |
| | 988 + 0.00 | 1152.75 | -0.083 | 12 | 1151.75 | 12 | -0.083 | 1150.75 |
| | 988 + 25.00 | 1152.50 | -0.083 | 12 | 1151.50 | 12 | -0.083 | 1150.50 |
| | 988 + 50.00 | 1152.27 | -0.083 | 12 | 1151.27 | 12 | -0.083 | 1150.27 |
| | 988 + 75.00 | 1152.05 | -0.083 | 12 | 1151.05 | 12 | -0.083 | 1150.05 |
| | 989 + 0.00 | 1151.85 | -0.083 | 12 | 1150.85 | 12 | -0.083 | 1149.85 |
| | 989 + 25.00 | 1151.66 | -0.083 | 12 | 1150.66 | 12 | -0.083 | 1149.66 |
| | 989 + 50.00 | 1151.49 | -0.083 | 12 | 1150.49 | 12 | -0.083 | 1149.49 |
| | 989 + 75.00 | 1151.34 | -0.083 | 12 | 1150.34 | 12 | -0.083 | 1149.34 |
| | 990 + 0.00 | 1151.20 | -0.083 | 12 | 1150.20 | 12 | -0.083 | 1149.20 |
| | 990 + 25.00 | 1151.07 | -0.083 | 12 | 1150.07 | 12 | -0.083 | 1149.07 |
| | 990 + 50.00 | 1150.94 | -0.083 | 12 | 1149.94 | 12 | -0.083 | 1148.94 |
| | 990 + 75.00 | 1150.81 | -0.083 | 12 | 1149.81 | 12 | -0.083 | 1148.81 |
| | 991 + 0.00 | 1150.67 | -0.083 | 12 | 1149.67 | 12 | -0.083 | 1148.67 |
| | 991 + 25.00 | 1150.54 | -0.083 | 12 | 1149.54 | 12 | -0.083 | 1148.54 |
| | 991 + 50.00 | 1150.41 | -0.083 | 12 | 1149.41 | 12 | -0.083 | 1148.41 |
| | 991 + 75.00 | 1150.28 | -0.083 | 12 | 1149.28 | 12 | -0.083 | 1148.28 |
| END FULL SUPER CS | 991 + 83.68 | 1150.23 | -0.083 | 12 | 1149.23 | 12 | -0.083 | 1148.23 |
| | 992 + 0.00 | 1150.15 | -0.077 | 12 | 1149.23 | 12 | -0.077 | 1148.30 |
| | 992 + 25.00 | 1150.02 | -0.066 | 12 | 1149.23 | 12 | -0.069 | 1148.40 |
| | 992 + 50.00 | 1149.89 | -0.056 | 12 | 1149.22 | 12 | -0.060 | 1148.50 |
| | 992 + 75.00 | 1149.75 | -0.045 | 12 | 1149.21 | 12 | -0.051 | 1148.60 |
| | 993 + 0.00 | 1149.62 | -0.035 | 12 | 1149.20 | 12 | -0.042 | 1148.70 |
| | 993 + 25.00 | 1149.49 | -0.024 | 12 | 1149.20 | 12 | -0.033 | 1148.81 |
| | 993 + 50.00 | 1149.36 | -0.014 | 12 | 1149.19 | 12 | -0.024 | 1148.90 |
| END SUPER TRANS RT. SC | 993 + 72.32 | 1149.24 | -0.005 | 12 | 1149.18 | 12 | -0.016 | 1148.99 |
| | 993 + 75.00 | 1149.23 | -0.004 | 12 | 1149.18 | 12 | -0.016 | 1148.99 |
| | 993 + 83.68 | 1149.18 | 0.000 | 12 | 1149.18 | 12 | -0.016 | 1148.99 |
| | 994 + 0.00 | 1149.10 | 0.007 | 12 | 1149.18 | 12 | -0.016 | 1148.99 |
| END SUPER TRANS LT. | 994 + 21.68 | 1148.98 | 0.016 | 12 | 1149.17 | 12 | -0.016 | 1148.98 |
| NORMAL SECTION | 994 + 25.00 | 1148.97 | 0.016 | 12 | 1149.16 | 12 | -0.016 | 1148.97 |

CALCULATED PS
CHECKED PG

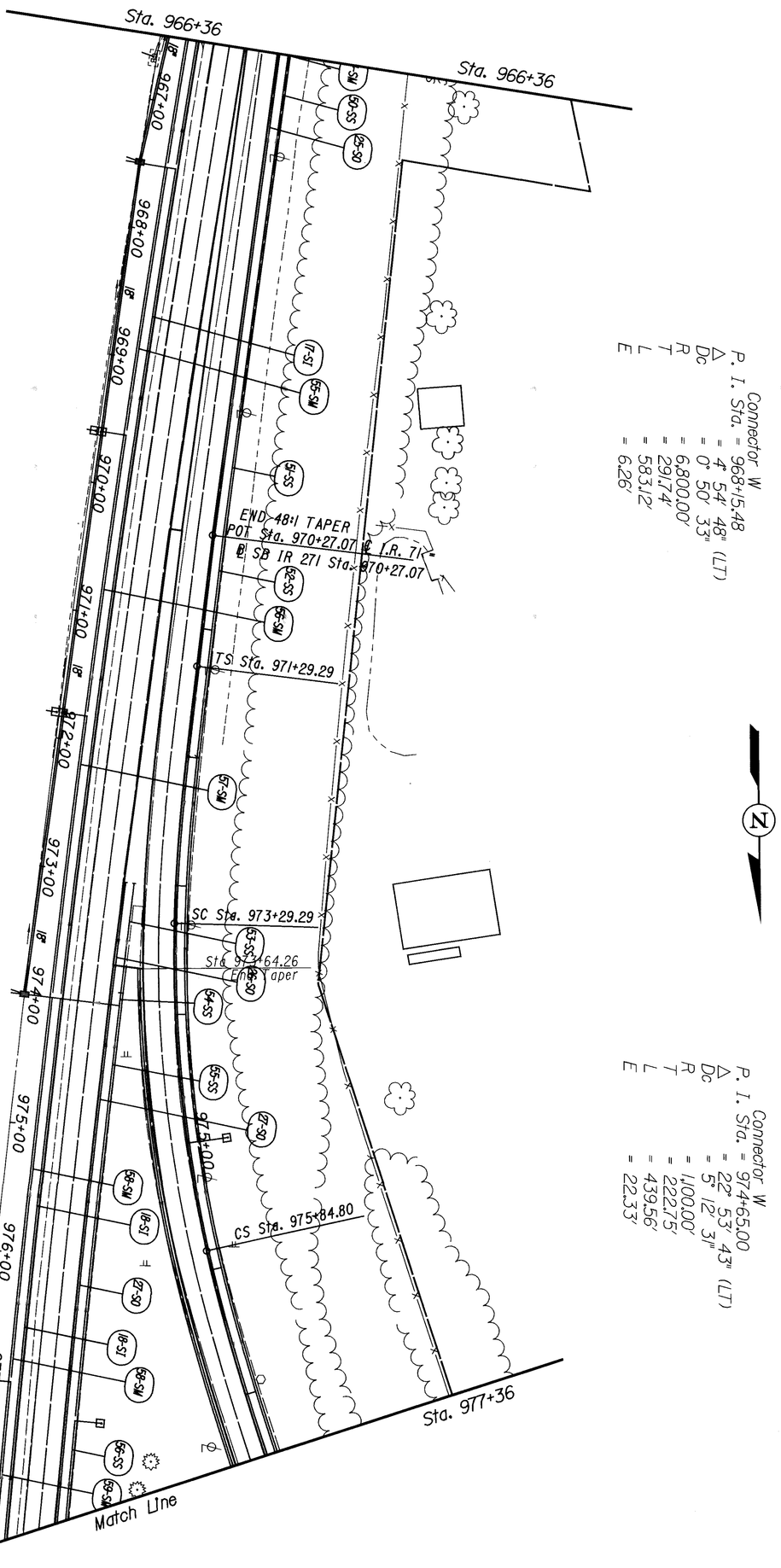
SUPERELEVATION TABLE

MED-71-15.78

424
940

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\271ge.dgn
USERNAME : nvondere
271GE.DGN 11/5/99 CAR

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




| | | | | |
|---|---|---|---|---|
| 425/940 | MED - 71 - 15.78 | IR 271 CONNECTOR W<br>STA. 966+36 TO STA. 977+36 | CALCULATED<br>CHECKED | 0 50 100<br>HORIZONTAL SCALE IN FEET |

## 'W' I.R. 271

P.I. Sta = 974+61.07
Δ = 25° 03' 12" (LT)
Dc = 5° 30' 00"
R = 1,041.74'
Ls = 200.00'
Theta = 5° 30' 00"
LT = 133.40'
ST = 66.73'
x = 199.82'
y = 6.40'
k = 99.97'
p = 1.60'
Δc = 14° 03' 12" (LT)
Lc = 255.51'
Ts = 331.78'
Es = 27.04'
eMAX. = 0.077

END 48:1 TAPER
POT Sta. 970+27.07 ℄ I.R. 71 - SB IR 271 Sta. 970+87.07
TS Sta. 971+28.29
SC Sta. 973+39.29
Sta 973+64.26 End open
CS Sta. 975+84.80
ST Sta. 977+84.80
℄ PROPOSED CONNECTION 'W' I.R. 271
℄ EXISTING CONNECTION 'W' I.R. 271
MATCH LINE 982+77
N 7° 38' 35" E
N 17° 24' 57" W
TS Sta. 977+97.74
SC Sta. 979+97.74
6-UD
7-UD
1-UD
8-UD
9-UD
2-UD
3-UD
14-UD
49A-D
18"

| CROSS REFERENCES | |
|---|---|
| DESCRIPTION | SHEET NO. |
| | |
| UNDERDRAIN TABLE | 127 |
| | |
| MAINLINE P&P | 182-184 |
| | |

STA. 970+27.07
1,171.34
1,171.30
P.V.I. Sta. 975+00.00 Elev. = 1,172.05
800' V.C.
+0.16 %
-1.52 %

| | | |

**℄ PROP. CONNECTION 'W' I.R. 271**

P.I. Sta = 985+89.67
Δ = 107° 15' 49" (RT)
Dc = 7° 45' 00"
R = 739.30'
Lsl = 200'
Thetal = 7° 31' 52"
LTl = 133.460
STl = 66.78
Ls2 = 188.64'
Theta2 = 7° 44' 33"
LT2 = 122.32
ST2 = 66.57
Δc = 91° 54' 37" (RT)
Lc = 1,185.94'
Tl = 1106.66
T2 = 1097.38
Es = 513.42'
eMAX. = 0.0833

**℄ PROP. CONNECTION 'W' I.R. 271**

P.I. Sta = 995+12.33
Δ = 1° 12' 02" (RT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 128.65'
L = 257.28'
E = 0.67'
e = N/C

| CROSS REFERENCES | |
|---|---|
| DESCRIPTION | SHEET NO. |
| | |
| UNDERDRAIN TABLE | 127 |
| MAINLINE P&P | 184 |
| SUPERELEVATION TABLE | 424 |
| STRUCTURE PLANS | 721-736 |

STA. 987+64.00, 32' RT.
PROP. M.H. NO. 3
TOP OF COVER EL. 1150.55
FL. 18" (N. & W.) EL. 1143.84

110' - 18" TYPE C CONDUIT @ 1.00%

STA. 986+50, 48' RT.
PROP. C.B. NO. 5A, A.P.P.
TOP OF GRATE EL. 1149.50
FL. 18" (N.E.) EL. 1144.93

STA. 987+55.86, 47.05' RT.
EX. C.B. (TO BE REMOVED)
TOP OF GRATE EL. 1148.0±
FL. 18" (N.W.) EL. 1144.0±

POINT OF MINIMUM VERTICAL CLEARANCE (17.0'±)

-0.52 %  -0.53 %

P.V.I. Sta. 988+00.00  Elev. - 1,152.25

400' V.C.

STA. 987+55.86, 33.97' LT.
PROP. C.B. NO. 5A, A.P.P.
TOP OF GRATE EL. 1151.46
FL. 36" (E.) EL. 1142.00
FL. 18" (S.E.) EL. 1143.10

STA. 987+55.86, 33.97' LT.
EX. C.B.
TOP OF GRATE EL. 1151.5±
FL. 36" (E.) EL. 1142.0±
FL. 18" (S.E.) EL. 1143.1±

STA. 989+15.84, 29.50' LT.
PROP. C.B. NO. 5A, A.P.P.
TOP OF GRATE EL. 1149.90
FL. 36" (E. & W.) EL. 1141.00

STA. 989+15.84, 29.50' LT.
EX. C.B.
TOP OF GRATE EL. 1149.9±
FL. 36" (E. & W.) EL. 1141.0±

STA. 990+52.27, 49.72' LT.
PROP. M.H. NO. 3
TOP OF COVER EL. 1152.00
FL. 36" (W.) EL. 1140.25
FL. 36" (E.) EL. 1140.05

STA. 990+52.27, 49.72' LT.
EX. M.H.
TOP OF COVER EL. 1152.0±
FL. 36" (W.) EL. 1140.3±
FL. 36" (E.) EL. 1140.1±

STA. 993+70.40, 32.10' LT.
PROP. C.B. NO. 5A, A.P.P.
TOP OF GRATE EL. 1147.55
FL. 36" (W.) EL. 1138.43
FL. 36" (E.) EL. 1138.23

STA. 994+48.78, 57.13' LT.
FL. EX. 36" (W.)
OUTLET EL. 1137.1±

STA. 993+70.40, 32.10' LT.
EX. C.B.
TOP OF GRATE EL. 1147.6±
FL. 36" (W.) EL. 1138.4±
FL. 36" (E.) EL. 1138.2±

| 1180 | 1170 | 1160 | 1150 | 1140 | 1130 | 1120 | 1110 |
|---|---|---|---|---|---|---|---|

| 983+00 | 984+00 | 985+00 | 986+00 | 987+00 | 988+00 | 989+00 | 990+00 | 991+00 | 992+00 | 993+00 | 994+00 | 995+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

| 1,159.87 | 1,159.10 | 1,158.34 | 1,157.58 | 1,156.82 | 1,156.06 | 1,155.30 | 1,154.92 | 1,154.57 | 1,154.22 | 1,153.90 | 1,153.59 | 1,153.29 | 1,153.01 | 1,152.75 | 1,152.50 | 1,152.27 | 1,152.05 | 1,151.85 | 1,151.66 | 1,151.49 | 1,151.34 | 1,151.20 | 1,150.94 | 1,150.67 | 1,150.41 | 1,150.15 | 1,149.89 | 1,149.62 | 1,149.36 | 1,149.10 | 1,148.84 | 1,148.57 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,159.44 | 1,158.59 | 1,157.54 | 1,156.60 | 1,155.56 | 1,155.27 | 1,154.45 | 1,153.81 | 1,153.46 | 1,152.96 | 1,152.49 | 1,152.24 | 1,152.19 | 1,152.23 | 1,151.72 | 1,151.35 | 1,151.18 | 1,151.00 | 1,150.59 | 1,150.50 | 1,150.20 | 1,149.87 | 1,149.67 | 1,149.09 | 1,148.60 | | | | | | | | |

MATCH LINE 982+77

MATCH LINE 995+27

℄ EXISTING CONNECTION 'W'

℄ PROPOSED CONNECTION 'W' I.R. 271

DO NOT DISTURB

+12, 12.5' LT. POINT OF MINIMUM TYPE T VERTICAL CLEARANCE

+58, 40' RT. TYPE T

+81, 12.5' LT. TYPE B-98

+66, 40' RT. TYPE B-98

℄ EXIST. CONNECTION 'E' I.R. 271

EX. TRANSMISSION LINE (OHIO EDISON)

1-UD 2-UD 3-UD 4-UD 5-UD 6-UD 7-UD 8-UD 9-UD 10-UD 11-UD 12-UD 13-UD 14-UD 15-UD 16-UD 17-UD

1-R 2-R 3-R

1-GR 2-GR

181-D 182-D 183-D 184-D 185-D 186-D

DESIGN FILE : h:\pd_med_ir71\dgn\rslt-d\finaldrainage\271gp2.dgn
USERNAME : mvondere
DATE : 06-DEC-1999
TIME : 10:59
271GP2.DGN

HORIZONTAL SCALE IN FEET 0 50 100

CALCULATED PS CHECKED W.C

# PLAN AND PROFILE CONNECTION 'W' I.R. 271

MED - 71 - 15.78

427 940

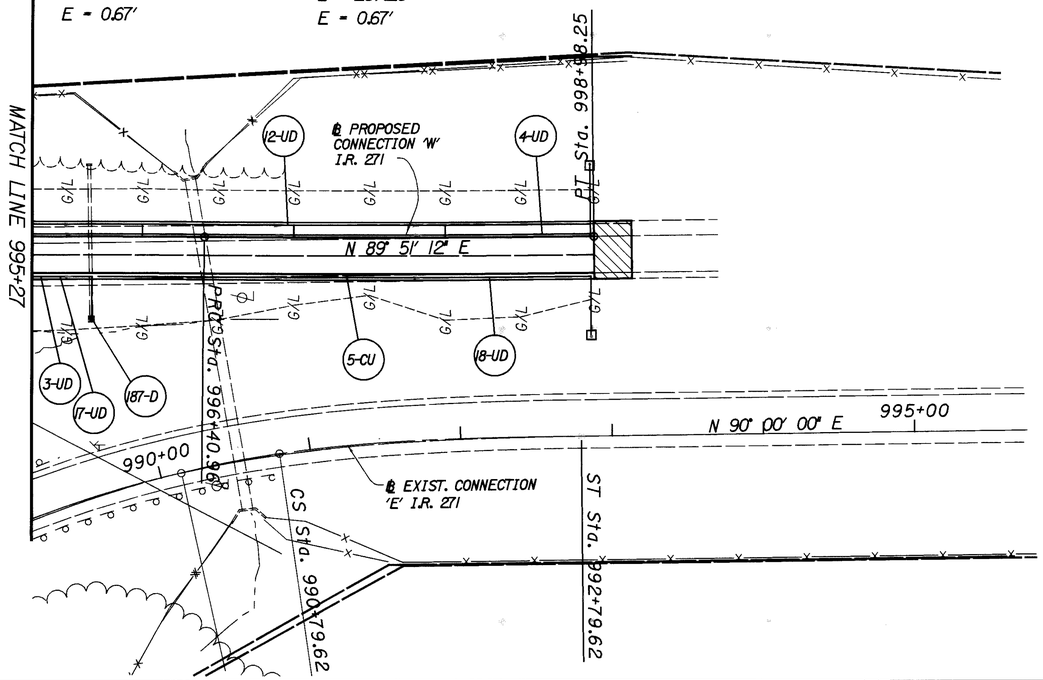
**℄ PROP. CONNECTION 'W' I.R. 271**

P.I. Sta = 995+12.33
Δ = 1° 12' 02" (RT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 128.65'
L = 257.28'
E = 0.67'

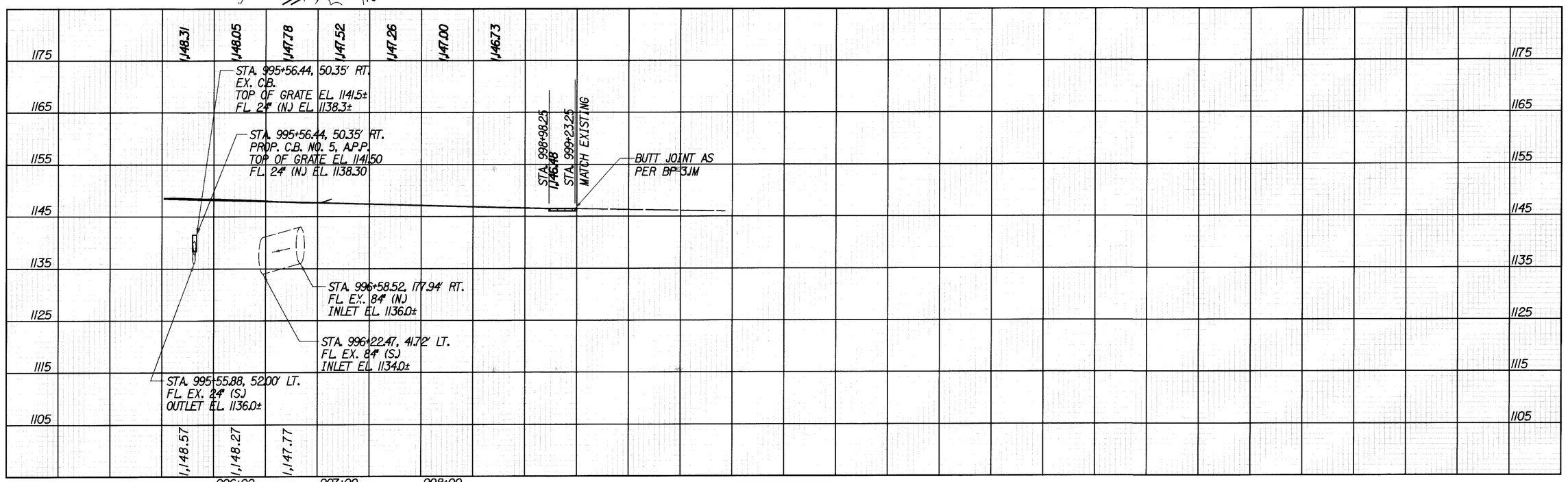
**℄ PROP. CONNECTION 'W' I.R. 271**

P.I. Sta = 997+69.61
Δ = 1° 12' 02" (LT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 128.65'
L = 257.28'
E = 0.67'

PLANING AND RESURFACING (T= 1½")




| CROSS REFERENCES | |
|---|---|
| DESCRIPTION | SHEET NO. |
| | |
| UNDERDRAIN TABLE | 127 |
| | |
| | |
| | |




HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED PS
CHECKED WJC

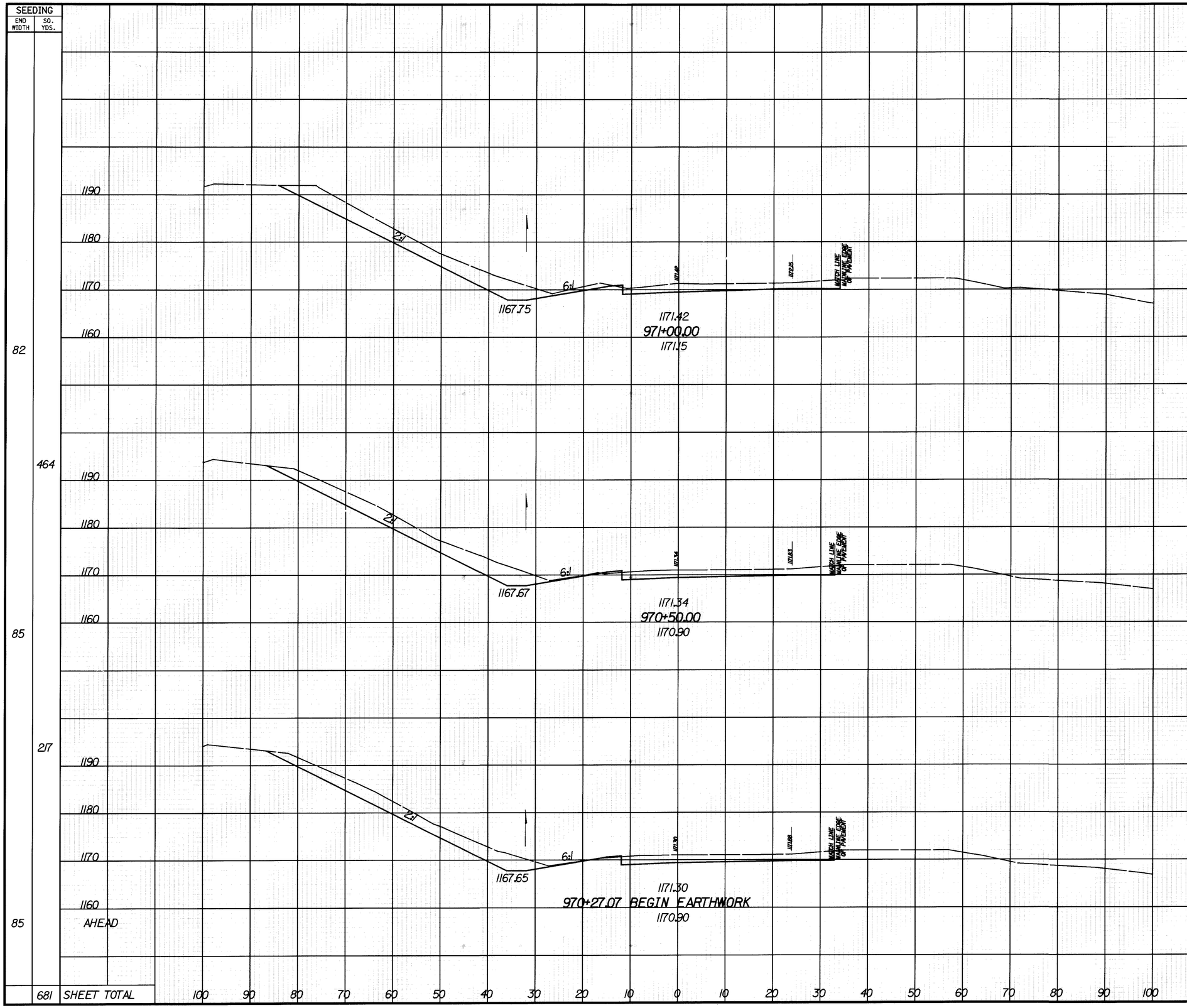
# PLAN AND PROFILE
# CONNECTION 'W' I.R. 271

MED - 71 - 15.78

428
940

DESIGN FILE : i:\pd_med_lr71\dgn\reitd\finaldrainage\271gp3.dgn
USERNAME : nvanderp
DATE : 06-DEC-1999
TIME : 11:00
271GP3.SGN

| SEEDING | | END AREA | | VOLUME | | CALCULATED | CHECKED |
|---|---|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL | PS | PG |
| 82 | 464 | 240 | 0 | 432 | 2 | | |
| 85 | 217 | 227 | 1 | 186 | 1 | | |
| 85 | AHEAD | 212 | 1 | AHEAD | | | |
| | 681 SHEET TOTAL | | | 618 | 3 | | |




DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 12:08

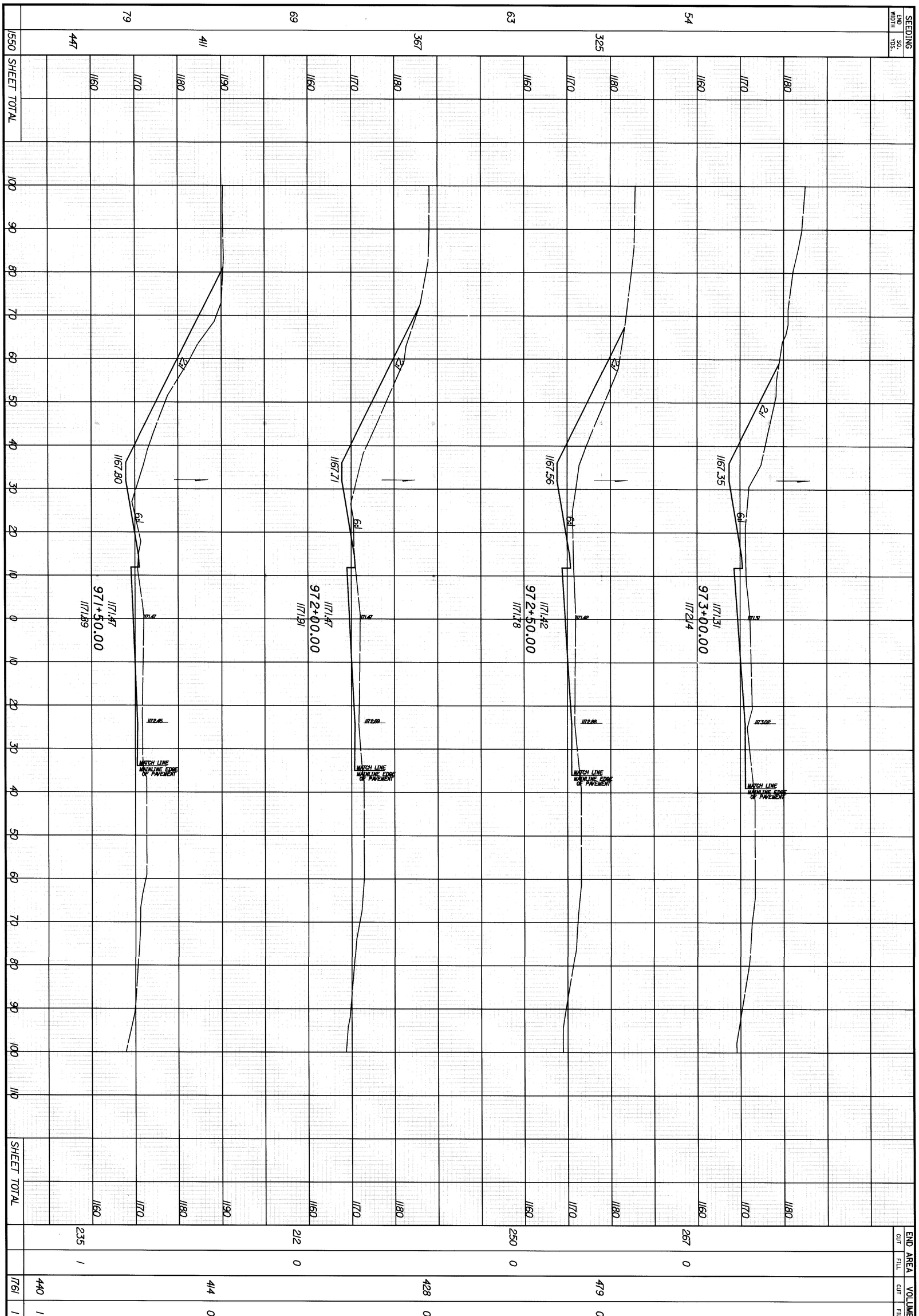
# CROSS SECTIONS
# CONNECTION 'W' I.R. 271

MED - 71 - 15.78

429
940

TE : 06-DEC-1999
ME : 12:14

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere



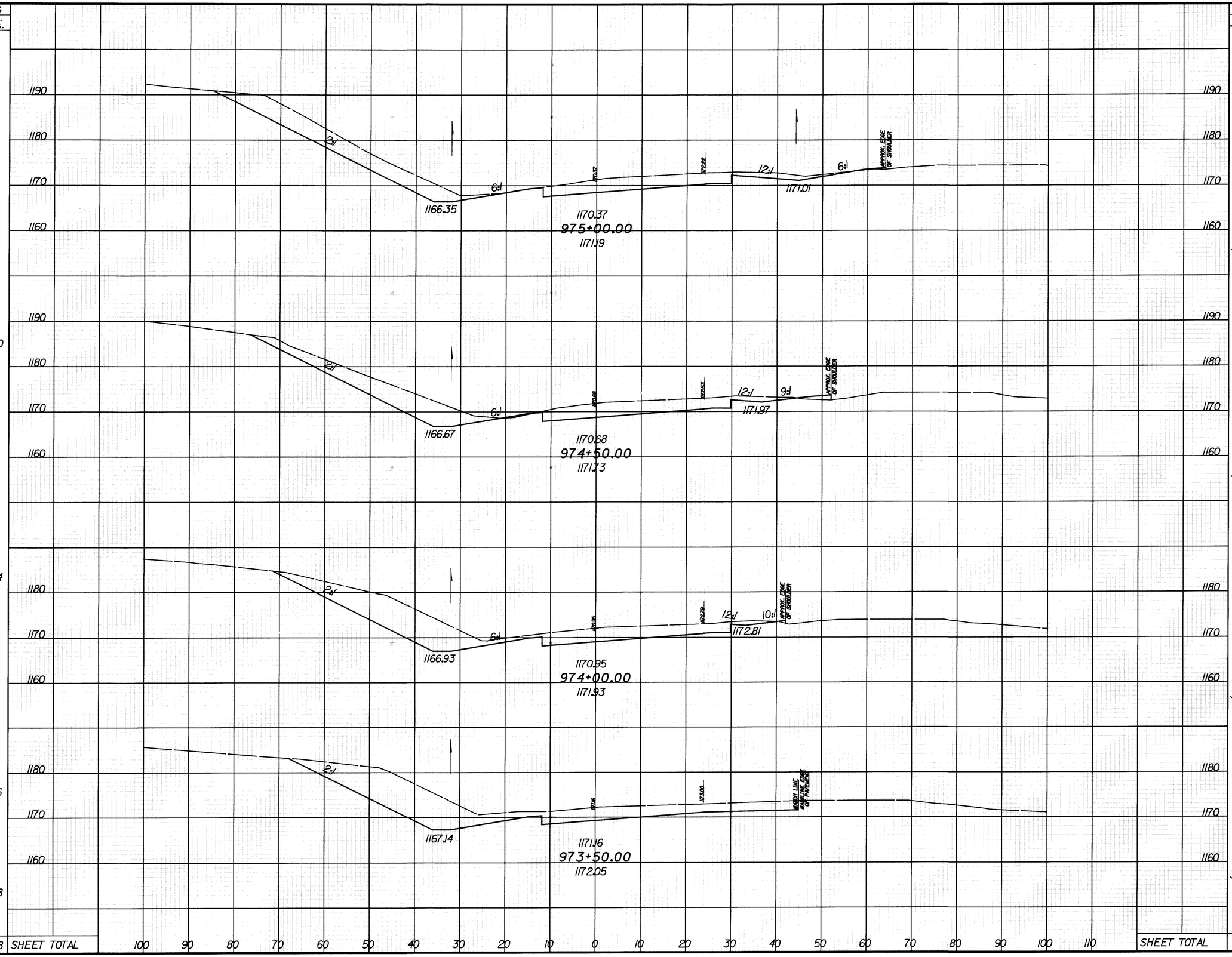

430
940

**MED - 71 - 15.78**

## CROSS SECTIONS
## CONNECTION 'W' I.R. 271

CALCULATED PS
CHECKED PG

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 120 | 600 |
| 96 | 494 |
| 82 | 406 |
| 64 | 328 |
| | 1828 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 326 | 1 | 575 | 7 |
| 294 | 7 | 589 | 7 |
| 342 | 0 | 674 | 0 |
| 387 | 0 | 605 | 0 |
| | | 1838 | 14 |
| SHEET TOTAL | | | |

CALCULATED PS
CHECKED PG

# CROSS SECTIONS
# CONNECTION 'W' I.R. 271

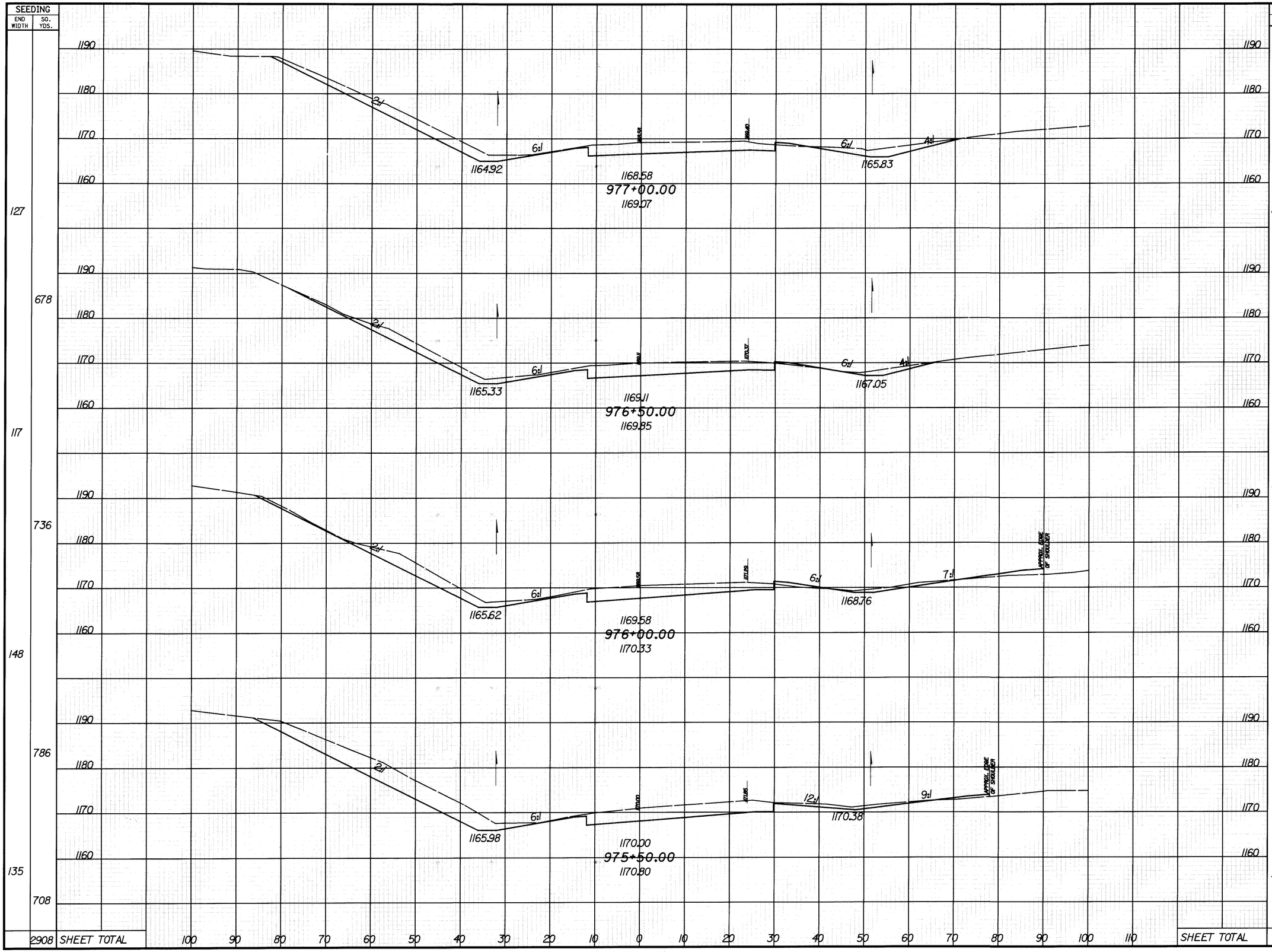
MED - 71 - 15.78

431
940

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 12:13

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| 127 | 678 | 223 | 3 | 376 | 5 |
| 117 | 736 | 183 | 3 | 350 | 20 |
| 148 | 786 | 194 | 19 | 475 | 22 |
| 135 | 708 | 319 | 5 | 598 | 6 |
| | 2908 SHEET TOTAL | | | 1799 | 53 |

CALCULATED PS
CHECKED PG




# CROSS SECTIONS
# CONNECTION 'W' I.R. 271

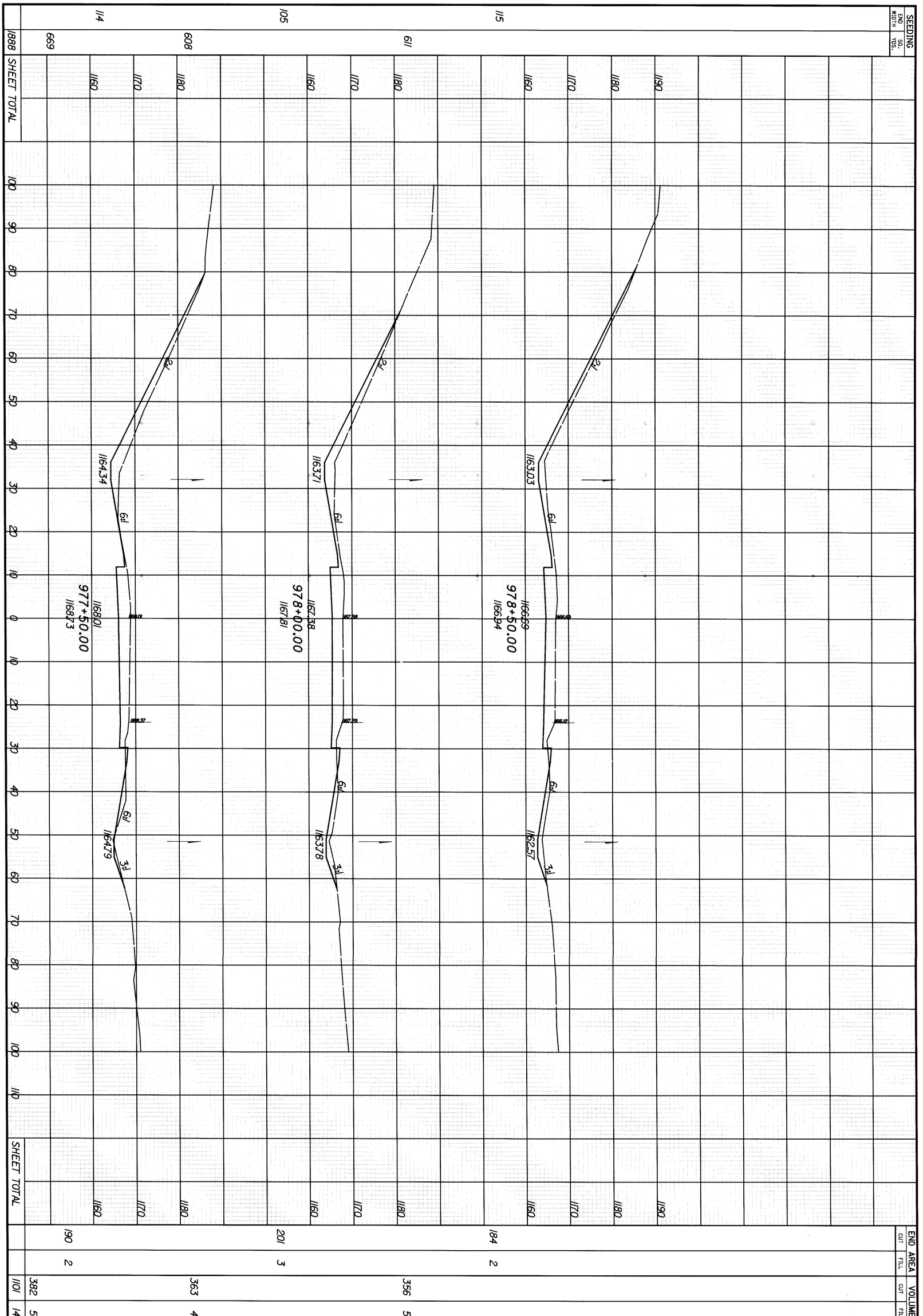
MED - 71 - 15.78



DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 12:13

DATE : 06-DEC-1999
TIME : 12:13

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere




433
940

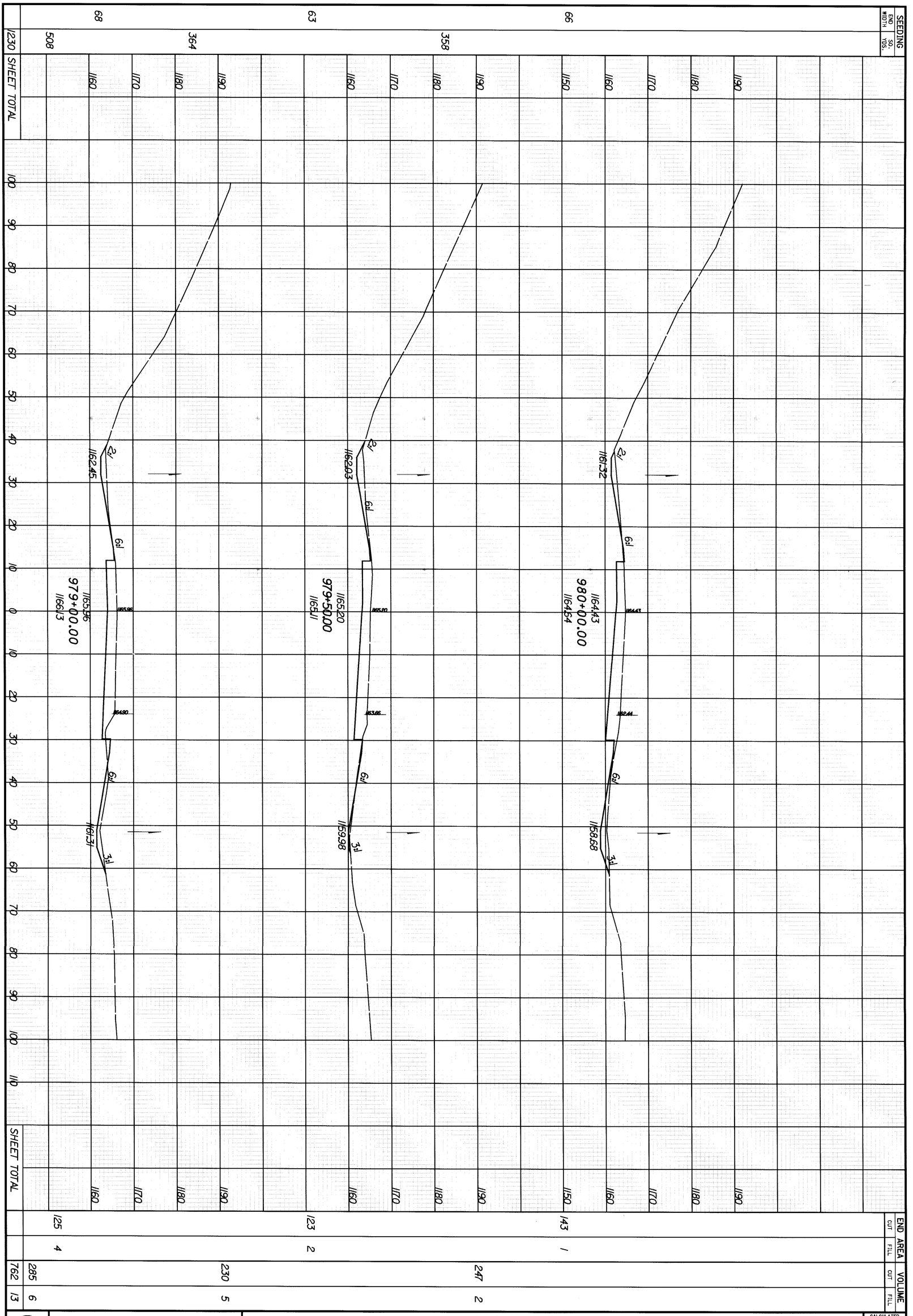
**MED - 71 - 15.78**

**CROSS SECTIONS**
**CONNECTION 'W' I.R. 271**

CALCULATED PS
CHECKED PG

ATE : 06-DEC-1999
IME : 12:12

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere



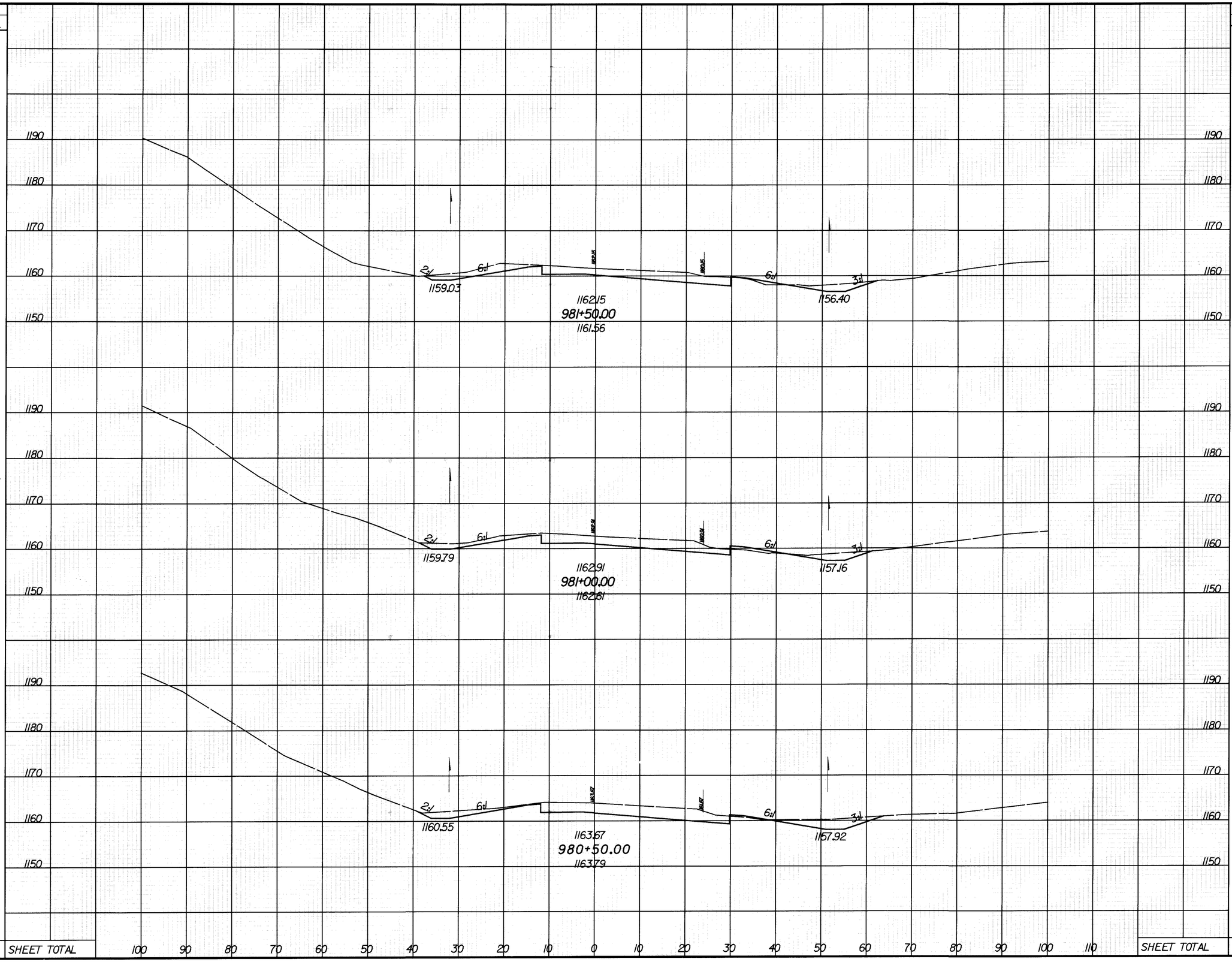

MED - 71 - 15.78

CROSS SECTIONS
CONNECTION 'W' I.R. 271

CALCULATED PS
CHECKED PG

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 67 | 375 |
| 68 | 381 |
| 69 | 375 |
| | 1131 |

SHEET TOTAL




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 122 | 4 | | |
| | | 223 | 9 |
| 120 | 6 | | |
| | | 247 | 8 |
| 147 | 2 | | |
| | | 269 | 2 |
| | | 739 | 19 |

SHEET TOTAL

CALCULATED PS
CHECKED PG

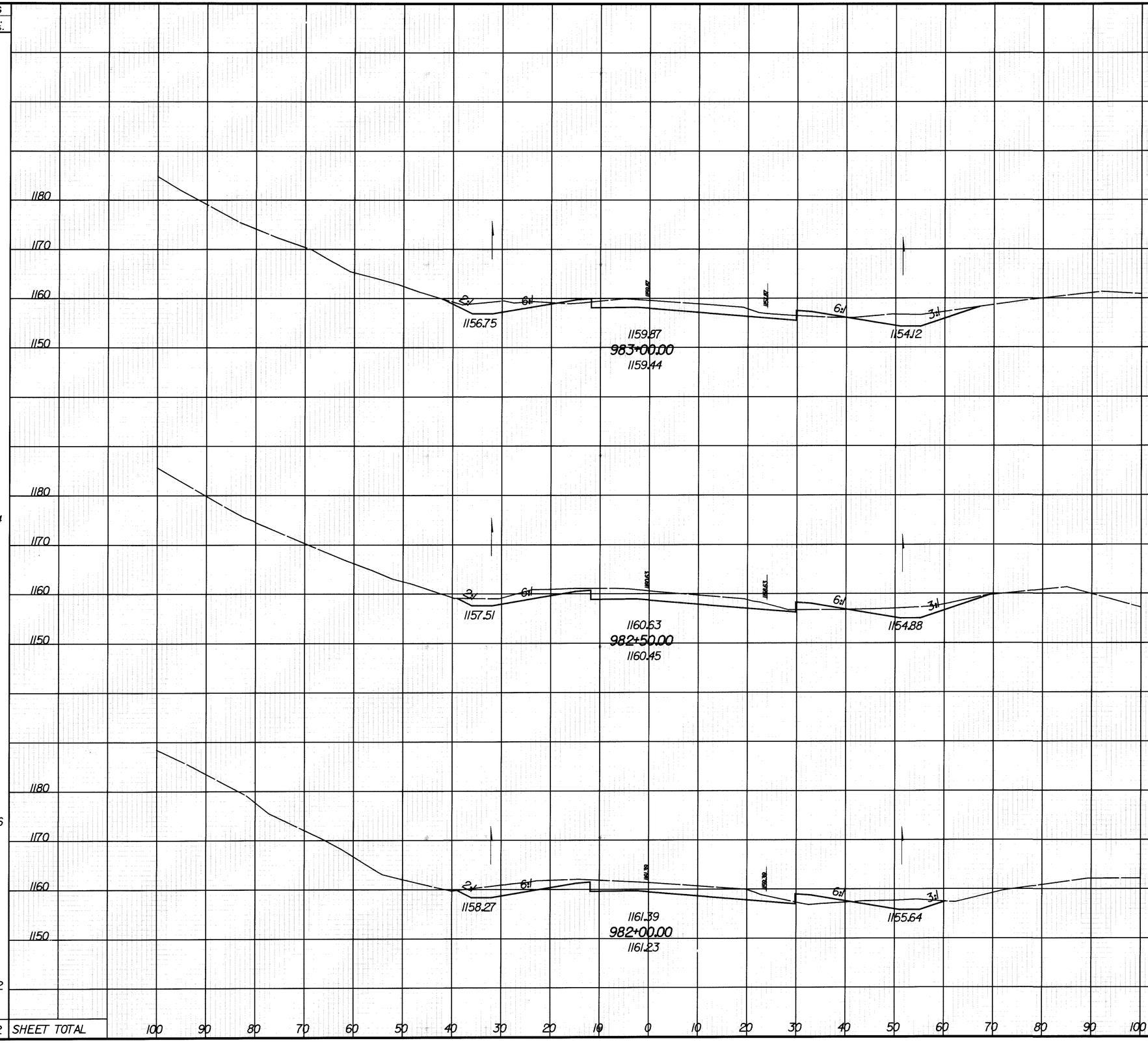
# CROSS SECTIONS
# CONNECTION 'W' I.R. 271

MED - 71 - 15.78

435
940

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 12:12

| SEEDING | | END AREA | | VOLUME | | CALCULATED PS | CHECKED PG |
|---|---|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL | | |
| 77 | 414 | 130 | 11 | 246 | 19 | | |
| 72 | 386 | 136 | 9 | 256 | 21 | | |
| 67 | 372 | 140 | 14 | 242 | 16 | | |
| | 1172 SHEET TOTAL | | | 744 | 56 | | |



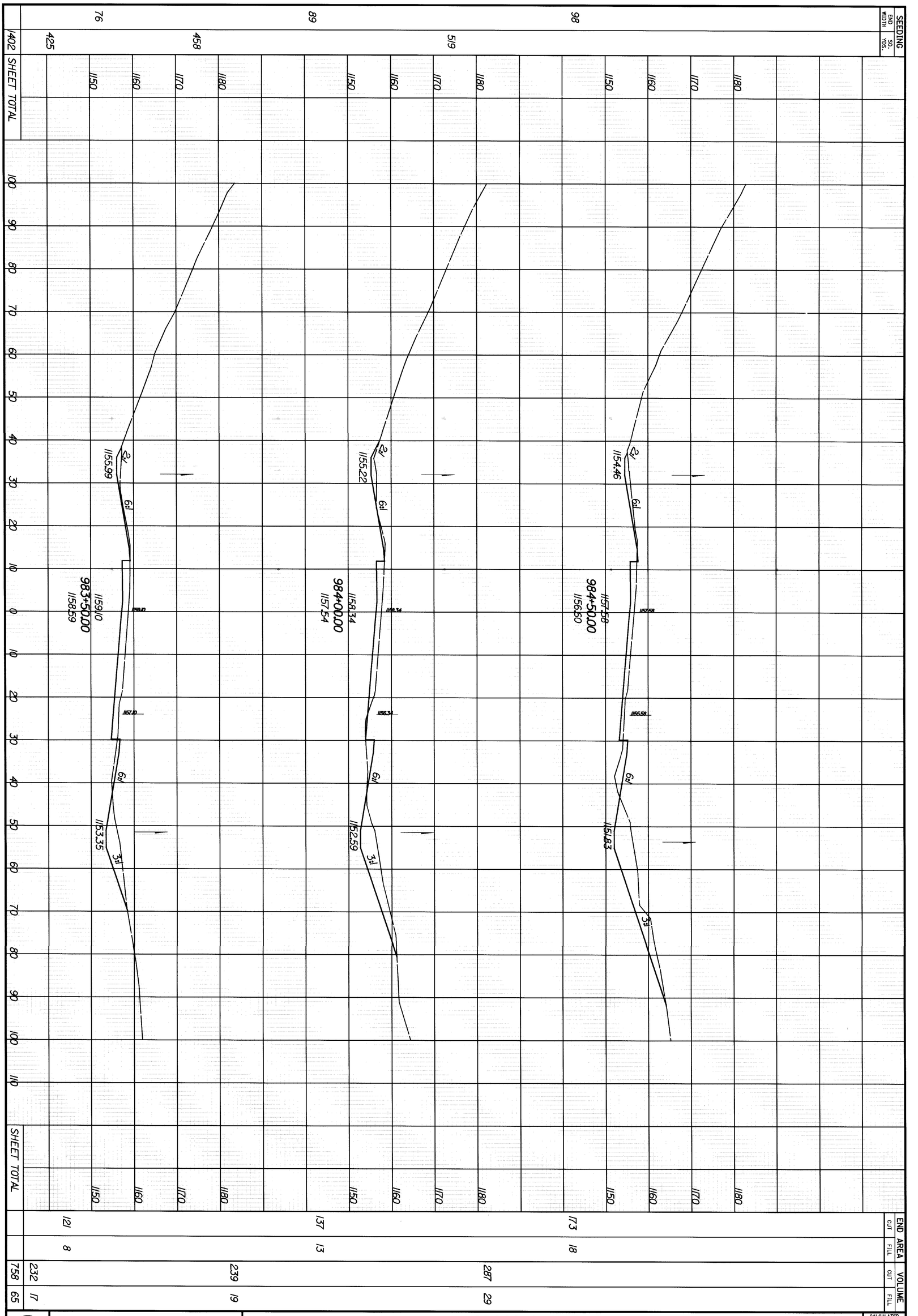

# CROSS SECTIONS
# CONNECTION 'W' I.R. 271

**MED - 71 - 15.78**

436
940

DESIGN FILE : i:\pd_med_1r71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 12:11

ATE : 06-DEC-1999 DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
IME : 12:11 USERNAME : nvondere



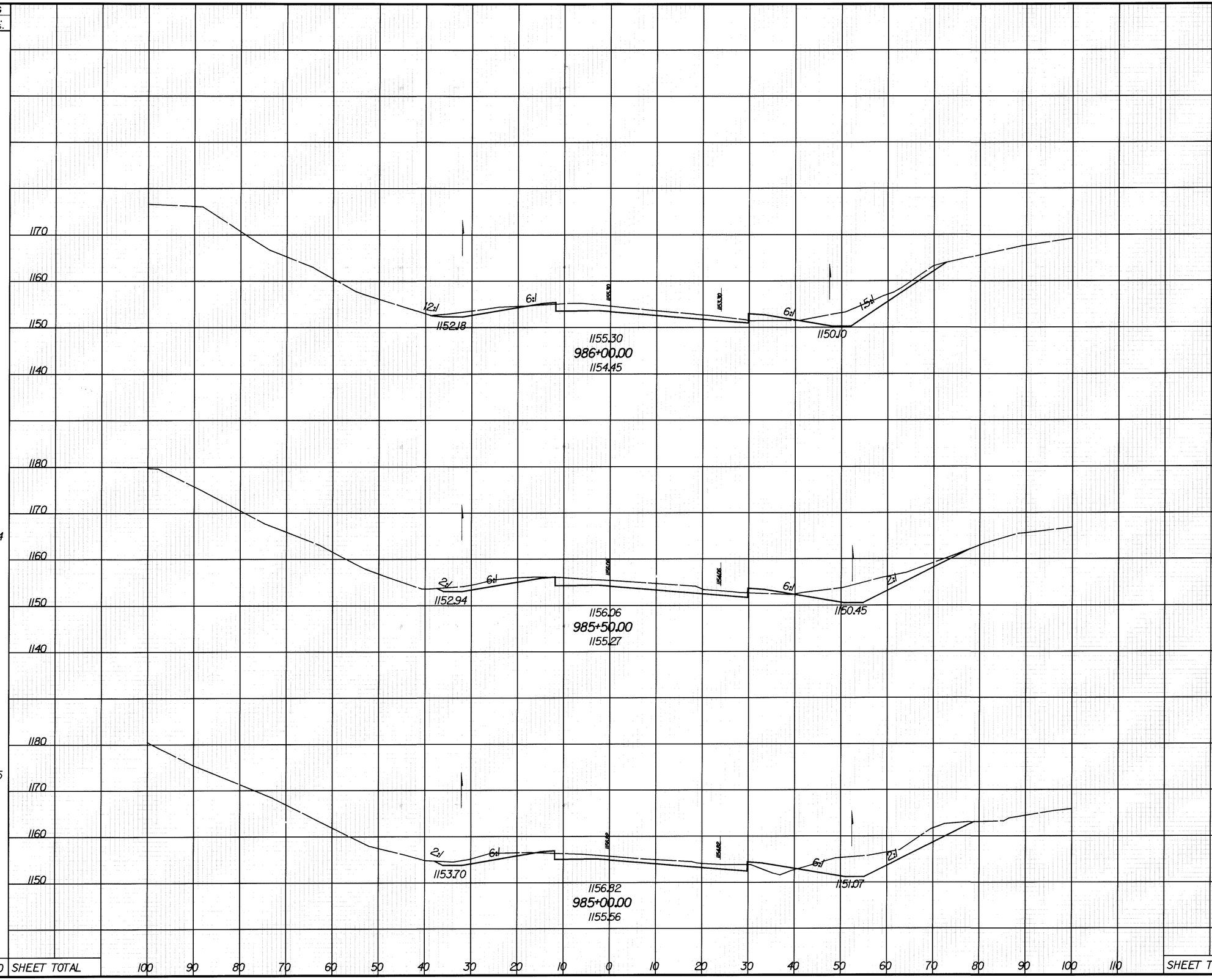

437
940

**MED - 71 - 15.78**

**CROSS SECTIONS**
**CONNECTION 'W' I.R. 271**

CALCULATED PS
CHECKED PG

| SEEDING | | END AREA | | VOLUME | | CALCULATED PS | CHECKED PG |
|---|---|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL | | |
| 82 | | | | | | | |
| | | 112 | 11 | | | | |
| 85 | 464 | | | 242 | 16 | | |
| | | 150 | 6 | | | | |
| 86 | 475 | | | 287 | 19 | | |
| | 511 | 160 | 14 | | | | |
| 1450 | SHEET TOTAL | | | 308 | 30 | | |
| | | | | 837 | 65 | | |



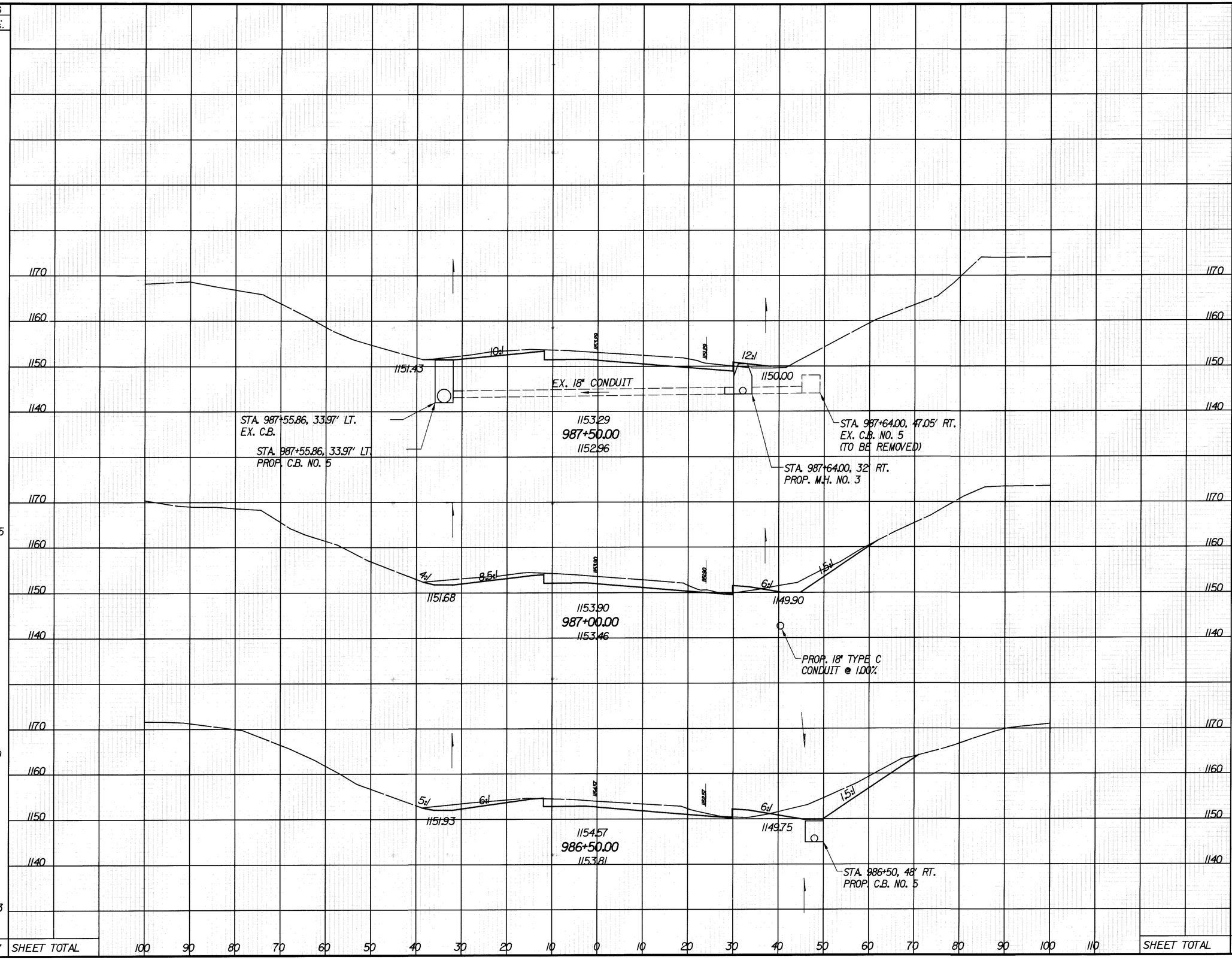

DESIGN FILE : i:\pd_med_lr71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 13:29

# CROSS SECTIONS
# CONNECTION 'W' I.R. 271

## MED - 71 - 15.78

438
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 47 | |
| | 325 |
| 70 | |
| | 419 |
| 81 | |
| | 453 |
| 1197 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 90 | 9 | | |
| 112 | 6 | 187 | 14 |
| 151 | 10 | 244 | 15 |
| | | 243 | 20 |
| SHEET TOTAL | | 674 | 49 |

CALCULATED PS
CHECKED PG

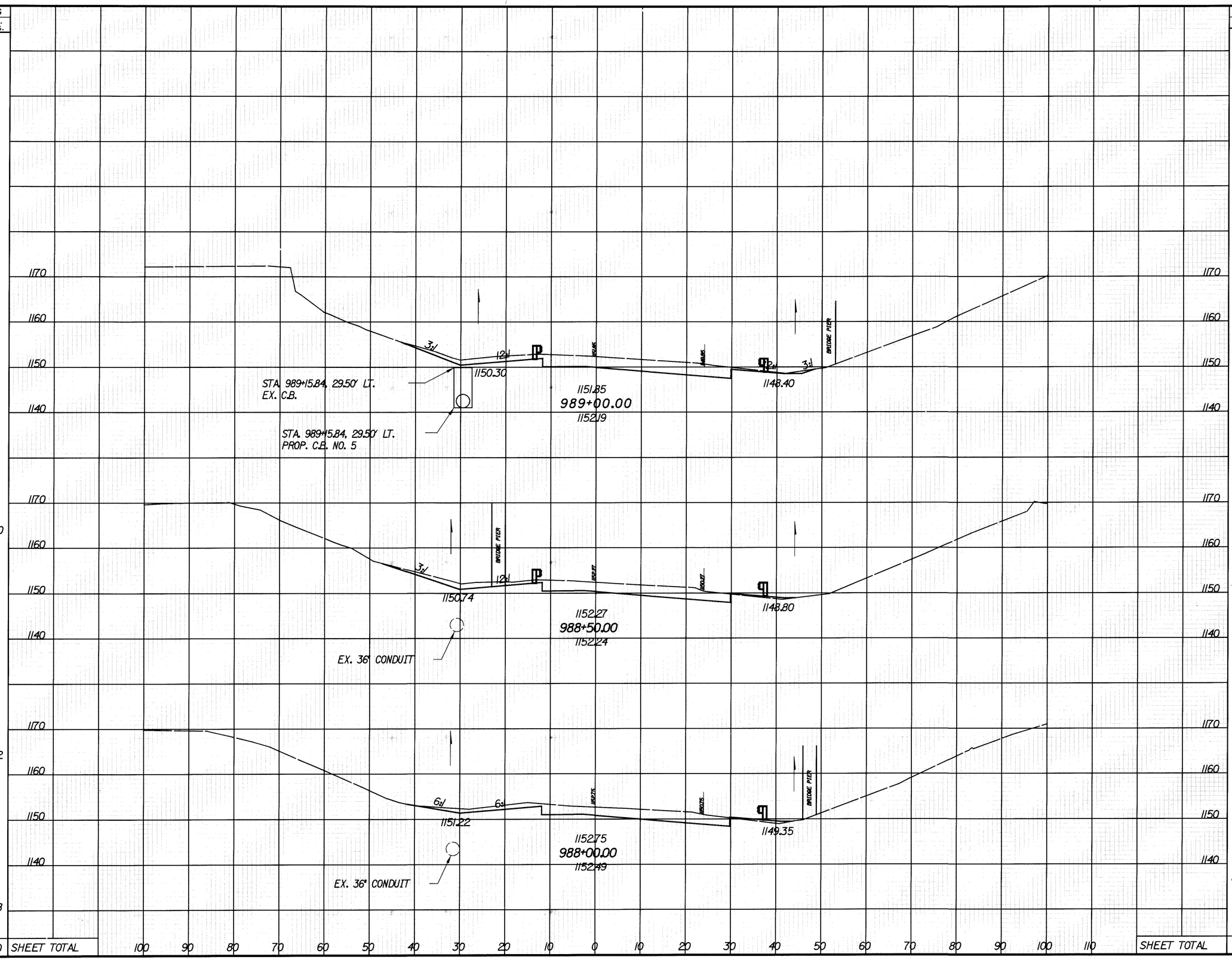
**CROSS SECTIONS**
**CONNECTION 'W' I.R. 271**

**MED - 71 - 15.78**

439
940

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 13:29

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 56 | |
| 350 | |
| 70 | |
| 342 | |
| 53 | |
| 278 | |
| 970 | SHEET TOTAL |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 139 | 0 | | |
| 240 | 4 | | |
| 120 | 4 | | |
| 209 | 9 | | |
| 106 | 5 | | |
| 181 | 14 | | |
| SHEET TOTAL | | 630 | 27 |

CALCULATED PS
CHECKED PG

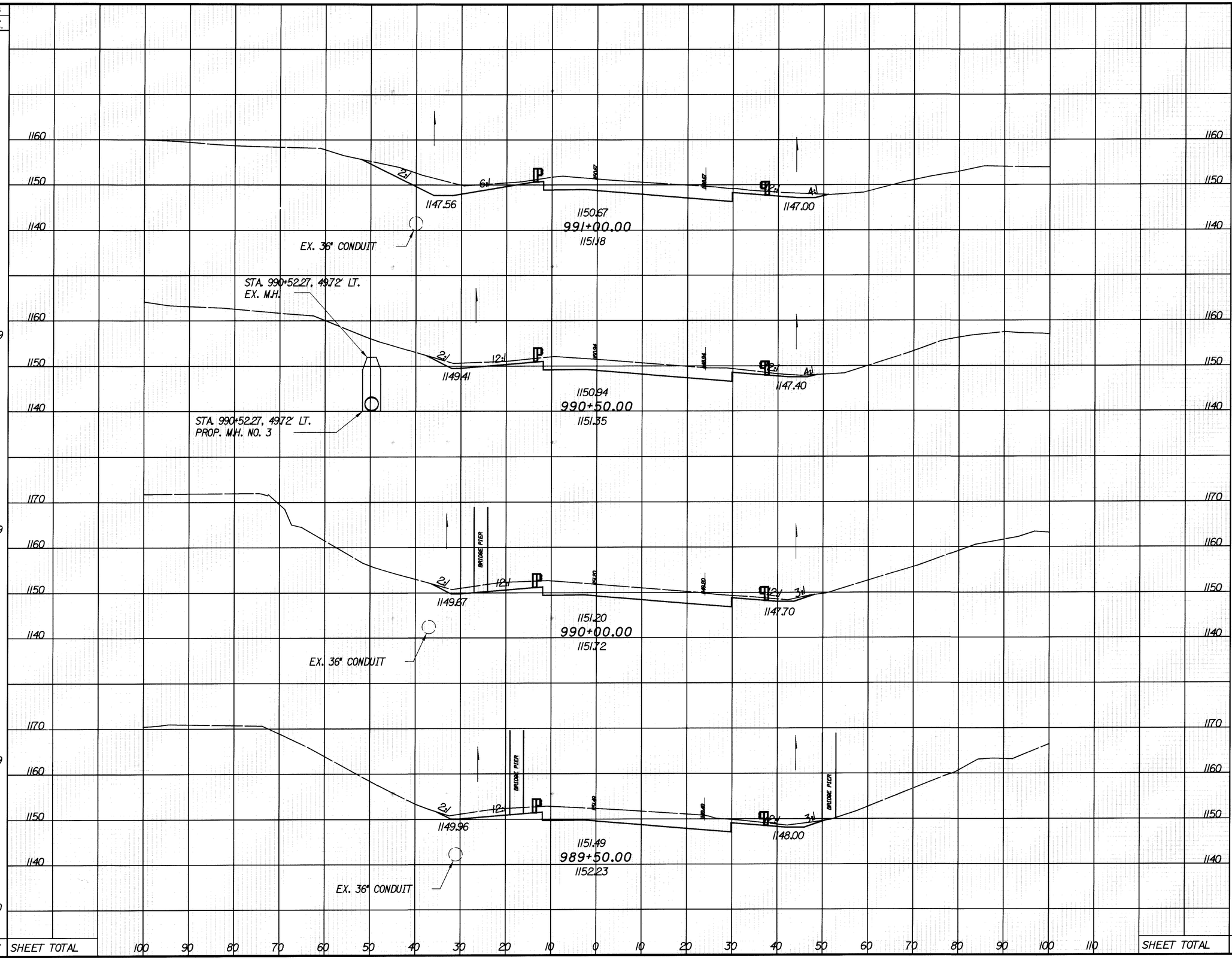
# CROSS SECTIONS
# CONNECTION 'W' I.R. 271

MED - 71 - 15.78

440
940

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 13:28

| SEEDING END WIDTH | SEEDING SQ. YDS. |
|---|---|
| 70 | 339 |
| 52 | |
| 52 | 289 |
| 52 | 289 |
| 52 | 300 |
| 1217 | SHEET TOTAL |




| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| | | | |
| 199 | 0 | | |
| | | 312 | 0 |
| 138 | 0 | | |
| | | 267 | 0 |
| 151 | 0 | | |
| | | 287 | 0 |
| 159 | 0 | | |
| | | 276 | 0 |
| 1142 | 0 | | |

CALCULATED PS
CHECKED PG

# CROSS SECTIONS
# CONNECTION 'W' I.R. 271

MED - 71 - 15.78

441
940

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 13:28

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 92 | 475 |
| 79 | 436 |
| 78 | 417 |
| 72 | 406 |
| 74 | 400 |
| | 2134 SHEET TOTAL |

STA. 993+70.40, 32.10' LT.
EX. C.B.
1145.70
STA. 993+70.40, 32.10' LT.
PROP. C.B. NO. 5
1149.36
993+50.00
1149.87
1145.99
EX. 36" CONDUIT
1149.62
993+00.00
1150.20
1146.48
EX. 36" CONDUIT
1149.89
992+50.00
1150.50
1147.01
EX. 36" CONDUIT
1150.15
992+00.00
1150.59
1147.29
EX. 36" CONDUIT
1150.41
991+50.00
1151.00
1144.50
1145.00
1145.50
1146.00
1146.50

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 169 | 1 | | |
| 193 | 1 | 335 | 2 |
| 215 | 0 | 378 | 1 |
| 205 | 0 | 389 | 0 |
| 221 | 0 | 394 | 0 |
| | | 389 | 0 |
| SHEET TOTAL | | 1885 | 3 |

CALCULATED PS
CHECKED PG

# CROSS SECTIONS
# CONNECTION 'W' I.R. 271

MED - 71 - 15.78

442
940

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 12:10

| SEEDING | | | | END AREA | | VOLUME | | |
|---|---|---|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | | | CUT | FILL | CUT | FILL | CALCULATED PS / CHECKED PG |
| 57 | 325 | STA. 995+55.88, 52.00 LT.<br>F.L. EX. 24" (SJ) OUTLET | STA. 995+56.44, 50.35' RT.<br>PROP. C.B. NO. 5<br>EX. 24" CONDUIT<br>1148.05<br>996+00.00<br>1148.27<br>STA. 995+56.44, 50.35' RT.<br>EX. C.B. | 116 | 4 | 229 | 4 | |
| 60 | 336 | | 1148.31<br>995+50.00<br>1148.57 | 131 | 0 | 242 | 1 | |
| 61 | 350 | | 1148.57<br>995+00.00<br>1148.60<br>1143.98 | 130 | 1 | 249 | 1 | |
| 65 | 367 | STA. 994+48.78, 57.13 LT.<br>F.L. EX. 36" OUTLET EL. 1137.70 | 1148.84<br>994+50.00<br>1149.09<br>1144.08 | 139 | 0 | 258 | 3 | |
| 67 | 442 | EX. 36" CONDUIT | 1149.10<br>994+00.00<br>1149.67<br>1144.18 | 140 | 3 | 286 | 4 | |
| | 1820 | SHEET TOTAL | | | | 1264 | 13 | |

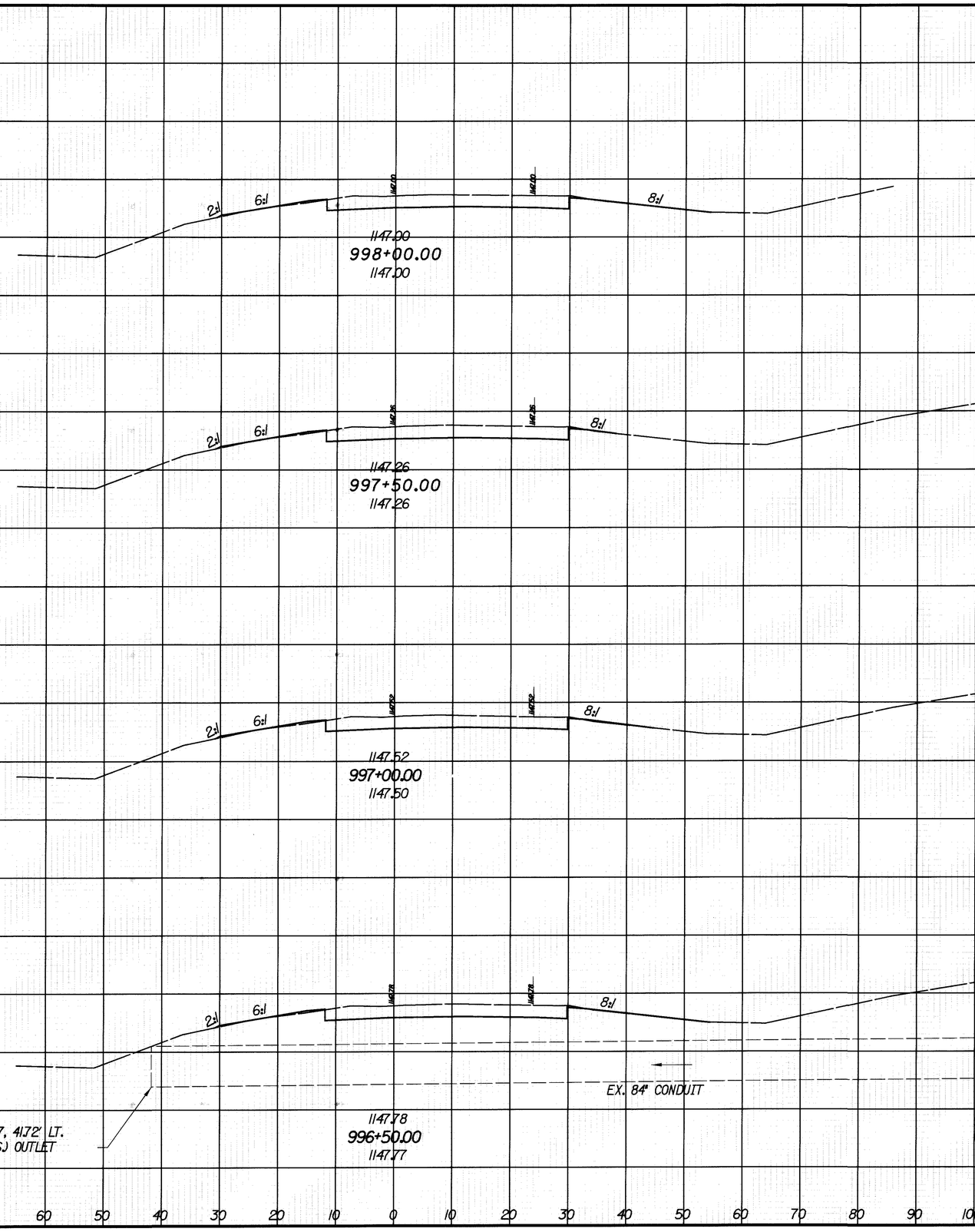
# CROSS SECTIONS
# CONNECTION 'W' I.R. 271

# MED - 71 - 15.78

443
940

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 12:09

| SEEDING END WIDTH | SEEDING SQ. YDS. | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|
| | | | | | |
| 52 | 242 | 87 | 3 | 162 | 5 |
| 35 | 214 | 88 | 3 | 160 | 6 |
| 42 | 261 | 85 | 4 | 160 | 7 |
| 52 | 303 | 88 | 4 | 188 | 8 |
| | 1020 SHEET TOTAL | | | 670 | 26 |




CALCULATED PS
CHECKED PG

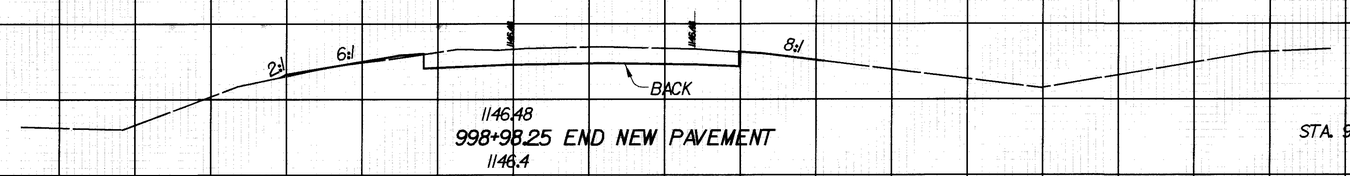
# CROSS SECTIONS
## CONNECTION 'W' I.R. 271

MED - 71 - 15.78

444
940

DATE : 06-DEC-1999
TIME : 12:09
DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere

| SEEDING END WIDTH | SEEDING SQ. YDS. | | END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|---|---|---|
| | 24186 | TOTAL I.R. 271 'W' CONNECTION CARRIED TO THE SUMMARY. SEE SHEET NO. ___ | | | 10756 | 434 |
| | | | | | -6783 | |
| | | TOTALS CARRIED TO THE SUMMARY. SEE SHEET NO. ___ | | | 17539 | 434 |
| | | DEDUCT FOR 202 PAVEMENT REMOVAL | | | | |
| | | TOTAL I.R. 271 'W' CONNECTION | | | | |
| 4 | | STA. 999+25 BACK | 0 | 0 | | |
| | | 999+25.00 END WORK | | | | |
| | | 999+23.25 MATCH EXISTING & END EARTHWORK | | | | |
| | 61 | | | | 0 | 1 |
| 38 | | 1146.48 998+98.25 END NEW PAVEMENT 1146.4 | AHEAD 0 | 3 | | |
| | | | BACK 86 | 3 | | |
| | 244 | | | | 155 | 6 |
| 50 | | 1146.73 998+50.00 1146.73 | 88 | 3 | | |
| | 283 | | | | | |
| | 588 | SHEET TOTAL | | | 162 | 6 |
| | | | | | 317 | 13 |




CALCULATED PS
CHECKED PG

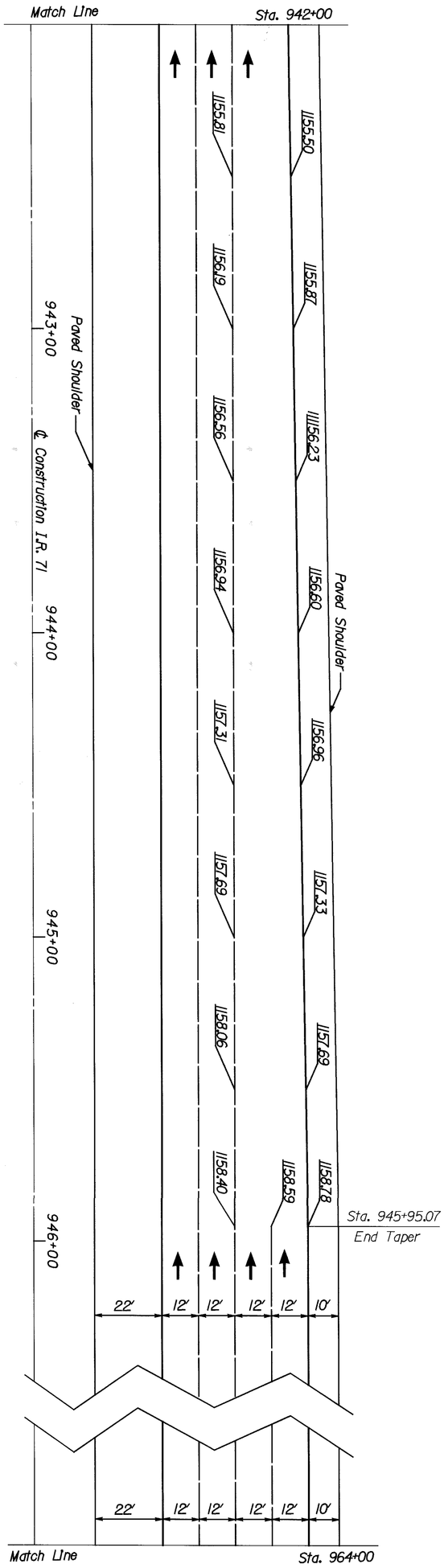
CROSS SECTIONS
CONNECTION 'W' I.R. 271

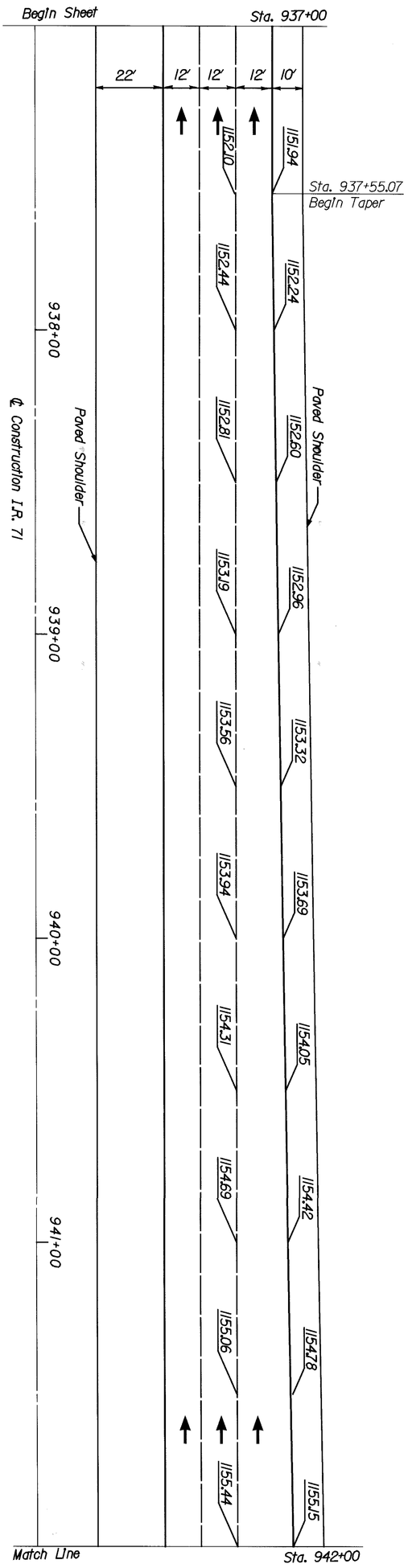
MED - 71 - 15.78

445
940

DESIGN FILE : i:\pd_med_ir71\dgn\reltd\finaldrainage\rconwsht.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 12:27

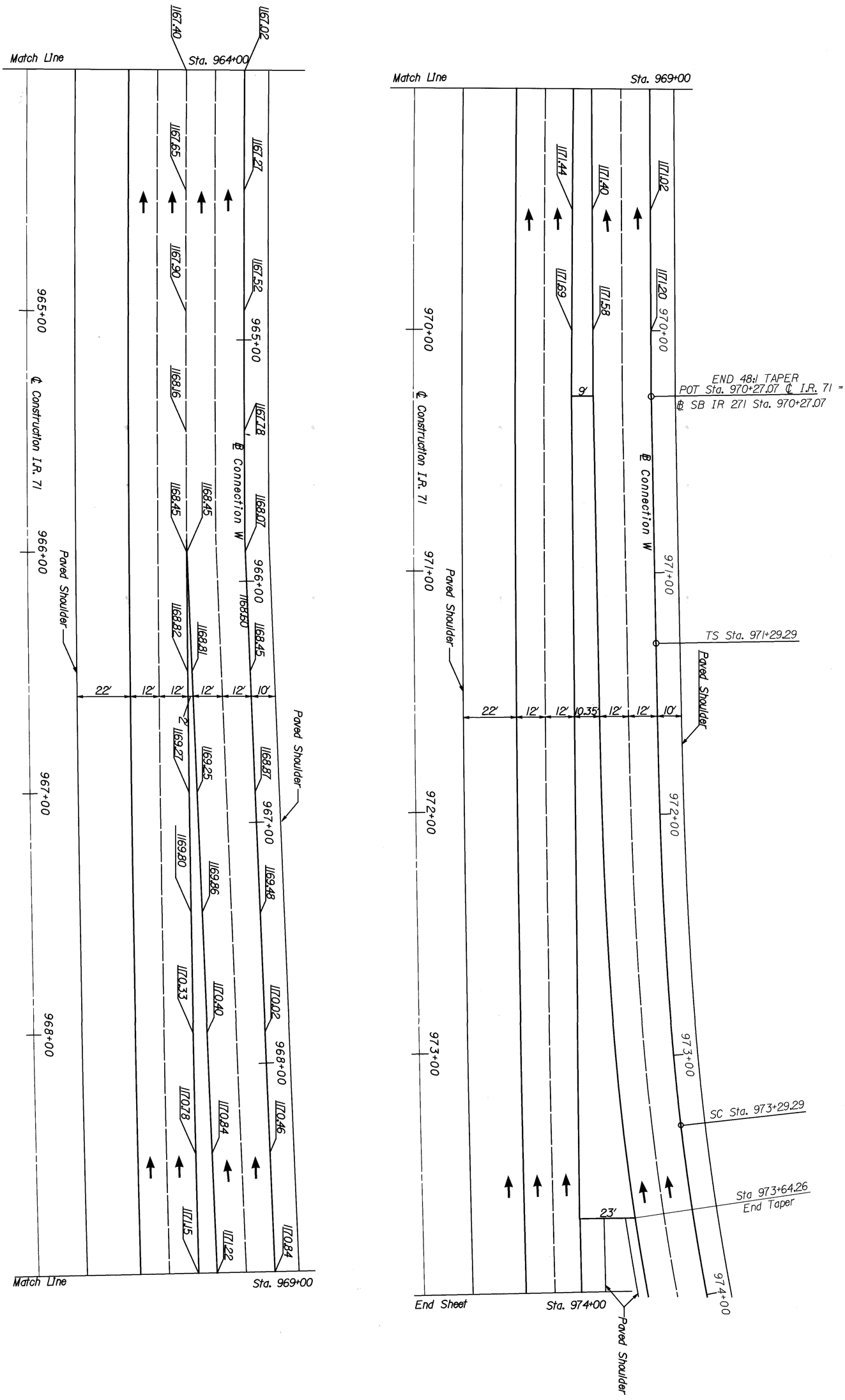
DATE : 06-DEC-1999
TIME : 11:24
DESIGN FILE : I:\pd_med_lr71\dgn\pavement details\lr271conn.dgn
USERNAME : nvondere



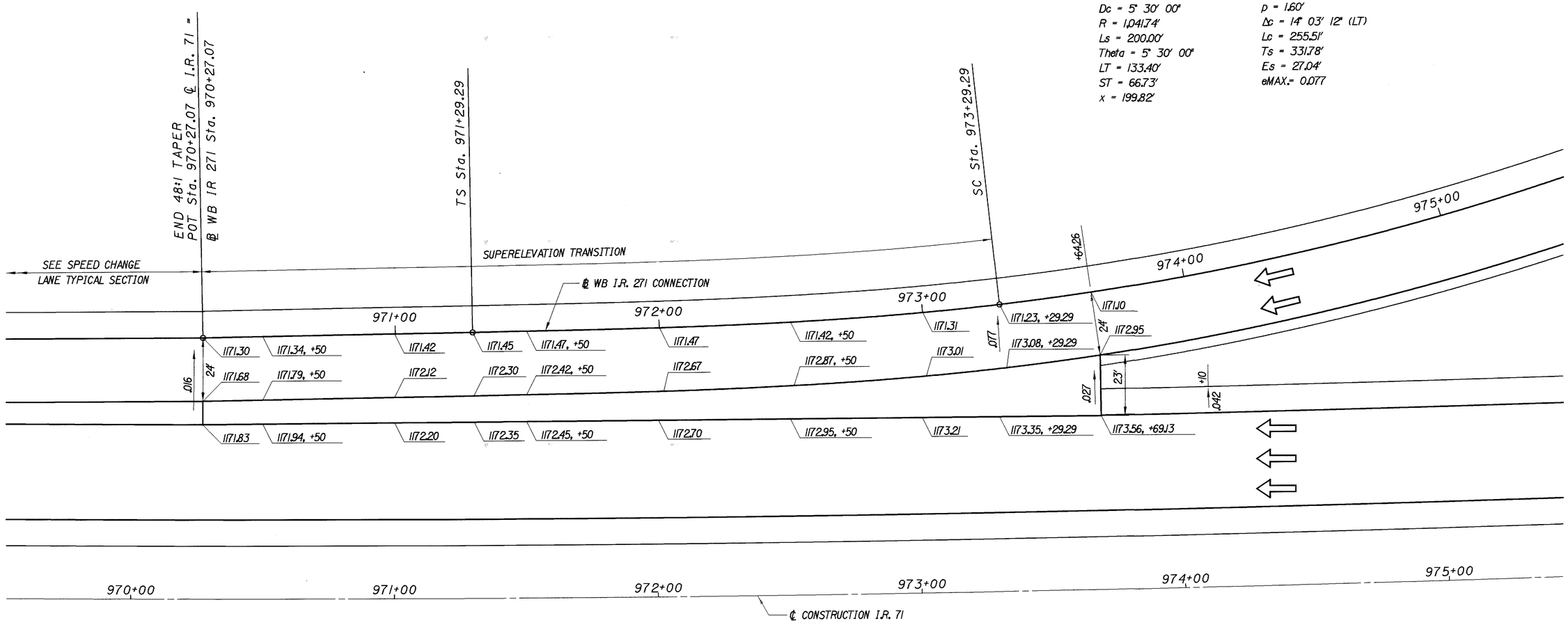




| | | | | |
|---|---|---|---|---|
| 940 / 446 | MED-71-15.78 | PAVEMENT DETAIL - I. R. 271 CONNECTOR W<br>Sta. 937+00 to Sta. 964+00 | CALCULATED DJV<br>CHECKED JWR | 0 20 40<br>HORIZONTAL SCALE IN FEET |

DATE : 06-DEC-1999
TIME : 11:24
DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\ir271conn.dgn
USERNAME : nvondere




| | | | | |
|---|---|---|---|---|
| 447 / 940 | MED-71-15.78 | PAVEMENT DETAIL - I. R. 271 CONNECTOR W<br>Sta. 964+00 to Sta. 970+00 | CALCULATED DJV<br>CHECKED JWR | 0 20<br>10 40<br>HORIZONTAL SCALE IN FEET |




## ℄ CONSTRUCTION I.R. 71 CURVE DATA

P.I. Sta = 984+41.65
Δ = 26° 45' 35" (LT)
Dc = 0° 22' 00"
R = 15,626.07'
T = 3,716.85
L = 7,298.08'
E = 435.97'

**NOTE:**

CROSS SLOPES SHOWN ON THE RAMPS THROUGH THE SUPERELEVATION TRANSITION AREAS REPRESENT THE CROSS SLOPE NORMAL TO THE RAMP ℄

HORIZONTAL SCALE IN FEET
0 10 20 40

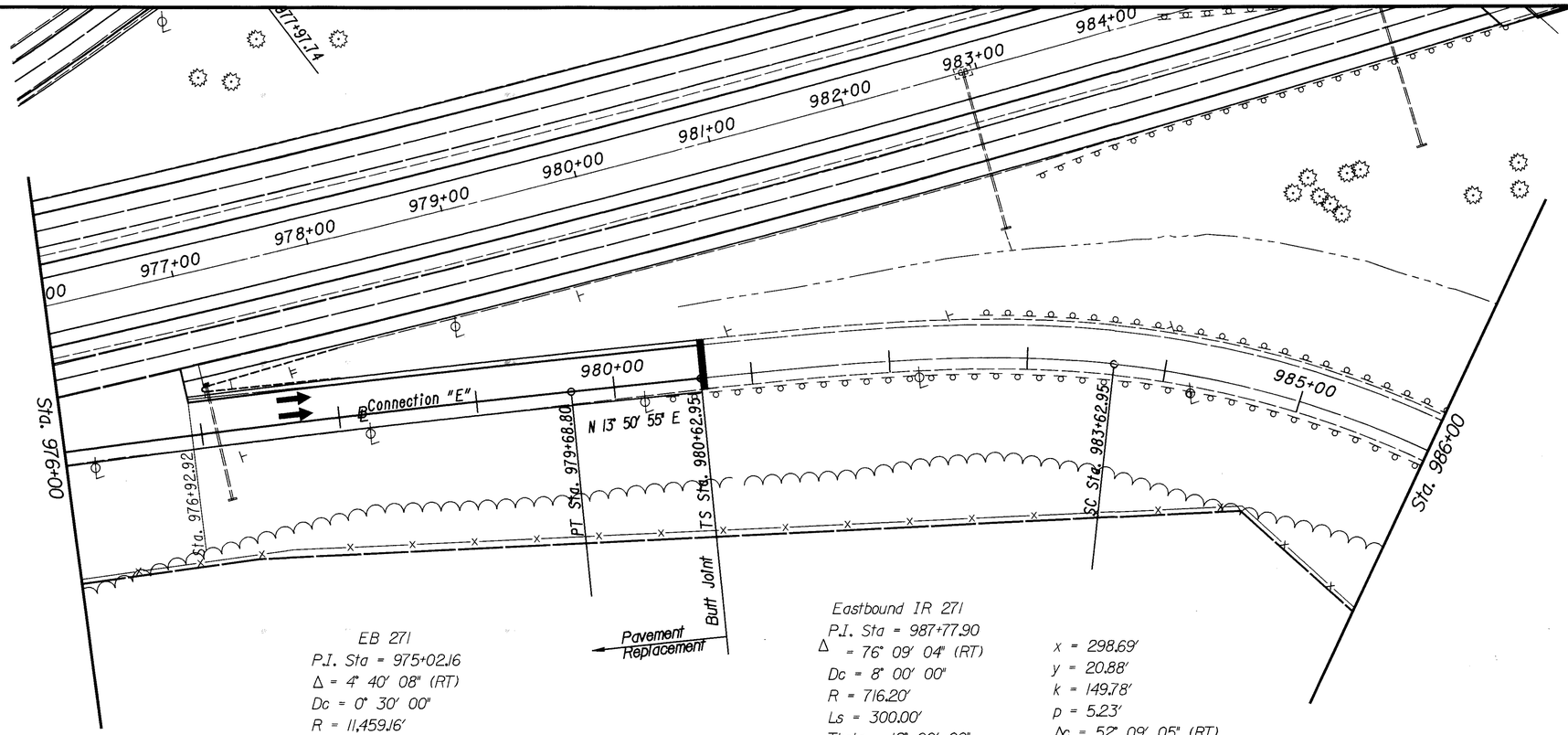
CALCULATED PO
CHECKED PS

# PAVEMENT DETAIL
# CONNECTION "W" I.R. 271

MED-71-5.78

448
940

DESIGN FILE : i:\pd_med.ir71\dgn\r-eltd\finaldrainage\7885gl.dgn
USERNAME : jrogers
DATE : 07-DEC-1999
TIME : 07:23
7885GL.DGN 11/3/99 SAM



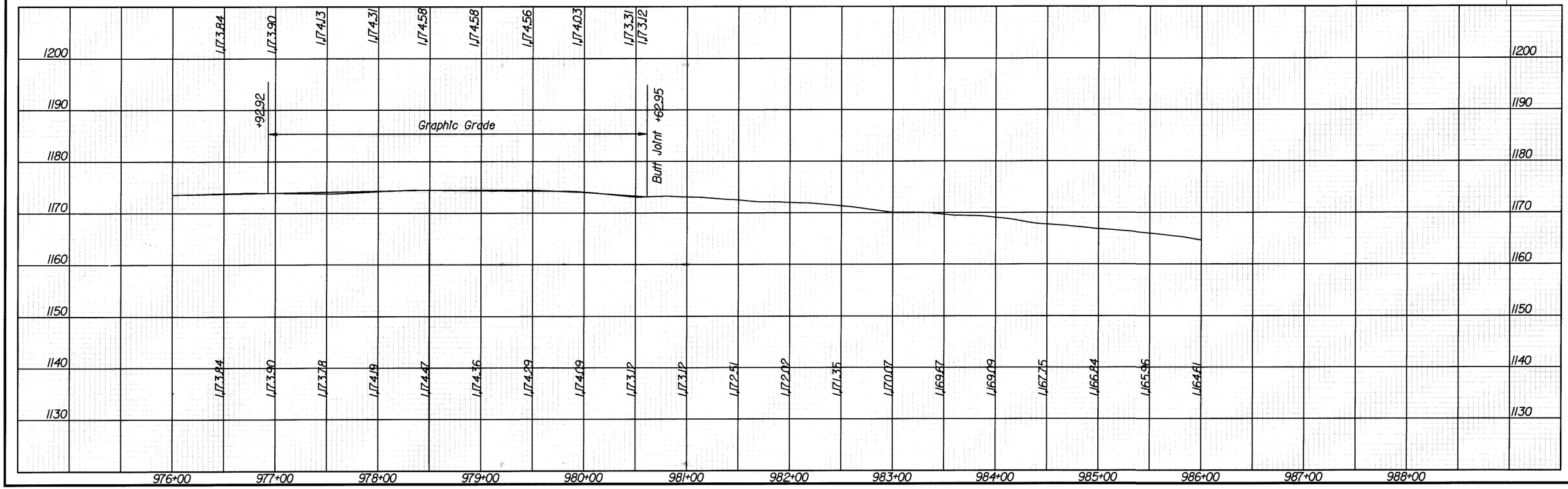

*IR 71 Curve Data*
*P.I. Sta = 984+41.65*
*Δ = 26° 45' 35" (LT)*
*Dc = 0° 22' 00"*
*R = 15,626.07'*
*T = 3,716.85'*
*L = 7,298.08'*
*E = 435.97'*

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

*EB 271*
*P.I. Sta = 975+02.16*
*Δ = 4° 40' 08" (RT)*
*Dc = 0° 30' 00"*
*R = 11,459.16'*
*T = 467.15'*
*L = 933.79'*
*E = 9.52'*

*Eastbound IR 271*
*P.I. Sta = 987+77.90*
*Δ = 76° 09' 04" (RT)*
*Dc = 8° 00' 00"*
*R = 716.20'*
*Ls = 300.00'*
*Theta = 12° 00' 00"*
*LT = 200.46'*
*ST = 100.42'*
*x = 298.69'*
*y = 20.88'*
*k = 149.78'*
*p = 5.23'*
*Δc = 52° 09' 05" (RT)*
*Lc = 651.89'*
*Ts = 714.96'*
*Es = 200.25'*

*B.M. #1, Sta. 990+93.07*
*O.D.O.T. Disc In Headwall,*
*Stamped Elev. 1149.65*




HORIZONTAL SCALE IN FEET
0

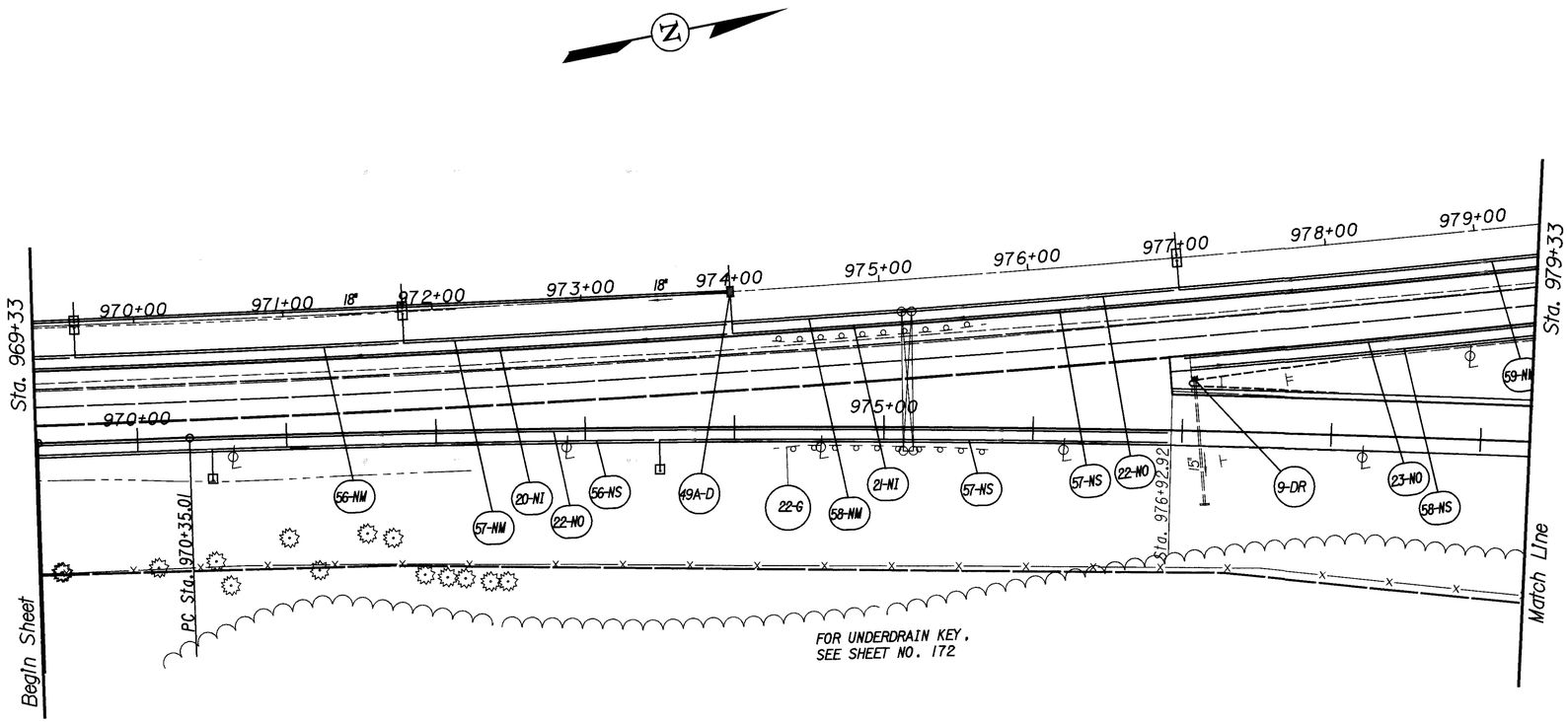
CALCULATED
CHECKED

**PLAN AND PROFILE**
**I.R. 271 CONNECTOR "E"**

**MED-71-15.78**

449
940

DESIGN FILE : i:\pd_med_ir71\dgn\planprofile\271eppl.dgn
USERNAME : nvonderle
DATE : 06-DEC-1999
TIME : 12:32




I.R.71
P. I. Sta. = 984+41.65
△ = 26° 45′ 35″ (LT)
Dc = 0° 22′ 00″
R = 15,626.07′
T = 3,716.85′
L = 7298.08′
E = 435.97′

E.B. I.R. 271
P. I. Sta. = 975+02.16
△ = 4° 40′ 08″ (RT)
Dc = 0° 30′ 00″
R = 11,459.16′
T = 467.15′
L = 933.79′
E = 9.52′

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

DATE : 06-DEC-1999
TIME : 12:38
DESIGN FILE : i:\pd_med_ir71\dgn\planprofile\ir271eb1.dgn
USERNAME : mvonderre

N

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

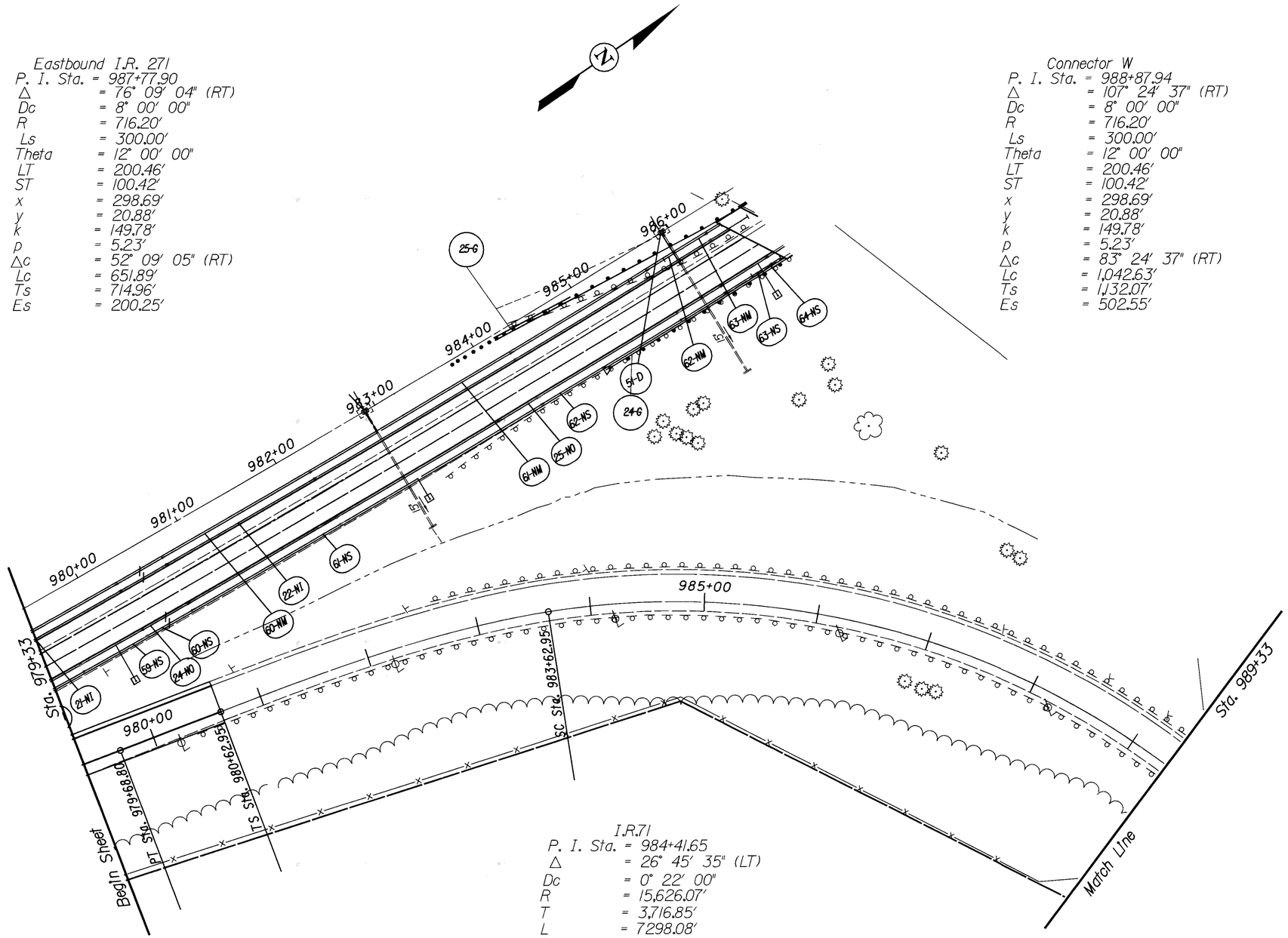
IR 271 EASTBOUND
STA. 969+33 TO STA 979+33

MED - 71 - 15.78

450
940

Eastbound I.R. 271
P. I. Sta. = 987+77.90
△ = 76° 09′ 04" (RT)
Dc = 8° 00′ 00"
R = 716.20′
Ls = 300.00′
Theta = 12° 00′ 00"
LT = 200.46′
ST = 100.42′
x = 298.69′
y = 20.88′
k = 149.78′
p = 5.23′
△c = 52° 09′ 05" (RT)
Lc = 651.89′
Ts = 714.96′
Es = 200.25′

Connector W
P. I. Sta. = 988+87.94
△ = 107° 24′ 37" (RT)
Dc = 8° 00′ 00"
R = 716.20′
Ls = 300.00′
Theta = 12° 00′ 00"
LT = 200.46′
ST = 100.42′
x = 298.69′
y = 20.88′
k = 149.78′
p = 5.23′
△c = 83° 24′ 37" (RT)
Lc = 1,042.63′
Ts = 1,132.07′
Es = 502.55′




I.R.71
P. I. Sta. = 984+41.65
△ = 26° 45′ 35" (LT)
Dc = 0° 22′ 00"
R = 15,626.07′
T = 3,716.85′
L = 7298.08′
E = 435.97′

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

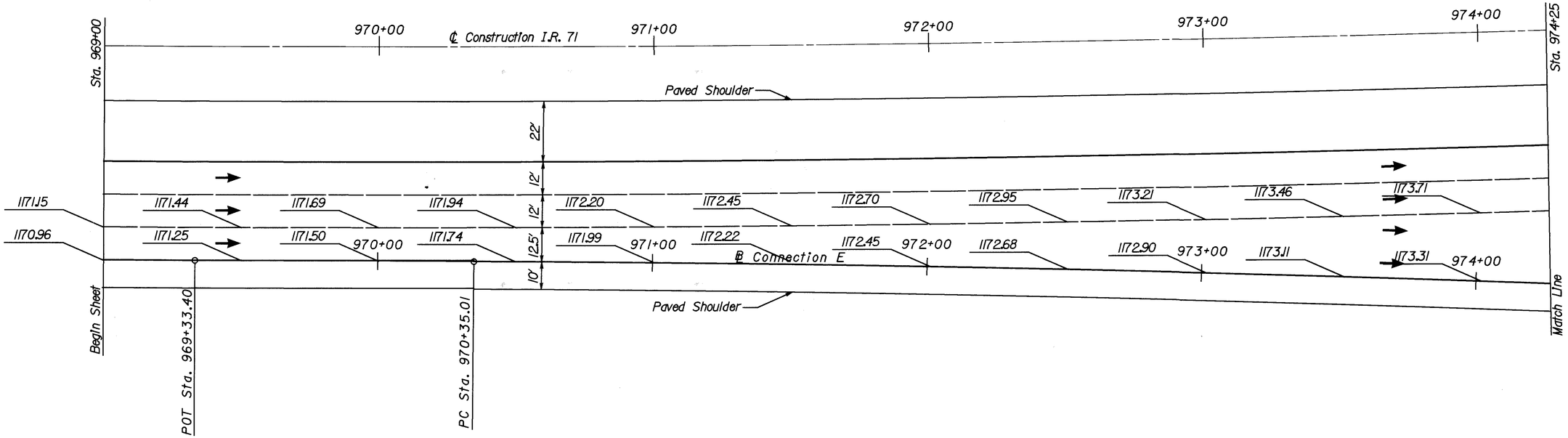
DESIGN FILE : i:\pd_med_ir71\dgn\planprofile\ir271tebl.dgn
USERNAME : mvondere
DATE : 06-DEC-1999
TIME : 12:38

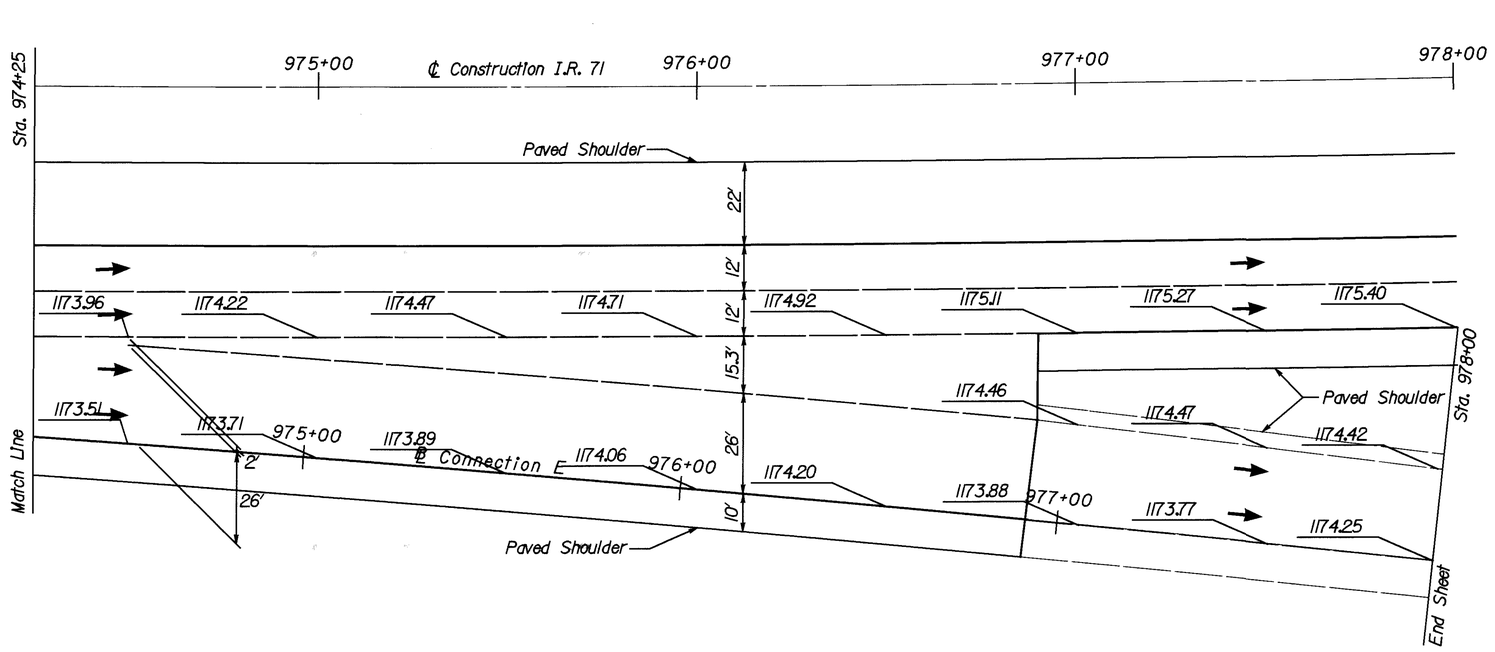
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

IR 271 EASTBOUND
STA. 989+33 TO STA. 999+13.97

MED - 71 - 15.78

451
940




HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

**PAVEMENT DETAIL - I. R. 271 CONNECTOR E**
**Sta. 969+00 to Sta. 978+00**

**MED-71-15.78**

452
940

DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\ir271conn.dgn
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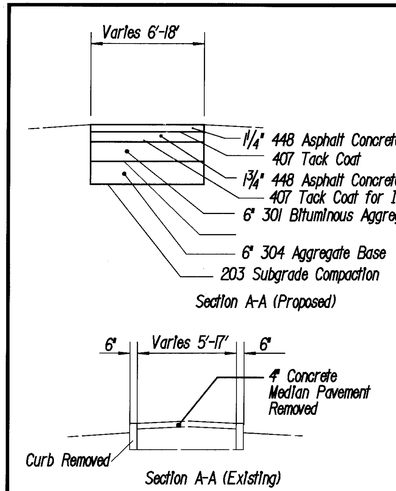
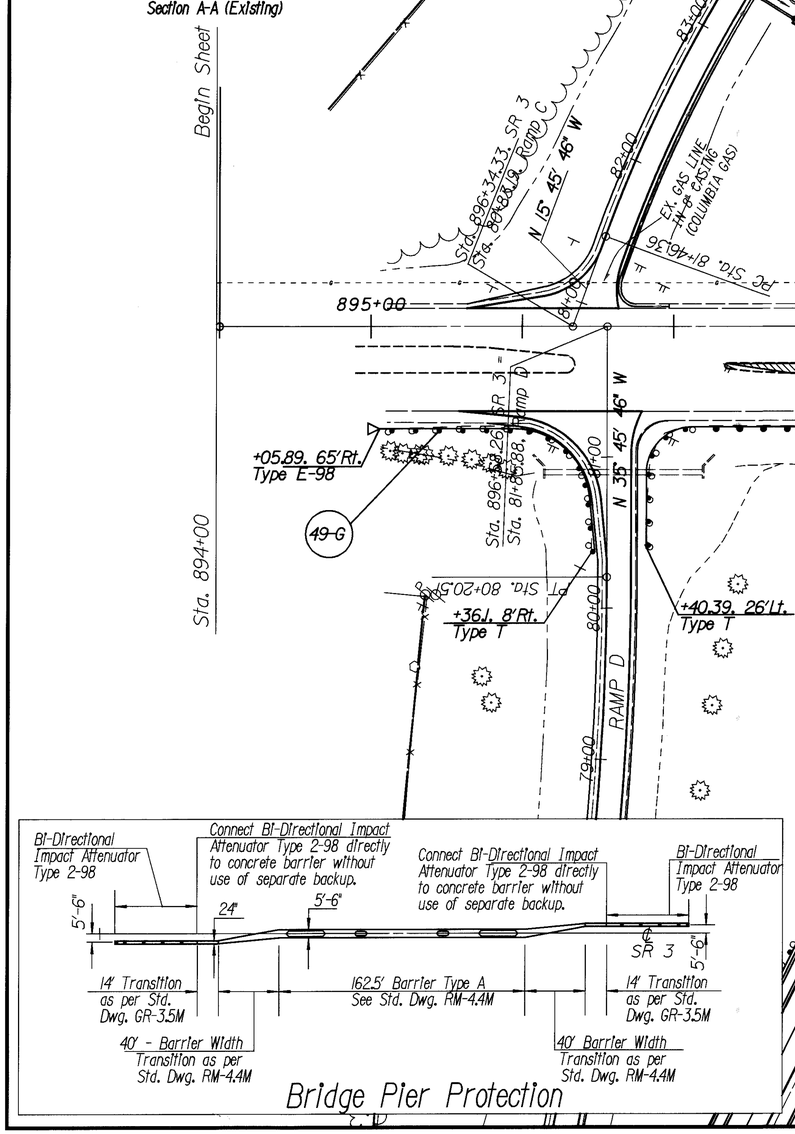
DATE : 06-DEC-1999
TIME : 12:40






| Centerline References for S.R. 3 | | |
|---|---|---|
| | Northing | Easting |
| Sta. 895+00 | 556894.1853 | 63416.2789 |
| Sta. 905+00 | 557478.6160 | 64227.7226 |

615 Temporary Pavement, As Per Plan = 84 Sq. Yds.
NOTE: Quantity Carried to General Summary.

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

SR 3
Sta 894+00.00 to Sta 906+50.00

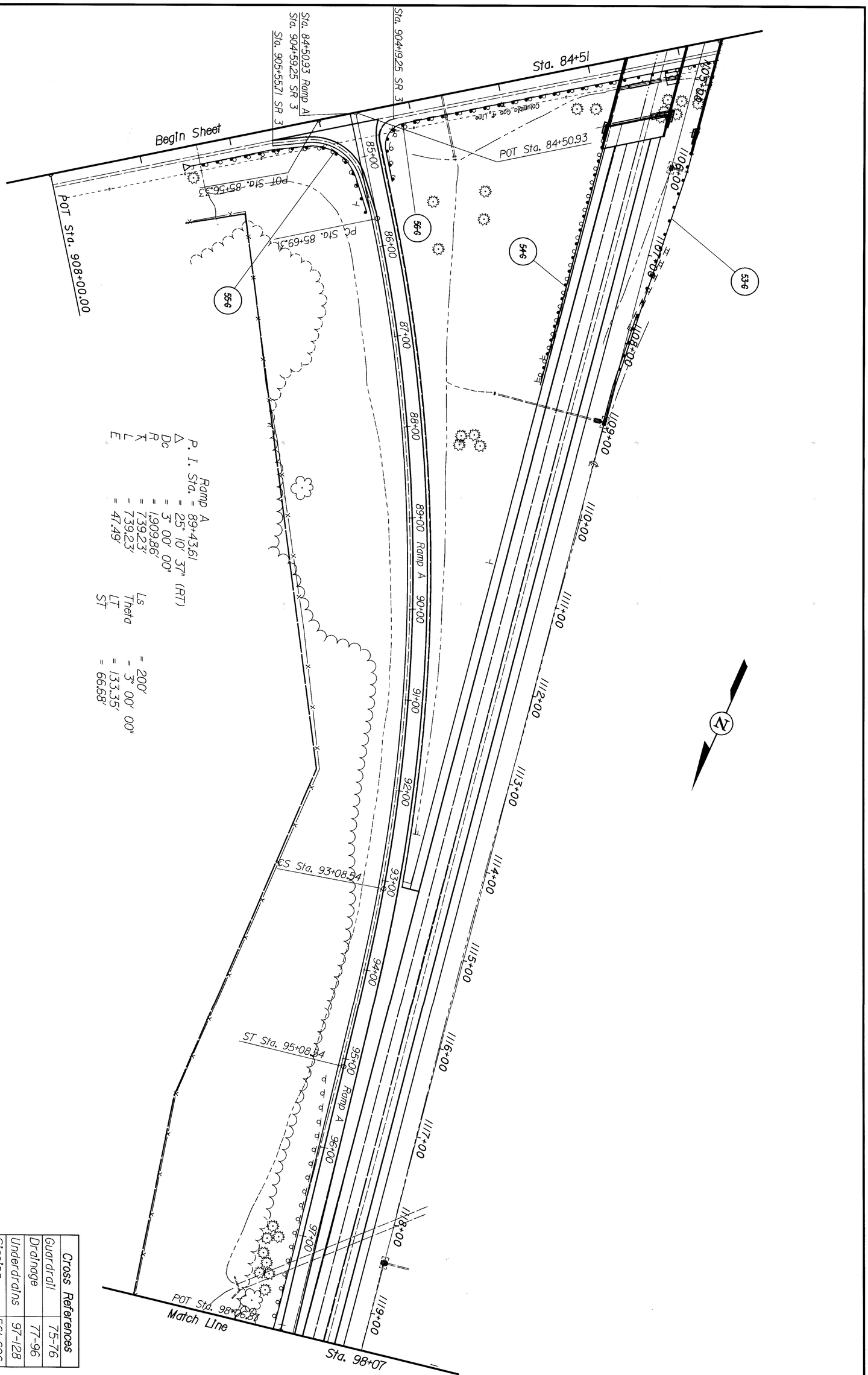
MED - 71 - 15.78

453
940

DESIGN FILE : i:\pd_MED_IR71\DGN\sr3.dgn
USERNAME : jrogers
DATE : 30-DEC-1999
TIME : 14:39

DATE : 03-DEC-1999
TIME : 08:53

DESIGN FILE : I:\pd\...MED_IR71\DGN\PlanProfile\sr3ral.dgn
USERNAME : pfought




| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

454
940

**MED - 71 - 15.78**

**SR 3 RAMP A**
**STA. 84+51 TO STA. 94+51**

CALCULATED
CHECKED

0 50 100
HORIZONTAL SCALE IN FEET

DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\sr3.dgn
USERNAME : jrogers

DATE : 01-DEC-1999
TIME : 07:31

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL S.R. 3 RAMP "A" STA. 1113+00 TO STA. 1122+00

MED-71-15.78

455
940

DESIGN FILE : i:\pd_med_lr71\dgn\pavement details\sr3.dgn
USERNAME : jrogers

DATE : 01-DEC-1999
TIME : 07:32

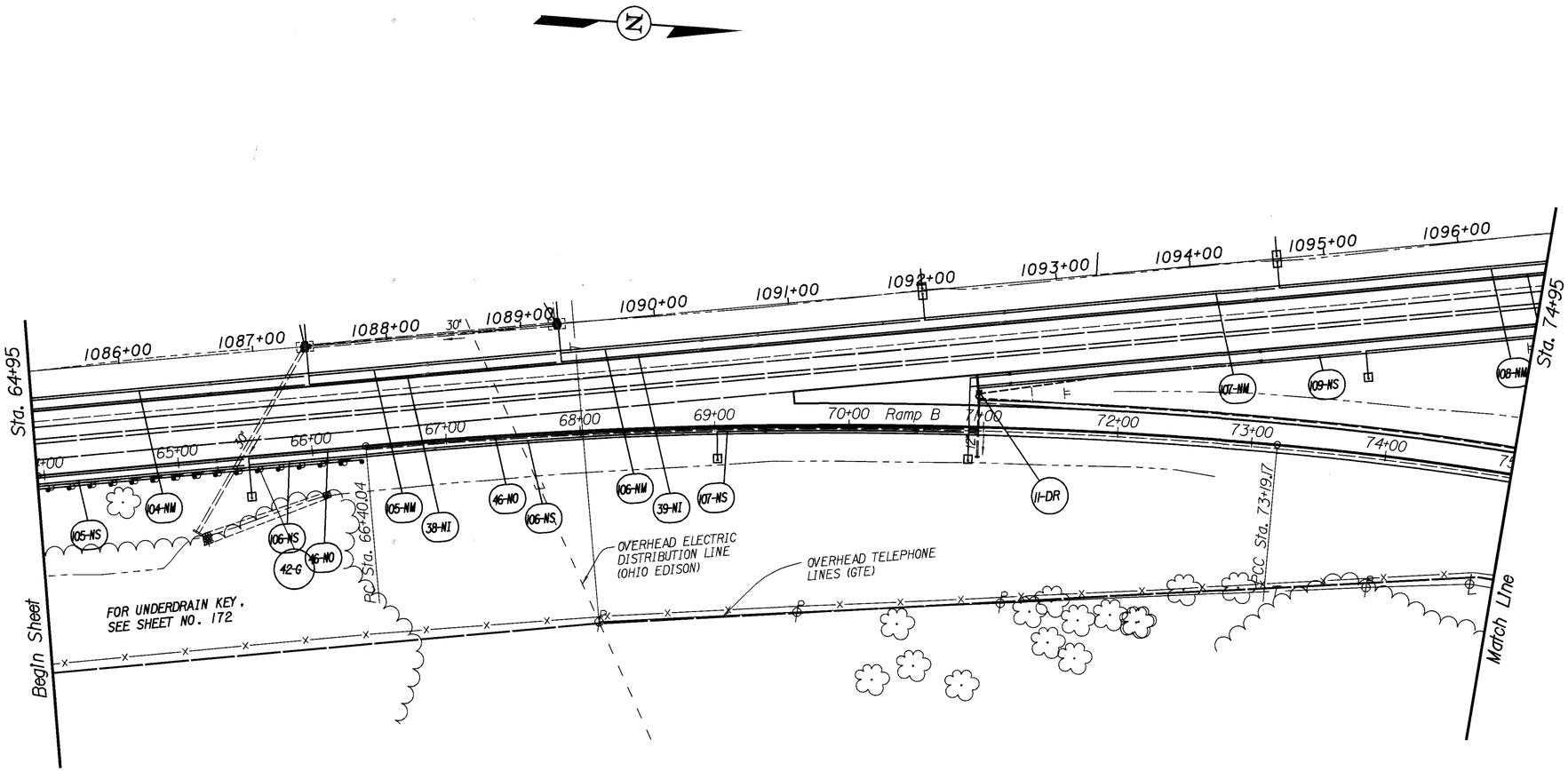
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL S.R. 3 RAMP "A"
## STA. 1123+00 TO STA. 1132+00

MED-71-15.78

456
940




Ramp B

| | | |
|---|---|---|
| P. I. Sta. | = | 69+80.50 |
| Δ | = | 10° 11′ 13″ (RT) |
| Dc | = | 1° 30′ 00″ |
| R | = | 3,819.72′ |
| T | = | 340.46′ |
| L | = | 679.13′ |
| E | = | 15.14′ |

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\sr-3rbi.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 08:54

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

SR 3 RAMP B
STA. 64+95 TO STA. 74+95

MED - 71 - 15.78

457
940

DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\sr3.dgn
USERNAME : jrogers

DATE : 01-DEC-1999
TIME : 07:31

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL S.R. 3 RAMP "B"
# STA. 1084+00 TO STA. 1093+00

MED-71-15.78

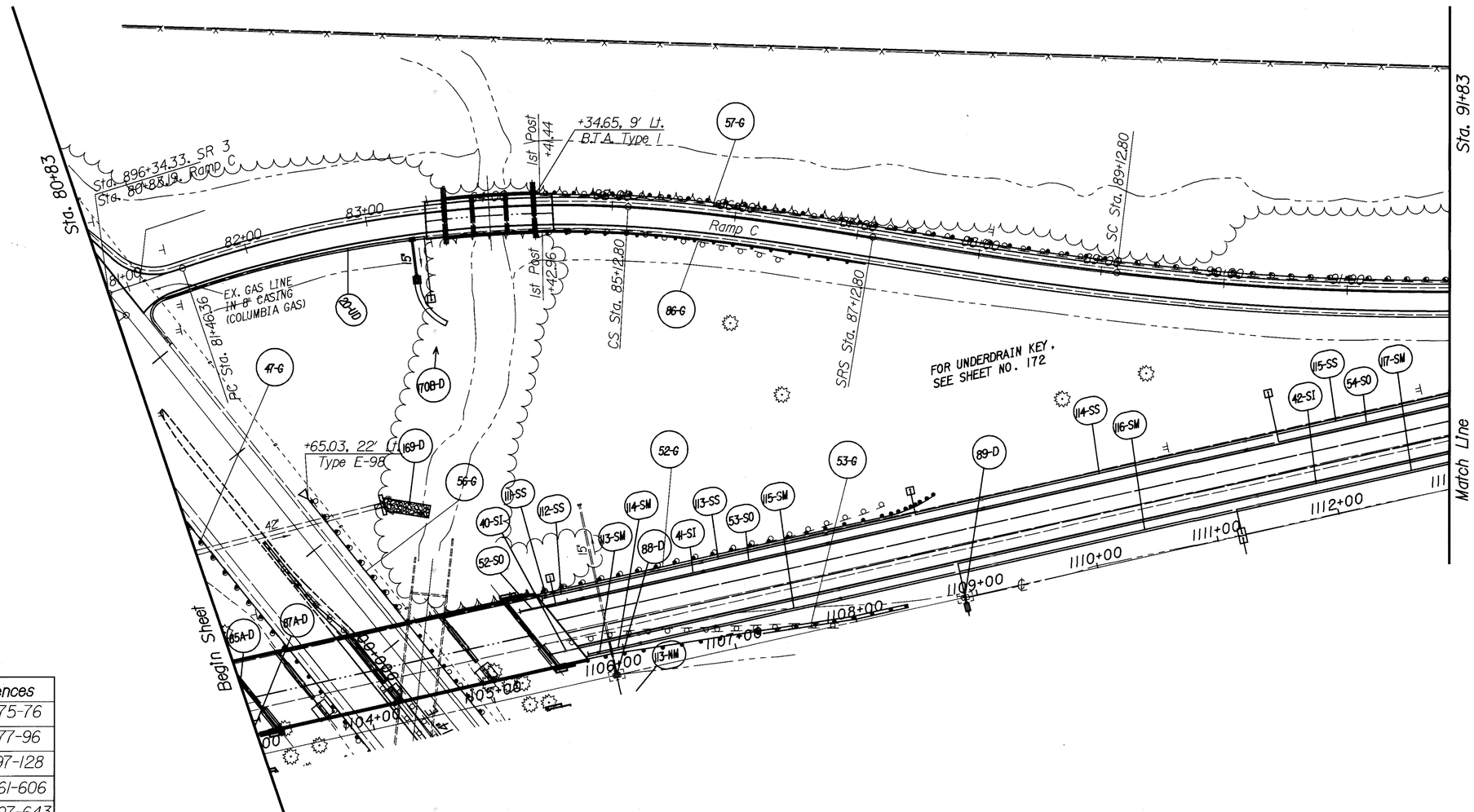
458
940

Ramp C
P. I. Sta. = 83+88.05
△ = 27° 59′ 10" (RT)
Dc = 6° 00′ 00"
R = 954.93′
△c = 21° 59′ 10" (RT)
Lc = 366.44′
Es = 30.11′

Ls = 200′
Theta = 6° 00′ 00"
Lt = 133.41′
St = 66.74′

Ls = 200′
Theta = 2° 30′ 00"
Lt = 133.35′
St = 66.68′

Ramp C
P. I. Sta. = 90+40.36
△ = 11° 31′ 05" (LT)
Dc = 2° 30′ 00"
R = 2,291.83′
△c = 9° 01′ 05" (LT)
Lc = 360.72′
Es = 11.90′




| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

DESIGN FILE : i:\pd_MED_JR71\DGN\PlanProfile\sr3rcl.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 12:16

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

SR 3 RAMP C
STA. 80+83 TO STA 91+83

MED - 71 - 15.78

459
940

Ramp C
P. I. Sta. = 96+13.98
△ = 10° 11' 13" (LT)
Dc = 1° 30' 00"
R = 3,819.72
T = 340.46'
L = 679.13'
E = 15.14'




| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

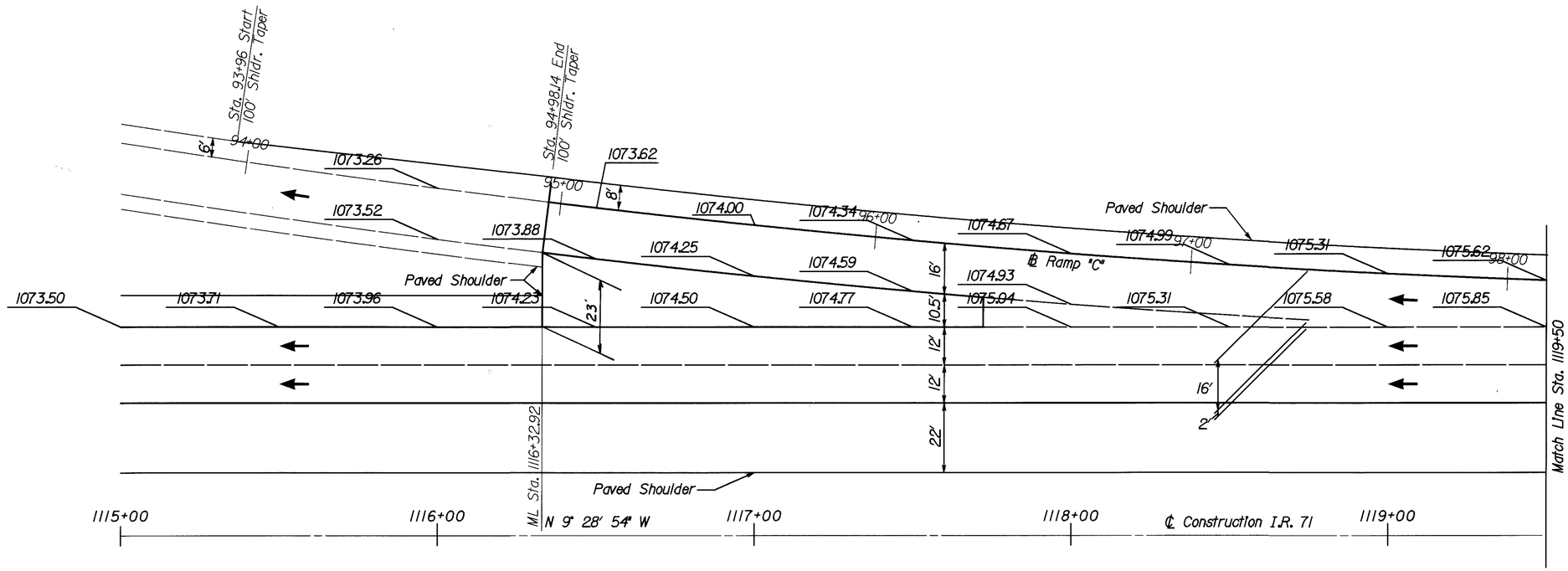
DESIGN FILE : i:\pd_MED_IR71\DGN\PlanProfile\sr3rc1.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 12:18

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

SR 3 RAMP C
STA. 91+83 TO STA. 101+98

MED - 71 - 15.78

460
940




DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\sr3.dgn
USERNAME : jrogers

DATE : 01-DEC-1999
TIME : 07:32

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL S.R. 3 RAMP "C"
## STA. 1115+00 TO STA. 1125+00

MED-71-15.78

461
940

Ramp D
P. I. Sta. = 76+08.62
Δ = 25° 00′ 18" (LT)
Dc = 3° 00′ 00"
R = 1,909.86′
Δc = 22° 00′ 18" (LT)
Lc = 733.50′
Es = 46.84′

Ls = 200′
\Theta = 3° 00′ 00"
Lt = 133.35′
St = 66.68′

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

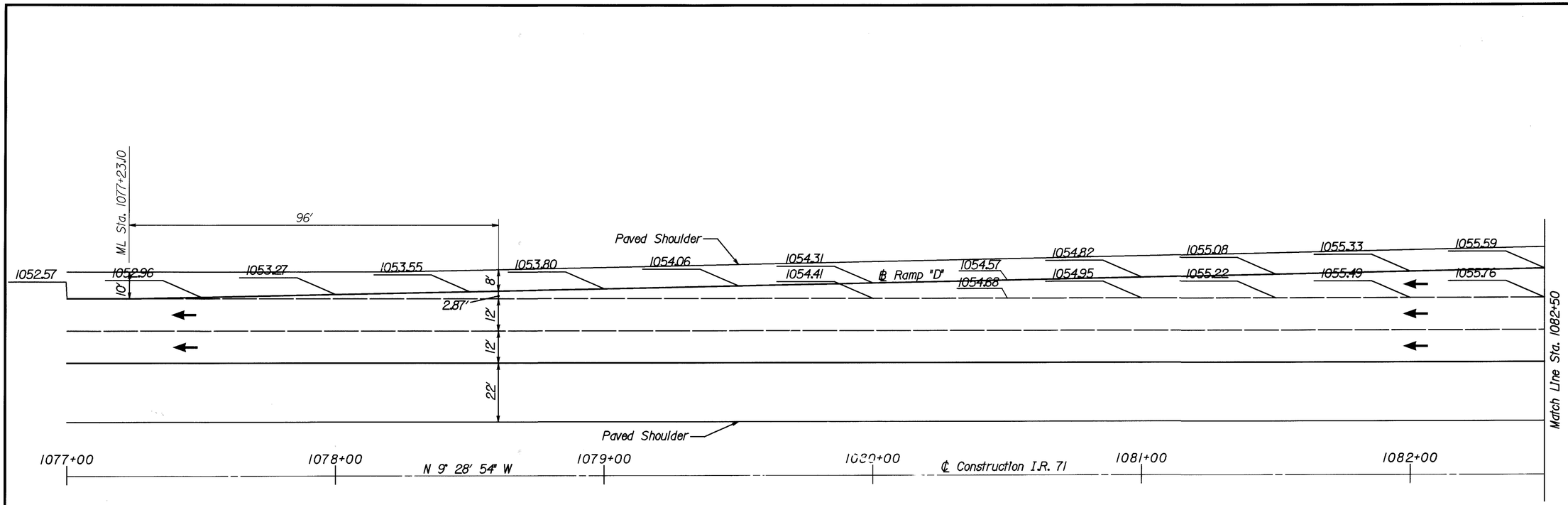
DESIGN FILE : i:\pd\MED.JR71\DGN\PlanProfile\sr_x.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 12:19

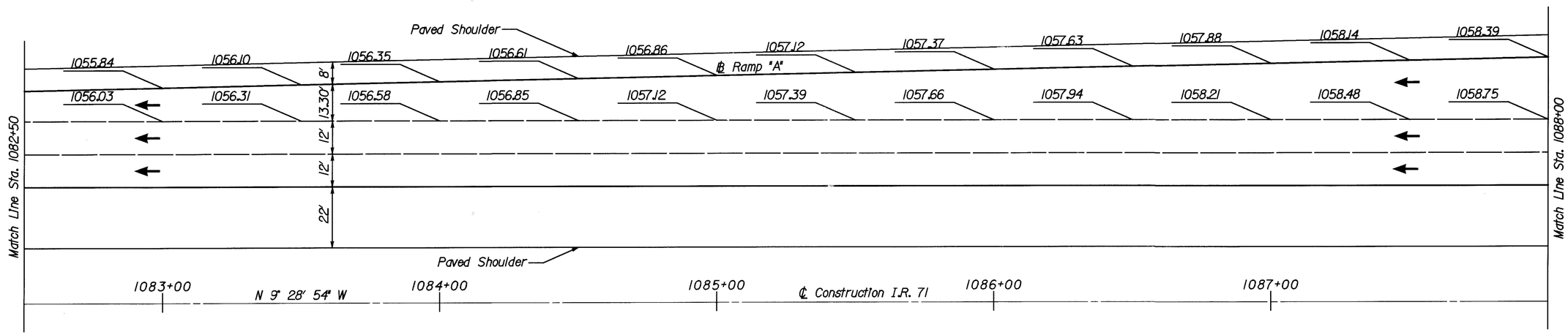
HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

SR 3 RAMP D
STA. 67+86 TO STA. 77+86

MED - 71 - 15.78

462
940




DESIGN FILE : i:\pd_med.ir71\dgn\pavement details\sr3.dgn
USERNAME : jrogers

DATE : 01-DEC-1999
TIME : 07:32

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL S.R. 3 RAMP "D"
# STA. 1077+00 TO STA. 1088+00

MED-71-15.78

463
940

DESIGN FILE : I:\pd_med_ir71\dgn\pavement details\sr3.dgn
USERNAME : jrogers

DATE : 01-DEC-1999
TIME : 07:32

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DSV
CHECKED JWR

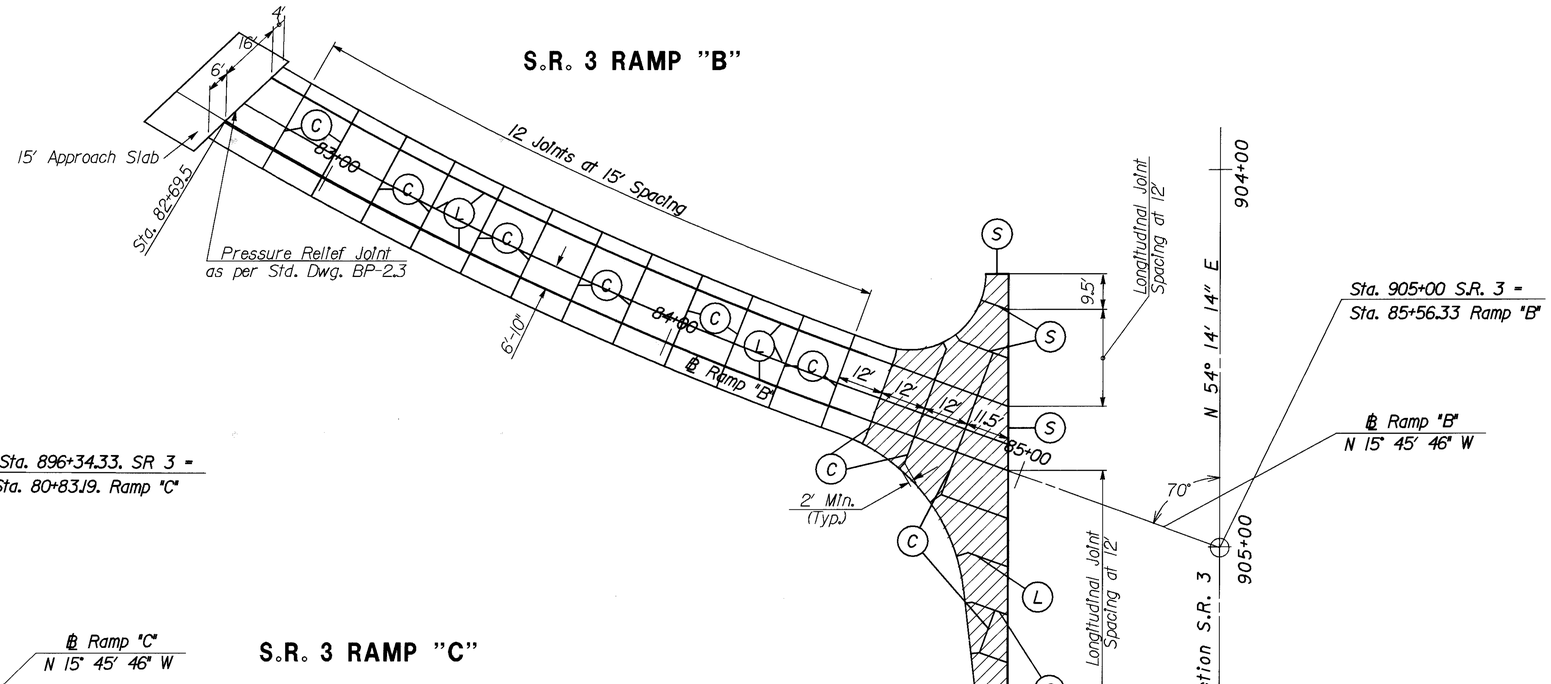
# PAVEMENT DETAIL S.R. 3 RAMP "D"
# STA. 1088+00 TO STA. 1095+00

MED-71-15.78

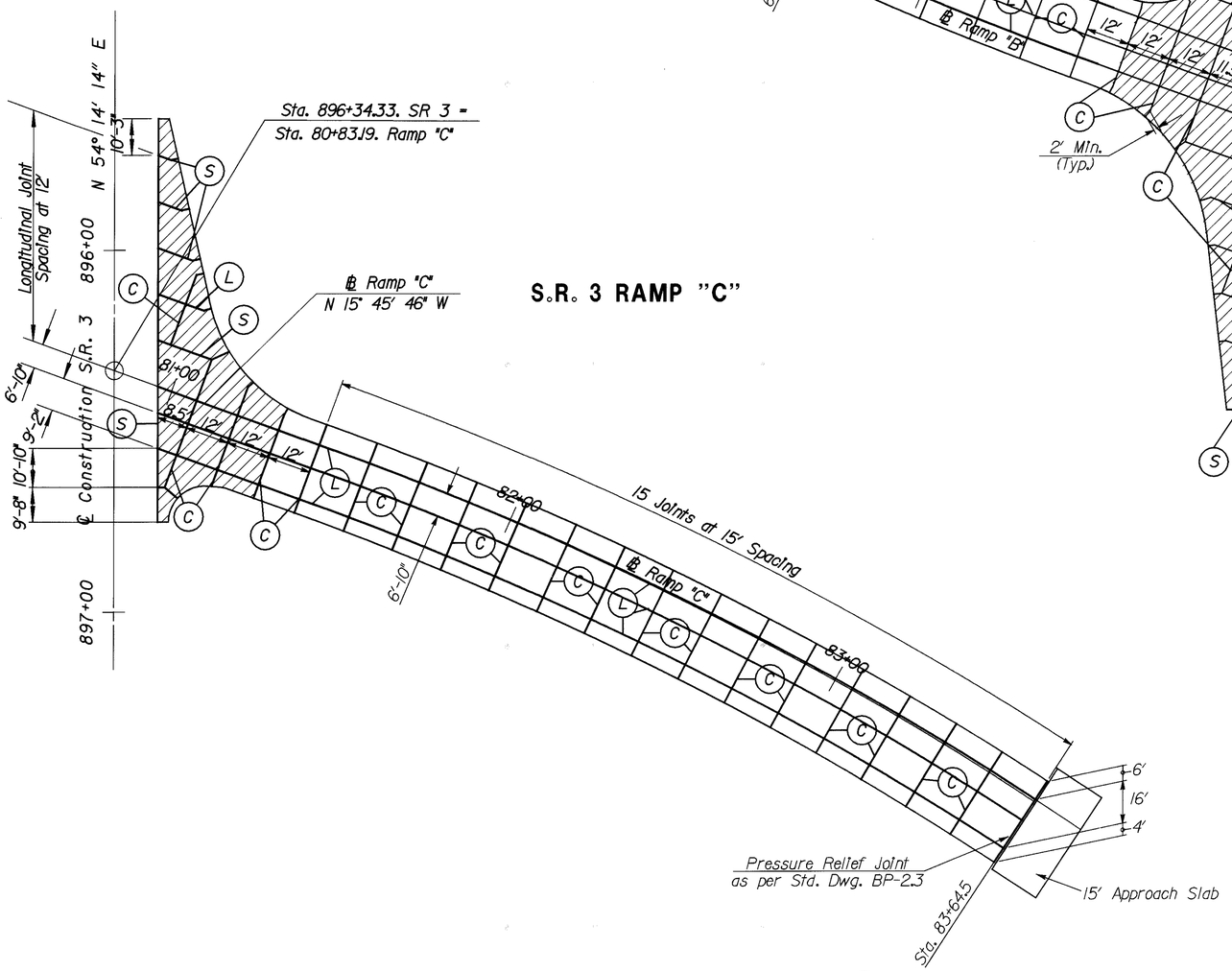
464
940

DESIGN FILE : I:\pd_med_ir71\dgn\pavement details\sr3.dgn
USERNAME : jrogers
DATE : 01-DEC-1999
TIME : 07:31

## S.R. 3 RAMP "B"




## S.R. 3 RAMP "C"




Note: For S.R. 3 Ramp Typical Section, See Sheet 17.

- Class "FS" Concrete

## LEGEND

- (L) Standard Longitudinal Joint As Per BP-2.1M
- (S) Standard Longitudinal Joint As Per BP-2.1M Without Tie Bars
- (C) Contraction Joint As Per BP-2.1M

CALCULATED DJV CHECKED JWR

HORIZONTAL SCALE IN FEET

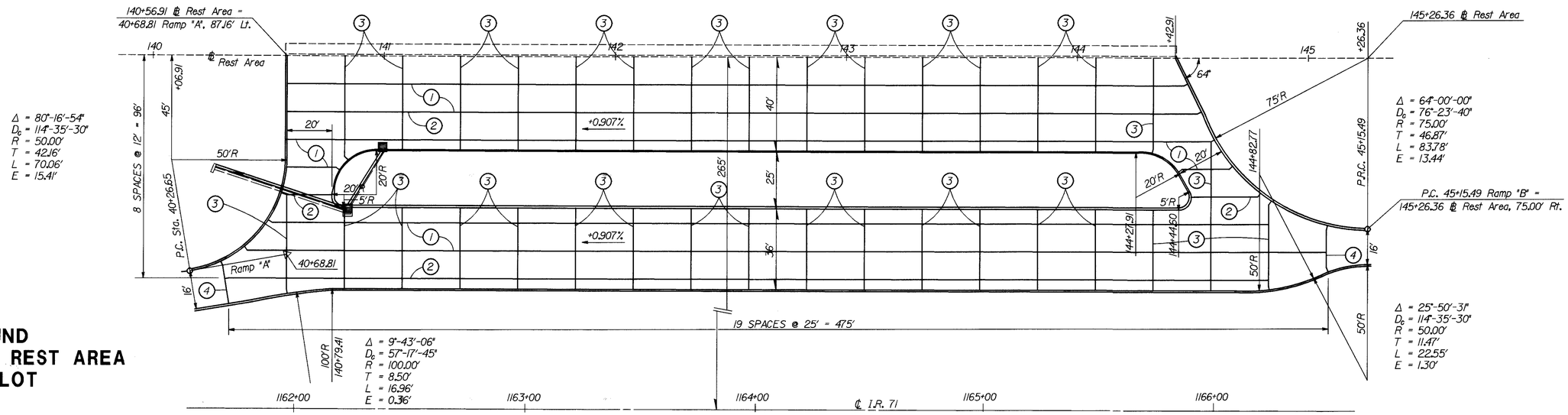
# PAVEMENT JOINT DETAIL S.R. 3 RAMPS "B" & "C"

MED-71-15.78

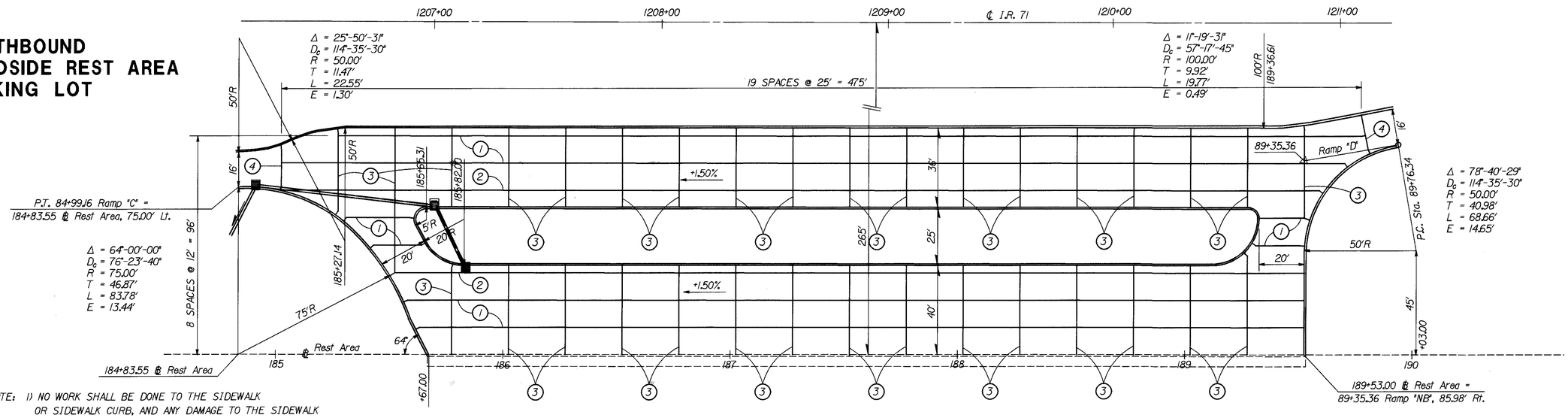
465
940

DESIGN FILE : i:\pd_MED_IR71\DGN\Pvmntrpr\pvmtrepr_ga.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 12:25

## SOUTHBOUND ROADSIDE REST AREA PARKING LOT




## NORTHBOUND ROADSIDE REST AREA PARKING LOT




NOTE: 1) NO WORK SHALL BE DONE TO THE SIDEWALK OR SIDEWALK CURB, AND ANY DAMAGE TO THE SIDEWALK OR SIDEWALK CURB SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

2) THE TRANSVERSE JOINTS IN THE RAMPS SHALL BE ALIGNED AS CLOSE AS POSSIBLE WITH THE LONGITUDINAL JOINTS IN THE PARKING LOT RADIUS AREAS.

3) PARKING LOT PAVEMENT ELEVATIONS TO BE REPLACED AT SAME ELEVATION AS EXISTING.

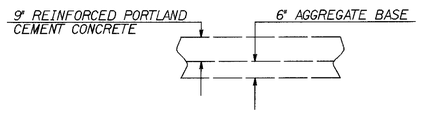
4) FOR U.G. UTILITY LOCATIONS SEE SHEETS 198-203.

5) THE EXISTING PAVEMENT BUILDUP FOR PARKING AREA AND RADIUS AREAS ARE SIMILAR TO EXISTING RAMP PAVEMENT BUILDUP AS SHOWN ON THIS SHEET.

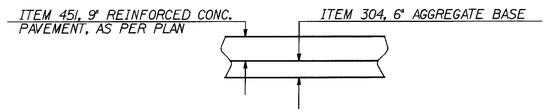
6) CONTRACTOR IS NOT TO DISTURB EXISTING LIGHTING CIRCUITS DURING PAVEMENT OPERATIONS AT THE REST AREAS.

## JOINT LEGEND

1. STANDARD LONGITUDINAL JOINT
2. STANDARD LONGITUDINAL JOINT WITHOUT TIE BARS
3. STANDARD CONTRACTION JOINT
4. STANDARD EXPANSION JOINT WITHOUT DOWELS




**EXISTING PAVEMENT BUILDUP FOR PARKING AND RADIUS AREAS**




**PROPOSED PAVEMENT BUILDUP FOR PARKING AND RADIUS AREAS**

HORIZONTAL SCALE IN FEET
0 25 50

CALCULATED DJV
CHECKED JWR

# REST AREA PAVEMENT DETAILS

MED-71-15.78

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

I.R.71
P. I. Sta. = 1149+64.08
Δ = 8° 28′ 56″ (RT)
Dc = 0° 15′ 00″
R = 22,918.23′
T = 1,699.54′
L = 3,392.88′
E = 62.93′

S.B. Rest Area
P. I. Sta. = 35+88.48
Δ = 5° 38′ 59″ (LT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 188.48′
L = 376.65′
E = 4.65′




DESIGN FILE : i:\pd_MED.IR71\DGN\PlanProfile\sbrppbl.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 12:27

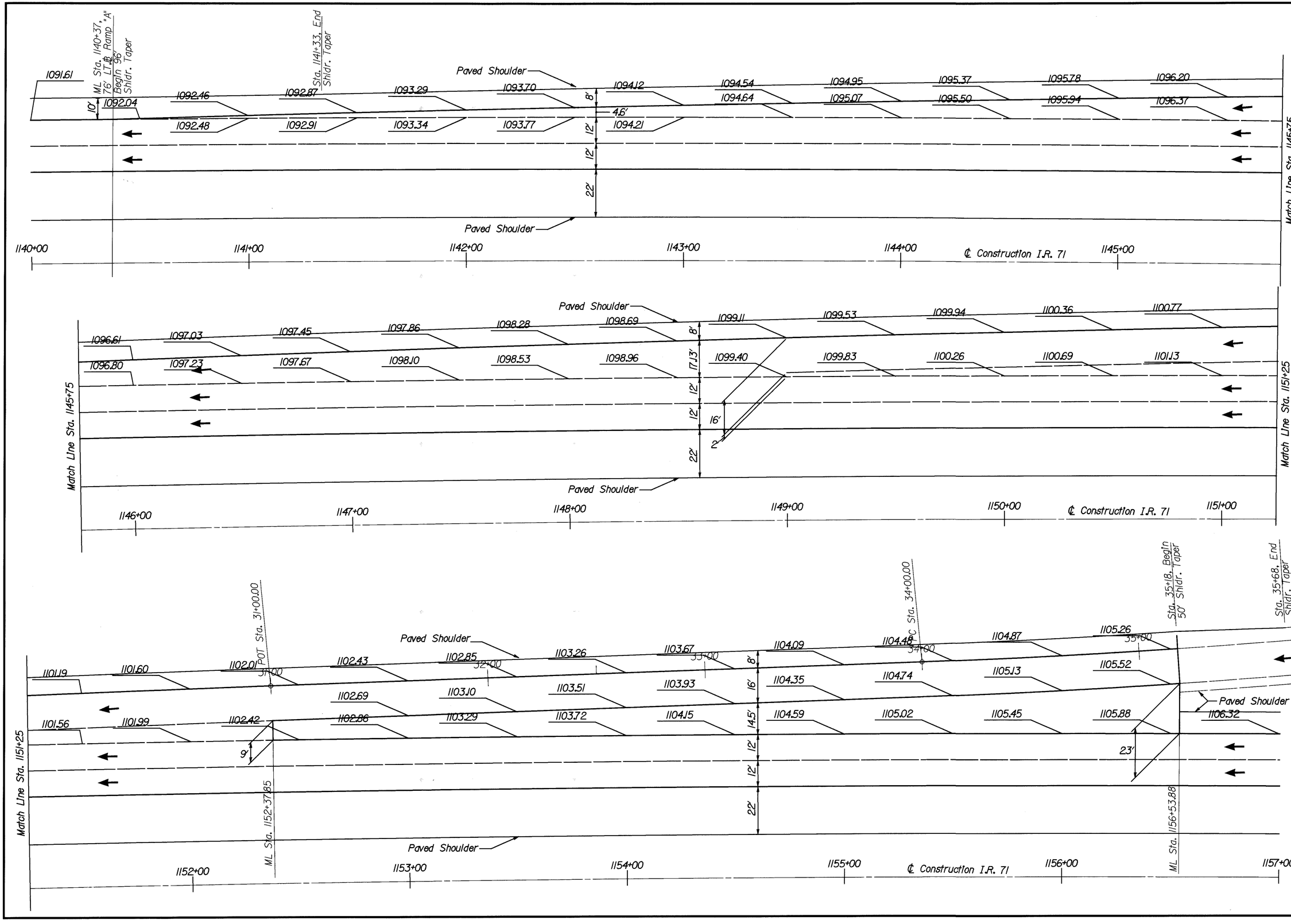
HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

SOUTHBOUND REST AREA, RAMP A
STA. 1149+32.91 TO STA. 1162+58.89

MED - 71 - 15.78

467
940

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USERNAME : jrogers

DATE : 01-DEC-1999
TIME : 09:05

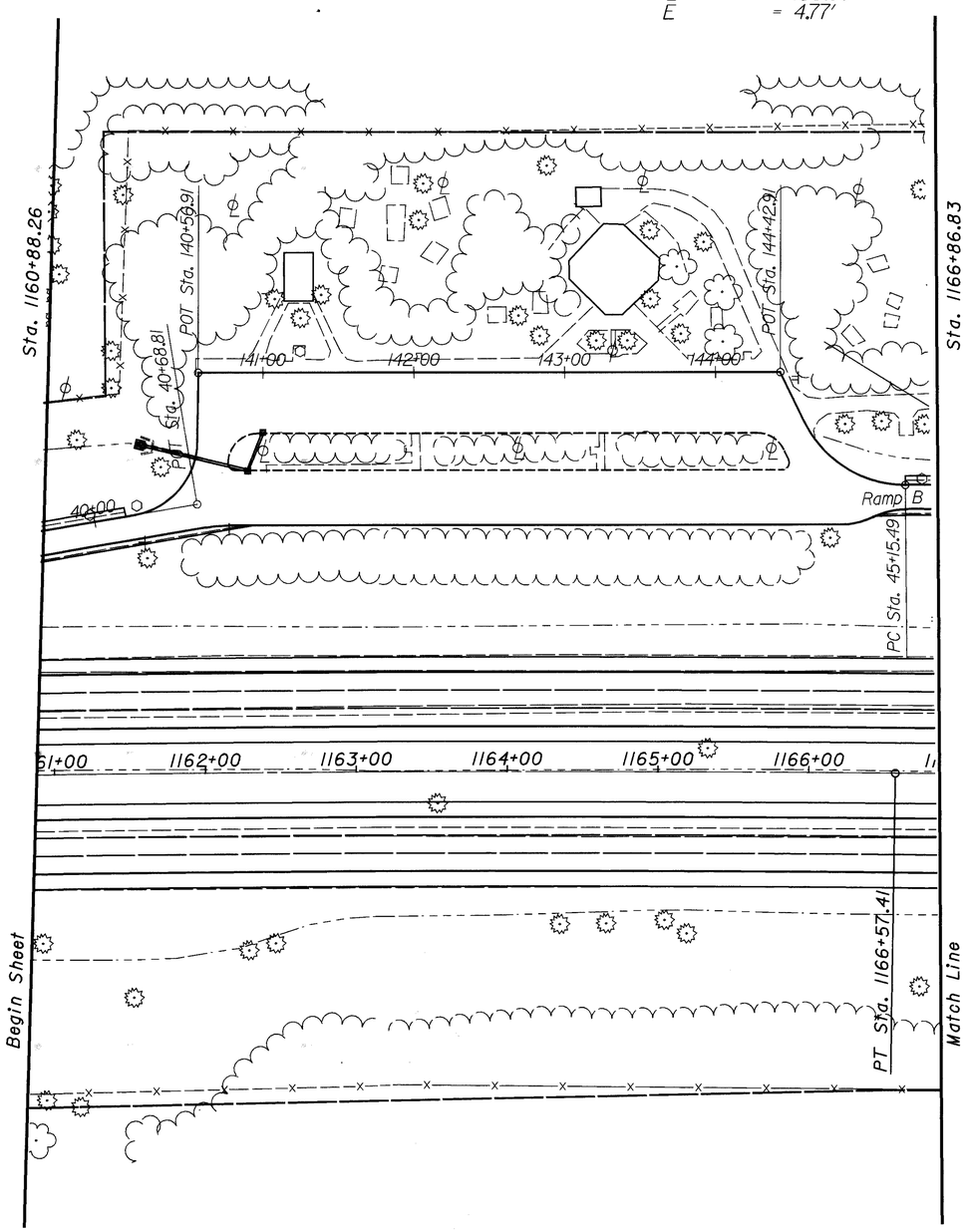
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL SOUTHBOUND REST AREA RAMP "A"
## STA. 1140+00 TO STA. 1157+00

MED-71-15.78

S.B. Rest Area
P. I. Sta. = 45+93.57
△ = 13° 59′ 08" (RT)
Dc = 9° 00′ 00"
R = 636.62′
T = 78.08′
L = 155.39′
E = 4.77′




| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

DESIGN FILE : h:\pd_MED_IR71\DGN\PlanProfile\sra1.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 12:29

N

0 50 100
HORIZONTAL SCALE IN FEET

CALCULATED | CHECKED

**SOUTHBOUND REST AREA**
**STA. 1160+88.26 TO STA. 1166+86.83**

**MED - 71 - 15.78**

469
940

S.B. Rest Area
P. I. Sta. = 51+05.08
△ = 12° 58′ 13″ (LT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 434.20′
L = 864.69′
E = 24.60′

Sta. 1165+33.18

POT Sta. 144+42.9

Sta. 1177+86.49

PT Sta. 55+35.57

PC Sta. 45+15.49

PRC Sta. 46+70.88

Ramp B

SAN

Match Line

Begin Sheet

PT Sta. 1166+57.41

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

SOUTHBOUND REST AREA,, RAMP B
STA. 1165+33.18 TO STA. 1177+86.49

MED - 71 - 15.78

470
940

DESIGN FILE : I:\pd_MED..IR71\DGN\PlanProfile\sbrpal.dgn
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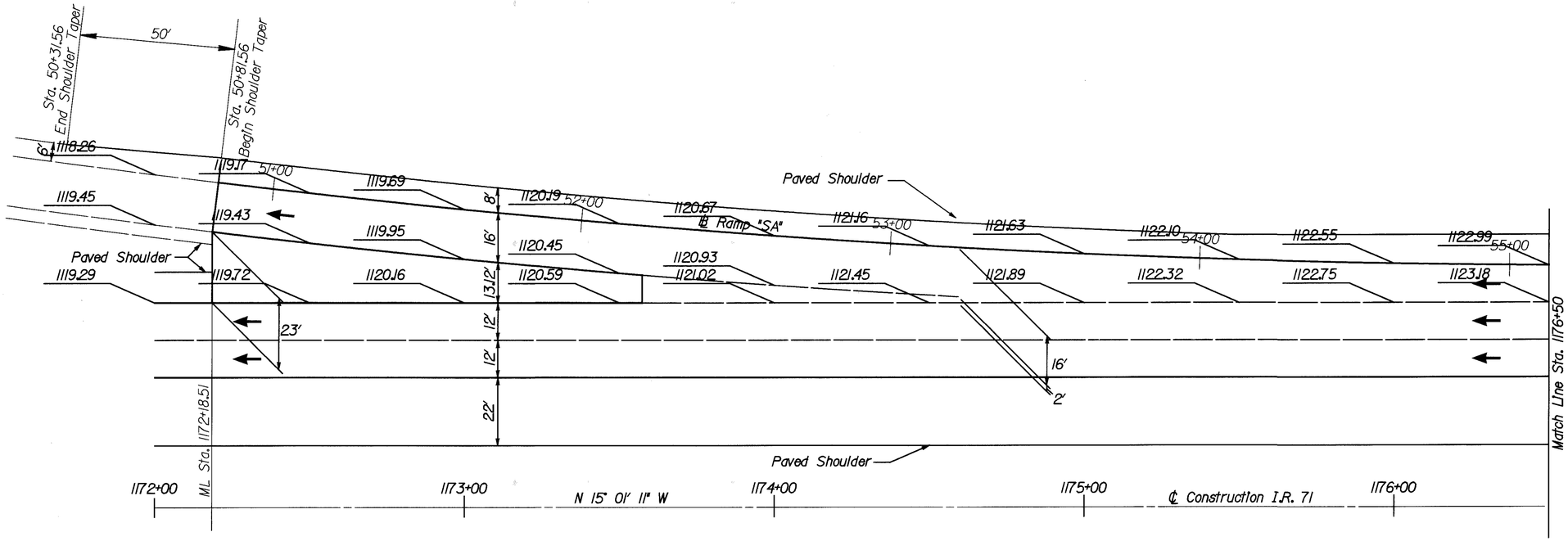
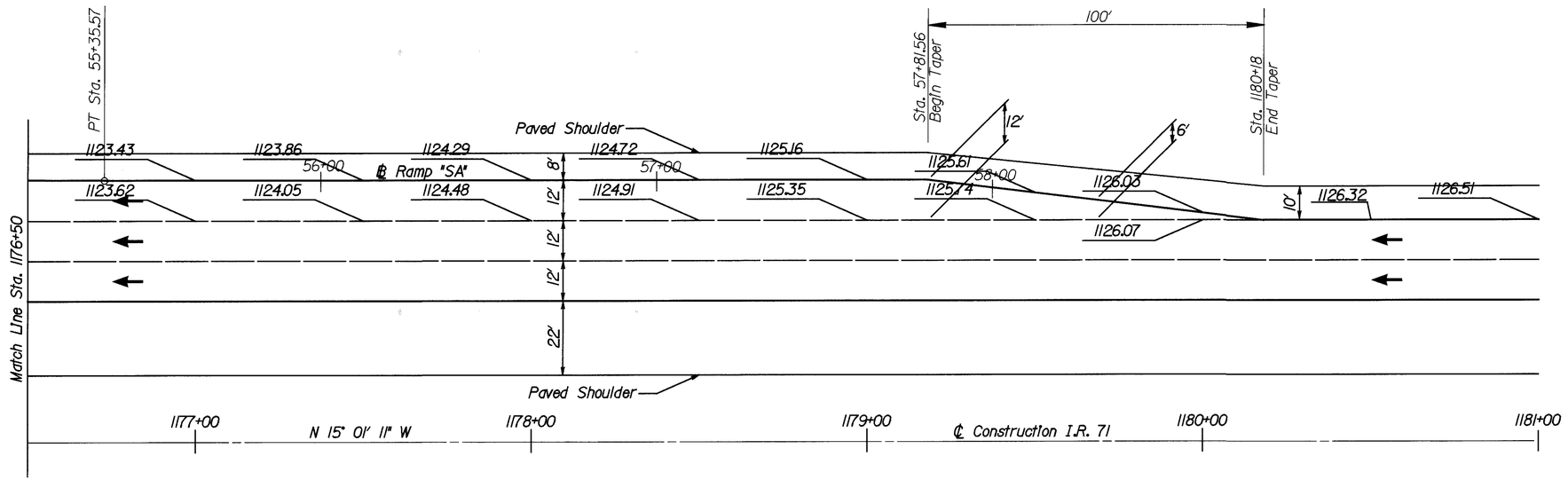
DATE : 03-DEC-1999
TIME : 12:31




N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL SOUTHBOUND REST AREA RAMP "B"
## STA. 1172+00 TO STA. 1181+00

MED-71-15.78

471
940

DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\restareas.dgn
USERNAME : jrogers

DATE : 01-DEC-1999
TIME : 09:05

DATE : 03-DEC-1999
TIME : 12:33

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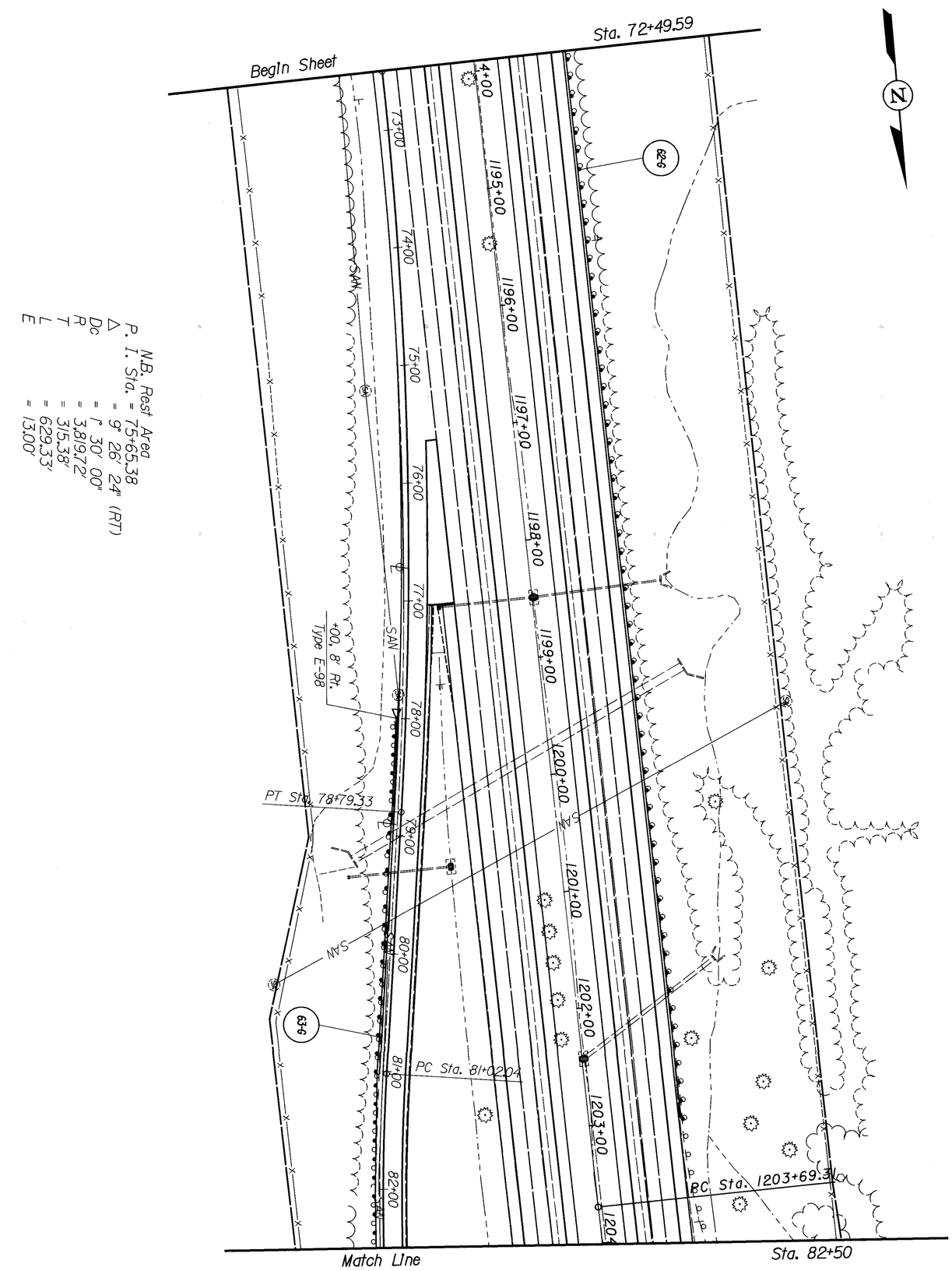



P. I. Sta. = 75+65.38
N.B. Rest Area
Δ = 9° 26' 24" (RT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 315.38'
L = 629.33'
E = 13.00'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

472
940

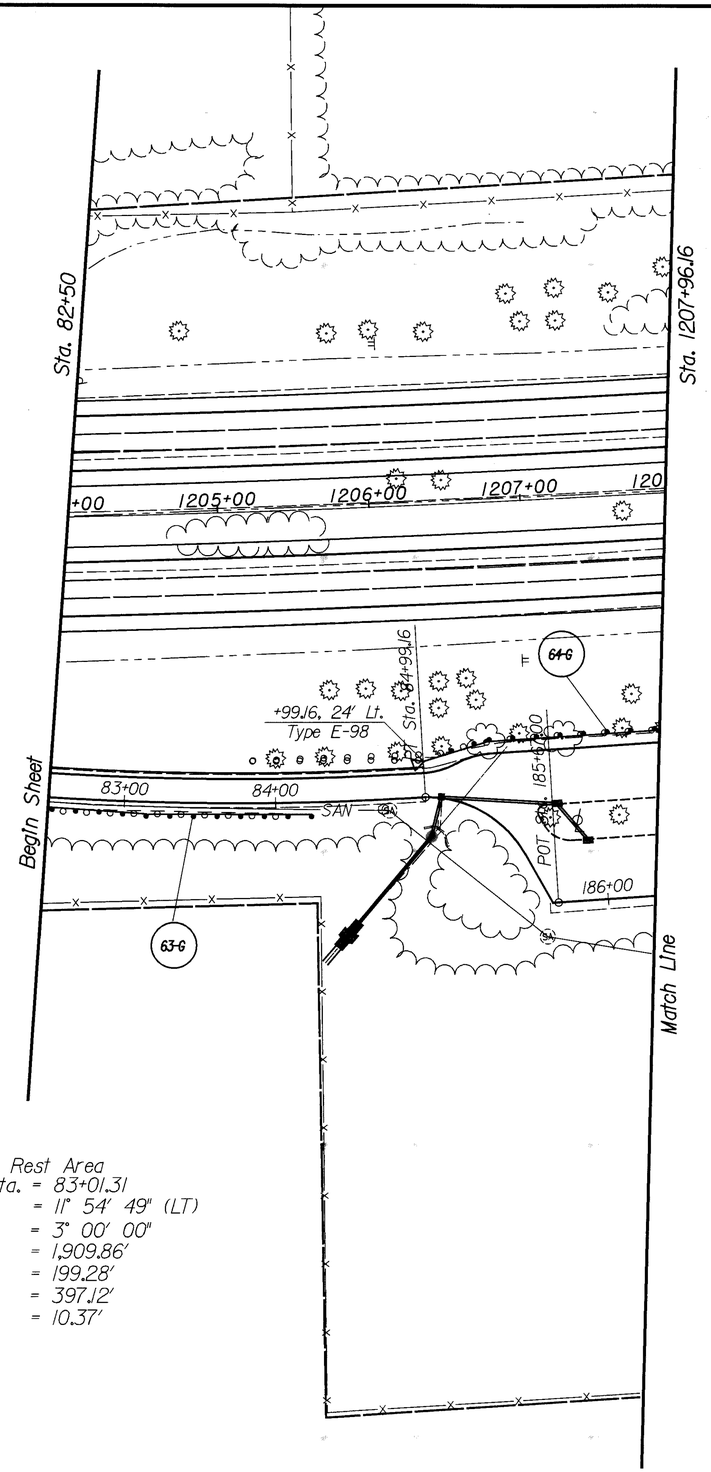
**MED - 71 - 15.78**

**NORTHBOUND REST AREA, RAMP C**
**STA. 72+49.59 TO STA. 82+50**

CALCULATED
CHECKED

0 50 100
HORIZONTAL SCALE IN FEET

N




N.B. Rest Area
P. I. Sta. = 83+01.31
$\Delta$ = 11° 54' 49" (LT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 199.28'
L = 397.12'
E = 10.37'

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

DESIGN FILE : i:\pd\...MED_IR71\DGN\PlanProfile\nbrarpa.dgn
USERNAME : pfought
DATE : 03-DEC-1999
TIME : 12:33

HORIZONTAL SCALE IN FEET
0 50 100
CALCULATED
CHECKED

NORTHBOUND REST AREA RAMP C
STA. 82+50 TO STA. 1207+96.16

MED - 71 - 15.78

473
940

DESIGN FILE : I:\pd_med_ir71\dgn\pavement details\restareas.dgn
USERNAME : jrogers

DATE : 01-DEC-1999
TIME : 09:04

N

0 10 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL NORTHBOUND REST AREA RAMP "C"
## STA. 1190+00 TO STA. 1199+00

MED-71-15.78

474
940

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

# NORTHBOUND REST AREA
## STA. 84+44.12 TO STA. 90+23.96

MED - 71 - 15.78

475
940

DESIGN FILE : k:\pd_MED_IR71\DGN\PlanProfile\nrral.dgn
USERNAME : prought
DATE : 03-DEC-1999
TIME : 12:35

DATE : 03-DEC-1999
TIME : 11:10
7885DMA.DGN

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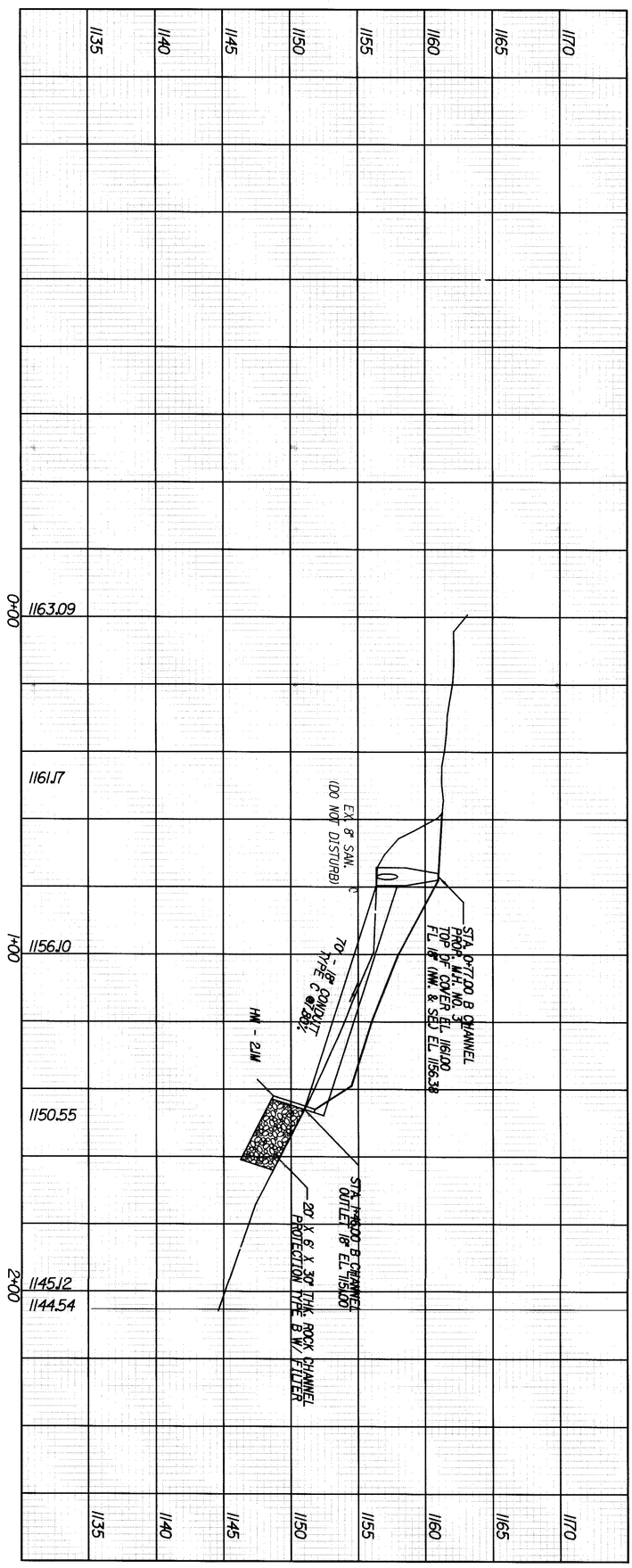
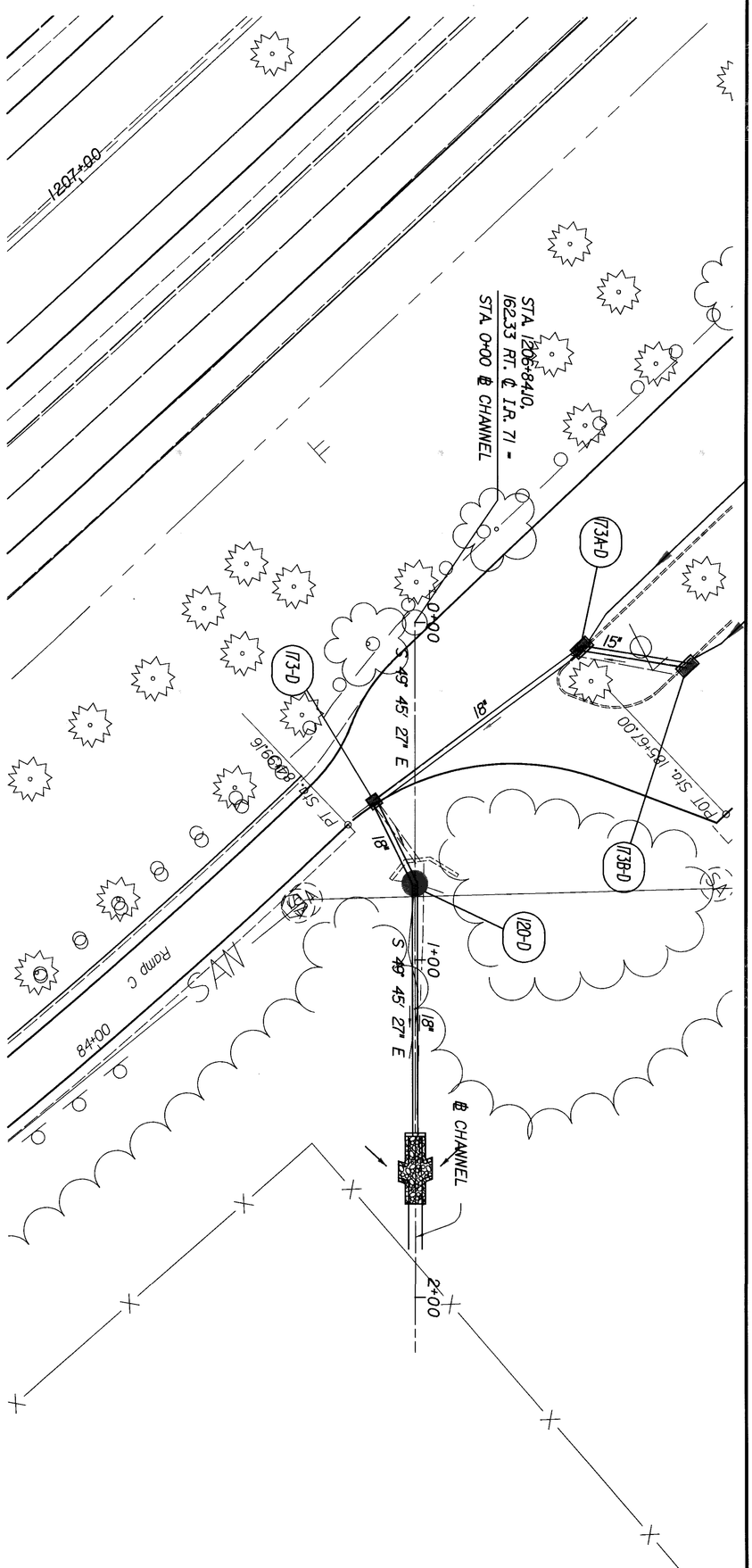


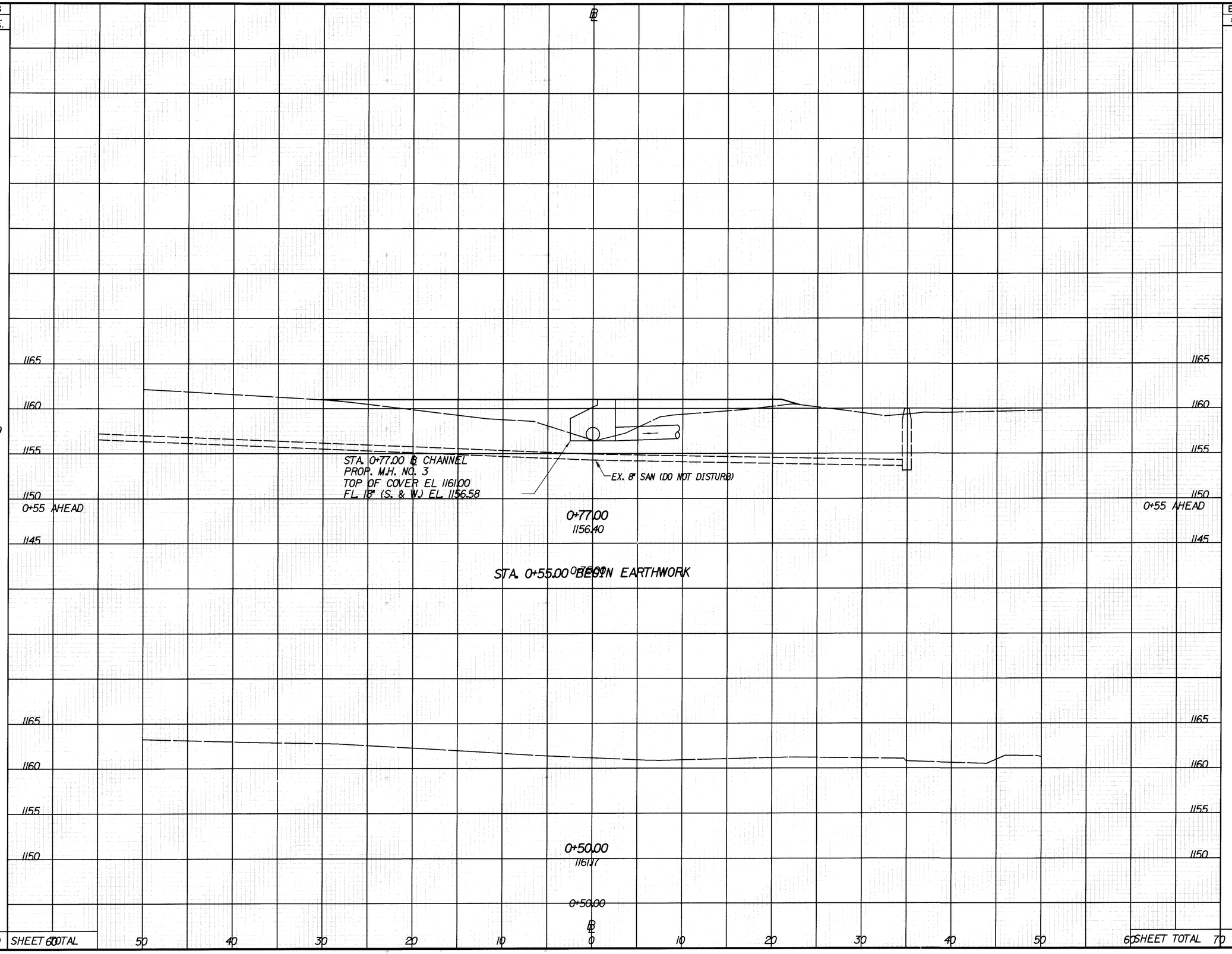

476
940

**MED - 71 - 15.78**

**NORTHBOUND REST AREA CHANNEL DETAIL**

CALCULATED PRS
CHECKED PDG

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 57 | |
| | 139 |
| 57 | |
| | 139 |




| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |
| 0 | 98 | | |
| | | 0 | 60 |
| 0 | 50 | | |
| | | | |
| | | | |
| |

| SEEDING END WIDTH | SEEDING SQ. YDS. | |
|---|---|---|
| | 702 | TOTAL RESTAREA SEEDING AND MULCHING CARRIED TO SUMMARY, SEE SHEET NO. 136. |
| 0 | 0 | AHEAD |
| 10 | 0 | 1+66 BACK |
| | 68 | |
| 66 | | |
| | 177 | |
| 61 | | |
| | 168 | |
| 60 | | |
| | 150 | |
| | 563 | SHEET TOTAL |

℄

TOTAL RESTAREA EARTHWORK CARRIED TO SUMMARY, SHEET NO. 136.

BACK

STA. 1+66.00 END EARTHWORK

1155 / 1150 / 1145 / 1140 / 1160 / 1155 / 1150 / 1145 / 1160 / 1155 / 1150 / 1145 / 1160 / 1155 / 1150 / 1145

6:1 — 1151.25 — 6:1 — 6:1 — 1150.75 — 100:1

STA. 1+46.00 ℄ CHANNEL
FL. 18" (S.)
OUTLET EL. 1151.00

1+50.00
1150.55
1+50.00

40:1 — 8:1 — 20:1 — 1153.63

PROP. 18" STORM

1+25.00
1153.47
1+25.00

80:1

PROP. 18" STORM

EX. 8" SAN (DO NOT DISTURB)

1+00.00
1156.10
1+00.00

℄

50 40 30 20 10 0 10 20 30 40 50

SHEET TOTAL

| END AREA CUT | END AREA FILL | VOLUME CUT | VOLUME FILL |
|---|---|---|---|
| | | 28 | 294 |
| 0 | 0 | | |
| | | 7 | 5 |
| 23 | 16 | | |
| | | 21 | 42 |
| 0 | 74 | | |
| | | 0 | 121 |
| 0 | 56 | | |
| | | 0 | 66 |
| | | 28 | 234 |

CALCULATED PRS
CHECKED PDG

# CROSS SECTIONS
## N.B. REST AREA CHANNEL

MED - 71 - 15.78

478
940

DESIGN FILE : i:\pd_med_1r71\dgn\rreltd\finaldrinage\7885dmb.dgn
USERNAME : jrogers
DATE : 03-DEC-1999
TIME : 12:19

DATE : 03-DEC-1999
TIME : 12:36

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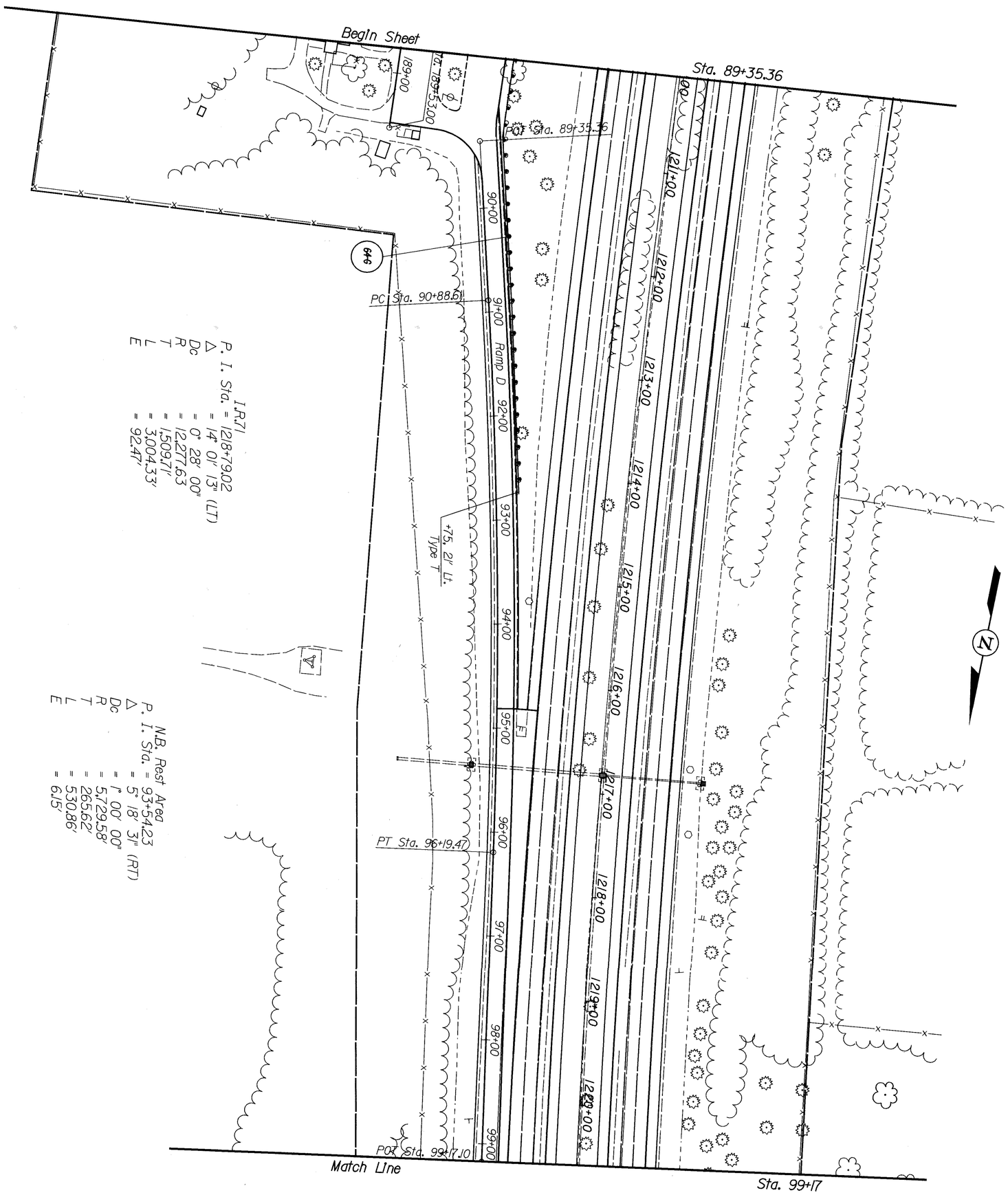
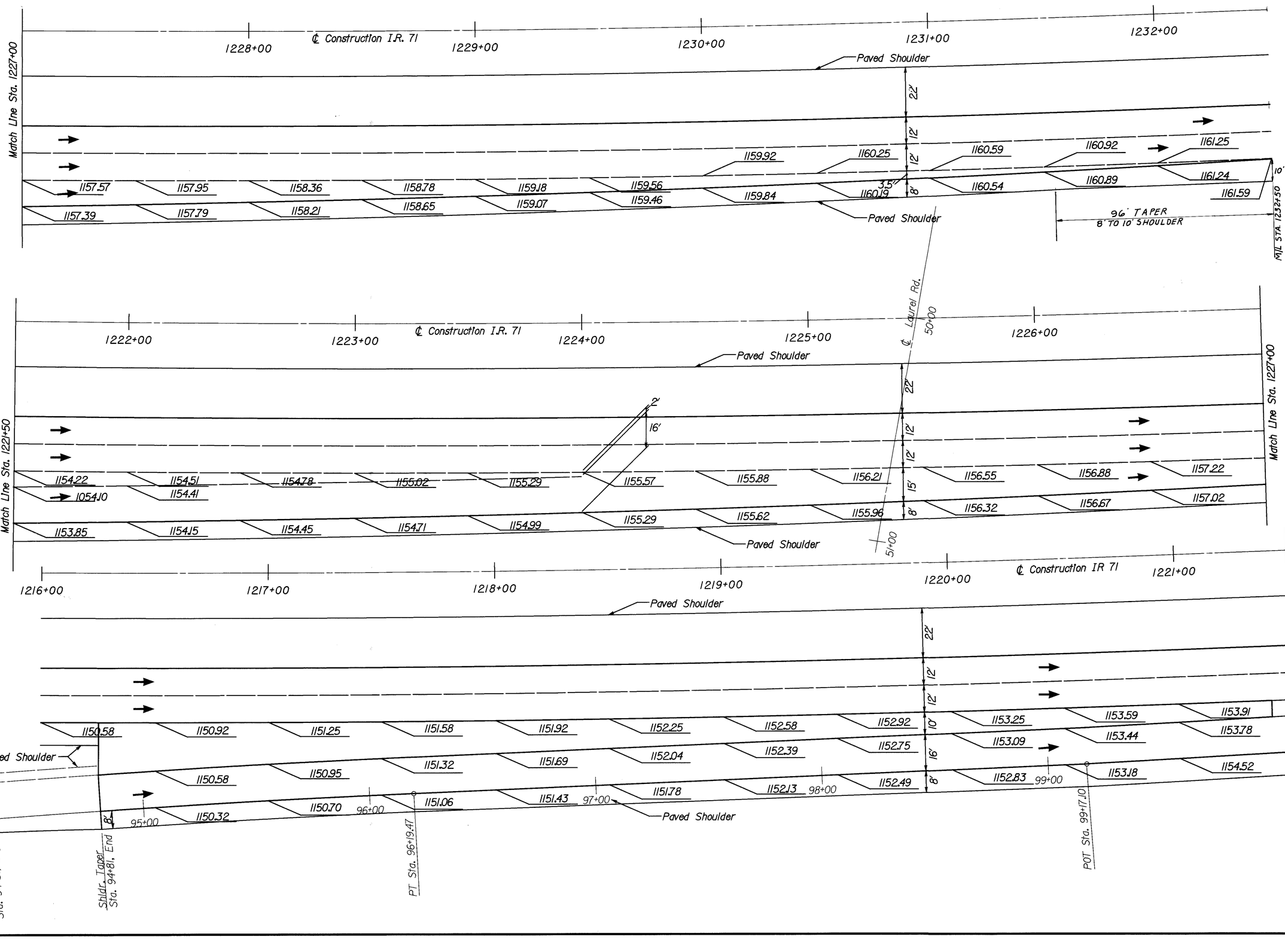



| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

| | | | | |
|---|---|---|---|---|
| 479/940 | MED - 71 - 15.78 | NORTHBOUND REST RAMP D<br>STA. 89+35.36 TO STA. 99+17 | CALCULATED / CHECKED | 0 50 100<br>HORIZONTAL SCALE IN FEET |

I:\pd_med_ir71\dgn\pavement details\rest area ramp.dgn
DESIGNFILE : jrogers
USERNAME :
01-DEC-1999 DATE :
09:04 TIME :




HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL NORTHBOUND REST AREA RAMP "D"
# STA. 1216+00 TO STA. 1232+50

MED-71-15.78

480
940

Bi-Directional Impact Attenuator Type 2-98

Connect Bi-Directional Impact Attenuator Type 2-98 directly to concrete barrier without use of separate backup.

Connect Bi-Directional Impact Attenuator Type 2-98 directly to concrete barrier without use of separate backup.

Bi-Directional Impact Attenuator Type 2-98

5'-6" 24" 5'-6"

49+00 50+00 51+00 52+00 ℄ SR 303

14' Transition as per Std. Dwg. GR-3.5M

185.5' Barrier Type A See Std. Dwg. RM-4.4M

14' Transition as per Std. Dwg. GR-3.5M

40' Barrier Width Transition as per Std. Dwg. RM-4.4M

40' Barrier Width Transition as per Std. Dwg. RM-4.4M

## Bridge Pier Protection

Begin Sheet

Sta. 40+00

Match Line

Sta. 52+50

℄ Ramp A

℄ Ramp A Spur

℄ Ramp B Spur

℄ Ramp B

P.C. Sta. 53+06.82

P.T. Sta. 51+73.84

P.S.C. Sta. 49+73.38

P.S. Sta. 46+12.56

48+12.56

+37, 8'Lt. Type 1

+13, 44'Lt. Type E-98

+40.9, 5.5'Rt. Type 2-98

+20, 47.5'Rt. Type E-98

+528, 8'Lt. Type B-98

+81.50, ℄ Type 2-98

POT Sta. 48+03.27

POT Sta. 48+47.

POT Sta. 47+58.8

PC Sta. 44+17.58

PT Sta. 45+20.26

PC Sta. 47+20.26

POT Sta. 31+01.45

POT Sta. 37+01.45

79-G 85-G 93-G 104-G 72-G

SR 303

N 89° 15' 06" E

N 20° 44' 54" W

N 87° 28'

S 16° 14' 07" E

S 16° 14' 07" E

S 16° 14' 07" E

R=1910.00' L=1910.00'

T=1910.00' CH=S 16° 14' 07" E

127+00 127.3+00 127.4+00 1267+00 1269+00 1265+00 1264+00

UCATV

SAN

EX. 10" SAN.

EX. 16" WATER LINE

UNDERGROUND CATV (CABLEVISION)

EX. UNDERGROUND ELECTRIC FOR LIGHTING

OVERHEAD ELECTRIC DISTRIBUTION LINE (OHIO EDISON) (CABLEVISION)

OVERHEAD TELEPHONE LINES (GTE)

6" Varies 5'-11" 6"

Curb Removed

Section A-A (Existing)

Varies 6'-18"

For quantities see sht. 135.

1¼" 448 Asphalt Concrete Surface Course Type 1, PG 64-22
407 Tack Coat
1¾" 448 Asphalt Concrete Intermediate Course Type 2, PG 64-22
407 Tack Coat for Intermediate Course
6" 301 Bituminous Aggregate Base
6" 304 Aggregate Base
203 Subgrade Compaction

Section A-A (Proposed)

DESIGN FILE : i:\pd_MED_IR71\DGN\sr303sl.dgn
USERNAME : jrogers
DATE : 30-DEC-1999
TIME : 14:40

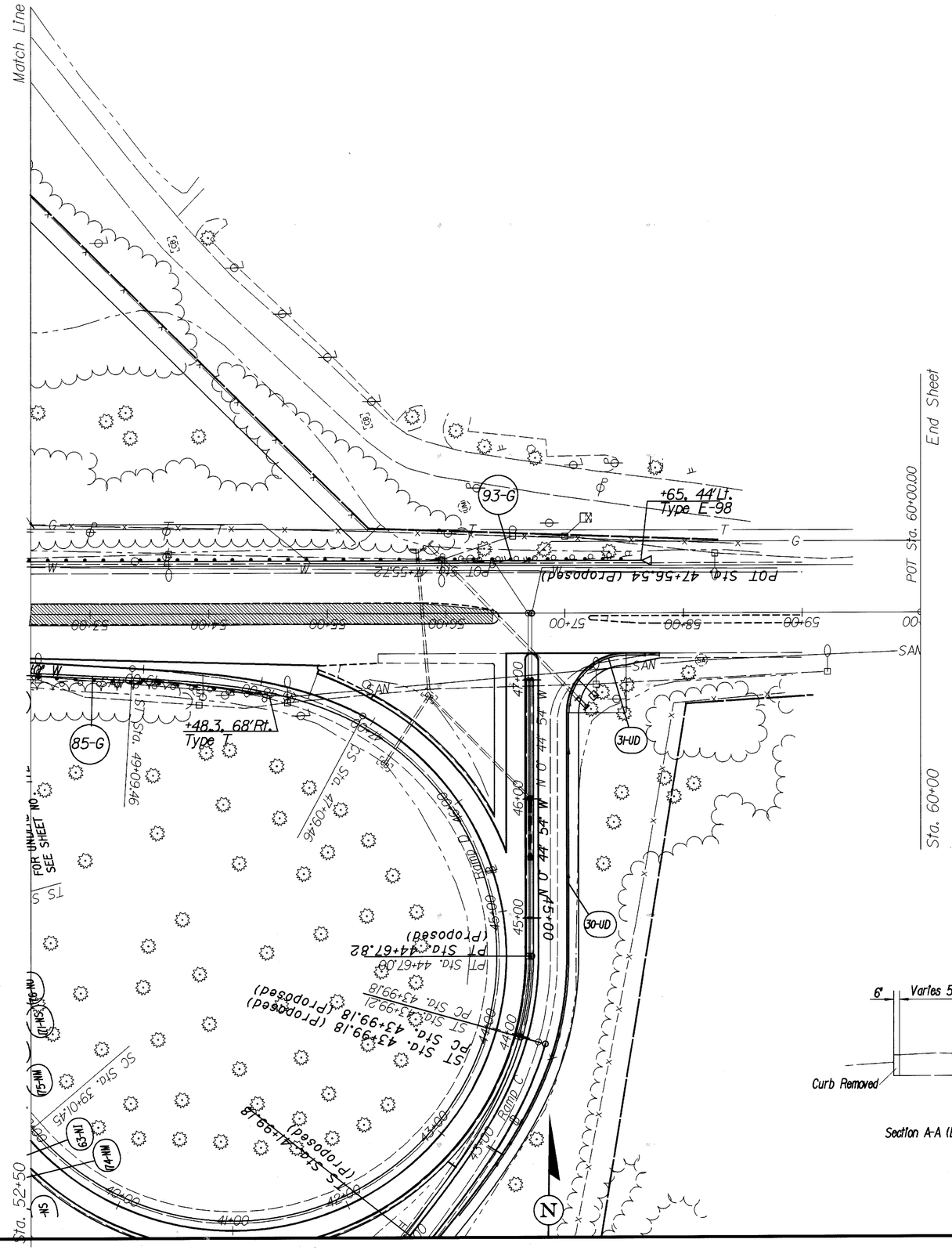
HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

SR 303
Sta 40+00.00 to Sta 56+50.00

MED - 71 - 15.78

482
940




6" Varies 5'-17' 6"

Curb Removed

Section A-A (Existing)

Varies 6'-18"

- 1¼" 448 Asphalt Concrete Surface Course Type 1, PG 64-22
- 407 Tack Coat
- 1¾" 448 Asphalt Concrete Intermediate Course Type 2, PG 64-22
- 407 Tack Coat for Intermediate Course
- 6" 301 Bituminous Aggregate Base
- 6" 304 Aggregate Base
- 203 Subgrade Compaction

Section A-A (Proposed)

For quantities see sht. 135.

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED

CHECKED

SR 303
Sta 52+50.00 to Sta 60+00.00

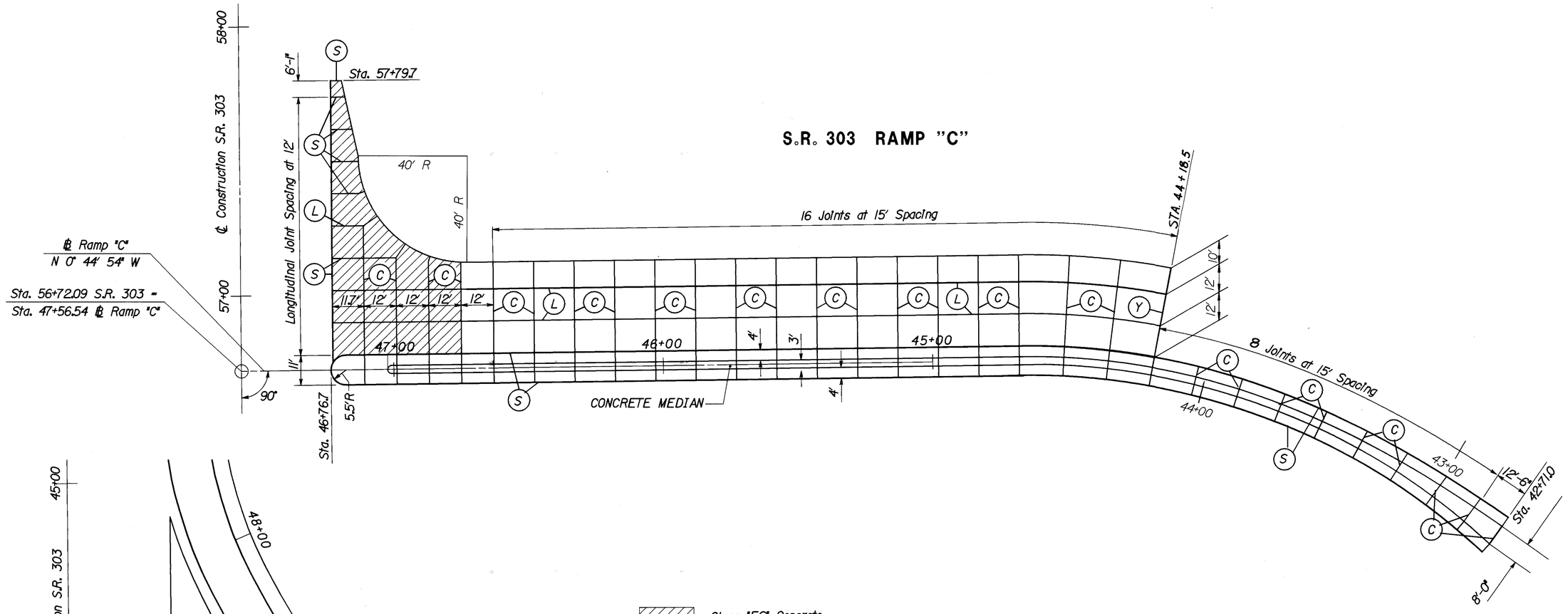
MED - 71 - 15.78

483
940

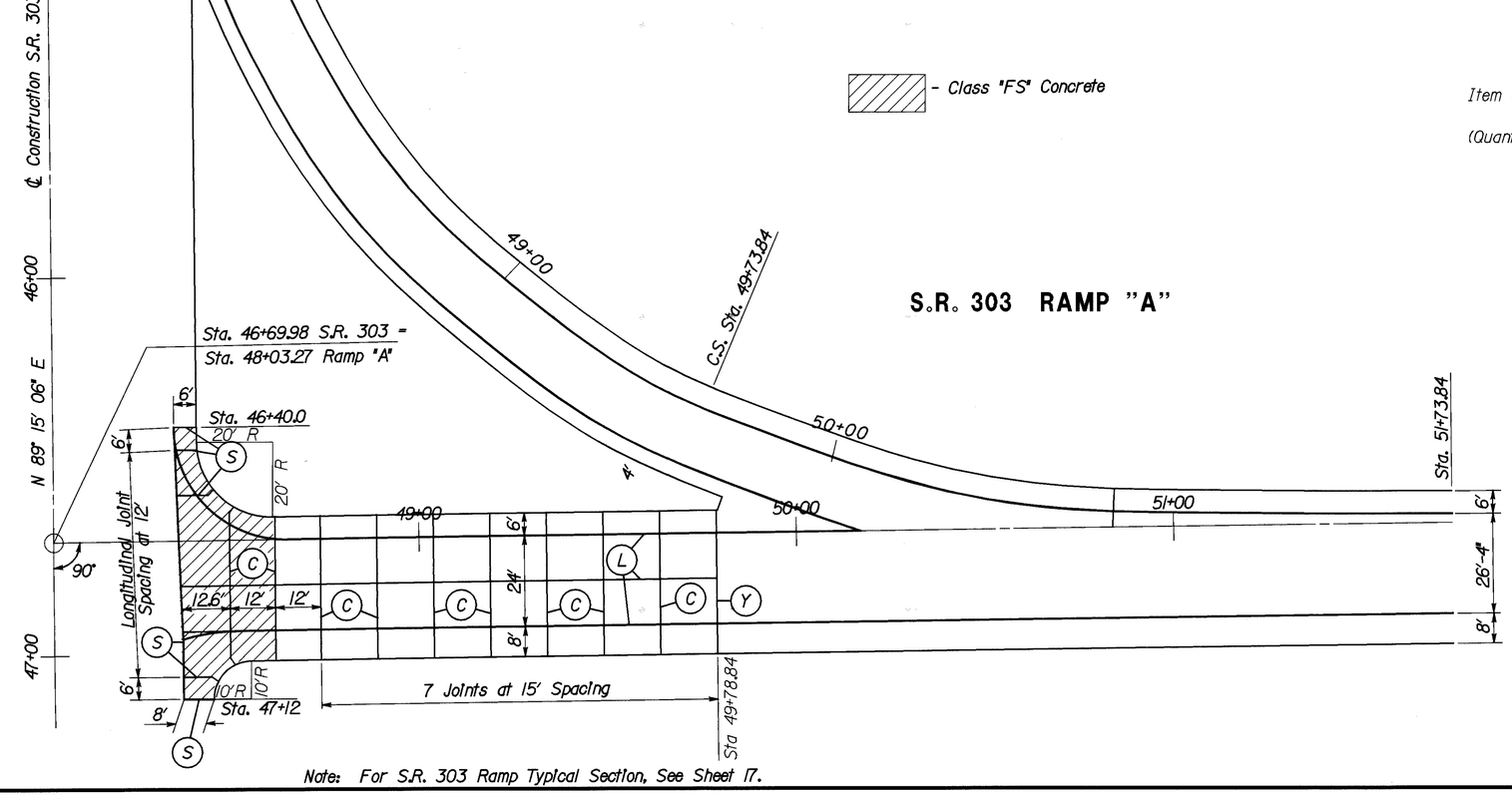
DESIGN FILE : i:\pdf_MED_IR71\DGN\sr303s2.dgn
USERNAME : pfought

DATE : 08-DEC-1999
TIME : 12:08

## S.R. 303 RAMP "C"




## S.R. 303 RAMP "A"




- Class "FS" Concrete

Item 830 Concrete Median 580 Sq. Yds.
(CADD generated quantity)
(Quantity carried to the General Summary.)

## LEGEND

- (L) Standard Longitudinal Joint As Per BP-2.1
- (S) Standard Longitudinal Joint As Per BP-2.1 Without Tie Bars
- (C) Contraction Joint As Per BP-2.1
- (Y) Butt Joint Between Existing Pavement and Proposed Pavement, A Doweled Type Y Joint As Per BP-2.5 Shall Be Provided. Grouting and Drilling Requirements Shall Be Per Specification 255 and BP-2.5 Except The Requirement That The Drilling Device Shall Be Capable Of Drilling Three Holes At One Time Shall Be Waived.

Note: For S.R. 303 Ramp Typical Section, See Sheet 17.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED

# PAVEMENT JOINT DETAIL
# S.R. 303 RAMPS "A" & "C"

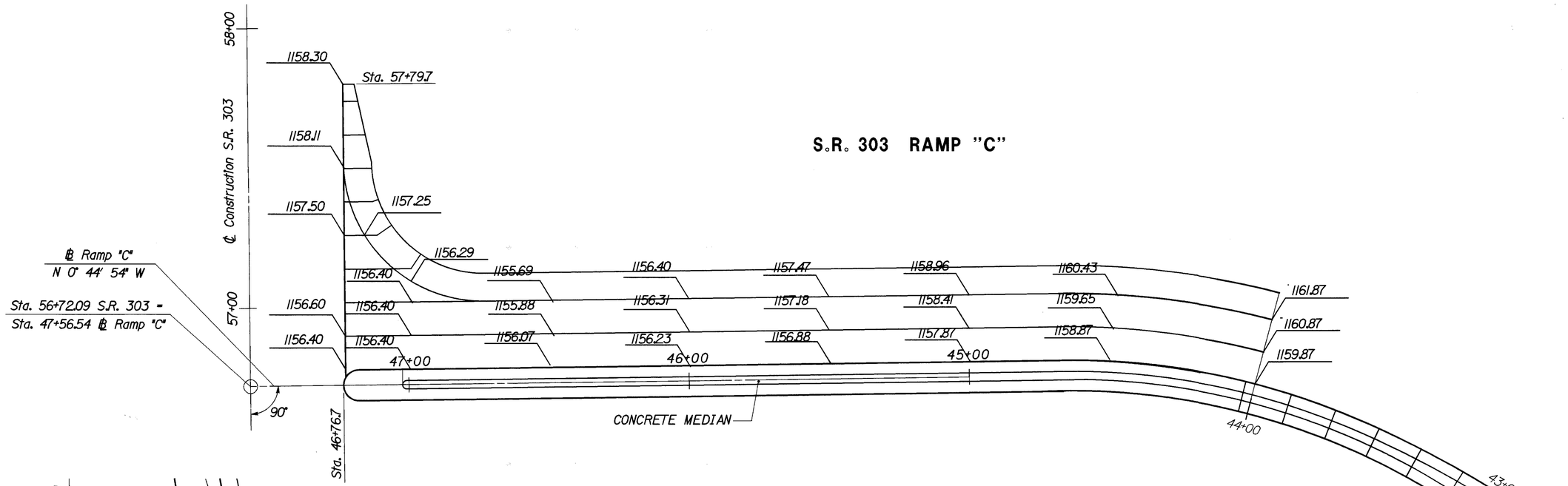
MED-71-15.78

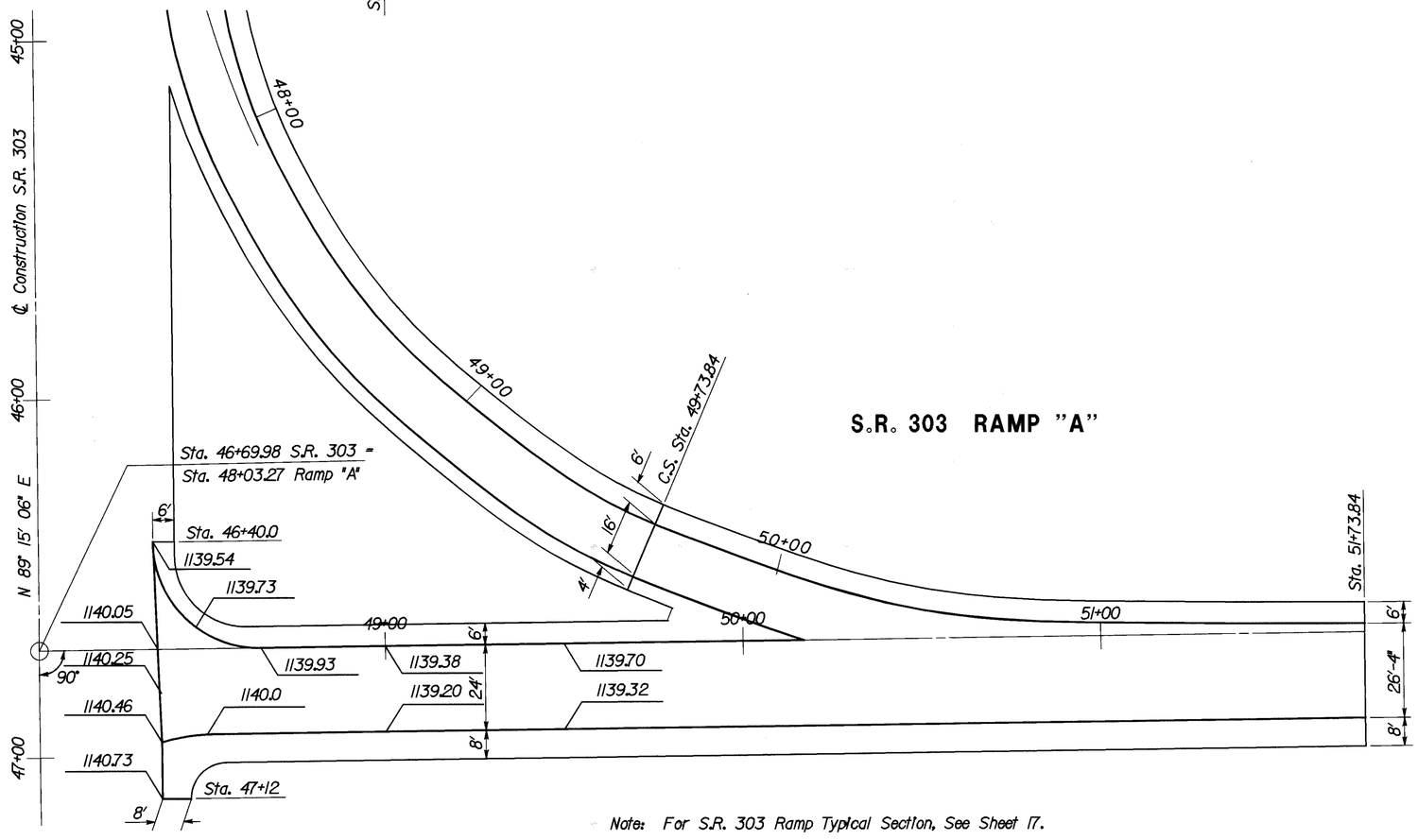
484
940

DESIGN FILE : i:\pd_med_lr71\dgn\pavement details\sr303.dgn
USERNAME : jrogers
DATE : 06-DEC-1999
TIME : 07:48

DESIGN FILE : i:\pd_med_ir71\dgn\pavement details\sr303.dgn
USERNAME : jrogers

DATE : 01-DEC-1999
TIME : 08:59




Note: For S.R. 303 Ramp Typical Section, See Sheet 17.

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED DJV
CHECKED JWR

# PAVEMENT JOINT DETAIL
## S.R. 303 RAMPS "A" & "C"

MED-71-15.78

484A
940

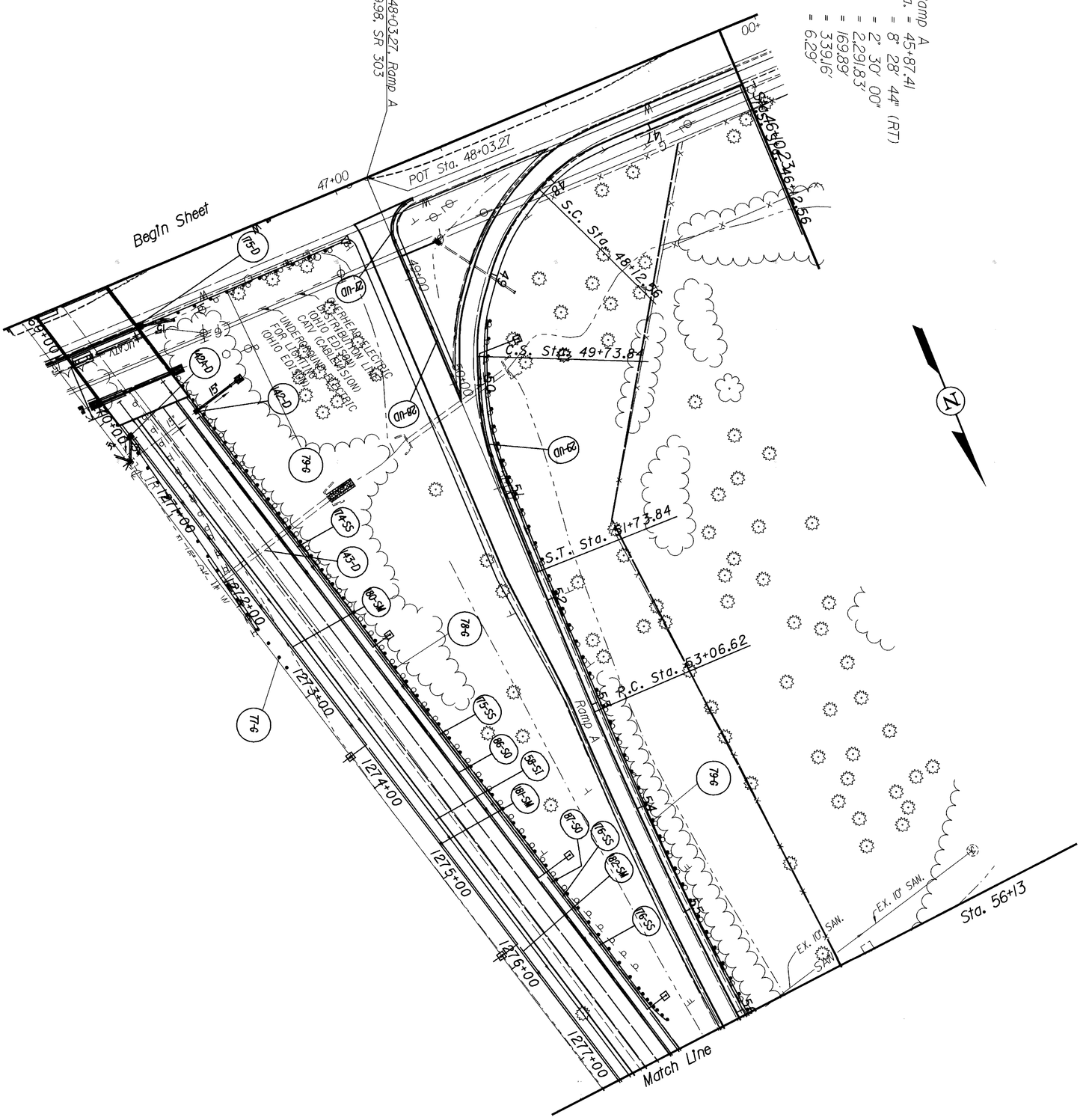
DATE : 07-DEC-1999
TIME : 09:10

DESIGN FILE : h:\pd_MED_IR71\DGN\PlanProfile\pepper.dgn
USERNAME : jpuente

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

Ramp A
P. I. Sta. = 48+31.13
Δ = 61° 31' 16" (LT)
Dc = 16° 22' 13"
R = 350.00'
Ls = 200.00'
Theta = 16° 22' 13"
LT = 133.91'
ST = 67.19'
x = 198.37'
y = 18.94'
k = 99.73'
p = 4.75'
Δc = 28° 46' 50" (LT)
Lc = 175.81'
Ts = 310.87'
Es = 62.83'

Ramp A
P. I. Sta. = 45+87.41
Δ = 8° 28' 44" (RT)
Dc = 2° 30' 00"
R = 229.83'
T = 169.89'
L = 339.16'
E = 6.29'




| | | | | |
|---|---|---|---|---|
| 485 / 940 | MED - 71 - 15.78 | SR 303 RAMP A<br>STA. 48+03.27 TO STA. 56.13 | CALCULATED<br>CHECKED | 0 50 100<br>HORIZONTAL SCALE IN FEET |

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

DATE : 06-DEC-1999
TIME : 07:46
DESIGN FILE : i:\pd\..MED.IR71\DGN\PlanProfile\sr303rdl.dgn
USERNAME : pfought

N

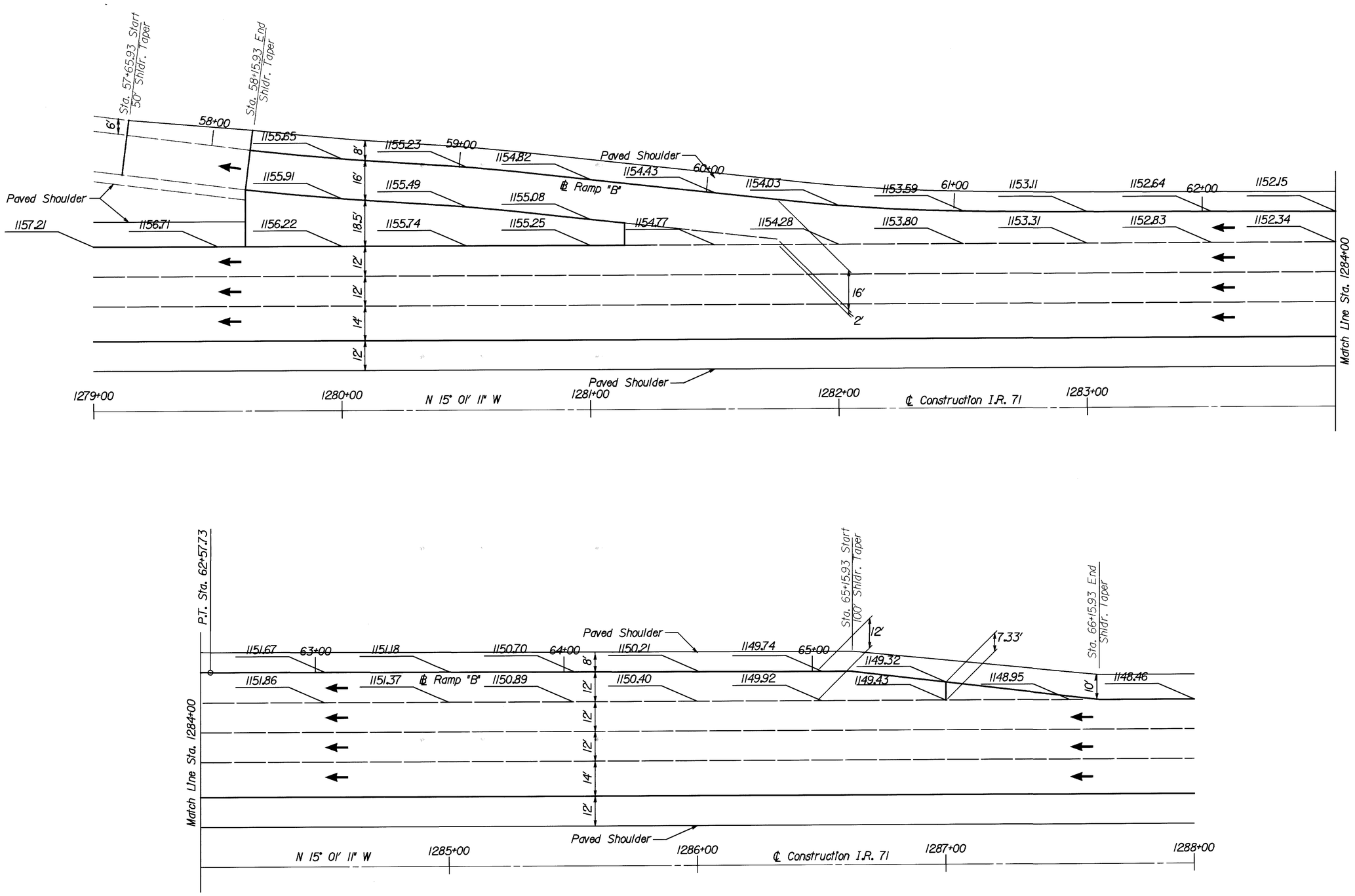
HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

SR 303 RAMP A
STA. 56+13 TO STA 62+58

MED - 71 - 15.78

485A
940

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USERNAME : pfought

DATE : 08-DEC-1999
TIME : 11:07

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL S.R. 303 RAMP "A"
## STA. 1279+00 TO STA. 1288+00

MED-71-15.78

486
940

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

DESIGN FILE : i:\pod_MED_JR7\DGN\PlanProfile\sr303rbl.dgn
USERNAME : pfought

DATE : 03-DEC-1999
TIME : 12:38

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

SR 303 RAMP B
STA. 32+00 TO STA. 42+00

MED - 71 - 15.78

487
940

Ramp B
P. I. Sta. = 49+49.13
△ = 90° 00' 00" (LT)
Dc = 24° 54' 40"
R = 230.00'
LS = 200.00'
Theta = 24° 54' 40"
LT = 134.68'
ST = 67.89'
x = 196.25'
y = 28.60'
k = 99.37'
p = 7.20'
△c = 40° 10' 40" (LT)
Lc = 161.28'
Ts = 336.57'
Es = 105.45'

DESIGN FILE : i:\pd_MED_IR71\DGN\pavement details\sr303.dgn
USERNAME : pfought
DATE : 08-DEC-1999
TIME : 11:08

N

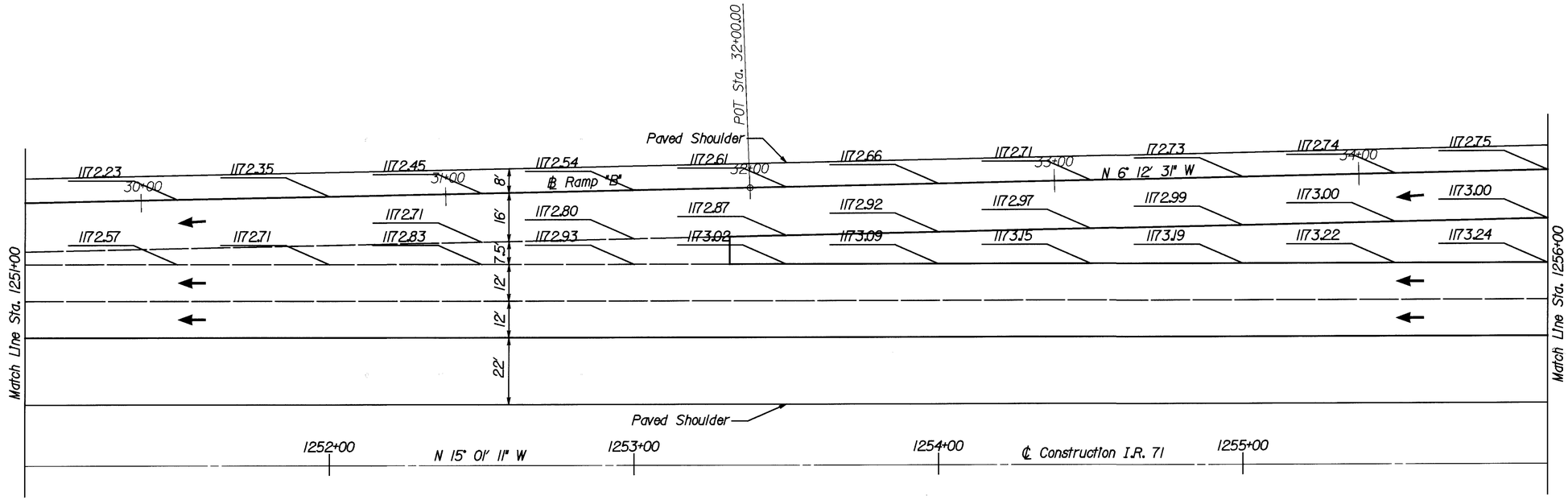
0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED DJV
CHECKED JWR

**PAVEMENT DETAIL S.R. 303 RAMP "B"**
**STA. 1241+00 TO STA. 1251+00**

**MED-71-15.78**

489
940

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USERNAME : pfought

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TIME : 12:05

N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL S.R. 303 RAMP "B"
## STA. 1251+00 TO STA. 1260+00

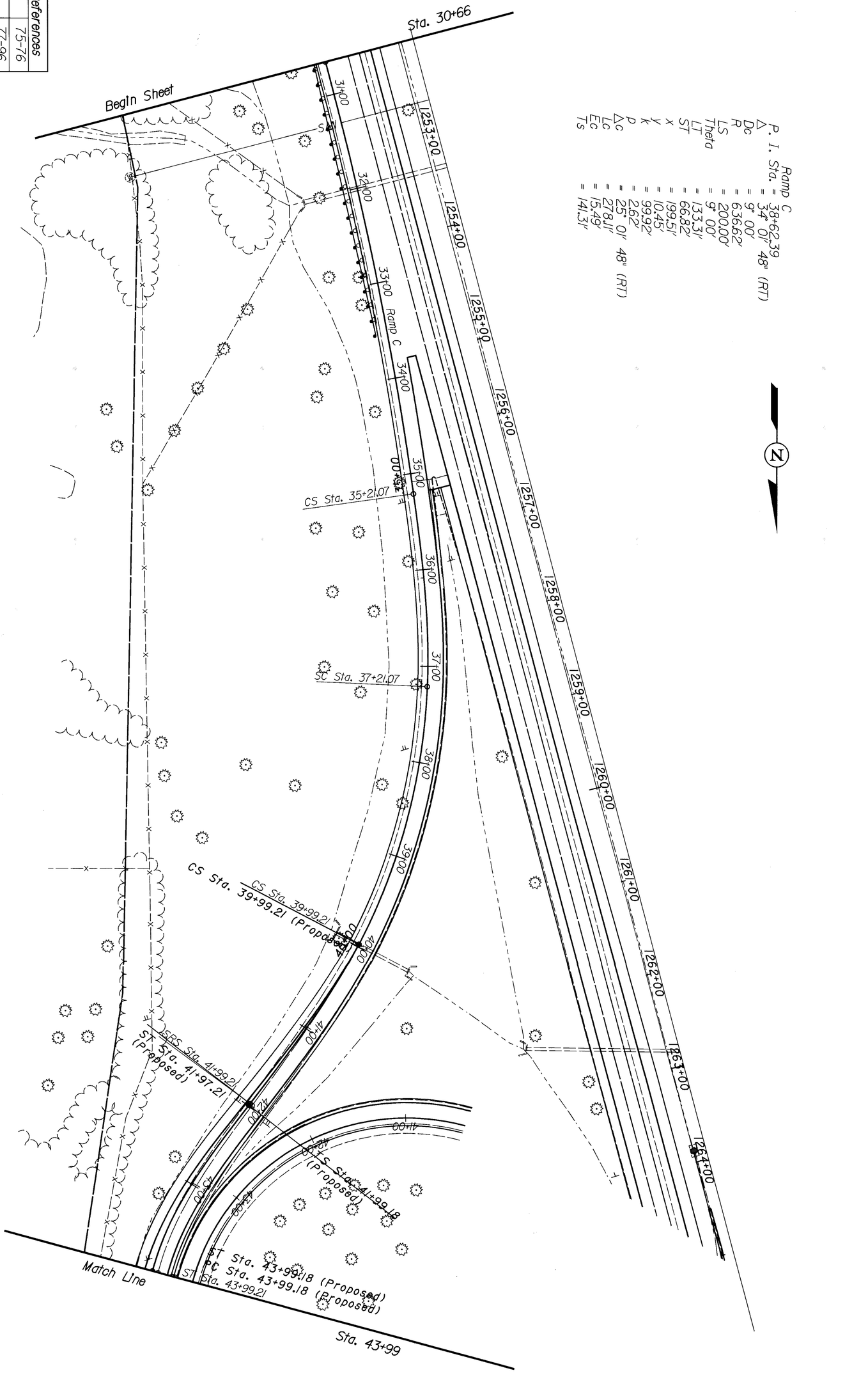
MED-71-15.78

490
940

DATE : 06-DEC-1999
TIME : 07:50

DESIGN FILE : I:\pd_MED_IR71\DGN\PlanProfile\sr303rcl.dgn
USERNAME : pfought

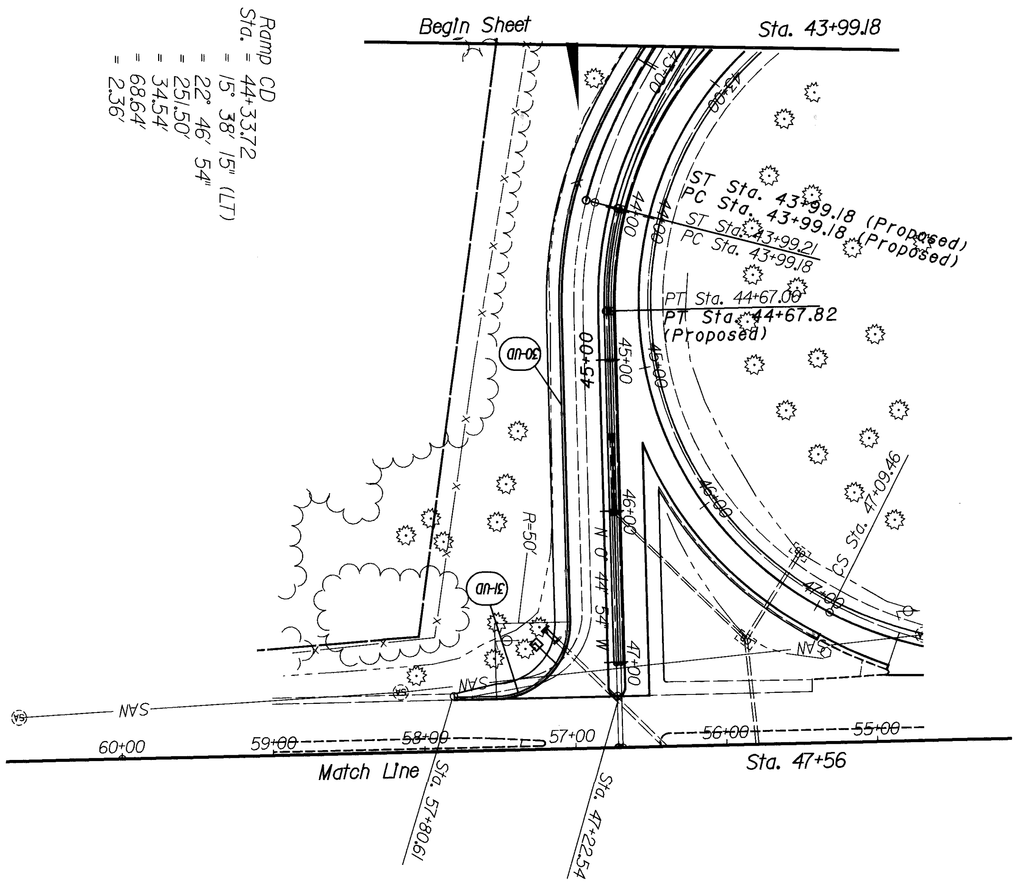
| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |




| | | | |
|---|---|---|---|
| 491 / 940 | MED - 71 - 15.78 | SR 303 RAMP C<br>STA. 30+66 TO STA. 43+99 | CALCULATED<br>CHECKED<br>0 50 100<br>HORIZONTAL SCALE IN FEET |

| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

P. I. Sta. = Ramp CD 44+33.72
Δ = 15° 38' 15" (LT)
Dc = 22° 46' 54"
R = 251.50'
T = 34.54'
L = 68.64'
E = 2.36'



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USERNAME : pfought

DATE : 02-DEC-1999
TIME : 12:05

HORIZONTAL SCALE IN FEET
0 10 20 40

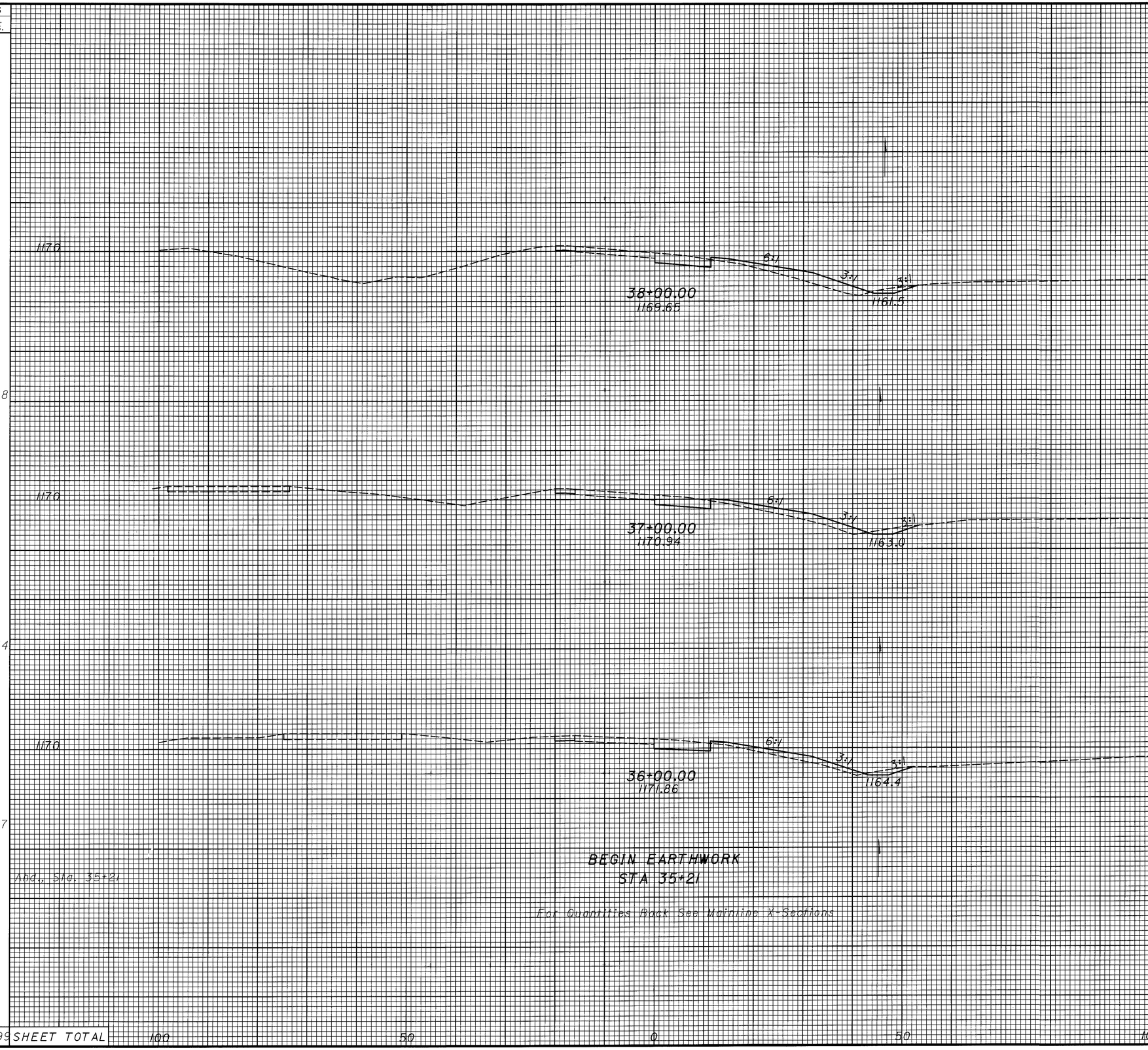
CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL S.R. 303 RAMP "C"
## STA. 1248+00 TO STA. 1258+00

MED-71-15.78

493
940

| SEEDING | | END AREA | | VOLUME | | CALCULATED | CHECKED |
|---|---|---|---|---|---|---|---|
| END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL | NJV | JWR |
| | | | | | | | |




| | | | | | | |
|---|---|---|---|---|---|---|
| 52 | | 30 | 41 | | | |
| | 578 | | | 115 | 135 | |
| 52 | | 32 | 32 | | | |
| | 544 | | | 115 | 107 | |
| 46 | | 30 | 26 | | | |
| | 377 | | | 94 | 67 | |
| 40 | | 34 | 20 | | | |
| | 1499 SHEET TOTAL | | SHEET TOTAL | 324 | 309 | |

100 50 0 50 100

# CROSS SECTIONS - S.R. 303 RAMP C
## STA. 36+00 TO STA. 38+00

MED-71-15.78

494
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| 44 | 522 |
| 50 | 511 |
| 42 | 522 |
| 52 | |
| | 1555 |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 38 | 26 | | |
| | | 133 | 102 |
| 34 | 29 | | |
| | | 122 | 100 |
| 32 | 25 | | |
| | | 115 | 122 |
| 30 | 41 | | |
| | | 370 | 324 |

CALCULATED N.J.V.
CHECKED J.W.R.

# CROSS SECTIONS - S.R. 303 RAMP C
## STA. 39+00 TO STA. 41+00

MED-71-15.78

495
940

| SEEDING | | | END AREA | | VOLUME | |
|---|---|---|---|---|---|---|
| STA. | END WIDTH | SQ. YDS. | CUT | FILL | CUT | FILL |
| 50 | | | | | | |
| | | | 130 | 2 | | |
| 522 | | | | | 389 | 26 |
| 44 | | | 80 | 12 | | |
| 489 | | | | | 219 | 70 |
| 44 | Stg. 41+00 | | 38 | 26 | | |
| | 1011 | SHEET TOTAL | | | 608 | 96 |




CALCULATED NJV

CHECKED JWR

CROSS SECTIONS - S.R. 303 RAMP C

STA. 42+00 TO STA. 43+00

MED-71-15.78

496
940

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | 400 |
| | |
| 58 | |
| | 644 |
| | |
| 58 | |
| | 611 |
| | |
| 52 | |
| | 511 |
| | |
| 40 | |
| | 500 |
| 50 | |
| | 2344 |

Seeding Ahd. to S.R. 303

Bk.

11660

11660

58

644

STA. 46+00, ℄ RAMP C-D
EX. C.B. (TO BE REMOVED)

STA. 45+97, 15' RT.
PROP. C.B. NO. 3A

EX. 18" CONDUIT

46+00.00
1156.23

611

11660

52

STA. 45+50, ℄ RAMP C-D
EX. C.B. (TO BE REMOVED)

45+00.00
1157.87

STA. 45+50, 15' RT.
PROP. C.B. NO. 3A

511

℄ Ramp C

11660

40

44+00.00
1159.87

500

50

Sta. 43+00

SHEET TOTAL

100 50 0 50 100

# END EARTHWORK
## STA 47+22

Earthwork Ahd. to S.R. 303

11660

11660

11667

6:1

3:1

1152.2

46+50.00
1156.07 EX. 30" CONDUIT

SEE DRAINAGE DETAILS
SHEET NO. 5/6.

11660

11660

6:1

2.5:1

1152.7

6:1

2:1

1154.7

6:1

2:1

1158.8

Sta. 43+00

SHEET TOTAL

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | 220 | 40 |
| Bk. 160 | 20 | | |
| | | 361 | 22 |
| 230 | 4 | | |
| | | 889 | 9 |
| 250 | 1 | | |
| | | 711 | 13 |
| Ahd. 134 | 6 | | |
| Bk. 116 | 6 | | |
| | | 456 | 13 |
| 130 | 2 | | |
| | | 2996 | 121 |

CALCULATED N.J.V.
CHECKED J.W.R.

CROSS SECTIONS - S.R. 303 RAMP CD
STA. 44+00 TO STA. 46+50

MED-71-15.78

497
940

DATE : 06-DEC-1999
TIME : 10:39

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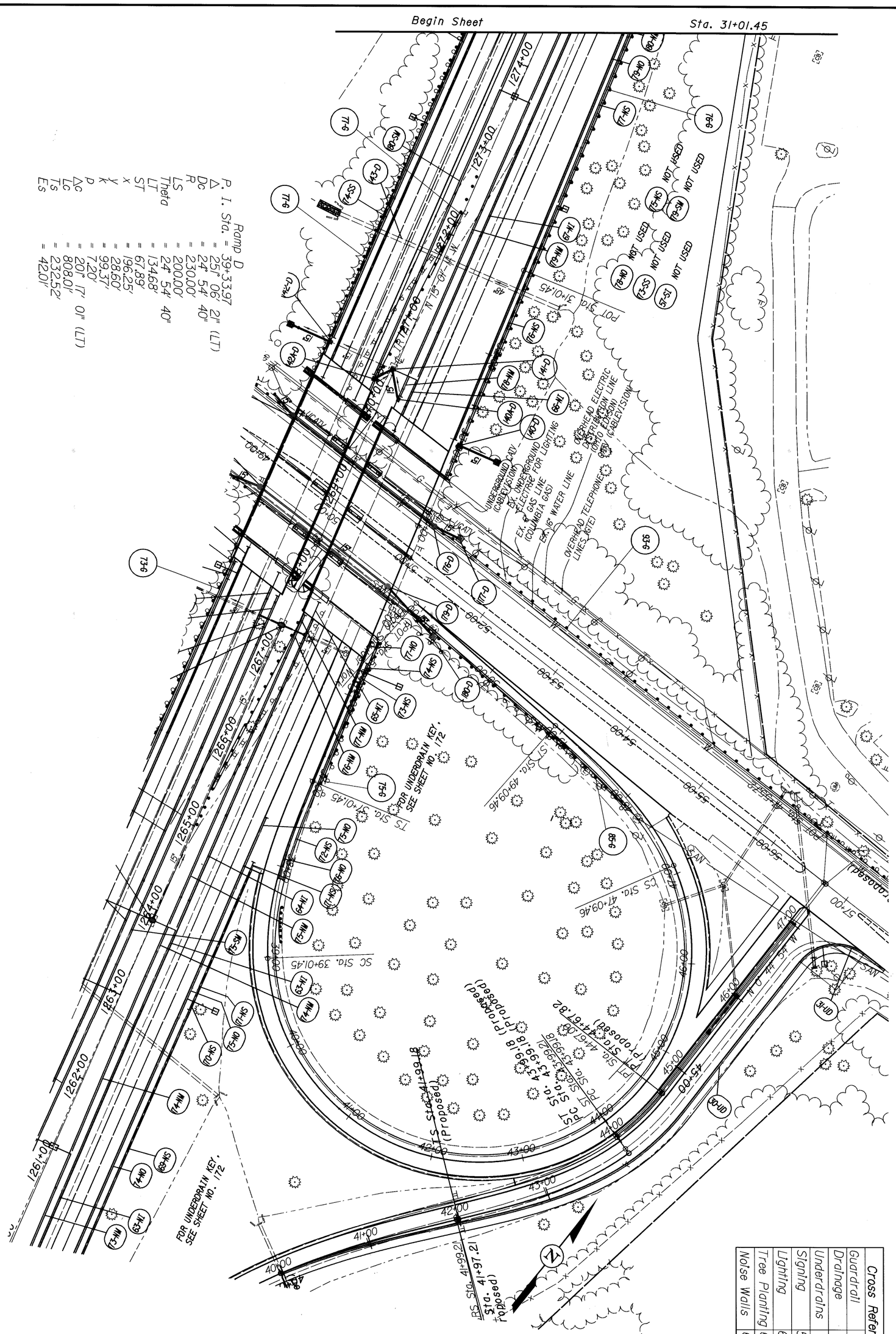



| Cross References | |
|---|---|
| Guardrail | 75-76 |
| Drainage | 77-96 |
| Underdrains | 97-128 |
| Signing | 561-606 |
| Lighting | 607-643 |
| Tree Planting | 647-663 |
| Noise Walls | 664-679 |

| | | | | |
|---|---|---|---|---|
| 498 940 | MED - 71 - 15.78 | SR 303 RAMP D<br>STA. 51+09.93 TO STA. 31+01.45 | CALCULATED<br>CHECKED | 0 50 100<br>HORIZONTAL SCALE IN FEET |

DESIGN FILE : i:\pd_MED_IR71\DGN\pavement details\sr303.dgn
USERNAME : pfought

DATE : 02-DEC-1999
TIME : 12:06

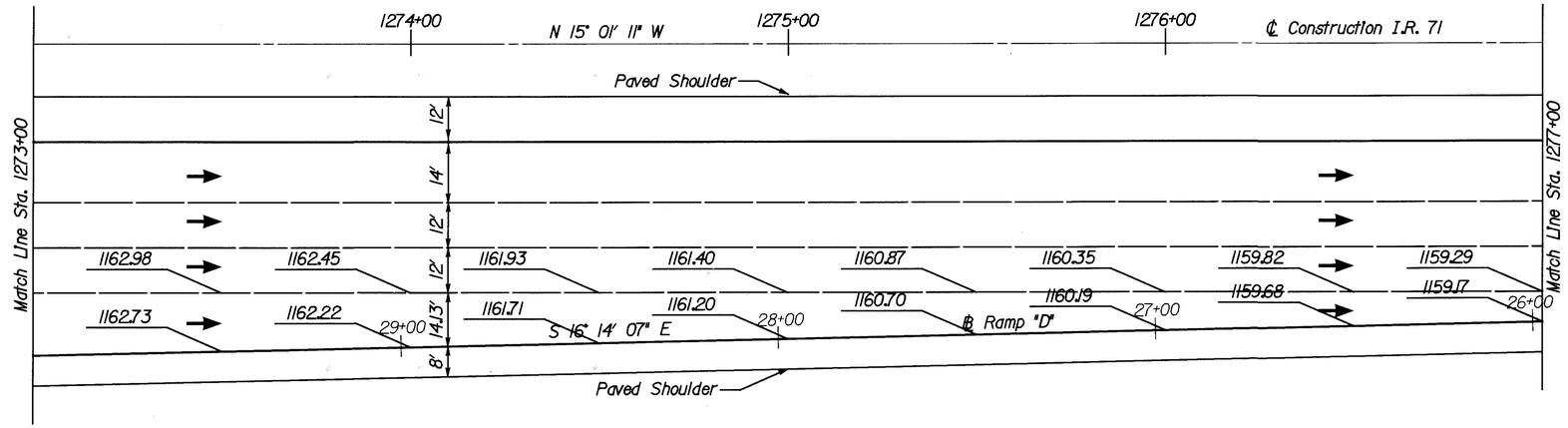
HORIZONTAL SCALE IN FEET
0 10 20 40

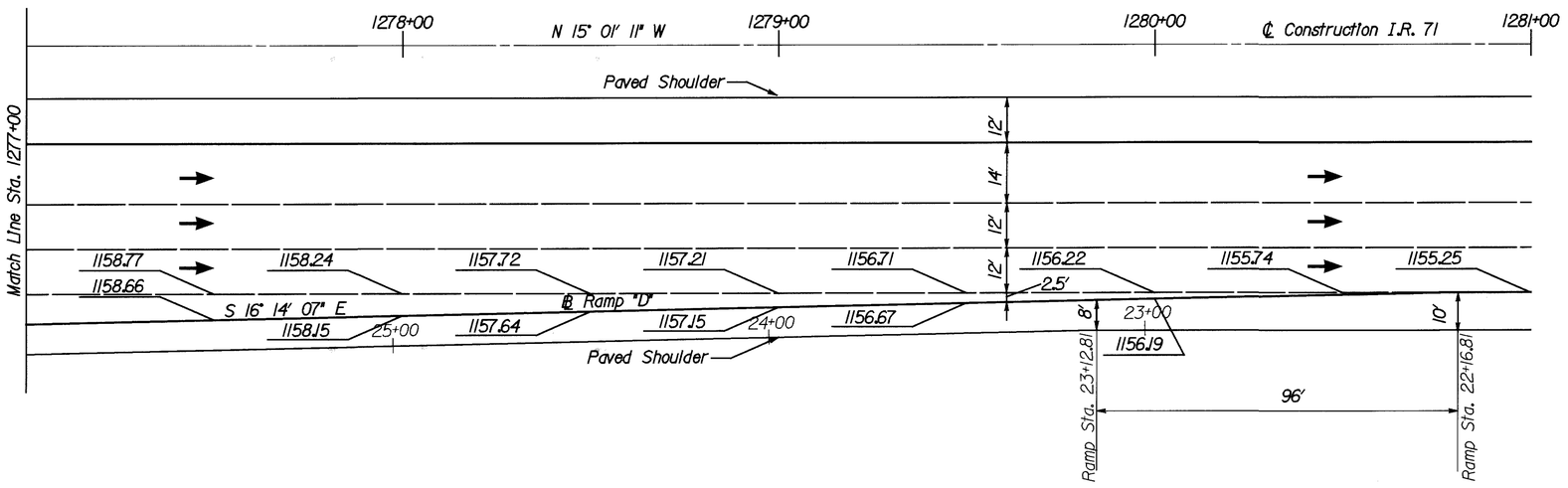
CALCULATED DSV
CHECKED JWR

# PAVEMENT DETAIL S.R. 303 RAMP "D"
## STA. 1264+00 TO STA. 1273+00

MED-71-15.78

499
940

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DATE : 02-DEC-1999
TIME : 12:06

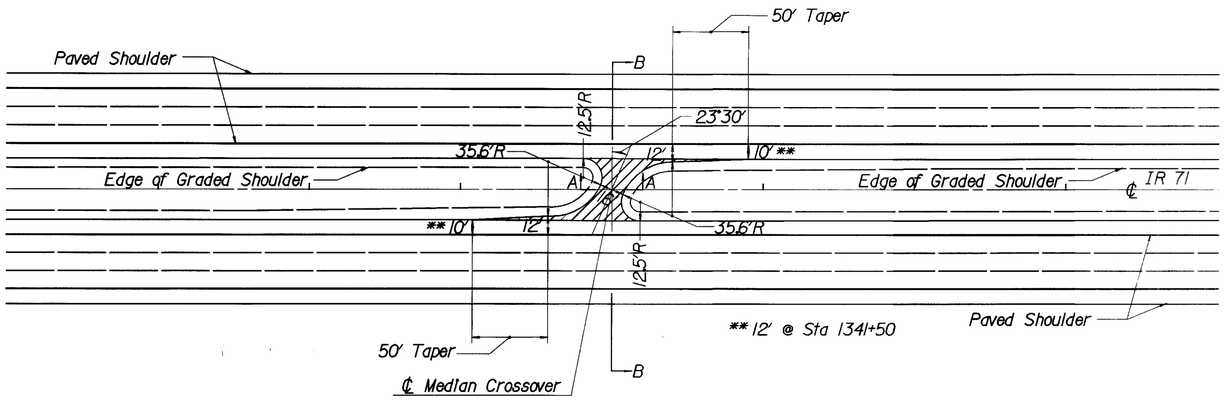
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DJV
CHECKED JWR

# PAVEMENT DETAIL S.R. 303 RAMP "D"
# STA. 1273+00 TO STA. 1281+00

MED-71-15.78

500
940




# TYPICAL MEDIAN CROSSOVER DETAIL

Applies: Between Sta. 993+50
Between Sta. 1186+44
Between Sta. 1341+50

MEDIAN CROSSOVER PAVEMENT

## LEGEND

(1) 1 1/2" ITEM 858 - Asphalt Concrete Surface Course, 12.5mm, Type A (446)

(2) ITEM 407 - Tack Coat for Intermediate Course

(3) 1 3/4" ITEM 858 - Asphalt Concrete Intermediate Course, 19mm, Type A (446)

(4) ITEM 407 - Tack Coat

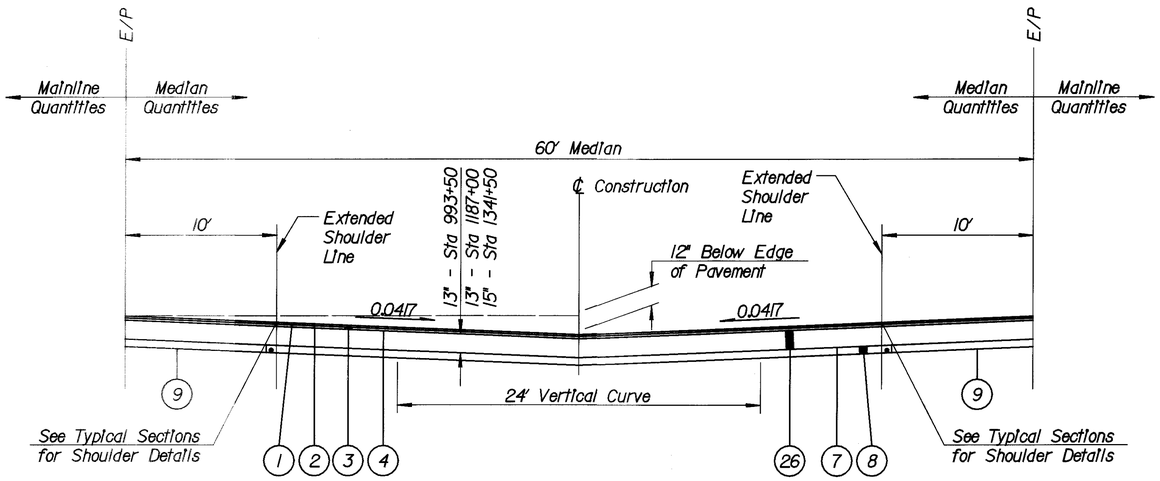
(7) ITEM 408 -Bituminous Prime Coat

(8) 6" ITEM 304 - Aggregate Base

(9) ITEM 203 - Subgrade Compaction

(10) ITEM 870 - Seeding and Mulching

(26) ITEM 302 - Bituminous Aggregate Base, PG64-22, Thickness as Shown

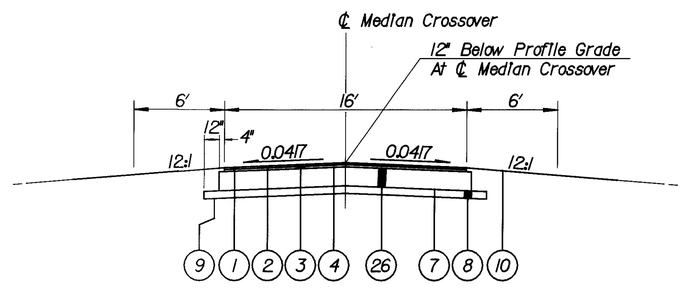



SECTION B-B

* 13" - Sta 993+50
13" - Sta 1187+00
15" - Sta 1341+50

# MEDIAN CROSSOVER QUANTITIES

| Station | 203 Subgrade Compaction | 302 Bituminous Aggregate Base, PG64-22 * | 304 6" Aggregate Base | 407 Tack Coat for Intermediate Course | 407 Tack Coat | 408 Bituminous Prime Coat | 858 1/2" Asphalt Concrete Surface Course, 12.5mm, Type A (446) | 858 3/4" Asphalt Concrete Intermediate Course, 19mm, Type A (446) |
|---|---|---|---|---|---|---|---|---|
| | Square Yard | Cubic Yard | Cubic Yard | Gallon | Gallon | Gallon | Cubic Yard | Cubic Yard |
| Sta. 993+50 | 162 | 59 | 33 | 81 | 162 | 64.8 | 7 | 8 |
| Sta. 1187+00 | 162 | 59 | 33 | 81 | 162 | 64.8 | 7 | 8 |
| Sta. 1341+50 | 102 | 43 | 17 | 51 | 102 | 40.8 | 4 | 5 |
| Sub-Totals | | | | | | | | |
| Totals Carried to the General Summary | 426 | 161 | 83 | 213 | 426 | 170.4 | 18 | 21 |




SECTION A-A

CALCULATED DRV CHECKED JWR

MEDIAN CROSSOVER DETAILS

MED-71-15.78

501
940

DESIGN FILE : i:\pd_med_ir71\dgn\misc. details\med71gm.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 07:28

# RUMBLE STRIP CALCULATIONS

**Sta. 883+00 to Sta. 1269+00 = 38,600 L.F. - (1,291 L.F. of Structures) = 37,309 L.F.**

**Item 618 Rumble Strips, Type 2 (Asphalt):**
(37,309 L.F.)(2 Shldr.) = 74,618 L.F.

**Item 618 Rumble Strips, Type 2 (Asphalt) as per plan**
(37,309 L.F.)(2 Shldr.) = 74,618 L.F.

**Sta. 1269+00 to Sta. 1394+40 = 12,540 L.F. - (120 L.F. of Structures) = 12,420 L.F.**

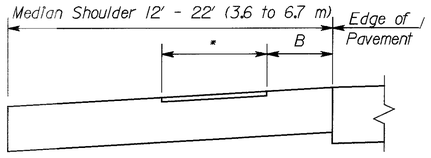
**Item 618 Rumble Strips, Type 2 (Asphalt):**
(12,420 L.F.)(4 Shldr.) = 49,680 L.F.

**SUB-SUMMARY**

| STA. | Item 618 Rumble Strips, Type 2 (Asphalt) | Item 618 Rumble Strips, Type 2 (Asphalt) as per plan |
|---|---|---|
| | Lin. Ft. | Lin. Ft. |
| 883+00 to 1269+00 | 74,618 | 74,618 |
| 1269+00 to 1394+40 | 49,680 | |
| | | |
| **TOTALS** | 124,298 | 74,618 |

Quantities carried to General Summary

# LOCATION OF RUMBLE STRIPS AS PER PLAN



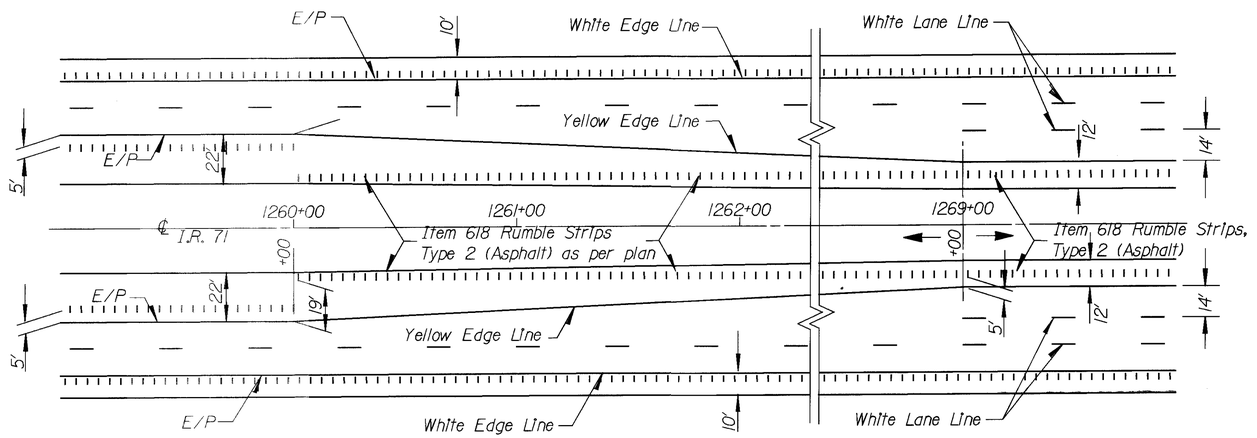

* See BP-9.1 for Rumble Strip details

| Median Shoulder Offset, as per plan |
|---|
| B = 5' for 22' shoulders, Sta. 883+00 to 1260+00 |
| B = Var. 19' to 5' thru shoulder transition, Sta. 1260+00 to 1263+00 |

(See Note 2.)

## NOTES

1. See Standard Construction Drawing BP-9.1M & BP-9.2M for additional Rumble Strip details.
2. This item shall meet the requirements of Spec. 618 and Std. Dwg. BP-9.1. except for the location of the Rumble Strip on the Median Shoulder as detailed on this sheet. All costs associated with this item shall be included in the bid price Item 618, Rumble Strips Type 2, (Asphalt) as per plan

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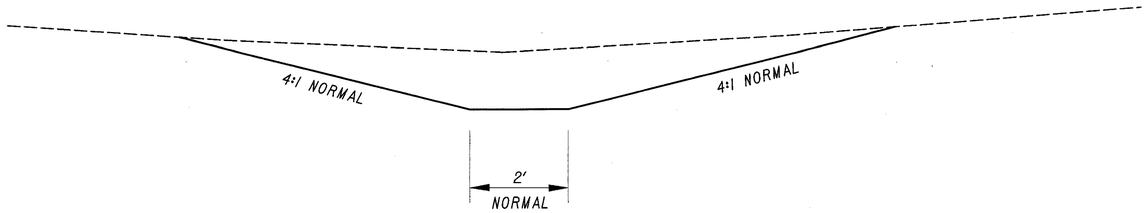
USERNAME : jrogers
DATE : 08-DEC-1999
TIME : 09:24

CALCULATED RLS CHECKED JwR

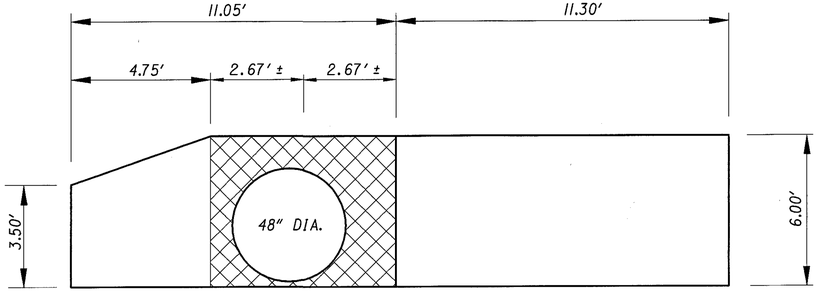
**SHOULDER RUMBLE STRIP DETAILS & QUANTITIES**

**MED-71-15.78**



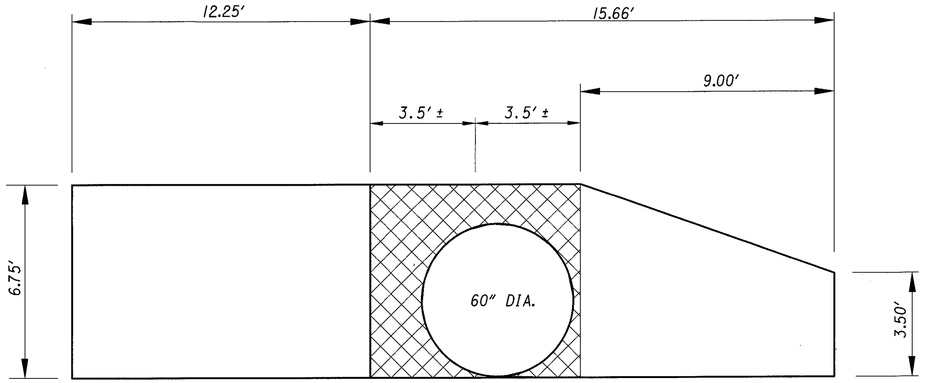

## ITEM 203 - DITCH CLEANOUT DETAIL

THE PROPOSED DITCH CLEANOUT SHALL BE GRADED TO PROVIDE A POSITIVE OUTLET AND CONSTRUCTED AS DIRECTED BY THE ENGINEER. SEE GENERAL NOTES.



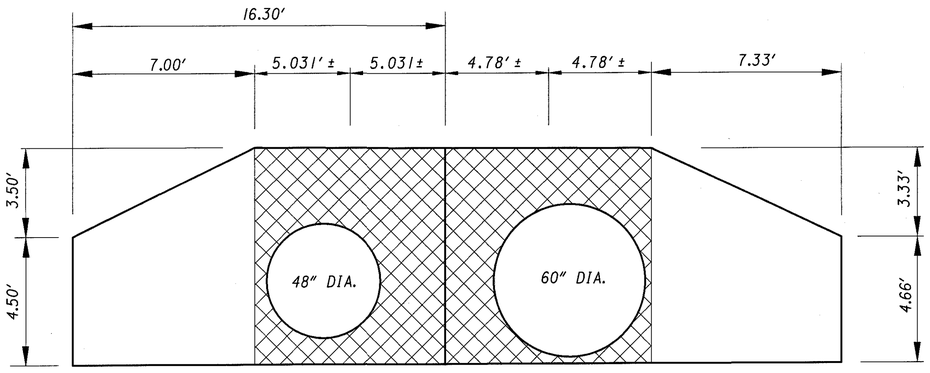

## HEADWALL PATCHING DETAIL

STA. 855+20




## HEADWALL PATCHING DETAIL

STA. 851+50




## HEADWALL PATCHING DETAIL

STA. 853+75

APPROXIMATE PATCHING AREA
AS APPROVED BY THE ENGINEER

(8-D) **HEADWALL PATCHING - LINER COLLAR FAILING**

STA. 852+50, RT.

ITEM 519 PATCHING CONCRETE STRUCTURES

APPROXIMATE PATCHING AREA

| | | |
|---|---|---|
| 6.75 x 3.5 x 2 = | 47.25 | SQ. FEET |
| PI/4 x (60/12) ^2 = | -19.63 | SQ. FEET |
| | 27.62 | SQ. FEET |

(11-D) **HEADWALL PATCHING - LINER COLLAR FAILING**

STA. 855+20, RT.

ITEM 519 PATCHING CONCRETE STRUCTURES

APPROXIMATE PATCHING AREA

| | | |
|---|---|---|
| 6.75 x 2.67 x 2 = | 32.04 | SQ. FEET |
| PI/4 x (48/12) ^2 = | -12.57 | SQ. FEET |
| | 19.47 | SQ. FEET |

(10-D) **HEADWALL PATCHING - LINER COLLAR FAILING**

STA. 853+75, LT.

ITEM 519 PATCHING CONCRETE STRUCTURES

APPROXIMATE PATCHING AREA

| | | |
|---|---|---|
| 8 x 5.031 x 2 = | 47.25 | SQ. FEET |
| 8 x 4.78 x 2 = | 71.66 | SQ. FEET |
| PI/4 x (48/12) ^2 = | -19.63 | SQ. FEET |
| PI/4 x (60/12) ^3 = | -19.63 | SQ. FEET |
| | 119.98 | SQ. FEET |

CALCULATED WJC
CHECKED PS

DRAINAGE DETAILS

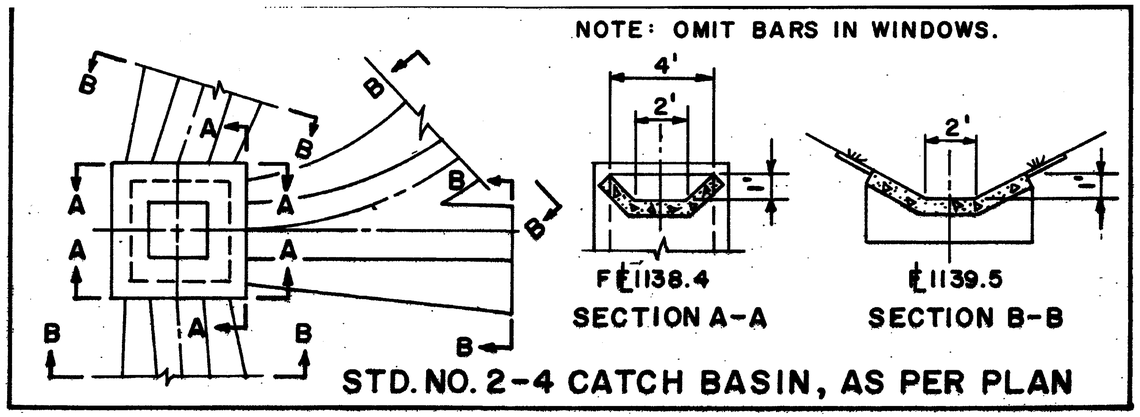
MED - 71 - 15.78

503
940

7885DMC.DGN

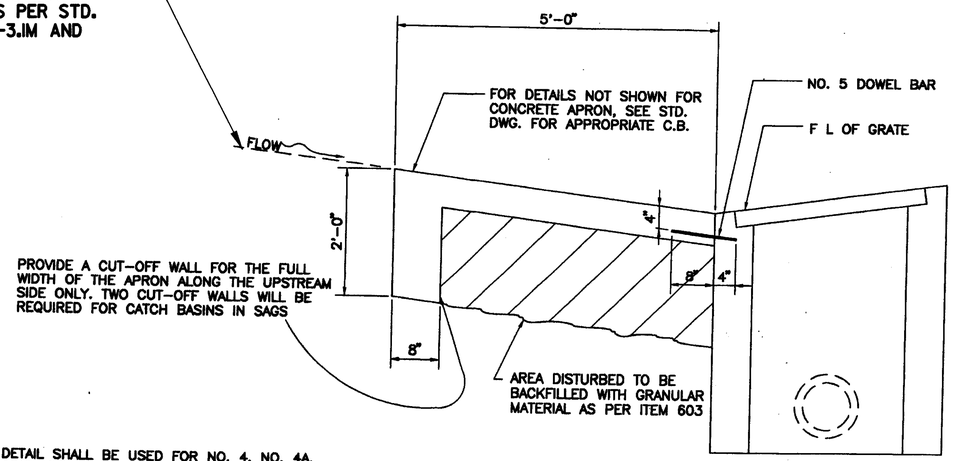
CALCULATED W.J.C. CHECKED P.S.

# DRAINAGE DETAILS




CATCH BASIN NO. 4, 4A, 5 AND 5A
AS PER PLAN

ITEM 670 DITCH EROSION PROTECTION SHALL BE CONSTRUCTED AS PER STD. CONSTRUCTION DRAWING CB-3.1M AND CB-3.2M

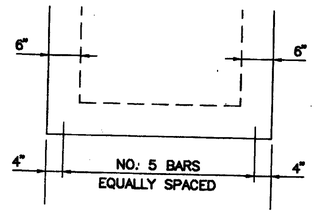



THIS DETAIL SHALL BE USED FOR NO. 4, NO. 4A, NO. 5 AND NO. 5A CATCH BASINS, AS PER PLAN. FOR DETAILS NOT SHOWN SEE STD. DWG. CB-3.1M, CB 3.2M, AND CB 3.4M.

THE REQUIREMENTS OF ITEM 604 SHALL GOVERN THE REPLACEMENT OF THE EXISTING CATCH BASIN. THE WORK SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE EXISTING CATCH BASIN AND ITS SUBSEQUENT REPLACEMENT. THE CONCRETE APRON SHALL BE REPLACED AND BACKFILLED AS SHOWN HERE AND IN THE STANDARD DRAWING FOR THE PERTINENT CATCH BASIN

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 604 CATCH BASIN, NO.4,5,4A, 5A AS PER PLAN, AND SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, TOOLS, AND EQUIPMENT INCIDENTAL TO COMPLETE THIS ITEM OF WORK.

## BAR LOCATION DETAIL
FOR NO. 4, 4A, 5 AND 5A C.B.




THE NUMBER OF BARS NEEDED ALONG EACH SIDE OF A NO. 4 AND 4A CATCH BASIN WITH A CONCRETE APRON IS 7. FOR A NO. 5 AND 5A CATCH BASIN, THE NUMBER OF BARS NEEDED ALONG EACH SIDE WITH A CONCRETE APRON IS 4

| CATCH BASIN NO. | TOTAL # OF BARS FOR A | |
|---|---|---|
| | STD. APRON | SEG. APRON |
| 4 & 4A | 7 | 14 |
| 5 & 5A | 12 | 16 |

THE FURNISHING AND PLACING OF STEEL FOR THE 5/8" X 12" DOWEL BARS SHALL BE PER 509 REINFORCING STEEL. THE DOWEL BARS SHALL BE EPOXY COATED PER 509.10. THE DOWEL BARS SHALL BE INSTALLED PER 510 OR CAST INTO THE BASIN. BOLT IN INSERTS MAY BE USED. THE CATCH BASIN SHALL BE PRECAST OR CAST-IN-PLACE CONCRETE. BRICK OR CONCRETE BLOCK WILL NOT BE PERMITTED. THE 6" CONCRETE APRON SHALL BE REINFORCED PER 601.04(3).

MED - 71 - 15.78

504
940

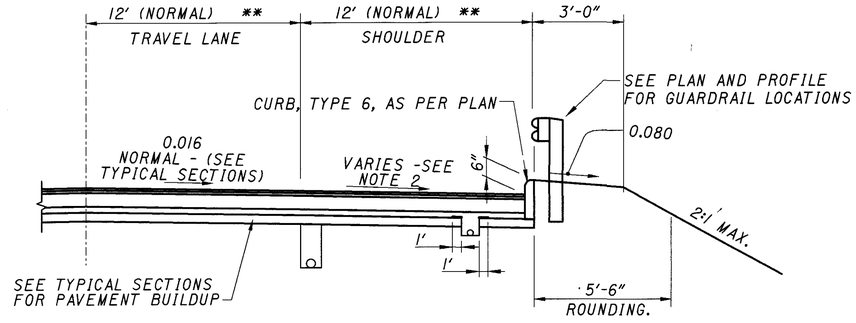
7885DDZ.DGN

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 172-218 |
| DRAINAGE SUBSUMMARY | 77-96 |
| TYPICAL SECTIONS | 8-22 |
| | |
| | |
| | |
| | |

ITEM 830 CURB, TYPE 6, AS PER PLAN

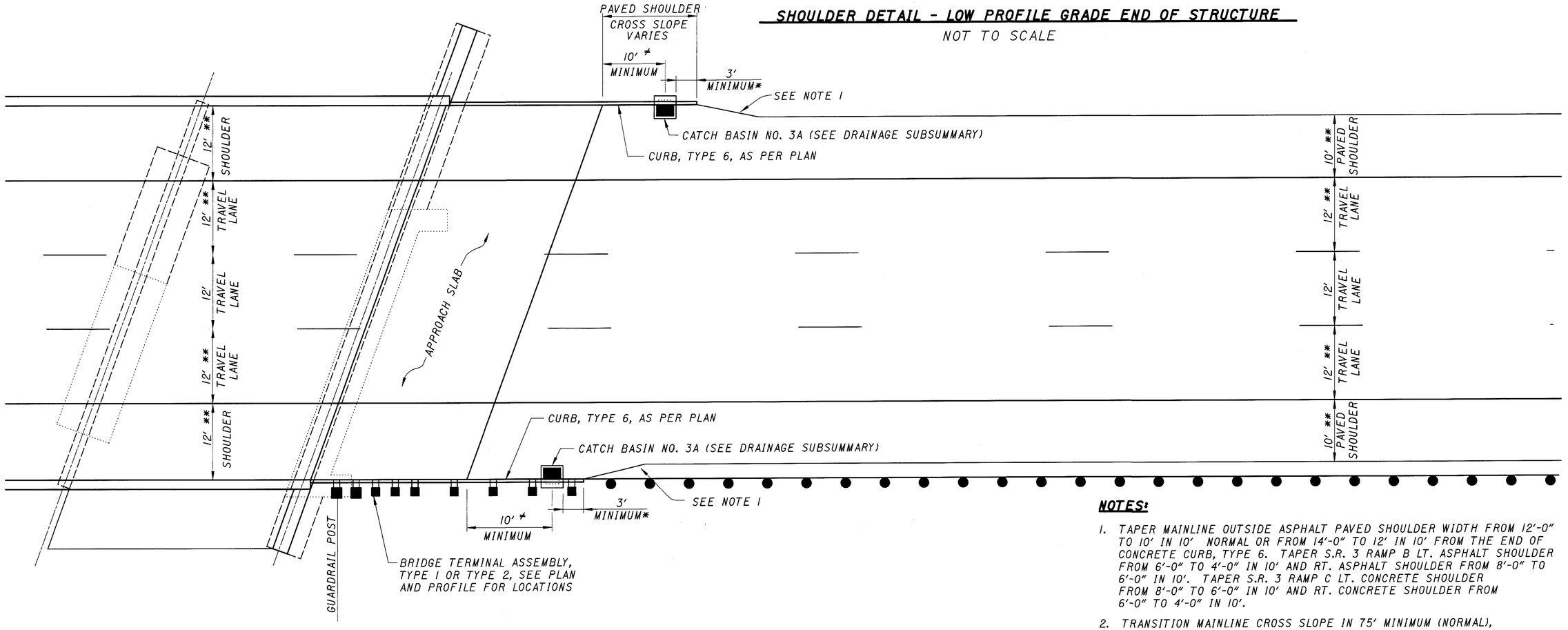
THE CONCRETE CURB SHALL BE CONSTRUCTED AS SHOWN IN STANDARD DRAWING BP-5.1M EXCEPT THE TOTAL CURB HEIGHT IS INCREASED AS FOLLOWS:

ON THE S.R. 18 AND THE S.R. 303 STRUCTURE THE TOTAL CURB HEIGHT SHALL BE 24 1/4"; THE I.R. 271, WILBUR, ROCKY RIVER AND S.R. 3 STRUCTURES SHALL HAVE A TOTAL CURB HEIGHT OF 22 1/4"




**SHOULDER DETAIL - LOW PROFILE GRADE END OF STRUCTURE**

NOT TO SCALE




** THE MEDIAN SIDE PAVED SHOULDER IS 12' AND THE MEDIAN SIDE TRAVEL LANE IS 14' AT S.R. 303. THE STRUCTURE MEDIAN SIDE SHOULDER AT S.R. 303 IS 14' WITH THE MEDIAN SIDE TRAVEL LANE OF 14'.

**DRAINAGE DETAIL - LOW PROFILE GRADE END OF STRUCTURE**

MAINLINE LAYOUT SHOWN. SEE S.R. 3 RAMP TYPICALS SECTIONS FOR S.R. 3 RAMP PAVEMENT LAYOUT AT CATCH BASIN LOCATION. SEE GRANGER ROAD TYPICAL SECTION FOR GRANGER ROAD PAVEMENT LAYOUT AT CATCH BASIN LOCATION. CATCH BASIN LOCATION CONCEPT IS SAME FOR ALL LOW PROFILE GRADE ENDS OF THE STRUCTURES, AS APPROVED BY THE ENGINEER.

**NOTES:**

1. TAPER MAINLINE OUTSIDE ASPHALT PAVED SHOULDER WIDTH FROM 12'-0" TO 10' IN 10' NORMAL OR FROM 14'-0" TO 12' IN 10' FROM THE END OF CONCRETE CURB, TYPE 6. TAPER S.R. 3 RAMP B LT. ASPHALT SHOULDER FROM 6'-0" TO 4'-0" IN 10' AND RT. ASPHALT SHOULDER FROM 8'-0" TO 6'-0" IN 10'. TAPER S.R. 3 RAMP C LT. CONCRETE SHOULDER FROM 8'-0" TO 6'-0" IN 10' AND RT. CONCRETE SHOULDER FROM 6'-0" TO 4'-0" IN 10'.
2. TRANSITION MAINLINE CROSS SLOPE IN 75' MINIMUM (NORMAL), USE 90' WHERE SHOULDER IS 14' WIDE

≠ PLACE CATCH BASIN BETWEEN GUARDRAIL POSTS BEYOND 10' WHERE PROPOSED GUARDRAIL IS TO BE ERECTED.

* EXTEND CURB 2' PAST GUARDRAIL POST IF 3' BEYOND CATCH BASIN DOES NOT EXTEND 2' BEYOND CLOSEST GUARDRAIL POST.

7885DDX.DGN

HORIZONTAL SCALE IN METERS
0 2 4

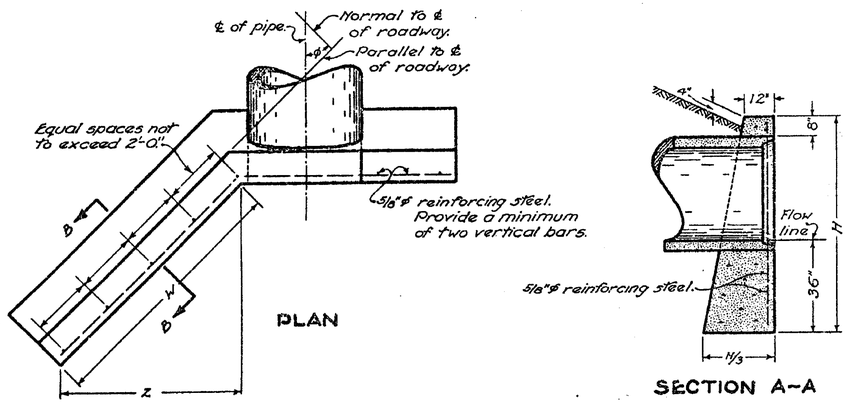
CALCULATED PS
CHECKED PDG

DRAINAGE DETAILS

MED - 71 - 15.78

505
940

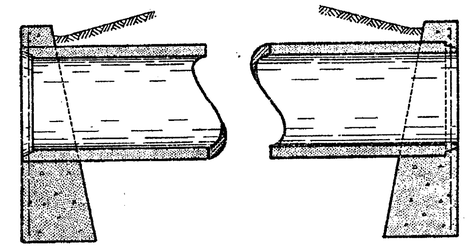
# HEADWALLS




PLAN




SECTION A-A

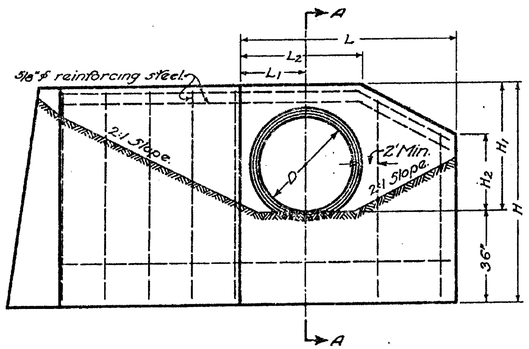


INLET END
GROOVE OR BELL UPSTREAM

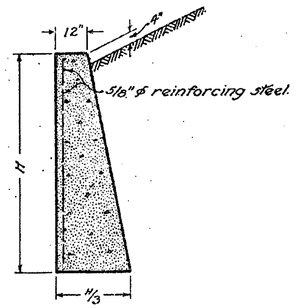


OUTLET END
TONGUE OR SPIGOT DOWNSTREAM

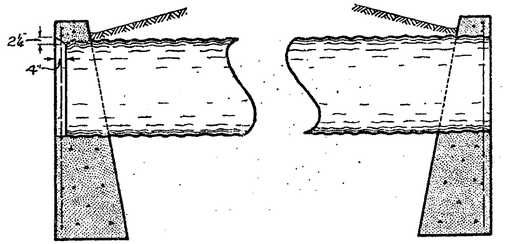
RIGID PIPE




ELEVATION




SECTION B-B




INLET END



OUTLET END

CORRUGATED PIPE

END TREATMENT AT HEADWALL

## NOTES

No 2 HEADWALL where required will be provided for skewed culverts having a diameter or rise of 36 inches or less.

CONCRETE shall be Class "C."

REINFORCING STEEL BARS shall be 5/8 inch round.

DIMENSIONS AND QUANTITIES are shown for circular sections only. When used with reinforced elliptical concrete pipe or corrugated metal pipe arches it will be necessary to determine such dimensions and quantities which shall generally conform with those listed for the nearest size circular pipe. The dimensions established by vertical diameter shall apply to rise and the dimensions established by horizontal diameter shall apply to span.

Chamfer all exposed corners 3/4 of an inch.

FOUNDATION. Where the soil borings indicate a bearing capacity of less than 2600 pounds per square foot it will be necessary to increase the width of the footing.

| | | ϕ=15° | | | | | | | | | | ϕ=30° | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIPE DIAM. | L | $L_1$ | $L_2$ | W | Z | H | $H_1$ | $H_2$ | CONC. C.Y. | STEEL LBS. | PIPE DIAM. | L | $L_1$ | $L_2$ | W | Z | H | $H_1$ | $H_2$ | CONC. C.Y. | STEEL LBS. |
| SLOPE 2:1 | 15" | 2'-11" | 0'-11" | 1'-7" | 2'-9" | 2'-8" | 5'-2" | 2'-2" | 1'-5" | 1.4 | 41 | 15" | 2'-11" | 0'-11" | 1'-7" | 3'-1" | 2'-8" | 5'-2" | 2'-2" | 1'-5" | 1.6 | 42 |
| | 18" | 3'-7" | 1'-1" | 1'-10" | 3'-4" | 3'-2" | 5'-5" | 2'-5" | 1'-7" | 1.8 | 46 | 18" | 3'-7" | 1'-1" | 1'-10" | 3'-8" | 3'-2" | 5'-5" | 2'-5" | 1'-7" | 2.0 | 48 |
| | 21" | 4'-1" | 1'-3" | 2'-2" | 3'-10" | 3'-8" | 5'-8" | 2'-8" | 1'-8" | 2.2 | 50 | 21" | 4'-1" | 1'-3" | 2'-2" | 4'-3" | 3'-8" | 5'-8" | 2'-8" | 1'-8" | 2.4 | 52 |
| | 24" | 4'-9" | 1'-5" | 2'-6" | 4'-4" | 4'-2" | 5'-11" | 2'-11" | 1'-10" | 2.7 | 61 | 24" | 4'-9" | 1'-5" | 2'-6" | 4'-10" | 4'-2" | 5'-11" | 2'-11" | 1'-10" | 3.0 | 63 |
| | 30" | 5'-11" | 1'-7" | 2'-10" | 5'-4" | 5'-2" | 6'-5" | 3'-5" | 2'-2" | 3.8 | 76 | 30" | 5'-11" | 1'-7" | 2'-10" | 6'-0" | 5'-2" | 6'-5" | 3'-5" | 2'-2" | 4.2 | 78 |
| | 36" | 7'-0" | 1'-10" | 3'-4" | 6'-7" | 6'-4" | 7'-0" | 4'-0" | 2'-6" | 5.4 | 87 | 36" | 7'-0" | 1'-10" | 3'-4" | 7'-4" | 6'-4" | 7'-0" | 4'-0" | 2'-6" | 5.8 | 97 |
| SLOPE 4:1 | 15" | 4'-1" | 0'-11" | 1'-7" | 3'-3" | 3'-2" | 5'-2" | 2'-2" | 1'-10" | 1.9 | 47 | 15" | 3'-9" | 0'-11" | 1'-7" | 3'-8" | 3'-2" | 5'-2" | 2'-2" | 1'-7" | 1.9 | 47 |
| | 18" | 4'-10" | 1'-1" | 1'-10" | 3'-10" | 3'-8" | 5'-5" | 2'-5" | 2'-0" | 2.4 | 57 | 18" | 4'-6" | 1'-1" | 1'-10" | 4'-3" | 3'-8" | 5'-5" | 2'-5" | 1'-10" | 2.4 | 57 |
| | 21" | 5'-8" | 1'-3" | 2'-2" | 4'-4" | 4'-2" | 5'-8" | 2'-8" | 2'-3" | 2.9 | 63 | 21" | 5'-2" | 1'-3" | 2'-2" | 4'-10" | 4'-2" | 5'-8" | 2'-8" | 2'-0" | 3.0 | 68 |
| | 24" | 6'-5" | 1'-5" | 2'-6" | 4'-10" | 4'-8" | 5'-11" | 2'-11" | 2'-6" | 3.5 | 74 | 24" | 5'-11" | 1'-5" | 2'-6" | 5'-5" | 4'-8" | 5'-11" | 2'-11" | 2'-2" | 3.6 | 74 |
| | 30" | 7'-9" | 1'-7" | 2'-10" | 5'-10" | 5'-8" | 6'-5" | 3'-5" | 3'-0" | 4.8 | 92 | 30" | 7'-2" | 1'-7" | 2'-10" | 6'-7" | 5'-8" | 6'-5" | 3'-5" | 2'-8" | 4.9 | 92 |
| | 36" | 9'-3" | 1'-10" | 3'-4" | 7'-1" | 6'-10" | 7'-0" | 4'-0" | 3'-5" | 6.6 | 112 | 36" | 8'-6" | 1'-10" | 3'-4" | 7'-11" | 6'-10" | 7'-0" | 4'-0" | 3'-0" | 6.7 | 111 |

| | | ϕ=45° | | | | | | | | | | ϕ=60° | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIPE DIAM. | L | $L_1$ | $L_2$ | W | Z | H | $H_1$ | $H_2$ | CONC. C.Y. | STEEL LBS. | PIPE DIAM. | L | $L_1$ | $L_2$ | W | Z | H | $H_1$ | $H_2$ | CONC. C.Y. | STEEL LBS. |
| SLOPE 2:1 | 15" | 2'-11" | 0'-11" | 1'-7" | 3'-9" | 2'-8" | 5'-2" | 2'-2" | 1'-5" | 1.8 | 44 | 15" | 2'-11" | 0'-11" | 1'-7" | 5'-4" | 2'-8" | 5'-2" | 2'-2" | 1'-5" | 2.3 | 54 |
| | 18" | 3'-7" | 1'-1" | 1'-10" | 4'-6" | 3'-2" | 5'-5" | 2'-5" | 1'-7" | 2.3 | 56 | 18" | 3'-7" | 1'-1" | 1'-10" | 6'-4" | 3'-2" | 5'-5" | 2'-5" | 1'-7" | 2.9 | 61 |
| | 21" | 4'-1" | 1'-3" | 2'-2" | 5'-2" | 3'-8" | 5'-8" | 2'-8" | 1'-8" | 2.8 | 61 | 21" | 4'-1" | 1'-3" | 2'-2" | 7'-4" | 3'-8" | 5'-8" | 2'-8" | 1'-8" | 3.5 | 73 |
| | 24" | 4'-9" | 1'-5" | 2'-6" | 5'-11" | 4'-2" | 5'-11" | 2'-11" | 1'-10" | 3.4 | 67 | 24" | 4'-9" | 1'-5" | 2'-6" | 8'-4" | 4'-2" | 5'-11" | 2'-11" | 1'-10" | 4.3 | 80 |
| | 30" | 5'-11" | 1'-7" | 2'-10" | 7'-4" | 5'-2" | 6'-5" | 3'-5" | 2'-2" | 4.8 | 90 | 30" | 5'-11" | 1'-7" | 2'-10" | 10'-4" | 5'-2" | 6'-5" | 3'-5" | 2'-2" | 6.0 | 105 |
| | 36" | 7'-0" | 1'-10" | 3'-4" | 8'-11" | 6'-4" | 7'-0" | 4'-0" | 2'-6" | 6.6 | 110 | 36" | 7'-0" | 1'-10" | 3'-4" | 12'-8" | 6'-4" | 7'-0" | 4'-0" | 2'-6" | 8.3 | 128 |
| SLOPE 4:1 | 15" | 3'-7" | 0'-11" | 1'-7" | 4'-6" | 3'-2" | 5'-2" | 2'-2" | 1'-5" | 2.1 | 50 | 15" | 3'-4" | 0'-11" | 1'-7" | 6'-4" | 3'-2" | 5'-2" | 2'-2" | 1'-4" | 2.6 | 59 |
| | 18" | 4'-2" | 1'-1" | 1'-10" | 5'-2" | 3'-8" | 5'-5" | 2'-5" | 1'-7" | 2.6 | 60 | 18" | 3'-11" | 1'-1" | 1'-10" | 7'-4" | 3'-8" | 5'-5" | 2'-5" | 1'-5" | 3.3 | 70 |
| | 21" | 4'-10" | 1'-3" | 2'-2" | 5'-11" | 4'-2" | 5'-8" | 2'-8" | 1'-9" | 3.2 | 71 | 21" | 4'-7" | 1'-3" | 2'-2" | 8'-4" | 4'-2" | 5'-8" | 2'-8" | 1'-7" | 4.0 | 77 |
| | 24" | 5'-6" | 1'-5" | 2'-6" | 6'-7" | 4'-8" | 5'-11" | 2'-11" | 1'-11" | 3.8 | 83 | 24" | 5'-2" | 1'-5" | 2'-6" | 9'-4" | 4'-8" | 5'-11" | 2'-11" | 1'-9" | 4.7 | 95 |
| | 30" | 6'-8" | 1'-7" | 2'-10" | 8'-0" | 5'-8" | 6'-5" | 3'-5" | 2'-4" | 5.3 | 95 | 30" | 6'-3" | 1'-7" | 2'-10" | 11'-4" | 5'-8" | 6'-5" | 3'-5" | 2'-1" | 6.5 | 116 |
| | 36" | 7'-11" | 1'-10" | 3'-4" | 9'-8" | 6'-10" | 7'-0" | 4'-0" | 2'-7" | 7.3 | 116 | 36" | 7'-5" | 1'-10" | 3'-4" | 13'-8" | 6'-10" | 7'-0" | 4'-0" | 2'-4" | 8.9 | 139 |

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

# HEADWALLS

DATE 6-1-65

STANDARD CONSTRUCTION HW-2 DRAWING

APPROVED Ben Rike ENGR. L. & D.

CALCULATED PDG CHECKED DAW

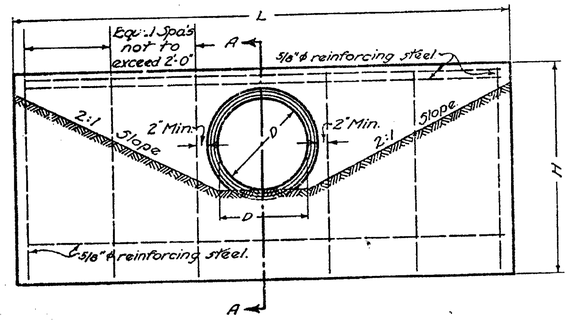
DRAINAGE DETAILS

MED - 71 - 15.78

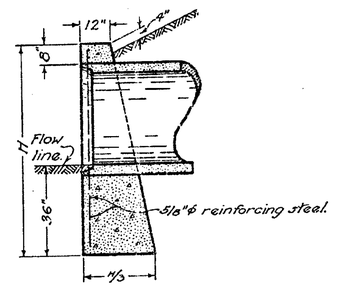
506
940

7885DDY.DGN

# HEADWALLS




ELEVATION

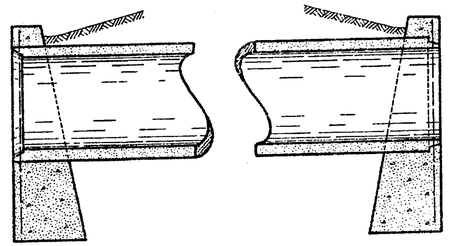



SECTION A-A

STANDARD Nº 1 HEADWALL

| DIMENSIONS | | | QUANTITIES ONE HEADWALL | |
|---|---|---|---|---|
| DIAMETER | H | L | CONCRETE CU. YDS. | REINFORCING STEEL LBS. |
| 15" | 5'-2" | 7'-0" | 1.7 | 41 |
| 18" | 5'-5" | 8'-4" | 2.2 | 57 |
| 21" | 5'-8" | 9'-8" | 2.8 | 62 |
| 24" | 5'-11" | 11'-0" | 3.3 | 69 |
| 30" | 6'-5" | 13'-8" | 4.7 | 92 |
| 36" | 7'-0" | 16'-4" | 6.5 | 105 |

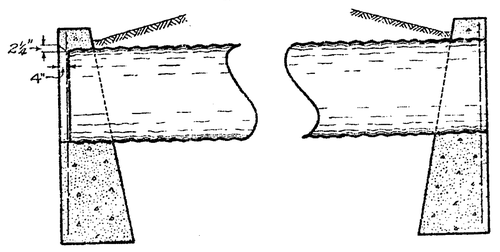
L CIRCULAR SECTIONS ≅ 5D + 4†
LL ELLIPTICAL OR PIPE-ARCH ≅ 4R + 4† + S
H CIRCULAR SECTIONS ≅ D + † + 44"
H ELLIPTICAL OR PIPE-ARCH ≅ R + † + 44"
D ≅ DIAMETER OF PIPE
R ≅ RISE OF PIPE
S ≅ SPAN OF PIPE
† ≅ THICKNESS OF BARREL
L ≅ LENGTH OF HEADWALL
H ≅ HEIGHT OF HEADWALL



INLET END
GROOVE OR BELL UPSTREAM

OUTLET END
TONGUE OR SPIGOT DOWNSTREAM

RIGID PIPE




INLET END

OUTLET END

CORRUGATED PIPE

END TREATMENT AT HEADWALL

## NOTES

Nº 1 HEADWALL where required will be provided for nonskewed culverts having a diameter or rise of 36 inches or less.

CONCRETE shall be Class "C".

REINFORCING STEEL BARS shall be 5/8 inch round.

DIMENSIONS AND QUANTITIES are shown for circular sections only. It will be necessary to determine dimensions for the Nº1 headwall required for reinforced elliptical concrete pipe or corrugated metal pipe arches in accordance with the equations listed on this drawing.

Chamfer all exposed corners ¾ of an inch.

FOUNDATION. Where the soil borings indicate a bearing capacity of less than 2600 pounds per square foot it will be necessary to increase the width of the base.

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

DATE 6-1-65

HEADWALLS

STANDARD CONSTRUCTION DRAWING HW-1

APPROVED _____ ENGR. L. & D.

CALCULATED PDG
CHECKED DAW

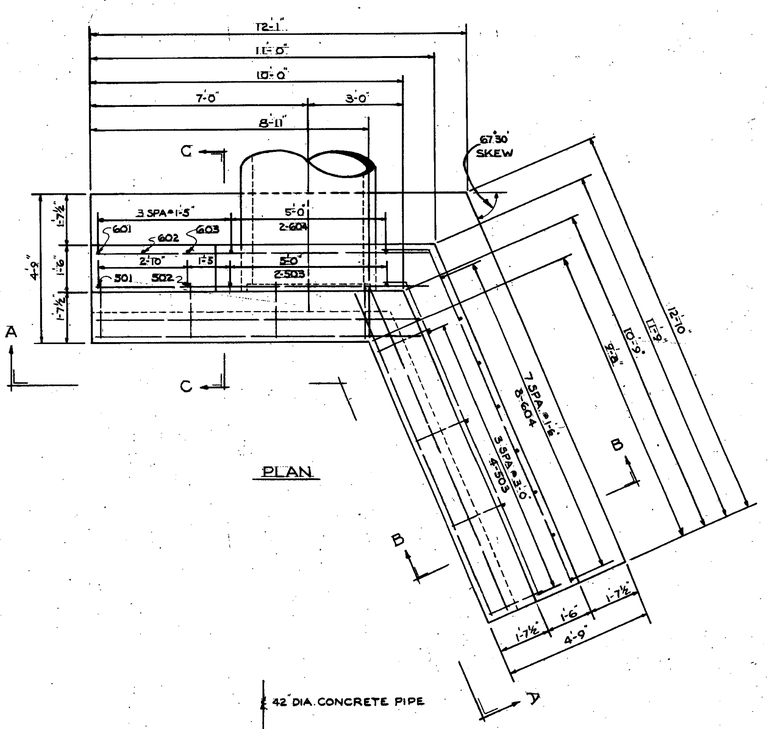
DRAINAGE DETAILS

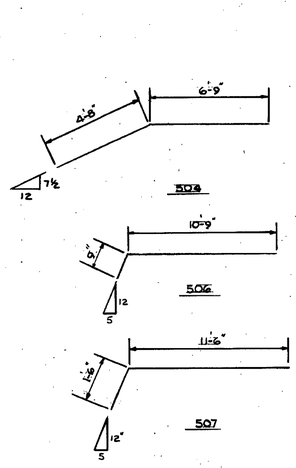
MED - 71 - 15.78

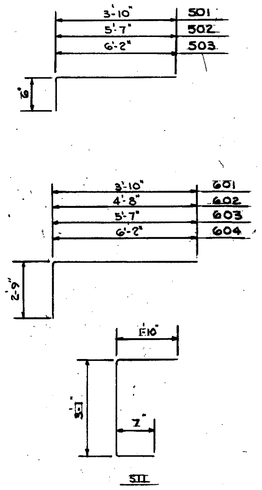
507
940

7885DD8.DGN

# HW-2A




STEEL FOR ONE HEADWALL

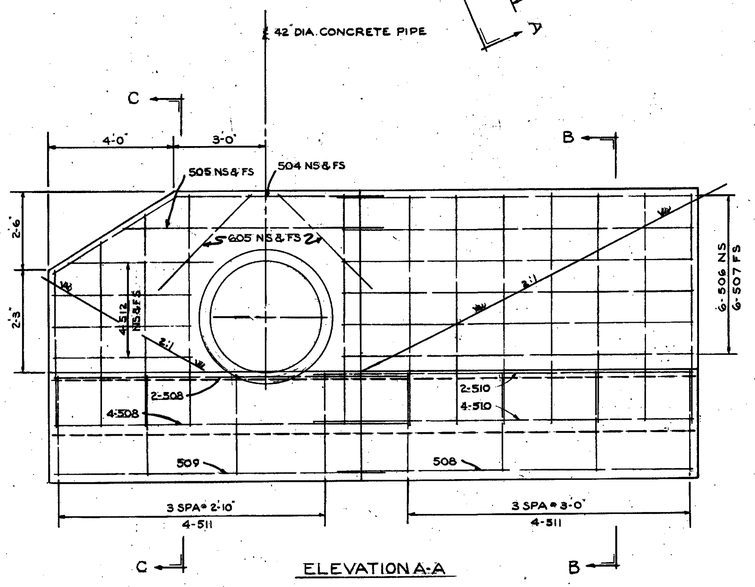
REINFORCING STEEL SCHEDULE

| MARK | NO. EACH | LENGTH | WEIGHT | SHP | MARK | NO. EACH | LENGTH | WEIGHT | SHP |
|---|---|---|---|---|---|---|---|---|---|
| 501 | 1 | 4'-3" | 5 | BT | 511 | 8 | 5'-4" | 44 | BT |
| 502 | 1 | 6'-0" | 7 | BT | 512 | 8 | 4'-5" | 37 | ST |
| 503 | 6 | 6'-7" | 41 | BT | | | | | |
| 504 | 2 | 11'-5" | 24 | BT | 601 | 1 | 6'-6" | 10 | BT |
| 505 | 2 | 8'-6" | 18 | ST | 602 | 1 | 7'-8" | 11 | BT |
| 506 | 6 | 11'-5" | 71 | BT | 603 | 1 | 8'-8" | 12 | BT |
| 507 | 6 | 12'-11" | 81 | BT | 604 | 10 | 8'-10" | 133 | BT |
| 508 | 7 | 10'-4" | 75 | ST | 605 | 4 | 4'-6" | 27 | ST |
| 509 | 1 | 9'-7" | 10 | ST | | | | | |
| 510 | 6 | 11'-2" | 70 | ST | | | | | |
| | | | | | | | TOTALS | 676# | |

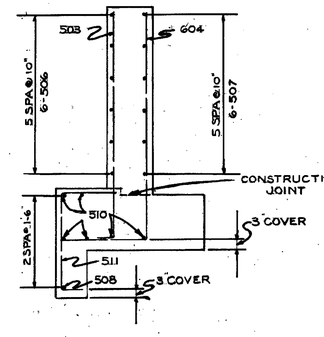
NOTE.
13.1 CU. YDS. CLASS C CONCRETE. FOR ONE HEADWALL.
$f'c = 3400^{\#} \; fs = 20000^{\#} \; - \; P = 35^{\#}/CU.FT.$
MAXIMUM BEARING PRESSURE AT TOE = 2.000#/SQ.FT.
ALL REINFORCING STEEL DIMENSIONS ARE FROM OUT TO OUT.
ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2" UNLESS OTHERWISE NOTED.

42" DIA. CONC. CULVERT

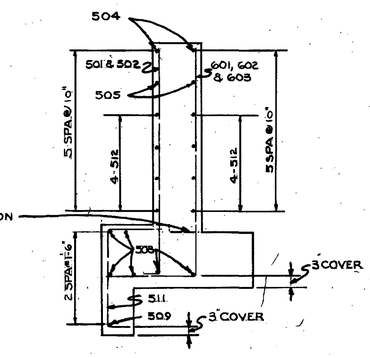
ONE REQUIRED



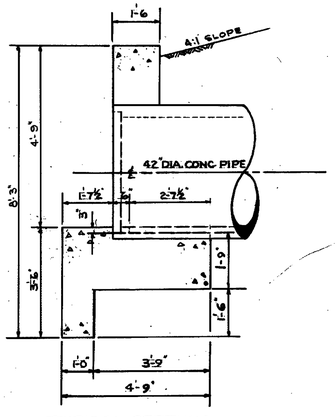

ELEVATION A-A




SECTION B-B




SECTION C-C




TYPICAL SECTION

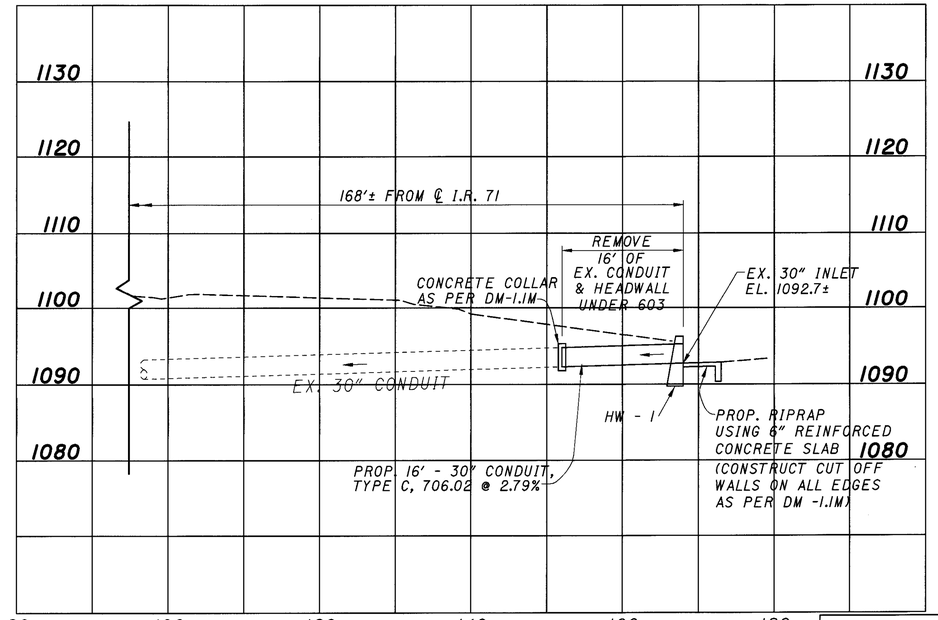
DRAINAGE DETAILS

MED - 71 - 15.78

508
940

CALCULATED PDG
CHECKED DAW

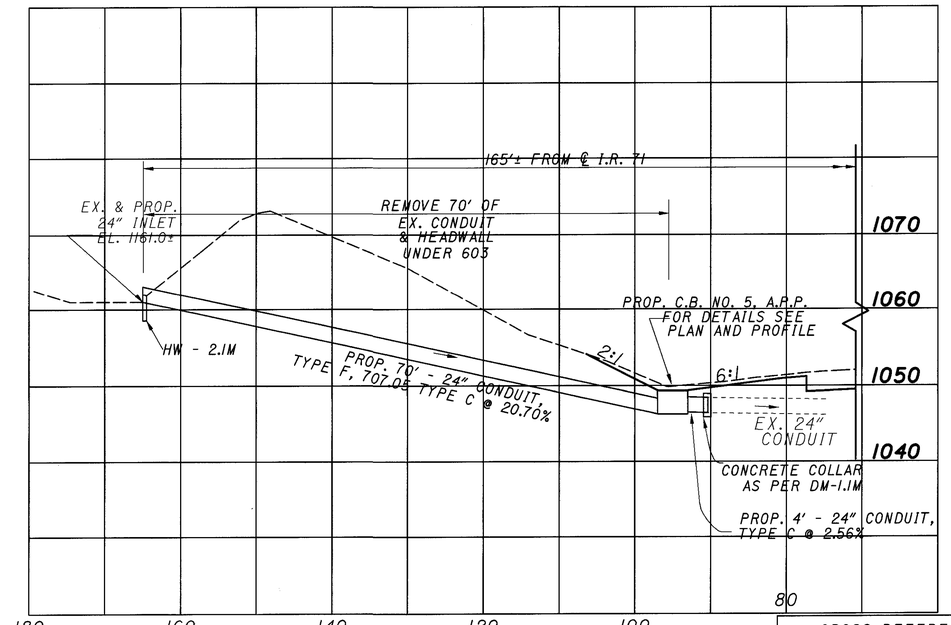
7885DDW.DGN




16-D

EX. 30" CONDUIT
STA. 884+32 RT. (STA. 13+35 S.R. 18 RAMP C)

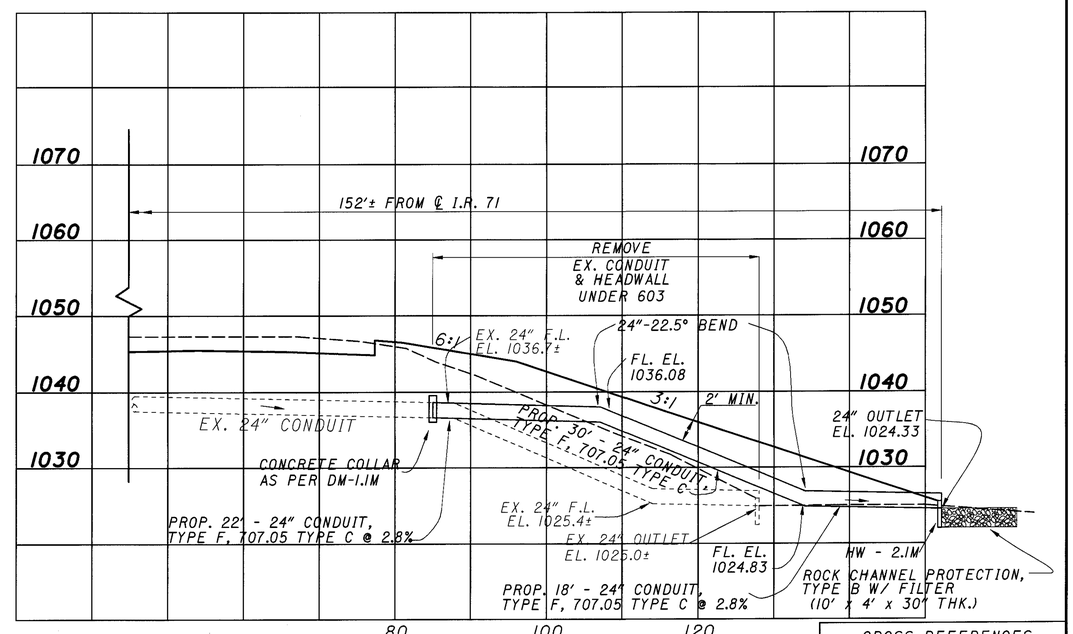
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 176-177 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE CALCS. | 138 |
| DRAINAGE DETAILS | 507 |




79-D

EX. 24" CONDUIT
STA. 1075+85 LT.

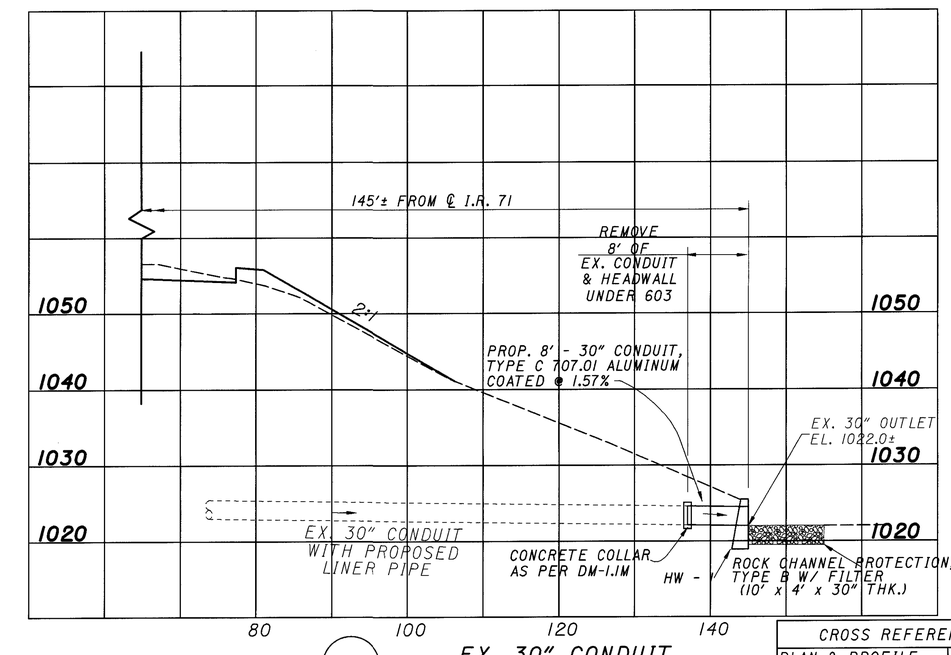
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 191 |
| DRAINAGE SUBSUMMARY | 81-84 |
| | |
| | |




74-D

EX. 24" CONDUIT
STA. 1067+40 RT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 191 |
| DRAINAGE SUBSUMMARY | 81-84 |
| DRAINAGE CALCS. | 143 |
| | |




82-D

EX. 30" CONDUIT
STA. 1082+95 RT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 192 |
| DRAINAGE SUBSUMMARY | 81-84 |
| CULVERT DETAIL | 523 |
| DRAINAGE CALCS. | 144 |
| DRAINAGE DETAILS | 507 |

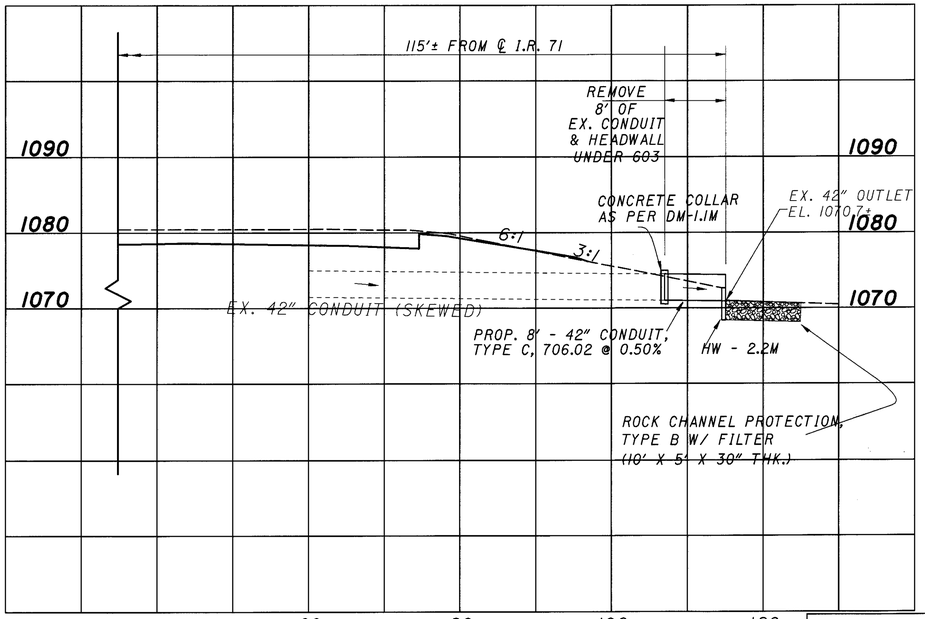
CALCULATED PRS
CHECKED PDG

# DRAINAGE DETAILS (PIPE REPLACEMENT)

MED - 71 -15.78

509
940

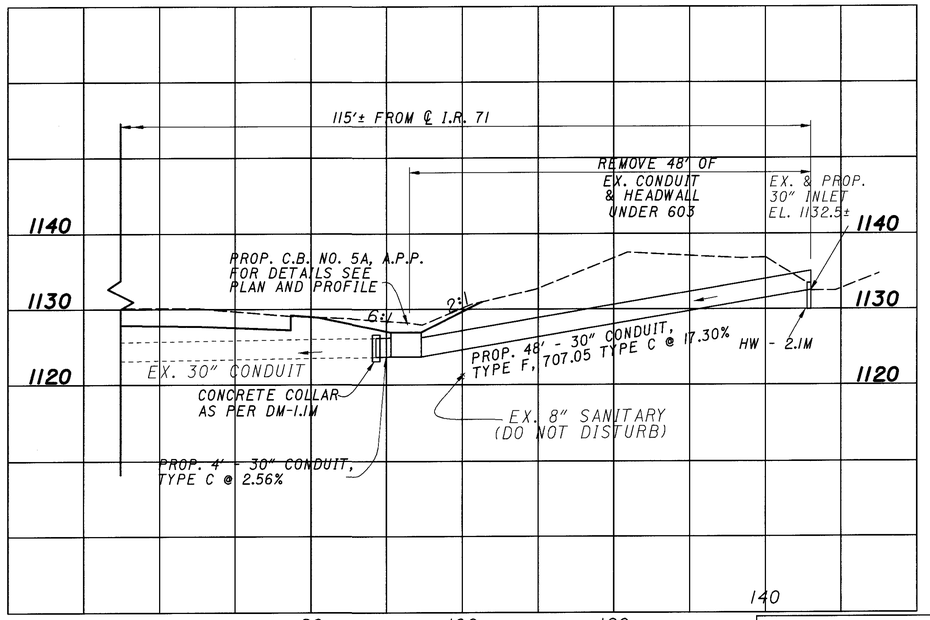
7885DFA.DGN 8/23/99 IPS




92-D

EX. 42" CONDUIT
STA. 1127+20 RT.

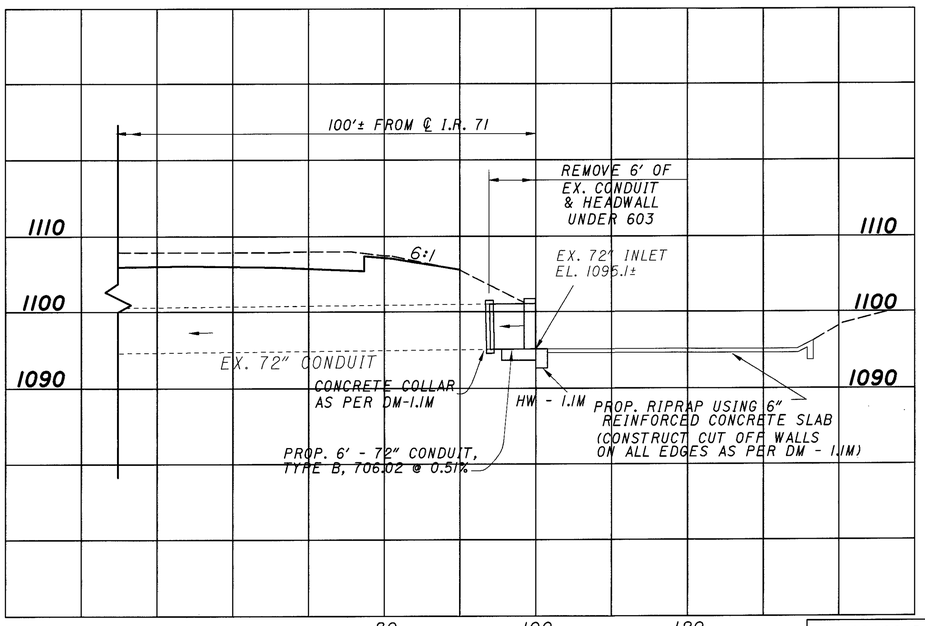
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 196 |
| DRAINAGE SUBSUMMARY | 85-88 |
| DRAINAGE CALCS. | 144 |
| | |




109-D

EX. 30" CONDUIT
STA. 1185+74 RT.

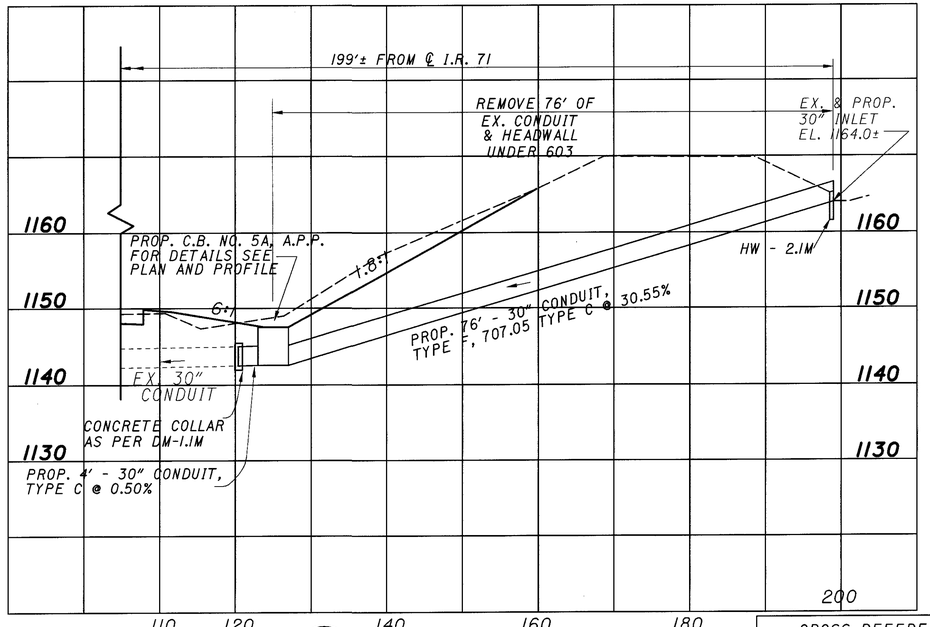
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 200 |
| DRAINAGE SUBSUMMARY | 85-88 |
| | |
| | |




103-D

EX. 72" CONDUIT
STA. 1158+55 RT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 198 |
| DRAINAGE SUBSUMMARY | 85-88 |
| DRAINAGE CALCS. | 145 |
| | |




123-D

EX. 30" CONDUIT
STA. 1216+76 RT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 203 |
| DRAINAGE SUBSUMMARY | 85-88 |
| | |
| | |

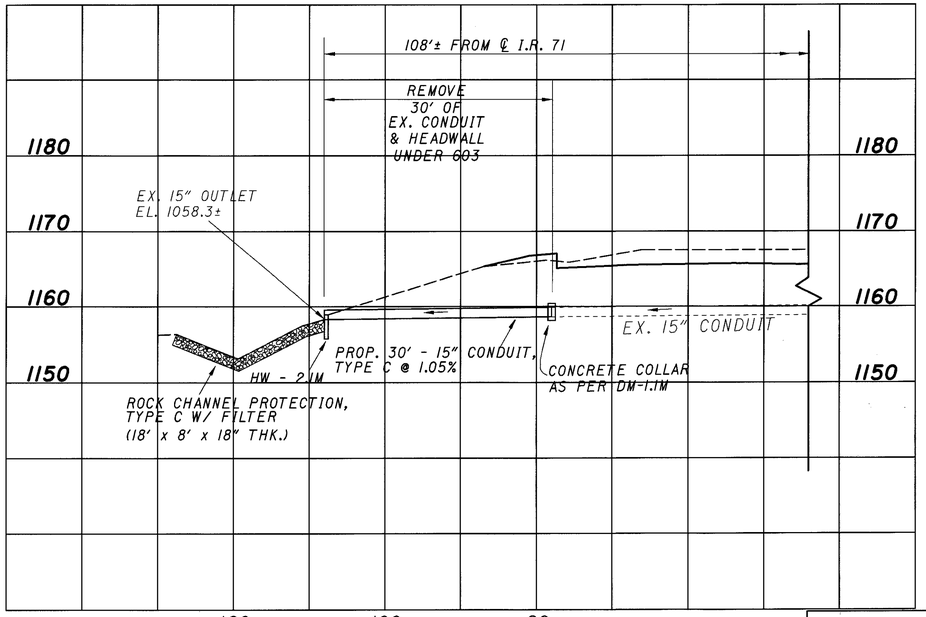
CALCULATED PRS
CHECKED PDG

DRAINAGE DETAILS (PIPE REPLACEMENT)

MED - 71 -15.78

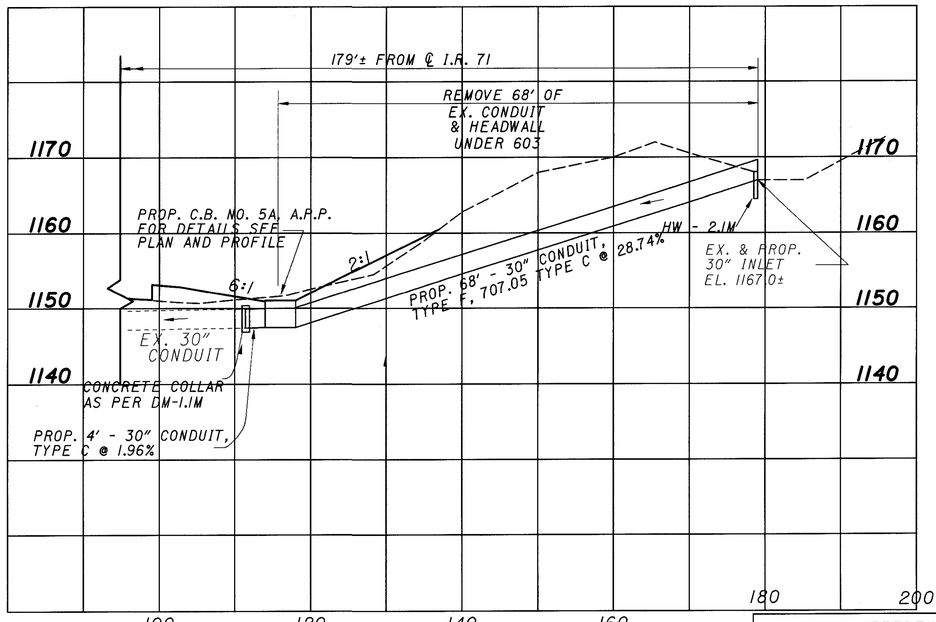
510
940

7885DFB.DGN 8/23/99 PS



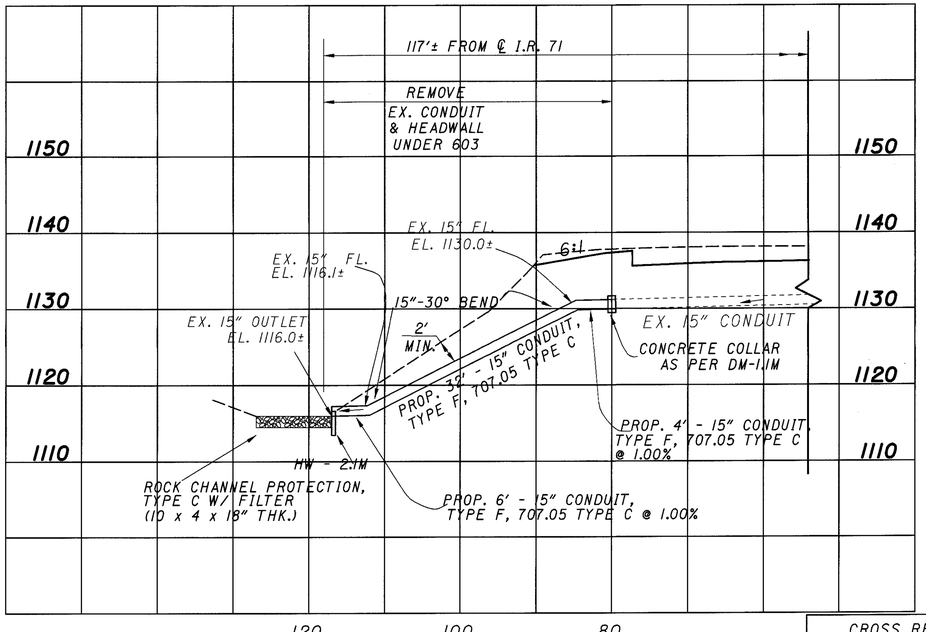

(135-D) EX. 15" CONDUIT STA. 1242+34 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 205 |
| DRAINAGE SUBSUMMARY | 89-92 |
| DRAINAGE CALCS. | 146 |
| | |



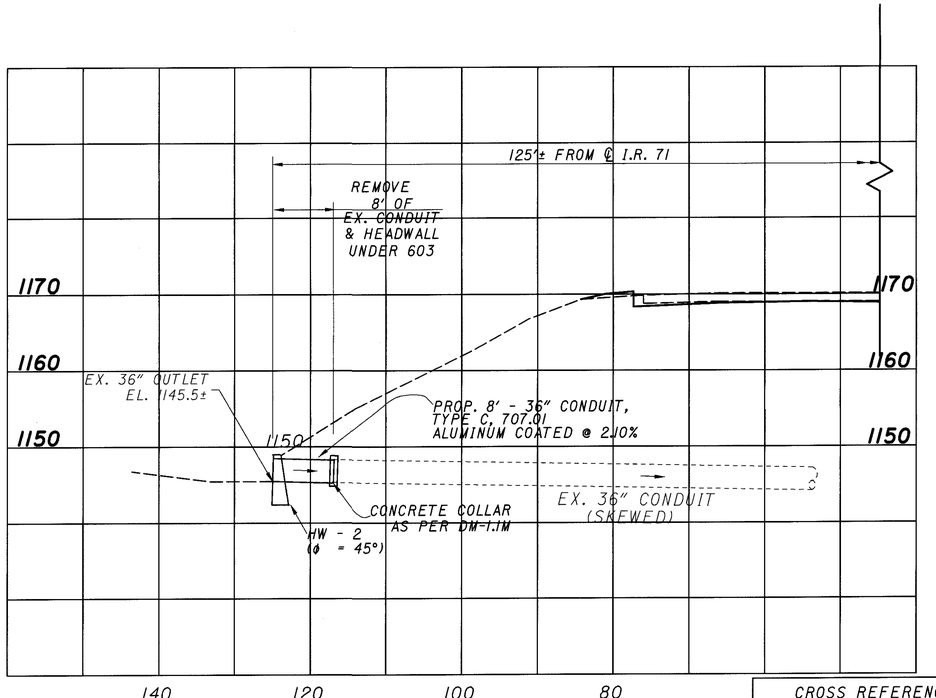

(126-D) EX. 30" CONDUIT STA. 1221+34 RT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 203 |
| DRAINAGE SUBSUMMARY | 85-88 |
| | |
| | |




(114-D) EX. 15" CONDUIT STA. 1198+41 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 201 |
| DRAINAGE SUBSUMMARY | 85-88 |
| DRAINAGE CALCS. | 145 |
| | |




(55-D) EX. 36" CONDUIT STA. 991+35 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 185 |
| DRAINAGE SUBSUMMARY | 81-84 |
| DRAINAGE DETAILS | 506 |
| | |

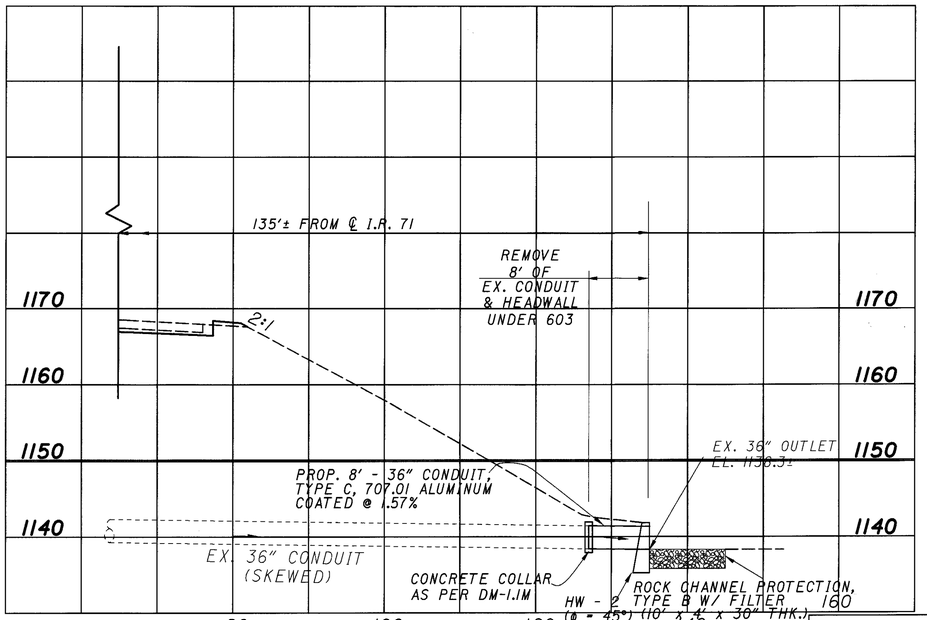
CALCULATED PRS CHECKED PDG

# DRAINAGE DETAILS (PIPE REPLACEMENT)

MED - 71 -15.78

511
940

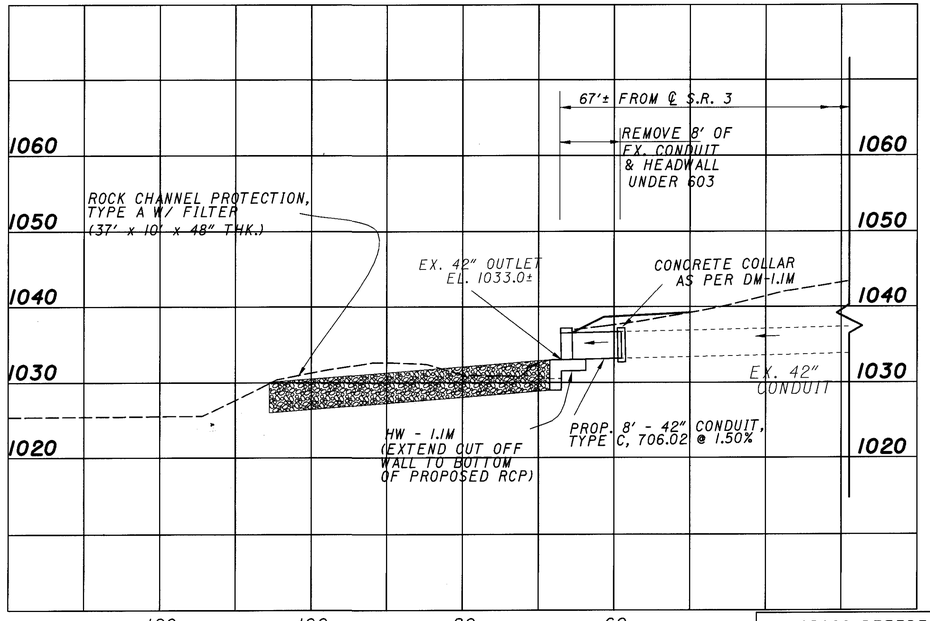
7885DFC 8/23/99 PS




55-D

EX. 36" CONDUIT
STA. 993+68 RT.

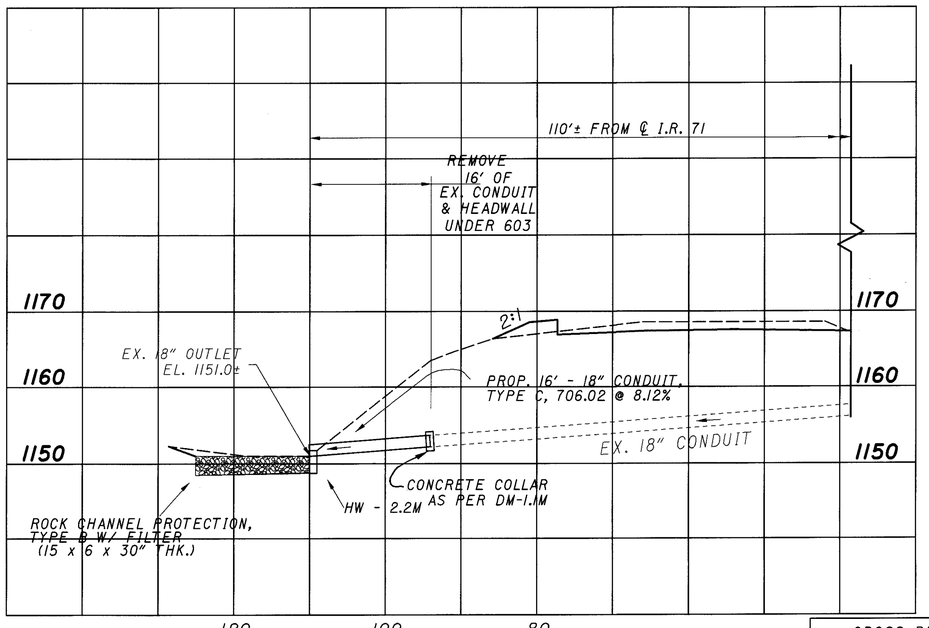
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 185 |
| DRAINAGE SUBSUMMARY | 81-84 |
| DRAINAGE CALCS. | 412 |
| DRAINAGE DETAILS | 506 |




169-D

EX. 42" CONDUIT
STA. 899+10 S.R. 3 LT.

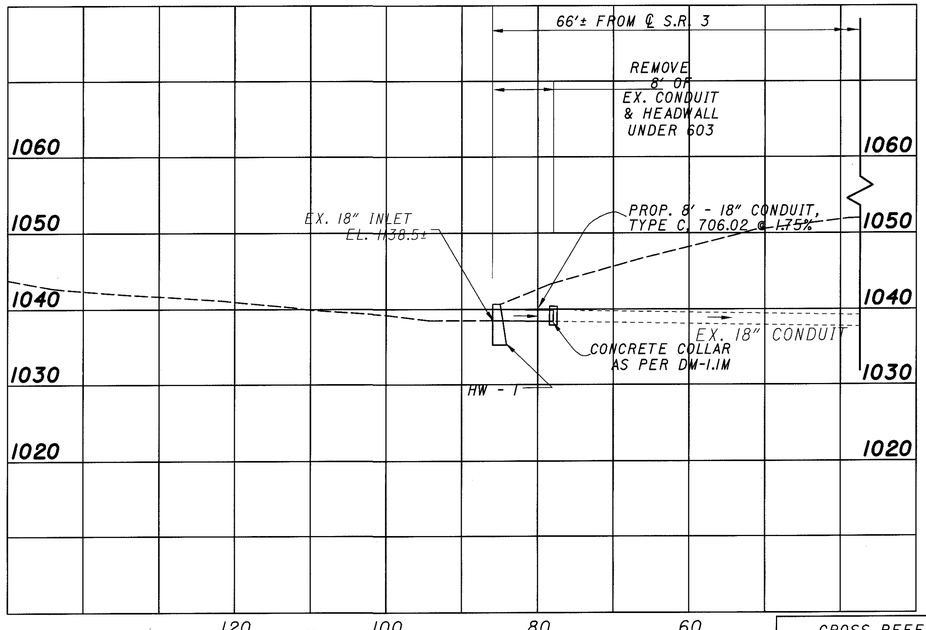
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 194 |
| DRAINAGE SUBSUMMARY | 89-92 |
| DRAINAGE CALCS. | 146 |




139-D

EX. 18" CONDUIT
STA. 1267+34 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 207 |
| DRAINAGE SUBSUMMARY | 89-92 |
| DRAINAGE CALCS. | 146 |




170-D

EX. 18" CONDUIT
STA. 903+65 S.R. 3 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 194 |
| DRAINAGE SUBSUMMARY | 89-91 |
| DRAINAGE DETAILS | 507 |

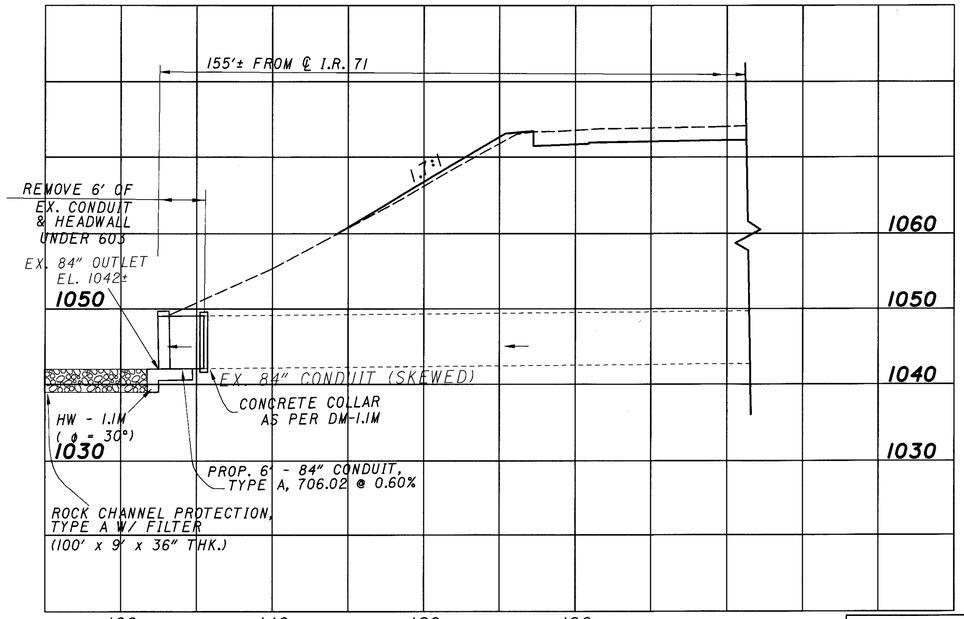
CALCULATED PRS
CHECKED PDG

DRAINAGE DETAILS (PIPE REPLACEMENT)

MED - 71 -15.78

512
940

7885DFH.DGN 8/23/99 PS




90-D

EX. 84" CONDUIT
STA. 1116+80 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 195 |
| DRAINAGE SUBSUMMARY | 85-88 |
| DRAINAGE CALCS. | 144 |
| | |

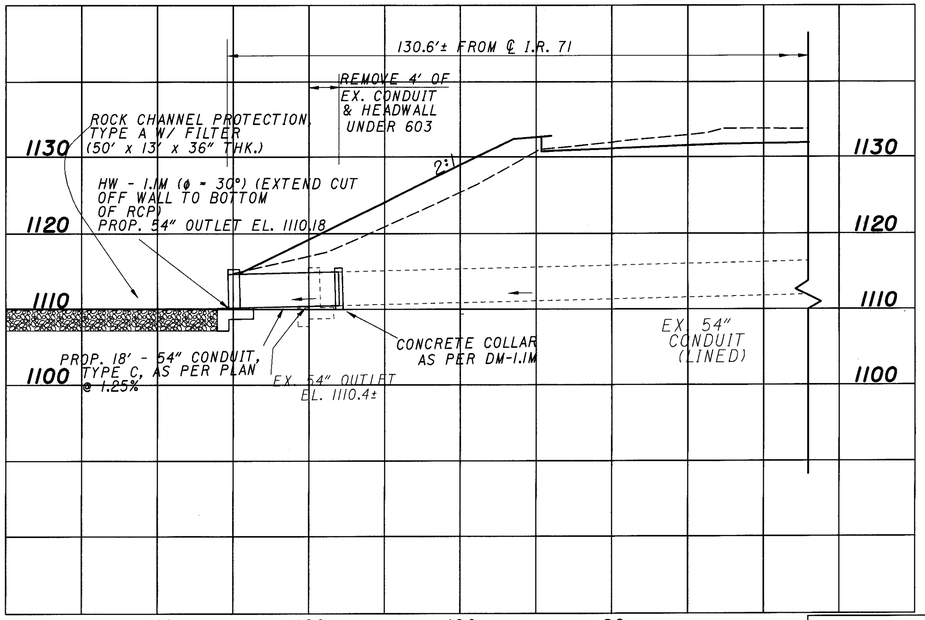
CALCULATED PRS
CHECKED PDG

DRAINAGE DETAILS (PIPE REPLACEMENT)

MED - 71 -15.78

512A
940

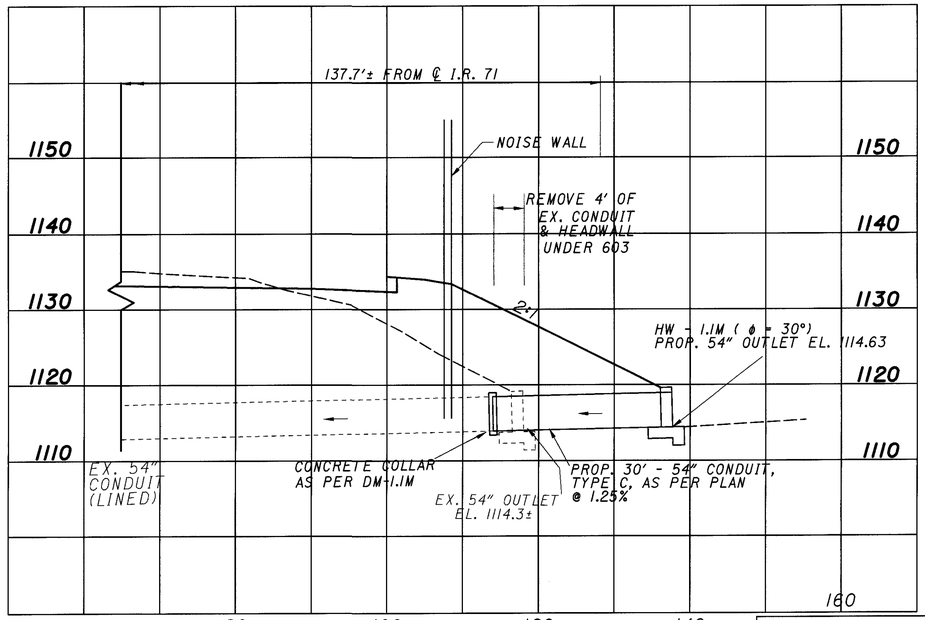
7885DFLDGN 8/23/99 PS




32-D

EX. 54" CONDUIT (SKEW 40° 45')
STA. 913+45 LT.

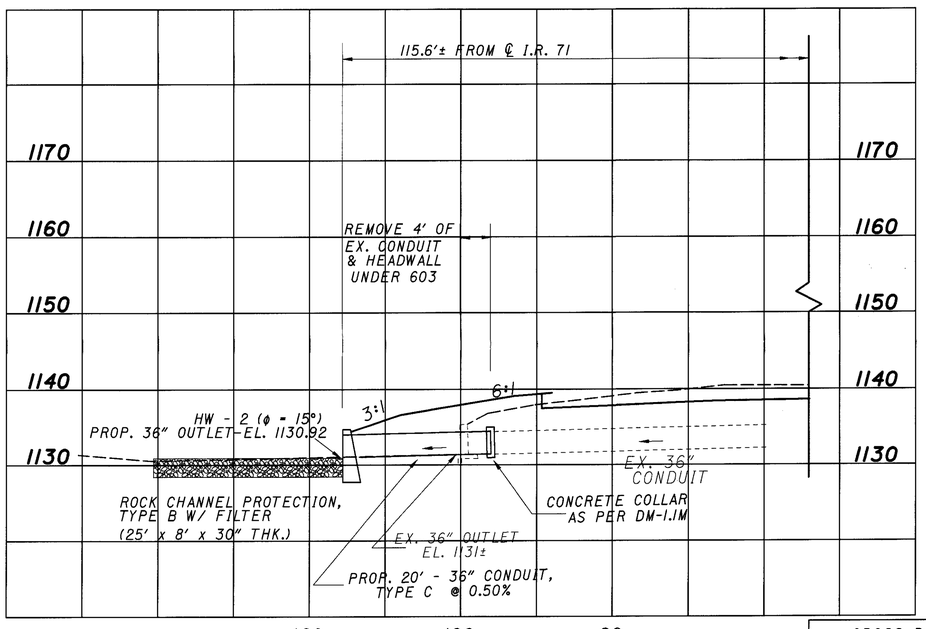
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 178-179 |
| DRAINAGE SUBSUMMARY | 77-80 |
| GENERAL NOTES | 35 |
| DRAINAGE CALCS. | 140 |




34-D

EX. 54" CONDUIT (SKEW 40° 45')
STA. 915+45 RT.

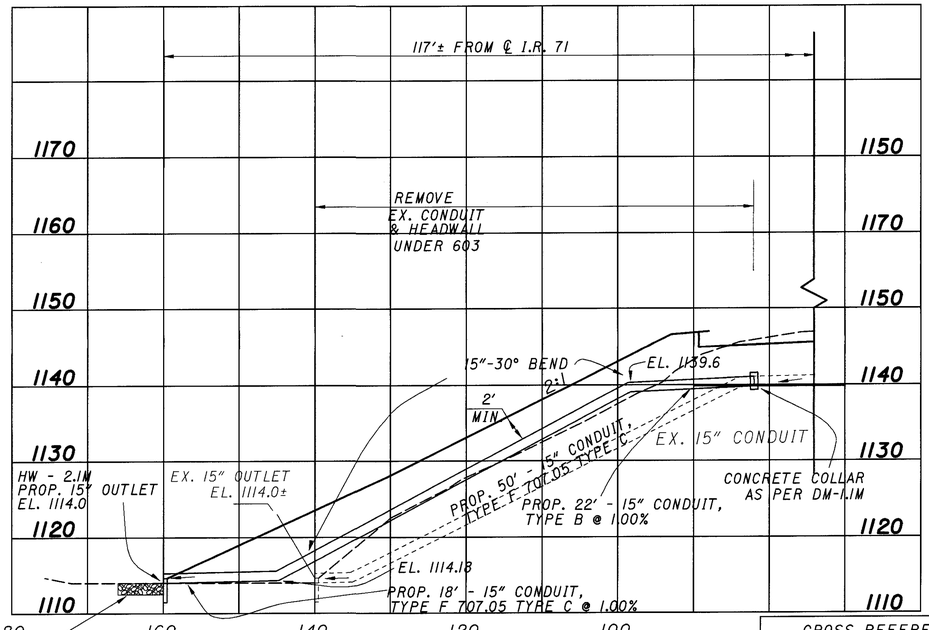
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 179 |
| DRAINAGE SUBSUMMARY | 77-80 |
| GENERAL NOTES | 35 |
| | |




36-D

EX. 36" CONDUIT (SKEW 13°)
STA. 921+88 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 179 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE CALCS. | 140 |
| DRAINAGE DETAILS | 506 |




38-D

EX. 15" CONDUIT
STA. 931+68 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 180 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE CALCS. | 141 |
| | |

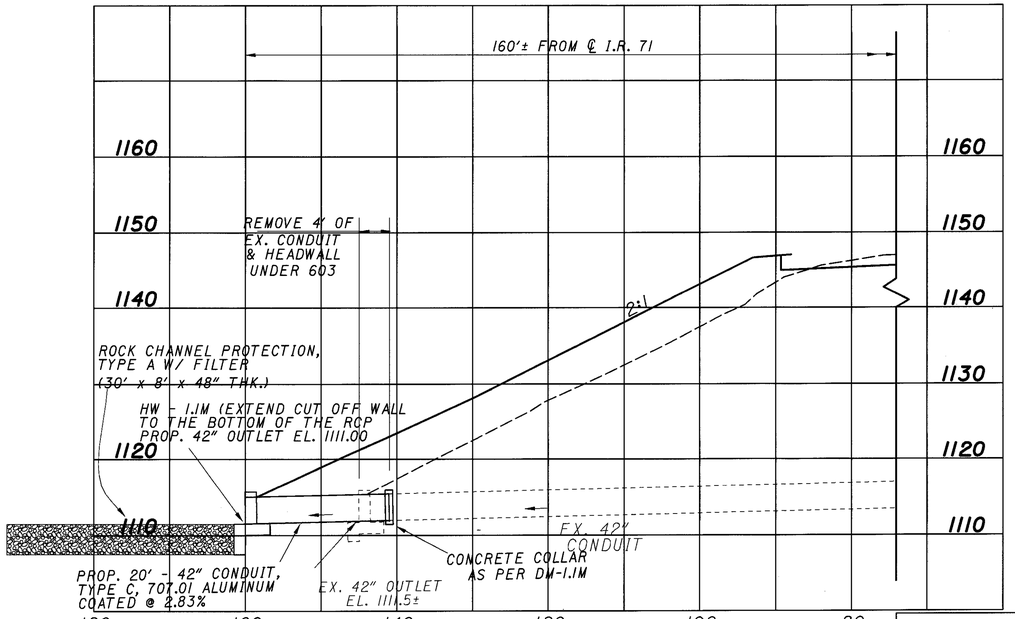
CALCULATED PRS
CHECKED PDG

DRAINAGE DETAILS (PIPE EXTENSION)

MED - 71 -15.78

513
940

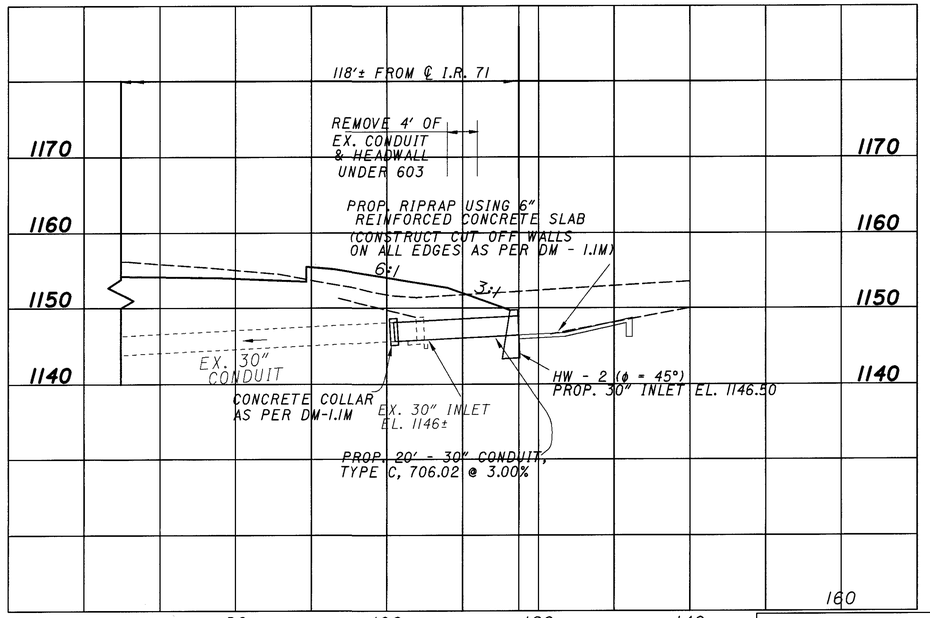
7885DFD.DGN 8/23/99 PS




39-D

EX. 42" CONDUIT (SKEW 7°)
STA. 932+25 LT.

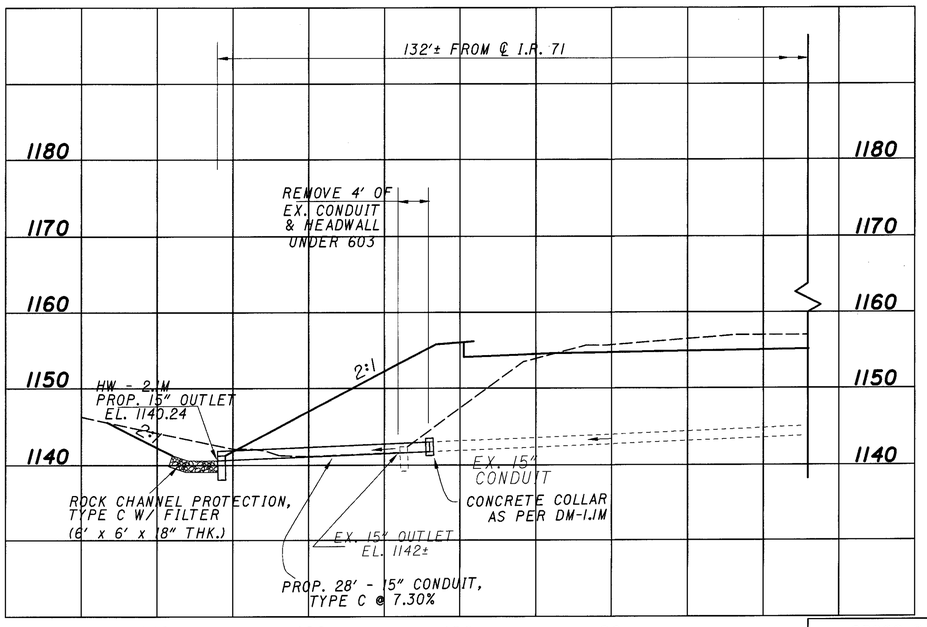
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 180 |
| DRAINAGE SUBSUMMARY | 77-80 |
| CULVERT DETAIL | 519 |
| DRAINAGE CALCS. | 141 |




41-D

EX. 30" CONDUIT (SKEW 39° L.F.)
STA. 943+45 RT.

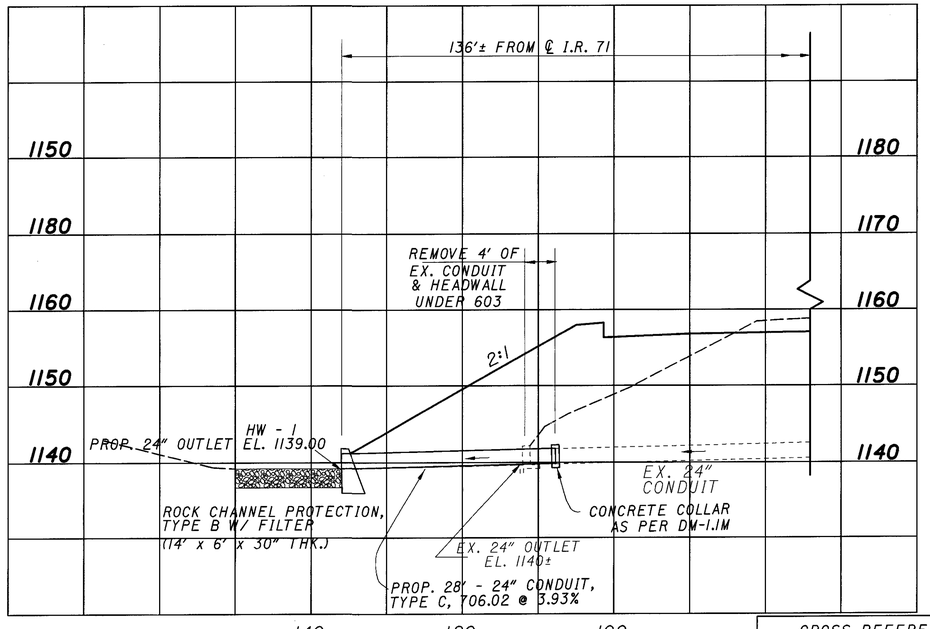
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 181 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE CALCS. | 141 |
| DRAINAGE DETAILS | 506 |




40-D

EX. 15" CONDUIT
STA. 944+68 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 181 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE CALCS. | 141 |




41A-D

EX. 24" CONDUIT
STA. 947+50 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 181 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE CALCS. | 141 |
| DRAINAGE DETAILS | 507 |

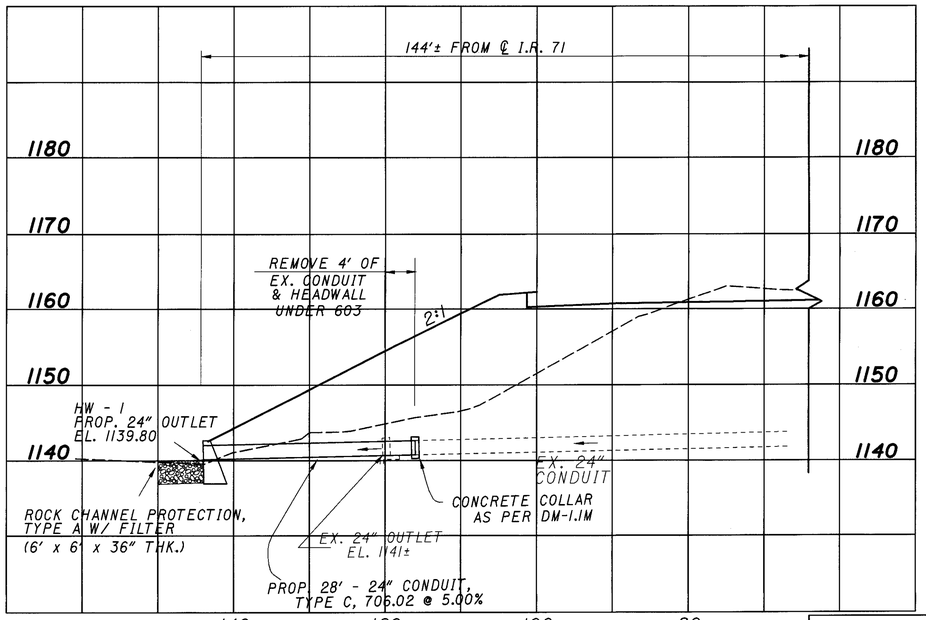
CALCULATED PRS
CHECKED PDG

# DRAINAGE DETAILS (PIPE EXTENSION)

MED - 71 -15.78

514
940

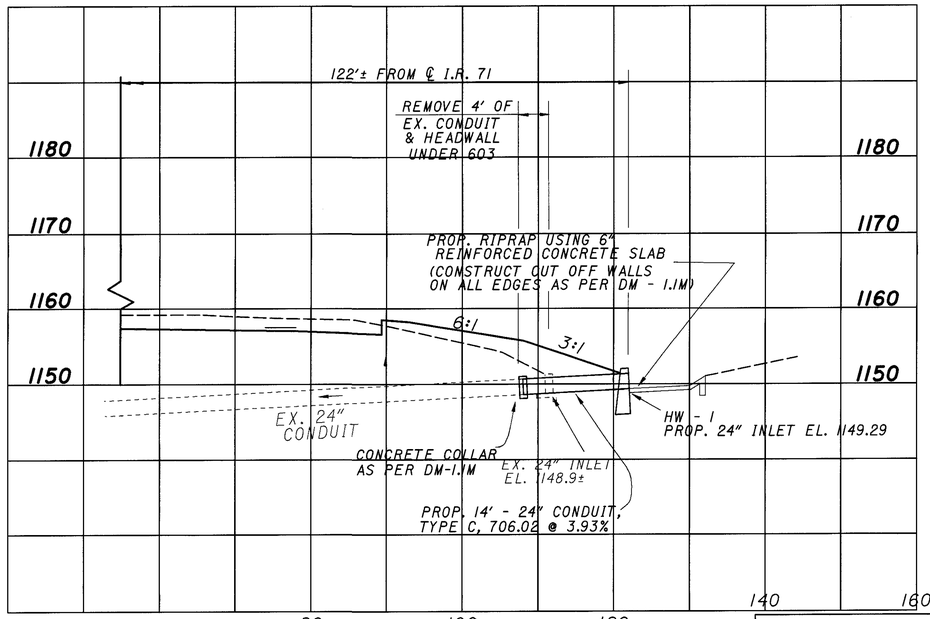
78850FE.DGN 8/23/99 PS




42-D

EX. 24" CONDUIT
STA. 952+68 LT.

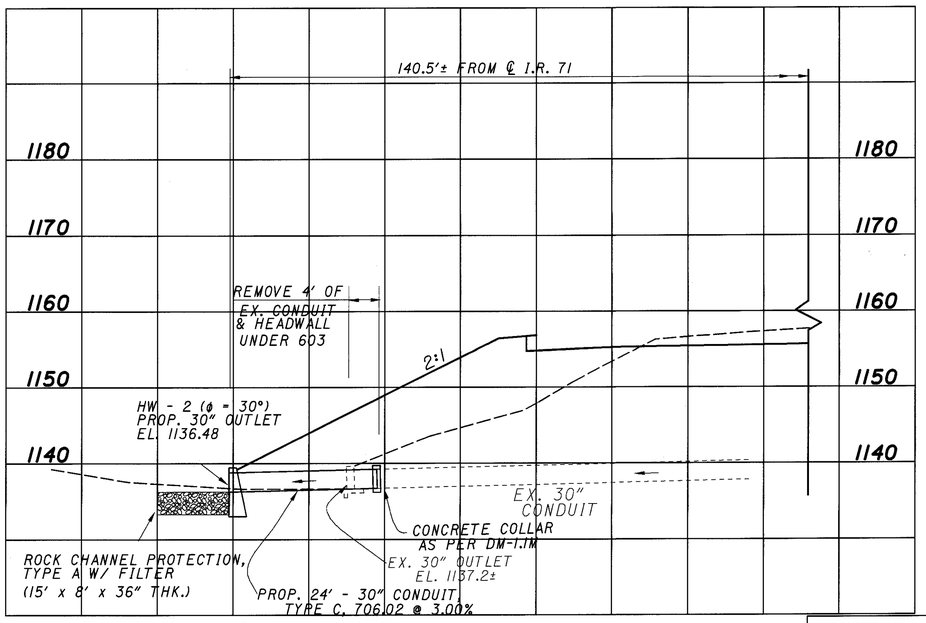
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 182 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE CALCS. | 142 |
| DRAINAGE DETAILS | 507 |




41A-D

EX. 24" CONDUIT
STA. 947+50 RT.

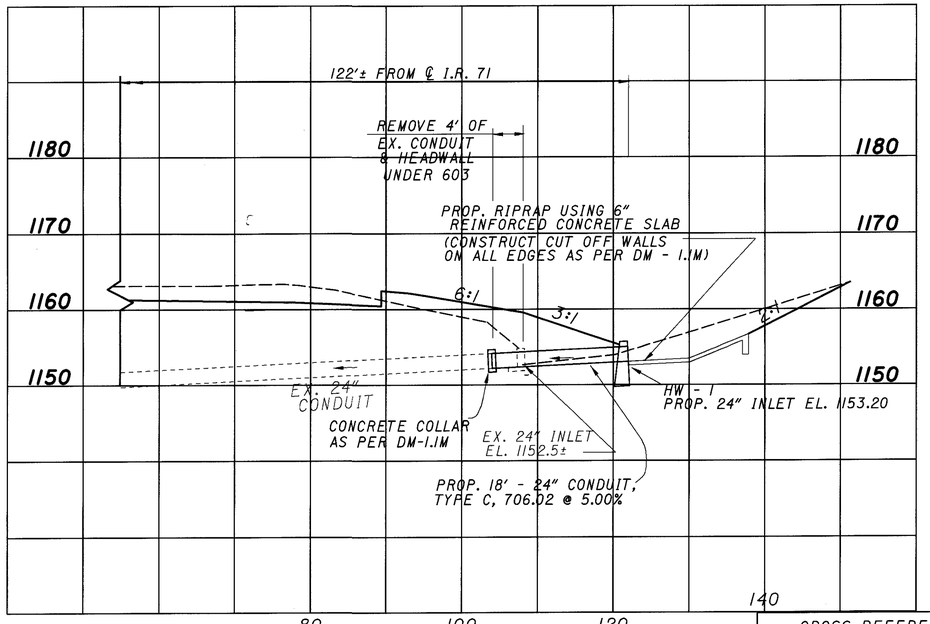
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 181 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE CALCS. | 142 |
| DRAINAGE DETAILS | 507 |




41-D

EX. 30" CONDUIT (SKEW 39°)
STA. 945+33 LT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 181 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE CALCS. | 141 |
| DRAINAGE DETAILS | 506 |




42-D

EX. 24" CONDUIT
STA. 952+68 RT.

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 182 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE CALCS. | 142 |
| DRAINAGE DETAILS | 507 |

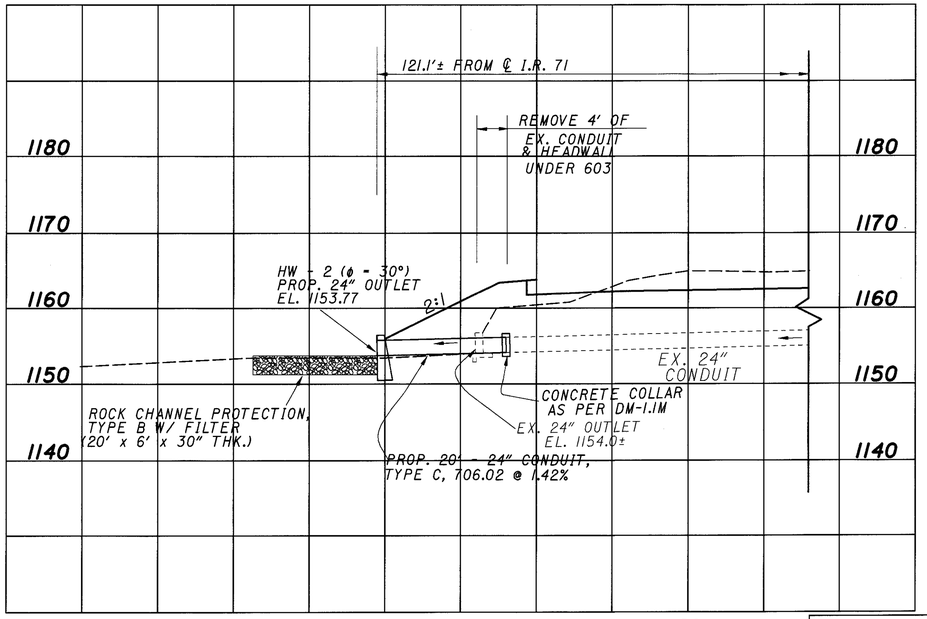
CALCULATED PRS
CHECKED PDG

# DRAINAGE DETAILS (PIPE EXTENSION)

MED - 71 -15.78

515
940

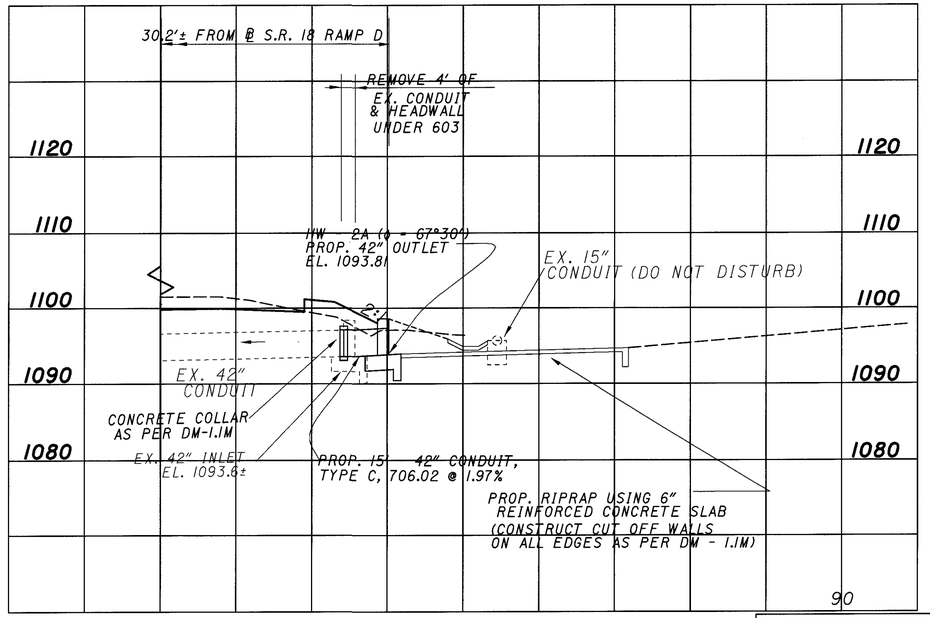
78850FF.DGN 8/23/99 PS




43-D

EX. 24" CONDUIT (SKEW 35°)
STA. 955+60 LT.

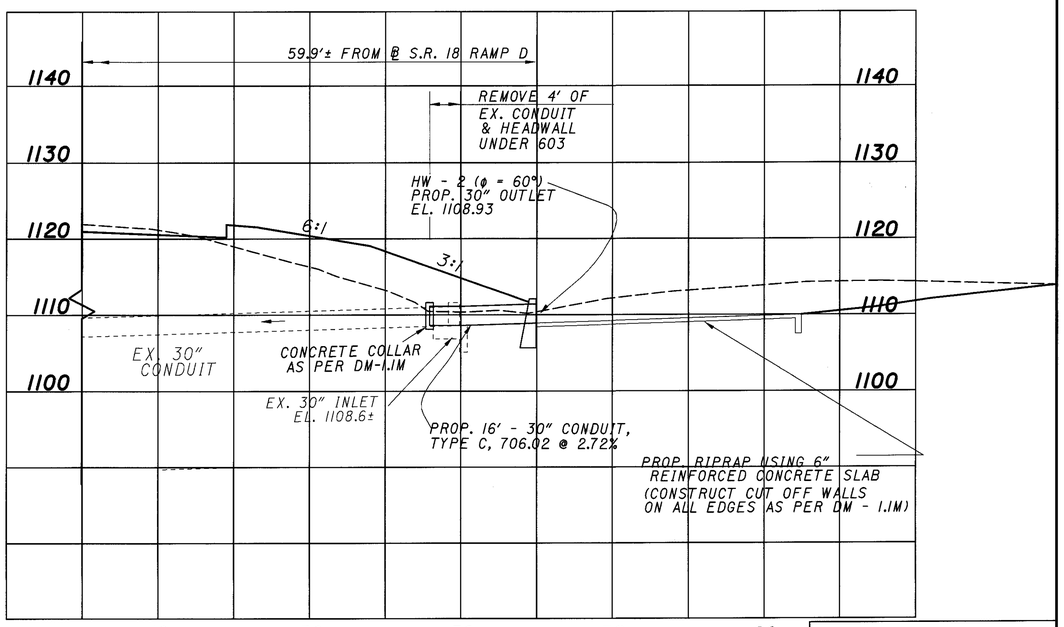
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 182 |
| DRAINAGE SUBSUMMARY | 81-84 |
| DRAINAGE DETAILS | 506 |
| DRAINAGE CALCS. | 142 |




26-D

EX. 42" CONDUIT (SKEW 27°59'28" L.F. ℄S.R.18)
STA. 1+32 RT. S.R. 18 RAMP D

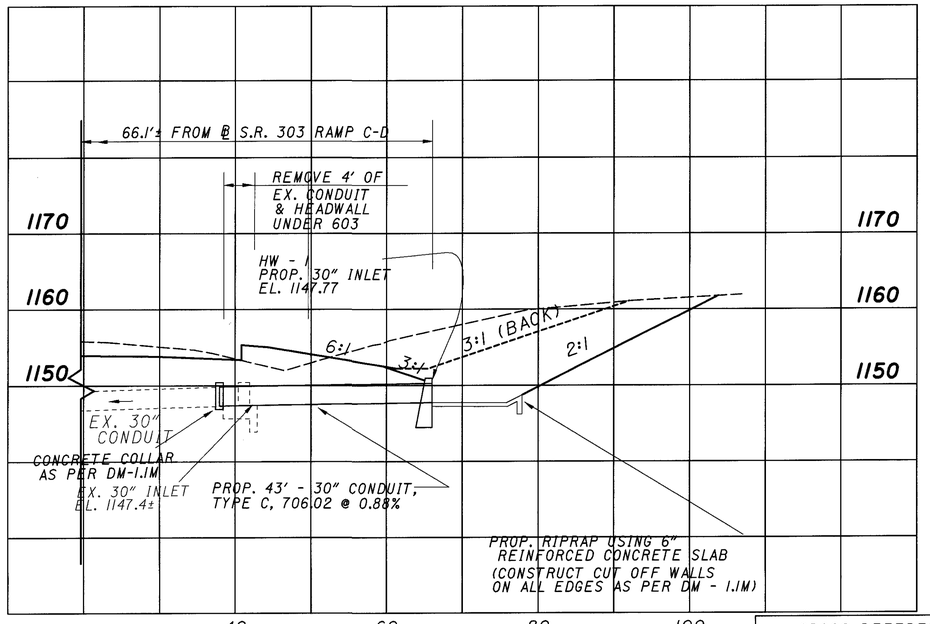
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 177 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE DETAILS | 508 |
| DRAINAGE CALCS. | 139 |




28-D

EX. 30" CONDUIT (SKEW 33° R.F.)
STA. 8+60 RT. S.R. 18 RAMP D

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 177 |
| DRAINAGE SUBSUMMARY | 77-80 |
| DRAINAGE DETAILS | 506 |
| DRAINAGE CALCS. | 139 |




180C-D

EX. 30" CONDUIT (SKEW 49° R.F. ℄ S.R.303)
STA. 46+84.54 38.91' RT. S.R. 303 RAMP C-D

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 491-492 |
| DRAINAGE SUBSUMMARY | 93-96 |
| DRAINAGE DETAILS | 507 |
| DRAINAGE CALCS. | 146A |

CALCULATED PRS
CHECKED PDG

# DRAINAGE DETAILS (PIPE EXTENSION)

MED - 71 -15.78

516
940

7885DFG.DGN 8/23/99 PS

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 176-177 |
| DRAINAGE SUBSUMMARY | 77-80 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 138 |
| | |
| | |
| | |

| DRAINAGE AREA = 46 ACRES | |
|---|---|
| $Q_{50}$ = | 96 cfs |
| $Q_{100}$ = | 107 cfs |
| $HW_{50}$ = | 6.7' |
| $HW_{100}$ = | 8.2' |
| V 50 = | 19 ft/s (n=0.009) |
| V 100 = | 23 ft/s (n=0.009) |

STA. 888+41.83 ℄ CONST. I.R. 71 =
STA. 10+00.00 ℄ CULVERT

EX. 48" CORRUGATED METAL PIPE CULVERT WITH PROPOSED SS837 LINER PIPE, GROUTED IN PLACE

74°

9+00 10+00 11+00

889+00 888+00

10' SHOULDER 36' 10' SHOULDER 20' 20' 10' SHOULDER 36' 10' SHOULDER

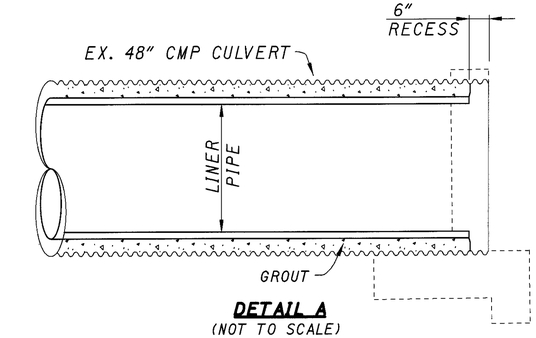
20-D

## ITEM SS837 BACKFILL FOR LINER PIPE
## ESTIMATED QUANTITY CALCULATION

$\frac{\pi(4)^2}{4(27)}$ = 0.47 CU. YARD / FT.

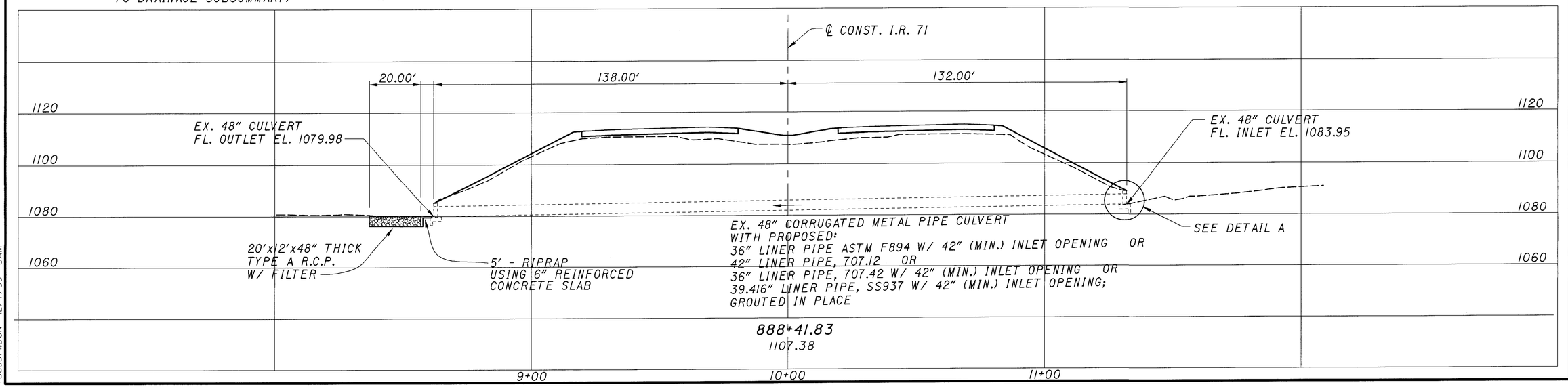
$\frac{\pi(3)^2}{4(27)}$ = - 0.26 CU. YARD / FT.

0.21 CU. YARD / FT.
X 270 FT. LENGTH
= 56.70 CU. YARDS X 2
USE 114 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)




**DETAIL A**
(NOT TO SCALE)

IF THE 36" OR 39.416" LINER PIPE, IS USED A 6" RECESS FROM 42" (MIN.) TO 36" OR 39.416" IS REQUIRED AT THE INLET




7885DP1.DGN 12/7/99 SAM

CALCULATED PRS
CHECKED PDG

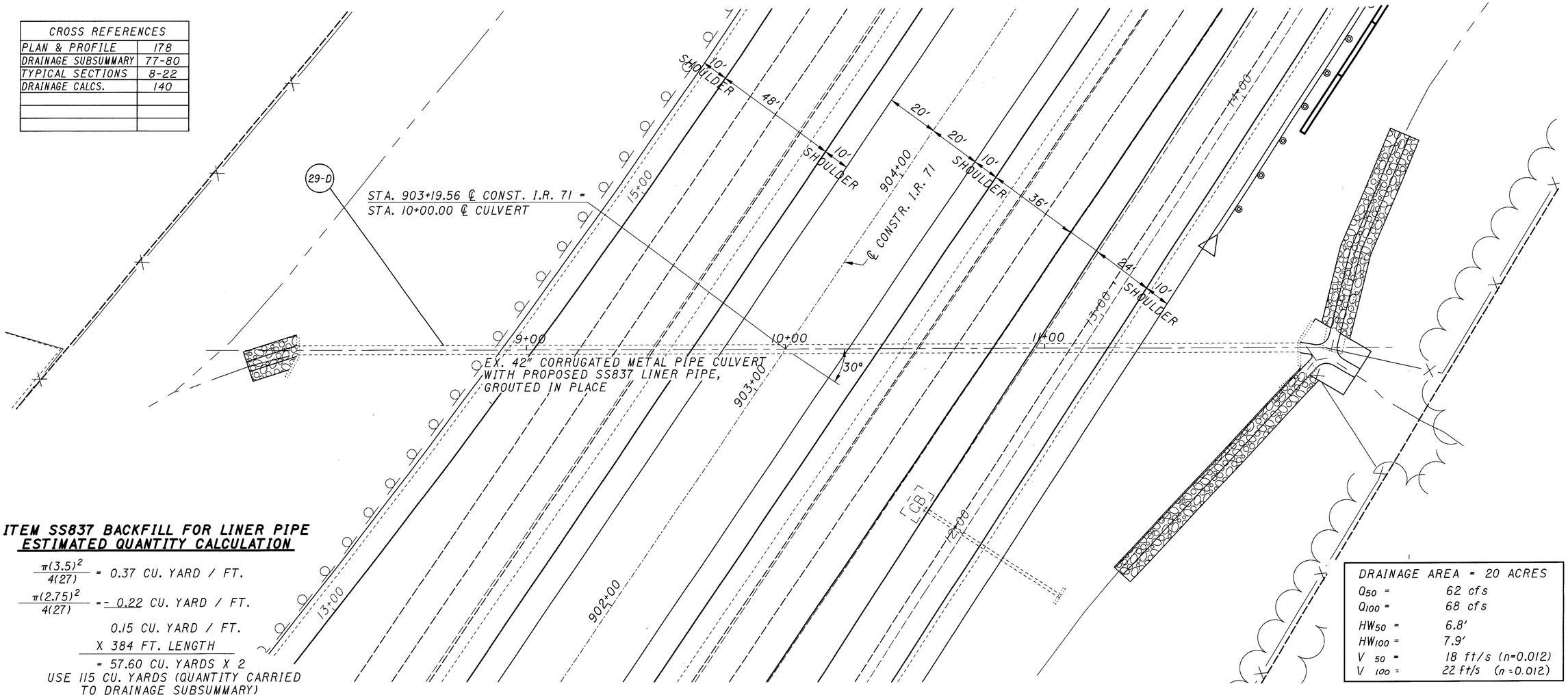
HORIZONTAL SCALE IN FEET
0 10 20 40

# CULVERT DETAIL (LINER) STA. 888+41.83

MED - 71 - 15.78

517
940

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 178 |
| DRAINAGE SUBSUMMARY | 77-80 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 140 |
| | |
| | |
| | |




**ITEM SS837 BACKFILL FOR LINER PIPE**
**ESTIMATED QUANTITY CALCULATION**

$\frac{\pi(3.5)^2}{4(27)}$ = 0.37 CU. YARD / FT.

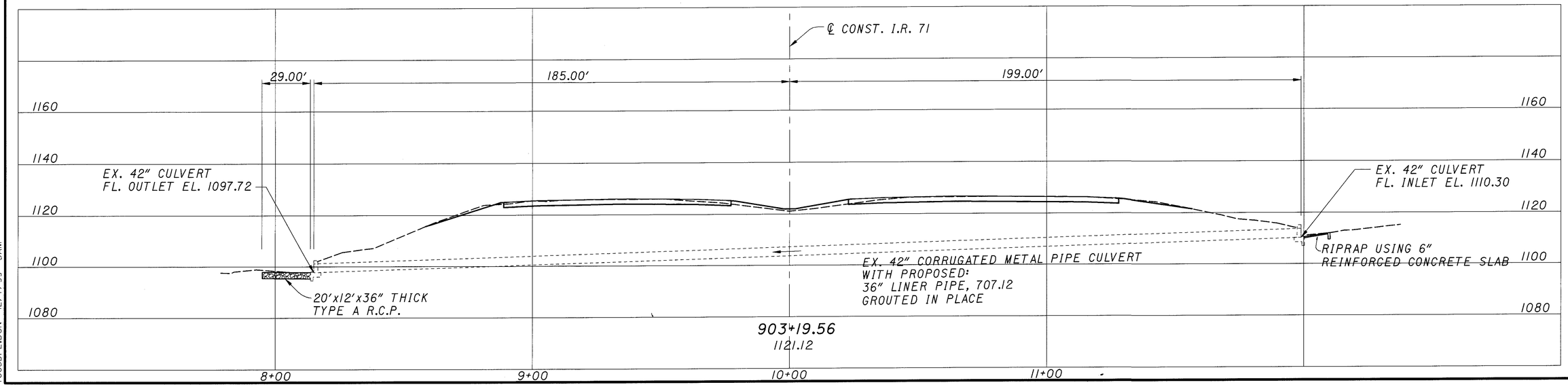
$\frac{\pi(2.75)^2}{4(27)}$ = 0.22 CU. YARD / FT.

0.15 CU. YARD / FT.
X 384 FT. LENGTH
= 57.60 CU. YARDS X 2

USE 115 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)

DRAINAGE AREA = 20 ACRES

| | |
|---|---|
| $Q_{50}$ = | 62 cfs |
| $Q_{100}$ = | 68 cfs |
| $HW_{50}$ = | 6.8' |
| $HW_{100}$ = | 7.9' |
| V 50 = | 18 ft/s (n=0.012) |
| V 100 = | 22 ft/s (n=0.012) |




HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PRS
CHECKED PDG

**CULVERT DETAIL (LINER)**
**STA. 903+19.56**

**MED - 71 - 15.78**

518
940

7885DP2.DGN 12/7/99 SAM

DRAINAGE AREA = 56 ACRES

| | | | |
|---|---|---|---|
| $Q_{50}$ = | 110 cfs | $V_{50}$ = | 20 ft/s (n=0.012) |
| $Q_{100}$ = | 123 cfs | $V_{100}$ = | 24 ft/s (n=0.012) |
| $HW_{50}$ = | 9.9′ | | |
| $HW_{100}$ = | 11.6′ | | |

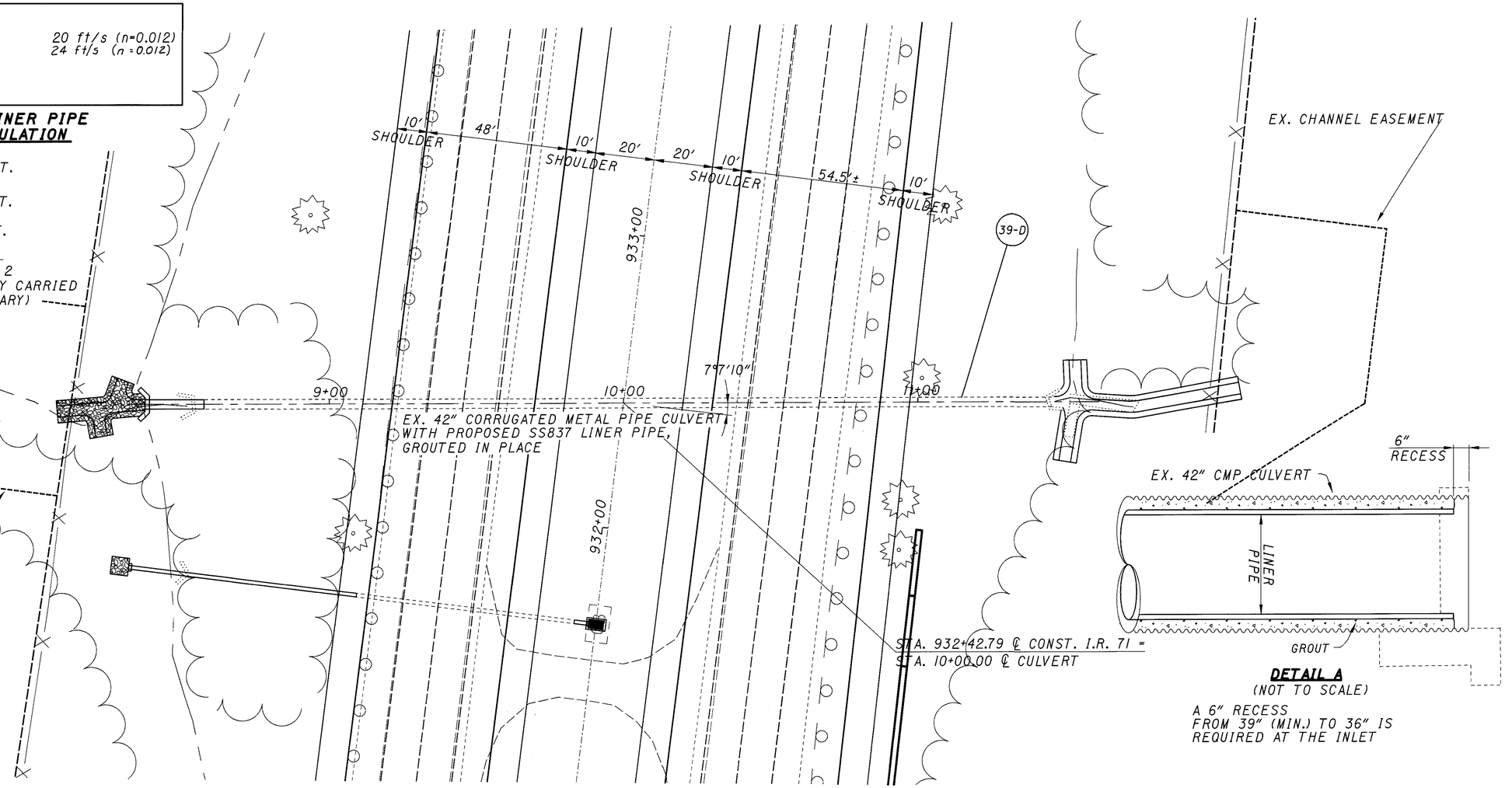
## ITEM SS837 BACKFILL FOR LINER PIPE ESTIMATED QUANTITY CALCULATION

$\frac{\pi(3.5)^2}{4(27)}$ = 0.37 CU. YARD / FT.

$\frac{\pi(3)^2}{4(27)}$ = -0.26 CU. YARD / FT.

0.11 CU. YARD / FT.
X 284 FT. LENGTH
= 31.24 CU. YARDS X 2
USE 63 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 180 |
| DRAINAGE SUBSUMMARY | 77-80 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE DETAILS | 514 |
| DRAINAGE CALCS. | 141 |
| | |
| | |

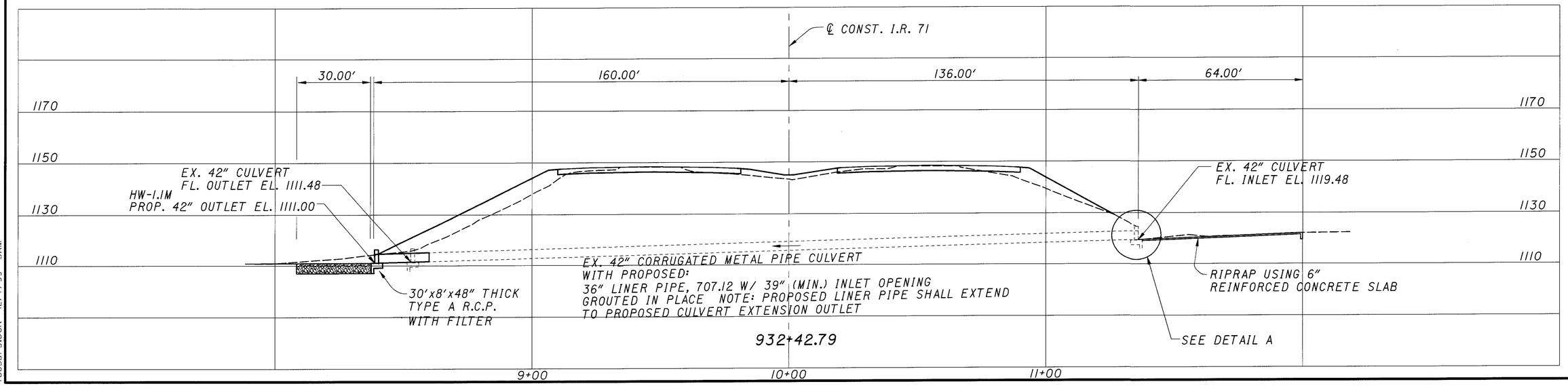






**DETAIL A**
(NOT TO SCALE)

A 6″ RECESS FROM 39″ (MIN.) TO 36″ IS REQUIRED AT THE INLET




HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PRS
CHECKED PDG

# CULVERT DETAIL (LINER)
# STA. 932+42.79

MED - 71 - 15.78

519
940

7885DP3.DGN 12/7/99 SAM

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 185 |
| DRAINAGE SUBSUMMARY | 81-84 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 142 |
| | |
| | |
| | |

| | | | |
|---|---|---|---|
| DRAINAGE AREA = 20 ACRES | | | |
| $Q_{50}$ = | 50 cfs | $V_{50}$ = | 20 ft/s (n=0.009) |
| $Q_{100}$ = | 57 cfs | $V_{100}$ = | 25 ft/s (n = 0.009) |
| $HW_{50}$ = | 4.9′ | | |
| $HW_{100}$ = | 6.2′ | | |

10′ SHOULDER | 36′ | 10′ SHOULDER | 20′ | 20′ | 10′ SHOULDER | 36′ | 10′ SHOULDER

1000+00

57-D

90°

9+00 | 10+00 | 11+00

EX. 36″ CORRUGATED METAL PIPE CULVERT WITH PROPOSED SS837 LINER PIPE, GROUTED IN PLACE

999+00

STA. 999+22.97 ℄ CONST. I.R. 71 = STA. 10+00.00 ℄ CULVERT

998+00

## ITEM SS837 BACKFILL FOR LINER PIPE ESTIMATED QUANTITY CALCULATION

$\frac{\pi(3)^2}{4(27)}$ = 0.26 CU. YARD / FT.

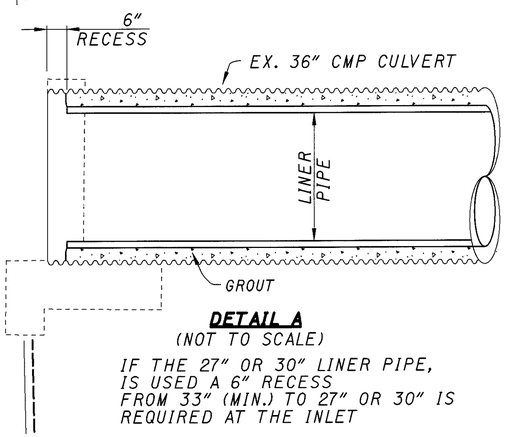
$\frac{\pi(2.25)^2}{4(27)}$ = - 0.15 CU. YARD / FT.

0.11 CU. YARD / FT.

X 244 FT. LENGTH

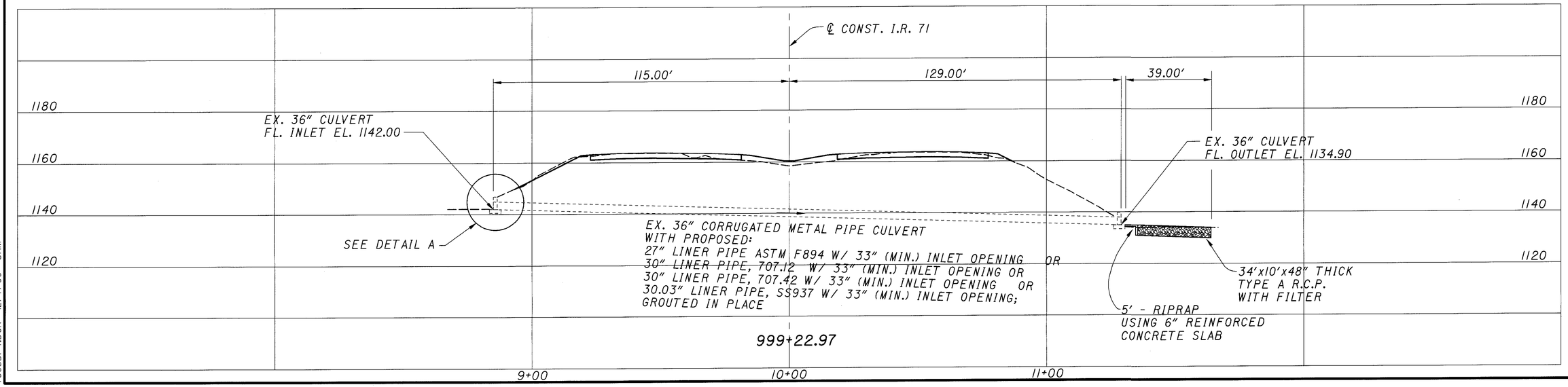
= 26.84 CU. YARDS X 2

USE 54 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)




**DETAIL A**
(NOT TO SCALE)

IF THE 27″ OR 30″ LINER PIPE, IS USED A 6″ RECESS FROM 33″ (MIN.) TO 27″ OR 30″ IS REQUIRED AT THE INLET




N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PRS
CHECKED PDG

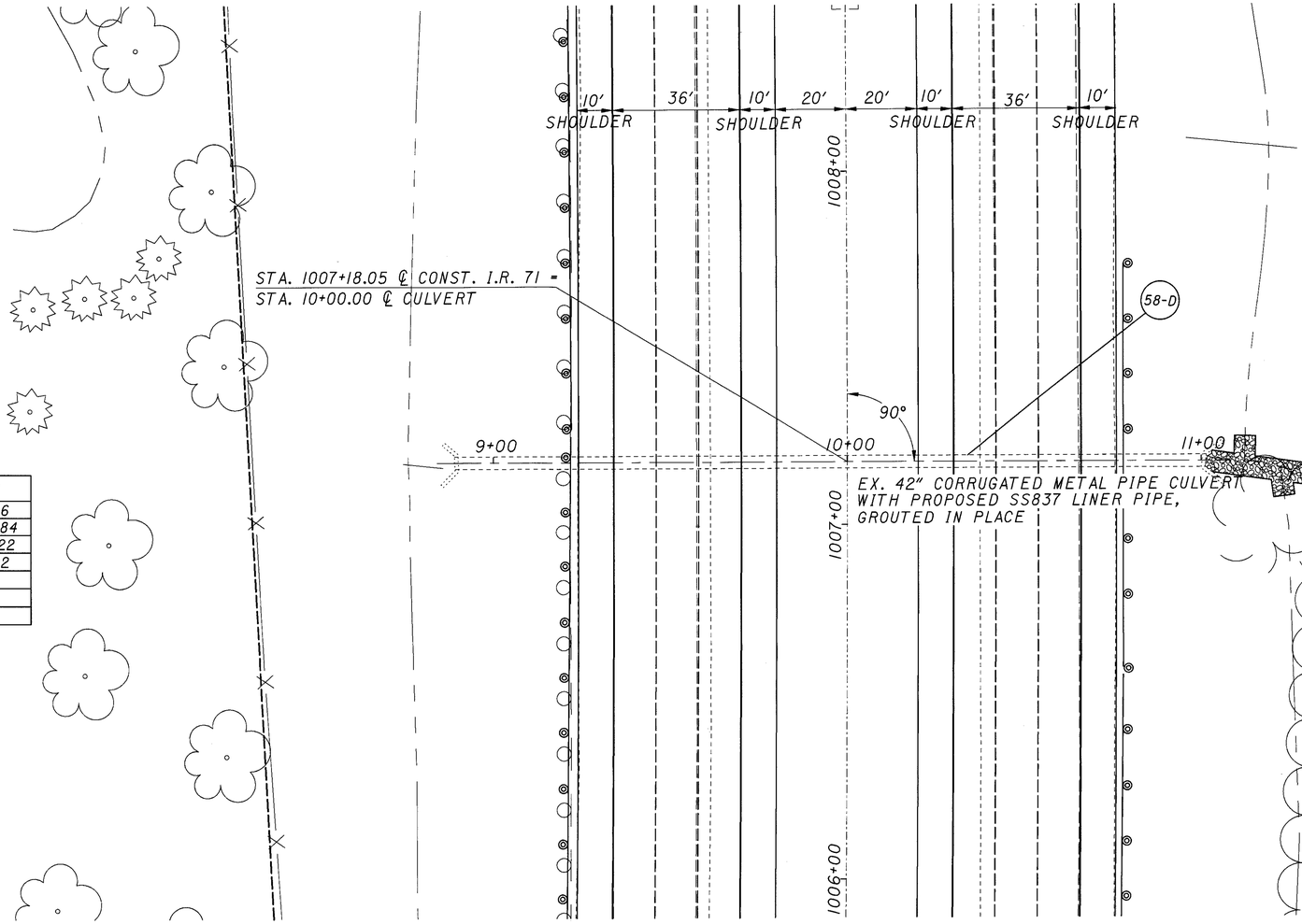
# CULVERT DETAIL (LINER)
# STA. 999+22.97

MED - 71 - 15.78

520
940

7885DP4.DGN 12/7/99 SAM

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 186 |
| DRAINAGE SUBSUMMARY | 81-84 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 142 |
| | |
| | |
| | |



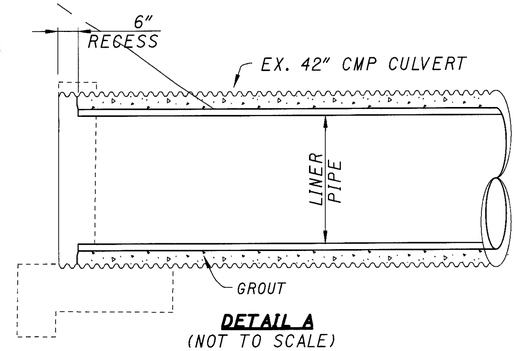

| DRAINAGE AREA = 26 ACRES | | | |
|---|---|---|---|
| $Q_{50}$ = | 68 cfs | $V_{50}$ = | 15 ft/s (n=0.009) |
| $Q_{100}$ = | 77 cfs | $V_{100}$ = | 19 ft/s (n=0.009) |
| $HW_{50}$ = | 6.2' | | |
| $HW_{100}$ = | 7.4' | | |

## ITEM SS837 BACKFILL FOR LINER PIPE ESTIMATED QUANTITY CALCULATION

$\frac{\pi(3.5)^2}{4(27)}$ = 0.37 CU. YARD / FT.

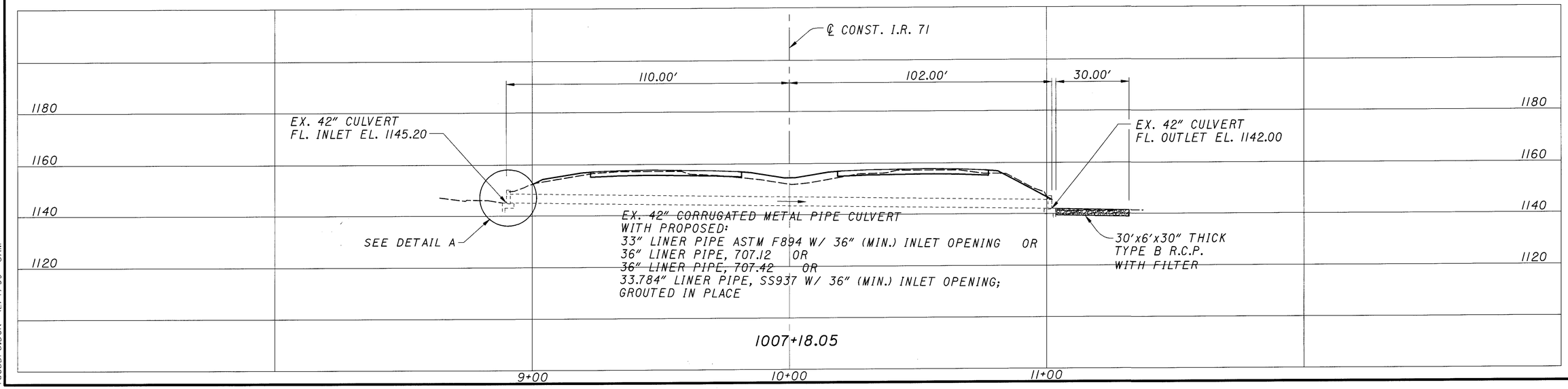
$\frac{\pi(2.75)^2}{4(27)}$ = - 0.22 CU. YARD / FT.

0.15 CU. YARD / FT.
X 212 FT. LENGTH
= 31.80 CU. YARDS X 2
USE 64 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)




**DETAIL A**
(NOT TO SCALE)

IF THE 33" LINER PIPE, IS USED A 6" RECESS FROM 36" (MIN.) TO 33" IS REQUIRED AT THE INLET




HORIZONTAL SCALE IN FEET
0 10 20 40

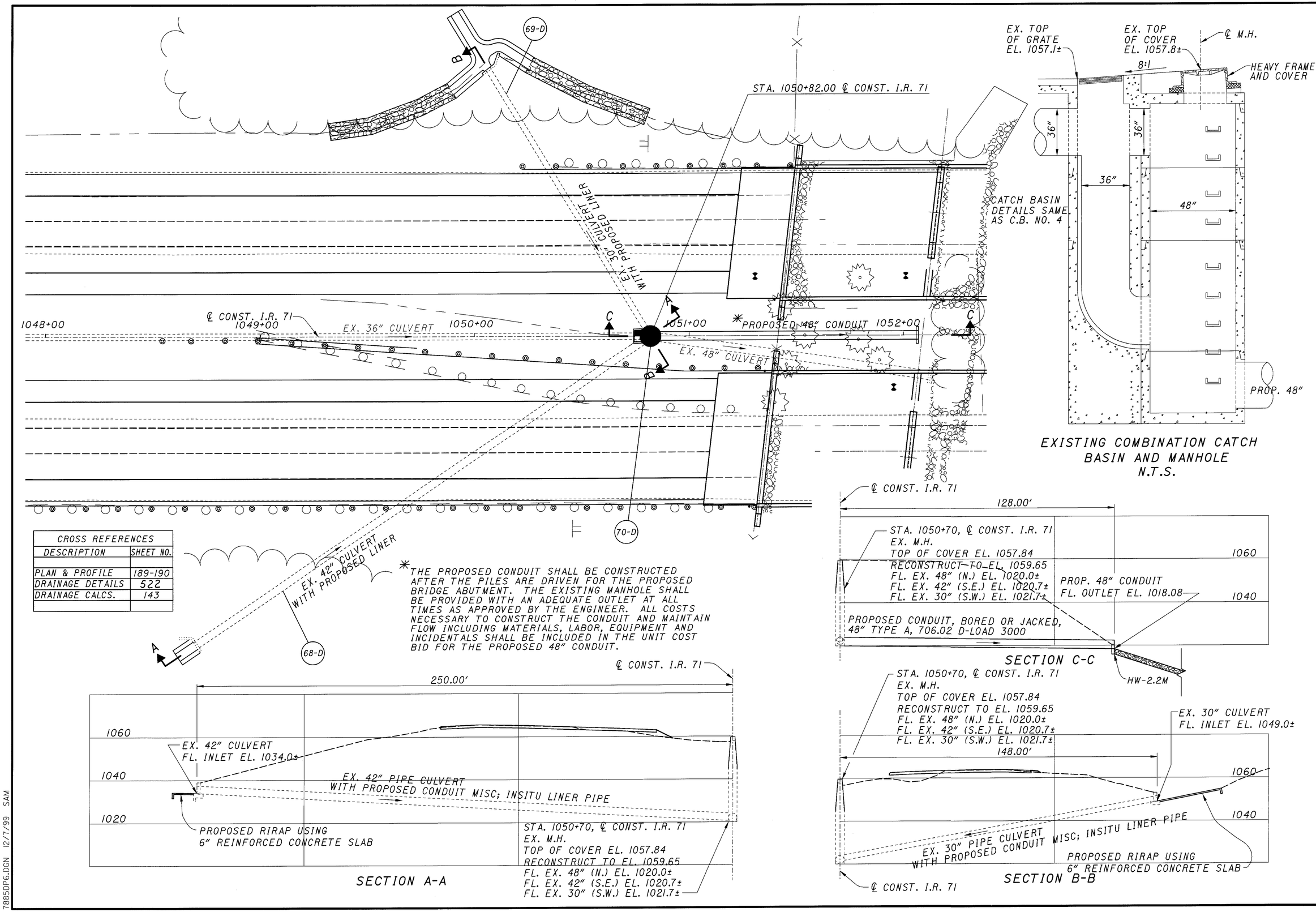
CALCULATED PRS
CHECKED PDG

# CULVERT DETAIL (LINER) STA. 1007+18.05

MED - 71 - 15.78

521
940

7885DP5.DGN 12/7/99 SAM




| CROSS REFERENCES | |
|---|---|
| DESCRIPTION | SHEET NO. |
| | |
| PLAN & PROFILE | 189-190 |
| DRAINAGE DETAILS | 522 |
| DRAINAGE CALCS. | 143 |
| | |

✳ THE PROPOSED CONDUIT SHALL BE CONSTRUCTED AFTER THE PILES ARE DRIVEN FOR THE PROPOSED BRIDGE ABUTMENT. THE EXISTING MANHOLE SHALL BE PROVIDED WITH AN ADEQUATE OUTLET AT ALL TIMES AS APPROVED BY THE ENGINEER. ALL COSTS NECESSARY TO CONSTRUCT THE CONDUIT AND MAINTAIN FLOW INCLUDING MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT COST BID FOR THE PROPOSED 48" CONDUIT.

EXISTING COMBINATION CATCH BASIN AND MANHOLE N.T.S.

SECTION C-C

SECTION A-A

SECTION B-B

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PRS
DECKED PDG

# STORM SEWER/CULVERT DETAIL (LINER) STA. 1050+82.00

MED - 71 - 15.78

522
940

7885DP6.DGN 12/1/99 SAM

DRAINAGE AREA = 67 ACRES

| | | | |
|---|---|---|---|
| $Q_{50}$ = | 32 cfs | $V_{50}$ = | 13 ft/s (n=0.009) |
| $Q_{100}$ = | 38 cfs | $V_{100}$ = | 17 ft/s (n=0.009) |
| $HW_{50}$ = | 5.2′ | | |
| $HW_{100}$ = | 7.8′ | | |

## ITEM SS837 BACKFILL FOR LINER PIPE
## ESTIMATED QUANTITY CALCULATION

$\frac{\pi(2.5)^2}{4(27)}$ = 0.18 CU. YARD / FT.

$\frac{\pi(2)^2}{4(27)}$ = - 0.12 CU. YARD / FT.

0.06 CU. YARD / FT.

X 286 FT. LENGTH

= 17.16 CU. YARDS X 2

USE 34 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)

STA. 1082+95.00 ℄ CONST. I.R. 71 =
STA. 10+00.00 ℄ CULVERT

82-D

1084+00

1083+00

1082+00

90°

9+00

11+00

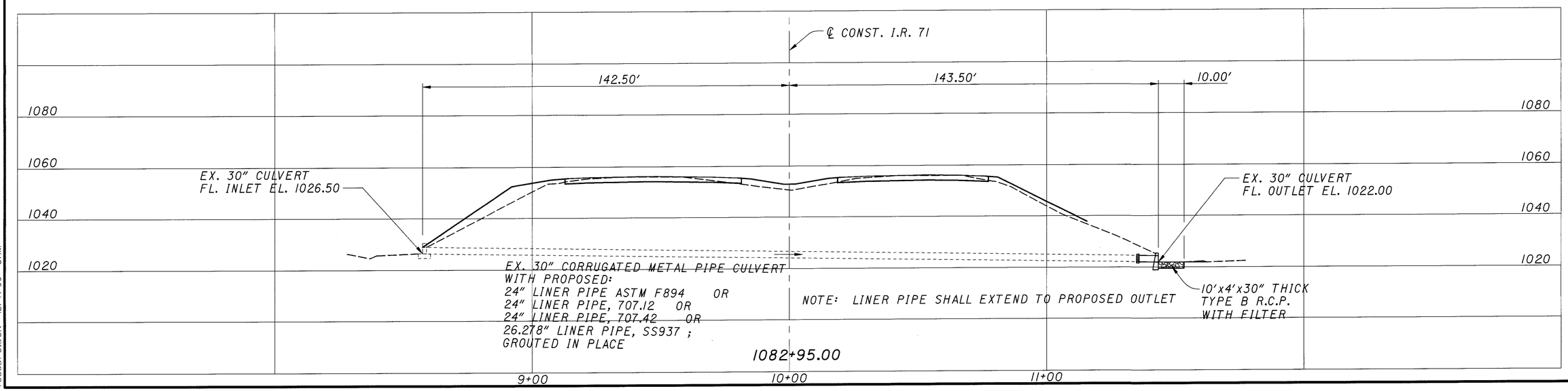
EX. 30″ CORRUGATED METAL PIPE CULVERT WITH PROPOSED SS837 LINER PIPE, GROUTED IN PLACE

10′ SHOULDER | 46.7± | 10′ SHOULDER | 20′ | 20′ SHOULDER | 10′ | 36′ | 10′ SHOULDER

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 192 |
| DRAINAGE SUBSUMMARY | 81-84 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE DETAILS | 509 |
| DRAINAGE CALCS. | 144 |
| | |
| | |

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PRS
CHECKED PDG




# CULVERT DETAIL (LINER)
# STA. 1082+95.00

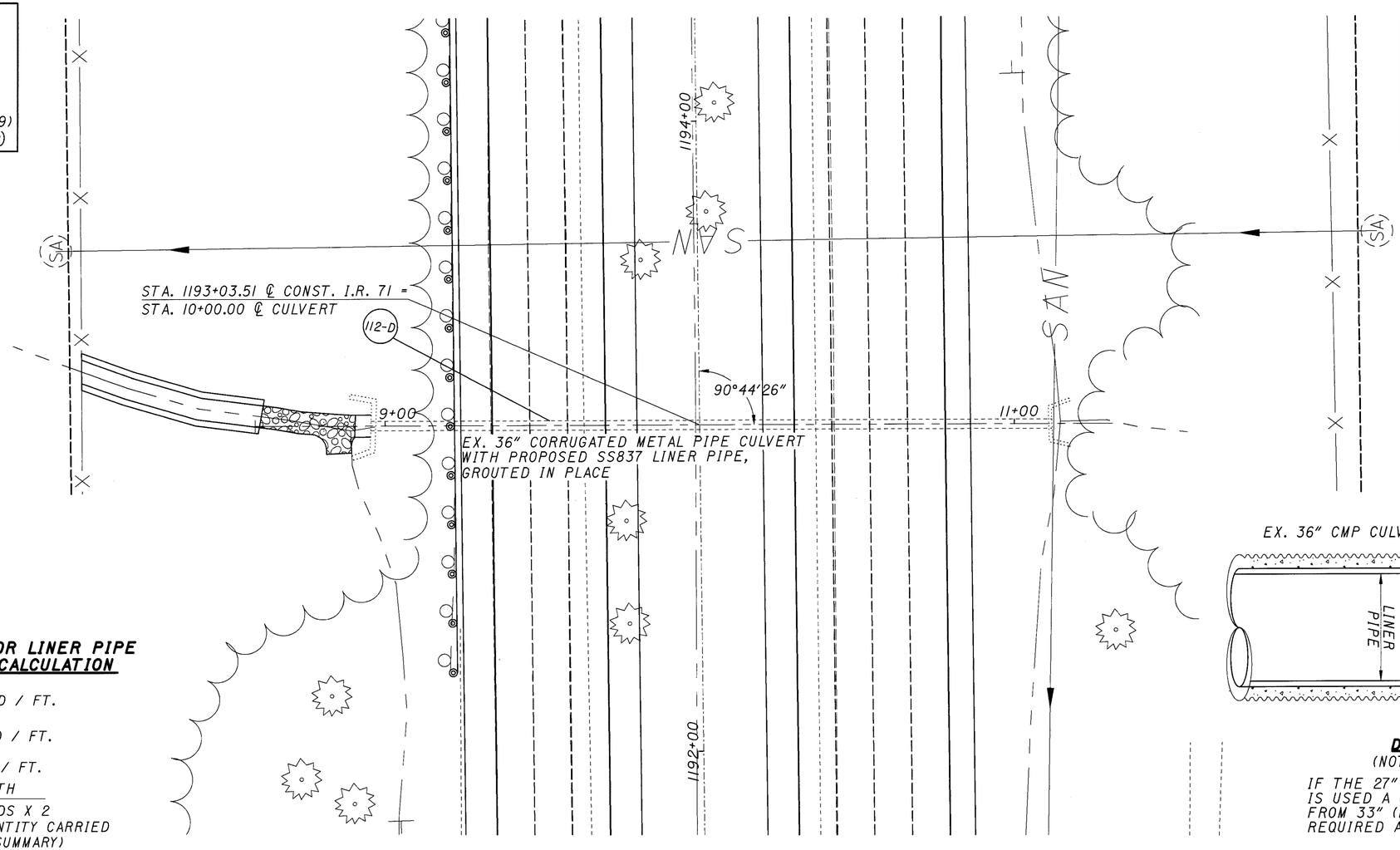
MED - 71 - 15.78

523
940

7885DP8.DGN 12/7/99 SAM

| DRAINAGE AREA = 19 ACRES | |
|---|---|
| $Q_{50}$ = | 64 cfs |
| $Q_{100}$ = | 72 cfs |
| $HW_{50}$ = | 5.6' |
| $HW_{100}$ = | 7.8' |
| V 50 = | 20 ft/s (n=0.009) |
| V 100 = | 24 ft/s (n=0.009) |

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 201 |
| DRAINAGE SUBSUMMARY | 85-88 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 145 |
| | |
| | |
| | |

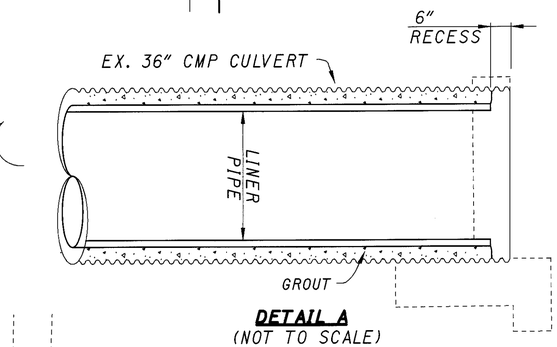



**ITEM SS837 BACKFILL FOR LINER PIPE**
**ESTIMATED QUANTITY CALCULATION**

$\frac{\pi(3)^2}{4(27)}$ = 0.26 CU. YARD / FT.

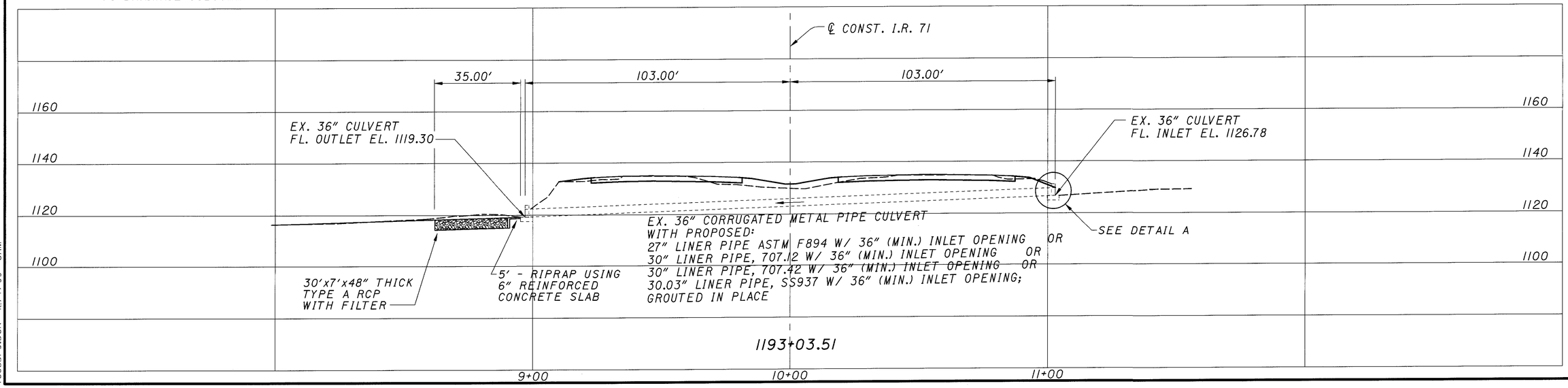
$\frac{\pi(2.25)^2}{4(27)}$ = - 0.15 CU. YARD / FT.

0.11 CU. YARD / FT.
X 206 FT. LENGTH
= 22.66 CU. YARDS X 2
USE 45 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)




**DETAIL A**
(NOT TO SCALE)

IF THE 27" OR 30" LINER PIPE, IS USED A 6" RECESS FROM 33" (MIN.) TO 27" OR 30" IS REQUIRED AT THE INLET




HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PRS
CHECKED PDG

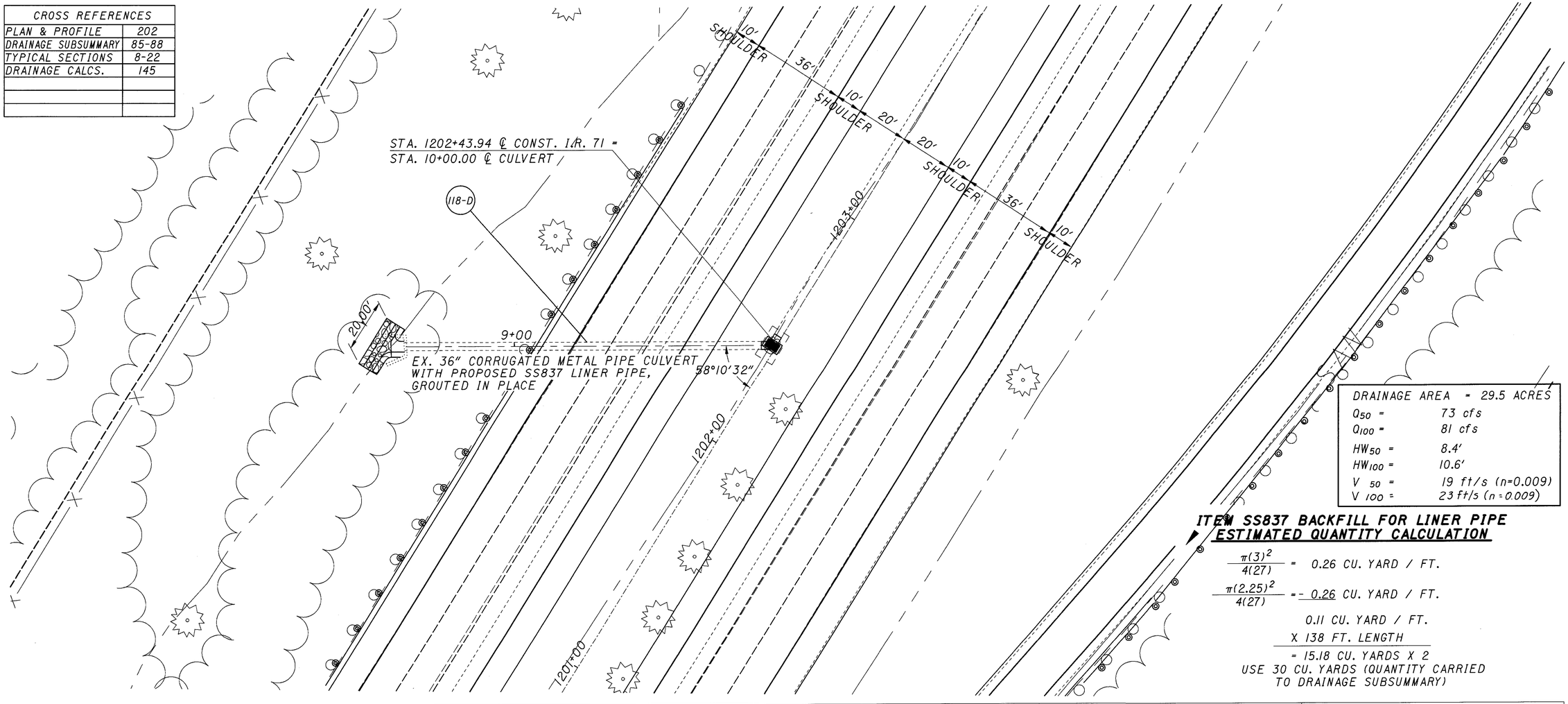
# CULVERT DETAIL (LINER)
# STA. 1193+03.51

MED - 71 - 15.78

524
940

7885DP9.DGN 12/7/99 SAM

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 202 |
| DRAINAGE SUBSUMMARY | 85-88 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 145 |
| | |
| | |
| | |



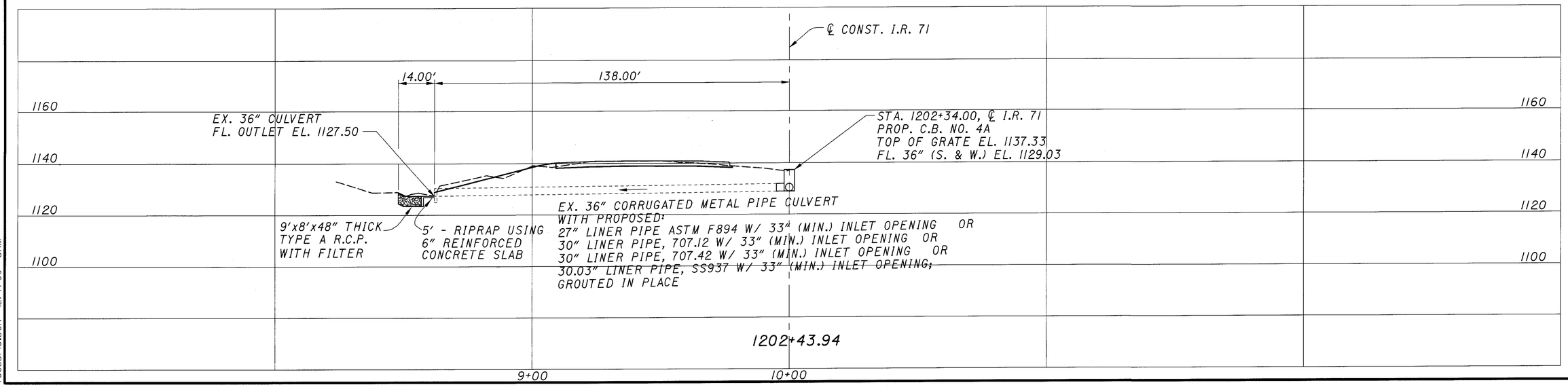

| DRAINAGE AREA = 29.5 ACRES | |
|---|---|
| $Q_{50}$ = | 73 cfs |
| $Q_{100}$ = | 81 cfs |
| $HW_{50}$ = | 8.4' |
| $HW_{100}$ = | 10.6' |
| V 50 = | 19 ft/s (n=0.009) |
| V 100 = | 23 ft/s (n=0.009) |

**ITEM SS837 BACKFILL FOR LINER PIPE**
**ESTIMATED QUANTITY CALCULATION**

$\frac{\pi(3)^2}{4(27)}$ = 0.26 CU. YARD / FT.

$\frac{\pi(2.25)^2}{4(27)}$ = - 0.26 CU. YARD / FT.

0.11 CU. YARD / FT.
X 138 FT. LENGTH
= 15.18 CU. YARDS X 2
USE 30 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)




N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PRS
CHECKED PDG

# CULVERT DETAIL (LINER)
# STA. 1202+43.94

MED - 71 - 15.78

525
940

7885DPIO.DGN 12/7/99 SAM

| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 205 |
| DRAINAGE SUBSUMMARY | 89-92 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 146 |
| | |
| | |
| | |

SAM HOUSTON (SA)

10' SHOULDER 36' 10' 20' 20' 10' SHOULDER 36' 10' SHOULDER

1241+00

1240+00

75°19'14"

9+00 10+00 11+00

34-D

EX. 72" CORRUGATED METAL PIPE CULVERT
WITH PROPOSED SS837 LINER PIPE,
GROUTED IN PLACE

STA. 1240+41.42 ℄ CONST. I.R. 71 =
STA. 10+00.00 ℄ CULVERT

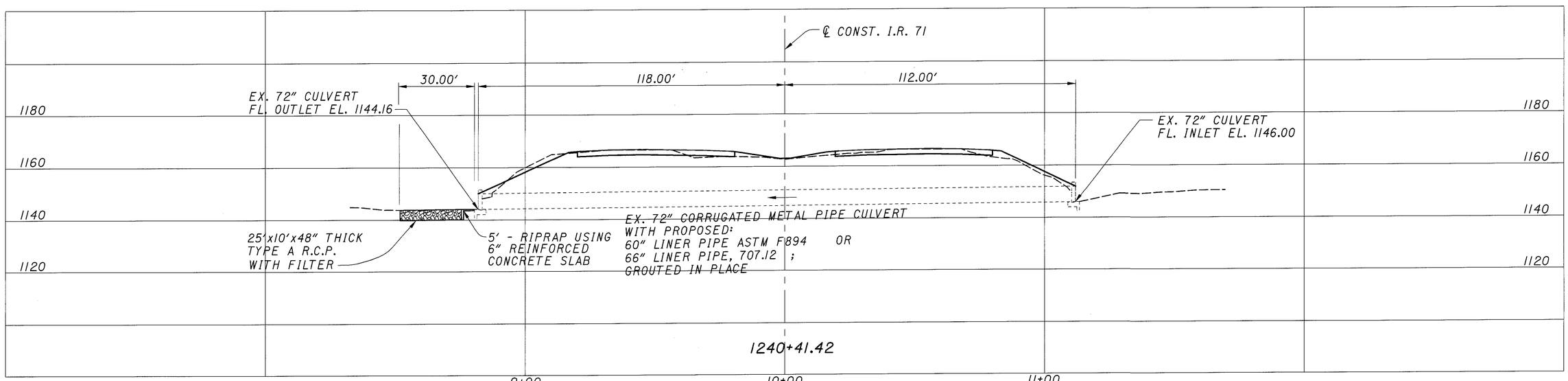
| DRAINAGE AREA = 186 ACRES | |
|---|---|
| $Q_{50}$ = | 293 cfs |
| $Q_{100}$ = | 335 cfs |
| $HW_{50}$ = | 12.7' |
| $HW_{100}$ = | 14.9' |
| V 50 = | 17 ft/s (n=0.009) |
| V 100 = | 21 ft/s (n=0.009) |

**ITEM SS837 BACKFILL FOR LINER PIPE**
**ESTIMATED QUANTITY CALCULATION**

$\frac{\pi(6)^2}{4(27)}$ = 1.05 CU. YARD / FT.

$\frac{\pi(5)^2}{4(27)}$ = - 0.73 CU. YARD / FT.

0.32 CU. YARD / FT.
X 230 FT. LENGTH
= 73.60 CU. YARDS X 2
USE 147 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)




HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PRS
CHECKED PDG

# CULVERT DETAIL (LINER)
# STA. 1240+41.42

MED - 71 - 15.78

526
940

7885DPIL.DGN 12/1/99 SAM

| | | | |
|---|---|---|---|
| DRAINAGE AREA = 16 ACRES | | | |
| $Q_{50}$ = | 56 cfs | $V_{50}$ = | 20 ft/s (n=0.009) |
| $Q_{100}$ = | 64 cfs | $V_{100}$ = | 25 ft/s (n = 0.009) |
| $HW_{50}$ = | 6.0' | | |
| $HW_{100}$ = | 7.1' | | |

## ITEM SS837 BACKFILL FOR LINER PIPE
## ESTIMATED QUANTITY CALCULATION

$\frac{\pi(3)^2}{4(27)}$ = 0.26 CU. YARD / FT.

$\frac{\pi(2.25)^2}{4(27)}$ = - 0.15 CU. YARD / FT.

0.11 CU. YARD / FT.

X 388 FT. LENGTH

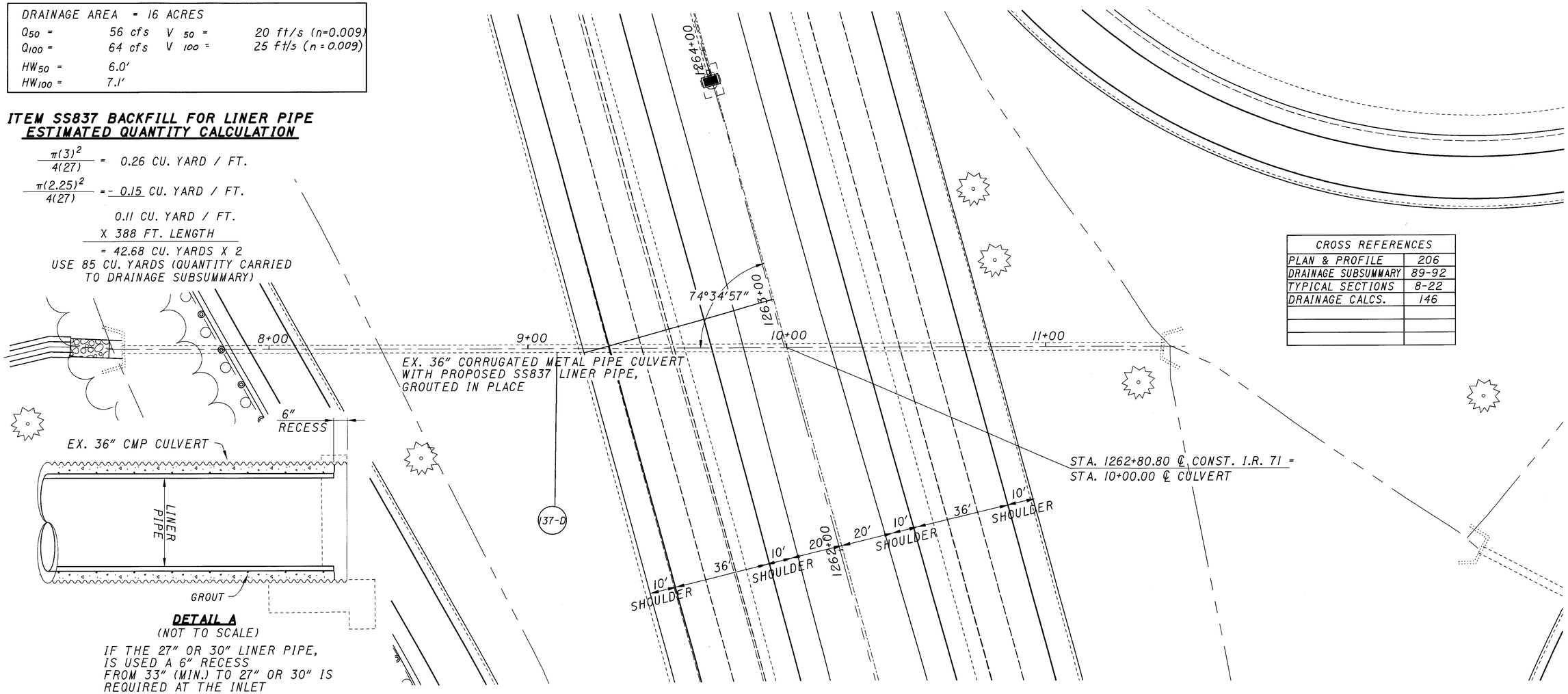
= 42.68 CU. YARDS X 2

USE 85 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)

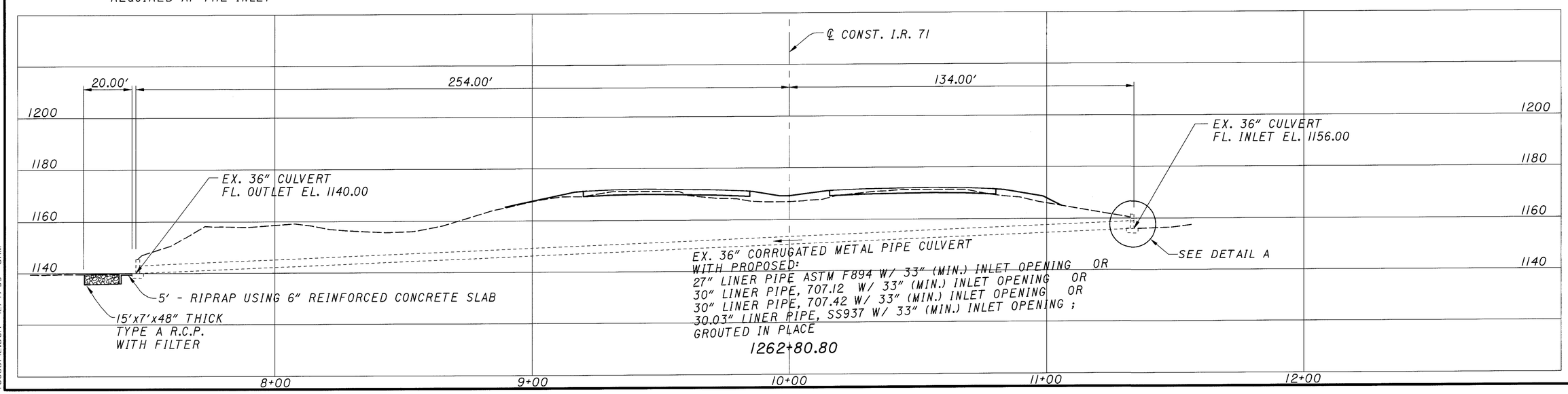



**DETAIL A**
(NOT TO SCALE)

IF THE 27" OR 30" LINER PIPE, IS USED A 6" RECESS FROM 33" (MIN.) TO 27" OR 30" IS REQUIRED AT THE INLET




| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 206 |
| DRAINAGE SUBSUMMARY | 89-92 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 146 |
| | |
| | |
| | |




HORIZONTAL SCALE IN FEET
0 10 20 40

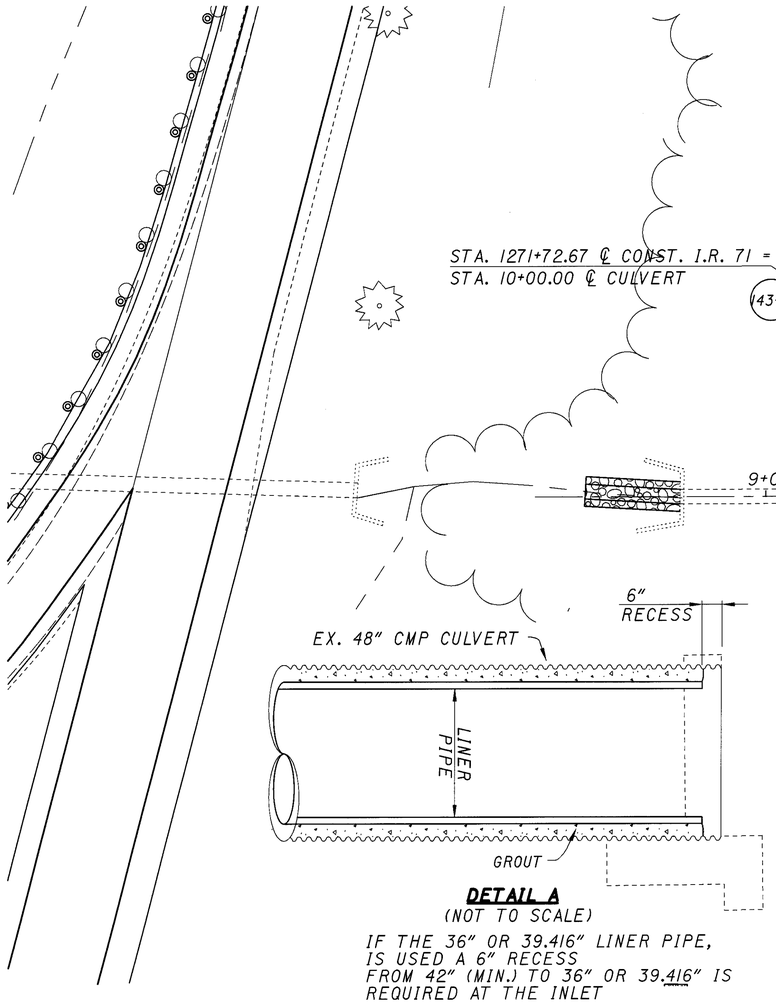
CALCULATED PRS
CHECKED PDG

# CULVERT DETAIL (LINER)
# STA. 1262+80.80

MED - 71 - 15.78

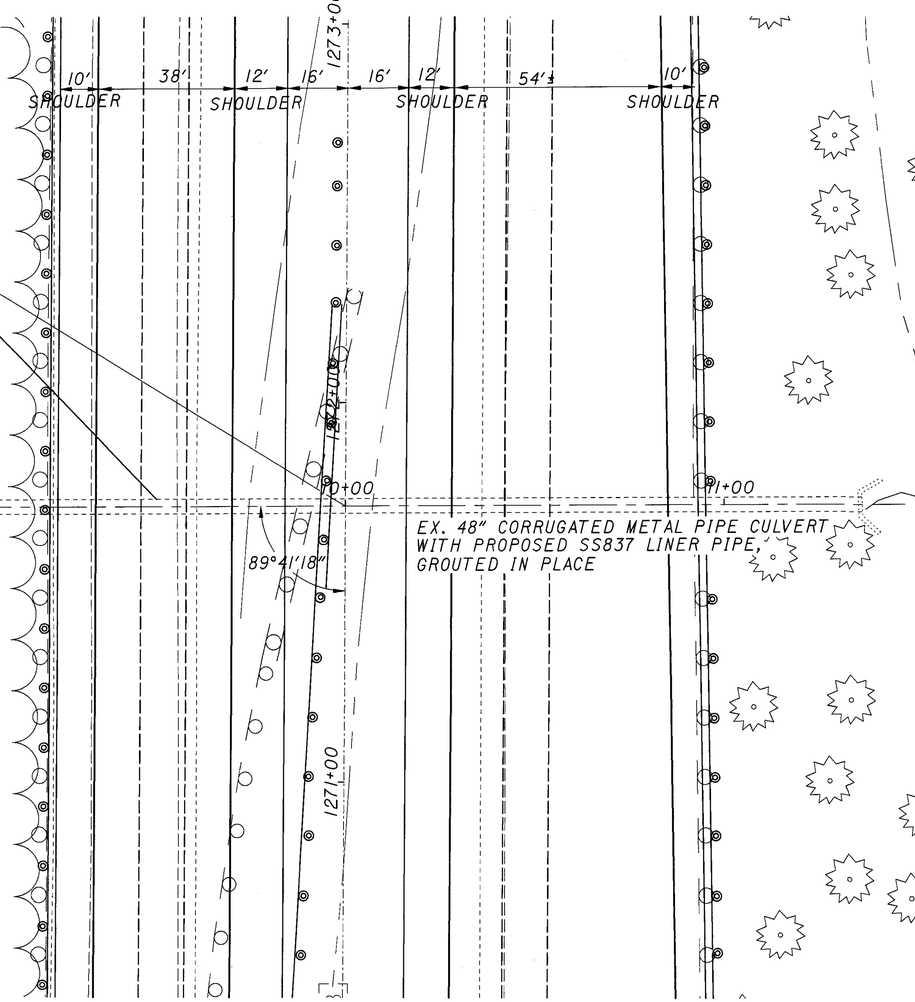
527
940

7885DP12.DGN 12/7/99 SAM




**DETAIL A**
(NOT TO SCALE)

IF THE 36" OR 39.416" LINER PIPE, IS USED A 6" RECESS FROM 42" (MIN.) TO 36" OR 39.416" IS REQUIRED AT THE INLET




| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 207 |
| DRAINAGE SUBSUMMARY | 89-92 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 146 |
| | |
| | |
| | |

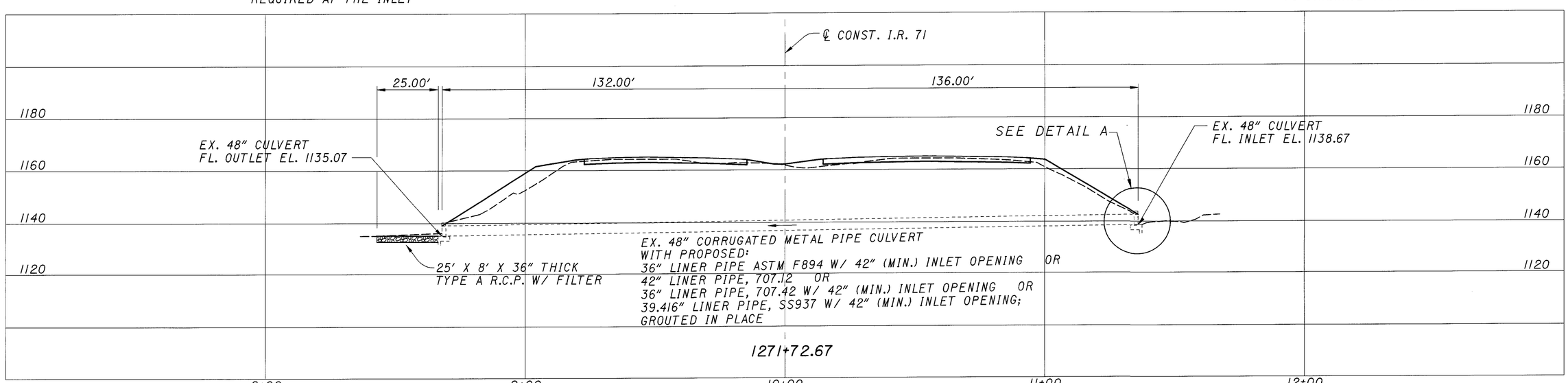
DRAINAGE AREA = 56 ACRES
$Q_{50}$ = 111 cfs
$Q_{100}$ = 127 cfs
$HW_{50}$ = 8.2'
$HW_{100}$ = 10'
$V_{50}$ = 16 ft/s (n=0.009)
$V_{100}$ = 19 ft/s (n=0.009)

**ITEM SS837 BACKFILL FOR LINER PIPE**
**ESTIMATED QUANTITY CALCULATION**

$\frac{\pi(4)^2}{4(27)}$ = 0.47 CU. YARD / FT.

$\frac{\pi(3)^2}{4(27)}$ = - 0.26 CU. YARD / FT.

0.21 CU. YARD / FT.
X 268 FT. LENGTH
= 56.28 CU. YARDS X 2
USE 113 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)




HORIZONTAL SCALE IN FEET
0 10 20 40

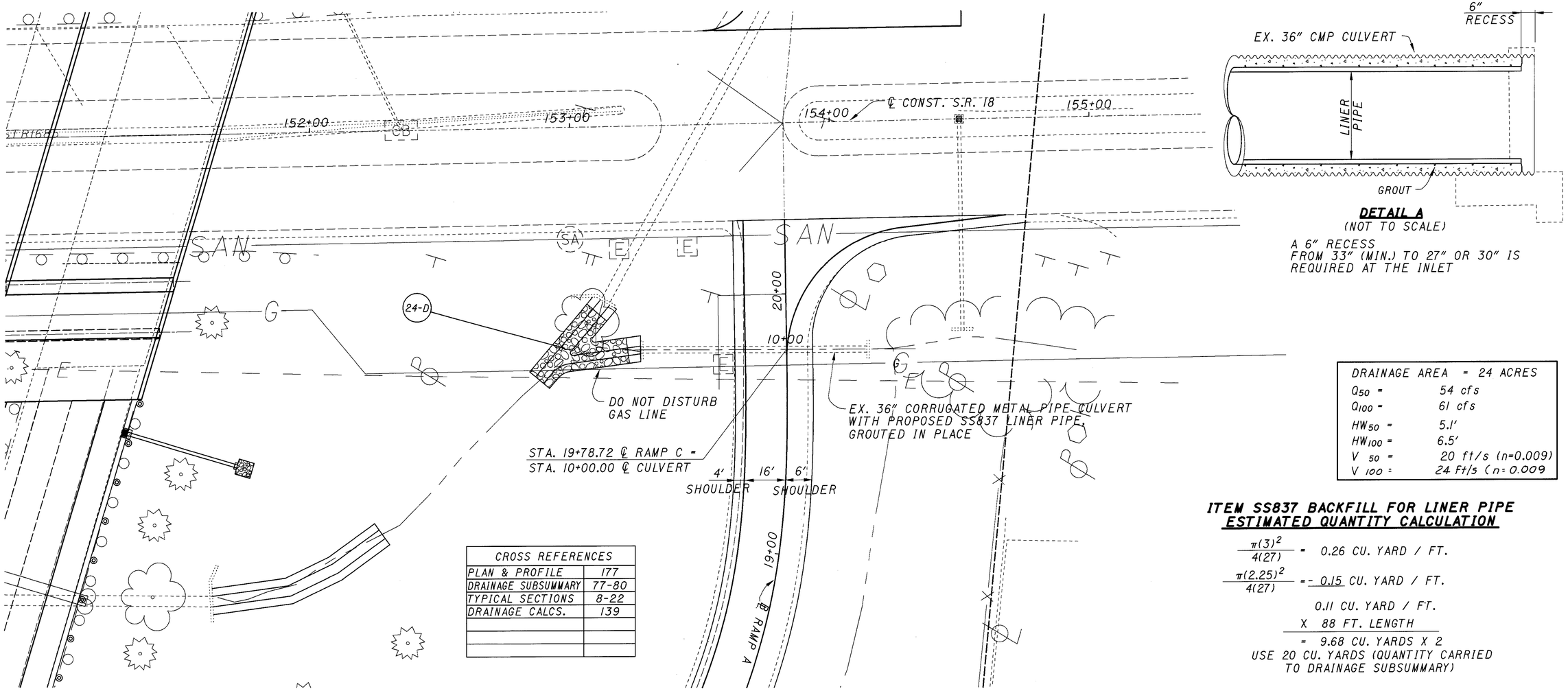
CALCULATED PRS
CHECKED PDG

# CULVERT DETAIL (LINER)
# STA. 1271+72.67

MED - 71 - 15.78

528
940

7885DP13.DGN 12/7/99 SAM







**DETAIL A**
(NOT TO SCALE)

A 6" RECESS FROM 33" (MIN.) TO 27" OR 30" IS REQUIRED AT THE INLET

| DRAINAGE AREA = 24 ACRES | |
|---|---|
| $Q_{50}$ = | 54 cfs |
| $Q_{100}$ = | 61 cfs |
| $HW_{50}$ = | 5.1' |
| $HW_{100}$ = | 6.5' |
| $V_{50}$ = | 20 ft/s (n=0.009) |
| $V_{100}$ = | 24 ft/s (n=0.009 |

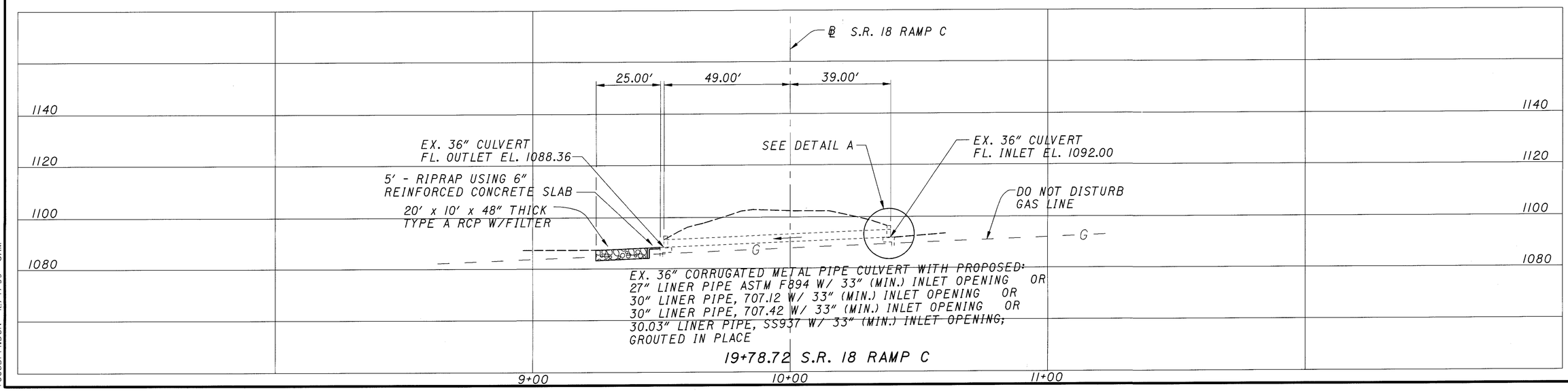
| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 177 |
| DRAINAGE SUBSUMMARY | 77-80 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 139 |
| | |
| | |
| | |

**ITEM SS837 BACKFILL FOR LINER PIPE**
**ESTIMATED QUANTITY CALCULATION**

$\frac{\pi(3)^2}{4(27)}$ = 0.26 CU. YARD / FT.

$\frac{\pi(2.25)^2}{4(27)}$ = - 0.15 CU. YARD / FT.

0.11 CU. YARD / FT.
X 88 FT. LENGTH
= 9.68 CU. YARDS X 2
USE 20 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)




HORIZONTAL SCALE IN FEET
0 10 20 40

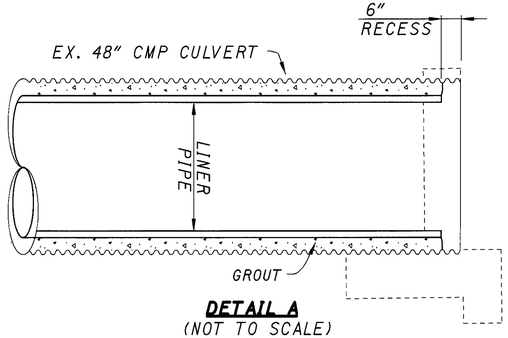
CALCULATED PRS
CHECKED PDG

**CULVERT DETAIL (LINER)**
**STA. 19+78.72 S.R. 18 RAMP C**

**MED - 71 - 15.78**

529
940

7885DP14.DGN 12/7/99 SAM




**DETAIL A**
(NOT TO SCALE)

IF THE 36" OR 39.416" LINER PIPE, IS USED A 6" RECESS FROM 42" (MIN.) TO 36" OR 39.416" IS REQUIRED AT THE INLET

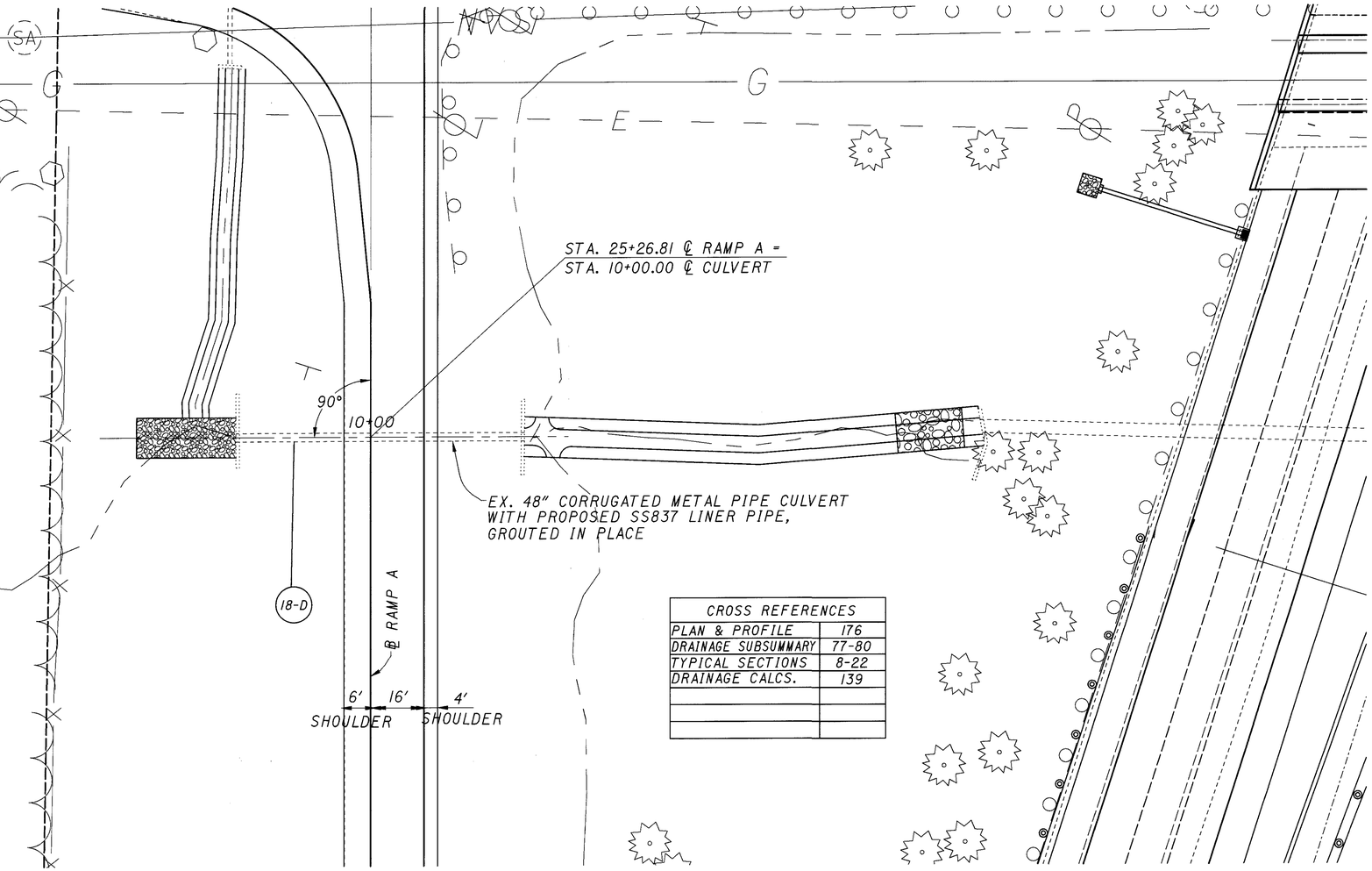
| | |
|---|---|
| DRAINAGE AREA | = 53 ACRES |
| $Q_{50}$ = | 104 cfs |
| $Q_{100}$ = | 117 cfs |
| $HW_{50}$ = | 6.2' |
| $HW_{100}$ = | 6.9' |
| V 50 = | 17 ft/s (n=0.009) |
| V 100 = | 21 ft/s (n=0.009) |

**ITEM SS837 BACKFILL FOR LINER PIPE**
**ESTIMATED QUANTITY CALCULATION**

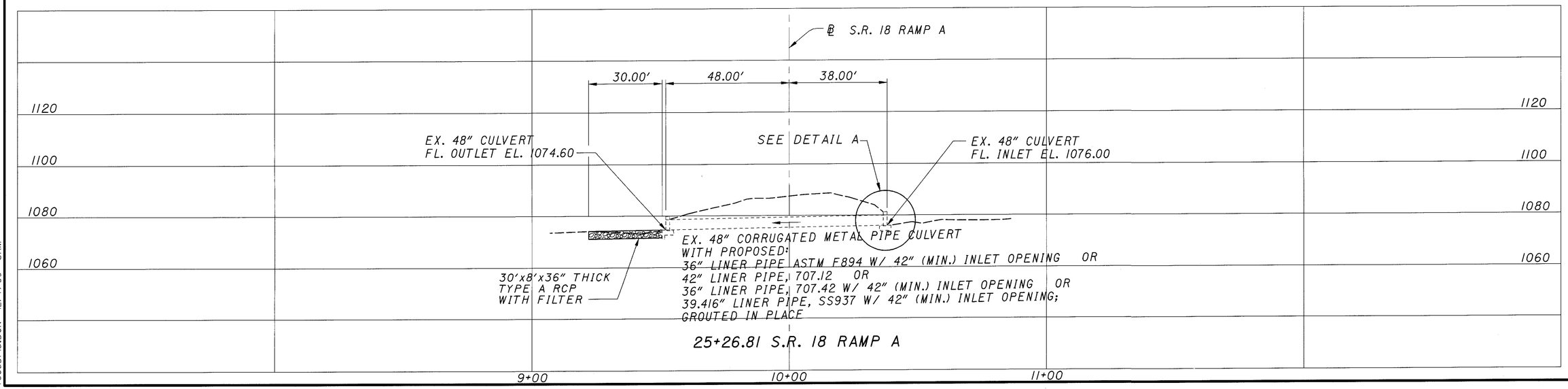
$\frac{\pi(4)^2}{4(27)}$ = 0.47 CU. YARD / FT.

$\frac{\pi(3)^2}{4(27)}$ = - 0.26 CU. YARD / FT.

0.21 CU. YARD / FT.
X 86 FT. LENGTH
= 18.06 CU. YARDS X 2
USE 36 CU. YARDS (QUANTITY CARRIED TO DRAINAGE SUBSUMMARY)




| CROSS REFERENCES | |
|---|---|
| PLAN & PROFILE | 176 |
| DRAINAGE SUBSUMMARY | 77-80 |
| TYPICAL SECTIONS | 8-22 |
| DRAINAGE CALCS. | 139 |
| | |
| | |
| | |




HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED PRS
CHECKED PDG

**CULVERT DETAIL (LINER)**
**STA. 25+26.81 S.R. 18 RAMP A**

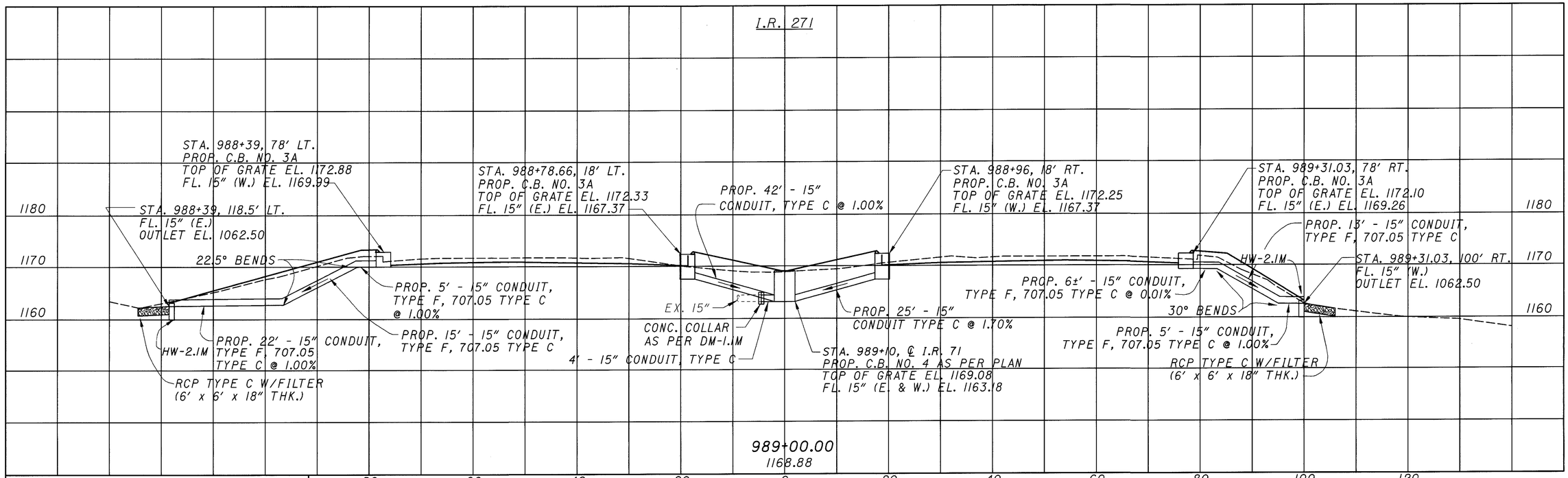
**MED - 71 - 15.78**

530
940

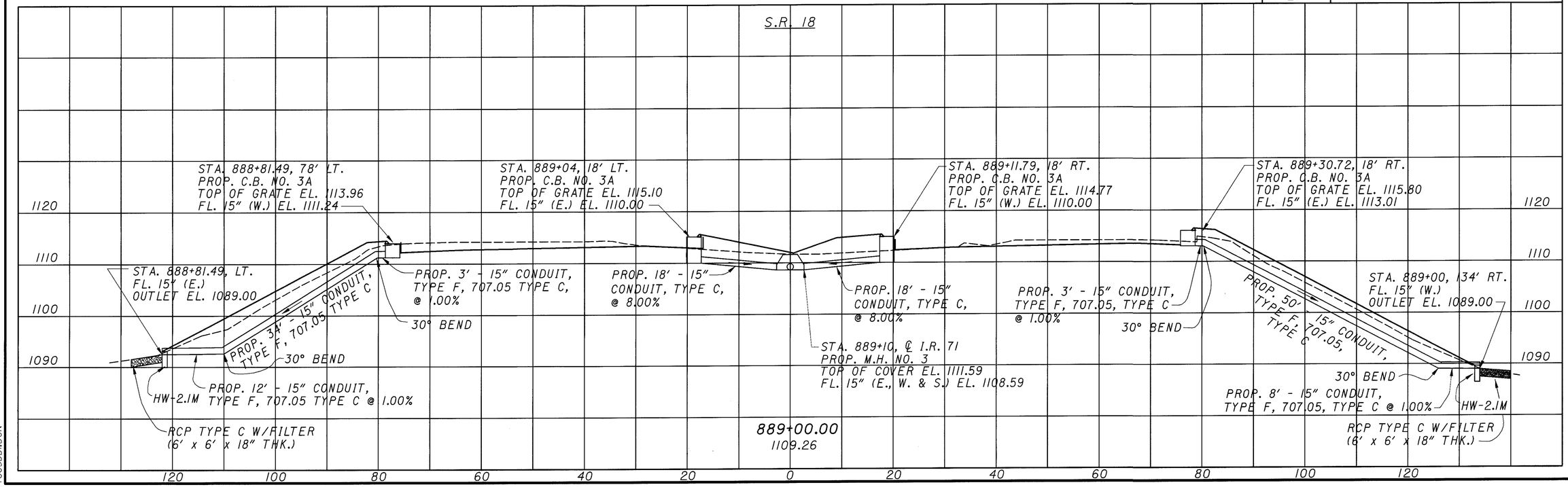
7885DP15.DGN 12/7/99 SAM

# STRUCUTRE DRAINAGE PROFILES
## STA. 889+00 TO STA. 989+00

CALCULATED W.JC | CHECKED PS




| CROSS REFERENCES | |
|---|---|
| 184-185 | PLAN AND PROFILE |
| 505 | DRAINAGE DETAILS |
| 142 | DRAINAGE CALCS. |
| 263 | CROSS SECTIONS |

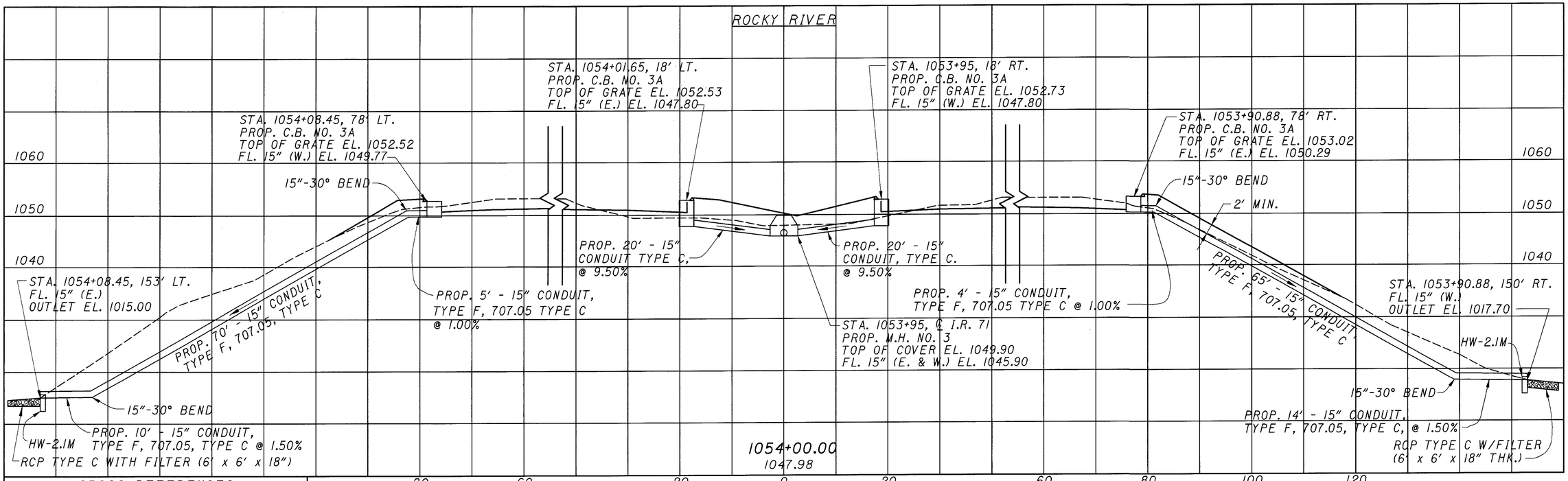



| CROSS REFERENCES | |
|---|---|
| 177 | PLAN AND PROFILE |
| 505 | DRAINAGE DETAILS |
| 138-139 | DRAINAGE CALCS. |
| 234 | CROSS SECTIONS |

MED-71-15.78

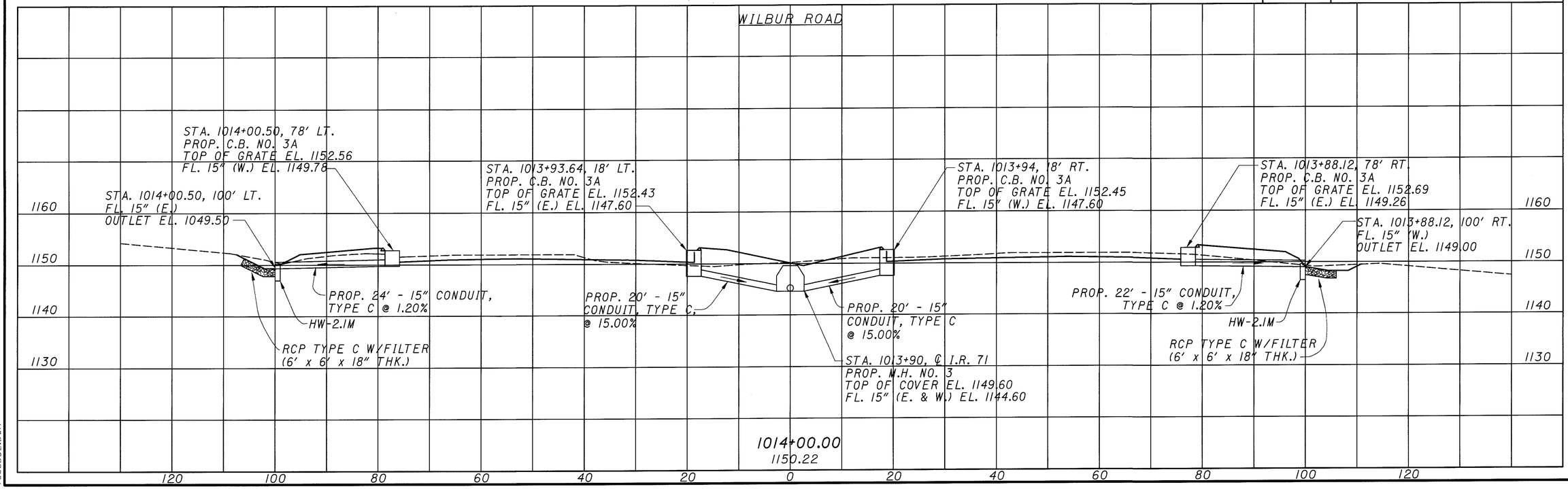
531
940

7885DDI.DGN




| CROSS REFERENCES | |
|---|---|
| 190 | PLAN AND PROFILE |
| 505 | DRAINAGE DETAILS |
| 143 | DRAINAGE CALCS. |
| 281 | CROSS SECTIONS |

| CROSS REFERENCES | |
|---|---|
| 186-187 | PLAN AND PROFILE |
| 505 | DRAINAGE DETAILS |
| 142 | DRAINAGE CALCS. |
| 270 | CROSS SECTIONS |



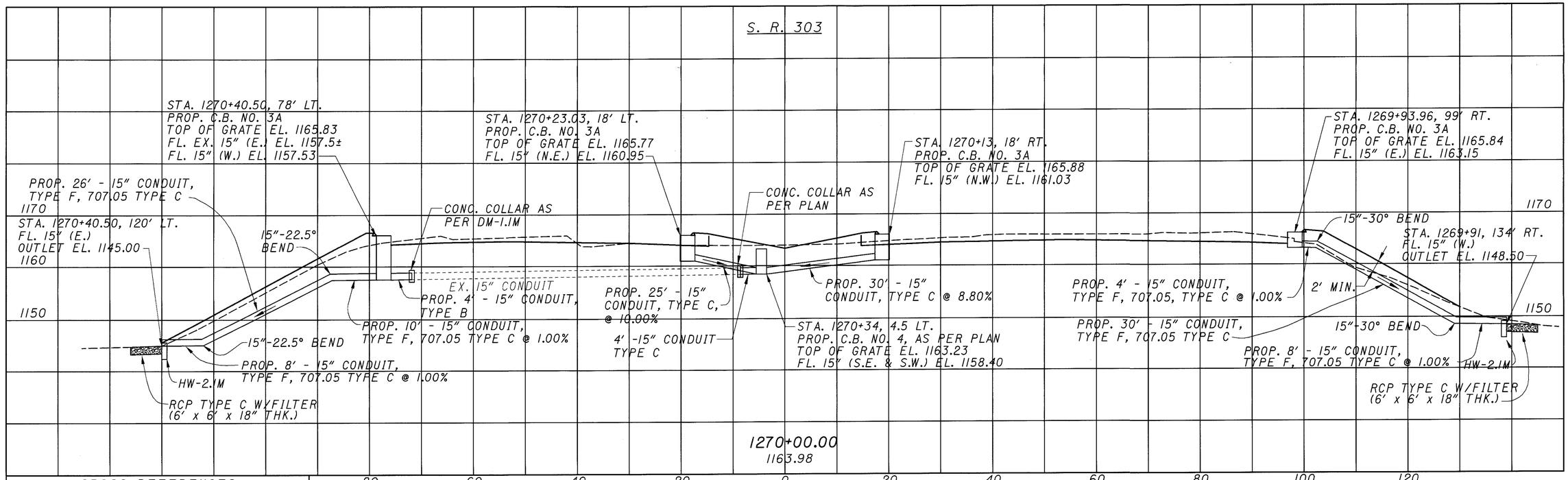

# STRUCUTRE DRAINAGE PROFILES
# STA. 1014+00 TO STA. 1054+00

CALCULATED WJC
CHECKED PS

MED - 71 - 15.78

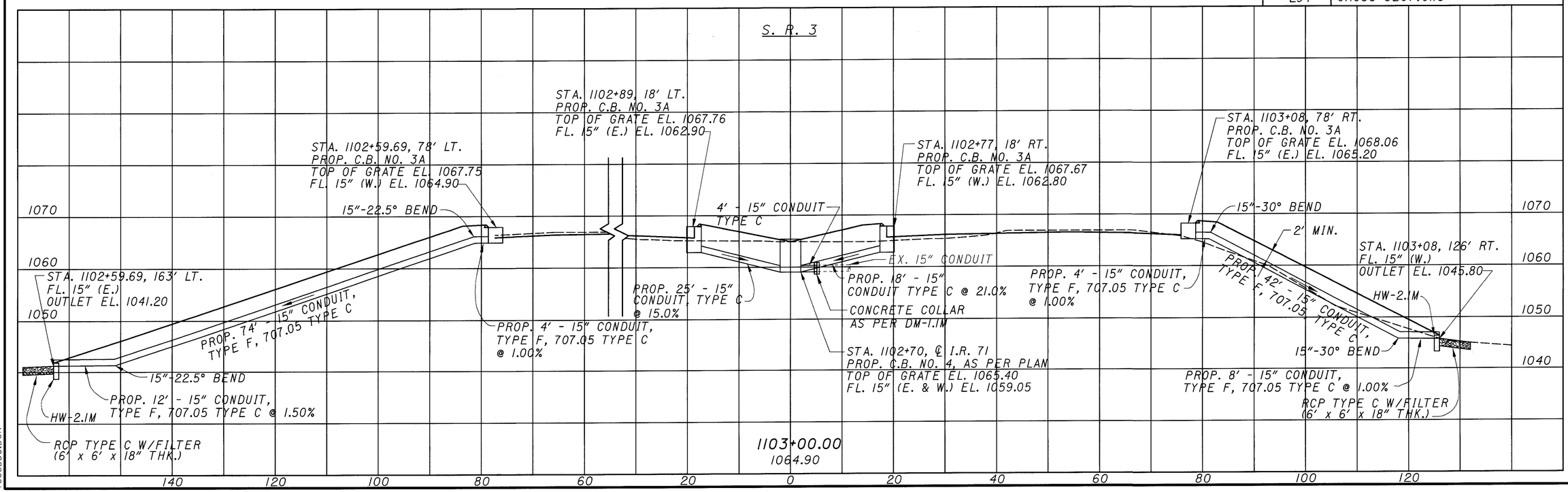
532
940

7885DD2.DGN




| CROSS REFERENCES | |
|---|---|
| 207 | PLAN AND PROFILE |
| 505 | DRAINAGE DETAILS |
| 146 | DRAINAGE CALCS. |
| 340 | CROSS SECTIONS |

| CROSS REFERENCES | |
|---|---|
| 194 | PLAN AND PROFILE |
| 505 | DRAINAGE DETAILS |
| 144 | DRAINAGE CALCS. |
| 294 | CROSS SECTIONS |



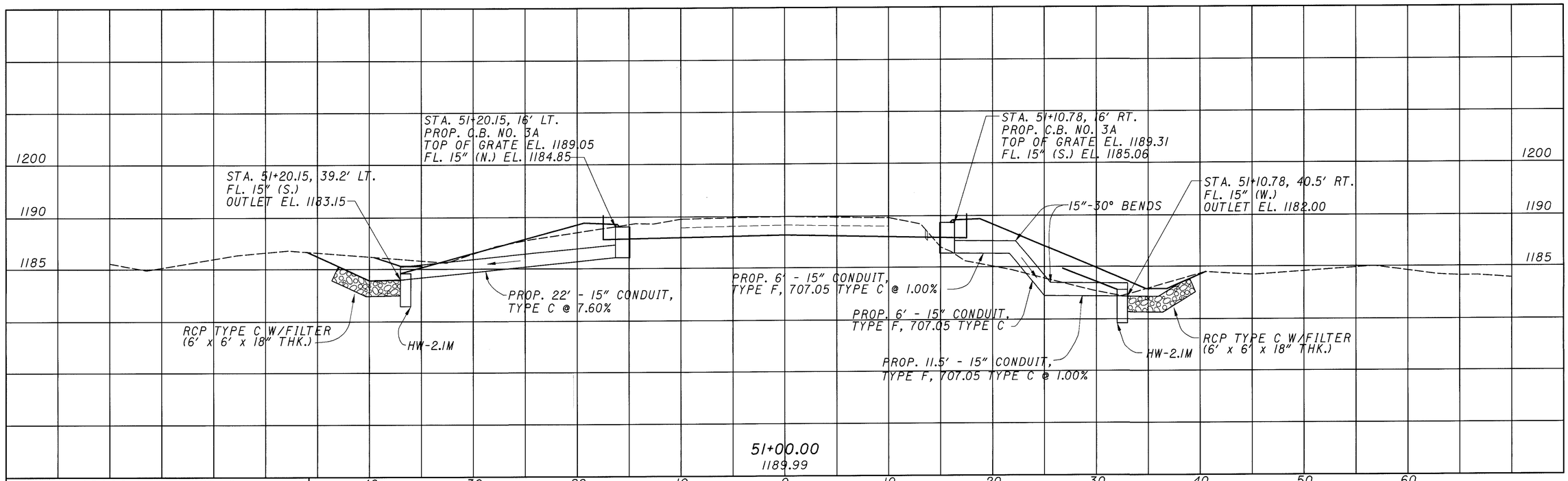

CALCULATED WJC
CHECKED PS

# STRUCUTRE DRAINAGE PROFILES
# STA. 1103+00 TO STA. 1270+00

MED- 71-15.78

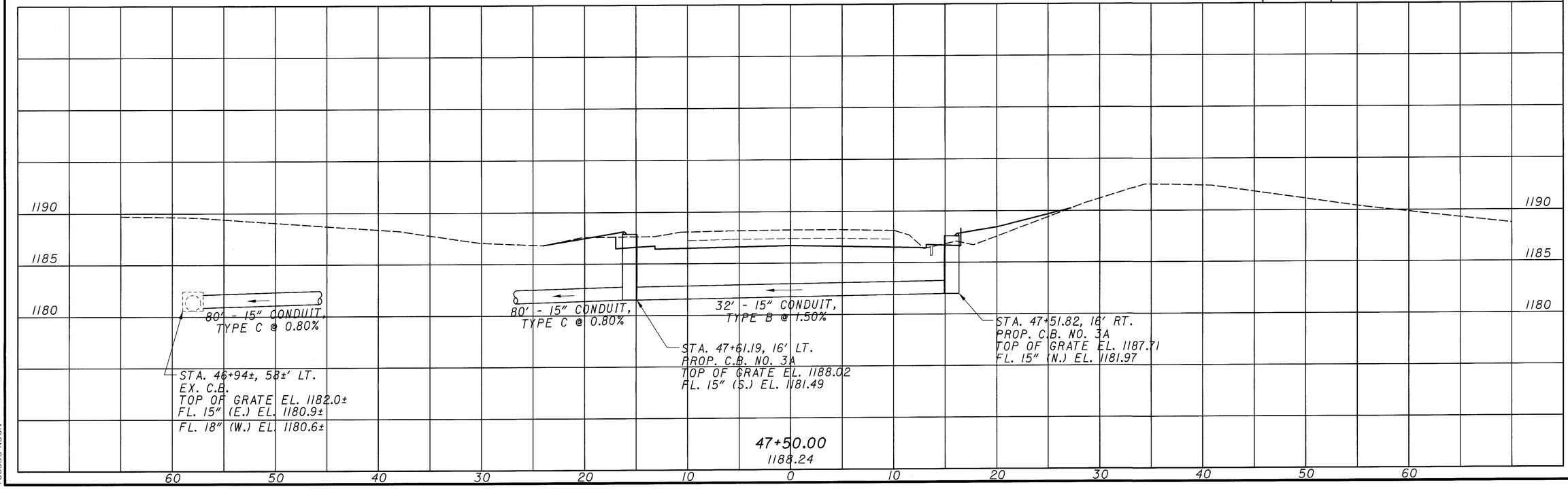
533
940

7885D03.DGN




| CROSS REFERENCES | |
|---|---|
| 173 | PLAN AND PROFILE |
| 505 | DRAINAGE DETAILS |
| 146 | DRAINAGE CALCS. |
| 415 | CROSS SECTIONS |

| CROSS REFERENCES | |
|---|---|
| 183 | PLAN AND PROFILE |
| 505 | DRAINAGE DETAILS |
| 146 | DRAINAGE CALCS. |
| 413 | CROSS SECTIONS |



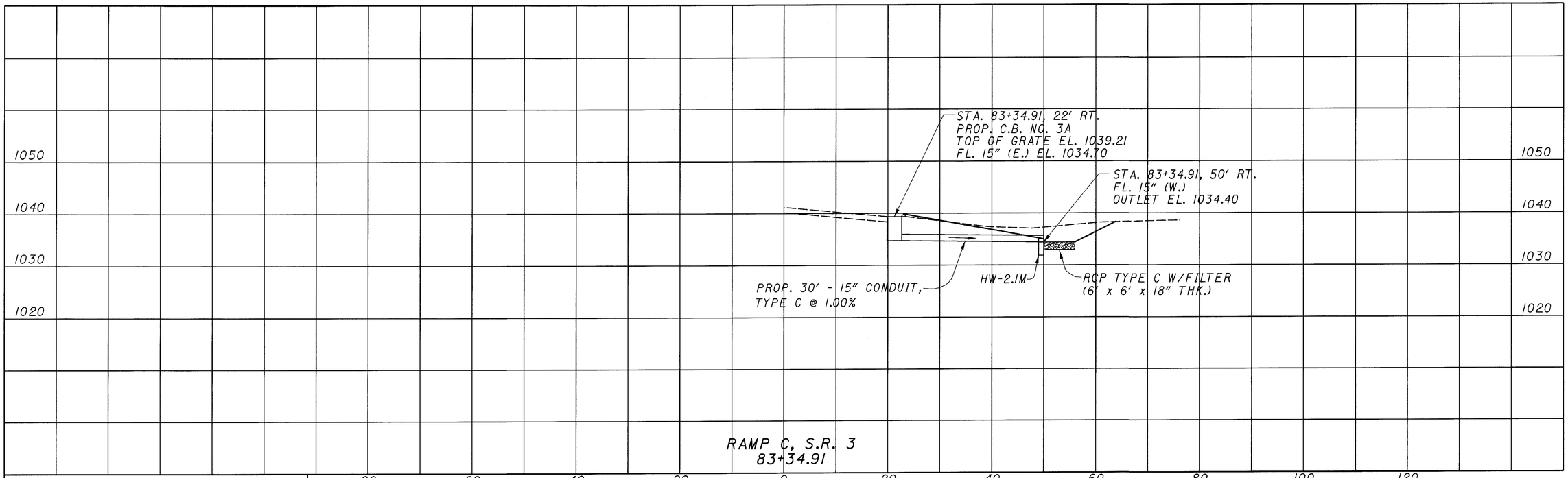

CALCULATED WJC
CHECKED PS

# STRUCUTRE DRAINAGE PROFILES
## GRANGER ROAD

MED-71-15.78

534
940

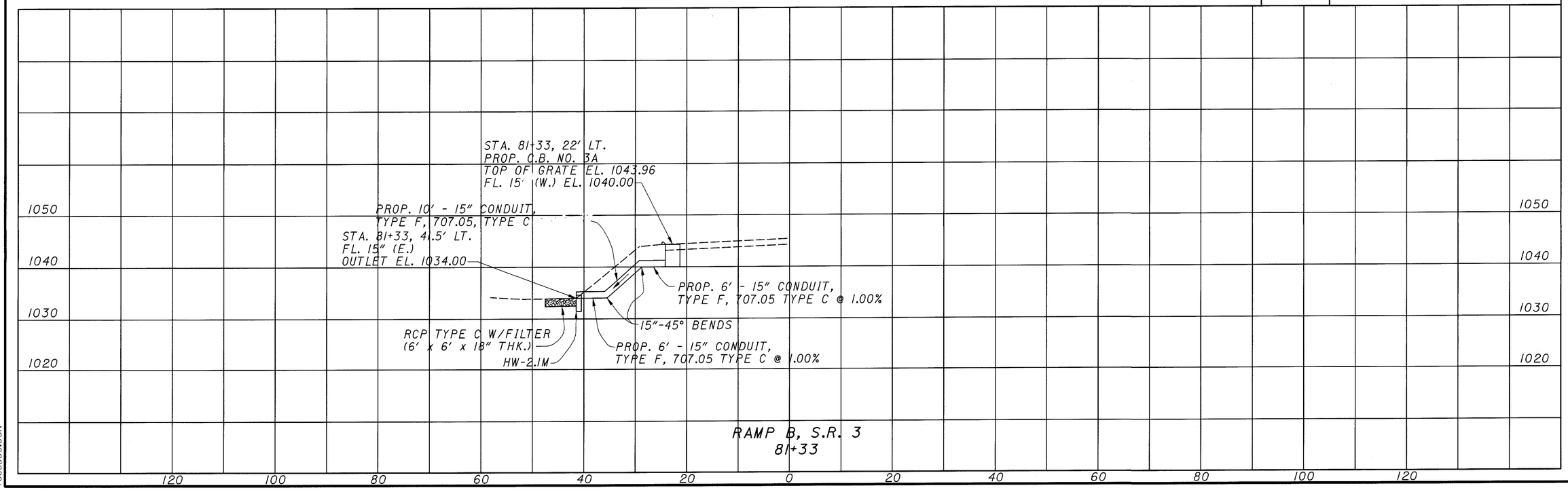
7885DD4.DGN




RAMP C, S.R. 3
83+34.91

| CROSS REFERENCES | |
|---|---|
| 459-460 | PLAN AND PROFILE |
| 505 | DRAINAGE DETAILS |
| 146A | DRAINAGE CALCS. |
| | |

| CROSS REFERENCES | |
|---|---|
| 457 | PLAN AND PROFILE |
| 505 | DRAINAGE DETAILS |
| 146A | DRAINAGE CALCS. |
| | |




RAMP B, S.R. 3
81+33

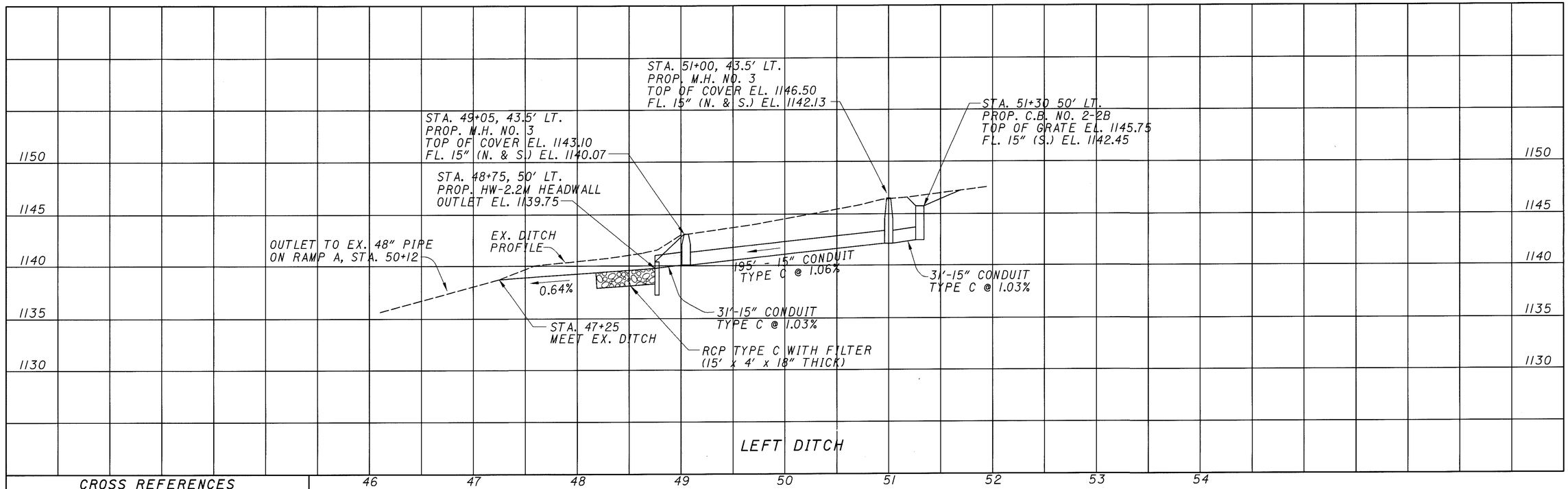
7885DD5.DGN

CALCULATED WJC
CHECKED PS

# STRUCUTRE DRAINAGE PROFILES
## RAMP B AND RAMP C

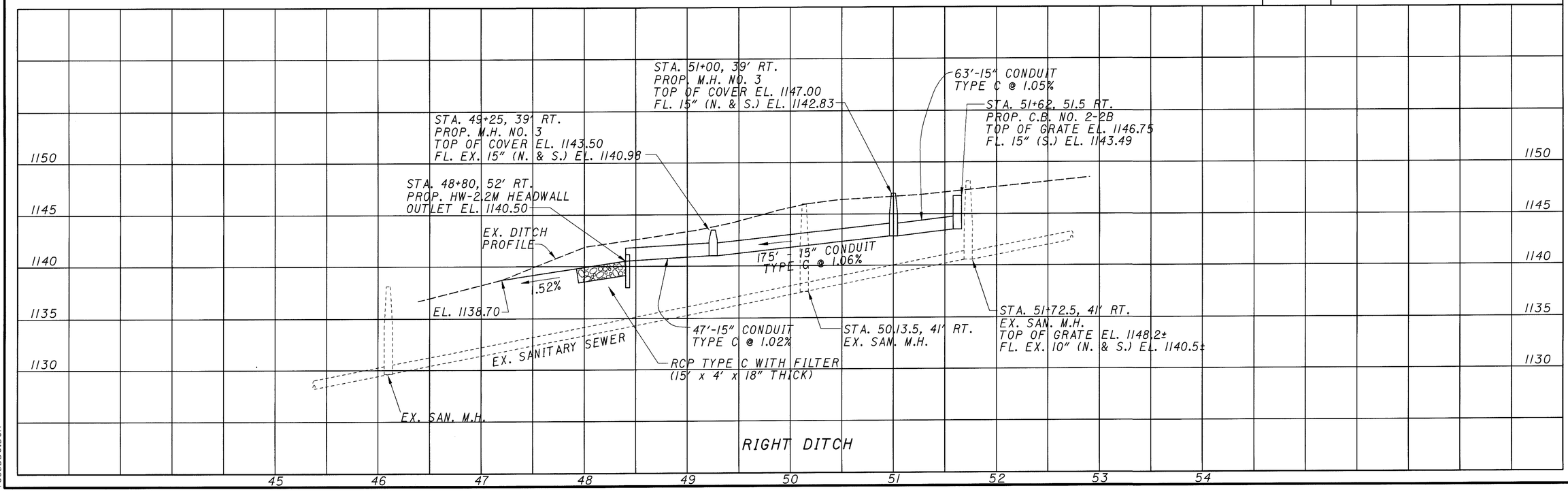
MED-71-15.78

535
940




| CROSS REFERENCES | |
|---|---|
| 207 | PLAN AND PROFILE |
| 146A | DRAINAGE CALCS. |
| | |
| | |

| CROSS REFERENCES | |
|---|---|
| 207 | PLAN AND PROFILE |
| 146A | DRAINAGE CALCS. |
| | |
| | |



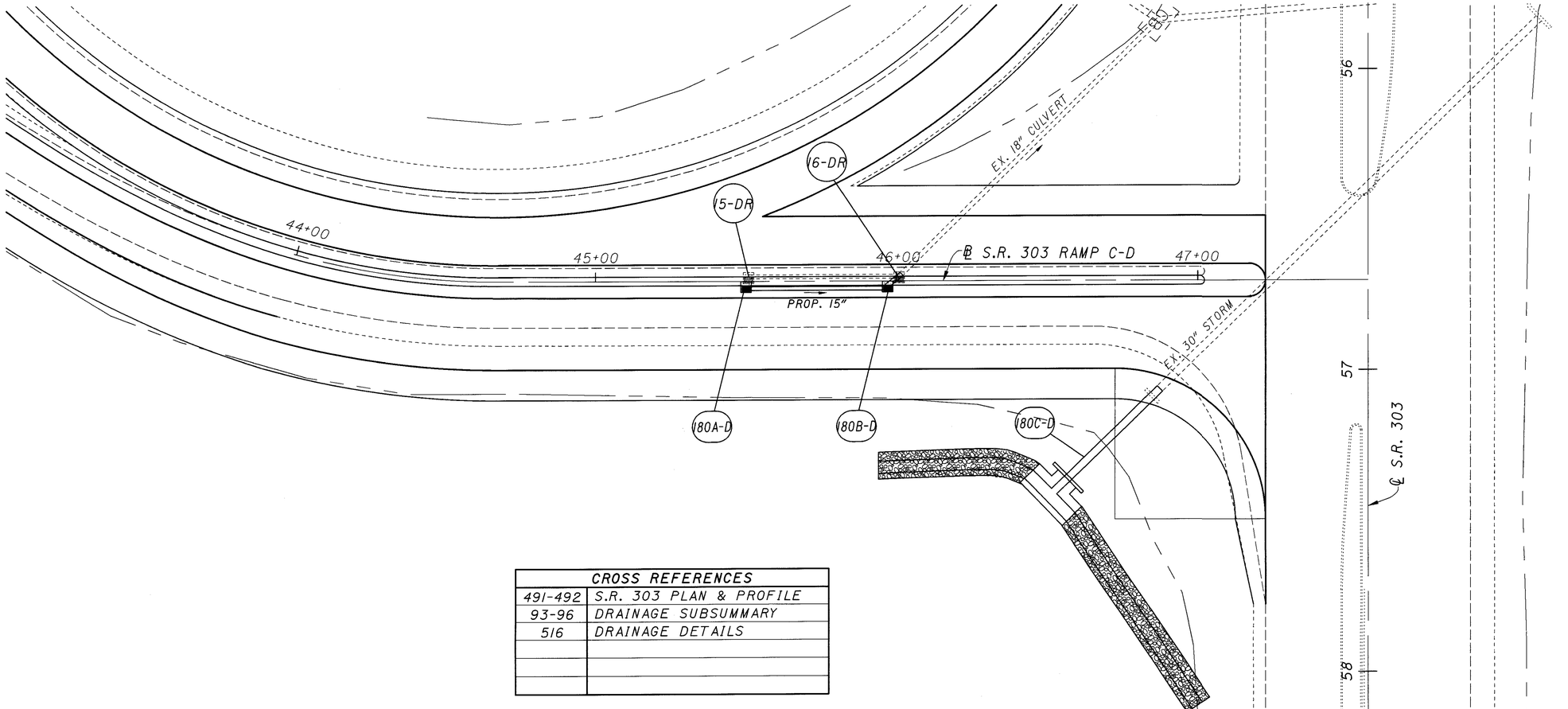

CALCULATED WJC
CHECKED PS

# DRAINAGE PROFILES
## S.R. 303

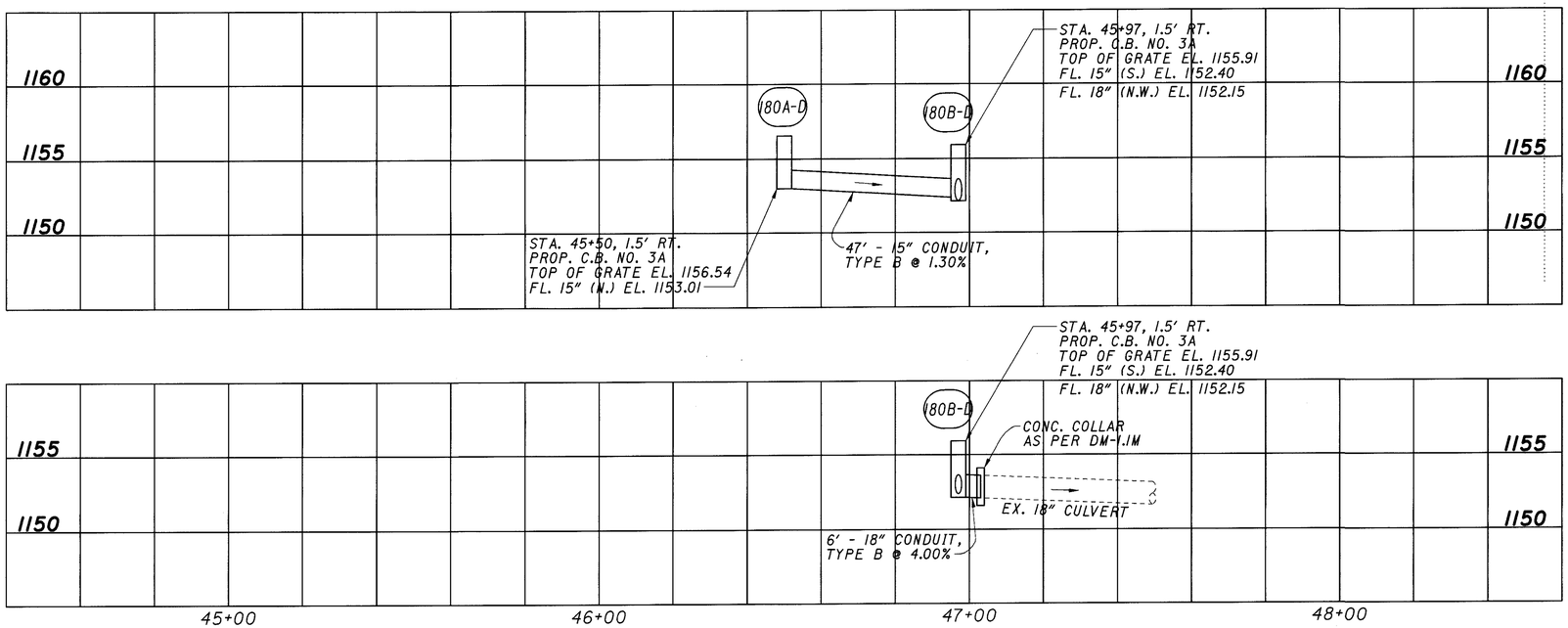
MED-71-15.78

536
940

7885D06.DGN




| CROSS REFERENCES | |
|---|---|
| 491-492 | S.R. 303 PLAN & PROFILE |
| 93-96 | DRAINAGE SUBSUMMARY |
| 516 | DRAINAGE DETAILS |
| | |
| | |
| | |




N

HORIZONTAL SCALE IN FEET
0 10 20 40

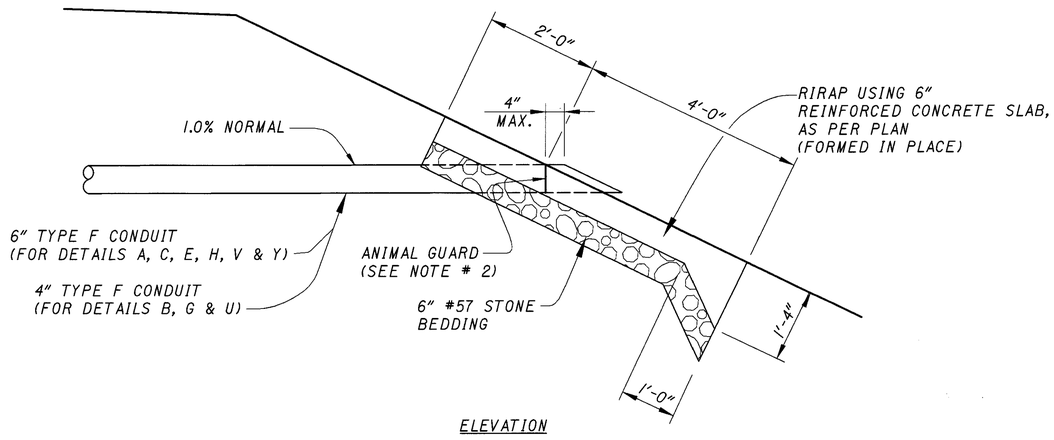
CALCULATED | CHECKED

# S.R. 303 RAMP C-D
# DRAINAGE PROFILES

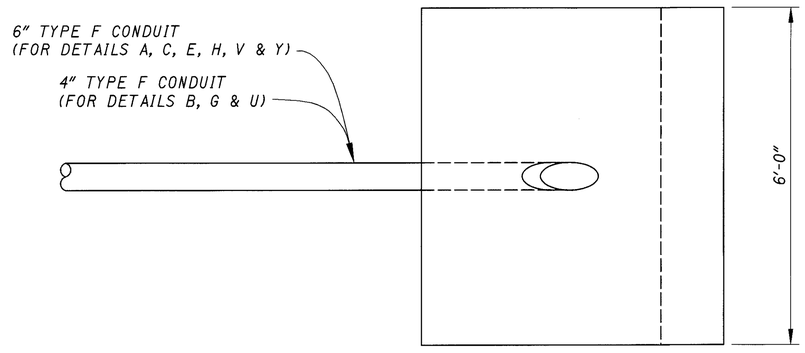
MED - 71 - 15.78

536A
940

REL_303DRAIN.DGN




ELEVATION

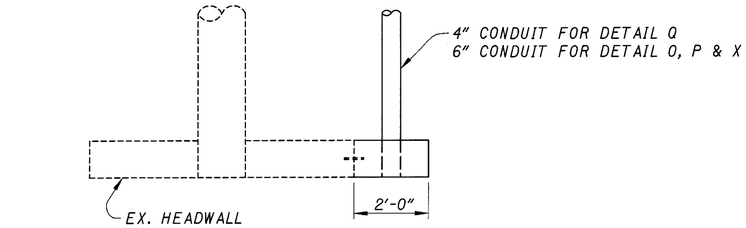



PLAN

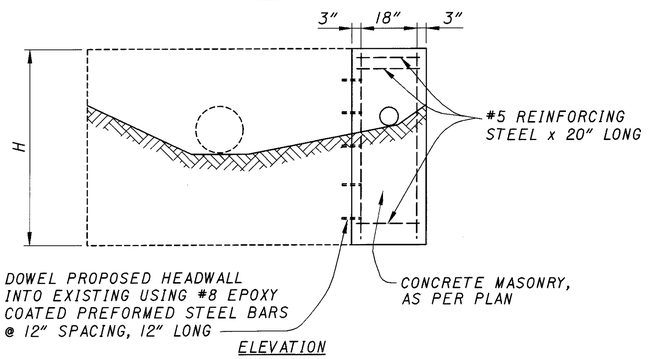
**NOTES:**

1. SOME LOCATIONS FOR RIPRAP PLACEMENT WILL HAVE AN EXISTING HEADWALL NEARBY, DO NOT DISTURB THESE HEADWALLS. THE OUTLET SHALL BE PLACED SO THERE IS POSITIVE DRAINAGE FLOW AND SHALL NOT OUTLET BEHIND THE HEADWALL OR BE PLACED IN A MANNER THAT WILL ERODE THE GROUND AROUND THE HEADWALLS AS DIRECTED BY THE ENGINEER.
2. ANIMAL GUARD IS TO BE PLACED VERTICALLY AS PER STANDARD DRAWING DW-1.1M. LOCATE AS FAR AS POSSIBLE IN FROM THE END OF PIPE TOWARDS THE RIPRAP.
3. RIPRAP PADS SHALL CONFORM TO THE PROPOSED OR EXISTING SLOPE AT OUTLET LOCATION.

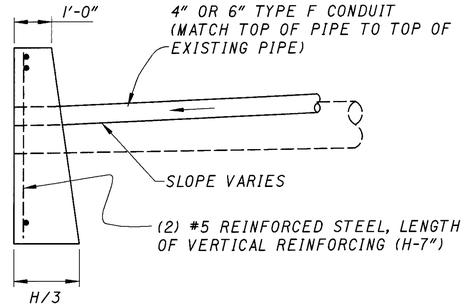
## OUTLET DETAIL TO RIPRAP




PLAN




ELEVATION

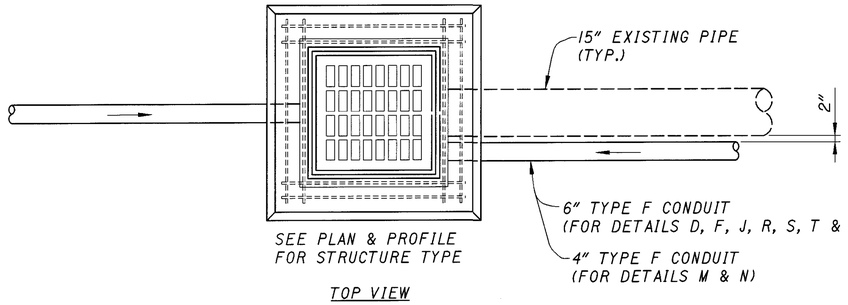



END VIEW

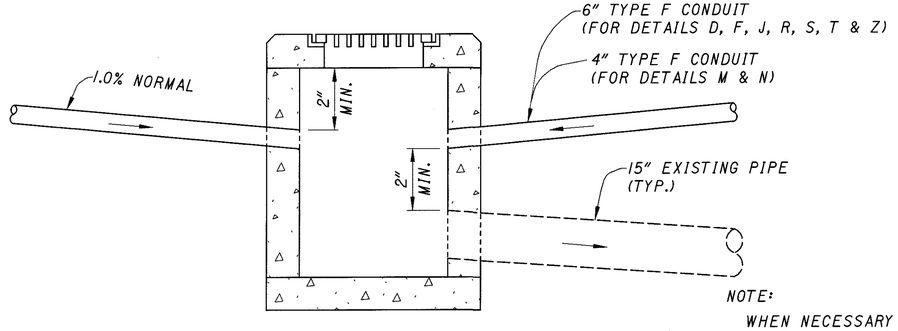
WHEN TYING INTO HEADWALL OF EXISTING 15" CONDUIT, H = 5'-2"
FOR 18" CONDUIT, H = 5'-5"

SEE HW-1 HEADWALL DETAIL FOR MORE INFORMATION, SEE SHEET 507

## OUTLET DETAIL TO HEADWALL




TOP VIEW




CROSS-SECTION

NOTE:
WHEN NECESSARY TO AVOID EXISTING PIPES, CONNECT THE TYPE F CONDUIT TO THE SIDE OF THE CATCH BASIN OR MANHOLE WITH APPROPRIATE BEND

## OUTLET DETAIL TO CATCH BASIN OR MANHOLE

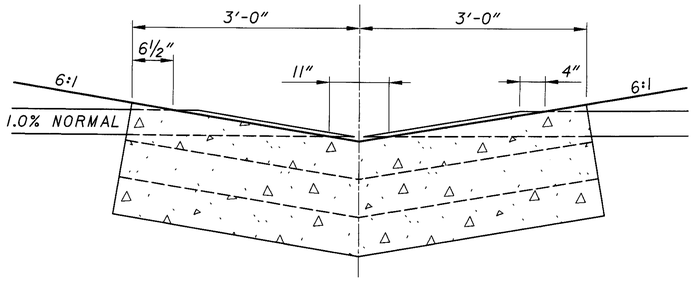
CALCULATED W.J.C. CHECKED P.S.

# UNDERDRAIN DETAILS

MED - 71 - 15.78

537
940

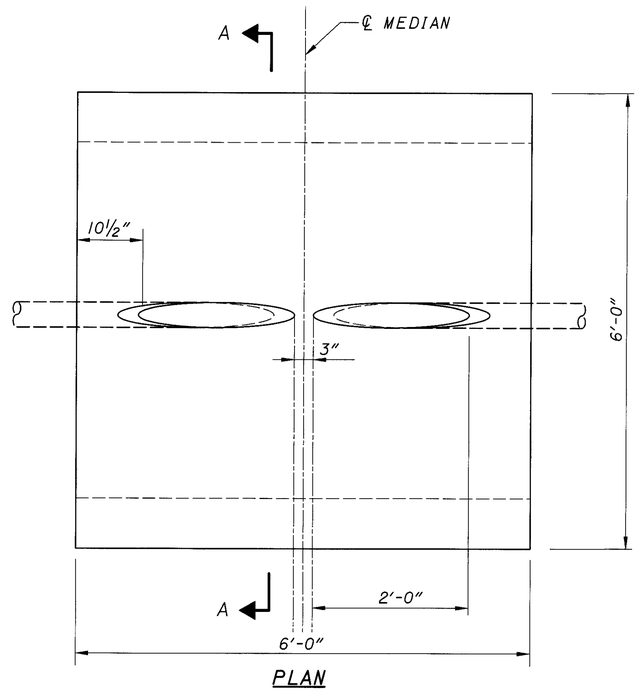
7885DDA.DGN



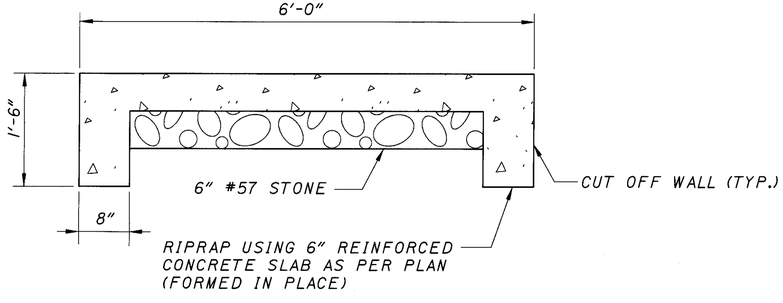

CROSS SECTION

**NOTE:**

OUTLET DETAIL TO SHARED RIPRAP IS USED WITH UNDERDRAIN DETAIL "W" FOR NARROW MEDIAN FROM STATION 1263+00 TO THE END OF THE PROJECT.



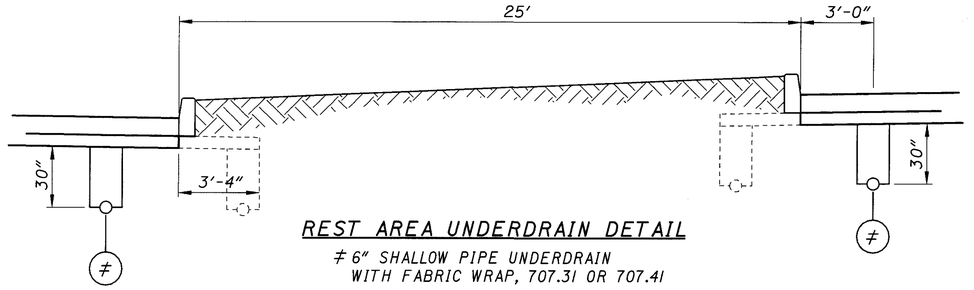

PLAN




SECTION A-A

## OUTLET DETAIL TO SHARED RIPRAP

SEE SHEET 537 FOR ADDITIONAL NOTES & DETAILS




## REST AREA UNDERDRAIN DETAIL

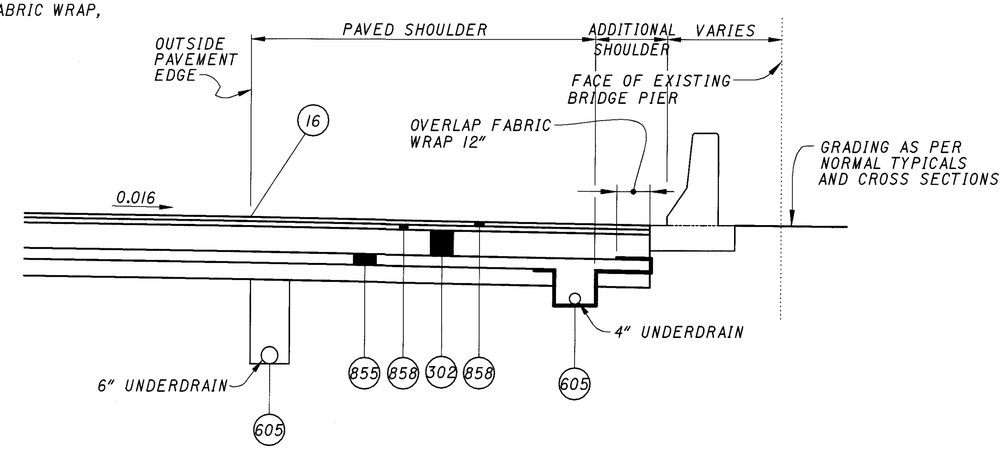
≠ 6" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41

## LEGEND

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

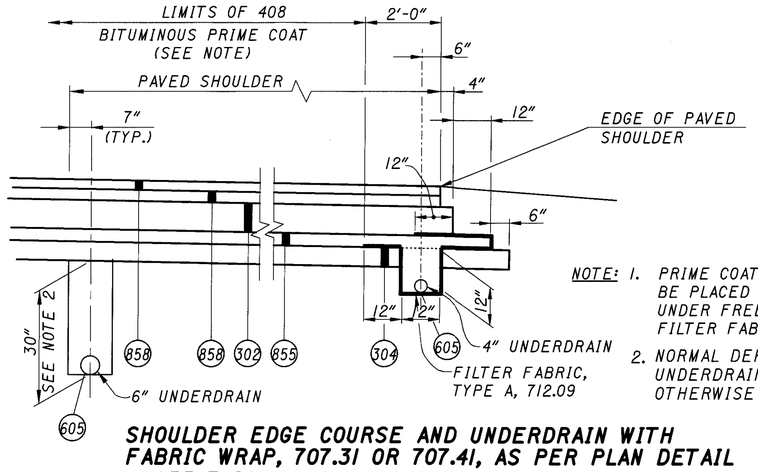
6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE




## SHOULDER EDGE COURSE AND UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN DETAIL TYPICAL FOR OUTSIDE SHOULDER BARRIER

SEE TYPICAL SECTIONS FOR PAVEMENT BUILDUP




NOTE: 1. PRIME COAT SHALL NOT BE PLACED ON TOP OF OR UNDER FREE DRAINING BASE FILTER FABRIC.

2. NORMAL DEPTH OF 6" PIPE UNDERDRAIN IS 30" UNLESS OTHERWISE NOTED.

## SHOULDER EDGE COURSE AND UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN DETAIL

SEE TYPICAL SECTIONS FOR PAVEMENT BUILDUP

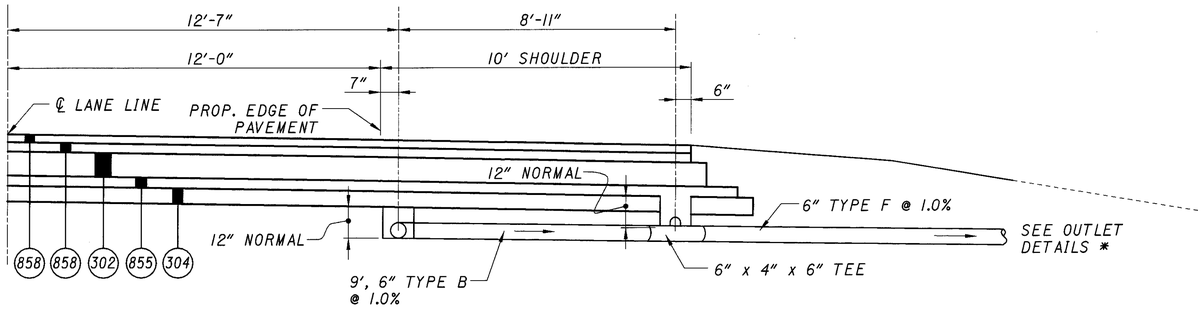
CALCULATED WJC CHECKED PS

# UNDERDRAIN DETAILS

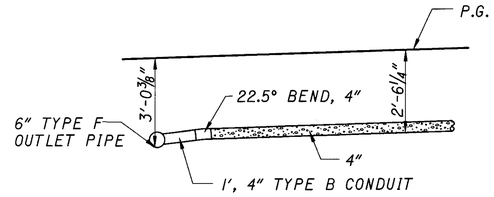
MED - 71 - 15.78

538 / 940

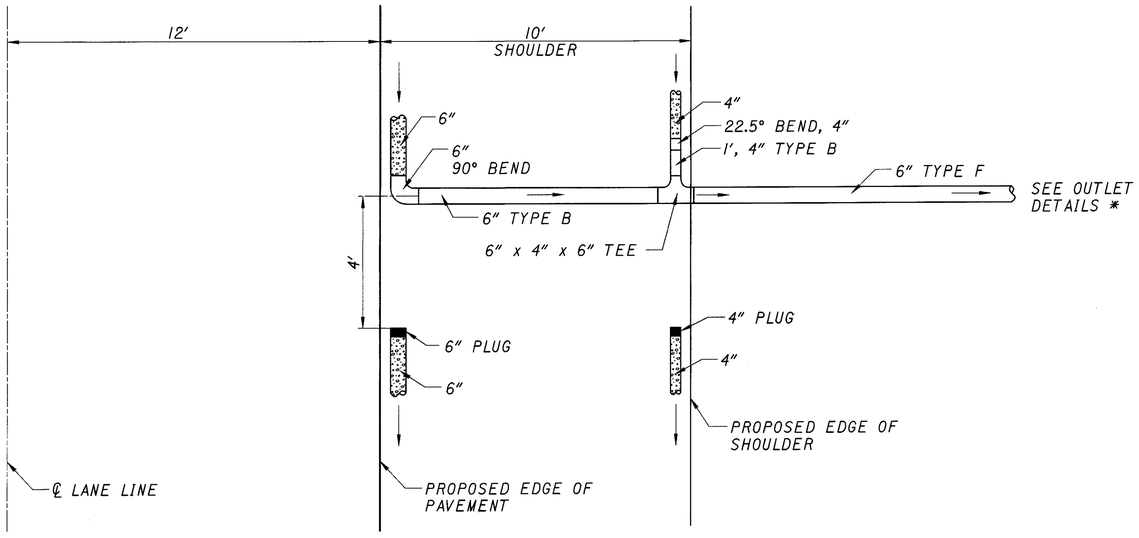
7885DD0.DGN




SECTION




PROFILE AT EDGE OF SHOULDER




PLAN

## UNDERDRAIN DETAIL L4 & L5

*FOR UNDERDRAIN DETAIL L4, SEE OUTLET DETAIL TO RIPRAP
FOR UNDERDRAIN DETAIL L5, SEE OUTLET DETAIL TO CATCH BASIN

## LEGEND

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

### ROCK CUT UNDERDRAIN NOTE:

THE NORMAL DEPTH OF THE ROCK CUT UNDERDRAINS IS AS SHOWN ON THIS SHEET. IF ANY SECTION IN THE ROCK CUT AREA REQUIRES OVER-EXCAVATION PER 203.04(b), THE DEPTH OF THE APPLICABLE ROCK CUT AND SHALLOW PIPE UNDERDRAINS SHALL BE MODIFIED TO A DEPTH 6" BELOW THE BOTTOM OF THE UNDERCUT (24" BELOW ITEM 304 - AGGREGATE BASE). THIS DEPTH SHALL APPLY TO ALL UNDERDRAIN SUBSUMMARIES UNDER REFERENCE NUMBERS 6-NO, 6-NI, 6-SI, 6-SO, 33-NO, 28B-NI, 26B-SI, 27-SI, 36B-SO, AND 37-SO.

OUTLET THE DEEPER UNDERDRAINS FOR 6-NO, 6-NI, 6-SI, AND 6-SO PER UNDERDRAIN DETAIL "F" IN LIEU OF UNDERDRAIN DETAIL "L4" OR "L5" (NOTE THAT THE OUTLET STATION FOR 6-SO MUST THEN CHANGE FROM 854+25 TO 855+70 AND THE PRECEDING UNDERDRAIN LENGTH EXTENDED); FOR 33-NO AND 36B-NI, USE DETAIL "A" IN LIEU OF "L4"; FOR 28B-NI AND 26B-NI, USE DETAIL "D" IN LIEU OF "L5". ADJUST THE NORTHERN DEPTHS TO 24" FOR THE 6" UNCLASSIFIED PIPE UNDERDRAINS FOR 28A-NI, 26-NI, AND 36A-NI; ADJUST THE SOUTHERN DEPTHS TO 24" FOR 29A-NI, 27A-SI, AND 37A-SO. CHANGE ALL BENDS AND BRANCHES QUANTITIES AS REQUIRED. ADDITIONAL QUANTITIES OF OUTLET PIPE (6" CONDUIT, TYPE B AND TYPE F, 707.33 OR 707.41; AND 4" CONDUIT, TYPE F, 707.33 OR 707.41) HAS BEEN PROVIDED IN THE UNDERDRAIN SUBSUMMARY TOTALS SHEET FOR OUTLETTING THE DEEPER UNDERDRAINS. ALL MATERIALS, LABOR, AND INCIDENTALS TO PROPERLY PLACE THESE ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BIDS FOR THE FOLLOWING:

| | |
|---|---|
| ITEM 603 - 4" CONDUIT, TYPE F, 707.33 OR 707.41 | 30 FEET |
| ITEM 603 - 6" CONDUIT, TYPE F, 707.33 OR 707.41 | 20 FEET |
| ITEM 603 - 6" CONDUIT, TYPE B, 707.33 OR 707.41 | 75 FEET |

QUANTITIES CARRIED TO THE UNDERDRAIN SUBSUMMARY, SEE SHEET 128

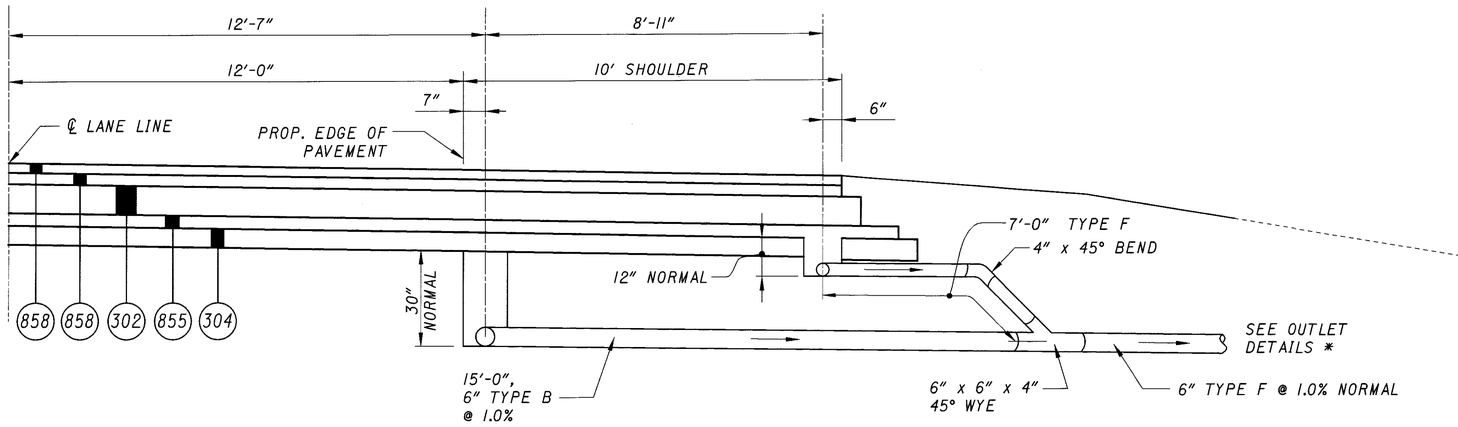
CALCULATED W.J.C. CHECKED P.S.

# UNDERDRAIN DETAILS

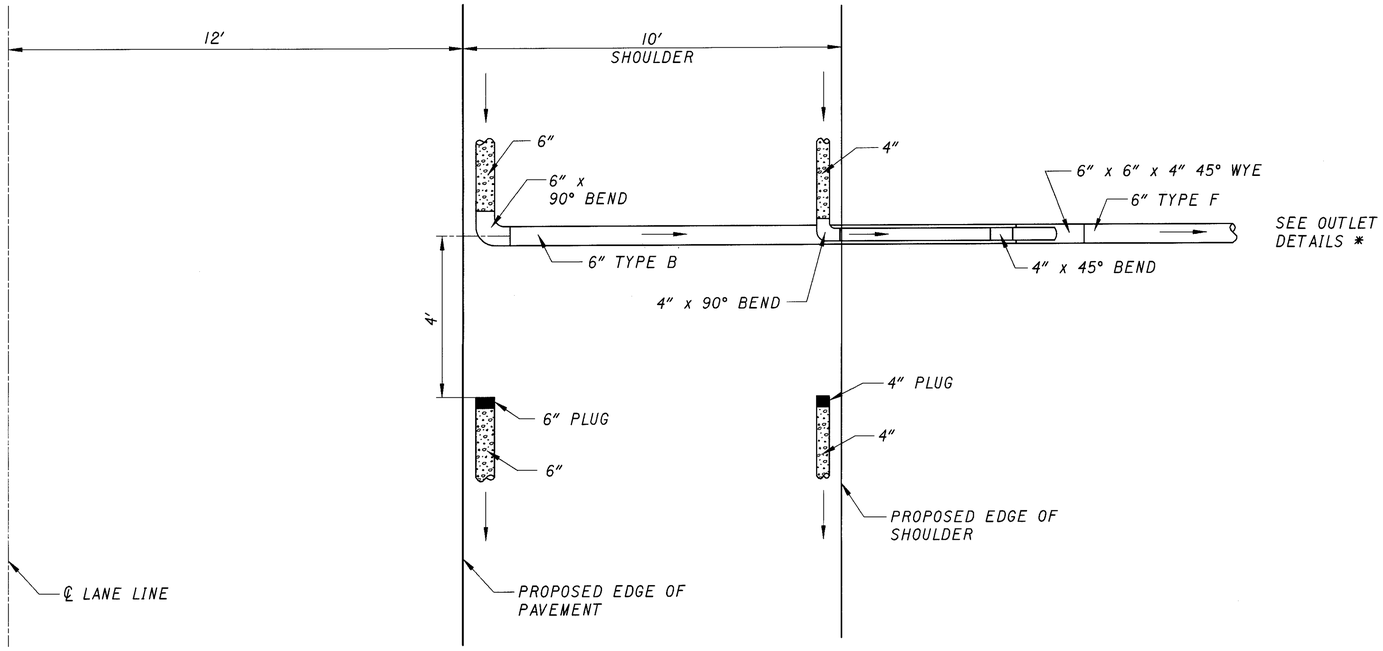
MED - 71 - 15.78

539
940

7885DD7.DGN




SECTION




PLAN

## UNDERDRAIN DETAILS A, D, O & L2

*FOR UNDERDRAIN DETAIL A, SEE OUTLET DETAIL TO RIPRAP

FOR UNDERDRAIN DETAIL D, SEE OUTLET DETAIL TO CATCH BASIN,

FOR UNDERDRAIN DETAIL O, SEE OUTLET DETAIL TO HEADWALL,

FOR UNDERDRAIN DETAIL L2, OUTLET DIRECTLY TO PROPOSED ROCK CHANNEL PROTECTION

LEGEND

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

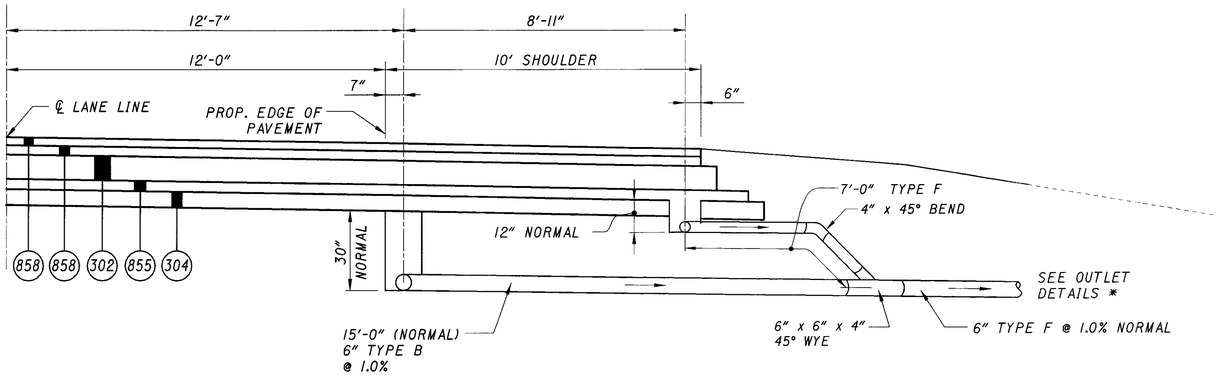
CALCULATED W.J.C
CHECKED P.S.

# UNDERDRAIN DETAILS

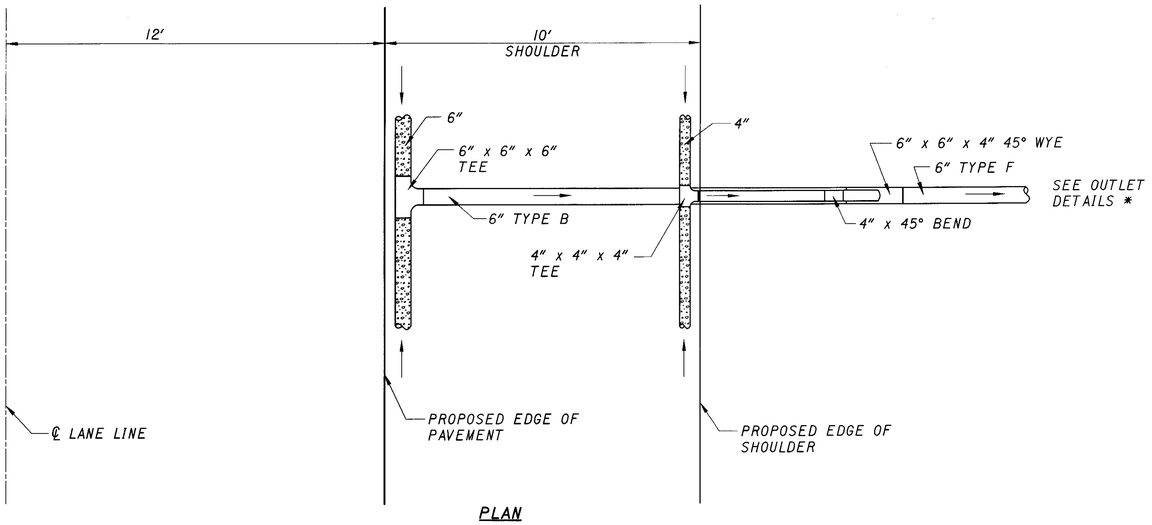
MED - 71 - 15.78

540
940

7885DDB.DGN




SECTION




PLAN

**NOTE:**

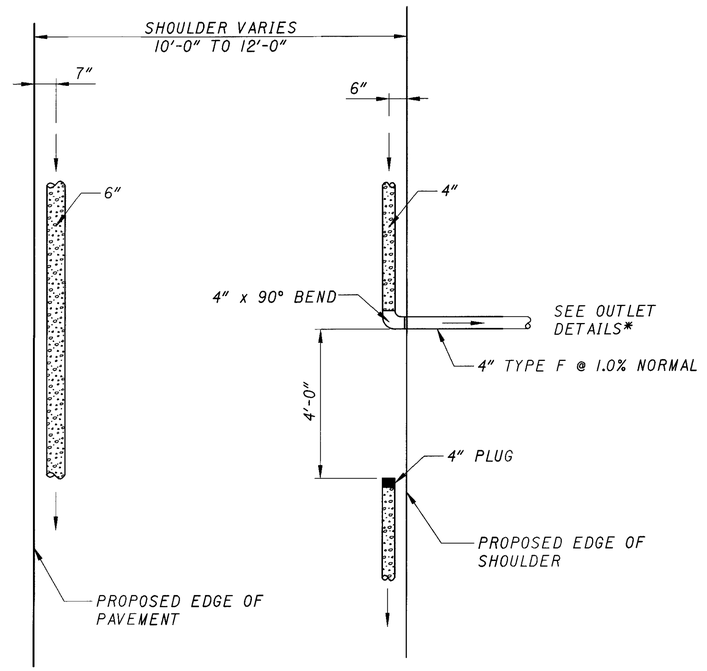
DEPTH OF THE 4". FREE-DRAINING BASE UNDERDRAIN WILL VARY, WHICH WILL AFFECT PIPE LENGTHS.

## UNDERDRAIN DETAILS C, J & P

*FOR UNDERDRAIN DETAIL C, SEE OUTLET DETAIL TO RIPRAP

FOR UNDERDRAIN DETAIL J, SEE OUTLET DETAIL TO CATCH BASIN OR MANHOLE

FOR UNDERDRAIN DETAIL P, SEE OUTLET DETAIL TO HEADWALL




**NOTE:**

WHEN THIS DETAIL IS USED ON THE HIGH SIDE OF A SUPERELEVATED SECTION, THE 6" UNDERDRAIN IS NOT PRESENT.

## CONNECTION DETAIL FOR UNDERDRAIN DETAILS B, M, Q, W & LI

* FOR UNDERDRAIN DETAIL B, SEE OUTLET DETAIL TO RIPRAP

FOR UNDERDRAIN DETAIL M, SEE OUTLET DETAIL TO CATCH BASIN

FOR UNDERDRAIN DETAIL Q, SEE OUTLET DETAIL TO EXISTING HEADWALL

FOR UNDERDRAIN DETAIL W, SEE OUTLET DETAIL TO SHARED RIPRAP

FOR UNDERDRAIN DETAIL LI, OUTLET DIRECTLY TO PROPOSED ROCK CHANNEL PROTECTION

## LEGEND

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

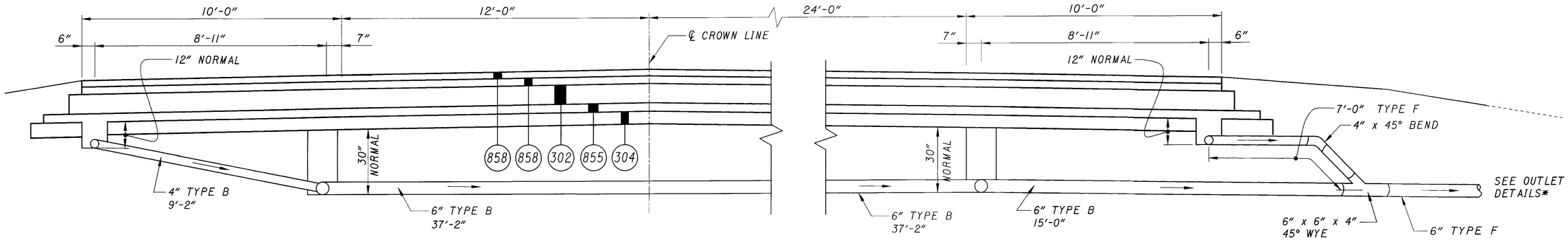
CALCULATED W.J.C. CHECKED P.S.

# UNDERDRAIN DETAILS

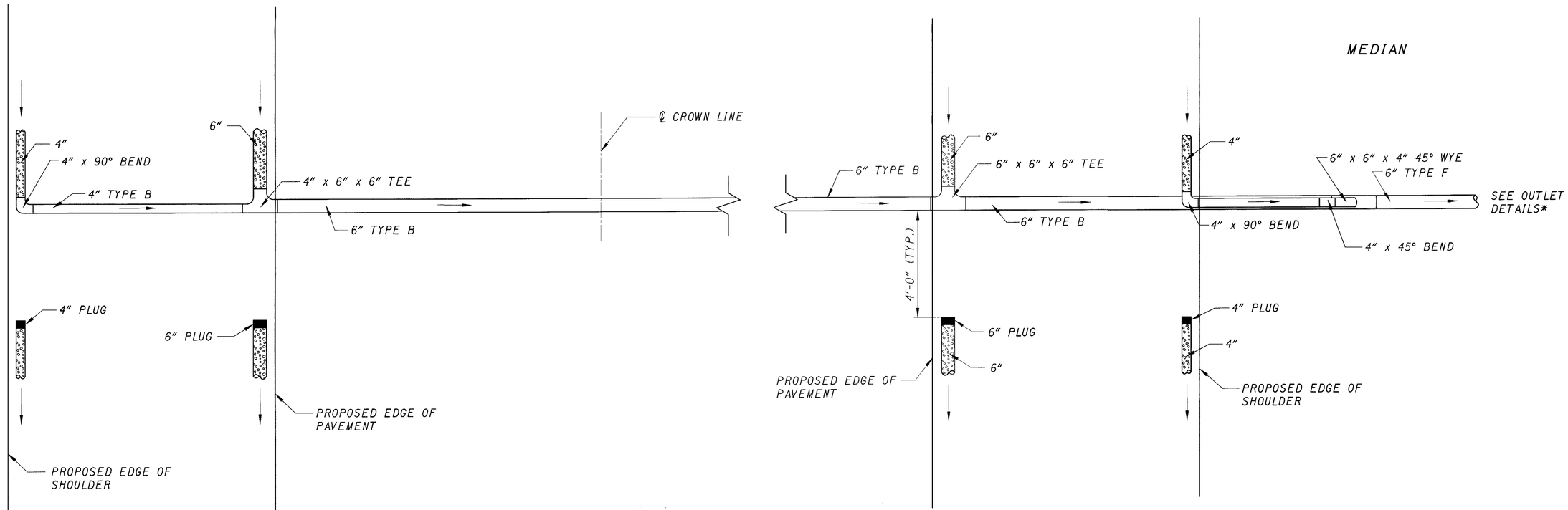
MED - 71 - 15.78

541
940

7885DDD.DGN




CROSS SECTION




PLAN

## NOTE:

1. DETAIL "F" IN SUPERELEVATED SECTIONS WILL HAVE NO 6" SUBGRADE UNDERDRAIN ON THE MEDIAN SIDE. OUTLET CONDUIT IS INCLUDED IN THE UNDERDRAIN SUMMARY WITH SUBGRADE CONNECTIONS FROM THE OUTSIDE.
2. DETAIL "Z" ALWAYS HAS NO 4" FREE-DRAINING BASE UNDERDRAIN ON THE FAR SIDE FROM THE OUTLET. SO THE 4" x 6" x 6" TEE SHOWN WILL BE A 6" x 90° BEND. ALSO ON THAT SIDE, THE 6" SUBGRADE UNDERDRAIN WILL NOT CONTINUE AFTER THE OUTLET. SEE UNDERDRAIN SUMMARY AND PLAN SHEETS FOR MORE INFORMATION.

## UNDERDRAIN DETAILS E, F & Z

*FOR UNDERDRAIN DETAIL E, SEE OUTLET DETAIL TO RIPRAP

FOR UNDERDRAIN DETAIL F & Z SEE OUTLET DETAIL TO CATCH BASIN OR MANHOLE

## LEGEND

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

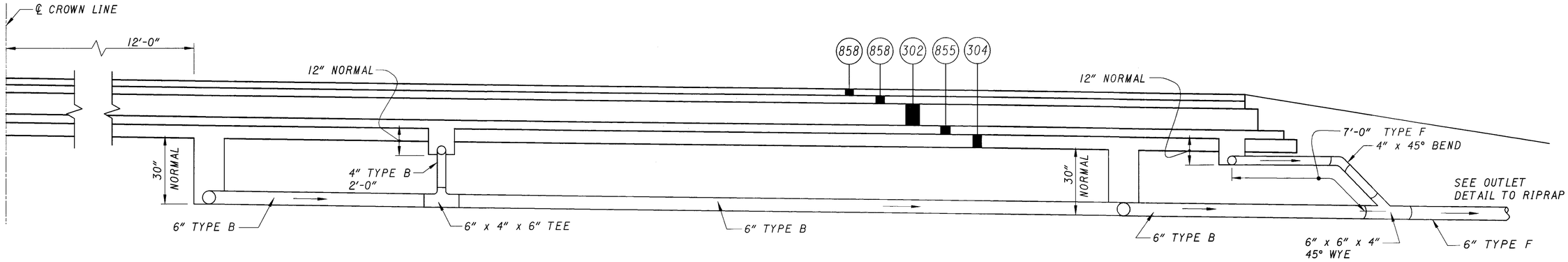
CALCULATED WJC
CHECKED PS

# UNDERDRAIN DETAILS

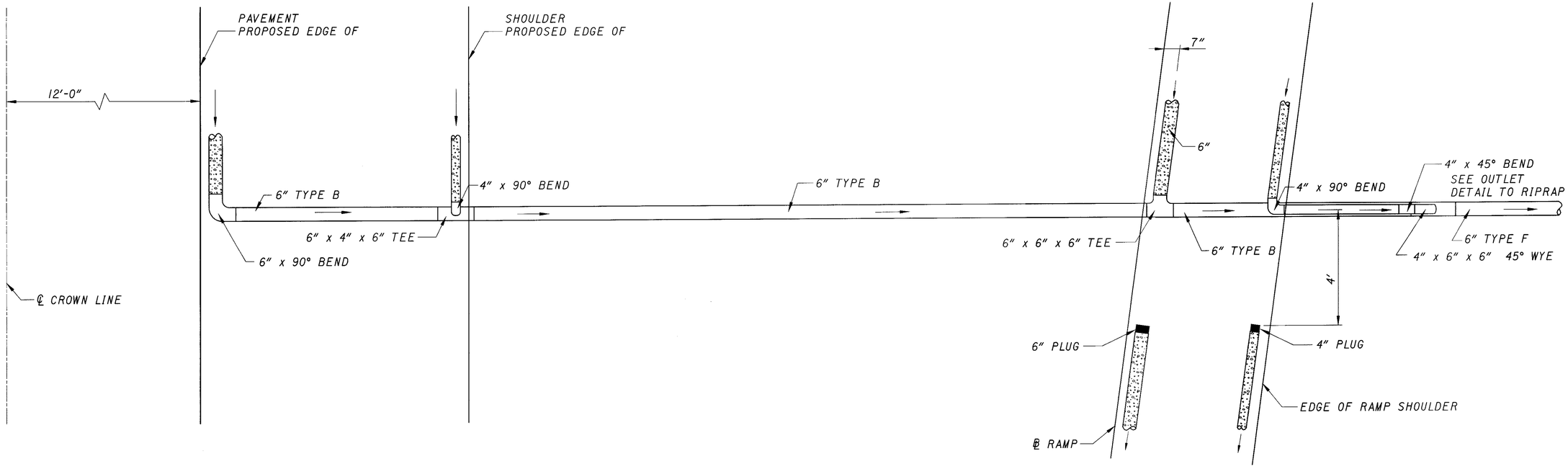
MED - 71 - 15.78

542
940

7885DDE.DGN




CROSS SECTION




PLAN

## CONNECTION DETAIL FOR UNDERDRAIN DETAIL H

**NOTE:**

THIS DETAIL IS USED UNDER RAMP B OF S.R. 3

**LEGEND**

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

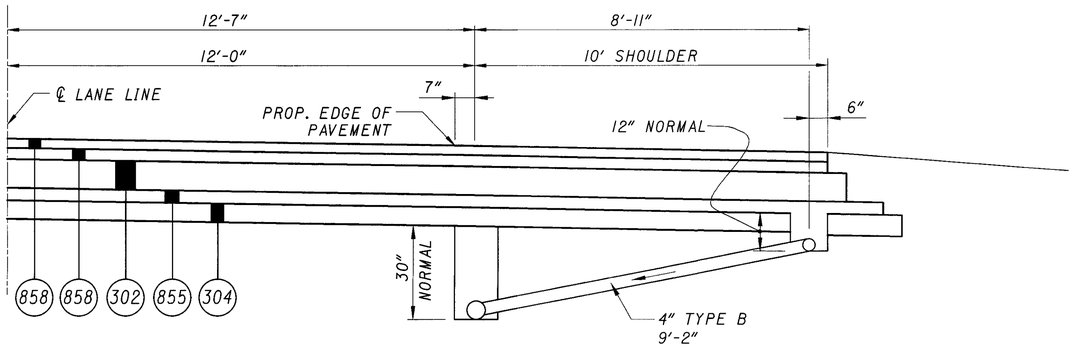
CALCULATED WJC CHECKED PS

# UNDERDRAIN DETAILS

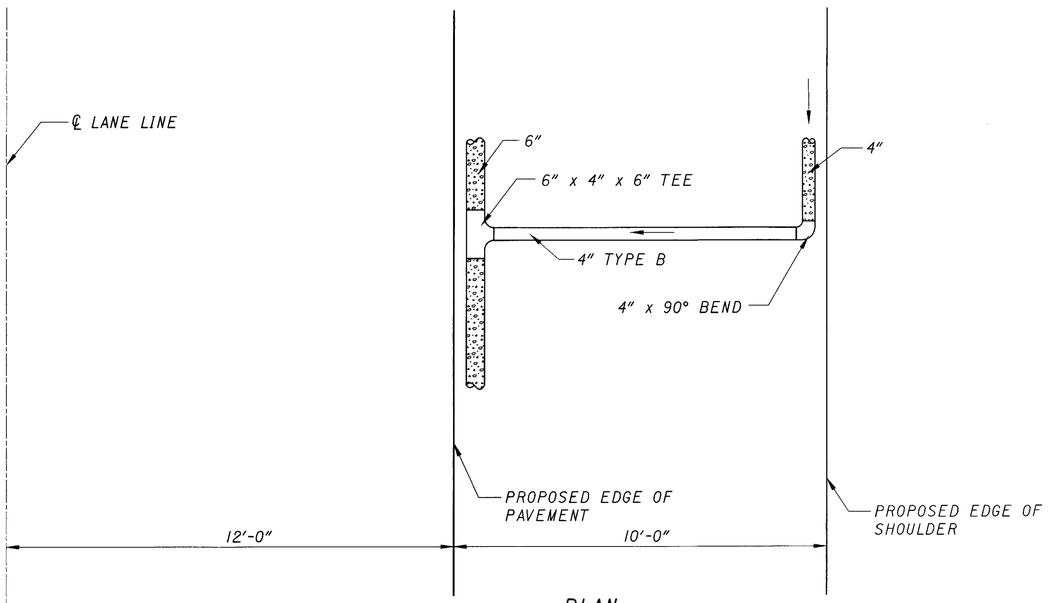
MED - 71 - 15.78

543 / 940

7885DDF.DGN



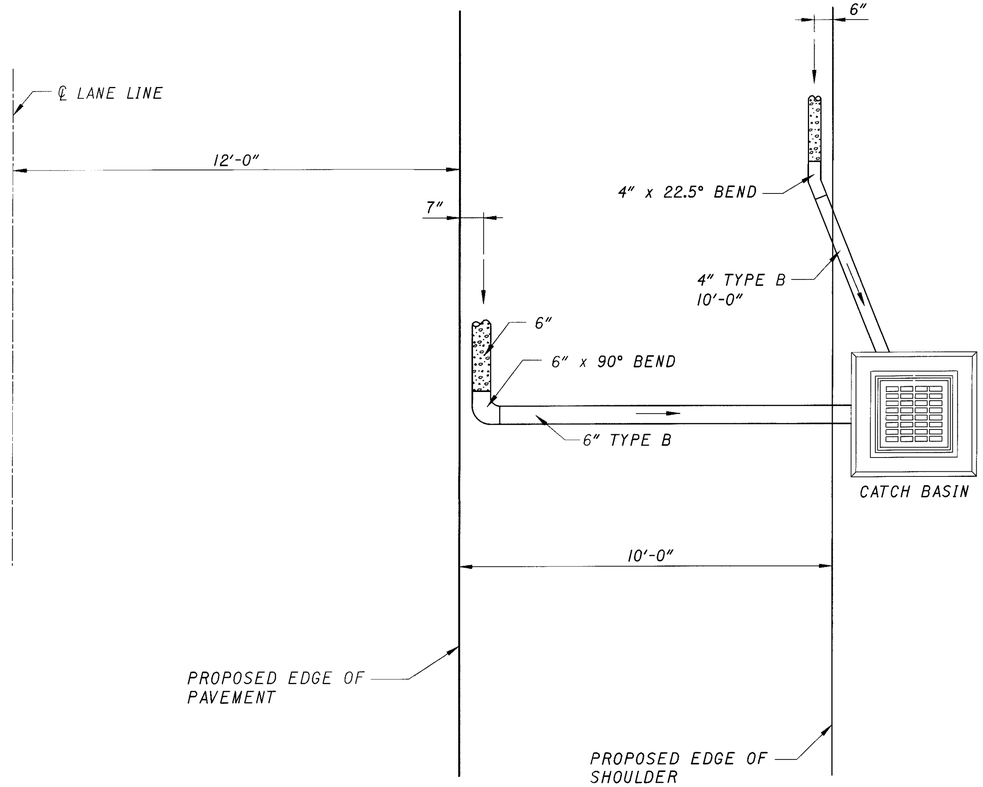

CROSS SECTION




PLAN

**UNDERDRAIN DETAIL K**

**NOTE:**
IN RAMP GORES, DETAIL "I" MAY OUTLET ONLY THE 6", SUBGRADE UNDERDRAIN, SEE UNDERDRAIN SUMMARY FOR PIPE QUANTITIES. DETAIL "I" IS ALSO USED IN THE REST AREAS FOR 6" PIPE TO BE OUTLETTED AS THE 4" IS DETAILED BELOW.




**UNDERDRAIN DETAIL I**

**LEGEND**

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

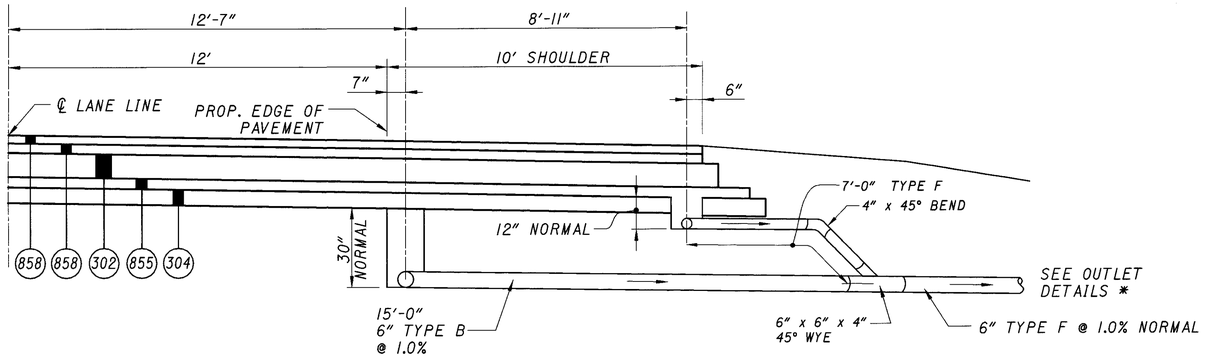
CALCULATED W.JC CHECKED PS

**UNDERDRAIN DETAILS**

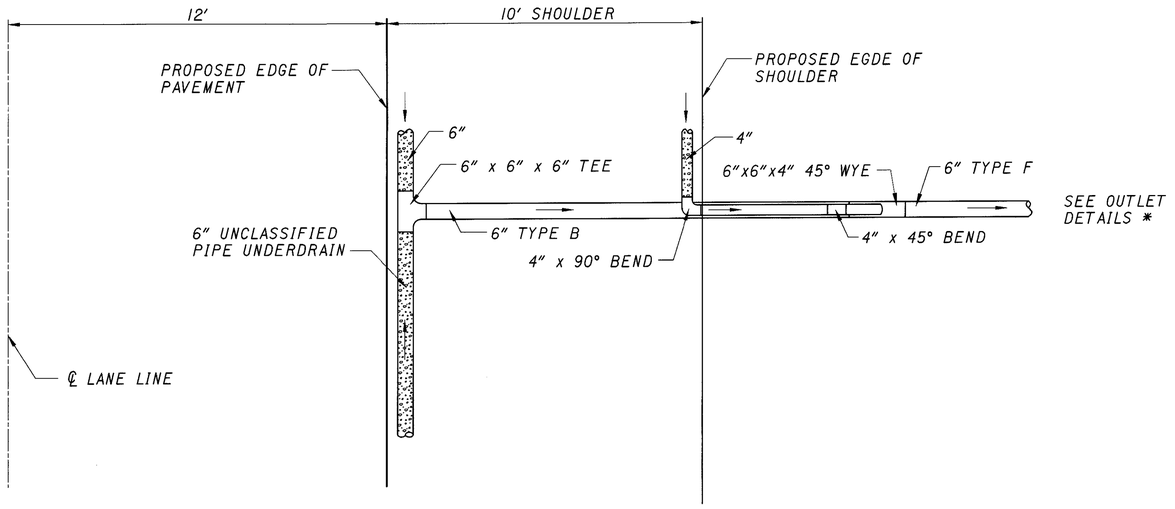
**MED - 71 - 15.78**

544
940

7885DDG.DGN




**SECTION**




## UNDERDRAIN DETAILS R, V & L3

* FOR UNDERDRAIN DETAIL R, SEE OUTLET DETAIL TO CATCH BASIN OR MANHOLE
* FOR UNDERDRAIN DETAIL V, SEE OUTLET DETAIL TO RIPRAP
  FOR UNDERDRAIN DETAIL L3, OUTLET DIRECTLY TO PROPOSED ROCK CHANNEL PROTECTION

**LEGEND**

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

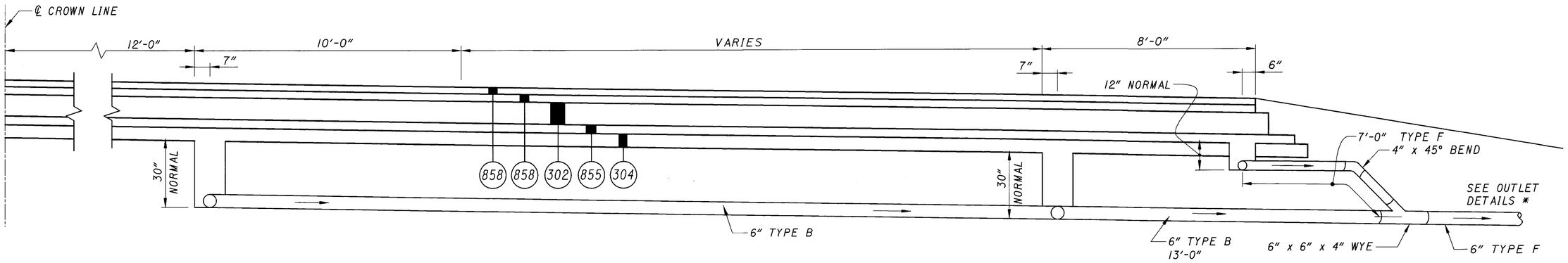
CALCULATED W.J.C. CHECKED P.S.

# UNDERDRAIN DETAILS

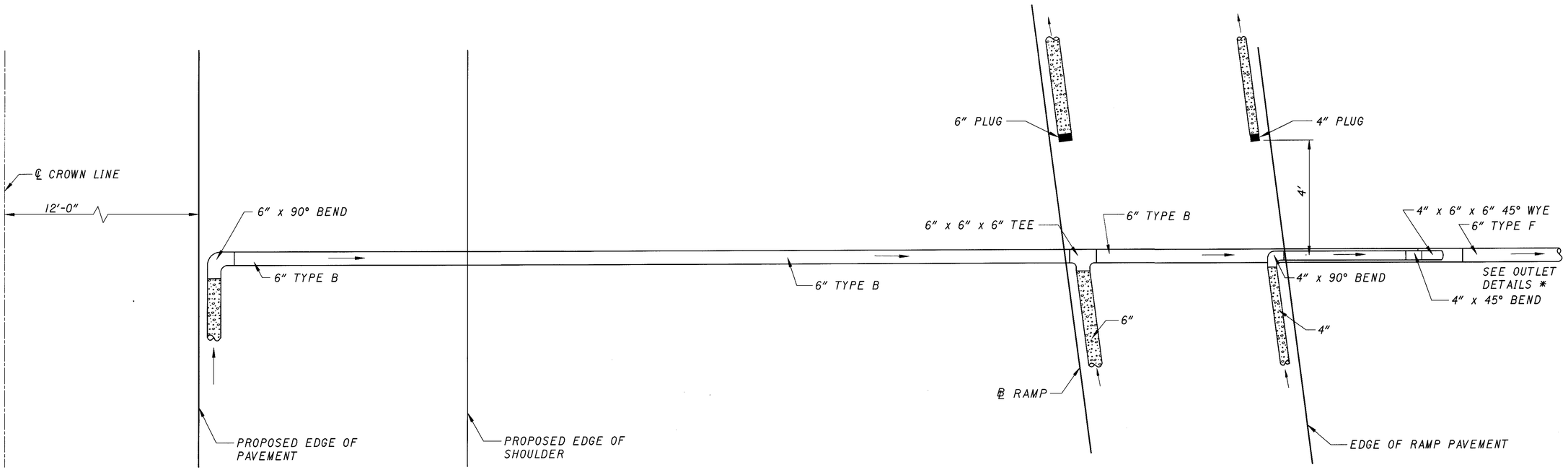
MED - 71 - 15.78

545/940

7885DDH.DGN




## CROSS SECTION




## PLAN

## CONNECTION DETAIL FOR UNDERDRAIN DETAILS X & Y

* FOR UNDERDRAIN DETAIL X, SEE OUTLET DETAIL TO HEADWALL
  FOR UNDERDRAIN DETAIL Y, SEE OUTLET DETAIL TO RIPRAP

## LEGEND

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

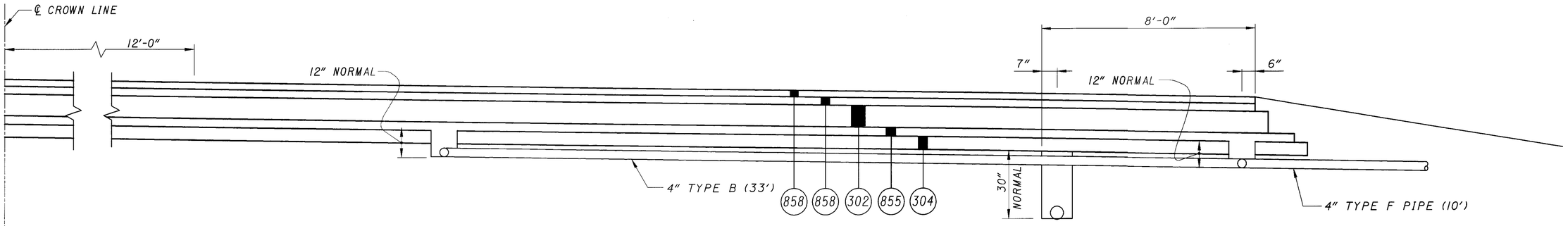
CALCULATED W.J.C.
CHECKED P.S.

# UNDERDRAIN DETAILS

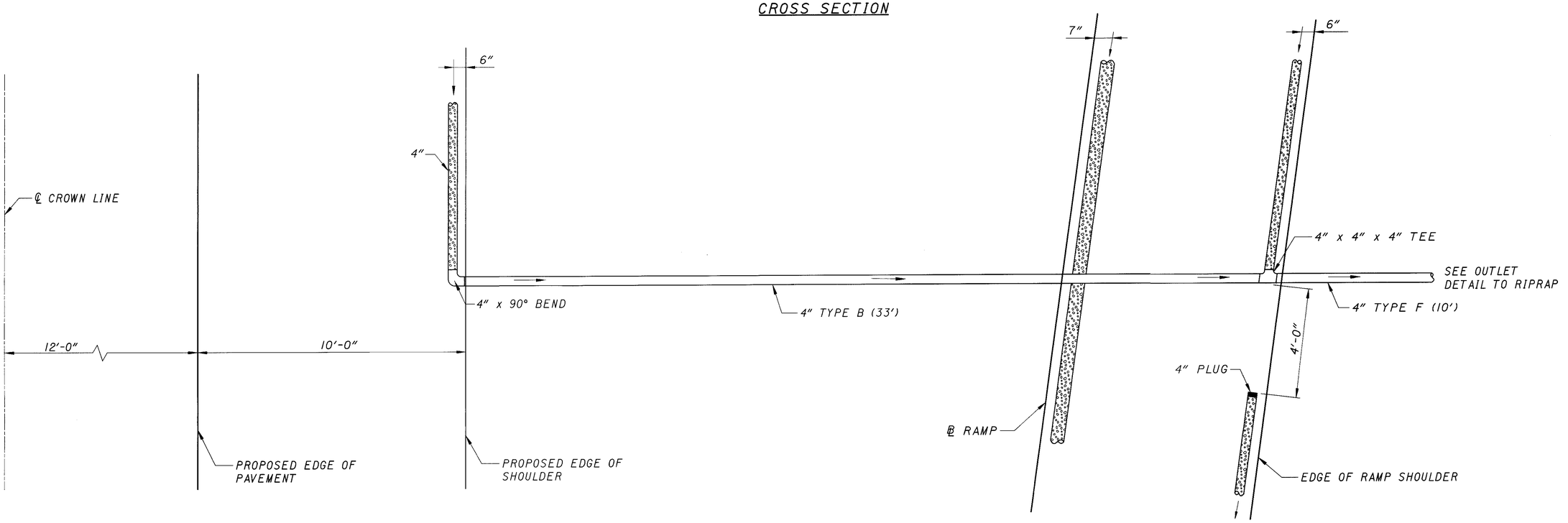
MED - 71 - 15.78

546
940

7885DDJ.DGN




## CROSS SECTION




## PLAN

**NOTE:**
DETAIL "U" IS TO BE USED ONLY AT "RAMP C" TO S.R. 18

## LEGEND

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

## CONNECTION DETAIL FOR UNDERDRAIN DETAIL U

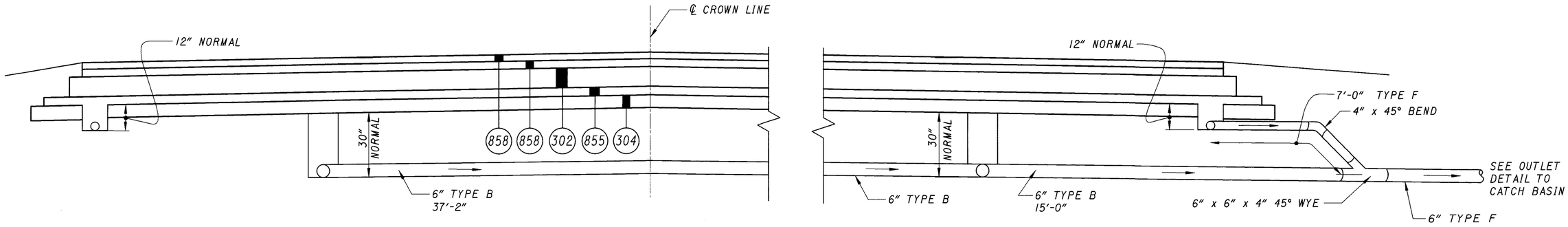
CALCULATED W.J.C. CHECKED P.S.

# UNDERDRAIN DETAILS

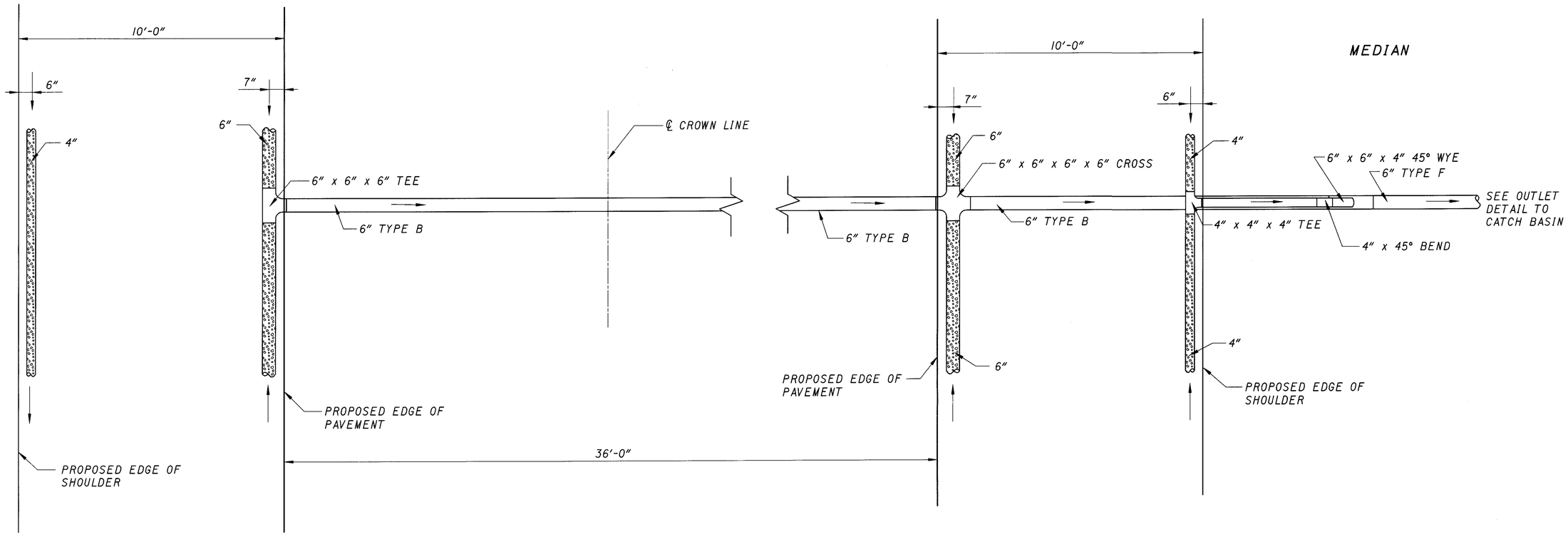
MED - 71 - 15.78

547
940

7885DDL.DGN




CROSS SECTION




PLAN

**NOTE:**

DETAIL "T" IS USED ONLY AT THE SOUTHERN END OF THIS PROJECT.

**UNDERDRAIN DETAIL T**

LEGEND

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

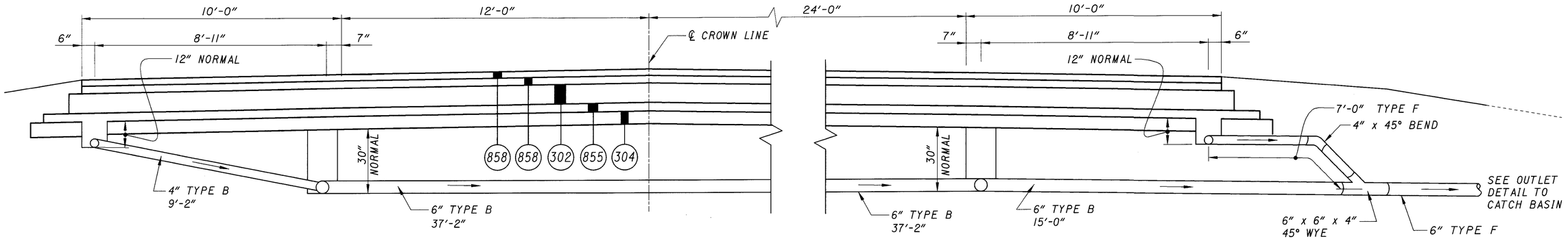
CALCULATED W.JC CHECKED PS

# UNDERDRAIN DETAILS

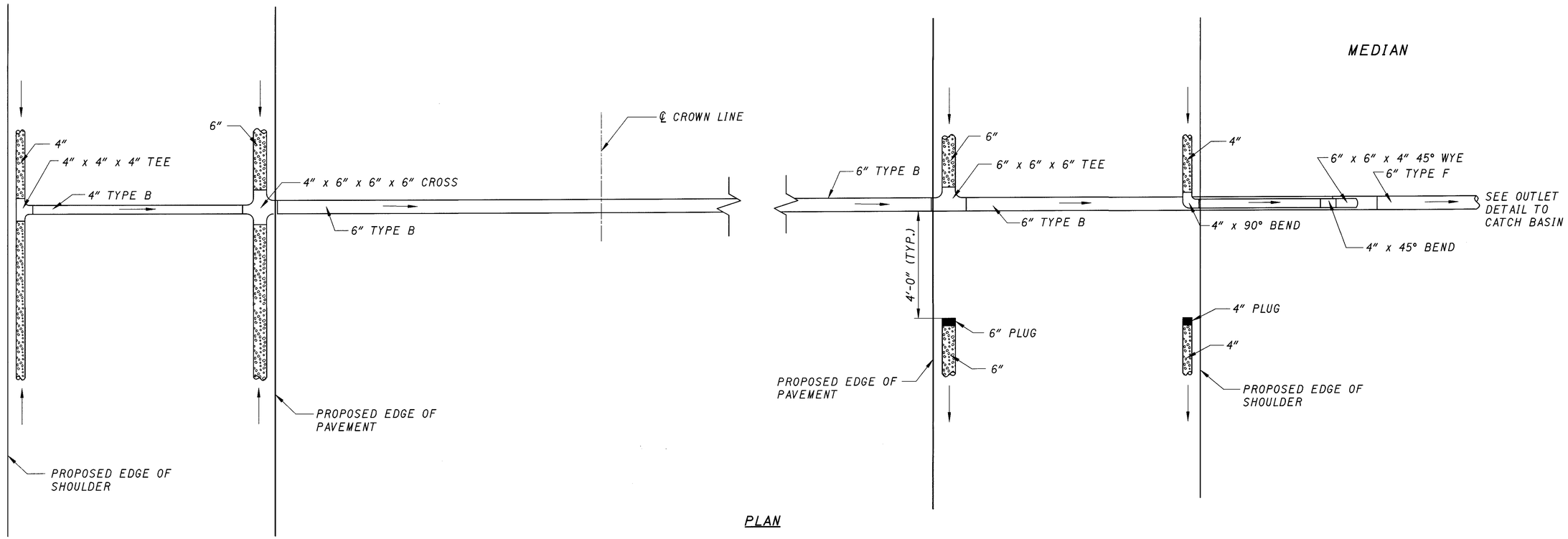
MED - 71 - 15.78

548
940

7885DDM.DGN




CROSS SECTION




PLAN

## LEGEND

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH)

OUTLET PIPE

**NOTE:**

DETAIL "S" IS SPECIFIC FOR A LOCATION IMMEDIATELY NORTH OF EASTBOUND RAMP TO I.R. 271

## UNDERDRAIN DETAIL S

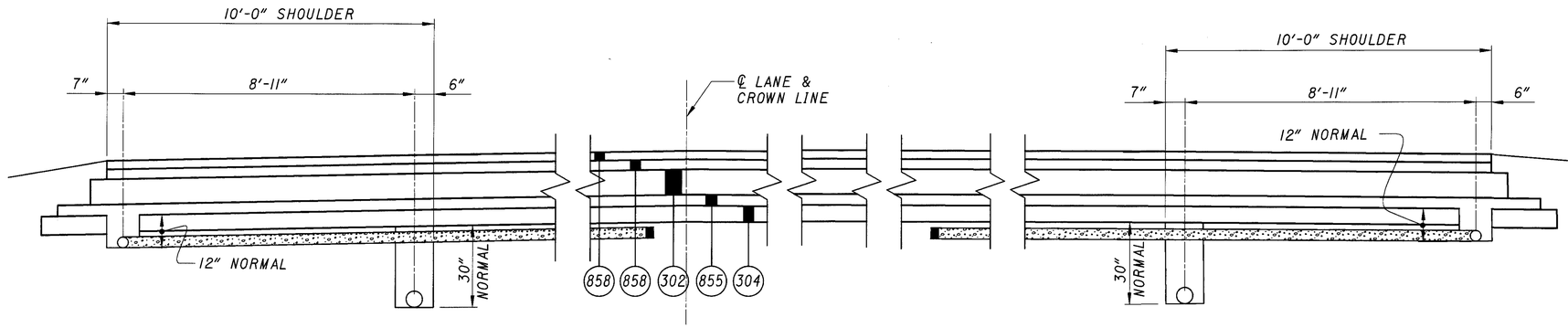
CALCULATED W.J.C. CHECKED P.S.

# UNDERDRAIN DETAILS

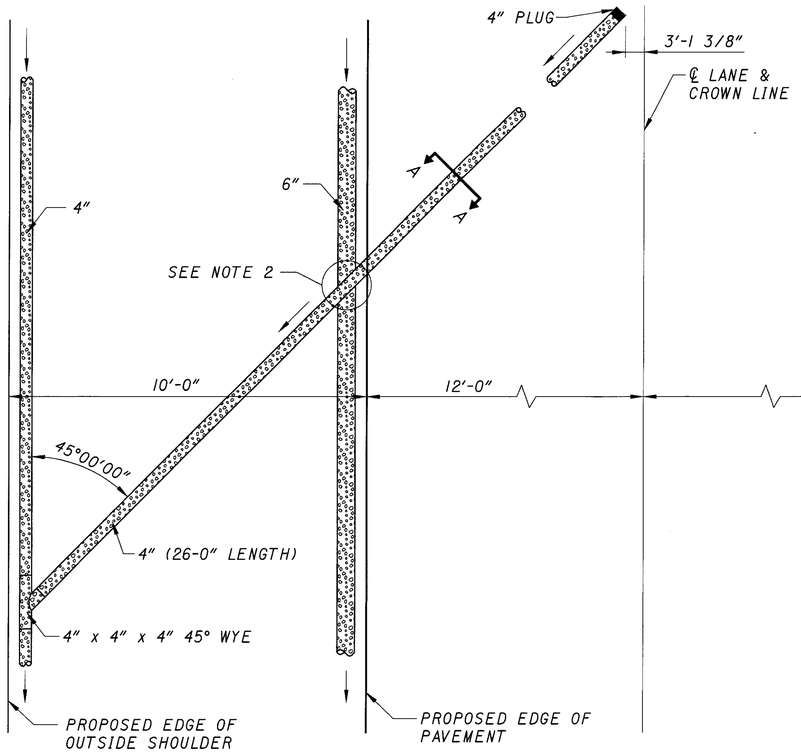
MED - 71 - 15.78

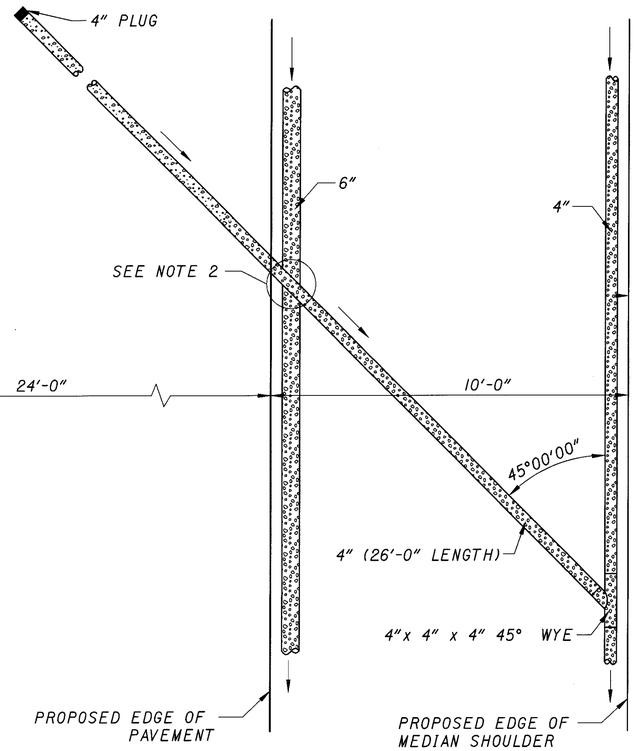
549
940

7885DDN.DGN

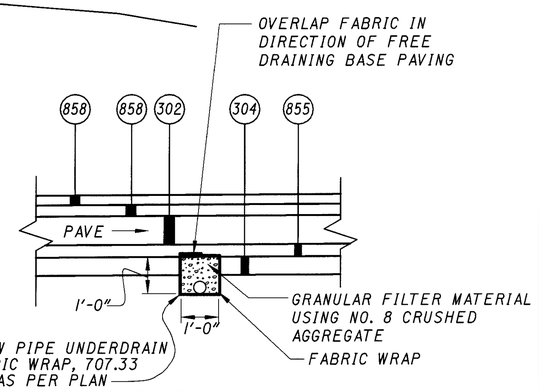



SECTION




PLAN




SECTION A-A

APPLICABLE FOR ALL TRANSVERSE UNDERAINS

**NOTE:**

1. THE CONSTRUCTION OF THE TRANSVERSE UNDERDRAIN IS DICTATED BY THE APPLICABLE CONSTRUCTION PHASE IN EACH STAGE. IN THE SUPERELEVATED SECTIONS WHERE THE TRANSVERSE UNDERDRAINS FLOW TOWARDS THE MEDIAN, THE PROPOSED TRANSVERSE UNDERDRAIN SHALL BE CONSTRUCTED TO THE OUTSIDE EDGE OF THE PAVEMENT. THE CONSTRUCTION OF THESE UNDERDRAINS SHALL BE CONSTRUCTED PART WIDTH IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PHASES.

2. TRANSVERSE UNDERDRAINS WILL EXTEND ACROSS THE SUBGRADE UNDERDRAIN AND THROUGH THE TOP OF THE PREVIOUSLY PLACED SUBGRADE UNDERDRAIN GRANULAR MATERIAL AND FABRIC WRAP. THE CONTRACTOR SHALL CAREFULLY EXCAVATE THE 304 MATERIAL AT THE LOCATION OF THE SUBGRADE UNDERDRAIN CROSSING TO EXPOSE THE SUBGRADE UNDERDRAIN FABRIC WRAP, CUT THE FABRIC WRAP, EXCAVATE THE NECESSARY GRANULAR MATERIAL, AND RE-FOLD THE SUBGRADE UNDERDRAIN FABRIC BEFORE THE TRANSVERSE FABRIC WRAP IS PLACED AND THE TRENCH IS FILLED. THUS, THE TRANSVERSE TRENCH EXCAVATION AT THIS CROSSING LOCATION SHALL PROCEED WITH EXTREME CARE, TO THE SATISFACTION OF THE ENGINEER, SO AS NOT TO DISTURB ANY SUBGRADE UNDERDRAIN.

**LEGEND**

4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41, AS PER PLAN (12" NORMAL DEPTH), OR

6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH), OR

4" SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 707.33 OR 707.41, AS PER PLAN (12" NORMAL DEPTH)

OUTLET PIPE

## TRANSVERSE UNDERDRAINS

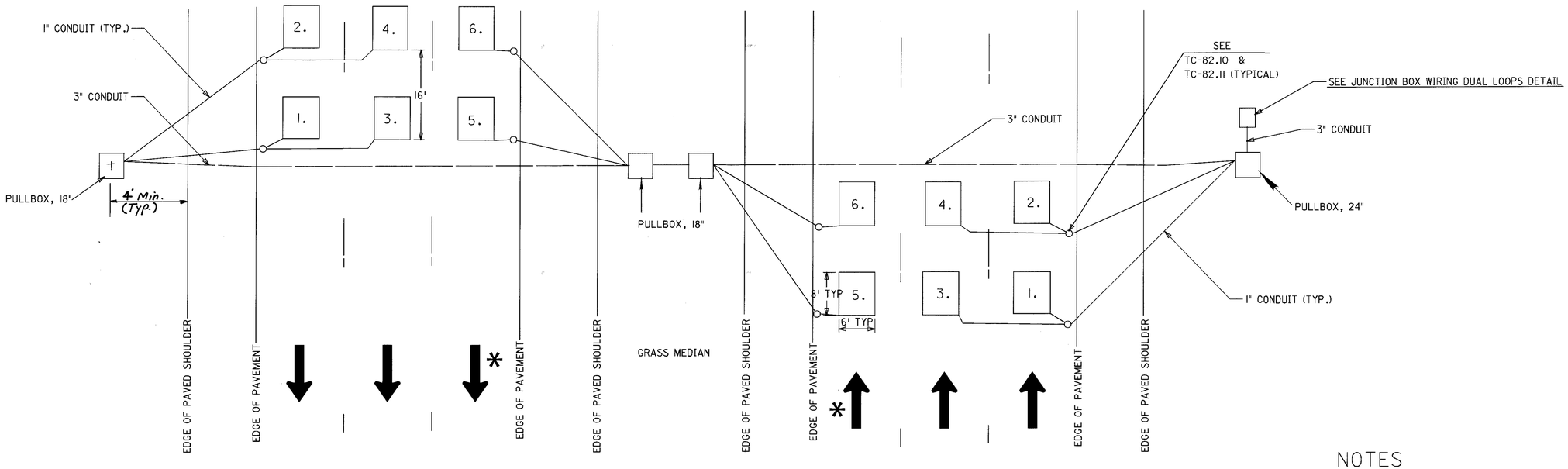
CALCULATED WJC CHECKED PS

# UNDERDRAIN DETAILS

MED - 71 - 15.78

550/940

7885DD1.DGN




# AUTOMATIC TRAFFIC RECORDER INSTALLATION

## 6 LANE SECTION

TO BE INSTALLED AT THE FOLLOWING LOCATIONS :

Sta 1037+75
Sta 1181+00
Sta 1314+50

* 6TH LANE OPEN TO TRAFFIC ONLY AT STA. 1314+50

| ITEM | ITEM EXT. | 1037+75 | 1181+00 | 1314+50 | TOTAL | UNIT | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 603 | 00400 | 80 | 80 | 80 | 240 | LIN.FT. | 4" CONDUIT, TYPE E |
| 625 | 25500 | 185 | 185 | 185 | 555 | LIN.FT. | CONDUIT, 3", 713.04 |
| | | | | | | | |
| 625 | 29000 | 185 | 185 | 185 | 555 | LIN.FT. | TRENCH |
| 625 | 29901 | 1 | 1 | 1 | 3 | EACH | JUNCTION BOX, AS PER PLAN |
| 625 | 30700 | 3 | 3 | 3 | 9 | EACH | PULL BOX, 713.08, 18" |
| 625 | 30706 | 1 | 1 | 1 | 3 | EACH | PULL BOX, 713.08, 24" |
| 625 | 32000 | 1 | 1 | 1 | 3 | EACH | GROUND ROD |
| 632 | 26501 | 12 | 12 | 12 | 36 | EACH | DETECTOR LOOP, AS PER PLAN |
| 632 | 65200 | 1430 | 1430 | 1430 | 4290 | LIN.FT. | LOOP DETECTOR LEAD-IN CABLE |
| | | | | | | | |
| | | | | | | | |
| (QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS 70 & 73) | | | | | | | |

## NOTES

1. ITEM 632 DETECTOR LOOP, AS PER PLAN
   ALL LOOPS SHALL BE 6' X 8'. LOOPS SHALL BE SPACED 16' FROM LEADING EDGE TO LEADING EDGE. INSTALLATION OF LOOPS SHALL CONFORM TO TC-82.10 & TC-82.11 EXCEPT THAT LOOPS SHALL BE INSTALLED WITH WITH FOUR (4) TURNS, AND HAVE A MINIMUM COVER OF 3 INCHES FOR ASPHALT -3/4 INCH FOR CONCRETE AND CUT AS PER SHEET 554.

2. ADJACENT LOOPS (TRANSVERSE AND LONGITUDINAL) SHALL BE INSTALLED IN OPPOSITE DIRECTIONS, i.e., LOOP 1 AND LOOP 4, CLOCKWISE LOOP 2 AND LOOP 3 COUNTERCLOCKWISE. EACH LOOP SHALL HAVE A SEPARATE LEAD-IN CABLE ROUTED TO THE JUNCTION BOX. EACH CABLE AND WIRE SHALL BE TAGGED AND IDENTIFIED IN ACCORDANCE WITH 632.04

3. REFFERENCE IS MADE TO STANDARD DRAWING HL-30.11 FOR DETAILS OF DRAINING PULLBOXES. UNDERDRAINS FOR PULLBOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20'. AN ESTIMATED QUANTITY OF 80' OF ITEM 603, 4" CONDUIT TYPE E IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

4. FIVE (5) WORKING DAYS PRIOR TO THE SCHEDULED INSTALLATION, THE CONTRACTOR SHALL CONTACT OFFICE OF TECH. SERVICES AT 614-466-3727.

5. ALL ITEMS SHALL CONFORM TO C&M SPECIFICATIONS 625, 713, 632, 732, 633 AND 733, UNLESS OTHERWISE SPECIFIED.

6. LOOPS SHALL BE CUT IN THE SURFACE ASPHALT COURSE. THEY SHALL NOT BE INSTALLED BETWEEN THE INTERMEDIATE AND SURFACE COURSES.

7. ALL SENSORS ARE TO BE TESTED BY O.D.O.T. PERSONNEL AFTER THE INSTALLATION IS COMPLETE SO AS TO VERIFY THAT THE STATION IS UP AND OPERATING PROPERLY. IF THE ELECTRONIC EQUIPMENT DOES NOT PERFORM PROPERLY BECAUSE OF A POORLY INSTALLED SENSOR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF THE FAULTY SENSOR, AS SOON AS POSSIBLE AT HIS OWN COST.

8. IT IS THE INTENT OF THIS PLAN TO OPEN CUT THE CONDUIT ACROSS I.R. 71. QUANTITIES TO PERFORM THIS OPERATION ARE INCLUDED IN THE SUMMARY. THE CONTRACTOR SHALL COORDINATE HIS UNDERDRAIN OPERATIONS AND TRAFFIC RECORDER CONDUIT OPERATION SO THAT EACH ITEM IS PLACED CORRECTLY AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL NOT TRENCH THROUGH THE FREE DRAINING BASE.

9. ITEM 625 JUNCTION BOX, AS PER PLAN SHALL MEET REQUIREMENTS OF ITEM 625 JUNCTION BOX EXCEPT AS SHOWN ON DETAIL ON SHEET 553.

CALCULATED RLS | CHECKED JWR

| DATE | |
|---|---|
| 06/06/91 | |
| 09/28/92 | |
| 03/26/93 | |
| 07/25/95 | |
| 01/21/98 | |
| 10/08/98 | |

6 LANE DUAL LOOPS PLAN INSERT SHEET

MED-71-15.78

551
940

SBW

REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:

DESIGN FILE : i:\pd_med_lr7\dgn\misc. details\dualloop.dgn
USERNAME : nvonderb

DATE : 01-DEC-1999
TIME : 13:05

LEVELS ON:1-64
PLOT QUEUE:\\DOI\PLOT\oce
PEN TABLE:h:\data\pd\pentab\oceCross.OCE.pen

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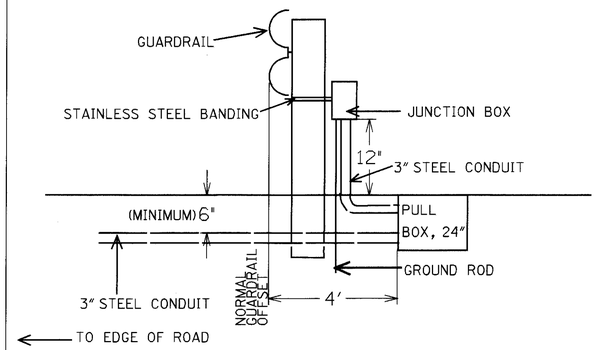
PROJECT:NONE

design file: dualloop.dgn

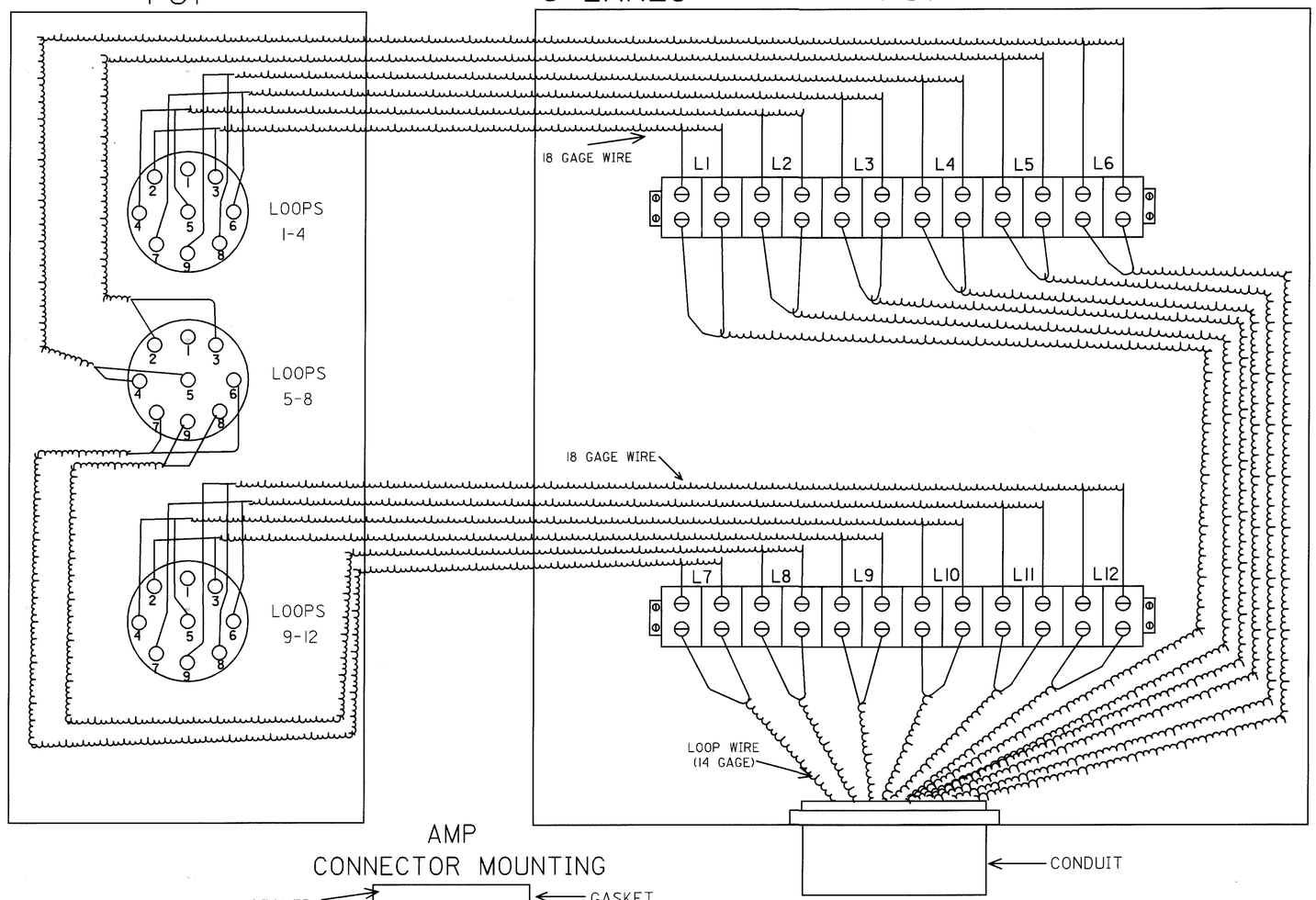
## GUARDRAIL AND JUNCTION BOX DETAIL




### NOTES

1. ENCLOSURE.
   A. NEMA-(A NUMERAL) WEATHER TIGHT (GIVE SIZE).
   B. TO PAINT OVER PUNCH OUTS & HOLES & RESTORE FINISHIN INTEGRITY. (HOLES FOR CONDUIT, BARRIER STRIP MOUNTING SCREWS, CONNECTOR, EXT.).
   C. EPOXY FINISH.
2. BARRIER STRIPS.
   A. #8 SCREWS.
   B. (P/N) OR APPROVED EQUAL.
   C. USE STAINLESS STL. FASTENERS.
   D. TERMINALS SHALL BE MARKED #1-26 (HOWEVER-TAPE ETC.).
3. TERMINALS.
   A. FORKED "STA-KON" OR EQUAL.
   B. PRGRER FOR WIRE GAUGE & SCREW SIZE.
   C. SOLDERED & CRIMPED.
   D. NON-INSULATED.
4. MAIN CONNECTOR.
   A. AMPHENOL "MS" TYPE MS-3102A-28-12(288).
   B. SEAL WITH RTV ON FLAUGE.
   C. USE STAINLESS FASTENERS.
5. MATING CONNECTOR.
   A. AMPHENOL "MS" TYPE.
   B. 97-3106A-28-12P.
   C. 97-3057-1016-1.
6. CONNECTION SCHEME FOR 26 CONDUCTORS.

# JUNCTION BOX WIRING
## TWO LOOPS PER LANE
## 6 LANES

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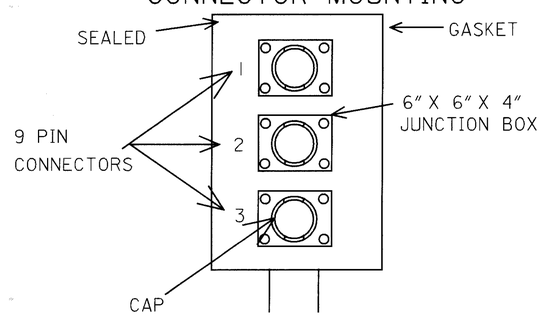


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DATE : 09-DEC-1999
TIME : 11:27
design file: JUNCBOX.dgn

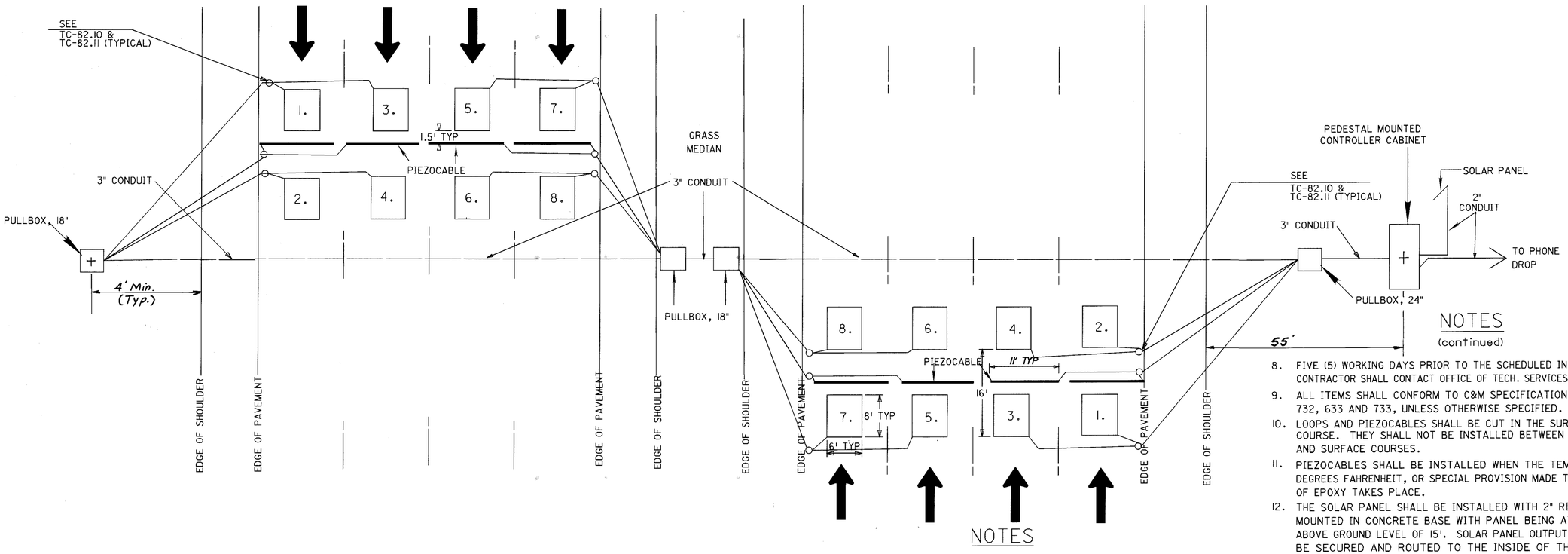
DATE 07/16/99

JUNCTION BOX WIRING DUAL LOOPS DETAIL

MED-71-15.78

552
940

SRW

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DATE : 09-DEC-1999
TIME : 12:02

filename: classM71

# AUTOMATIC TRAFFIC RECORDER INSTALLATION
## 8 LANE SECTION
## APPLIES @ STA. 940+00

| ITEM | ITEM EXT. | TOTAL | UNIT | DESCRIPTION |
|---|---|---|---|---|
| 603 | 00400 | 80 | LIN.FT. | 4" CONDUIT, TYPE E |
| | | | | |
| 625 | 25400 | 15 | LIN.FT. | CONDUIT, 2", 713.04 |
| 625 | 25500 | 220 | LIN.FT. | CONDUIT, 3", 713.04 |
| | | | | |
| 625 | 29000 | 230 | LIN.FT. | TRENCH |
| 625 | 30700 | 3 | EACH | PULL BOX, 713.08, 18" |
| 625 | 30706 | 1 | EACH | PULL BOX, 713.08, 24" |
| 625 | 32000 | 1 | EACH | GROUND ROD |
| | | | | |
| 632 | 26501 | 16 | EACH | DETECTOR LOOP, AS PER PLAN |
| 632 | 63000 | 1 | EACH | PHONE DROP |
| 632 | 64020 | 1 | EACH | PEDESTAL FOUNDATION |
| | | | | |
| 632 | 65200 | 3040 | LIN.FT. | LOOP DETECTOR LEAD-IN CABLE |
| 632 | 89800 | 1 | EACH | PEDESTAL, 3' TRANSFORMER BASE |
| 632 | 90400 | 8 | EACH | SIGNALIZATION, MISC. : PIEZOCABLE AXLE SENSOR CLASS 2 (11' IN LENGTH) |
| | | | | |
| | | | | |
| 633 | 65001 | 1 | EACH | CABINET WITHOUT CONTROLLER, AS PER PLAN |
| 633 | 70500 | 12 | SQ. FT. | CONTROLLER WORK PAD |
| 633 | 99000 | 1 | EACH | CONTROLLER ITEM, MISC. : SOLAR PANEL |
| | | | | |
| (QUANTITIES CARRIED TO GENERAL SUMMARY, SHEETS 70 & 73) | | | | |

## NOTES

1. ITEM 632 DETECTOR LOOP, AS PER PLAN
ALL LOOPS SHALL BE 6' X 8'. LOOPS SHALL BE SPACED 16' FROM LEADING EDGE TO LEADING EDGE. INSTALLATION OF LOOPS SHALL CONFORM TO TC-82.10 & TC-82.11 EXCEPT THAT LOOPS SHALL BE INSTALLED WITH FOUR (4) TURNS, AND HAVE A MINIMUM COVER OF 3 INCHES FOR ASPHALT -3/4 INCH FOR CONCRETE AND CUT AS PER SHEET 554.
2. THE PIEZOCABLE SENSOR SHALL BE MADE BY MEASUREMENT SPECIALITIES ROAD TRAX BRASS LINGUINI (BL) CLASS I AXLE SENSOR OR EQUIVALENT. THE 11 FOOT SENSOR SHALL BE CENTERED IN THE 12 FOOT LANE. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH ITEM SIGNALIZATION, MISC.: PIEZOCABLE AXLE SENSOR, CLASS 2 (11 FEET IN LENGTH) AND SHALL INCLUDE ALL MATERIAL, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY FOR EACH INSTALLATION, IN PLACE COMPLETE AND ACCEPTED.
THE PIEZOCABLE LEADIN CABLE IS PURCHASED AT DIFFERENT LENGTHS AS PART OF THE SENSOR AND SHALL NOT BE SPLICED. INCLUDED WITH THIS ITEM SHALL BE PAVEMENT CUTTING OF SLOTS, LEADIN WIRE IN PLACE, AND THE APPLICATION OF SEALANT. CONDUIT, DRILLING, TRENCHING, BACKFILLING, AND SURFACE RESTORATION FROM THE EDGE OF THE PAVEMENT TO THE PULL BOX SHALL ALSO BE INCLUDED.
3. CONTROLLER WORK PAD SHALL BE 3 FOOT BY 4 FOOT BY 6 INCHES DEEP AND SHALL BE LEVEL.
4. THE ALUMINUM CONTROLLER CABINET SHALL BE A PEDESTAL MOUNTED NEMA SIZE 3 AS SHOWN ON PLAN SHEET 554.
5. CABLE AND WIRE SHALL BE IDENTIFIED IN ACCORDANCE WITH 632.04. IDENTIFICATION SHALL INCLUDE THE DIRECTION OF TRAVEL (i.e., NB, WB) AND THE LOOP NUMBER AS SHOWN. EACH CABLE AND WIRE SHALL HAVE 5' COILED IN THE CONTROLLER CABINET FOR CONNECTION TO THE DATA COLLECTION SYSTEM.
6. ADJACENT LOOPS (TRANSVERSE AND LONGITUDINAL) SHALL BE INSTALLED IN OPPOSITE DIRECTIONS, i.e., LOOP 1 AND LOOP 4, CLOCKWISE LOOP 2 AND LOOP 3 COUNTERCLOCKWISE. EACH LOOP SHALL HAVE A SEPARATE LEAD-IN CABLE ROUTED TO THE CONTROLLER CABINET AND TAGGED.
7. REFERENCE IS MADE TO STANDARD DRAWING HL-30.11 FOR DETAILS OF DRAINING PULLBOXES. UNDERDRAINS FOR PULLBOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20'. AN ESTIMATED QUANTITY OF 80' OF ITEM 603, 4" CONDUIT TYPE E IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

## NOTES (continued)

8. FIVE (5) WORKING DAYS PRIOR TO THE SCHEDULED INSTALLATION, THE CONTRACTOR SHALL CONTACT OFFICE OF TECH. SERVICES AT 614-466-3727.
9. ALL ITEMS SHALL CONFORM TO C&M SPECIFICATIONS 625, 713, 632, 732, 633 AND 733, UNLESS OTHERWISE SPECIFIED.
10. LOOPS AND PIEZOCABLES SHALL BE CUT IN THE SURFACE ASPHALT COURSE. THEY SHALL NOT BE INSTALLED BETWEEN THE INTERMEDIATE AND SURFACE COURSES.
11. PIEZOCABLES SHALL BE INSTALLED WHEN THE TEMP. IS ABOVE 60 DEGREES FAHRENHEIT, OR SPECIAL PROVISION MADE TO ENSURE CURING OF EPOXY TAKES PLACE.
12. THE SOLAR PANEL SHALL BE INSTALLED WITH 2" RIGID CONDUIT MOUNTED IN CONCRETE BASE WITH PANEL BEING AT A MIN. HEIGHT ABOVE GROUND LEVEL OF 15'. SOLAR PANEL OUTPUT CABLE SHALL BE SECURED AND ROUTED TO THE INSIDE OF THE CABINET FOR CONNECTION TO TERMINAL BLOCK. SOLAR PANEL SHALL BE MOUNTED AT A 45° ANGLE FACING SOUTH.
13. SOLAR PANEL SHALL BE A SOLAREX MODEL VLX 32 (32 WATTS) OR AN APPROVED EQUAL WITH MOUNTING HARDWARE, CABLES AND INCLUDING ALL MATERIALS, LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO CONSTRUCT THIS ITEM AS APPROVED BY THE ENGINEER.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND TESTING THE PHONE DROP INSIDE OF THE CONTROLLER CABINET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHARGES INCURRED PRIOR TO THE TRANSFER OF THE TELEPHONE ACCOUNT. THE CONTRACTOR SHALL COORDINATE WITH ODOT, TELECCOMMUNICATIONS, MR. MIKE WIGGINS ( 614-466-4452 ) TO TRANSFER THE TELEPHONE ACCOUNT AND THE BILLING RESPONSIBLITY FROM THE CONTRACTOR TO ODOT. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH ITEM 632 PHONE DROP AND SHALL INCLUDE ALL MATERIAL, LABOR, TOOLS, EQUIPMENT, INCIDENTALS AND PAYMENT OF ALL PHONE COMPANY FEES NECESSARY FOR EACH INSTALLATION, IN PLACE COMPLETE AND ACCEPTED.
15. ALL SENSORS ARE TO BE TESTED BY O.D.O.T. PERSONNEL AFTER THE INSTALLATION IS COMPLETE SO AS TO VERIFY THAT THE STATION IS UP AND OPERATING PROPERLY. IF THE ELECTRONIC EQUIPMENT DOES NOT PERFORM PROPERLY BECAUSE OF A POORLY INSTALLED SENSOR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF THE FAULTY SENSOR, AS SOON AS POSSIBLE AT HIS OWN COST.
16. THE PULL BOX COVERS IN THE ASPHALT SHOULDER SHALL BE A HEAVY DUTY FRAME AND LID (NEENAH R-6686 OR APPROVED EQUAL). THIS ITEM SHALL INCLUDE ALL COSTS OF LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL EACH ITEM 625 - PULL BOX, 713.08, 18 & 24 IN. AS PER PLAN
17. IT IS THE INTENT OF THIS PLAN TO OPEN CUT THE CONDUIT ACROSS I.R. 71. QUANTITIES TO PERFORM THIS OPERATION ARE INCLUDED IN THE SUMMARY. THE CONTRACTOR SHALL COORDINATE HIS UNDERDRAIN OPERATIONS AND TRAFFIC RECORDER CONDUIT OPERATION SO THAT EACH ITEM IS PLACED CORRECTLY AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL NOT TRENCH THROUGH THE FREE DRAINING BASE. PART WIDTH CONSTRUCTION WILL BE UTILIZED ON THIS PROJECT AND THE CONTRACTOR SHALL COORDINATE THE TRAFFIC RECORDER CONDUIT OPERATION ACCORDINGLY AS APPROVED BY THE ENGINEER.

CALCULATED RLS | CHECKED Jwp

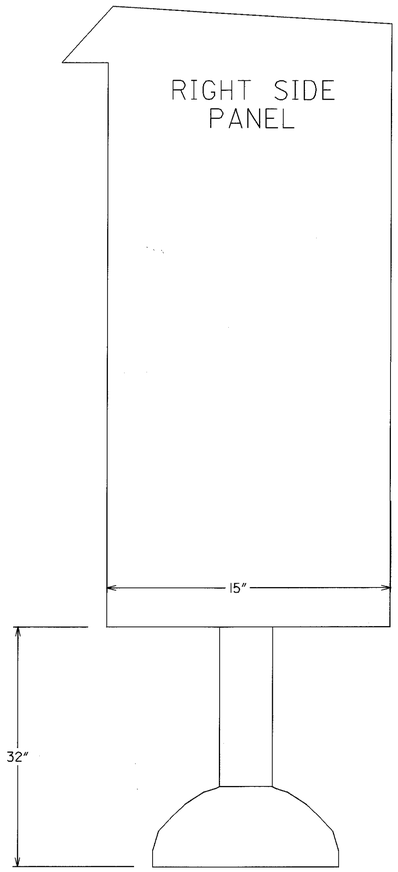
DATE 07/26/99

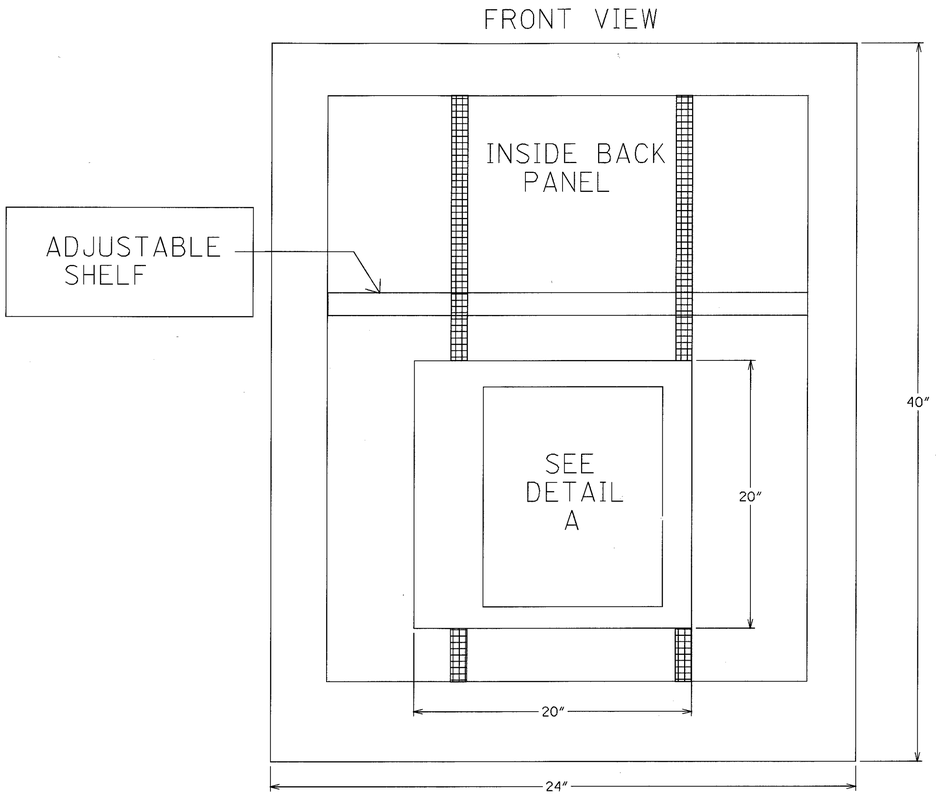
# 8 LANE CLASSIFICATION SITE PLAN INSERT SHEET

MED-71-15.78

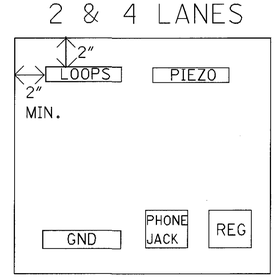
553
940

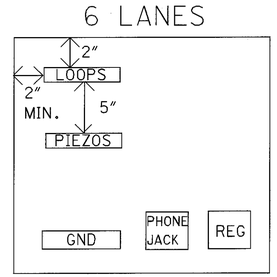
SBW

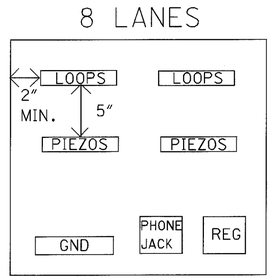



# DETAIL A
# DIFFERENT TERMINAL BLOCKS




## NOTES

CABINET WITHOUT CONTROLLER, AS PER PLAN

1. THE ALUMINUM CABINET SHALL BE A PEDESTEL MOUNTED SIZE 3 AS SHOWN IN TABLE 7.3-1 OF THE NEMA STANDARD PUBLICATION No TS 2-1992. THE NOMINAL DIMENSIONS ARE: 24 INCHES WIDE BY 40 INCHES HIGH BY 15 INCHES DEEP.
   IT SHALL BE SHEET ALUMINUM AS DETAILED IN SECTION 7.2.2.1 OR CAST ALUMINUM DETAILED IN SECTION 7.2.2.2. IT SHALL ALSO CONFORM TO SECTIONS: 7.4, 7.5 EXCEPT FOR 7.5.7, 7.6 WITH ONE SHELF, 7.7.3, 7.8.3 SIZE 5, 7.8.4.
   THE CABINET SHALL BE INSTALLED WITH INTERNAL COMPONENTS FOR THE WEIGH-IN-MOTION EQUIPMENT AS NECESSARY TO PROVIDE COMPLETE OPERATION OF THE WIM SYSTEM.
   A. IT SHALL BE EQUIPPED WITH TWO ADJUSTABLE "C" CHANNELS MOUNTED ON EACH OF THE THREE INTERIOR SIDES FOR THE PURPOSE OF MOUNTING TERMINAL STRIP PANELS AND SHELVING. FURNISH THE CABINETS WITH ONE ADJUSTABLE SHELF WHICH WILL NOT SAG WHEN LOADED WITH THE WIM ELECTRONICS. DESIGN THE SHELVING TO ALLOW FOR THE PASSAGE OF AIR. PLACE NO EQUIPMENT ON THE BOTTOM OF THE CABINET.
   B. MOUNT A GROUNDING STRIP TO THE TERMINAL STRIP PANEL ON THE CABINET WALL FOR CONNECTION OF ALL COMMON CONDUCTORS WITH THE STRIP GROUNDING TO THE GROUND ROD.
   C. INSTALL THE HOUSING CABINET AS TO ALLOW ALL EQUIPMENT TO STAND IN AN UPRIGHT POSITION WITH ALL EQUIPMENT AND DEVICES CAPABLE OF BEING REMOVED BY PULLING STRAIGHT OUT AND NOT TURNING SIDEWAYS AND WITHOUT RELOCATING OR DISCONNECTING ONE DEVICE TO REMOVE ANOTHER DEVICE.
   D. PROVIDE THAT ALL CONNECTIONS ARE MADE ON TERMINAL BLOCKS USING SOLDERED SPADE TYPE CONNECTORS. PROVIDE THAT ALL HOUSING CABINET WIRING AND TERMINALS ARE CLEARLY MARKED AND LABELED AS SHOWN ON THE CABINET WIRING DIAGRAM DETAILS. PROVIDE THAT WIRING IS LACED OR BOUND TOGETHER WITH SELF-LOCKING NYLON TIE-WRAPS. MAKE A LOOP NUMBERING DIAGRAM WITH CORRESPONDING TERMINAL NUMBERS FOR EACH SITE AND STORE IN A PLASTIC WEATHER PROOF ENVELOP IN THE ENCLOSURE. PROVIDE A DUPLICATE DIAGRAM TO THE ODOT PROJECT INSPECTOR.
   E. INSTALL ALL HOUSING CABINETS SO AS TO WITHSTAND ALL WEATHER CONDITIONS AND PREVENT THE INTRUSION OF REPTILES, RODENTS, AND INSECTS.
   F. THE CABINET SHALL INCLUDE A VENT, BUT NO FAN.
   G. MOUNTING FACILITIES SHALL INCLUDE ONE BACK PANEL WITH 5 HOLES (ALUMINUM).
   H. TERMINAL STRIPS MOUNTED HORIZONTALLY ON BACK PANEL 2" FROM TOP AND SIDES EQUIDISTANTLY SPACED FOR 2 LANE APPLICATIONS. SOLAR PANEL AND GROUND BAR TO BE MOUNTED 2" FROM BOTTOM AND LEFT OF BACK PANEL FOR ALL APPLICATIONS. 4-6 LANE APPLICATIONS TO HAVE ONE ROW OF TWO TERMINAL STRIPS MOUNTED HORIZONTALLY 2" FROM TOP AND SIDES OF BACK PLATE AND ONE ROW OF TWO TERMINAL STRIPS MOUNTED 8" FROM TOP 2" FROM AND SIDES BACK PLATE EQUIDISTANTLY SPACED. 8 LANE APPLICATIONS TO HAVE TWO ROWS OF THREE TERMINAL BLOCKS W/ 1ST ROW 2" FROM TOP AND SIDES OF BACK PLATE AND SECOND ROW 8" FROM TOP AND 2" FROM SIDES OF BACK PLATE EQUIDISTANTLY SPACED.
   I. LOCKS KEYED TO STATE MASTER.
2. THE CABINET SHALL BE ORIENTED SO THAT THE DOOR OPENS AWAY FROM THE ROADWAY, SO THAT THE FIELD TECHNICIAN CAN OBSERVE TRAFFIC WHILE WORKING ON THE SYSTEM.

## TERMINAL BLOCK DETAILS

2 LNS - 4 LOOPS - BEAU TYPE 78008 TERMINAL STRIP OR EQIVALENT

2 LNS - 4 LOOPS & 4 PIEZOS - BEAU TYPE 78008 TERMINAL STRIP OR EQIVALENT x 2

4 LNS - 8 LOOPS - BEAU TYPE 78016 TERMINAL STRIP OR EQIVALENT

4 LNS - 8 LOOPS & 8 PIEZOS - BEAU TYPE 78016 TERMINAL STRIP OR EQIVALENT x 2

6 LNS - 12 LOOPS - BEAU TYPE 78024 TERMINAL STRIP OR EQIVALENT

6 LNS - 12 LOOPS & 12 PIEZOS - BEAU TYPE 78024 TERMINAL STRIP OR EQIVALENT x 2

8 LNS - 16 LOOPS - BEAU TYPE 78016 TERMINAL STRIP OR EQIVALENT x 2

8 LNS - 16 LOOPS & 16 PIEZOS - BEAU TYPE 78016 TERMINAL STRIP OR EQIVALENT x 4

CALCULATED | CHECKED

DATE 01/29/99 05/11/99

**NEMA SIZE 3 CABINET DETAILS**

**MED-71-15.78**

554
940

SBW

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DESIGN FILE: MEDTIATRL.dgn

## 4" EDGE LINE

| LOCATION | STATION (Mainline Stationing) | Linear Feet White | Linear Feet Yellow |
|---|---|---|---|
| NORTHBOUND | | | |
| | | | |
| Northbound Lanes | 833+00 to 870+93 | 3793 | |
| | 882+91 to 903+20 | 2029 | |
| | 930+05 to 970+35 | 4030 | |
| | 976+90 to 1084+32 | 10,742 | |
| | 1092+35 to 1120+94 | 2859 | |
| | 1131+44 to 1190+47 | 5903 | |
| | 1198+47 to 1222+09 | 2362 | |
| | 1232+59 to 1248+59 | 1600 | |
| | 1256+59 to 1270+46 | 1387 | |
| | 1280+96 to 1394+40 | 11,344 | |
| | | | |
| | 833+00 to 1394+40 | | 56,140 |
| | | | |
| | | | |
| | (Ramp Stationing) | | |
| | | | |
| Exit Ramp "C", SR 18 | 870+93 (Mainline) to 0+00 | 28 | |
| | 0+00 to 19+75 | 1975 | |
| | Distance Along Radius | 115 | |
| | 11+78 to 20+28 | | 850 |
| Entrance Ramp "D", SR 18 | Distance Along Radius | 85 | |
| | 1+04 to 14+73 | 1369 | |
| | 905+73 (ML) to 930+05 (ML) | 2432 | |
| | 0+35 to 11+23 | | 1088 |
| | | | |
| Exit Ramp IR 271 Eastbound | 970+35 to 980+63 | 1028 | |
| | 976+93 to 980+63 | | 370 |
| | | | |
| Exit Ramp "B", SR 3 | 62+95 to 84+52 | 2157 | |
| | Distance Along Radius | 110 | |
| | 70+97 to 84+89 | | 1392 |
| Entrance Ramp "A", SR 3 | Distance Along Radius | 160 | |
| | 85+60 to 98+07 | 1247 | |
| | 98+07 to 1131+44 (Mainline) | 1200 | |
| | 84+63 to 98+07 | | 1344 |
| | | | |
| Exit Ramp Rest Area | 1190+47 (Mainline) to 72+50 | 345 | |
| | 72+50 to 84+99 | 1249 | |
| | 77+03 to 84+99 | | 796 |
| Entrance Ramp Rest Area | 89+71 to 99+17 | 946 | |
| | 99+17 to 1232+59 | 1200 | |
| | 89+71 to 99+17 | | 946 |
| | | | |
| Exit Ramp "C", SR 303 | 1248+59 (Mainline) to 30+65 | 345 | |
| | 30+65 to 46+72 | 1607 | |
| | Distance Along Radius | 105 | |
| | 45+54 to 47+22 | 168 | |
| | 35+20 to 47+22 | | 1202 |
| | 45+54 to 47+22 | | 168 |
| Entrance Ramp "D", SR 303 | 1280+96 (Mainline) to 34+01 | 1200 | |
| | 34+01 to 51+10 | 1709 | |
| | 34+01 to 45+54 | | 1153 |
| | 45+54 to 47+10 | | 156 |
| | | | |
| | | | |
| | | | |
| | **Continued** | | |
| | | | |
| | | | |

## 4" EDGE LINE (CONTINUED)

| LOCATION | STATION (Mainline Stationing) | Linear Feet White | Linear Feet Yellow |
|---|---|---|---|
| SOUTHBOUND | | | |
| | | | |
| Southbound Lanes | 833+00 to 862+23 | 2923 | |
| | 872+73 to 899+51 | 2678 | |
| | 904+05 to 937+55 | 3350 | |
| | 969+27 to 1077+23 | 10,796 | |
| | 1087+73 to 1116+33 | 2860 | |
| | 1124+36 to 1140+38 | 1602 | |
| | 1151+58 to 1172+18 | 2060 | |
| | 1180+18 to 1241+31 | 6113 | |
| | 1251+81 to 1279+61 | 2780 | |
| | 1287+41 to 1394+40 | 10,699 | |
| | | | |
| | 833+00 to 1394+40 | | 56,140 |
| | | | |
| | | | |
| | (Ramp Stationing) | | |
| | | | |
| Entrance Ramp "A", SR 18 | 0+00 to 25+67 | 2567 | |
| | Distance Along Radius | 170 | |
| | 11+93 to 26+64 | | 1471 |
| Exit Ramp "B", SR 18 | Distance Along Radius | 65 | |
| | 0+76 to 15+67 | 1491 | |
| | 0+36 to 11+13 | | 1077 |
| | | | |
| Ent Ramp IR 271 W Connecter | 937+55 to 973+64 | 3609 | |
| | 970+12 to 973+64 | | 352 |
| | | | |
| Entrance Ramp "D", SR 3 | 1077+23 (Mainline) to 67+86 | 1200 | |
| | 67+86 to 80+32 | 1246 | |
| | Distance Along Radius | 165 | |
| | 67+86 to 80+30 | | 1344 |
| Exit Ramp "C", SR 3 | Distance Along Radius | 105 | |
| | 81+39 to 102+98 | 2159 | |
| | 81+03 to 94+97 | | 1394 |
| | | | |
| Entrance Ramp Rest Area | 1140+38 (Mainline) to 31+00 | 1200 | |
| | 31+00 to 40+27 | 927 | |
| | 31+00 to 40+27 | | 927 |
| Exit Ramp Rest Area | 45+15 to 55+36 | 1021 | |
| | 55+36 to 1180+18 (Mainline) | 345 | |
| | 45+15 to 50+83 | | 568 |
| | | | |
| Entrance Ramp "B", SR 303 | 1241+31 (Mainline) to 31+94 | 1200 | |
| | 31+94 to 50+96 | 1902 | |
| | 31+94 to 46+44 | | 1450 |
| | 46+44 to 48+05 | | 161 |
| Ramp "B" Spur | 46+44 to 48+10 | 166 | |
| | 46+44 to 48+03 | | 159 |
| Exit Ramp "A", SR 303 | 46+12 to 62+58 | 1646 | |
| | 62+58 to 1287+41 (Mainline) | 338 | |
| | 47+80 to 50+12 | | 232 |
| | 50+12 to 58+16 | | 804 |
| Ramp "A" Spur | 48+36 to 50+17 | 181 | |
| | 48+36 to 50+17 | | 181 |
| | | | |
| | | | |
| | Total Linear Feet | 134,393 | 134,561 |
| | Total Linear Feet | 268,954 | |
| Total Miles Carried to Pavement Marking Sum, Sheet 560 | | 50.94 | |

## 8" CHANNELIZING LINE

| LOCATION | STATION (Mainline Stationing) | Linear Feet White |
|---|---|---|
| | | |
| NORTHBOUND | | |
| | | |
| Exit Ramp "C", SR 18 | 880+31 to 882+91 | 260 |
| | 880+31 to 11+78 (Ramp) | 260 |
| Entrance Ramp "D", SR 18 | 902+20 to 903+70 | 150 |
| | | |
| Exit Ramp IR 271 Eastbound | 974+30 to 976+90 | 260 |
| | 974+30 to 976+93 (Ramp) | 260 |
| | | |
| Exit Ramp "B", SR 3 | 1089+75 to 1092+35 | 260 |
| | 1089+75 to 70+97 (Ramp) | 260 |
| Entrance Ramp "A", SR 3 | 1119+44 to 1120+94 | 150 |
| | | |
| Exit Ramp Rest Area | 1195+87 to 1198+47 | 260 |
| | 1195+87 to 77+03 (Ramp) | 260 |
| Entrance Ramp Rest Area | 1220+59 to 1222+09 | 150 |
| | | |
| Exit Ramp "C", SR 303 | 1253+99 to 1256+59 | 260 |
| | 1253+99 to 35+20 (Ramp) | 260 |
| | 44+00 (Ramp) to 47+05 (Ramp) | 305 |
| Entrance Ramp "D", SR 303 | 1268+96 to 1270+46 | 150 |
| | | |
| | | |
| SOUTHBOUND | | |
| | | |
| Entrance Ramp "A", SR 18 | 872+73 to 874+23 | 150 |
| Exit Ramp "B", SR 18 | 899+51 to 902+11 | 260 |
| | 11+13 (Ramp) to 902+11 | 260 |
| | 0+51 (Ramp) to 2+84 (Ramp) | 233 |
| | | |
| Ent Ramp IR 271 W Connecter | 969+27 to 970+27 | 100 |
| | | |
| Entrance Ramp "D", SR 3 | 1087+73 to 1089+23 | 150 |
| Exit Ramp "C", SR 3 | 1116+33 to 1118+93 | 260 |
| | 94+97 (Ramp) to 1118+93 | 260 |
| | | |
| Entrance Ramp Rest Area | 1150+88 to 1152+38 | 150 |
| Exit Ramp Rest Area | 1172+18 to 1174+78 | 260 |
| | 50+83 (Ramp) to 1174+78 | 260 |
| | | |
| Entrance Ramp "B", SR 303 | 1251+81 to 1253+31 | 150 |
| | 48+05 (Ramp) to 49+15 (Ramp) | 110 |
| | | |
| Exit Ramp "A", SR 303 | 1279+61 to 1282+11 | 260 |
| | 58+16 (Ramp) to 1282+11 | 260 |
| Ramp "A" Spur | 48+55 (Spur) to 51+72 (Spur) | 317 |
| | | |
| | | |
| Total Carried to Pavement Marking Summary, Sheet 560 | | 6945 |

NOTE: For I-271 quantities not shown see Sheet 421

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# PAVEMENT MARKING

MED-71-15.78

555
940

## 4" LANE LINE

| LOCATION | STATION (Mainline Stationing) | Linear Feet White |
|---|---|---|
| NORTHBOUND | | |
| Northbound Lanes | 833+00 to 1394+00 | 56,100 |
| | 1263+00 to 1394+00 | 13,100 |
| Exit Ramp "C", SR 18 | 876+11 to 880+31 | 420 |
| Entrance Ramp "D", SR 18 | 1+00 (Ramp) to 14+73 (Ramp) | 1373 |
| | 905+73 to 930+05 | 2432 |
| Ent Ramp "D" to Exit IR 271 EB | 903+70 to 974+30 | 7060 |
| Exit Ramp "B", SR 3 | 1087+55 to 1089+75 | 220 |
| Entrance Ramp "A", SR 3 | 1120+94 to 1123+74 | 280 |
| Exit Ramp Rest Area | 1193+67 to 1195+87 | 220 |
| Entrance Ramp Rest Area | 1222+09 to 1224+89 | 280 |
| Exit Ramp "C", SR 303 | 1251+79 to 1253+99 | 220 |
| Entrance Ramp "D", SR 303 | 1270+46 to 1273+26 | 280 |
| SOUTHBOUND | | |
| Southbound Lanes | 833+00 to 1394+00 | 56,100 |
| | 1263+00 to 1394+00 | 13,100 |
| Entrance Ramp "A", SR 18 | 869+93 to 872+73 | 280 |
| Exit Ramp "B" to Ent IR 271 W | 902+11 to 969+27 | 6716 |
| Ent Ramp IR 271 W Connecter | 945+95 to 973+64 | 2769 |
| Entrance Ramp "D", SR 3 | 1084+93 to 1087+73 | 280 |
| Exit Ramp "C", SR 3 | 1118+93 to 1121+13 | 220 |
| Entrance Ramp Rest Area | 1148+08 to 1150+88 | 280 |
| Exit Ramp Rest Area | 1174+78 to 1176+98 | 220 |
| Entrance Ramp "B", SR 303 | 1249+01 to 1251+81 | 280 |
| Exit Ramp "A", SR 303 | 1282+11 to 1284+41 | 220 |
| | Total Linear Feet | 162,450 |
| Total Miles Carried to Pavement Marking Sum, Sheet 560 | | 30.77 |

## 24" STOP LINE

| LOCATION | STATION (Ramp Stationing) | Linear Feet White |
|---|---|---|
| NORTHBOUND | | |
| Exit Ramp "C", SR 18 | 20+16 | 35 |
| Exit Ramp "B", SR 3 | 84+83 | 35 |
| Exit Ramp "C", SR 303 | 47+05 | 36 |
| SOUTHBOUND | | |
| Exit Ramp "B", SR 18 | 0+51 | 35 |
| Exit Ramp "C", SR 3 | 81+10 | 32 |
| Exit Ramp "A" Spur, SR 303 | 48+55 | 26 |
| Total Carried to Pavement Marking Summary, Sheet 560 | | 199 |

## 24" TRANSVERSE LINE

| LOCATION | STATION (Mainline Stationing) | Linear Feet White |
|---|---|---|
| NORTHBOUND | | |
| Exit Ramp "C", SR 18 | 880+31 to 882+91 | 325 |
| Exit Ramp IR 271 Eastbound | 974+30 to 976+90 | 325 |
| Exit Ramp "B", SR 3 | 1089+75 to 1092+35 | 325 |
| Exit Ramp Rest Area | 1195+87 to 1198+47 | 325 |
| Exit Ramp "C", SR 303 | 1253+99 to 1256+59 | 325 |
| SOUTHBOUND | | |
| Exit Ramp "B", SR 18 | 899+51 to 902+11 | 325 |
| Exit Ramp "C", SR 3 | 1116+33 to 1118+93 | 325 |
| Exit Ramp Rest Area | 1172+18 to 1174+78 | 325 |
| Exit Ramp "A", SR 303 | 1279+61 to 1282+11 | 325 |
| Total Carried to Pavement Marking Summary, Sheet 560 | | 2925 |

## WORD "ONLY" ON PAVEMENT, 96"

| LOCATION | STATION (Ramp Stationing) | Each White |
|---|---|---|
| NORTHBOUND | | |
| Exit Ramp "C", SR 303 | 45+30 | 2 |
| SOUTHBOUND | | |
| Exit Ramp "B", SR 18 | 1+94 | 2 |
| Exit Ramp "A" Spur, SR 303 | 49+55 | 2 |
| | 50+85 | 1 |
| Total Carried to Pavement Marking Summary, Sheet 560 | | 7 |

## 6" CROSSWALK LINE

| LOCATION | STATION (Ramp Stationing) | Linear Feet White |
|---|---|---|
| NORTHBOUND | | |
| Exit Ramp "C", SR 303 | 47+11 | 150 |
| Entrance Ramp "D", SR 303 | 47+33 | 32 |
| SOUTHBOUND | | |
| Entrance Ramp "B", SR 303 | 48+30 | 32 |
| Ramp "B" Spur | 47+93 | 50 |
| Exit Ramp "A", SR 303 | 48+25 | 32 |
| Ramp "A" Spur | 48+49 | 65 |
| Total Carried to Pavement Marking Summary, Sheet 560 | | 361 |

## LANE ARROWS

| LOCATION | STATION (Ramp Stationing) | Each White |
|---|---|---|
| NORTHBOUND | | |
| Exit Ramp "C", SR 303 | 44+30 | 2 |
| | 46+30 | 2 |
| SOUTHBOUND | | |
| Exit Ramp "B", SR 18 | 1+14 | 2 |
| | 2+74 | 2 |
| Exit Ramp "A" Spur, SR 303 | 49+00 | 2 |
| | 50+10 | 2 |
| | 51+60 | 1 |
| Total Carried to Pavement Marking Summary, Sheet 560 | | 13 |

## 4" PARKING LOT STALL MARKING

| LOCATION | STATION (Rest Area Stationing) | Linear Feet White |
|---|---|---|
| NORTHBOUND | | |
| Rest Area | 185+66 to 189+48 | 1125 |
| SOUTHBOUND | | |
| Rest Area | 140+59 to 144+41 | 1125 |
| Total Carried to Pavement Marking Summary, Sheet 560 | | 2250 |

## HANDICAP SYMBOL MARKING

| LOCATION | STATION (Rest Area Stationing) | Each White |
|---|---|---|
| NORTHBOUND | | |
| Rest Area | 188+53 | 1 |
| | 188+77 | 1 |
| SOUTHBOUND | | |
| Rest Area | 142+85 | 1 |
| | 143+09 | 1 |
| Total Carried to Pavement Marking Summary, Sheet 560 | | 4 |

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PAVEMENT MARKING

MED-71-15.78

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940

# RAISED PAVEMENT MARKERS

| LOCATION | STATION | @ LANE LINES 1-Way @ 120' Spa. White Each | @ EDGE LINES 2-Way @ 80' Spa. Yellow/Red Each | @ CHANNELIZING LINES 2-Way @ 40' Spa. White/Red Each |
|---|---|---|---|---|
| | (Mainline Stationing) | | | |
| NORTHBOUND | | | | |
| | | | | |
| Northbound Lanes | 833+50 to 1393+90 | 468 | | |
| | | | | |
| | | | | |
| | (Ramp Stationing) | | | |
| | | | | |
| Exit Ramp "C", SR 18 | 880+31 (ML) to 882+71 (ML) | | | 7 |
| | 880+31(ML) to 11+58 | | | 7 |
| | 12+38 to 19+58 | | 10 | |
| Entrance Ramp "D", SR 18 | 1+13 to 10+73 | | 13 | |
| | 902+50 (ML) to 903+70 (ML) | | | 4 |
| | | | | |
| Northbound Lanes | 904+80 (ML) to 973+20 (ML) | 58 | | |
| | | | | |
| Exit Ramp IR 271 Eastbound | 974+30 (ML) to 976+70 (ML) | | | 7 |
| | 974+30 (ML) to 975+73 | | | 7 |
| | 976+53 to 980+53 | | 6 | |
| | | | | |
| Exit Ramp "B", SR 3 | 1089+75 (ML) to 1092+15 (ML) | | | 7 |
| | 1089+75 (ML) to 70+77 | | | 7 |
| | 71+57 to 84+37 | | 17 | |
| Entrance Ramp "A", SR 3 | 84+77 to 97+57 | | 17 | |
| | 1119+74 (ML) to 1120+94 (ML) | | | 4 |
| | | | | |
| Exit Ramp Rest Area | 1195+87 (ML) to 1198+27 (ML) | | | 7 |
| | 1195+87 (ML) to 76+83 | | | 7 |
| | 77+63 to 84+83 | | 10 | |
| Entrance Ramp Rest Area | 89+87 to 98+67 | | 12 | |
| | 1220+89 (ML) to 1222+09 (ML) | | | 4 |
| | | | | |
| Exit Ramp "C", SR 303 | 1253+99 (ML) to 1256+39 (ML) | | | 7 |
| | 1253+99 (ML) to 35+00 | | | 7 |
| | 35+80 to 47+00 | | 15 | |
| | 44+00 to 47+05 | | | 9 |
| Lt. | 45+70 to 46+50 | | 2 | |
| Entrance Ramp "D", SR 303 | 47+15 to 48+35 | | | 4 |
| | 45+60 to 46+40 | | 2 | |
| | 34+50 to 44+90 | | 14 | |
| | 1269+26 (ML) to 1270+46 (ML) | | | 4 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | **Continued** | | | |
| | | | | |

| LOCATION | STATION | @ LANE LINES 1-Way @ 120' Spa. White Each | @ EDGE LINES 2-Way @ 80' Spa. Yellow/Red Each | @ CHANNELIZING LINES 2-Way @ 40' Spa. White/Red Each |
|---|---|---|---|---|
| | (Mainline Stationing) | | | |
| SOUTHBOUND | | | | |
| | | | | |
| Southbound Lanes | 833+50 to 1393+90 | 468 | | |
| | | | | |
| | | | | |
| | (Ramp Stationing) | | | |
| | | | | |
| Entrance Ramp "A", SR 18 | 872+73 (ML) to 873+93 (ML) | | | 4 |
| | 12+43 to 26+03 | | 18 | |
| Exit Ramp "B", SR 18 | 0+50 to 2+84 | | | 7 |
| | 1+23 to 10+83 | | 13 | |
| | 11+13 to 902+11 (ML) | | | 7 |
| | 899+71 (ML) to 902+11 (ML) | | | 7 |
| | | | | |
| Southbound Lanes | 903+30 (ML) to 968+10 (ML) | 55 | | |
| | | | | |
| Ent Ramp IR 271 W Connecter | 969+27 (ML) to 970+07 (ML) | | | 3 |
| | 970+92 to 977+32 | | 9 | |
| | | | | |
| Entrance Ramp "D", SR 3 | 1087+73 (ML) to 1088+93 (ML) | | | 4 |
| | 68+36 to 81+16 | | 17 | |
| Exit Ramp "C", SR 3 | 81+57 to 94+37 | | 17 | |
| | 95+17 to 1118+93 (ML) | | | 7 |
| | 1116+53 (ML) to 1118+93 (ML) | | | 7 |
| | | | | |
| Entrance Ramp Rest Area | 1150+88 (ML) to 1152+08 (ML) | | | 4 |
| | 31+50 to 40+30 | | 12 | |
| Exit Ramp Rest Area | 45+43 to 50+23 | | 7 | |
| | 51+03 to 1174+78 (ML) | | | 7 |
| | 1172+38 (ML) to 1174+78 (ML) | | | 7 |
| | | | | |
| Entrance Ramp "B", SR 303 | 1251+81 (ML) to 1253+01 (ML) | | | 3 |
| | 32+44 to 45+24 | | 17 | |
| | 46+75 to 47+55 | | 2 | |
| | 48+35 to 49+15 | | | 3 |
| Ramp "B" Spur | 46+04 to 47+63 | | 3 | |
| | | | | |
| Exit Ramp "A", SR 303 | 47+70 to 50+10 | | 4 | |
| | 53+56 to 57+56 | | 6 | |
| | 58+36 to 1282+11 (ML) | | | 7 |
| | 1279+71 (ML) to 1282+11 (ML) | | | 7 |
| Ramp "A" Spur | 48+55 to 51+72 | | | 9 |
| | 48+76 to 52+76 | | 6 | |
| | | | | |
| | | | | |
| | Subtotals | 1049 | 249 | 192 |
| Total Carried to Pavement Marking Summary, Sheet 560 | | 1490 | | |

NOTE: For I-271 quantities not shown see Sheet 421.

DESIGN FILE : i:\pd_med_lr71\dgn\pavemark\medpm.dgn
USERNAME : nvondere

DATE : 06-DEC-1999
TIME : 08:02

CALCULATED NJV
CHECKED gwp

PAVEMENT MARKING

MED-71-15.78

557
940

# DELINEATORS

| LOCATION | STATION | DELINEATOR Type C Each | DELINEATOR Type D Each | SPACING Feet |
|---|---|---|---|---|
| | (Mainline Stationing) | | | |
| NORTHBOUND | | | | |
| | | | | |
| Northbound Lanes | 833+00 to 869+00 | 10 | | 400 |
| | 886+00 to 898+00 | 4 | | 400 |
| | 910+00 to 966+00 | 15 | | 400 |
| | 979+00 to 1083+00 | 27 | | 400 |
| | 1095+50 to 1111+50 | 5 | | 400 |
| | 1133+50 to 1189+50 | 15 | | 400 |
| | 1201+50 to 1213+50 | 4 | | 400 |
| | 1232+00 to 1248+00 | 5 | | 400 |
| | 1259+00 to 1263+00 | 2 | | 400 |
| | 1284+00 to 1392+00 | 28 | | 400 |
| | | | | |
| | | | | |
| | (Ramp Stationing) | | | |
| | | | | |
| Exit Ramp "C", SR 18 | 0+00 to 12+00 | 7 | | 200 |
| | 12+00 | | 1 | - |
| | 13+10 to 15+50 | | 4 | 80 |
| | 16+50 | 1 | 1 | - |
| | 17+50 to 19+00 | 4 | | 50 |
| | 20+00 | 1 | | - |
| Entrance Ramp "D", SR 18 | 1+50 to 9+50 | | 5 | 200 |
| | 9+50 to 15+50 | 4 | | 200 |
| | | | | |
| Exit Ramp IR 271 Eastbound | 969+00 to 977+00 | 5 | | 200 |
| | 977+00 to 981+00 | | 3 | 200 |
| | | | | |
| Exit Ramp "B", SR 3 | 65+10 to 71+10 | 4 | | 200 |
| | 71+10 to 79+10 | | 5 | 200 |
| | 79+10 to 84+10 | 6 | | 100 |
| Entrance Ramp "A", SR 3 | 85+00 to 93+00 | | 5 | 200 |
| | 93+00 to 1130+40 (ML) | 9 | | 200 |
| | | | | |
| Exit Ramp Rest Area | 1192+50 (ML) to 77+10 | 4 | | 200 |
| | 77+10 to 85+10 | | 5 | 200 |
| Entrance Ramp Rest Area | 90+50 to 94+50 | | 3 | 200 |
| | 94+50 to 1230+00 (ML) | 8 | | 200 |
| | | | | |
| Exit Ramp "C", SR 303 | 1250+70 (ML) to 35+30 | 4 | | 200 |
| | 35+30 | | 1 | - |
| | 36+90 to 40+10 | | 5 | 80 |
| | 41+30 | 1 | 1 | - |
| | 42+50 to 45+00 | 6 | | 50 |
| | 46+00 to 47+00 | 2 | | 100 |
| Entrance Ramp "D", SR 303 | 45+80 to 47+30 | | 4 | 50 |
| | 38+20 to 43+70 | | 12 | 50 |
| | 38+20 | 1 | | - |
| | 37+20 to 1279+80 (ML) | 8 | | 200 |
| | | | | |
| | | | | |
| | **Continued** | | | |
| | | | | |

| LOCATION | STATION | DELINEATOR Type C Each | DELINEATOR Type D Each | SPACING Feet |
|---|---|---|---|---|
| | (Mainline Stationing) | | | |
| SOUTHBOUND | | | | |
| | | | | |
| Southbound Lanes | 833+00 to 861+00 | 7 | | 400 |
| | 882+00 to 898+00 | 5 | | 400 |
| | 909+00 to 961+00 | 14 | | 400 |
| | 974+00 to 1078+00 | 27 | | 400 |
| | 1097+50 to 1113+50 | 5 | | 400 |
| | 1124+50 to 1140+50 | 5 | | 400 |
| | 1158+50 to 1170+50 | 4 | | 400 |
| | 1180+00 to 1240+00 | 16 | | 400 |
| | 1261+00 to 1277+00 | 5 | | 400 |
| | 1288+00 to 1392+00 | 27 | | 400 |
| | | | | |
| | | | | |
| | (Ramp Stationing) | | | |
| | | | | |
| Entrance Ramp "A", SR 18 | 1+50 to 17+50 | 9 | | 200 |
| | 17+50 to 25+50 | | 5 | 200 |
| Exit Ramp "B", SR 18 | 0+80 to 3+80 | 7 | | 50 |
| | 4+80 | 1 | 1 | - |
| | 6+20 | | 1 | - |
| | 7+80 to 9+40 | | 3 | 80 |
| | 11+00 | | 1 | - |
| | 11+00 to 905+40 (ML) | 4 | | 200 |
| | | | | |
| Ent Ramp IR 271 W Connecter | 965+00 to 973+00 | 5 | | 200 |
| | 973+00 to 977+00 | | 5 | 100 |
| | | | | |
| Entrance Ramp "D", SR 3 | 1080+30 (ML) to 72+90 | 8 | | 200 |
| | 72+90 to 80+90 | | 5 | 200 |
| Exit Ramp "C", SR 3 | 81+40 to 86+80 | 7 | | 90 |
| | 86+80 to 94+80 | | 5 | 200 |
| | 94+80 to 100+80 | 4 | | 200 |
| | | | | |
| Entrance Ramp Rest Area | 1142+85 (ML) to 35+50 | 8 | | 200 |
| | 35+50 to 39+50 | | 3 | 200 |
| Exit Ramp Rest Area | 45+15 to 46+75 | 3 | | 80 |
| | 46+75 to 50+75 | | 3 | 200 |
| | 50+75 to 1178+10 (ML) | 4 | | 200 |
| | | | | |
| Entrance Ramp "B", SR 303 | 1242+50 (ML) to 37+10 | 9 | | 200 |
| | 37+10 to 45+10 | | 5 | 200 |
| | 47+00 to 48+20 | | 3 | 60 |
| Ramp "B" Spur | 47+10 | | 1 | - |
| Exit Ramp "A", SR 303 | 48+20 to 49+70 | | 4 | 50 |
| | 52+00 to 58+00 | | 4 | 200 |
| | 58+00 to 1285+45 (ML) | 4 | | 200 |
| Ramp "A" Spur | 49+00 to 50+50 | | 2 | 150 |
| | | | | |
| | | | | |
| | | | | |
| Totals Carried to Pavement Marking Summary, Sheet 560 | | 378 | 106 | |

NOTE: For I-271 quantities not shown see Sheet 421.

CALCULATED NJJ | CHECKED gwR

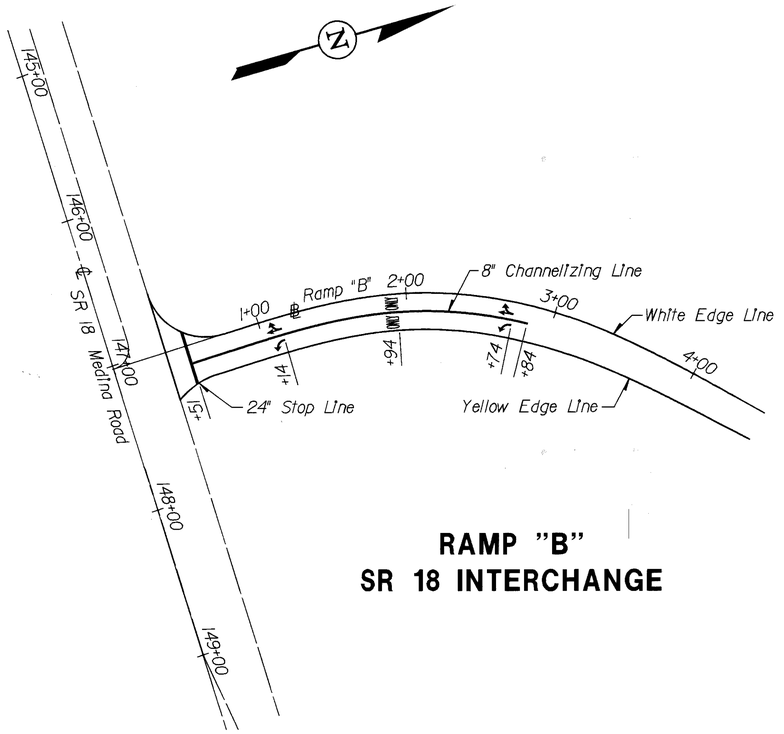
PAVEMENT MARKING

MED-71-15.78

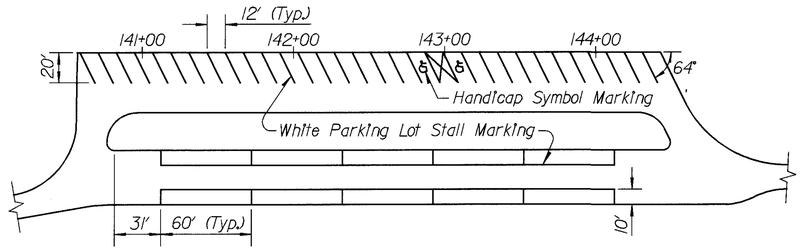
558
940

DESIGN FILE : i:\pd_med_lr71\dgn\pavemark\medpm.dgn
USERNAME : nvondere

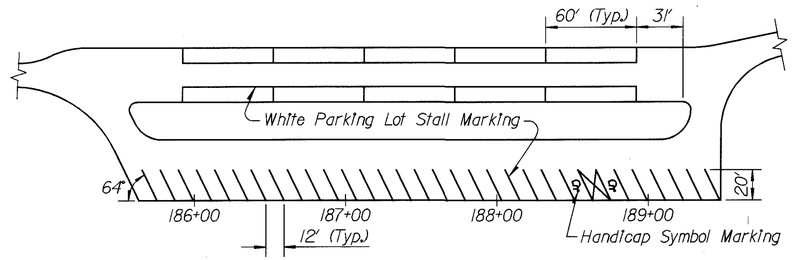
DATE : 06-DEC-1999
TIME : 08:02



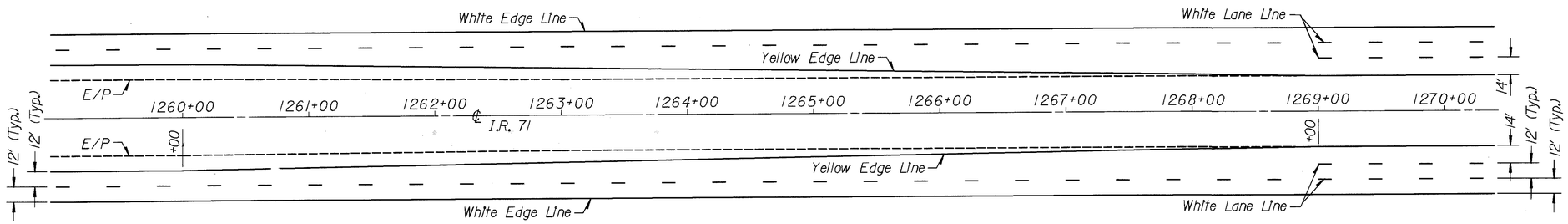

## RAMP "B"
## SR 18 INTERCHANGE




## SOUTHBOUND REST AREA




## NORTHBOUND REST AREA




## I.R. 71 LANE TRANSITION

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TIME : 08:10

CALCULATED | CHECKED

# PAVEMENT MARKING DETAILS

MED-71-15.78

559
940

DESIGN FILE : i:\pd_med_lr71\dgn\pavemark\medpm2.dgn
USERNAME : nvondere
DATE : 06-DEC-1999
TIME : 08:14

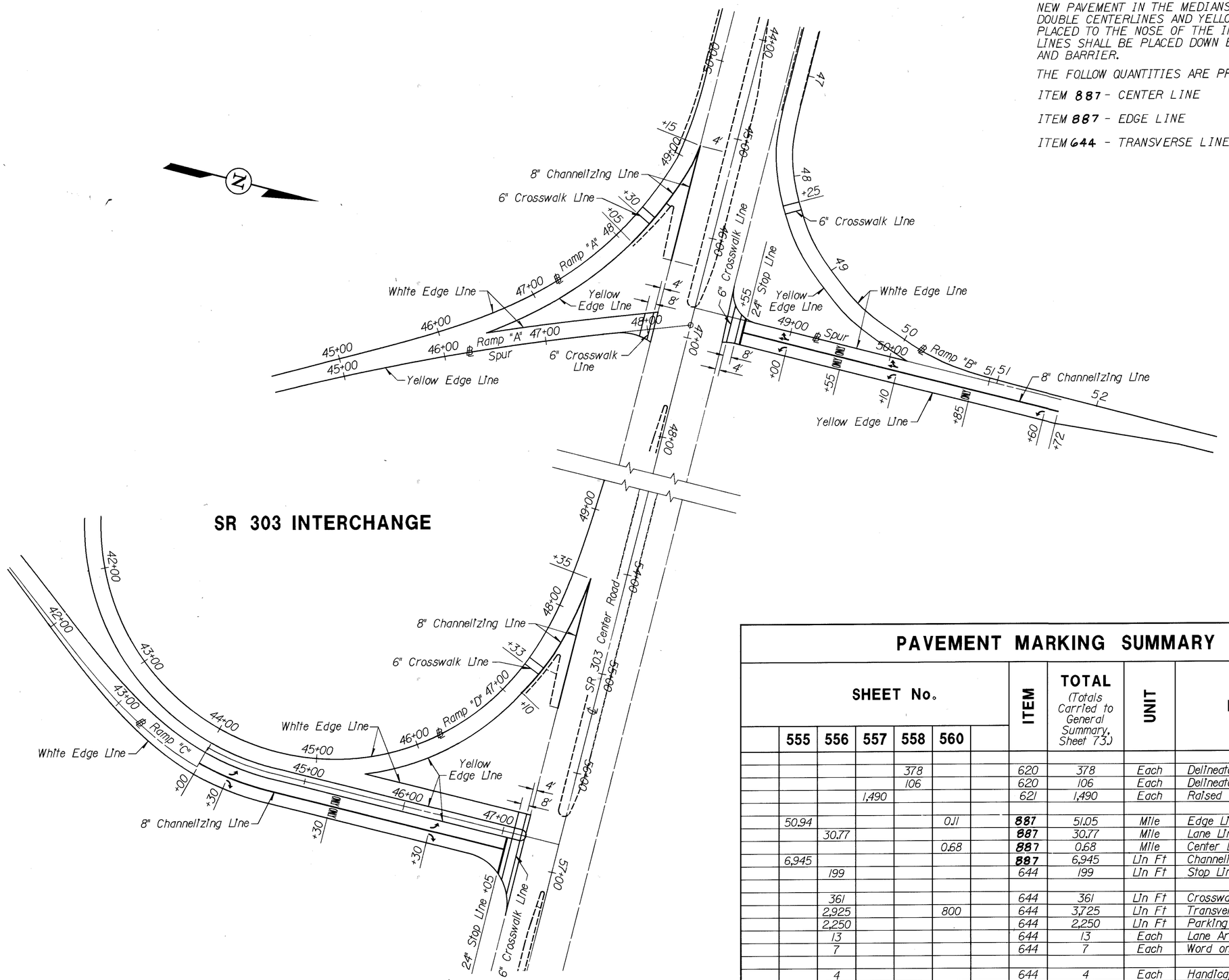
CALCULATED NJV CHECKED Jwp

**NOTE: PAVEMENT MARKINGS**

THE FOLLOWING PAVEMENT MARKINGS SHALL BE APPLIED TO THE NEW PAVEMENT IN THE MEDIANS OF SR 3 AND SR 303: SOLID DOUBLE CENTERLINES AND YELLOW TRANSVERSE LINES SHALL BE PLACED TO THE NOSE OF THE IMPACT ATTENUATOR. YELLOW EDGE LINES SHALL BE PLACED DOWN EACH SIDE OF THE ATTENUATOR AND BARRIER.

THE FOLLOW QUANTITIES ARE PROVIDED FOR THIS WORK:

| | |
|---|---|
| ITEM **887** - CENTER LINE | 0.68 MILE |
| ITEM **887** - EDGE LINE | 0.11 MILE |
| ITEM **644** - TRANSVERSE LINE | 800 LIN. FT. |




## PAVEMENT MARKING SUMMARY

| SHEET No. | | | | | | | ITEM | TOTAL (Totals Carried to General Summary, Sheet 73.) | UNIT | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|
| 555 | 556 | 557 | 558 | 560 | | | | | | |
| | | | 378 | | | | 620 | 378 | Each | Delineator, Type C, Post Mounted |
| | | | 106 | | | | 620 | 106 | Each | Delineator, Type D, Post Mounted |
| | | 1,490 | | | | | 621 | 1,490 | Each | Raised Pavement Marker |
| 50.94 | | | | 0.11 | | | **887** | 51.05 | Mile | Edge Line **(5 Year Warranty)** |
| | 30.77 | | | | | | **887** | 30.77 | Mile | Lane Line **(5 Year Warranty)** |
| | | | | 0.68 | | | **887** | 0.68 | Mile | Center Line **(5 Year Warranty)** |
| 6,945 | | | | | | | **887** | 6,945 | Lin Ft | Channelizing Line **(5 Year Warranty)** |
| | 199 | | | | | | 644 | 199 | Lin Ft | Stop Line |
| | 361 | | | | | | 644 | 361 | Lin Ft | Crosswalk Line |
| | 2,925 | | | 800 | | | 644 | 3,725 | Lin Ft | Transverse Line |
| | 2,250 | | | | | | 644 | 2,250 | Lin Ft | Parking Lot Stall Marking |
| | 13 | | | | | | 644 | 13 | Each | Lane Arrow |
| | 7 | | | | | | 644 | 7 | Each | Word on Pavement, 96" |
| | 4 | | | | | | 644 | 4 | Each | Handicap Symbol Marking |

PAVEMENT MARKING SUMMARY & DETAILS

MED-71-15.78

560
940

REF-FILE *1:\NDA_MED_JRT\DGN\LGMTG\alignmnt.dgn
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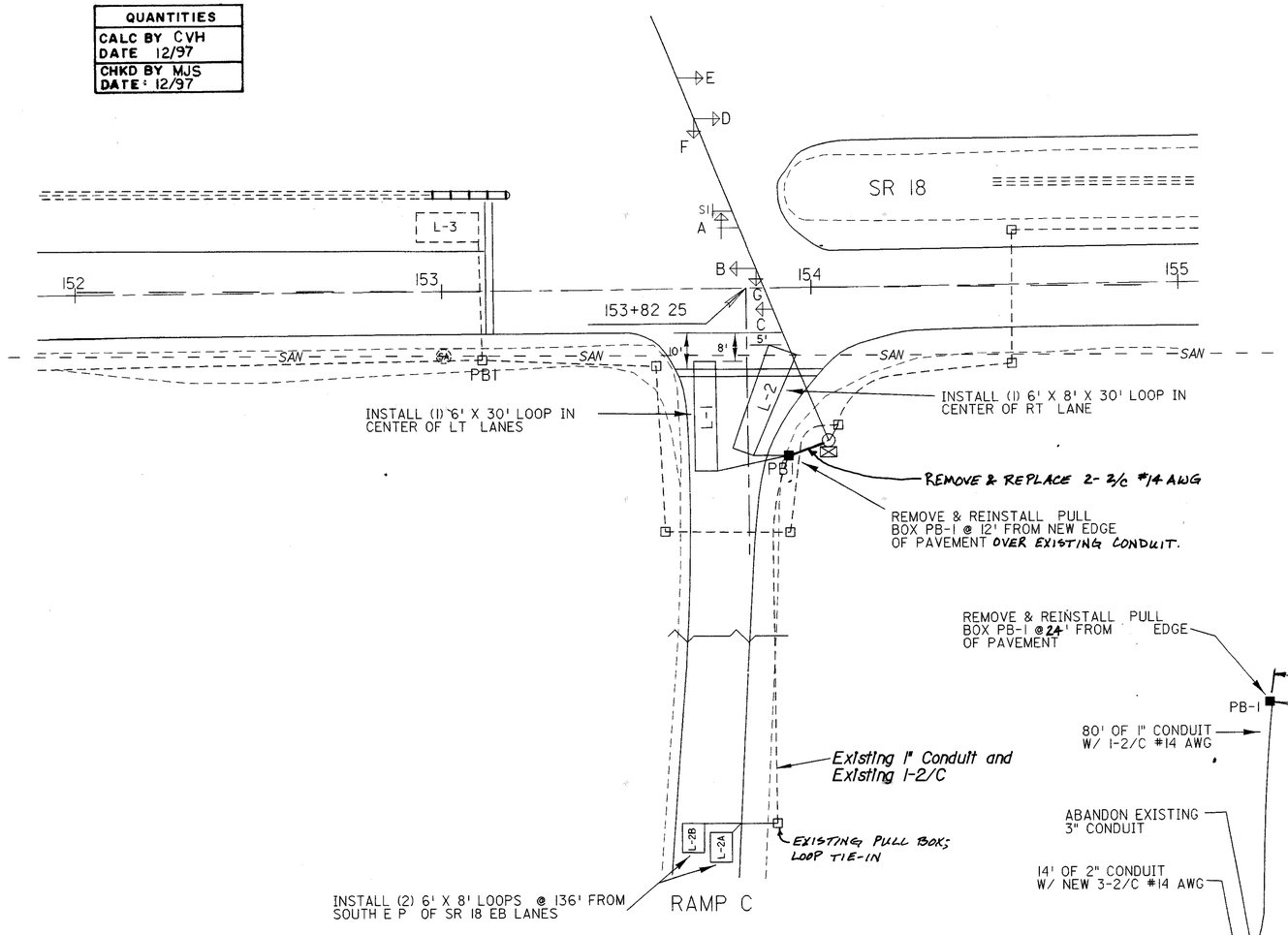
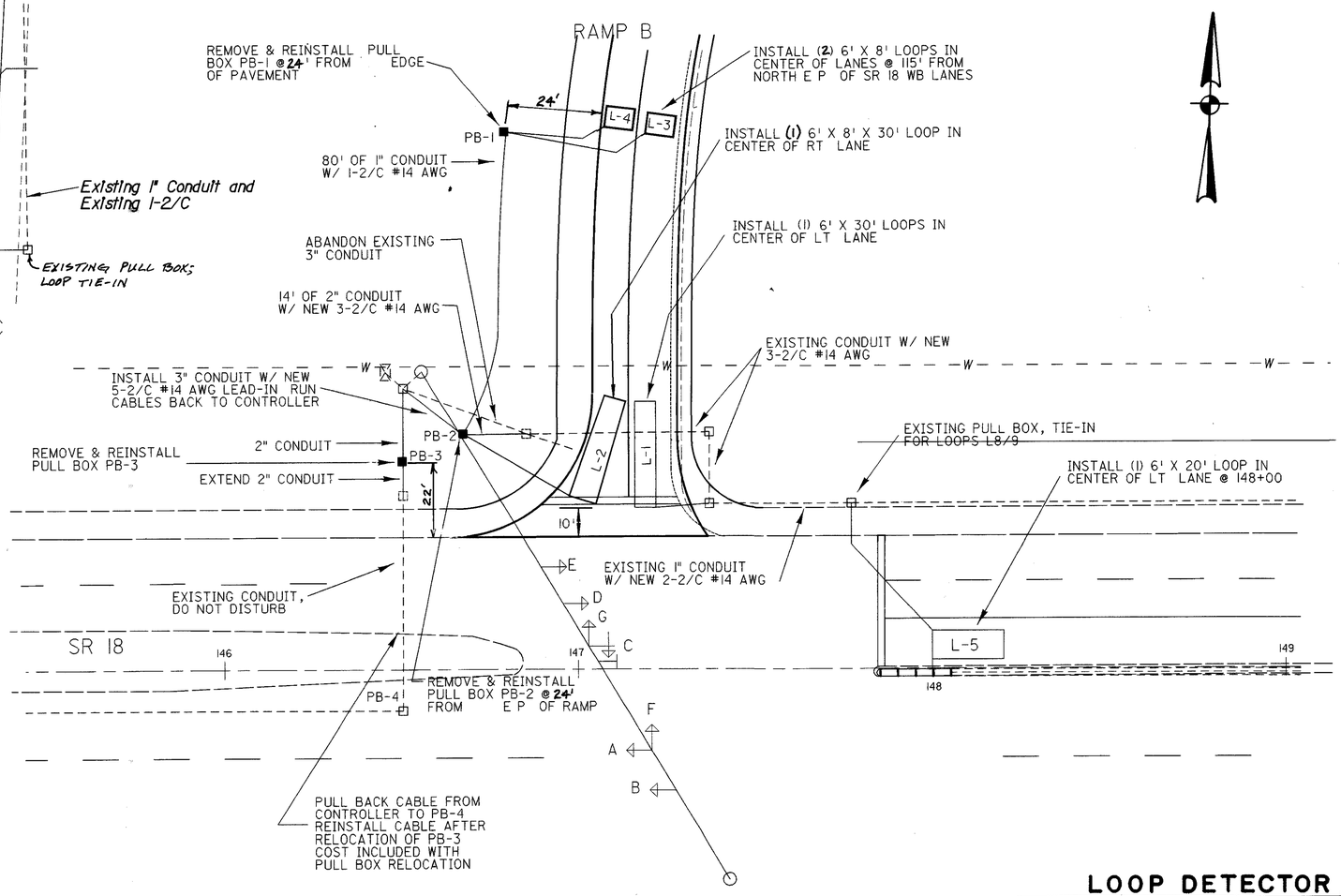
REF-FILE *2:\NDA_MED_JRT\DGN\Lighting\conventional.dgn
REF-FILE *2 LEVELS ON:1\35,37,38,641
REF-FILE *3:\NDA_MED_JRT\DGN\abc2dembu.dgn
REF-FILE *3 LEVELS ON:1\641
REF-FILE *4:\NDA_MED_JRT\DGN\ygrdrail.dgn
REF-FILE *4 LEVELS ON:1\641

| QUANTITIES |
|---|
| CALC BY CVH |
| DATE 12/97 |
| CHKD BY MJS |
| DATE: 12/97 |




| RAMP B SR 18 | | | | |
|---|---|---|---|---|
| ITEM | ITEM EXT | TOTAL | UNIT | DESCRIPTION |
| 625 | 25100 | 80 | LIN FT | CONDUIT, 1", 713 04 |
| 625 | 25400 | 24 | LIN FT | CONDUIT, 2", 713.04 |
| 625 | 25500 | 25 | LIN FT | CONDUIT, 3", 713 04 |
| 625 | 29000 | 119 | LIN FT. | TRENCH |
| 625 | 31600 | 3 | EACH | PULL BOX, MISC : REMOVED AND REINSTALLED, 713 08, 18" |
| | | | | |
| 632 | 65300 | 945 | LIN FT | LOOP DETECTOR LEAD-IN CABLE, 2/C, #14 AWG. |
| 632 | 26500 | 5 | EACH | DETECTOR LOOP |
| 632 | 27201 | 1 | EACH | LOOP DETECTOR TIE -IN, AS PER PLAN |
| | | | | |
| | | | | |

*NOTE: All Quantities Carried to the Traffic Control General Summary. See Sheets 562 & 563.*




| RAMP C SR 18 | | | | |
|---|---|---|---|---|
| ITEM | ITEM EXT | TOTAL | UNIT | DESCRIPTION |
| 632 | 26500 | 4 | EACH | DETECTOR LOOP |
| 632 | 27201 | 3 | EACH | LOOP DETECTOR TIE -IN, AS PER PLAN |
| 625 | 31600 | 1 | EACH | PULL BOX, MISC : REMOVED AND REINSTALLED, 713 08, 18" |
| 632 | 65300 | 50 | LIN. FT. | LOOP DETECTOR LEAD-IN CABLE 2/C #14 AWG |

*NOTE: All Quantities Carried to the Traffic Control General Summary. See Sheets 562 & 563.*

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED | CHECKED

# LOOP DETECTOR
## Ramps B & C @ S.R. 18

MED-71-15.78

560A
940

**LOOP DETECTOR**
RAMPS B&C @ S.R. 18

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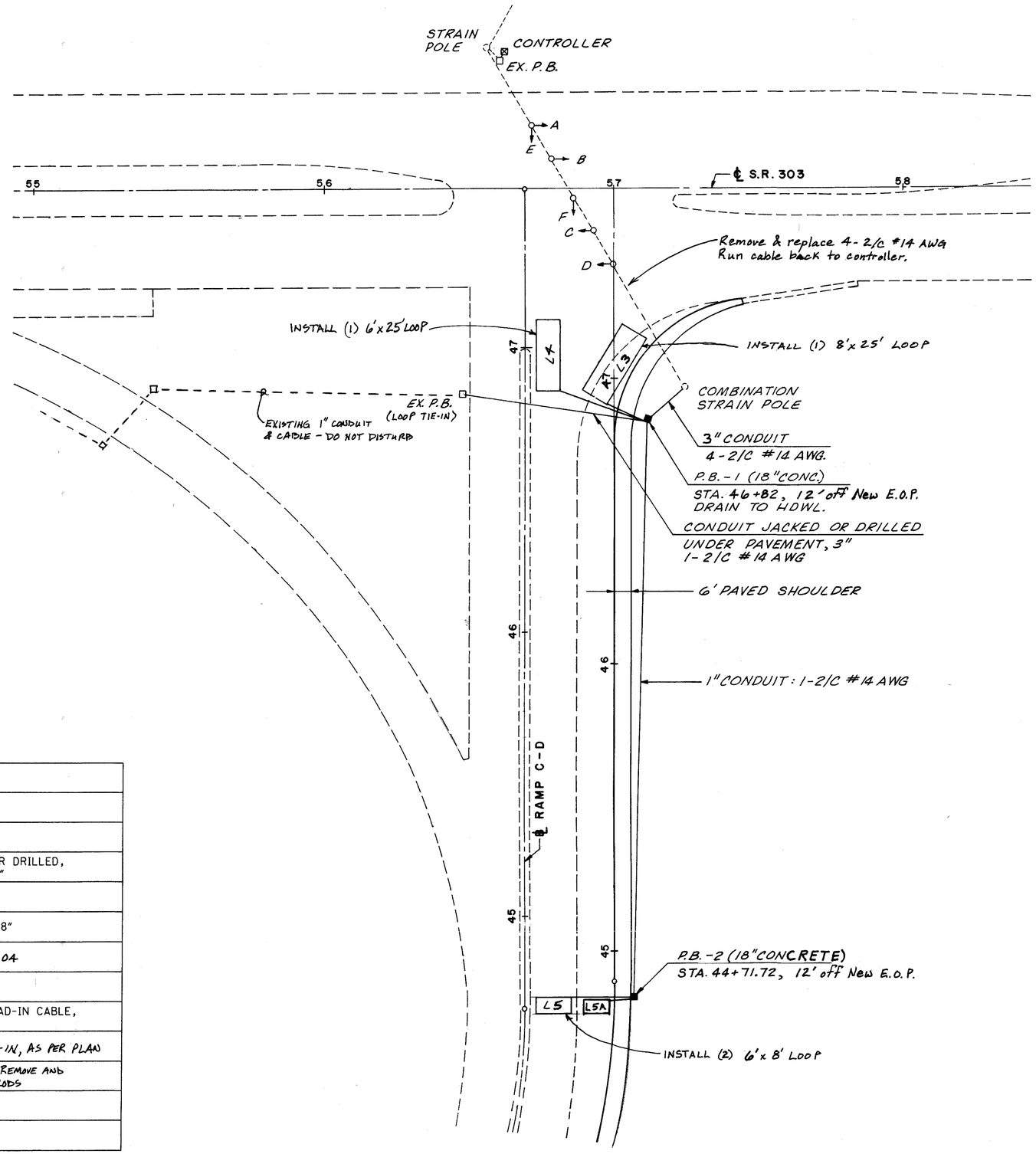
USERNAME: mfox
PROJECT: NONE
LEVELS ON:1\641
PLOT QUEUE: \\OPS\PLOT1pce
RSRC TABLES: H:\Bstd\dgn\pdfCodeCross.DCE.pen

| QUANTITIES |
|---|
| CALC. BY: CVH<br>DATE: 12/97 |
| CHKD. BY: MJS<br>DATE: 12/97 |




| RAMP W SR 303 | | | | |
|---|---|---|---|---|
| ITEM | ITEM EXT. | TOTAL | UNIT | DESCRIPTION |
| 625 | 25100 | 196 | LIN. FT. | CONDUIT, 1", 713.04 |
| 625 | 25900 | 84 | LIN. FT. | CONDUIT, JACKED OR DRILLED, UNDER PAVEMENT 3" |
| 625 | 29000 | 218 | LIN. FT. | TRENCH |
| 625 | 30700 | 2 | EACH | PULL BOX, 713.08, 18" |
| 625 | 25500 | 18 | LIN. FT. | CONDUIT, 3", 713.04 |
| 632 | 26500 | 4 | EACH | DETECTOR LOOP |
| 632 | 65300 | 1119 | LIN. FT. | LOOP DETECTOR LEAD-IN CABLE, 2/C, #14 AWG |
| 632 | 27200 | 1 | EACH | LOOP DETECTOR TIE-IN, AS PER PLAN |
| 632 | 90500 | 134 | LIN. FT. | SIGNALIZATION, MISC.: REMOVE AND REPLACE LASHING RODS |
| | | | | |
| | | | | |

NOTE: All Quantities Carried to the Traffic Control General Summary. See Sheets 562 & 563.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED | CHECKED

LOOP DETECTOR
RAMP CD @ S.R. 303

MED-71-15.78

560B
940

LOOP DETECTOR
RAMP W @ S.R. 303

REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:

DESIGN FILE : i:\pd_MED_JR71\DGN\Lighting\7885CP2.dgn
USERNAME : mfox
DATE : 26-NOV-1999
TIME : 09:18

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PLOT QUEUE:\\DOIPLOT\bos
REF: i:\tables\dgn\bosCrossSec.pen

RASTER REFERENCE FILES:357.tif

FILENAME:\\BOS_MED_JR71\pd_MED_JR71\DGN\Lighting\7885CP2.dgn
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USERNAME: mfox
PROJECT: NONE

## REMOVAL OF OHIO LOGO SIGNS

ALL SIGNS LISTED ON THIS PROJECT AS "REMOVED BY OTHERS" ARE THE PROPERTY OF OHIO LOGOS, INC.

OHIO LOGOS, INC. IS RESPONSIBLE FOR REMOVAL AND REERECTION OF THE LOGO SIGNS. THE CONTRACTOR SHALL CONTACT OHIO LOGOS, INC. (1-800-860-5646) IN WRITING A MINIMUM OF THIRTY (30) DAYS PRIOR TO THE PROJECT BEGINNING DATE. THIS INFORMATION SHALL BE SENT TO:

OHIO LOGOS, INC.
4384 TULLER RD.
DUBLIN, OH 43017
ATTN: ROGER ROSE, GENERAL MANAGER

THE CONTRACTOR, AT THE COMPLETION OF THIS PROJECT, SHALL NOTIFY OHIO LOGOS, INC. THAT THEY CAN REERECT THE SIGNS THAT HAD BEEN PREVIOUSLY REMOVED.

## FREEWAY LOCATION IDENTIFICATION SYSTEM SIGNS

THESE SIGNS CONSIST OF A MAINLINE MARKER (N-44B) OR RAMP MARKER (N-43B), ATTACHED TO GUIDE AND DESTINATION SIGNS WITH AN ITEM 630 SIGN BACKING ASSEMBLY IF ATTACHED TO A GROUND-MOUNTED SIGN OR AN ITEM 630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED IF ATTACHED TO THE VERTICAL MEMBER OF AN OVERHEAD SIGN STRUCTURE.

THE CONTRACTOR SHALL DETERMINE THE CORRECT STRAIGHT LINE MILEAGE, IN HUNDREDTH'S OF A MILE, FOR EACH SIGN BASED ON THE FINAL LOCATION OF THE SIGN. THE CORRECT MILEAGE SHALL BE DETERMINED ONLY AFTER THE MILE MARKERS HAVE BEEN LOCATED BY THE DEPARTMENT. THE PLAN SHOWS THE ROUTE NUMBER, ROUTE DIRECTION AND THE RAMP CODES ( WHERE APPLICABLE). SEE SHEET NO. 575 FOR DETAILS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A RECORD OF THE STRAIGHT LINE MILEAGE FOR EACH FREEWAY LOCATION IDENTIFICATION SYSTEM SIGN.

PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 630, SIGN, FLAT SHEET, TYPE G. THE REQUIRED ITEM 630, SIGN BACKING ASSEMBLY OR ITEM 630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED ARE PAID SEPARATELY AS INDICATED.

## SIGNS REPLACEMENTS

WITH RESPECT TO THE REPLACEMENT OF EXISTING SIGNS THE CONTRACTOR SHALL IN NO CASE REMOVE A SIGN UNLESS THE APPLICABLE REPLACEMENT CAN BE ERECTED WITHIN THE SAME WORKING DAY.

## HIGHWAY LIGHTING

THERE IS EXISTING HIGHWAY LIGHTING ON THIS PROJECT. PLEASE CALL THE ODOT DISTRICT ROADWAY SERVICES MANAGER (419)281-0513 Ext. 341 TWO (2) WEEKS PRIOR TO CONSTRUCTION FOR THE LOCATION OF UNDERGROUND LIGHTING CIRCUITRY.

## MILE MARKER LOCATION

THE LOCATION OF MILE MARKERS ON THESE PLANS ARE APPROXIMATE AND A MORE PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST THIRTY (30) DAYS IN ADVANCE OF THE PLANNED DATE OF MILE MARKER INSTALLATION. THE ENGINEER WILL CONTACT THE OFFICE OF TECHNICAL SERVICES (614)466-4224 WHICH WILL LOCATE THE LONGITUDINAL POSITION OF MILE MARKER, BY MEANS OF A PAINT MARK ON THE PAVEMENT EDGE. ALTERNATE MARKS WILL NOT BE PROVIDED ON DIVIDED HIGHWAYS AND THE CONTRACTOR SHALL SET MARKS FOR THE OPPOSITE ROADWAY ACROSS FROM THE PROVIDED MARK. ANY EXISTING DELINEATORS FALLING WITHIN 50' OF A MILE MARKER SHALL BE REMOVED. REMOVAL OF ANY DELINEATORS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

## ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN

CLEARING AND GRUBBING SHALL BE PERFORMED IN AREAS AS DIRECTED BY THE ENGINEER TO PROVIDE ADEQUATE CLEAR SIGHT DISTANCE TO SIGNS ERECTED AS PART OF THIS PLAN. SEE SHEET NO. 561A FOR GUIDE FOR CLEARING AND GRUBBING.

IN ADDITION TO THE REQUIREMENTS OF ITEM 201, ALL VEGETATION MECHANICALLY REMOVED BY CUTTING OR MOWING SHALL HAVE A CUT STUMP HERBICIDE TREATMENT APPLIED TO EACH INDIVIDUL REMAINING STUMP WITHIN TWO (2) HOURS OF CUTTING. CARE SHALL BE EXERCISED TO APPLY TREATMENT ONLY TO INDIVIDUAL STUMPS SO AS NOT TO HARM OTHER VEGETATION. THE CUT STUMP TREATMENT SHALL BE GARLON 4 OR PATHFINDER II RTU APPLIED IN ACCORDANCE WITH LABEL DIRECTIONS. APPLICATORS OF THE CUT STUMP TREATMENT SHALL BE CURRENTLY LICENSED OHIO COMMERCIAL APPLICATORS IN THE APPROPRIATE CATEGORY. EVIDENCE OF VALID LICENSES SHALL BE PROVIDED TO THE ENGINEER FOR VERIFICATION.

## ITEM 620 - DELINEATOR INSTALLED, BY TYPE, BY SUPPORT

FLEXIBLE POSTS SHALL BE INSTALLED SO THAT THE FACE OF THE REFLECTOR, OTHER THAN RED IS 90 DEGREES TO THE CENTERLINE FACING APPROACHING TRAFFIC AND TO SUCH A DEPTH THAT THE TOPS OF THE INSTALLED REFLECTORS SHALL BE 4 FEET PLUS OR MINUS ABOVE THE ELEVATION OF THE ADJACENT EDGE OF PAVEMENT.

## REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, AS PER PLAN

THE GROUND MOUNTED SIGNS THAT ARE MOUNTED ON BEAMS WILL BE EITHER MOUNTED BACK ON NEW BEAMS OR MOUNTED OVERHEAD ON NEW STRUCTURES AS INDICATED IN THE PLANS. THE COSTS FOR REMOVING, STORING AND REERECTION OF THE SIGNS, INCLUDING ALL NECESSARY HARDWARE FOR A COMPLETE INSTALLATION ON THE NEW OVERHEAD SIGN SUPPORT SHALL BE INCLUDED AND PAID UNDER ITEM 630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, AS PER PLAN PER EACH.

CALCULATED
CHECKED

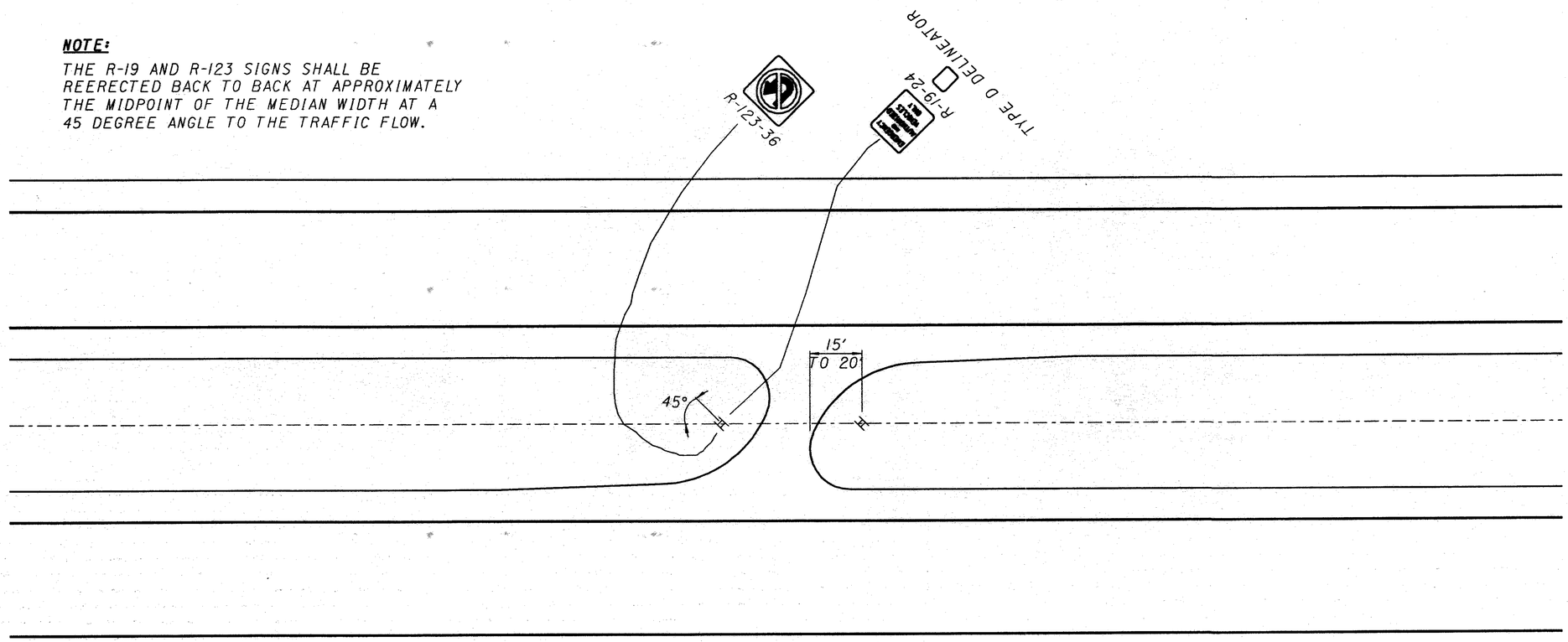
SIGNING GENERAL NOTES AND MISCELLANEOUS DETAIL

MED-71-15.78

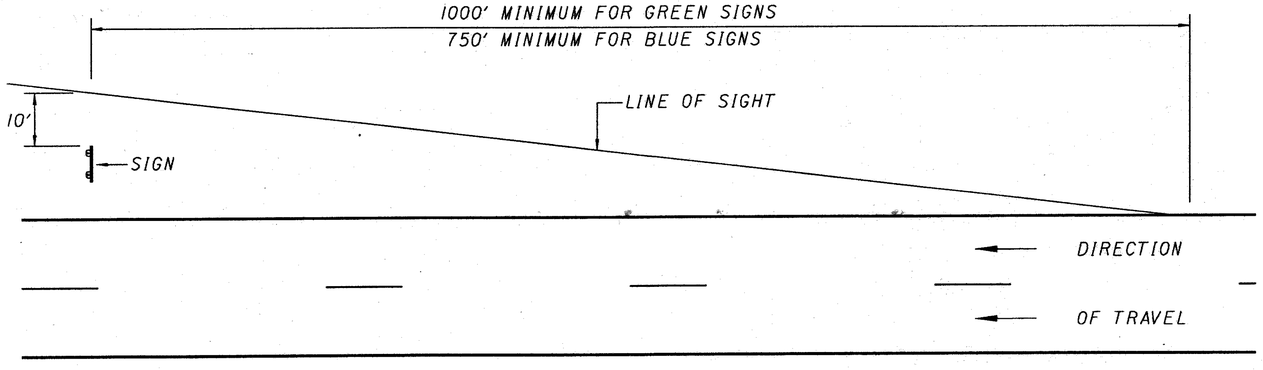
561
940

7885REL_TNA.DGN 1/28/00 SAM

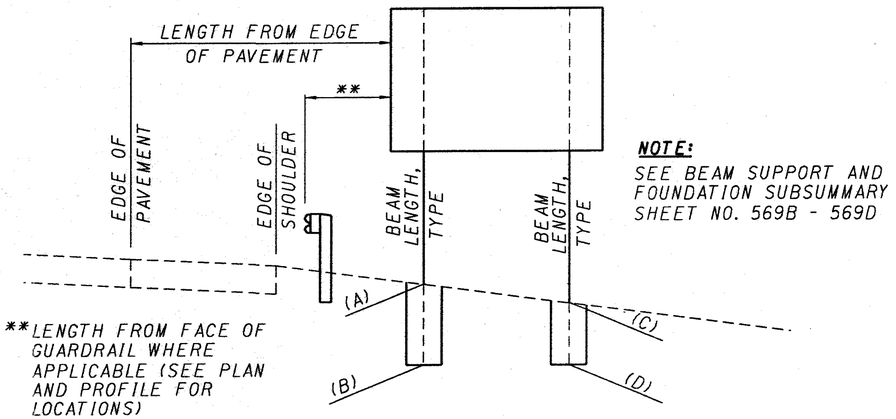
**NOTE:**
THE R-19 AND R-123 SIGNS SHALL BE REERECTED BACK TO BACK AT APPROXIMATELY THE MIDPOINT OF THE MEDIAN WIDTH AT A 45 DEGREE ANGLE TO THE TRAFFIC FLOW.




## STANDARD SIGNING FOR U-TURN MEDIAN CROSSOVER




## GUIDE FOR CLEARING AND GRUBBING




**NOTE:**
SEE BEAM SUPPORT AND FOUNDATION SUBSUMMARY SHEET NO. 569B - 569D

## GROUND MOUNTED SIGN ON BEAM DETAIL

CALCULATED PS
CHECKED PDG

SIGNING MISCELLANEOUS DETAILS

MED-71-15.78

561A
940

7885REL_TDA.DGN 1/27/00 SAM

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$

DATE : $$$$DATE$$$$
TIME : $$$$$TIME$$$$$

| SHEET No. | | | | | | | | | | | | | | ITEM | ITEM EXT. | TOTAL | UNIT | DESCRIPTION | SEE SHEET No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 407 | 551/553 | 560A | 560B | 564 | 565 | 566 | 567 | 568 | 569 | 569A | 569D | 569E | 619 | | | | | | |
| | | | | | | | | | | | | | | | | | | TRAFFIC CONTROL | |
| | | | | 2 | 2 | | 2 | | | | | | | 620 | 31200 | 6 | EACH | DELINEATOR, REMOVED FOR DISPOSAL | |
| | | | | 2 | 2 | | 2 | | | | | | | 620 | 40301 | 6 | EACH | REFLECTOR, TYPE D, AS PER PLAN | |
| | | 80 | 196 | | | | | | | | | | | 625 | 25100 | 276 | LIN FT | CONDUIT, 1", 713.04 | |
| | 15/555 220 | 24 | | | | | | | | | | | | 625 | 25400 | 39 | LIN FT | CONDUIT, 2", 713.04 | |
| | | 25 | 18 | | | | | | | | | | | 625 | 25500 | 818 | LIN FT | CONDUIT, 3", 713.04 | |
| | | | 84 | | | | | | | | | | | 625 | 25900 | 84 | LIN FT | CONDUIT, JACKED OR DRILLED, SIZE 3" | |
| | 555 230 | 119 | 218 | | | | | | | | | | | 625 | 29000 | 1122 | LIN FT | TRENCH | |
| | | | | | | | | | | | | | | | | | | | |
| | 9/3 | | 2 | | | | | | | | | | | 625 | 30700 | 14 | EACH | PULL BOX, 713.08, 18" | |
| | | 4 | | | | | | | | | | | | 625 | 31600 | 4 | EACH | PULL BOX, MISC.: REMOVED AND REINSTALLED, 713.08, 18" | |
| | 3/1 | | | 4 | 5 | 6 | 4 | | | 3 | | 4 | | 625 | 32000 | 30 | EACH | GROUND ROD | |
| | | | | 15 | 12 | 12 | 12 | | | | | | | 630 | 02100 | 51 | LIN. FT. | GROUND MOUNTED SUPPORT, NO. 2 POST | |
| 141 | | | | 336 | 275 | 276 | 321 | 515 | 484 | 481 | | | | 630 | 03100 | 2829 | LIN. FT. | GROUND MOUNTED SUPPORT, NO. 3 POST | |
| | | | | | | | | | | | 813 | | | 630 | 06400 | 813 | LIN. FT. | GROUND MOUNTED SUPPORT, S4X7.7 BEAM | |
| | | | | | | | | | | | 77 | | | 630 | 06500 | 77 | LIN. FT. | GROUND MOUNTED SUPPORT, W6X9 BEAM | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | 113 | | | 630 | 07500 | 113 | LIN. FT. | GROUND MOUNTED SUPPORT, W10X22 BEAM | |
| | | | | | | | | | | | 241 | | | 630 | 07600 | 241 | LIN. FT. | GROUND MOUNTED SUPPORT, W10X12 BEAM | |
| | | | | | | | | 65 | 50 | 50 | | | | 630 | 08004 | 165 | LIN. FT. | ONE WAY SUPPORT, NO. 3 POST | |
| | | | | | | | | | | | 66 | | | 630 | 09000 | 66 | EACH | BREAKAWAY BEAM CONNECTION | |
| | | | | 1 | | | | | | 3 | | | | 630 | 20400 | 3 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 4, 20' ARM | |
| | | | | | | | | | | | | 1 | | 630 | 20500 | 1 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 5, 22' ARM | |
| | | | | | | | | | | | | 1 | | 630 | 20600 | 1 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 6, 26' ARM | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | 1 | | | | | | | | | 630 | 20700 | 1 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 7, 24' ARM | |
| | | | | 1 | 1 | 6 | 4 | | | | | 1 | | 630 | 20900 | 13 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 9, 26' ARM | |
| | | | | 1 | | | | | | | | | | 630 | 45500 | 1 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8, 75' SPAN | |
| | | | | 1 | 1 | | | | | | | | | 630 | 45500 | 2 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8, 85' SPAN | |
| | | | | | 1 | | | | | | | | | 630 | 45500 | 1 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8, 93' SPAN | |
| | | | | 1 | 1 | | | | | | | | | 630 | 45500 | 2 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8, 97' SPAN | |
| | | | | | | | | | | | | 2 | | 630 | 77900 | 2 | EACH | OVERPASS STRUCTURE MOUNTED SIGN SUPPORT, TYPE TC-18.26, DESIGN 9 | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | 8 | 5 | 10 | 4 | 1 | | 7 | | 3 | | 630 | 79500 | 38 | EACH | SIGN SUPPORT ASSEMBLY, POLE MOUNTED | |
| | | | | 67 | 40 | 15 | 6 | 93 | 225 | 161 | 110 | 5 | | 630 | 80102 | 722 | SQ. FT. | SIGN, FLAT SHEET, TYPE G | |
| | | | | 1247 | 1623 | 1032 | 750 | | | 240 | 516 | | | 630 | 80204 | 5408 | SQ. FT. | SIGN, EXTRU SHEET, TYPE G | |
| | | | | | | | | | | | 42 | | | 630 | 82000 | 42 | EACH | SIGN BACKING ASSEMBLY | |
| | | | | | | | | | | | 66 | | | 630 | 84500 | 66 | EACH | GROUND MOUNTED BEAM SUPPORT FOUNDATION | |
| | | | | 8 | 8 | 6 | 4 | | | 3 | | 3 | | 630 | 84510 | 32 | EACH | RIGID OVERHEAD SIGN SUPPORT FOUNDATION | |
| | | | | 4 | 5 | 6 | 4 | 2 | 16 | 7 | 7 | | | 630 | 84900 | 51 | EACH | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL | |
| | | | | | | | | | | | | | | | | | | | |
| 16 | | | | 11 | 12 | 14 | 17 | 20 | 8 | 11 | 12 | | | 630 | 85100 | 121 | EACH | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION | |
| | | | | 1 | | | | | | | | | | 630 | 85101 | 1 | EACH | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, AS PER PLAN | |
| | | | | 4 | 7 | 6 | 4 | | | | 2 | | | 630 | 85400 | 23 | EACH | REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL | |
| | | | | | | | | | | | 19 | | | 630 | 85600 | 19 | EACH | REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION | |
| | | | | 1 | | | | | | | | | | 630 | 85601 | 1 | EACH | REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION, AS PER PLAN | |
| 11 | | | | 12 | 13 | 15 | 15 | 29 | 22 | 18 | 24 | | | 630 | 86002 | 159 | EACH | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL | |
| | | | | 10 | 10 | 12 | 8 | | | | 30 | | | 630 | 86102 | 70 | EACH | REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | 1 | | | | | | | | | 630 | 86310 | 1 | EACH | REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL | |
| | | | | | | | | | | | | 4 | | 630 | 86320 | 4 | EACH | REMOVAL OF STRUCTURE MOUNTED SIGN AND REERECTION | |
| | | | | | | | | | | | | 2 | | 630 | 87100 | 2 | EACH | REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION | |
| | | | | 2 | 3 | | | | | | | | | 630 | 87400 | 5 | EACH | REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL | |
| | | | | | | | | | | | | 1 | | 630 | 89706 | 1 | EACH | REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 | |
| | | | | 1 | 1 | | | | | | | | | 630 | 89802 | 2 | EACH | REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 | |
| | | | | | 1 | | | | | | | | | 630 | 89806 | 1 | EACH | REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-18.24 | |
| | | | | | | | | | | | | 4 | | 630 | 89808 | 4 | EACH | REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-18.26 | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | 15 | 631 | 84000 | 15 | EACH | SIGN SERVICE | |
| | | | | | | | | | | | | | 22 | 631 | 84300 | 22 | EACH | SIGN WIRED | |
| | | | | | | | | | | | | | 15 | 631 | 85302 | 15 | EACH | DISCONNECT SWITCH WITH ENCLOSURE, 30 AMP | |
| | | | | | | | | | | | | | 2 | 631 | 85500 | 2 | EACH | SWITCH ENCLOSURE MOUNTING BRACKET ASSEMBLY | |
| | | | | | | | | | | | | | 2 | 631 | 87200 | 2 | EACH | BALLAST, TYPE CMRI-I75-480, REMOTE | |

REV. 2-22-00

TRAFFIC CONTROL GENERAL SUMMARY

MED-71-15.78

| SHEET No. | | | | | | | | | | | | | | ITEM | ITEM EXT. | TOTAL | UNIT | DESCRIPTION | SEE SHEET No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 560B | 560A | | 564 | 565 | 566 | 567 | 568 | 569 | | | 619 | | | | | | |
| | | | | | | | | | | | | | | | | | | TRAFFIC CONTROL | |
| | | | | | | | | | | | | | 17 | 631 | 87202 | 17 | EACH | BALLAST, TYPE CMRI-175-480, INTEGRAL | |
| | | | | | | | | | | | | | 19 | 631 | 87302 | 19 | EACH | BALLAST, TYPE CMRI-250-480, INTEGRAL | |
| | | | | | | | | | | | | | 19 | 631 | 88200 | 19 | EACH | MERCURY VAPOR LUMINAIRE, TYPE TC-31.20 WITH 175 WATT LAMP | |
| | | | | | | | | | | | | | 19 | 631 | 88300 | 19 | EACH | MERCURY VAPOR LUMINAIRE, TYPE TC-31.20 WITH 250 WATT LAMP | |
| | | | | | | | | | | | | | 4 | 631 | 94412 | 4 | EACH | REMOVAL OF SIGN SERVICE AND DISPOSAL | |
| | | 4 | 9 | | | | | | | | | | | 632 | 26500 | 13 | EACH | DETECTOR LOOP | |
| | | 1 | 4 | | | | | | | | | | | 632 | 27201 | 5 | EACH | LOOP DETECTOR TIE IN, AS PER PLAN | 561 |
| | | 1119 | 995 | | | | | | | | | | | 632 | 65300 | 2114 | LIN. FT. | LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, No. 14 AWG | |
| | | 134 | | | | | | | | | | | | 632 | 90500 | 134 | LIN. FT. | SIGNALIZATION, MISC.: REMOVE AND REPLACE LASHING RODS | |

DESIGN FILE : i:\users\gwilliam\med71\sign\med71sub.dgn
USERNAME : gwilliam

DATE : 10-DEC-1999
TIME : 12:14

CALCULATED A.L. CHECKED jwp

# TRAFFIC CONTROL GENERAL SUMMARY

MED-71-15.78

# SIGNING SUB-SUMMARY

Note: Sheet Totals Carried To Traffic Control General Summary Sheet 562 .

| REF. NO. | STATION | SIDE | CODE | SIZE | LEVEL | 630 SIGNS FLAT SHEET TYPE "G" | 630 SIGNS EXTRU SHEET TYPE "G" | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MINOR | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MAJOR | 630 REMOVAL OF GROUND MTD. SIGN & REERECTION AS PER PLAN MINOR | 630 REMOVAL OF GROUND MTD. SIGN & REERECTION AS PER PLAN MAJOR | 630 REMOVAL OF OVERHEAD MTD. SIGN & DISPOSAL | 620 DELINEATOR, REMOVED FOR DISPOSAL | 620 REFLECTOR, TYPE D, AS PER PLAN | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MINOR | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MAJOR | 630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED | 625 GROUND RODS | 630 GROUND MOUNTED SUPPORTS NO. 2 POST | 630 GROUND MOUNTED SUPPORTS NO. 3 POST | 630 OVERHEAD SIGN SUPPORTS TC-7.65 DESIGN 8 85' SPAN | 630 OVERHEAD SIGN SUPPORTS TC-7.65 DESIGN 8 75' SPAN | 630 OVERHEAD SIGN SUPPORTS TC-7.65 DESIGN 8 97' SPAN | 630 OVERHEAD SIGN SUPPORTS TC 12.30 | | 630 OVERHEAD SIGN SUPPORTS TC 12.30 DESIGN 4 20' ARM | 630 OVERHEAD SIGN SUPPORTS TC 12.30 DESIGN 9 26' ARM | 630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION | 630 REMOVAL OF GRD. MTD. POST SUPPORT AND DISPOSAL | 630 REMOVAL OF GRD. MTD. BEAM SUPPORT AND DISPOSAL | 630 REMOVAL OF OVER-HEAD SIGN SUPPORT AND DISPOSAL TYPE TC-7.65 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MAIN LINE | | | | | SQ. FT. | SQ. FT. | EACH | EACH | EACH | EACH | EACH | EACH | | EACH | EACH | EACH | EACH | LIN. FT. | LIN. FT. | EACH | EACH | EACH | | | EACH | EACH | POST | BEAM | EACH |
| 1 | 843+00 | LT | W-54A-144 | 12'x4' | | | 48 | | | | | | | | | | | 1 | | | | | | | | 1 | | 1 | | | |
| | | | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 2 | 847+27 | RT | NO WORK | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2A | 855+00 | LT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 856+22 | RT | GEP | 8'x2' | | | | | | | | | | | | | | 1 | | | | | | | | | | 1 | 1 | | |
| | | | GB | 13'x12' | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 857+47 | RT | GEP | 8'x2' | | | | | | 1 | | | | | | | | | | | | | | | | | | | | 2 | |
| | | | GB | 13'x12' | 1 | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1' | | 1.5 | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 4 | 862+00 | RT | IM-37-36 | 3'x1.5' | | 4.5 | | | | | | | | | | | | | | 15.5/15.5 | | | | | | | | | | |
| | | | M-5-36-2 | 3'x3' | | 9.0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 862+00 | LT | IM-38-36 | 3'x1.5' | | 4.5 | | | | | | | | | | | | | | 15.5/15.5 | | | | | | | | | | |
| | | | M-5-36-2 | 3'x3' | | 9.0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 870+81 | RT | GEP | 8'x2' | | | 16.0 | | | | | | | | | | 2 | 1 | | | | 1 | | | | | 2 | | | | |
| | | | GB | 13'x10' | 1 | | 130.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | RT | GEP | 8'x2' | | | 16.0 | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| | | | GE | 11'x12'-6" | 1 | | 137.5 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1' | | 1.5 | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| | | RT | GEP | 8'x2' | | | | | | | | | | | 1 | | | | | | | | | | | | | | 2 | | |
| | | | GE | 10'x12' | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 7 | 880+37 | LT | W-49R-48 | 4'x4' | | | | 1 | | | | | | | | | | | | 15.0/15.0 | | | | | | | | | | |
| 8 | 883+92 | | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 888+63 | RT | GEP | 8'x2' | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 |
| | | | GB | 13'x9.5' | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| 10 | 898+41 | LT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | 899+00 | RT | N-41-12 | 1'x4' | | | | 1 | | | | | | | | | | 15.0 | | | | | | | | | | | 1 | | |
| 12 | 900+18 | RT | W-49R-48 | 4'x4' | | | | 1 | | | | | | | | | | | | 15.0/15.0 | | | | | | | | | 2 | | |
| 12A | 901+00 | LT | GG | 18' x 10' | | | 180.0 | | | | | | | | | | | 1 | | | | | 1 | | | | | 2 | | | |
| | | | GEP | 8'x2' | | | 16.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | GE | 16' x 13' | | | 208.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1' | | 1.5 | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 13 | 929+95.25 | RT | W-60R-48 | 4'x4' | | 16.0 | | | | | | | | | | | | | | 15.0/15.0 | | | | | | | | | | |
| 14 | 911+20 | LT | GEP | 8'x2' | | | | | | | | | | | 1 | | | | | | | | | | | | | | 2 | | |
| | | | GE | 13'x9.5' | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 15 | 920+75 | RT | W-53R-48 | 4'x4' | | 16.0 | | | | | | | | | | | | | | 15.0/15.5 | | | | | | | | | | |
| 16 | 922+75 | RT | M-37-36 | 3'x1.5' | | | | 1 | | | | | | | | | | | | 15.5/15.5 | | | | | | | | | 1 | | |
| | | | M-5-36-2 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 925+92 | LT | W-42-48 | 4'x4' | | | | 1 | | | | | | | | | | | | 15.0/15.0 | | | | | | | | | 2 | | |
| | | LT | W-42-48 | 4'x4' | | | | 1 | | | | | | | | | | | | 15.0/15.0 | | | | | | | | | 2 | | |
| 17A | 927+40 | LT | GG | 18'x10' | | | 180.0 | | | | | | | | | | | 1 | | | | | 1 | | | | | 2 | | | |
| | | | GEP | 8'x2' | | | 16.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | GE | 23' x 13' | | | 299.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1' | | 1.5 | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 18 | 929+43 | LT | GEP | 8'x2' | | | | | | | | | | | 1 | | | | | | | | | | | | | | 2 | | |
| | | | GB | 13'x12' | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 19 | 931+16 | RT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 931+35 | MED | R-19-24 | 2'x2.5' | | | | 1 | | | | | 1 | 1 | | | | | | 15.5/15.5 | | | | | | | | | 1 | | |
| | | | R-123-36 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | 931+60 | MED | R-19-24 | 2'x2.5' | | | | 1 | | | | | 1 | 1 | | | | | | 15.5/15.5 | | | | | | | | | 1 | | |
| | | | R-123-36 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | 934+17 | RT | GEP | 8'x2' | | | | | | | | | | | 1 | | | | | | | | | | | | | | 2 | | |
| | | | GB | 13'x9.5' | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| | SHEET TOTAL | | | | | 66.5 | 1246.5 | 11 | | 1 | 1 | 2 | 2 | 2 | 4 | 4 | 8 | 4 | 15.0 | 335.5 | 1 | 1 | 1 | | | 1 | 1 | 8 | 12 | 10 | 1 |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

CALCULATED
CHECKED

SIGNING QUANTITIES

MED-71-15.78

564
940

# SIGNING SUB-SUMMARY

| REF. NO. | STATION | SIDE | CODE | SIZE | LEVEL | 630 SIGNS FLAT SHEET TYPE "G" SQ. FT. | 630 SIGNS EXTRU SHEET TYPE "G" SQ. FT. | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MINOR EACH | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MAJOR EACH | 630 REMOVAL OF STRUCTURE MTD. SIGN & DISPOSAL EACH | 630 REMOVAL OF OVERHEAD MTD. SIGN & DISPOSAL EACH | 620 DELINEATOR, REMOVED FOR DISPOSAL EACH | 620 REFLECTOR, TYPE D, AS PER PLAN EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MINOR EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MAJOR EACH | 630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH | 625 GROUND RODS EACH | 630 GROUND MOUNTED SUPPORTS NO. 2 POST LIN. FT. | 630 GROUND MOUNTED SUPPORTS NO. 3 POST LIN. FT. | 630 OVERHEAD SIGN SUPPORTS TC-7.65 DESIGN 8 97' SPAN EACH | 630 OVERHEAD SIGN SUPPORTS TC-7.65 DESIGN 8 93' ARM EACH | 630 OVERHEAD SIGN SUPPORTS TC-7.65 DESIGN 8 85' SPAN EACH | 630 OVERHEAD SIGN SUPPORTS TC 12.30 DESIGN 9 26' ARM EACH | 630 OVERHEAD SIGN SUPPORTS TC 12.30 DESIGN 7 24' ARM EACH | 630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH | 630 REMOVAL OF GRD. MTD. POST SUPPORT AND DISPOSAL POST EACH | 630 REMOVAL OF GRD. MTD. BEAM SUPPORT AND DISPOSAL BEAM EACH | 630 REMOVAL OF OVER-HEAD SIGN SUPPORT AND DISPOSAL TYPE TC-7.65 EACH | 630 REMOVAL OF OVER-HEAD SIGN SUPPORT AND DISPOSAL TYPE TC-18.24 EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MAIN LINE | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | 935+14 | LT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | 942+50 | LT | M-38-36 | 3'x1.5' | | | | 1 | | | | | | | | | | 15.5/15.5 | | | | | | | 1 | | | |
| | | | M-5-36-2 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| 24A | 932+25.30 | RT | GG | 17'x10' | | | 170.0 | | | | | | | | | | 1 | | | | 1 | | | 2 | | | | |
| | | | GEP | 8'x2' | | | 16.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | GB | 23' x 13' | | | 299.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | | | | | 1 | | | | | | | | | | | | |
| 25 | 948+93 | RT | GEP | 8'x2' | | | | | | | | | | 1 | | | | | | | | | | | | | 2 | |
| | | | GB | 13'x9.5' | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 26 | 953+80 | LT | GEP | 8'x2' | | | 16.0 | | | | | | | | | | 1 | | | 1 | | | | 2 | | | | |
| | | | GE | 18'x12'-6" | 1 | | 225.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | GG | 18'x10' | | | 180.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | | | | | 1 | | | | | | | | | | | | |
| 27 | 956+63 | LT | GEP | 8'x2' | | | | | | | | | | 1 | | | | | | | | | | | | | 2 | |
| | | | GB | 12'x12' | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 28 | 964+61 | RT | GEP | 8'x2' | | | | | | | | | | 1 | | | | | | | | | | | | | 2 | |
| | | | GB | 13'x9.5' | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 29 | 946+05.07 | LT | W-60R-48 | 4'x4' | | 16.0 | | | | | | | | | | | | 15.0/15.5 | | | | | | | | | | |
| 30 | 971+00 | RT | GG | 18'x10' | | | 180.0 | | | | | | | | | | 1 | | | | 1 | | | 2 | | | | |
| | | | GEP | 8'x2' | | | 16.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | GB | 18'x10'-6" | | | 189.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | | | | | 1 | | | | | | | | | | | | |
| 31 | 955+80 | LT | W-53R-48 | 4'x4' | | 16.0 | | | | | | | | | | | | 15.0/15.5 | | | | | | | | | | |
| 32 | 974+16 | LT | W-49R-48 | 4'x4' | | | | 1 | | | | | | | | | | 15.0/15.5 | | | | | | | 2 | | | |
| 33 | 975+14 | RT | GEP | 8'x2' | | | | | | | 1 | | | | | | | | | | | | | | | | 1 | |
| | | | GB | 14'x7' | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| | | | GG | 17'x9.5' | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 34 | 975+71 | LT | W-54B | 16'x5' | | | | | | | | | | | 2 | | | | | | | | | | | 4 | | |
| 35 | 977+19 | RT | W-98-48 | 4'x5' | | | | 1 | | | | | | | | | | 15.0/15.0 | | | | | | | 1 | | | |
| 36 | 977+67 | RT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | 979+80 | RT | M-37-36 | 3'x1.5' | | | | 1 | | | | | | | | | | 15.5/16.0 | | | | | | | 1 | | | |
| | | | M-5-36-2 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| 38 | 988+00 | BRDG | W-54B | 16'x5' | | | | | | 1 | | | | | | | | | | | | | | | | | | 1 |
| 39 | 1001+60 | RT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 1003+24 | RT | N-41-12 | 1'x4' | | | | 1 | | | | | | | | | | | 12.0 | | | | | | | | | |
| 41 | 1038+20 | RT | GEP | 8'x2' | | | 16.0 | | | | | | | | | | 1 | | | | | | 1 | 1 | | | | |
| | | | GB | 12'x12' | 1 | | 144.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1 | | 1.5 | | | | | | | | | | 1 | | | | | | | | | | | | |
| 42 | 1039+40 | RT | GEP | 8'x2' | | | | | | | | | | 1 | | | | | | | | | | | | | 2 | |
| | | | GB | 9'x7' | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 43 | 1040+31 | LT | R-35-48 | 4'x5' | | | | 1 | | | | | | | | | | 15.5/15.5 | | | | | | | 2 | | | |
| 44 | 1050+45 | RT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45 | 1050+78 | LT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | | | | | |
| 46 | 1061+12 | LT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | | | | | |
| 47 | 1066+12 | RT | GEP | 8'x2' | | | | | | | | | | 1 | | | | | | | | | | | | | 2 | |
| | | | GB | 9'x7' | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 48 | 1066+70 | MED | R-19-24 | 2'x2.5' | | | | 1 | | | | 1 | 1 | | | | | 15.0/15.0 | | | | | | | 1 | | | |
| | | | R-123-36 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| 49 | 1066+84 | RT | GEP | 8'x2' | | | 16.0 | | | | | | | | | | 1 | | | | | 1 | | 1 | | | | |
| | | | GB | 13'x12' | 1 | | 156.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1 | | 1.5 | | | | | | | | | | 1 | | | | | | | | | | | | |
| 50 | 1067+15 | MED | R-19-24 | 2'x2.5' | | | | 1 | | | | 1 | 1 | | | | | 15.0/15.0 | | | | | | | 1 | | | |
| | | | R-123-36 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| | SHEET TOTAL | | | | | 39.5 | 1623.0 | 12 | | 1 | 3 | 2 | 2 | 5 | 7 | 5 | 5 | 12 | 27.5 | 1 | 1 | 1 | 1 | 1 | 8 | 13 | 10 | 1 | 1 |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

CALCULATED
CHECKED

SIGNING QUANTITIES

MED-71-15.78

# SIGNING SUB-SUMMARY

Note: Sheet Totals Carried To Traffic Control General Summary Sheet 562 .

| REF. NO. | STATION | SIDE | CODE | SIZE | LEVEL | 630 SIGNS FLAT SHEET TYPE "G" SQ. FT. | 630 SIGNS EXT.RU SHEET TYPE "G" SQ. FT. | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MINOR EACH | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MAJOR EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MINOR EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MAJOR EACH | 630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH | 625 GROUND RODS EACH | 630 GROUND MOUNTED SUPPORTS NO. 2 POST LIN. FT. | 630 GROUND MOUNTED SUPPORTS NO. 3 POST LIN. FT. | 630 OVERHEAD SIGN SUPPORTS TC 12.30 EACH | 630 OVERHEAD SIGN SUPPORTS TC 12.30 EACH | 630 OVERHEAD SIGN SUPPORTS TC 12.30 DESIGN 9 26' ARM EACH | 630 OVERHEAD SIGN SUPPORTS TC 12.30 EACH | 630 OVERHEAD SIGN SUPPORTS TC 12.30 EACH | 630 OVERHEAD SIGN SUPPORTS TC 12.30 EACH | 630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH | 630 REMOVAL OF GRD. MTD. POST SUPPORT AND DISPOSAL POST EACH | 630 REMOVAL OF GRD. MTD. BEAM SUPPORT AND DISPOSAL BEAM EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MAIN LINE | | | | | | | | | | | | | | | | | | | | | | | |
| 51 | 1074+38 | LT | M-38-36 | 3'x1.5' | | | | 1 | | | | | | | 15.5/16.0 | | | | | | | | 1 | |
| | | | M-5-36-2 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | |
| 52 | 1084+40 | RT | GEP | 8'x2' | | | | | | 1 | | | | | | | | | | | | | | 2 |
| | | | GB | 8'x7' | | | | | | | 1 | | | | | | | | | | | | | |
| | | RT | GEP | 8'x2' | | | 16.0 | | | | | | 1 | | | | | 1 | | | | 1 | | |
| | | | GE | 12'x12'-6" | 1 | | 150.0 | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1 | | 1.5 | | | | | | 1 | | | | | | | | | | | | |
| 53 | 1093+00 | RT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | |
| 54 | 1095+00 | LT | W-49R-48 | 4'x4' | | | | 1 | | | | | | | 15.0/15.5 | | | | | | | | 2 | |
| 55 | 1096+45 | RT | M-37-36 | 3'x1.5' | | | | 1 | | | | | | | 15.5/16.0 | | | | | | | | 1 | |
| | | | M-5-36-2 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | |
| 56 | 1110+71 | RT | N-41-12 | 1'x4' | | | | 1 | | | | | | 12.0 | | | | | | | | | 1 | |
| 57 | 1112+86 | LT | M-38-36 | 3'x1.5' | | | | 1 | | | | | | | 15.5/16.0 | | | | | | | | 1 | |
| | | | M-5-36-2 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | |
| 58 | 1113+79 | RT | W-49R-48 | 4'x4' | | | | 1 | | | | | | | 15.0/15.5 | | | | | | | | 2 | |
| 59 | 1115+57 | LT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | |
| 60 | 1124+35 | LT | GEP | 8'x2' | | | 16.0 | | | | | | 1 | | | | | 1 | | | | 1 | | |
| | | | GE | 12'x12'-6" | 1 | | 150.0 | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1 | | 1.5 | | | | | | 1 | | | | | | | | | | | | |
| | | LT | GEP | 8'x2' | | | | | | 1 | | | | | | | | | | | | | | |
| | | | GB | 10'x9.5' | | | | | | | 1 | | | | | | | | | | | | | 2 |
| 61 | 1134+56 | LT | N-44B-18 | 1.5x1 | | 1.5 | | | | | | 1 | | | | | | | | | | | | |
| 62 | 1135+00 | RT | M-37-36 | 3'x1.5' | | | | 1 | | | | | | | 15.5/16.0 | | | | | | | | 1 | |
| | | | M-5-36-2 | 3'x3' | | | | 1 | | | | | | | | | | | | | | | | |
| 63 | 1142+62 | LT | GEP | 8'x2' | | | | | | 1 | | | | | | | | | | | | | | 2 |
| | | | GB | 13'x9.5' | | | | | | | 1 | | | | | | | | | | | | | |
| | 1142+75 | LT | GEP | 8'x2' | | | 16.0 | | | | | | 1 | | | | | 1 | | | | 1 | | |
| | | | GB | 13'x12' | 1 | | 156.0 | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1 | | 1.5 | | | | | | 1 | | | | | | | | | | | | |
| 64 | 1146+10 | RT | N-44B-18 | 1.5x1 | | 1.5 | | | | | | 1 | | | | | | | | | | | | |
| 65 | 1148+57 | RT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | |
| 66 | 1157+37 | LT | W-49R-48 | 4'x4' | | | | 1 | | | | | | | 15.0/15.5 | | | | | | | | 2 | |
| 67 | 1166+84 | LT | NO WORK | | | | | | | | | | | | | | | | | | | | | |
| 68 | 1171+33 | LT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | |
| 69 | 1177+08 | RT | GEP | 8'x2' | | | 16.0 | | | | | | 1 | | | | | 1 | | | | 1 | | |
| | | | GB | 14'x12' | 1 | | 168.0 | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1 | | 1.5 | | | | | | 1 | | | | | | | | | | | | |
| | 1177+28 | RT | GEP | 8'x2' | | | | | | 1 | | | | | | | | | | | | | | 2 |
| | | | GB | 14'x9.5' | | | | | | | 1 | | | | | | | | | | | | | |
| 70 | 1180+21 | LT | N-44B-18 | 1.5x1 | | 1.5 | | | | | | 1 | | | | | | | | | | | | |
| 71 | 1190+34 | RT | N-44B-18 | 1.5x1 | | 1.5 | | | | | | 1 | | | | | | | | | | | | |
| 72 | 1195+53 | LT | GEP | 8'x2' | | | | | | 1 | | | | | | | | | | | | | | 2 |
| | | | GB | 10'x9.5' | | | | | | | 1 | | | | | | | | | | | | | |
| 73 | 1195+55 | LT | GEP | 8'x2' | | | 16.0 | | | | | | 1 | | | | | 1 | | | | 1 | | |
| | | | GB | 12'x12' | 1 | | 144.0 | | | | | | | | | | | | | | | | | |
| 74 | 1199+17 | RT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | |
| 75 | 1206+07 | LT | GA-1 | 5'x1.5' | | | | 1 | | | | | | | 14.5/14.5 | | | | | | | | 2 | |
| 76 | 1212+37 | LT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | |
| 77 | 1218+14 | LT | N-44B-18 | 1.5x1 | | 1.5 | | | | | | 1 | | | | | | | | | | | | |
| 78 | 1225+00 | RT | GN-VAR | 5'x2' | | | | 1 | | | | | | | 14.5/14.5 | | | | | | | | 2 | |
| 79 | 1226+15 | LT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | | | | |
| 80 | 1231+14 | RT | GEP | 8'x2' | | | 16.0 | | | | | | 1 | | | | | 1 | | | | 1 | | |
| | | | GB | 14'x12' | 1 | | 168.0 | | | | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5x1 | | 1.5 | | | | | | 1 | | | | | | | | | | | | |
| | 1231+24 | RT | GEP | 8'x2' | | | | | | 1 | | | | | | | | | | | | | | 2 |
| | | | GB | 14'x9.5' | | | | | | | 1 | | | | | | | | | | | | | |
| | SHEET TOTAL | | | | | 15.0 | 1032.0 | 14 | | 6 | 6 | 10 | 6 | 12.0 | 275.5 | | | 6 | | | | 6 | 15 | 12 |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

CALCULATED
CHECKED

SIGNING QUANTITIES

MED-71-15.78

566
940

# SIGNING SUB-SUMMARY

Note: Sheet Totals Carried To Traffic Control General Summary Sheet 562 .

| REF. NO. | STATION | SIDE | CODE | SIZE | LEVEL | 630 SIGNS FLAT SHEET TYPE "G" SQ. FT. | 630 SIGNS EXTRU SHEET TYPE "G" SQ. FT. | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MINOR EACH | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MAJOR EACH | 620 DELINEATOR, REMOVED FOR DISPOSAL EACH | 620 REFLECTOR, TYPE D AS PER PLAN EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MINOR EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MAJOR EACH | 630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH | 625 GROUND RODS EACH | 630 GROUND MOUNTED SUPPORTS NO. 2 POST LIN. FT. | 630 GROUND MOUNTED SUPPORTS NO. 3 POST LIN. FT. | 630 OVERHEAD SIGN SUPPORTS TC 12.30 DESIGN 9 26' ARM EACH | 630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH | 630 REMOVAL OF GRD. MTD. POST SUPPORT AND DISPOSAL POST EACH | 630 REMOVAL OF GRD. MTD. BEAM SUPPORT AND DISPOSAL BEAM EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MAIN LINE | | | | | | | | | | | | | | | | | | | | |
| 81 | 1236+32 | LT | M-38-36 | 3'x1.5' | | | | 1 | | | | | | | | | 15.5/16.0 | | | 1 | |
| | | | M-5-36-2 | 3'x3' | | | | 1 | | | | | | | | | | | | | |
| 82 | 1248+48 | RT | GEP | 8'x2' | | | | | | | | 1 | | | | | | | | | 2 |
| | | | GB | 14'x9.5' | | | | | | | | | 1 | | | | | | | | |
| | | RT | GEP | 8'x2' | | | 16.0 | | | | | | | | 1 | | | 1 | 1 | | |
| | | | GE | 14'x12'-6" | 1 | | 175.0 | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | | | 1 | | | | | | | |
| 83 | 1257+34 | RT | FOR QUANTITIES SEE SHEET 569B | | | | | | | | | | | | | | | | | | |
| 84 | 1258+50 | RT | M-37-36 | | | | | 1 | | | | | | | | | | | | 1 | |
| | | | M-5-36-2 | | | | | 1 | | | | | | | | | | | | | |
| | 1260+00 | RT | M-37-36 | 3'x1.5' | | | | | | | | | | | | | 17.0/17.5 | | | | |
| | | | M-5-36-2 | 3'x3' | | | | | | | | | | | | | | | | | |
| 85 | 1258+87 | LT | W-49R-48 | 4'x4' | | | | 1 | | | | | | | | | 16.0/16.0 | | | 2 | |
| 86 | 1263+93 | RT | W-49R-48 | 4'x4' | | | | 1 | | | | | | | | | 16.0/16.0 | | | 2 | |
| 87 | 1264+32 | RT | N-41-12 | 1'x4' | | | | 1 | | | | | | | | 12.0 | | | | 1 | |
| 88 | 1275+36 | LT | M-38-36 | 3'x1.5' | | | | 1 | | | | | | | | | 17.0/17.5 | | | 1 | |
| | | | M-5-36-2 | 3'x3' | | | | 1 | | | | | | | | | | | | | |
| 89 | 1278+19 | LT | W-47-48 | 4'x4' | | | | 1 | | | | | | | | | 16.0/16.0 | | | 2 | |
| 90 | 1278+72 | LT | FOR QUANTITIES SEE SHEET 569C | | | | | | | | | | | | | | | | | | |
| 91 | 1286+00 | RT | M-37-36 | 3'x1.5' | | | | 1 | | | | | | | | | 15.5/16.0 | | | 1 | |
| | | | M-5-36-2 | 3'x3' | | | | 1 | | | | | | | | | | | | | |
| 92 | 1287+20 | LT | GEP | 8'x2' | | | 16.0 | | | | | | | | 1 | | | 1 | 1 | | |
| | | | GE | 14'x12'-6" | 1 | | 175.0 | | | | | | | | | | | | | | |
| | | | N-44B | 1.5x1 | | 1.5 | | | | | | | | 1 | | | | | | | |
| | 1287+40 | LT | GEP | 8'x2' | | | | | | | | 1 | | | | | | | | | 2 |
| | | | GB | 14'x6' | | | | | | | | | 1 | | | | | | | | |
| 93 | 1296+41 | RT | FOR QUANTITIES SEE SHEET 569C | | | | | | | | | | | | | | | | | | |
| 94 | 1299+60 | MED | R-19-24 | 2'x2.5' | | | | 1 | | 1 | 1 | | | | | | 15.0/15.5 | | | 1 | |
| | | | R-123-36 | 3'x3' | | | | 1 | | | | | | | | | | | | | |
| 95 | 1300+20 | MED | R-19-24 | 2'x2.5' | | | | 1 | | 1 | 1 | | | | | | 15.0/15.5 | | | 1 | |
| | | | R-123-36 | 3'x3' | | | | 1 | | | | | | | | | | | | | |
| 96 | 1306+51 | RT | FOR QUANTITIES SEE SHEET 569C | | | | | | | | | | | | | | | | | | |
| 97 | 1312+11 | LT | GEP | 8'x2' | | | 16.0 | | | | | | | | 1 | | | 1 | 1 | | |
| | | | GB | 14'x12' | 1 | | 168.0 | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | | | 1 | | | | | | | |
| | 1312+27 | LT | GEP | 8'x2' | | | | | | | | 1 | | | | | | | | | 2 |
| | | | GB | 14'x9.5' | | | | | | | | | 1 | | | | | | | | |
| 98 | 1332+14 | LT | GEP | 8'x2' | | | | | | | | 1 | | | | | | | | | 2 |
| | | | GB | 14'x9'-6" | | | | | | | | | 1 | | | | | | | | |
| | 1332+34 | LT | GEP | 8'x2' | | | 16.0 | | | | | | | | 1 | | | 1 | 1 | | |
| | | | GB | 14'x12' | 1 | | 168.0 | | | | | | | | | | | | | | |
| | | | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | | | 1 | | | | | | | |
| 99 | 1353+37 | RT | N-88-54 | 4.5'x3.5' | | | | 1 | | | | | | | | | 15.5/16.0 | | | 2 | |
| 100 | 1391+34 | LT | FOR QUANTITIES SEE SHEET 569C | | | | | | | | | | | | | | | | | | |
| | SHEET TOTAL | | | | | 6.0 | 750.0 | 17 | | 2 | 2 | 4 | 4 | 4 | 4 | 12.0 | 320.5 | 4 | 4 | 15 | 8 |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

CALCULATED
CHECKED

SIGNING QUANTITIES

MED-71-15.78

# SIGNING SUB-SUMMARY

Note: Sheet Totals Carried To Traffic Control General Summary Sheet 562 .

| REF. NO. | STATION | SIDE | CODE | SIZE | LEVEL | 630 SIGNS FLAT SHEET TYPE "G" SQ. FT. | 630 SIGNS EXTRU SHEET TYPE "G" SQ. FT. | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MINOR EACH | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MAJOR EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MINOR EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MAJOR EACH | 630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH | 630 GROUND MOUNTED SUPPORTS NO. 3 POST LIN. FT. | 630 GROUND MOUNTED SUPPORTS ONE WAY NO. 3 POST LIN. FT. | 630 REMOVAL OF GRD. MTD. POST SUPPORT AND DISPOSAL POST EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S.R. 18 INTERCHANGE | | | | | | | | | | | | | | |
| | RAMP "C" | | | | | | | | | | | | | | |
| 101 | 13+05 | LT | W-47-48 | 4'x4' | | | | 1 | | | | | 16.0/16.0 | | 2 |
| | | RT | W-47-48 | 4'x4' | | | | 1 | | | | | 16.0/16.0 | | 2 |
| 102 | 14+34 | RT | FOR QUANTITIES SEE SHEET 569C | | | | | | | | | | | | |
| 103 | 17+55 | RT | R-70-48 | 4'x3' | | | | 1 | | | | | 14.0/14.5 | | 2 |
| 104 | 18+34 | RT | D-4-A | 7'x1.5' | | | | 1 | | | | | 12.5/13.0 | | 2 |
| 105 | 19+05 | LT | R-41A-36 | 3'x2' | | | | 1 | | | | | 13.0/13.5 | | 1 |
| | | RT | R-41A-36 | 3'x2' | | | | 1 | | | | | 13.0/13.5 | | 1 |
| 106 | 19+93 | RT | R-41B-36 | 3'x3' | | | | 1 | | | | | 14.0 | | 2 |
| | | | R-43L-48 | 4'x1.5' | | 6.0 | | | | | | | | 15.5 | |
| | | | R-43R-48 | 4'x1.5' | | 6.0 | | | | | | | | | |
| 106A | 19+93 | LT | R-41B-36 | 3'x3' | | | | 1 | | | | | 14.0 | | 2 |
| | | | R-43L-48 | 4'x1.5' | | | | 1 | | | | | | 15.5 | |
| | | | R-43R-48 | 4'x1.5' | | | | 1 | | | | | | | |
| | RAMP "A" | | | | | | | | | | | | | | |
| 107 | 25+47 | LT | R-15A-36 | 3'x3' | | | | 1 | | | | | 14.0/14.5 | | 1 |
| | S.R. 18 MAIN LINE | | | | | | | | | | | | | | |
| 108 | 147+40 | RT | N-44B-18 | 1.5' x 1' | | 1.5 | | | | | | 1 | | | |
| 108A | 149+70 | RT | FOR QUANTITIES SEE SHEET 569E | | | | | | | | | | | | |
| | | MED | | | | | | | | | | | | | |
| | 149+95 | | | | | | | | | | | | | | |
| 109 | 151+75 | MED | FOR QUANTITIES SEE SHEET 569E | | | | | | | | | | | | |
| | 152+00 | LT | | | | | | | | | | | | | |
| 109A | 154+25 | LT | FOR QUANTITIES SEE SHEET 569E | | | | | | | | | | | | |
| | 154+36 | LT | | | | | | | | | | | | | |
| | RAMP "B" | | | | | | | | | | | | | | |
| 110 | 0+65 | LT | R-41B-36 | 3'x3' | | | | 1 | | | | | 15.5 | | 2 |
| | | | R-3R-36 | 3'x4.5' | | | | 1 | | | | | | 17.0 | |
| | | | R-43L-48 | 4'x1.5' | | 6.0 | | | | | | | | | |
| | | | R-43R-48 | 4'x1.5' | | 6.0 | | | | | | | | | |
| 111 | 0+65 | RT | R-41B-36 | 3'x3' | | | | 1 | | | | | 15.5 | | 2 |
| | | | R-3L-36 | 3'x4.5' | | | | 1 | | | | | | 17.0 | |
| | | | R-43L-48 | 4'x1.5' | | 6.0 | | | | | | | | | |
| | | | R-43R-48 | 4'x1.5' | | 6.0 | | | | | | | | | |
| 112 | 0+84 | LT | W-82-36 | 3'x3' | | | | | 1 | | | | | | 1 |
| | | | WP-76P-24 | 2'x2' | | | | | 1 | | | | | | |
| | | | W-81-42 | 3.5'x3.5' | | 12.25 | | | | | | | 14.5/14.5 | | |
| 112A | 2+00 | LT | R-41A-36 | 3'x2' | | 6.0 | | | | | | | 13.0/13.5 | | |
| | | RT | R-41A-36 | 3'x2' | | 6.0 | | | | | | | 13.0/13.5 | | |
| 113 | 1+77 | LT | R-31A | | | | | 1 | | | | | | | 2 |
| | | RT | R-31A | | | | | 1 | | | | | | | 2 |
| | 3+25 | LT | R-31A-36 | 3'x2.5' | | 7.5 | | | | | | | 13.5/14.0 | | |
| | | RT | R-31A-36 | 3'x2.5' | | 7.5 | | | | | | | 13.5/14.0 | | |
| 114 | 5+07 | RT | D-4A | 7'x1.5' | | | | 1 | | | | | 13.0/13.5 | | 2 |
| 115 | 5+63 | LT | FOR QUANTITIES SEE SHEET 569C | | | | | | | | | | | | |
| 116 | 7+50 | LT | W-47-48 | 4'x4' | | | | 1 | | | | | 16.0/16.0 | | 2 |
| 117 | 8+06 | RT | FOR QUANTITIES SEE SHEET 569C | | | | | | | | | | | | |
| | RAMP "D" | | | | | | | | | | | | | | |
| 118 | 1+94 | RT | R-15A-36 | 3'x3' | | | | 1 | | | | | 14.0/14.5 | | 1 |
| 119 | 900+73 | RT | W-53R-48 | 4'x4' | | 16.0 | | | | | | | 16.0/16.0 | | |
| | SHEET TOTAL | | | | | 92.75 | | 20 | 2 | | | 1 | 514.5 | 65.0 | 29 |

DESIGN FILE : $$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

CALCULATED
CHECKED

SIGNING QUANTITIES

MED-71-15.78

# SIGNING SUB-SUMMARY

Note: Sheet Totals Carried To Traffic Control General Summary Sheet 562 .

| REF. NO. | STATION | SIDE | CODE | SIZE | LEVEL | 630 SIGNS FLAT SHEET TYPE "G" SQ. FT. | 630 SIGNS EXTRU SHEET TYPE "G" SQ. FT. | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MINOR EACH | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MAJOR EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MINOR EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MAJOR EACH | 630 GROUND MOUNTED SUPPORTS NO. 3 POST LIN. FT. | 630 GROUND MOUNTED SUPPORTS ONE WAY NO. 3 POST LIN. FT. | 630 OVERHEAD SIGN SUPPORTS | 630 REMOVAL OF GRD. MTD. POST SUPPORT AND DISPOSAL POST EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S.R. 3 INTERCHANGE | | | | | | | | | | | | | | |
| | RAMP "A" | | | | | | | | | | | | | | |
| 120 | 77+00 | RT | FOR QUANTITIES SEE SHEET 569C | | | | | | | | | | | | |
| 121 | 79+00 | RT | NO WORK | | | | | | | | | | | | |
| 122 | 82+90 | RT | R-41A | 3'x2' | | | | 1 | | | | 13.0/13.5 | | | 1 |
| | | LT | R-41A | 3'x2' | | | | 1 | | | | 13.0/13.5 | | | 1 |
| 123 | 84+60 | LT | R-1-48 | 4'x4' | | 16.0 | | | | 1 | | 15.0 | | | 1 |
| | | | R-41B-36 | 3'x3' | | 9.0 | | | | 1 | | | | | 2 |
| | | | R-43R-48 | 4'x1.5' | | 6.0 | | | | 1 | | | 16.5 | | |
| | | | R-43L-48 | 4'x1.5' | | 6.0 | | | | 1 | | | | | |
| 124 | 84+60 | RT | R-1-48 | 4'x4' | | 16.0 | | | | 1 | | 15.0 | | | 2 |
| | | | R-41B-36 | 3'x3' | | 9.0 | | | | 1 | | | | | |
| | | | R-43R-48 | 4'x1.5' | | 6.0 | | | | | | | 16.5 | | |
| | | | R-43L-48 | 4'x1.5' | | 6.0 | | | | | | | | | |
| | RAMP "B" | | | | | | | | | | | | | | |
| 125 | 85+50 | RT | R-15A-36 | 3'x3' | | | | 1 | | | | 14.0/15.0 | | | 1 |
| 125A | 902+00 | LT | IM-38-36 | 3'x1.5' | | 4.5 | | | | | | 17.5/17.5 | | | |
| | | | M-5-36-2 | 3'x3' | | 9.0 | | | | | | | | | |
| | | | IM-21-30 | 2.5'x2' | | 5.0 | | | | | | | | | |
| | 902+93 | LT | M-45 | | | | | | | 1 | | | | | 1 |
| 125B | 899+11 | RT | IM-37-36 | 3'x1.5' | | 4.5 | | | | | | 17.5/17.5 | | | |
| | | | M-5-36-2 | 3'x3' | | 9.0 | | | | | | | | | |
| | | | IM-21-30 | 2.5'x2' | | 5.0 | | | | | | | | | |
| | | | M-45 | | | | | | | 1 | | | | | 1 |
| | RAMP "C" | | | | | | | | | | | | | | |
| 126 | 81+30 | LT | R-1-48 | 4'x4' | | 16.0 | | | | 1 | | 15.0 | | | 2 |
| | | | R-41B-36 | 3'x3' | | 9.0 | | | | 1 | | | | | |
| | | | R-43R-48 | 4'x1.5' | | 6.0 | | | | 1 | | | 16.5 | | |
| | | | R-43L-48 | 4'x1.5' | | 6.0 | | | | 1 | | | | | |
| 127 | 81+30 | RT | R-1-48 | 4'x4' | | 16.0 | | | | 1 | | 15.0/15.0 | | | 2 |
| | | | R-41B-36 | 3'x3' | | 9.0 | | | | 1 | | | | | |
| 128 | 83+50 | LT | R-41A-36 | 3'x2' | | | | 1 | | | | 13.0/13.5 | | | 1 |
| | | RT | R-41A-36 | 3'x2' | | | | 1 | | | | 13.0/13.5 | | | 1 |
| 129 | 88+05 | | FOR QUANTITIES SEE SHEET 569C | | | | | | | | | | | | |
| | RAMP "D" | | | | | | | | | | | | | | |
| 130 | 80+23 | LT | R-15A-36 | 3'x3' | | | | 1 | | | | 14.0/15.0 | | | 1 |
| 130A-130D | | | FOR QUANTITIES SEE SHEET 569D | | | | | | | | | | | | |
| | S.R. 303 INTERCHANGE | | | | | | | | | | | | | | |
| | RAMP "C" | | | | | | | | | | | | | | |
| 131 | 37+00 | RT | W-47-48 | 4'x4' | | 16.0 | | | | | | 15.5/16.0 | | | |
| | | LT | W-47-48 | 4'x4' | | 16.0 | | | | | | 15.5/16.0 | | | |
| 132 | 41+15 | RT | W-82-36 | 3'x3' | | | | | | 1 | | | | | 1 |
| | | | W-81-42 | 3.5'x3.5' | | 12.25 | | | | | | 15.0/15.5 | | | |
| 133 | 41+92 | | FOR QUANTITIES SEE SHEET 569D | | | | | | | | | | | | |
| 134 | 42+10 | | R-41A-36 | 3'x2' | | | | 1 | | | | 13.0/13.5 | | | 1 |
| | | RT | R-41A-36 | 3'x2' | | | | 1 | | | | 13.0/13.5 | | | 1 |
| 135 | 43+00 | RT | R-31F-36 | 3'x2.5' | | 7.5 | | | | | | 14.0/14.5 | | | |
| 136 | 45+00 | RT | W-47-48 | 4'x4' | | | | | | 1 | | | | | 2 |
| | SHEET TOTAL | | | | | 224.75 | | 8 | | 16 | | 484.0 | 49.5 | | 22 |

DESIGN FILE : $$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$
TIME : $$$$TIME$$$$

CALCULATED
CHECKED

SIGNING QUANTITIES

MED-71-15.78

# SIGNING SUB-SUMMARY

Note: Sheet Totals Carried To Traffic Control General Summary Sheet 562 .

| REF. NO. | STATION | SIDE | CODE | SIZE | LEVEL | 630 SIGNS FLAT SHEET TYPE "G" SQ. FT. | 630 SIGNS EXTRU SHEET TYPE "G" SQ. FT. | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MINOR EACH | 630 REMOVAL OF GROUND MTD SIGN & RERECTION MAJOR EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MINOR EACH | 630 REMOVAL OF GROUND MTD. SIGN & DISPOSAL MAJOR EACH | 630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH | 625 GROUND RODS EACH | 630 GROUND MOUNTED SUPPORTS NO. 3 POST LIN. FT. | 630 GROUND MOUNTED SUPPORTS ONE WAY NO. 3 POST LIN. FT. | 630 OVERHEAD SIGN SUPPORTS TC 12.30 DESIGN 4 20' ARM EACH | 630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH | 630 REMOVAL OF GRD. MTD. POST SUPPORT AND DISPOSAL POST EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S.R. 3 INTER. (Cont.) | | | | | | | | | | | | | | | | | |
| | RAMP "D" | | | | | | | | | | | | | | | | | |
| 137 | 45+00 | RT | R-31F-36 | 3'x2.5' | | 7.5 | | | | | | | | 14.5/15.0 | | | | |
| 137A | 46+81 | RT | W-81-42 | 3.5'x3.5' | | 12.25 | | | | | | | | 14.5/15.0 | | | | |
| 138 | 46+73 | RT | R-41B-36 | 3'x3' | | | | 1 | | | | | | 14.0 | | | | 2 |
| | | | R-43R-48 | 4'x1.5' | | | | 1 | | | | | | | 15.5 | | | |
| | | | R-43L-48 | 4'x1.5' | | | | 1 | | | | | | | | | | |
| 139 | 45+00 | LT | R-15A-36 | 3'x3' | | | | 1 | | | | | | 14.0/14.5 | | | | 1 |
| 140 | 46+05 | LT | R-2-36 | 3'x3' | | | | 1 | | | | | | 14.5/15.0 | | | | 2 |
| 140A | 47+30 | LT | W-81-42 | 3.5'x3.5' | | 12.25 | | | | | | | | 14.5/15.0 | | | | |
| | RAMP "B" | | | | | | | | | | | | | | | | | |
| 141 | 45+92 | LT | R-15A-36 | 3'x3' | | | | 1 | | | | | | 14.0/15.0 | | | | 1 |
| 142 | 47+46 | LT | R-2-36 | 3'x3' | | | | 1 | | | | | | 14.5/15.0 | | | | 2 |
| 142A | 47+90 | LT | W-81-42 | 3.5'x3.5' | | 12.25 | | | | | | | | 14.5/15.0 | | | | |
| | 48+31 | LT | W-81-42 | 3.5'x3.5' | | 12.25 | | | | | | | | 14.5/15.0 | | | | |
| 143 | 48+00 | LT | W-82-36 | 3'x3' | | | | | | 1 | | | | | | | | 1 |
| | | | WP-76P-24 | 2'x2' | | | | | | 1 | | | | | | | | |
| 144 | 0+50 | LT | W-82-36 | 3'x3' | | | | | | 1 | | | | | | | | 1 |
| | | | WP-76P-24 | 2'x2' | | | | | | 1 | | | | | | | | |
| | | | W-81-42 | 3.5'x3.5' | | 12.25 | | | | | | | | 14.5/14.5 | | | | |
| 145 | 48+53 | RT | R-3R-36 | 3'x4.5' | | | | 1 | | | | | | 15.5 | | | | 2 |
| | | | R-41B-36 | 3'x3' | | 9.0 | | | | | | | | | 17.0 | | | |
| | | | R-43R-48 | 4'x1.5' | | 6.0 | | | | | | | | | | | | |
| | | | R-43L-48 | 4'x1.5' | | 6.0 | | | | | | | | | | | | |
| 145A | 48+53 | LT | R-3L-36 | 3'x4.5' | | | | 1 | | | | | | 15.5 | | | | 2 |
| | | | R-41B-36 | 3'x3' | | 9.0 | | | | | | | | | 17.0 | | | |
| | | | R-43R-48 | 4'x1.5' | | 6.0 | | | | | | | | | | | | |
| | | | R-43L-48 | 4'x1.5' | | 6.0 | | | | | | | | | | | | |
| 146 | 48+40 | LT | W-82-36 | 3'x3' | | | | | | 1 | | | | | | | | 1 |
| | | | WP-76P-24 | 2'x2' | | | | | | 1 | | | | | | | | |
| | | | W-81-42 | 3.5'x3.5' | | 12.25 | | | | | | | | 14.5/14.5 | | | | |
| 146A | 50+00 | RT | R-31A-36 | 3'x2.5' | | 7.5 | | | | | | | | 13.5/14.5 | | | | |
| 147 | 52+00 | LT | R-41A-36 | 3'x2' | | | | 1 | | | | | | 13.5/14.5 | | | | 1 |
| 147A | 52+00 | RT | R-41A-36 | 3'x2' | | | | 1 | | | | | | 13.5/14.5 | | | | 1 |
| | | | R-31A-36 | 3'x2.5' | | 7.5 | | | | | | | | | | | | |
| 148 | 52+67 | LT | W-82-36 | 3'x3' | | | | | | 1 | | | | | | | | 1 |
| | | | W-81-42 | 3.5'x3.5' | | 12.25 | | | | | | | | 14.5/15.0 | | | | |
| 149 | 54+67 | LT | FOR QUANTITIES SEE SHEET 569D | | | | | | | | | | | | | | | |
| | S.R. 303 MAIN LINE | | | | | | | | | | | | | | | | | |
| 150 | 45+05 | RT | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | 1 | | | | | | |
| 150A | 47+40 | LT | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | 1 | | | | | | |
| 150B | 49+00 | RT | FOR QUANTITIES SEE SHEET 569E | | | | | | | | | | | | | | | |
| 151 | 51+06 | RT | FOR QUANTITIES SEE SHEET 569E | | | | | | | | | | | | | | | |
| | 51+25 | MED | | | | | | | | | | | | | | | | |
| 151A | 54+22 | RT | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | 1 | | | | | | |
| 151B | 56+40 | LT | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | 1 | | | | | | |
| | I.R. 71 MAIN LINE | | | | | | | | | | | | | | | | | |
| 152 | 1267+25 | MED | W-54A | 16'x5' | | | 80.0 | | | | | | 1 | | | 1 | 1 | |
| | | | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | 1 | | | | | | |
| 153 | 1294+15 | MED | W-54B | 16'x5' | | | 80.0 | | | | | | 1 | | | 1 | 1 | |
| | | | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | 1 | | | | | | |
| 154 | 1307+35 | MED | W-54B | 16'x5' | | | 80.0 | | | | | | 1 | | | 1 | 1 | |
| | | | N-44B-18 | 1.5'x1' | | 1.5 | | | | | | 1 | | | | | | |
| | SHEET TOTAL | | | | | 160.75 | 240.0 | 11 | | 7 | | 7 | 3 | 480.5 | 49.5 | 3 | 3 | 18 |

DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$

CALCULATED
CHECKED

SIGNING QUANTITIES

MED-71-15.78

569A
940

630

| SHEET NO. | REFERENCE NO. | STATION | SIDE | CODE | SIZE (FEET) | GUARDRAIL | | FOR DETAIL SHOWING POINTS OF ELEVATIONS A, B, C, & D SEE SHEET | | | | | | SIGNS | | GROUND MOUNTED SUPPORTS | | | | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL | | GROUND MOUNTED BEAM SUPPORT FOUNDATION | SIGN BACKING ASSEMBLY | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL | REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL | BREAKAWAY BEAM CONNECTION | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | OFFSET BEHIND GUARDRAIL | ELEV. TOP OF FOUNDATION | | ELEV. BOTTOM OF FOUNDATION | | OFFSET FROM EDGE OF PAVEMENT | FLAT SHEET, TYPE G | EXTRU SHEET, TYPE G | S4 x 7.7 BEAM | W 6 x 9 BEAM | W 10 x 12 BEAM | W 10 x 22 BEAM | | | | | | | | | |
| | | | | | | YES | NO | FEET | A | C | B | D | FEET | SQ. FT. | | LIN. FT. | | | | MINOR | MAJOR | EACH | EACH | EACH | EACH | EACH | MINOR | MAJOR |
| | 2A | 855+00 | LT. | R-9-84 | 7' x 6' | X | | 4 | 98.8 | 98.1 | 94.8 | 94.1 | | | 42.0 | 18/19 | | | | | | 2 | | | | 2 | | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 8 | 883+92 | RT. | GF | 8' x 5' | | X | | 99.0 | 98.4 | 95.0 | 94.4 | 16 | | | 17/17.5 | | | | | | 2 | | 2 | | 2 | | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 10 | 898+41 | LT. | GF | 8' x 5' | | X | | 99.0 | 98.5 | 95.0 | 94.5 | 16 | | | 17/17.5 | | | | | | 2 | | 2 | | 2 | | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 19 | 931+16 / 941+00 | RT. | R-9-84 | 7' x 6' | | X | | 98.8 | 98.1 | 94.8 | 94.1 | 16 | | | 18/19 | | | | | | 2 | | | | 2 | 2 | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 23 | 935+14 | LT. | R-9-84 | 7' x 6' | X | | 4 | 98.0 | 96.0 | 94.0 | 92.0 | | | | 19/21 | | | | | | 2 | | | | 2 | 2 | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 36 | 977+67 | RT. | GF | 8' x 5' | | X | | 98.9 | 98.4 | 94.9 | 94.4 | 16 | | | 17/17.5 | | | | | | 2 | | 2 | | 2 | | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 39 | 1001+60 | RT. | GJ | 8' x 3' | X | | 4 | 97.5 | 95.5 | 93.5 | 91.5 | | | | 16.5/18.5 | | | | | | 2 | | | | 2 | 2 | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 44 | 1050+45 | RT. | GB | 17' x 6' | X | | 4 | 97.5 | 96.0 | 92.5 | 91.0 | | | | | 19.5/21 | | | | | 2 | | | | 2 | 2 | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 45 | 1050+78 | LT. | GJ | 9' x 4' | X | | 4 | 98.6 | 97.8 | 94.6 | 93.8 | | | | 16.5/17.5 | | | | | | 2 | | | | 2 | 2 | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 46 | 1061+12 | LT. | R-9-84 | 7' x 6' | X | | 4 | 98.8 | 98.0 | 94.8 | 94.0 | | | | 18/19 | | | | | | 2 | | | | 2 | 2 | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 53 | 1093+00 | RT. | GF | 8' x 5' | | X | | 99.0 | 99.0 | 95.0 | 95.0 | 16 | | | 17/17 | | | | | | 2 | | 2 | | 2 | | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 59 | 1115+57 | LT. | GF | 8' x 5' | | X | | 99.0 | 99.0 | 95.0 | 95.0 | 16 | | | 17/17 | | | | | | 2 | | 2 | | 2 | | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 65 | 1148+57 | RT. | R-9-84 | 7' x 6' | | X | | 98.8 | 98.1 | 94.8 | 94.1 | 16 | | | 18/19 | | | | | | 2 | | 2 | | 2 | | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 68 | 1171+33 | LT. | RA-4-72 | 6' x 5.5' | | X | | 99.0 | 98.5 | 95.0 | 94.5 | 16 | | | 17.5/18 | | | | | | 2 | | 2 | | 2 | 1 | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 74 | 1199+17 | RT. | RA-4-72 | 6' x 5.5' | | X | | 99.0 | 98.6 | 95.0 | 94.6 | 16 | | | 17.5/18 | | | | | | 2 | | 2 | | 2 | 1 | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 76 | 1212+37 | LT. | R-9-84 | 7' x 6' | | X | | 98.7 | 98.0 | 94.7 | 94.0 | 16 | | | 18.5/19 | | | | | | 2 | | | | 2 | 2 | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 79 | 1226+15 | LT. | RA-1-132 | 11' x 4.5' | X | | 4 | 98.6 | 97.6 | 94.6 | 93.6 | | | | 17/18 | | | | | | 2 | | 2 | | 2 | | 1 |
| | | | | GSF-1 | 5' x 1.5' | | | | | | | | | | | | | | | | | | 2 | | | | 1 | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| | 83 | 1257+34 | RT. | GF | 8' x 5' | | X | | 99.0 | 99.0 | 95.0 | 95.0 | 16 | | | 17/17 | | | | | | 2 | | 2 | | 2 | | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | 1 | | | | | |
| TOTALS CARRIED TO SHEET NO. 569A | | | | | | | | | | | | | | 27.0 | 42.0 | 606.0 | 40.5 | | | | | 36 | 20 | 20 | 14 | 36 | 5 | 13 |

CALCULATED PS
CHECKED PDG

# SIGNING SUBSUMMARY
# BEAM SUPPORTS AND FOUNDATIONS

MED-71-15.78

569B
940

7885REL_TSA.DGN 1/28/00 SAM

630

| SHEET NO. | REFERENCE NO. | STATION | SIDE | CODE | SIZE (FEET) | GUARDRAIL YES | GUARDRAIL NO | FOR DETAIL SHOWING POINTS OF ELEVATIONS A, B, C, & D SEE SHEET: OFFSET BEHIND GUARDRAIL FEET | ELEV. TOP OF FOUNDATION A | ELEV. TOP OF FOUNDATION C | ELEV. BOTTOM OF FOUNDATION B | ELEV. BOTTOM OF FOUNDATION D | OFFSET FROM EDGE OF PAVEMENT FEET | SIGNS: FLAT SHEET, TYPE G SQ. FT. | SIGNS: EXTRU-SHEET, TYPE G SQ. FT. | GROUND MOUNTED SUPPORTS: S4 x 7.7 BEAM LIN. FT. | GROUND MOUNTED SUPPORTS: W 6 x 9 BEAM LIN. FT. | GROUND MOUNTED SUPPORTS: W 10 x 12 BEAM LIN. FT. | GROUND MOUNTED SUPPORTS: W 10 x 22 BEAM LIN. FT. | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL: MINOR EACH | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL: MAJOR EACH | GROUND MOUNTED BEAM SUPPORT FOUNDATION EACH | SIGN BACKING ASSEMBLY EACH | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH | REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL EACH | BREAKAWAY BEAM CONNECTION EACH | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION: MINOR EACH | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION: MAJOR EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 1278+72 | LT. | GF | 8' x 5' | | X | | 98.6 | 98.0 | 94.6 | 94.0 | 16 | | | 17.5/18 | | | | | | 2 | | 2 | | 2 | | | | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | 93 | 1296+41 | RT. | R-9-84 | 7' x 6' | | X | | 98.8 | 98.8 | 94.8 | 94.2 | 16 | | | 18.5/19 | | | | | | 2 | | | | 2 | 2 | | | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | 96 | 1306+51 | RT. | GJ | 9' x 4' | X | | 4 | 97.5 | 95.0 | 93.5 | 91.0 | | | | 17.5/20 | | | | | | 2 | | | | 2 | 2 | 1 | | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | 100 | 1391+34 | LT. | R-9-84 | 7' x 6' | | X | | 98.6 | 98.0 | 94.6 | 94.0 | 16 | | | 18.5/19 | | | | | | 2 | | | | 2 | 2 | | | 1 |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | | S.R. 18 INTERCHANGE | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 102 | 17+02 RAMP C | RT. | M-2-36-2 | 3' x 3' | | | | | | | | | | | | | | | | | | | | 1 | | | 1 | | |
| | | | | M-25-30 | 2.5' x 2' | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| | | | | D-4B-48 | 10' x 4' | | X | | 98.2 | 97.3 | 92.2 | 91.3 | 12 | | | | | 19/20 | | | | 2 | | | | 2 | 2 | | | 1 |
| | | | | N-43B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | 115 | 5+63 RAMP B | LT. | M-2-36-2 | 3' x 3' | | | | | | | | | | | | | | | | | | | | 1 | | | 1 | | |
| | | | | M-25-30 | 2.5' x 2' | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| | | | | D-4B-48 | 10' x 4' | | X | | 98.5 | 97.3 | 92.5 | 91.3 | 16 | | | | | 19/20 | | | | 2 | | | | 2 | 2 | | | 1 |
| | | | | N-43B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | 117 | 8+06 RAMP B | RT. | M-2-36-2 | 3' x 3' | | | | | | | | | | | | | | | | | | | | 1 | | | 1 | | |
| | | | | M-25-30 | 2.5' x 2' | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| | | | | D-4B-48 | 10' x 4' | | X | | 98.3 | 97.5 | 92.3 | 91.5 | 16 | | | | | 19/20 | | | | 2 | | | | 2 | 2 | | | 1 |
| | | | | N-43B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | | S.R. 3 INTERCHANGE | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 120 | 77+00 RAMP A | RT. | M-2-36-2 | 3' x 3' | | | | | | | | | 9.0 | | | | | | | | | | 1 | | | | | | |
| | | | | M-25-30 | 2.5' x 2' | | | | | | | | | 5.0 | | | | | | | | | | | | | | | | |
| | | | | D-4B-48 | 9' x 4' | | X | | 98.9 | 97.8 | 93.9 | 92.8 | 12 | | 36.0 | | 17.5/18.5 | | | | | 2 | | | | | 2 | | | |
| | | | | N-43B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | 129 | 88+05 RAMP C | LT. | M-2-36-2 | 3' x 3' | | | | | | | | | 9.0 | | | | | | | | | | 1 | | | | | | |
| | | | | M-25-30 | 2.5' x 2' | | | | | | | | | 5.0 | | | | | | | | | | | | | | | | |
| | | | | D-4B-48 | 9' x 4' | X | | 4 | 97.5 | 95.5 | 91.5 | 89.5 | | | 36.0 | | | 20/21.5 | | | | 2 | | | | | 2 | | | |
| | | | | N-43B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | | | | M-2-24 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| | | | | M-25-21 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| | | | | D-4B | | | | | | | | | | | | | | | | | 1 | | | | 2 | | | | | |
| | | TOTALS CARRIED TO SHEET NO. 569D | | | | | | | | | | | | 41.5 | 72.0 | 148.0 | 36.0 | 158.5 | | 3 | | 18 | 14 | 4 | 12 | 18 | 7 | 6 | | |

CALCULATED PS
CHECKED PDG

SIGNING SUBSUMMARY
BEAM SUPPORTS AND FOUNDATIONS

MED-71-15.78

569C
940

7885REL_TSB.DGN 1/26/00 SAM

630

| SHEET NO. | REFERENCE NO. | STATION | SIDE | CODE | SIZE (FEET) | GUARDRAIL YES | GUARDRAIL NO | FOR DETAIL SHOWING POINTS OF ELEVATIONS A, B, C, & D SEE SHEET: OFFSET BEHIND GUARDRAIL FEET | ELEV. TOP OF FOUNDATION A | ELEV. TOP OF FOUNDATION C | ELEV. BOTTOM OF FOUNDATION B | ELEV. BOTTOM OF FOUNDATION D | OFFSET FROM EDGE OF PAVEMENT FEET | SIGNS: FLAT SHEET, TYPE G SQ. FT. | SIGNS: EXTRU-SHEET, TYPE G SQ. FT. | GROUND MOUNTED SUPPORTS: S4 x 7.7 BEAM LIN. FT. | W 6 x 9 BEAM LIN. FT. | W 10 x 12 BEAM LIN. FT. | W 10 x 22 BEAM LIN. FT. | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL: MINOR EACH | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL: MAJOR EACH | GROUND MOUNTED BEAM SUPPORT FOUNDATION EACH | SIGN BACKING ASSEMBLY EACH | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH | REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL EACH | BREAKAWAY BEAM CONNECTION EACH | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION: MINOR EACH | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION: MAJOR EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | S.R. 3 MAINLINE | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 130A | 897+00 | LT. | GH-1 | 14' x 9.5' | | X | | 98.5 | 97.4 | 91.7 | 90.7 | 17 | | 133.0 | | | | 25/29 | | | 2 | | | | | | 2 | | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | 130B | 897+10 | RT. | M-52A | 9' x 2.5' | X | | 4.7 | 99.3 | 99.1 | 95.3 | 95.1 | | | 22.5 | 14.5/14.5 | | | | | | 2 | | | | | 2 | | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | 130C | 904+00 | RT. | GH-1 | 13' x 9.5' | X | | 4 | 95.9 | 92.2 | 89.2 | 85.5 | | | 123.5 | | | | 27.5/31 | | | 2 | | | | | 2 | | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | 130D | 904+15 | LT. | M-52A | 9' x 2.5' | X | | 6.85 | 99.0 | 98.6 | 95.0 | 94.6 | | | 22.5 | 15/15 | | | | | | 2 | | | | | 2 | | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | | S.R. 303 INTERCHANGE | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 133 | 41+92 RAMP C | RT. | M-2-36-3 | 3.75' x 3' | | | | | | | | | 11.3 | | | | | | | | | | 1 | | | | | | |
| | | | | M-25-30 | 2.5' x 2' | | | | | | | | | 5.0 | | | | | | | | | | | | | | | | |
| | | | | D-4B-48 | 10' x 4' | | X | | 98.7 | 97.8 | 92.7 | 91.8 | 16 | | 40.0 | | | 18.5/19.5 | | | | 2 | | | | | 2 | | |
| | | | | N-43B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | | | | M-2-24 | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| | | | | M-25-21 | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| | | | | D-4B | | | | | | | | | | | | | | | | | 1 | | | | | 2 | | | |
| | 149 | 54+67 RAMP A | LT. | M-2-36-3 | 3.75' x 3' | | | | | | | | | 11.3 | | | | | | | | | | 1 | | | | 2 | | |
| | | | | M-25-30 | 2.5' x 2' | | | | | | | | | 5.0 | | | | | | | | | | | | | | | | |
| | | | | D-4B-48 | 10' x 4' | X | | 4 | 99.4 | 95.1 | 93.4 | 89.1 | | | 40.0 | | | 20/24 | | | | 2 | | | | | | | |
| | | | | D-4A-24 | 10' x 2' | | | | | | | | | | 20.0 | | | | | | | | | | | | | | | |
| | | | | N-43B-18 | 1.5' x 1' | | | | | | | | | 1.5 | | | | | | | | | | 1 | | | | | | |
| | | | | M-2-24 | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| | | | | M-25-21 | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| | | | | D-4B | | | | | | | | | | | | | | | | | 1 | | | | | 2 | | | |
| | TOTAL FROM THIS SHEET | | | | | | | | | | | | | 41.6 | 401.5 | 59.0 | | 82.0 | 112.5 | 4 | 2 | 12 | 8 | | 4 | 12 | | |
| | TOTAL FROM SHEET NO. 569B | | | | | | | | | | | | | 27.0 | 42.0 | 606.0 | 40.5 | | | | | 36 | 20 | 20 | 14 | 36 | 5 | 13 |
| | TOTAL FROM SHEET NO. 569C | | | | | | | | | | | | | 41.5 | 72.0 | 148.0 | 36.0 | 158.5 | | 3 | | 18 | 14 | 4 | 12 | 18 | 7 | 6 |
| | TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY | | | | | | | | | | | | | 110.1 | 515.5 | 813.0 | 76.5 | 240.5 | 112.5 | 7 | 2 | 66 | 42 | 24 | 30 | 66 | 12 | 19 |

CALCULATED PS
CHECKED PDG

SIGNING SUBSUMMARY
BEAM SUPPORTS AND FOUNDATIONS

MED-71-15.78

569D
940

7885REL_TSC.DGN 1/26/00 SAM

| SHEET NO. | REFERENCE NO. | STATION | SIDE | CODE | SIZE (FEET) | LEVEL | GUARDRAIL YES | GUARDRAIL NO | OFFSET BEHIND GUARDRAIL FEET | 625 GROUND RODS EACH | SIGNS FLAT SHEET, TYPE G SQ. FT. | | 630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION, MAJOR EACH | SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH | OVERHEAD SIGN SUPPORTS TC-12.30 DESIGN 5 22' ARM EACH | OVERHEAD SIGN SUPPORTS TC-12.30 DESIGN 6 26' ARM EACH | OVERHEAD SIGN SUPPORTS TC-12.30 DESIGN 9 26' ARM EACH | OVERPASS STRUCTURE MOUNTED SIGN SUPPORT TC-18.26 DESIGN 9 EACH | RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH | REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL TYPE TC-12.30 EACH | REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL TYPE TC-18.26 EACH | REMOVAL OF STRUCTURE MOUNTED SIGN AND REERECTION EACH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | S.R. 18 MAINLINE | | | | | | | | | | | | | | | | | | | | | |
| | 108A | 149+95 | RT. | GH | 11' x 4.5' | 1 | | X | | 1 | | | | | | | | 1 | | | | 1 | 1 |
| | 109 | 151+75 | LT. | GH | 11' x 4.5' | | | X | | | | | | | | | | 1 | | | | 1 | 1 |
| | 109A | 154+36 | LT. | GH-1 | 9' x 7.5' | 1 | X | | 8 | | | | 2 | | | | | | | | | | |
| | | | LT. | GH-1 | 9' x 7.5' | | | | | 1 | | | | | | | 1 | | 1 | | | | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | 1.5 | | | 1 | | | | | | | | | |
| | | 154+25 | | GH-1 | 9' x 7.5' | | | | | | | | | | | | | | | 1 | | | |
| | | | | GH-1 | 9' x 7.5' | | | | | | | | | | | | | | | | | | |
| | | S.R. 303 MAINLINE | | | | | | | | | | | | | | | | | | | | | |
| | 150B | 49+00 | RT. | GH | 9' x 7.5' | 1 | X | | 6.5 | 1 | | | | | | 1 | | | 1 | | | | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | 1.5 | | | 1 | | | | | | | | | |
| | | 49+25 | RT. | GH | 9' x 7.5' | | | | | | | | | | | | | | | | | 1 | 1 |
| | 151 | 51+40 | LT. | GH | 9' x 7.5' | 1 | X | | 6.5 | 1 | | | | | 1 | | | | 1 | | | | |
| | | | | N-44B-18 | 1.5' x 1' | | | | | | 1.5 | | | 1 | | | | | | | | | |
| | | 51+06 | LT. | GH | 9' x 7.5' | | | | | | | | | | | | | | | | | 1 | 1 |
| | TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY | | | | | | | | | 4 | 4.5 | | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 1 | 4 | 4 | |

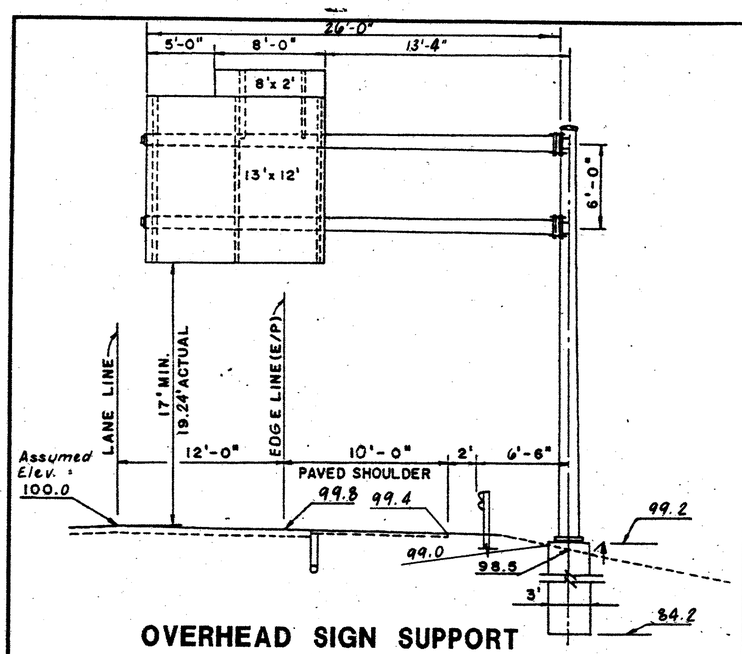
CALCULATED PS
CHECKED PDG

# SIGNING SUBSUMMARY
## SIDEROAD OVERHEAD SUPPORTS

MED-71-15.78

569E
940

7885REL_TSD.DGN 1/26/00 SAM

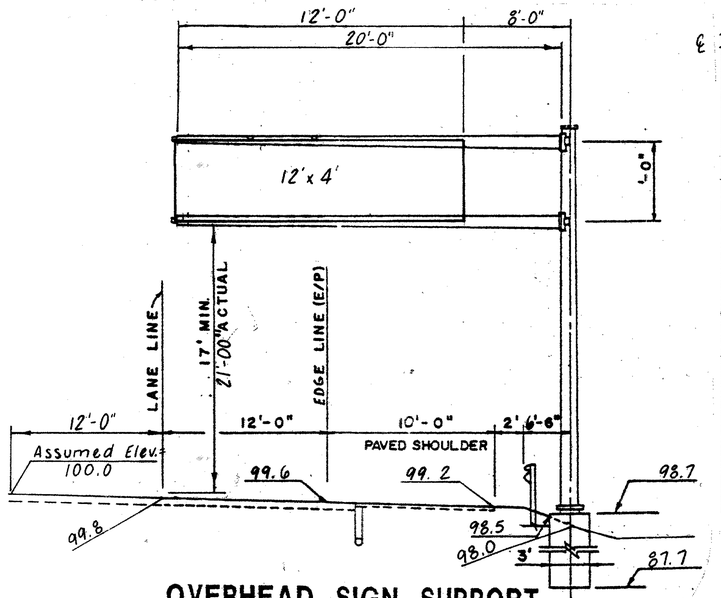



**OVERHEAD SIGN SUPPORT**

**STA. 856+22, 84.5' RT. ℄ I.R. 71**

3

TC-12.30, DESIGN 9
POLE = 30'-0"
ARM = 26'-0"

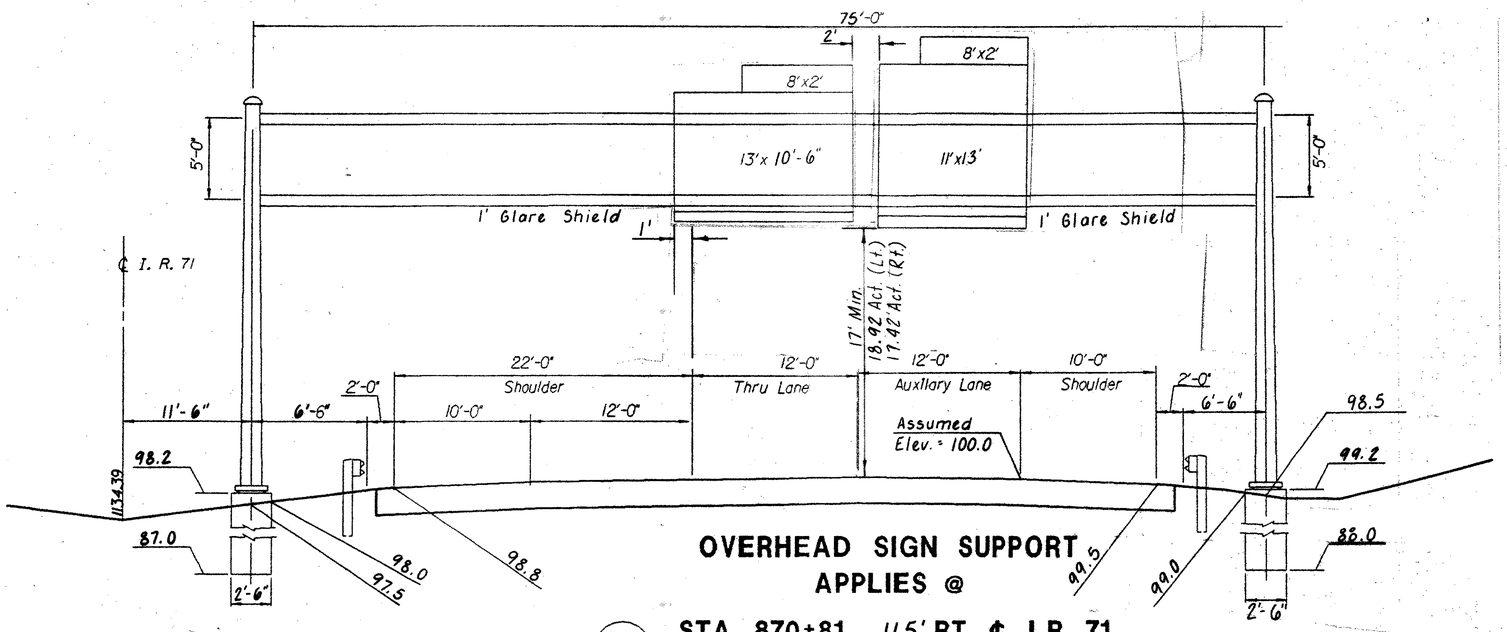



**OVERHEAD SIGN SUPPORT**

**STA. 843+00, 11.5' LT. ℄ I.R. 71**

1

TC-12.30, DESIGN 4
POLE = 27'-0"
ARM = 20'-0"




**OVERHEAD SIGN SUPPORT**
**APPLIES @**

**STA. 870+81, 11.5' RT. ℄ I.R. 71**

6

TC-7.65, DESIGN 8
LT. POLE = 29'-0"
RT. POLE = 28'-0"

HORIZONTAL SCALE IN FEET

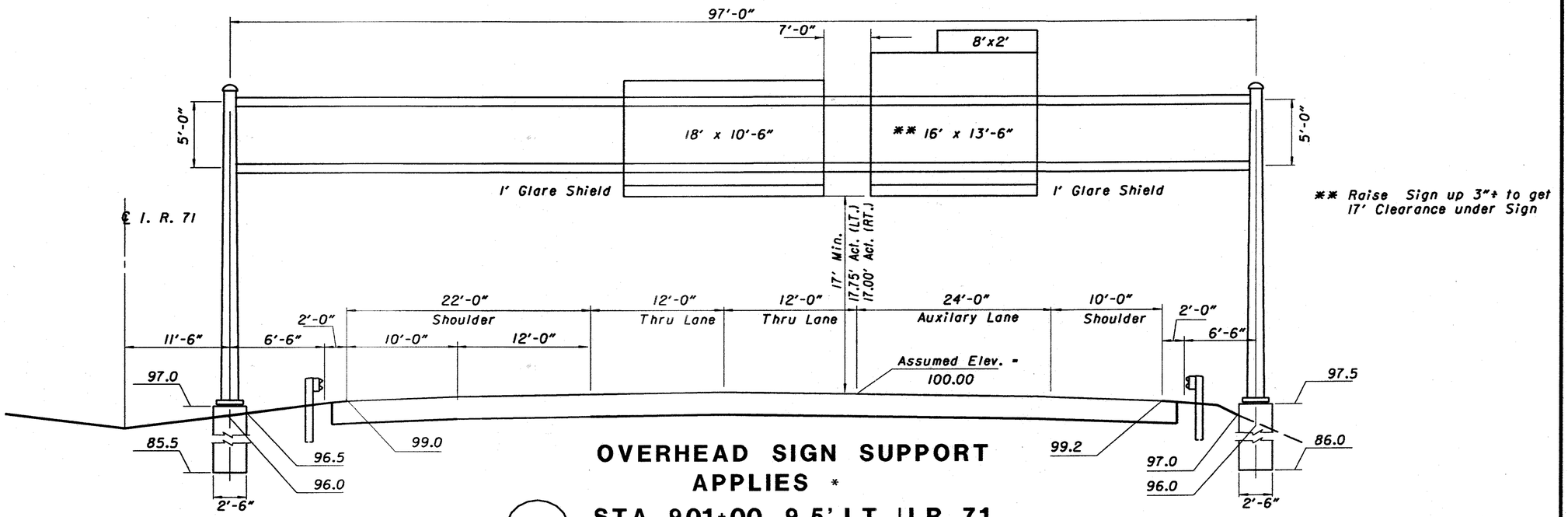
CALCULATED

CHECKED

**OVERHEAD SIGN SUPPORT DETAILS**

MED - 71 - 15.78

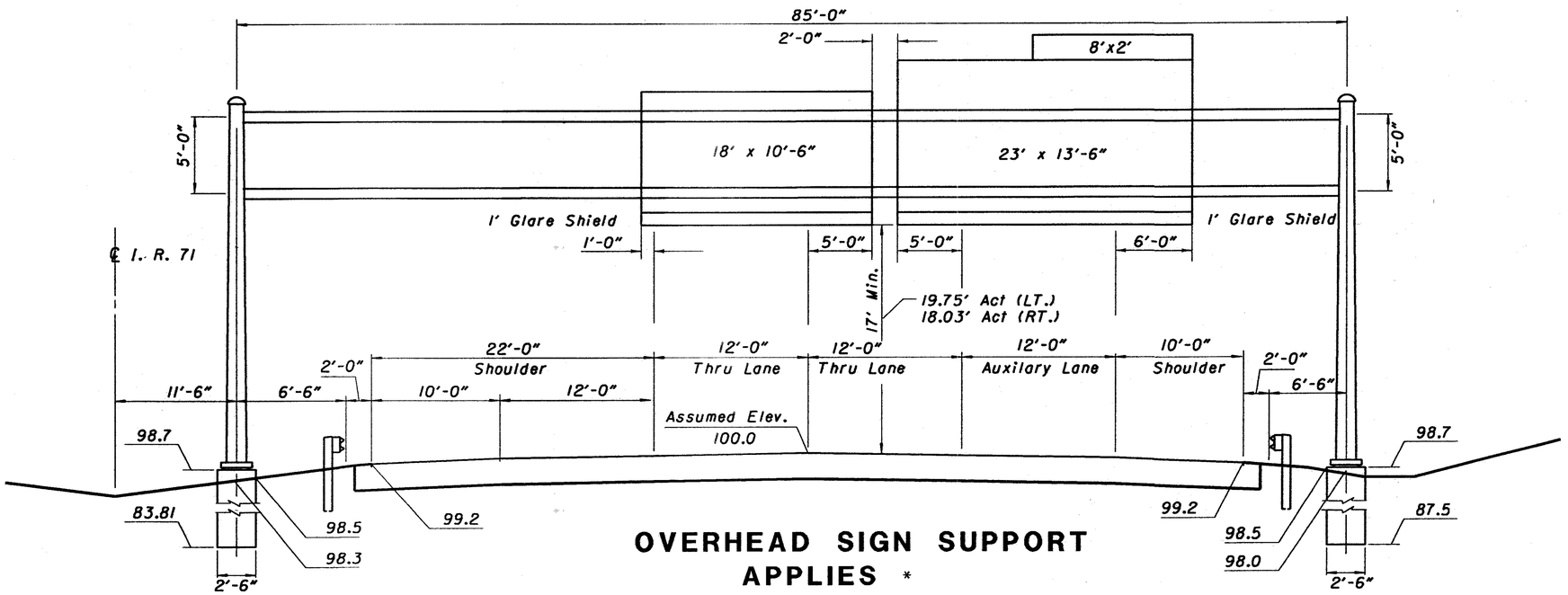
570
940




** Raise Sign up 3"± to get 17' Clearance under Sign

## OVERHEAD SIGN SUPPORT
## APPLIES *
## 12A STA. 901+00, 9.5' LT. ℄I.R. 71

TC-7.65, DESIGN 8
LT. POLE - 29'-6"
RT. POLE - 29'-0"




## OVERHEAD SIGN SUPPORT
## APPLIES *
## 17A STA. 927+40, 9.5' LT. ℄I.R. 71

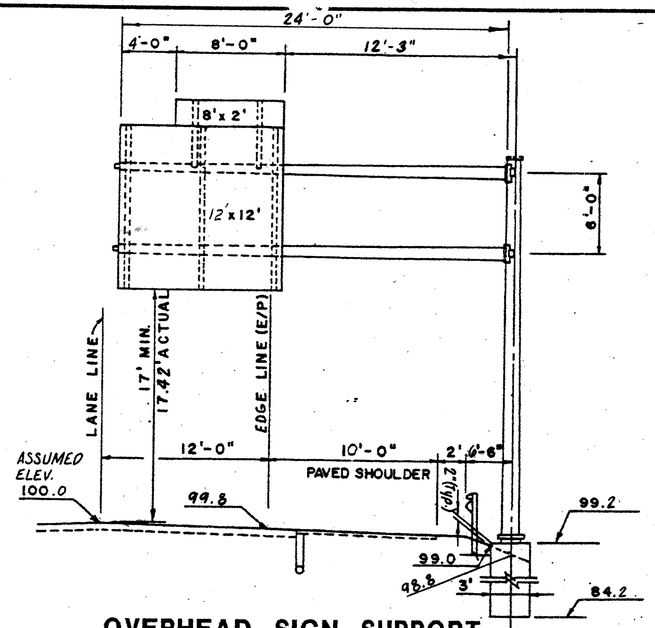
TC-7.65, DESIGN 8
LT. POLE = 29'-6", RT. POLE = 29'-6"

OVERHEAD SIGN SUPPORT DETAILS

MED-71-15.78

571
940

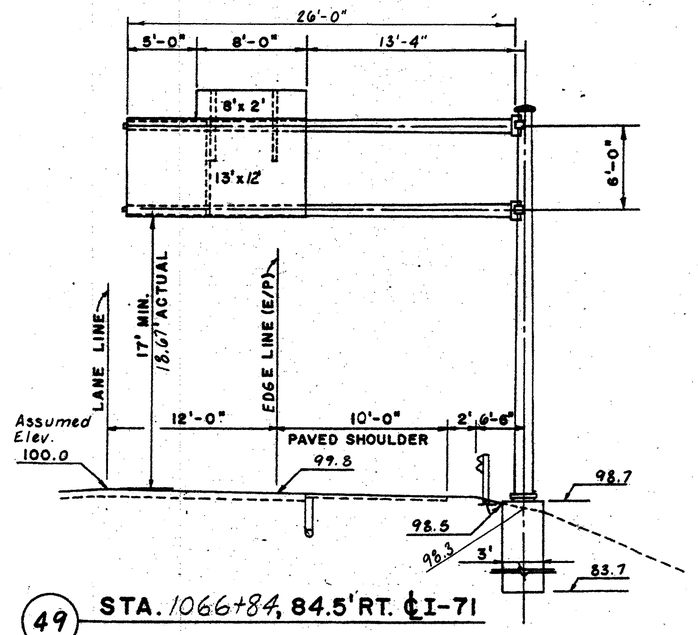
DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




**OVERHEAD SIGN SUPPORT**

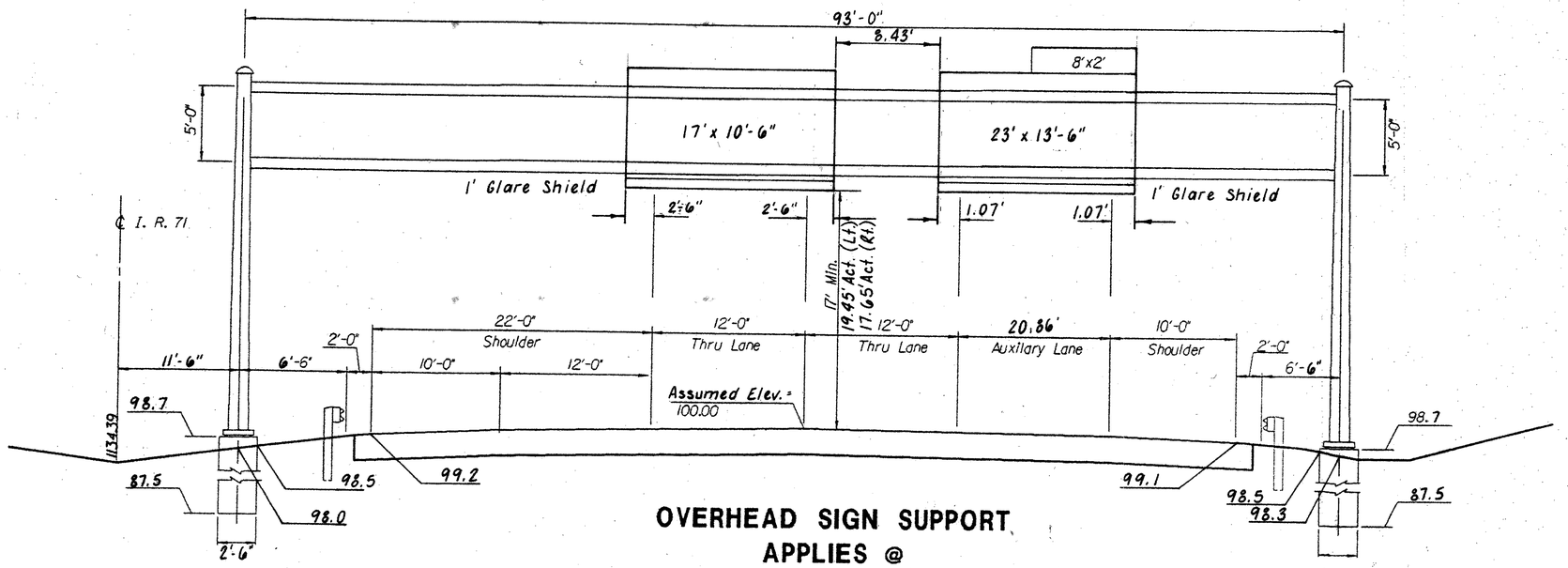
**41 STA. 1038+20, 83.5' RT. ℄ I.R. 71**

TC-12.30, DESIGN 7
POLE = 28'-0"
ARM = 24'-0"




**49 STA. 1066+84, 84.5' RT. ℄ I-71**

TC-12.30 DESIGN 9
POLE = 30'-0"
ARM = 26'-0"




**OVERHEAD SIGN SUPPORT APPLIES @**

**24A STA. 932+25.30, 11.5' RT. ℄ I.R. 71**

TC-7.65, DESIGN 8
LT. POLE = 29'-0"
RT. POLE = 29'-0"

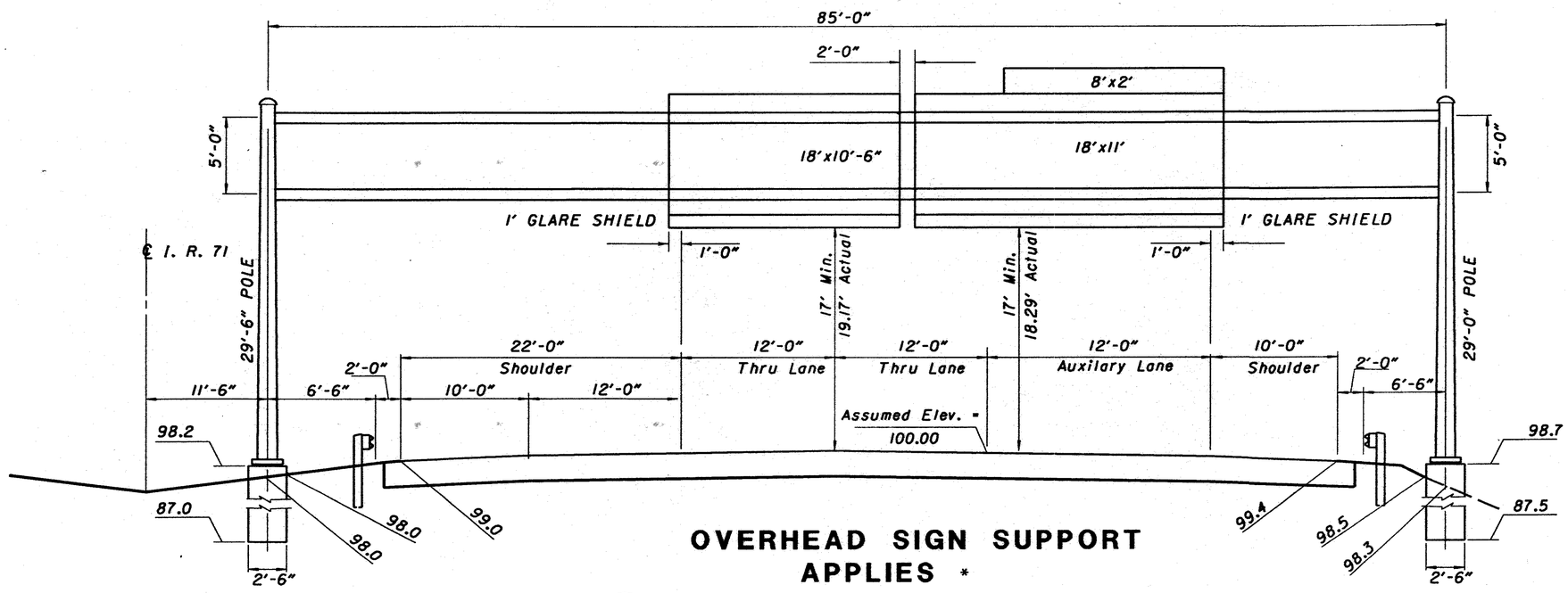
HORIZONTAL SCALE IN FEET
0

CALCULATED
CHECKED

OVERHEAD SIGN SUPPORT DETAILS

MED - 71 - 15.78

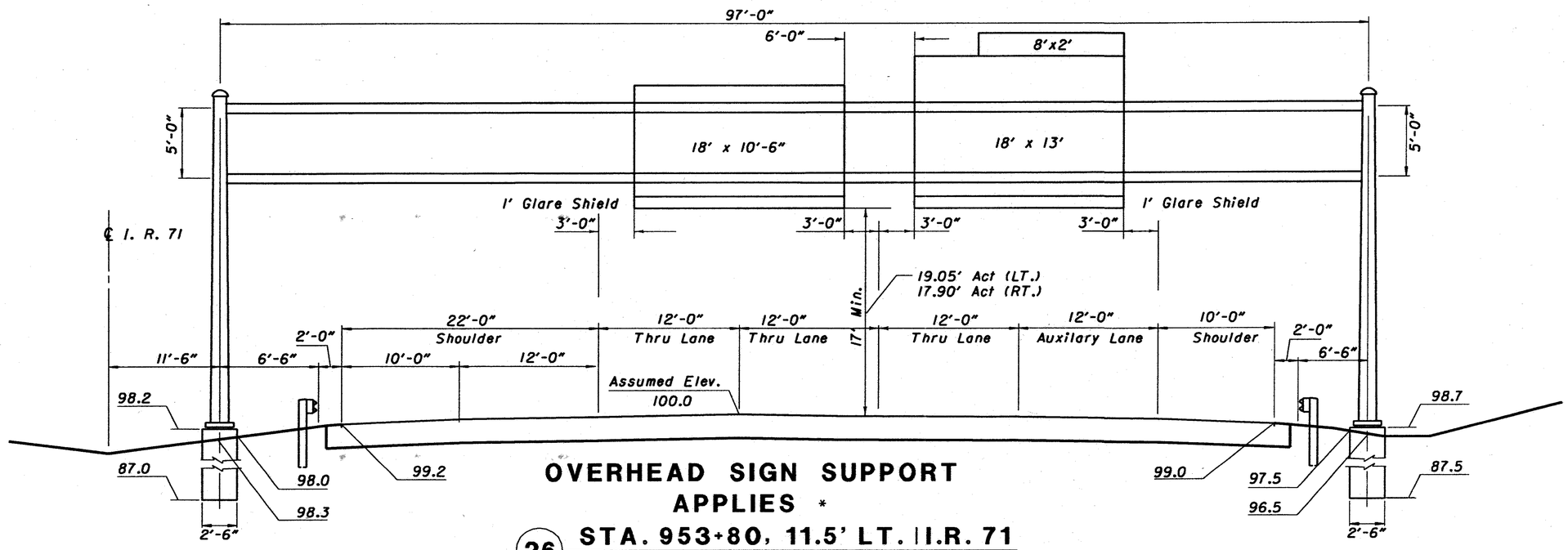
572
940




**OVERHEAD SIGN SUPPORT**
**APPLIES ***

**30** **STA. 971+00, 11.5' RT. I.R. 71**

*TC-7.65, DESIGN 8*
*LT. POLE = 29'-6"*
*RT. POLE = 29'-0"*




**OVERHEAD SIGN SUPPORT**
**APPLIES ***

**26** **STA. 953+80, 11.5' LT. I.R. 71**

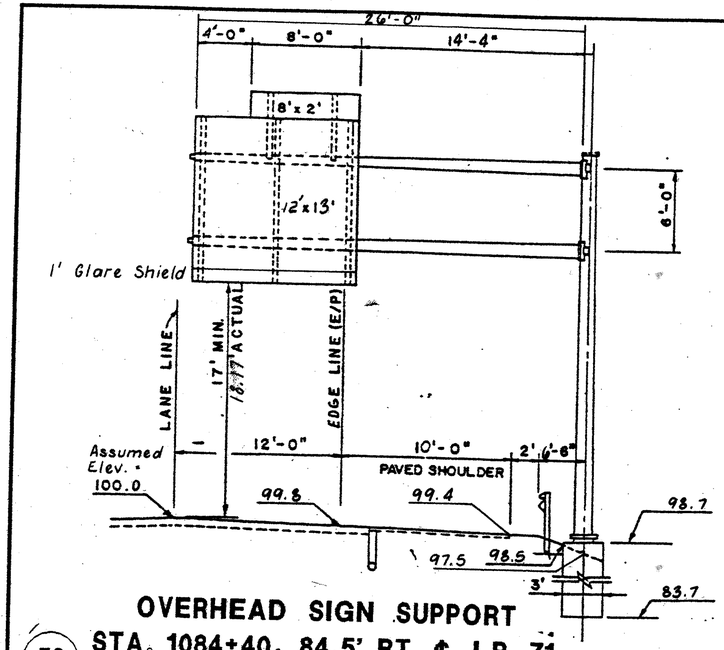
*TC-7.65, DESIGN 8*
*LT. POLE = 29'-6", RT. POLE = 29'-0"*

**OVERHEAD SIGN SUPPORT DETAILS**

**MED-71-15.78**

573
940

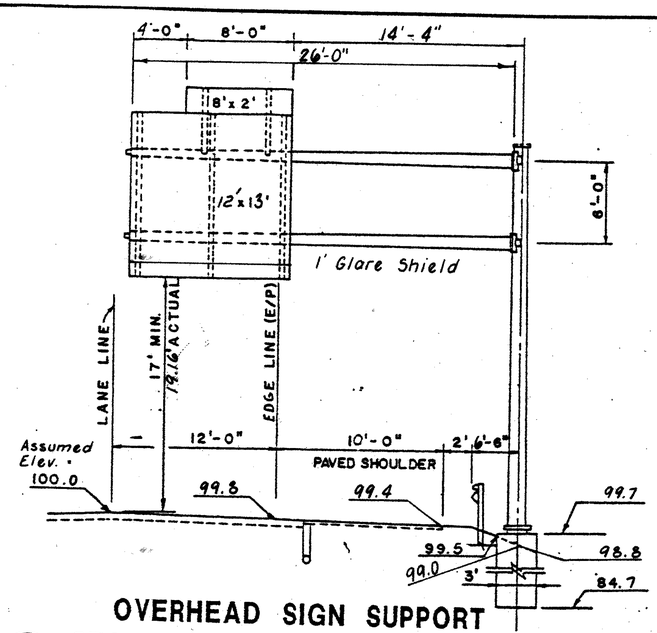
DATE : $$$$DATE$$$$ DESIGN FILE : $$$$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
TIME : $$$$TIME$$$$ USERNAME : $$$$INSTRUCTIONS$$$$




**OVERHEAD SIGN SUPPORT**

**52** **STA. 1084+40, 84.5' RT. ℄ I.R. 71**

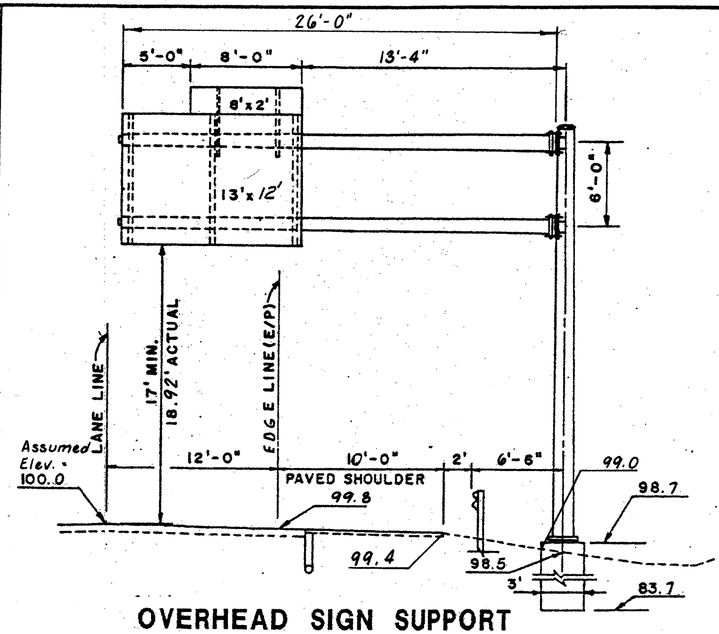
TC-12.30, DESIGN 9
POLE - 30'-0"
ARM - 26'-0"




**OVERHEAD SIGN SUPPORT**

**60** **STA. 1124+35, 87.5' LT. ℄ I.R. 71**

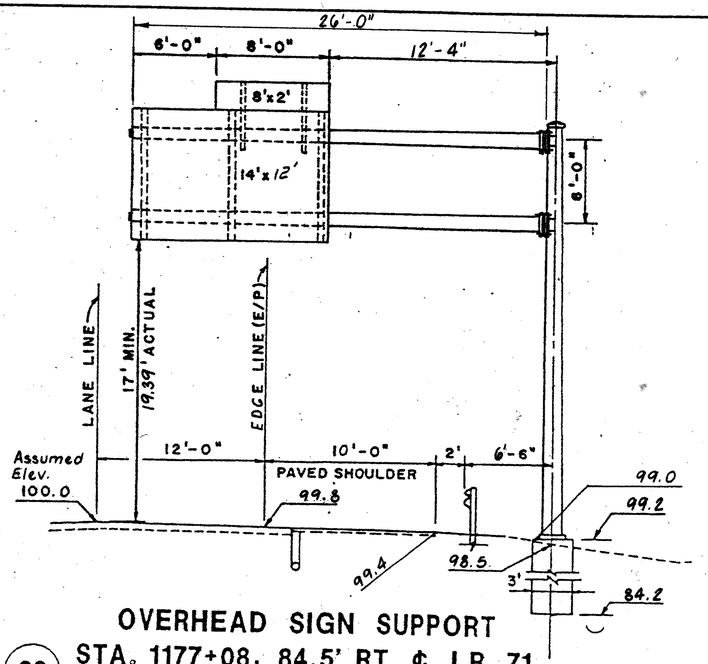
TC-12.30, DESIGN 9
POLE - 30'-0"
ARM - 26'-0"




**OVERHEAD SIGN SUPPORT**

**63** **STA. 1142+75, 87.5' LT. ℄ I.R. 71**

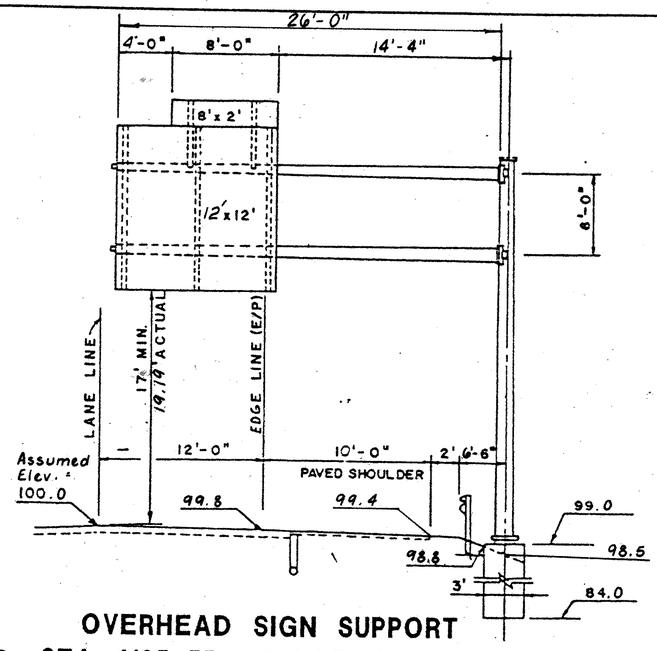
TC-12.30, DESIGN 9
POLE - 30'-0"
ARM - 26'-0"




**OVERHEAD SIGN SUPPORT**

**69** **STA. 1177+08, 84.5' RT. ℄ I.R. 71**

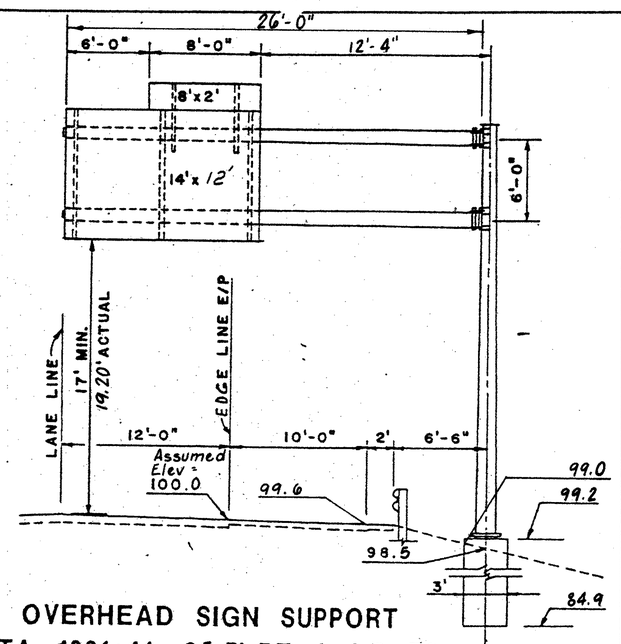
TC-12.30, DESIGN 9
POLE - 30'-0"
ARM - 26'-0"




**OVERHEAD SIGN SUPPORT**

**73** **STA. 1195+55, 84.5' LT. ℄ I.R. 71**

TC-12.30, DESIGN 9
POLE - 30'-0"
ARM - 26'-0"




**OVERHEAD SIGN SUPPORT**

**80** **STA. 1231+14, 85.5' RT. ℄ I.R. 71**

TC-12.30, DESIGN 9
POLE - 30'-0"
ARM - 26'-0"

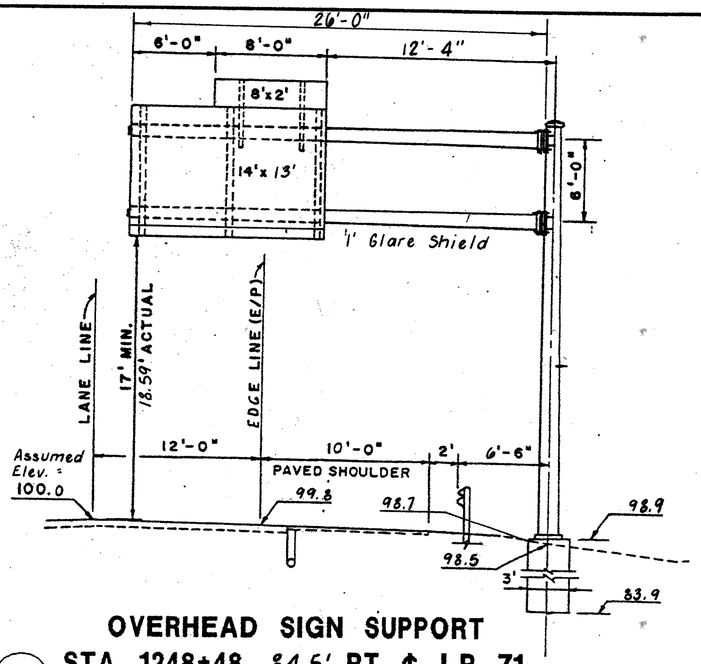
HORIZONTAL SCALE IN FEET
0

CALCULATED
CHECKED

OVERHEAD SIGN SUPPORT DETAILS

MED - 71 - 15.78

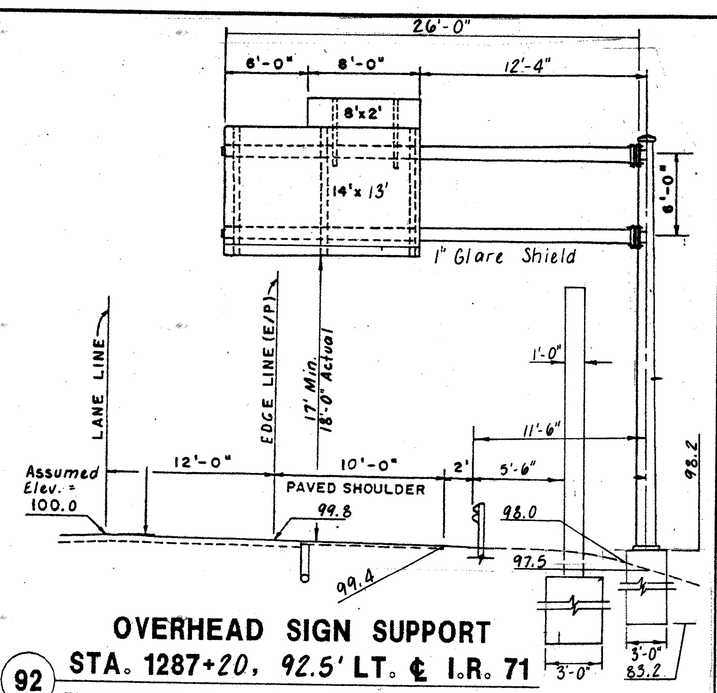
574
940




## OVERHEAD SIGN SUPPORT
## STA. 1248+48, 84.5' RT. ℄ I.R. 71

82

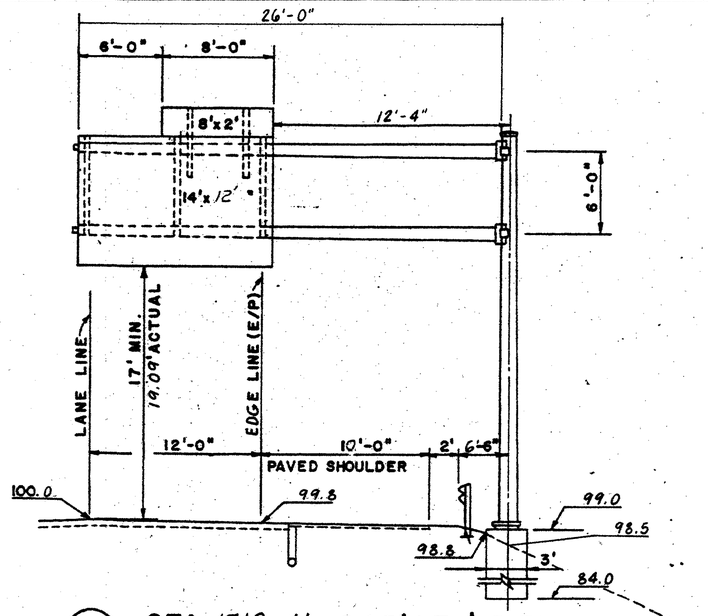
TC-12.30, DESIGN 9
POLE = 30'-0"
ARM = 26'-0"




## OVERHEAD SIGN SUPPORT
## STA. 1287+20, 92.5' LT. ℄ I.R. 71

92

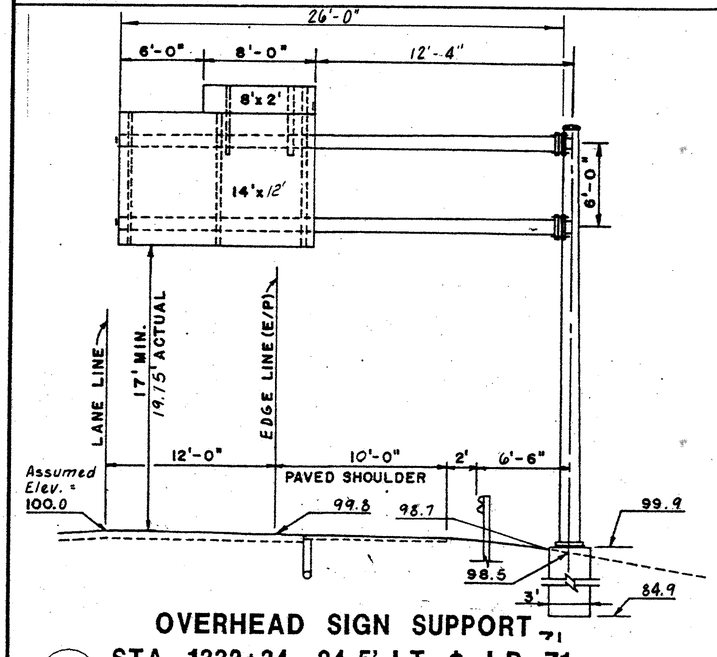
TC-12.30, DESIGN 9
POLE = 30'-0"
ARM = 26'-0"




## STA. 1312+11, 84.5' LT. ℄ I-71

97

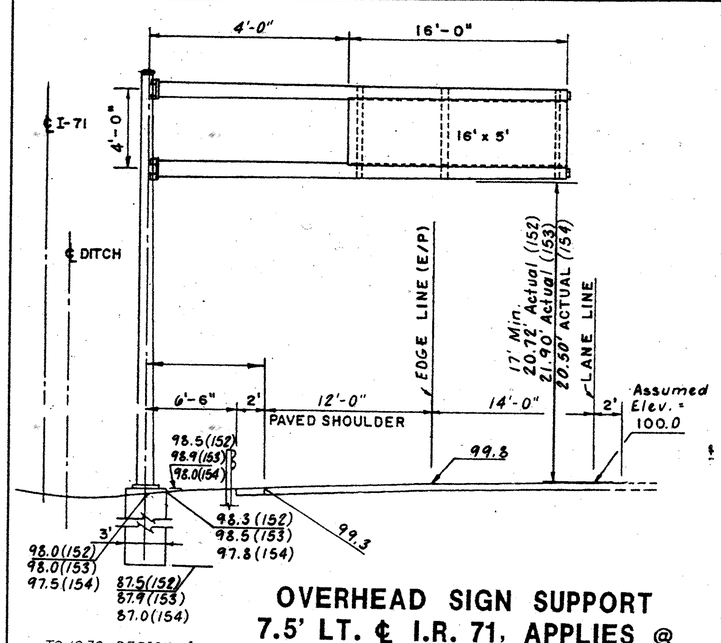
TC-12.30, DESIGN 9
POLE = 30'-0"
ARM = 26'-0"




## OVERHEAD SIGN SUPPORT
## STA. 1332+34, 84.5' LT. ℄ I.R. 71

98

TC-12.30, DESIGN 9
POLE = 30'-0"
ARM = 26'-0"




TC-12.30. DESIGN 4
POLE = 27'-0"
ARM = 20'-0"

## OVERHEAD SIGN SUPPORT
## 7.5' LT. ℄ I.R. 71, APPLIES @

SIGN 152, STA. 1267+25
SIGN 153, STA. 1294+15
SIGN 154, STA. 1307+35

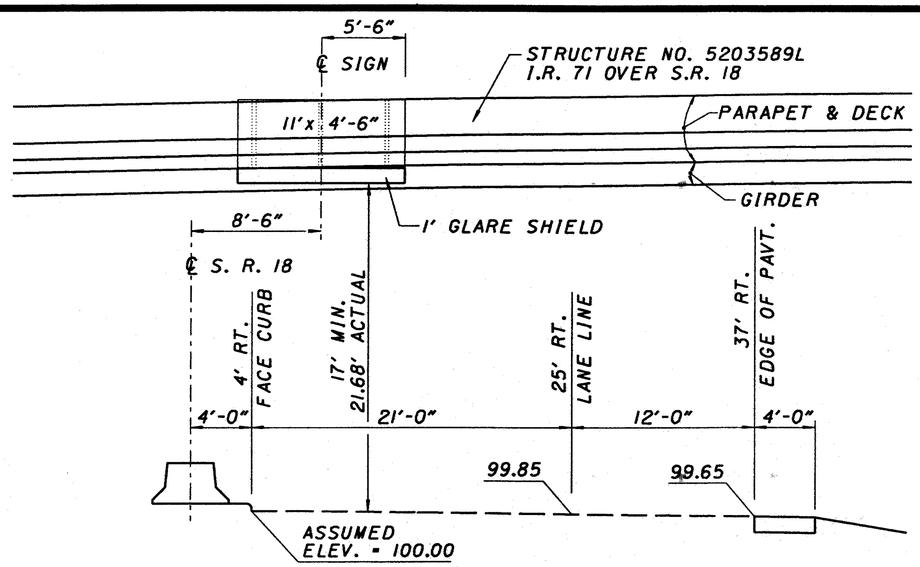
HORIZONTAL SCALE IN FEET
0

CALCULATED
CHECKED

# OVERHEAD SIGN SUPPORT DETAILS

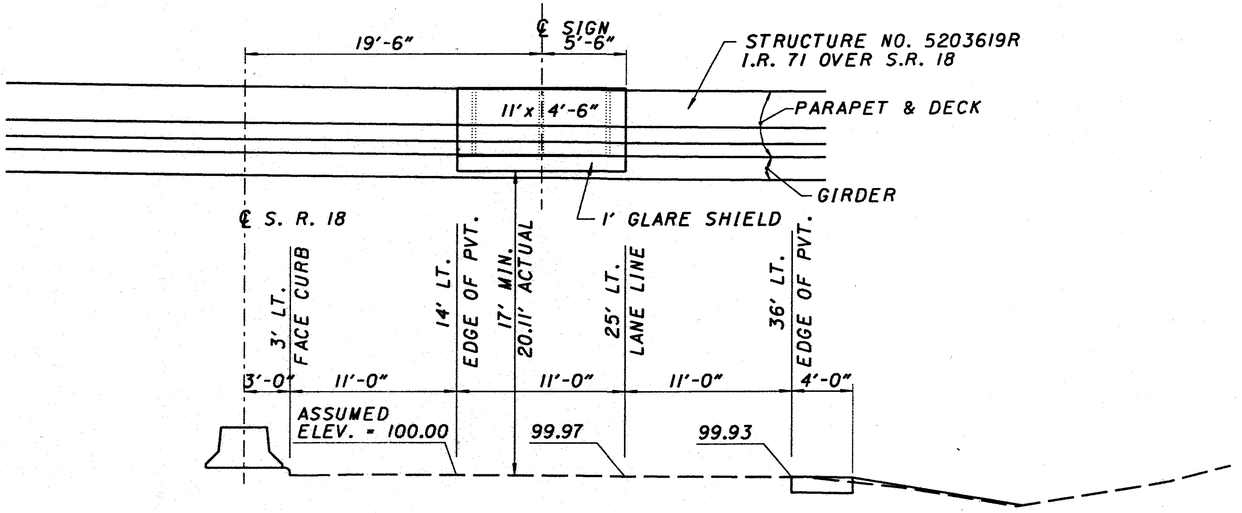
MED - 71 - 15.78

574A
940



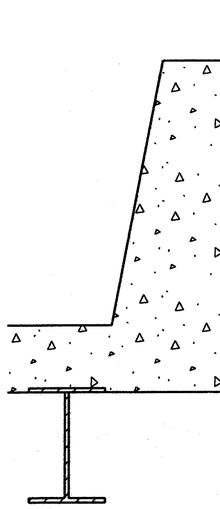

## SIGN SUPPORT
## 108A STA. 149+95, 8.5' RT. ℄ S.R. 18

TC-18.26, DESIGN 9



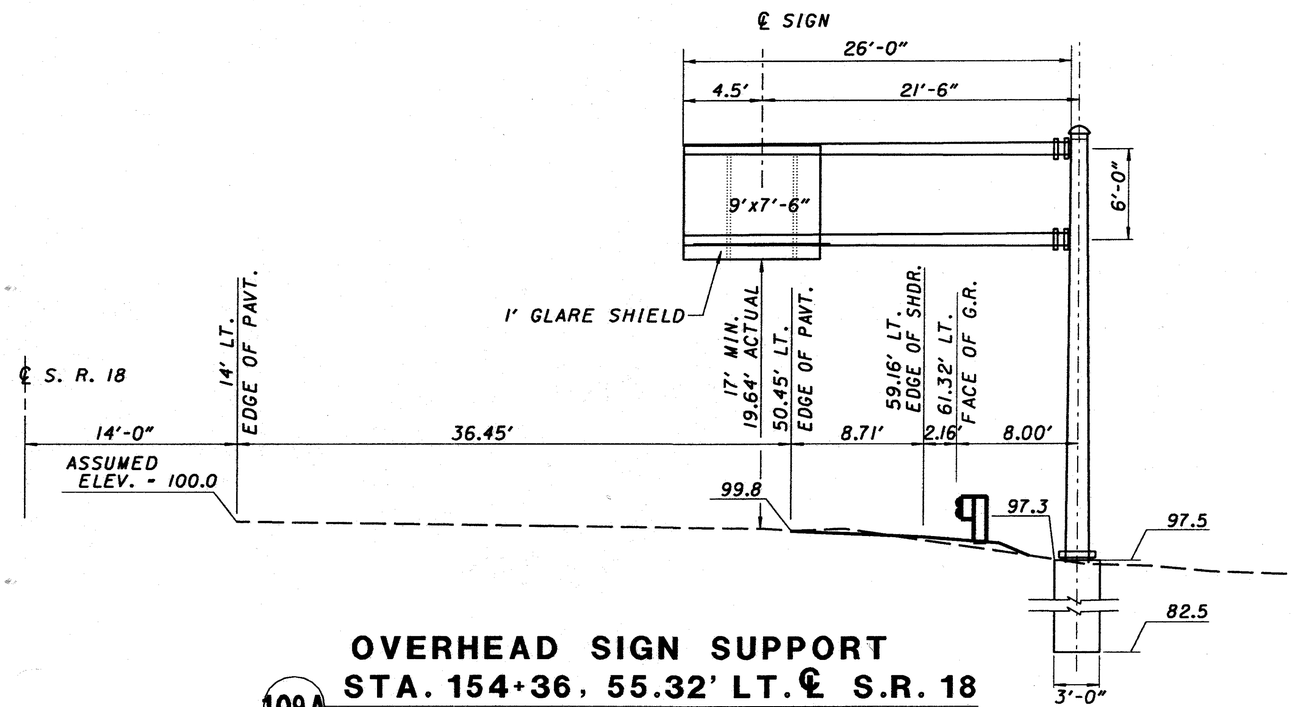

## SIGN SUPPORT
## 109 STA. 151+75, 19.5' LT. ℄ S.R. 18

TC-18.26, DESIGN 9




## BRIDGE MOUNTED SIGN SUPPORT DETAIL

SEE STR. 5203589L & 5203619R I.R. 71
OVER S.R. 18 PLANS AND
STANDARD CONSTRUCTION
DWG. TC-18.26 FOR ADDITIONAL DETAILS




## OVERHEAD SIGN SUPPORT
## 109A STA. 154+36, 55.32' LT. ℄ S.R. 18

TC-12.30, DESIGN 9
POLE = 30'-0"
ARM = 26'-0"

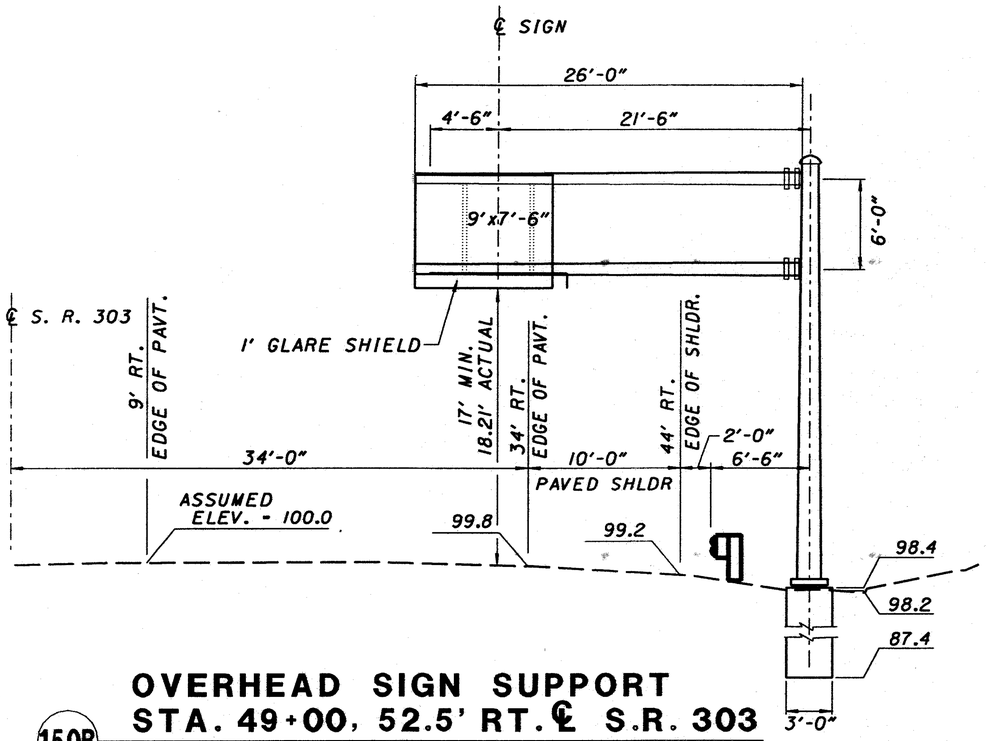
OVERHEAD SIGN SUPPORT DETAILS

MED-71-15.78

574B
940

CALCULATED
CHECKED

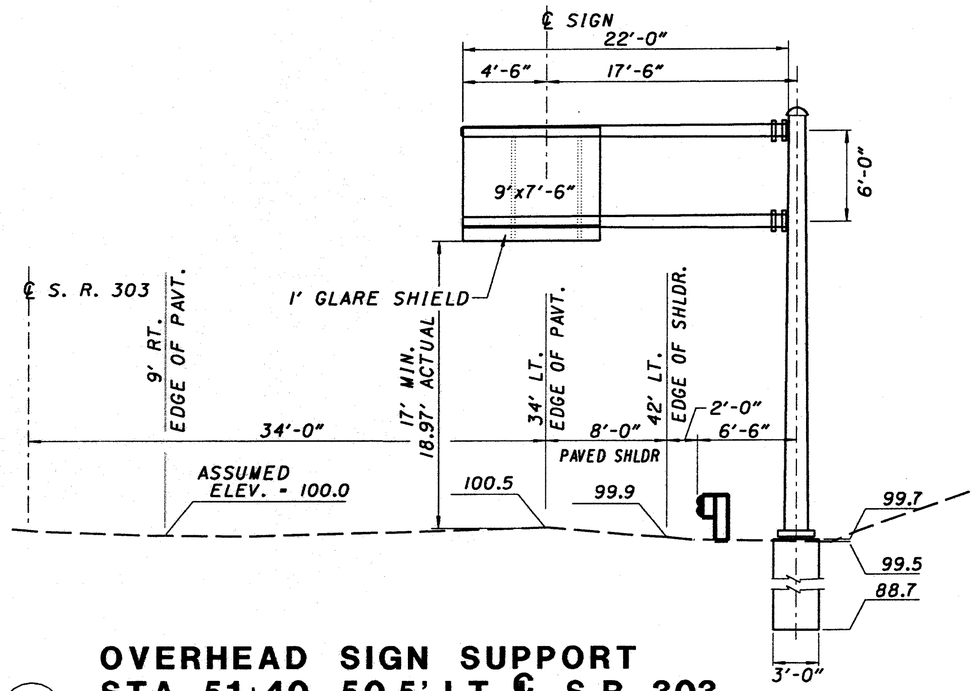
7885REL_SIGN.DGN 1/28/00 SAM




## OVERHEAD SIGN SUPPORT
## STA. 49+00, 52.5' RT. ℄ S.R. 303

150B

TC-12.30, DESIGN 6
POLE - 28'-0"
ARM - 26'-0"




## OVERHEAD SIGN SUPPORT
## STA. 51+40, 50.5' LT. ℄ S.R. 303

151

TC-12.30, DESIGN 5
POLE - 28'-0"
ARM - 22'-0"

CALCULATED
CHECKED

OVERHEAD SIGN SUPPORT DETAILS

MED-71-15.78

574C
940

7985REL_SIGN.DGN 1/28/00 SAM

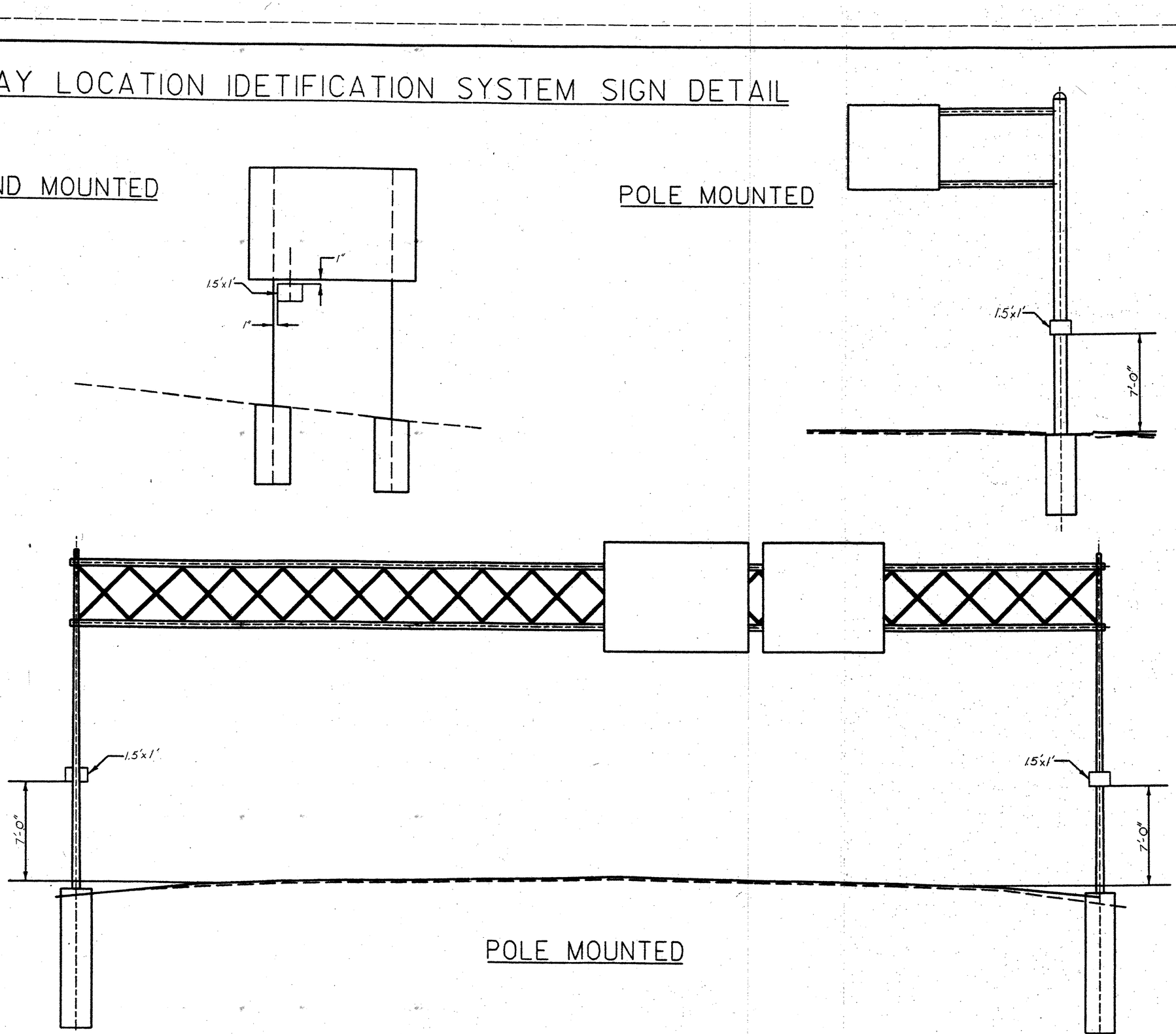
# FREEWAY LOCATION IDETIFICATION SYSTEM SIGN DETAIL

## GROUND MOUNTED




## POLE MOUNTED




## POLE MOUNTED

DATE : 12-NOV-1999
TIME : 06:30

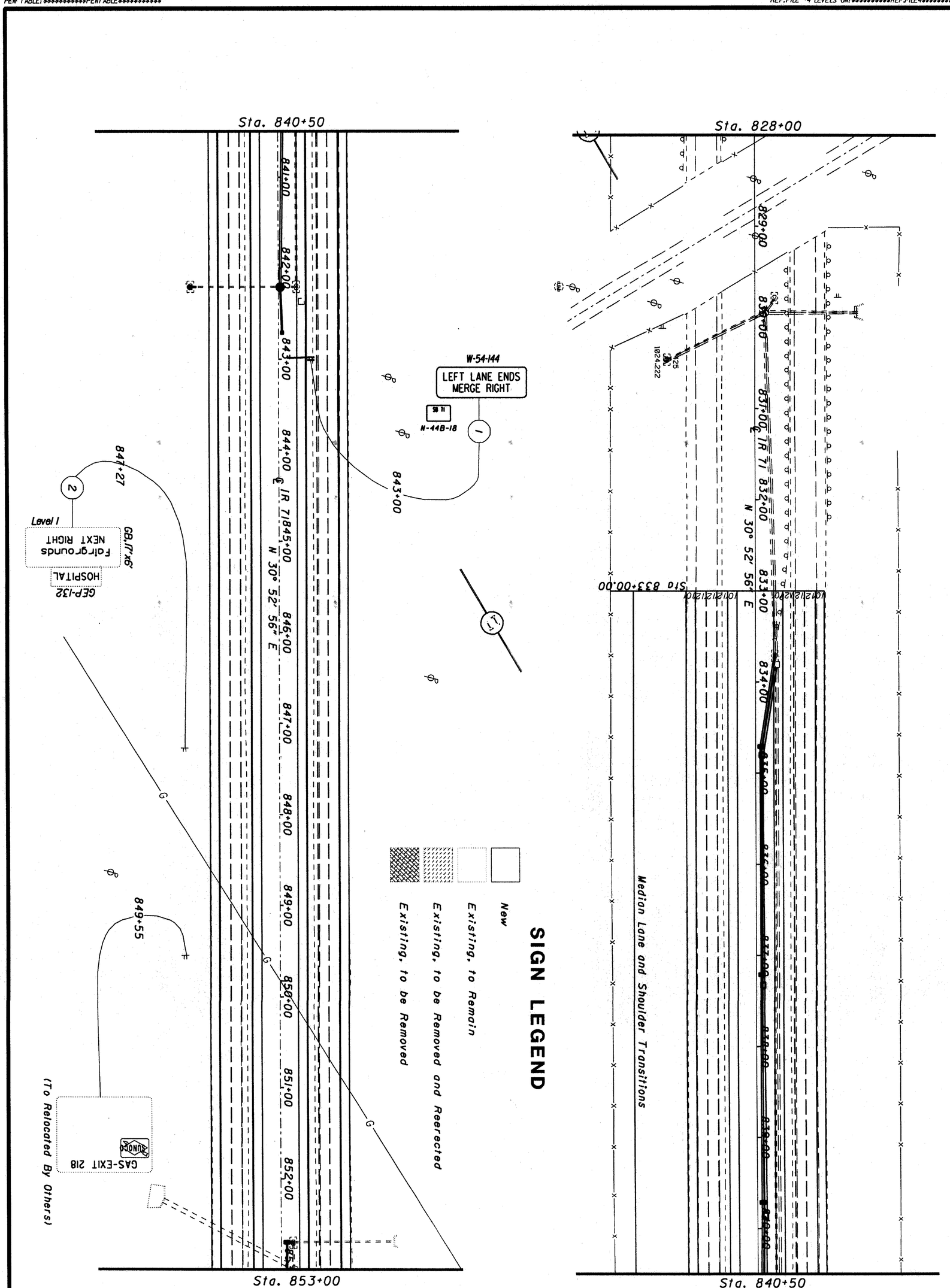
DESIGN FILE : I:\users\gwilliam\med71\sign\med71sub.dgn
USERNAME : gwilliam

**LOCATION IDENTIFICATION SIGN DETAIL**

**MED-71-15.78**

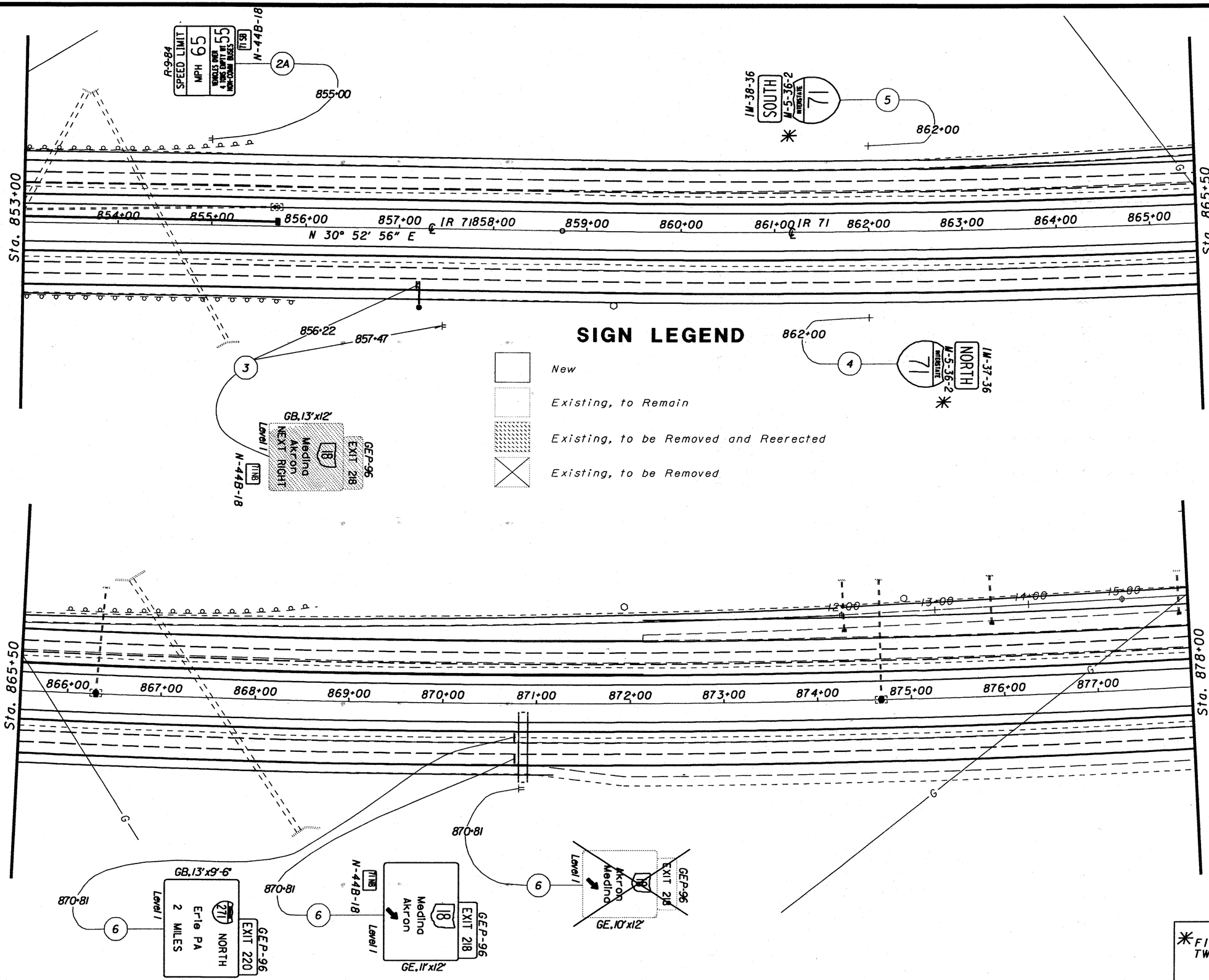
575
140

USERNAME: ##########USER##########
PROJECT: ##########PROJECT##########
LEVELS ON: ##########LEVELSON##########
PLOT QUEUE: ##############QUEUE##############
PEN TABLE: ############PENTABLE############
REF.FILE *2: ##########REF.FILENAME2##############
REF.FILE *2 LEVELS ON: ##########REF.FILE2##############
REF.FILE *3: ##########REF.FILENAME3##############
REF.FILE *3 LEVELS ON: ##########REF.FILE3##############
REF.FILE *4: ##########REF.FILENAME4##############
REF.FILE *4 LEVELS ON: ##########REF.FILE4##############




| | | | | |
|---|---|---|---|---|
| 576 / 940 | MED - 71 - 15.78 | SIGNING LINE SHEET<br>STA. 828+00 TO STA. 853+00 | CALCULATED / CHECKED | HORIZONTAL SCALE IN FEET |

REF.FILE *2:##########REF.FILENAME2##########
REF.FILE *2 LEVELS ON:##########REF.FILE2##########
REF.FILE *3:##########REF.FILENAME3##########
REF.FILE *3 LEVELS ON:##########REF.FILE3##########
REF.FILE *4:##########REF.FILENAME4##########
REF.FILE *4 LEVELS ON:##########REF.FILE4##########



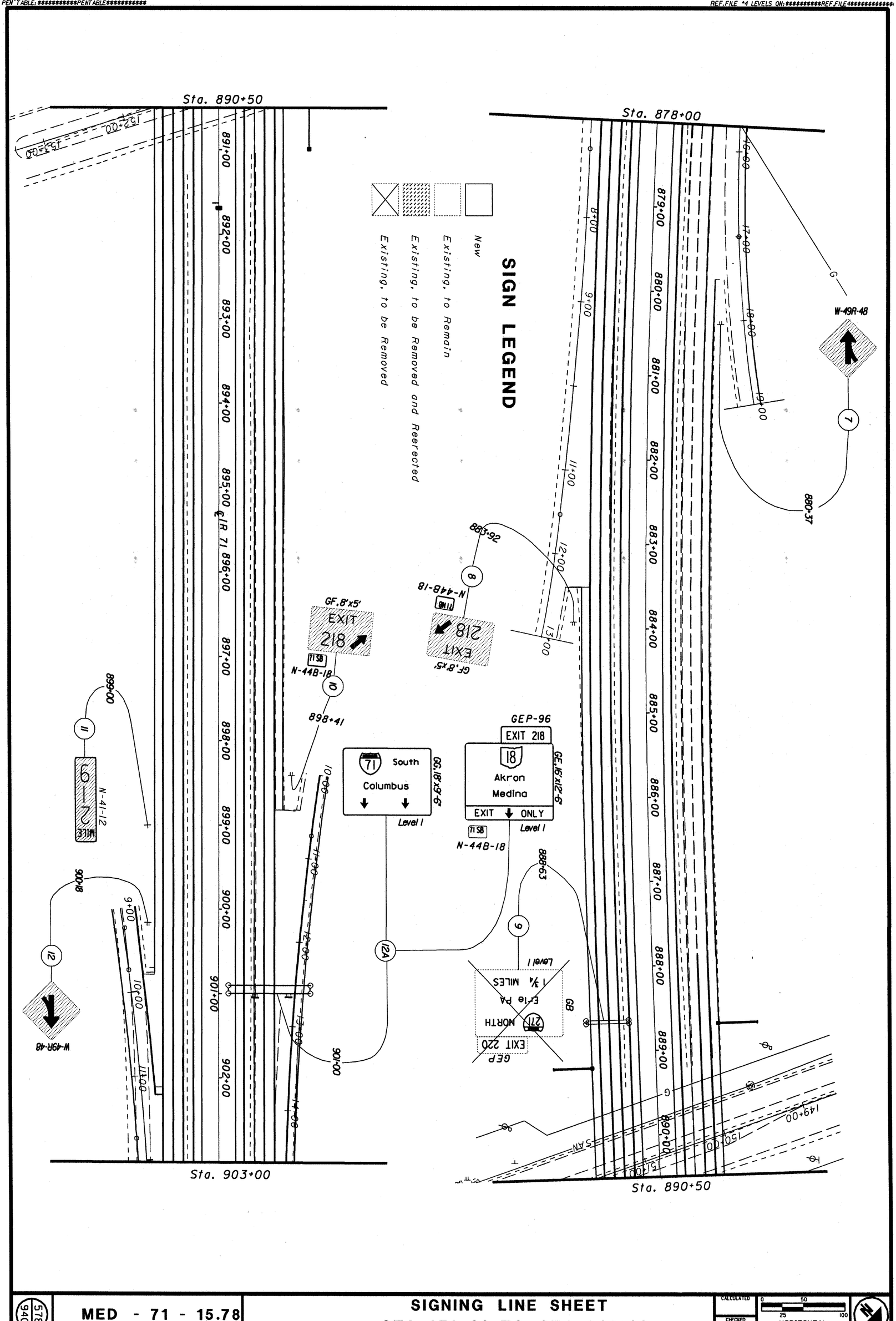

LEVELS ON:##########LEVELSON##########
REF.FILE:##########REFFILE##########
PEN TABLE:##########PENTABLE##########
USERNAME:##########USER##########
PROJECT:##########PROJECT##########

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

SIGNING LINE SHEET
STA. 853+00 TO STA. 878+00

MED - 71 - 15.78

577
940


Sta. 890+50
Sta. 878+00
Sta. 903+00
Sta. 890+50
SIGN LEGEND
New
Existing, to Remain
Existing, to be Removed and Reerected
Existing, to be Removed
W-49R-48
GF,8'x5'
EXIT 218
71 SB
N-44B-18
GF,8'x5'
EXIT 218
71 NB
N-44B-18
GEP-96
EXIT 218
18
Akron
Medina
EXIT ONLY
71 SB
N-44B-18
Level I
GE,16'x12'-6"
71
South
Columbus
Level I
GG,18'x9'-6"
GEP
EXIT 220
271
NORTH
1 ¾ MILES
Erie PA
Level I
GB
MILE 2—9
N-41-12
W-49R-48
SAN
7
8
9
10
11
12
12A
880-37
888-92
888-63
898-41
899-00
898-08
900-00
901+00
902+00
903+00
878+00
879+00
880+00
881+00
882+00
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7+00
8+00
9+00
10+00
11+00
12+00
13+00
14+00
15+00
16+00
17+00
18+00
19+00
6+00
7+00
8+00
9+00
10+00
11+00
12+00
13+00
14+00
15+00
16+00
17+00
18+00
19+00
G
G
G

USERNAME: $$$$$$$$$USER$$$$$$$$$
PROJECT: $$$$$$$$$PROJECT$$$$$$$$$
LEVELS ON: $$$$$$$$$$LEVELSON$$$$$$$$$$
PLOT QUEUE: $$$$$$$$$$$$$$QUEUE$$$$$$$$$$$$$$
PEN TABLE: $$$$$$$$$$$$PENTABLE$$$$$$$$$$$$
REF.FILE *2: $$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$$$REF.FILE2$$$$$$$$$$$$$
REF.FILE *3: $$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$$$REF.FILE3$$$$$$$$$$$$$
REF.FILE *4: $$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$$$REF.FILE4$$$$$$$$$$$$$

Sta. 915+50

Sta. 903+00

N 11° 18' 41" E

SIGN LEGEND

New

Existing, to Remain

Existing, to be Removed and Reerected

Existing, to be Removed (To Be Relocated By Others)

W-53R-48
STA. 920+75
RIGHT LANE ENDS

GAS EXIT 216
DIESEL

Sta. 910+05.25
End 48:1 Taper

922+19

922+75

W-42-48
14'-5"

925+92

927+40

EXIT PANEL TO BE PLACED AT LEFT MOST EDGE OF SIGN. THE ARROW ON THE LEFT SIDE SHALL BE COVERED UP BY THE PANEL AND LEFT IN PLACE FOR FUTURE USE.

GEP-96
EXIT 218
18
Akron
Medina
EXIT ONLY
GE, 23' x 12'-6"
Level I

GG, 18'x9'-6"
71
South
Columbus
71 SB
Level I
N-44B-18

Begin Auxiliary Lane Shoulder
Sta 909+60.04, 88' Lt.

Begin Auxiliary Lane
Sta 909+60.04, 78' Lt.

GEP
EXIT 218
18
Akron
Medina
GE
Level I

911+20

M-5-36-2
NORTH
M-37-36

* FIELD DRILL FOR TWO (2) SUPPORTS SIGN #16

579
940

MED - 71 - 15.78

SIGNING LINE SHEET
STA. 903+00 TO STA. 928+00

CALCULATED
CHECKED

0 50
25 100
HORIZONTAL SCALE IN FEET

(TO BE RELOCATED BY OTHERS)

GB,13'x12'
GEP EXIT 218 (18) Medina Akron NEXT RIGHT Level I

TYPE D DELINEATOR
R-19-24 EMERGENCY OR STRANDED VEHICLES ONLY

R-123-36

R-9-84 SPEED LIMIT 65 MPH 55 MPH WHEN FLASHING

N-44B-18 (TLSB)

FOOD - EXIT 218
IHOP
IHOP'S BIG BOY
BOB EVANS RESTAURANT
PONDEROSA

Sta. 928+00
929+00 930+00 931+00 932+00 933+00 ℄ IR 71 934+00 935+00 936+00 937+00 938+00 939+00 940+00
N 17° 16' 41" E
Sta. 940+50

929-43
931-35
935-14
938-80

R-19-24 EMERGENCY OR STRANDED VEHICLES ONLY
DELINEATOR TYPE D
931-60
931-16
932+25.30
934-17

R-123-36

(RELOCATE TO STA. 941+00)

R-9-84 SPEED LIMIT 65 MPH 55 MPH WHEN FLASHING

N-44B-18 (TLNB)

GG,17'x9'-6" Level I
(71) NORTH Cleveland

GB,13'x9'-6" Level I
¾ MILES Erie PA NORTH
(220) EXIT 220
GEP-96

(71) NORTH Erie PA ¾ MILE EXIT ONLY
EXIT 220
GEP-96
GB,23' x 12'-6"

W-60R-48
STA. 929+95.25

M-38-36 SOUTH M-5-36-2 WINDSTAR (71)

942+50

Sta. 945+95.07 End Taper

945+00 950+00

Sta. 940+50
941+00 942+00 ℄ IR 71 943+00 944+00 945+00 946+00 947+00 948+00 949+00 950+00 951+00 952+00
Sta. 953+00

(RELOCATED FROM STA. 931+16)

941-00

R-9-84 SPEED LIMIT 65 MPH 55 MPH WHEN FLASHING

N-44B-18 (TLNB)

W-60R-48
STA. 946+05.07

948+93

GB,13'x9'-6" Level I
NEXT RIGHT Erie PA (220) NORTH
EXIT 220
GEP-96

## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

✱ FIELD DRILL FOR TWO (2) SUPPORTS SIGNS 20, 21 & 24

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

SIGNING LINE SHEET
STA. 928+00 TO STA. 953+00

MED - 71 - 15.78

580
940

REF.FILE *1: ##########REF.FILENAME1##########
REF.FILE *2: ##########REF.FILENAME2##########
REF.FILE *2 LEVELS ON: ##########REF.FILE2##########
REF.FILE *3: ##########REF.FILENAME3##########
REF.FILE *3 LEVELS ON: ##########REF.FILE3##########
REF.FILE *4: ##########REF.FILENAME4##########
REF.FILE *4 LEVELS ON: ##########REF.FILE4##########

UNIC, M. I. INC.: ##########INCLUDE: ####
USERNAME: ##########USERS##########
PROJECT: ##########PROJECT##########
LEVELS ON: ##########LEVELSON##########
PLOT QUEUE: ##########QUEUE##########
PEN TABLES: ##########PENTABLES##########

SIZE THE GE SIGN AS WITH TWO (2) DOWN ARROWS TO BE PLACED AT A LATER DATE

GE, 18'x12'
GEP-96
EXIT 218
18
Akron
Medina
1 MILE
Level I

GG, 18'x9'-6"
South
71
Columbus
Level I
N-44B-18

GB, 13'x12'
GEP-96
EXIT 218
18
Akron
Medina
NEXT RIGHT
Level I

26
953+80
27
956+63

954+00 955+00 956+00 957+00 958+00 959+00 960+00 961+00 962+00 963+00 964+00 965+00

Sta. 953+00

954+00 955+00 956+00 957+00 ℄ IR 71 958+00 959+00 960+00 961+00 962+00 963+00 964+00 965+00

Sta. 965+50

45+00 46+00 3+00 47+00 48+00 49+00

RIGHT LANE ENDS
W-53R-48
STA. 955+80
31

964+61
28
Level I
GB, 13'x9'-6"
NORTH
EXIT 220
GEP-96
71

0+00 1+00 2+00 3+00

## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

SIGNING LINE SHEET
STA. 953+00 TO STA. 965+50

MED - 71 - 15.78

581
940

REF.FILE *2,$$$$$$$$$$REF.FILENAME2$$$$$$$$$$
REF.FILE *2 LEVELS ON,$$$$$$$$$$REF.FILE2$$$$$$$$$$
REF.FILE *3,$$$$$$$$$$REF.FILENAME3$$$$$$$$$$
REF.FILE *3 LEVELS ON,$$$$$$$$$$REF.FILE3$$$$$$$$$$
REF.FILE *4,$$$$$$$$$$REF.FILENAME4$$$$$$$$$$
REF.FILE *4 LEVELS ON,$$$$$$$$$$REF.FILE4$$$$$$$$$$

LEVELS ON:$$$$$$$$$$LEVELSON$$$$$$$$$$
USERNAME:$$$$$$$$$$USER$$$$$$$$$$
PLOT QUEUE:$$$$$$$$$$QUEUE$$$$$$$$$$
PROJECT:$$$$$$$$$$PROJECT$$$$$$$$$$
PEN TABLE:$$$$$$$$$$PENTABLE$$$$$$$$$$

DATE & TIME: ########DATE&TIME########
USERNAME: ##########USER##########
PROJECT: #########PROJECT#########

LEVELS ON: ##########LEVELSON##########
PLOT QUEUE: ##############QUEUE##############
PEN TABLE: ############PENTABLE############

REF.FILE *2: ##########REF.FILENAME2##########
REF.FILE *2 LEVELS ON: ##########REF.FILE2##########
REF.FILE *3: ##########REF.FILENAME3##########
REF.FILE *3 LEVELS ON: ##########REF.FILE3##########
REF.FILE *4: ##########REF.FILENAME4##########
REF.FILE *4 LEVELS ON: ##########REF.FILE4##########

## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

Sta. 965+50

BEGIN 48:1 TAPER
℄ Sta. 965+95.07,
90.00' LT.

End Auxiliary Lane

Sta. 978+00

30 — N-44B-18 — TWO
EXIT ONLY / Erie PA / NORTH 271 — Level 1
Cleveland / NORTH 71 — Level 1
GB,18'x0'
GE P-96 EXIT 220
GG,18'x9'-6"

33 — 17'x9'-6"
Cleveland / NORTH 271
GG

33 — GB,14'x7'
Erie PA / NORTH 271 — Level 1
GE P-96 EXIT 220

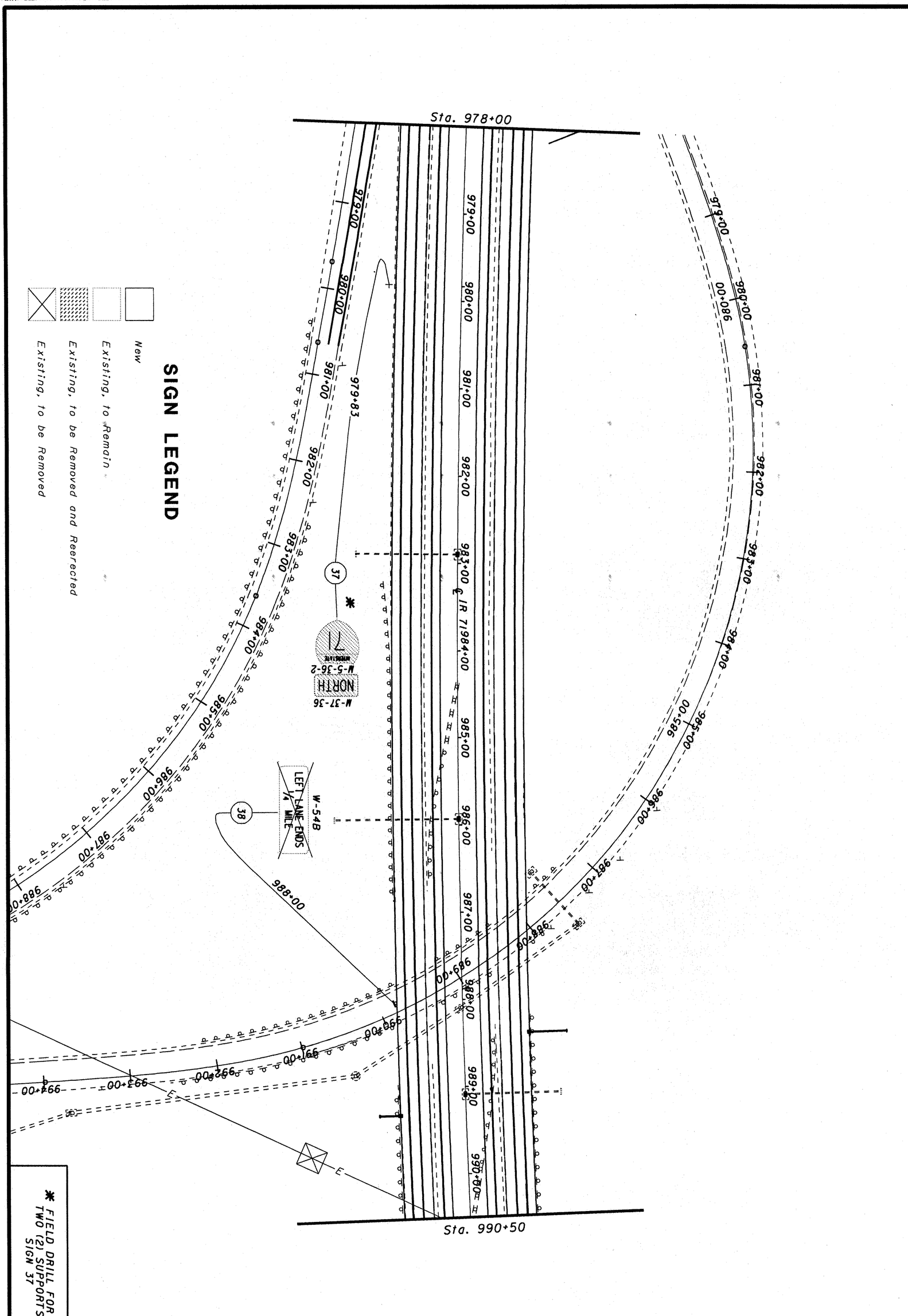
35 — W-98-48 RAMP 45 MPH

36 — N-44B-18 — TWO
EXIT 220
GF,8'x5'

32 — W-49R-48

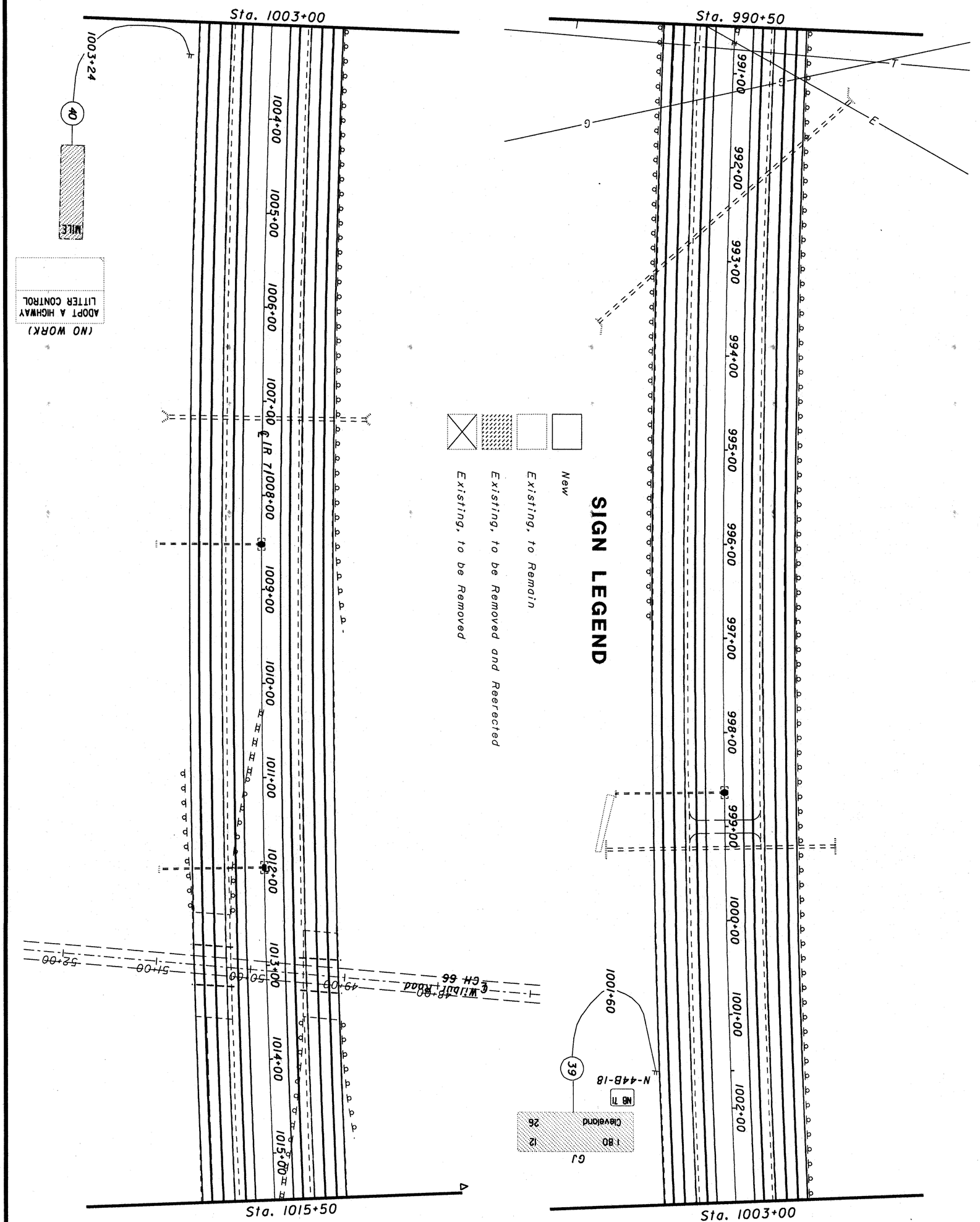
34 — W-54B-144 LEFT LANE ENDS 1/4 MILE

USERNAME: ##########USER#########
PROJECT: ########PROJECT########
LEVELS ON: ###########LEVELSON###########
PLOT QUEUE: ################QUEUE################
PEN_TABLE: ##############PENTABLE############
REF.FILE *2: ###########REF.FILENAME2###############
REF.FILE *2 LEVELS ON: ############REF.FILE2##############
REF.FILE *3: ###########REF.FILENAME3###############
REF.FILE *3 LEVELS ON: ############REF.FILE3##############
REF.FILE *4: ###########REF.FILENAME4###############
REF.FILE *4 LEVELS ON: ############REF.FILE4##############



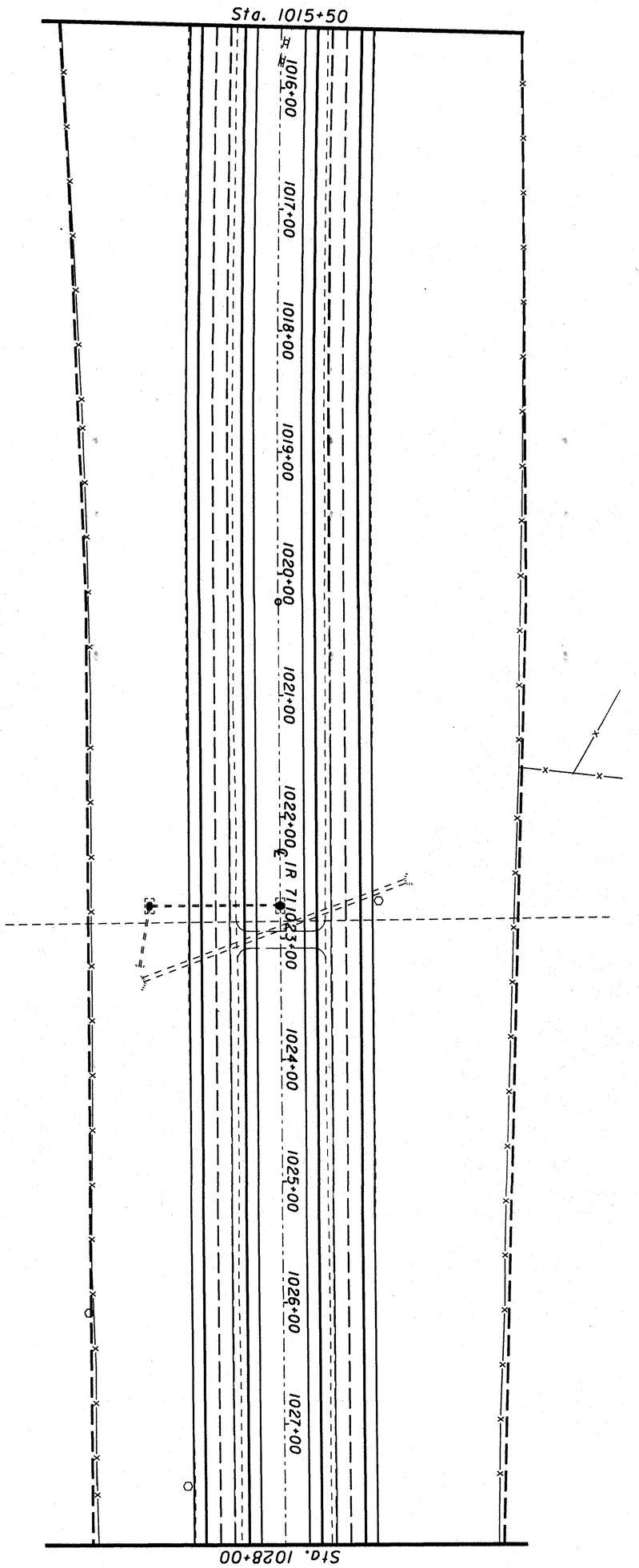

| | | | | |
|---|---|---|---|---|
| 583 940 | MED - 71 - 15.78 | SIGNING LINE SHEET STA. 978+00 TO STA. 990+50 | CALCULATED / CHECKED | 0 50 25 100 HORIZONTAL SCALE IN FEET |

USERNAME: $$$$$$$$$$USER$$$$$$$$$$
PROJECT: $$$$$$$$$PROJECT$$$$$$$$$
LEVELS ON: $$$$$$$$$$$LEVELSON$$$$$$$$$$$
PLOT QUEUE: $$$$$$$$$$$$$$QUEUE$$$$$$$$$$$$$$
PEN-TABLE: $$$$$$$$$$$$PENTABLE$$$$$$$$$$$$
REF.FILE *2: $$$$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$$$REF.FILE2$$$$$$$$$$$$$$
REF.FILE *3: $$$$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$$$REF.FILE3$$$$$$$$$$$$$$
REF.FILE *4: $$$$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$$$REF.FILE4$$$$$$$$$$$$$$




| | | | |
|---|---|---|---|
| 584 / 940 | MED - 71 - 15.78 | SIGNING LINE SHEET<br>STA. 990+50 TO STA. 1015+50 | CALCULATED / CHECKED<br>0 50 100 / 25<br>HORIZONTAL SCALE IN FEET |

DATE & TIME: ########TIME&DATE########
USERNAME: ##########USER##########
PROJECT: #########PROJECT#########
LEVELS ON: ###########LEVELSON###########
PLOT QUEUE: ################QUEUE################
PEN TABLE: ############PENTABLE############
REF.FILE *2: ##########REF.FILENAME2##############
REF.FILE *2 LEVELS ON: ###########REF.FILE2##############
REF.FILE *3: ##########REF.FILENAME3##############
REF.FILE *3 LEVELS ON: ###########REF.FILE3##############
REF.FILE *4: ##########REF.FILENAME4##############
REF.FILE *4 LEVELS ON: ###########REF.FILE4##############




585
940

**MED - 71 - 15.78**

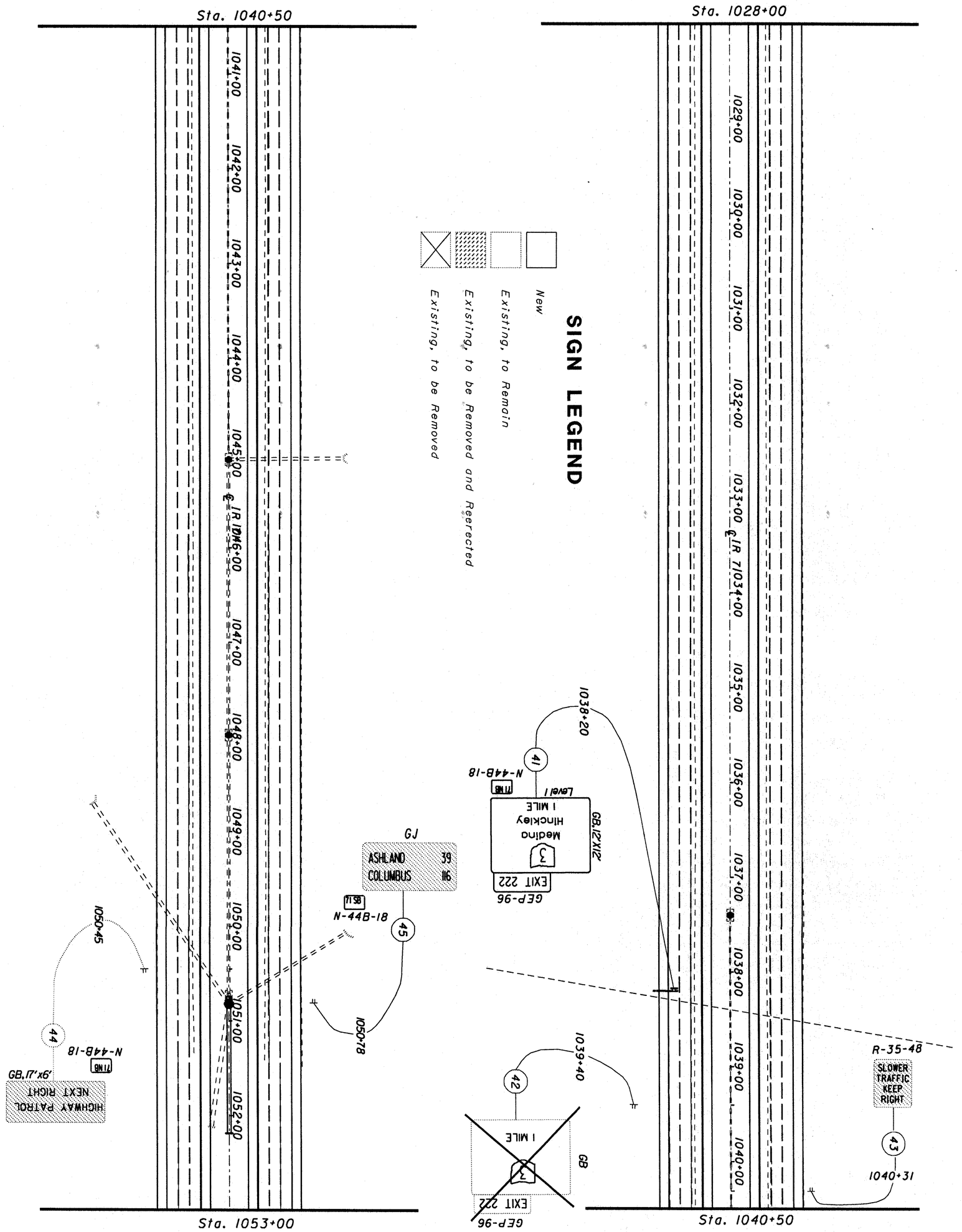
# SIGNING LINE SHEET
## STA. 1015+50 TO STA. 1028+00

CALCULATED

CHECKED

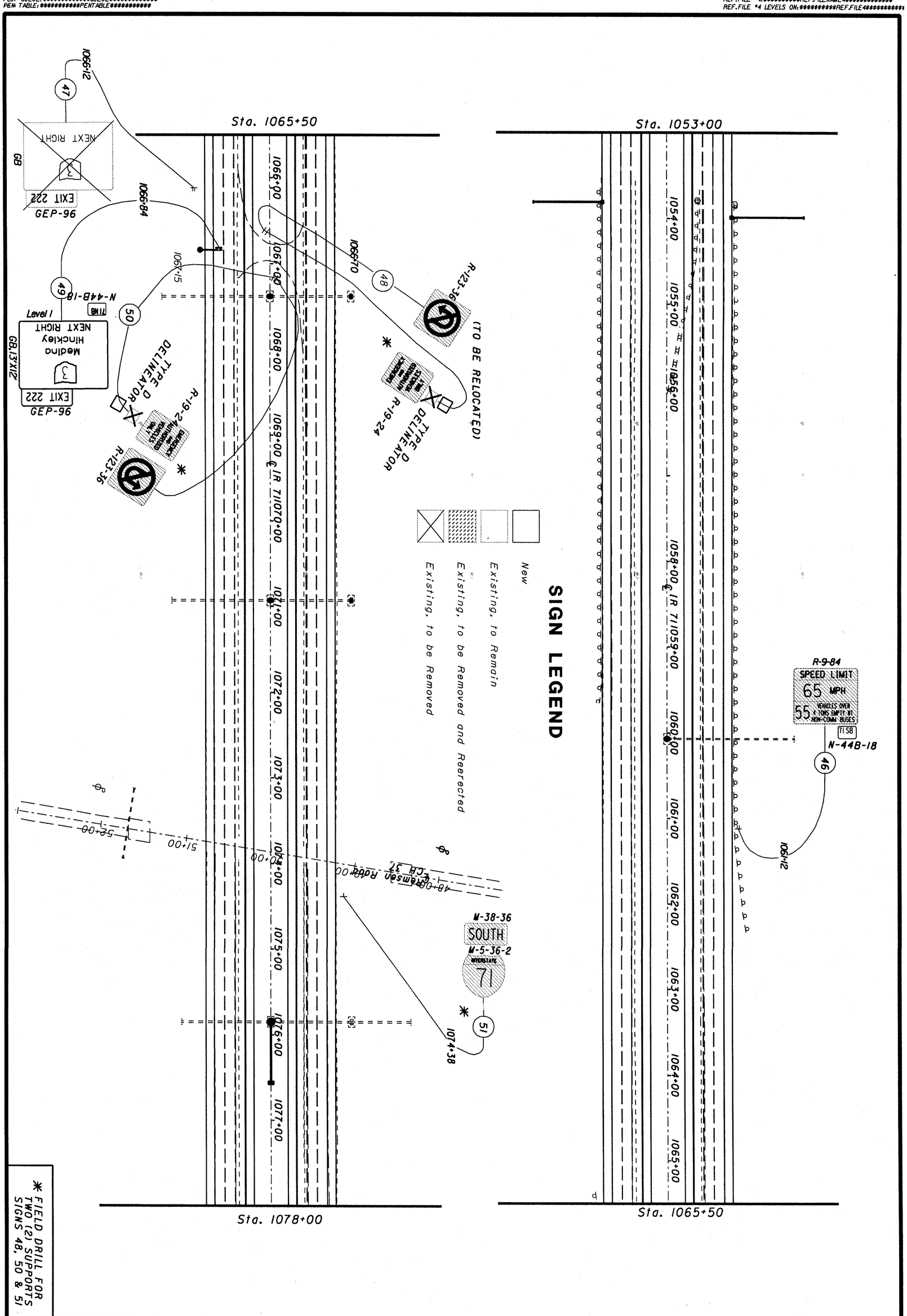
0 50
25 100
HORIZONTAL SCALE IN FEET

USERNAME: $$$$$$$$$$USER$$$$$$$$$$
PROJECT: $$$$$$$$$$PROJECT$$$$$$$$$$
LEVELS ON: $$$$$$$$$$LEVELSON$$$$$$$$$$
PLOT QUEUE: $$$$$$$$$$$$$QUEUE$$$$$$$$$$$$$
PEN TABLE: $$$$$$$$$$$$PENTABLE$$$$$$$$$$$$
REF.FILE *2: $$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$$REF.FILE2$$$$$$$$$$$
REF.FILE *3: $$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$$REF.FILE3$$$$$$$$$$$
REF.FILE *4: $$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$$REF.FILE4$$$$$$$$$$$




| | | | | |
|---|---|---|---|---|
| 586 940 | MED - 71 - 15.78 | SIGNING LINE SHEET<br>STA. 1028+00 TO STA. 1053+00 | CALCULATED<br>CHECKED | 0 50<br>25 100<br>HORIZONTAL SCALE IN FEET |

USERNAME: $$$$$$$$$$USER$$$$$$$$$$
PROJECT: $$$$$$$$$PROJECT$$$$$$$$$
LEVELS ON: $$$$$$$$$$LEVELSON$$$$$$$$$$
PLOT QUEUE: $$$$$$$$$$$$$$QUEUE$$$$$$$$$$$$$$
P&W TABLE: $$$$$$$$$$$$PENTABLE$$$$$$$$$$$$
REF.FILE *2: $$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$REF.FILE2$$$$$$$$$$
REF.FILE *3: $$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$REF.FILE3$$$$$$$$$$
REF.FILE *4: $$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$REF.FILE4$$$$$$$$$$




* FIELD DRILL FOR TWO (2) SUPPORTS SIGNS 48, 50 & 51

587
940

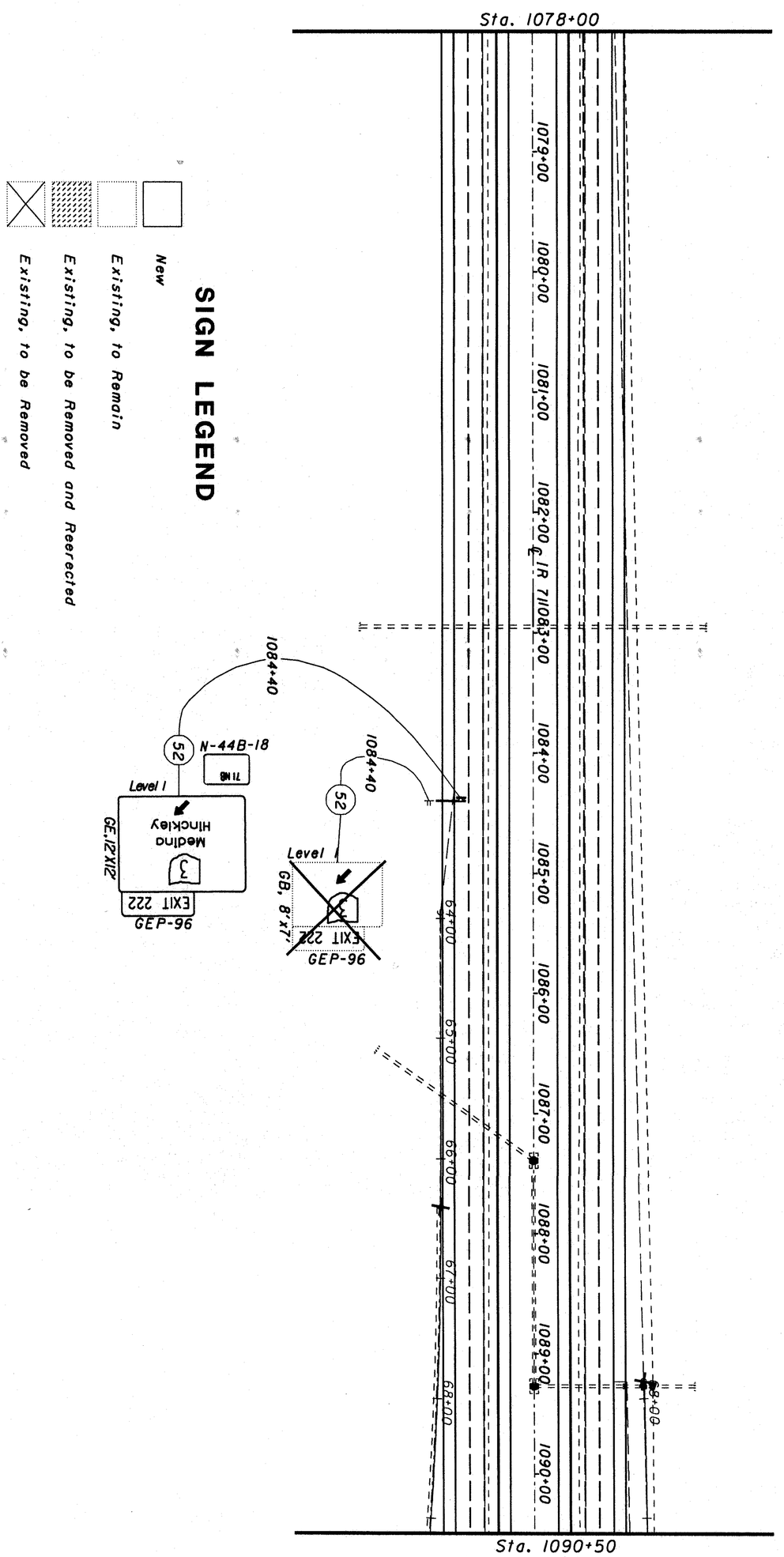
**MED - 71 - 15.78**

**SIGNING LINE SHEET**
**STA. 1053+00 TO STA. 1078+00**

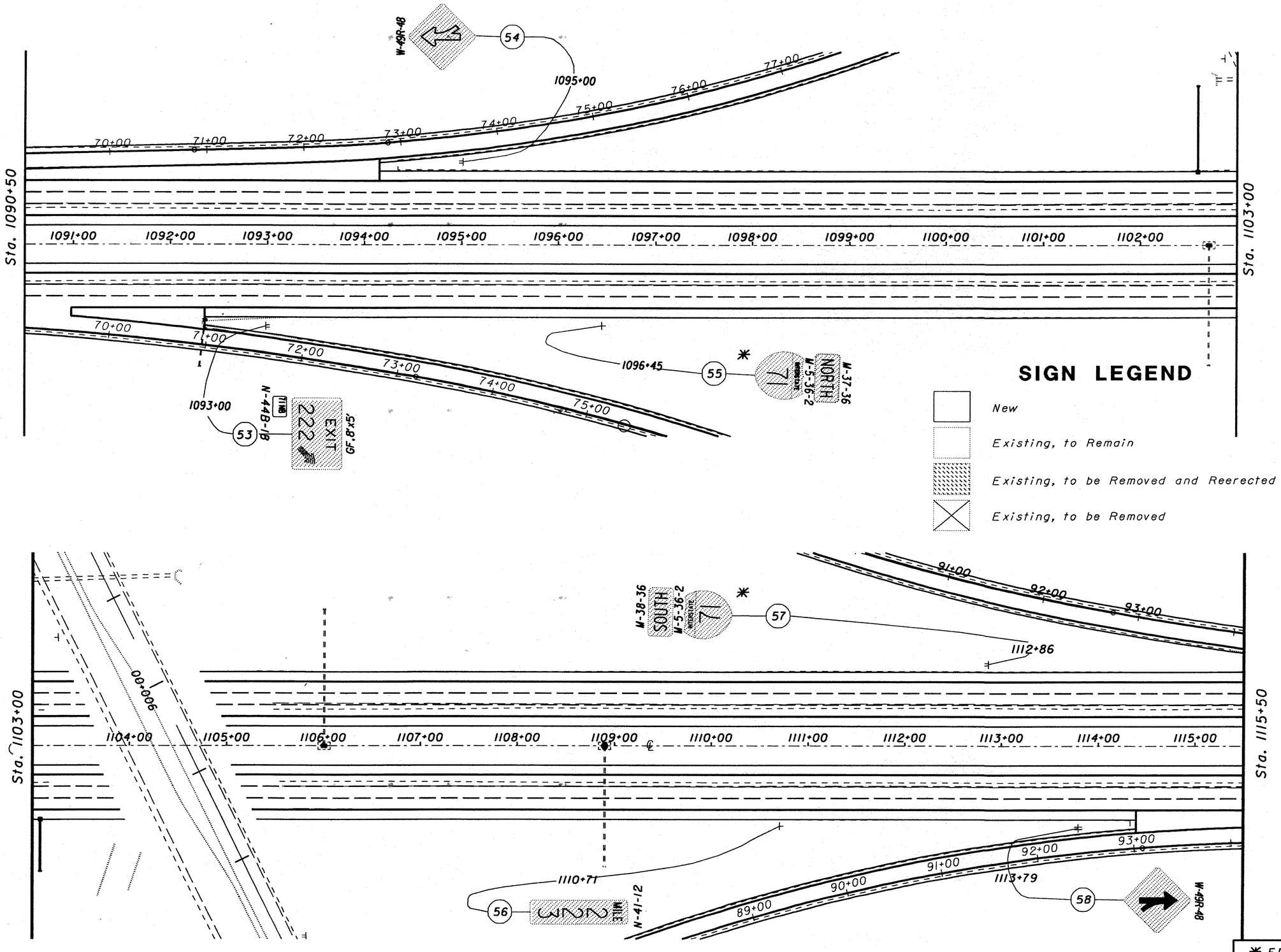
CALCULATED
CHECKED

0 50
25 100
HORIZONTAL SCALE IN FEET

USERNAME: ##########USER##########
PROJECT: ##########PROJECT##########
LEVELS ON: ##########LEVELSON##########
PLOT QUEUE: ##########QUEUE##########
PEN TABLE: ##########PENTABLE##########
REF.FILE *2: ##########REF.FILENAME2##########
REF.FILE *2 LEVELS ON: ##########REF.FILE2##########
REF.FILE *3: ##########REF.FILENAME3##########
REF.FILE *3 LEVELS ON: ##########REF.FILE3##########
REF.FILE *4: ##########REF.FILENAME4##########
REF.FILE *4 LEVELS ON: ##########REF.FILE4##########



REF.FILE *2: $$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$REF.FILE2$$$$$$$$$$$$$
REF.FILE *3: $$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$REF.FILE3$$$$$$$$$$$$$
REF.FILE *4: $$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$REF.FILE4$$$$$$$$$$$$$




## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

* FIELD DRILL FOR TWO (2) SUPPORTS SIGNS 55 & 57

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED | CHECKED

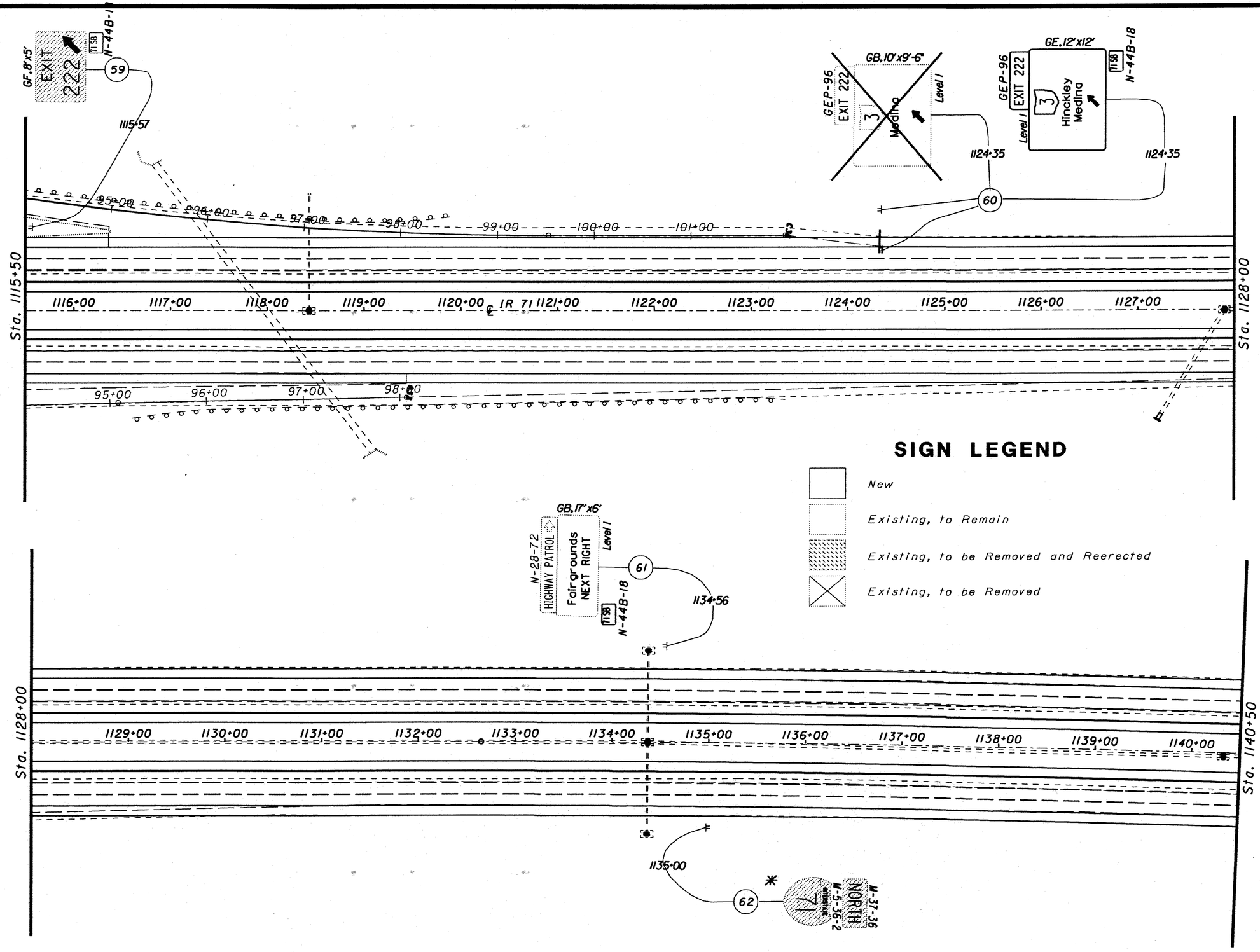
# SIGNING LINE SHEET
# STA. 1090+50 TO STA. 1115+50

MED - 71 - 15.78

589
940

LEVELS ON: $$$$$$$$$$LEVELSON$$$$$$$$$$
PLOT TITLE: $$$$$$$$$$PLOTTITLE$$$$$$$$$$
PEN TABLE: $$$$$$$$$$PENTABLE$$$$$$$$$$
USERNAME: $$$$$$$$$$USERNAME$$$$$$$$$$
PROJECT: $$$$$$$$$$PROJECT$$$$$$$$$$

REF.FILE *2: $$$$$$$$$$REF.FILENAME2$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$REF.FILE2$$$$$$$$$$
REF.FILE *3: $$$$$$$$$$REF.FILENAME3$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$REF.FILE3$$$$$$$$$$
REF.FILE *4: $$$$$$$$$$REF.FILENAME4$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$REF.FILE4$$$$$$$$$$




HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

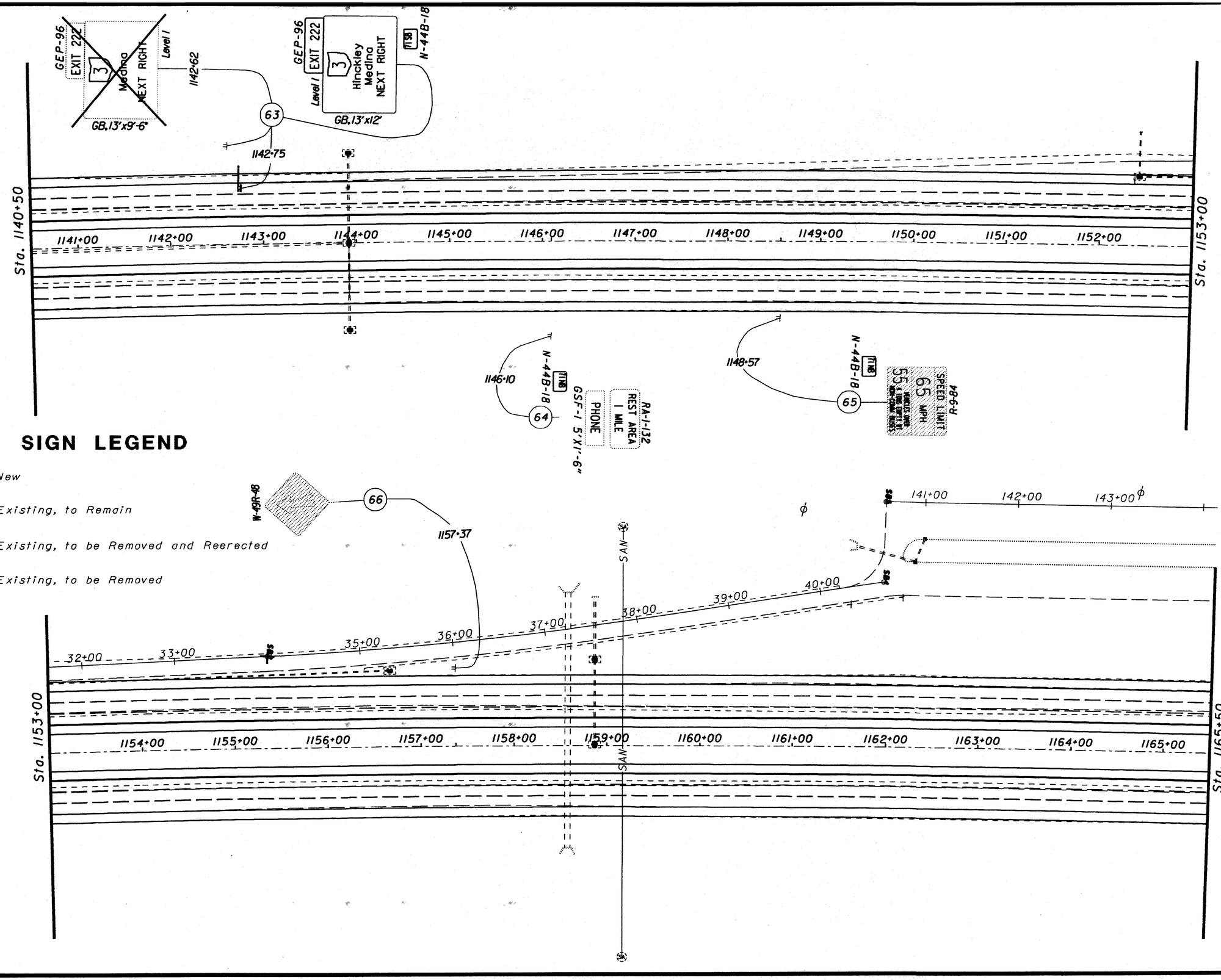
# SIGNING LINE SHEET
## STA. 1115+50 TO STA. 1140+50

MED - 71 - 15.78

590
940

LEVELS ON: $$$$$$$$$$LEVELSON$$$$$$$$$$
PLOT QUEUE: $$$$$$$$$$QUEUE$$$$$$$$$$
PEN TABLE: $$$$$$$$$$PENTABLE$$$$$$$$$$
USERNAME: $$$$$$$$$$USER$$$$$$$$$$
PROJECT: $$$$$$$$$$PROJECT$$$$$$$$$$

REF.FILE *2:$$$$$$$$$$REF.FILENAME2$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$REF.FILE2$$$$$$$$$$
REF.FILE *3:$$$$$$$$$$REF.FILENAME3$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$REF.FILE3$$$$$$$$$$
REF.FILE *4:$$$$$$$$$$REF.FILENAME4$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$REF.FILE4$$$$$$$$$$




## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

USERNAME: $$$$$$$$$$USER$$$$$$$$$$
PROJECT: $$$$$$$$$$PROJECT$$$$$$$$$$
LEVELS ON: $$$$$$$$$$LEVELSON$$$$$$$$$$
RLT. DWG: $$$$$$$$$$RELATIVE$$$$$$$$$$
REM.TABLE: $$$$$$$$$$PENTABLE$$$$$$$$$$

CALCULATED
CHECKED
HORIZONTAL SCALE IN FEET
0 25 50 100

SIGNING LINE SHEET
STA. 1140+50 TO STA. 1165+50

MED - 71 - 15.78

59
940

# SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

# SIGNING LINE SHEET
## STA. 1165+50 TO STA. 1190+50

MED - 71 - 15.78

592
940

Sta. 1165+50
Sta. 1178+00
Sta. 1178+00
Sta. 1190+50

(No Work)
NORTH 271 To Erie PA NEXT RIGHT
Level 1
GB.26'x12'
67
1166-84
46+00
47+00
48+00
49+00
50+00
51+00
52+00
53+00
54+00
55+00
REST AREA
RA-4-72
68
T1 SB
N-44B-18
1171-33
1166+00
1167+00
1168+00
1169+00
1170+00
1171+00
1172+00
1173+00
1174+00
1175+00
1176+00
1177+00
1177-08
1177-28
69
1½ MILE
Level 2
GB.14'x9'6"
303
Brunswick
EXIT 226
GEP-96
GB.14'x12'
Level 1
Brunswick Hinckley 1½ MILE
T1 NB
N-44B-18
(TO BE RELOCATED BY OTHERS)
1169-27
LODGING-EXIT 226
RA-2-132
REST AREA
70
T1 SB
N-44B-18
1180+21
Hinckley Road
CH-136
1179+00
1180+00
1181+00
1182+00
1183+00
1184+00
1185+00
1186+00
1187+00
1188+00
1189+00
1190+00
49+00
50+00
51+00
52+00
SAN
1190-34
T1 NB
N-44B-18
71
RA-2-132
REST AREA

REF.FILE *3:$$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON:$$$$$$$$$$REF.FILE3$$$$$$$$$$$$$$
REF.FILE *4:$$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON:$$$$$$$$$$REF.FILE4$$$$$$$$$$$$$$
REF.FILE *2:$$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON:$$$$$$$$$$REF.FILE2$$$$$$$$$$$$$$

LEVELS ON:$$$$$$$$$$LEVELSON$$$$$$$$$$$$$$
PLOT QUEUE:$$$$$$$$$$QUEUE$$$$$$$$$$$$$$
PEN TABLE:$$$$$$$$$$PENTABLE$$$$$$$$$$$$$$

USERNAME:$$$$$$$$$$USER$$$$$$$$$$
PROJECT:$$$$$$$$$$PROJECT$$$$$$$$$$

USERNAME: $$$$$$$$$USER$$$$$$$$$
PROJECT: $$$$$$$$$PROJECT$$$$$$$$$
LEVELS ON: $$$$$$$$$$LEVELSON$$$$$$$$$$
PLOT QUEUE: $$$$$$$$$$$$$$$QUEUE$$$$$$$$$$$$$$$
PEN TABLE: $$$$$$$$$$$$$PENTABLE$$$$$$$$$$$$
REF.FILE *2: $$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$REF.FILE2$$$$$$$$$$$$$$
REF.FILE *3: $$$$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$$$REF.FILE3$$$$$$$$$$$$$$
REF.FILE *4: $$$$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$$$REF.FILE4$$$$$$$$$$$$$$

## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

Sta. 1190+50

SAN

1191+00
1192+00
1193+00
1194+00
1195+00
1196+00
1197+00
1198+00
1199+00
1200+00
1201+00
1202+00

73+00
74+00
75+00
76+00
77+00
78+00
79+00
80+00
81+00

GEP-96
EXIT 222
3
Medina
1 1/2 MILE
Level I
GB 10'x9'-6"

GEP-96
Level I
EXIT 222
3
Hinckley
Medina
1 1/2 MILE
GB 12'x12'
T158
N-44B-18

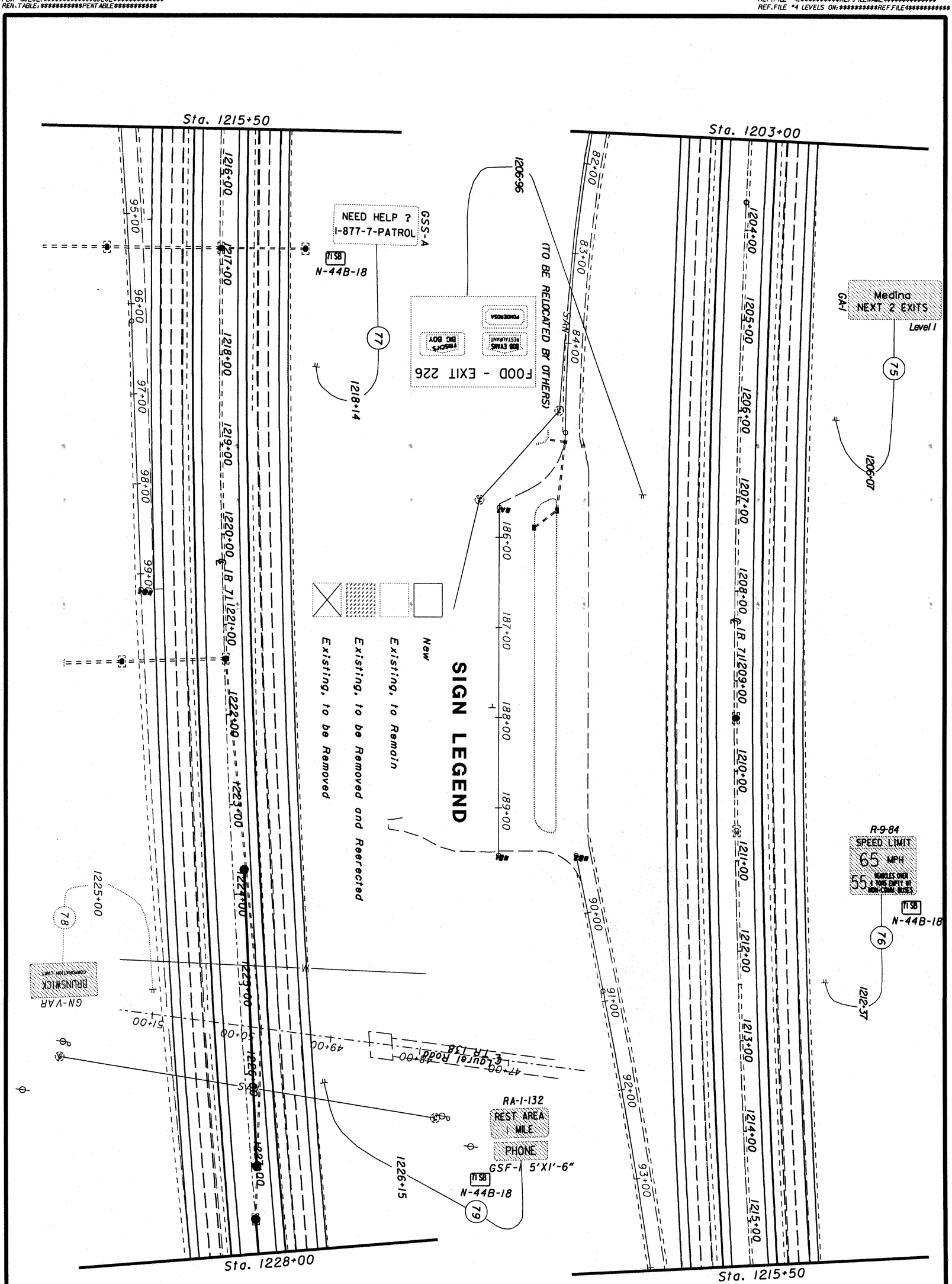
1195+53
1195+55
72
73

1196+17
71
N-44B-18
T148
REST AREA 27
RA-4-72

Sta. 1203+00

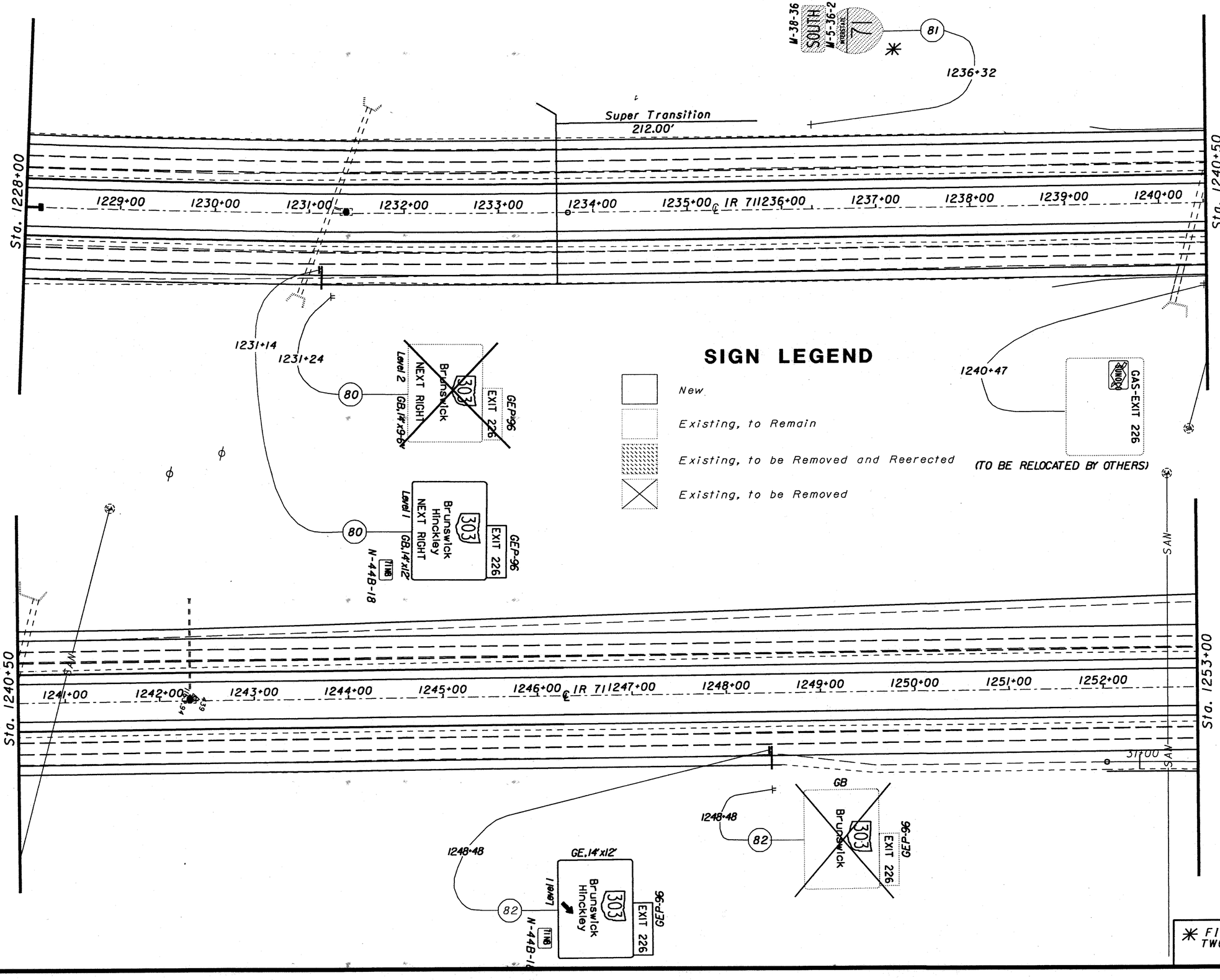
| | | | | |
|---|---|---|---|---|
| 593 940 | MED - 71 - 15.78 | SIGNING LINE SHEET STA. 1190+50 TO STA. 1203+00 | CALCULATED / CHECKED | 0 50 25 100 HORIZONTAL SCALE IN FEET |

USERNAME: ##########USER##########
PROJECT: ##########PROJECT##########
LEVELS ON: ##########LEVELSON##########
PLOT QUEUE: ##########QUEUE##########
REN. TABLE: ##########PENTABLE##########
REF.FILE *2: ##########REF.FILENAME2##########
REF.FILE *2 LEVELS ON: ##########REF.FILE2##########
REF.FILE *3: ##########REF.FILENAME3##########
REF.FILE *3 LEVELS ON: ##########REF.FILE3##########
REF.FILE *4: ##########REF.FILENAME4##########
REF.FILE *4 LEVELS ON: ##########REF.FILE4##########




| | | | | |
|---|---|---|---|---|
| 594 / 940 | MED - 71 - 15.78 | SIGNING LINE SHEET<br>STA. 1203+00 TO STA. 1228+00 | CALCULATED / CHECKED | 0 50 25 100<br>HORIZONTAL SCALE IN FEET |

REF.FILE *2:$$$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON:$$$$$$$$$$$REF.FILE2$$$$$$$$$$$$$$$
REF.FILE *3:$$$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON:$$$$$$$$$$$REF.FILE3$$$$$$$$$$$$$$$
REF.FILE *4:$$$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON:$$$$$$$$$$$REF.FILE4$$$$$$$$$$$$$$$




## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

✳ FIELD DRILL FOR TWO (2) SUPPORTS SIGN #81

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

SIGNING LINE SHEET
STA. 1228+00 TO STA. 1253+00

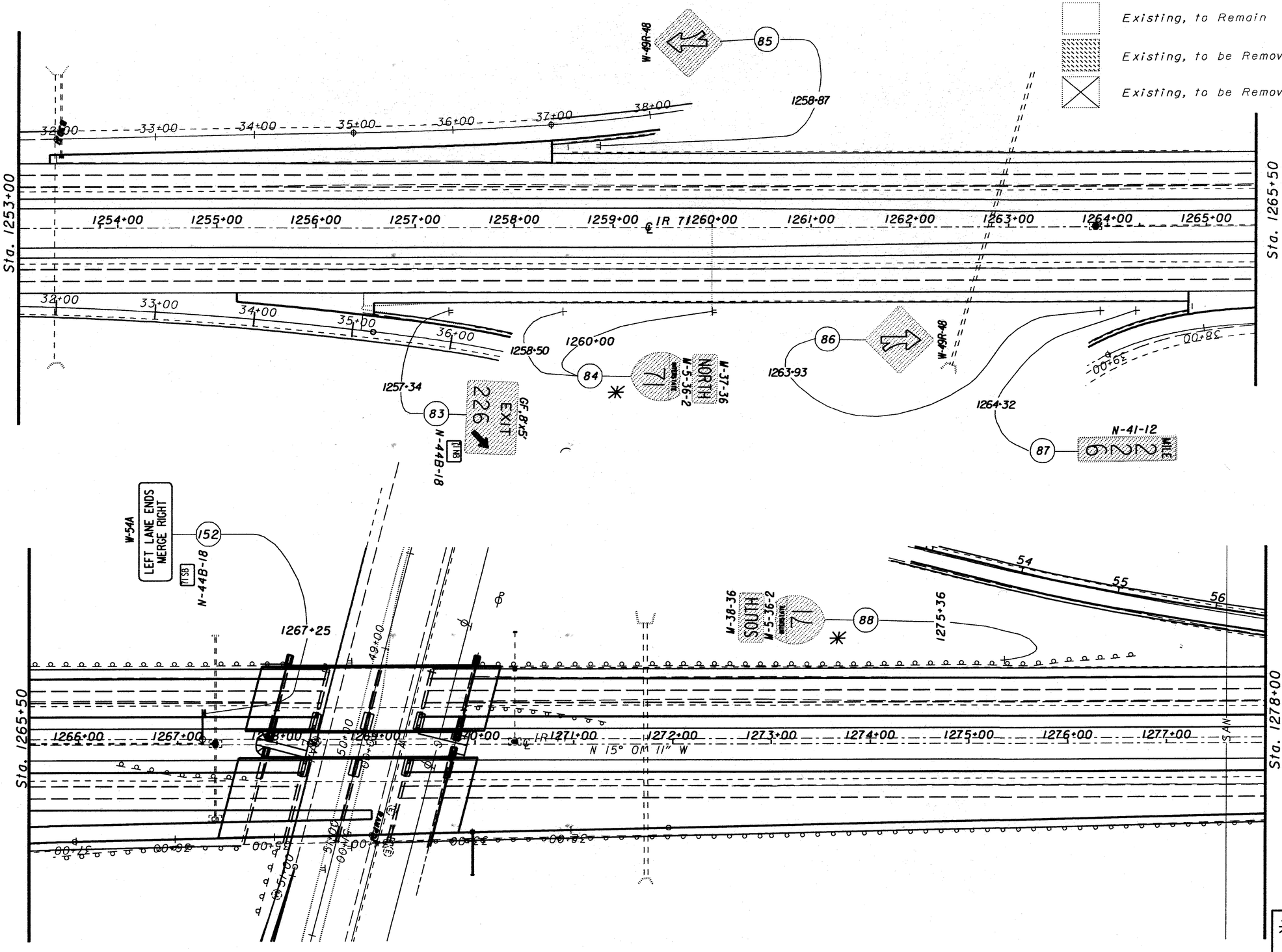
MED - 71 - 15.78

595
940

LEVELS ON:$$$$$$$$$$LEVELSON$$$$$$$$$$$$$$$
REF.FILE:$$$$$$$$$$REFFILES$$$$$$$$$$$$$$$
PEN TABLE:$$$$$$$$$$PENTABLE$$$$$$$$$$$$$$$
USERNAME:$$$$$$$$$$USER$$$$$$$$$$
PROJECT:$$$$$$$$$$PROJECT$$$$$$$$$$

# SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed




✳ FIELD DRILL FOR TWO (2) SUPPORTS SIGNS 84 & 88

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED

CHECKED

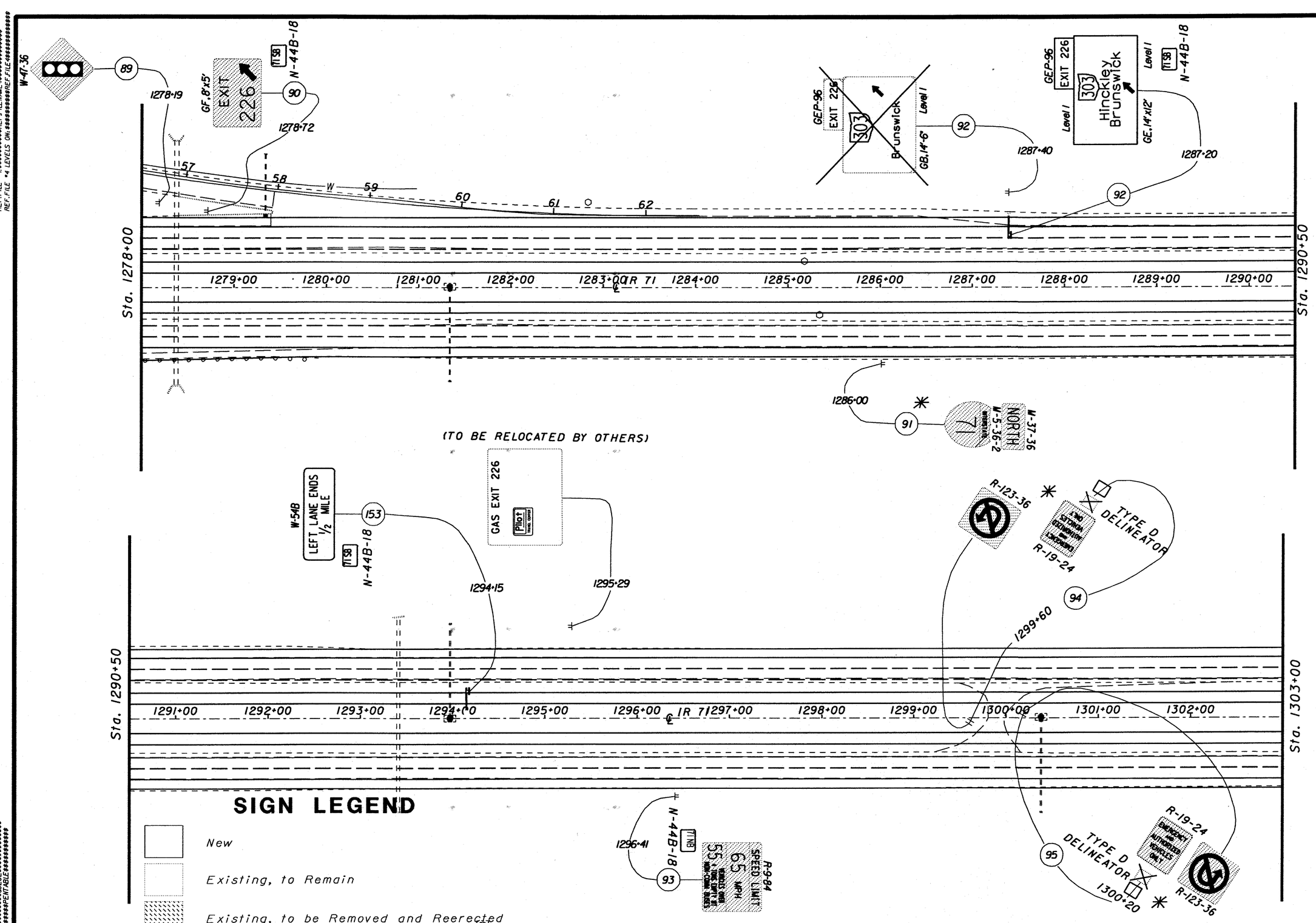
SIGNING LINE SHEET
STA. 1253+00 TO STA. 1278+00

MED - 71 - 15.78

596
940


REF.FILE *2,$$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON,$$$$$$$$$$REF.FILE2$$$$$$$$$$$$$$$
REF.FILE *3,$$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON,$$$$$$$$$$REF.FILE3$$$$$$$$$$$$$$$
REF.FILE *4,$$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON,$$$$$$$$$$REF.FILE4$$$$$$$$$$$$$$$
LEVELS ON,$$$$$$$$$$LEVELSON$$$$$$$$$$$$$$$
USERNAME,$$$$$$$$$$USER$$$$$$$$$$
PROJECT,$$$$$$$$$$PROJECT$$$$$$$$$$
PERMITABLE,$$$$$$$$$$PERMITABLE$$$$$$$$$$

REF.FILE *2:$$$$$$$$$$REF.FILENAME2$$$$$$$$$$
REF.FILE *3:$$$$$$$$$$REF.FILENAME3$$$$$$$$$$
REF.FILE *4:$$$$$$$$$$REF.FILENAME4$$$$$$$$$$
REF.FILE *2 LEVELS ON:$$$$$$$$$$REF.FILE2$$$$$$$$$$
REF.FILE *3 LEVELS ON:$$$$$$$$$$REF.FILE3$$$$$$$$$$
REF.FILE *4 LEVELS ON:$$$$$$$$$$REF.FILE4$$$$$$$$$$




## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

✳ FIELD DRILL FOR TWO (2) SUPPORTS SIGNS 91, 94 & 95

SIGNING LINE SHEET
STA. 1278+00 TO STA. 1303+00

MED - 71 - 15.78

597
940

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

LEVELS ON:$$$$$$$$$$LEVELSON$$$$$$$$$$
PLOT QUEUE:$$$$$$$$$$QUEUE$$$$$$$$$$
PEN TABLE:$$$$$$$$$$PENTABLE$$$$$$$$$$
USERNAME:$$$$$$$$$$USER$$$$$$$$$$
PROJECT:$$$$$$$$$$PROJECT$$$$$$$$$$

(TO BE RELOCATED BY OTHERS)

FOOD - EXIT 226
DENNY'S
BIG BOY
IHOP
PANCAKES

1303-31

W-54B
LEFT LANE ENDS
¼ MILE
154
TSB
N-44B-18

1307-35

GEP-96
EXIT 226
303
Brunswick
NEXT RIGHT
Level I
GB.14'x9-6"
97
1312-27

GEP-96
Level I
EXIT 226
303
Hinckley
Brunswick
NEXT RIGHT
GB.14'x12"
TSB
N-44B-18
97
1312-11

Sta. 1303+00

1304+00 1305+00 1306+00 1307+00 1308+00 1309+00 1310+00 1311+00 1312+00 1313+00 1314+00 1315+00

IR 71

Sta. 1315+50

1306-51
N-44B-18
TSB
96
CLEVELAND
90
36
71

LODGING-EXIT 226
Quality

(TO BE RELOCATED BY OTHERS)
1324+25

## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

Sta. 1315+50

1316+00 1317+00 1318+00 1319+00 1320+00 1321+00 IR 71 1322+00 1323+00 1324+00 1325+00 1326+00 1327+00

Sta. 1328+00

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

# SIGNING LINE SHEET
## STA. 1303+00 TO STA. 1328+00

MED - 71 - 15.78

598
940

REF.FILE *1: $$$$$$$$$$REF.FILENAME1$$$$$$$$$$$$$$$$
REF.FILE *2: $$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$REF.FILE2$$$$$$$$$$$$$$$$
REF.FILE *3: $$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$REF.FILE3$$$$$$$$$$$$$$$$
REF.FILE *4: $$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$REF.FILE4$$$$$$$$$$$$$$$$

LEVELS ON: $$$$$$$$$$LEVELSON$$$$$$$$$$
PLOT QUEUE: $$$$$$$$$$PLOTQUEUE$$$$$$$$$$
PEN TABLE: $$$$$$$$$$PENTABLE$$$$$$$$$$

USERNAME: $$$$$$$$$$USERNAME$$$$$$$$$$
PROJECT: $$$$$$$$$$PROJECT$$$$$$$$$$

USERNAME: $$$$$$$$$$USER$$$$$$$$$$
PROJECT: $$$$$$$$$PROJECT$$$$$$$$$
LEVELS ON: $$$$$$$$$$$LEVELSON$$$$$$$$$$$
PLOT QUEUE: $$$$$$$$$$$$$$$QUEUE$$$$$$$$$$$$$$$
PEN TABLE: $$$$$$$$$$$$$PENTABLE$$$$$$$$$$$$$
REF.FILE *2: $$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$REF.FILE2$$$$$$$$$$
REF.FILE *3: $$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$REF.FILE3$$$$$$$$$$
REF.FILE *4: $$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$REF.FILE4$$$$$$$$$$

Sta. 1340+50

1341+00
1342+00
1343+00
1344+00
1345+00
1346+00 ℄ IR 71
1347+00
1348+00
1349+00
1350+00
1351+00
1352+00

Sta. 1353+00

Sta. 1328+00

1329+00
1330+00
1331+00
1332+00
1333+00
1334+00 ℄ IR 71
1335+00
1336+00
1337+00
1338+00
1339+00
1340+00

Sta. 1340+50

GEP-96
EXIT 226
303
Brunswick
1 MILE
GB, 14'x9-6"
Level 1

1332+14
98

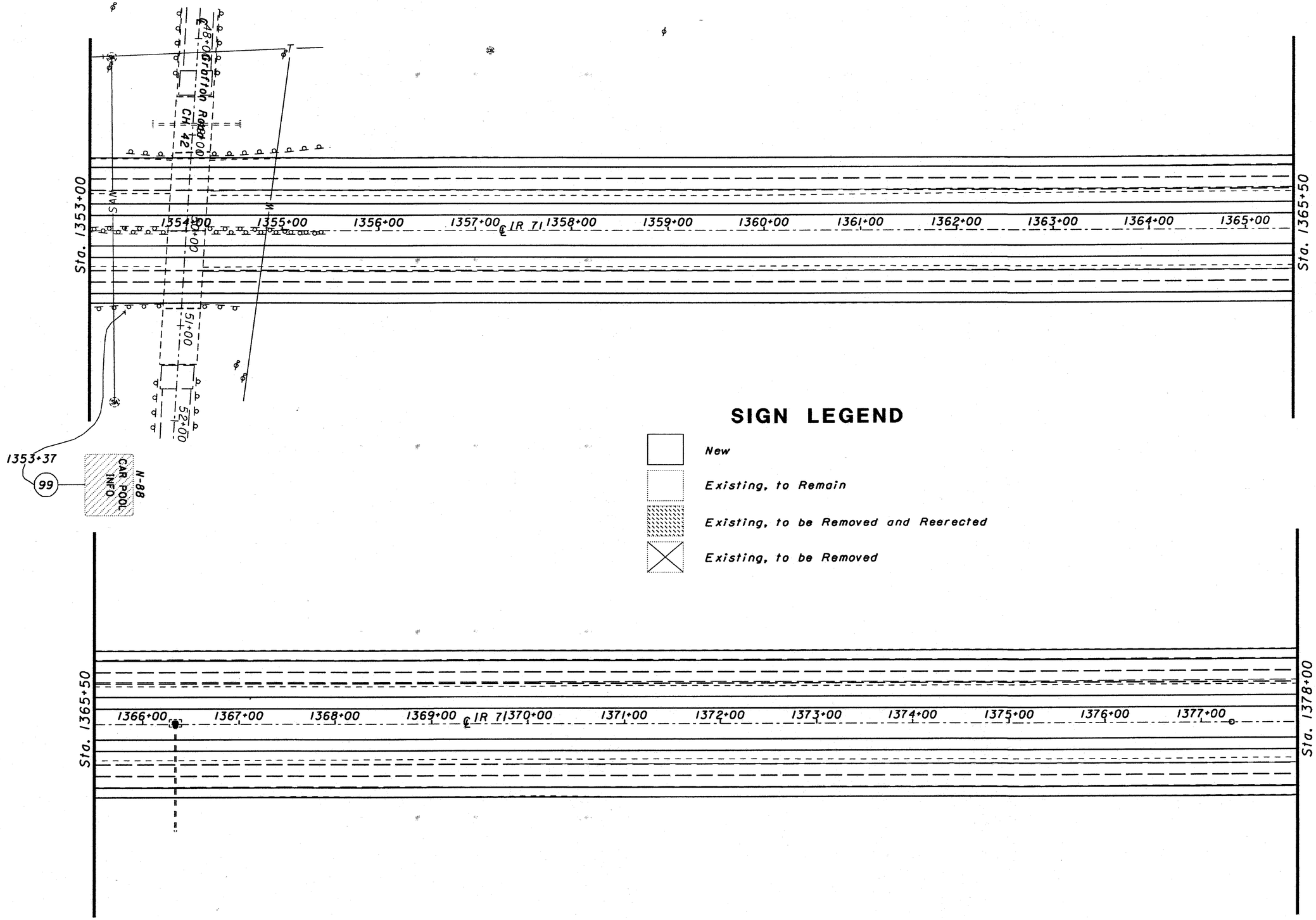
GEP-96
Level 1
EXIT 226
303
Hinckley
Brunswick
1 MILE
GB, 14'x12'
71 SB
N-44B-18

1332+34
98

## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

| | | | |
|---|---|---|---|
| 596 / 640 | MED - 71 - 15.78 | SIGNING LINE SHEET<br>STA. 1328+00 TO STA. 1353+00 | CALCULATED<br>CHECKED<br>0 50<br>25 100<br>HORIZONTAL SCALE IN FEET |




## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

SIGNING PLAN SHEET
STA. 1353+00 TO STA. 1378+00

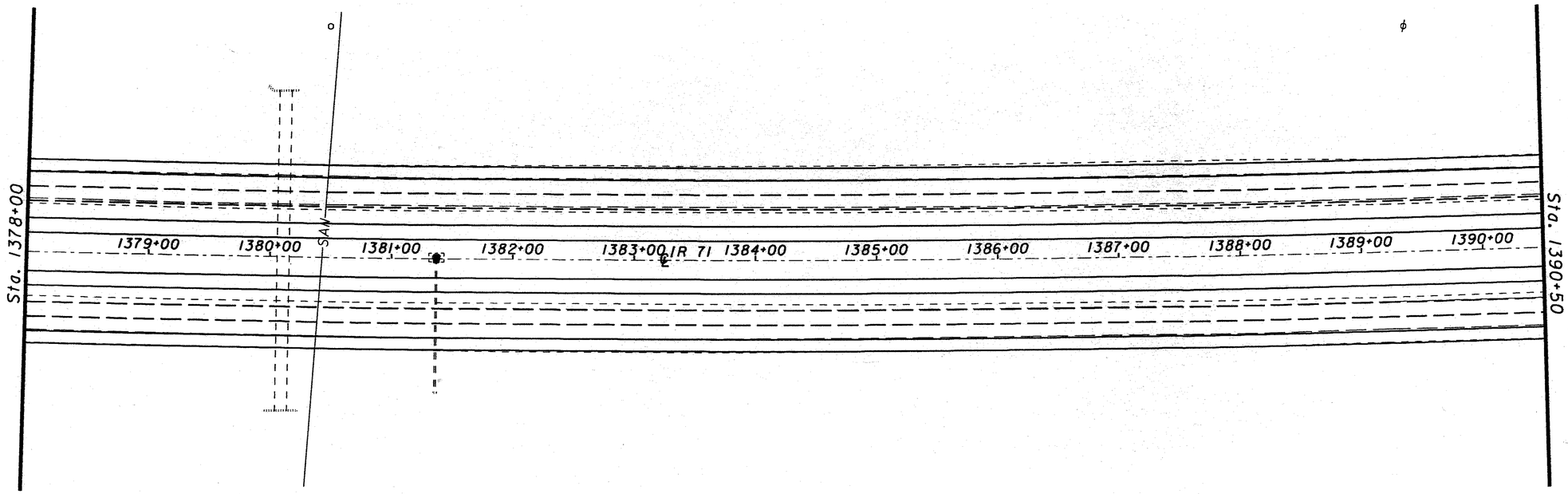
MED - 71 - 15.78

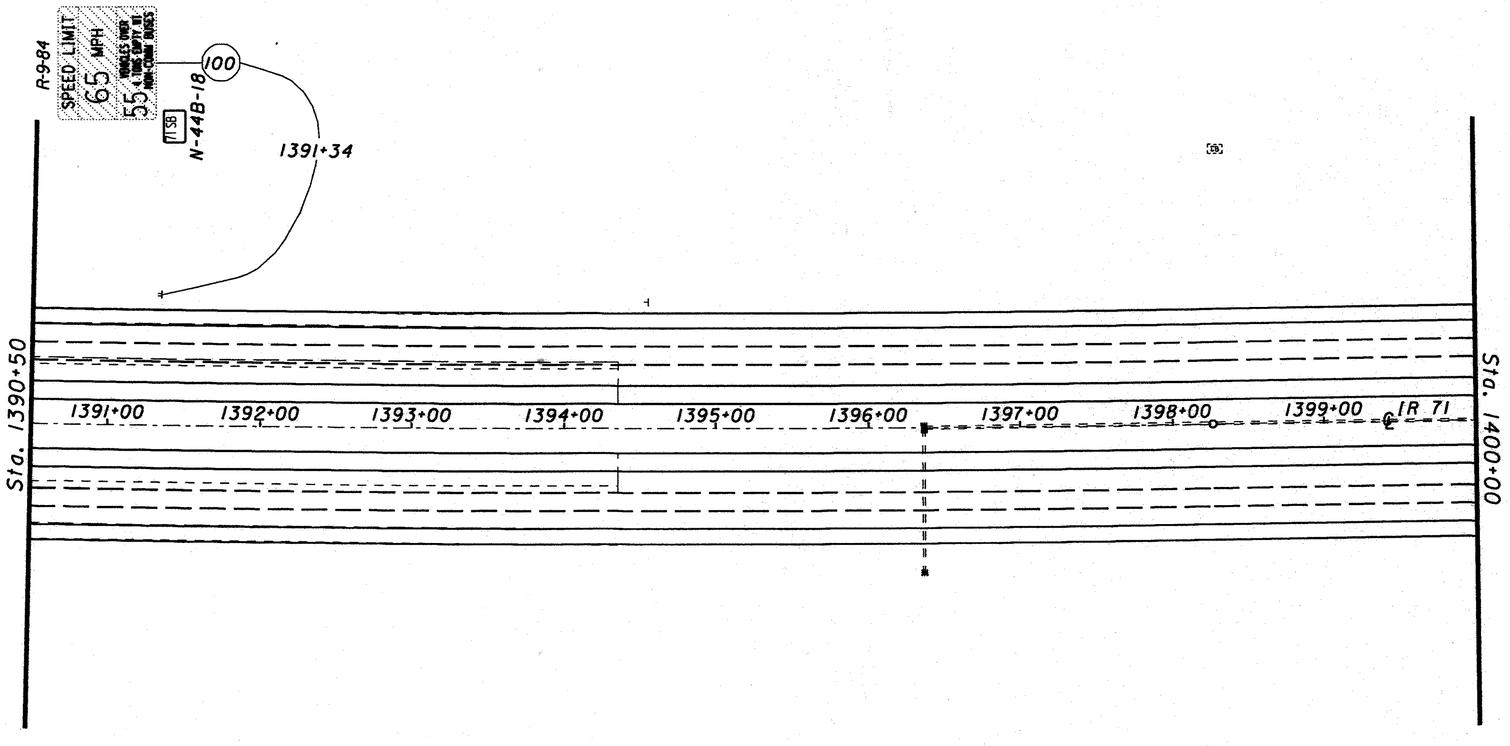
600
940

REF.FILE *2 LEVELS ON: ##########REF.FILENAME2##########
REF.FILE *3 LEVELS ON: ##########REF.FILENAME3##########
REF.FILE *4 LEVELS ON: ##########REF.FILENAME4##########

LEVELS ON: ##########LEVELSON##########
PLOT QUEUE: ##########QUEUE##########
PEN TABLE: ##########PENTABLE##########
USERNAME: ##########USER##########
PROJECT: ##########PROJECT##########

REF.FILE *2:##########REF.FILENAME2##########
REF.FILE *2 LEVELS ON:##########REF.FILE2##########
REF.FILE *3:##########REF.FILENAME3##########
REF.FILE *3 LEVELS ON:##########REF.FILE3##########
REF.FILE *4:##########REF.FILENAME4##########
REF.FILE *4 LEVELS ON:##########REF.FILE4##########




## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

CALCULATED
CHECKED

HORIZONTAL SCALE IN FEET
0 25 50 100

# SIGNING LINE SHEET
## STA. 1378+00 TO STA. 1400+00

MED - 71 - 15.78

601
940

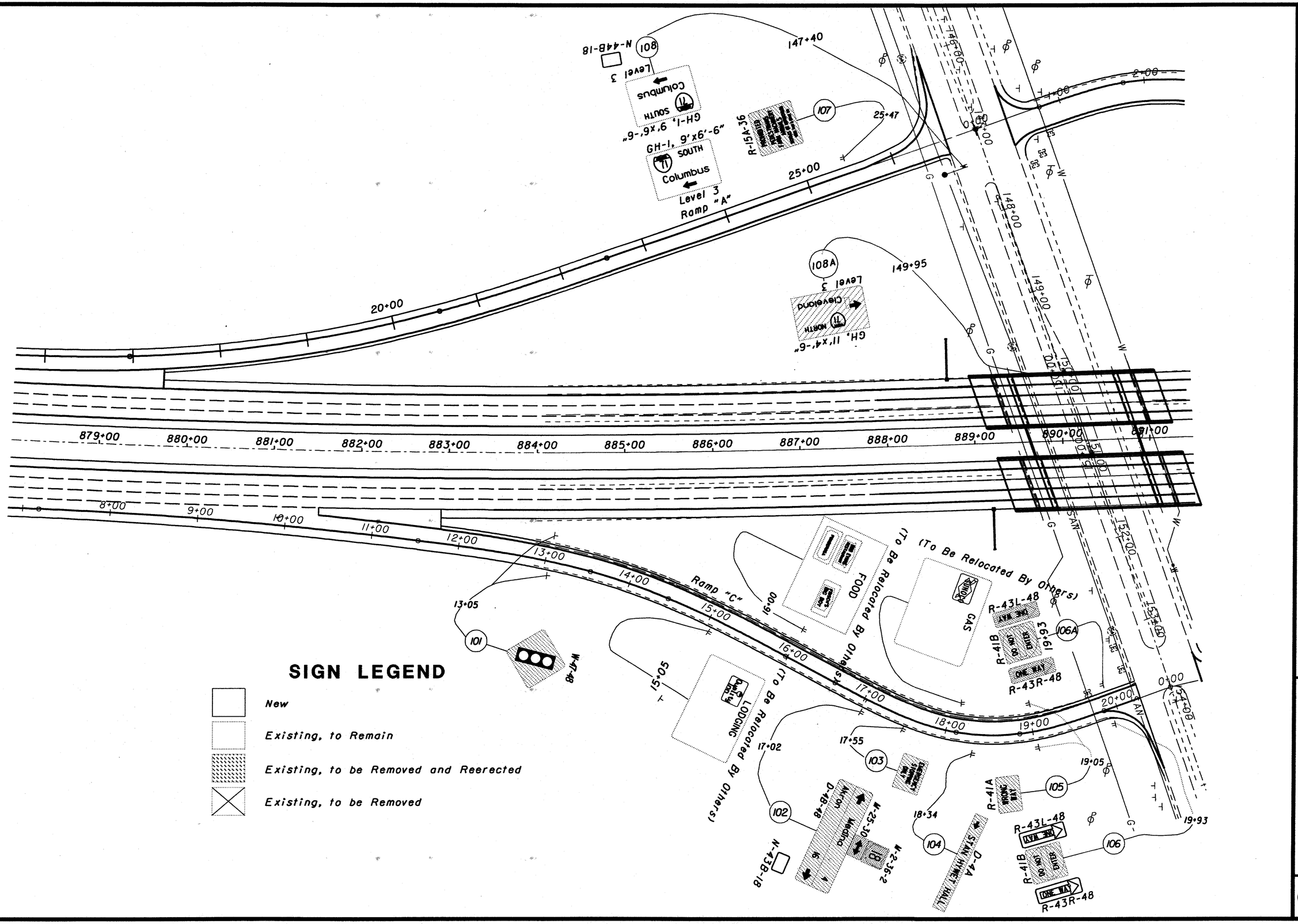
USERNAME: ##########USER##########
PROJECT: ##########PROJECT##########
LEVELS ON:##########LEVELSON##########
ACTIVE FILE: ##########ACTIVEFILE##########
PLOT TABLE: ##########PLOTTABLE##########

REF.FILE *2:$$$$$$$$$$$$REF-FILENAME2$$$$$$$$$$$$
REF.FILE *2 LEVELS ON: $$$$$$$$$$$$REF-FILE2$$$$$$$$$$$$

REF.FILE *3:$$$$$$$$$$$$REF-FILENAME3$$$$$$$$$$$$
REF.FILE *3 LEVELS ON: $$$$$$$$$$$$REF-FILE3$$$$$$$$$$$$
REF.FILE *4:$$$$$$$$$$$$REF-FILENAME4$$$$$$$$$$$$
REF.FILE *4 LEVELS ON: $$$$$$$$$$$$REF-FILE4$$$$$$$$$$$$

USERNAME: $$$$$$$$$$USER$$$$$$$$$$
PROJECT: $$$$$$$$$$PROJECT$$$$$$$$$$

LEVELS ON: $$$$$$$$$$LEVELSON$$$$$$$$$$
HATCH OBJECTS: $$$$$$$$$$HATCH$$$$$$$$$$
PEN TABLE: $$$$$$$$$$PENTABLE$$$$$$$$$$




## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

SIGNING LINE SHEET
S.R. 18 INTERCHANGE, RAMPS A & C

CALCULATED
CHECKED

HORIZONTAL SCALE IN FEET
0 25 50 100

MED - 71 - 15.78

602
940

REF.FILE *1: ##########REFFILENAME1##########
REF.FILE *2: ##########REFFILENAME2##########
REF.FILE *2 LEVELS ON: ##########REFFILE2##########
REF.FILE *3: ##########REFFILENAME3##########
REF.FILE *3 LEVELS ON: ##########REFFILE3##########
REF.FILE *4: ##########REFFILENAME4##########
REF.FILE *4 LEVELS ON: ##########REFFILE4##########

USERNAME: ##########USER##########
PROJECT: ##########PROJECT##########

LEVELS ON: ##########LEVELSON##########
PLOT QUEUE: ##########QUEUE##########
PEN TABLE: ##########PENTABLE##########

R-43R-48
VEH. SIGN
DO NOT ENTER
ONE WAY
R-43L-48
R-41B-36
R-3L-36
STOP WHEN RED
W-82-36
PED XING WP-76P-24
111
112
0+84
W-81-42
0+65
R-41A WRONG WAY
112A
0+00
1+00
2+00
K-2-36-2
K-25-30
Akron Medina
D-1B-48
N-43B-17
5+63
115
W-47-48
116
7+50
(To Be Relocated By Others)
FOOD
8+55
1+77
3+25
113
R-31A-36
ONE WAY
110
R-43R-48
R-3R-36
R-41B-36
R-43L-48
STAN HYWET HALL
114
5+07
(To Be Relocated By Others)
FOOD
5+55
K-2-36-2
K-25-30
Akron Medina
N-43B-17
117
8+06
148+00
149+00
150+00
151+00
152+00
153+00
154+00
890+00
891+00
892+00
893+00
894+00
895+00
896+00
897+00
898+00
899+00
900+00
901+00
902+00
GH, 11'x4'-6"
SOUTH
Columbus
Level 3
151+75
109
1+00
2+00
3+00
4+00
5+00
6+00
7+00
8+00
9+00
10+00
11+00
900+73
W-53R-48
119
RIGHT LANE ENDS
0+00
R-15A-36
194
118
154+25
154+36
109A
Level 3
Cleveland
NORTH
GH-1, 9'x6'-6"
GH-1, 9'x6'-6"
NORTH
Cleveland
Level 3
To Be Relocated
See Detail On Sheet —
N-44B-18

## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED
CHECKED

SIGNING LINE SHEET
S.R. 18 INTERCHANGE RAMPS B & D

MED - 71 - 15.78

603
940

REF.FILE *3,$$$$$$$$$$REF.FILENAME3$$$$$$$$$$$$$$
REF.FILE *3 LEVELS ON,$$$$$$$$$$REF.FILE3$$$$$$$$$$$$$$
REF.FILE *4,$$$$$$$$$$REF.FILENAME4$$$$$$$$$$$$$$
REF.FILE *4 LEVELS ON,$$$$$$$$$$REF.FILE4$$$$$$$$$$$$$$
REF.FILE *2,$$$$$$$$$$REF.FILENAME2$$$$$$$$$$$$$$
REF.FILE *2 LEVELS ON,$$$$$$$$$$REF.FILE2$$$$$$$$$$$$$$

Sta. 896+34.33. SR 3
Sta. 80+83.19. Ramp C

Sta. 896+58.66, SR 3
Sta. 81+85.80, Ramp C

N 35° 45' 46" W

R-43R-48
R-43L-48
R-41B
R-1
STOP
DO NOT ENTER
R-41B-36
R-1-48
R-41A
ONE WAY
R-15A-36
R-43L
R-43R

126 81+30
127 81+30
128 83+50
129 88+05
130 80+23
124 84+60
123 84+60
122 82+90

GH-1
LV-1
SOUTH
71
Columbus
14'x9'-6"
897+00
130A
N-44B-18

125B 11+66.8
N-44B-18 897+10
M-524-108
130B
NORTH
SOUTH
IM-21-30
M-5-36-2
IM-37-36
M-45
LEFT LANE

IM-38-36
M-5-36-2
902+00
IM-21-30
125A
902+93
M-45
LEFT LANE
M-52A-108
904+15
N-44B-18
130D

120
N-43B-17
Hinckley 4
Medina 4
D-4B-48
M-25-30
M-2-36-2
3
77+00
78+00
79+00
80+00
Ramp A 81+00
82+00
83+00
84+00
85+00
86+00
87+00 Ramp B 88+00
89+00
90+00

121 79+00
(NO WORK)
SOUTH
M-52A
NORTH
N-44B-18
904+00
13'x9'-6"
Cleveland
71
NORTH
130C
LV-1
GH-1
R-41A
ONE WAY

125 85+50
R-15A-36

Columbus 895+00" Line

1098+00 1099+00 1100+00 1101+00 1102+00 1103+00 1104+00 1105+00 1106+00 1107+00 1108+00 1109+00 1110+00 1111+00 1112+00

## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

* FIELD DRILL FOR TWO (2) SUPPORTS SIGNS # 125A & 125B

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

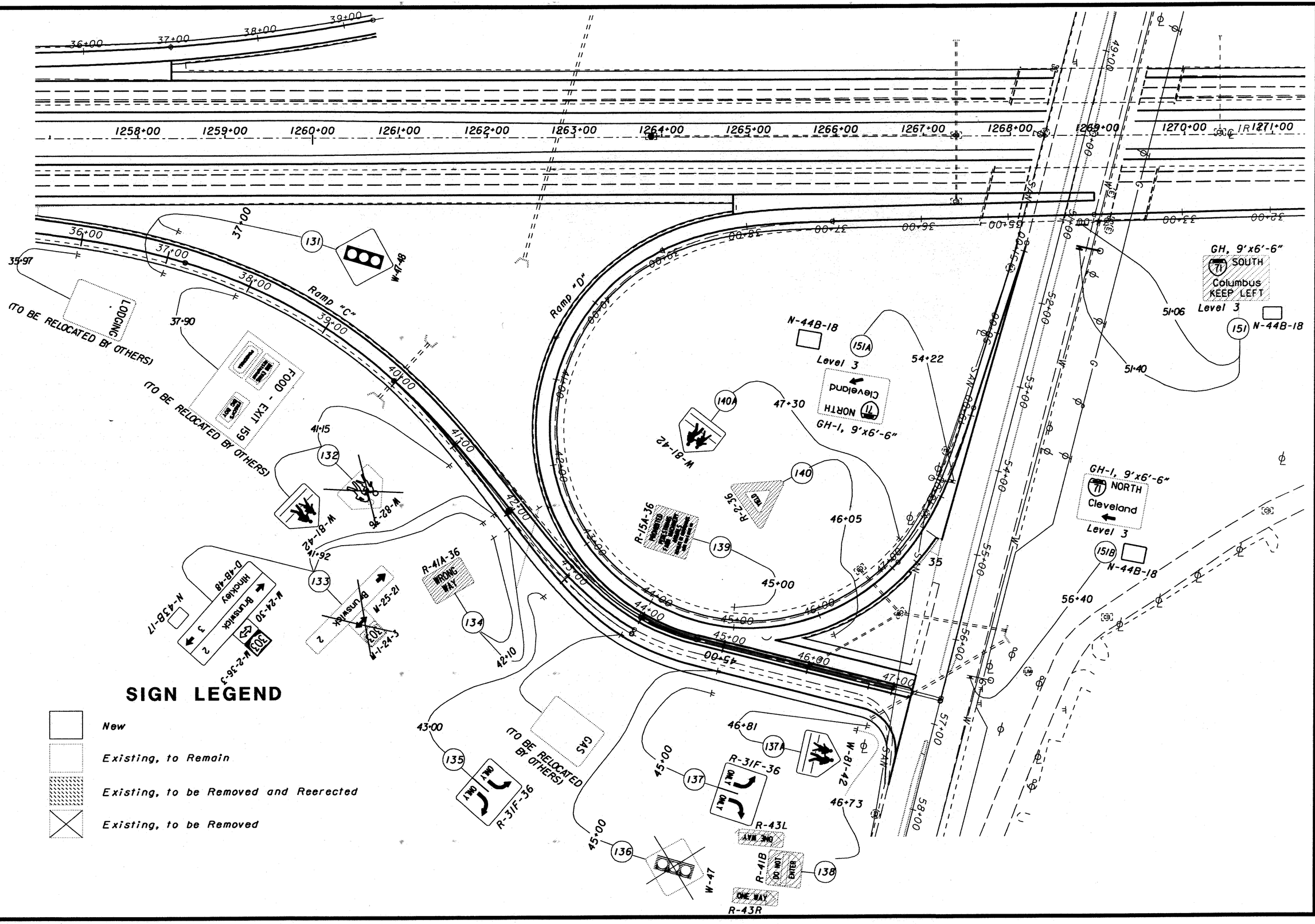
# SIGNING LINE SHEET
# S.R. 3 INTERCHANGE RAMPS A, B, C, & D
# MED - 71 - 15.78

604
940

LEVELS ON,$$$$$$$$$$LEVELSON$$$$$$$$$$$$$$
PLOT DATE,$$$$$$$$$$PLOTDATE$$$$$$$$$$$$$$
PEN TABLE,$$$$$$$$$$PENTABLE$$$$$$$$$$$$$$
USERNAME,$$$$$$$$$$USER$$$$$$$$$$$$$$
PROJECT,$$$$$$$$$$PROJECT$$$$$$$$$$$$$$

REF-FILE *2:$$$$$$$$$$REF-FILENAME2$$$$$$$$$$
REF-FILE *2 LEVELS ON: $$$$$$$$$$REF-FILE2$$$$$$$$$$

REF-FILE *3:$$$$$$$$$$REF-FILENAME3$$$$$$$$$$
REF-FILE *3 LEVELS ON: $$$$$$$$$$REF-FILE3$$$$$$$$$$
REF-FILE *4:$$$$$$$$$$REF-FILENAME4$$$$$$$$$$
REF-FILE *4 LEVELS ON: $$$$$$$$$$REF-FILE4$$$$$$$$$$




## SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

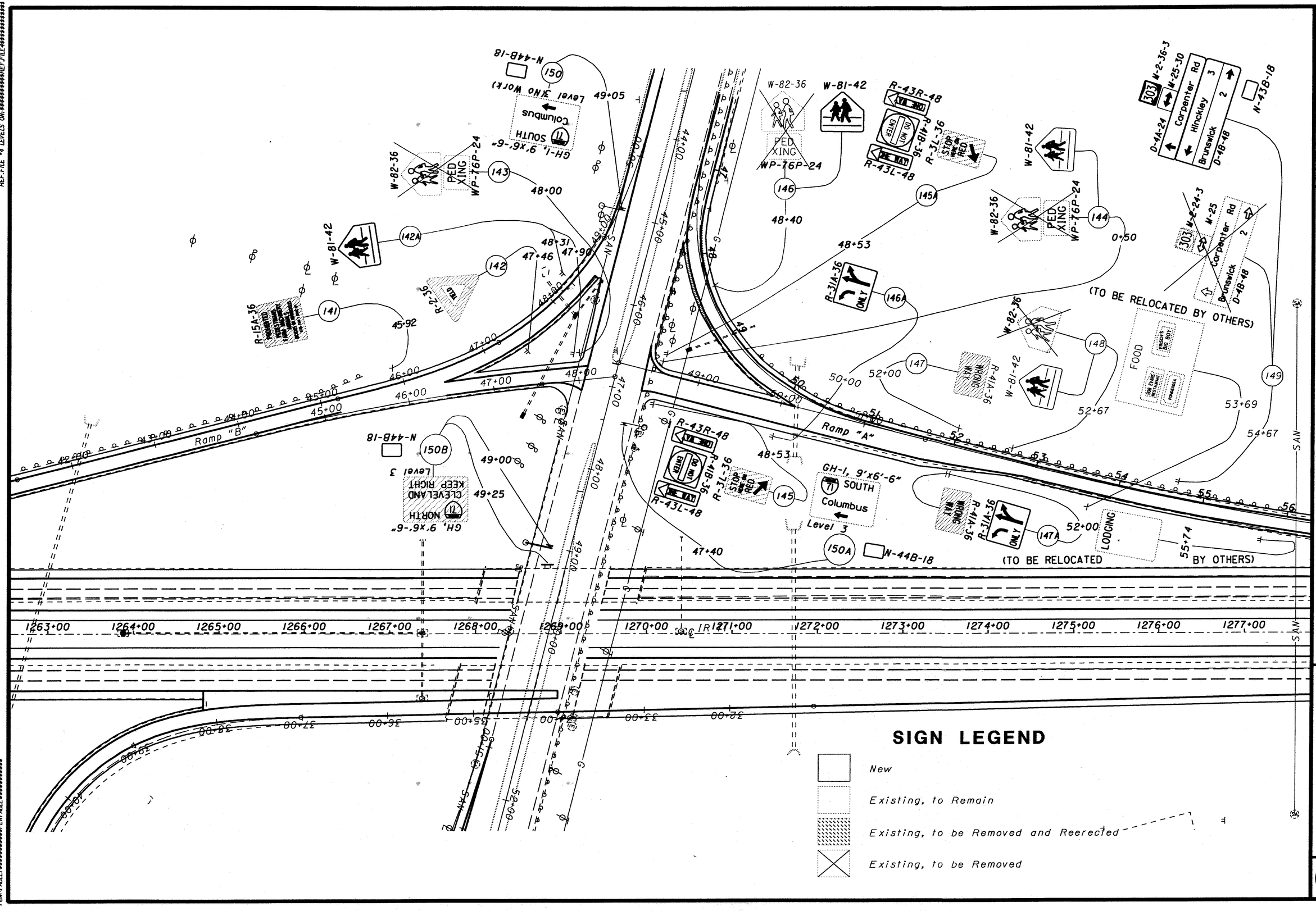
# SIGNING LINE SHEET
# S.R. 303 INTERCHANGE RAMPS C & D
# MED - 71 - 15.78

605
940

LEVELS ON:$$$$$$$$$$LEVELSON$$$$$$$$$$
PLOT QUEUE:$$$$$$$$$$PLOTQUEUE$$$$$$$$$$
PEN TABLE:$$$$$$$$$$PENTABLE$$$$$$$$$$

USERNAME:$$$$$$$$$$USER$$$$$$$$$$
PROJECT:$$$$$$$$$$PROJECT$$$$$$$$$$

REF-FILE *1 LEVELS ON: ##########REF-FILENAME1##########
REF-FILE *2 LEVELS ON: ##########REF-FILENAME2##########
REF-FILE *3 LEVELS ON: ##########REF-FILENAME3##########
REF-FILE *4 LEVELS ON: ##########REF-FILENAME4##########
REF-FILE *1 LEVELS ON: ##########REF-FILE1##########
REF-FILE *2 LEVELS ON: ##########REF-FILE2##########


Ramp "B"
Ramp "A"
W-82-36
PED XING
WP-76P-24
W-81-42
R-43R-48
R-43L-48
R-3L-36
STOP HERE ON RED
R-15A-36
R-2-36
R-3I4-36
ONLY
R-41A-36
WRONG WAY
GH-1, 9'x6'-6"
SOUTH
Columbus
Level 3
GH, 9'x6'-6"
NORTH
CLEVELAND
KEEP RIGHT
N-44B-18
N-43B-18
D-4A-24
Carpenter Rd
Hinckley
Brunswick
D-48-48
W-2-36-3
W-25-30
W-2-24-3
W-25
FOOD
LODGING
(TO BE RELOCATED BY OTHERS)
SAW
SAW
SAW

REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:

# LIGHTING GENERAL NOTES

## POWER SERVICE, AS PER PLAN

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

Ohio Edison Company - Distribution
6326 Lake Avenue
Elyria, Ohio 44035
440-324-0231

Ohio Edison Company - Transmission
76 South Main Street
Akron, Ohio 44308
330-384-5180

THIS PROJECT WILL RECEIVE 480 VOLT, THREE WIRE GROUNDED NEUTRAL

ELECTRICAL ENERGY FROM EXISTING POWER SERVICES SHALL CONTINUE TO BE CHARGED TO THE MAINTAINING AGENCY. THE CONTRACTOR SHALL PAY ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. AFTER ACCEPTANCE OF THE LIGHTING WORK, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERED TO THE OHIO DEPARTMENT OF TRANSPORTATION. THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF THE EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT.

## CONVENTIONAL LUMINAIRES

STYLE B LUMINAIRES SHALL HAVE SINGLE RATED 480 V, 400 W, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC M400, WESTINGHOUSE OV-25, ITT AMERICAN 400, OR EQUAL APPROVED BY THE ENGINEER.

## UNDERPASS LUMINAIRES

UNDERPASS LUMINAIRES SHALL BE HOLOPHANE "UNDERPASS WALLPACK", WESTINGHOUSE, OR GENERAL ELECTRIC WL-250 UNDERPASS UNIT OR EQUAL APPROVED BY THE ENGINEER, AND SHALL BE FURNISHED WITH AN INTEGRAL FUSE HOLDER AND 10-AMPERE FUSE. THE INTEGRAL HIGH PRESSURE SODIUM BALLAST SHALL BE OF A REGULATOR TYPE RATED FOR 480 VOLTS, 100 WATTS.

## LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", WESTINGHOUSE "CERAMALUX", SYLVANIA "LUMALUX", OR EQUAL APPROVED BY THE ENGINEER.

## UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO STANDARD DRAWING HL-30.11 FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE THE ENGINEER, AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATIS-FACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. AN ESTIMATED QUANTITY OF " 1240 LINEAR FEET OF ITEM 603 4" CONDUIT, TYPE E" IS INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR THIS PURPOSE.

## CONDUIT ON STRUCTURE

EXPANSION FITTINGS FOR CONDUIT ON STRUCTURES SHALL BE OZ TYPE AX, CROUSE-HINDS TYPE XJ-4, APPLETON TYPE XJ-4, OR EQUAL APPROVED BY THE ENGINEER, FOR THE FOLLOWING BRIDGES:

MED-71-2088E
MED-71-2092W

EACH EXPANSION FITTING SHALL HAVE A COPPER EXTERNAL BINDING JUMPER.

## HIGH VOLTAGE DIRECT CURRENT TEST

A HIGH VOLTAGE DIRECT CURRENT TEST SHALL BE PERFORMED ON NEW CIRCUITS ONLY. EXISTING CIRCUITS SHALL NOT BE TESTED. THE TEST SHALL NOT BE PERFORMED UNTIL AFTER ALL NEW CONSTRUCTION, SUCH AS GUARDRAIL, FENCE, DELINEATOR POSTS, SIGN SUPPORTS, ETC., IN THE IMMEDIATE VICINITY OF THE LOCATION OF CABLE RUN BEING TESTED, HAS BEEN COMPLETED.

A LUMP SUM PAYMENT FOR THIS TEST HAS BEEN INCLUDED IN THE LIGHTING GENERAL SUMMARY.

## PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH SPECIFICATION 631.08 PARRAGRAPH 3. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEMS BEING LOCKED.

## ITEM 625 - SERVICE TO UNDERPASS LIGHTING

THIS ITEM SHALL CONSIST OF PROVIDING COMPLETE ELECTRICAL SERVICE, EXCEPT FOR LUMINAIRES AND STRUCTURE GROUNDING, FOR THE UNDERPASS LIGHTING SYSTEM ON A BRIDGE AS SHOWN IN THE PLANS.

THE INSTALLATION WORK SHALL INCLUDE CONDUITS, CONDUIT GROUNDING, MOUNTINGS, FITTINGS, JUNCTION BOXES, CABLES, AND ALL INCIDENTALS NECESSARY TO COMPLETE, READY FOR USE, THE SERVICE AS DETAILED ON SHEETS 630 & 636 PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR EACH "ITEM 625 - SERVICE TO UNDERPASS LIGHTING" AND SHALL INCLUDE ALL EQUIPMENT, LABOR, AND MATERIALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED. COMPONENT PARTS NOT SPECIFICALLY MENTIONED BUT REQUIRED FOR SATISFACTORY OPERATION OF THIS ITEM SHALL BE FURNISHED AND CONSIDERED PAID FOR AS PART OF THE ITEM.

## ITEM 202-LIGHT POLE REMOVED

THE ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LIGHT POLE INCLUDING THE BRACKET ARM(S) AND TRANSFORMER BASE (IF USED). THE CONTRACTOR SHALL TAKE POSSESSION OF THE LIGHT POLE AND DISPOSE OF IT PROPERLY OFF THE PROJECT SITE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER EACH ITEM 202 "LIGHT POLE REMOVED."

## ITEM 202-LIGHT POLE FOUNDATION REMOVED

THIS ITEM OF WORK WILL CONSIST OF REMOVING AN EXISTING LIGHT POLE FOUNDATION TO A MINIMUM OF ONE FOOT BELOW FINISHED GRADE, BACKFILLING THE RESULTANT DEPRESSION WITH COMPACTED SOIL AND RESTORING THE DISTURBED AREA.

PAYMENT WILL BE MADE FOR EACH ITEM 202 "LIGHT POLE FOUNDATION REMOVED "

## ITEM 202-PULLBOX REMOVED

THIS ITEM OF WORK WILL CONSIST OF REMOVING AN EXISTING PULLBOX WHICH SHALL THEN BE PROPERLY DISPOSED OF. THE RESULTANT OPENING SHALL THEN BE BACKFILLED TO GRADE WITH SUITABLE COMPACTED SOIL AND RESTORED TO MATCH SURROUNDING AREA.

PAYMENT WILL BE MADE FOR EACH ITEM 202 "PULLBOX REMOVED."

## ITEM 202 POWER SERVICE REMOVED, AS PER PLAN

THIS ITEM OF WORK INCLUDES THE REMOVAL OF THOSE PORTIONS OF THE EXISTING POWER SERVICE NOT BEING REUSED. EXISTING UNDERGROUND CONDUIT AND WIRING MAY BE ABANDONED IN PLACE EXCEPT WHEN NEW WIRING IS TO BE PLACED IN EXISTING CONDUITS OR PULL BOXES. IN THIS LATTER CASE, THE OLD WIRES SHALL BE REMOVED. REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE. ALL DISTURBED AREAS SHALL BE RESTORED AS TO MATCH THE SURROUNDING AREA.

THIS ITEM WILL ALSO COMPENSATE THE CONTRACTOR FOR COORDINATING WITH THE POWER COMPANY TO INSURE THAT THEY DISCONNECT AND REMOVE ANY OF THEIR ITEMS THAT ARE A PART OF THE POWER SERVICE. IT ALSO INCLUDES RETURNING TO THE POWER COMPANY ANY ITEMS BELONGING TO THEM THAT WERE REMOVED BY THE CONTRACTOR, SUCH AS THE THE METER BASE.

PAYMENT WILL BE MADE FOR EACH ITEM "POWER SERVICE REMOVED, AS PER PLAN" AND SHALL BE FULL COMPENSATION INCLUDING ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THE INSTALLATION IN A SATISFACTORY WORKMAN-LIKE MANNER.

## ITEM 202 LUMINAIRE REMOVED

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF AN EXISTING LUMINAIRE.

THE LUMINAIRE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY, OFF OF THE PROJECT SITE.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID FOR EACH "ITEM 202 LUMINAIRE REMOVED" AND SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK SATISFACTORILY.

## HIGH MAST LUMINAIRES

THE LUMINAIRE ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS SPECIFIED IN SECTION 713.21 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE HEREBY WAIVED FOR THIS PROJECT. INSTEAD, THE LUMINAIRES FOR TOWER LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS.

ASYMMETRIC, TYPE I, LUMINAIRES FOR TOWER LIGHTING MAY BE HOLOPHANE "HMST" TEST #36801 OR #36802, OR GENERAL ELECTRIC "HM" TEST #7349, OR COOPER "HMC" TEST #764130.

ASYMMETRIC, TYPE II OR TYPE III, LUMINAIRES FOR TOWER LIGHTING MAY BE HOLOPHANE "HMST" TEST #36648, OR GENERAL ELECTRIC "HM" TEST #7349, OR COOPER "HMC" TEST #764130.

SYMMETRIC, TYPE V, LUMINAIRES FOR TOWER LIGHTING MAY BE HOLOPHANE "HMST" TEST #36383, OR GENERAL ELECTRIC "HM" TEST #6312, OR COOPER "HAL" TEST # 48381.

IN ADDITION, OTHER LUMINAIRES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND UNIFORMITY ARE PROVIDED USING THE THE DESIGNED POLE LOCATIONS AND THE DESIGNED NUMBER AND TYPE OF FIXTURES PER POLE.

CALCULATED | CHECKED

Lighting General Notes

MED-71-15.78

607
940

FILENAME: I:\OPD_MELL_JHY\LIGHTING\LIGHTGEN.DGN
PLOTTED ON: 09-DEC-1999 16:24:09 BY: JHYOUNG
DATE & TIME: 09-DEC-1999 16:24
USERNAME: mfox
PROJECT: NONE
LEVELS ON: 1-63
REF. FILE: I:\OPD_MELL_JHY\LIGHTING\DGN\OpenCross.DGE.pen
REF. TABLE: I:\MDOT\PMP\OpenCross.DGE.pen

REF-FILE #1 LEVELS ON:
REF-FILE #2 LEVELS ON:
REF-FILE #3 LEVELS ON:
REF-FILE #4 LEVELS ON:

# GENERAL NOTES

## LOW MAST LUMINAIRES

THE LUMINAIRE ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS SPECIFIED IN SECTION 713.21 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE HEREBY WAIVED FOR THIS PROJECT. INSTEAD, THE LUMINAIRES FOR LOW MAST LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS.

ASYMMETRIC, TYPE II OR TYPE III, LUMINAIRES FOR LOW MAST LIGHTING MAY BE HOLOPHANE "HMST" TEST #36648, OR GENERAL ELECTRIC "HM" TEST #7349, OR COOPER "HMC" TEST #764130.

SYMMETRIC, TYPE V, LUMINAIRES FOR LOW MAST LIGHTING MAY BE HOLOPHANE "HMST" TEST #36383, OR GENERAL ELECTRIC "HM" TEST #6312, OR COOPER "HAL" TEST# 48381.

IN ADDITION, OTHER LUMINAIRES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND UNIFORMITY ARE PROVIDED USING THE DESIGNED POLE LOCATIONS AND THE TYPE OF FIXTURE PER POLE.

## RECONNECTION OF OVERHEAD SIGNS TO NEW LIGHTING CIRCUITS

THE EXISTING LIGHTED SIGNS SHALL BE RECONNECTED TO THE NEW OFF STRUCTURE CANTILEVERED OVERHEAD SIGN SUPPORT LIGHTING CIRCUITS. PAYMENT FOR THIS WORK WILL BE UNDER THE FOLLOWING ITEMS:

DISCONNECTION OF THE SIGN FROM THE EXISTING CIRCUIT SHALL BE PAID BY ITEM SPECIAL – "DISCONNECT EXISTING CIRCUIT".

REMOVAL OF THE EXISTING PULL BOX SHALL BE ITEM 202 – "PULL BOX REMOVED".

REPLACEMENT OF A NEW PULL BOX AT THE SPECIFIED LOCATION SHALL BE PAID UNDER ITEM 625 – "PULL BOX, 18", 713.08".

RECONNECTION OF THE SIGNS TO THE NEW LIGHTING CIRCUIT SHALL BE PROVIDED BY ITEM 625 – "CABLE SPLICE KITS" (2 PER PULL BOX).

## ITEM 202 – DISCONNECT EXISTING CIRCUIT

THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A PULL BOX OR AT A LIGHT POLE.

DISCONNECTION AT A PULL BOX SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL SPLICE KITS. ANY CABLE THAT IS TO BE ABANDONED SHALL BE TERMINATED IN A MANNER SUCH THAT NO CABLE IS LEFT REMAINING IN THE PULL BOX.

DISCONNECTION AT A LIGHT POLE SHALL INVOLVE THE REMOVAL OF THAT PART OF THE CABLE THAT IS TO BE ABANDONED FROM THE POLE. THESE ENDS OF THE CONNECTOR KITS FROM WHICH THE ABANDONED CABLE IS REMOVED SHALL BE PLUGGED AND TAPED.

ANY CABLE THAT IS TO BE REUSED IN A PULL BOX OR LIGHT POLE SHALL BE CUT IN A MANNER SO THAT THERE IS SUFFICIENT LENGTH OF CABLE LEFT FOR RECONNECTION. CABLE SPLICE KITS AND CONNECTOR KITS WILL BE PAID FOR RESPECTIVELY UNDER EACH ITEM 625.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 202 – "DISCONNECT EXISTING CIRCUIT" AND SHALL BE FULL COMPENSATION INCLUDING ALL LABOR, MATERIALS, AND INCIDENTIALS REQUIRED TO COMPLETE THE WORK.

## PORTABLE POWER UNIT

THE CONTRACTOR SHALL SUPPLY A PORTABLE POWER UNIT AS SPECIFIED IN THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS. A QUANTITY OF "1 EACH" OF ITEM 625, "PORTABLE POWER UNIT", IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

## LIGHT TOWER FOUNDATIONS, AS PER PLAN

IN LIEU OF THE TOP OF FOUNDATION RELATIONSHIP SHOWN IN THE STANDARD DRAWINGS, LIGHT TOWER FOUNDATIONS SHALL EXTEND 6" ABOVE GROUND OR PLATFORM. THE 6" EXTENSION IS INCLUDED IN THE FOUNDATION DEPTH.

## ITEM SPECIAL – MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF THE EXISTING LIGHTING SHALL BE MADE BY THE STATE'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR. IF AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED–DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED–DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENTS.

SHOULD THE CONTRACTOR DESIRE THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR (4) SETS OF THE TEMPORARY LIGHTING PLAN TO THE DIRECTOR FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, WIRING METHODS, AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27' AND MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20'. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENT AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USE TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NESESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL, AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL – MAINTAINING EXISTING LIGHTING, SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

## ADDITIONAL PULL BOXES AND CABLE SPLICING KITS

AN ESTIMATED QUANTITY OF 60 EACH OF ITEM 625 PULL BOX, 713.08, 18" AND A QUANTITY OF 180 EACH OF ITEM 625 CABLE SPLICING KIT ARE PROVIDED AS DIRECTED BY THE ENGINEER. THE LIGHTING PLANS WILL HAVE A "PB**" INDICATING APPROXIMATELY WHERE THE PULL BOXES SHOULD BE PLACED.

## ITEM 625 – CONDUIT JACKED OR DRILLED, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING CONDUIT OF THE SIZE OR SIZES INDICATED UNDER EXISTING PAVEMENT AND CONTIGUOUS SHOULDERS BY AN APPROVED METHOD SUCH AS "DRILLING" OR "JACKING".

THE CONTRACTOR SHALL PLACE THE CONDUIT WITH THE LEAST AMOUNT OF DISTURBANCE TO THE EXISTING PAVEMENT, SUBBASE, BERM PAVEMENT, OR SHOULDERS OF THE ROADWAY. ALL PUSH PITS OR ANY NECESSARY EXCAVATIONS SHALL BE BACKFILLED AND RESTORED IN ACCORDANCE WITH 625.01.

MEASUREMENT OF THE CONDUIT SHALL BE THE ACTUAL AMOUNT OF LINEAL FEET INSTALLED UNDER PAVEMENT AND SHOULDERS, MEASURED IN PLACE AS ACCEPTED BY THE ENGINEER. THE UNIT PRICE BID FOR ITEM 625 "CONDUIT JACKED OR DRILLED, AS PER PLAN" SHALL BE FULL COMPENSATION FOR EXCAVATION, DRILLING OR JACKING, BACKFILLING, COMPACTION, RESTORATION, AND ALL LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED.

## LIGHT TOWER LUMINAIRE MOUNTING ARRANGEMENT

LUMINAIRE MOUNTING ARMS FOR TOWER LIGHTING UNITS SHALL BE INSTALLED BY THE POLE MANUFACTURERS SO THAT THE REQUIRED NUMBER OF LUMINAIRES CAN BE INSTALLED ON THE LUMINAIRE MOUNTING RING IN A SYMMETRICAL ARRANGEMENT. WHEN ONLY TWO (2) ARMS ARE REQUIRED THEY SHALL BE POSITIONED SO THE ARMS ARE PARALLEL TO THE CENTERLINE OR BASELINE OF THE PAVEMENT FROM WHICH THE TOWER IS STATIONED.

UNLESS OTHERWISE SPECIFIED IN THE PLANS, ALL LUMINAIRES WITH ASYMMETRIC DISTRIBUTIONS SHALL BE INSTALLED SO THE "ARROW" OR "STREET SIDE" DESIGNATION ON THE OPTICAL ASSEMBLY IS POSTIONED PERPENDICULAR TO THE CENTERLINE OR BASELINE OF THE PAVEMENT FROM WHICH THE TOWER IS STATIONED. ANY OPTICAL ROTATION CALLED FOR WILL BE EXPRESSED AS A CLOCKWISE (CW) OR COUNTERCLOCKWISE (CCW) ANGULAR MEASUREMENT FROM THE NORMAL "ARROW" ORIENTATION.

## GLARE SHEILDS, AS PER PLAN

ALL LUMINAIRES MOUNTED AT THE TOWERS LOCATIONS SPECIFIED SHALL HAVE THE 90 DEGREE GLARE SHIELD INSTALLED ON THE HOUSE SIDE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 625 'GLARE SHEIDS, AS PER PLAN".

## CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

## ANCHOR BASE FOUNDATIONS

ALL LIGHT POLE FOUNDATIONS DESIGNATED FOR ANCHOR BASE POLES (NOT ALUMINUNM TRANSFORMER BASE POLES) SHALL HAVE THEIR FOUNDATION FORMED SUCH THAT THE TOP OF FOUNDATION SHALL BE 8" TO 12" ABOVE FINISHED GRADE

CALCULATED | CHECKED

Lighting General Notes

MED-71-15.78

608
940

FILENAME: INDOT_MED_71\15\Lighting\GENGNOTE.dgn
DATE & TIME: 09-DEC-1999 16:25
USERNAME: mfox
PROJECT: NONE
LEVELS ON: [64]
PLOT QUEUE: \\DGN\PLOT\oce
PEN TABLE: InDot\PenTable\Cross_OCE.pen

| LOCATION - SHEET NUMBER | | | | | | | | | | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GENERAL NOTES | | S.R. 18 | | | I.R. 271 | S.R. 3 | NB REST AREA | S.R. 303 | | | | | | | | |
| 607 | 608 | 611 | 612 | 618 | 613 | 614 | 615 | 616 | 617 | 682 | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | LIGHTING | |
| | | | 6 | 10 | | | | | | | 202 | 75300 | 16 | EACH | PULL BOX REMOVED | |
| | | | 7 | 42 | | | 9 | | | | 202 | 75400 | 58 | EACH | LIGHT POLE REMOVED | |
| | | | 7 | 42 | | | 9 | | | | 202 | 75500 | 58 | EACH | LIGHT POLE FOUNDATION REMOVED | |
| | | | 7 | 42 | | | 9 | | | | 202 | 75506 | 58 | EACH | LUMINAIRE REMOVED | |
| | | | | 1 | | | | | | | 202 | 75511 | 1 | EACH | POWER SERVICE REMOVED, AS PER PLAN | 607 |
| | | | | | | | | | | | | | | | | |
| | | 1 | | | 2 | | 1 | | 10 | | 202 | 75800 | 14 | EACH | DISCONNECT EXISTING CIRCUIT | |
| | | | LUMP | | | | | | | | 202 | 98000 | LUMP | | REMOVAL MISC.: EXISTING UNDERPASS LIGHTING SYSTEM | |
| 1,240 | | | | | | | | | | | 603 | 00400 | 1,240 | LIN FT | 4" CONDUIT, TYPE E | |
| | | 38 | | | | 18 | 18 | 12 | 5 | | 625 | 00500 | 91 | EACH | CONNECTOR KIT, TYPE II | |
| | | | | | | 18 | 9 | 12 | 5 | | 625 | 00600 | 44 | EACH | CONNECTOR KIT, TYPE III | |
| | | | | | | | | | | | | | | | | |
| | | | | | | 6 | | | | | 625 | 01004 | 6 | EACH | CONNECTOR KIT, TYPE VII B | |
| | 180 | 9 | 3 | | 16 | 24 | 3 | 4 | 32 | | 625 | 01500 | 271 | EACH | CABLE SPLICING KIT | |
| | | 1 | | | | | | | | | 625 | 05700 | 1 | EACH | LIGHT POLE, DESIGN A25B40 | |
| | | | | | | 4 | | | | | 625 | 06300 | 4 | EACH | LIGHT POLE, DESIGN AT12B41.7 | |
| | | 1 | | | | 14 | | | | | 625 | 06400 | 15 | EACH | LIGHT POLE, DESIGN AT15B41.7 | |
| | | | | | | | | | | | | | | | | |
| | | 7 | | | | | | | | | 625 | 06500 | 7 | EACH | LIGHT POLE, DESIGN AT18B41.7 | |
| | | 2 | | | | | | | | | 625 | 08700 | 2 | EACH | LIGHT POLE, DESIGN A25B50 | |
| | | 2 | | | | | | 12 | 5 | | 625 | 09400 | 19 | EACH | LIGHT POLE, DESIGN AT15B51.7 | |
| | | | | | | | 9 | | | | 625 | 10500 | 9 | EACH | LIGHT POLE, MISC.: DESIGN A30835 | |
| | | 1 | | | | | | | | | 625 | 10500 | 1 | EACH | LIGHT POLE, MISC.: DESIGN A30840 | |
| | | | | | | | | | | | | | | | | |
| | | 2 | | | | | | | | | 625 | 10500 | 2 | EACH | LIGHT POLE, MISC.: DESIGN A25845 | |
| | | 2 | | | | | | | | | 625 | 10500 | 2 | EACH | LIGHT POLE, MISC.: DESIGN A30845 | |
| | | | | | 5 | | | | | | 625 | 13200 | 5 | EACH | LIGHT TOWER, BBBB100 | |
| | | | | | 5 | | | 2 | | | 625 | 13204 | 7 | EACH | LIGHT TOWER, BBBB110 | |
| | | | | | | | | 2 | 2 | | 625 | 13208 | 4 | EACH | LIGHT TOWER, BBBB120 | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | 3 | | | 625 | 13400 | 3 | EACH | LIGHT TOWER, BBBBBB100 | |
| | | | | | 3 | | | 3 | | | 625 | 13404 | 6 | EACH | LIGHT TOWER, BBBBBB110 | |
| | | | | | 1 | | | 1 | | | 625 | 13406 | 2 | EACH | LIGHT TOWER, BBBBBB120 | |
| | | | | | | | | | | | | | | | | |
| | | 8 | | | | 18 | | | | | 625 | 14100 | 26 | EACH | LIGHT POLE FOUNDATION, 24" X 8' DEEP | |
| | | 9 | | | | | 9 | 12 | 5 | | 625 | 14200 | 35 | EACH | LIGHT POLE FOUNDATION, 24" X 10' DEEP | |
| | | | | | 14 | | | 11 | 2 | | 625 | 15201 | 27 | EACH | LIGHT TOWER FOUNDATION, 36" X 25' DEEP, AS PER PLAN | 608 |
| | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | 625 | 20000 | 1 | EACH | PORTABLE POWER UNIT | |
| | | | | | 3 | | | | | | 625 | 21100 | 3 | EACH | LIGHT TOWER MAINTENANCE PLATFORM, TYPE B | |
| | | | | | 2 | | | | | | 625 | 21200 | 2 | EACH | LIGHT TOWER MAINTENANCE PLATFORM, TYPE C | |
| | | | | | | | | | | | | | | | | |
| | | | 551 | | 540 | 5,070 | | 1,905 | 1,500 | | 625 | 23200 | 9,296 | LIN FT | NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE | |
| | | | 207 | | 1,035 | | | | | | 625 | 23300 | 1,902 | LIN FT | NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE | |
| | | 2,512 | | | | 3,021 | 1,260 | 2,394 | 1,000 | | 625 | 23400 | 10,187 | LIN FT | NO. 10 AWG POLE AND BRACKET CABLE | |
| | | | | | 1,685 | 6,490 | 2,212 | 7,555 | 1,780 | | 625 | 24320 | 19,722 | LIN FT | 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES | |
| | | 7,185 | 2,613 | | 5,420 | | | | | | 625 | 24330 | 15,218 | LIN FT | 1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 5000 VOLT CABLES | |
| | | | | | | | | | | | | | | | | |
| | | | | | 110 | 80 | | | | | 625 | 25400 | 190 | LIN FT | CONDUIT, 2", 713.04 | |
| | | | 39 | | 165 | 375 | | 405 | 490 | | 625 | 25500 | 1,474 | LIN FT | CONDUIT, 3", 713.04 | |
| | | 164 | 559 | | 350 | 860 | | 400 | | | 625 | 25901 | 2,333 | LIN FT | CONDUIT, JACKED OR DRILLED, AS PER PLAN 3" | 608 |
| | | | | | | | | | | 2,546 | 625 | 25920 | 2,546 | LIN FT | CONDUIT, MISC.: 4" MULTICELL RACEWAY | 682 |
| | | | | | | | 9 | | | | 625 | 26250 | 9 | EACH | LUMINAIRE, CONVENTIONAL, STYLE B, TYPE 2, 200 WATT, 713.11, 240 VOLT | |
| | | | | | | | | | | | | | | | | |
| | | 14 | | | | 18 | | | | | 625 | 26250 | 32 | EACH | LUMINAIRE, CONVENTIONAL, STYLE B, TYPE 2, 200 WATT, HPS, 713.11, 480 VOLT | |
| | | 4 | | | | | | 12 | 5 | | 625 | 26250 | 21 | EACH | LUMINAIRE, CONVENTIONAL, STYLE B, TYPE 3, 310 WATT, HPS, 713.11, 480 VOLT | |
| | | | | | 28 | | | 16 | 8 | | 625 | 26260 | 52 | EACH | LUMINAIRE, HIGH MAST ASYMMETRIC, 400 WATT, HPS, 713.21, 480 VOLT | |
| | | | | | 36 | | | 42 | | | 625 | 26260 | 78 | EACH | LUMINAIRE, HIGH MAST SYMMETRIC, 400 WATT, HPS, 713.21, 480 VOLT | |
| | | | | | 12 | | | | 12 | | 625 | 27500 | 24 | EACH | LUMINAIRE, UNDERPASS, HIGH PRESSURE SODIUM, 713.13 | |
| | | | | | | | | | | | | | | | | |

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REF.FILE *2:
REF.FILE *2: 2 LEVELS ON:
REF.FILE *3: 3 LEVELS ON:
REF.FILE *3:
REF.FILE *4:
REF.FILE *4: 4 LEVELS ON:

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DATE & TIME: 10-DEC-1999 15:41
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CALCULATED NJV
CHECKED M.L.F.

LIGHTING GENERAL SUMMARY

MED-71-15.78

609
940

REF.FILE "1 LEVELS ON:
REF.FILE "1 LEVELS ON:
REF.FILE "2 LEVELS ON:
REF.FILE "2 LEVELS ON:

REF.FILE "3 LEVELS ON:
REF.FILE "4 LEVELS ON:
REF.FILE "4 LEVELS ON:

| LOCATION - SHEET NUMBER | | | | | | | | | | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GENERAL NOTES | | S.R. 18 | | | I.R. 271 | S.R. 3 | NB REST AREA | S.R. 303 | | | | | | | | |
| 607 | 608 | 611 | 612 | 618 | 613 | 614 | 615 | 616 | 617 | 682 | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | 28 | | | 16 | 8 | | 625 | 28001 | 52 | EACH | GLARE SHIELD, AS PER PLAN | 608 |
| | | 6,985 | 2,673 | | 6910 | 6,790 | 2,122 | 7,540 | 2,210 | | 625 | 29002 | 35,330 | LIN FT | TRENCH, 24" DEEP | |
| | 60 | 5 | 7 | | 6 | 7 | | 2 | 6 | | 625 | 30700 | 93 | EACH | PULL BOX, 713.08, 18" | |
| | | | | | | | | | | 24 | 625 | 30707 | 24 | EACH | PULL BOX, 713.08, 24", AS PER PLAN | 683 |
| | | | | | | | | | | | | | | | | |
| | | 18 | | | 28 | 18 | 9 | 34 | 9 | | 625 | 32000 | 116 | EACH | GROUND ROD | |
| | | | | | 3 | 1 | | | 2 | | 625 | 33000 | 6 | EACH | STRUCTURE GROUNDING SYSTEM | |
| | | | 2 | | 1 | 1 | | 2 | | | 625 | 34001 | 6 | EACH | POWER SERVICE, AS PER PLAN | 607 |
| | | | | | 4 | | | | 4 | | 625 | 37100 | 8 | EACH | SERVICE TO UNDERPASS LIGHTING | |
| | | | | | | | | | | | | | | | | |
| LUMP | | | | | | | | | | | 625 | 38000 | LUMP | | HIGH VOLTAGE TEST | |
| | LUMP | | | | | | | | | | SPECIAL | 62540000 | LUMP | | MAINTAIN EXISTING LIGHTING | 608 |

CALCULATED VJJ
CHECKED M.L.F.

LIGHTING GENERAL SUMMARY

MED-71-15.78

610
940


FILENAME: h:\pw_med_lr71\dgn\lighting7885lg2.dgn
DATE & TIME: 10-DEC-1999 15:14
USERNAME: mnordere
PROJECT: NONE

LEVELS ON: 1 (641)
DGN TEMPLATE: \\OOTPLOT\xxx
PEN TABLE: h:\dgnlib\pw\pwlib\penCross_OCE.pen

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REF.FILE *3: LEVELS ON:
REF.FILE *3:
REF.FILE *4: LEVELS ON:
REF.FILE *4:

| SHEET No. | REFERENCE NO. | ROADWAY | STATION TO STATION From | STATION TO STATION To | SIDE | 202 Light Pole Removed | 202 Light Pole Foundation Removed | 202 Luminaire Removed | 202 Disconnect Existing Circuit | 202 Pull Box Removed | 625 Light Pole, Design AT15B4L7 | 625 Light Pole, Design AT15B5L7 | 625 Light Pole, Design AT18B4L7 | 625 Light Pole, Design A25B40 | 625 Light Pole, Design A25B45 | 625 Light Pole, Design A25B50 | 625 Light Pole, Design A30B40 | 625 Light Pole, Design A30B45 | 625 GROUND ROD | 625 Connector Kit, Type II | 625 Connector Kit, Type III | 625 Cable Splicing Kit | 625 Luminaire, Conventional, Style 'B' IES Type II, 200 Watt HPS, 480 Volt | 625 Luminaire, Conventional, Style 'B' IES Type III, 310 Watt HPS, 480 Volt | 625 Light Pole, Foundation, 24" X 8' Deep | 625 Light Pole, Foundation, 24" X 10' Deep | 625 Pull Box, 713.08, 18" | 625 No. 10 AWG Pole and Bracket Cable | 625 1/2" Duct Cable With 3 NO. 2 AWG 5000 Volt Cables | 625 1/2" Duct Cable With 3 NO. 4 AWG 5000 Volt Cables | 625 NO. 2 AWG 5000 Volt Distribution Cable | 625 NO. 4 AWG 5000 Volt Distribution Cable | 625 Conduit, 3", 713.04 | 625 Conduit, Jacked or Drilled, As Per Plan, 3" | 625 Trench, 24" Deep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | EACH | | | | | EACH | | | | | | | | EACH | | | | EACH | | EACH | | | LIN.FT. | LIN.FT. | LIN.FT. | LIN.FT. | | LIN.FT. | LIN.FT. |
| 622 | AA-5 | I.R.-71 | 863+06 | | Lt. | | | | | | | | 1 | | | | | | 1 | 2 | | | 1 | | 1 | | | 126 | | | | | | | |
| | | | 863+06 | 865+32 | | | | | | | | | | | | | | | | | | | | | | | | | 333 | | | | | | 323 |
| 622 | AA-4 | I.R.-71 | 865+32 | | Lt. | | | | | | | | | | 1 | | | | 1 | 2 | | | 1 | | | 1 | | 150 | | | | | | | |
| | | | 865+32 | 868+44 | | | | | | | | | | | | | | | | | | | | | | | | | 319 | | | | | | 309 |
| 622 | AA-3 | I.R.-71 | 868+44 | | Lt. | | | | | | | | | | 1 | | | | 1 | 2 | | | 1 | | | 1 | | 150 | | | | | | | |
| | | | 868+44 | 870+75 | | | | | | | | | | | | | | | | | | | | | | | | | 234 | | | | | | 224 |
| 622 | PB-AA4 | I.R.-71 | 870+75 | | Lt. | | | | | | | | | | | | | | | | | 3 | | | | | 1 | | | | | | | |
| | | | 870+75 Lt. | 870+75 Rt. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 121 | | |
| | | | 870+75 Lt. | 871+40 | | | | | | | | | | | | | | | | | | | | | | | | | 81 | | | | | | 71 |
| 622 | PB-AA5 | I.R.-71 | 870+75 | | Rt. | | | | | | | | | | | | | | | | | 3 | | | | | 1 | | | | | | | |
| 622 | AA-2 | I.R.-71 | 871+40 | | Lt. | | | | | | | | | | | | | 1 | 1 | 2 | | | 1 | | | 1 | | 160 | | | | | | | |
| | | | 871+40 | 874+23 | | | | | | | | | | | | | | | | | | | | | | | | | 290 | | | | | | 280 |
| 622 | AA-1 | I.R.-71 | 874+23 | | Lt. | | | | | | | | | | | | | 1 | 1 | 2 | | | 1 | | | 1 | | 160 | | | | | | | |
| | | | 874+23 | 21+00 | | | | | | | | | | | | | | | | | | | | | | | | | 906 | | | | | | 896 |
| 623 | AA-0 | Ramp 'A' | 26+21 | | Lt. | | | | 1 | | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| | | | 26+21 | 21+00 | | | | | | | | | | | | | | | | | | | | | | | | | 531 | | | | | | 521 |
| 623 | PB-AA3 | Ramp 'A' | 21+00 | | Lt. | | | | | | | | | | | | | | | | | | | | | | | | | | | | 43 | | |
| 623 | Sign *108 | SR-18 | 147+40 | | Rt. | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 623 | Sign *108A | SR-18 | 149+70 | | Rt. | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 627 | DC-13 | I.R.-71 | 945+95 | | Lt. | | | | | | 1 | | | | | | | | 1 | 2 | | | 1 | | 1 | | | 120 | | | | | | | |
| | | | 943+17 | 945+95 | | | | | | | | | | | | | | | | | | | | | | | | | 288 | | | | | | 278 |
| 627 | DC-12 | I.R.-71 | 943+17 | | Lt. | | | | | | | | 1 | | | | | | 1 | 2 | | | 1 | | 1 | | | 126 | | | | | | | |
| | | | 940+30 | 943+17 | | | | | | | | | | | | | | | | | | | | | | | | | 297 | | | | | | 287 |
| 627 | DC-11 | I.R.-71 | 940+30 | | Lt. | | | | | | | | 1 | | | | | | 1 | 2 | | | 1 | | 1 | | | 126 | | | | | | | |
| | | | 938+68 | 940+30 | | | | | | | | | | | | | | | | | | | | | | | | | 172 | | | | | | 162 |
| 627 | DC-10 | I.R.-71 | 937+33 | | Lt. | | | | | | | | 1 | | | | | | 1 | 2 | | | 1 | | 1 | | | 126 | | | | | | | |
| | | | 938+68 | 937+33 | | | | | | | | | | | | | | | | | | | | | | | | | 145 | | | | | | 135 |
| 627 | DC-9 | I.R.-71 | 938+68 | | Rt. | | | | | | | | 1 | | | | | | 1 | 2 | | | 1 | | 1 | | | 126 | | | | | | | |
| | | | 935+70 | 938+68 | | | | | | | | | | | | | | | | | | | | | | | | | 310 | | | | | | 300 |
| 627 | DC-8 | I.R.-71 | 935+70 | | Rt. | | | | | | | | 1 | | | | | | 1 | 2 | | | 1 | | 1 | | | 126 | | | | | | | |
| | | | 932+83 | 935+70 | | | | | | | | | | | | | | | | | | | | | | | | | 297 | | | | | | 287 |
| 627 | DC-7 | I.R.-71 | 932+83 | | Rt. | | | | | | | | 1 | | | | | | 1 | 2 | | | 1 | | 1 | | | 126 | | | | | | | |
| | | | 930+05 | 932+83 | | | | | | | | | | | | | | | | | | | | | | | | | 289 | | | | | | 279 |
| 626 | DC-6 | I.R.-71 | 930+05 | | Rt. | | | | | | | | | | | | 1 | | 1 | 2 | | | 1 | | | 1 | | 150 | | | | | | | |
| | | | 912+40 | 918+20 | | | | | | | | | | | | | | | | | | | | | | | | | 595 | | | | | | 585 |
| 625 | DC-5 | I.R.-71 | 912+40 | | Rt. | | | | | | | | | | 1 | | | | 1 | 2 | | | | 1 | | 1 | | 160 | | | | | | | |
| | | | 909+58 | 912+40 | | | | | | | | | | | | | | | | | | | | | | | | | 292 | | | | | | 282 |
| 625 | PB-DO (EX) | I.R.-71 | 909+58 | | Rt. | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | |
| | | | 908+32 | 909+58 | | | | | | | | | | | | | | | | | | | | | | | | | 136 | | | | | | 126 |
| 625 | DC-4 | I.R.-71 | 908+32 | | Rt. | | | | | | | | | | 1 | | | | 1 | 2 | | | | 1 | | 1 | | 160 | | | | | | | |
| | | | 904+44 | 908+32 | | | | | | | | | | | | | | | | | | | | | | | | | 399 | | | | | | 389 |
| 625 | DC-3 | I.R.-71 | 904+44 | | Rt. | | | | | | | 1 | | | | | | | 1 | 2 | | | | 1 | | | 1 | 140 | | | | | | | |
| | | | 900+83 | 904+44 | | | | | | | | | | | | | | | | | | | | | | | | | 371 | | | | | | 361 |
| 624 | DC-2 | I.R.-71 | 900+83 | | Rt. | | | | | | | 1 | | | | | | | 1 | 2 | | | | 1 | | 1 | | 140 | | | | | | | |
| | | | 0+90 | 900+83 | | | | | | | | | | | | | | | | | | | | | | | | | 900 | | | | | | 890 |
| 624 | DC-1 | Ramp 'D' | 0+90 | | Rt. | | | | | | | | | 1 | | | | | 1 | 2 | | | 1 | | | 1 | | 140 | | | | | | | |
| | | | 0+85 | 0+90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTALS CARRIED TO LIGHTING GENERAL SUMMARY | | | | | | | | | 1 | | 1 | 2 | 7 | 1 | 2 | 2 | 1 | 2 | 18 | 38 | | 9 | 14 | 4 | 8 | 9 | 5 | 2512 | 7185 | | | | 164 | 6985 |

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DATE & TIME: 10-DEC-1999 15:19
USERNAME: dfought
PROJECT: NONE

CALCULATED MLF
CHECKED

# LIGHTING SUB-SUMMARY

MED-71-15.94

611
940

REF.FILE *1 LEVELS ON:
REF.FILE *2 LEVELS ON:
REF.FILE *3 LEVELS ON:
REF.FILE *4 LEVELS ON:

# LIGHTING SUB-SUMMARY

| SHEET No. | REFERENCE NO. | ROADWAY | STATION TO STATION From | STATION TO STATION To | SIDE | 202 Light Pole Removed EACH | 202 Light Pole Foundation Removed EACH | 202 Luminaire Removed EACH | 202 Disconnect Existing Circuit EACH | 202 Pull Box Removed EACH | 202 Removal of Existing Underpass Lighting System LUMP | 625 | 625 | 625 Power Service, As Per Plan EACH | 625 | 625 | 625 GROUND ROD EACH | 625 Connector Kit, Type II EACH | 625 Connector Kit, Type III EACH | 625 Cable Splicing Kit EACH | 625 Luminaire, Conventional, Style 'B' IES Type II, 200 Watt HPS, 480 Volt EACH | 625 Luminaire, Conventional, Style 'B' IES Type III, 310 Watt HPS, 480 Volt EACH | 625 Light Pole, Foundation, 24" X 8' Deep EACH | 625 Light Pole, Foundation, 24" X 10' Deep EACH | 625 Pull Box, 713.08, 18" EACH | 625 No. 10 AWG Pole and Bracket Cable LIN.FT. | 625 1½" Duct Cable With 3 NO. 2 AWG 5000 Volt Cables LIN.FT. | 625 1½" Duct Cable With 3 NO. 4 AWG 5000 Volt Cables LIN.FT. | 625 NO. 2 AWG 5000 Volt Distribution Cable LIN.FT. | 625 NO. 4 AWG 5000 Volt Distribution Cable LIN.FT. | 625 Conduit, 3", 713.04 LIN.FT. | 625 Conduit, Jacked or Drilled, As Per Plan, 3" LIN.FT. | 625 Trench, 24" Deep LIN.FT. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 627 | PB-DC-6 | I.R.-71 | 938+68 | | Lt. | | | | | | | | | | | | | | | | | | | | | | | | 207 | | | 197 | |
| 626 | PB-DC-4 | I.R.-71 | 927+40 | | Rt. | | | | | | | | | | | | | | | 3 | | | | | | | | | | 138 | 10 | 108 | |
| 626 | PB-DC-3 | I.R.-71 | 918+20 | | Rt. | | | | | | | | | | | | | | | | | | | | | 932 | | | | | | | 922 |
| 624 | PB-DC-1 | Ramp 'D' | 0+82 | | Rt. | | | | | | | | | | | | | | | | | | | | | | | | | 144 | | 134 | |
| 624 | Sign *109 | SR-18 | 152+00 | | Lt. | | | | | | | | | | | | | | | | | | | | 1 | | | | | 110 | | | 100 |
| 624 | Sign *109A | SR-18 | 154+35 | | Lt. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 624 | Sign *12A | SR-18 | 901+00 | | Lt. | | | | | | | | | | | | | | | | | | | | 1 | | | | | 159 | 29 | 120 | |
| 626 | Sign *15 | SR-18 | 918+20 | | Rt. | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| 626 | Sign *17A | SR-18 | 927+40 | | Lt. | | | | | | | | | | | | | | | | | | | | 2 | | 274 | | | | | | 264 |
| 627 | Sign *24A | SR-18 | 945+00 | | Rt. | | | | | | | | | | | | | | | | | | | | 1 | | 634 | | | | | | 624 |
| 628 | Sign *26 | SR-18 | 953+80 | | Lt. | | | | | | | | | | | | | | | | | | | | 1 | | 773 | | | | | | 763 |
| 622 | | I.R.-71 | 865+71 | | Lt. | 1 | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 622 | | I.R.-71 | 869+01 | | Lt. | 1 | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 622 | | I.R.-71 | 872+21 | | Lt. | 1 | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 624 | | SR-18 | 0+68 RAMP 'D' | | Rt. | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 624 | | SR-18 | 0+90 RAMP 'D' | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 625 | | I.R.-71 | 907+70 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 625 | | I.R.-71 | 910+65 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 625 | | I.R.-71 | 914+23 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 624 | | SR-18 | 149+80 | 1151+80 | Lt.&Rt. | | | | | 2 | LUMP | | | | | | | | | | | | | | | | | | | | | | | |
| 623 | CC-A | SR-18 | 147+44 | | Rt. | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| 624 | CC-D | Ramp 'D' | 0+90 | | Rt. | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| TOTALS CARRIED TO LIGHTING GENERAL SUMMARY | | | | | | 7 | 7 | 7 | | 6 | LUMP | | | 2 | | | | | | 3 | | | | 7 | | 2613 | | 207 | 551 | 39 | 559 | 2673 | |

CALCULATED MLF CHECKED

MED-71-15.94

612
940

FILENAME: I:\pw_MELL-HY\USKN\Lighting\d98sLSSU.dgn
DATE & TIME: 10-DEC-1999 15:19
USERNAME: pfaught
PROJECT: NONE

LEVELS ON: [1-64]
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REF.FILE: I:\d01sta\pw\Pce\Cross_OCE.pen

REF.FILE *1 LEVELS ON:
REF.FILE *2 LEVELS ON:
REF.FILE *3 LEVELS ON:
REF.FILE *4 LEVELS ON:
REF.FILE *5 LEVELS ON:

# LIGHTING SUB–SUMMARY

| QUANTITIES |
|---|
| CALC. BY: AFS<br>DATE: 5/16/94 |
| CHKD. BY: MCB<br>DATE: 6/1/94 |

| SHEET. No. | REF. No. | STATION FROM | STATION TO | SIDE | CABLE SPLICING KIT | LIGHT TOWER FOUNDATION 36" X 25', A.P.P. | LIGHT TOWER MAINTENANCE PLATFORM TYPE–B | LIGHT TOWER MAINTENANCE PLATFORM TYPE–C | NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE | NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE | 1.5" DUCT CABLE WITH *THREE* NO. 2 AWG 5000 V CABLES | 1.5" DUCT CABLE WITH *THREE* NO. 4 AWG 5000 V CABLES | CONDUIT, 3", 713.04 | CONDUIT JACKED OR DRILLED 3", *AS PER PLAN* | TRENCH 24" DEEP | LIGHT TOWER, BBBB100 | LIGHT TOWER, BBBB110 | | LIGHT TOWER, BBBBBB110 | LIGHT TOWER, BBBBBB120 | LUMINAIRE, ASYMMETRIC 400 W, HPS 713.21, 480 V | LUMINAIRE, SYMMETRIC 400 W, HPS 713.21, 480 V | LUMINAIRE, UNDERPASS, 713.13 | PULL BOX, 713.08, 18" | STRUCTURE GROUNDING SYSTEM | GROUND ROD | GLARE SHIELDS, AS PER PLAN | SERVICE TO UNDERPASS LIGHTING | POWER SERVICE AS PER PLAN | DISCONNECT EXISTING CIRCUIT | CONDUIT, 2", 713.04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | 625 | | | | | | | | | | | | 202 | 625 |
| | | | | | EACH | EACH | EACH | EACH | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | EACH | EACH | | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | EACH | EACH | EACH | LIN. FT. |
| | | I.R.71 AND I.R.271 NEW INSTALLATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | CIRCUIT W | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 629 | CC–K | 51+07 GRANGER | *964+71 CONN. W.* | LT | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| 629 | | 51+07 GRANGER | | LT/LT | | | | | | 870 | | | 90 | 200 | 90 | | | | | | | | | | | | | | | |
| 629 | PB–W1 | *964+71 CONN. W.* | | LT | 4 | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| 629 | | *964+71 CONN. W.* | *962+63 CONN. W.* | LT | | | | | | | | 220 | | | 210 | | | | | | | | | | | | | | | |
| 629 | WK–1 | *962+63 CONN. W.* | | LT | | 1 | | 1 | | | | | | | | 1 | | | | | 4 | | | | | | 2 | *4* | | |
| 629 | | *964+71 CONN. W.* | *968+83 CONN. W.* | LT | | | | | | | 430 | | | | 420 | | | | | | | | | | | | | | | |
| 629 | WK–2 | *968+83 CONN. W.* | | LT | | 1 | 1 | | | | | | | | | 1 | | | | | 4 | | | | | | 2 | *4* | | |
| 629 | | *968+83 CONN. W.* | *974+13 CONN. W.* | LT | | | | | | | 540 | | | | 530 | | | | | | | | | | | | | | | |
| 629 | WK–3 | *974+13 CONN. W.* | | LT | | 1 | 1 | | | | | | | | | | 1 | | | | 4 | | | | | | 2 | *4* | | |
| 629 | | *974+13 CONN. W.* | *978+63 CONN. W.* | LT/RT | | | | | | | 610 | | | 50 | 550 | | | | | | | | | | | | 2 | | | |
| 629 | WK–4 | *978+63 CONN. W.* | | RT | | 1 | | | | | | | | | | | | | 1 | | | | 6 | | | | | | | |
| 629 | | *978+63 CONN. W.* | *984+38 CONN. W.* | RT | | | | | | | 510 | | | | 500 | | | | | | | | | | | | 2 | | | |
| 629 | WK–5 | *984+38 CONN. W.* | | RT | | 1 | | | | | | | | | | | | | 1 | | | | 6 | | | | 2 | | | |
| 629 | | *984+38 CONN. W.* | *987+73 CONN. W.* | RT | | | | | | | | 310 | | | 300 | | | | | | | | | | | | | | | |
| 630 | PB–W2 | *987+73 CONN. W.* | | RT | 4 | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| 630 | UP–W12–10 | *987+73 CONN. W.* | *988+53 CONN. W.* | RT | | | | | | | | | | | | | | | | | | | | 3 | | 1 | | 1 | | |
| 630 | | *987+73 CONN. W.* | *989+83 CONN. W.* | RT | | | | | | | | 220 | | | 210 | | | | | | | | | | | | | | | |
| 630 | PB–W3 | *989+83 CONN. W.* | | RT | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 | |
| 630 | UP–W3–1 | *989+83 CONN. W.* | *988+83 CONN. W.* | RT | | | | | | | | | | | | | | | | | | | | 3 | | 1 | | 1 | | |
| 630 | | *987+73 CONN. W.* | *988+13 CONN. W.* | RT/LT | | | | | *270* | | | *90* | 30 | 50 | 30 | | | | | | | | | | | | | | | |
| 630 | PB–W4 | *988+13 CONN. W.* | | LT | 4 | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| 630 | UP–W9–7 | *988+13 CONN. W.* | *988+93 CONN. W.* | LT | | | | | | | | | | | | | | | | | | | | 3 | | | | 1 | | |
| 630 | | *988+13 CONN. W.* | *990+13 CONN. W.* | LT | | | | | *270* | | | 220 | | | 210 | | | | | | | | | | | | | | | |
| 630 | PB–W5 | *990+13 CONN. W.* | *990+43 CONN. W.* | LT | 1 | | | | | | | *70* | | | *60* | | | | | | | | | | 1 | | | | | |
| 630 | UP–W4–6 | *990+13 CONN. W.* | *989+23 CONN. W.* | LT | | | | | | | | | | | | | | | | | | | | 3 | | | | 1 | | |
| 629 | | *988+13 CONN. W.* | *992+73* I.R.71 | LT/LT | | | | | | | | *555* | | | *545* | | | | | | | | | | | | | | | |
| 629 | WK–6 | *992+73* I.R.71 | | LT | | 1 | | 1 | | | | | | | | | 1 | | | | 4 | | | | | | 2 | *4* | | |
| | | CIRCUIT E | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 629 | CC–K | 51+07 GRANGER | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 629 | | 51+07 GRANGER | *965+63 CONN. E.* | LT/RT | | | | | | 165 | | | 45 | | 45 | | | | | | | | | | | | | | | |
| 629 | EK–1 | *965+63 CONN. E.* | | RT | | 1 | | | | | | | | | | 1 | | | | | 4 | | | | | | 2 | *4* | | |
| 629 | | *965+63 CONN. E.* | *971+13 CONN. E.* | RT | | | | | | | 560 | | | | 550 | | | | | | | | | | | | | | | |
| 629 | EK–2 | *971+13 CONN. E.* | | RT | | 1 | 1 | | | | | | | | | 1 | | | | | 4 | | | | | | 2 | *4* | | |
| 629 | | *971+13 CONN. E.* | *974+83 CONN. E.* | RT | | | | | | | 380 | | | | 370 | | | | | | | | | | | | | | | |
| 629 | PB–E1 | *974+83 CONN. E.* | | RT | 2 | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| 629 | | *974+83 CONN. E.* | *976+63 CONN. E.* | RT | | | | | | | 190 | | | | 180 | | | | | | | | | | | | | | | |
| 629 | EK–3 | *976+63 CONN. E.* | | RT | | 1 | | | | | | | | | | | 1 | | | | 4 | | | | | | 2 | *4* | | |
| 629 | | *976+63 CONN. E.* | *982+63* I.R.71 | RT/RT | | | | | | | 740 | | | 50 | 680 | | | | | | | | | | | | | | | |
| 629 | EK–4 | *982+63* I.R.71 | | RT | | 1 | | | | | | | | | | | | | 1 | | | | 6 | | | | 2 | | | |
| 629 | | *982+63* I.R.71 | *990+63 CONN. W.* | RT/RT | | | | | | | 460 | | | | 450 | | | | | | | | | | | | | | | |
| 629 | EK–7 | *990+63 CONN. W.* | | RT | | 1 | | | | | | | | | | | | | | 1 | | | 6 | | | | 2 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | 4 | | | | 2 | | | |
| 629 | EK–8 | *991+43 CONN. W.* | | LT | | 1 | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 629 | | *982+63* I.R.71 | *987+68 CONN. E.* | RT/LT | | | | | | | *565* | | | | *555* | | | | | | | | | | | | | | | |
| 629 | EK–5 | *987+68 CONN. E.* | | LT | | 1 | | | | | | | | | | | 1 | | | | | | 4 | | | | 2 | | | |
| 629 | | *987+68 CONN. E.* | *991+63 CONN. E.* | LT | | | | | | | *435* | | | | *425* | | | | | | | | | | | | | | | |
| 629 | EK–6 | *991+63 CONN. E.* | | LT | | 1 | | | | | | | | | | | 1 | | | | | | 4 | | | | 2 | | | |
| | | STRUCTURE MED–71–2088E NEW INSTALLATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 631 | | 81+55 RAMP B | 82+65 RAMP B | RT | | | | | | | | | | | | | | | | | | | | | | 1 | | | | 110 |
| | | SHEET TOTALS | | | 16 | 14 | 3 | 2 | *540* | *1035* | 5420 | *1685* | *165* | 350 | 6910 | 5 | 5 | | 3 | 1 | 28 | 36 | 12 | 6 | 3 | 28 | *28* | 4 | 1 | 2 | 110 |

CALCULATED | CHECKED

LIGHTING SUB-SUMMARY

MED–71–15.78

613
940

LIGHTING SUB–SUMMARY

FILENAME: I:\PDP_MELL_HWY\USER\Lighting\results.dgn
DATE & TIME: 10-DEC-1999 15:00
USERNAME: mfox
PROJECT: NONE
LEVELS ON: [1-63]
PLOT QUEUE: PDPLOT108
REFA TABLE: I:\MDist\Plan\OneCross_OCE.pen

# LIGHTING SUB–SUMMARY

| QUANTITIES |
|---|
| CALC. BY: AFS<br>DATE: 5/16/94 |
| CHKD. BY: MCB<br>DATE: 6/1/94 |

| SHEET. No. | REF. No. | STATION FROM | STATION TO | SIDE | 625 CONNECTOR KIT, TYPE II EACH | CONNECTOR KIT, TYPE III EACH | CONNECTOR KIT, TYPE VII B EACH | CABLE SPICING KIT EACH | LIGHT POLE DESIGN, AT12B41.7 EACH | LIGHT POLE DESIGN, AT15B41.7 EACH | LIGHT POLE FOUNDATION 24"X8' DEEP EACH | NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE LIN. FT. | NO. 10 AWG POLE AND BRACKET CABLE LIN. FT. | 1.5" DUCT CABLE WITH THREE NO. 4 AWG 5000 V CABLES LIN. FT. | CONDUIT, 2", 713.04 LIN. FT. | CONDUIT, 3", 713.04 LIN. FT. | CONDUIT JACKED OR DRILLED UNDER PAVEMENT 3"A.P.P. LIN. FT. | TRENCH 24" DEEP LIN. FT. | LUMINAIRE, STYLE B, TYPE II 200 W, HPS 713.11, 480V EACH | PULLBOX 713.08, 18" EACH | GROUND ROD EACH | POWER SERVICE AS PER PLAN EACH | STRUCTURE GROUNDING SYSTEM EACH | GLARE SHIELD AS PER PLAN EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I.R.71 AND S.R.3 NEW INSTALLATION | | | | | | | | | | | | | | | | | | | | | | | | |
| CIRCUIT A | | | | | | | | | | | | | | | | | | | | | | | | |
| 631 | CC–J | 896+55 S.R.3 | | RT | | | | | | | | | | | | | | | | | | 1 | | |
| | | 896+55 S.R.3 | 81+20 RAMP B | RT/LT | | | | | | | | 330 | | | | 100 | | 100 | | | | | | |
| | PB–B1 | 81+20 RAMP B | | LT | | | | 4 | | | | | | | | | | | | | 1 | | | |
| | | 81+20 RAMP B | 895+60 S.R.3 | LT/LT | | | | | | | | 330 | | | | | 100 | | | | | | | |
| | AJ–1 | 895+60 S.R.3 | | LT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 81+20 RAMP B | 897+15 S.R.3 | LT/RT | | | | | | | | 510 | | | | 80 | 80 | 80 | | | | | | |
| | AJ–2 | 897+15 S.R.3 | | RT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 897+15 S.R.3 | 904+00 S.R.3 | RT | | | | | | | | | | 695 | | | | 685 | | | | | | |
| | PB–A1 | 904+00 S.R.3 | | RT | | | | 4 | | | | | | | | | | | | 1 | | | | |
| | | 904+00 S.R.3 | 904+00 S.R.3 | RT/LT | | | | | | | | 330 | | | | | 100 | | | | | | | |
| | AJ–3 | 904+00 S.R.3 | | LT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 904+00 S.R.3 | 905+60 S.R.3 | RT | | | | | | | | 510 | | | | 100 | 60 | 100 | | | | | | |
| 631 | AJ–4 | 905+60 S.R.3 | | RT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| CIRCUIT B | | | | | | | | | | | | | | | | | | | | | | | | |
| 631 | CC–J | 896+55 S.R.3 | | RT | | | | | | | | | | | | | | | | | | | | |
| | | 896+55 S.R.3 | 81+20 RAMP B | RT/LT | | | | | | | | 330 | | | | | | | | | | | | |
| | PB–B1 | 81+20 RAMP B | | LT | | | | 2 | | | | | | | | | | | | | | | | |
| | | 81+20 RAMP B | 1087+69 I.R.71 | LT/LT | | | | | | | | | | 1570 | | | | 1560 | | | | | | |
| | BJ–1 | 1087+69 I.R.71 | | LT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 1087+69 I.R.71 | 1084+69 I.R.71 | LT | | | | | | | | | | 310 | | | | 300 | | | | | | |
| | BJ–2 | 1084+69 I.R.71 | | LT | 1 | 1 | 2 | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 1084+69 I.R.71 | 1081+69 I.R.71 | LT | | | | | | | | | | 310 | | | | 300 | | | | | | |
| | BJ–3 | 1081+69 I.R.71 | | LT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 1084+69 I.R.71 | 1085+34 I.R.71 | LT/RT | | | | | | | | 720 | | | | | 160 | 70 | | | | | | |
| | BJ–4 | 1085+34 I.R.71 | | RT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 1085+34 I.R.71 | 1090+00 I.R.71 | RT | | | | | | | | | | 480 | | | | 470 | | | | | | |
| | PB–B2 | 1090+00 I.R.71 | | RT | | | | 4 | | | | | | | | | | | | 1 | | | | |
| | | 1090+00 I.R.71 | 70+55 RAMP B | RT/RT | | | | | | | | | | 200 | | | | 190 | | | | | | |
| | BJ–5 | 70+55 RAMP B | | RT | 1 | 1 | | | 1 | | 1 | | 162 | | | | | | 1 | | 1 | | | |
| | | 70+55 RAMP B | 72+50 RAMP B | RT | | | | | | | | | | 210 | | | | 200 | | | | | | |
| | BJ–7 | 72+50 RAMP B | | RT | 1 | 1 | | | 1 | | 1 | | 162 | | | | | | 1 | | 1 | | | |
| | | 72+50 RAMP B | 1093+39 I.R.71 | RT/RT | | | | | | | | 240 | | | | | 70 | | | | | | | |
| 631 | BJ–6 | 1093+39 I.R.71 | | RT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| CIRCUIT C | | | | | | | | | | | | | | | | | | | | | | | | |
| 632 | CC–J | 896+55 S.R.3 | | RT | | | | | | | | | | | | | | | | | | | | |
| | | 896+55 S.R.3 | 81+20 RAMP B | RT/LT | | | | | | | | 330 | | | | | | | | | | | | |
| | PB–B1 | 81+20 RAMP B | | LT | | | | 2 | | | | | | | | | | | | | | | | |
| | | 81+20 RAMP B | 896+00 S.R.3 | LT/LT | | | | | | | | 330 | | | | | 100 | | | | | | | |
| | PB–C1 | 896+00 S.R.3 | | LT | | | | 2 | | | | | | | | | | | | 1 | | | | |
| | | 896+00 S.R.3 | 83+50 RAMP C | LT/LT | | | | | | | | 840 | | | | | | 270 | | | | | | |
| | PB–C2 | 83+50 RAMP C | | LT | | | | 2 | | | | | | | | | | | | 1 | | | | |
| | | 83+50 RAMP C | 84+50 RAMP C | LT/LT | | | | | | | | 270 | | | 80 | | | 20 | | | 1 | | | |
| | PB–C3 | 84+50 RAMP C | | LT | | | | 2 | | | | | | | | | | | | 1 | | | | |
| | | 84+50 RAMP C | 93+45 RAMP C | LT | | | | | | | | | | 910 | | | | 900 | | | | | | |
| | CJ–6 | 93+45 RAMP C | | LT | 1 | 1 | 2 | | 1 | | 1 | | 162 | | | | | | 1 | | 1 | | | |
| | | 93+45 RAMP C | 1115+24 I.R.71 | LT/LT | | | | | | | | | | 95 | | 35 | 50 | 35 | | | | | | |
| | CJ–7 | 1115+24 I.R.71 | | LT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 93+45 RAMP C | 95+40 RAMP C | LT | | | | | | | | | | 205 | | | | 195 | | | | | | |
| | CJ–5 | 95+40 RAMP C | | LT | 1 | 1 | | | 1 | | 1 | | 162 | | | | | | 1 | | 1 | | | |
| | | 95+40 RAMP C | 1118+61 I.R.71 | LT/LT | | | | | | | | | | 200 | | | | 190 | | | | | | |
| | PB–C4 | 1118+61 I.R.71 | | LT | | | | 2 | | | | | | | | | | | | 1 | | | | |
| | | 1118+61 I.R.71 | 1123+24 I.R.71 | LT | | | | | | | | | | 475 | | | | 465 | | | | | | |
| | CJ–4 | 1123+24 I.R.71 | | LT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 1123+24 I.R.71 | 1123+94 I.R.71 | LT/RT | | | | | | | | | | 210 | | 60 | 140 | 60 | | | | | | |
| | CJ–2 | 1123+94 I.R.71 | | RT | 1 | 1 | 2 | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 1123+94 I.R.71 | 1120+94 I.R.71 | RT | | | | | | | | | | 310 | | | | 300 | | | | | | |
| | CJ–1 | 1120+94 I.R.71 | | RT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | 1123+94 I.R.71 | 1126+94 I.R.71 | RT | | | | | | | | | | 310 | | | | 300 | | | | | | |
| 632 | CJ–3 | 1126+94 I.R.71 | | RT | 1 | 1 | | | | 1 | 1 | | 169.5 | | | | | | 1 | | 1 | | | |
| | | SHEET TOTALS | | | 18 | 18 | 6 | 24 | 4 | 14 | 18 | 5070 | 3021 | 6490 | 80 | 375 | 860 | 6790 | 18 | 7 | 18 | 1 | 1 | | | |

Lighting Sub-Summary

MED-71-15.78

614
940

LIGHTING SUB–SUMMARY


REF.FILE "1" LEVELS ON:
REF.FILE "2" LEVELS ON:
REF.FILE "3" LEVELS ON:
REF.FILE "4" LEVELS ON:
REF.FILE "5" LEVELS ON:
Sht.-367
FILENAME: \\dgn\...\med_rr\\dgn\lghtmgv\ds0sld2.dgn
DATE & TIME: 10-DEC-1999 09:20
USERNAME: rhermon
PROJECT: NONE
LEVELS ON: 1-641
PLOT QUEUE: \\D2\PLOT\ocs
REM. TABLE: N:\DIst6\Yuba\OceaCross...OCE.pen

REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:

| SHEET No. | REFERENCE NO. | ROADWAY | STATION TO STATION From | STATION TO STATION To | SIDE | 202 Light Pole Removed EACH | 202 Light Pole Foundation Removed EACH | 202 Luminaire Removed EACH | 202 Disconnect Existing Circuit EACH | 625 Light Pole, Design A30B35 EACH | 625 Luminaire, Conventional, Style 'B' IES Type II, 200 Watt HPS, 240 Volt EACH | 625 Light Pole, Foundation, 24" X 10' Deep EACH | 625 Connector Kit, Type II LIN.FT. | 625 Connector Kit, Type III LIN.FT. | 625 Cable Splicing Kit EACH | 625 No. 10 AWG Pole and Bracket Cable LIN.FT. | 625 1/2" DUCT CABLE WITH 3 NO. 4 AWG 5000 VOLT CABLES LIN.FT. | 625 TRENCH, 24" DEEP LIN.FT. | | 625 GROUND ROD EACH | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 633 | NB-P1 | Ramp NB | 91+45 | | Rt. | | | | | 1 | 1 | 1 | 2 | 1 | | 140 | | | | 1 | | |
| | NB-L1 | Ramp NB | NB-PB1 | NB-P1 | Rt. | | | | | | | | | | | | 197 | 187 | | | | |
| | NB-P2 | Ramp NB | 94+00 | | Rt. | | | | | 1 | 1 | 1 | 2 | 1 | | 140 | | | | 1 | | |
| | NB-L2 | Ramp NB | NB-P1 | NB-P2 | Rt. | | | | | | | | | | | | 264 | 254 | | | | |
| | NB-P3 | Ramp NB | 1220+35 | | Rt. | | | | | 1 | 1 | 1 | 2 | 1 | | 140 | | | | 1 | | |
| | NB-L3 | Ramp NB | NB-P2 | NB-P3 | Rt. | | | | | | | | | | | | 261 | 251 | | | | |
| | NB-P4 | I.R.-71 | 1222+55 | | Rt. | | | | | 1 | 1 | 1 | 2 | 1 | | 140 | | | | 1 | | |
| | NB-L4 | I.R.-71 | NB-P3 | NB-P4 | Rt. | | | | | | | | | | | | 252 | 242 | | | | |
| | NB-P5 | I.R.-71 | 1224+79 | | Rt. | | | | | 1 | 1 | 1 | 2 | 1 | | 140 | | | | 1 | | |
| | NB-L5 | I.R.-71 | NB-P4 | NB-P5 | Rt. | | | | | | | | | | | | 233 | 223 | | | | |
| | NB-P6 | I.R.-71 | 1227+25 | | Rt. | | | | | 1 | 1 | 1 | 2 | 1 | | 140 | | | | 1 | | |
| | NB-L6 | I.R.-71 | NB-P5 | NB-P6 | Rt. | | | | | | | | | | | | 238 | 228 | | | | |
| | NB-P7 | I.R.-71 | 1229+69 | | Rt. | | | | | 1 | 1 | 1 | 2 | 1 | | 140 | | | | 1 | | |
| | NB-L7 | I.R.-71 | NB-P6 | NB-P7 | Rt. | | | | | | | | | | | | 258 | 248 | | | | |
| | NB-P8 | I.R.-71 | 1232+10 | | Rt. | | | | | 1 | 1 | 1 | 2 | 1 | | 140 | | | | 1 | | |
| | NB-L8 | I.R.-71 | NB-P7 | NB-P8 | Rt. | | | | | | | | | | | | 256 | 246 | | | | |
| | NB-P9 | I.R.-71 | 91+45 | | Rt. | | | | | 1 | 1 | 1 | 2 | 1 | | 140 | | | | 1 | | |
| | NB-L9 | I.R.-71 | NB-P8 | NB-P9 | Rt. | | | | | | | | | | | | 253 | 243 | | | | |
| | NB-PB1 | Ramp NB | 89+58.50 | | Rt. | | | | 1 | | | | | | 3 | | | | | | | |
| | L1 | Ramp NB | 91+45 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | |
| | L2 | Ramp NB | 94+00 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | |
| | L3 | Ramp NB | 96+50 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | |
| | L4 | I.R.-71 | 1220+34 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | |
| | L5 | I.R.-71 | 1222+54 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | |
| | L6 | I.R.-71 | 1224+79 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | |
| | L7 | I.R.-71 | 1227+24 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | |
| | L8 | I.R.-71 | 1229+69 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | |
| 633 | L9 | I.R.-71 | 1232+09 | | Rt. | 1 | 1 | 1 | | | | | | | | | | | | | | |
| TOTALS CARRIED TO LIGHTING GENERAL SUMMARY | | | | | | 9 | 9 | 9 | 1 | 9 | 9 | 9 | 18 | 9 | 3 | 1260 | 2212 | 2122 | | 9 | | |

CALCULATED MLF CHECKED

LIGHTING SUB-SUMMARY

MED-71-15.94

615
940

FILENAME: I:\pdn_med_1r\ngn\lighting\V88bls1sd.dgn
DATE & TIME: 10-DEC-1999 10:03
USERNAME: rherman
PROJECT: NONE
LEVELS ON: 1 63
PLOT QUEUE: \\DGN\PLOT\oce
OPEN TABLE: i:\ndot\sd\plot\oce\oceCross_OCE.pen

# LIGHTING SUB–SUMMARY

| QUANTITIES |
|---|
| CALC. BY: AFS<br>DATE: 5/16/94 |
| CHKD. BY: MCB<br>DATE: 6/1/94 |

| SHEET. No. | REF. No. | STATION FROM | STATION TO | SIDE | 625 CONNECTOR KIT, TYPE II EACH | CONNECTOR KIT, TYPE III EACH | CABLE SPICING KIT EACH | LIGHT POLE DESIGN, AT15B51.7 EACH | LIGHT POLE FOUNDATION 24"X10' DEEP EACH | LIGHT TOWER FOUNDATION 36"X25' DEEP AS PER PLAN EACH | NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE LIN. FT. | NO. 10 AWG POLE AND BRACKET CABLE LIN. FT. | 1.5" DUCT CABLE WITH THREE NO. 4 AWG 5000 V CABLES LIN. FT. | CONDUIT 3", 713.04 LIN. FT. | CONDUIT JACKED OR DRILLED UNDER PAVEMENT 3" A.P.P. LIN. FT. | TRENCH 24" DEEP LIN. FT | LIGHT TOWER BBBB110 EACH | LIGHT TOWER BBBB120 EACH | LIGHT TOWER BBBBBB100 EACH | LIGHT TOWER BBBBBB110 EACH | LIGHT TOWER BBBBBB120 EACH | LUMINAIRE, STYLE B, TYPE III 310 W, HPS 713.11, 480V EACH | LUMINAIRE, ASYMMETRIC 400 W HPS 713.21, 480V EACH | LUMINAIRE, SYMMETRIC 400 W, HPS 713.21, 480V EACH | LUMINAIRE, UNDERPASS, 713.13 EACH | PULLBOX 713.08, 18" EACH | GROUND ROD EACH | POWER SERVICE, AS PER PLAN EACH | GLARE SHIELD AS PER PLAN EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I.R. 71 AND S.R. 303 NEW INSTALLATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CIRCUIT B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 634 | BM–8 | 1242+34 I.R. 71 | | LT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1242+34 I.R. 71 | 1244+34 I.R. 71 | LT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | | |
| | BM–7 | 1244+34 I.R. 71 | | LT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1244+34 I.R. 71 | 1246+34 I.R. 71 | LT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | | |
| | BM–6 | 1246+34 I.R. 71 | | LT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1246+34 I.R. 71 | 1248+34 I.R. 71 | LT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | | |
| | BM–5 | 1248+34 I.R. 71 | | LT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1248+34 I.R. 71 | 1251+84 I.R. 71 | LT | | | | | | | | | 360 | | | 350 | | | | | | | | | | | | | | |
| | BM–4 | 1251+84 I.R. 71 | | LT | | | | | | 1 | | | | | | | 1 | | | | | | | 4 | | | | 2 | | 4 |
| | | 1251+84 I.R. 71 | 36+00 RAMP B | LT | | | | | | | | | 560 | | | 550 | | | | | | | | | | | | | | |
| | BM–3 | 36+00 RAMP B | | LT | | | | | | 1 | | | | | | | | 1 | | | | | | 4 | | | | 2 | | 4 |
| | | 36+00 RAMP B | 42+50 RAMP B | LT/RT | | | | | | | | | 790 | | 50 | 730 | | | | | | | | | | | | | | |
| | BM–2 | 42+50 RAMP B | | RT | | | | | | 1 | | | | | | | | | 1 | | | | | | 6 | | | 2 | | |
| | | 42+50 RAMP B | 48+10 S.R. 303 | RT/RT | | | | | | | | | 440 | | | 430 | | | | | | | | | | | | | | |
| | BM–1 | 48+10 S.R. 303 | | RT | | | | | | 1 | | | | | | | | | 1 | | | | | | 6 | | | 2 | | |
| | | 48+10 S.R. 303 | 48+00 S.R. 303 | RT | | | | | | | 180 | | | 50 | | 50 | | | | | | | | | | | | | | |
| 634 | CC–M | 48+00 S.R. 303 | | RT | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| CIRCUIT A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 635 | CC–M | 48+00 S.R. 303 | | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 48+00 S.R. 303 | 47+87 S.R. 303 | RT/LT | | | | | | | 975 | | | 215 | 100 | 215 | | | | | | | | | | | | | | |
| | AM–1 | 47+87 S.R. 303 | | LT | | | | | | 1 | | | | | | | | | | 1 | | | | | 6 | | | 2 | | |
| | | 47+87 S.R. 303 | 55+25 RAMP A | LT/RT | | | | | | | | | 530 | | | 520 | | | | | | | | | | | | | | |
| | AM–2 | 55+25 RAMP A | | RT | | | | | | 1 | | | | | | | | | 1 | | | | | | 6 | | | 2 | | |
| | | 55+25 RAMP A | 1280+34 I.R. 71 | RT/LT | | | | | | | | | 480 | | 50 | 420 | | | | | | | | | | | | | | |
| | AM–3 | 1280+34 I.R. 71 | | LT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1280+34 I.R. 71 | 1281+67 I.R. 71 | LT | | | | | | | | | 150 | | | 140 | | | | | | | | | | | | | | |
| | PB–A1 | 1281+67 I.R. 71 | | LT | | | 2 | | | | | | | | | | | | | | | | | | | | | 1 | | |
| | | 1281+67 I.R. 71 | 1282+84 I.R. 71 | LT | | | | | | | | | 130 | | | 120 | | | | | | | | | | | | | | |
| | AM–4 | 1282+84 I.R. 71 | | LT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1282+84 I.R. 71 | 1284+84 I.R. 71 | LT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | | |
| | AM–5 | 1284+84 I.R. 71 | | LT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1284+84 I.R. 71 | 1286+84 I.R. 71 | LT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | | |
| | AM–6 | 1286+84 I.R. 71 | | LT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1286+84 I.R. 71 | 1288+84 I.R. 71 | LT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | | |
| 635 | AM–7 | 1288+84 I.R. 71 | | LT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| CIRCUIT C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 634 | CN–8 | 1242+84 I.R. 71 | | RT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1242+84 I.R. 71 | 1244+84 I.R. 71 | RT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | | |
| | CN–7 | 1244+84 I.R. 71 | | RT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1244+84 I.R. 71 | 1246+84 I.R. 71 | RT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | | |
| | CN–6 | 1246+84 I.R. 71 | | RT | 1 | 1 | | 1 | 1 | | | 199.5 | | | | | | | | | | | 1 | | | | 1 | | | |
| | | 1246+84 I.R. 71 | 1249+34 I.R. 71 | RT | | | | | | | | | 270 | | | 260 | | | | | | | | | | | | | | |
| | CN–5 | 1249+34 I.R. 71 | | RT | | | | | | 1 | | | | | | | 1 | | | | | | | 4 | | | | 2 | | 4 |
| | | 1249+34 I.R. 71 | 1254+24 I.R. 71 | RT | | | | | | | | | 490 | | | 480 | | | | | | | | | | | | | | |
| | PB–C1 | 1254+24 I.R. 71 | | RT | | | 2 | | | | | | | | | | | | | | | | | | | | | 1 | | |
| | | 1254+24 I.R. 71 | 1254+84 I.R. 71 | RT | | | | | | | | | 70 | | | 60 | | | | | | | | | | | | | | |
| | CN–4 | 1254+84 I.R. 71 | | RT | | | | | | 1 | | | | | | | | 1 | | | | | | 4 | | | | 2 | | 4 |
| | | 1254+84 I.R. 71 | 1260+59 I.R. 71 | RT | | | | | | | | | 690 | | 50 | 630 | | | | | | | | | | | | | | |
| | CN–3 | 1260+59 I.R. 71 | | RT | | | | | | 1 | | | | | | | | | | 1 | | | | | 6 | | | 2 | | |
| | | 1260+59 I.R. 71 | 36+62, RAMP D | RT/LT | | | | | | | | | 595 | | 50 | 535 | | | | | | | | | | | | | | |
| | CN–2 | 36+62 RAMP D | | LT | | | | | | 1 | | | | | | | | | | 1 | | | | | 6 | | | 2 | | |
| | | 36+62 RAMP D | 44+80 RAMP D | LT | | | | | | | | | 320 | | | 310 | | | | | | | | | | | | | | |
| | CN–1 | 44+80 RAMP D | | LT | | | | | | 1 | | | | | | | | | | | | | 1 | | 6 | | | 2 | | |
| | | 36+62 RAMP D | 53+00 S.R. 303 | LT/LT | | | | | | | 750 | | | 140 | 100 | 140 | | | | | | | | | | | | | | |
| 634 | CC–N | 53+00 S.R. 303 | | LT | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| SHEET TOTALS | | | | | 12 | 12 | 4 | 12 | 12 | 11 | 1905 | 2394 | 7555 | 405 | 400 | 7540 | 2 | 2 | 3 | 3 | 1 | 12 | 16 | 42 | | 2 | 34 | 2 | 16 |

REF.FILE "1" LEVELS ON:
REF.FILE "1 LEVELS ON:
REF.FILE "2 LEVELS ON:

REF.FILE "3 LEVELS ON:
REF.FILE "3 LEVELS ON:
REF.FILE "4 LEVELS ON:
REF.FILE "4 LEVELS ON:

Sht-368

FILENAME: \\xpo_med_1\rdgn\rdgn\rdgv\rdsh63.dgn
DATE & TIME: 10-DEC-1999 10:12
USERNAME: rherman
PROJECT: NONE

LEVELS ON: 1-641
PLOT QUEUE: \\DRIPLOT\oce
REM TABLE: \\xp0d0s1d\xpa0\xpa0oce\Cross_OCE.pen

CALCULATED | CHECKED

Lighting Sub-Summary

MED-71-15.78

# LIGHTING SUB–SUMMARY

| QUANTITIES |
|---|
| CALC. BY: AFS DATE: 5/16/94 |
| CHKD. BY: MCB DATE: 6/1/94 |

| | | | | | 625 | | | | | | | | | | | | | | | | | | | | | | | | 202 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHEET. No. | REF. No. | STATION FROM | STATION TO | SIDE | CONNECTOR KIT, TYPE II | CONNECTOR KIT, TYPE III | CABLE SPICING KIT | LIGHT POLE DESIGN, AT15B51.7 | LIGHT POLE FOUNDATION 24"X10' DEEP | LIGHT TOWER FOUNDATION 36"X25' DEEP, AS PER PLAN | NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE | NO. 10 AWG POLE AND BRACKET CABLE | 1.5" DUCT CABLE WITH THREE NO. 4 AWG 5000 V CABLES | CONDUIT 3", 713.04 | CONDUIT JACKED OR DRILLED UNDER PAVEMENT 3" | TRENCH 24" DEEP | LIGHT TOWER BBBB100 | LIGHT TOWER BBBB110 | LIGHT TOWER BBBB120 | LUMINAIRE, STYLE B, TYPE III 310 W, HPS 713.11, 480W | LUMINAIRE, ASYMMETRIC 400 W HPS 713.21, 480V | LUMINAIRE, SYMMETRIC 400 W, HPS 713.21, 480V | LUMINAIRE, UNDERPASS, 713.13 | PULLBOX 713.08, 18" | GROUND ROD | SERVICE TO UNDERPASS LIGHTING | GLARE SHIELD AS PER PLAN | STRUCTURE GROUNDING SYSTEM | DISCONNECT EXISTING CIRCUIT |
| | | | | | EACH | EACH | EACH | EACH | EACH | EACH | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH |
| I.R. 71 AND S.R. 303 NEW INSTALLATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CIRCUIT D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 635 | CC–N | 53+00 S.R. 303 | | LT | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 53+00 S.R. 303 | 1272+34 I.R. 71 | LT/RT | | | | | | | 1500 | | | 490 | | 490 | | | | | | | | | | | | | |
| | DN–1 | 1272+34 I.R. 71 | | RT | | | | | | 1 | | | | | | | | | 1 | | 4 | | | 2 | | 4 | | | |
| | | 1272+34 I.R. 71 | 1278+64 I.R. 71 | RT | | | | | | | | | 640 | | | 630 | | | | | | | | | | | | | |
| | DN–2 | 1278+64 I.R. 71 | | RT | | | | | | 1 | | | | | | | | | 1 | | 4 | | | 2 | | 4 | | | |
| | | 1278+64 I.R. 71 | 1281+59 I.R. 71 | RT | | | | | | | | | 320 | | | 310 | | | | | | | | | | | | | |
| | DN–3 | 1281+59 I.R. 71 | | RT | 1 | 1 | | 1 | 1 | | | 200 | | | | | | | | 1 | | | | 1 | | | | | |
| | | 1281+59 I.R. 71 | 1283+34 I.R. 71 | RT | | | | | | | | | 190 | | | 180 | | | | | | | | | | | | | |
| | DN–4 | 1283+34 I.R. 71 | | RT | 1 | 1 | | 1 | 1 | | | 200 | | | | | | | | 1 | | | | 1 | | | | | |
| | | 1283+34 I.R. 71 | 1285+34 I.R. 71 | RT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | |
| | DN–5 | 1285+34 I.R. 71 | | RT | 1 | 1 | | 1 | 1 | | | 200 | | | | | | | | 1 | | | | 1 | | | | | |
| | | 1285+34 I.R. 71 | 1287+34 I.R. 71 | RT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | |
| | DN–6 | 1287+34 I.R. 71 | | RT | 1 | 1 | | 1 | 1 | | | 200 | | | | | | | | 1 | | | | 1 | | | | | |
| | | 1287+34 I.R. 71 | 1289+34 I.R. 71 | RT | | | | | | | | | 210 | | | 200 | | | | | | | | | | | | | |
| 635 | DN–7 | 1289+34 I.R. 71 | | RT | 1 | 1 | | 1 | 1 | | | 200 | | | | | | | | 1 | | | | 1 | | | | | |
| REVISIONS TO EXISTING SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EXISTING CIRCUIT S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 636 | | 47+51.33 S.R. 303 | | RT | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 |
| | PB–S5 | 49+20 S.R. 303 | | RT | | | 4 | | | | | | | | | | | | | 1 | | | | | | | | | 1 |
| | UP–S6–4 | 49+20 S.R. 303 | 50+10 S.R. 303 | RT | | | | | | | | | | | | | | | | | | 3 | | 1 | | 1 | | | |
| | PB–S3 | 50+10 S.R. 303 | | RT | | | 2 | | | | | | | | | | | | | 1 | | | | | | | | | |
| | UP–S3–1 | 50+10 S.R. 303 | 51+25 S.R. 303 | RT | | | | | | | | | | | | | | | | | | 3 | | 1 | | 1 | | | |
| | PB–S1 | 51+25 S.R. 303 | | RT | | | 2 | | | | | | | | | | | | | 1 | | | | | | | | | |
| | | 52+56.33 S.R. 303 | | RT | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 |
| 636 | | 54+66.33 S.R. 303 | | RT | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 |
| EXISTING CIRCUIT T | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 636 | | 46+16.33 S.R. 303 | | LT | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 |
| | | 48+56.33 S.R. 303 | | LT | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 |
| | PB–T5 | 48+95 S.R. 303 | | LT | | | 2 | | | | | | | | | | | | | 1 | | | | | | | | | |
| | UP–T6–4 | 48+95 S.R. 303 | 49+90 S.R. 303 | LT | | | | | | | | | | | | | | | | | | 3 | | 1 | | | | | |
| | PB–T3 | 49+90 S.R. 303 | | LT | | | 2 | | | | | | | | | | | | | 1 | | | | | | | | | |
| | UP–T3–1 | 49+90 S.R. 303 | 51+05 S.R. 303 | LT | | | | | | | | | | | | | | | | | | 3 | | 1 | | | | | |
| | PB–T1 | 51+05 S.R. 303 | | LT | | | 4 | | | | | | | | | | | | | 1 | | | | | | | | | |
| | | 51+56.33 S.R. 303 | | LT | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 |
| | | 53+66.33 S.R. 303 | | LT | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 |
| 636 | | 55+96.33 S.R. 303 | | LT | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 |
| SHEET TOTALS | | | | | 5 | 5 | 32 | 5 | 5 | 2 | 1500 | 1000 | 1780 | 490 | | 2210 | | | 2 | 5 | 8 | | 12 | 6 | 9 | 4 | 8 | 2 | 10 |

Lighting Sub-Summary

MED-71-15.78

617
940

LIGHTING SUB–SUMMARY


REF.FILE *1; LEVELS ON:
REF.FILE *2; LEVELS ON:
REF.FILE *3; LEVELS ON:
REF.FILE *4; LEVELS ON:
FILENAME: H:\pdf_files\lighting\lgtsub.dgn
DATE & TIME: 10-DEC-1999 10:24
USERNAME: rherman
PROJECT: NONE
LEVELS ON: 1-63
PLOT QUEUE: \\DIPLOT\oce
PEN TABLE: N:\DistAdp\pdfOceCross_OCE.pen

REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:

SHT.-3/UB

FILENAME=I:\OPL_MELLIN\MAIN\LIGHTING\803SUB.dgn
DATE & TIME=10-DEC-1999 15:01
USERNAME=mfox
PROJECT=NONE

LEVELS ON=1,63
ACTIVE MODEL=3D PLOT.pce
REGN TABLE=I:\DGN\default\pltr\OpenCross.OCE.pen

# LIGHTING SUB-SUMMARY

| QUANTITIES |
|---|
| CALC. BY: AFS<br>DATE: 5/16/94 |
| CHKD. BY: MCB<br>DATE: 6/1/94 |

| SHEET. No. | REF. No. | STATION FROM | STATION TO | SIDE | 202 LIGHT POLE REMOVED EACH | LIGHT POLE FOUNDATION REMOVED EACH | LUMINAIRE REMOVED EACH | PULL BOX REMOVED EACH | POWER SERVICE REMOVED, *AS PER PLAN* EACH | REMOVAL OF EXISTING UNDERPASS LIGHTING SYSTEM LUMP | REMOVAL OF MISCELLANEOUS COMBINATION BRACKET ARM AND LUMINAIRE EACH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I.R.71 AND I.R.271 REMOVALS | | | | | | | | | |
| 629 | | 51+07 GRANGER RD. | | LT | | | | | | | |
| 629 | | 51+19 GRANGER RD. | | LT | | | | | 1 | | |
| 629 | | *967+58 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *970+58 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *972+13 CONN. E.* | | RT | | | | 1 | | | |
| 629 | | *972+13 CONN. W.* | | RT | | | | 1 | | | |
| 629 | | *977+23 CONN. W.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *979+23 CONN. W.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *981+23 CONN. W.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *983+23 CONN. W.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *985+23 CONN. W.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *987+23 CONN. W.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *989+23 CONN. W.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *989+83 CONN. W.* | | RT | | | | 1 | | | |
| 629 | | *991+23 CONN. W.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *993+63 CONN. W.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *972+13 CONN. W.* | | LT | | | | 1 | | | |
| 629 | | *971+23 CONN. W.* | | LT | 1 | 1 | 1 | | | | |
| 629 | | *969+23 CONN. W.* | | LT | 1 | 1 | 1 | | | | |
| 629 | | *967+23 CONN. W.* | | LT | 1 | 1 | 1 | | | | |
| 629 | | *965+23 CONN. W.* | | LT | 1 | 1 | 1 | | | | |
| 629 | | *963+48 CONN. W.* | | LT | 1 | 1 | 1 | | | | |
| 629 | | *961+63 CONN. W.* | | LT | 1 | 1 | 1 | | | | |
| 629 | | *973+23 CONN. W.* | | LT | 1 | 1 | 1 | | | | |
| 629 | | *975+23 CONN. W.* | | LT | 1 | 1 | 1 | | | | |
| 629 | | *972+83 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *974+53 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *976+18 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *977+88 CONN. E.* | | RT | | | | 1 | | | |
| 629 | | *977+88 CONN. E.* | | LT | 1 | 1 | 1 | | | | |
| 629 | | *978+18 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *980+18 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *982+18 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *984+18 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *986+18 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *988+18 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *990+18 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *992+18 CONN. E.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *993+43 CONN. E.* | | RT | | | | 1 | | | |
| 629 | | *993+43 CONN. E.* | | LT | | | | 1 | | | |
| 629 | | *996+63 CONN. W.* | | RT | 1 | 1 | 1 | | | | |
| 629 | | *999+43 CONN. W.* | | LT | | | | 1 | | | |
| 629 | | *1000+13 CONN. W.* | | LT | 1 | 1 | 1 | | | | |
| SHEET *629* TOTALS | | | | | 33 | 33 | 33 | 8 | 1 | | |
| | | I.R.71 AND S.R.303 REMOVALS | | | | | | | | | |
| 636 | | 46+16.33 | | LT | 1 | 1 | 1 | | | | |
| 636 | | 48+56.33 | | LT | 1 | 1 | 1 | | | | |
| 636 | | 51+05 | | LT | | | | 1 | | | |
| 636 | | 51+56.33 | | LT | 1 | 1 | 1 | | | | |
| 636 | | 53+66.33 | | LT | 1 | 1 | 1 | | | | |
| 636 | | 55+66.33 | | LT | 1 | 1 | 1 | | | | |
| 636 | | 47+51.33 | | RT | 1 | 1 | 1 | | | | |
| 636 | | 49+20 | | RT | | | | 1 | | | |
| 636 | | 50+10.33 | | RT | 1 | 1 | 1 | | | | |
| 636 | | 52+56.33 | | RT | 1 | 1 | 1 | | | | |
| 636 | | 54+66.33 | | RT | 1 | 1 | 1 | | | | |
| SHEET *636* TOTALS | | | | | 9 | 9 | 9 | 2 | | | |
| SHEET TOTALS | | | | | 42 | 42 | 42 | 10 | 1 | | |

CALCULATED | CHECKED

Lighting Sub-Summary

MED-71-15.78

618
940

# LIGHTING SUB–SUMMARY

NOTE: 631 ITEMS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY SHEETS 562,563

| QUANTITIES |
|---|
| CALC. BY: AFS DATE: 5/16/94 |
| CHKD. BY: MCB DATE: 6/1/94 |

| | | | | 631 | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHEET. No. | REF. No. | STATION FROM | TO | SIDE | SIGN SERVICE | SIGN WIRED | | DISCONNECT SWITCH WITH ENCLOSURE, 30 AMP | SWITCH ENCLOSURE MOUNTING BRACKET ASSEMBLY | BALLAST, TYPE CMRI–175–480, *REMOTE* | BALLAST, TYPE CMRI–175–480, INTEGRAL | BALLAST, TYPE CMRI–250–480, INTEGRAL | | MERCURY VAPOR LUMINAIRE, TYPE TC–31.21 WITH 175 W LAMP | MERCURY VAPOR LUMINAIRE, TYPE TC–31.21 WITH 250 W LAMP | | | | | | | |
| | | | | | EACH | EACH | | EACH | EACH | EACH | EACH | EACH | | EACH | EACH | | | | | | | | | |
| | | I.R. 71 AND S.R. 18 NEW INSTALLATION | | | | | | | | | | | | | | | | | | | | | | |
| 623 | SIGN–B108A | 149+70 S.R. 18 | | RT | 1 | 1 | | 1 | 1 | 1 | | | | 1 | | | | | | | | | | |
| 622 | SIGN – 6 | 870+81 I.R. 71 | | RT | 1 | 2 | | 1 | | | 2 | 1 | | 2 | 1 | | | | | | | | | |
| 624 | SIGN–D109A | 154+35 S.R. 18 | | LT | 1 | 2 | | 1 | | | 1 | | | 1 | | | | | | | | | | |
| 624 | SIGN–D109 | 151+75 S.R. 18 | | LT | 1 | 1 | | 1 | 1 | 1 | | | | 1 | | | | | | | | | | |
| | | I.R. 71 AND I.R. 271 NEW INSTALLATION | | | | | | | | | | | | | | | | | | | | | | |
| 629 | SIGN 30 | 97+00 IR-71 | | RT. | 1 | 2 | | 1 | | | 4 | | | 4 | | | | | | | | | | |
| | | I.R. 71 AND S.R. 3 NEW INSTALLATION | | | | | | | | | | | | | | | | | | | | | | |
| 631 | SIGN–B52 | 1084+40 I.R. 71 | | RT | 1 | 1 | | 1 | | | | 2 | | | 2 | | | | | | | | | |
| 632 | SIGN–C60 | 1124+35 I.R. 71 | | LT | 1 | 1 | | 1 | | | | 2 | | | 2 | | | | | | | | | |
| | | I.R. 71 AND S.R. 303 NEW INSTALLATION | | | | | | | | | | | | | | | | | | | | | | |
| 634 | SIGN–C82 | 1248+48 I.R. 71 | | RT | 1 | 1 | | 1 | | | | 2 | | | 2 | | | | | | | | | |
| 635 | SIGN–A92 | 1287+20 I.R. 71 | | LT | 1 | 1 | | 1 | | | | 2 | | | 2 | | | | | | | | | |
| | | I.R. 71 AND S.R. 303 REVISIONS TO EXISTING SYSTEM | | | | | | | | | | | | | | | | | | | | | | |
| 636 | SIGN–T151 | 51+25 S.R. 303 | | LT | 1 | 1 | | 1 | | | 1 | | | 1 | | | | | | | | | | |
| 636 | SIGN–S150B | 49+00 S.R. 303 | | RT | 1 | 1 | | 1 | | | 1 | | | 1 | | | | | | | | | | |
| | | I.R. 71 AND S.R. 18 NEW INSTALLATION (Cont.) | | | | | | | | | | | | | | | | | | | | | | |
| 624 | SIGN 12A | 901+00 IR-71 | | LT. | 1 | 2 | | 1 | | | 2 | 2 | | 2 | 2 | | | | | | | | | |
| 626 | SIGN 17A | 927+40 IR-71 | | LT. | 1 | 2 | | 1 | | | 2 | 3 | | 2 | 3 | | | | | | | | | |
| 627 | SIGN 24A | 932+25.30 IR-71 | | RT. | 1 | 2 | | 1 | | | 2 | 3 | | 2 | 3 | | | | | | | | | |
| 628 | SIGN 26 | 953+80 IR-71 | | LT. | 1 | 2 | | 1 | | | 2 | 2 | | 2 | 2 | | | | | | | | | |
| | SHEET TOTALS | | | | 15 | 22 | | 15 | 2 | 2 | 17 | 19 | | 19 | 19 | | | | | | | | | |

REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:

CALCULATED | CHECKED

SIGN LIGHTING SUB-SUMMARY

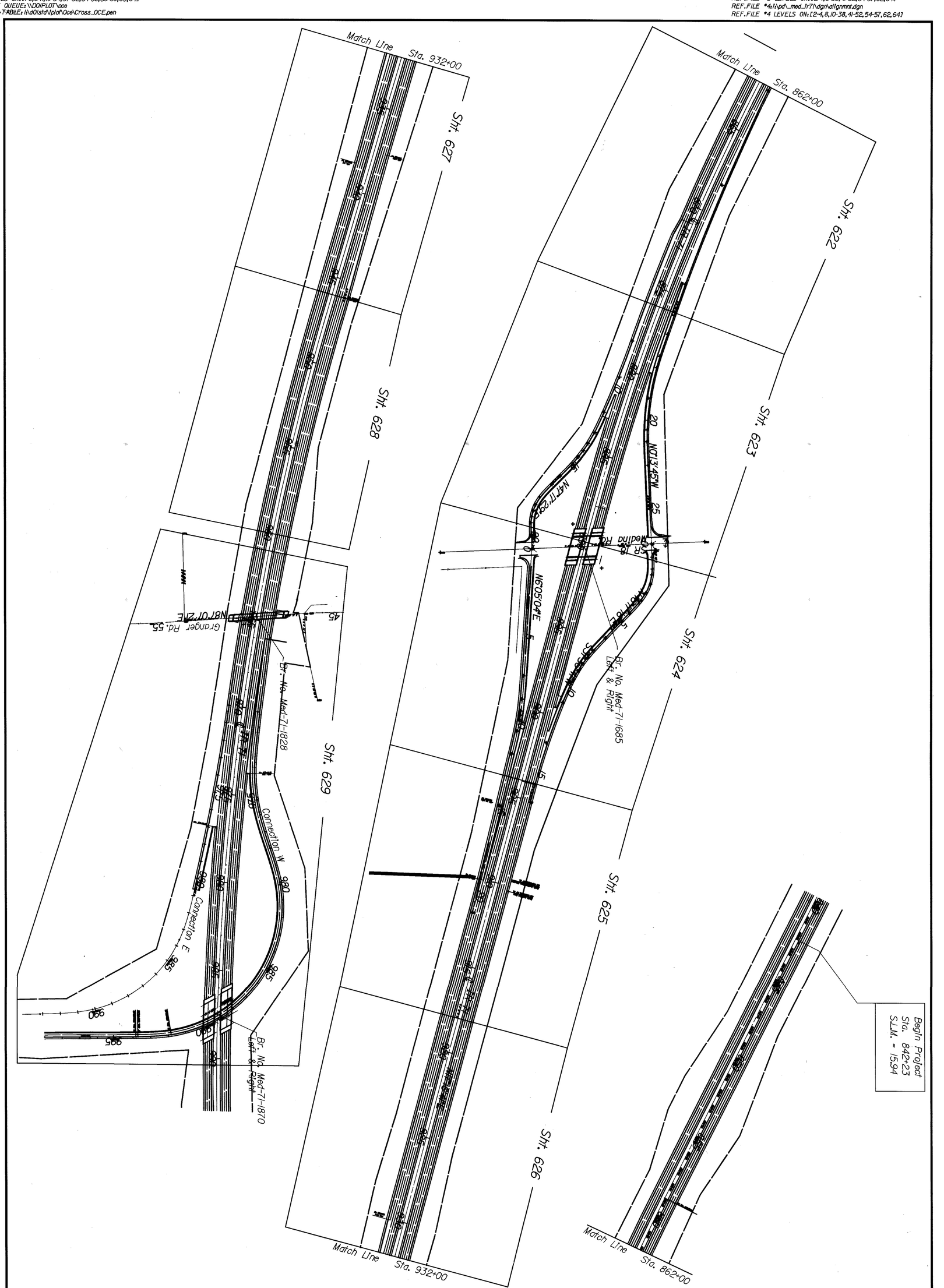
MED-71-15.78

619
940

FILENAME: I:\pd_MED_JR7\DGN\Lighting7885LM.dgn
DATE & TIME: 09-DEC-1999 18:18
USERNAME: mfox
PROJECT: NONE

LEVELS ON: [1-6,8-11,19-34,37-52,54-56,58-60,63,641]
PLOT QUEUE: \\DOIPLOT\oce
PEN TABLE: I:\d01std\plot\Oce\Crass_OCE.pen

REF.FILE *1: I:\pd_med_Jr7\dgn\alignmnt.dgn
REF.FILE *1 LEVELS ON: [4,8-52,54-57,59,61,62,641]
REF.FILE *2: I:\pd_med_Jr7\dgn\alignmnt.dgn
REF.FILE *2 LEVELS ON: [2-4,8,10-52,54-57,59,62,641]
REF.FILE *3: I:\pd_med_Jr7\dgn\alignmnt.dgn
REF.FILE *3 LEVELS ON: [2-4,8-39,41-52,54-57,62,641]
REF.FILE *4: I:\pd_med_Jr7\dgn\alignmnt.dgn
REF.FILE *4 LEVELS ON: [2-4,8,10-38,41-52,54-57,62,641]




| 620 / 940 | MED-71-15.78 | SCHEMATIC PLAN | 0 250 125 500 HORIZONTAL SCALE IN FEET | N |
|---|---|---|---|---|

FILENAME: h:\pd_MED_IR71\DGN\Lighting\7885LM.dgn
DATE & TIME: 10-DEC-1999 13:26
USERNAME: mfox
PROJECT: NONE

LEVELS ON: [1-6, 8-11, 19-34, 37-52, 54-56, 58-60, 63, 641
PLOT QUEUE: \\DOI\PLOT\oce
PEN TABLE: i:\dot\std\plot\Dce\Cross_DCE.pen

REF FILE *1: i:\pd_med_ir71\dgn\allgnmnt.dgn
REF FILE *1 LEVELS ON: [4, 8-52, 54-57, 59, 61, 62, 641
REF FILE *2: i:\pd_med_ir71\dgn\allgnmnt.dgn
REF FILE *2 LEVELS ON: [2-4, 8, 10-52, 54-57, 59, 62, 641

REF FILE *3: i:\pd_med_ir71\dgn\allgnmnt.dgn
REF FILE *3 LEVELS ON: [2-4, 8-39, 41-52, 54-57, 62, 641
REF FILE *4: i:\pd_med_ir71\dgn\allgnmnt.dgn
REF FILE *4 LEVELS ON: [2-4, 8, 10-38, 41-52, 54-57, 62, 641

Sht. 633
Sht. 634
Sht. 631
Sht. 635
Sht. 632
Br. No. Med-71-2034 Left & Right
Br. No. Med-71-2402 Left & Right
Br. No. Med-71-2090 Left & Right
Ramp A
Ramp B
Ramp C
Ramp D
SR 3
Bridge No. Cuy-71-0000
Medina Cty.
Cuyahoga Cty.
Boston Rd.
End Project Sta. 1406+34 S.L.M.=

| 621 / 940 | MED-71-15.78 | SCHEMATIC PLAN | 0 250 125 500 HORIZONTAL SCALE IN FEET | N |
|---|---|---|---|---|

REF-FILE *1; LEVELS ON:
REF-FILE *2; 2 LEVELS ON.
REF-FILE *3; 3 LEVELS ON:
REF-FILE *4; 4 LEVELS ON (135-38,64)

## LIGHTING LEGEND

- EXISTING PULL BOX
- EXISTING PULL BOX TO BE REMOVED
- PULL BOX
- EXISTING SIGN (CANTILEVER TYPE)
- EXISTING CONVENTIONAL LIGHTING
- EXISTING COMBINATION CONVENTIONAL LIGHTING AND TRAFFIC SIGNAL POLE
- CONVENTIONAL 310 W LIGHTING 50' MOUNTING HEIGHT
- HIGH MAST TOWER, ASYMMETRICAL LUMINAIRES
- CONVENTIONAL 200 W LIGHTING, 40' MOUNTING HEIGHT
- HIGH MAST TOWER, SYMMETRICAL LUMINAIRES
- CONVENTIONAL 200 W LIGHTING, 30' MOUNTING HEIGHT
- EXISTING BRIDGE UNDERPASS LIGHTING
- PROPOSED BRIDGE UNDERPASS LIGHTING
- EXISTING CABLE OR CONDUIT
- OVERHEAD SIGN (SPAN TYPE)
- EXISTING OVERHEAD SIGN (SPAN TYPE)
- TRAFFIC LANE
- OVERHEAD SIGN SUPPORT (CANTILEVER TYPE)
- EXISTING SERVICE POLE
- PROPOSED SERVICE POLE
- EXISTING POWER POLE
- EXISTING CONTROL CENTER
- PROPOSED CONTROL CENTER W/ PULL BOX
- EXISTING CONVENTIONAL LIGHTING TO BE REMOVED
- EXISTING POST TOP MOUNTED LUMINARE TO BE REMOVED
- EXISTING CONTROL CENTER TO BE REMOVED
- EXISTING CABLE OR CONDUIT TO BE ABANDONED
- EXISTING SERVICE POLE TO BE REMOVED
- DISTRIBUTION CABLE IN CONDUIT JACKED UNDER PVMT
- DISTRIBUTION CABLE IN CONDUIT
- 1.5" DUCT CABLE SYSTEM W/ 3 NO. 4 AWG 5000V CABLES
- 1.5" DUCT CABLE SYSTEM W/ 3 NO. 2 AWG 5000V CABLES
- 1.5" NO. 4 AWG DUCT CABLE IN 3" CONDUIT JACKED UNDER PVMT
- 1.5" NO. 2 AWG DUCT CABLE IN 3" CONDUIT JACKED UNDER PVMT
- EXISTING BRIDGE MOUNTED SIGN
- PROPOSED BRIDGE MOUNTED SIGN
- CONDUIT STUB
- EXISTING POST TOP MOUNTED LUMINAIRE
- CONDUIT JACKED OR DRILLED

*NOTE: Contractor shall make sure that the conduit jacked and/or drilled misses the pile supports for the noise wall.*

TOWER DESIGNATION AA-1
FIRST LETTER IS THE CIRCUIT DESIGNATION
SECOND LETTER IS THE POWER SERVICE DESIGNATION
THE # IS THE TOWER OR POLE NUMBER ON THE CIRCUIT

ALL OFFSET DISTANCES SHOWN, LEFT OR RIGHT, ARE MEASURED FROM THE EDGE OF PAVEMENT. *TYPICAL ALL PLAN SHEETS.*

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS

*Ohio Edison Company - Distribution*
*6326 Lake Avenue*
*Elyria, Ohio 44035*
*440-324-0231*

*Ohio Edison Company - Transmission*
*76 South Main Street*
*Akron, Ohio 44308*
*330-384-5180*

AA-5 Sta. 863+06 I-71 18.00 LT 1 200 Watt Luminaire 40' Pole, 18' Arm
AA-4 STA. 865+32 I-71 25.00 LT 1 200 Watt Luminaire 1 45' Pole, 25' Arm
AA-3 STA. 868+44 I-71 25.00 LT 1 200 Watt Luminaire 1 45' Pole, 25' Arm
PB-AA4 STA. 870+75
AA-2 STA. 871+40 I-71 30.00 LT 1 200 Watt Luminaire 1 45' Pole, 30' Arm
AA-1 STA. 874+23 I-71 30.00 LT 1 200 Watt Luminaire 1 45' Pole, 30' Arm
AT Sta. 11+92.79
PC Sta. 0+00.00
EX. 2" GAS LINE (M.F.C. DRILLING) (ABANDONED)
EX. 2" GAS LINE (M.F.C. DRILLING) (ABANDONED)
EX. 2" GAS LINE (M.F.C. DRILLING) (ABANDONED)
862+00 863+00 864+00 865+00 866+00 867+00 868+00 869+00 870+00 871+00 IR 71 872+00 873+00 874+00 875+00 STA. 876+00
PB-AA5 STA. 870+75
Sign AA-6 STA. 870+81
Do Not Disturb
Match Line
NOTE: Existing Ramp C Lighting To Remain

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED
CHECKED

**S.R. 18 Interchange**
**Partial Lighting**

**MED-71-15.78**

622
940

FILENAME: i:\pdp_MELLJR\(NJK)\lighting\r880u1*.dgn
DATE & TIME: 10-DEC-1999 13:18
USERNAME: mfox
PROJECT: NONE
LEVELS ON: 1***

MSLF.FILE: *1:\ADM_MED_IRT\DGN\Lighting\conventional.dgn
REF.FILE *1 LEVELS ON(1,35-38,64)
REF.FILE *2:\ADM_MED_IRT\DGN\Lighting\abc-2dambi.dgn
REF.FILE *2 LEVELS ON(1,12-4,8-16,18,20-52,54-59,61,62,641)

REF.FILE *3:\ADM_MED_IRT\DGN\Lighting\alignmnt.dgn
REF.FILE *3 LEVELS ON(1,3,5,9-37,39,41-52,54-57,59,60,641)
REF.FILE *4:\ADM_MED_IRT\DGN\Lighting\conventional.dgn
REF.FILE *4 LEVELS ON(1,35-38,641)

Proposed Lighting Control
Center 'A' Sta. 147+44, 64' Rt.
Pull Box 'PB-AA1'
Sta. 147+36, 59' Rt.
S.R.-18 Stationing

Traffic Signal Power Service Pole
Traffic Signal Controller
Traffic Signal Pull Box
Traffic Signal Strain Pole

AA-0 Sta. 26+21 (Ramp 'A')
Re-connect (existing)

Sign #108A Sta. 149+70 (SR-18)
Circuit

Insert 'A'
Scale = 100':1"

Sign #108 Sta. 147+40 (SR-18)
Traffic Signal Strain Pole

Pull Box PB-AA3
Sta. 21+00, 17' Lt.
(Ramp 'A')

Pull Box PB-AA2
Sta. 21+00, 26' Rt.
(Ramp 'A')

Sign #108A
(Mounted (SR-18) On Structure)

Insert 'A'

Ramp 'A'
N 0° 13' 45" W

Ramp 'C'
N 47° 17' 29" E

S.R.-18
Medina Road

Match Line
Match Line

Sta. 876+00
Sta. 890+00

| CONTROL CENTER DATA | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONTROL CENTER | CONNECTED LOAD KVA | SERVICE ENTRANCE CONDUCTOR SIZE-AWG | ENCLOSURE RATING AMPS | CIRCUIT NUMBER | CIRCUIT LOAD AMPS | CIRCUIT FUSE SIZE AMPS | MAINTAINENCE AGENCY |
| SR-18 | | | | | | | |
| A | 2.82 | 4 | 60 | A | 5.88 | 60 | ODOT |

NOTES: FOR LEGEND, SEE SHEET 622

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED | CHECKED

S.R. 18 Interchange
Partial Lighting

MED-71-15.78

623
940

FILENAME: I:\ADM_MED_IRT\DGN\Lighting\dd50u12.dgn
DATE & TIME: 10-DEC-1999 13:19
USERNAME: mfox
PROJECT: NONE

LEVELS ON(1,64)
PLOT QUEUE: \\DOPLOT\oce
PEN TABLE: I:\MDOT\DPT\DoeCross.OCE.pen

FILENAME: \\pd_MED_IR7\DGN\Lighting\885LP5.dgn
DATE & TIME: 10-DEC-1999 13:19
USERNAME: mfox
PROJECT: NONE

LEVELS ON: [1-64]
PLOT QUEUE: \\DOIPLOT\oce
PEN TABLES: \\dOIsfd\plot\Oce\Cross_OCE.pen

REF.FILE *1: \\pd_MED_IR7\DGN\Lighting\conventional.dgn
REF.FILE *1 LEVELS ON: [35-38,64]
REF.FILE *2: \\pd_MED_IR7\DGN\Lighting\abc2dcmb.dgn
REF.FILE *2 LEVELS ON: [1-2,4,8-16,18,20-52,54-59,61,62,64]
REF.FILE *3: \\pd_MED_IR7\DGN\Lighting\alignmnt.dgn
REF.FILE *3 LEVELS ON: [3,9-37,39,41-52,54-57,59,64]
REF.FILE *4: \\pd_MED_IR7\DGN\Lighting\prdrain.dgn
REF.FILE *4 LEVELS ON: [1-64]

Match Line Sta. 890+00

Match Line Sta. 904+00

S.R.-18

See Insert

Ramp 'D'

Ramp 'B'

POT Sta. 20+65.61

POT Sta. 0+00.00

Ex. 12" WATER

SC Sta. 1+76.00

CS Sta. 2+83.58

ST Sta. 4+33.58

TS Sta. 6+29.62

SC Sta. 7+79.62

CS Sta. 8+72.58

TS Sta. 7+25.25

SC Sta. 10+72.58

SC Sta. 9+23.25

CS Sta. 9+73.25

Sta. 9+85.25

ST Sta. 11+73.25

PT Sta. 15+66.68

PB-DC9

SIGN-12A

Sta. 901+00

DC-1

STA. 0+90 Ramp 'D'
22.00 RT
200 Watt Luminaire
40' Pole, 25' Arm

DC-2

STA. 900+83 I-71
15.00 RT
1 310 Watt Luminaire
50' Pole, 15' Arm

| CONTROL CENTER DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CONTROL CENTER | CONNECTED LOAD KVA | SERVICE ENTRANCE CONDUCTOR SIZE-AWG | ENCLOSURE RATING AMPS | CIRCUIT NUMBER | CIRCUIT LOAD AMPS | CIRCUIT FUSE SIZE AMPS | MAINTAINENCE AGENCY | |
| D | 877 | 2 | 60 | DC | 1827 | 60 | ODOT | |
| SR-18 | | | | | | | | |

NOTES: FOR LEGEND, SEE SHEET 622

100 Scale Insert (42)

Sign #109A
Sta. 154+35
(SR-18)

PB-DC1
Sta. 0+82
Ramp 'D'

CC-D
Sta. 0+90
Ramp 'D'

DC-1
Sta. 0+90
Ramp 'D'

Strain Pole

SR-18

Sign #109
Mounted on Structure
(SR-18)

PB-DC2
Sta. 152+00
(SR-18)

624
940

MED-71-15.78

S.R. 18 Interchange
Partial Lighting

CALCULATED

CHECKED

0 50
25 100
HORIZONTAL SCALE IN FEET

FILENAME: I:\pd_MED_IR71\DGN\Lighting\88SLY4.dgn
DATE & TIME: 10-DEC-1999 13:20
USERNAME: mfox
PROJECT: NONE

LEVELS ON: [1-64]
PLOT QUEUE: \\DOIPLOT\oce
PEN TABLE: i:\d01sfd\plot\oce\Cross_OCE.pen

REF.FILE *1: I:\pd_MED_IR71\DGN\Lighting\conventional.dgn
REF.FILE *1 LEVELS ON: [35-38,64]
REF.FILE *2: I:\pd_med_ir71\dgn\abc2dcmb.dgn
REF.FILE *2 LEVELS ON: [2-4,8-16,18,20-52,54-59,61,62,64]

REF.FILE *3: I:\pd_MED_IR71\DGN\Lighting\alignmnt.dgn
REF.FILE *3 LEVELS ON: [3,5,9-37,39-52,54-57,59,60,64]
REF.FILE *4:
REF.FILE *4 LEVELS ON:

Match Line Sta. 904+00

DC-3
STA. 904+44 I-71
15.00 RT
1 310 Watt Luminaire
50' Pole, 15' Arm

POT Sta. 14+73.22
Sta. 905+73.25
Begin 48:1 Taper

POT Sta. 16+68.94

DC-4
STA. 908+32 I-71
25.00 RT
1 310 Watt Luminaire
50' Pole, 25' Arm

PB-DO (Ex.)
Sta. 909+58 I.R.-71
Re-Connect Existing Circuit

Care should be exercised by the contractor to insure that the existing conduit is not damaged by the guardrail and noise wall construction.

Sta. 910+05.25
End 48:1 Taper

DC-5
STA. 912+40 I-71
25.00 RT
1 310 Watt Luminaire
50' Pole, 25' Arm

POT Sta. 20+91.78

N 17° 16' 41" E

Match Line Sta. 918+00

NOTES: FOR LEGEND, SEE SHEET 622

FILENAME: N:\pd_MED_IR7\NDGN\Lighting\V885LP5.dgn
DATE & TIME: 10-DEC-1999 13:20
USERNAME: mfox
PROJECT: NONE

LEVELS ON: [1-64]
PLOT QUEUE: \\DOTPLOT\oce
REN TABLE: n:\dotsfd\plot\oce\Cross_OCE.pen

REF.FILE *1: N:\pd_MED_IR7\NDGN\Lighting\conventional.dgn
REF.FILE *1 LEVELS ON: [35-38,64]
REF.FILE *2: N:\pd_med_ir7\dgn\abc2dambdgn
REF.FILE *2 LEVELS ON: [2-4,8-16,18,20-52,54-59,61,62,64]

REF.FILE *3: N:\pd_MED_IR7\NDGN\Lighting\alignmnt.dgn
REF.FILE *3 LEVELS ON: [3,5,9-37,39-52,54-57,59,60,64]
REF.FILE *4:
REF.FILE *4 LEVELS ON:

Match Line Sta. 918+00

PB-DC3
Sta. 918+20 I-71
27.00' Rt.

PB-DC4
STA.927+40

SIGN-17A
Sta. 927+40

PB-DC5

Sta. 930+05.25
Begin Tape

DC-6
STA. 930+05 I-71
30.00 RT
1 200 Watt Luminaire
40' Pole, 30' Arm

15'

Match Line Sta. 932+00

NOTES: FOR LEGEND, SEE SHEET 622



MED-71-15.78

S.R. 18 Interchange
Partial Lighting

CALCULATED
CHECKED

0 50
25 100
HORIZONTAL SCALE IN FEET

FILENAME: i:\pd_MED_JR71\DGN\Lighting\v8850LR.dgn
DATE & TIME: 10-DEC-1999 13:21
USERNAME: mfox
PROJECT: NONE

LEVELS ON: [1-64]
PLOT QUEUE: \\DOIPLOT\oce
REM TABLE: i:\d01sfd\plot\Oce\Cross_OCE.pen

REF.FILE *1: i:\pd_MED_JR71\DGN\Lighting\conventional.dgn
REF.FILE *1 LEVELS ON: [35,37,38,64]
REF.FILE *2: i:\pd_msd_jr71\dgn\abc2dcmb.dgn
REF.FILE *2 LEVELS ON: [2-4,8-16,18,20-52,54-59,61,62,64]
REF.FILE *3: i:\pd_MED_JR71\DGN\Lighting\alignmnt.dgn
REF.FILE *3 LEVELS ON: [3,5,9-37,39-52,54-57,59,60,64]
REF.FILE *4:
REF.FILE *4 LEVELS ON:

Match Line Sta. 932+00

PB - DC 7
Sta. 932+25.30 I-71
18.00 Rt
Sign - 24A

DC-7
STA. 932+83 I-71
18.00 RT
1 200 Watt Luminaire
40' Pole, 18' Arm

DC-8
STA. 935+70 I-71
18.00 RT
1 200 Watt Luminaire
40' Pole, 18' Arm

DC-10
STA. 937+33 I-71
18.00 LT
1 200 Watt Luminaire
40' Pole, 18' Arm

Sta. 937+55.07
Begin Taper

PB-DC6
Sta. 938+68 I-71
21.00' Lt.

Sta. 938+45.25
End Taper

DC-9
STA. 938+68 I-71
18.00 RT
1 200 Watt Luminaire
40' Pole, 18' Arm

DC-11
STA. 940+30 I-71
18.00 LT
1 200 Watt Luminaire
40' Pole, 18' Arm

DC-12
STA. 943+17 I-71
18.00 LT
1 200 Watt Luminaire
40' Pole, 18' Arm

DC-13
STA. 945+95 I-71
15.00 LT
1 200 Watt Luminaire
40' Pole, 15' Arm

Sta. 945+95.07
End Taper

N 17° 16' 41" E

Match Line Sta. 946+50

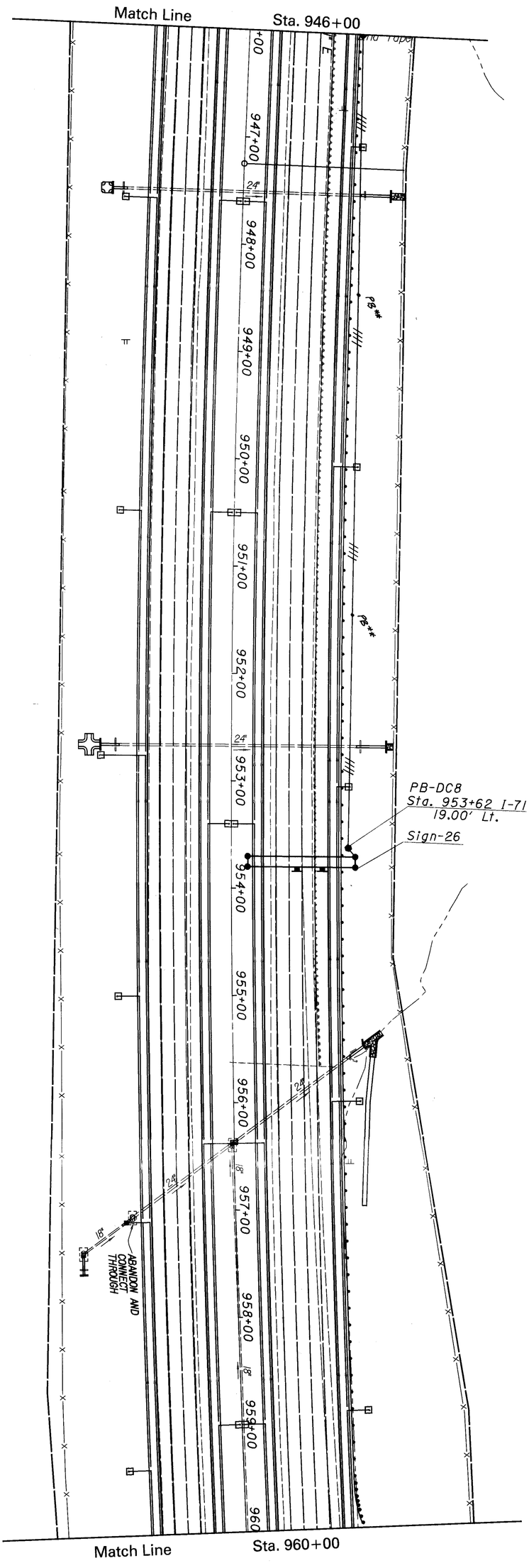
NOTES: FOR LEGEND, SEE SHEET 622

FILENAME: i:\pd_MED_IR71\DGN\Lighting\V885LP47.dgn
DATE & TIME: 10-DEC-1999 13:21
USERNAME: mfox
PROJECT: NONE

LEVELS ON: [1-64]
PLOT QUEUE: \\DOIPLOT\oce
PEN TABLE: i:\d01std\plot\Oce\Cross_OCE.pen

REF.FILE *1: i:\pd_MED_IR71\DGN\Lighting\conventional.dgn
REF.FILE *1 LEVELS ON: [35, 37, 38, 64]
REF.FILE *2: i:\pd_med_ir71\dgn\abc2dcmb.dgn
REF.FILE *2 LEVELS ON: [2-4, 8-16, 18, 20-52, 54-59, 61, 62, 64]

REF.FILE *3: i:\pd_MED_IR71\DGN\Lighting\allgnmnt.dgn
REF.FILE *3 LEVELS ON: [3, 5, 9-37, 39-52, 54-57, 59, 60, 64]
REF.FILE *4:
REF.FILE *4 LEVELS ON:




NOTES: FOR LEGEND, SEE SHEET 622

| | | | | |
|---|---|---|---|---|
| 940 / 628 | MED-71-15.78 | S.R. 18 Interchange<br>Partial Lighting | CALCULATED<br>CHECKED | 0 50<br>25 100<br>HORIZONTAL SCALE IN FEET |

| CONTROL CENTER DATA | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONTROL CENTER | CONNECTED LOAD KVA | SERVICE ENTRANCE CONDUCTOR SIZE–AWG | ENCLOSURE RATING AMPS | CIRCUIT NUMBER | CIRCUIT LOAD AMPS. | CIRCUIT FUSE SIZE AMPS. | MAINTAINENCE AGENCY |
| I–271 | | | | | | | |
| K | 33.66 | 2 | 100 | E | 33.60 | 100 | ODOT |
| | | | | W | 36.52 | 100 | |

NOTES: EXISTING POLE MOUNTED CONTROL CENTER AND SERVICE POLE AT STA. 51+07 GRANGER RD. SHALL BE REMOVED. A NEW POLE MOUNTED CONTROL CENTER SHALL BE INSTALLED AT THE SAME LOCATION.

FOR LEGEND, SEE SHEET 622

SEE SHEET 630 FOR UNDERPASS LIGHTING DETAILS.

0' 100' 200' 300'
SCALE IN FEET

SERVICE POLE STA. 5+07 40' LT(±) GRANGER RD.
SERVICE POLE STA. 5+19 40' LT(±)
POWER POLE STA. 52+28 40' LT.(±) GRANGER RD.
POLE MOUNTED CONTROL CENTER K STA. 5+07 40' LT.(±) GRANGER RD.
EK–1 STA. 965+63 CONN. E 42' RIGHT 4 LUMINAIRES 100' POLE
STA. 967+58 CONN. E. 15' RIGHT
STA. 967+58 CONN. E 15' RIGHT
STA. 965+23 CONN.W 15' LEFT
STA. 967+23 CONN.W 15' LEFT
WK–2 STA. 968+83 CONN. W 38' LEFT 4 LUMINAIRES 100' POLE
STA. 969+23 CONN.W 15' LEFT
STA. 970+58 CONN. E 15' RIGHT
EK–2 STA. 971+13 CONN. E 47' RIGHT 4 LUMINAIRES 100' POLE
STA. 971+23 CONN.W 15' LEFT
STA. 972+13 CONN.W 15' LEFT
STA. 972+13 CONN. E 15' RIGHT
STA. 972+13 15' RIGHT
STA. 972+83 CONN. E 15' RIGHT
STA. 973+23 CONN.W 15' LEFT
STA. 974+53 CONN. E 15' RIGHT
WK–3 STA. 974+13 CONN. W 35' LEFT 4 LUMINAIRES 110' POLE
STA. 975+23 CONN.W 15' LEFT
STA. 977+23 CONN.W 15' RIGHT
STA. 976+18 CONN. E 15' RIGHT
EK–3 STA. 976+63 CONN.E 50' RIGHT 4 LUMINAIRES 110' POLE
STA. 977+88 CONN. E 15' LEFT
STA. 977+88 CONN. E 15' RIGHT
STA. 978+18 CONN. E 15' RIGHT
WK–4 STA. 978+63 CONN. W 100' RIGHT 6 LUMINAIRES 110' POLE
STA. 980+18 CONN. E 15' RIGHT
STA. 981+23 CONN.W 15' RIGHT
STA. 982+18 CONN. E 15' RIGHT
EK–4 STA. 982+631–71 60' RIGHT 6 LUMINAIRES 110' POLE
STA. 983+23 CONN.W 15' RIGHT
WK–5 STA. 984+38 CONN. W 80' RIGHT 6 LUMINAIRES 110' POLE
STA. 984+18 CONN. E. 15' RIGHT
STA. 985+23 CONN.W 15' RIGHT
STA. 986+18 CONN. E 15' RIGHT
STA. 987+23 CONN.W 15' RIGHT
STA. 988+18 CONN. E 15' RIGHT
EK–5 STA. 987+68 CONN. E 60' LEFT WITH 4 LUMINAIRES 110' POLE
STA. 988+13 CONN. W 15' RIGHT
STA. 989+13 CONN. W 15' RIGHT
STA. 990+18 CONN. E 15' RIGHT
STA. 991+13 CONN. W 15' RIGHT
EK–6 STA. 991+63 CONN. E 40' LEFT WITH 4 LUMINAIRES 110' POLE
STA. 992+18 CONN. E 15' RIGHT
STA. 992+73 I–71 30' LEFT 4 LUMINAIRES 110' POLE
STA. 993+43 CONN. E 15' RIGHT
STA. 993+43 CONN. E 60' LEFT
STA. 993+63 CONN. W 15' RIGHT
STA. 996+63 CONN. W 15' RIGHT
STA. 999+43 CONN. W 15' LEFT
STA. 1000+13 CONN. W 15' LEFT
EK–7 STA. 990+63 CONN. W 120' RIGHT 6 LUMINAIRES 100' POLE
WK–7 STA. 990+43 CONN. W 65' LEFT WITH 4 LUMINAIRES 100' POLE
WK–1 STA. 962+63 CONN. W STA. LEFT 36' LUMINAIRES 100' POLE
STA. 961+63 CONN.W 15' LEFT
STA. 963+48 CONN. W 15' LEFT
PB–W1 STA. 964+11
PB–W2 STA. 987+73
PB–W3 STA. 989+73
PB–W4 STA. 988+13
PB–W5 STA. 990+13
CONNECTION W
CONNECTION E
CIRCUIT W 2–NO. 2 AWG
CIRCUIT E 2–NO. 2 AWG
CIRCUIT W 2–NO. 4 AWG
CIRCUIT E 2–NO. 4 AWG
STA. 979+23 CONN.W 15' RIGHT
BRIDGE NO. MED–71–1870 L & R
AT&T FIBERLINE
28,160 ADT
O.E. TOWER 68' M.H.
O.E. TOWER
SOHIO EDISON R/W=150 FT. CARLISLE–STAR 345 KV LINE
MATCH LINE STA. 965+00
MATCH LINE
W. GRANGER RD.
54.75'
59.7'
15"
18"
24"
36"
42"
84"
96"
150'
960+00
963+00
965+00
970+00
975+00
980+00
985+00
990+00
Sign #30 Sta. 971+00 IR–71 Connection to Lighting Circuit made at Light Tower EK–2 Terminal Block. Run conduit from tower foundation to truss sign.

*Note:*
*All references to 2 - No. 4 AWG & 2 - No. 2 AWG*
*Shall Be: 3 - No. 4 AWG & 3 - No. 2 AWG*

HORIZONTAL SCALE IN FEET
0 50 100 200
CALCULATED
CHECKED

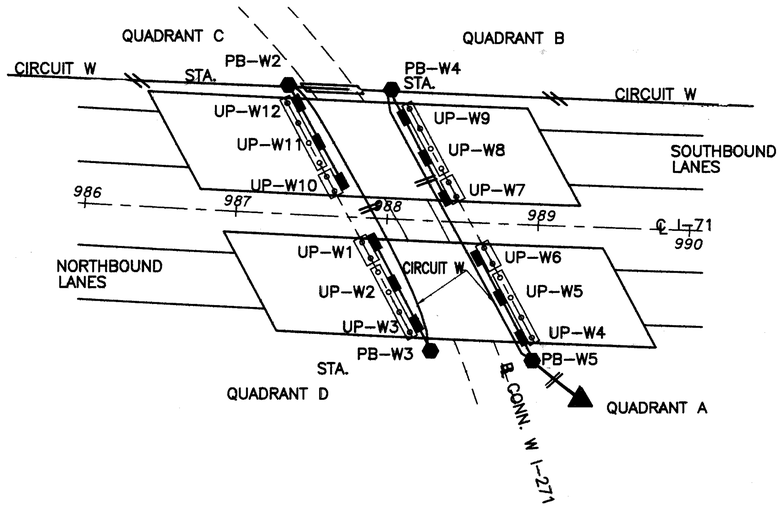
I–271 Interchange
High Mast Lighting

MED–71–15.78

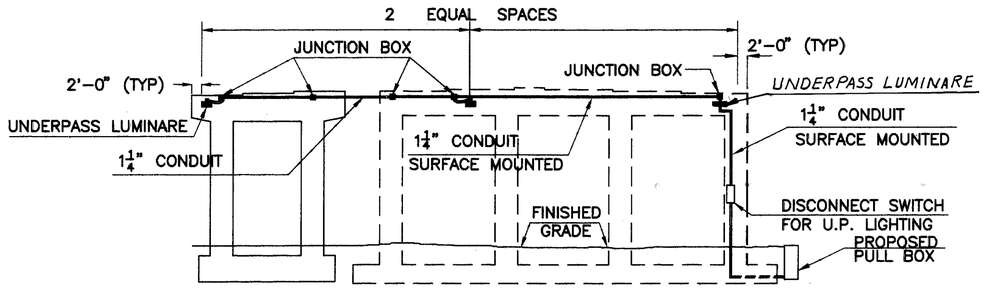
629
940

I–271 INTERCHANGE
HIGH MAST LIGHTING


mtl-FILE: *1:\ldot_med_jrt\dgn\mmmm.dgn
REF_FILE *1:LEVELS ON:15,641
REF_FILE *2:\ldot_med_jrt\dgn\abc2comb.dgn
REF_FILE *2:LEVELS ON:11-641
REF_FILE *2:\ldot_med_jrt\dgn\abc2comb.dgn
REF_FILE *2:LEVELS ON:12-4,8-16,18,20-52,54-59,61,62,641
REF_FILE *3:\ldot_med_jrt\dgn\proatrindgn
REF_FILE *3:LEVELS ON:11-641
REF_FILE *4:\ldot_med_jrt\dgn\blankstr.dgn
REF_FILE *4:LEVELS ON:15,16,18,21,24,39,55,56,59,641
REF_FILE *4:LEVELS ON:15,16,18,21,24,39,55,56,59,641
I:\LEVELS ON:11-641
PLOT OUTLINE: \2D\PLOT\oss
PEN TABLES: h:\d0\std\plot\GeoCross_OCE.pen
DATE & TIME: 10-DEC-1999 13:21
USERNAME: mfox
PROJECT: NONE

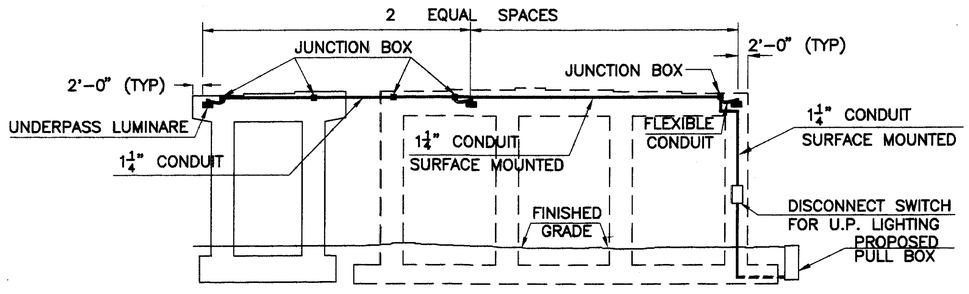



PROPOSED UNDERPASS LIGHTING PLAN




PROPOSED UNDERPASS LIGHTING, QUADRANT D

NOTE: REFER TO STANDARD DRAWING HL–20.31, (5–1–87) FOR DETAILS.




PROPOSED UNDERPASS LIGHTING, QUADRANT C
QUADRANTS A & B SIMILAR

NOTE: REFER TO STANDARD DRAWING HL–20.31, (5–1–87) FOR DETAILS.

NOTES: FOR LEGEND, SEE SHEET *622*

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED | CHECKED

I–271 Interchange
Underpass Lighting Details

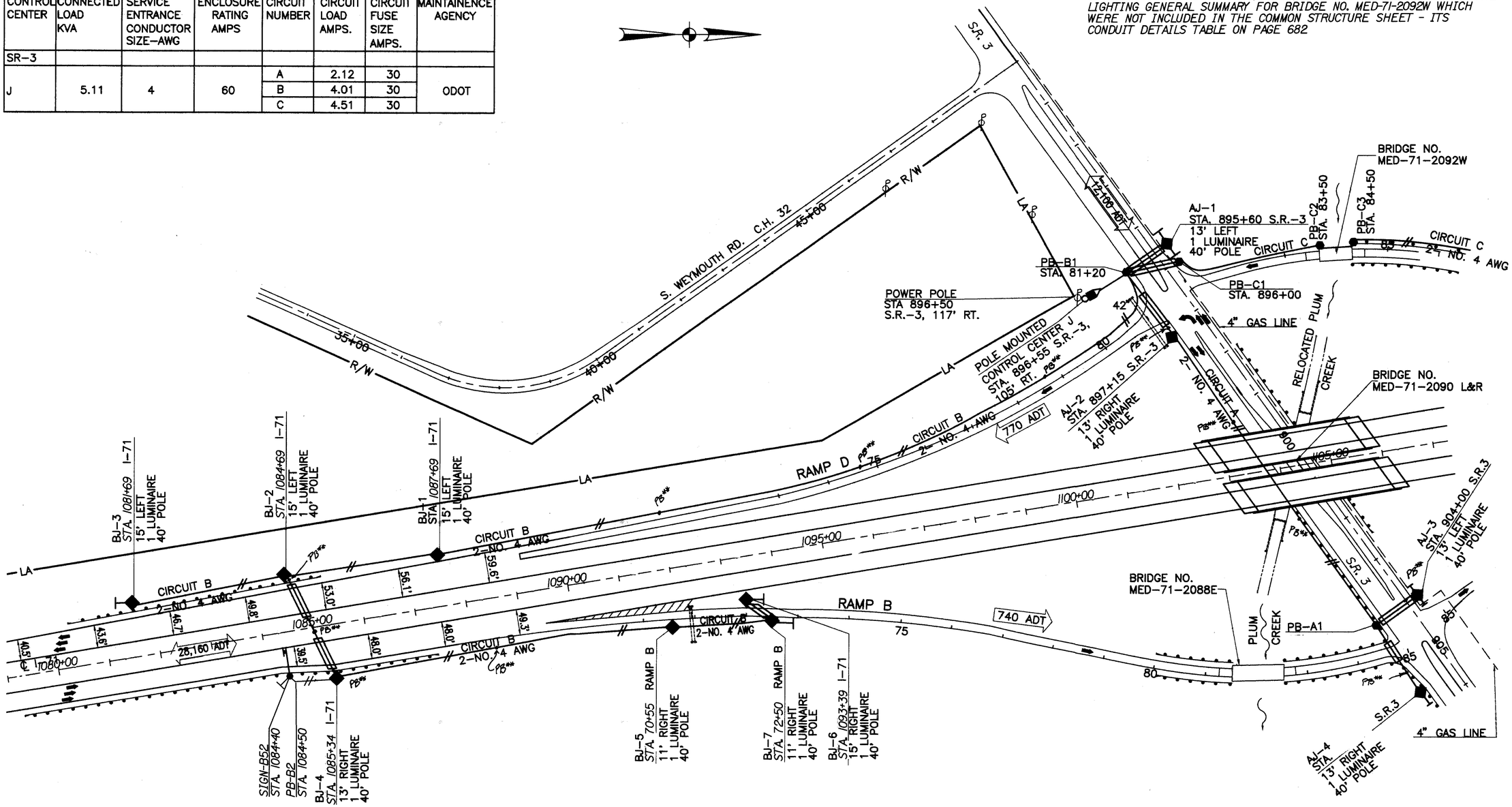
MED–71–15.78

630
940


FILE NAME: i:\dgn_mtl\jht\usr\lighting\d830s1-sdgn
DATE & TIME: 10-DEC-1999 13:22
USERNAME: mfox
PROJECT: NONE
LEVELS ON: 1 63 64
PLOT QUEUE: \\DUPLOT\oce
PEN TABLE: i:\dot\dfs\pat\OakCross.OCE.pen
REF. FILE *1 LEVELS ON: 13, 9-37, 39-52, 54-57, 59, 60, 641
REF. FILE *2
REF. FILE *2 LEVELS ON:
REF. FILE *3
REF. FILE *3 LEVELS ON:
REF. FILE *4
REF. FILE *4 LEVELS ON:

| CONTROL CENTER DATA | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONTROL CENTER | CONNECTED LOAD KVA | SERVICE ENTRANCE CONDUCTOR SIZE–AWG | ENCLOSURE RATING AMPS | CIRCUIT NUMBER | CIRCUIT LOAD AMPS. | CIRCUIT FUSE SIZE AMPS. | MAINTAINENCE AGENCY |
| SR–3 | | | | | | | |
| J | 5.11 | 4 | 60 | A | 2.12 | 30 | ODOT |
| | | | | B | 4.01 | 30 | |
| | | | | C | 4.51 | 30 | |

NOTE: Structure plans show 2 inch conduit is within the concrete parapet.
The length of the conduit in the concrete parapet is 75.5 feet.
Where the conduit leaves the structure an expansion sleeve should be included.
TWO ADDITIONAL PULL BOXES, 713.08, 24" HAVE BEEN INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR BRIDGE NO. MED-71-2092W WHICH WERE NOT INCLUDED IN THE COMMON STRUCTURE SHEET - ITS CONDUIT DETAILS TABLE ON PAGE 682




Note:
All references to 2 - No. 4 AWG & 2 - No. 2 AWG
Shall Be: 3 - No. 4 AWG & 3 - No. 2 AWG

NOTES: FOR LEGEND, SEE SHEET 622.

2" CONDUIT SHALL BE INSTALLED IN THE RIGHT PARAPET WALL OF BRIDGE NO. MED-71-2088E AND CAPPED AT EACH END OF THE PARAPET. SEE SHEET 682 FOR DETAILS.

0' 100' 200' 300'
SCALE IN FEET

# S.R.3 INTERCHANGE
## PARTIAL LIGHTING

HORIZONTAL SCALE IN FEET 0 50 100 200
CALCULATED
CHECKED

S.R. 3 Interchange
Partial Lighting

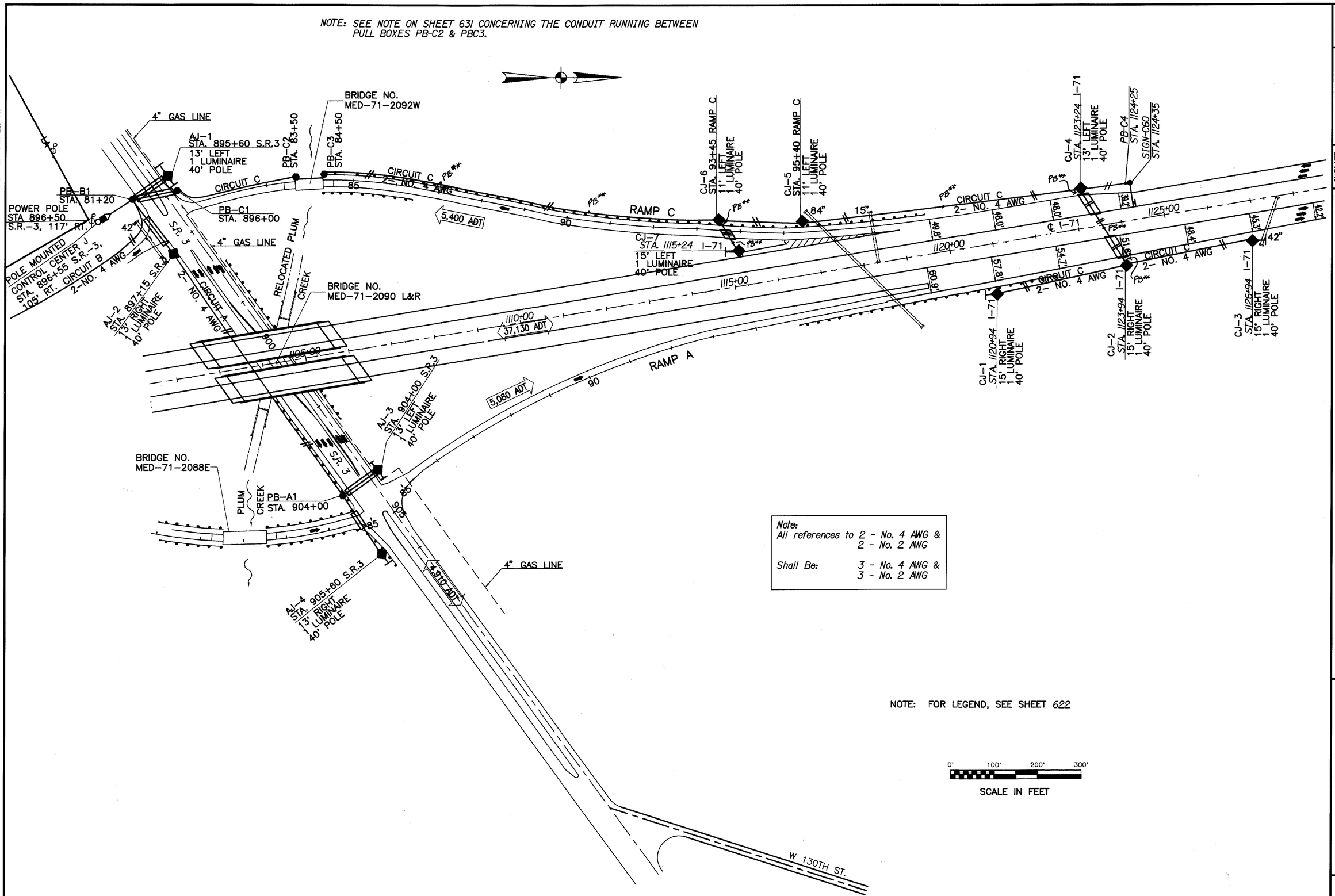
MED-71-15.78

631
940

REF.FILE *1: \\ADOT_MED_IRT\Design\Lighting\CONVENTIONAL.DGN
REF.FILE *1 LEVELS ON: 15, 20, 641
REF.FILE *2: \\ADOT_MED_IRT\DGN\Lighting\CONVENTIONAL.DGN
REF.FILE *2 LEVELS ON: 138, 61, 641
REF.FILE *3: LEVELS ON:
REF.FILE *3 LEVELS ON:
REF.FILE *4: LEVELS ON:
REF.FILE *4 LEVELS ON:

FILENAME: \\ADOT_MED_IRT\DGN\Lighting\V8DGN\SR3-IVLdgn
DATE & TIME: 10-DEC-1999 13:22
USERNAME: mfox
PROJECT: NONE
LEVELS ON: 11-641
PLOT SCALE: 1.000000
REF TABLE: \\ADOT_MED_IRT\DGN\Data\Cross_DCE.pen

NOTE: SEE NOTE ON SHEET 631 CONCERNING THE CONDUIT RUNNING BETWEEN PULL BOXES PB-C2 & PBC3.




*Note:*
*All references to 2 - No. 4 AWG & 2 - No. 2 AWG*

*Shall Be: 3 - No. 4 AWG & 3 - No. 2 AWG*

NOTE: FOR LEGEND, SEE SHEET *622*

0' 100' 200' 300'
SCALE IN FEET

N

0 50 100 200
HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

S.R. 3 Interchange
Partial Lighting

MED-71-15.78

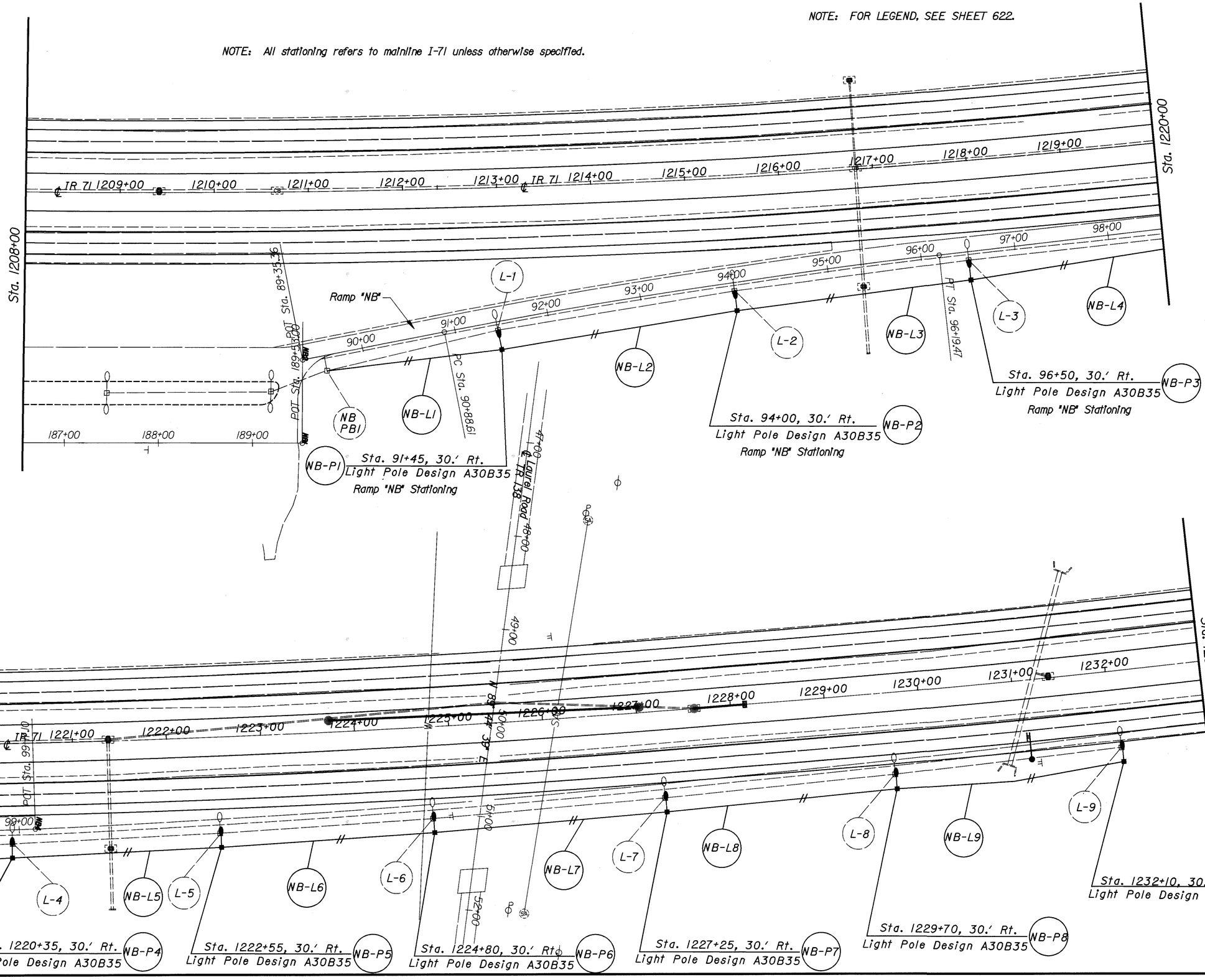
632
940

S.R.3 INTERCHANGE
PARTIAL LIGHTING


FILE NAME: I:\ODOT\MED\J_JH71\DGN\LIGHTING\XXSJLP11.dgn
DATE & TIME: 10-DEC-1998 13:23
USERNAME: mfox
PROJECT: NONE
LEVELS ON: 1-641
PLOT OUTLINE: \\ODOTPLOT\oce
REQ'D TABLE: I:\ODOT\DGN\OceVCross_OCE.pen
REF. FILE *1: I:\ODOT\MED\J_JH71\DGN\ALIGNMENT.dgn
REF. FILE *1 LEVELS ON: 1,3,5,9-37,39-52,54-57,59,60,641
REF. FILE *2: I:\ODOT\MED\J_JH71\DGN\Lighting\conventional.dgn
REF. FILE *2 LEVELS ON: 1,37,38,61,641
REF. FILE *3: I:\ODOT\MED\J_JH71\DGN\BRKONTR.dgn
REF. FILE *3 LEVELS ON: 1,5,6,16,18,21,24,33,55,56,59,641
REF. FILE *4:
REF. FILE *4 LEVELS ON:

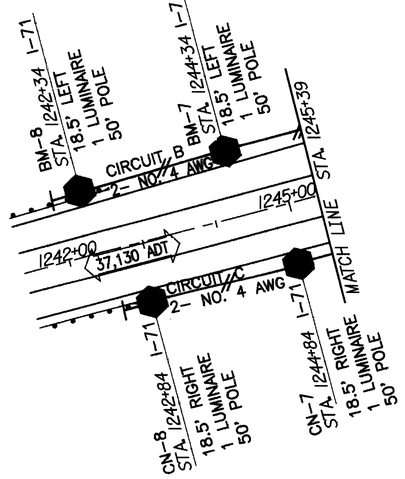
NOTE: FOR LEGEND, SEE SHEET 622.

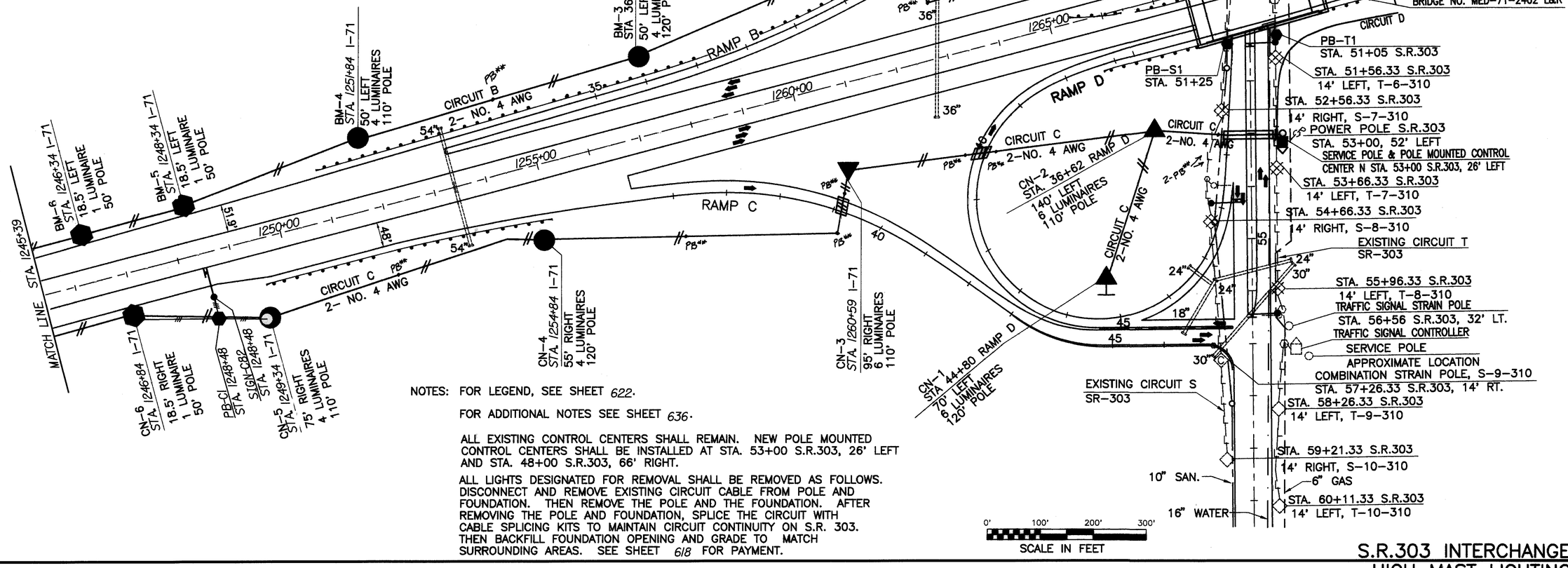
NOTE: All stationing refers to mainline I-71 unless otherwise specified.


Sta. 1208+00
Sta. 1220+00
Sta. 1233+00
IR 71 1209+00
1210+00
1211+00
1212+00
1213+00
IR 71 1214+00
1215+00
1216+00
1217+00
1218+00
1219+00
1220+00
1221+00
1222+00
1223+00
1224+00
1225+00
1226+00
1227+00
1228+00
1229+00
1230+00
1231+00
1232+00
187+00
188+00
189+00
90+00
91+00
92+00
93+00
94+00
95+00
96+00
97+00
98+00
99+00
49+00
47+00
52+00
Ramp "NB"
POT Sta. 89+35.36
POT Sta. 189+51.00
PC Sta. 90+88.61
PT Sta. 96+19.47
POT Sta. 99+71.10
L-1
L-2
L-3
L-4
L-5
L-6
L-7
L-8
L-9
NB-L1
NB-L2
NB-L3
NB-L4
NB-L5
NB-L6
NB-L7
NB-L8
NB-L9
NB PBI
NB-P1
Sta. 91+45, 30.' Rt.
Light Pole Design A30B35
Ramp "NB" Stationing
NB-P2
Sta. 94+00, 30.' Rt.
Light Pole Design A30B35
Ramp "NB" Stationing
NB-P3
Sta. 96+50, 30.' Rt.
Light Pole Design A30B35
Ramp "NB" Stationing
NB-P4
Sta. 1220+35, 30.' Rt.
Light Pole Design A30B35
NB-P5
Sta. 1222+55, 30.' Rt.
Light Pole Design A30B35
NB-P6
Sta. 1224+80, 30.' Rt.
Light Pole Design A30B35
NB-P7
Sta. 1227+25, 30.' Rt.
Light Pole Design A30B35
NB-P8
Sta. 1229+70, 30.' Rt.
Light Pole Design A30B35
NB-P9
Sta. 1232+10, 30.' Rt.
Light Pole Design A30B35
Left Ramp "NB"
138.00' Left
Left Ramp "NB" 47+00
Left Ramp "NB" 49+00
Left Ramp "NB" 52+00
Left Ramp "NB" 54+00
Left Ramp "NB" 56+00
Left Ramp "NB" 58+00
Left Ramp "NB" 59+00
Left Ramp "NB" 61+00
Left Ramp "NB" 63+00
Left Ramp "NB" 64+00
Left Ramp "NB" 66+00
Left Ramp "NB" 68+00
Left Ramp "NB" 70+00
Left Ramp "NB" 72+00
Left Ramp "NB" 74+00
Left Ramp "NB" 76+00
Left Ramp "NB" 78+00
Left Ramp "NB" 80+00
Left Ramp "NB" 82+00
Left Ramp "NB"

| CONTROL CENTER DATA | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONTROL CENTER | CONNECTED LOAD KVA | SERVICE ENTRANCE CONDUCTOR SIZE–AWG | ENCLOSURE RATING AMPS | CIRCUIT NUMBER | CIRCUIT LOAD AMPS. | CIRCUIT FUSE SIZE AMPS. | MAINTAINENCE AGENCY |
| SR–303 | | | | | | | |
| M | 19.20 | 4 | 60 | A | 16.80 | 60 | ODOT |
| | | | | B | 23.20 | 60 | |
| N | 19.78 | 4 | 60 | C | 29.20 | 60 | ODOT |
| | | | | D | 12.00 | 60 | |

*Note:*
*All references to* 2 - No. 4 AWG & 2 - No. 2 AWG
*Shall Be:* 3 - No. 4 AWG & 3 - No. 2 AWG




NOTES: FOR LEGEND, SEE SHEET 622.

FOR ADDITIONAL NOTES SEE SHEET 636.

ALL EXISTING CONTROL CENTERS SHALL REMAIN. NEW POLE MOUNTED CONTROL CENTERS SHALL BE INSTALLED AT STA. 53+00 S.R.303, 26' LEFT AND STA. 48+00 S.R.303, 66' RIGHT.

ALL LIGHTS DESIGNATED FOR REMOVAL SHALL BE REMOVED AS FOLLOWS. DISCONNECT AND REMOVE EXISTING CIRCUIT CABLE FROM POLE AND FOUNDATION. THEN REMOVE THE POLE AND THE FOUNDATION. AFTER REMOVING THE POLE AND FOUNDATION, SPLICE THE CIRCUIT WITH CABLE SPLICING KITS TO MAINTAIN CIRCUIT CONTINUITY ON S.R. 303. THEN BACKFILL FOUNDATION OPENING AND GRADE TO MATCH SURROUNDING AREAS. SEE SHEET 618 FOR PAYMENT.

S.R.303 INTERCHANGE
HIGH MAST LIGHTING

S.R. 303 Interchange
High Mast Lighting

HORIZONTAL SCALE IN FEET 0 50 100 200

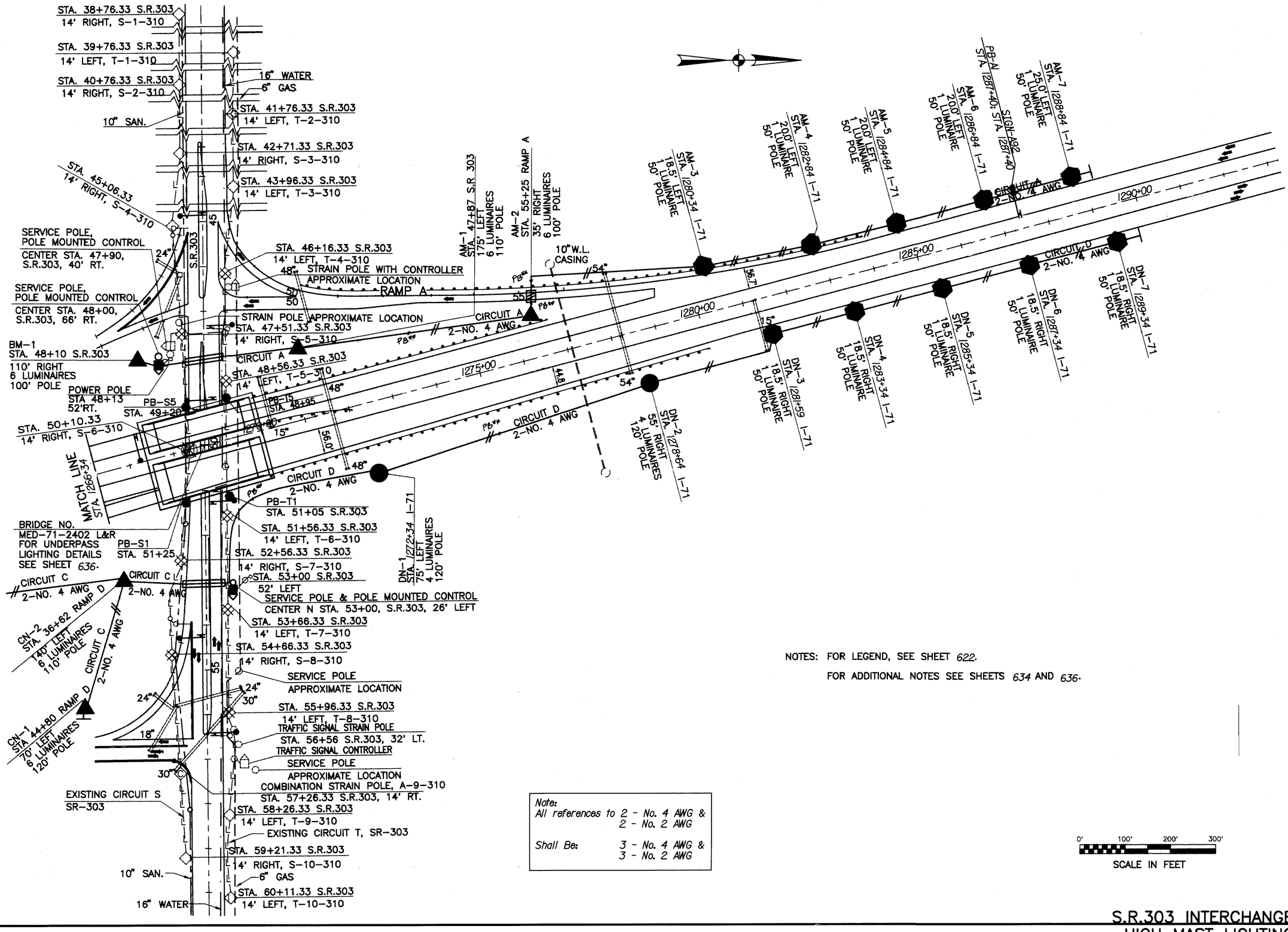
CALCULATED | CHECKED

MED–71–15.78

634
940

REF. FILE *1:\ldot_med_lrf\ndgn\bkmstr.dgn
REF. FILE *1 LEVELS ON:1,5,20,641
REF. FILE *2:\ldot_med_lrf\ndgn\bkmstr.dgn
REF. FILE *2 LEVELS ON:1,5,16,18,21,24,39,55,56,59,641
REF. FILE *3:\ldot_med_lrf\ndgn\bkmstr.dgn
REF. FILE *3 LEVELS ON:1,5,16,18,21,24,39,55,56,59,641
REF. FILE *4:\ldot_med_lrf\ndgn\abbrdsmdgn
REF. FILE *4 LEVELS ON:1,2-4,8-16,18,20-52,54-59,61,62,641

FILENAME:I:\ldot_MED_LRF\NDGN\LIGHTING\885LT13.dgn
DATE & TIME:10-DEC-1999 13:24
USERNAME:mfox
PROJECT:NONE
LEVELS ON:F1-641
PLOT OBJECT:VIEWPLOTbase
PEN TABLE:I:\ldot\std\plot\PenCross_OCE.pen




NOTES: FOR LEGEND, SEE SHEET 622.

FOR ADDITIONAL NOTES SEE SHEETS 634 AND 636.

| Note: | |
|---|---|
| All references to | 2 - No. 4 AWG & 2 - No. 2 AWG |
| Shall Be: | 3 - No. 4 AWG & 3 - No. 2 AWG |

0' 100' 200' 300'

SCALE IN FEET

# S.R.303 INTERCHANGE
# HIGH MAST LIGHTING

0 50 100 200 HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

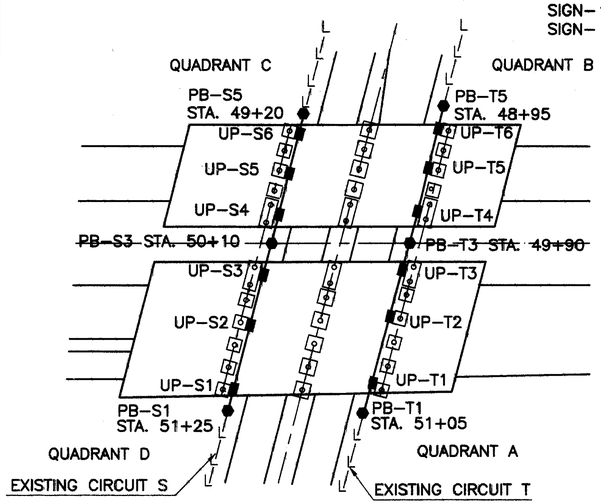
S.R. 303 Interchange
High Mast Lighting

MED-71-15.78

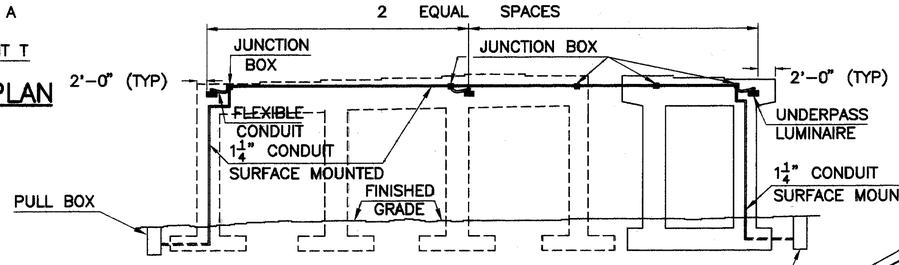
635
940


REF. FILE *1 \\hdot_med_jrr\signmmm.dgn
REF. FILE *1 LEVELS ON:1,3,5,9-37,39-52,54-57,59,60,641
REF. FILE *2 \\hdot_med_jrr\dgn\abc2combudgn
REF. FILE *2 LEVELS ON:12-4,8-16,18,20-52,54-59,61,62,641
REF. FILE *3 \\hdot_med_jrr\dgn\ordercontrolsudgn
REF. FILE *3 LEVELS ON:1(-641)
REF. FILE *4 \\hdot_med_jrr\dgn\lohtextr.dgn
REF. FILE *4 LEVELS ON:1(5,16,18,21,24,39,55,56,641
REF. FILE *4 LEVELS ON:1(5,16,18,21,24,39,55,56,641
FILE NAME: \\HDOT_MED_JRR\MAIN\Lighting\v8DGN\Hmdgn
DATE & TIME: 10-DEC-1999 13:25
USERNAME: mfox
PROJECT: NONE
LEVELS ON:1(-641
PLOT QUEUE: \\QUEPLOT\oce
PEN TABLE: \\HDOT\dot\plot\OceCross_OCE.pen

SIGN-150B 1-175W LUMINAIRE
SIGN- 151 1-175W LUMINAIRE



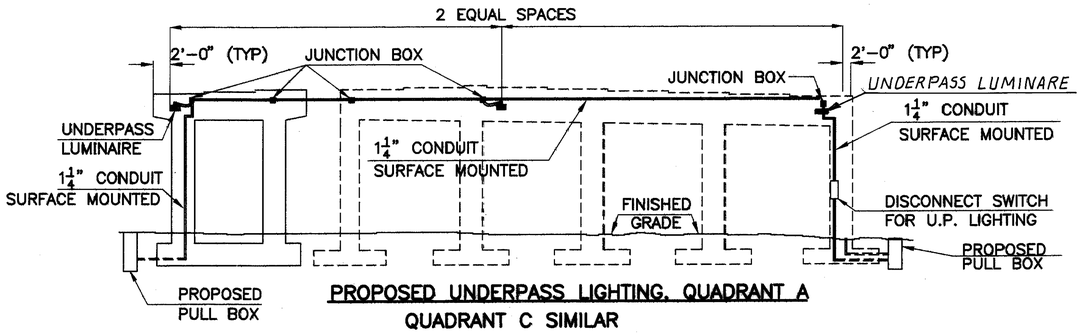

## PROPOSED UNDERPASS LIGHTING PLAN




**PROPOSED UNDERPASS LIGHTING QUADRANT B**
**QUADRANT D SIMILAR**

NOTE: 1-1/4" CONDUIT TO BRIDGE MOUNTED SIGN SHALL BE MOUNTED TO BOTTOM OF BRIDGE DECK.

*Note:*
*All references to* 2 - No. 4 AWG & 2 - No. 2 AWG
*Shall Be:* 3 - No. 4 AWG & 3 - No. 2 AWG

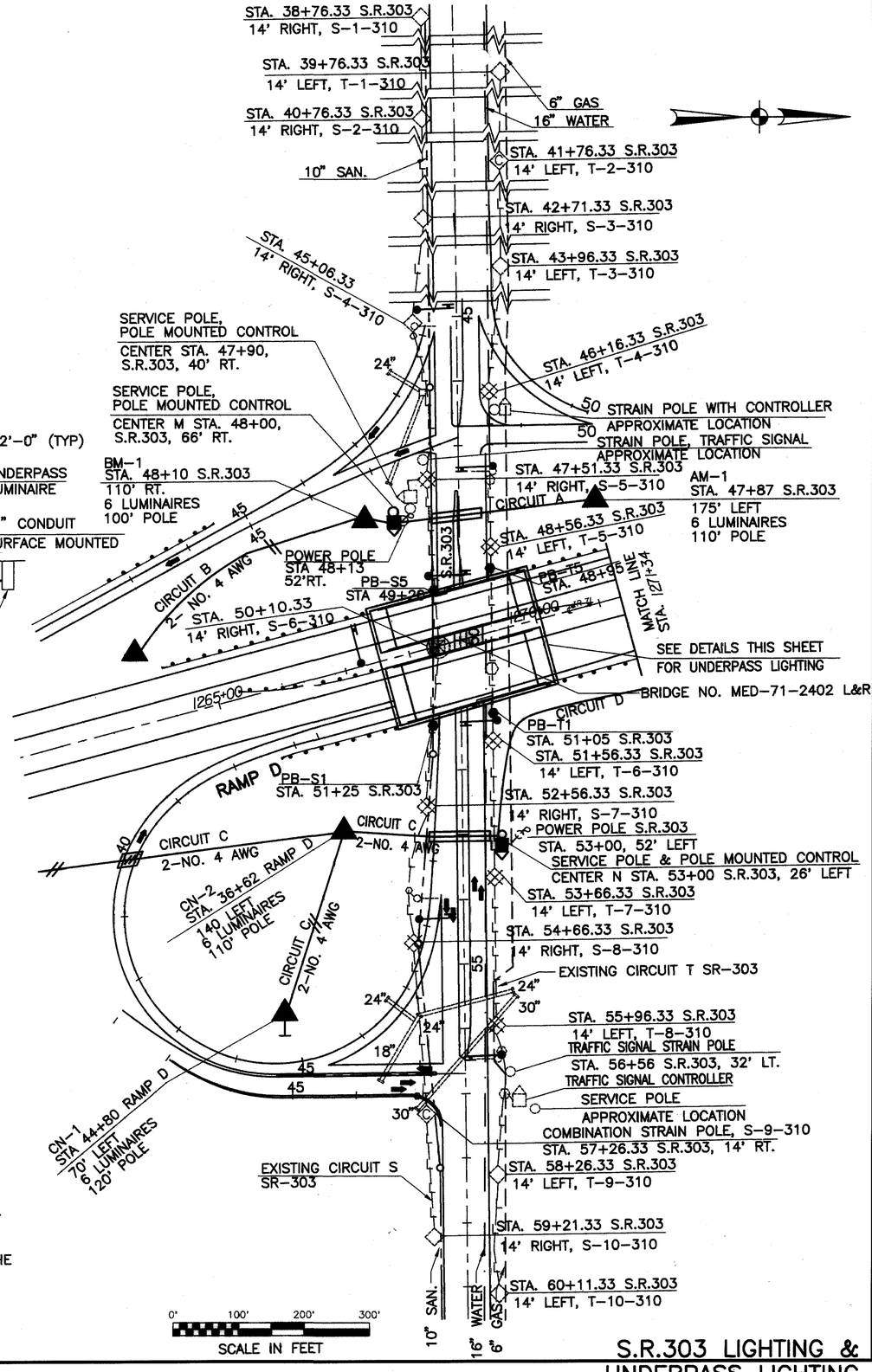



**PROPOSED UNDERPASS LIGHTING, QUADRANT A**
**QUADRANT C SIMILAR**

NOTE: ALL EXISTING SIGN LIGHTING COMPONENTS SHALL BE REMOVED.

NOTE: S.R. 303 CIRCUITS S AND T SHALL REMAIN IN PLACE AND ALL LIGHTS DESIGNATED FOR REMOVAL SHALL BE REMOVED. THE UNDERPASS LIGHTING WILL BE ADDED TO S.R.303 CIRCUITS S AND T.
ALL LIGHT POLE FOUNDATIONS SHALL BE REMOVED 4 FEET BELOW FINSHED GRADE. PAYMENT SHALL BE INCLUDED WITH ITEM 202, LIGHT POLE FOUNDATION REMOVED AND A ITEM 625, CABLE SPLICING KIT PROVIDED TO COMPLETE THE CIRCUIT.

FOR ADDITIONAL NOTES SEE SHEET 634.
FOR LEGEND SEE SHEET 622.




## S.R.303 LIGHTING & UNDERPASS LIGHTING

HORIZONTAL SCALE IN FEET

CALCULATED | CHECKED

S.R. 303 Lighting and Underpass Lighting

MED-71-15.78

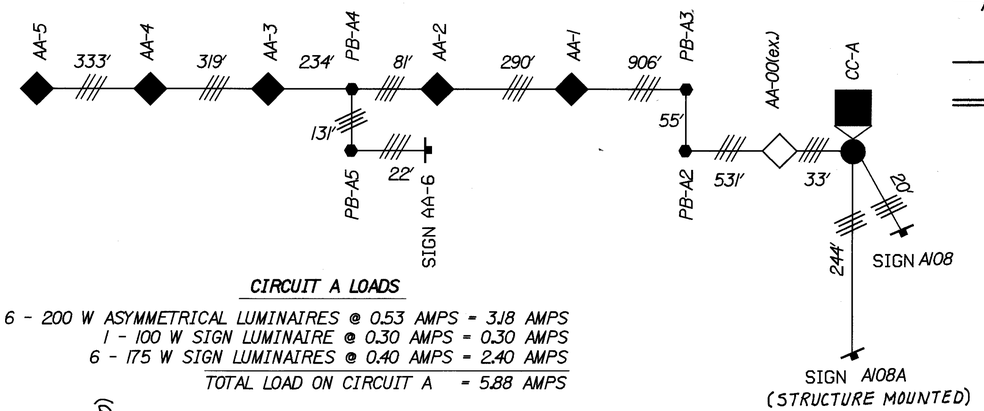
636
940

REF.FILE *1: \\ODOT_MED_IT\rdalignment.dgn
REF.FILE *1 LEVELS ON: 1,3,5,9-37,39-52,54-57,59,60,641
REF.FILE *2: \\ODOT_MED_IT\TRAFFIC\Lighting\conventional.dgn
REF.FILE *2 LEVELS ON: 1,37,38,61,641
REF.FILE *3:
REF.FILE *3 LEVELS ON:
REF.FILE *4:
REF.FILE *4 LEVELS ON:
FILENAME: \\ODOT_MED_IT\DATA\TRAFFIC\Lighting\CONVENTIONAL.DGN
DATE & TIME: 10-DEC-1999 13:25
USERNAME: mfox
PROJECT: NONE
LEVELS ON: 1-641
ACTIVE DGN: \\ODOT_MED_IT\DATA\TRAFFIC\Lighting\CONVENTIONAL.DGN
REF FILE: \\ODOT_MED_IT\DATA\TRAFFIC\Lighting\CrossCross_OCE.pen

# CIRCUIT DIAGRAMS

REF.FILE *1 LEVELS ON:
REF.FILE *1 LEVELS ON:
REF.FILE *2 LEVELS ON:
REF.FILE *2 LEVELS ON:
REF.FILE *3 LEVELS ON:
REF.FILE *4 LEVELS ON:
REF.FILE *4 LEVELS ON:

## SR-18 CIRCUIT A



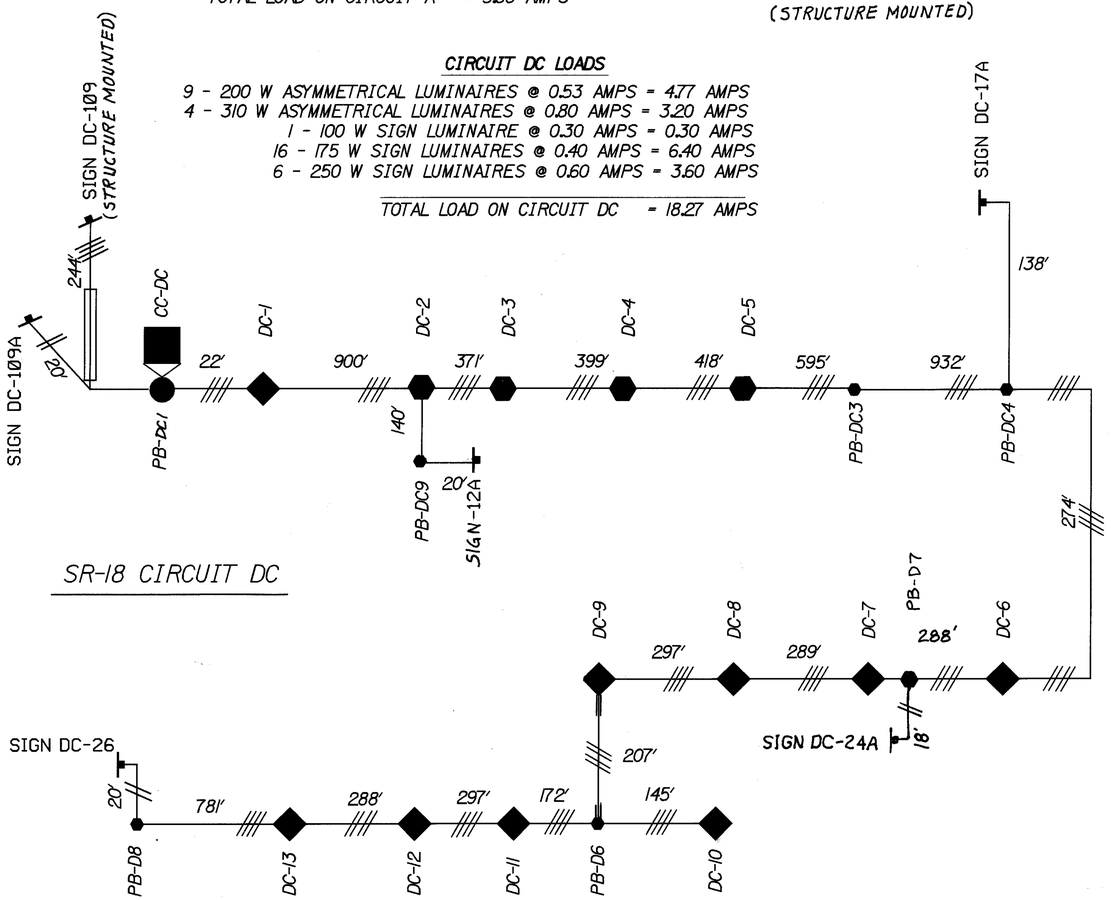

### CIRCUIT A LOADS

| | | |
|---|---|---|
| 6 - 200 W ASYMMETRICAL LUMINAIRES @ 0.53 AMPS | = | 3.18 AMPS |
| 1 - 100 W SIGN LUMINAIRE @ 0.30 AMPS | = | 0.30 AMPS |
| 6 - 175 W SIGN LUMINAIRES @ 0.40 AMPS | = | 2.40 AMPS |
| TOTAL LOAD ON CIRCUIT A | = | 5.88 AMPS |

### CIRCUIT DC LOADS

| | | |
|---|---|---|
| 9 - 200 W ASYMMETRICAL LUMINAIRES @ 0.53 AMPS | = | 4.77 AMPS |
| 4 - 310 W ASYMMETRICAL LUMINAIRES @ 0.80 AMPS | = | 3.20 AMPS |
| 1 - 100 W SIGN LUMINAIRE @ 0.30 AMPS | = | 0.30 AMPS |
| 16 - 175 W SIGN LUMINAIRES @ 0.40 AMPS | = | 6.40 AMPS |
| 6 - 250 W SIGN LUMINAIRES @ 0.60 AMPS | = | 3.60 AMPS |
| TOTAL LOAD ON CIRCUIT DC | = | 18.27 AMPS |

## SR-18 CIRCUIT DC




1-1/2" DUCT CABLE W/3 NO. 4 AWG WIRE

1-1/2" DUCT CABLE W/3 NO. 2 AWG WIRE

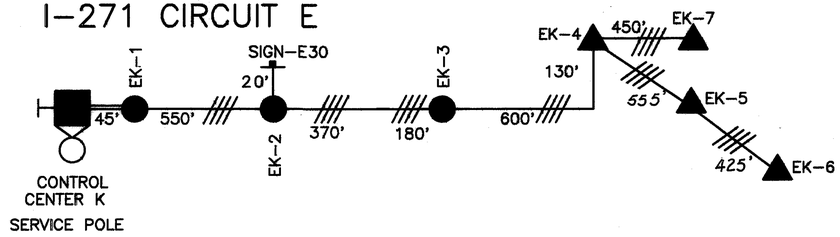
3 NO. 4 AWG DISTRIBUTION CABLE

3 NO. 2 AWG DISTRIBUTION CABLE

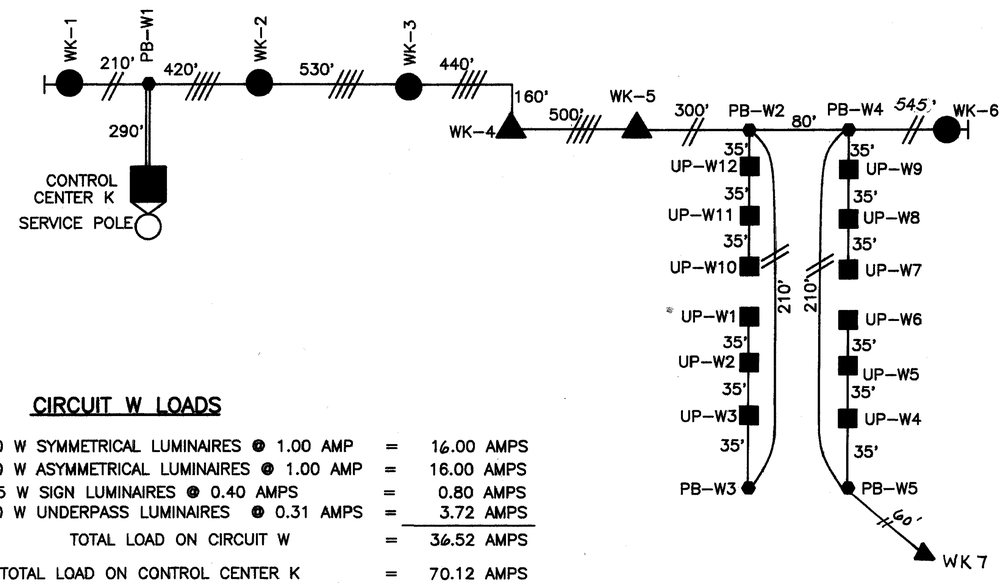
### CIRCUIT E LOADS

| | | |
|---|---|---|
| 20 - 400 W SYMMETRICAL LUMINAIRES @ 1.00 AMP | = | 20.00 AMPS |
| 12 - 400 W ASYMMETRICAL LUMINAIRES @ 1.00 AMP | = | 12.00 AMPS |
| 4 - 175 W SIGN LUMINAIRES @ 0.40 AMPS | = | 1.60 AMPS |
| TOTAL LOAD ON CIRCUIT E | = | 33.60 AMPS |

## I-271 CIRCUIT E




## I-271 CIRCUIT W




### CIRCUIT W LOADS

| | | |
|---|---|---|
| 16 - 400 W SYMMETRICAL LUMINAIRES @ 1.00 AMP | = | 16.00 AMPS |
| 16 - 400 W ASYMMETRICAL LUMINAIRES @ 1.00 AMP | = | 16.00 AMPS |
| 2 - 175 W SIGN LUMINAIRES @ 0.40 AMPS | = | 0.80 AMPS |
| 12 - 100 W UNDERPASS LUMINAIRES @ 0.31 AMPS | = | 3.72 AMPS |
| TOTAL LOAD ON CIRCUIT W | = | 36.52 AMPS |
| TOTAL LOAD ON CONTROL CENTER K | = | 70.12 AMPS |
| OR | = | 33.66 KVA |

NOTES: FOR LEGEND SEE SHEET 622

HORIZONTAL SCALE IN FEET
0

CALCULATED
CHECKED

SR-18 & I-271 CIRCUIT DIAGRAMS

MED-71-15.78

637
940

I-271
CIRCUIT DIAGRAMS

FILENAME: \\Apps\...\MED_I-271\Admin\Graphics\SR18CIRCUIT.dgn
DATE & TIME: 10-DEC-1999 13:27
USERNAME: mfox
PROJECT: NONE

LEVELS ON: 1-641
PLOT QUEUE: \\2DPLOT\2DP
REF. TABLE: I:\ROOTS\DATA\CADD\Cross_DOC.pen

REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #2 LEVELS ON:

REF.FILE #3 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:
REF.FILE #4 LEVELS ON:

# CIRCUIT DIAGRAMS

1–1/2" DUCT CABLE W/3 NO. 4 AWG WIRE

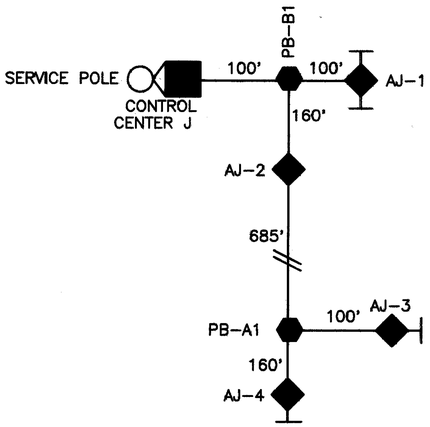
1–1/2" DUCT CABLE W/3 NO. 2 AWG WIRE

3 NO. 4 AWG DISTRIBUTION CABLE

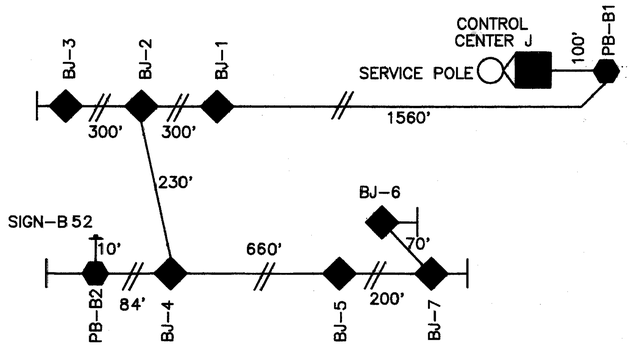
3 NO. 2 AWG DISTRIBUTION CABLE

## CIRCUIT A LOADS

| | |
|---|---|
| 4 – 200 W CONVENTIONAL LUMINAIRES @ 0.53 AMPS | = 2.12 AMPS |
| TOTAL LOAD ON CIRCUIT A | = 2.12 AMPS |



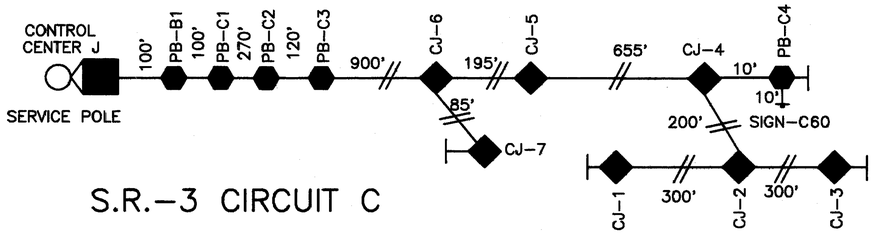

S.R.–3 CIRCUIT A




S.R.–3 CIRCUIT B

## CIRCUIT B LOADS

| | |
|---|---|
| 7 – 200 W CONVENTIONAL LUMINAIRES @ 0.53 AMPS | = 3.71 AMPS |
| 1 – 100 W SIGN LUMINAIRE @ 0.30 AMPS | = 0.30 AMPS |
| TOTAL LOAD ON CIRCUIT B | = 4.01 AMPS |



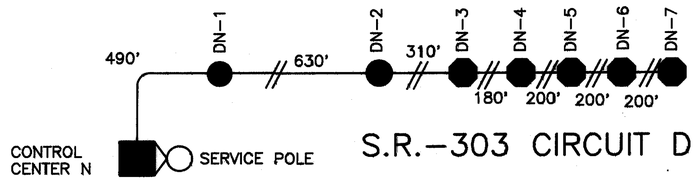

S.R.–3 CIRCUIT C

## CIRCUIT C LOADS

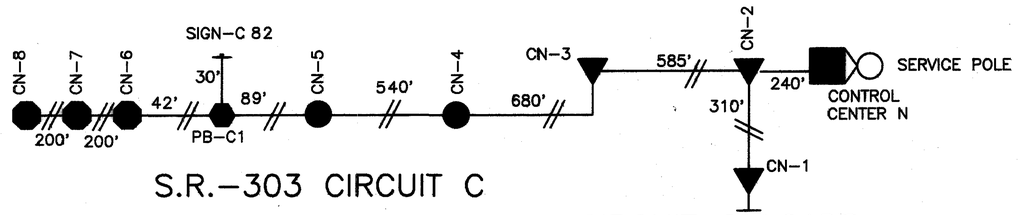
| | |
|---|---|
| 7 – 200 W CONVENTIONAL LUMINAIRES @ 0.53 AMPS | = 3.71 AMPS |
| 2 – 175 W SIGN LUMINAIRES @ 0.40 AMPS | = 0.80 AMPS |
| TOTAL LOAD ON CIRCUIT C | = 4.51 AMPS |
| TOTAL LOAD ON CONTROL CENTER J | = 10.64 AMPS |
| OR | = 5.11 KVA |

## CIRCUIT D LOADS

| | |
|---|---|
| 5 – 310 W CONVENTIONAL LUMINAIRES @ 0.80 AMPS | = 4.00 AMPS |
| 8 – 400 W ASYMMETRICAL LUMINAIRES @ 1.00 AMP | = 8.00 AMPS |
| TOTAL LOAD ON CIRCUIT D | = 12.00 AMPS |



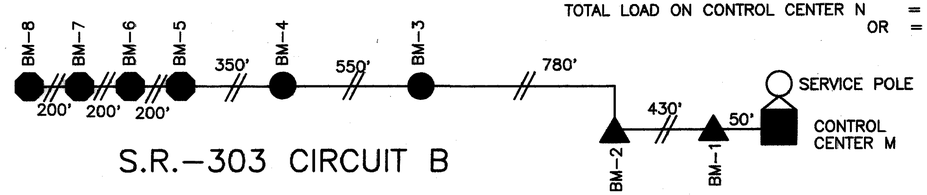

S.R.–303 CIRCUIT D




S.R.–303 CIRCUIT C

## CIRCUIT C LOADS

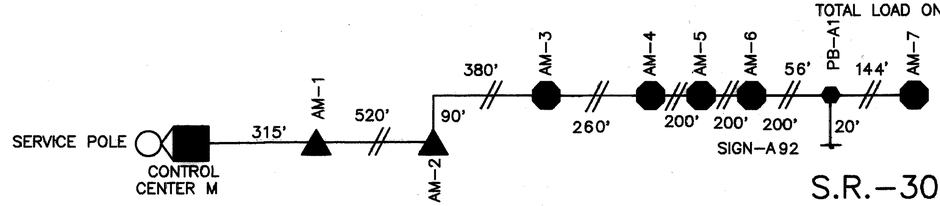
| | |
|---|---|
| 18 – 400 W SYMMETRICAL LUMINAIRES @ 1.00 AMP | = 18.00 AMPS |
| 8 – 400 W ASYMMETRICAL LUMINAIRES @ 1.00 AMP | = 8.00 AMPS |
| 3 – 310 W CONVENTIONAL LUMINAIRES @ 0.80 AMPS | = 2.40 AMPS |
| 2 – 175 W SIGN LUMINAIRES @ 0.40 AMPS | = 0.80 AMPS |
| TOTAL LOAD ON CIRCUIT C | = 29.20 AMPS |
| TOTAL LOAD ON CONTROL CENTER N | = 41.20 AMPS |
| OR | = 19.78 KVA |




S.R.–303 CIRCUIT B

## CIRCUIT B LOADS

| | |
|---|---|
| 12 – 400 W SYMMETRICAL LUMINAIRES @ 1.00 AMP | = 12.00 AMPS |
| 8 – 400 W ASYMMETRICAL LUMINAIRES @ 1.00 AMP | = 8.00 AMPS |
| 4 – 310 W CONVENTIONAL LUMINAIRES @ 0.80 AMPS | = 3.20 AMPS |
| TOTAL LOAD ON CIRCUIT B | = 23.20 AMPS |




S.R.–303 CIRCUIT A

## CIRCUIT A LOADS

| | |
|---|---|
| 12 – 400 W SYMMETRICAL LUMINAIRES @ 1.00 AMP | = 12.00 AMPS |
| 5 – 310 W CONVENTIONAL LUMINAIRES @ 0.80 AMPS | = 4.00 AMPS |
| 2 – 175 W SIGN LUMINAIRES @ 0.40 AMPS | = 0.80 AMPS |
| TOTAL LOAD ON CIRCUIT A | = 16.80 AMPS |
| TOTAL LOAD ON CONTROL CENTER M | = 40.00 AMPS |
| OR | = 19.20 KVA |

*NOTES: FOR LEGEND SEE SHEET 622*

HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

S.R.-3 & S.R.-303 Circuit Diagram

MED-71-15.78

638
940

S.R.–3 & S.R.–303
CIRCUIT DIAGRAMS


FILENAME: I:\DGN_MELLINI\MAINLIGHTING\V8DGNLIB\dgn
DATE & TIME: 10-DEC-1999 13:27
USERNAME: mfox
PROJECT: NONE
LEVELS ON: 1\641
PLOT QUEUE: \\DGNPLOT\dgn
REFA TABLE: I:\DGN\default\plot\OpenCross.DCE.pen

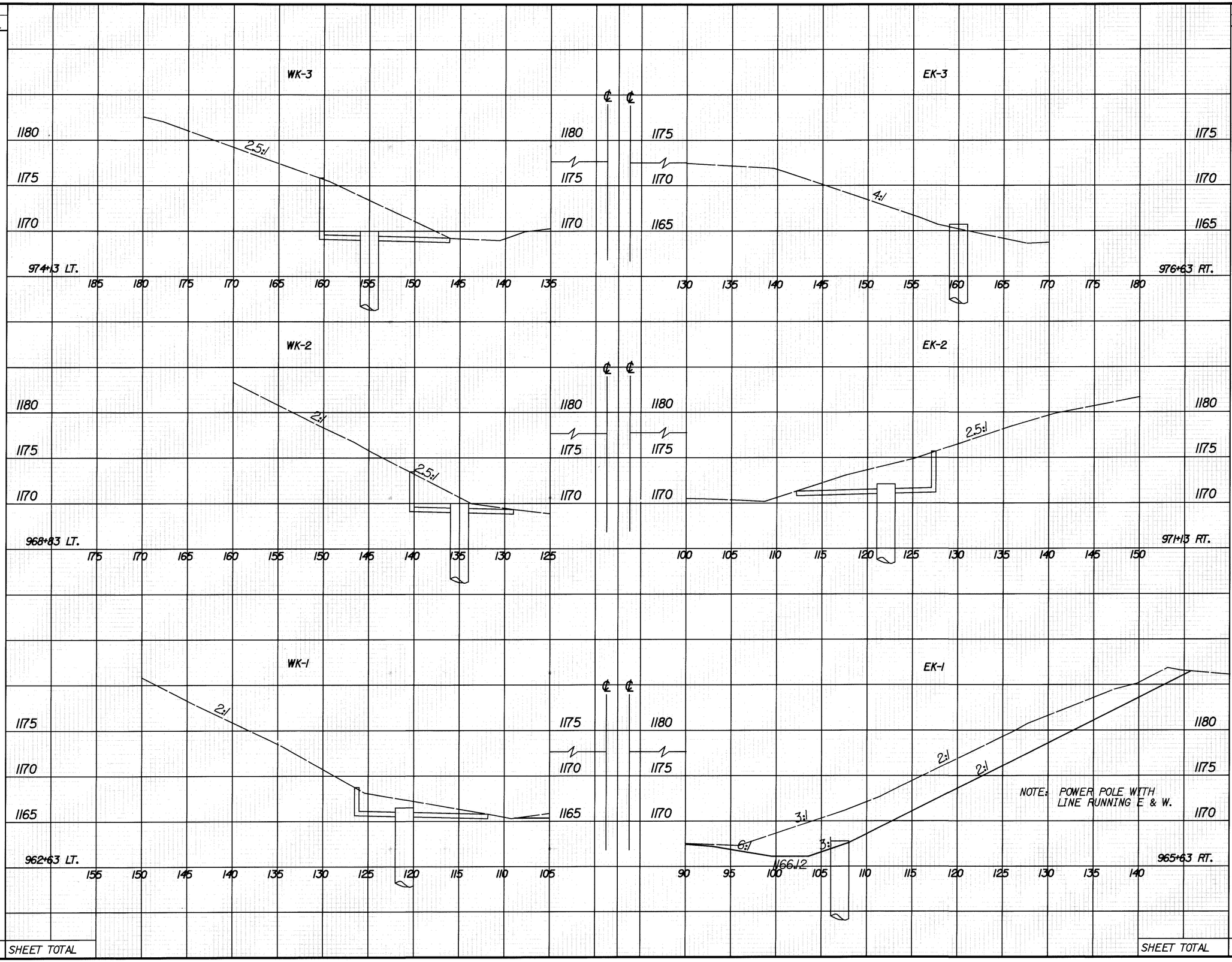
| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

CALCULATED DJV
CHECKED JWR

REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:

REF.FILE #2 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:
REF.FILE #4 LEVELS ON:




SHEET TOTAL

SHEET TOTAL

# TOWER LIGHTING CROSS SECTIONS
## STA. 962+63 TO STA. 976+63

MED-71-15.78

639
940

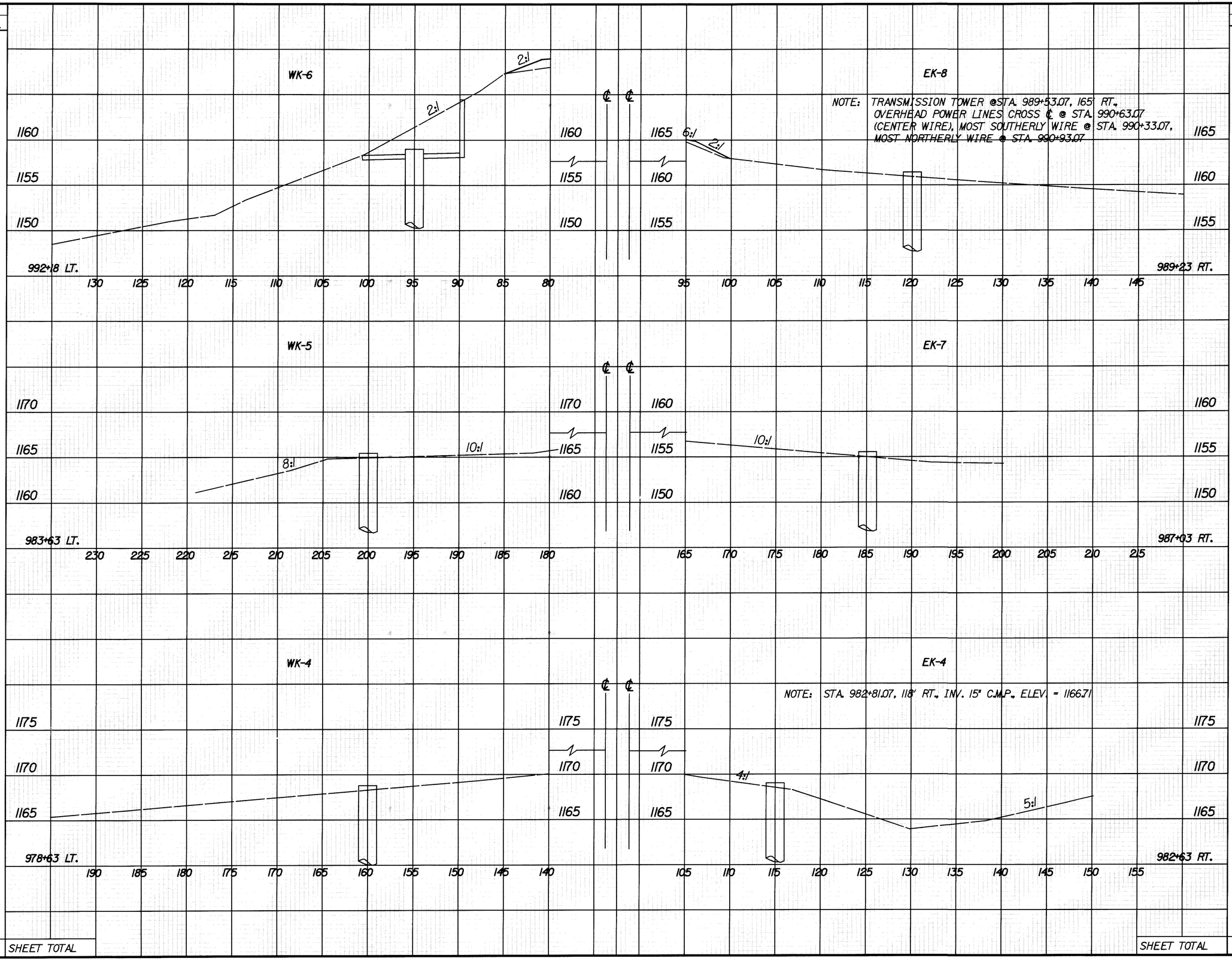
LEVELS ON:1-3,5-6,63,641
DGN TABLE: N:\dgn\dgn00\dgn00ceiCross_OCE.pen
PLOT SHEUVE: \\DOH-PLOT\bbb

FILENAME: N:\pw_MED_JRT\DGN\xsl\gH.dgn
DATE & TIME: 10-DEC-1999 07:05
USERNAME: mfox
PROJECT: NONE

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

CALCULATED DMV
CHECKED JWR




SHEET TOTAL

SHEET TOTAL

TOWER LIGHTING CROSS SECTIONS
STA. 978+63 TO STA. 992+18

MED-71-15.78

640
940

REF.FILE #1 LEVELS ON:
REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:
REF.FILE #4 LEVELS ON:

FILENAME: INDOT_MED_HY\ASHY\X81lgnt.dgn
DATE & TIME: 10-DEC-1999 07:04
USERNAME: mfox
PROJECT: NONE
LEVELS ON: 1-3,5-61,63,641
PLOT QUEUE: \\QUEPLOT\oce
PENTABLE: i:\dot\sh\plot\oce\Cross_OCE.pen

REF.FILE "1" LEVELS ON:
REF.FILE #1 LEVELS ON:
REF.FILE #2
REF.FILE #2 LEVELS ON:

REF.FILE #3
REF.FILE #3 LEVELS ON:
REF.FILE #4
REF.FILE #4 LEVELS ON:

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

CALCULATED DJV
CHECKED JWR

BM-4
EK-6
EK-5
CN-4
CN-5
℄
1165
1160
1155
1150
1145
1140
1170
19:1
3.5:1
7:1
2:1
5:1
3:1
1251+84 LT.
180 175 170 165 160 155 150 145 140 135 130
991+63 LT.
CONNECTION E
60 55 50 45 40 35 30 25
1254+84 RT.
115 120 125 130 135 140 145 150 155 160 165
987+68 LT.
CONNECTION E
85 80 75 70 65 60 55 50 45 40 35
1249+34 RT.
130 135 140 145 150 155 160 165 170 175 180

SHEET TOTAL
SHEET TOTAL

# TOWER LIGHTING CROSS SECTIONS
## STA. 987+68 TO STA. 1254+84

MED-71-15.78

641
940

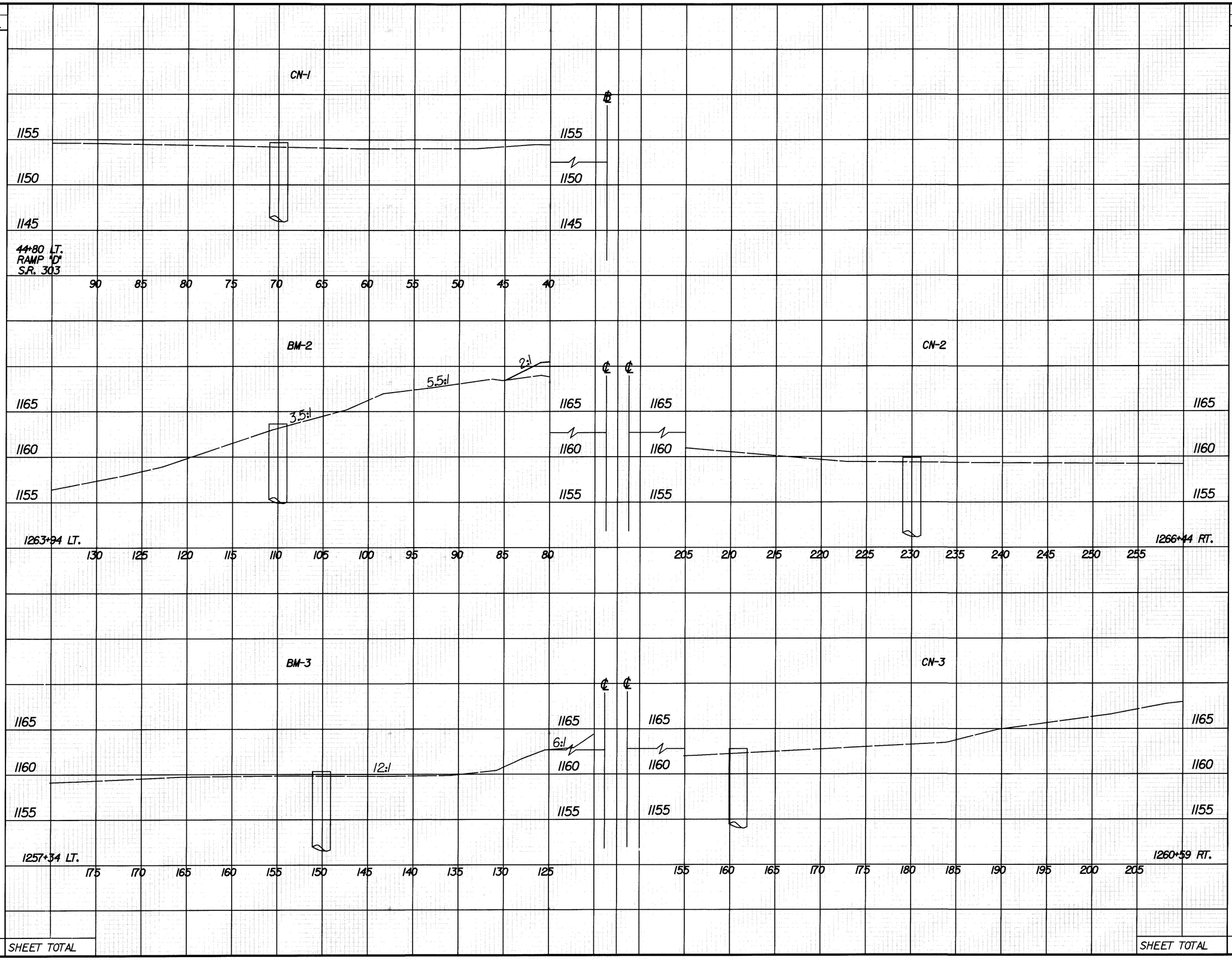
FILENAME: h:\dgn_MED_JM\Naish\sht1.dgn
DATE & TIME: 10-DEC-1999 07:04
USERNAME: mfox
PROJECT: NONE

LEVELS ON: 1-3,5-6,63,641
PLOT QUEUE: \\DJP\PLOT1_xpa
PEN TABLE: h:\data\data\Data\OceCross.OCE.pen

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |
| | |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| | | | |

CALCULATED DJV
CHECKED JWR




SHEET TOTAL

SHEET TOTAL

TOWER LIGHTING CROSS SECTIONS
STA. 1257+34 TO STA. 1266+44

MED-71-15.78

642
940

REF-FILE "1" LEVELS ON:
REF-FILE #2 LEVELS ON:
REF-FILE #2 LEVELS ON:

REF-FILE #3 LEVELS ON:
REF-FILE #3 LEVELS ON:
REF-FILE #4 LEVELS ON:
REF-FILE #4 LEVELS ON:

LEVELS ON:[1-3,5-6],63,641
PLOT QUEUE:\QQ1PLOT\qcs
PEN\TABLE:\n0dlsf\Ndot\ddeaCross_OCE.pen
DATE & TIME: 10-DEC-1999 07:04
USERNAME: mfox
PROJECT: NONE

REF.FILE *1 LEVELS ON:
REF.FILE *2 LEVELS ON:
REF.FILE *3 LEVELS ON:
REF.FILE *4 LEVELS ON:

LEVELS ON:[1,3,5,61,63,64]
PLOT OUTLINE: \320\1000
PEN TABLE: \\nd01sit01\plot\OceCross.OCEpen

FILENAME: I:\pdf_MED_IRT\DGN\xsllght.dgn
DATE & TIME: 10-DEC-1999 07:03
USERNAME: mfox
PROJECT: NONE

| SEEDING | |
|---|---|
| END WIDTH | SQ. YDS. |

| END AREA | | VOLUME | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |

CALCULATED DRV
CHECKED JWR

AM-2

1160 1155 1150

1276+54 LT.

130 125 120 115 110 105 100 95 90 85 80

2:1 6:1 5.5:1

AM-1

1145 1140 1135

1271+34 LT.

190 185 180 175 170 165 160 155 150 145 140

BM-1

1150 1145 1140

1267+84 LT.

230 225 220 215 210 205 200 195 190 185 180

DN-2

6:1 2:1

1145 1140 1135

1278+64 RT.

95 100 105 110 115 120 125 130 135 140 145

DN-1

1150 1145 1140

1272+34 RT.

145 150 155 160 165 170 175 180 185 190 195

SHEET TOTAL

SHEET TOTAL

TOWER LIGHTING CROSS SECTIONS
STA. 1267+84 TO STA. 1278+64

MED-71-15.78

643
940

REF.FILE #1: LEVELS ON:
REF.FILE #1 LEVELS ON:
REF.FILE #2 LEVELS ON:
REF.FILE #3: LEVELS ON:
REF.FILE #3 LEVELS ON:
REF.FILE #4 LEVELS ON:
REF.FILE #4 LEVELS ON:

DESIGN FILE : i:\pd_med_ir71\dgn\plantings\plntgnotz.dgn
USERNAME : jrogers

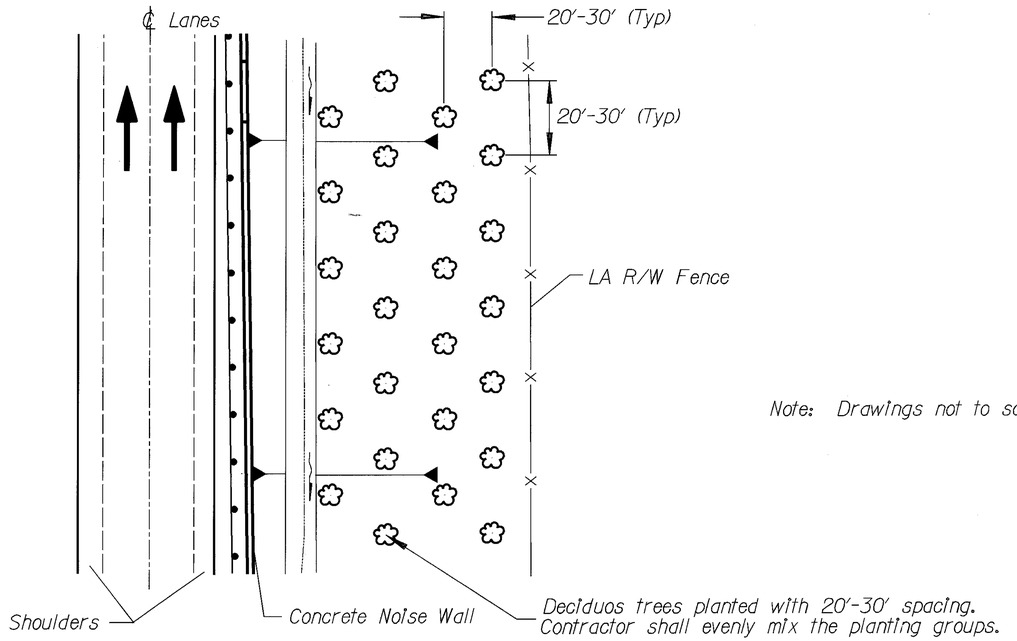
DATE : 30-NOV-1999
TIME : 12:41

DESIGN FILE : i:\pd_med_ir71\dgn\plantings\plntgnotz.dgn
USERNAME : jrogers

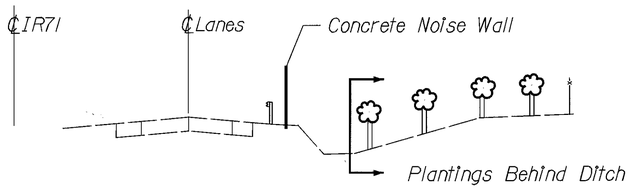
DATE : 30-NOV-1999
TIME : 12:41

FILENAME: i:\pd_med_ir71\dgn\plantings\plntgnotz.dgn
DATE & TIME: 30-NOV-1999 12:41
USERNAME: jrogers
PROJECT: NONE

# CONCRETE WALL PLANTING AREA

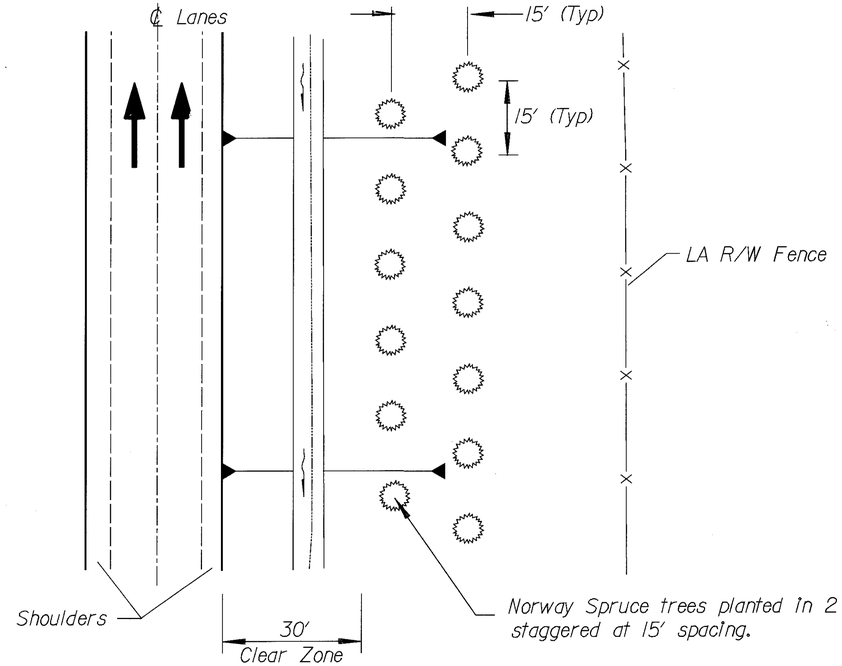


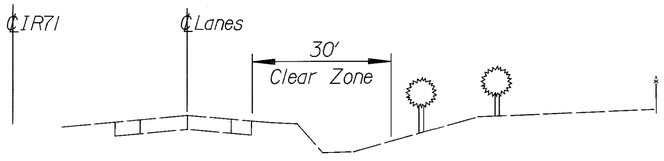

Note: Drawings not to scale




## Roadway Typical Section

# TREE WALL PLANTING AREA




## Roadway Typical Section

| BOTANICAL NAME | COMMON NAME |
|---|---|
| | |
| FRAXINUS AMERICANA (JUNGINER) | WHITE ASH |
| ACER SACCHARUM (COMMEMORATION) | SUGAR MAPLE |
| PLATANUS X ACERIFOLICA (BLOODGOOD) | LONDON PLANE TREE |
| PICEA ABIES | NORWAY SPRUCE |
| QUERCUS RUBRA | RED OAK |
| QUERCUS PALUSTRIS | PIN OAK |
| | |

## LANDSCAPING SUBSUMMARY

| | STATION | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM | 805+00 to 20+00 | 905+00 to 932+50 | 1232+00 to 1247+00 | 1282+00 to 1302+00 | 1315+00 to 1328+50 | 1328+00 to 1343+00 | 1333+00 to 1341+00 | 1398+00 to 1408+00 | ITEM | ITEM EXTENSION | GRAND TOTAL | UNIT | DESCRIPTION |
| | Lt. | Rt. | Lt. | Lt. | Rt. | Lt. | Rt. | Lt. | | | | | |
| 661 | 53 | 87 | | 67 | | | | 34 | 661 | 40080 | 241 | EACH | DECIDUOUS TREE, 2" CALIPER, FRAXINUS AMERICANA (JUNGINER) B&B 24" MIN. |
| 661 | 53 | 87 | | 67 | | | | 34 | 661 | 40080 | 241 | EACH | DECIDUOUS TREE, 2" CALIPER, ACER SACCHARUM (COMMEMORATION) B&B 16" MIN. |
| 661 | 53 | 87 | | 67 | | | | 34 | 661 | 40080 | 241 | EACH | DECIDUOUS TREE, 2" CALIPER, PLATANUS X ACERIFOLICA (BLOODGOOD) B&B 16" MIN. |
| 661 | 53 | 87 | | 67 | | | | 34 | 661 | 40080 | 241 | EACH | DECIDUOUS TREE, 2" CALIPER, QUERCUS RUBRA B&B 20" MIN. |
| | | | | | | | | | | | | | |
| 661 | 53 | 87 | | 67 | | | | 34 | 661 | 40080 | 241 | EACH | DECIDUOUS TREE, 2" CALIPER, QUERCUS PALUSTRIS B&B 20" MIN. |
| 661 | | | 194 | | 174 | 194 | 108 | | 661 | 50140 | 670 | EACH | EVERGREEN TREE, 7' HEIGHT, PICEA ABIES B&B 24" MIN. |
| 662 | 6625 | 10875 | 2910 | 8375 | 2610 | 2910 | 1620 | 4250 | 662 | 30000 | 40,175 | GAL | LANDSCAPE WATERING |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | |

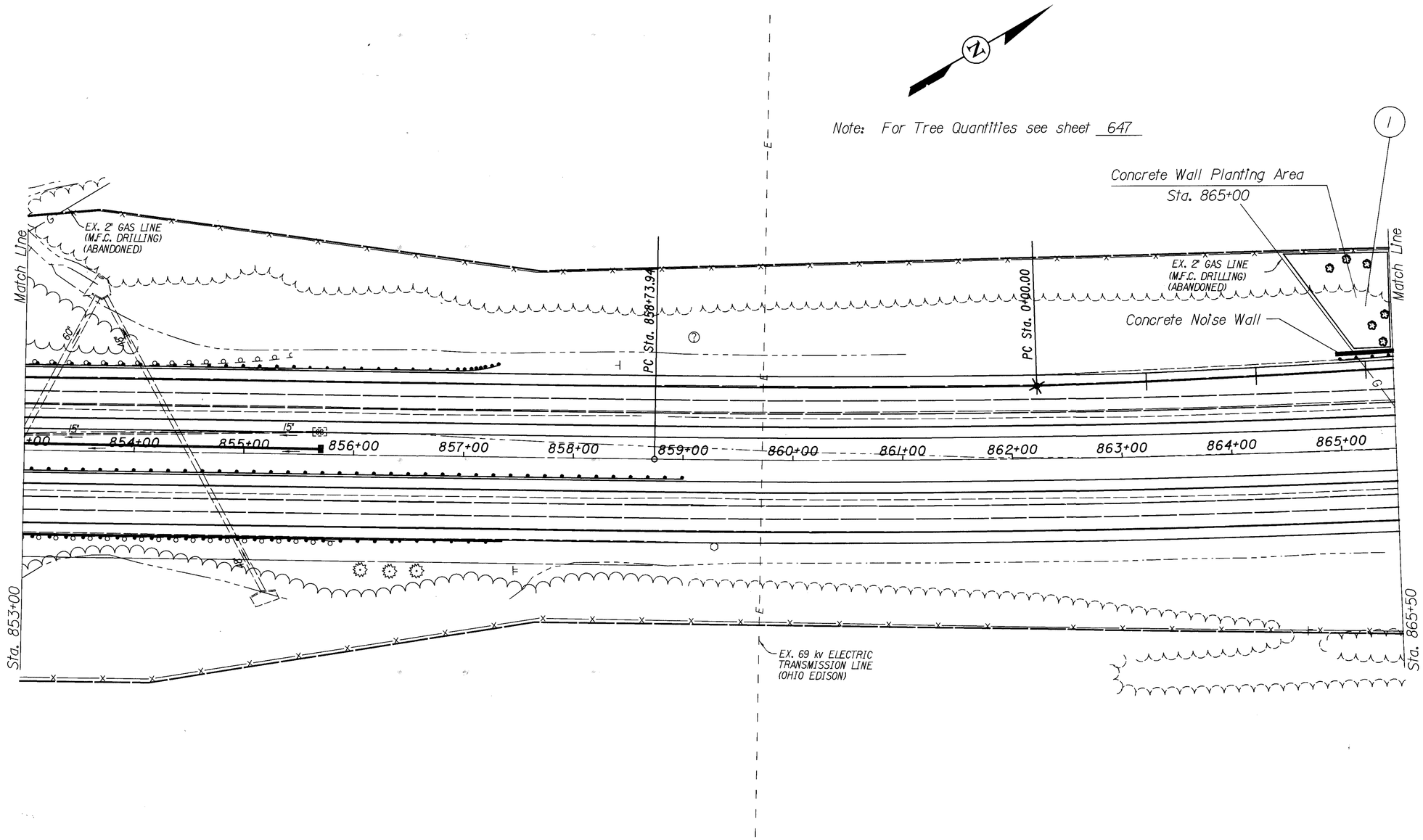
(TOTALS CARRIED TO GENERAL SUMMARY, SEE SHEET 74)

CALCULATED RLS CHECKED JWR

# PLANTING DETAILS AND LANDSCAPING SUBSUMMARY

MED-71-15.78

Note: For Tree Quantities see sheet 647




HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

**PLANTING SHEET**
**Sta 853+00.00 to Sta 865+50.00**

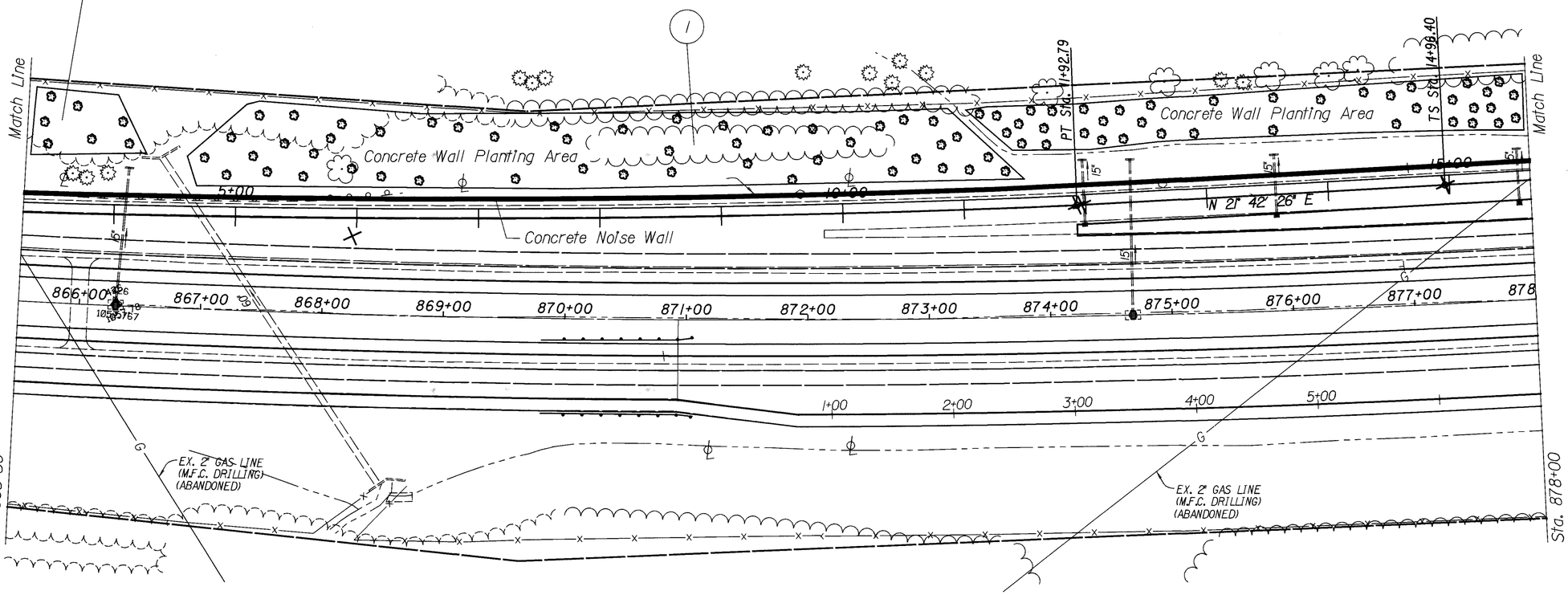
**MED - 71 - 15.78**

648
940

DATE : 24-NOV-1999
TIME : 14:02

DESIGN FILE : i:\pd_med_lr71\dgn\plantings\pp01.dgn
USERNAME : jrogers

Note: For Tree Quantities see sheet 647




HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

PLANTING SHEET
Sta 865+50.00 to Sta 878+00.00

MED - 71 - 15.78

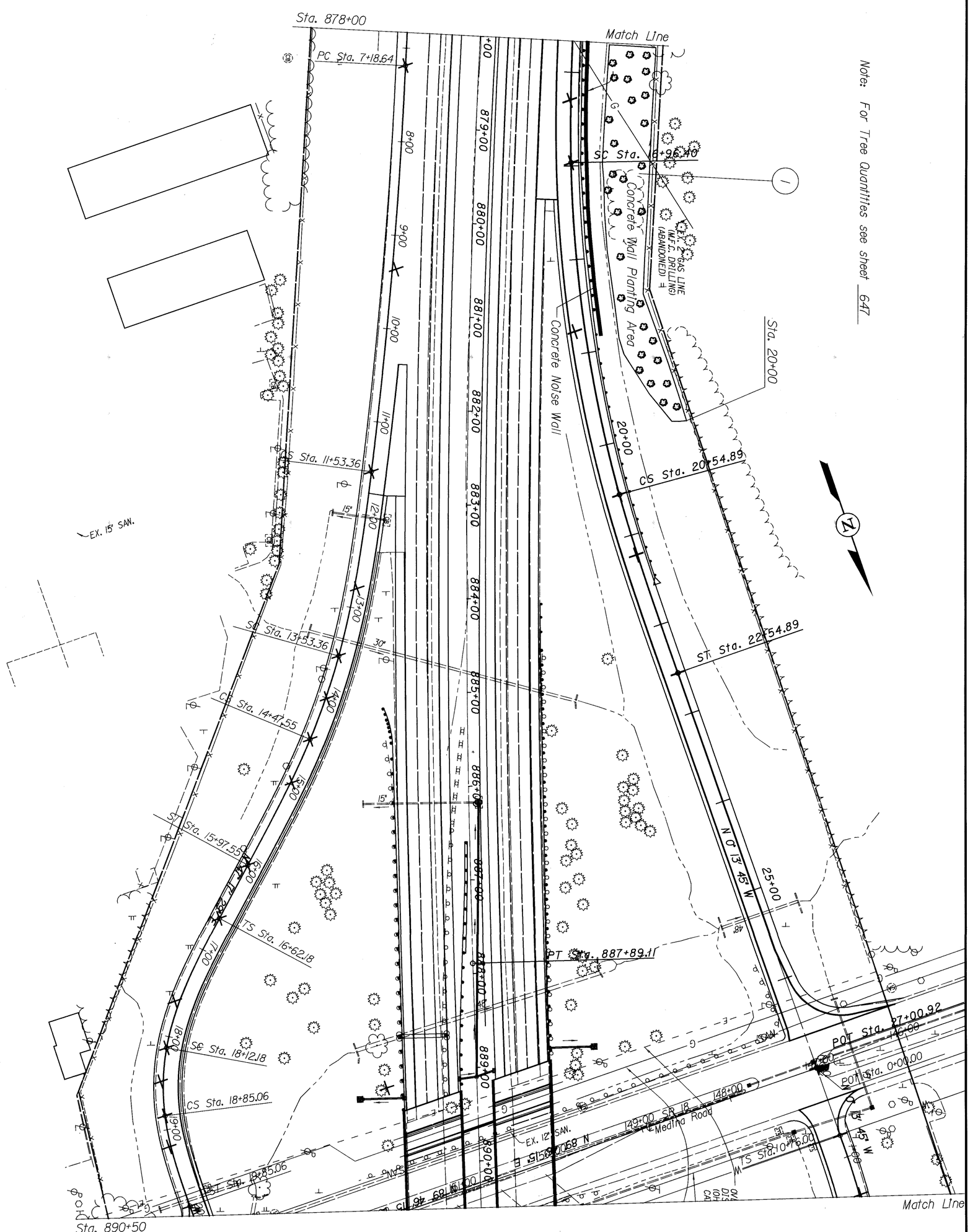
649
940

DESIGN FILE : i:\pd_med.lr71\dgn\plantings\pp02.dgn
USERNAME : jrogers

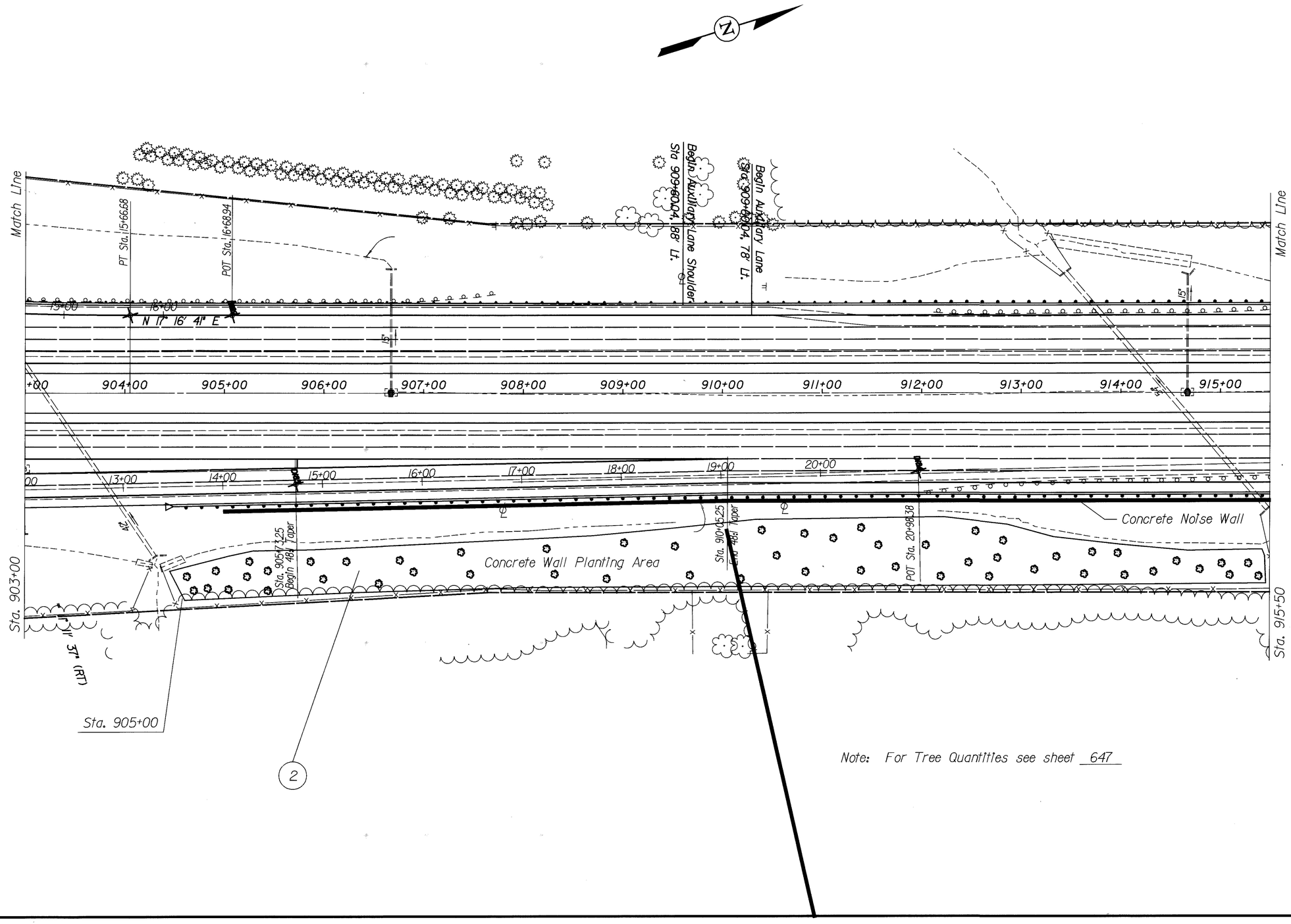
DATE : 24-NOV-1999
TIME : 14:59

DATE : 24-NOV-1999
TIME : 15:06

DESIGN FILE : I:\pd_med_lr7i\dgn\plantings\pp03.dgn
USERNAME : jrogers




| | | | | |
|---|---|---|---|---|
| 650 / 940 | MED - 71 - 15.78 | PLANTING SHEET<br>Sta 878+00.00 to Sta 890+50.00 | CALCULATED<br>CHECKED | 0 50 100<br>HORIZONTAL SCALE IN FEET |




Note: For Tree Quantities see sheet 647

DESIGN FILE : it\pd_med_lr-71\dgn\plantings\pp04.dgn
USERNAME : jrogers

DATE : 24-NOV-1999
TIME : 15:07

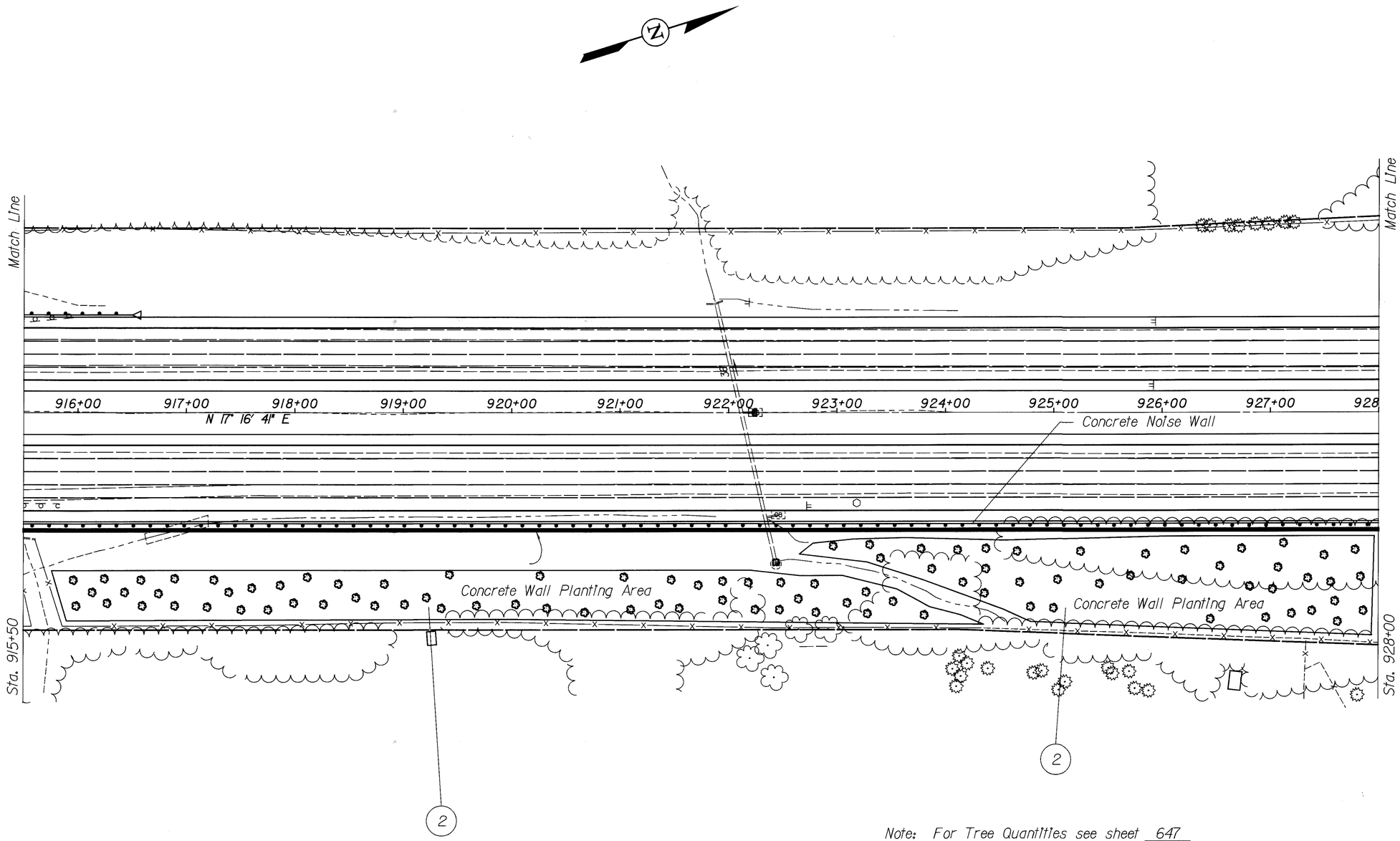
HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

# PLANTING SHEET
## Sta 903+00.00 to Sta 915+50.00

MED - 71 - 15.78

651
940




Note: For Tree Quantities see sheet 647

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

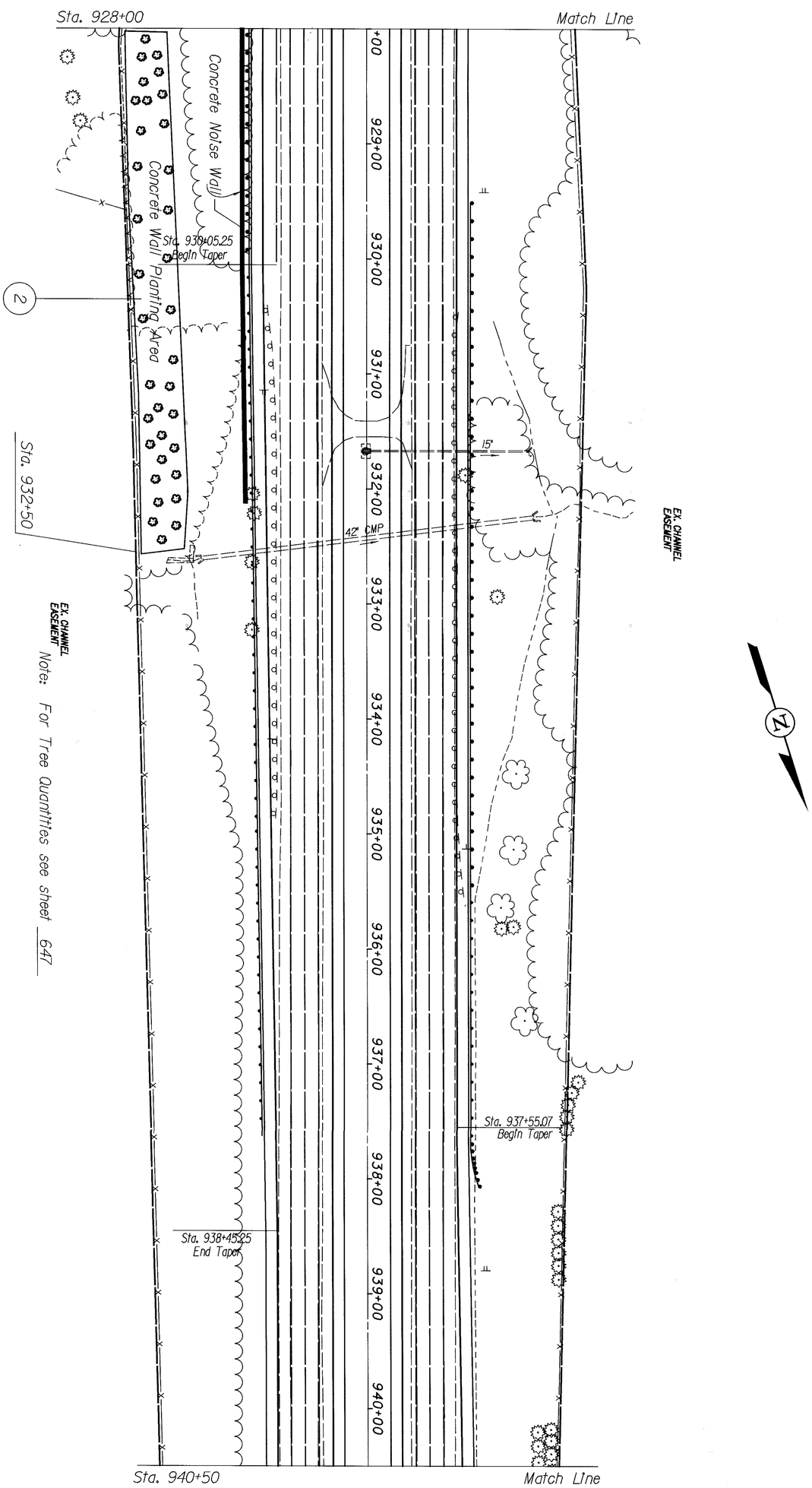
PLANTING
Sta 915+50.00 to Sta 928+00.00

MED - 71 - 15.78

652
940

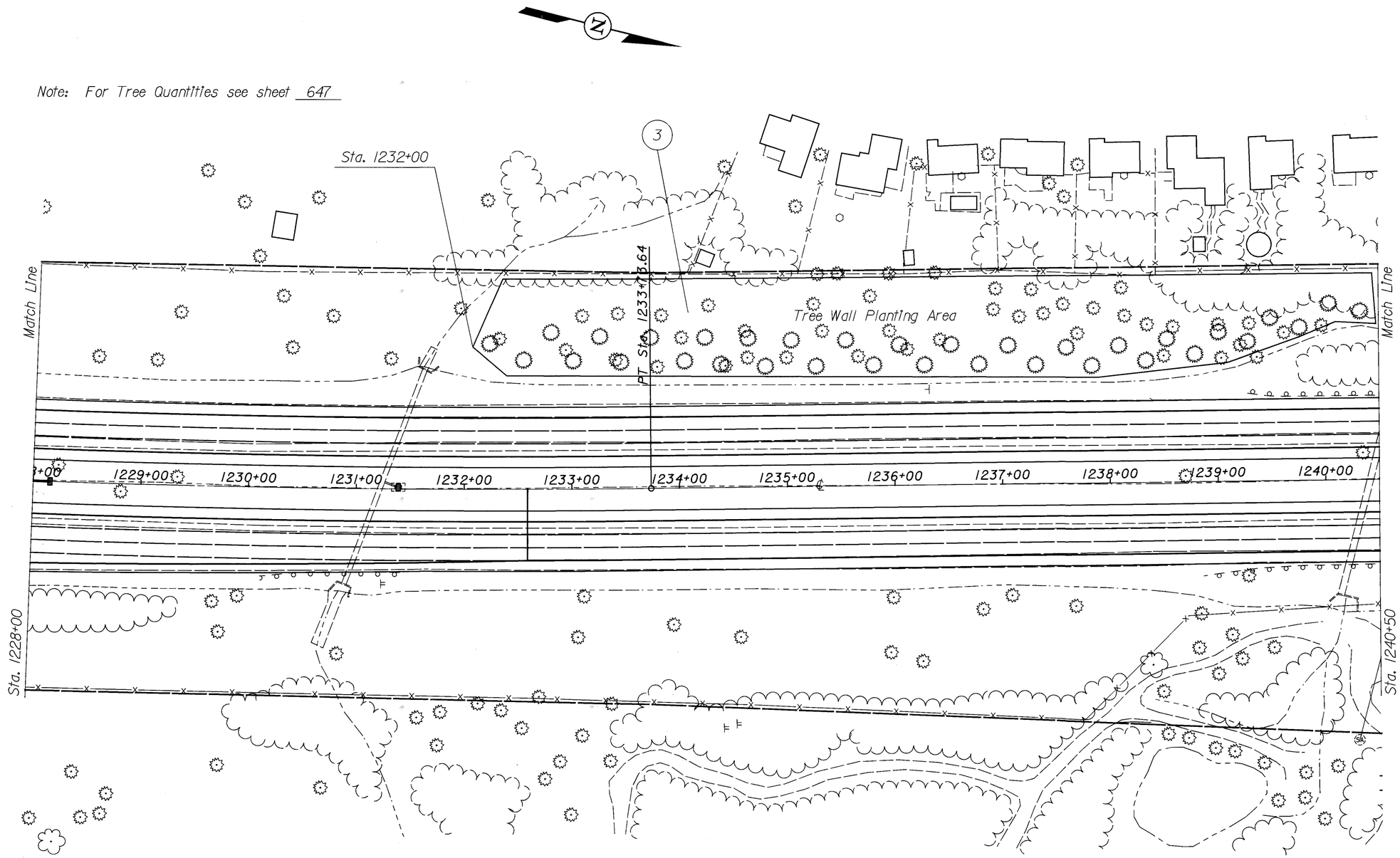
DATE : 24-NOV-1999
TIME : 15:07

DESIGN FILE : I:\pd_med_lr71\dgn\plantings\pp06.dgn
USERNAME : jrogers




| | | | | |
|---|---|---|---|---|
| 653 / 940 | MED - 71 - 15.78 | PLANTING SHEET<br>Sta 928+00.00 to Sta 940+50.00 | CALCULATED<br>CHECKED | 0 50 100<br>HORIZONTAL SCALE IN FEET |

Note: For Tree Quantities see sheet 647




DESIGN FILE : H:\pd_med_ir71\dgn\plantings\pp07.dgn
USERNAME : jrogers

DATE : 24-NOV-1999
TIME : 6:07

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

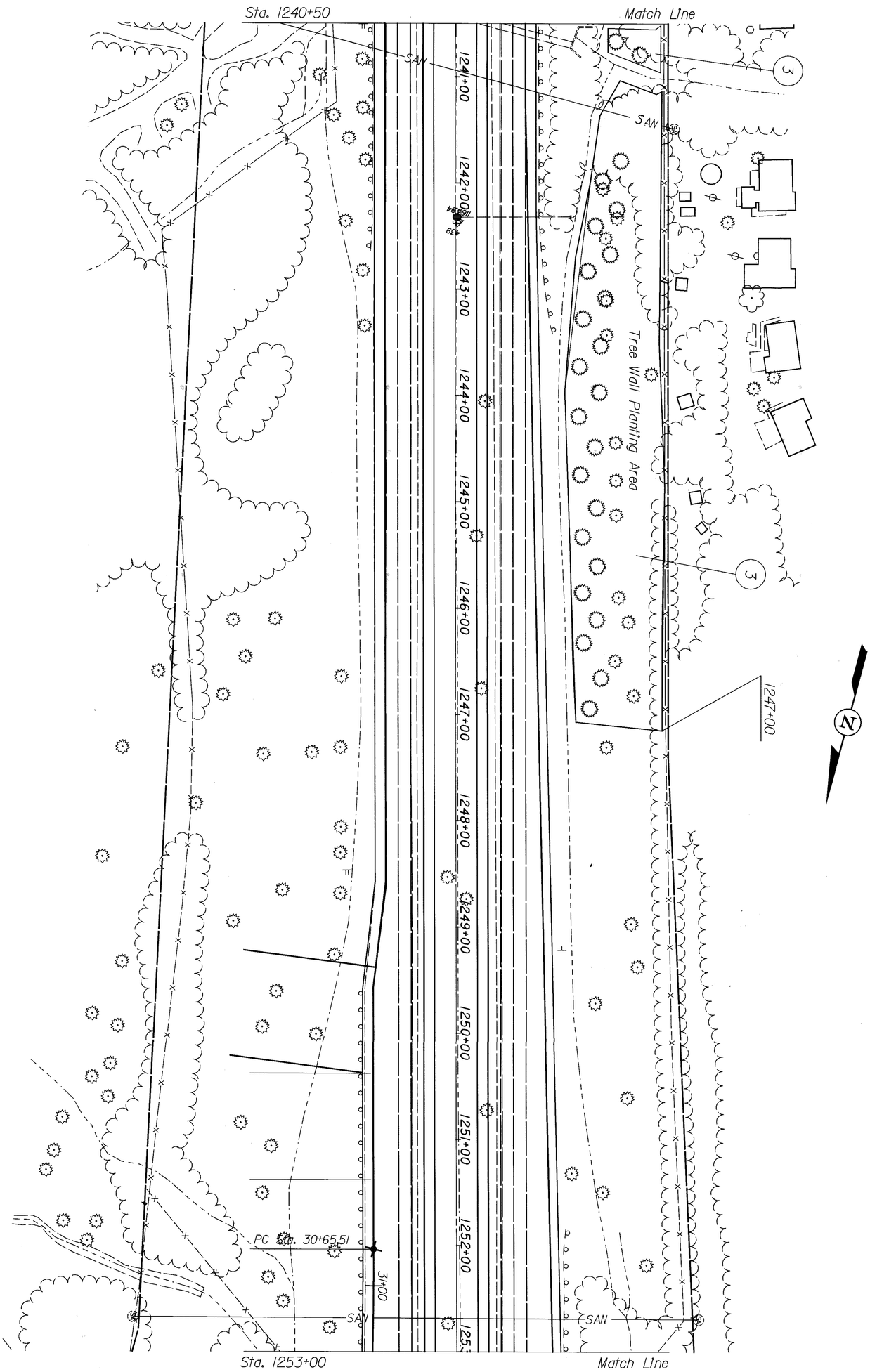
PLANTING SHEET
Sta 1228+00.00 to Sta 1240+50.00

MED - 71 - 15.78

654
940

DATE : 24-NOV-1999
TIME : 15:07

DESIGN FILE : h:\pd_med_lr71\dgn\plantings\pp08.dgn
USERNAME : jrogers

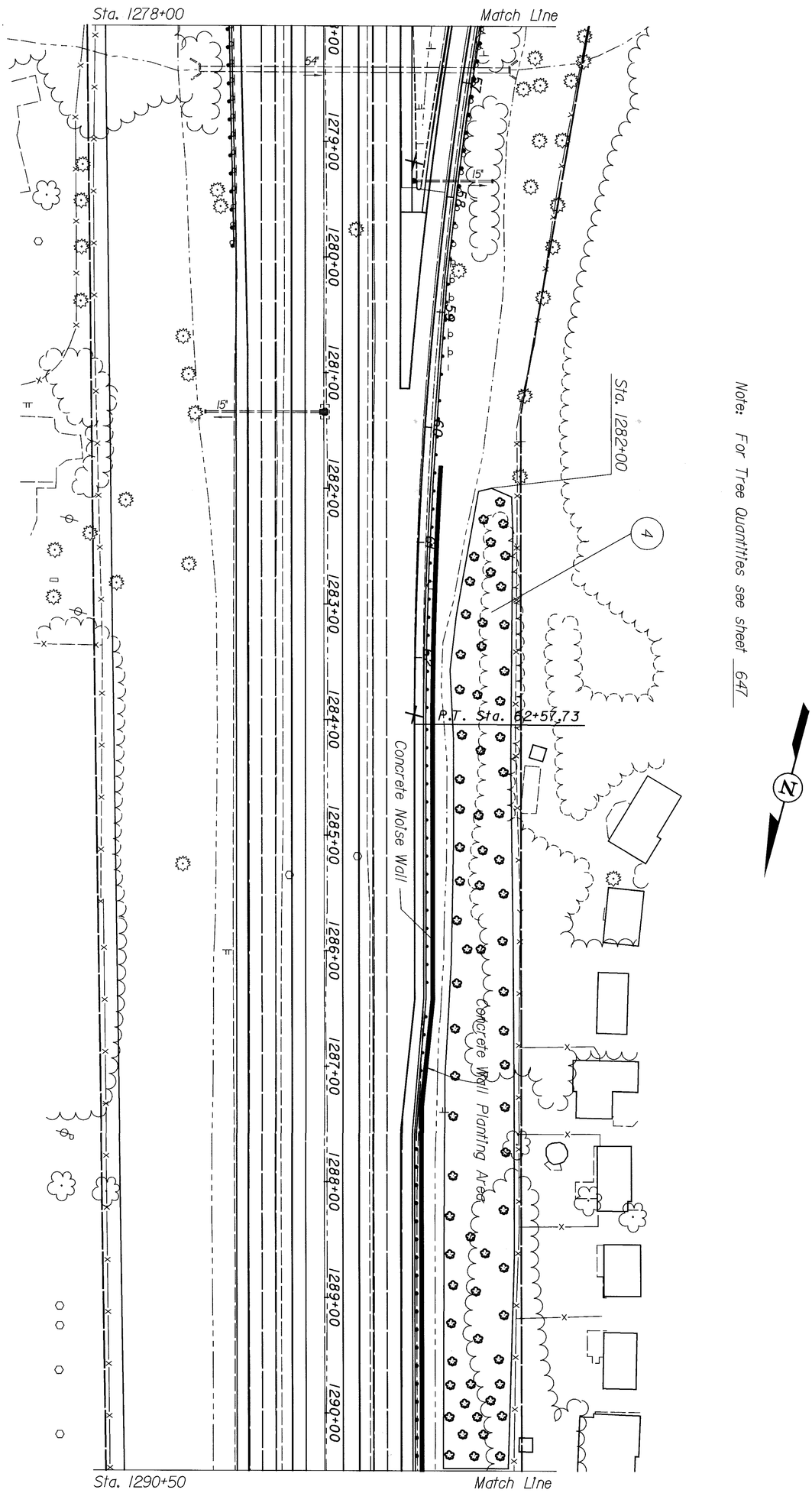



Note: For Tree Quantities see sheet 647

| | | | | |
|---|---|---|---|---|
| 655 940 | MED - 71 - 15.78 | PLANTING SHEET 1240+40 to Sta 1253+00.00 | CALCULATED / CHECKED | 0 50 100 HORIZONTAL SCALE IN FEET |

DATE : 24-NOV-1999
TIME : 15:07

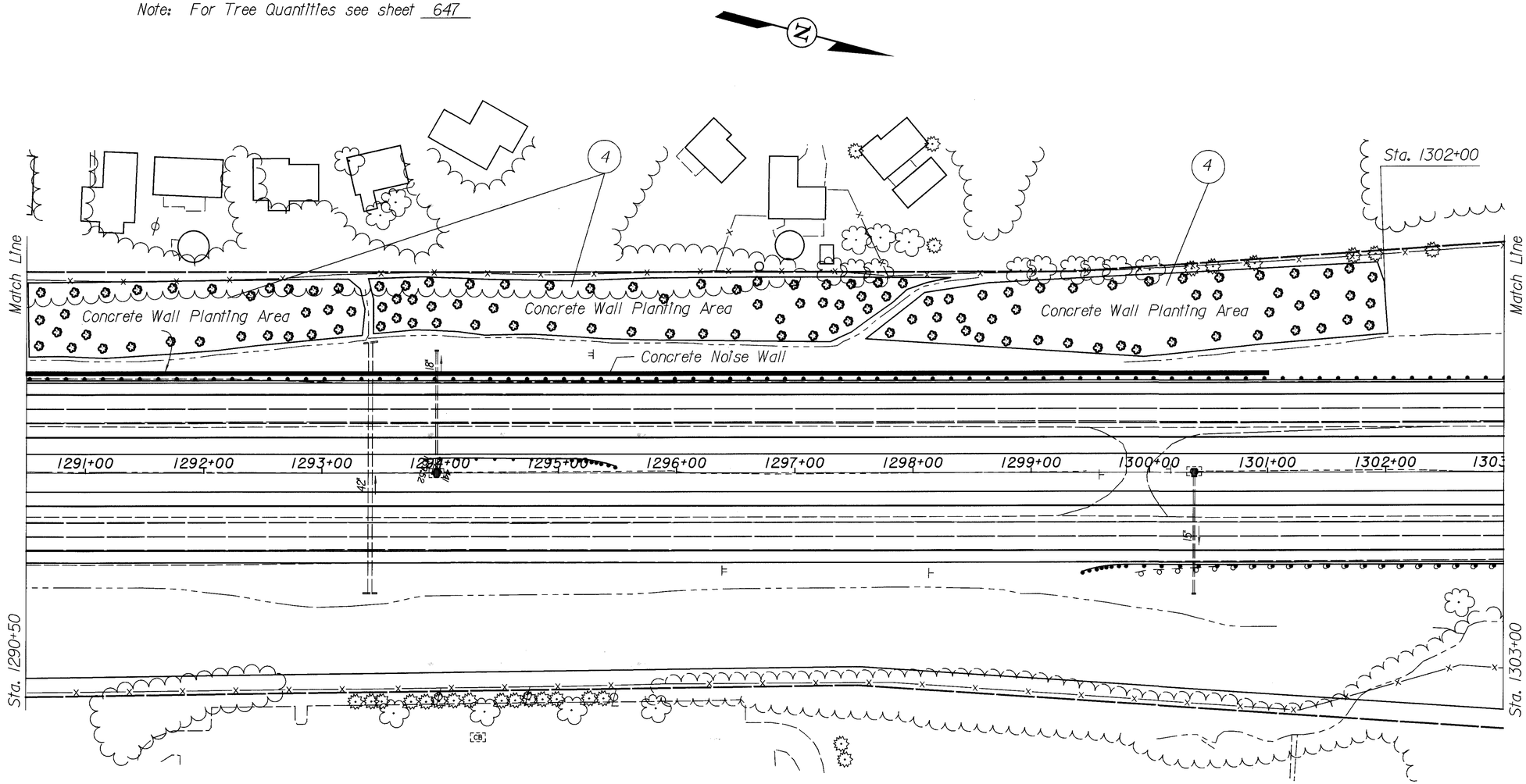
DESIGN FILE : I:\pd_med_lr71\dgn\plantings\pp09.dgn
USERNAME : jrogers




Note: For Tree Quantities see sheet 647

| | | | | | |
|---|---|---|---|---|---|
| 659 / 940 | MED - 71 - 15.78 | PLANTING SHEET<br>Sta 1278+00.00 to Sta 1290+50.00 | CALCULATED<br>CHECKED | 0 50 100<br>HORIZONTAL SCALE IN FEET | N |

Note: For Tree Quantities see sheet 647




DATE : 24-NOV-1999
TIME : 15:07

DESIGN FILE : i:\pd_med_lr71\dgn\plantings\pp10.dgn
USERNAME : jrogers

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

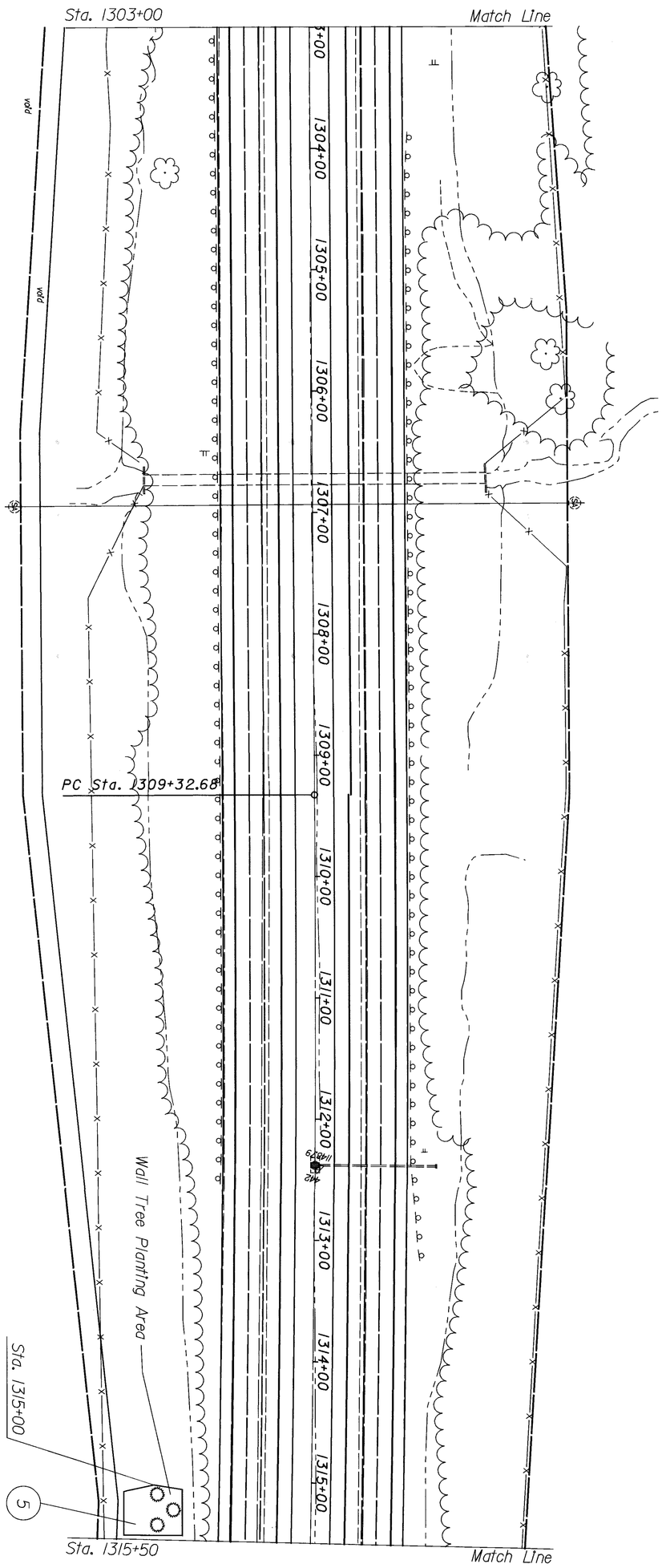
PLANTING SHEET
Sta 1290+50.00 to Sta 1303+00.00

MED - 71 - 15.78

657
940

DATE : 24-NOV-1999
TIME : 15:07

DESIGN FILE : h:\pd_med_lr71\dgn\plantings\ppll.dgn
USERNAME : jrogers




Note: For Tree Quantities see sheet 647

658
940

**MED - 71 - 15.78**

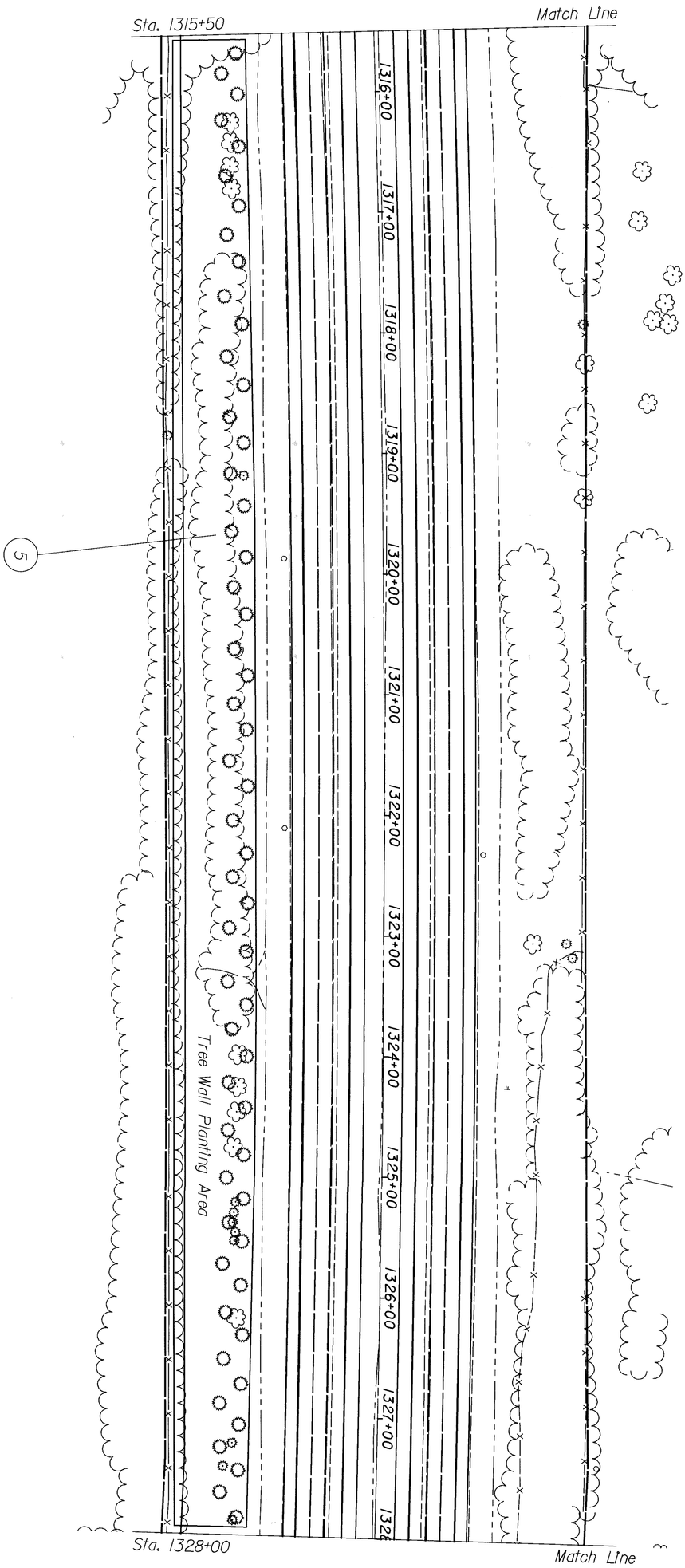
**PLANTING SHEET**
**Sta 1303+00.00 to Sta 1315+50.00**

CALCULATED
CHECKED

0 50 100
HORIZONTAL SCALE IN FEET

DATE : 24-NOV-1999
TIME : 15:07

DESIGN FILE : I:\pd_med_lr71\dgn\plantings\ppl2.dgn
USERNAME : jrogers




Note: For Tree Quantities see sheet 647

659
940

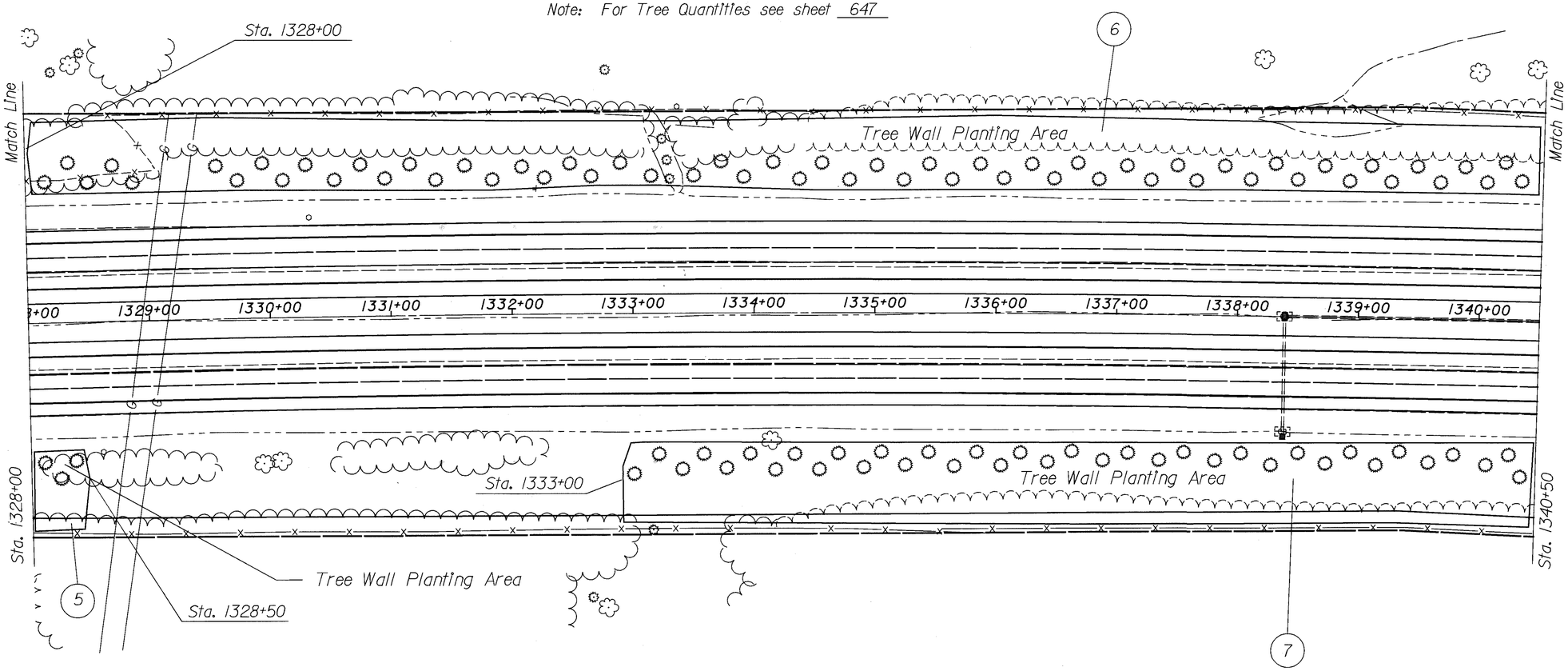
**MED - 71 - 15.78**

**PLANTING SHEET**
**Sta 1315+50 toSta 1328+00.00**

CALCULATED
CHECKED

0 50 100
HORIZONTAL SCALE IN FEET

Note: For Tree Quantities see sheet 647




HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

PLANTING SHEET
Sta 1328+00.00 to Sta 1340+50.00

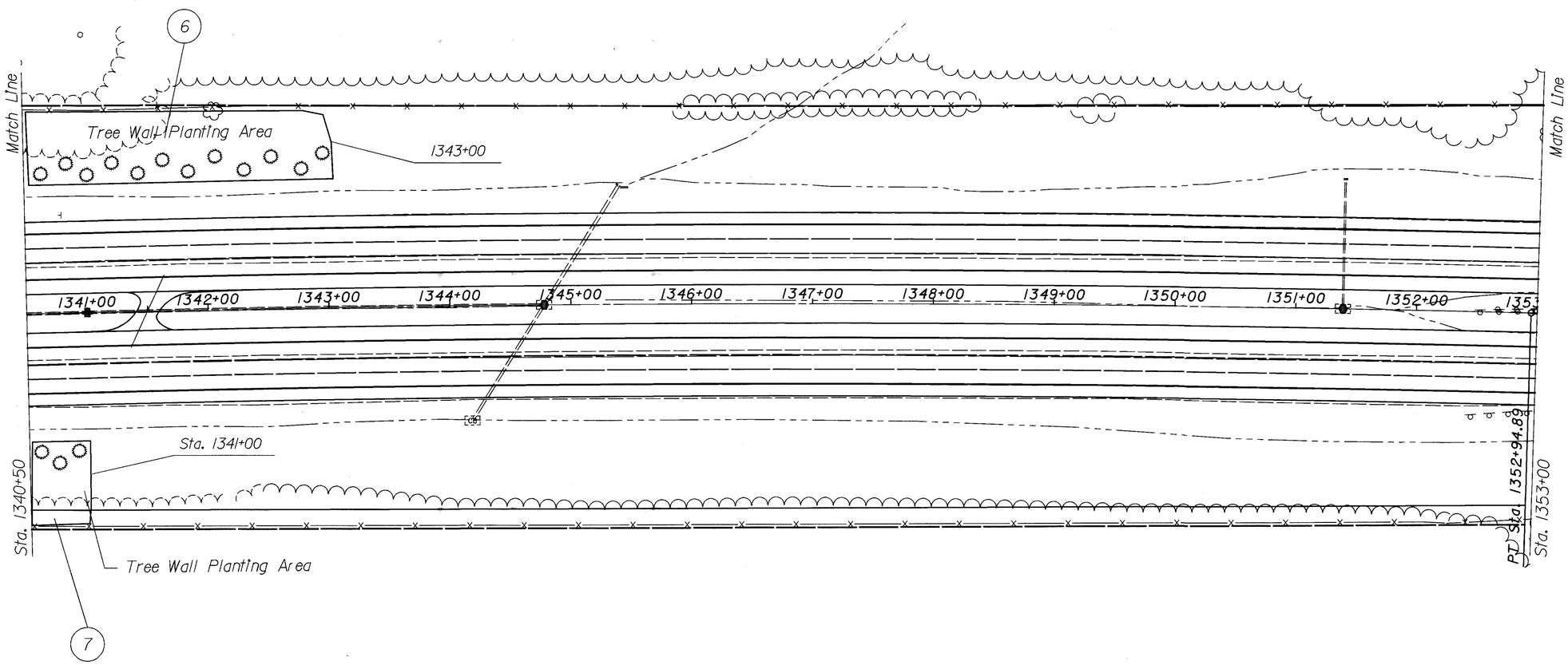
MED - 71 - 15.78

660
940

DATE : 24-NOV-1999
TIME : 15:07

DESIGN FILE : i:\pd_med_lr7h\dgn\plantings\ppl3.dgn
USERNAME : jrogers

Note: For Tree Quantities see sheet 647




DESIGN FILE : i:\od_med_lr7i\dgn\plantings\ppl4.dgn
USERNAME : jrogers

DATE : 24-NOV-1999
TIME : 15:07

HORIZONTAL SCALE IN FEET
0 50 100

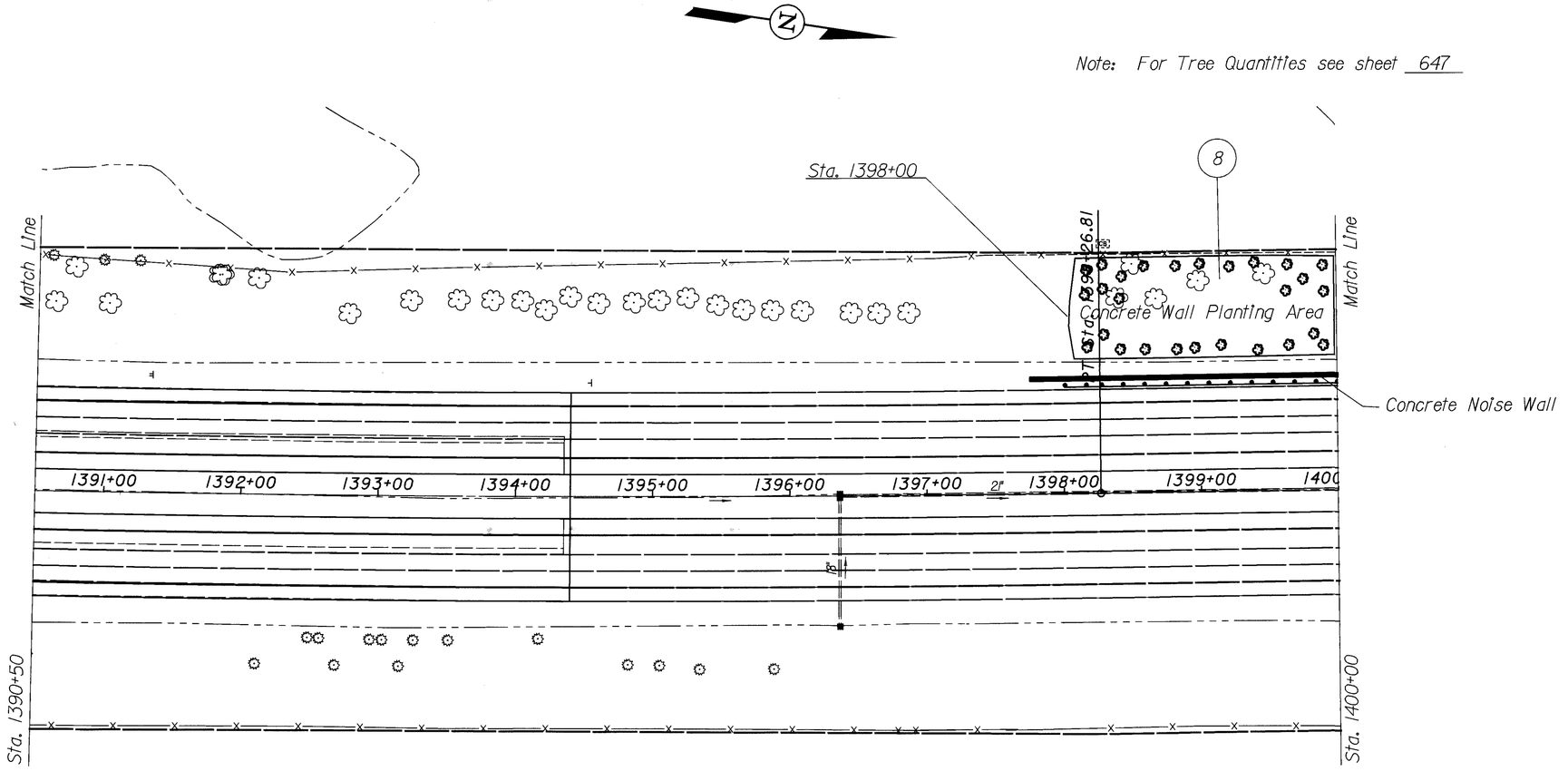
CALCULATED | CHECKED

**PLANTING SHEET**
**Sta 1340+50.00 to Sta 1353+00.00**

**MED - 71 - 15.78**

661
940

Note: For Tree Quantities see sheet 647




DESIGN FILE : i:\pd_med_lr71\dgn\plantings\pp15.dgn
USERNAME : jrogers

DATE : 24-NOV-1999
TIME : 15:07

HORIZONTAL SCALE IN FEET
0 50 100

CALCULATED | CHECKED

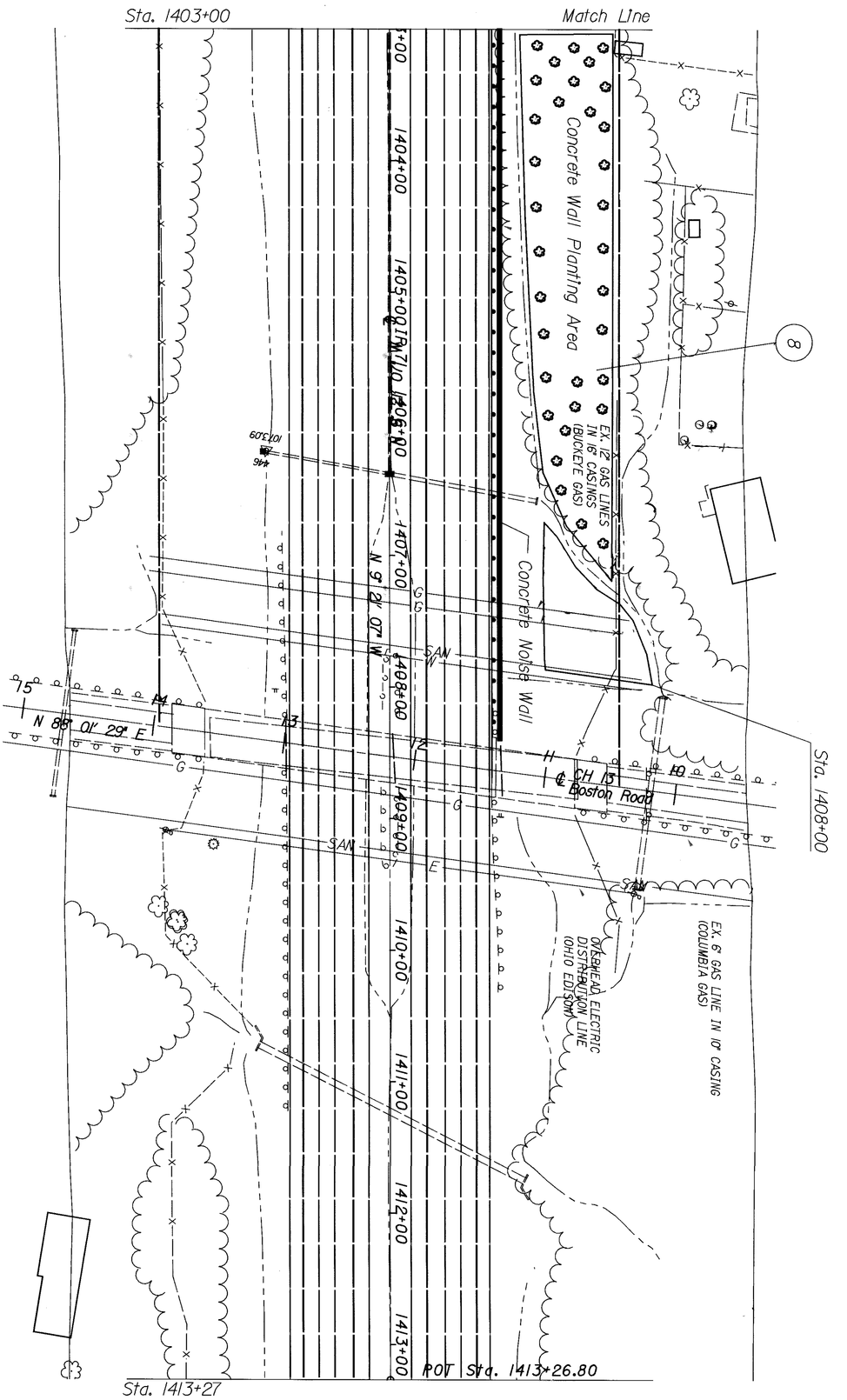
**PLANTING SHEET**
**Sta 1390+50 to Sta 1400+00.00**

**MED - 71 - 15.78**

662
940

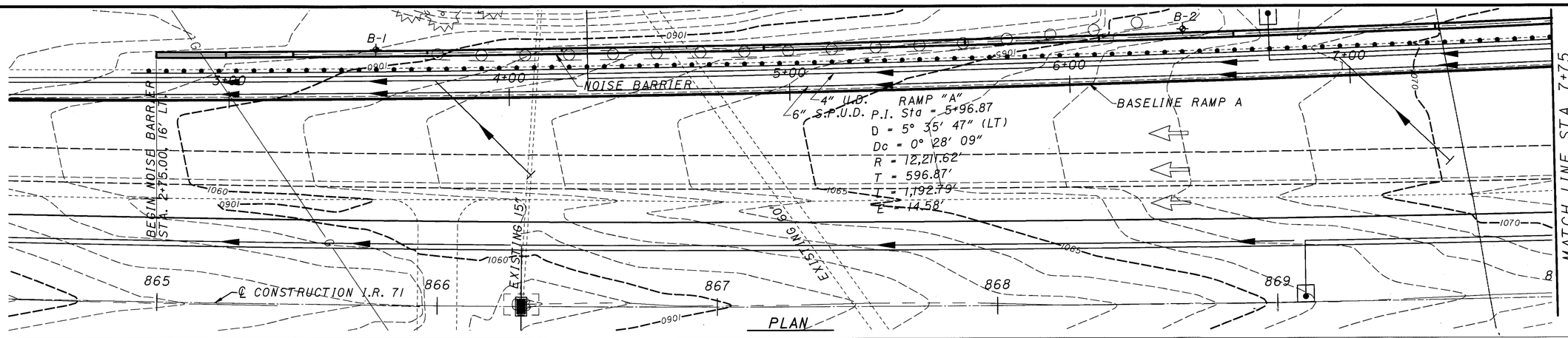
DATE : 24-NOV-1999
TIME : 15:07

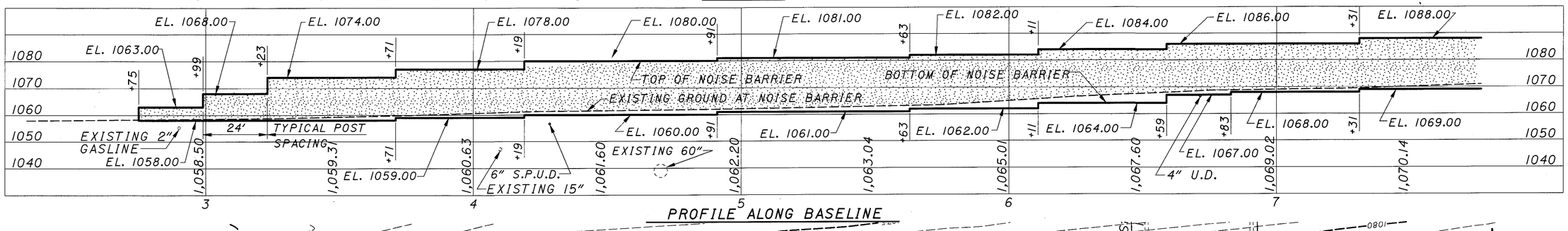
DESIGN FILE : I:\pd_med_ir71\dgn\plantings\ppl6.dgn
USERNAME : jrogers

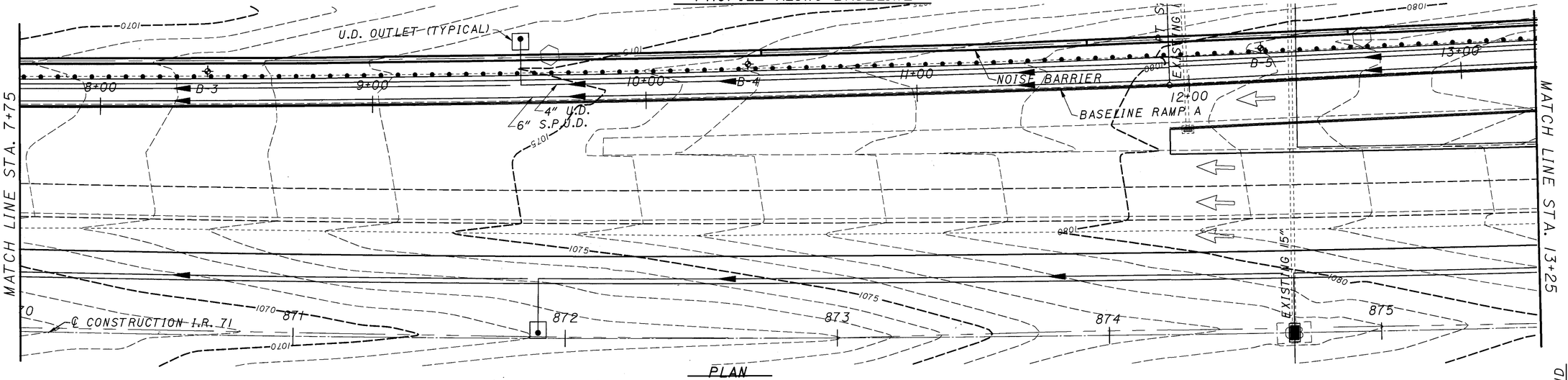


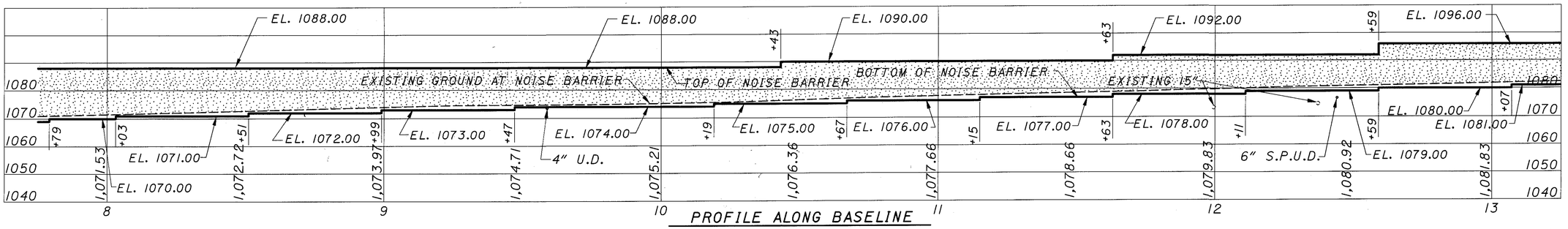

Note: For Tree Quantities see sheet 647

| | | | | |
|---|---|---|---|---|
| 663 / 940 | MED - 71 - 15.78 | PLANTING SHEET<br>Sta. 1403+00.00 to Sta. 1413+27.0 | CALCULATED / CHECKED | 0<br>HORIZONTAL SCALE IN FEET |




LEGEND
U.D. - UNDER DRAIN
S.P.U.D. - SHALLOW PIPE UNDER DRAIN

SITE-1.DGN 10/26/99 RB

DESIGN AGENCY
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

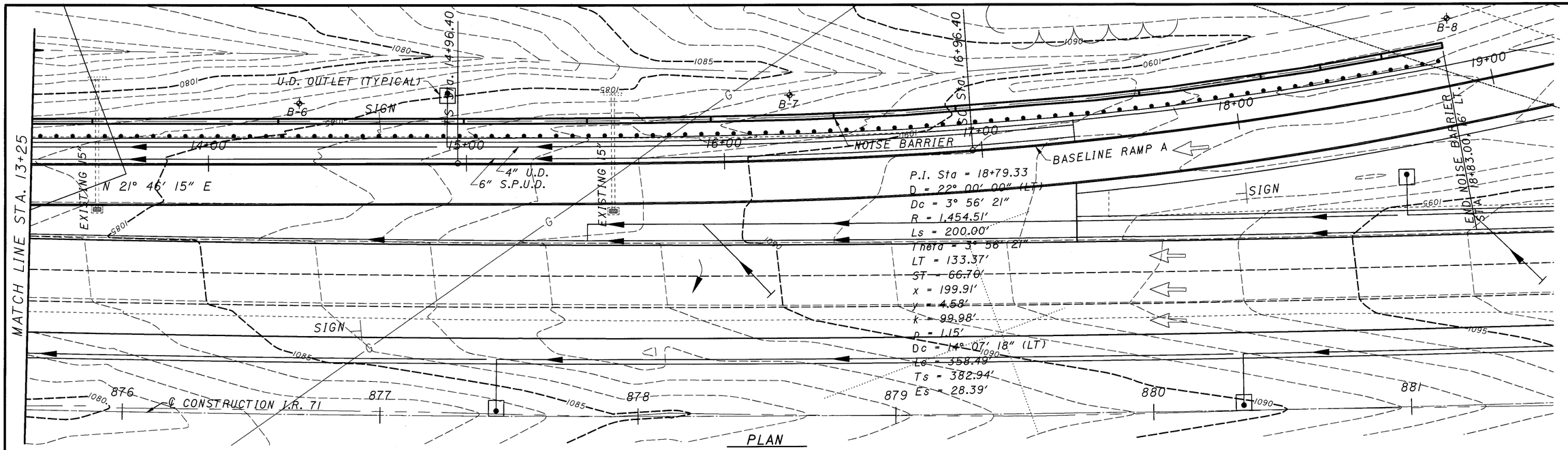
DATE
REVIEWED JB 11/9/99
DRAWN RRB REVISED
DESIGNED DAP CHECKED PS

NOISE BARRIER SITE PLAN - 1
SITE NO. 1

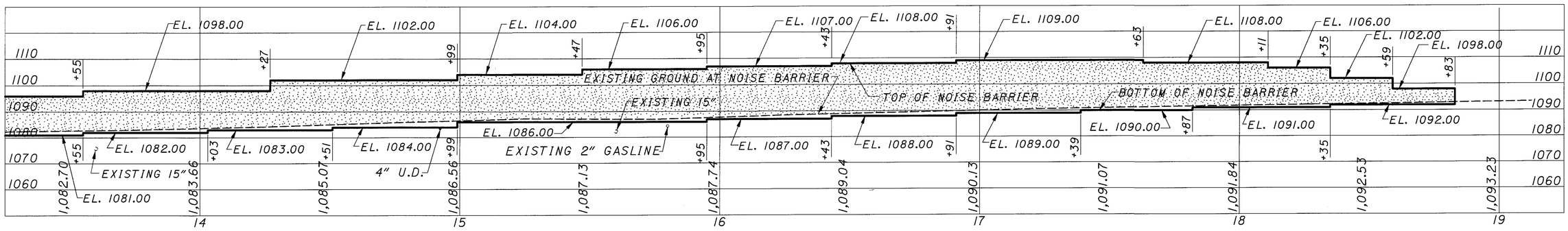
MED-71-15.78

1 / 16

664
940




PLAN




LEGEND

U.D. = UNDER DRAIN
S.P.U.D. = SHALLOW PIPE UNDER DRAIN

SITE-1.DGN 10/26/99 RB

DESIGN AGENCY
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

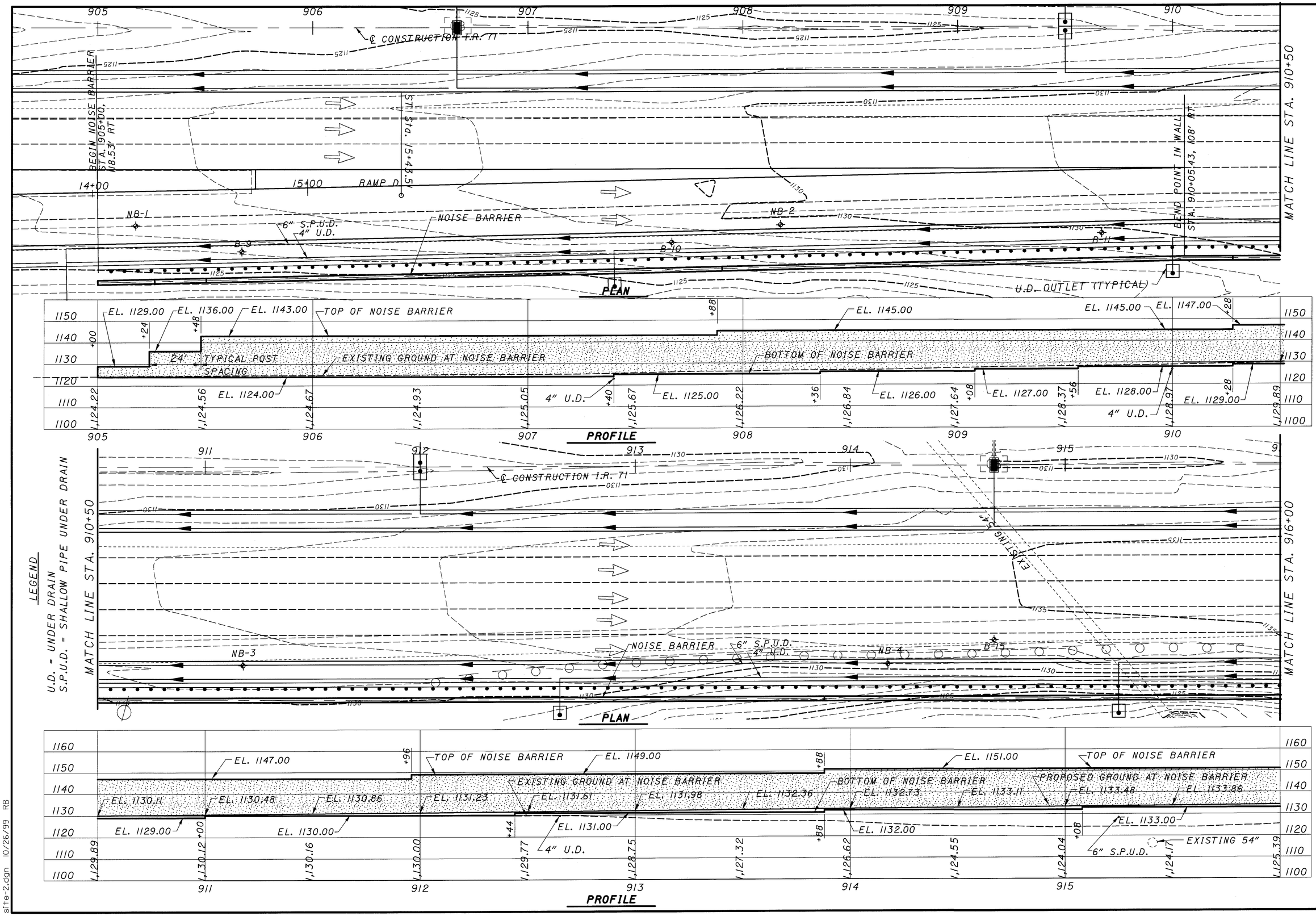
DATE 11/9/99
REVIEWED JB
REVISED
DRAWN RRB
DESIGNED DAP
CHECKED PS

NOISE BARRIER SITE PLAN - 2
SITE NO. 1

MED-71-15.78

2 / 16

665
940




site-2.dgn 10/26/99 RB

DESIGN AGENCY
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

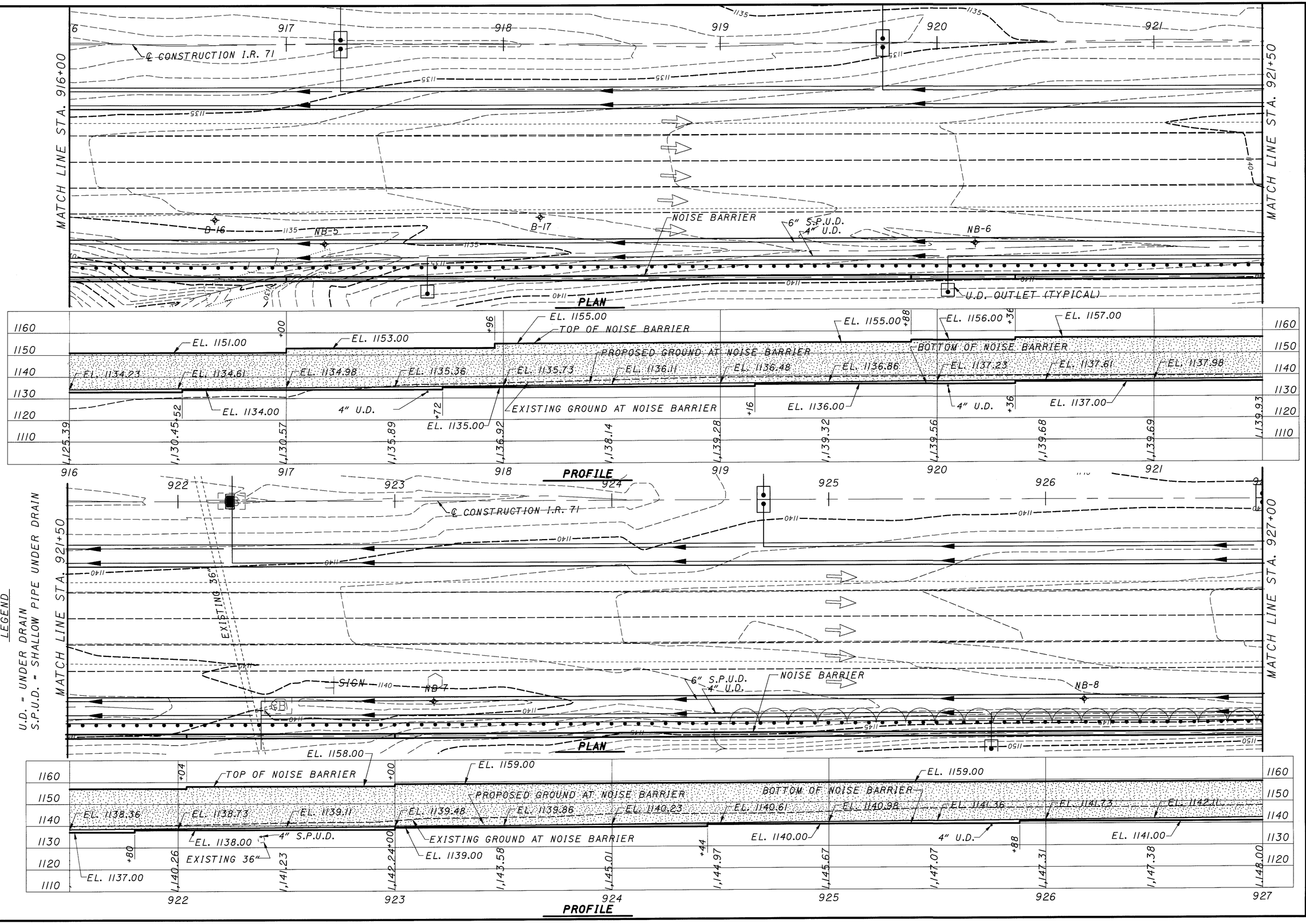
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| DAP | RRB | JB | 11/9/99 |
| CHECKED | REVISED | | |
| PS | | | |

NOISE BARRIER SITE PLAN - 3
SITE NO. 2

MED-71-15.78

3 / 16

666
940




site-2.dgn 10/26/99 RB

DESIGN AGENCY
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| DAP | RRB | JB | 11/9/99 |
| CHECKED | REVISED | | |
| PS | | | |

**PLAN - 4**

**NOISE BARRIER SITE PLAN**
**SITE NO. 2**

**MED-71-15.78**

4 / 16

667
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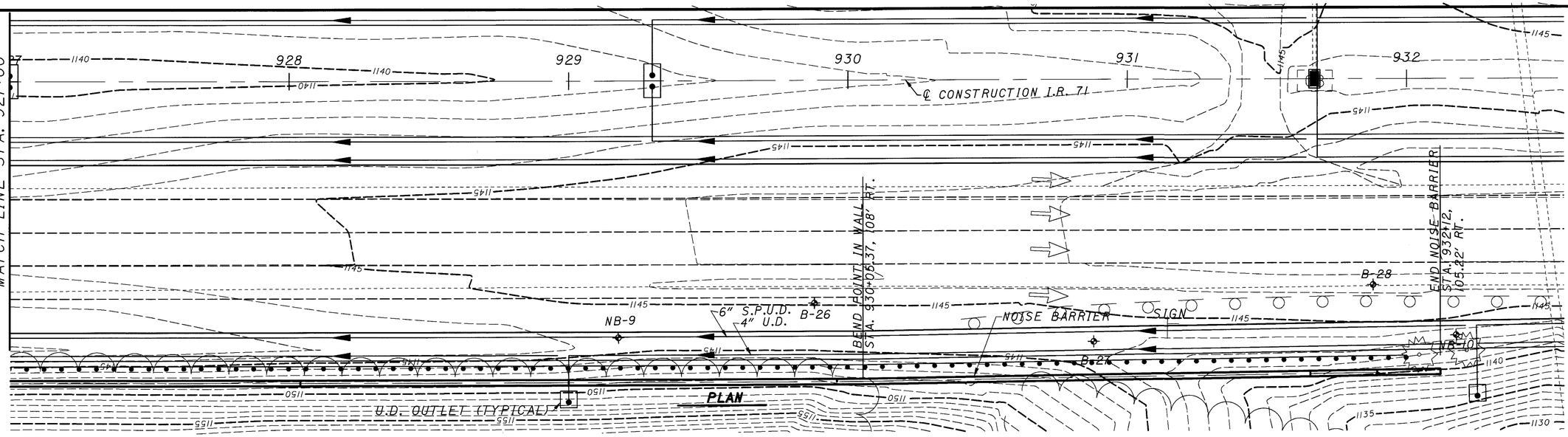


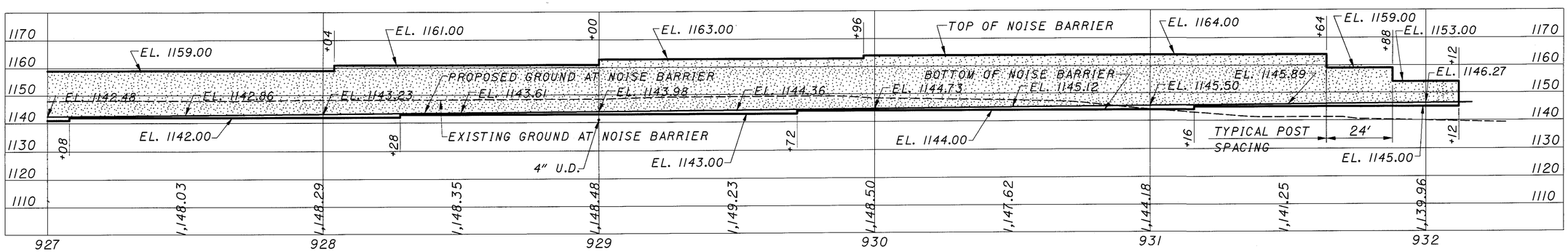


PROFILE

LEGEND

U.D. = UNDER DRAIN
S.P.U.D. = SHALLOW PIPE UNDER DRAIN

site-2.dgn 10/26/99 RB

DESIGN AGENCY
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NOISE BARRIER SITE PLAN - 5
SITE NO. 2

MED-71-15.78

5 / 16

668
940

P.T. STA. 62+57.73

U.D. OUTLET (TYPICAL)

B-29 6

B-30 62

B-31 NOISE BARRIER

RAMP A

Δ = 14°16'00" Lt.
$D_c$ = 1°-30'
R = 3819.72'
T = 478.03'
L = 951.11'
E = 29.80'

4" U.D.
6" S.P.U.D.

BEGIN NOISE BARRIER
STA. 1281+80, 101.35' LT.

ANGLE POINT
STA. 1286+41.81, 93.85' LT.

MATCH LINE 1287+00

1150 1145 1140

1282 1283 1284 1285 1286 12

℄ CONSTRUCTION I.R. 71

TOP OF NOISE BARRIER

EL. 1164.00

EL. 1157.00 +04 +28 EL. 1169.00 +44 EL. 1167.00 +12 EL. 1165.00

1170 1160 1150 1140 1130 1120 1110

+80

EXISTING GROUND AT NOISE BARRIER

BOTTOM OF NOISE BARRIER

24' TYPICAL POST SPACING

+04 +24 +92 +16 +12

EL. 1152.00
4" S.P.U.D.

EL. 1151.00

EL. 1150.00

4" U.D.

EL. 1149.00

EL. 1148.00

EL. 1147.00

1,152.73 1,152.14 1,151.88 1,151.31 1,150.83 1,150.70 1,150.47 1,149.20 1,148.86 1,148.27 1,147.62

1282 1283 1284 1285 1286 1287

LEGEND
U.D. - UNDER DRAIN
S.P.U.D. - SHALLOW PIPE UNDER DRAIN

MATCH LINE STA. 1287+00

ANGLE POINT
STA. 1287+36.91, 83.98' LT.

NOISE BARRIER

4" U.D.
6" S.P.U.D.

B-36

MATCH LINE STA. 1292+50

1145 1140

1287 1288 1289 1290 1291 1292

℄ CONSTRUCTION I.R. 71

EL. 1165.00 +04 EL. 1163.00 TOP OF NOISE BARRIER +96 EL. 1161.00 +12 EL. 1159.00

1190 1180 1170 1160 1150 1140 1130 1120 1110 1100

EXISTING GROUND AT NOISE BARRIER

BOTTOM OF NOISE BARRIER

+32 +76 +96 +92 +88

EL. 1147.00

4" U.D.

EL. 1146.00

EL. 1145.00

EL. 1144.00

4" U.D.

EL. 1143.00

EL. 1142.00

1,147.50 1,147.07 1,146.81 1,146.47 1,146.10 1,145.45 1,144.92 1,144.49 1,144.18 1,143.45 1,142.74

1287 1288 1289 1290 1291 1292

SITE-3.DGN 10/27/99 RB

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MANSFIELD, OHIO 44902

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NOISE BARRIER SITE PLAN - 6
SITE NO. 4

MED-71-15.78

6 / 16

669
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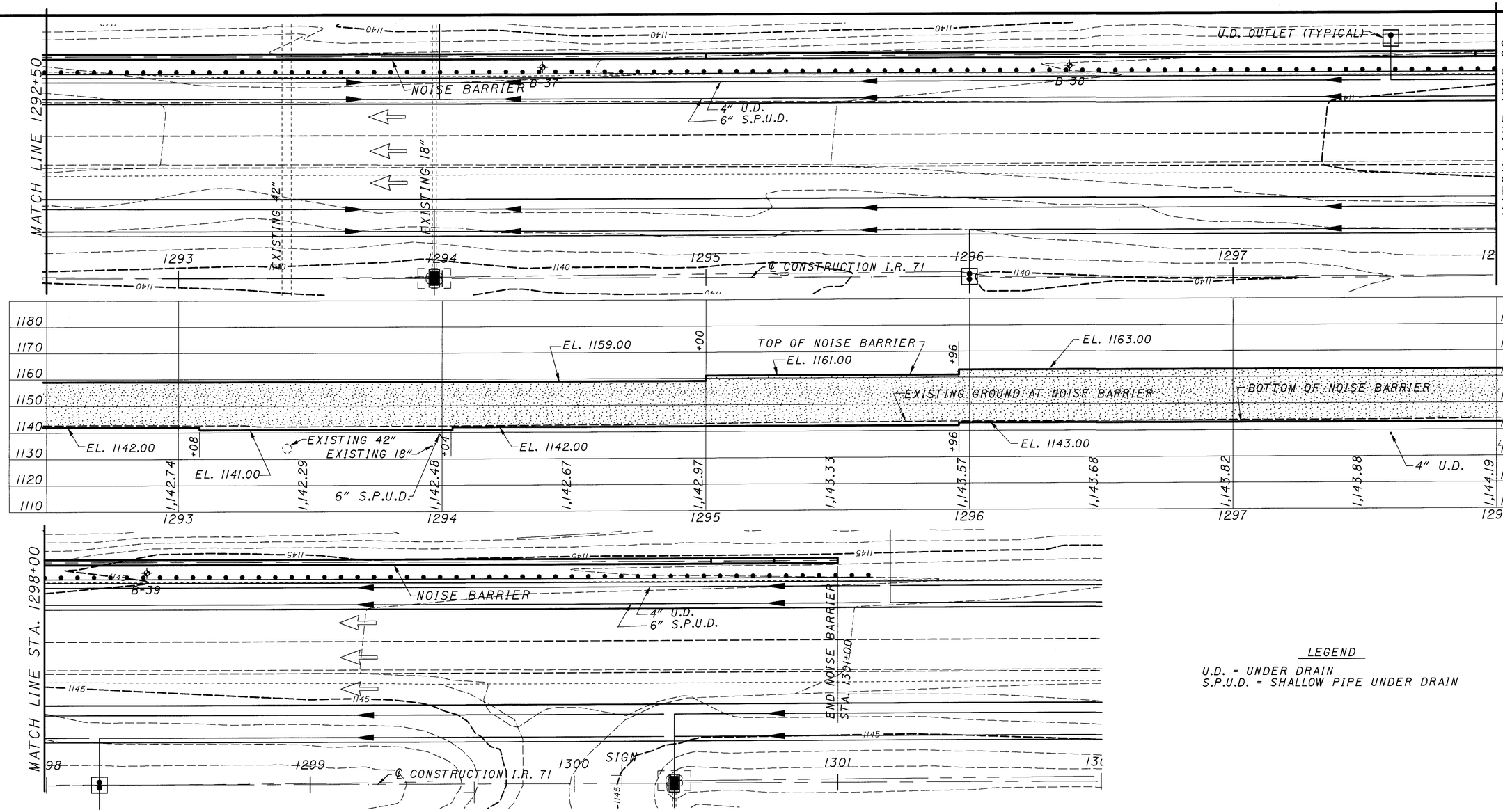


LEGEND

U.D. - UNDER DRAIN
S.P.U.D. - SHALLOW PIPE UNDER DRAIN

SITE-3.DGN 10/27/99 RB

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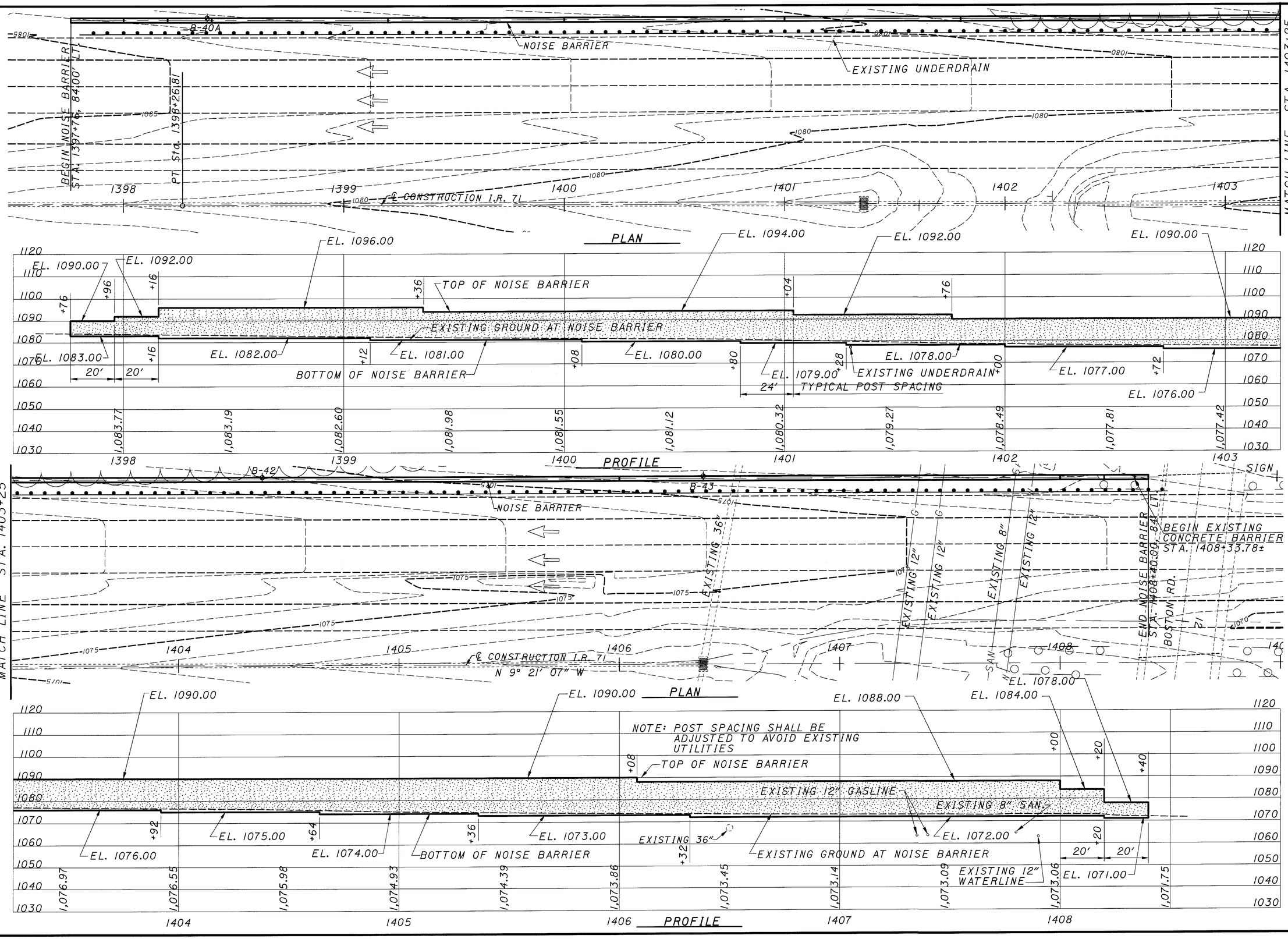
NOISE BARRIER SITE PLAN - 7
SITE NO. 4

MED-71-15.78

7 / 16

670
940

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NOISE BARRIER SITE PLAN - 8
SITE NO. 6

MED-71-15.78

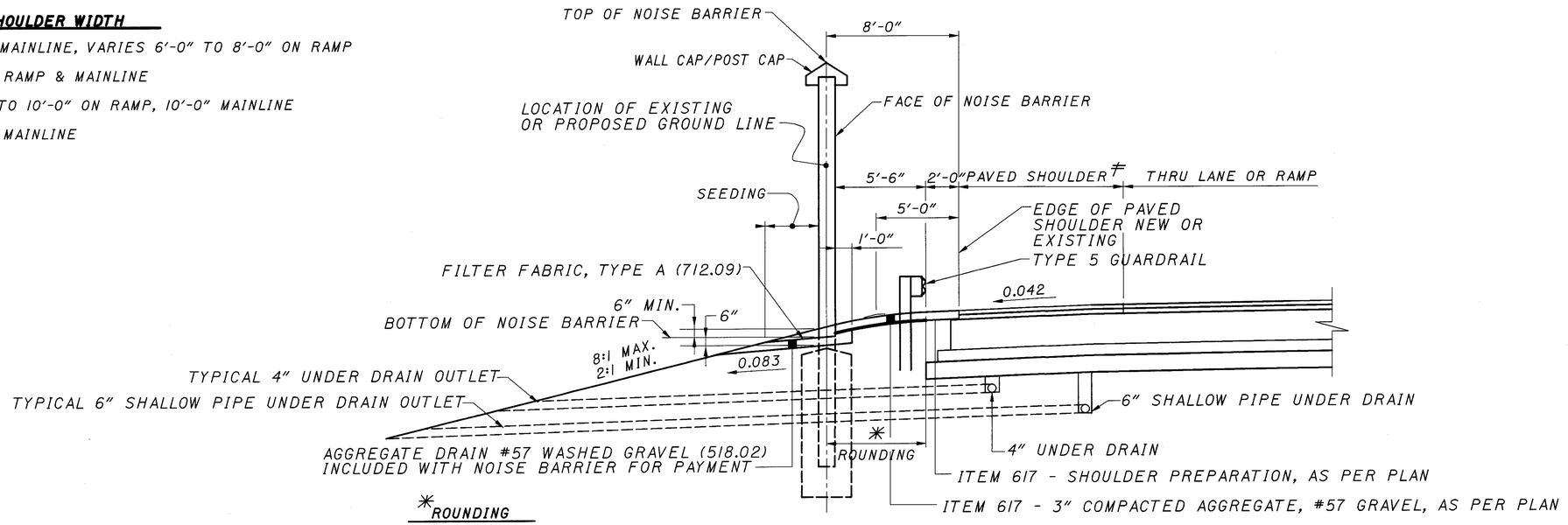
8 / 16

671
940

SITE-4.DGN 10/21/99 RB

**≠ SHOULDER WIDTH**

| | |
|---|---|
| SITE NO. 1 | 10'-0" MAINLINE, VARIES 6'-0" TO 8'-0" ON RAMP |
| SITE NO. 2 | 10'-0" RAMP & MAINLINE |
| SITE NO. 4 | 8'-0" TO 10'-0" ON RAMP, 10'-0" MAINLINE |
| SITE NO. 6 | 10'-0" MAINLINE |




**✳ ROUNDING**

SITE NO. 1, 4 & 6 - 4'-0" ROUNDING
SITE NO. 2 - 10'-0" ROUNDING

## NOISE BARRIER TYPICAL SECTION

### NOISE BARRIER ESTIMATED QUANTITIES

CALCULATED DAP DATED 11/99
CHECKED RB DATED 11/99

| ITEM | ITEM EXT. | QUANTITY | UNIT | DESCRIPTION | SITE NO. 1 | SITE NO. 2 | SITE NO. 4 | SITE NO. 6 |
|---|---|---|---|---|---|---|---|---|
| SPECIAL | 60610200 | 1,756 | S.F. | NOISE BARRIER (REFLECTIVE), 10' HEIGHT AND UNDER | 744 | 312 | 240 | 460 |
| SPECIAL | 60610210 | 12,552 | S.F. | NOISE BARRIER (REFLECTIVE), OVER 10' TO 14' HEIGHT | 3,912 | 624 | 600 | 7,416 |
| SPECIAL | 60610220 | 112,272 | S.F. | NOISE BARRIER (REFLECTIVE), OVER 14' TO 20' HEIGHT | 22,104 | 49,200 | 33,744 | 7,224 |
| | | | | | | | | |
| 617 | 11101 | 1,028 | TON | COMPACTED AGGREGATE, AS PER PLAN | 226 | 382 | 270 | 150 |
| 617 | 20001 | 5,275 | S.Y. | SHOULDER PREPARATION, AS PER PLAN | 1,161 | 1,959 | 1,387 | 768 |

NOTE: QUANTITIES CARRIED TO THE GENERAL SUMMARY SHEET 68.


DESIGN AGENCY
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MANSFIELD, OHIO 44902


DATE 11/9/99
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DESIGNED DAP
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NOISE BARRIER TYPICAL SECTION AND ESTIMATED QUANTITIES

MED-71-15.78

9/16

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TYPICAL.DGN 7/21/99 RB

# GENERAL NOTES
# Noise Barrier


I. Description
II. Posts
III. Barrier Materials
IV. Construction Methods
V. Acceptance Criteria
VI. Method of measurement
Vii. Method of Payment


## ITEM SPECIAL-NOISE BARRIER

### I. Description

This work shall consist of furnishing and installing noise barriers including all material, labor and equipment required in accordance with these provisions and applicable standards and in conformity with the dimensions, lines and grades shown on the plans.

No mixing of barrier material types or colors at any one noise barrier will be allowed.

Barrier material type supplied for reflective noise barrier projects shall be any listed on sheet 12 of 16 unless otherwise specified.

Individual barrier fabrication and erection details, except for posts and foundations, shall be as per approved Manufacturer's drawings listed on sheets 12 of 16 Posts and foundations shall be as detailed in these plans. Project plan post and foundation details govern over manufacturer's drawings.

Post spacing shown in the noise barrier material Manufacturer's approved drawings may be used in lieu of the post spacing shown in the plans. Any interference with utilities, under drains or other post spacing adjustments required to meet design plan alignment, connections to structures, or other conditions created due to changing of post spacings shall be at the Contractor's expense.

Copies of the Manufacturer's drawings listed on sheets 12 of 16 shall be furnished the Engineer before any work is initiated, All project specific details not covered by the plans or the Manufacturer's drawings shall be approved by the Engineer before work is initiated.

The barrier and the associated work shall conform to sections 499 and 501 of the CMS as appropriate.

### II. Posts

A. CONCRETE POSTS, PEDESTALS, SPREAD FOOTINGS, and DRILLED SHAFTS

Reinforcing steel shall be ASTM A615, Grade 60.

Concrete shall be Class C concrete, CMS 511, except for drilled shaft concrete which shall conform to Section D. Concrete for Drilled Shafts.

B. PRESTRESSED CONCRETE POSTS

Item 515 of the CMS shall apply except as modified below.

Prestressed Concrete;
compressive strength - 5,000 PSI,
compressive strength at transfer of prestress - 4,000 PSI
prestressing strand - ASTM A416.
Ultimate strength F's = 270,000 PSI.
Initial stress = 0.70 F's.

Prestressing strand shall be ½" diameter with an area of 0.153 sq. in. An initial tensile force of 28900 lbs. shall be applied to each strand. Exposed strand ends shall be painted with approved epoxy. See Section A. above for specifications and application rates.

C. CONCRETE FOR DRILLED SHAFTS

Concrete for all drilled shafts shall be Class S Concrete and shall be in accordance with Item 511 except as modified and supplemented herein. The required slump is 7 inches plus or minus ½ inch. The maximum water to cement ratio shall be 0.50 for concrete placed under water. The requirements of adding 10 percent more cement to the concrete mix shall be waived. The top 10 feet of concrete in the drilled shafts are required to be vibrated. Only a minimal vibratory effort is necessary. SPECIAL CARE shall be taken NOT to OVER-VIBRATE the drilled shaft concrete.

NOTE: If the casing is removed using a vibratory hammer, no other vibratory effort is needed. The concrete for the drilled shaft shall be placed as per 511 except as modified by the plans. The concrete placement operation shall be continuous from the start to finish. The concrete for the drilled shaft shall be placed promptly after the final inspection of the shaft. If practicable, the concrete shall be placed in a clean, dry excavation. Care shall be taken to ensure that concrete is not being placed in moving water. The concrete can be placed in a dry drilled shaft excavation by the free fall method provided the concrete falls to its final position through air without striking the sides of the hole, the reinforcing steel cage or any other obstruction. The free fall method allows the concrete to be dropped from the top through a centering chute to the concrete's final position.

If the engineer determines that dewatering is not practicable, the contractor may be given permission to place the concrete under water. The drilled shaft excavation shall be filled with water to such a depth that all water motion has ceased. The concrete shall then be placed by means of a concrete pump. The concrete pump pipe shall have a diameter that is not less than 4 inches. The concrete pump equipment shall be so arranged that no vibrations result which might damage fresh concrete. Pipes carrying concrete from the pump to the shaft should be arranged with a minimum number of bends. The pipe used to convey the concrete to the bottom of the drilled shaft excavation shall be anchored to the steel casing to prevent the pipe from undulating during the initial placement of the concrete.

The pumping equipment shall be suitable in kind and adequate in capacity for the work required. The use of aluminum pipe as a conveyance for the concrete will not be permitted. An adequate quantity of grout, mortar, or concrete with coarse aggregate omitted shall be pumped through the equipment ahead of the specification concrete to provide lubrication to the pumping system. The concrete used for lubrication shall not be placed in the shaft. The lubrication process will not be repeated as long as the pumping operations are continuous. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. In order to prevent the contamination of the concrete placed initially at the bottom of the shaft, the outlet end of the pumping pipe shall be sealed with a diaphragm or plug that is flushed out when the hydrostatic pressure from the column of concrete exceeds that of the water in the shaft. The initial rate of concrete placement must be carefully controlled so as not to lift or displace the cage of reinforcing steel. The conveying system shall be water tight and the outlet end shall always remain well below the top of the freshly placed concrete. The preferred concrete placement procedure is to maintain the outlet end of the pumping system at approximately 10 feet below the top of the fresh concrete. When the concrete reaches the top of the drilled shaft column, all laitance shall be removed.

### III. Barrier Materials

Acceptable Noise panel designs are listed on sheets 12 of 16.
Materials shall either meet the manufacturer's requirements listed on their approved drawings or CMS requirements if not listed on manufacturer's approved drawings.

Concrete Noise barrier panels shall be precast, prestressed, or cast in place.

### IV. POST AND WALL CAP

Post and wall cap height shall be 4 inches. The caps may be designed integral with the wall and/or the post or attached separately. The bottom of the post cap shall be above the top of the wall cap by no more than 1 inch. Where walls on either side of the post are at different plan specified elevation the 1 inch space between post cap and wall cap shall be based on the higher wall. Wall caps shall be 4 inches wider than the wall and centered on the top of the wall to give a 2 inch overhang on both sides.Post caps shall overhang all vertical edges of the post by 2 inches. The vertical ends of the wall cap shall be no less than 1 inch from the vertical face of the posts, whether integral or separately attached.

Caps shall have designed reinforcement and concrete cover meeting AASHTO requirements.

If the caps are to be cast and attached separAtely to the top of the wall and/or post, the concrete design strength for the cap shall be equal to the wall.

Anchorage systems between separate caps and the wall or posts shall be designed in accordance with AASHTO and shall have a galvanized coating if the accepted anchorage system is steel. The anchor system in the installed condition shall not be visible when viewing the finished wall. Payment for all of the above shall be incidental to the pertinent Item Special - Noise Barrier.

### V. Construction Methods

A. Noise barriers shall be installed in accordance with the plans. Joints and connections shall be secured in such a manner as to be structurally sound with no visible openings for sound transmission. Noise panel attachments to posts and installation methods shall be structurally sound, give adequate support to the noise panels, and be secured to the post or adequately blocked between the post's flanges to eliminate movement at the support and eliminate any possible vibration.

Exclusive of the Contractor's choice of noise barrier panel, the top of installed noise barriers shall match the top of wall design elevations, with no variation between posts, unless the design plans require an elevation change.

The plan detailed elevations for the top of the noise barrier shall be maintained. If any additional panel height and square feet of noise panel are required to meet the plan elevations due to the Contractor's choice of post spacings and noise panels, the additional square feet shall not be included for payment.

B. Marred, chipped, scratched, spalled, or any other damage deemed detrimental to the noise barriers by the Engineer shall be repaired or replaced in accordance with the manufacturer's recommendations, as approved by the Engineer, at the Contractor's expense.

C. Trench backfill shall be with Class S concrete modified as per II.D. above. The method of placement shall not allow voids or excessive segregation and shall be performed to the satisfaction of the Engineer.

GENERAL NOTES CONTINUED Sheet 11/16

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

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| | PS | | | |

NOISE BARRIER GENERAL NOTES

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D. All excess excavation shall be disposed of in a manner satisfactory to the Engineer.

E. After erection of the noise barrier, the disturbed area shall be left in a finished condition at the direction of the Engineer and a growth of grass established, at the Contractor's expense, in accordance with CMS Item 659.

F. Tolerances

1. Posts (measured at top)
   a. Vertical alignment shall be within 0.05 inch/ft. of height.
   b. Posts shall be set within +/- ½ inch of their specified location.

2. Noise barriers
   a. Vertical alignment shall be within 0.05 inch/ft. of height.

G. Horizontal joints shall be aligned with horizontal joints in adjacent panels between adjacent posts.

## VI. Acceptance Requirements

In addition to conforming with the structural requirements as shown in the plans, it is also necessary to comply with the following aesthetic requirements.

The Contractor shall deliver to the job site one full size noise panel, and one full size post representative of the product the contractor is going to supply. The Engineer will evaluate whether both the noise panel and post meet all plan specified federal color standard, texture, trim, and/or coating requirements. To facilitate this comparison, the contractor shall supply the Engineer with a copy of "Federal Standard 595B Color Used in Government Procurement". If either the noise panel or post do not meet the plan requirements the Contractor shall have another noise panel or post manufactured and delivered to the job site for approval by the Engineer. If the plans do not specify a color, texture, trim, or coating requirement, it will still be necessary to deliver the sample post and panel to the job site. Prior to the production of any additional noise barriers or posts the sample post and panel must be delivered to the job site and approved if required.

The sample post and panel will become the control post and panel with which all subsequent posts and panels will be compared. This control post and panel shall be delivered to, and if necessary, moved to different locations to facilitate comparisons with the remaining posts and panels.

Any delivered and/or erected posts and panels which do not match the control post and panel or do not conform with the structural requirements as shown in the plans shall be removed and replaced at no additional costs.

All concrete noise barrier panels shall have a sealer/stain applied to match the Federal color number listed in the plan.

## VII. Method of Measurement

Noise barrier plan quantities are measured in square feet of acceptable barrier using a height from bottom of wall to top of wall and a length from post to post as detailed in the plans. The cost of the post cap and wall cap shall be incidental to the cost of the noise barrier. Where a noise barrier is constructed behind a concrete parapet the bottom the wall shall be defined as the top of the parapet for measurement purposes.

Final plan quantities of noise barrier in square feet shall not include any addition for noise barrier heights greater than plan requirements. The additional heights of noise barrier required to accommodate the contractor's selected manufactured barrier materials or post spacing either greater or less than plan post spacing shall not be included for payment.

## VIII. Basis of Payment

Noise barriers, completed and in place, as described in method of measurement, will be paid for at the contract unit price per square foot. This payment shall be full compensation for all materials, labor and equipment necessary to construct the noise barrier. All excavation, backfill with suitable material and any adjustment in earthwork quantities required due to the contractor's selected noise panel, sealing/staining, aggregate drains, compaction, disposal of surplus or unsuitable materials, seeding, fertilizing and mulching of disturbed areas shall also be included for payment.

| ITEM | DESCRIPTION | UNIT |
|---|---|---|
| | REFLECTIVE TYPE | |
| Special | Noise Barrier (Reflective) 10 ft. ht. and under | Sq.ft. |
| Special | Noise Barrier (Reflective), over 10 to 14 ft. ht. | Sq.ft. |
| Special | Noise Barrier (Reflective), over 14 to 20 ft. ht. | Sq.ft. |

ABBREVIATIONS

| | |
|---|---|
| AITC | American Institute of Timber Construction |
| ASTM | American Society for Testing and Materials |
| CMS | Construction and Materials Specifications of ODOT |
| ILI | Indiana Limestone Institute |
| LPG | Volatile Petroleum Solvent (liquid propane gas) |
| SSPC | Structural Steel Painting Council |
| VPS | Voluntary Product Standard |

**ITEM SPECIAL-NOISE BARRIER (REFLECTIVE) 10 FT. HEIGHT AND UNDER**

**ITEM SPECIAL-NOISE BARRIER (REFLECTIVE) OVER 10 TO 14 FT. HEIGHT**

**ITEM SPECIAL-NOISE BARRIER (REFLECTIVE) OVER 14 TO 20 FT. HEIGHT**

In order to assure positive drainage under the noise barrier, a 6" thick layer of #57 washed gravel meeting 518.02 shall be placed under the noise barrier panels. A filter fabric, Type A meeting 712.09 shall be used on top of the gravel behind the noise barrier. All disturbed areas behind the noise barrier shall be seeded and muched. See typical sections on sheet 9 of 16 for additional details.

Payment for all of the above shall be at the unit price bid per square foot for the above Items, which shall include all labor, equipment, materials, and incidentals to complete the above work.

**ITEM 617 COMPACTED AGGREGATE, AS PER PLAN**

This Item shall be used to place aggregate between the noise barrier and the paved shoulder. All Items of 617 shall apply except that the compaction requirment is waived and the aggregate shall be #57 gravel placed 3 inches thick.

Payment for all of the above shall be at the unit price bid per ton for Item 617-Compacted Aggregate, as per plan, which shall include all labor, equipment, materials, and incidentals necessary to complete the above work.

**ITEM 617 SHOULDER PREPARATION, AS PER PLAN**

This Item shall be used to remove material between the aggregate drain and the paved shoulder . All Items of 617 shall be followed except that the existing surface shall be loosened to a depth of 3 inches.

Payment for all of the above shall be at the unit price bid per square yard for Item 617-shoulder preparation, as per plan, which shall include all labor, equipment, materials, and incidentals necessary to complete the above work.

**REVIEW OF DRAINAGE FACILITIES**

The locations and depths of existing culverts, storm and sanitary sewers as shown in the plans were taken from the field survey information and original construction plans and are assumed to be approximate.

Before any work is started on the project and again before final acceptance by the state. Representatives of the state and the contractor, along with local representatives, shall make an inspection of all existing sewers, roadway pipes and edge drain outlets which are to remain in service and which may be affected by the work. The condition of the existing conduits and their appurtenance shall be determined from field observations. Records of the inspection shall be kept in writing by the state.

All existing sewer, roadway pipes and edge drain outlets inspected initially by the above mentioned parties shall be maintained and left in a condition reasonably comparable to that determined by the original inspection. Any change in the condition resulting from the contractors operations shall be corrected by the contractor to the satisfaction of the state at the contractors expense.

Payment for all operations described above shall be included in the contract price for the pertinent Item Special-Noise Barrier items.

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REVISED

NOISE BARRIER GENERAL NOTES

MED-71-15.78

# APPROVED REFLECTIVE BARRIER SUPPLIERS

CONCRETE

| SUPPLIERS | DRAWINGS & NOTES | VARIABLES COLOR TEXTURE PATTERN BRICK STYLE |
|---|---|---|
| Faddis Concrete Products<br>3515 Kings Hwy.<br>Downingtown, PA 19335<br>Telephone: (800) 777-7973<br>Fax: 1-215-873-8431 | USODOT-1 Sheets 1-6<br>Nov. 1993<br>Note: Up to 3283 N per Meter on Structures<br>Note: Panels per Evercrete Limited<br>D -7700297 - Sheets 1 & 2 Feb. 18,1997 | Form lined ashlar sandstone texture on side away from freeway. The texture on the freeway side shall be ashlar sandstone impressed design with a relief of at least ½". The relief shall be measured from the depth at the center of the impressed joint. The width to depth ratio shall be 2:1 or less (if the depth is ½", the width of the joint shall not exceed a nominal 1" plus ⅛").<br><br>The panels shall be set flush with the posts on the freeway side.<br><br>The panels, wall cap and posts shall be stained to a brown color meeting Federal Color #30252<br><br>All horizontal joint lines shall be aligned with adjacent panels between posts. |
| The Reinforced Earth Company<br>Midwest Region<br>760 Pasquinelli Drive Suite 344<br>Westmount,Ill. 60559<br>Telephone:(708) 655-0044<br>Fax:(708) 655-0064 | FW-1 & FW-2 of 3 (5/17/83)<br>Fanwall/Durisol Technical Handbook (10/1/89) with ODOT posts | |
| Concrete Tech. Inc.<br>95 Mound Park Drive<br>Springboro,Ohio 45066<br>Telephone:(513) 224-1867 | Sheet #1 & P-3 (10/22/83) | |
| Baxter Concrete Products, Inc.<br>3370 Port Union Road<br>Hamilton, Ohio 45014<br>Telephone: (513) 860-3593 | #92202-Sheets 1-17<br>(10-5-92) | |
| Soundcore<br>4043 Maple Road, Suite 106<br>Amherst, NY 14226<br>Telephone: (716) 833-7651 | Soundcore - Standard Hollowcore Precast Noise Barriers<br>Drawing No. DET-1<br>(2-12-97) | |
| Concrete Products, Inc.<br>P.O. Box 2799<br>Redmond, Washington 98073<br>Telephone: (206) 881-7910 | Precast Noise Abatement Wall System 1 January 13, 1994<br>Precast Noise Abatement Wall System 2 January 13, 1994<br>Precast Noise Abatement Wall System 3 January 13, 1994 | |
| Prestress Engineering Corp.<br>P.O. Box 609<br>Algonquin, Illinois 60102-0609<br>Telephone: (708) 658-4545 | Precast Noise Abatement Wall January, 1994 | |
| Sidley Precast Div.<br>P.O. Box 70<br>Thompson, Ohio 44086<br>Telephone: (216) 298-3232 | Noise Barrier March 04, 1994 | |
| | | |

CONCRETE

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29 NORTH PARK STREET
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| | PS | | | |

NOISE BARRIER DETAILS

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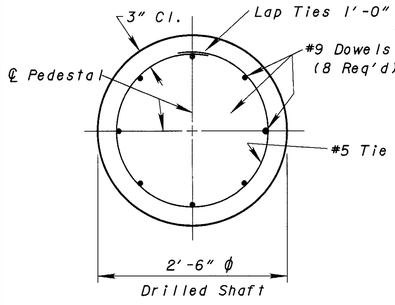
## TABLE - DETAILS FOR SPREAD FOOTINGS*

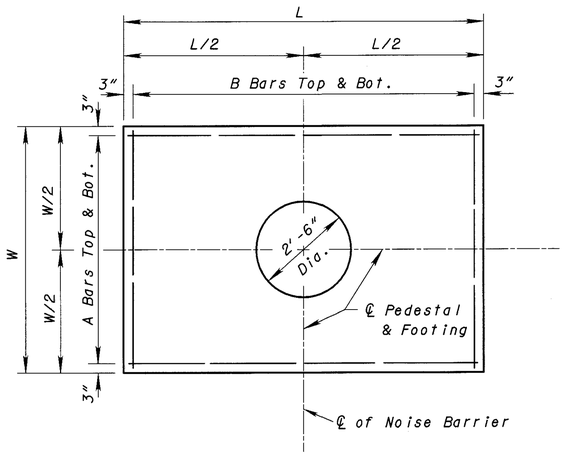
| PANEL GROUP | LENGTH L | WIDTH W | A BARS | B BARS |
|---|---|---|---|---|
| I | 7'-6" | 3'-6" | 4-#5x7'-2" Top<br>4-#6x7'-2" Bot. | 6-#5x3'-2"<br>Top & Bottom |
| II | 9'-0" | 5'-6" | 6-#5x8'-8" Top<br>6-#6x8'-8" Bot. | 7-#5x5'-2"<br>Top & Bottom |
| III | 10'-6" | 7'-6" | 7-#5x10'-2" Top<br>7-#6x10'-2" Bot. | 7-#5x7'-2"<br>Top & Bottom |
| IV | 12'-0" | 9'-6" | 9-#5x11'-8" Top<br>9-#6x11'-8" Bot. | 9-#5x9'-2"<br>Top & Bottom |

Note: Soil should be able to handle a minimum allowable bearing pressure = 1.25 tons per sq. ft.

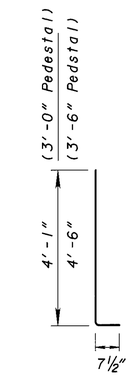
* All post and panel noise barriers shall utilize drilled shaft foundations unless otherwise indicated on the plans or directed by the Engineer.



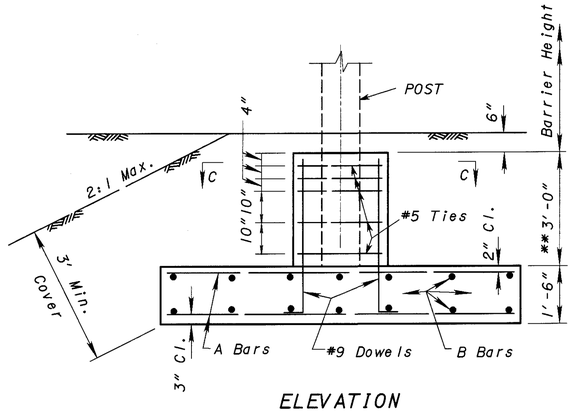

SECTION C-C




PLAN



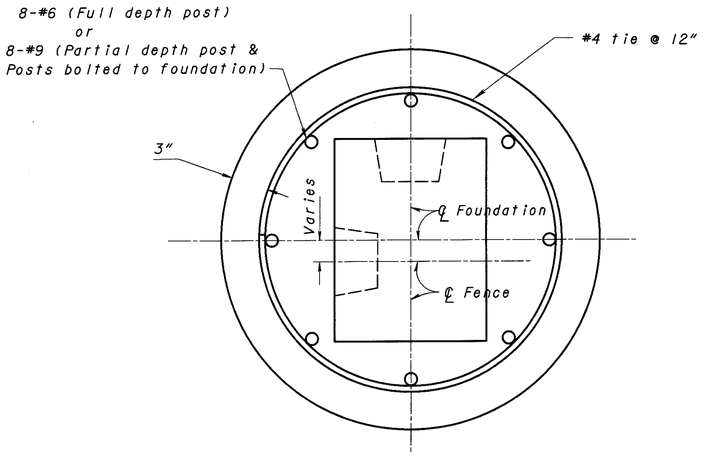

#9 DOWEL




ELEVATION

SPREAD FOOTING FOUNDATION

** 3'-6" Pedestal for all embedded posts except concrete.




TYPICAL DRILLED SHAFT CROSS-SECTION

148-9NBD

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

REVISED | DESIGNED DAP | DRAWN RRB | REVIEWED JB | DATE 11/9/99
CHECKED PS | REVISED | STRUCTURE FILE NUMBER

NOISE BARRIER DETAILS

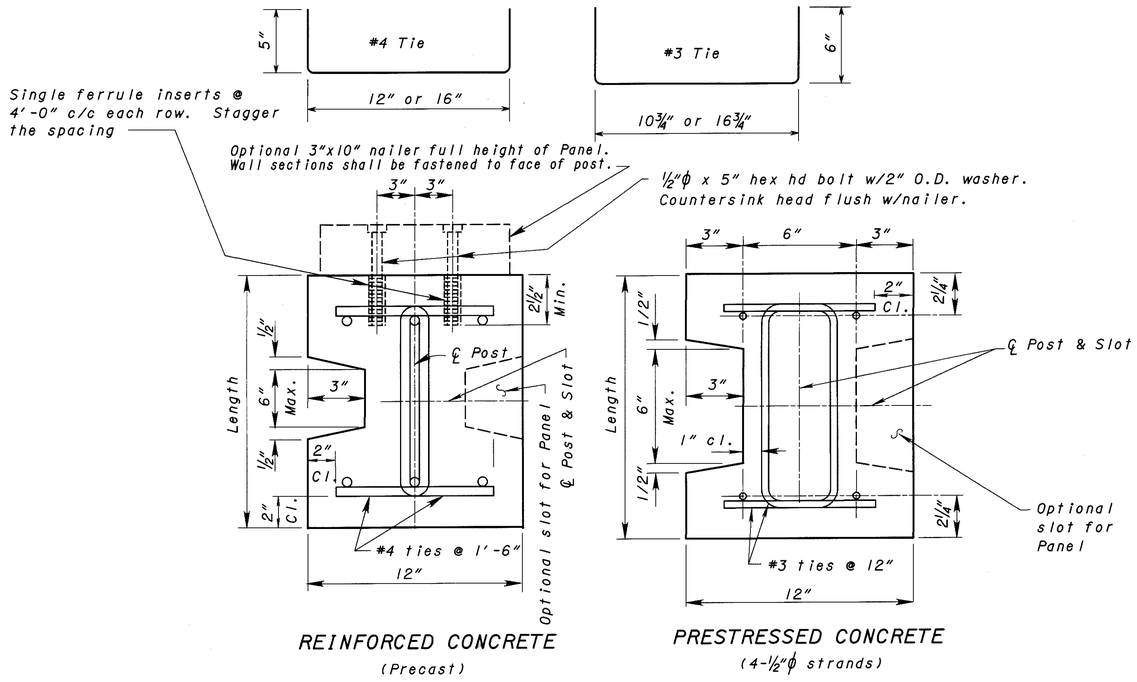
MED-71-15.78

13/16

676/940

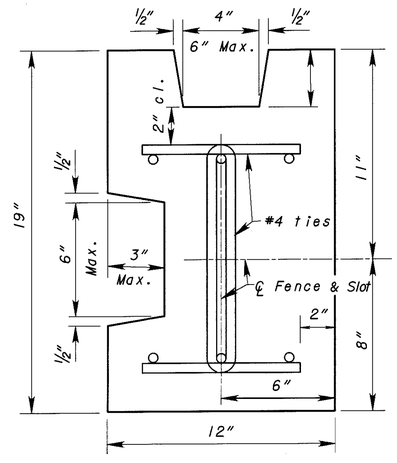
# LINE POST DETAILS

NOTE: For post sizes and concrete post reinforcement, see Noise Barrier Table on Sheet 16/16

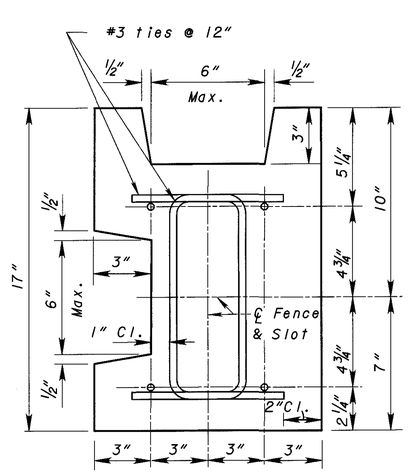



REINFORCED CONCRETE
(Precast)

PRESTRESSED CONCRETE
(4-½"ϕ strands)




REINFORCED CONCRETE
CORNER POST




PRESTRESSED CONCRETE
CORNER POST

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29 NORTH PARK STREET
MANSFIELD, OHIO 44902

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| | DAP | RRB | JB | 11/9/99 |
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| | PS | 11/18/98 | | |

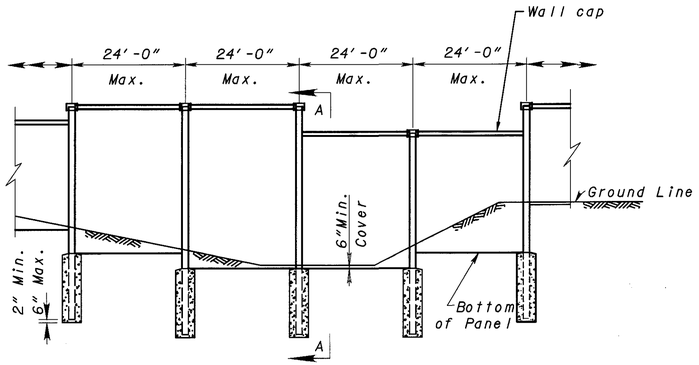
NOISE BARRIER DETAILS

MED-71-15.78

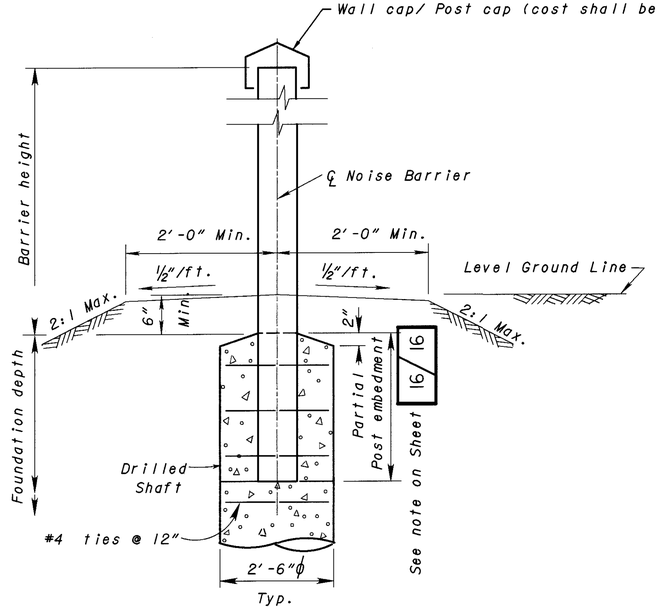
14/16

677
940

148-9NBD




FRONT ELEVATION
(Post and Panel Noise Barrier)




SECTION A-A


RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

| REVISED | DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|---|
| | DAP | RRB | JB | 11/9/99 |
| | CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| | PS | 11/18/98 | | |

NOISE BARRIER DETAILS

MED-71-15.78

15/16

678/940


148-9NBD

(1) Transverse grade slope will be as designated in the plans

(2) N = summation SP Test Values at 12 inches and 18 inches.

## NOISE BARRIER TABLE (POST AND PANEL CONSTRUCTION)

| BARRIER HEIGHT (FEET) | POST SPACING (FEET) | | | | PANEL GROUP | POST SIZE | | | SOIL TYPE | FOUNDATION DEPTH (FEET) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 8 & Under | Over 8 Thru 12 | Over 12 Thru 16 | Over 16 Thru 24 | | | | | | | | | SITE NO. 1 STA. 2+75 TO STA. 7+50 | SITE NO.2 | SITE NO. 1 STA. 7+50 TO STA. 18+75 SITE NO. 4 SITE NO. 6 |
| | | | | | | | | | TRANSVERSE GROUND SLOPE (1) | N (2) | 0-2 | 2-4 | 4-8 | 8-16 | 16-32 |
| 12 and Less | 10 and Less | 8 and Less | 6 and Less | I | Reinforced Concrete | 12"x16" | W/6 #4 | | LEVEL | 12.5 | 12.5 | 7.0 | 5.0 | 4.0 |
| | | | | | | | | | 5:1 | 13.5 | 13.5 | 7.5 | 5.0 | 4.0 |
| | | | | | | | | | 4:1 | 13.5 | 13.5 | 7.5 | 5.0 | 4.0 |
| | | | | | | | | | 3:1 | 14.0 | 14.0 | 8.0 | 5.0 | 4.0 |
| | | | | | | | | | 2:1 | 14.5 | 15.0 | 8.0 | 5.5 | 4.0 |
| | | | | | | Prestressed Concrete | 12"x14" | W/4 strands | LEVEL | 17.0 | 17.0 | 9.5 | 7.5 | 5.0 |
| | | | | | | | | | 5:1 | 18.5 | 18.5 | 10.0 | 8.0 | 5.0 |
| | | | | | | | | | 4:1 | 19.0 | 18.5 | 10.5 | 8.0 | 5.0 |
| | | | | | | | | | 3:1 | 19.5 | 19.0 | 10.5 | 8.0 | 5.0 |
| | | | | | | | | | 2:1 | 20.0 | 20.0 | 11.0 | 8.5 | 5.5 |
| Greater Than 12 Thru 16 | Greater Than 10 Thru 14 | Greater Than 8 Thru 12 | Greater Than 6 Thru 10 | II | Reinforced Concrete | 12"x16" | W/6 #6 | | LEVEL | 21.5 | 21.0 | 13.5 | 9.5 | 6.5 |
| | | | | | | | | | 5:1 | 23.0 | 23.0 | 14.5 | 10.0 | 7.0 |
| | | | | | | | | | 4:1 | 23.5 | 23.0 | 14.5 | 10.0 | 7.0 |
| | | | | | | | | | 3:1 | 25.0 | 24.0 | 15.0 | 10.5 | 7.0 |
| | | | | | | | | | 2:1 | 25.5 | 24.5 | 16.0 | 11.0 | 7.0 |
| | | | | | | Prestressed Concrete | 12"x14" | W/4 strands | LEVEL | * | * | 19.0 | 13.0 | 9.0 |
| | | | | | | | | | 5:1 | * | * | 20.5 | 14.0 | 9.0 |
| | | | | | | | | | 4:1 | * | * | 21.0 | 14.5 | 9.0 |
| | | | | | | | | | 3:1 | * | * | 22.0 | 15.0 | 9.5 |
| | | | | | | | | | 2:1 | * | * | 24.0 | 15.0 | 10.0 |
| Greater Than 16 Thru 20 | Greater Than 14 Thru 20 | Greater Than 12 Thru 16 | Greater Than 10 Thru 14 | III | Reinforced Concrete | 12"x16" | W/6 #9 | | | | | | | | |
| | | | | | | Prestressed Concrete | 12"x14" | W/4 strands | | | | | | | |
| | | Greater Than 16 Thru 20 | Greater Than 14 Thru 20 | IV | Reinforced Concrete | 12"x20" | W/6 #9 | | | | | | | | |
| | | | | | | Prestressed Concrete | 12"x20" | w/4 strands | | | | | | | |

LEGEND: (**)- Top of foundation.

NOTES:

Noise barrier height is the distance from the top of drilled shaft to the top of the higher barrier wall at that post, rounded to the nearest foot.

All posts and panel noise barriers shall utilize drilled shaft foundations unless otherwise indicated on the plans or directed by the Engineer.

If within the required length of the foundation, bedrock is encountered, the drilled shaft foundation may be terminated after 3 feet of penetration into hard bedrock or 6 feet of penetration into soft bedrock.

Embedment of posts into the drilled shafts shall not be less than 3'-6", except for concrete posts which shall be embedded not less than 3'-0".

* - not an acceptable design - select or install at a lower spacing to meet the height requirements of the wall.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

REVISED

DESIGNED DAP | DRAWN RRB | REVIEWED JB | DATE 11/9/99

CHECKED PS | REVISED 11/18/98 | STRUCTURE FILE NUMBER

NOISE BARRIER DETAILS

MED-71-15.78



148-9NBD

## INDEX OF STRUCTURE SHEETS

| | STRUCTURE SHEET NO. |
|---|---|
| COMMON STRUCTURE SHEETS<br>INDEX OF SHEET NUMBERS, COMMON STRUCTURE NOTES, TRAILING END PARAPET DETAILS, ITS CONDUIT DETAILS, METALIZING NOTES | CSS1 THRU CSS7 |
| MED-71-1685 (I-71 OVER SR18)<br>NEW STRUCTURE | 1 THRU 34 OF 34 |
| MED-71-1828 (GRANGER ROAD OVER I-71)<br>NEW STRUCTURE | 1 THRU 16 OF 16 |
| MED-71-1870 (I-71 OVER I-271)<br>NEW SUPERSTRUCTURE AND WIDENING OF EXISTING SUBSTRUCTURES | 1 THRU 39 OF 39 |
| MED-71-1918 (I-71 OVER WILBUR ROAD)<br>NEW SUPERSTRUCTURE AND WIDENING OF EXISTING SUBSTRUCTURE | 1 THRU 22 OF 22 |
| MED-71-1992 (I-71 OVER ROCKY RIVER)<br>NEW SUPERSTRUCTURE AND WIDENING OF EXISTING SUBSTRUCTURES | 1 THRU 23 OF 23 |
| MED-71-2088E (RAMP B @ SR3)<br>NEW SUPERSTRUCTURE AND WIDENING OF EXISTING ABUTMENTS, PIER ENCASEMENT | 1 THRU 16 OF 16 |
| MED-71-2090 (I-71 OVER SR3)<br>NEW SUPERSTRUCTURE AND WIDENING OF EXISTING SUBSTRUCTURES | 1 THRU 31 OF 31 |
| MED-71-2092W (RAMP C @ SR3)<br>NEW SUPERSTRUCTURE AND WIDENING OF EXISTING ABUTMENTS, PIER ENCASEMENT | 1 THRU 18 OF 18 |
| MED-71-2402 (I-71 OVER SR303)<br>NEW SUPERSTRUCTURE AND WIDENING OF EXISTING SUBSTRUCTURES | 1 THRU 46 OF 46 |
| MAINLINE OVERHEAD STRUCTURES<br>CONCRETE COLUMN PIER ENCASEMENT, PAINTING OF STRUCTURAL STEEL BEAMS AND MINOR OTHER REHABILITATION OF REMSEN ROAD, SLEEPY HOLLOW ROAD, LAUREL ROAD AND GRAFTON ROAD STRUCTURES OVER I-71 | 1 THRU 9 OF 9 |

## ITEM 507, STEEL PILES OR C.I.P. REINFORCED CONCRETE PILES

THE ESTIMATED PILE LENGTHS SHOWN IN THE PLANS ARE THE CALCULATED PILE LENGTHS BASED ON THE DESIGN LOADS. THE ORDER LENGTHS AS SHOWN IN THE ESTIMATED QUANTITIES ARE THE ESTIMATED PILE LENGTH PLUS AN ADDITIONAL LENGTH UP TO 5 FEET FOR FRICTION DESIGN PILES. FOR PILES TO BEDROCK, THE ORDER LENGTH WILL BE APPROXIMATELY THE ESTIMATED PILE LENGTH.

## ITEM 523, DYNAMIC LOAD TESTS

THIS PAY ITEM HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES FOR MED-71-2090 ONLY. THE TEST SHALL BE PERFORMED FOR STAGE 1 CONSTRUCTION. DURING STAGE 2 CONSTRUCTION AN ADDITIONAL TEST MAY BE REQUIRED IF DRIVING CONDITIONS VARY FROM STAGE 1. ALSO INCLUDED ARE ADDITIONAL HOURS THAT MAY BE USED FOR OTHER SITES WITHIN THIS PROJECT AS DIRECTED BY THE ENGINEER. IF ADDITIONAL TESTING IS NOT USED PORTION OF THIS PAY ITEM WILL BE NON-PERFORMED.

## ITEM 844, HIGH PERFORMANCE CONCRETE TESTING

THIS PAY ITEM HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES ON A SELECT NUMBER OF STRUCTURES. BASED THE CONTRACTORS OPERATIONS AND SEQUENCING OF THE CONCRETE DECK POURS, THE PROJECT ENGINEER SHALL HAVE THE OPTION TO SELECT WERE THE TESTING WILL BE PERFORMED. THE TOTAL NUMBER OF TEST PERFORMED WILL EQUAL THE NUMBER OF TIMES THIS PAY ITEM APPEARS. FOR EACH PAY ITEM A TEST WILL BE REQUIRED FOR STAGE 1 AND STAGE 2 CONSTRUCTION. IN THE PLANS FOUR SITES HAVE BEEN SELECTED (MED-71-1828,1918, 2090 & 2402). THE TESTING REQUIREMENTS OF 844.11 SHALL BE MEET FOR THIS PROJECT FOR A TOTAL OF EIGHT CONCRETE DECK POURS. ALL COSTS OF THE TESTING SHALL BE INCLUDED FOR PAYMENT UNDER THE LUMP SUM BID PRICE FOR HIGH PERFORMANCE CONCRETE TESTING BASED ON THE ABOVE PREMISE.

## ITEM 503, COFFERDAMS, CRIBS AND SHEETING

THIS PAY ITEM SHALL INCLUDED ALL WORK NECCESSARY TO CONSTRUCT THE BRIDGES PER THE PLANS. THIS SHALL INCLUDE ALL TEMPORARY SHEETING REQUIRED TO MAINTAIN TRAFFIC DURING STAGE CONSTRUCTION, APPROXIMATE LOCATION SHOWN IN THE SPECIFIC PLANS.

## MAINLINE STRUCTURES

THE ELEVATIONS ON THE SITE PLAN ARE GIVEN AT THE PROFILE GRADE. THE STATIONING IS ALONG THE CENTERLINE OF EITHER THE NORTHBOUND OR SOUTHBOUND STRUCTURES ON IR-71.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

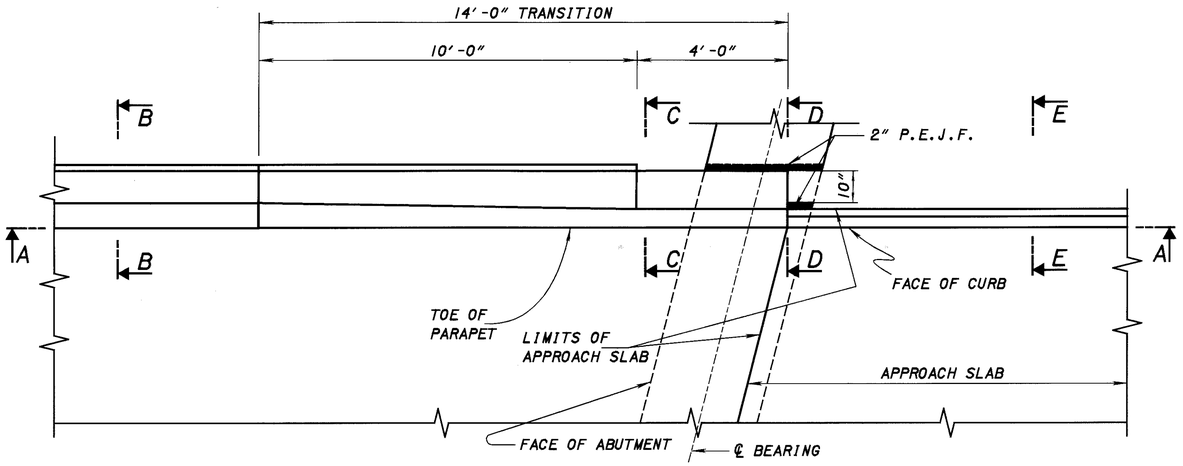
DESIGNED DFT | DRAWN BKL | REVISED TAA | DATE 10-1-99 | REVISED | STRUCTURE FILE NUMBER

COMMON STRUCTURE SHEET
INDEX SHEETS
AND COMMON NOTES

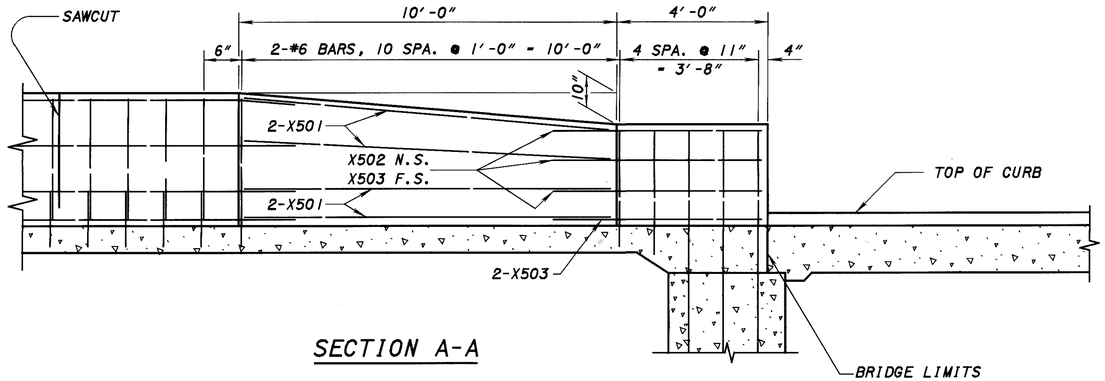
MED-71-15.78

CSS1

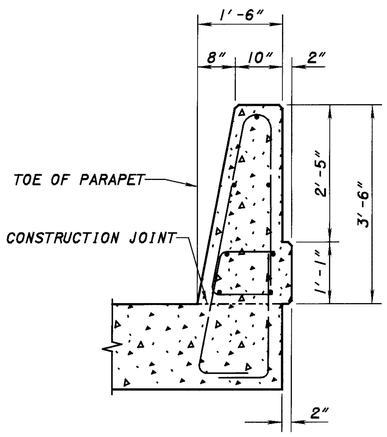
680
940




## PART PLAN AT ABUTMENT

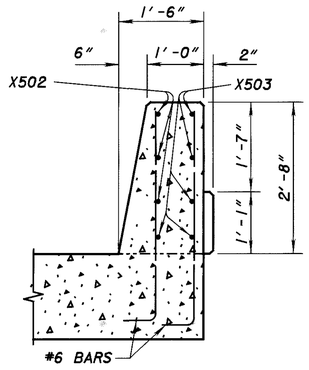



## SECTION A-A

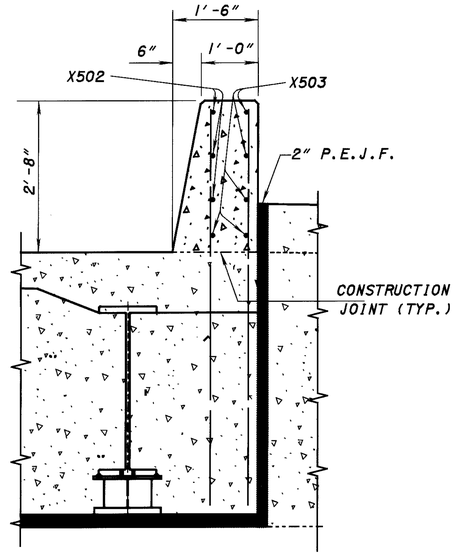



## SECTION B-B

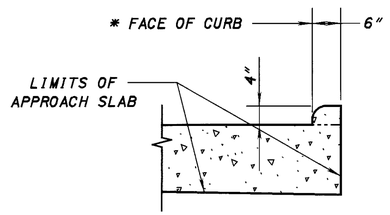
Area = 4.26 ft²




## SECTION C-C




## SECTION D-D




## SECTION E-E

## NOTES

THIS SHEET IS INTENDED TO BE USED TO SUPPLEMENT PLAN DETAILS FOR PARAPET TRANSITION AT THE TRAILING END OF THE STRUCTURE WHERE A BRIDGE TERMINAL ASSEMBLY IS NOT USED. THIS WILL OCCUR ONLY ON THE MAINLINE STRUCTURES, SEE PLAN DETAILS FOR FURTHER INFORMATION. ALL REINFORCING STEEL WILL REMAIN ESSENTIALLY THE SAME. X502 WILL NOT BE REQUIRED TO BE BENT AT THIS LOCATION PER THESE DETAILS. IN THE REINFORCING STEEL LIST FOR EACH BRIDGE X502 WILL BE LISTED AS AN X503 BAR FOR DETERMINATION OF NUMBER OF BARS PER THESE DETAILS.

**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

FOR ADDITIONAL INFORMATION ON THE CONCRETE CURB SHOWN IN SECTION E-E SEE STD. CONST. DWG. BP-5.1. THE CURB SHALL BE TYPE 4-A.

MIN. LAP SPLICES: #5 BAR = 2′-6″
#6 BAR = 3′-0″

LEGEND: N.S. = NEAR SIDE
F.S. = FAR SIDE

* THE FACE OF CURB SHALL MATCH THE SLOPE OF THE PARAPET AND TRANSITION TO TYPE 4-A WITHIN 4′-0″.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| DFT | BKL | TAA | 10-1-99 |

CHECKED — REVISED — STRUCTURE FILE NUMBER

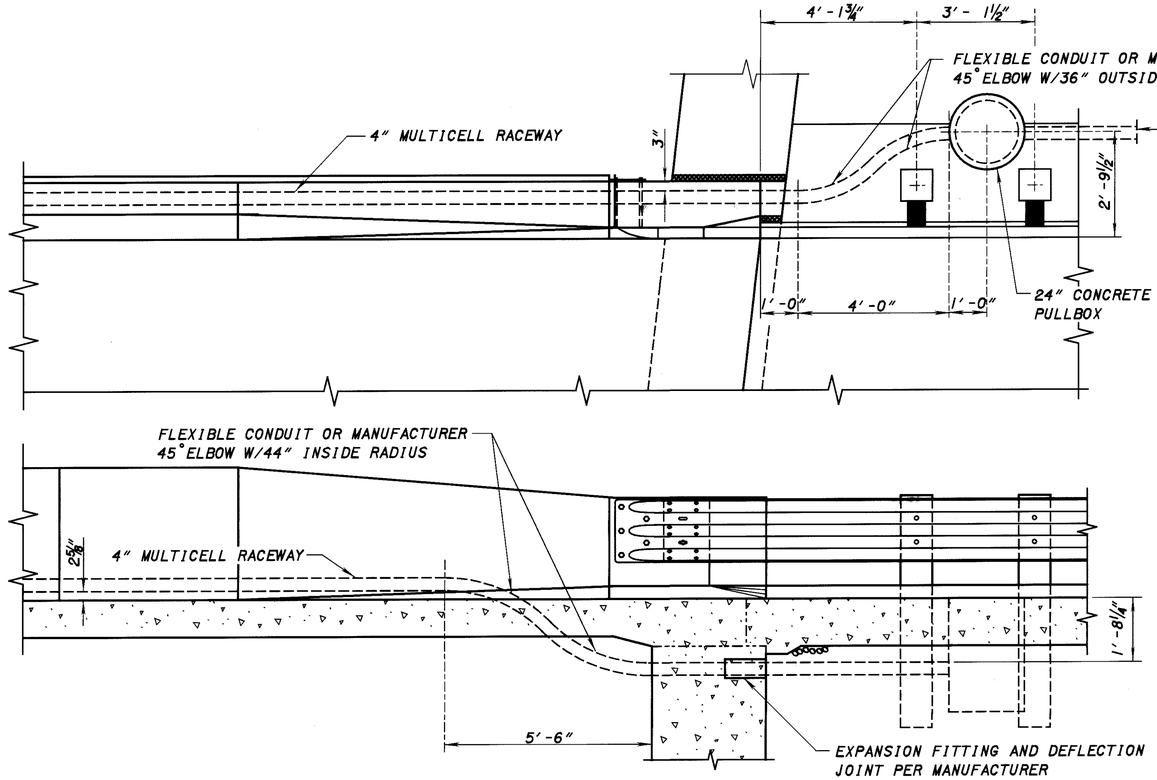
# COMMON STRUCTURE SHEET

PARAPET DETAILS AT TRAILING END

MED-71-15.78

CSS2

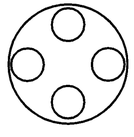
681
940




CONDUIT DETAILS FOR SEMI-INTEGRAL BRIDGE W/STRAIGHT WINGWALLS

| | 625 | 625 | | |
|---|---|---|---|---|
| | PULL BOX, CONCRETE 24", 713.08, AS PER PLAN | CONDUIT MISC: 4" MULTICELL RACEWAY | | |
| BRIDGE NO. | EACH | FEET | | |
| MED-71-1685 | 4 | 477 | | |
| MED-71-1870 | 4 | 429 | | |
| MED-71-1918 | 4 | 228 | | |
| MED-71-1992 | 4 | 464 | | |
| MED-71-2090 | 4 | 544 | | |
| MED-71-2402 | 4 | 404 | | |
| | | | | |
| | | | | |
| | | | | |
| TOTALS | 24 | 2546 | | |

QUANTITIES CARRIED TO LIGHTING GENERAL SUMMARY, SEE SHEET 609 AND 610.



CROSS-SECTION 4″ MULTICELL RACEWAY

(4 INNERDUCTS)

NOTES:

ITEM 625, CONDUIT, MISC.: 4" MULTICELL RACEWAY:

THE ITS RACEWAY SHALL CONSIST OF A FACTORY ASSEMBLED SYSTEM OF (4) INNERDUCTS WITHIN A PROTECTIVE OUTERDUCT. IN GENERAL THE OUTERDUCT SHALL BE PVC CAPABLE OF BURIAL OR CONCRETE ENCASEMENT.

THE ELBOWS, BENDS, OR FITTINGS REQUIRED FOR THE CONSTRUCTION SHALL BE STANDARD UNITS MADE BY THE RACEWAY MANUFACTURER.

THE INNERDUCTS SHALL BE NOMINAL 1", SCHEDULE 40 PVC PER 713.07 WITH A BELL INSERTION DEPTH OF 2" MINIMUM.

THE COUPLING SHALL BE DESIGNED IN A MANNER TO PERMIT EASY FIELD ASSEMBLY. THE COUPLING SHALL BE MARKED OR KEYED IN A MANNER TO ENSURE THE INNERDUCTS ARE PROPERLY ALIGNED, ANY COLOR CODES ARE CONTINUED AND THE ADJOINING SECTION IS INSERTED TO THE PROPER DEPTH IN THE BELL. ALL KEYS AND/OR MARKINGS SHALL BE VISIBLE AFTER ASSEMBLY BEFORE BURIAL. THE SEALING SYSTEM SHALL BE DESIGNED TO ASSURE AIR INTEGRITY OF EACH INDIVIDUAL INNERDUCT AND WATER INTEGRITY OF THE ENTIRE SYSTEM.

WHERE MULTICELL DUCT IS TO REMAIN EMPTY, A ¼" NYLON ROPE SHALL BE INSTALLED IN EACH EMPTY DUCT. THE ROPE WILL REMAIN TO BE USED FOR A FUTURE CABLE INSTALLATION.

THE CONDUIT SHALL BE PLACED IN THE OUTSIDE SHOULDER PARAPET FOR BOTH THE LEFT AND RIGHT STRUCTURES. FINAL INSTALLATION DETAILS WILL BE BASED ON COORDINATION WITH CONTRACTOR AND CONDUIT MANUFACTURER AND APPROVED BY THE PROJECT ENGINEER.

THE RACEWAY WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 625 - CONDUIT MISC.: 4" MULTICELL RACEWAY. THIS PRICE SHALL INCLUDE THE INCIDENTAL COST OF THE FITTINGS AND ALL OTHER ITEMS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM. AS RECOMMENDED BY THE MANUFACTURER AND APPROVED BY THE PROJECT ENGINEER.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF PRODUCTION

DESIGNED DFT | DRAWN BRC | REVISED | CHECKED

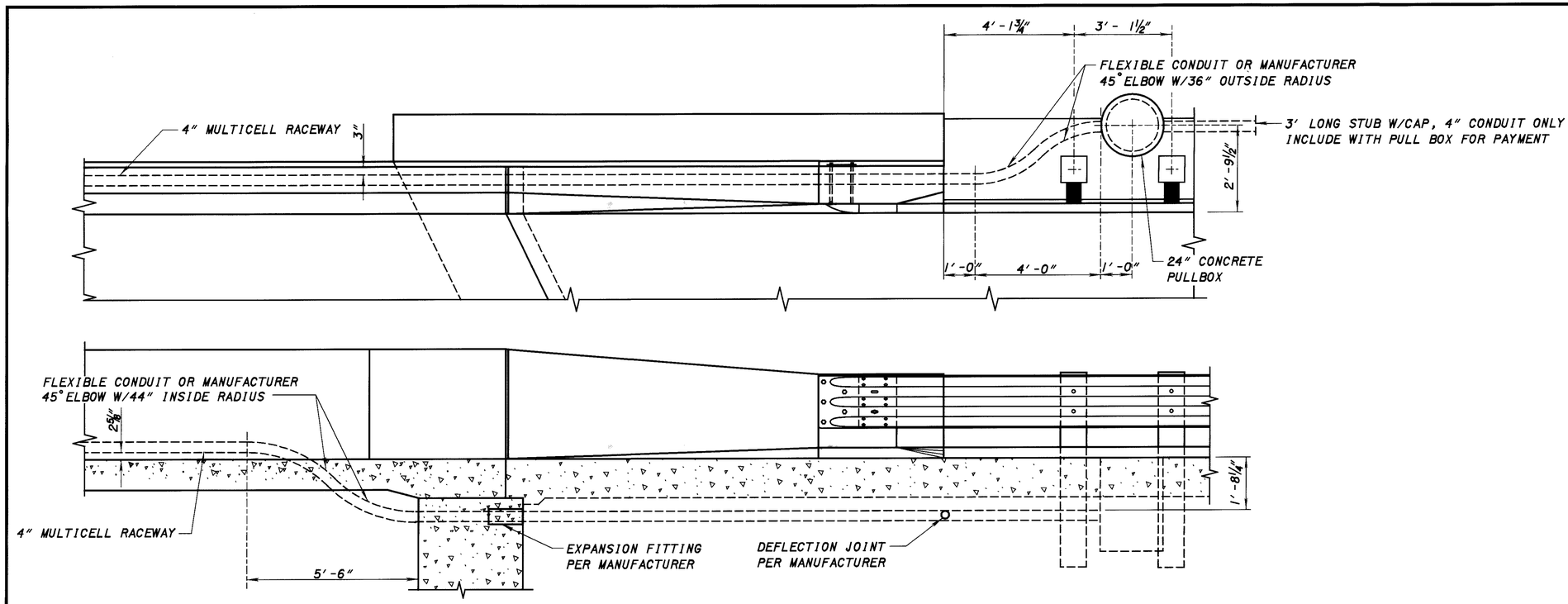
REVISED BRC | DATE 10-1-99 | STRUCTURE FILE NUMBER

COMMON STRUCTURE SHEET
ITS CONDUIT DETAILS

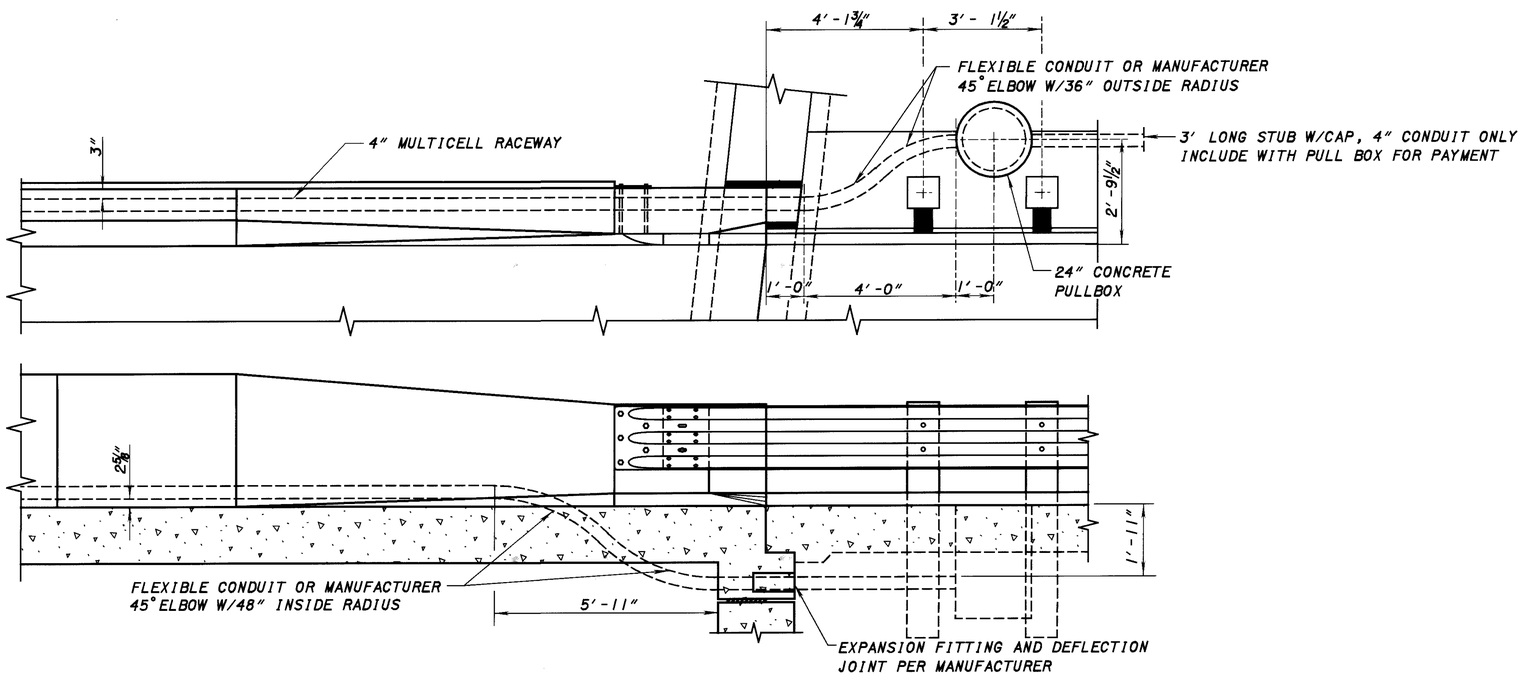
MED-71-15.78

CSS3

682
940




CONDUIT DETAILS FOR SEMI-INTEGRAL BRIDGE W/TURNBACK WINGWALLS




CONDUIT DETAILS FOR SLAB BRIDGE W/STRAIGHT WINGWALLS

DESIGN AGENCY
OHIO DEPARTMENT
OF TRANSPORTATION
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| DFT | BRC | BRC | 10-1-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |

COMMON STRUCTURE SHEET
ITS CONDUIT DETAILS

MED-71-15.78

CSS4

683
940

## ITEM 530 - STRUCTURE, MISC.: METALLIC COATING SYSTEM

### DESCRIPTION

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO CLEAN, METALIZE AND SEAL ALL STRUCTURAL STEEL SURFACES, AS SPECIFIED HEREIN. THE METALLIC COATING SYSTEM SHALL BE APPLIED IN A STRUCTURAL STEEL FABRICATION SHOP QUALIFIED PER SUPPLEMENTAL SPECIFICATION 863 WITH PERFORMANCE OF THE SYSTEM IN PERMANENT BUILDINGS PER SS 863.07.

### PRE-FABRICATION MEETING

AS PART OF THE PRE-FABRICATION MEETING REQUIRED UNDER SS 863, THE FABRICATOR AND/OR METALIZING APPLICATOR SHALL PRESENT AND DISCUSS METHODS OF OPERATION, INCLUDING REPAIRS, TO ACCOMPLISH ALL PHASES OF THE PREPARATION AND COATING WORK.

### QUALITY CONTROL

### QUALITY CONTROL SPECIALIST

THE FABRICATOR'S QCPS (QUALITY CONTROL PAINT SPECIALIST) REQUIRED UNDER SS863, SHALL BE RESPONSIBLE FOR ALL QUALITY CONTROL REQUIREMENTS OF THIS SPECIFICATION. THE QCPS SHALL HAVE THE TESTING EQUIPMENT SPECIFIED PER SS863.29.

### QUALITY CONTROL POINTS

QUALITY CONTROL POINTS (QCP) ARE POINTS IN TIME WHEN ONE PHASE OF THE WORK IS COMPLETE AND READY FOR INSPECTION BY THE QCPS AND QA INSPECTORS. THE NEXT OPERATIONAL STEP SHALL NOT PROCEED UNLESS THE QCP HAS BEEN ACCEPTED OR QA INSPECTION WAIVED BY THE QA INSPECTOR. AT THESE POINTS THE FABRICATOR SHALL AFFORD ACCESS TO INSPECT ALL AFFECTED SURFACES. IF QA INSPECTION INDICATES A DEFICIENCY, THAT PHASE OF THE WORK SHALL BE CORRECTED IN ACCORDANCE WITH THESE SPECIFICATIONS PRIOR TO BEGINNING THE NEXT PHASE OF WORK. DISCOVERY OF DEFECTIVE WORK OR MATERIAL AFTER A QUALITY CONTROL POINT IS PAST OR FAILURE OF THE FINAL PRODUCT BEFORE FINAL ACCEPTANCE, SHALL NOT IN ANY WAY PREVENT REJECTION OR OBLIGATE THE DEPARTMENT TO FINAL ACCEPTANCE.

| QUALITY CONTROL POINTS (QCP) | (PURPOSE) |
|---|---|
| 1) SOLVENT CLEANING | REMOVE ASPHALTIC CEMENT, OIL, GREASE, SALT, DIRT ETC. |
| 2) ABRASIVE BLASTING | BLASTED SURFACE TO RECEIVE METALLIC COATING, INCLUDING REPAIR OF FINS, TEARS, SLIVERS OR SHARP EDGES, PER AWS. |
| 3) METALLIC COAT APPLICATION (METALIZING) | CHECK SURFACE CLEANLINESS, APPLY METALIZING, CHECK COATING THICKNESS. |
| 4) ADHESION | CHECK ADHESION OF METALIZING. |
| 5) SEAL COAT APPLICATION | CHECK SURFACE CLEANLINESS, APPLY SEAL COAT, CHECK COATING THICKNESS. |
| 6) FIELD REVIEW | ENGINEER'S FIELD INSPECTION OF THE SYSTEM |

### SOLVENT CLEANING (QCP #1)

THE QCPS SHALL DOCUMENT AND CHECK THE PERFORMANCE OF THE SOLVENT CLEANING AND THAT DEFECTS ON EXPOSED SURFACES ARE CORRECTED PRIOR TO RELEASE TO THE METALIZING PROCESS.

### ABRASIVE BLASTING (QCP #2)

ABRASIVES SHALL ALSO BE CHECKED FOR OIL CONTAMINATION BEFORE USE. A SMALL SAMPLE OF ABRASIVES SHALL BE ADDED TO ORDINARY TAP WATER. ANY DETECTION OF A OIL FILM ON THE SURFACE OF THE WATER SHALL BE CAUSE FOR REJECTION. THE QCPS SHALL PERFORM AND RECORD THIS TEST AT THE START OF EACH SHIFT. THE QCPS SHALL RECORD THE SURFACE PROFILE WITH REPLICA TAPE ASTM D4417-93 METHOD C.

THE QCPS SHALL RECORD THE AMBIENT TEMPERATURE AND DEW POINT NO MORE THAN ONE (1) HOUR BEFORE BLASTING. ENVIRONMENTAL CONDITIONS SHALL BE MONITORED EVERY FOUR (4) HOURS DURING THE BLASTING OPERATION.

FOR <u>AUTOMATED BLASTING PROCESS</u>: FIVE (5) EACH RECORDED READINGS AT RANDOM LOCATIONS ON ONE MEMBER FOR 20% OF THE MAIN MEMBERS OR ONE (1) BEAM PER SHIFT ( WHICH EVER IS GREATER) AND ONE (1) RECORDED READING FOR 10% OF ALL SECONDARY MATERIAL.

FOR <u>MANUAL BLASTING PROCESS</u>: FIVE (5) EACH RECORDED READINGS AT RANDOM LOCATIONS FOR EACH MAIN MEMBER AND ONE (1) RECORDED READING FOR 25% OF ALL SECONDARY MATERIAL.

THE QCPS SHALL PERFORM AND RECORD THE FOLLOWING TEST TO ENSURE THAT THE COMPRESSED AIR IS NOT CONTAMINATED: BLOW AIR FROM THE NOZZLE FOR 30 SECONDS ONTO A WHITE CLOTH OR BLOTTER HELD IN A RIGID FRAME. IF ANY OIL OR OTHER CONTAMINANTS ARE PRESENT ON THE CLOTH OR BLOTTER, ABRASIVE BLASTING SHALL BE SUSPENDED UNTIL THE PROBLEM IS CORRECTED AND THE OPERATION IS VERIFIED BY A REPEATED TEST. THIS TEST SHALL BE DONE PRIOR TO BLOWING, AT THE START OF EACH SHIFT.

### METALLIC COAT APPLICATION AND THICKNESS (QCP #3)

THE QCPS SHALL RECORD THE TIME BETWEEN BLASTING AND APPLICATION OF THE METALIZING. THE QCPS SHALL RECORD THE AMBIENT TEMPERATURE AND DEW POINT NO MORE THAN ONE (1) HOUR BEFORE APPLICATION OF THE METALIZING ENVIRONMENTAL CONDITIONS SHALL BE MONITORED EVERY FOUR (4) HOURS DURING THE METALIZING OPERATION.

GAUGES SHALL BE CALIBRATED ON THE BLASTED STEEL SURFACE TO BE METALIZED. THICKNESS SHALL BE DETERMINED BY USE OF TYPE 2 MAGNETIC GAGE IN ACCORDANCE WITH THE FOLLOWING:

FIVE SEPARATE SPOT MEASUREMENTS SHALL BE MADE, SPACED EVENLY OVER EACH 100 SQUARE FEET OF METALIZED SURFACE AREA. THREE GAGE READINGS SHALL BE MADE FOR EACH SPOT MEASUREMENT. THE GAGE SHALL BE MOVED A DISTANCE OF ONE TO THREE (1 TO 3) INCHES FOR EACH NEW GAUGE READING. ANY UNUSUALLY HIGH OR LOW GAGE READING THAT CANNOT BE REPEATED CONSISTENTLY SHALL BE DISCARDED. THE AVERAGE (MEAN) OF THE THREE (3) GAGE READINGS SHALL BE USED AS THE SPOT MEASUREMENT. THE AVERAGE OF FIVE (5) SPOT MEASUREMENTS FOR EACH SUCH 100 SQUARE FEET AREA SHALL NOT BE LESS THAT THE SPECIFIED THICKNESS. NO SINGLE SPOT MEASUREMENT IN ANY 100 SQUARE FEET AREA SHALL BE LESS THAN 80% OF THE SPECIFIED MINIMUM THICKNESS. ANY ONE OF THREE (3) READINGS WHICH ARE AVERAGED TO PRODUCE EACH SPOT MEASUREMENT, MAY UNDER-RUN BY A GREATER AMOUNT. THE FIVE (5) SPOT MEASUREMENTS SHALL BE MADE FOR EACH 100 SQUARE FEET OF AREA.

### ADHESION (QCP #4)

BEFORE SEALING, THE QCPS SHALL TEST FOR ADHESION IN ACCORDANCE WITH ASTM D 4541. THE QCPS SHALL PERFORM FIVE (5) TESTS AT RANDOM LOCATIONS SELECTED BY THE QA INSPECTOR ON THE FIRST MAIN MEMBER, INCLUDING SPLICE PLATES. THEREAFTER, TEN PERCENT (10%) OF THE MAIN MATERIAL SHALL BE TESTED IN THE SAME MANNER. FIVE PERCENT (5%) OF ALL SECONDARY MATERIAL SHALL BE TESTED AT A RATE OF ONE (1) ADHESION TEST. THE MINIMUM ACCEPTABLE ADHESION SHALL BE 1000 PSI.

### SEAL COAT APPLICATION AND THICKNESS (QCP #5)

THE QCPS SHALL RECORD THE STORAGE TEMPERATURE, LOT AND STOCK NUMBERS, AND DATE OF MANUFACTURE OF THE SEALANT.

THE QCPS SHALL DOCUMENT THAT ALL SPRAY EQUIPMENT USED FOLLOWS THE SEALER MANUFACTURER'S EQUIPMENT RECOMMENDATIONS. EQUIPMENT SHALL BE SUITABLE FOR USE WITH THE SPECIFIED SEALER TO AVOID SEALER APPLICATION PROBLEMS.

THE QCPS SHALL RECORD THE TIME BETWEEN METALIZING AND SEAL COAT APPLICATION. THE QCPS SHALL RECORD THE AMBIENT TEMPERATURE AND HUMIDITY NO MORE THAN ONE (1) HOUR BEFORE APPLICATION OF THE SEAL COAT. ENVIRONMENTAL CONDITIONS SHALL BE MONITORED EVERY FOUR (4) HOURS DURING THE SEALING OPERATION.

THE SAME TEST FOR ABRASIVE BLASTING AIR CONTAMINATION SHALL BE MADE BY THE SEALER APPLICATOR AND VERIFIED BY THE QCPS TO ENSURE THAT THE TRAPS OR SEPARATORS ARE WORKING PROPERLY. THIS IS NOT REQUIRED FOR AN AIRLESS SPRAYER.

THE SEALANT THICKNESS SHALL BE VISUALLY VERIFIED BY THE QCPS SUCH THAT ALL PEAKS AND VALLEYS ARE COVERED AND THAT THE SEALED SURFACE IS WITHOUT SURFACE ROUGHNESS ATTRIBUTED TO THE METALIZING. PINHOLING SHALL BE AVOIDED BY METHOD OF APPLICATION.

### FIELD REVIEW (QCP #6)

THE ENGINEER SHALL VISUALLY INSPECT THE METALIZING TO ESTABLISH THAT FIELD WELDED AND DAMAGED AREAS ARE REPAIRED AS PER THIS SPECIFICATION.

### PROCEDURAL OPTIONS

THESE SPECIFICATIONS GOVERN THE MINIMUM ACCEPTABLE APPLICATION OF THE METALIZED COATING SYSTEM. THE APPLICATOR MAY PROPOSE VARIATIONS FROM THE SPECIFICATION, SUCH AS BLAST PROFILE, BLAST MEDIUM, TIME BETWEEN OPERATIONS AND THICKNESS OF METALIZING PASSES. THE PROPOSAL SHALL BE ACCOMPANIED BY THE QUALIFICATION TEST PLATES REQUIRED UNDER "QUALIFICATIONS FOR METALIZING APPLICATORS". THESE TESTS SHALL BE COMPARED TO QUALIFICATION TEST PLATES PRODUCED ACCORDING TO THIS SPECIFICATION. THE OFFICE OF STRUCTURAL ENGINEERING SHALL DETERMINE IF THE PROPOSAL IS ACCEPTABLE.


DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
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| OSE | | JDR | 10-01-99 |

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REVISED
STRUCTURE FILE NUMBER

COMMON STRUCTURE SHEET
METALIZING NOTES

MED-71-15.78

CSS5

684
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## ITEM 530 - STRUCTURE, MISC.: METALLIC COATING SYSTEM CONTINUED

**QUALIFICATIONS FOR METALIZING APPLICATORS**

**EQUIPMENT AND OPERATOR QUALIFICATIONS:**

EACH EQUIPMENT OPERATOR SHALL DEMONSTRATE THE ABILITY TO SET UP AND OPERATE THE METALIZING AND SEALING EQUIPMENT THAT WILL BE USED. THIS PROOF OF QUALITY SHALL BE DEMONSTRATED WITH THE INTENDED FEEDSTOCK AND SEALANT MATERIALS.

THE QCPS SHALL RECORD THAT EACH SPRAY OPERATOR DEMONSTRATED TO THE QCPS THE ABILITY TO APPLY THE SEALER AS PREVIOUSLY SPECIFIED. ANY OPERATOR WHO DOES NOT DEMONSTRATE THIS ABILITY SHALL NOT SPRAY.

**ADHESION**

IN THE PRESENCE OF THE QCPS AND QA INSPECTORS, THE APPLICATOR SHALL PREPARE AND METALIZE, AS SPECIFIED, A 3" x 12" x 1/8" COUPON OF ASTM A606 OR A588, GRADE 50 STEEL. THIS COUPON SHALL BE USED FOR THE ADHESION TEST PER ASTM D4541. IF THE TEST FAILS, IT SHALL BE REPEATED USING A NEW TEST PLATE. IF THE TEST FAILS ON THE SECOND PLATE, THE EQUIPMENT AND WORK SHALL BE DEEMED UNACCEPTABLE. NO METALIZING WORK SHALL BE PERFORMED PRIOR TO THE ACCEPTANCE OF THE ADHESION TEST COUPON BY THE OSE.

**BEND TEST**

IN THE PRESENCE OF THE QCPS AND QA INSPECTORS, THE APPLICATOR SHALL PREPARE AND METALIZE, AS SPECIFIED, A 3" x 12" x 1/8" COUPON OF A606 OR A588, GRADE 50 STEEL. ONCE COATED, THE COUPONS SHALL BE COLD BENT 180 DEGREES AROUND A 1/2 INCH DIAMETER MANDREL. THE METALIZING SHALL BE ON THE OUTSIDE OF THE COUPON. NO DELAMINATION OF THE COATING IS PERMITTED. CRACKING OF THE COATING IS PERMITTED, PROVIDED THE COATING ADHERES TO THE COUPON. THE COATING SHALL ADHERE TO THE FACE OF THE COUPON. THE BEND TEST FAILS IF THE COATING CAN BE PICKED OFF WITH A KNIFE BLADE. NO METALIZING WORK SHALL BE PERFORMED PRIOR TO THE ACCEPTANCE OF THE BEND TEST COUPON BY THE OSE.

**SURFACE PREPARATION**

ALL FABRICATION PER SS863 SHALL BE COMPLETE PRIOR TO SURFACE PREPARATION. PAYMENT OF SS863 FABRICATION MAY BE ACCEPTED PRIOR TO METALIZING.

**SOLVENT CLEANING :**

THE STEEL SHALL BE SOLVENT CLEANED WERE NECESSARY TO REMOVE ALL TRACES OF ASPHALTIC CEMENT, OIL, GREASE, DIESEL FUEL DEPOSITS, AND OTHER SOLUBLE CONTAMINANTS PER SSPC-SP 1. UNDER NO CIRCUMSTANCES SHALL ANY ABRASIVE BLASTING BE DONE TO AREAS WITH ASPHALTIC CEMENT, OIL, GREASE, OR DIESEL FUEL DEPOSITS. THE STEEL SHALL BE ALLOWED TO DRY BEFORE BLAST CLEANING BEGINS.

**REMOVAL OF SURFACE DEFECTS:**

ALL FINS, TEARS, SLIVERS AND BURRED OR SHARP EDGES THAT APPEAR AFTER THE BLASTING OPERATION SHALL BE CONDITIONED PER ASTM A6 AND THE AREA RE-BLASTED TO PROVIDE THE SPECIFIED SURFACE PROFILE.

**ABRASIVE BLAST CLEANING:**

ALL STRUCTURAL STEEL SURFACES SHALL BE BLAST CLEANED ACCORDING TO SSPC-SP5. THE APPEARANCE OF THE BLAST-CLEANED SURFACE SHALL CLOSELY APPROXIMATE THE PICTORIAL STANDARDS OF SSPC-VIS 1-89. STEEL SHALL BE MAINTAINED IN A BLAST CLEANED CONDITION UNTIL IT HAS RECEIVED A METALLIC COATING.

ANY ABRASIVE BLASTING WHICH IS DONE WHEN THE STEEL TEMPERATURE IS LESS THAN 5° F ABOVE THE DEW POINT SHALL BE RE-BLASTED WHEN THE STEEL TEMPERATURE IS AT LEAST 5° F ABOVE THE DEW POINT.

THE ABRASIVE SHALL BE GRIT PRODUCING A MINIMUM ANGULAR SURFACE PROFILE OF THREE (3) MILS. IF RECYCLABLE GRIT IS USED, IT SHALL BE CLEANED OF PAINT CHIPS, RUST, MILL SCALE AND OTHER FOREIGN MATERIAL BY EQUIPMENT SPECIFICALLY DESIGNED FOR SUCH CLEANING.

ALL ABRASIVES AND RESIDUE SHALL BE REMOVED FROM ALL SURFACES TO BE METALIZED WITH A VACUUM CLEANER EQUIPPED WITH A BRUSH-TYPE CLEANING TOOL, OR BY DOUBLE BLOWING.

ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES SHALL HAVE A 1/16 INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE. PRIOR TO BLASTING, THERMALLY CUT MATERIAL SHALL HAVE THE SIDES GROUND AS NECESSARY TO REMOVE THE HARDENED EDGES.

**APPLICATION OF METALLIC COATING (METALIZING)**

**STEEL SURFACE**

THE METALIZING SHALL COAT ALL SURFACES. PRIOR TO APPLICATION OF THE METALLIC COATING, THE STEEL SURFACE TO BE METALIZED SHALL MEET THE REQUIREMENTS UNDER "SURFACE PREPARATION". THE METALIZING SHALL NOT BE APPLIED TO A SURFACE WHICH SHOWS ANY SIGN OF SURFACE MOISTURE. THERMAL SPRAYING SHALL NOT BE PERFORMED WHEN THE STEEL TEMPERATURE IS LESS THAN 5° F ABOVE THE DEW POINT. THE MINIMUM APPLICATION SURFACE TEMPERATURE SHALL BE ZERO DEGREES (0°) FAHRENHEIT.

IF COMBUSTION FLAME SPRAY EQUIPMENT IS USED, THE INITIAL STARTING ONE TO TWO (1 TO 2) SQUARE FEET SURFACE AREA OF ANY METALIZING PASS SHALL BE PREHEATED TO APPROXIMATELY 250° FAHRENHEIT. THE METALIZING OPERATION PROGRESSION SHALL BE SUCH THAT THIS PREHEAT IS MAINTAINED.

**EQUIPMENT AND TECHNIQUES:**

THE METALIZING MAY BE APPLIED USING EITHER COMBUSTION FLAME SPRAYING EQUIPMENT OR BY ELECTRIC ARC SPRAYING EQUIPMENT OPERATED IN ACCORDANCE WITH THE MANUFACTURER'S LATEST WRITTEN INSTRUCTIONS, INCLUDING BUT NOT LIMITED TO AIR PRESSURE AND GUN ANGLE RELATIVE TO THE WORK SURFACE.

THERMAL SPRAY OPERATORS SHALL APPLY THE METALIZING IN A MANNER THAT PROMOTES UNIFORM COVERAGE AND PREVENTS DISCONTINUITY OF THE APPLIED COATING. SPRAYING SHALL BE PERFORMED IN A BLOCK PATTERN, TYPICALLY TWO (2) SQUARE FEET. THE METALIZING SHALL OVERLAP FIFTY PERCENT (50%) ON EACH PASS TO ENSURE UNIFORM COVERAGE. THE REQUIRED COATING THICKNESS SHALL BE OBTAINED IN MULTIPLE LAYERS. EACH LAYER SHALL BE APPLIED AT RIGHT ANGLES TO THE PREVIOUS LAYER. SPRAYING DISTANCE SHOULD BE BETWEEN SIX TO EIGHT (6 TO 8) INCHES FROM THE WORK SURFACE TO ENSURE THE METAL IS PLASTIC ON IMPACT. ANY DEFECTS SHALL BE IMMEDIATELY CORRECTED.

STARTUP AND ADJUSTMENT OF THERMAL SPRAY EQUIPMENT SHALL BE DONE OFF THE SURFACE BEING METALIZED.

THE METALIZING SHALL COAT ALL SURFACES. METALIZING IN THE VICINITY OF PREVIOUSLY COATED (METALIZED, SEALED OR OTHER) SURFACES SHALL BE CONDUCTED IN A MANNER THAT PREVENTS MOLTEN METAL FROM STRIKING THE COATING AND OTHERWISE MINIMIZES COATING DAMAGE. COATINGS DAMAGED BY METALIZING OPERATIONS SHALL BE REPAIRED IN ACCORDANCE WITH THIS SPECIFICATION.

**METALIZING THICKNESS**

THE METALIZING SHALL BE APPLIED TO A MINIMUM THICKNESS OF TWELVE (12) MILS. IN GENERAL, ANY PASS SHALL NOT DEPOSIT MORE THAN FOUR (4) MILS. THE TOP OF THE TOP FLANGE SHALL RECEIVE A COAT NOT LESS THAN 0.5 MILS NOR MORE THAN 1.5 MILS.

THE FIRST PASS OF METALIZING SHALL BE COMPLETED WITHIN TWELVE (12) HOURS OF BLASTING, BEFORE FLASH RUST OR DETERIORATION OF THE STEEL FROM THE SPECIFIED SURFACE CLEANLINESS. THE TIME BETWEEN ADDITIONAL METALIZING PASSES SHALL BE NO MORE THAN SIX (6) HOURS.

**METALIZING WIRE:**

PURE ZINC (99.99%) METALIZING WIRE SHALL BE USED, POWDER MATERIAL WILL NOT BE ACCEPTED. THE WIRE USED FOR METALIZING SHALL BE IN ACCORDANCE WITH ASTM B833. THE WIRE MANUFACTURER SHALL PROVIDE CERTIFIED TEST DATA PER SS863.09.

**SYSTEM IDENTIFICATION**

THE COMPLETION DATE (MONTH AND YEAR) OF THE METALLIC COATING SYSTEM AND THE LETTERS MZA OR MZF SHALL BE STENCILED ON THE STEEL IN FOUR (4) INCH LETTERS WITH A BLACK URETHANE PAINT. THE TYPE OF THERMAL SPRAYING EQUIPMENT IS REPRESENTED BY AN "A" FOR ELECTRIC ARC OR A "F" FOR COMBUSTION FLAME. THIS DATE SHALL BE APPLIED AT FOUR (4) LOCATIONS NEAR THE END OF EACH OUTSIDE BEAM ON THE OUTSIDE WEB VISIBLE FROM THE ROAD OR AS DIRECTED BY THE OSE.

**SEALER APPLICATION**

**GENERAL:**

THE AREAS OF STRUCTURAL STEEL THAT ARE EMBEDDED IN, PARTIALLY EMBEDDED IN, OR IN CONTACT WITH CAST-IN-PLACE CONCRETE SHALL BE SEALED (E.G, TOP AND SIDES OF TOP FLANGE). WHEN THE STRUCTURE IS AN INTEGRAL ABUTMENT, ALL METALIZED SURFACES FROM THE END OF THE BEAM TO ONE (1) FOOT PAST THE ABUTMENT INTERFACE SHALL BE SEALED.

SEALER SHALL NOT BE APPLIED WHEN THE METALIZING STEEL SURFACE TEMPERATURE IS LESS THAN 5° F ABOVE THE DEW POINT. THE SURFACES TO BE SEALED SHALL BE DRY. SEALERS SHALL NOT BE APPLIED IN RAIN, SNOW, FOG OR MIST, OR TO FROSTED OR ICE-COATED SURFACES. THE AMBIENT AND SURFACE TEMPERATURES SHALL BE PER THE SEALER MANUFACTURER'S RECOMMENDATIONS.

**HANDLING OF SEALER**

ALL SEALER SHALL BE DELIVERED TO THE FABRICATOR IN ORIGINAL, UNOPENED CONTAINERS WITH LABELS INTACT. MINOR DAMAGE TO CONTAINERS IS ACCEPTABLE PROVIDED THE CONTAINER HAS NOT BEEN PUNCTURED.

SEALER SHALL BE STORED AT THE TEMPERATURE RECOMMENDED BY THE MANUFACTURER TO PREVENT SEALER DETERIORATION.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| OSE | | JDR | 10-01-99 |

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COMMON STRUCTURE SHEET
METALIZING NOTES

MED-7 1-15.78

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## ITEM 530 - STRUCTURE, MISC.: METALLIC COATING SYSTEM CONTINUED

ALL CONTAINERS OF SEALER SHALL REMAIN UNOPENED UNTIL USE. THE LABEL INFORMATION SHALL BE LEGIBLE AND CHECKED AT THE TIME OF USE. SOLVENT USED FOR CLEANING EQUIPMENT IS EXEMPT FROM THE ABOVE REQUIREMENTS.

EACH CONTAINER OF SEALER SHALL BE CLEARLY MARKED OR LABELED TO SHOW SEALER IDENTIFICATION, COMPONENT, LOT NUMBER, STOCK NUMBER, DATE OF MANUFACTURE, AND INFORMATION AND WARNINGS AS MAY BE REQUIRED BY FEDERAL AND STATE LAWS.

SEALER WHICH HAS LIVERED, GELLED OR OTHERWISE DETERIORATED DURING STORAGE SHALL NOT BE USED. THE OLDEST SEALER OF EACH KIND SHALL BE USED FIRST. NO SEALER SHALL BE USED WHICH HAS SURPASSED ITS SHELF LIFE.

THE APPLICATOR SHALL PROVIDE THERMOMETERS CAPABLE OF MONITORING THE MAXIMUM HIGH AND LOW TEMPERATURES WITHIN THE STORAGE FACILITY. THE APPLICATOR IS RESPONSIBLE FOR PROPERLY DISPOSING OF ALL UNUSED SEALER AND SEALER CONTAINERS

**EQUIPMENT AND TECHNIQUES**

SEALERS SHALL BE APPLIED BY SPRAY METHODS. SPRAY EQUIPMENT SHALL BE KEPT CLEAN SO DIRT, DRIED SEALER AND OTHER FOREIGN MATERIALS ARE NOT DEPOSITED IN THE SEALER FILM. ANY SOLVENT LEFT IN THE EQUIPMENT SHALL BE COMPLETELY REMOVED BEFORE USING.

IF AIR SPRAY IS USED, TRAPS OR SEPARATORS SHALL BE PROVIDED TO REMOVE OIL AND CONDENSED WATER FROM THE AIR. THE TRAPS OR SEPARATORS MUST BE OF ADEQUATE SIZE AND MUST BE DRAINED PERIODICALLY DURING OPERATIONS.

THE SEALANT THICKNESS SHALL BE VISUALLY VERIFIED SUCH THAT ALL PEAKS AND VALLEYS ARE COVERED AND THAT THE SEALED SURFACE IS WITHOUT SURFACE ROUGHNESS ATTRIBUTED TO THE METALIZING. PINHOLING SHALL BE AVOIDED BY METHOD OF APPLICATION.

THE APPLICATOR SHALL TAKE PRECAUTION TO PREVENT CONTAMINATION OF SURFACES THAT HAVE BEEN PREPARED FOR SEALING AND SURFACES FRESHLY SEALED. THE SEALER SHALL BE APPLIED NO MORE THAN EIGHT (8) HOURS OF THE COMPLETION OF THE METALIZING.

THE SEALER SHALL BE APPLIED IN THE SHOP. THE STEEL SHALL NOT BE HANDLED UNNECESSARILY OR REMOVED FROM THE SHOP UNTIL THE SEALER HAS DRIED SUFFICIENTLY TO RESIST BEING MARRED IN HANDLING AND SHIPPING.

**TYPE OF SEALER**

AN AIR DRIED CLEAR PHENOLIC, EITHER "METALLIZING SEALER #9876" OR "9127", MANUFACTURED BY KEELER AND LONG (PPG)P.O. BOX 460, WATERTOWN CT 06795, OR "METCO AP" MANUFACTURED BY METCO, OR EQUAL TO METCO AP MANUFACTURED BY AKRON PAINT & VARNISH, OR OTHER APPROVED EQUAL.

**HANDLING, SHIPPING, FIELD WELDING OR OTHER SURFACE DEFECTS**

SPECIFIED AREAS OF FIELD WELDING, OTHER THAN STUD WELDING, SHALL REQUIRE THE REMOVAL OF THE METALIZED COATING BY GRINDING OR OTHER METHODS ACCEPTABLE TO THE ENGINEER.

SMALL AREAS OF METALIZING TOTALING LESS THAN ONE (1) SQUARE FOOT PER MAIN MEMBER THAT ARE REMOVED, MARRED, DAMAGED, OR REJECTED SHALL BE REPAIRED ACCORDING TO ASTM A780 ANNEX 1. LARGER AREAS OF METALIZING SHALL BE REPAIRED BY REMOVAL AND REPLACEMENT OF THE DAMAGED AREA AS SPECIFIED HEREIN. AT THE COMPLETION OF CONSTRUCTION, THE METALIZED COATING SHALL BE UNDAMAGED AND THE SURFACES FREE FROM GREASE, OIL, CHALK MARKS, PAINT, CONCRETE SPLATTER OR OTHER SILAGE.

THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THIS METALLIC COATING SYSTEM. REQUIRED REPAIRS WILL BE AT NO ADDITIONAL COMPENSATION.

**METHOD OF MEASUREMENT**

THE LUMP SUM PRICE BID SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE WORK. ALL STRUCTURAL STEEL TO BE PAID FOR UNDER ITEM 863 SHALL BE METALIZED.

**BASIS OF PAYMENT**

PAYMENT WILL BE MADE AT CONTRACT PRICES FOR:

| ITEM | UNIT | DESCRIPTION |
|---|---|---|
| 530 | LUMP SUM | STRUCTURE MISC.: METALLIC COATING SYSTEM |

MED-71-2402 L&R (I-71 OVER S.R. 303) SHALL BE METALIZED, SEE PLAN DETAILS.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
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| OSE | | JDR | 10-01-99 |
| CHECKED | REVISED | | STRUCTURE FILE NUMBER |
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COMMON STRUCTURE SHEET
METALIZING NOTES

MED-71-15.78

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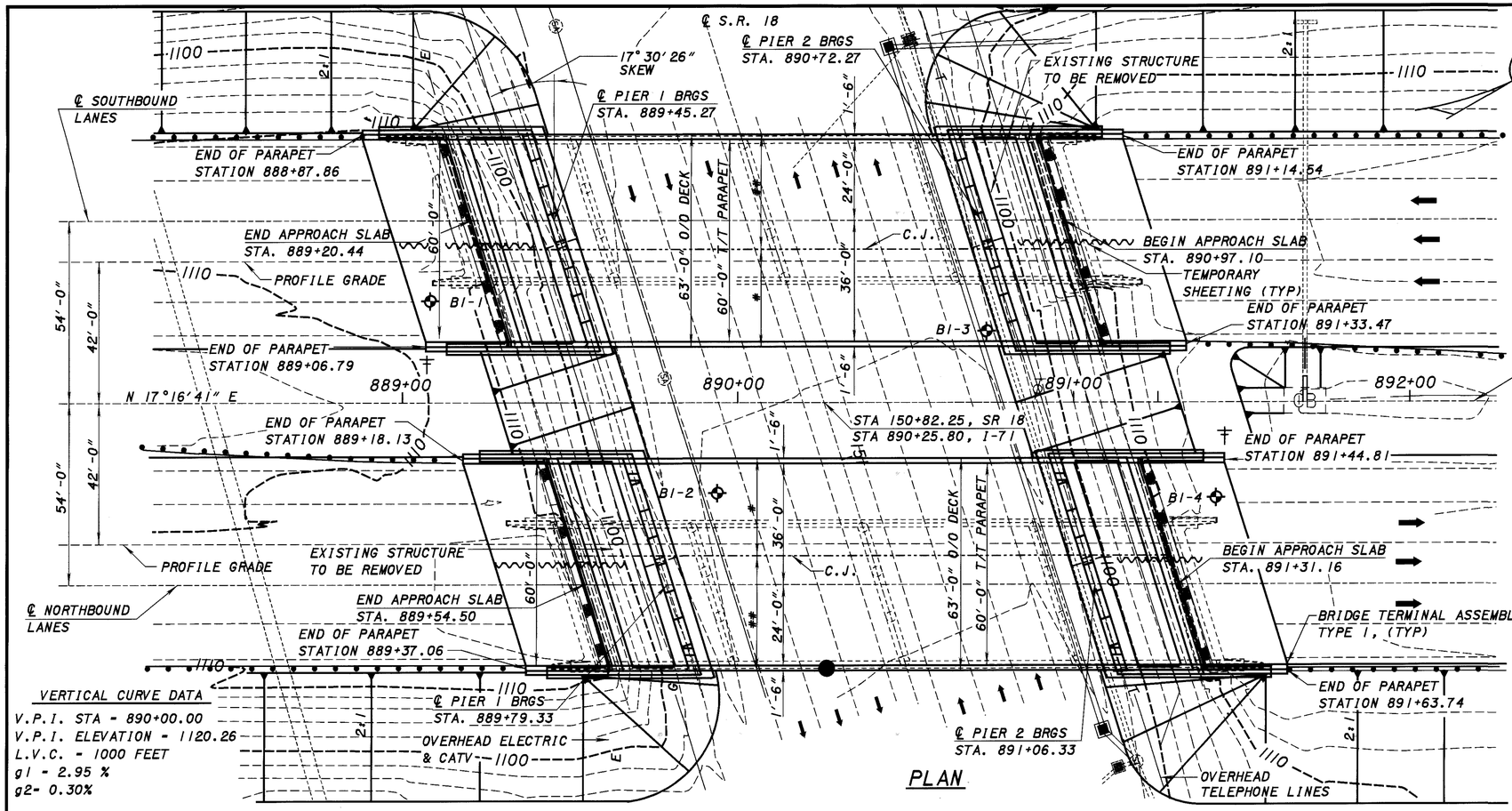
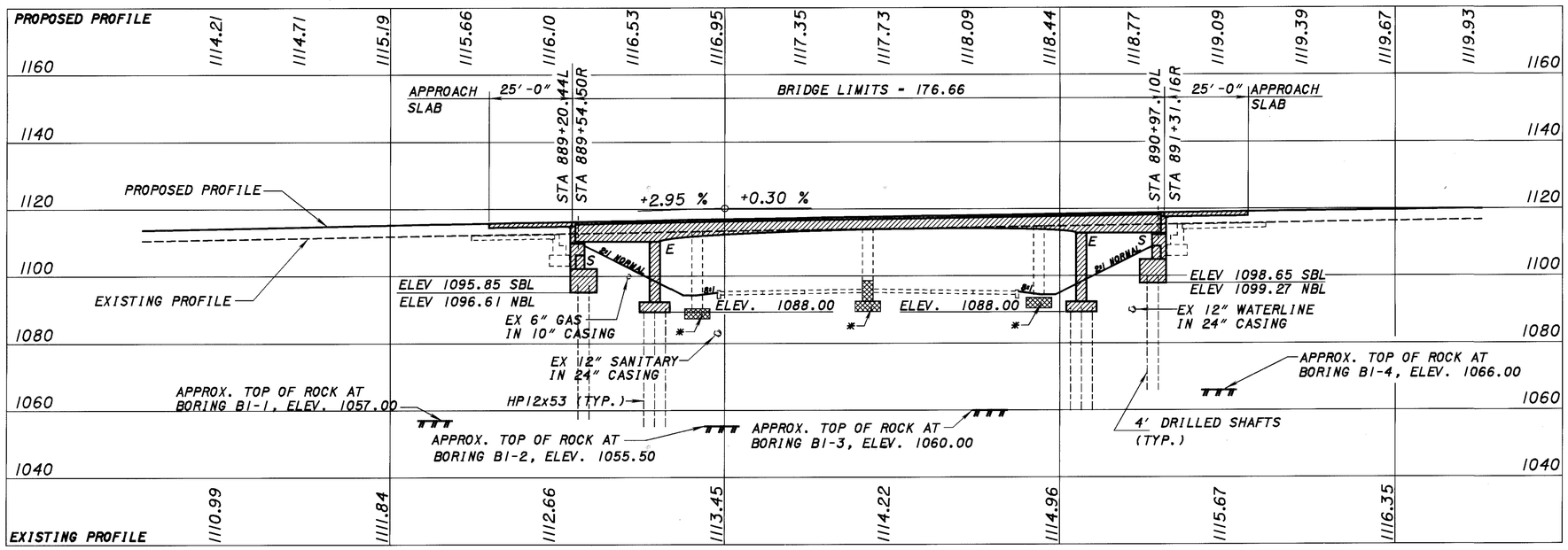



## PLAN

### VERTICAL CURVE DATA

V.P.I. STA = 890+00.00
V.P.I. ELEVATION = 1120.26
L.V.C. = 1000 FEET
g1 = 2.95 %
g2= 0.30%




E - EXPANSION
S - SEMI-INTEGRAL (EXPANSION BEARING)

## PROFILE

(ALONG ℄ NB SHOWN, SB PROFILE SIMILAR)

* NOTE: PORTIONS OF SUBSTRUCTURE UNITS TO REMAIN, SEE SHEET 8 / 34 FOR FURTHER DETAILS.

## NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

PILES ARE HP12x53 FOR THE ABUTMENT WINGWALLS AND PIERS. THE ESTIMATED PAY LENGTHS ARE:

REAR ABUTMENT WINGWALLS - 40 FEET
PIER 1 AND PIER 2 - 35 AND 30 FEET
FORWARD ABUTMENT WINGWALLS - 40 FEET

### DESIGN TRAFFIC

2000 ADT - 34900 2000 ADTT - 7678
2020 ADT - 49130 2020 ADTT - 10809

## BENCHMARK DATA

BM #1 - STATION 922+51.07 ELEVATION - 1135.48
ODOT DISC IN HEADWALL, STAMPED

* - STAGE 1 CONSTRUCTION - 29'-0"
** - STAGE 2 CONSTRUCTION - 34'-0"
● 16'-10" REQUIRED MINIMUM VERTICAL CLEARANCE (16'-6" PLUS 4" FOR FUTURE SR 18 WORK)
17'-1" ACTUAL MINIMUM VERTICAL CLEARANCE (CLEARANCES ARE TO EXISTING ROADWAY)
† NO BRIDGE TERMINAL ASSEMBLY, SEE CSS2 FOR ADDITIONAL DETAILS.

## EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.

SPANS:
S.B.L.: 40'-0"±, 51'-0"±, 51'-0"±, 40'-0"± C/C BRGS.
N.B.L.: 40'-0"±, 51'-0"±, 51'-0"±, 40'-0"± C/C BRGS.

ROADWAY: 42'-0"± F/F OF PARAPETS

LOADING: CF 2000 (57) AND A.A.S.H.O. ALTERNATIVE LOADING

SKEW: 17°30'30"± (R.F.)

WEARING SURFACE: CONCRETE

APPROACH SLABS: 25'-0" LONG AS-1-54

ALIGNMENT: TANGENT

CROWN: 3/16" PER FOOT

DATE BUILT: 1957

SFN: 5203570 L / 5203600 R

## PROPOSED STRUCTURE

TYPE: END ANCHORED CONTINUOUS A572 STEEL COMPOSITE HAUNCHED GIRDER WITH REINFORCED CONCRETE DECK ON REINFORCED CONCRETE SUBSTRUCTURES.

SPANS:
S.B.L.: 23'-0", 127'-0", 23'-0" C/C BRGS.
N.B.L.: 23'-0", 127'-0", 23'-0" C/C BRGS.

ROADWAY: 60'-0" TOE/TOE OF PARAPETS

LOADING: HS 20-44 (CASE 1) AND ALTERNATE MILITARY LOADING

SKEW: 17°30'26" (R.F.)

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0", LONG AS-1-81, 60'-0" TOE/TOE PARAPET

ALIGNMENT: TANGENT

SUPERELEVATION: 0.018 FT/FT

LONGITUDE: 81°47'40" LATITUDE 41°08'14"

DESIGN AGENCY: ODOT CENTRAL OFFICE / OFFICE OF PRODUCTION
DESIGNED: TAA
DRAWN: TAA
REVIEWED: BRC
CHECKED: DFT
REVISED:
DATE: 12-10-99
STRUCTURE FILE NUMBER: 5203589L/5203619R

MEDINA COUNTY
STA. 889+20.44L
STA. 890+97.10L
MEDINA COUNTY
STA. 889+54.50R
STA. 891+31.16R

SITE PLAN
MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

1 / 34

687 / 940

| | | MED-71-1685 L | MED-71-1685 R | | ESTIMATED QUANTITIES | MED-71-1685 L | | | | MED-71-1685 R | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM | EXTENSION | TOTAL | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS | SUPER. | GEN. | ABUT. | PIERS | SUPER. | GEN. |
| 202 | 11203 | LUMP | LUMP | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | LUMP | LUMP | LUMP | | LUMP | LUMP | LUMP | |
| | | | | | | | | | | | | | |
| 503 | 11101 | LUMP | LUMP | | COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN | | | | LUMP | | | | LUMP |
| 503 | 21301 | LUMP | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LUMP | LUMP | | | LUMP | LUMP | | |
| | | | | | | | | | | | | | |
| 505 | 11100 | LUMP | LUMP | | PILE DRIVING EQUIPMENT MOBILIZATION | | | | LUMP | | | | LUMP |
| | | | | | | | | | | | | | |
| 507 | 00200 | 3641 | 3641 | LF | STEEL PILES HP12X53, FURNISHED | 1190 | 2451 | | | 1190 | 2451 | | |
| 507 | 00250 | 3641 | 3641 | LF | STEEL PILES HP12X53, DRIVEN | 1190 | 2451 | | | 1190 | 2451 | | |
| 507 | 50500 | 49 | 49 | EACH | STEEL PILE SPLICES | 14 | 35 | | | 14 | 35 | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 512 | 44400 | 9 | 9 | SY | TYPE B WATERPROOFING | 9 | | | | 9 | | | |
| | | | | | | | | | | | | | |
| SPECIAL | 51267200 | 45 | 45 | SY | WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING | 45 | | | | 45 | | | |
| SPECIAL | 51267510 | 1540 | 1540 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 410 | 468 | 662 | | 410 | 468 | 662 | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 516 | 13200 | 613 | 613 | SF | 1/2" PREFORMED EXPANSION JOINT FILLER | 522 | 70 | 21 | | 522 | 70 | 21 | |
| 516 | 44100 | 16 | 16 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | 16 | | | | 16 | | | |
| | | | | | (NEOPRENE) (15"x20"x2 1/4" PAD AND 16"x21"x1 1/2" PLATE) | | | | | | | | |
| 516 | 44100 | 16 | 16 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | | 16 | | | | 16 | | |
| | | | | | (NEOPRENE), (16"x24"x2 1/4" PAD AND 17"x25"x 2" PLATE) | | | | | | | | |
| | | | | | | | | | | | | | |
| 518 | 21231 | LUMP | LUMP | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | | | | LUMP | | | |
| 518 | 40000 | 132 | 132 | LF | 6" PERFORATED CORRUGATED PLASTIC PIPE | 132 | | | | 132 | | | |
| 518 | 40010 | 140 | 140 | LF | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 140 | | | | 140 | | | |
| | | | | | | | | | | | | | |
| 524 | 94902 | 640 | 640 | LF | DRILLED SHAFTS, 48" DIAMETER, ABOVE BEDROCK | 640 | | | | 640 | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 601 | 21000 | 173 | 173 | SY | CONCRETE SLOPE PROTECTION | | | | 173 | | | | 173 |
| 607 | 98200 | LUMP | LUMP | | FENCE, MISC.: SCREEN FENCE | | | | LUMP | | | | LUMP |
| 816 | 00600 | LUMP | LUMP | | FIELD PAINTING NEW STEEL, INTERMEDIATE AND FINISH COAT, SYSTEM IZEU | | | LUMP | | | | LUMP | |
| | | | | | | | | | | | | | |
| 842 | 40501 | 288 | 288 | CY | CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN | | 288 | | | | 288 | | |
| 842 | 44101 | 283 | 283 | CY | CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN | 283 | | | | 283 | | | |
| 842 | 46501 | 398 | 398 | CY | CLASS C CONCRETE, FOOTING, AS PER PLAN | 251 | 147 | | | 251 | 147 | | |
| | | | | | | | | | | | | | |
| 844 | 48001 | 313 | 313 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK), AS PER PLAN, MIX 4 | | | 313 | | | | 313 | |
| 844 | 48021 | 71 | 71 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET), AS PER PLAN, MIX 4 * | | | 71 | | | | 71 | |
| 844 | 48041 | 34 | 34 | CY | HIGH PERFORMANCE CONCRETE SUBSTRUCTURE, AS PER PLAN, MIX 4 | 34 | | | | 34 | | | |
| 844 | 49000 | LUMP | LUMP | | HIGH PERFORMANCE CONCRETE TRIAL MIX | | | LUMP | | | | LUMP | |
| | | | | | | | | | | | | | |
| 863 | 10100 | LUMP | LUMP | | STRUCTURAL STEEL MEMBERS, LEVEL FIVE (5) FABRICATION | | | LUMP | | | | LUMP | |
| 863 | 20000 | 2928 | 2928 | EACH | WELDED STUD SHEAR CONNECTORS | 192 | | 2736 | | 192 | | 2736 | |
| 863 | 95020 | LUMP | LUMP | | STRUCTURAL STEEL, MISC. : TIE DOWN DEVICES | LUMP | | | | LUMP | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

* PARAPET ON THE APPROACH SLAB IS INCLUDED WITH THIS ITEM

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT DATE 12-10-99
STRUCTURE FILE NUMBER 5203589L/5203619R

DRAWN TAA REVISED

DESIGNED TAA CHECKED RJH

ESTIMATED QUANTITIES
MED-71-1685 L/R
I-71 OVER SR18

MED-71-15.78

# GENERAL NOTES

**STANDARD DRAWINGS AND SPECIFICATIONS:**

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

| | |
|---|---|
| AS-1-81 | REVISED 09-15-94 |
| SBR-1-99 | DATED 01-12-99 |
| PCB-1-91 | REVISED 07-06-99 |
| GSD-1-96 | DATED 02-12-97 |
| MH-1.1M | DATED 10-21-97 |

AND TO SUPPLEMENTAL SPECIFICATIONS:

| | |
|---|---|
| 816 | DATED 04-21-97 |
| 842 | DATED 01-06-99 |
| 844 | DATED 01-06-99 |
| 863 | DATED 10-12-99 |
| 899 | DATED 10-21-98 |
| 910 | DATED 07-28-98 |
| 911 | DATED 07-10-97 |
| 954 | DATED 09-09-97 |

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997 AND 1998 INTERIM SPECIFICATIONS AND THE ODOT DESIGN MANUAL.

**DESIGN LOADING:**

HS20-44, CASE I AND THE ALTERNATE MILITARY LOADING.

**DESIGN DATA:**

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

ITEM 842 CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60 Ksi. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

STRUCTURAL STEEL - A572 - YIELD STRENGTH 50 Ksi

**DECK PROTECTION METHOD** - EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER AND HIGH PERFORMANCE CONCRETE.

**MONOLITHIC WEARING SURFACE** IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

**EXISTING BRIDGE PLANS** MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT THREE OFFICE IN ASHLAND, OHIO.

**ITEM 202 PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN:**

PORTION OF THE STRUCTURE REMOVED, AS PER PLAN, SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. SEE SHEET 8/34 FOR PLAN DETAILS.

**PROTECTION OF TRAFFIC:**

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN , ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE ENGINEER FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER.

PAYMENT

ALL WORK SHALL BE PAID FOR UNDER ITEM 202 PORTIONS OF STRUCTURES REMOVED, AS PER PLAN

**TRAFFIC MAINTENANCE:**

SEE ROADWAY PLANS FOR ADDITIONAL TRAFFIC NOTES AND DETAILS.

**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)**

EPOXY-URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722 AS PER THE DETAILS IN THE PLAN.

**ITEM SPECIAL - WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING**

INSTALL A 3 FOOT WIDE STRIP, 3/32 INCH THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 3 FOOT WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X 3/32" (LENGTH X SHANK DIAMETER) #10 GALVANIZED BUTTON HEAD SPIKE THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS, AT 6 INCHES CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS WHERE THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST ONE FOOT IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32 INCH THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

| DESCRIPTION OF TEST | ASTM METHOD | REQUIREMENT |
|---|---|---|
| THICKNESS, INCHES | D 751 | 0.094 ± .01 |
| BREAKING STRENGTH,GRAB WXF, LBS, MINIMUM | D 751 | 700 X 700 |
| ADHESIVE 1" STRIP, 2" MINIMUM, LBS,MINIMUM | D 751 | 9 |
| BURST STRENGTH (MULLEN) PSI, MINIMUM | D 751 | 1400 |
| HEAT AGING 70 HOURS T 212 F, 180 BEND WITHOUT CRACKING | D 2136 | NO CRACKING OF COATING |
| LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40 F, BEND AROUND ¼ INCH MANDREL | D 2136 | NO CRACKING OF COATING |

PAYMENT FOR LABOR MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN INTEM SPECIAL- WATERPROOFING, MISC. : SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING.

**PAINTING OF 863 STEEL**

THE COLOR OF THE FINISH COAT SHALL BE A LIGHT GRAY COLOR MEETING FEDERAL STANDARD NUMBER 16440. IN ADDITION TO THE STEEL STRINGER TO BE PAINTED INCIDENTALS SUCH AS CROSSFRAMES AND BEARINGS SHALL BE INCLUDED FOR PAYMENT.

**ITS CONDUIT**

THE CONDUIT SHALL BE PLACED WITHIN THE OUTSIDE PARAPET OF L & R STRUCTURES. SEE CSS3 & CSS4 FOR DETAILS.

**ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:**

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 6" LIFTS. EXCAVATION AT ABUTMENTS IN ADDITION TO THAT NECESSARY TO REMOVE PORTION OF THE EXISTING STRUCTURE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION FOR PAYMENT.

**ITEM 842 CLASS C CONCRETE, (FOOTINGS, PIERS AND ABUTMENTS) AS PER PLAN**

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITEM 844 HIGH PERFORMANCE CONCRETE, AS PER PLAN**

THE DESIGN MIX SHALL BE MIX NO. 4 LIMESTONE. THE OPTION OF SLIPFORM CONSTRUCTION OF THE BRIDGE PARAPET IS NOT PERMITTED. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**REINFORCING STEEL:**

NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED UNDER ITEM 844 HIGH PERFORMANCE CONCRETE.

**ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN**

POROUS BACKFILL SHALL BE #57 GRAVEL ONLY.

**PILES DRIVEN TO BEDROCK:**

PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK. REFUSAL SHALL BE CONSIDERED AS OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES WITH A MINIMUM RESISTANCE OF 20 BLOWS PER INCH OR REFUSAL SHALL BE CONSIDERED AS OBTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECEIVED AT LEAST 20 BLOWS.

THE DESIGN LOAD IS 40 TONS PER PILE FOR THE ABUTMENT WINGWALL PILES AND 60 TONS PER PILE FOR THE PIER PILES.

**863 STRUCTURAL STEEL MISC.: TIE DOWN DEVICES**

**DESCRIPTION:** THIS ITEM SHALL CONSIST OF FURNISHING ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO INSTALL ALL THREADBARS, NUTS, WASHERS, GREASE AND ALL OTHER MATERIAL NECESSARY TO INSTALL THE TIE-DOWN DEVICE AS SHOWN ON THE PLANS AND AS SPECIFIED HEREIN.

**MATERIALS:** THE THREADBARS AND NUTS SHALL BE AASHTO M275-79 (TYPE II) OR ASTM A722. THE NUTS AND WASHERS SHALL BE GALVANIZED PER 711.02. THE STANDARD PIPE SHALL CONFORM TO ASTM A501, BE GALVANIZED AND BE INCLUDED WITH STRUCTRUAL STEEL FOR PAYMENT. THE GREASE PACKED INSIDETHE STANDARD PIPE SHALL MEET TRADE SPECIFICATIONS FOR WHEEL BEARING GREASE. THREADED BARS SHALL BE EPOXY COATED PER ASTM A755.

**CONSTRUCTION REQUIREMENTS:** THE THREADBARS AT EACH GIRDER END SHALL BE INITIALLY TIGHTENED TO A SNUG TIGHT CONDITION AT THE TIME OF GIRDER ERECTION PRIOR TO RELEASING CRANE SUPPORT. AT THE CONTRACTOR'S OPTION AN ALTERNATE HOLD-DOWN SUPPORT METHOD MAY BE USED AT THE ABUTMENTS DURING STEEL ERECTION UNTIL THE PERMINANT TIE-DOWN DEVICES ARE INSTALLED. ALL THREADBARS AT EACH GIRDER END SHALL BE TENSIONED SIMULTANEOUSLY IN ACCORDANCE WITH THE THREADBAR MANUFACTURER'S RECOMMENDATIONS SO AS NOT TO OVERSTRESS THE STRUCTURAL STEEL AND ELASTOMERIC BEARINGS. AFTER THE THREADBARS HAVE BEEN TENTSIONED TO FINAL STRESS, ANY DAMAGED GALVANIZING ON THE ASSOCIATED HARDWARE SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780. GREASE SHALL THEN BE PUMPED INTO THE STANDARD PIPES THROUGH A FLEXIBLE HOSE. COMMENCING AT THE BOTTOM AND PROGRESSIVELY RAISED IN MANNER TO FILL THE CAVITY COMPLETELY TO THE TOP OF THE PIPE.

BASIS OF PAYMENT, THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, LUMP SUM (CONSISTING OF FOUR THREADBARS AND ASSOCIATED HARDWARE) WHICH PRICE SHALL INCLUDED ALL COSTS FOR PERFORMING THE WORK AS SHOWN ON THE PLANS AND AS SPECIFIED HEREIN.

**ERECTION OF STRUCTURAL STEEL:** ERECTION OF THE STRUCTURAL STEEL WILL REQUIRE INITIAL SNUG TIGHT INSTALLATION OF THE TIE DOWN DEVICES AT ABUTMENTS IN ADDITION TO SECURING NECESSARY LATERAL BRACING PRIOR TO RELEASING CRANE SUPPORT. THE CONTRACTOR MAY SUBMIT TO THE ENGINEER FOR APPROVAL, AN ALTERNATE METHOD OF PROVIDING TEMPORARY TIE DOWN SUPPORT DURING ERECTION. THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL CONSTRUCTION PLANS IN ACCORDANCE WITH 501.06. TO FACILITATE ERECTION AND INSTALLATION OF FIELD SECTIONS. THE CONTRACTOR MAY SUBMIT FOR APPROVAL PLANS TO PROVIDE TEMPORARY FALSE WORK INCLUDING PROPOSED PROTECTION AND MAINTENANCE OF TRAFFIC ON SR18.

**SURVEY DISC ON STRUCTURE:**

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

| REVIEWED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|
| JFF | 12-10-99 | 5203589L/5203619R |

| DRAWN | REVISED |
|---|---|
| JFF | |

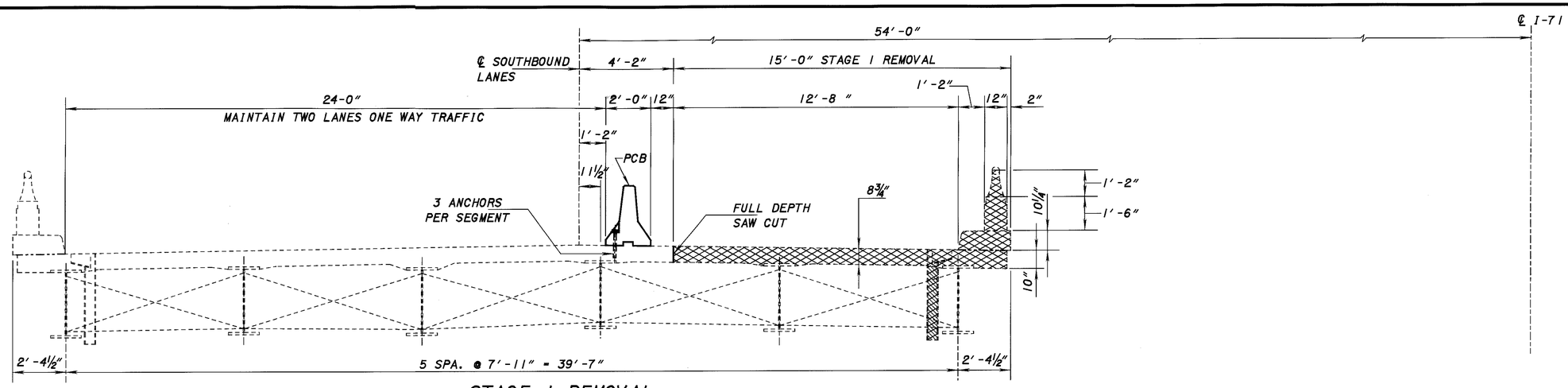
| DESIGNED | CHECKED |
|---|---|
| TAA | DFT |

GENERAL NOTES
MED-71-1685 L/R
I-71 OVER SR18

MED-71-15.78

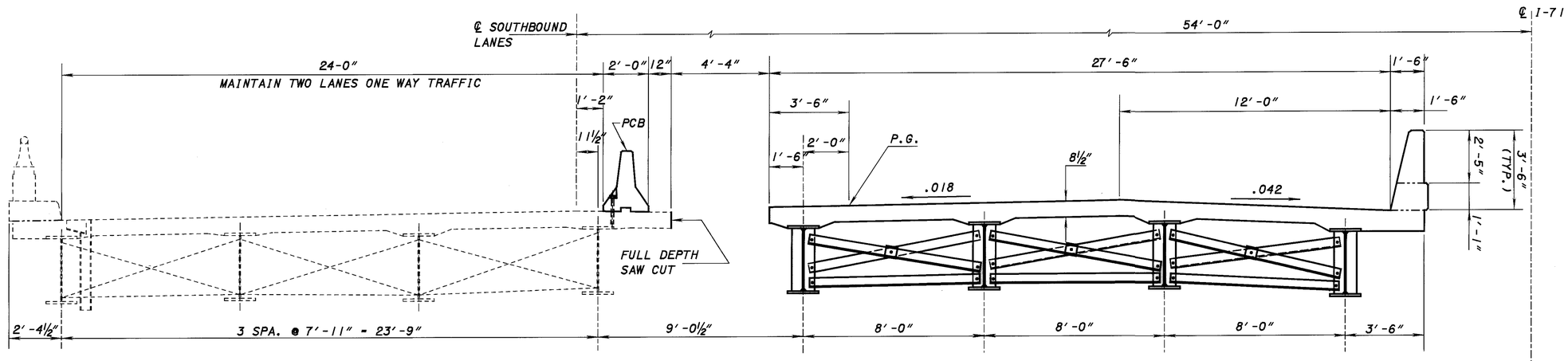
3/34

689/940



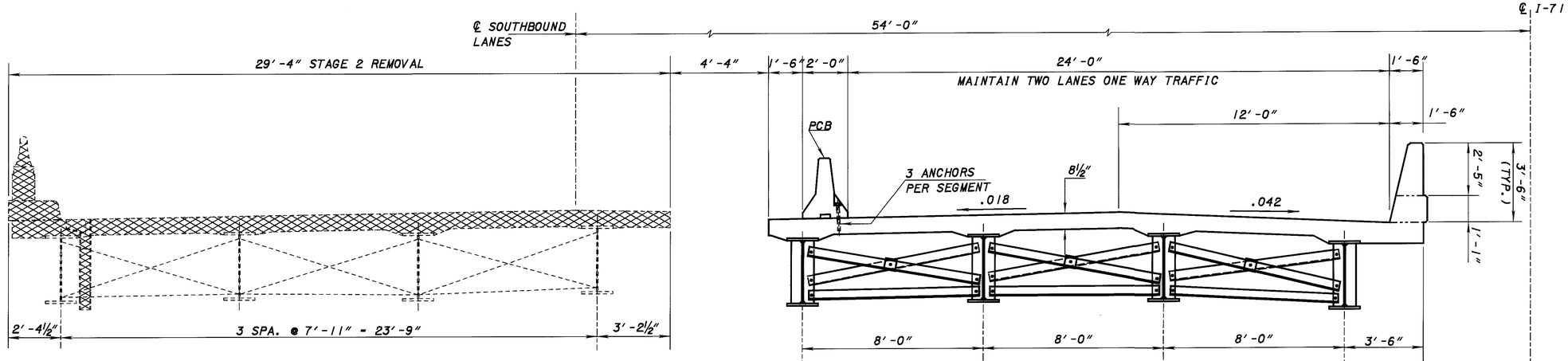

## STAGE I REMOVAL

(SOUTHBOUND LANES SHOWN)




## STAGE I CONSTRUCTION

(SOUTHBOUND LANES SHOWN)




## STAGE 2 REMOVAL

(SOUTHBOUND LANES SHOWN)

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT
DATE 12-10-99
STRUCTURE FILE NUMBER 5203589L/5203619R

DRAWN BKL
REVISED

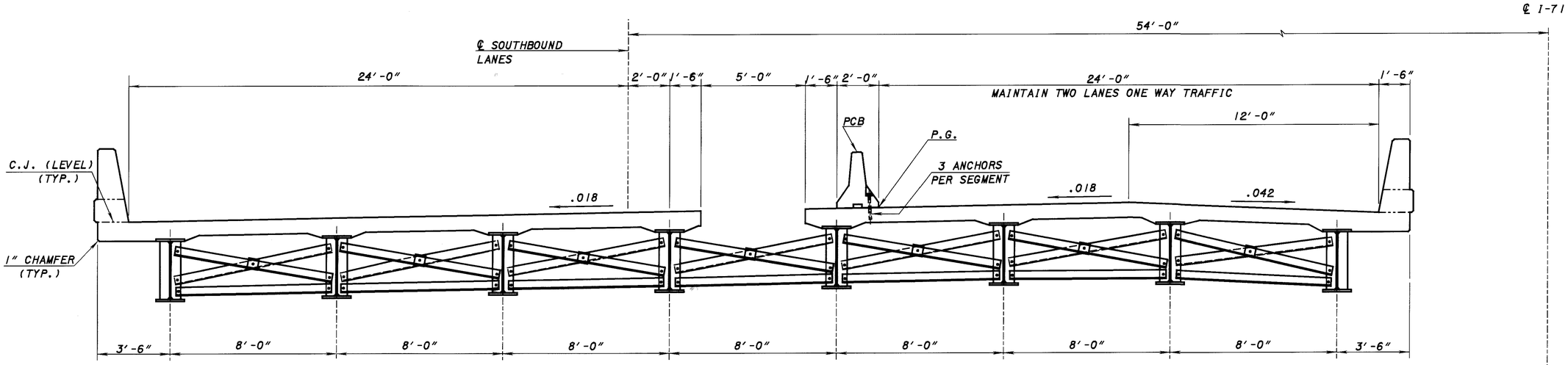
DESIGNED BKL
CHECKED TAA

STAGE CONSTRUCTION DETAILS
MED-71-1685 L
I-71 OVER S.R. 18

MED-71-15.78

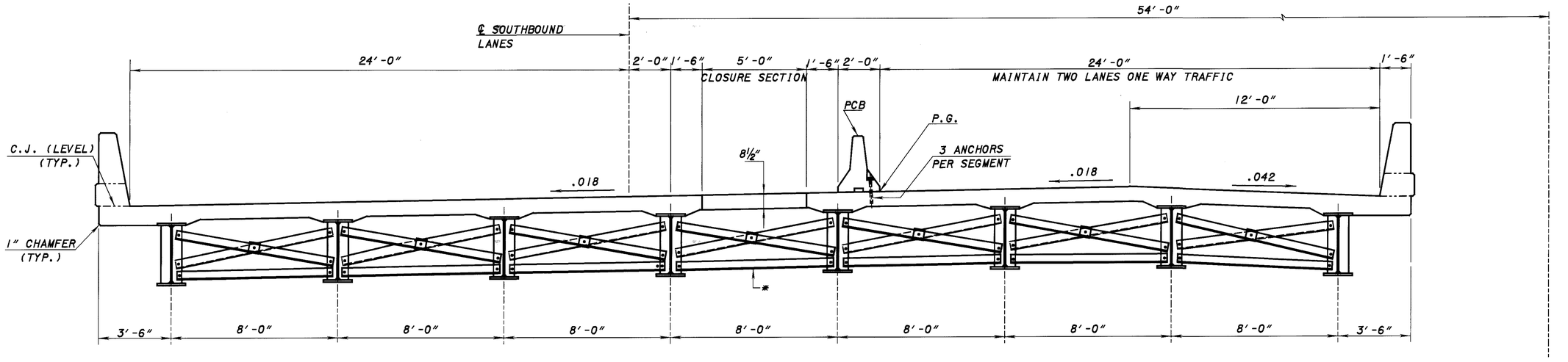
4/34

690
940




## STAGE 2 CONSTRUCTION

(SOUTHBOUND LANES SHOWN)




## CLOSURE SECTION CONSTRUCTION

(SOUTHBOUND LANES SHOWN)

* PLACE CROSSFRAMES IN POSITION PRIOR TO POURING OF THE CLOSURE POUR

## NOTES AND LEGEND

TEMPORARY BARRIERS SHALL BE ANCHORED TO EXISTING AND PROPOSED BRIDGE DECK. THREE (3) ANCHORS PER TEMPORARY BARRIER SEGMENT ARE REQUIRED ON THE TRAFFIC SIDE OF THE BARRIER. THE ANCHOR BOLT PATTERN SHALL BE SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. SEE STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.

PCB - INDICATES PORTABLE CONCRETE BARRIER.

## PROPOSED WORK

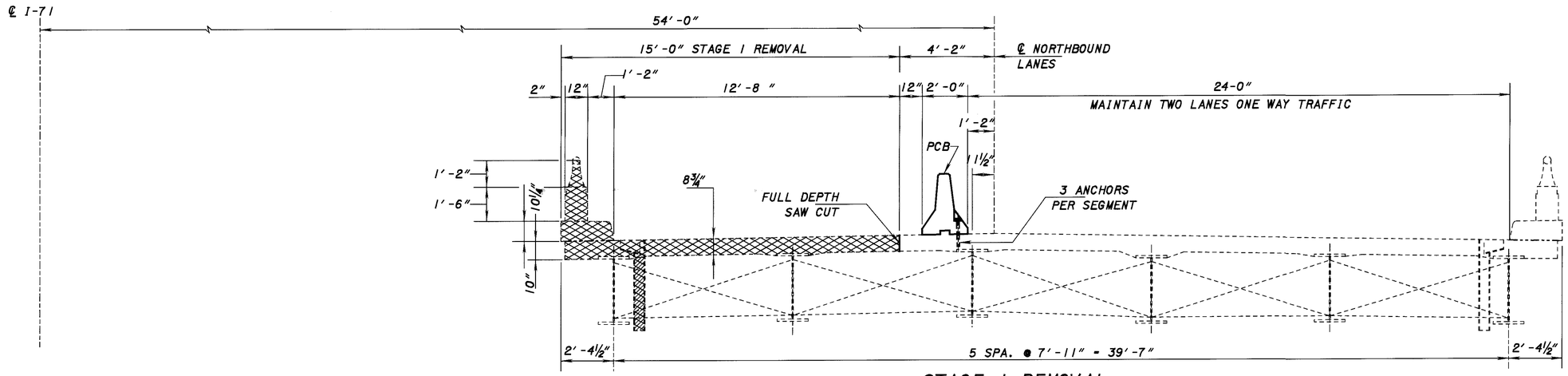
1. MAINTAIN TRAFFIC BY USE OF STAGE CONSTRUCTION
2. REPLACE CONCRETE DECK AND STEEL BEAMS
3. CONSTRUCT NEW SUBSTRUCTURE UNITS

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| BKL | BKL | DFT | 12-10-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| HLG | | 52035891/520361 9R | |

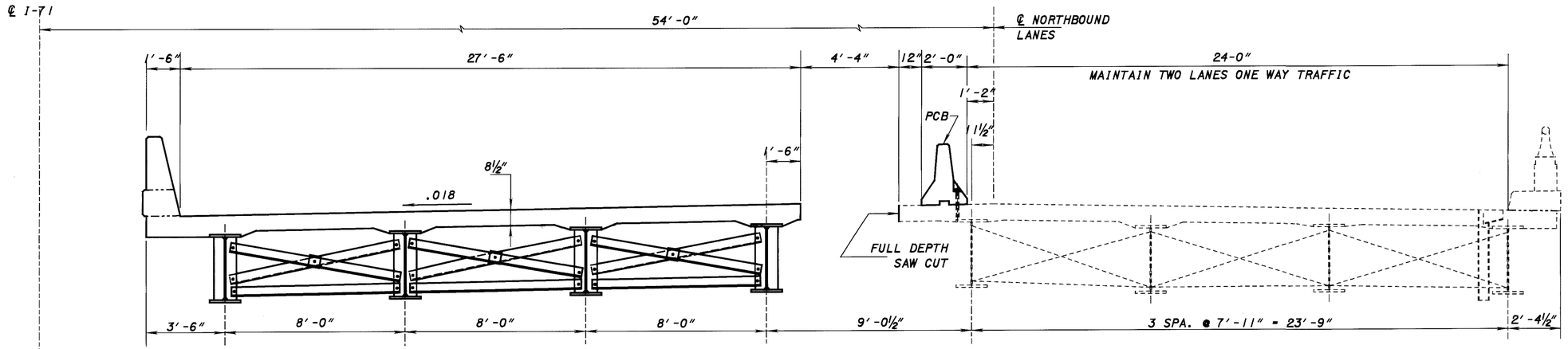
STAGE CONSTRUCTION DETAILS
MED-71-1685 L
I-71 OVER S.R. 18

MED-71-15.78



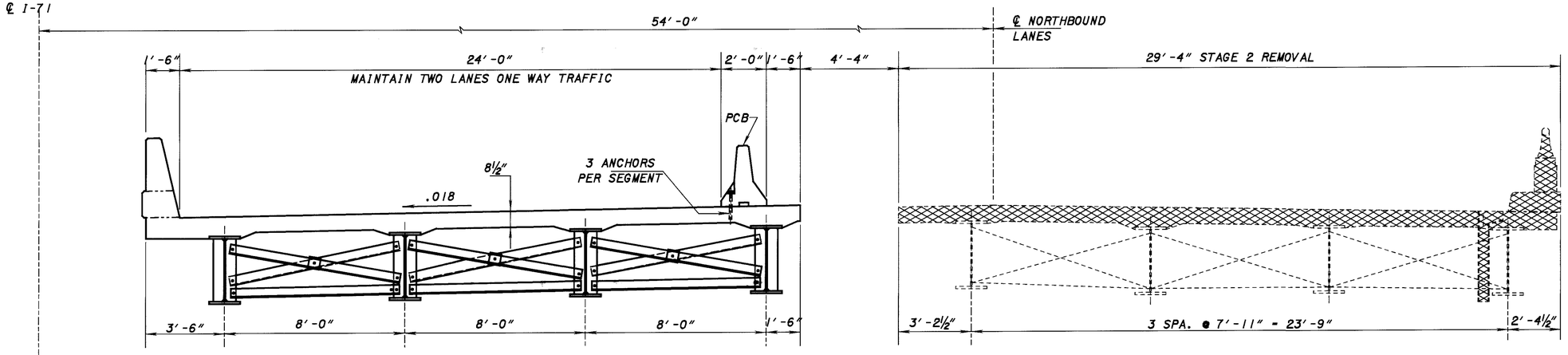

## STAGE 1 REMOVAL

(NORTHBOUND LANES SHOWN)




## STAGE 1 CONSTRUCTION

(NORTHBOUND LANES SHOWN)




## STAGE 2 REMOVAL

(NORTHBOUND LANES SHOWN)

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|
| DFT | 12-19-99 | 5203589L/5203619R |

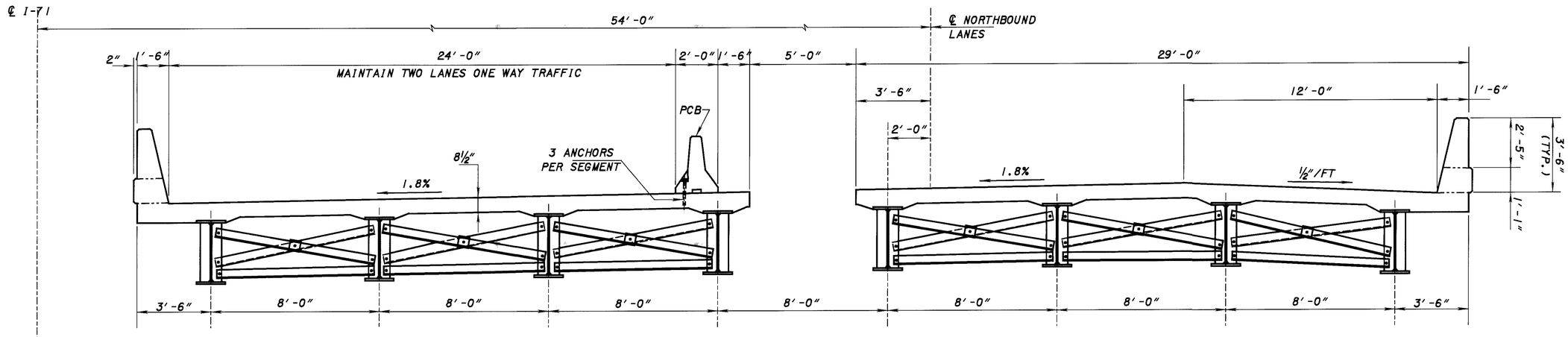
| DESIGNED | DRAWN | REVISED |
|---|---|---|
| BKL | BKL | |

CHECKED TAA

# STAGE CONSTRUCTION DETAILS

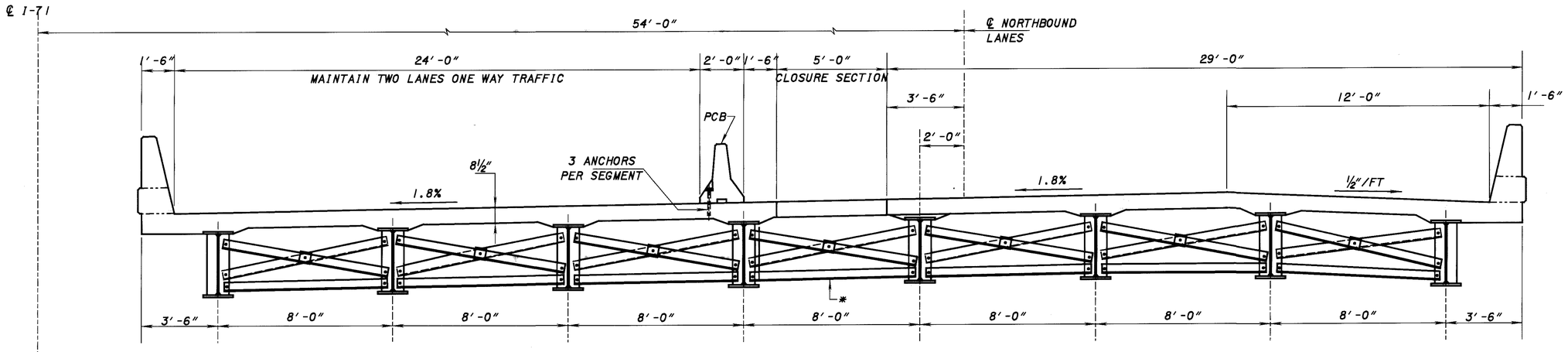
MED-71-1685 R
I-71 OVER S.R. 18

MED-71-15.78




## STAGE 2 CONSTRUCTION

(NORTHBOUND LANES SHOWN)




* PLACE CROSSFRAMES IN POSITION PRIOR TO POURING OF THE CLOSURE POUR

## CLOSURE SECTION CONSTRUCTION

(NORTHBOUND LANES SHOWN)

## PROPOSED WORK

1. MAINTAIN TRAFFIC BY USE OF STAGE CONSTRUCTION
2. REPLACE CONCRETE DECK AND STEEL BEAMS
3. CONSTRUCT NEW SUBSTRUCTURE UNITS

## NOTES AND LEGEND

TEMPORARY BARRIERS SHALL BE ANCHORED TO EXISTING AND PROPOSED BRIDGE DECK. THREE (3) ANCHORS PER TEMPORARY BARRIER SEGMENT ARE REQUIRED ON THE TRAFFIC SIDE OF THE BARRIER. THE ANCHOR BOLT PATTERN SHALL BE SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. SEE STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.

PCB - INDICATES PORTABLE CONCRETE BARRIER.

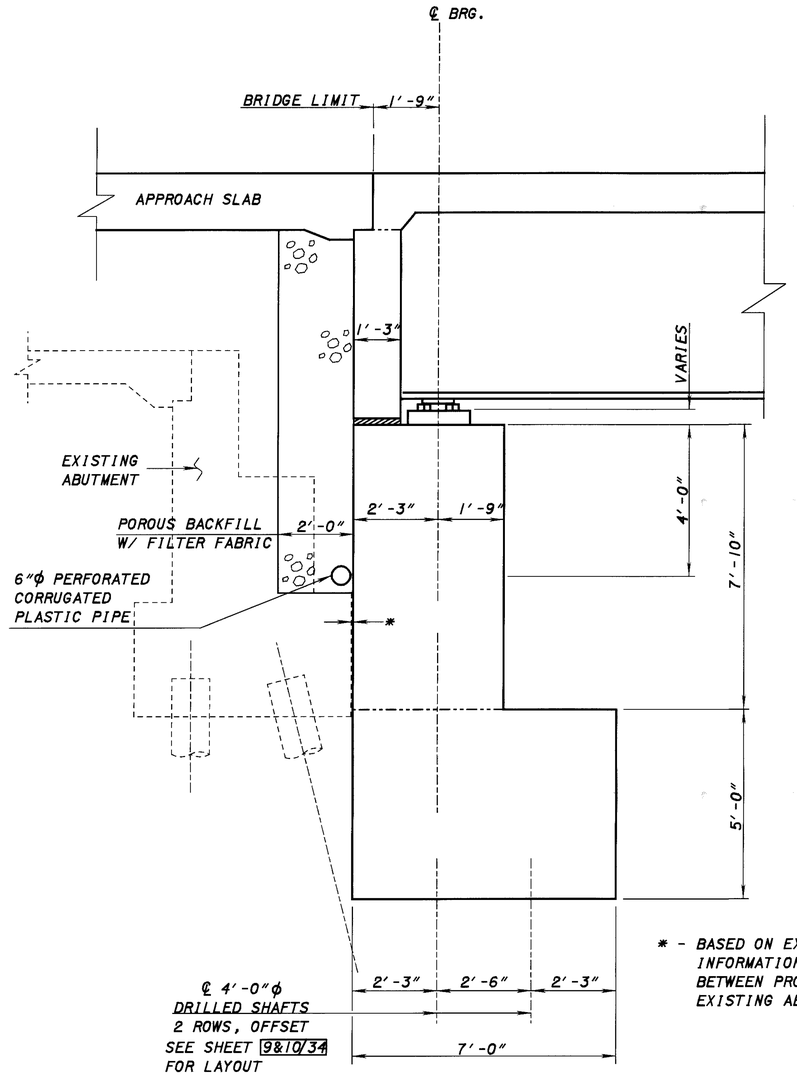
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| BKL | BKL | DFT | 12-10-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203589L/5203619R | |

STAGE CONSTRUCTION DETAILS

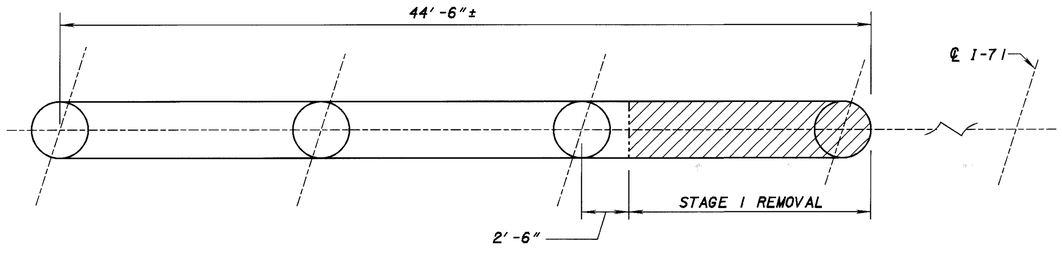
MED-71-1685 R
I-71 OVER S.R. 18

MED-71-15.78




* - BASED ON EXISTING PLAN INFORMATION, CLEARANCE BETWEEN PROPOSED AND EXISTING ABUTMENT IS ½".

## ABUTMENT SECTION




**STAGE PIER REMOVAL**

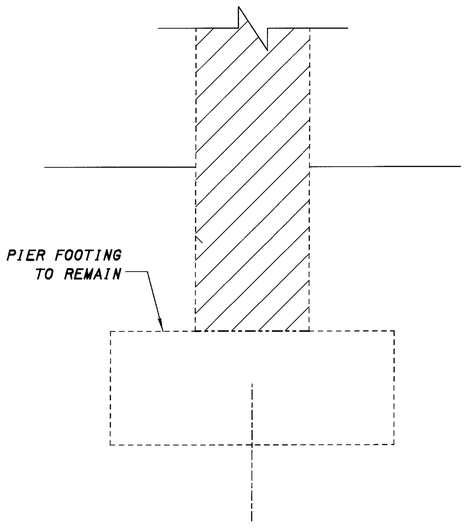
NOTES

*Existing Abutment Removals: The proximity of the existing abutment will interfere with the proposed abutment construction. The Contractor shall assume that the existing abutment and front row of piles shall be removed. After an assessment by the Contractor of the location of the existing abutment by field verification and method of construction to be used including proposed temporary sheeting plans and stage construction procedures, The contractor may propose a plan to incorporate the existing abutment into the temporary shoring plan. With this plan, portions of the existing abutment may be left in-place, but in any case the existing abutment backwall and approach slab shall be removed. If portions of the existing abutment are left in place the Contractor will need to submit plans to deal with any conflicts between the existing battered front row of piles and the proposed abutment construction.*

*The existing abutment northbound right side and southbound left side wingwall and footing shall be removed. This portion of the abutment will conflict with the proposed abutment wingwall and footing. The existing pile in the wingwall footing may remain, proposed pile location may need to be adjusted to avoid conflict.*

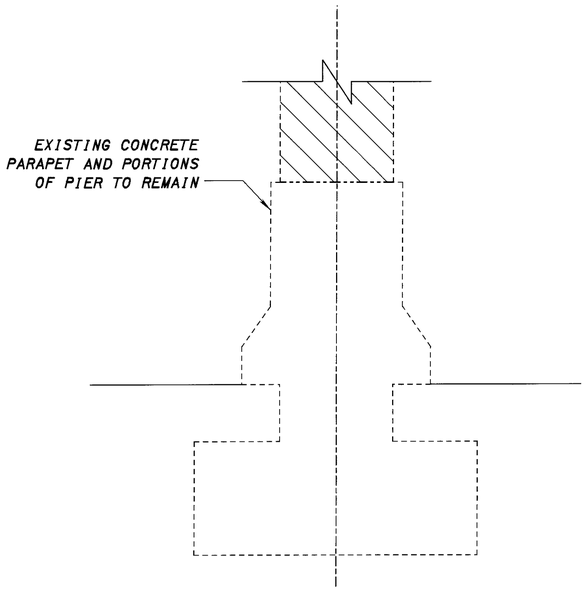
*All work necessary shall be included for payment under 202-Portions of Structure removed, as per plan.*

*Temporary Shoring: In order to construct the proposed substructures temporary shoring is required, see footing plan layout details for approximate locations. The Contractor shall construct a concrete reinforced wall similar to the abutment turnback wingwall and footings in the required locations. The retaining wall shall be placed parallel to the outside turnback walls, details will be similar. In between the proposed abutment and pier temporary shoring is required for construction, the details of the concrete end walls may be used. The height of the wall need only be as required by the Contractor construction needs and operation to construct and retain the proposed slopes and concrete slope protection. The temporary shoring shall tie the proposed abutment and pier together in order to provide a closed box configuration, to resist uplift and skew forces. The proposed turnback wingwalls and end wall between the pier and abutment shall be the basis of the temporary shoring construction, details to be incorporated into a temporary shoring plan. The Contractor may choose to propose an alternate temporary shoring plan, the temporary shoring shall be capable of supporting the embankment and highway loadings and provide the necessary lateral resistant due to the uplift and skew forces. All labor, materials to construct the temporary shoring shall be included for payment under 503-Cofferdams, Cribbing and Sheeting, as per plan.*




## PIER 1 & 3 REMOVAL

REMOVE PIER 1 AND 3 TO TOP OF EXISTING FOOTINGS.




## PIER 2 REMOVAL

REMOVE EXISTING PIER 2 TO TOP OF EXISTING PARAPET. THE PIER COLUMN SHALL BE SAW CUT A MINIMUM 1" DEEP AROUND THE PERIMETER AND REMAINING CONCRETE REMOVED TO PROVIDE A SMOOTH, EVEN SURFACE AT THE SAME LEVEL AS TOP OF PARAPET.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED TAA DATE 12-10-99
STRUCTURE FILE NUMBER 5203589L/5203619R

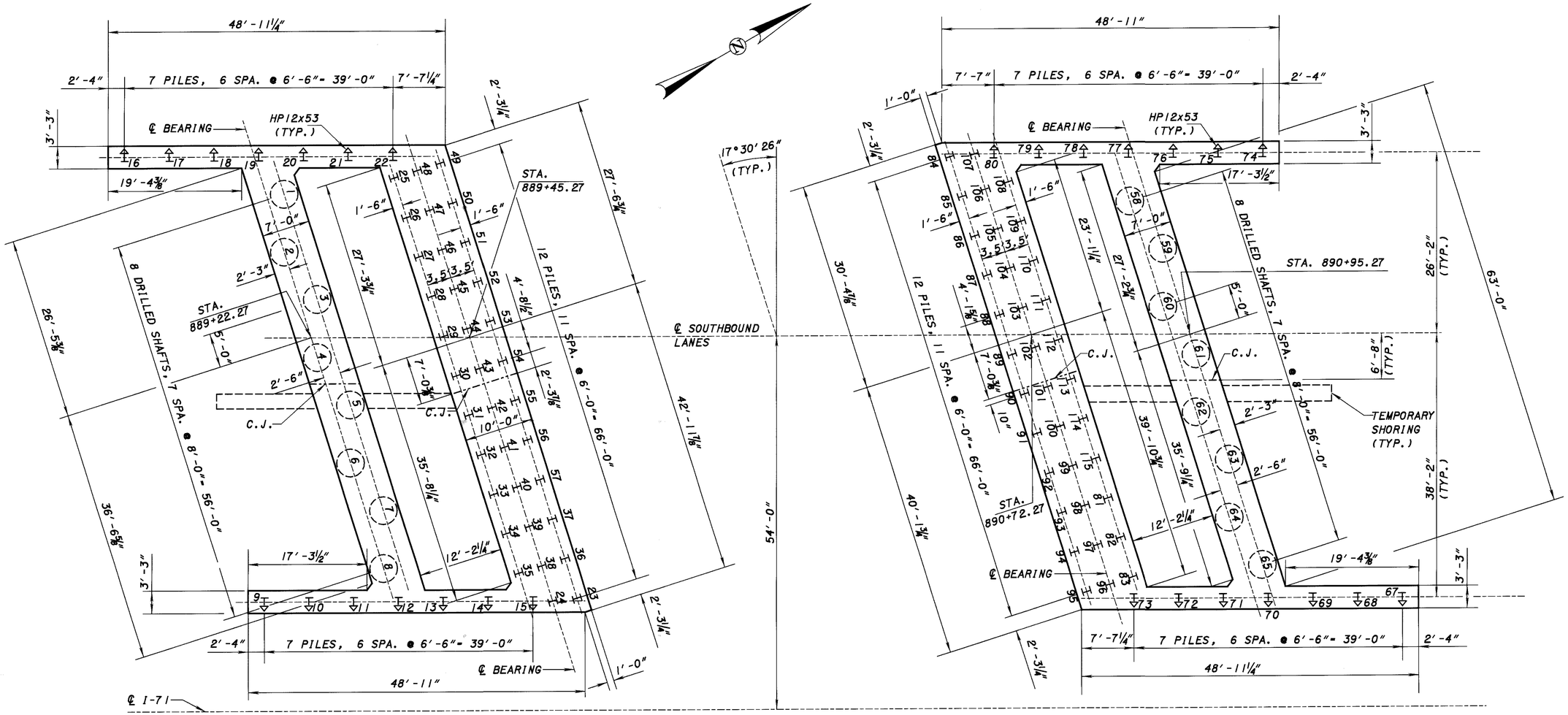
DRAWN BKL REVISED
DESIGNED DFT CHECKED BKL

REMOVAL AND STAGE CONSTRUCTION DETAILS
MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.87

8 / 34

694 / 940




PILE NUMBERING NOTE: PILE #66 HAS BEEN OMITTED.

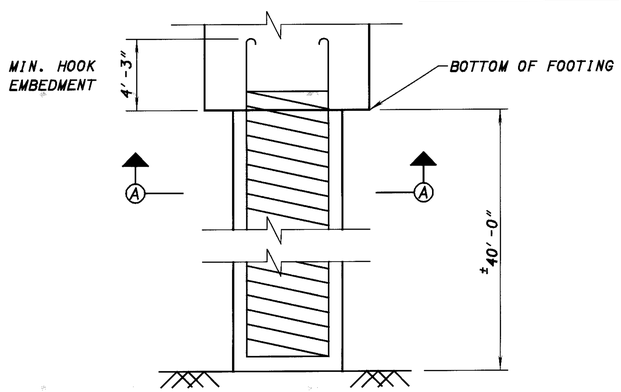
FOR TEMPORARY SHORING NOTES SEE SHEET 8/34

## LEGEND

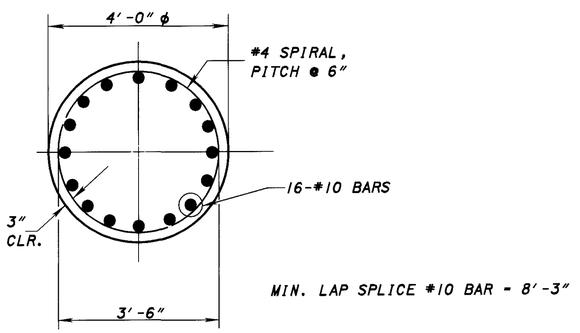
- INDICATES 4'-0" DIA, DRILLED SHAFT
- INDICATES STEEL HP12X53 PILES
- INDICATES BATTERED PILE (1:4)
- 43 INDICATES PILE NUMBERING

DRILLED SHAFTS ARE DESIGNED FOR UPLIFT AT AN ALLOWABLE SIDE ADHESION OF ½ TSF, THUS THE CASING SHALL BE PULLED FOR ALL DRILLED SHAFTS IF ONE IS USED. DRILLED SHAFTS SHALL TERMINATE AT TOP OF BEDROCK. TOP OF BEDROCK ELEVATION VARIES AS SHOWN ON SITE PLAN. BEDROCK SHALL BE CONSIDERED WHEN AUGER CAN NO LONGER PROCEED. WEATHERING BEDROCK THAT CAN BE DRILLED THRU WILL NOT BE CONSIDERED AS COMPETENT BEDROCK.

## FOOTING- PLAN




DRILLED SHAFT DETAIL




SECTION A-A

MIN. LAP SPLICE #10 BAR = 8'-3"

REINFORCING STEEL, INCLUDING HOOK BARS, TO BE INCLUDED WITH ITEM 524, DRILLED SHAFTS, FOR PAYMENT.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|---|---|
| TAA | TAA | DFT | 12-10-99 | 5203589L |
| CHECKED | REVISED | | | |
| BRC | | | | |

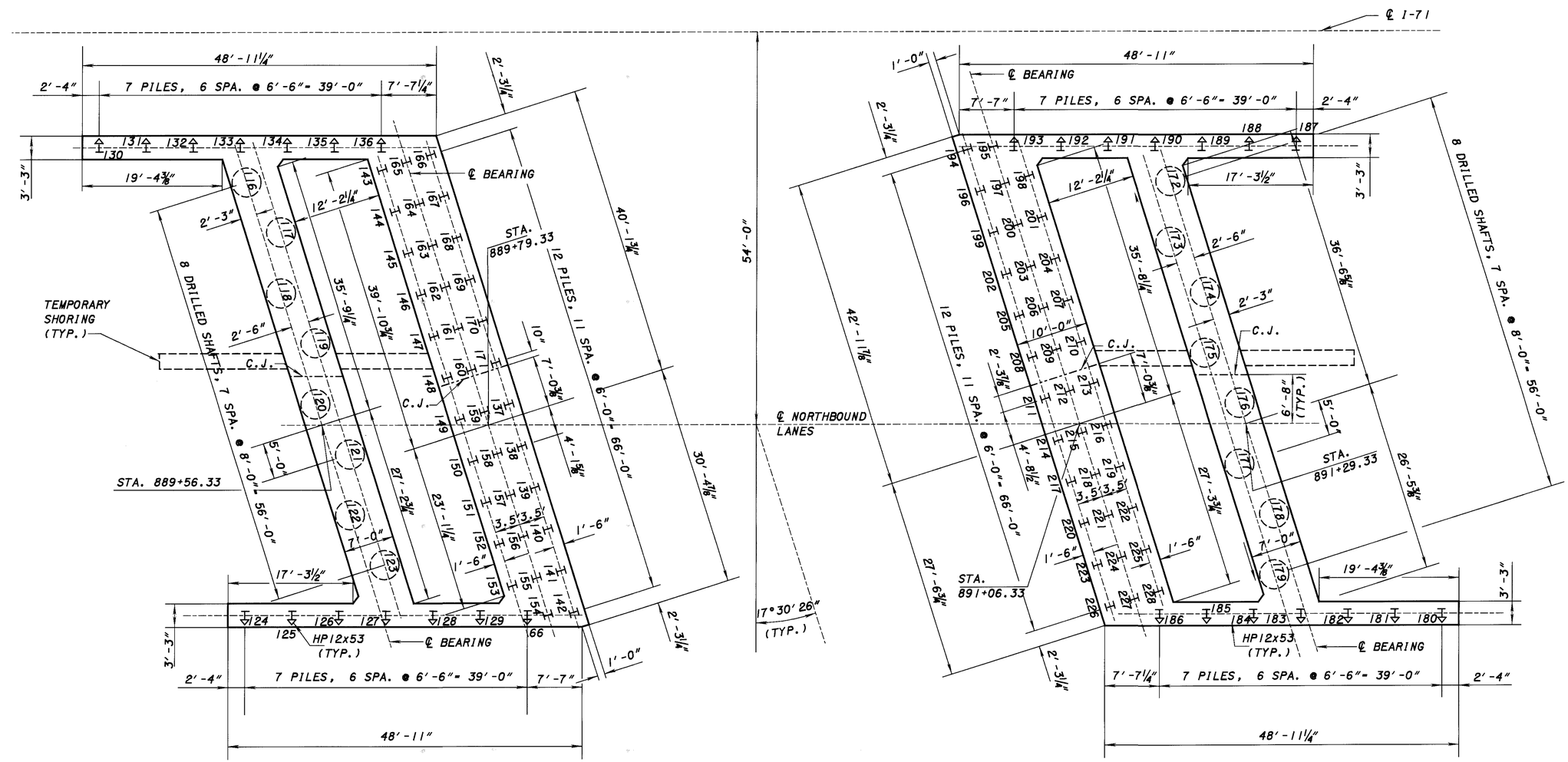
FOOTING DETAILS

MED-71-1685 L
I-71 OVER S.R. 18

MED-71-15.78

9/34

695/940




## LEGEND

- INDICATES 4'-0" DIA, DRILLED SHAFT
- INDICATES STEEL HP12X53 PILES
- INDICATES BATTERED PILE (1:4)
- 43 INDICATES PILE NUMBERING

## FOOTING- PLAN

SEE SHEET 9/34 FOR MORE INFO.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | DFT | 12-10-99 |
| CHECKED | REVISED | REVISED | STRUCTURE FILE NUMBER |
| BRC | | | 5203619R |

FOOTING DETAILS

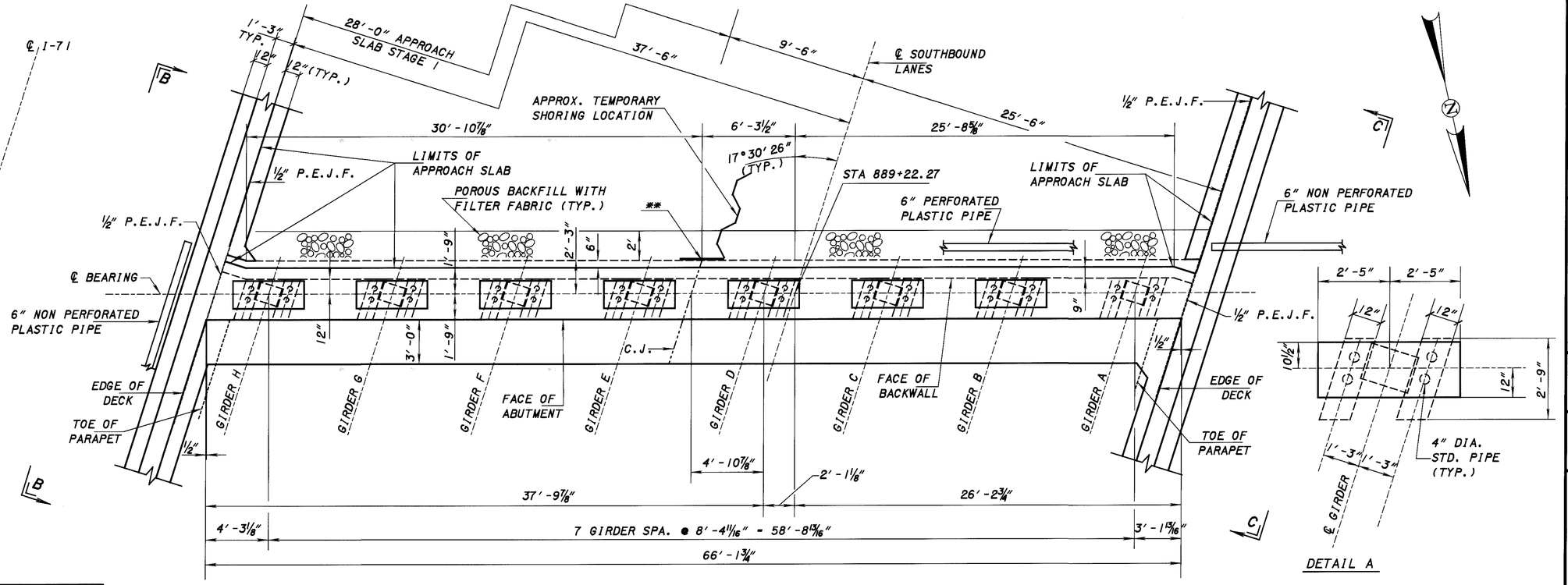
MED-71-1685 R

I-71 OVER S.R. 18

MED-71-15.78

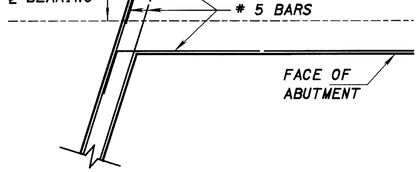
10/34

696/940

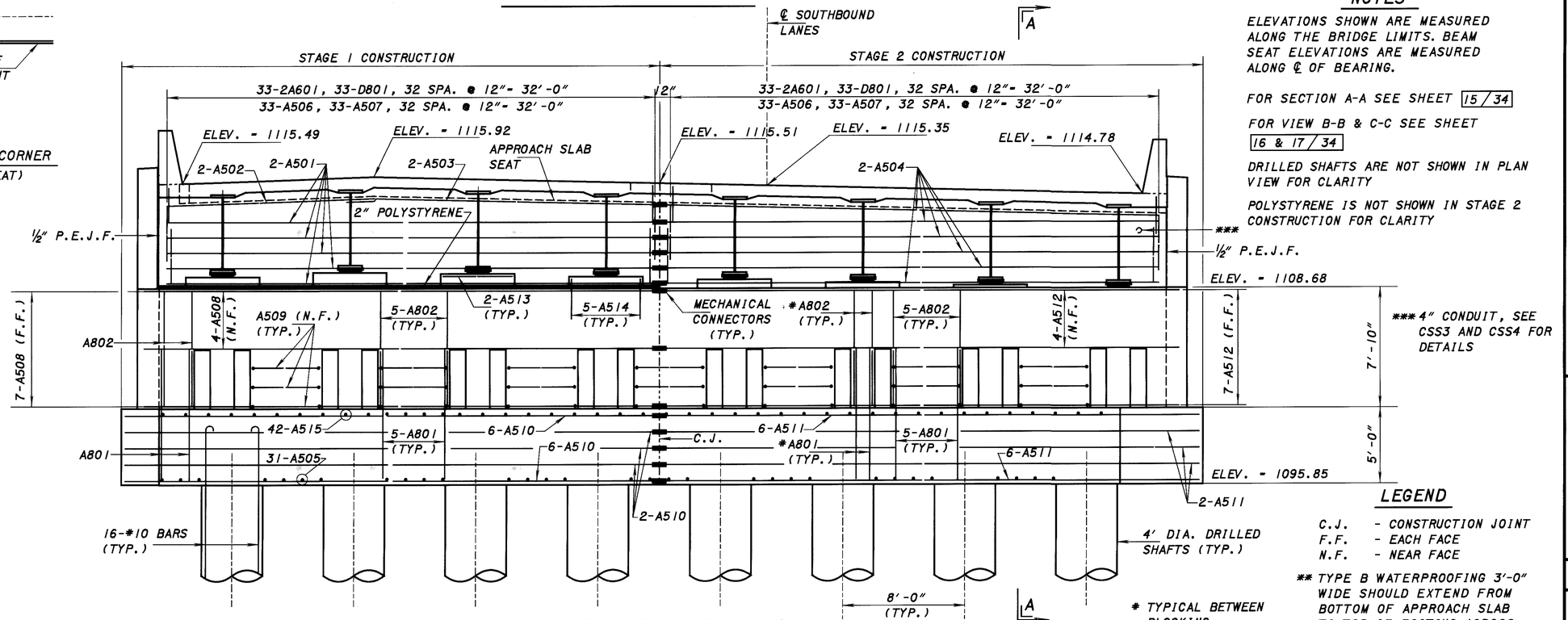



REAR ABUTMENT- PLAN

DETAIL A




TYPICAL REINFORCING STEEL AT CORNER
(VIEW AS SEEN IS BELOW BEAM SEAT)




REAR ABUTMENT- ELEVATION

| LOCATION | ELEVATION |
|---|---|
| GIRDER A | 1108.68 |
| GIRDER B | 1108.87 |
| GIRDER C | 1109.06 |
| GIRDER D | 1109.25 |
| GIRDER E | 1109.44 |
| GIRDER F | 1109.63 |
| GIRDER G | 1109.70 |
| GIRDER H | 1109.41 |

BEAM SEAT ELEVATIONS ARE GIVEN AT TOP OF CONCRETE STEP.

## NOTES

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

FOR SECTION A-A SEE SHEET 15/34

FOR VIEW B-B & C-C SEE SHEET 16 & 17/34

DRILLED SHAFTS ARE NOT SHOWN IN PLAN VIEW FOR CLARITY

POLYSTYRENE IS NOT SHOWN IN STAGE 2 CONSTRUCTION FOR CLARITY

## LEGEND

C.J. - CONSTRUCTION JOINT
F.F. - EACH FACE
N.F. - NEAR FACE

* TYPICAL BETWEEN BLOCKING

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

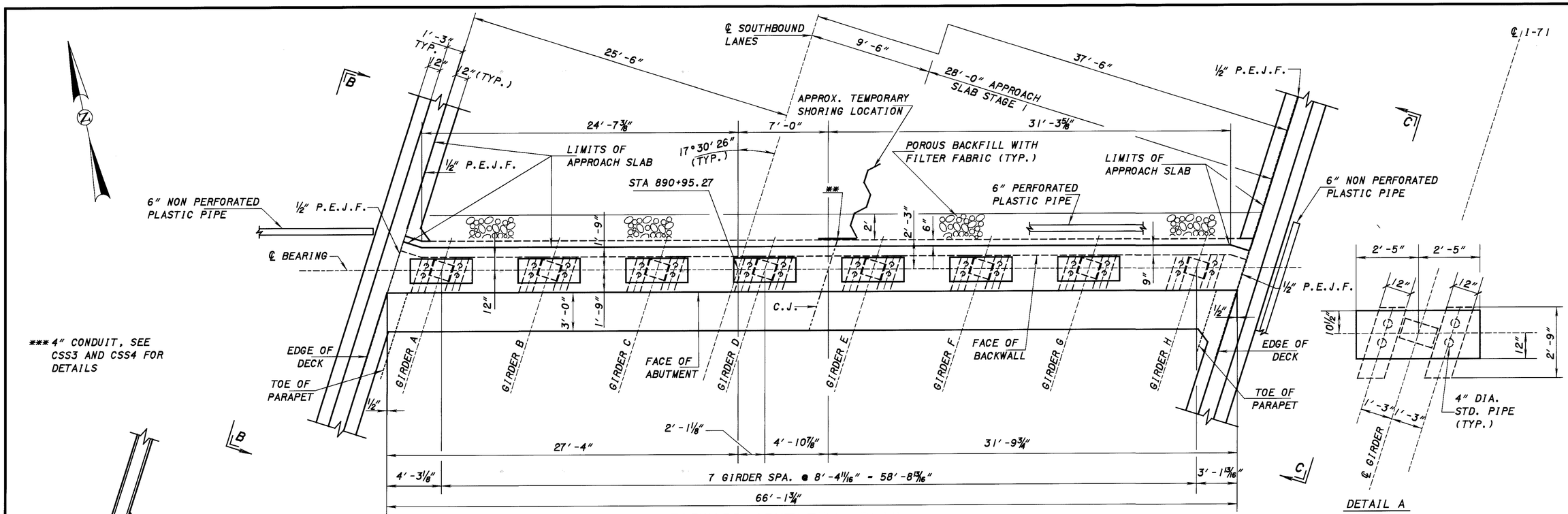
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED: DFT | DATE: 12-17-99 | STRUCTURE FILE NUMBER: 5203589L
DRAWN: TAA | REVISED:
DESIGNED: TAA | CHECKED: BRC

REAR ABUTMENT DETAILS
MED-71-1685 L
I-71 OVER S.R. 18

MED-71-15.78

11/34

697/940




| LOCATION | ELEVATION |
|---|---|
| GIRDER A | 1111.48 |
| GIRDER B | 1111.66 |
| GIRDER C | 1111.84 |
| GIRDER D | 1112.02 |
| GIRDER E | 1112.20 |
| GIRDER F | 1112.37 |
| GIRDER G | 1112.43 |
| GIRDER H | 1112.13 |

BEAM SEAT ELEVATIONS ARE GIVEN AT TOP OF CONCRETE STEP.

## NOTES

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

FOR SECTION A-A SEE SHEET 16 & 17 / 34

FOR VIEW B-B & C-C SEE SHEET 16 / 34

DRILLED SHAFTS ARE NOT SHOWN IN PLAN VIEW FOR CLARITY

POLYSTYRENE IS NOT SHOWN IN STAGE I CONSTRUCTION FOR CLARITY

## LEGEND

C.J. - CONSTRUCTION JOINT
F.F. - EACH FACE
N.F. - NEAR FACE

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

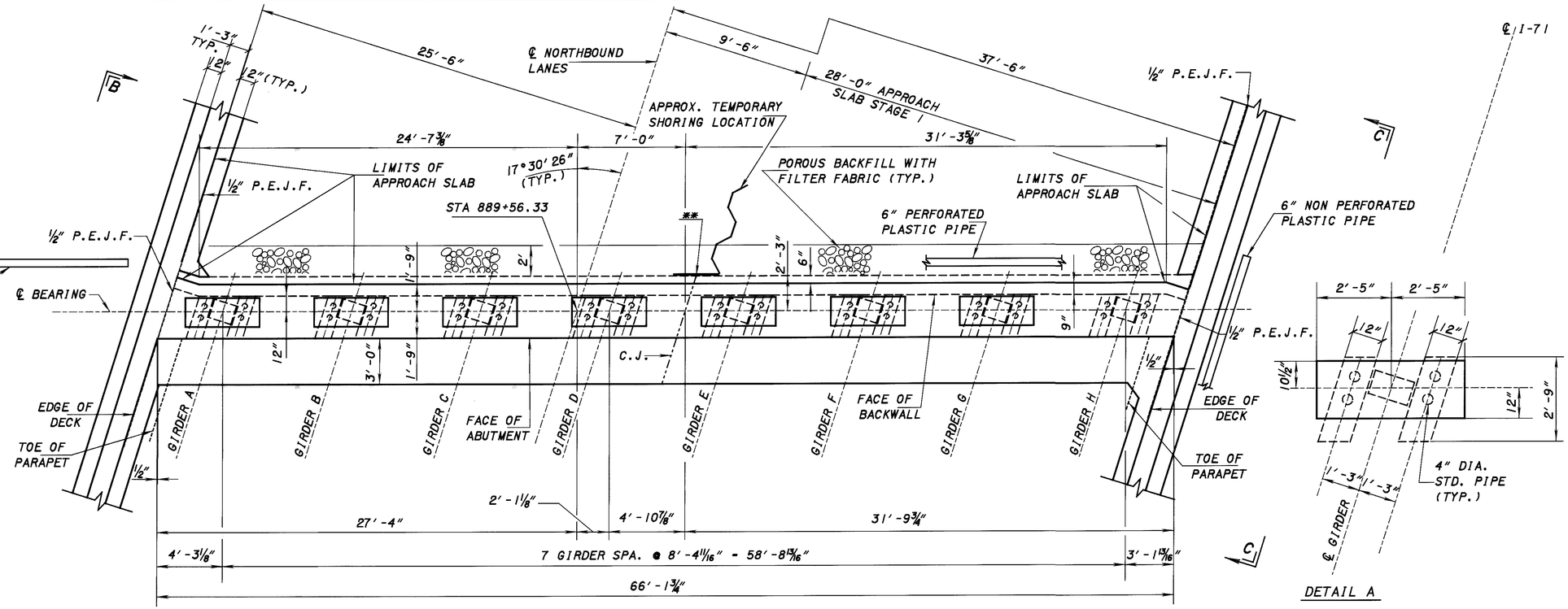
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVISED: DFT
DATE: 12-17-99
STRUCTURE FILE NUMBER: 5203589L
DRAWN: TAA
REVISED:
DESIGNED: TAA
CHECKED: BRC

FORWARD ABUTMENT DETAILS
MED-71-1685 L
I-71 OVER S.R. 18

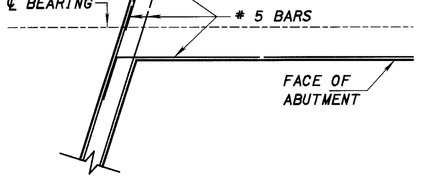
MED-71-15.78

12 / 34

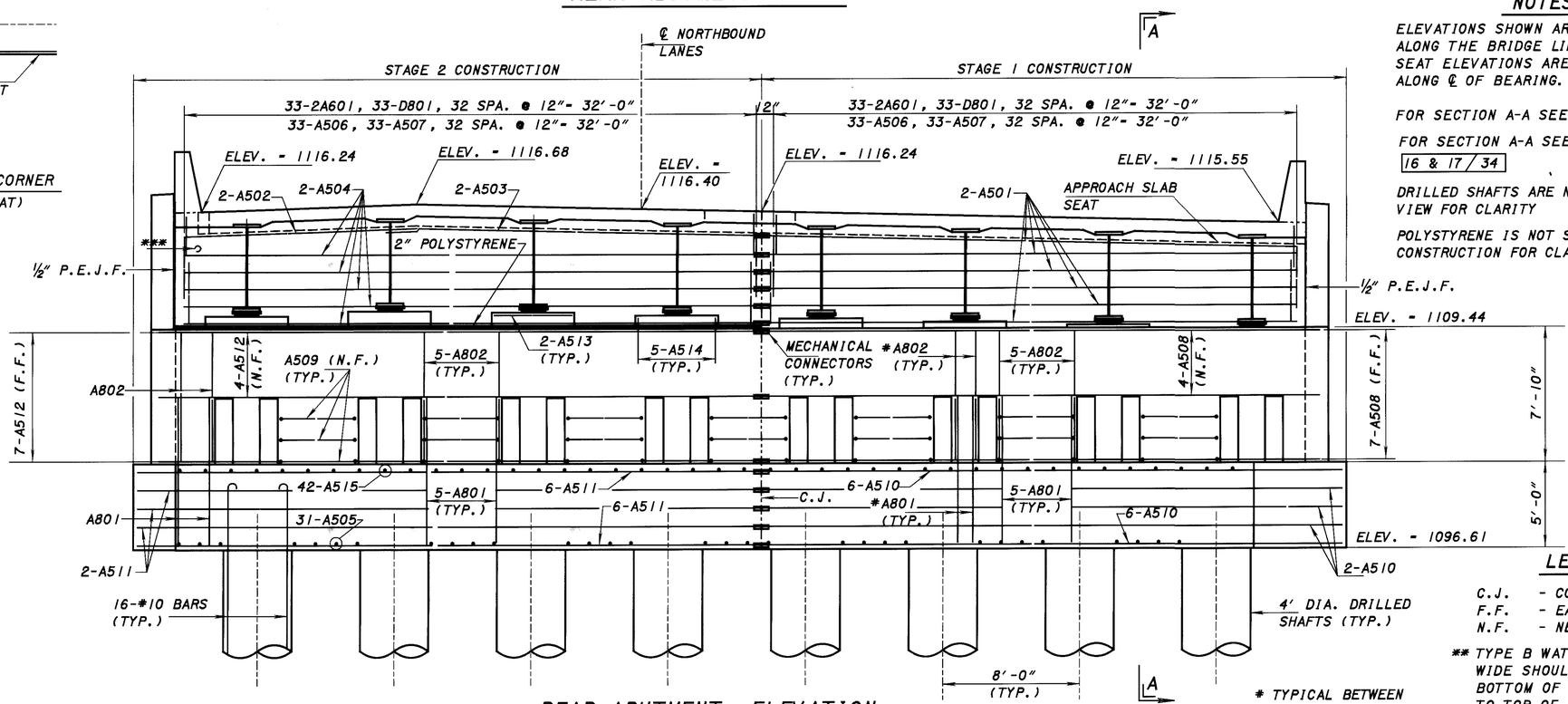
698 / 940




## REAR ABUTMENT- PLAN




TYPICAL REINFORCING STEEL AT CORNER
(VIEW AS SEEN IS BELOW BEAM SEAT)




## REAR ABUTMENT- ELEVATION

| LOCATION | ELEVATION |
|---|---|
| GIRDER A | 1110.16 |
| GIRDER B | 1110.45 |
| GIRDER C | 1110.38 |
| GIRDER D | 1110.19 |
| GIRDER E | 1110.01 |
| GIRDER F | 1109.82 |
| GIRDER G | 1109.63 |
| GIRDER H | 1109.44 |

BEAM SEAT ELEVATIONS ARE GIVEN AT TOP OF CONCRETE STEP.

## NOTES

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

FOR SECTION A-A SEE SHEET 15/34

FOR SECTION A-A SEE SHEET 16 & 17/34

DRILLED SHAFTS ARE NOT SHOWN IN PLAN VIEW FOR CLARITY

POLYSTYRENE IS NOT SHOWN IN STAGE 2 CONSTRUCTION FOR CLARITY

## LEGEND

C.J. - CONSTRUCTION JOINT
F.F. - EACH FACE
N.F. - NEAR FACE

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

* TYPICAL BETWEEN BLOCKING

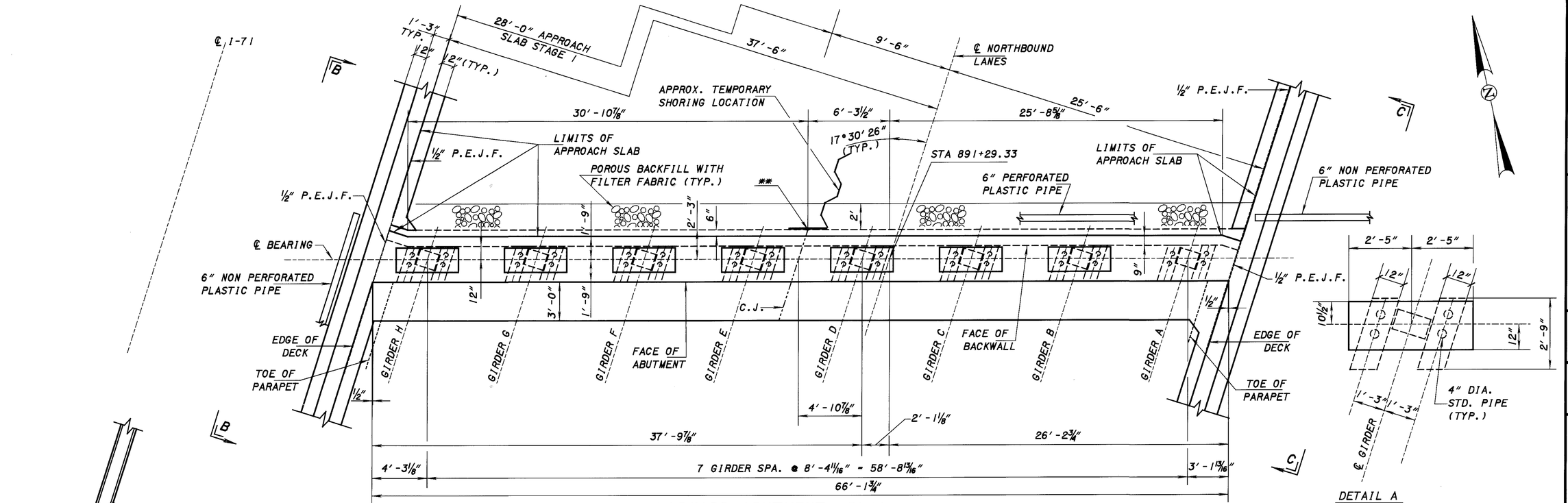
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TAA
DRAWN: TAA
REVIEWED: DFT
DATE: 12-17-99
CHECKED: BRC
REVISED:
REVISED:
STRUCTURE FILE NUMBER: 5203619R

REAR ABUTMENT DETAILS
MED-71-1685 R
I-71 OVER S.R. 18

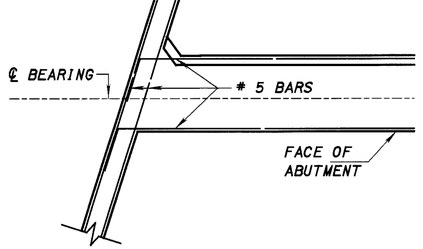
MED-71-15.78

13/34

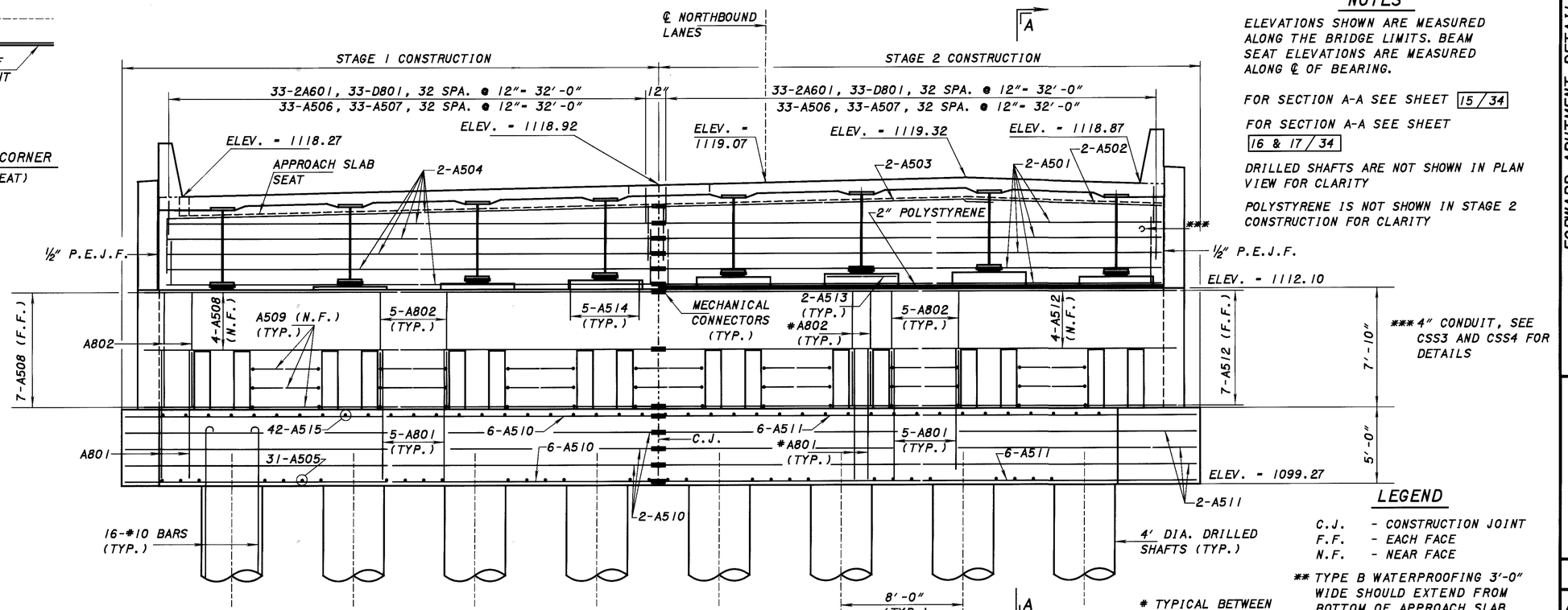
699/940




## FORWARD ABUTMENT- PLAN




TYPICAL REINFORCING STEEL AT CORNER
(VIEW AS SEEN IS BELOW BEAM SEAT)




## FORWARD ABUTMENT- ELEVATION

| LOCATION | ELEVATION |
|---|---|
| GIRDER A | 1112.74 |
| GIRDER B | 1113.04 |
| GIRDER C | 1112.99 |
| GIRDER D | 1112.81 |
| GIRDER E | 1112.64 |
| GIRDER F | 1112.46 |
| GIRDER G | 1112.28 |
| GIRDER H | 1112.10 |

BEAM SEAT ELEVATIONS ARE GIVEN AT TOP OF CONCRETE STEP.

### NOTES

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

FOR SECTION A-A SEE SHEET 15/34

FOR SECTION A-A SEE SHEET 16 & 17/34

DRILLED SHAFTS ARE NOT SHOWN IN PLAN VIEW FOR CLARITY

POLYSTYRENE IS NOT SHOWN IN STAGE 2 CONSTRUCTION FOR CLARITY

*** 4" CONDUIT, SEE CSS3 AND CSS4 FOR DETAILS

### LEGEND

C.J. - CONSTRUCTION JOINT
F.F. - EACH FACE
N.F. - NEAR FACE

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

# FORWARD ABUTMENT DETAILS

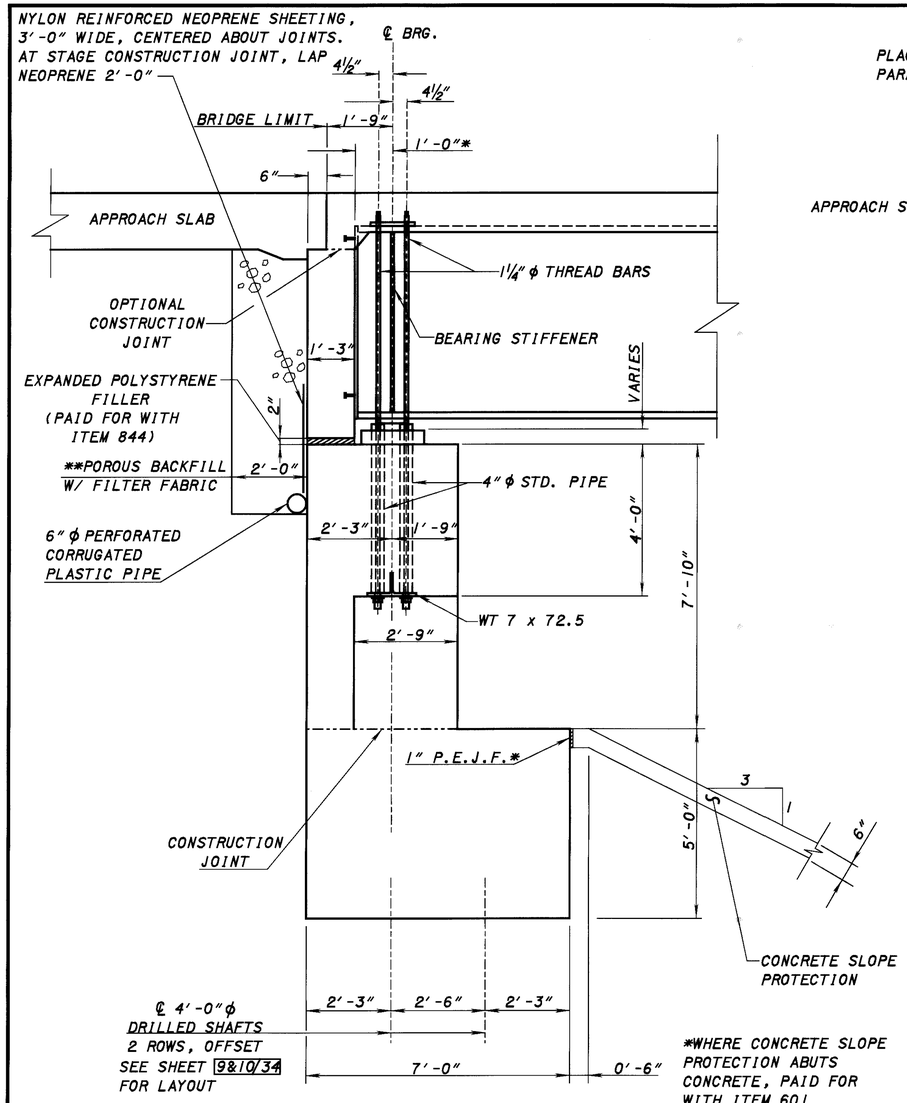
MED-71-1685 R
I-71 OVER S.R. 18

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 12-17-99
STRUCTURE FILE NUMBER: 5203619R
DRAWN: TAA
REVISED:
DESIGNED: TAA
CHECKED: BRC

MED-71-15.78

14/34

700/940

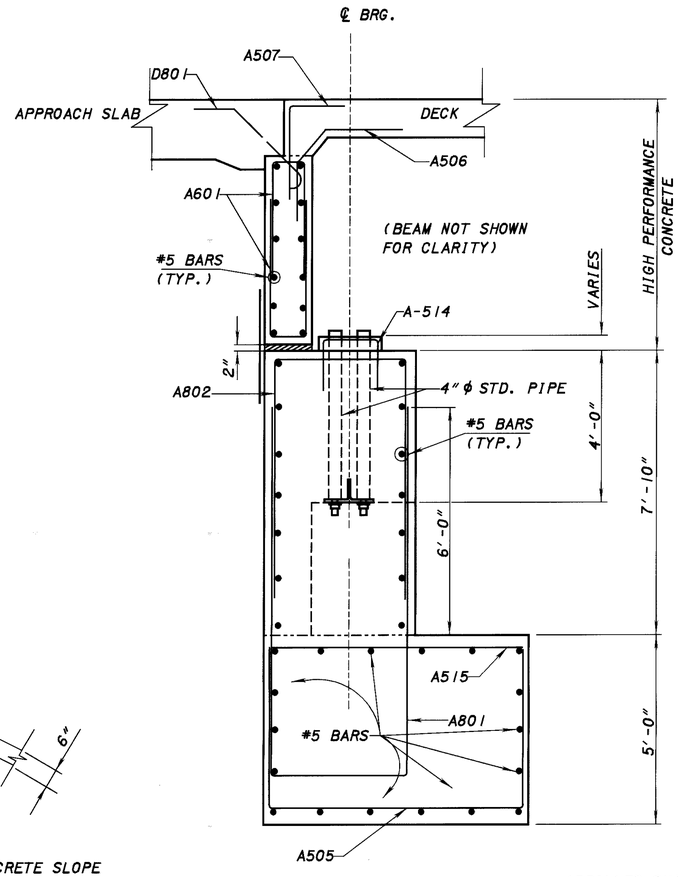



*WHERE CONCRETE SLOPE PROTECTION ABUTS CONCRETE, PAID FOR WITH ITEM 601

## ABUTMENT TYPICAL SECTION

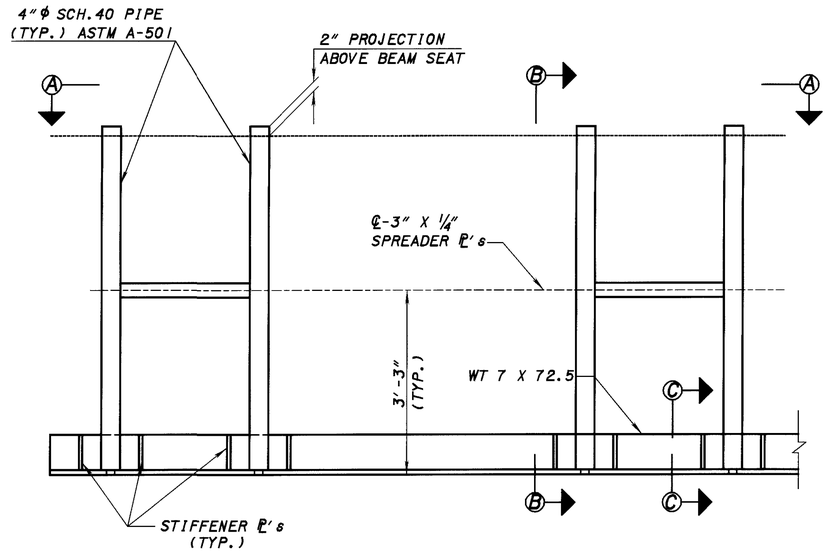
@ 60° F

** BOTTOM OF POROUS BACKFILL APPROXIMATELY AT EXISTING ABUTMENT BRIDGE SEAT, FIELD VERIFY.




## SECTION Ⓐ-Ⓐ

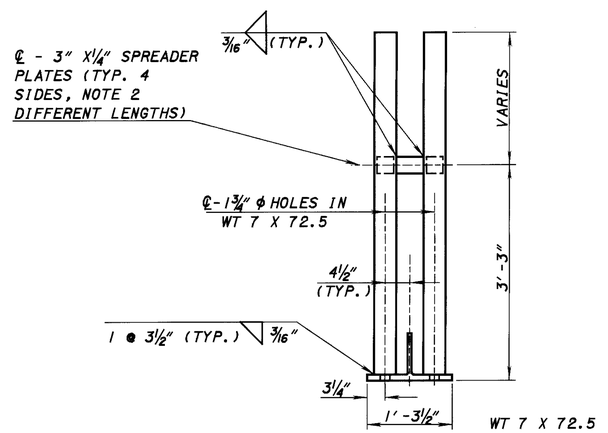
(SEE REAR AND FORWARD ABUTMENT SHEETS FOR LOCATION OF Ⓐ-Ⓐ)




## WT 7 X 72.5 ASSEMBLY ELEVATION

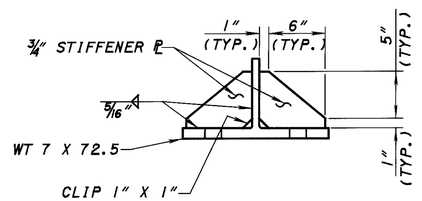
(FRONT VIEW ONLY SHOWN)

NOTE: ALL SURFACES SHALL BE GALVANIZED AFTER FABRICATION. THE WT 7 X 72.5 AND PIPE ASSEMBLY IS INCLUDED WITH THE STRUCTURAL STEEL FOR PAYMENT. SPLICE LOCATIONS SHALL BE APPROVED BY PROJECT ENGINEER AND SHALL HAVE COMPLETE PENETRATION BUTT WELDS

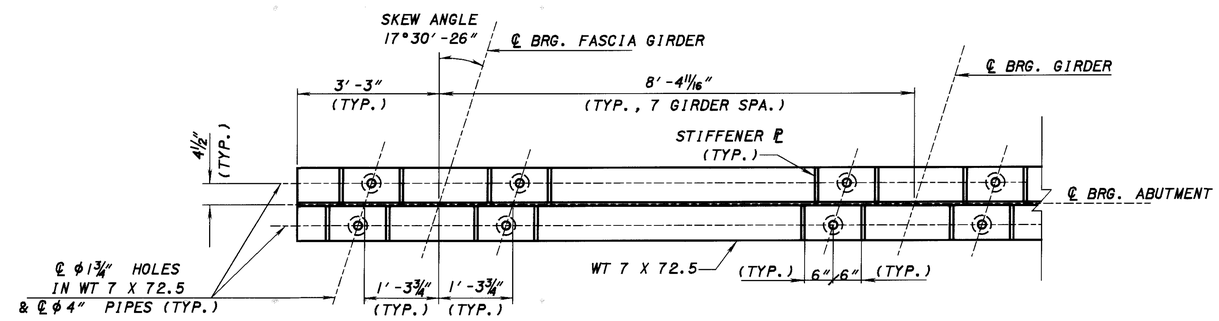



## SECT Ⓑ-Ⓑ

(STIFFENERS NOT SHOWN FOR CLARITY)




## SECT Ⓒ-Ⓒ




## VIEW Ⓐ-Ⓐ

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVIEWED: DFT | DATE: 12-10-99 | STRUCTURE FILE NUMBER: 5203589L/5203619R

DRAWN: HLG | REVIEWED:

DESIGNED: TAA | CHECKED: TAA

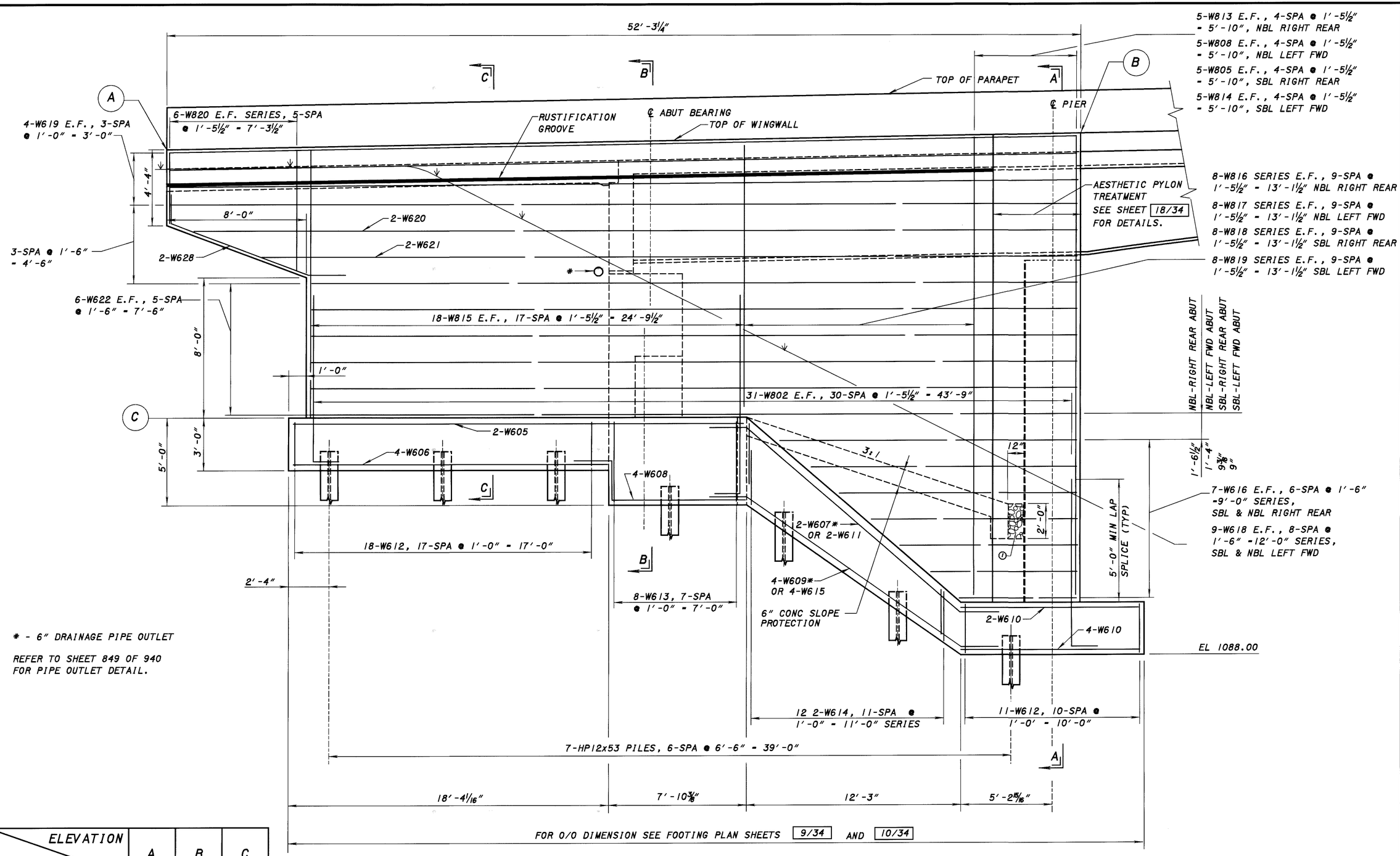
# ABUTMENT DETAILS

MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

15 / 34

701 / 940




\# - 6" DRAINAGE PIPE OUTLET

REFER TO SHEET 849 OF 940 FOR PIPE OUTLET DETAIL.

| ELEVATION / LOCATION | A | B | C |
|---|---|---|---|
| NBL-RIGHT REAR ABUTMENT | 1116.88 | 1117.78 | 1101.61 |
| NBL-LEFT FWD ABUTMENT | 1119.67 | 1118.99 | 1104.27 |
| SBL-RIGHT REAR ABUTMENT | 1116.11 | 1117.05 | 1100.85 |
| SBL-LEFT FWD ABUTMENT | 1119.07 | 1118.34 | 1103.65 |

FOR SECTIONS, SEE SHEET 18/34

## ABUTMENT WINGWALL ELEVATION

(1) 12"x2'-0" FRENCH DRAIN AT BASE OF CONCRETE SLOPE PROTECTION, TOE IN SLOPE PROTECTION 2'-0" AS SHOWN. DRAIN TO BE INCLUDED WITH 518 POROUS BACKFILL FOR PAYMENT, NO FILTER FABRIC REQUIRED.

NOTE: CONTRACTOR MAY PROPOSE ADDITIONAL CONSTRUCTION JOINTS.

E.F. - EACH FACE

* RIGHT REAR ABUTMENT ONLY (BOTH BRIDGES)

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVISED: DFT 12-10-99 | DATE | STRUCTURE FILE NUMBER: 5203689L/5203619R

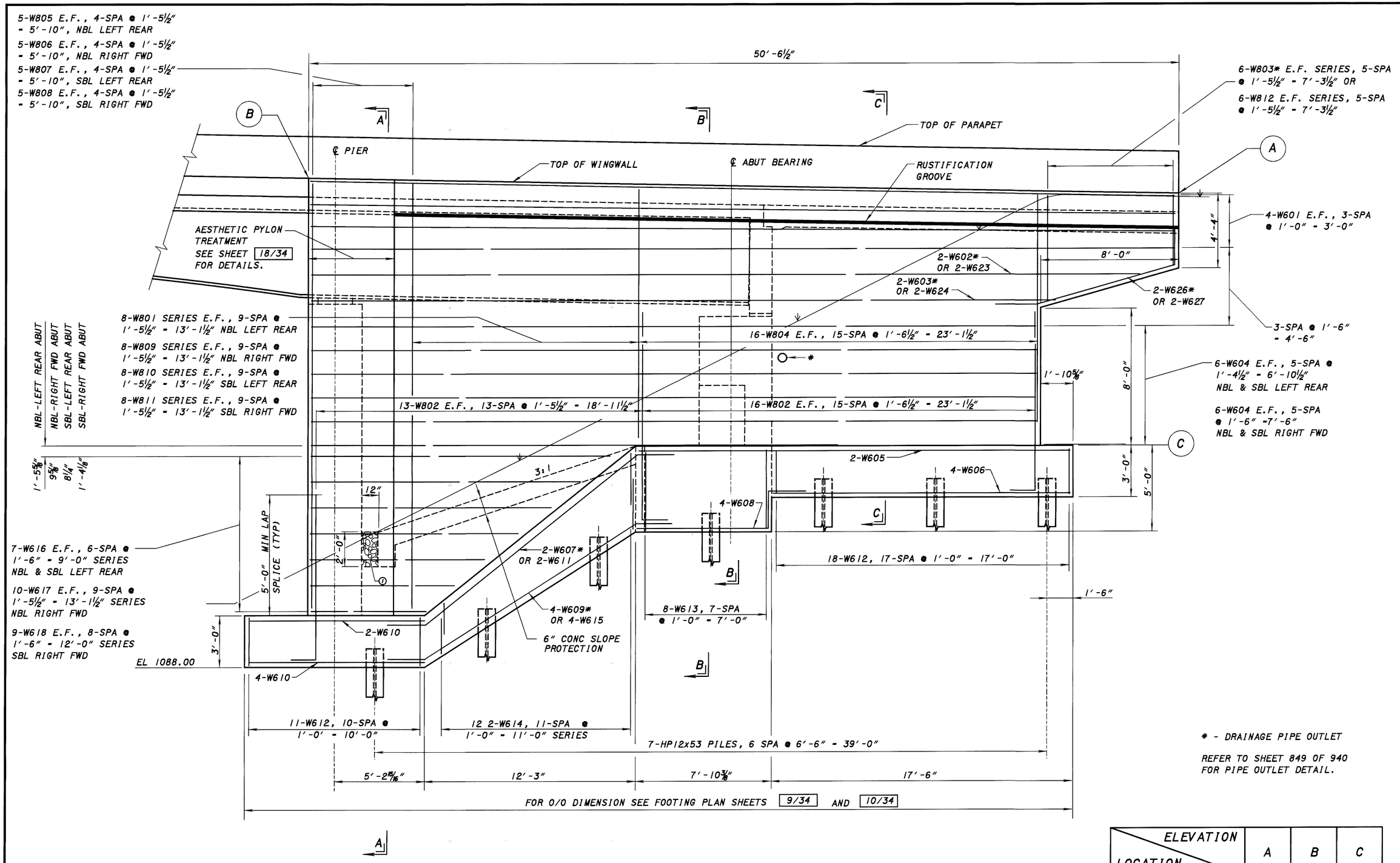
DESIGNED: BRC | DRAWN: BRC | CHECKED: TAA | REVISED

WINGWALL ELEVATIONS
MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

16/34

702/940




## ABUTMENT WINGWALL ELEVATION

| LOCATION \ ELEVATION | A | B | C |
|---|---|---|---|
| NBL-LEFT REAR ABUTMENT | 1116.18 | 1117.07 | 1101.61 |
| NBL-RIGHT FWD ABUTMENT | 1120.26 | 1119.63 | 1104.27 |
| SBL-LEFT REAR ABUTMENT | 1115.39 | 1116.33 | 1100.85 |
| SBL-RIGHT FWD ABUTMENT | 1119.67 | 1119.00 | 1103.65 |

FOR SECTIONS, SEE SHEET 18/34

\# - DRAINAGE PIPE OUTLET

REFER TO SHEET 849 OF 940 FOR PIPE OUTLET DETAIL.

NOTE: CONTRACTOR MAY PROPOSE ADDITIONAL CONSTRUCTION JOINTS.

* - LEFT REAR ABUTMENTS ONLY (BOTH BRIDGES)

E.F. - EACH FACE

(1) 12"x2'-0" FRENCH DRAIN AT BASE OF CONCRETE SLOPE PROTECTION, TOE IN SLOPE PROTECTION 2'-0" AS SHOWN. DRAIN TO BE INCLUDED WITH 518 POROUS BACKFILL FOR PAYMENT, NO FILTER FABRIC REQUIRED.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

REVISED: DFT | DATE: 12-10-99 | STRUCTURE FILE NUMBER: 5203589L/5203619R

DRAWN: BRC | REVISED:

DESIGNED: BRC | CHECKED: TAA

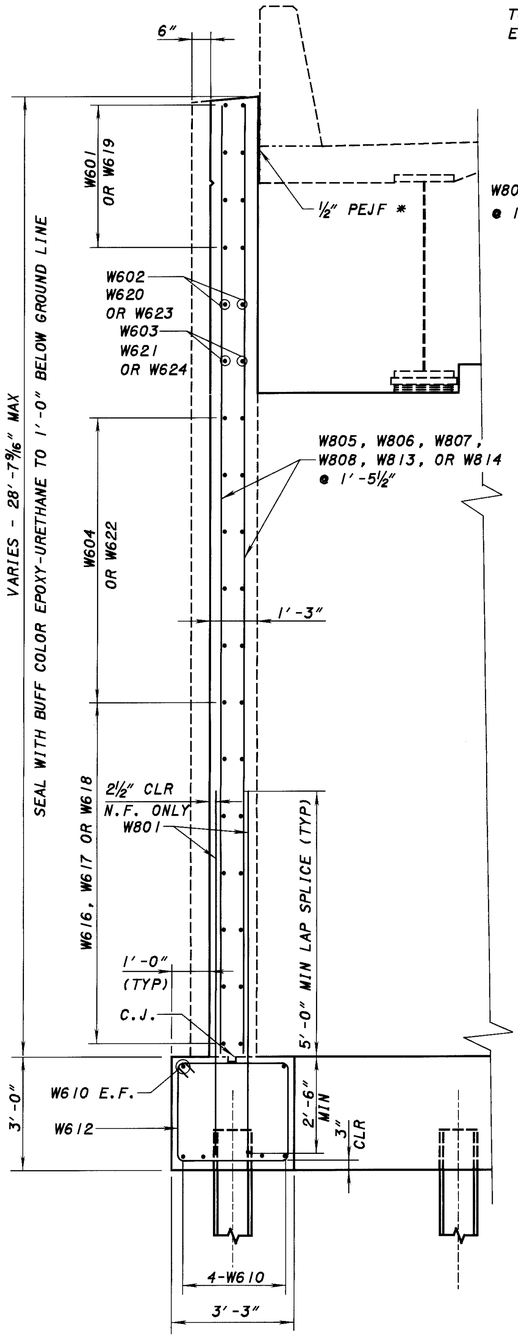
WINGWALL ELEVATIONS
MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

17/34

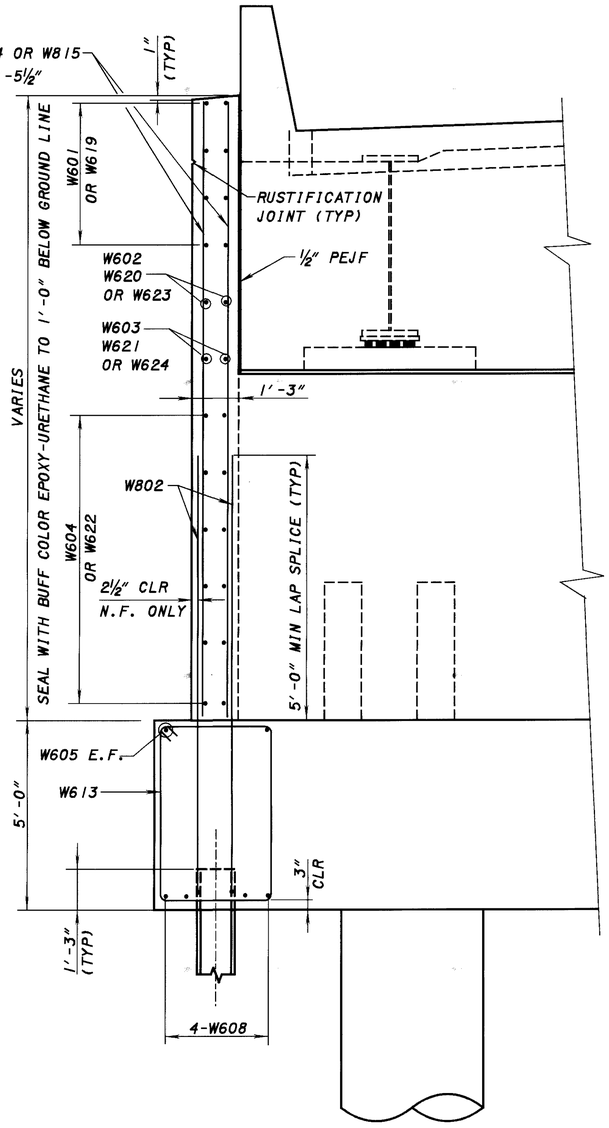
703/940

* - PEJF TO BE SECURED TO WINGWALL SIMILAR TO NEOPRENE ANCHORS OR AS APPROVED BY PROJECT ENGINEER, INCIDENTAL TO 516, SPACED @ 5'-0".



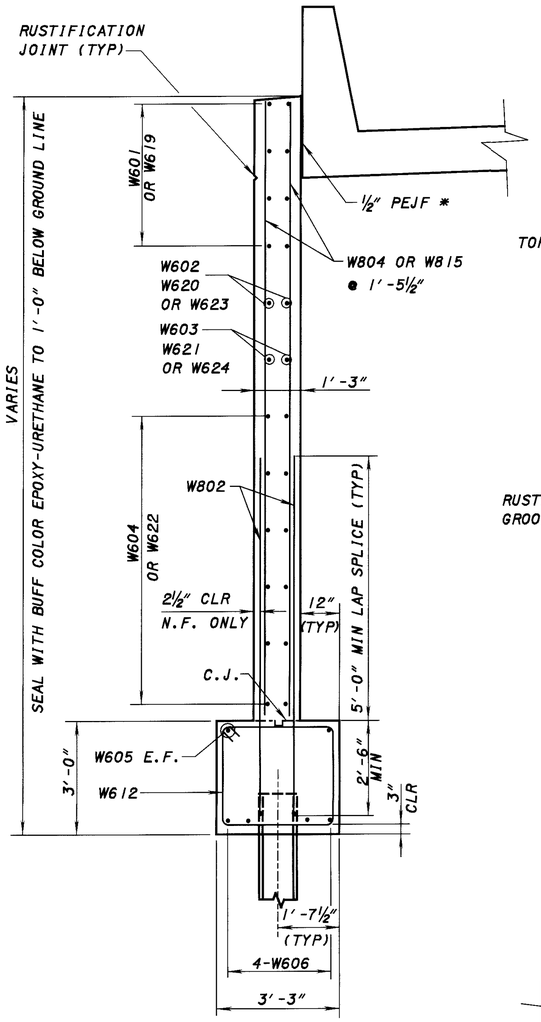

SECTION A-A

(PIER)

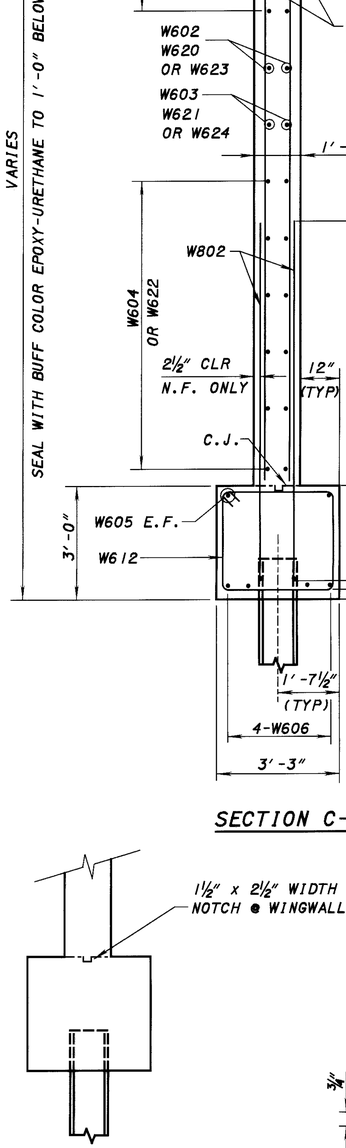



SECTION B-B

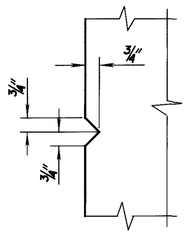
(ABUTMENT)




SECTION C-C

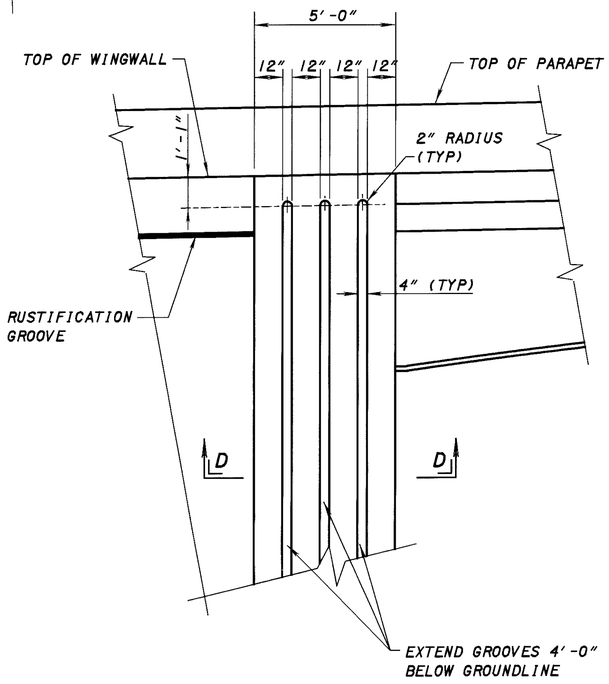



CONSTRUCTION JOINT

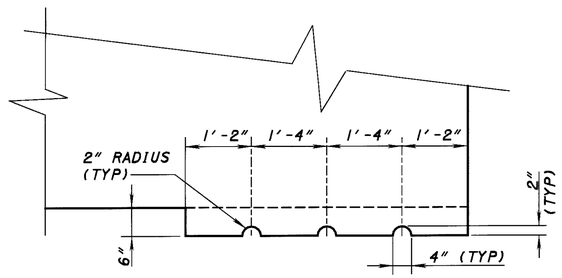



RUSTIFICATION GROOVE DETAIL

ELEVATION TO COINCIDE WITH BOTTOM OF CONCRETE DECK




AESTHETIC PYLON TREATMENT DETAIL




SECTION D-D

FOR SECTION CUT LOCATIONS, SEE SHEETS 16/34 AND 17/34.
N.F. - NEAR FACE
E.F. - EACH FACE

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| BRC | BRC | DFT | 12-10-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 52035891/52036191R | |

WINGWALL DETAILS
MED-71-1685 L
I-71 OVER S.R. 18

MED-71-15.78

18/34

704/940

## NOTES

* LADDER RUNGS SHALL BE CENTERED BETWEEN GIRDERS F AND E. SEE STD. CONST. DWGS. MH-1.1M FOR FURTHER DETAILS ON LADDER RUNGS. LADDER RUNGS SHALL BE INCLUDED WITH PIER CONCRETE FOR PAYMENT ITEM NO. 842.

REBARS SHALL BE ADJUSTED LOCALLY TO CLEAR LADDER RUNGS.

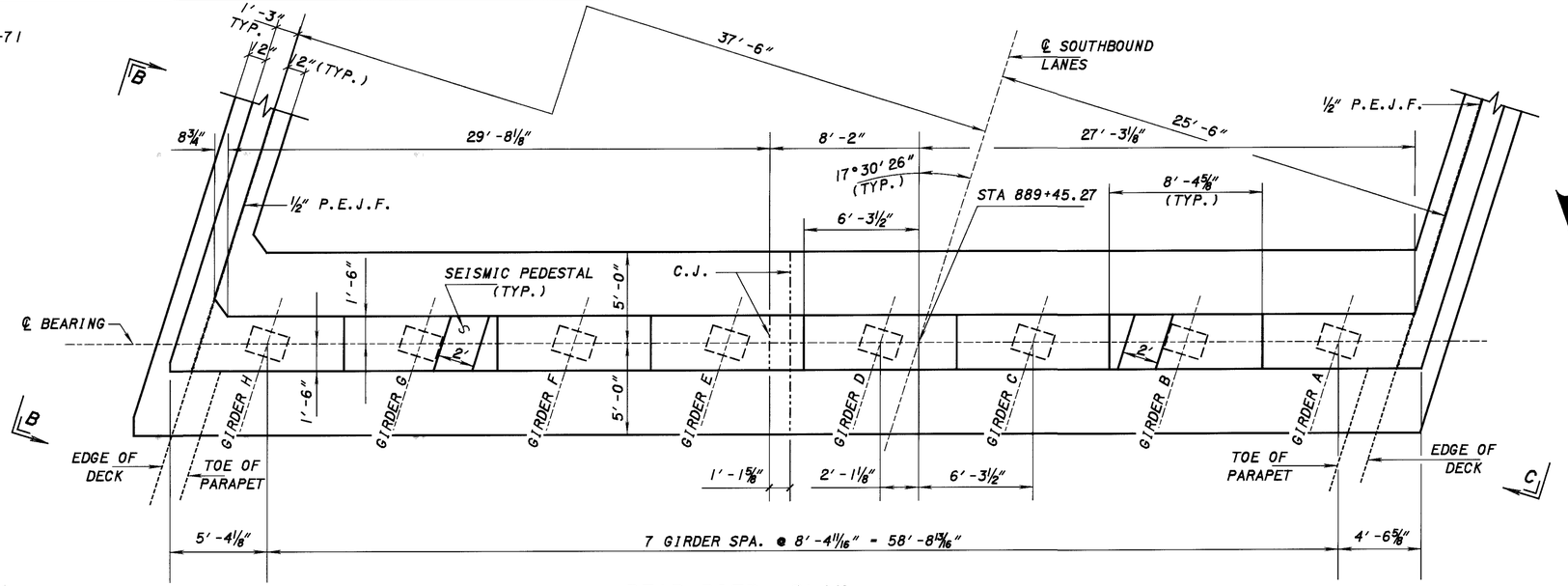
THE VERTICAL SURFACE OF THE PIER FROM THE TOP OF GROUND TO BRIDGE SEAT SHALL BE SEALED WITH AN EPOXY URETHANE SEALER. BRIDGE SEAT NEED NOT BE SEALED.

FOR LOCATION OF VIEW B-B AND C-C SEE SHEET 15/34

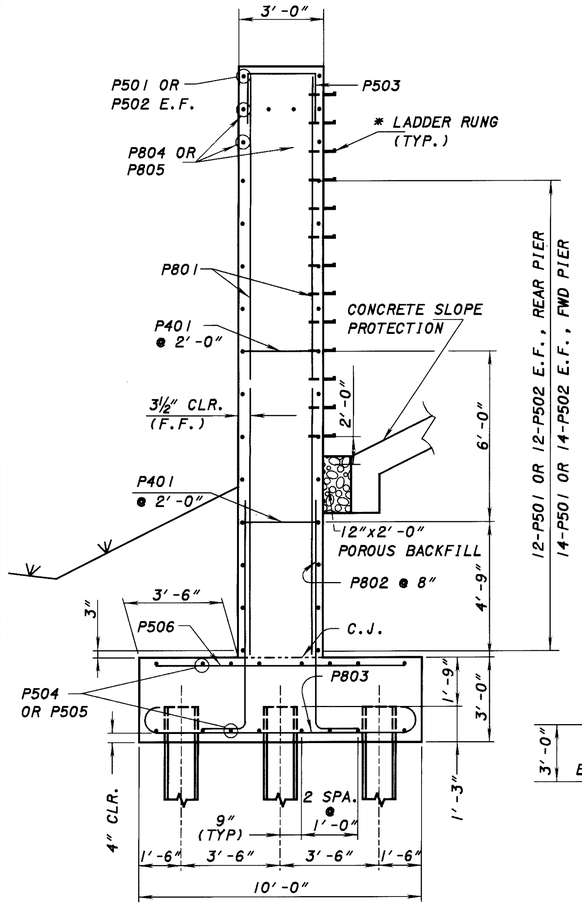
PILES ARE NOT SHOWN IN PLAN VIEW FOR CLARITY. FOR ADDITIONAL INFORMATION SEE SHEET 9/34

# 5 BAR MINIMUM LAP - 3'-0"
# 8 BAR MINIMUℳ LAP - 5'-2"

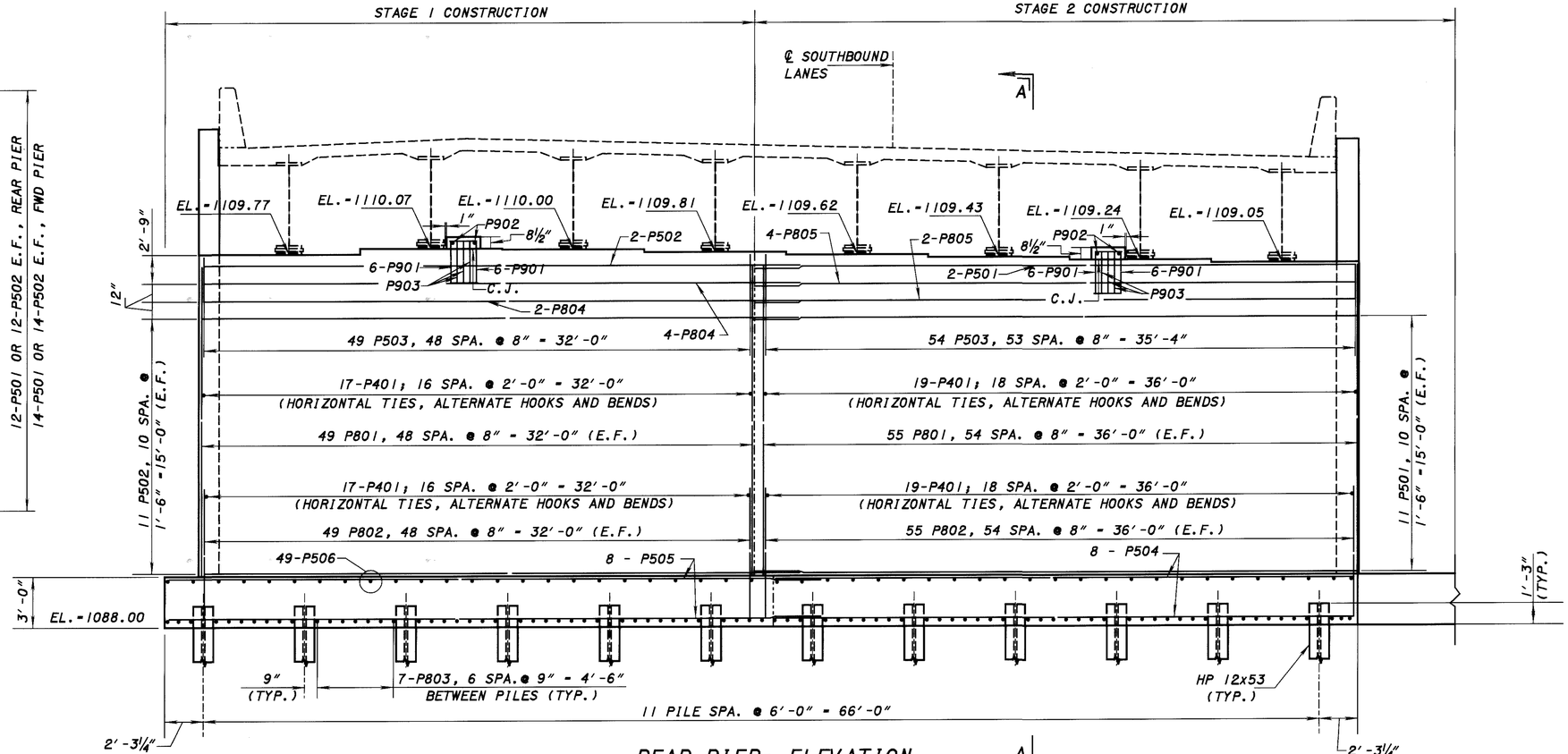
F.F.- FRONT FACE




## REAR PIER- PLAN




## SECTION A-A




## REAR PIER- ELEVATION

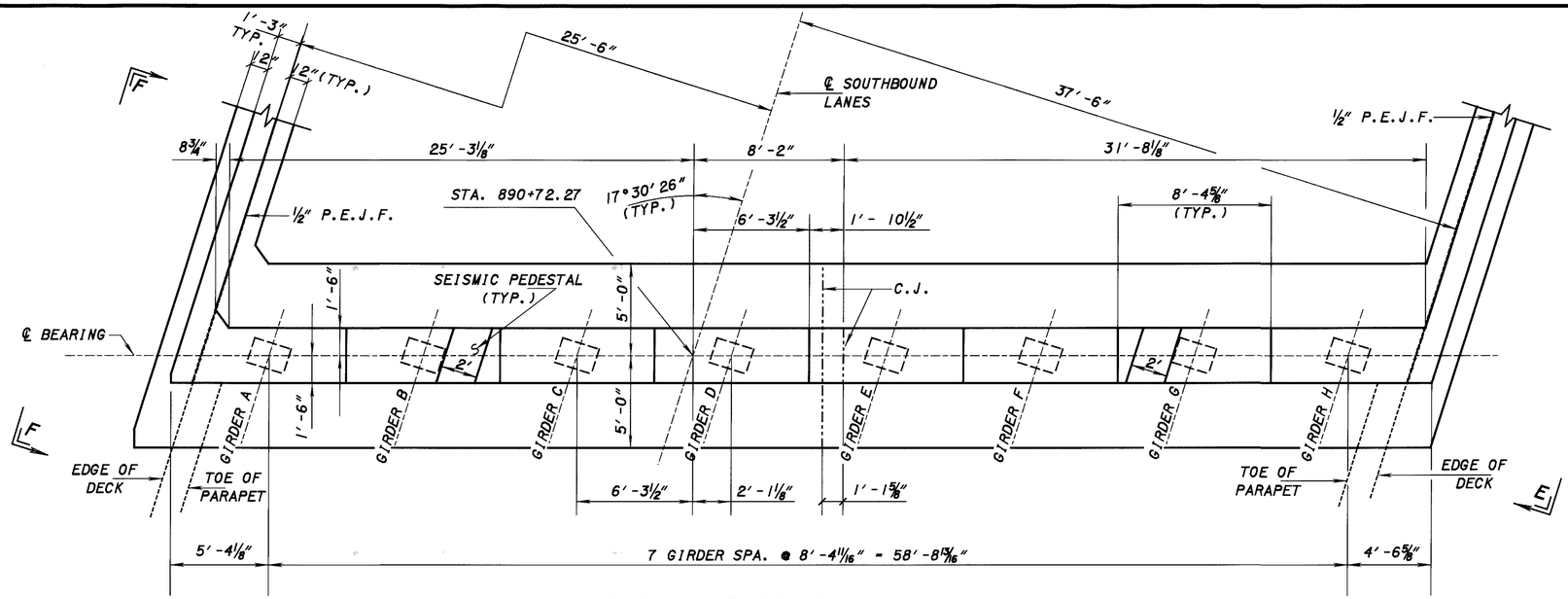
| | |
|---|---|
| DESIGN AGENCY | ODOT CENTRAL OFFICE OFFICE OF PRODUCTION |
| REVIEWED DFT | DATE 12-10-99 |
| STRUCTURE FILE NUMBER | 5203589L |
| DRAWN TAA | REVISED |
| DESIGNED TAA | CHECKED BRC |

PIER DETAILS
MED-71-1685 L
I-71 OVER S.R. 18

MED-71-15.78

19/34

705/940




## FORWARD PIER- PLAN

## NOTES

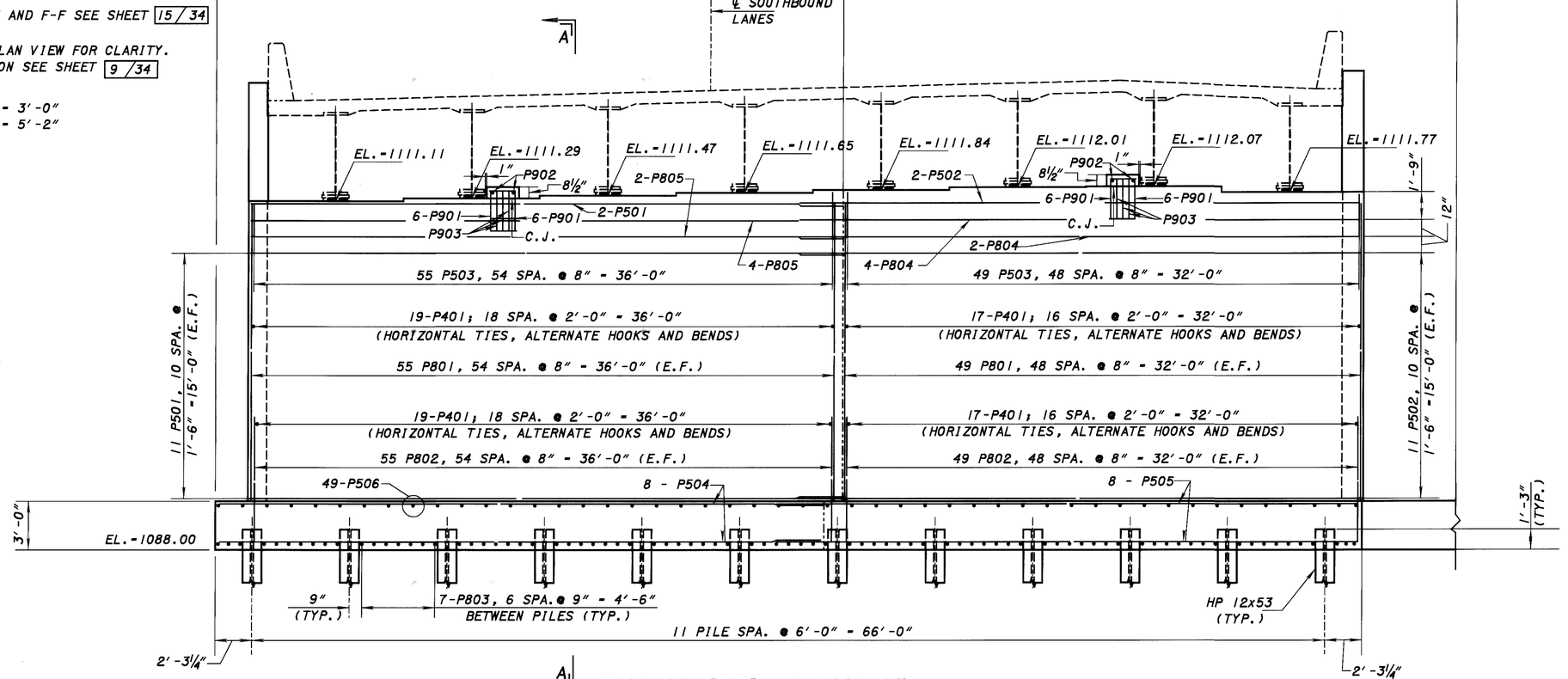
THE VERTICAL SURFACE OF THE PIER FROM THE TOP OF GROUND TO BRIDGE SEAT SHALL BE SEALED WITH AN EPOXY URETHANE SEALER. BRIDGE SEAT NEED NOT BE SEALED.

FOR LOCATION OF SECTION A-A SEE SHEET 19/34

FOR LOCATION OF VIEW E-E AND F-F SEE SHEET 15/34

PILES ARE NOT SHOWN IN PLAN VIEW FOR CLARITY. FOR ADDITIONAL INFORMATION SEE SHEET 9/34

# 5 BAR MINIMUM LAP - 3'-0"
# 8 BAR MINIMUM LAP - 5'-2"




## FORWARD PIER- ELEVATION

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVISED: DFT DATE: 12-10-99
STRUCTURE FILE NUMBER: 5203589L
DRAWN: TAA REVISED:
DESIGNED: TAA CHECKED: BRC

PIER DETAILS
MED-71-1685 L
I-71 OVER S.R. 18

MED-71-15.78

20/34

706/940

## NOTES

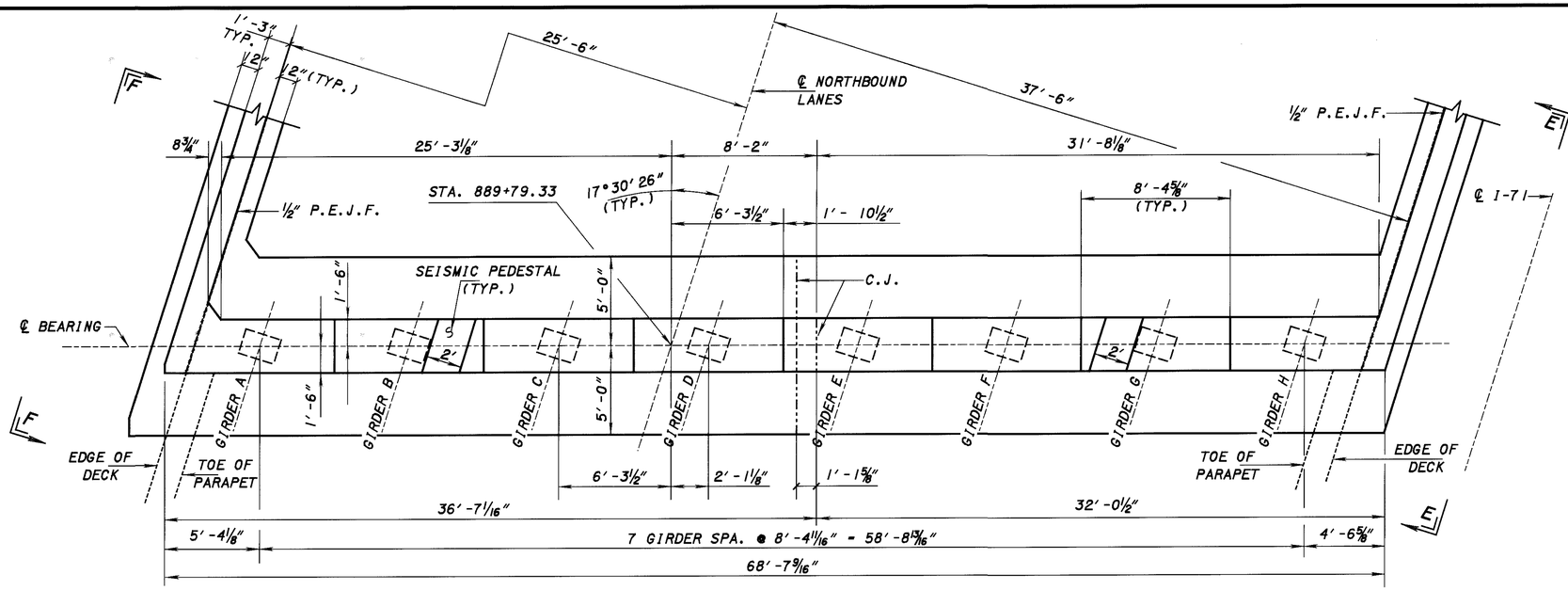
THE VERTICAL SURFACE OF THE PIER FROM THE TOP OF GROUND TO BRIDGE SEAT SHALL BE SEALED WITH AN EPOXY URETHANE SEALER. BRIDGE SEAT NEED NOT BE SEALED.

FOR LOCATION OF SECTION A-A SEE SHEET 19/34

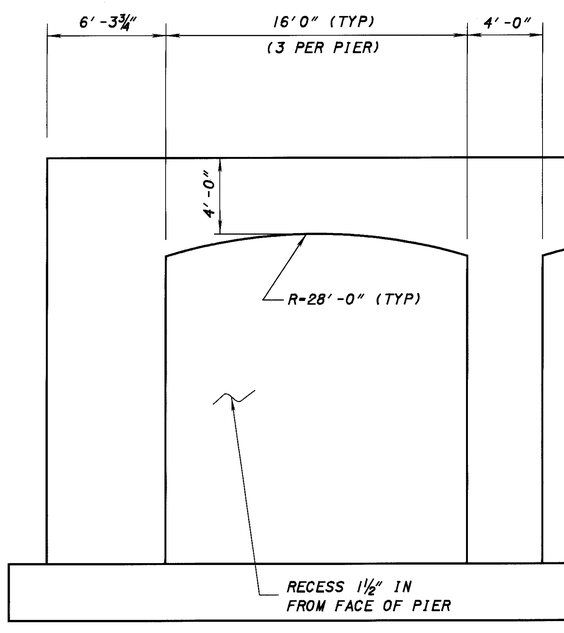
FOR LOCATION OF VIEW E-E AND F-F SEE SHEET 15/34

PILES ARE NOT SHOWN IN PLAN VIEW FOR CLARITY.
FOR ADDITIONAL INFORMATION SEE SHEET 10/34

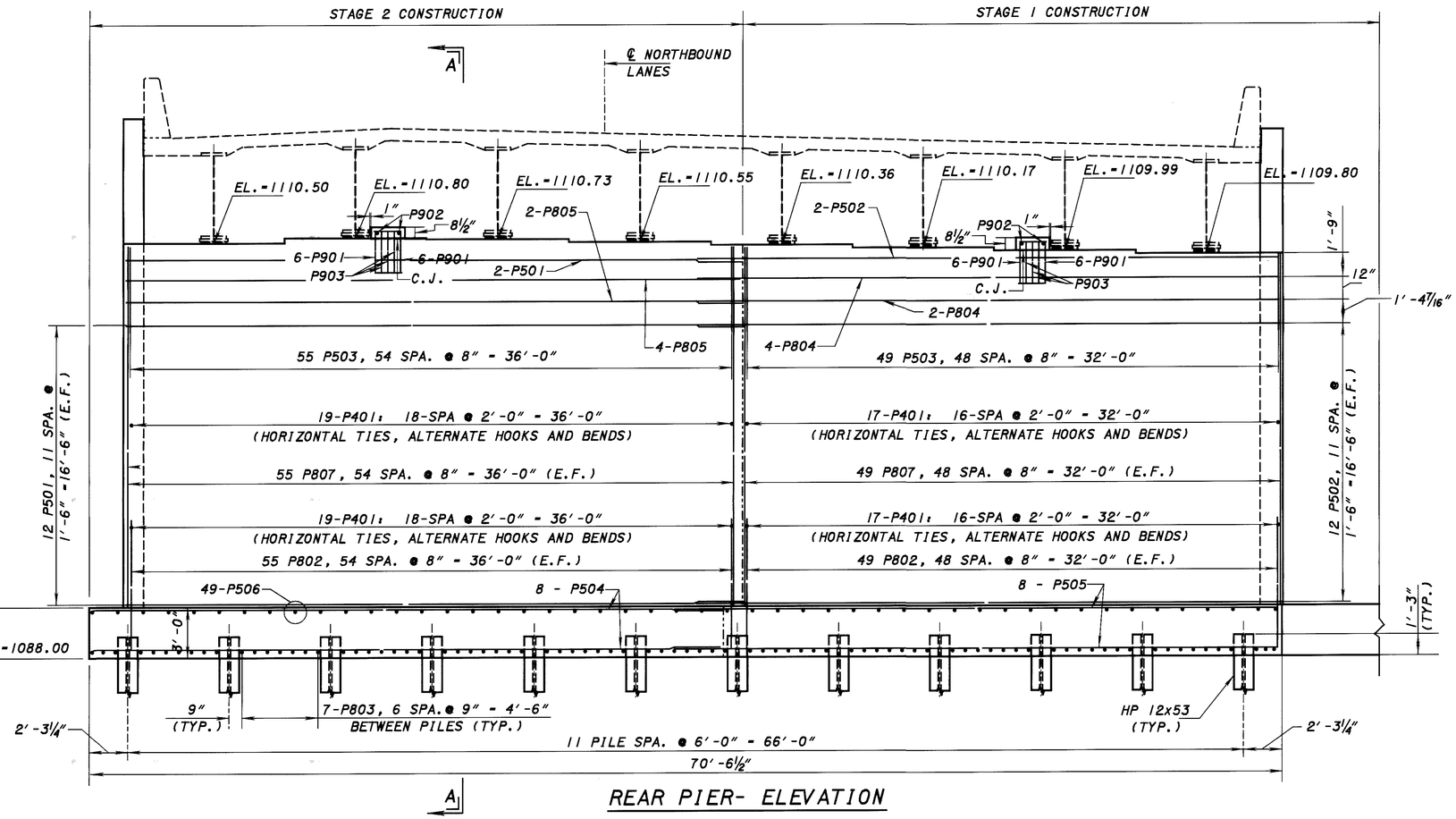
# 5 BAR MINIMUM LAP = 3'-0"
# 8 BAR MINIMUM LAP = 5'-2"




## REAR PIER- PLAN




## RECESSED ARCH DETAIL



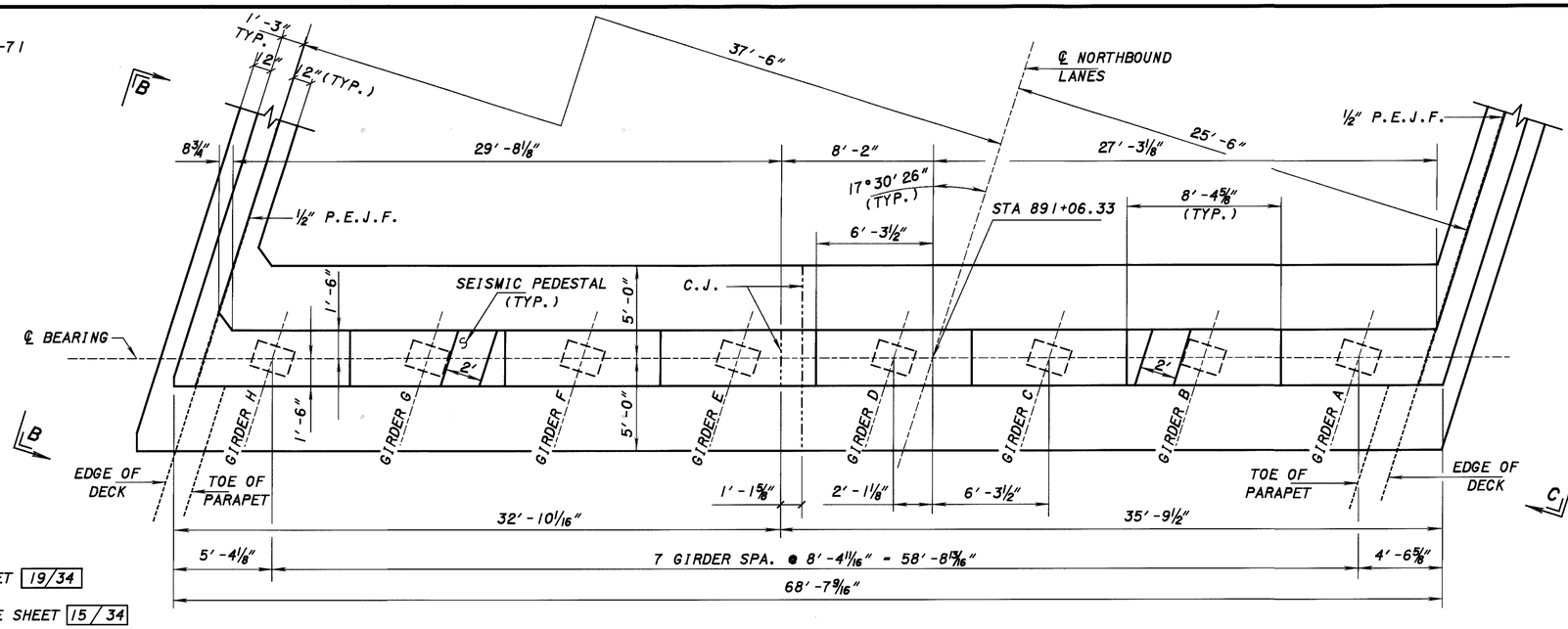

## REAR PIER- ELEVATION

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | BRC | DFT | 12-10-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| BRC | | 5203619R | |

PIER DETAILS
MED-71-1685 R
I-71 OVER S.R. 18

MED-71-15.78




## NOTES

THE VERTICAL SURFACE OF THE PIER FROM THE TOP OF GROUND TO BRIDGE SEAT SHALL BE SEALED WITH AN EPOXY URETHANE SEALER. BRIDGE SEAT NEED NOT BE SEALED.

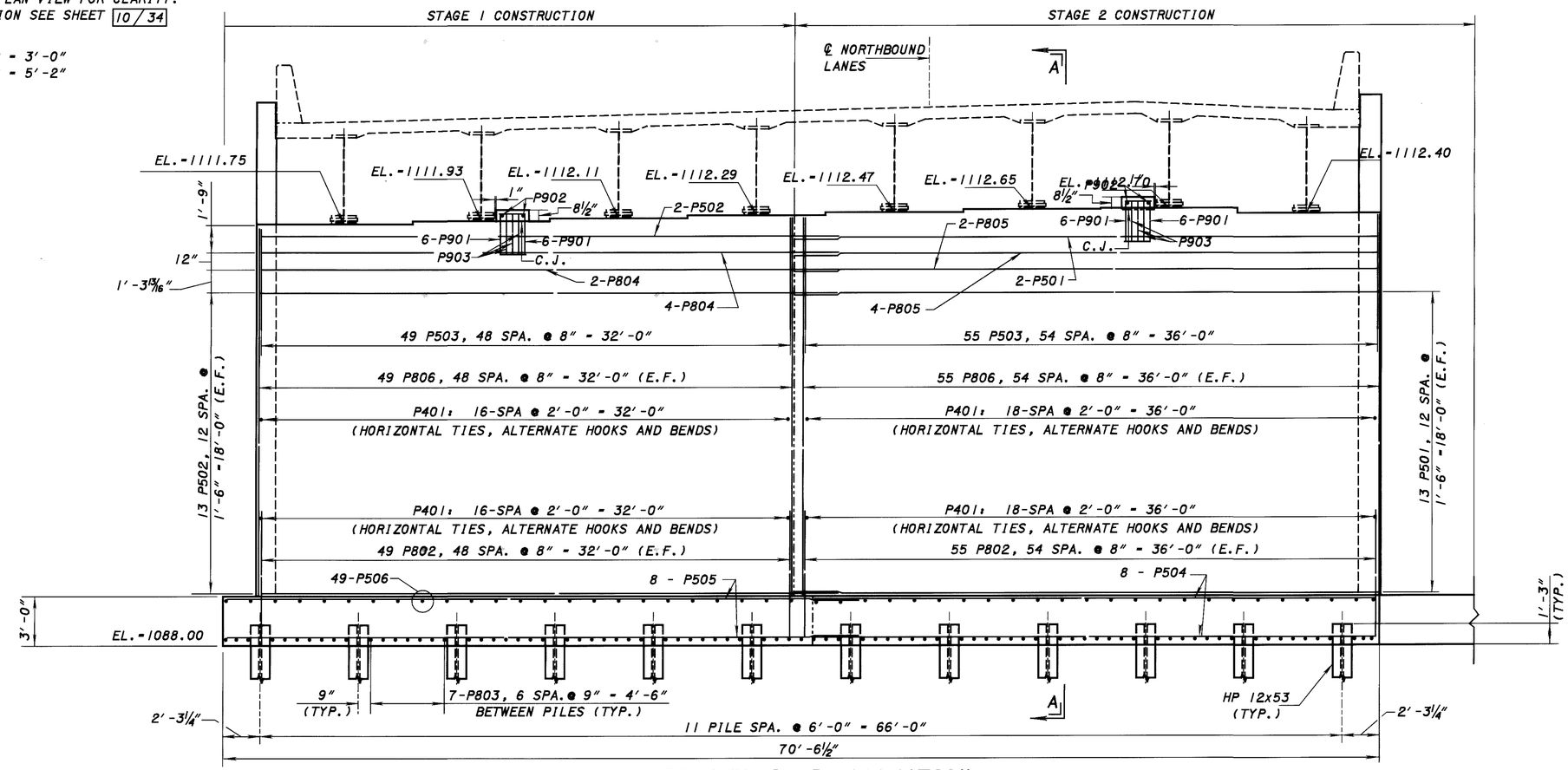
FOR LOCATION OF SECTION A-A SEE SHEET 19/34

FOR LOCATION OF VIEW E-E AND F-F SEE SHEET 15/34

PILES ARE NOT SHOWN IN PLAN VIEW FOR CLARITY. FOR ADDITIONAL INFORMATION SEE SHEET 10/34

* 5 BAR MINIMUM LAP - 3'-0"
* 8 BAR MINIMUM LAP - 5'-2"

## FORWARD PIER- PLAN




## FORWARD PIER- ELEVATION

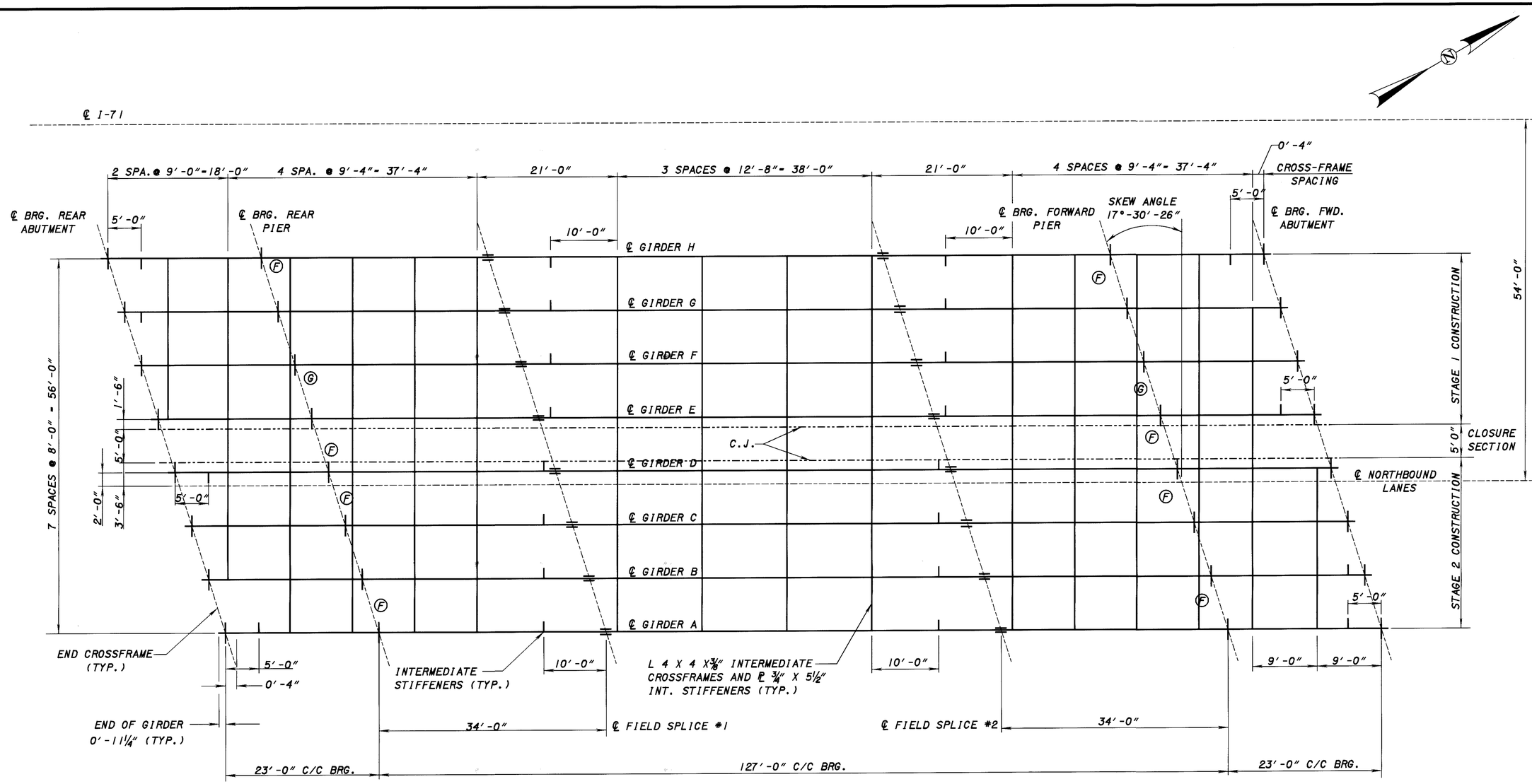
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TAA
DRAWN: BRC
CHECKED: BRC
REVIEWED: DFT
DATE: 12-10-99
REVISED:
STRUCTURE FILE NUMBER: 5203619R

PIER DETAILS
MED-71-1685 R
I-71 OVER S.R. 18

MED-71-15.78

22/34

708/940




## FRAMING PLAN

(NORTHBOUND LANES ONLY SHOWN)

## NOTES:

**STRUCTURAL STEEL:**
WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.0

ALL MATERIAL TO BE ASTM A-572, GRADE 50.

BEARING STIFFENERS AND ENDS OF BEAM TO BE VERTICAL. BEARING STIFFENERS LOCATED AT ℄ BRGS.

ALL BEAM LENGTH DIMENSIONS ARE AT 60 °F

## LOCATION OF FENCE PANELS:

Ⓖ - GATE PANEL

Ⓕ - FIXED PANELS

SEE SHEET 33/34 FOR DETAILS

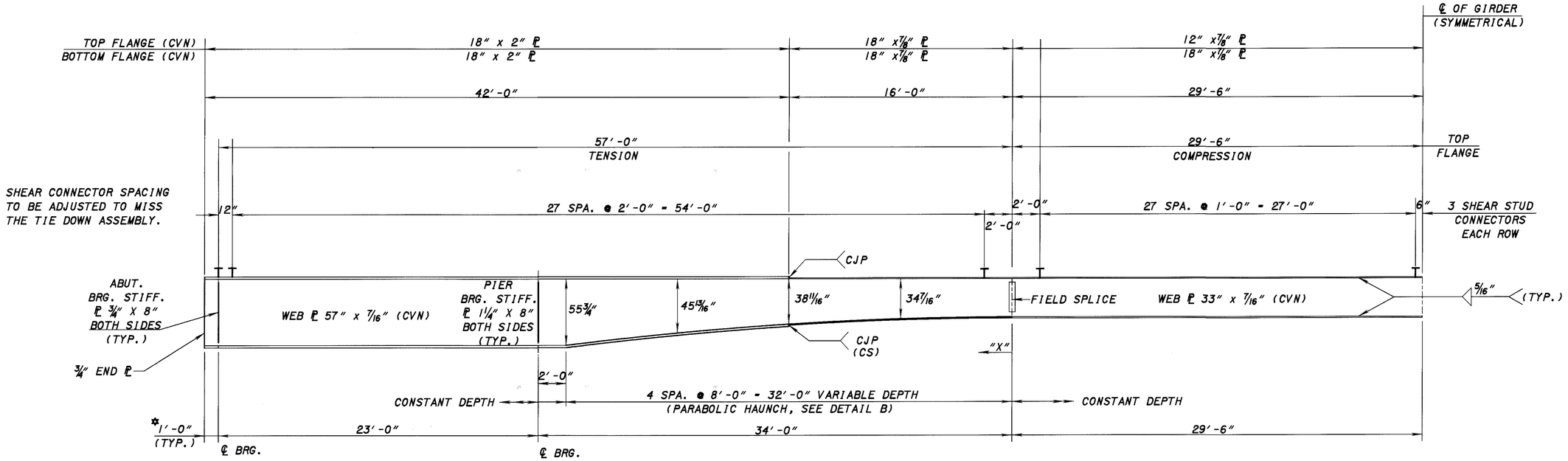
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | HLG | HLG | 12-10-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5203589L/5203619R | |

SUPERSTRUCTURE DETAILS

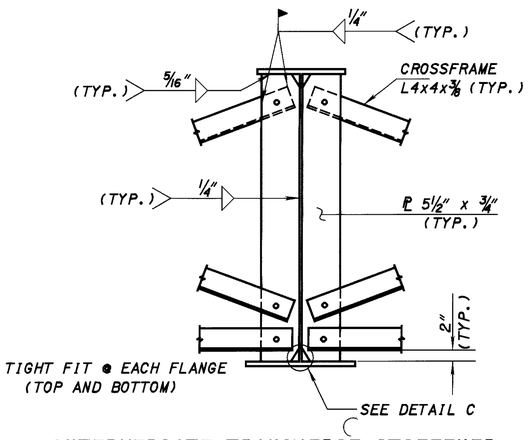
MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78



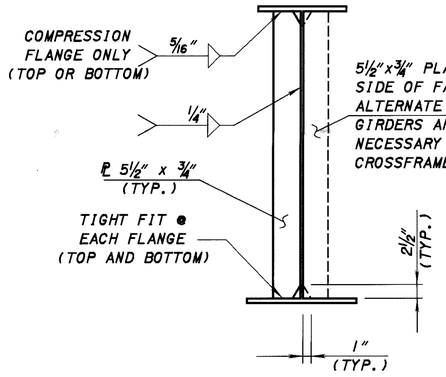

## HALF GIRDER ELEVATION

*INCLUDES 3/4" ℙ




## INTERMEDIATE TRANSVERSE STIFFENER @ CROSS-FRAME LOCATIONS

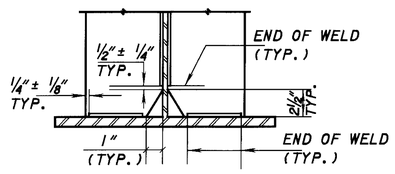
SEE STD. DRWG. GSD-1-96 FOR ADDITIONAL DETAILS (TYPE 3 CROSSFRAMES SHOWN)




## TYPICAL INTERMEDIATE TRANSVERSE STIFFENER

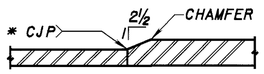
**STRUCTURAL STEEL:**

WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.0




## DETAIL C

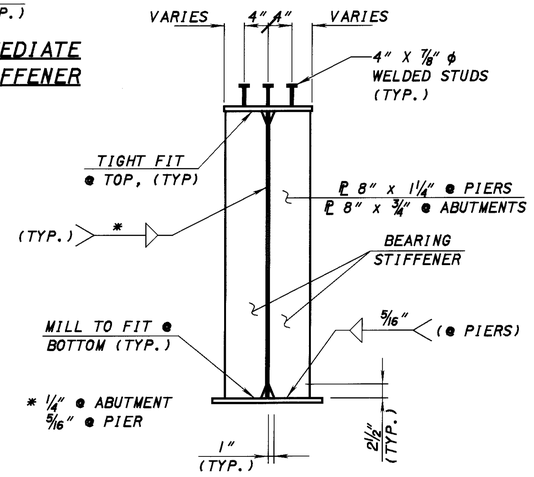
WELD TERMINATION AND STIFFENER PLATE CLIPPING DETAIL



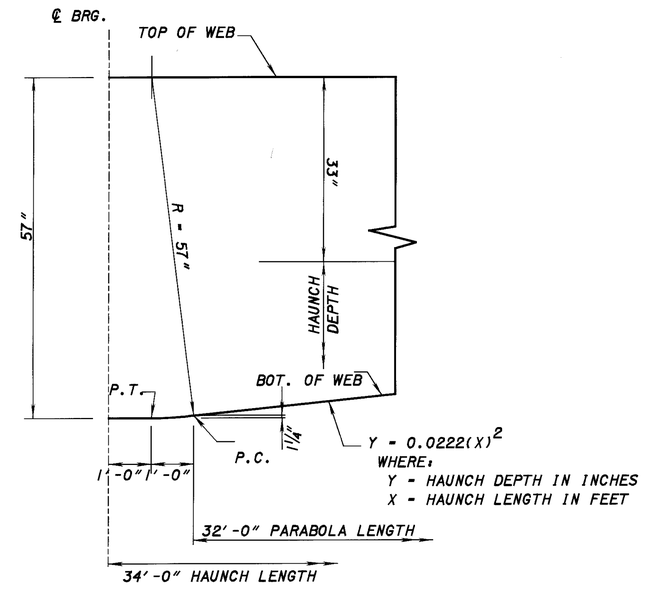

## FLANGE WELD DETAIL

* COMPLETE JOINT PENETRATION WELDS SHALL BE GROUND SMOOTH IN A LONGITUDINAL DIRECTION TO REMOVE WELD REINFORCEMENT.

CS - BUTT WELD SUBJECT TO COMPRESSIVE STRESSES ONLY




## BEARING STIFFENER




## DETAIL B

TYPICAL HAUNCH GEOMETRY

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVISED HLG DATE 12-10-99

STRUCTURE FILE NUMBER 5203589L/5203619R

DESIGNED DFT | DRAWN HLG | REVISED

CHECKED TAA

# SUPERSTRUCTURE DETAILS

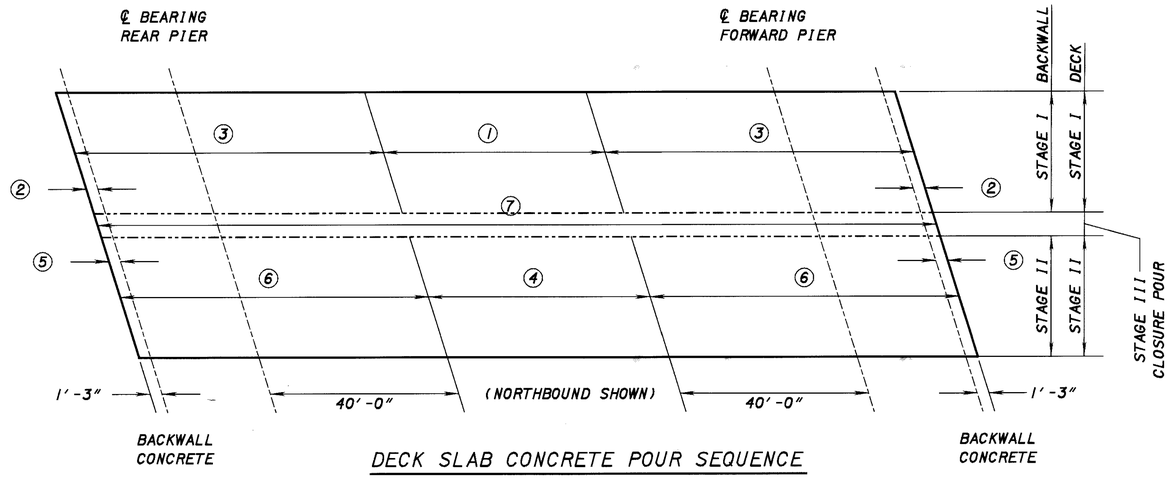
MED-71-1685 L/R

I-71 OVER S.R. 18

MED-71-15.78

24 | 34

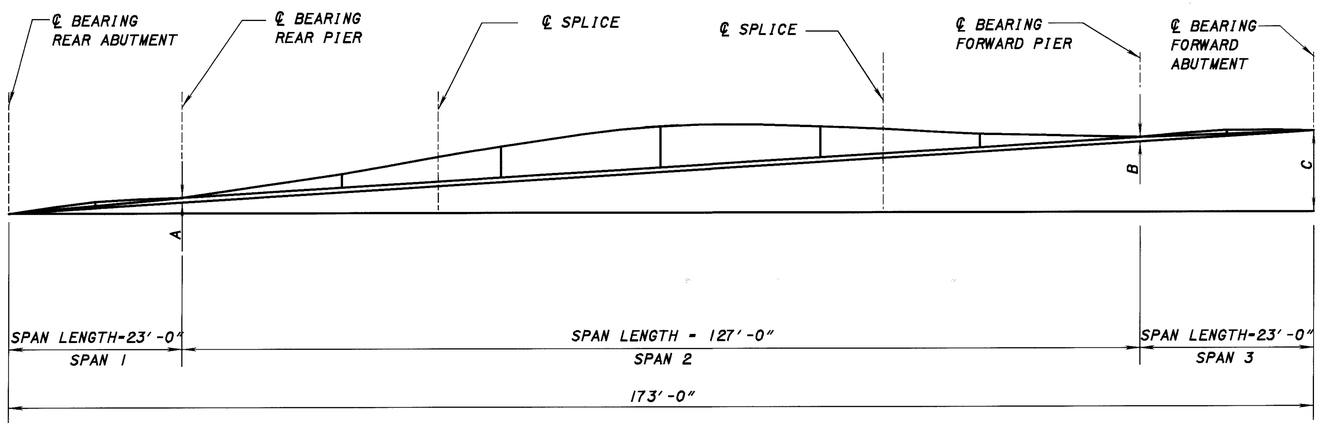
710 / 940




## DECK SLAB CONCRETE POUR SEQUENCE

| NORTHBOUND LANES | | | |
|---|---|---|---|
| BLOCKING DIAGRAM DIMENSIONS | | | |
| BEAMLINE | A | B | C |
| A | 9/16" | 11/16" | 2'-7 1/8" |
| B | 9/16" | 11/16" | 2'-7 1/4" |
| C | 9/16" | 11/16" | 2'-7 7/16" |
| D | 9/16" | 11/16" | 2'-7 9/16" |
| E | 9/16" | 9/16" | 2'-7 9/16" |
| F | 9/16" | 9/16" | 2'-7 11/16" |
| G | 9/16" | 9/16" | 2'-7 13/16" |
| H | 9/16" | 9/16" | 2'-8" |

| SOUTHBOUND LANES | | | |
|---|---|---|---|
| BLOCKING DIAGRAM DIMENSIONS | | | |
| BEAMLINE | A | B | C |
| A | 9/16" | 1/2" | 2'-9 5/8" |
| B | 9/16" | 9/16" | 2'-9 1/2" |
| C | 9/16" | 9/16" | 2'-9 3/8" |
| D | 9/16" | 9/16" | 2'-9 3/16" |
| E | 9/16" | 9/16" | 2'-9 1/16" |
| F | 9/16" | 5/8" | 2'-9 1/16" |
| G | 9/16" | 11/16" | 2'-8 15/16" |
| H | 9/16" | 11/16" | 2'-8 13/16" |




## BLOCKING AND CAMBER DIAGRAM

VERTICAL DIMENSIONS EXAGGERATE FOR CLARITY

## NOTES & LEGEND:

**STRUCTURAL STEEL:**
WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

FOR SCREED DIAGRAM AND TABLE SEE SHEET 27/34

**WELDED ATTACHMENT:**
WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FACIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

STRUCTURAL STEEL SHALL BE ASTM A572.

ALL BEAM LENGTH DIMENSION ARE AT 60 °F

POUR SEQUENCE ACCORDING TO NUMERICAL ORDER.

BACKWALL CONCRETE (POURS 2 & 5, UP TO THE APPROACH SLAB SEAT LEVEL) SHALL BE PLACED AT LEAST 48 HOURS BEFORE ADJACENT DECK CONCRETE IS PLACED. THIS WORK SHALL ALSO BE COMPLETED WHEN SUDDEN TEMPERATURE CHANGES ARE UNLIKELY AND AT LEAST 4 HOURS PRIOR TO THE DAY'S PEAK AMBIENT TEMPERATURE.

STAGE II BACKWALL CONCRETE (POUR 5) SHALL EXTEND TO ADJOIN STAGE I CONSTRUCTION.

STAGE III DECK CLOSURE (POUR 7) MAY BE MADE IN A SINGLE POUR, END-TO-END OF STRUCTURE.

| NORTHBOUND AND SOUTHBOUND BEAM DEFLECTION AND CAMBER TABLE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SPAN 1 | SPAN 2 | | | | | | | SPAN 3 |
| LOCATION OF POINT | 1/2 | 1/6 | SPL | 1/3 | 1/2 | 2/3 | SPL | 5/6 | 1/2 |
| BEAM DEFLECTION | 0" | 1/8" | 1/4" | 3/8" | 1/2" | 3/8" | 1/4" | 1/8" | 0" |
| REMAINING DL DEFLECTION | 1/16" | 9/16" | 1 3/16" | 1 1/2" | 2 1/8" | 1 1/2" | 1 3/16" | 9/16" | 1/16" |
| CORRECTION FOR VERTICAL CURVE | 0" | 3/8" | 1/2" | 9/16" | 5/8" | 9/16" | 1/2" | 3/8" | 0" |
| SHOP CAMBER | 1/16" | 1 1/16" | 1 15/16" | 2 7/16" | 3 1/4" | 2 7/16" | 1 15/16" | 1 1/16" | 1/16" |

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

DESIGNED DB | DRAWN DB | CHECKED BRC | REVISED | REVIEWED DFT | DATE 12-10-99

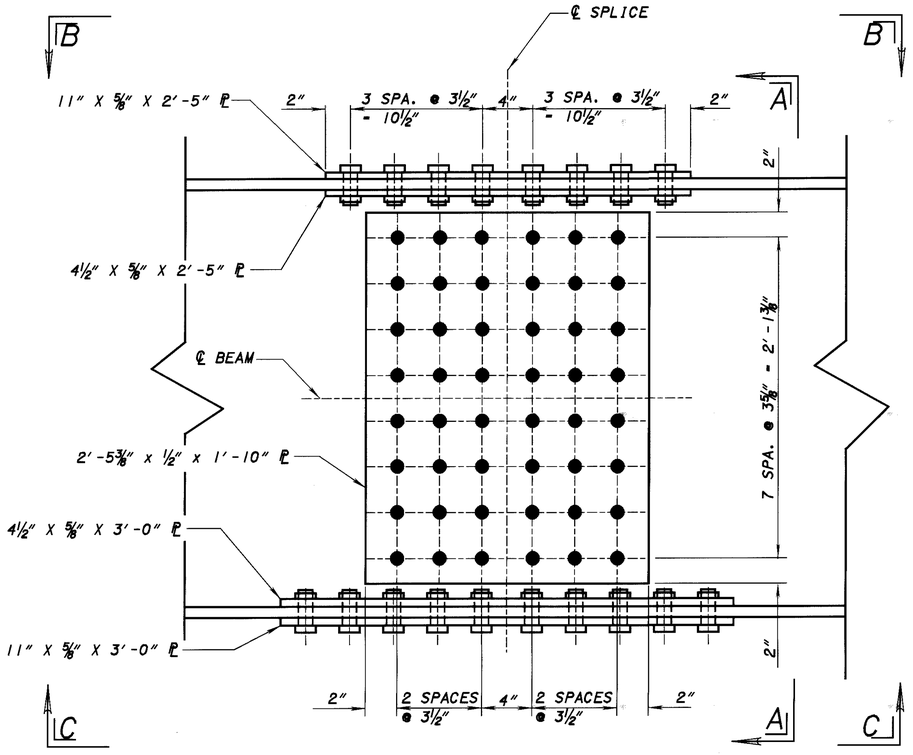
STRUCTURE FILE NUMBER 5203589L/5203619R

BLOCKING AND CAMBER DIAGRAM
MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

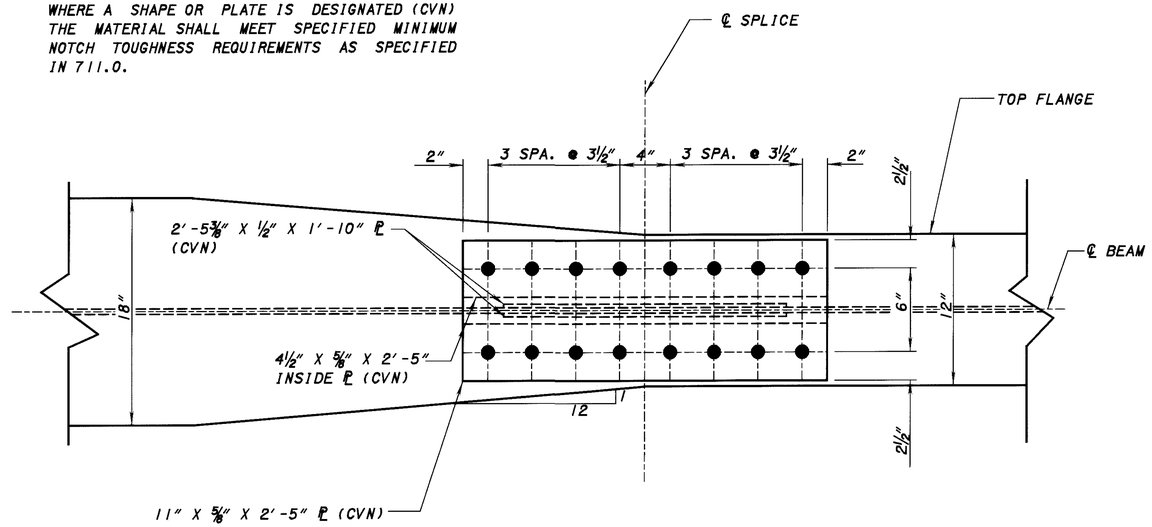
25/34

711/940



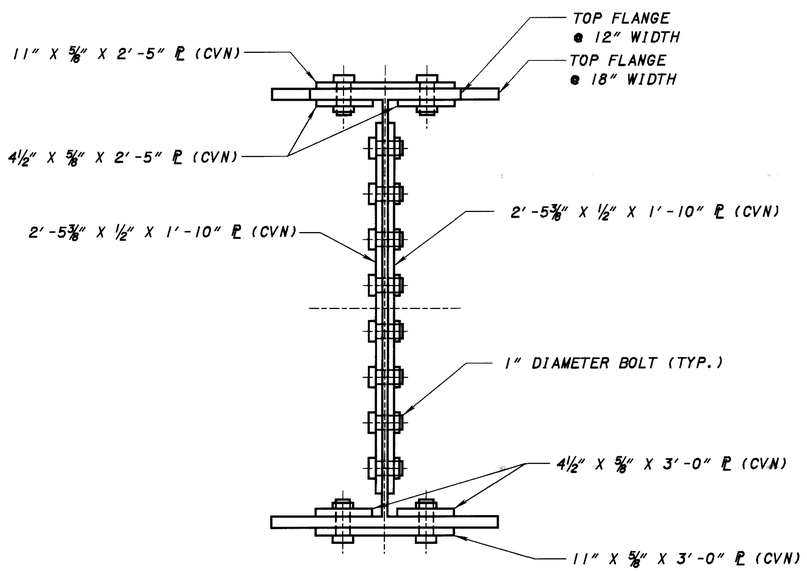

SPLICE DETAILS

**STRUCTURAL STEEL:**
*WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.0.*

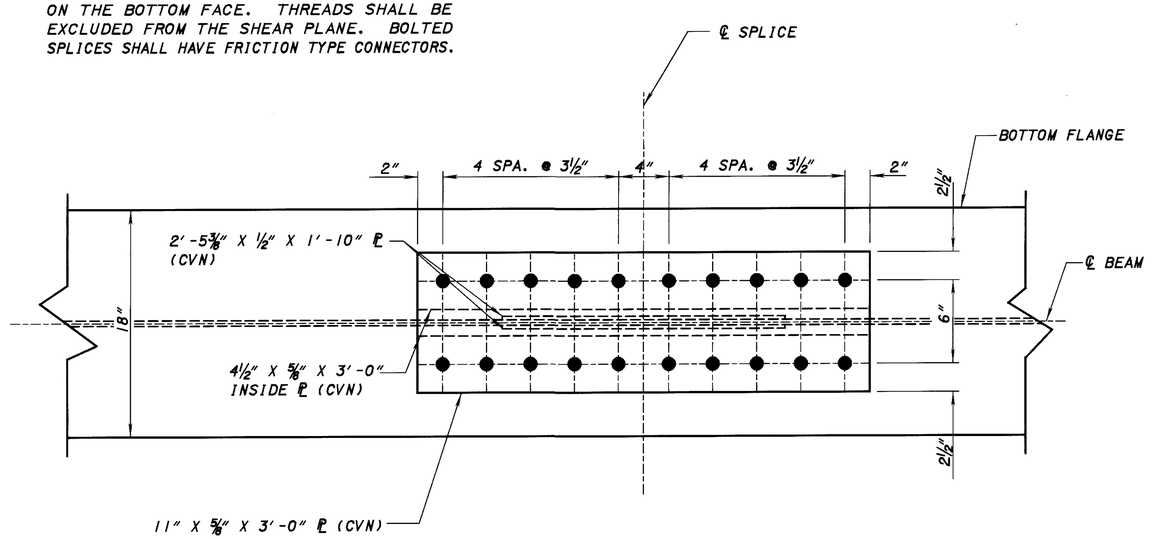



VIEW B-B

*ALL BOLTS SHALL BE HIGH STRENGTH 1" DIAMETER, A325 GALVANIZED BOLTS, UNLESS OTHERWISE NOTED. WEB BOLTS OF FIELD SPLICES SHALL BE PLACED WITH THE HEADS ON THE OUTSIDE FACE OF EXTERIOR GIRDERS. FLANGE BOLTS FOR THE BOTTOM FLANGES OF THE FIELD SPLICES OF ALL GIRDERS SHALL BE PLACED WITH HEADS ON THE BOTTOM FACE. THREADS SHALL BE EXCLUDED FROM THE SHEAR PLANE. BOLTED SPLICES SHALL HAVE FRICTION TYPE CONNECTORS.*




SECTION A-A




VIEW C-C

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED: TAA — DATE: 12-10-99
STRUCTURE FILE NUMBER: 5203589L/5203619R
DRAWN: DB — REVISED:
DESIGNED: DB — CHECKED: DFT

SPLICE DETAILS
MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

26 / 34

712 / 940

## SCREED ELEVATION - SOUTHBOUND BRIDGE

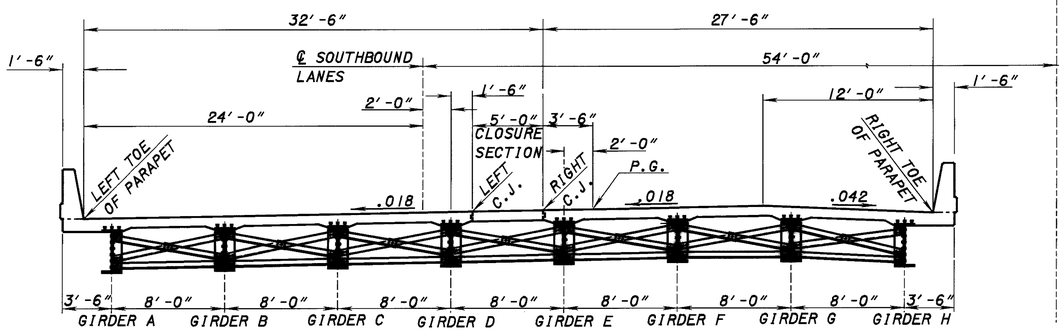
| LOCATION | LEFT TOE OF PARAPET | | SOUTHBOUND LANE ℄ | | LEFT CONSTR JT | | RIGHT CONSTR JT | | PROFILE GRADE | | RIGHT TOE OF PARAPET | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 889+14.70 | 1114.82 | 889+22.27 | 1115.39 | 889+23.37 | 1115.47 | 889+24.95 | 1115.59 | 889+26.06 | 1115.67 | 889+33.63 | 1115.52 |
| MIDSPAN | 889+26.20 | 1115.02 | 889+33.77 | 1115.59 | 889+34.87 | 1115.68 | 889+36.45 | 1115.80 | 889+37.56 | 1115.88 | 889+45.13 | 1115.72 |
| ℄ PIER # 1 | 889+37.70 | 1115.24 | 889+45.27 | 1115.80 | 889+46.37 | 1115.88 | 889+47.95 | 1116.00 | 889+49.06 | 1116.09 | 889+56.63 | 1115.93 |
| 1/6 SPAN | 889+58.87 | 1115.65 | 889+66.44 | 1116.21 | 889+67.54 | 1116.29 | 889+69.12 | 1116.41 | 889+70.22 | 1116.49 | 889+77.79 | 1116.33 |
| FIELD SPLICE #1 | 889+71.70 | 1115.92 | 889+79.27 | 1116.48 | 889+80.37 | 1116.56 | 889+81.95 | 1116.68 | 889+83.06 | 1116.76 | 889+90.63 | 1116.60 |
| 1/3 SPAN | 889+80.03 | 1116.10 | 889+87.60 | 1116.65 | 889+88.71 | 1116.73 | 889+90.28 | 1116.85 | 889+91.39 | 1116.93 | 889+98.96 | 1116.77 |
| MIDSPAN | 890+01.20 | 1116.50 | 890+08.77 | 1117.05 | 890+09.87 | 1117.13 | 890+11.45 | 1117.25 | 890+12.56 | 1117.33 | 890+20.13 | 1117.16 |
| 2/3 SPAN | 890+22.37 | 1116.78 | 890+29.94 | 1117.33 | 890+31.04 | 1117.41 | 890+32.62 | 1117.53 | 890+33.72 | 1117.61 | 890+41.29 | 1117.43 |
| FIELD SPLICE #2 | 890+30.70 | 1116.87 | 890+38.27 | 1117.42 | 890+39.37 | 1117.50 | 890+40.95 | 1117.61 | 890+42.06 | 1117.69 | 890+49.63 | 1117.52 |
| 5/6 SPAN | 890+43.53 | 1117.02 | 890+51.10 | 1117.57 | 890+52.21 | 1117.65 | 890+53.78 | 1117.76 | 890+54.89 | 1117.84 | 890+62.46 | 1117.66 |
| ℄ PIER # 2 | 890+64.70 | 1117.30 | 890+72.27 | 1117.84 | 890+73.37 | 1117.92 | 890+74.95 | 1118.03 | 890+76.06 | 1118.11 | 890+83.63 | 1117.93 |
| MIDSPAN | 890+76.20 | 1117.46 | 890+83.77 | 1118.00 | 890+84.87 | 1118.08 | 890+86.45 | 1118.19 | 890+87.56 | 1118.27 | 890+95.13 | 1118.08 |
| ℄ FORWARD ABUTMENT | 890+87.70 | 1117.62 | 890+95.27 | 1118.16 | 890+96.37 | 1118.24 | 890+97.95 | 1118.35 | 890+99.06 | 1118.43 | 891+06.63 | 1118.24 |

## SCREED ELEVATION - NORTHBOUND BRIDGE

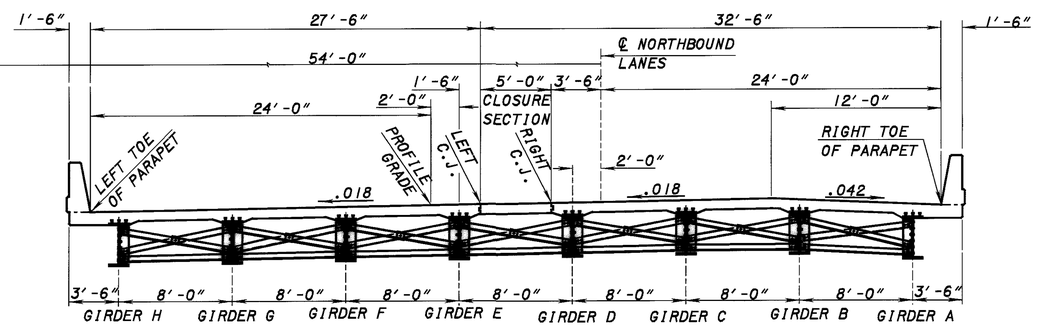
| LOCATION | LEFT TOE OF PARAPET | | PROFILE GRADE | | LEFT CONSTR JT | | RIGHT CONSTR JT | | NORTHBOUND LANE ℄ | | RIGHT TOE OF PARAPET | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 889+44.97 | 1115.58 | 889+52.54 | 1116.15 | 889+53.65 | 1116.23 | 889+55.23 | 1116.35 | 889+56.33 | 1116.43 | 889+63.90 | 1116.27 |
| MIDSPAN | 889+56.47 | 1115.78 | 889+64.04 | 1116.34 | 889+65.15 | 1116.42 | 889+66.73 | 1116.54 | 889+67.83 | 1116.62 | 889+75.40 | 1116.46 |
| ℄ PIER # 1 | 889+67.97 | 1115.98 | 889+75.54 | 1116.54 | 889+76.65 | 1116.62 | 889+78.23 | 1116.74 | 889+79.33 | 1116.82 | 889+86.90 | 1116.66 |
| 1/6 SPAN | 889+89.14 | 1116.38 | 889+96.71 | 1116.93 | 889+97.82 | 1117.02 | 889+99.39 | 1117.13 | 890+00.50 | 1117.21 | 890+08.07 | 1117.05 |
| FIELD SPLICE #1 | 890+01.97 | 1116.64 | 890+09.54 | 1117.19 | 890+10.65 | 1117.27 | 890+12.23 | 1117.39 | 890+13.33 | 1117.47 | 890+20.90 | 1117.30 |
| 1/3 SPAN | 890+10.31 | 1116.81 | 890+17.88 | 1117.36 | 890+18.98 | 1117.44 | 890+20.56 | 1117.55 | 890+21.66 | 1117.63 | 890+29.23 | 1117.46 |
| MIDSPAN | 890+31.47 | 1117.19 | 890+39.04 | 1117.74 | 890+40.15 | 1117.82 | 890+41.73 | 1117.93 | 890+42.83 | 1118.01 | 890+50.40 | 1117.84 |
| 2/3 SPAN | 890+52.64 | 1117.46 | 890+60.21 | 1118.00 | 890+61.32 | 1118.08 | 890+62.89 | 1118.19 | 890+64.00 | 1118.27 | 890+71.57 | 1118.10 |
| FIELD SPLICE #2 | 890+60.97 | 1117.55 | 890+68.54 | 1118.09 | 890+69.65 | 1118.17 | 890+71.23 | 1118.28 | 890+72.33 | 1118.36 | 890+79.90 | 1118.18 |
| 5/6 SPAN | 890+73.81 | 1117.68 | 890+81.38 | 1118.22 | 890+82.48 | 1118.30 | 890+84.06 | 1118.41 | 890+85.16 | 1118.49 | 890+92.73 | 1118.31 |
| ℄ PIER # 2 | 890+94.97 | 1117.94 | 891+02.54 | 1118.47 | 891+03.65 | 1118.55 | 891+05.23 | 1118.66 | 891+06.33 | 1118.74 | 891+13.90 | 1118.55 |
| MIDSPAN | 891+06.47 | 1118.09 | 891+14.04 | 1118.63 | 891+15.15 | 1118.70 | 891+16.73 | 1118.81 | 891+17.83 | 1118.89 | 891+25.40 | 1118.70 |
| ℄ FORWARD ABUTMENT | 891+17.97 | 1118.25 | 891+25.54 | 1118.78 | 891+26.65 | 1118.86 | 891+28.23 | 1118.97 | 891+29.33 | 1119.04 | 891+36.90 | 1118.85 |

SCREED SETTING ELEVATIONS GIVEN ARE TO THE TOP OF CONCRETE DECK AND ARE REQUIRED PRIOR TO PLACEMENT OF CONCRETE. THEY INCLUDE AN ALLOWANCE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE.

℄ I-71




SOUTHBOUND LANE BRIDGE




NORTHBOUND LANE BRIDGE

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

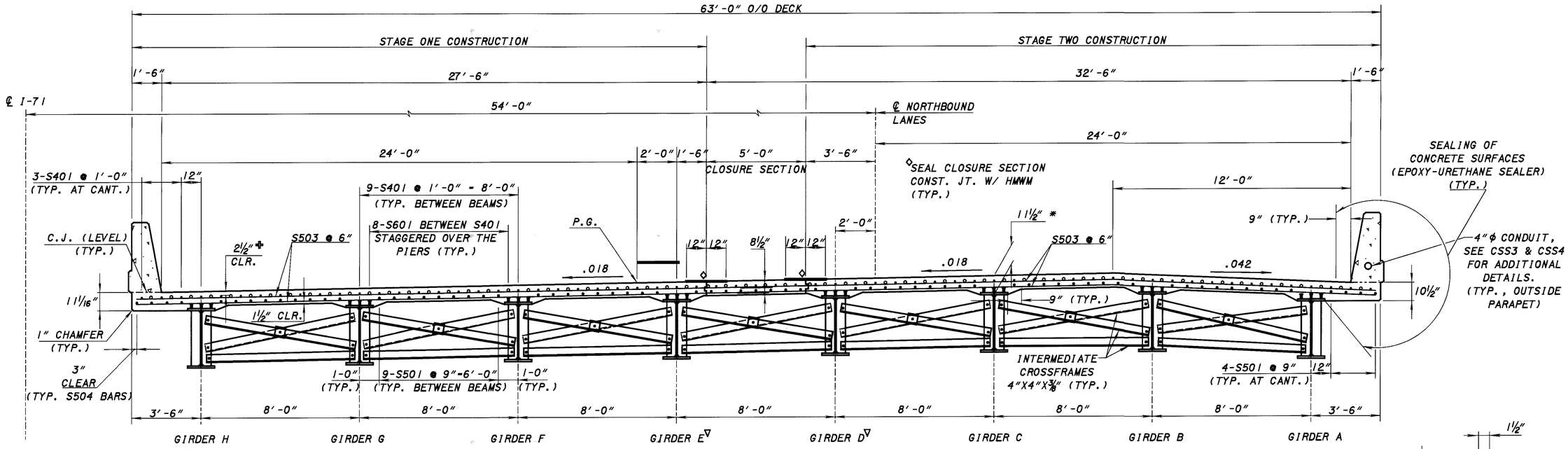
REVIEWED DFT
DATE 12-10-99
STRUCTURE FILE NUMBER 5203589L/5203619R

DRAWN BRC
REVISED

DESIGNED BRC
CHECKED DB

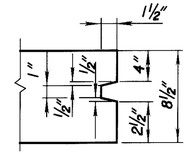
SCREED TABLES
MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

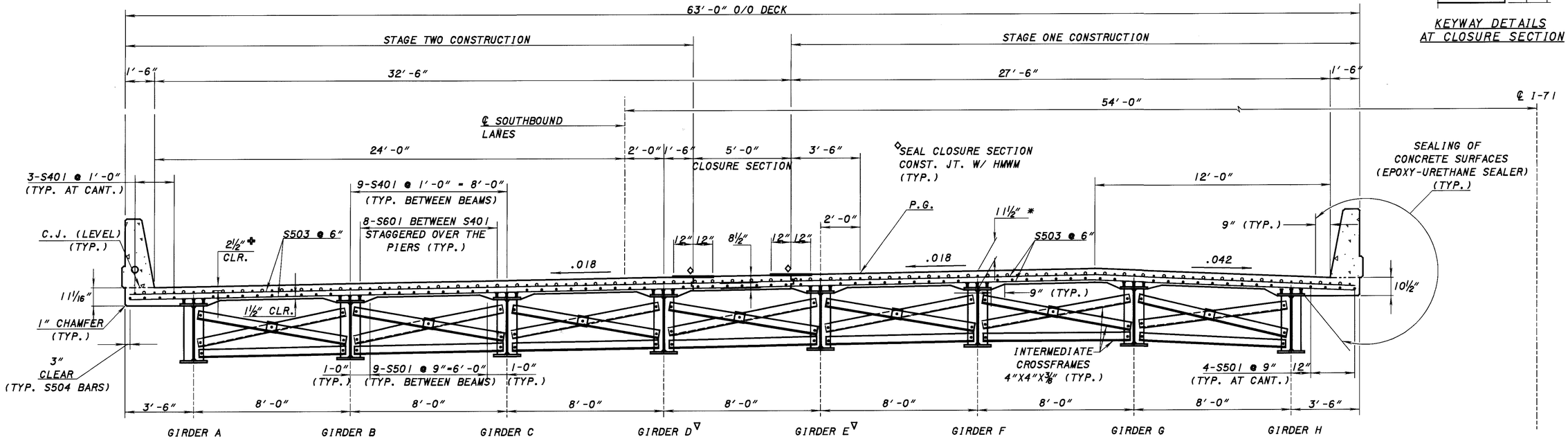



▽CROSSFRAMES BETWEEN GIRDERS D & E SHALL BE PLACED AFTER STAGE TWO DECK POUR.

## TRANSVERSE SECTION
(NORTHBOUND LANES SHOWN)




KEYWAY DETAILS AT CLOSURE SECTION




## TRANSVERSE SECTION
(SOUTHBOUND LANES SHOWN)

## NOTES AND LEGEND:

✣THE 2½" CLEARANCE SHALL BE TO THE #4 BARS.

HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE. SEE SUPPLEMENTAL SPECIFICATION.

*THE DISTANCE FROM THE BOTTOM OF THE DECK TO THE BOTTOM OF THE TOP FLANGE REMAINS 3" AT ALL LOCATIONS ON THE BRIDGE. THE HAUNCH DEPTH WILL VARY BECAUSE OF THE DIFFERENCE IN TOP FLANGE THICKNESS.

**HAUNCH WIDTHS:**
HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12".

REINFORCING STEEL MAY BE FIELD BENT OR SHOP BENT TO ACCOMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE.

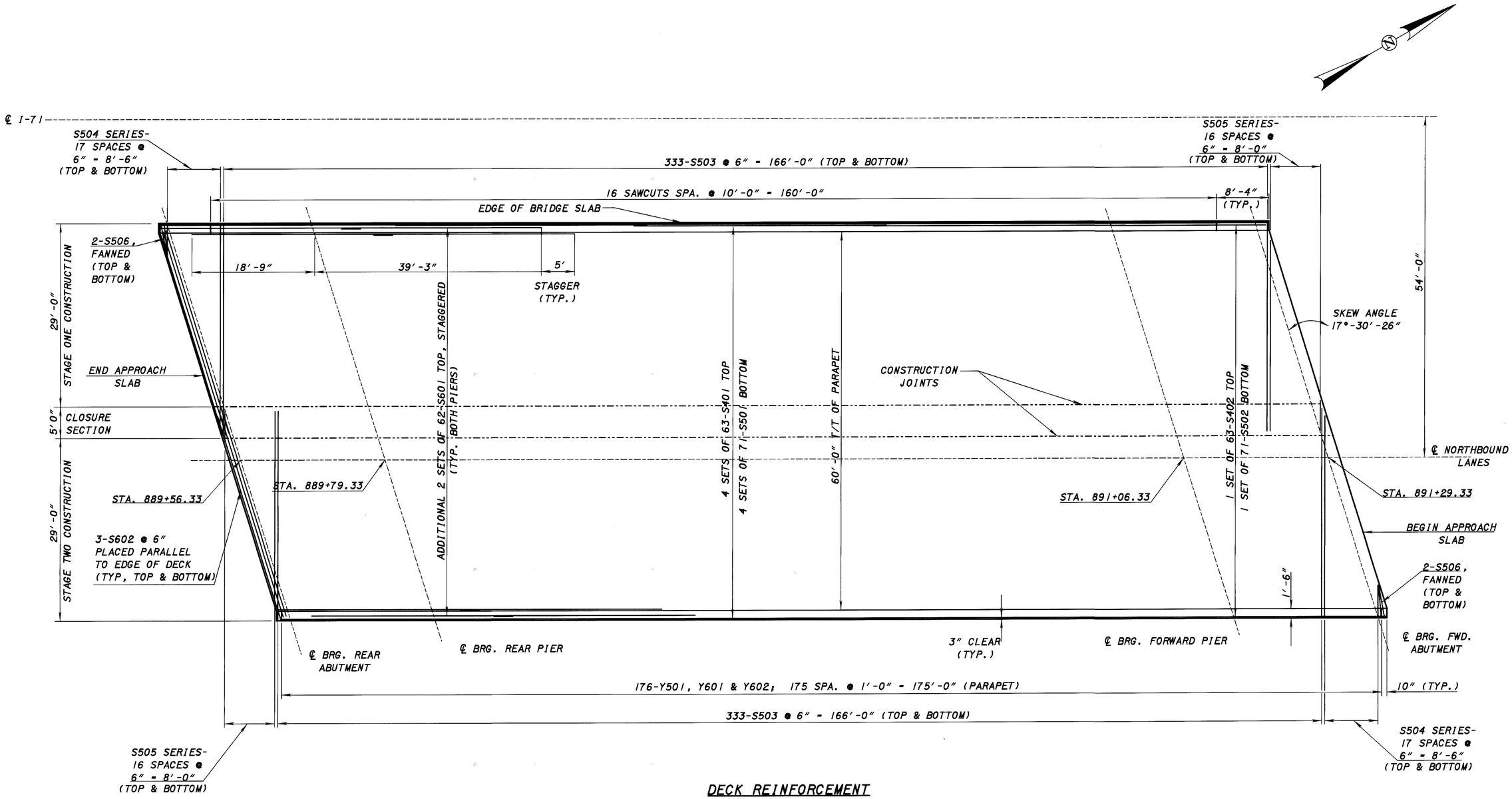
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
DESIGNED: TAA
DRAWN: HLG
CHECKED: DFT
REVISED: HLG
DATE: 12-10-99
REVISED:
STRUCTURE FILE NUMBER: 5203589L/5203619R

TRANSVERSE SECTIONS
MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

28 / 34

714 / 940




## DECK REINFORCEMENT

NORTHBOUND LANES ONLY SHOWN

## NOTES AND LEGEND:

***DECK SLAB DEPTH:***
*THE DISTANCE SHOWN FROM THE TOP OF THE DECK SLAB TO THE BOTTOM OF THE FLANGE IS THE CONCRETE DECK DESIGN DIMENSION, PLUS THE DESIGN HAUNCH THICKNESS OF 3″. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED UPON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL PLATES AS PER 863.31.*

*MINIMUM LAP SPLICES: #4 BARS = 2′-0″*
*#5 BARS = 2′-6″*
*#6 BARS = 3′-0″*

*REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE.*

*ALL REINFORCING STEEL IS EPOXY COATED.*

*SEE SHEET 32/34 FOR PARAPET TRANSITION DETAILS.*

*SEE SHEET 25/34 FOR DECK SLAB CONCRETE POUR SEQUENCE.*

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

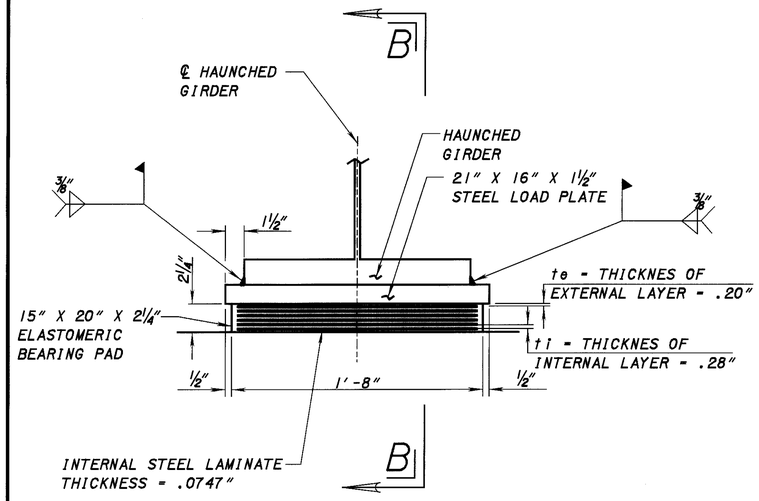
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | HLG | DFT | 12-10-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| HLG | | 5203589L/5203619R | |

SUPERSTRUCTURE DETAILS
MED-71-1685 L/R
I-71 OVER S.R. 18

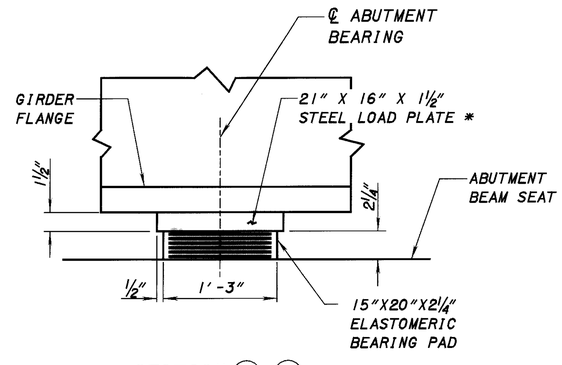
MED-71-15.78

29 / 34

715 / 940




## REAR AND FORWARD ABUTMENT LAMINATED ELATOMERIC EXPANSION BEARING




SECTION (B)–(B)

* LOAD PLATE BEVELED IN THIS VIEW

| BEARING TABLE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BEARING LOCATION | TYPE | L | W | $t_i$ In. | $t_e$ In. | $n_1$ | $n_2$ | STEEL LOAD PL | TOTAL HEIGHT* | DL, Kips | LL, Kips | TOTAL, Kips |
| REAR & FORWARD ABUTMENT | EXP | 15" | 20" | .28" | .20" | 5 | 6 | 16"x21"x1½" | 3¾" | 260 | 35 | 295 |
| PIER 1 & 2 | EXP | 16" | 24" | .44" | .31" | 3 | 4 | 17"x25"x2" | 4¼" | 264 | 107 | 371 |

$n_1$ - NUMBER OF INTERNAL ELASTOMER LAYERS, $t_i$ ELASTOMER LAYERS ARE 50 DUROMETERS
$n_2$ - NUMBER OF STEEL LAMINATES, 0.0747" THICKNESS * TOTAL HEIGHT INCLUDES LOAD PLATE

## NOTES:

MATERIALS: STEEL PLATES SHALL BE THE SAME GRADE OF THE STEEL AS THE PROPOSED STEEL BEAM. THE STEEL PLATES SHALL HAVE THE SAME PROTECTIVE COATING AS MAIN STRUCTURAL STEEL.

PAYMENT FOR MATERIALS, LABOR, FABRICATION, PROTECTIVE COATING, AND AND STEEL PLATE SHALL BE INCLUDED WITH ITEM 516 ABUTMENT ELASTOMERIC BEARINGS FOR PAYMENT.

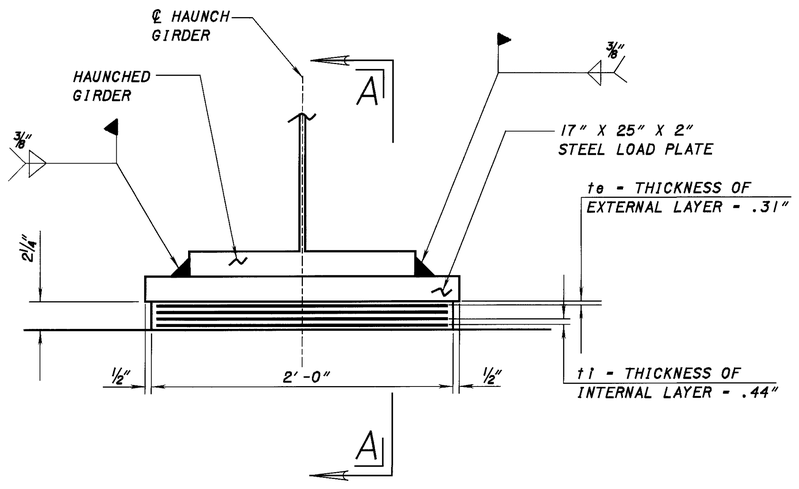
WELDING: WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL LOAD PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).

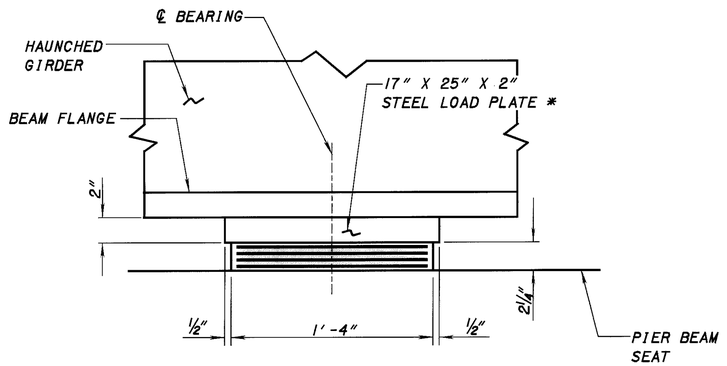
BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60°F ± 10°F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDERFORMED SHAPE AT 60° F +/- 10° F.

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC EXPANSION BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELATOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):

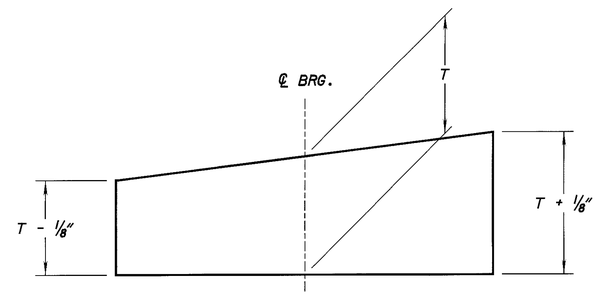
16" x 24" x 2¼" WITH 17" x 25" x 2" LOAD PLATE
15"x20"x 2¼" WITH 16"x21"x1½" LOAD PLATE.




## REAR AND FORWARD PIER LAMINATED ELATOMERIC EXPANSION BEARING




SECTION (A)–(A)




## BEVELED LOAD PLATE

ALL LOAD PLATES SHALL BE BEVELED TO ACCOMODATE THE ROADWAY GRADE. T IS THE THICKNESS OF THE LOAD PLATE GIVEN IN THE PLANS.

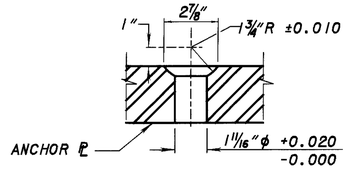
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED TAA DATE 12-10-99
STRUCTURE FILE NUMBER 52035891/52036191R
DRAWN DB REVISED
DESIGNED DB CHECKED DFT

BEARING PAD DETAILS
MED-71-1685 L/R
I-71 OVER S.R. 18

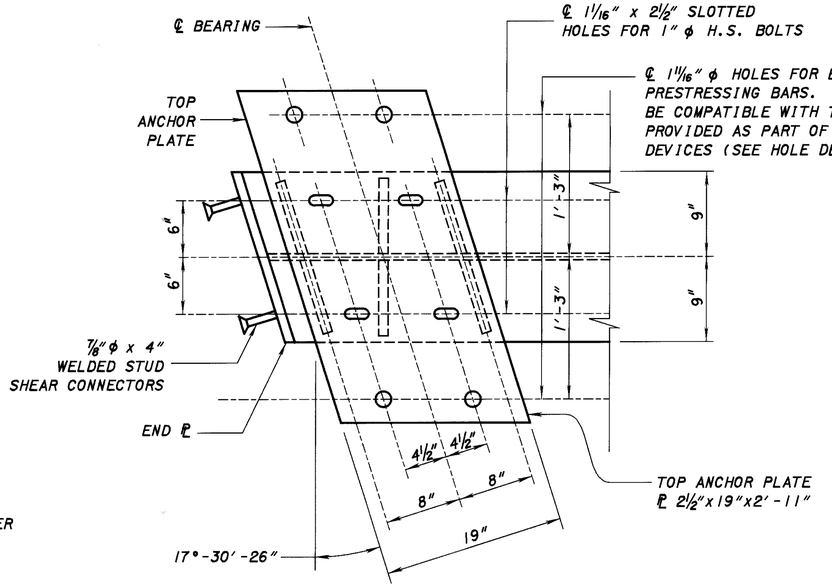
MED-71-15.78

30/34

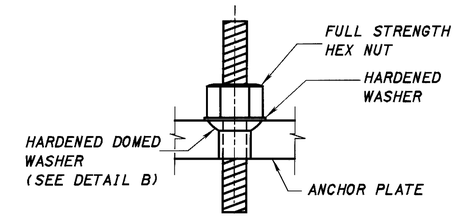
716/940




HOLE DETAIL



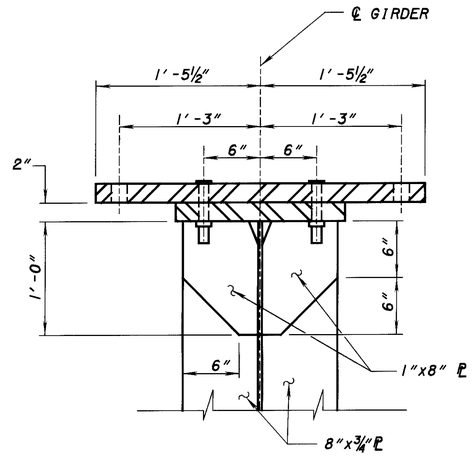

VIEW C-C



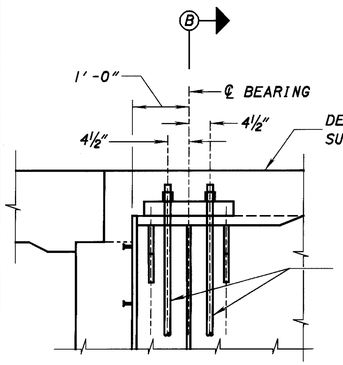

ANCHOR DETAIL

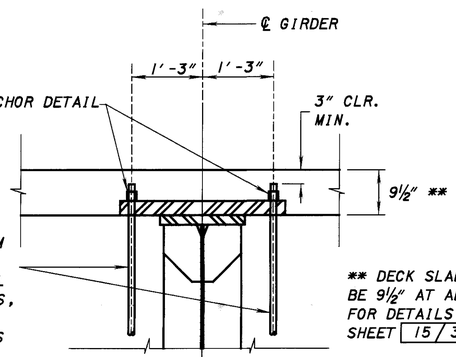
(TYP. TOP & BOTTOM)

SEE HOLE DETAIL IN ANCHOR PLATE



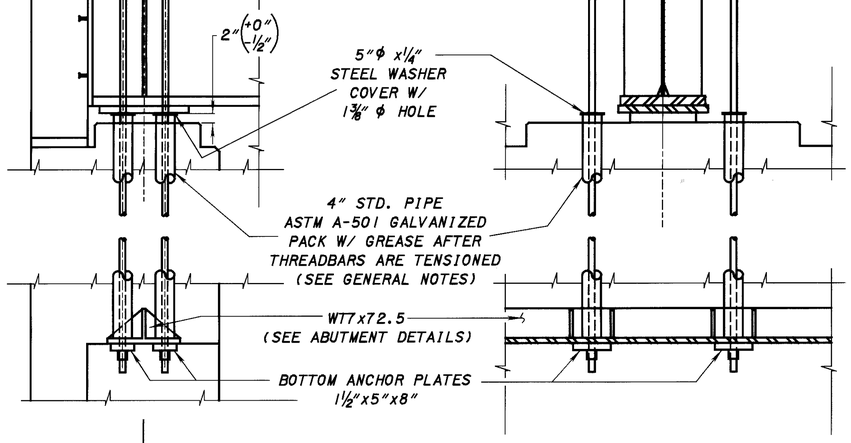

SECTION A-A




1¼" THREADBARS AASHTO M275-79 (TYPE 2) OR ASTM A722 GRADE 150 WITH 2 EACH FULL STRENGTH HEX NUTS, FLAT AND DOMED HARDENED WASHERS

** DECK SLAB SHALL BE 9½" AT ABUTMENT. FOR DETAILS SEE SHEET 15/34.

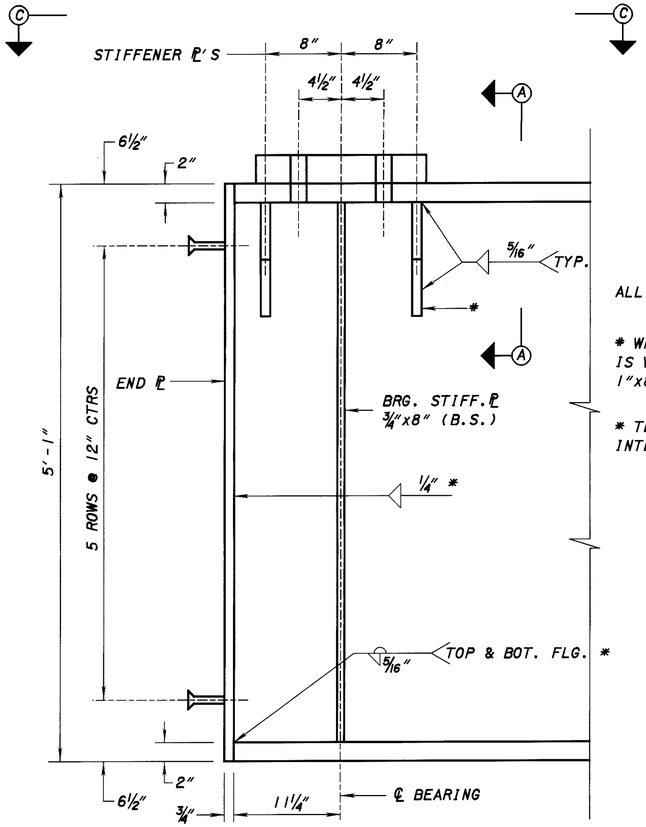



TIE DOWN DEVICE

STRESS EACH THREADBAR TO 65 KIPS AFTER ANCHORAGE IS SET.

SECTION B-B

THREADBARS AND HARDWARE CONNECTIONS SHALL HAVE A SAFE WORKING LOAD CAPAPCITY OF 110 KIPS PER BAR. THREADBARS SHALL BE EPOXY COATED PER ASTM A755. ALL OTHER TIE DOWN APPURTENANCES SHALL BE GALVANIZED PER 711.02.

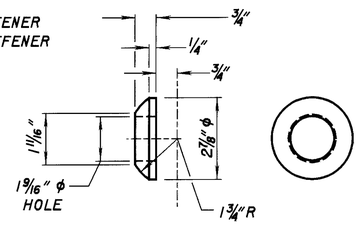



DETAIL A

ALL STEEL SHALL BE A572.

* WHERE INTERMEDIATE STIFFENER IS WITHIN 12" OF BRG. STIFFENER 1"x8" ℄ NOT REQUIRED.

* TERMINATE WELD 1" FROM INTERSECTION OF WELDS.




DETAIL B

NOTE: MATERIAL TO MEET THE CHEMICAL AND MECHANICAL REQUIREMENTS OF ASTM F436 FOR "HARDENED STEEL WASHERS"

TIE DOWN DEVICE: SEE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS. THE BOTTOM AND TOP ANCHOR PLATES, WT7x72.5 AND 4" PIPE ARE INCLUDED WITH STRUCTURAL STEEL FOR PAYMENT. THE THREADBARS, WASHERS, NUTS & INCIDENTALS ARE INCLUDED WITH TIE-DOWN DEVICE FOR PAYMENT.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

REVIEWED RJH | DATE 12-10-99 | STRUCTURE FILE NUMBER 5203589L/5203619R

DRAWN RJH | REVISED

DESIGNED TAA | CHECKED DFT

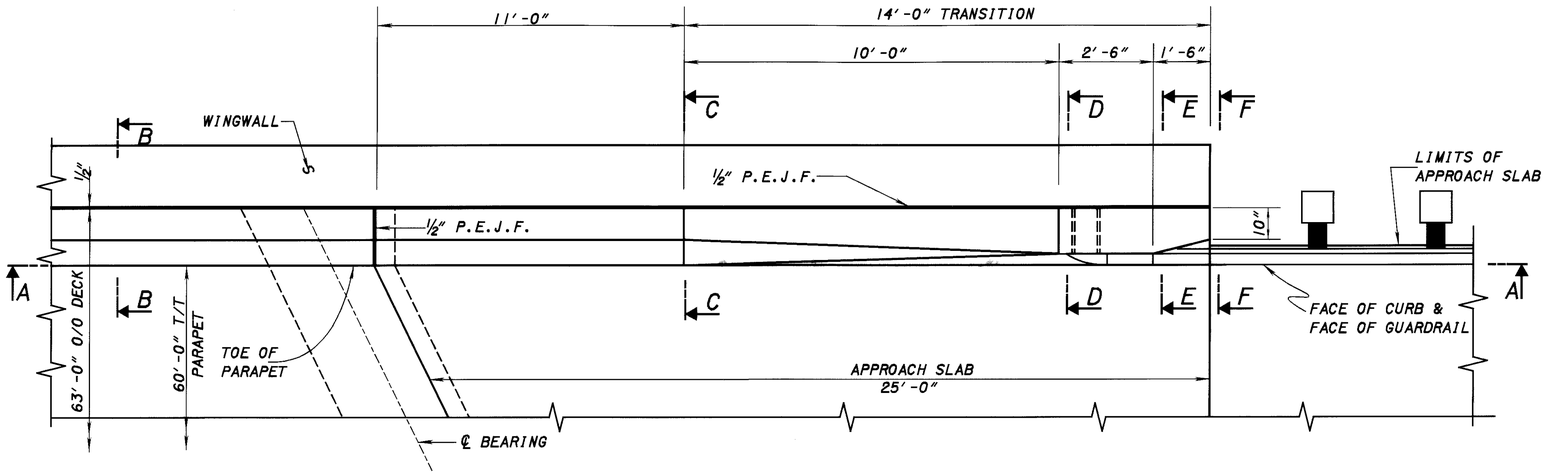
TIE DOWN DEVICE DETAILS

MED-71-1685 L/R
I-71 OVER S.R. 18

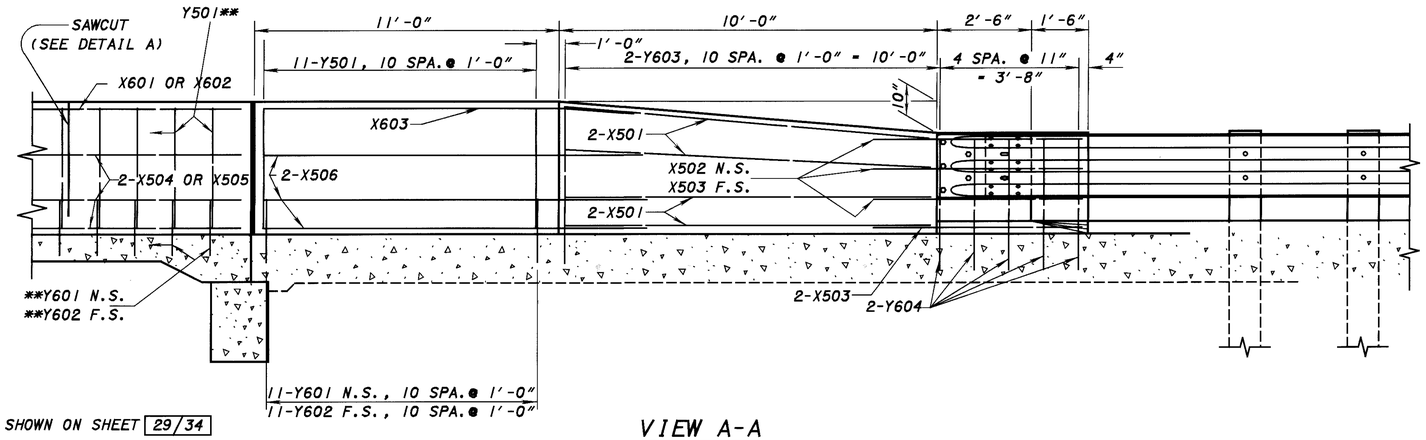
MED-71-15.78

31/34

717/940




## PART PLAN AT ABUTMENT



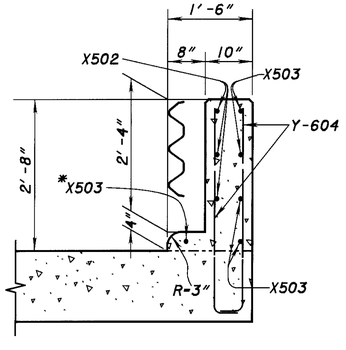

**SPACING SHOWN ON SHEET 29/34

## VIEW A-A



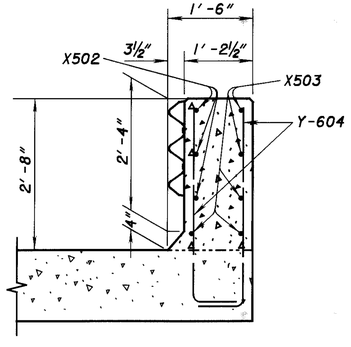

## DETAIL A

(Section through sawcut)
Sawcut Perimeter = 7'-6"

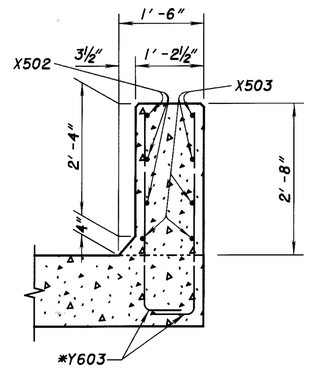



## SECTION F-F

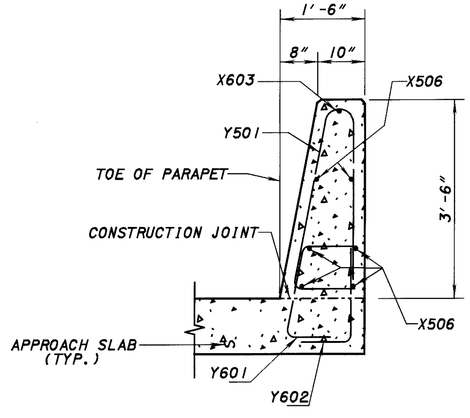
* FIELD BEND IF NECESSARY



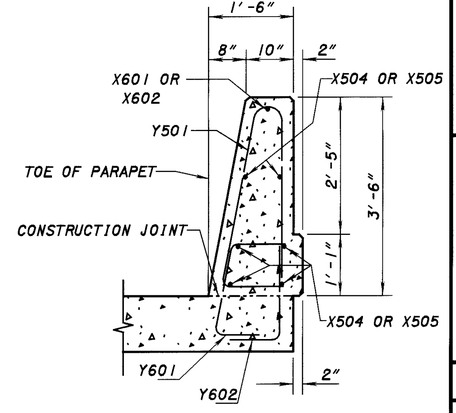

## SECTION E-E




## SECTION D-D




## SECTION C-C




## SECTION B-B

Area = 4.26 ft²

## NOTES

**CONTROL JOINTS FOR CONCRETE PARAPETS:** THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL TO A MINIMUM DEPTH OF ONE INCH CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE-HALF INCH OF THE OUTSIDE FACE OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

MIN. LAP SPLICES: #5 BAR - 2'-6"
#6 BAR - 3'-0"

LEGEND: N.S. - NEAR SIDE
F.S. - FAR SIDE

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVISED: TAA DATE: 12-10-99
STRUCTURE FILE NUMBER: 5203589L/5203619R
DRAWN: HLG REVISED:
DESIGNED: HLG CHECKED: DFT

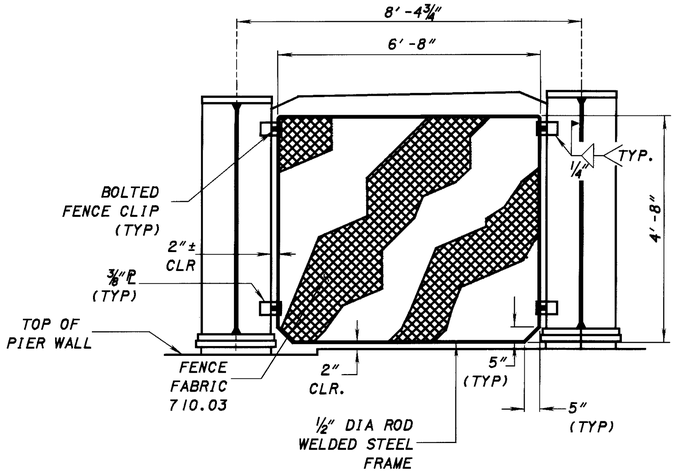
# PARAPET TRANSITION DETAILS

MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

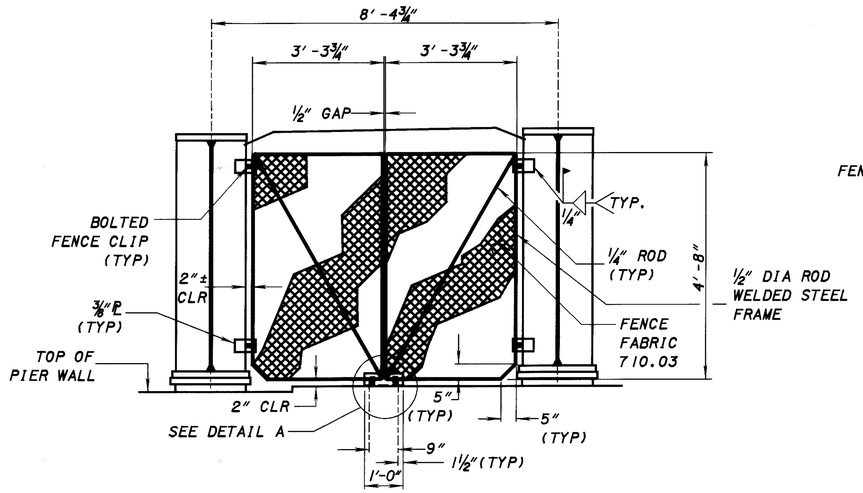
32/34

718/940




## FIXED PANEL ELEVATION

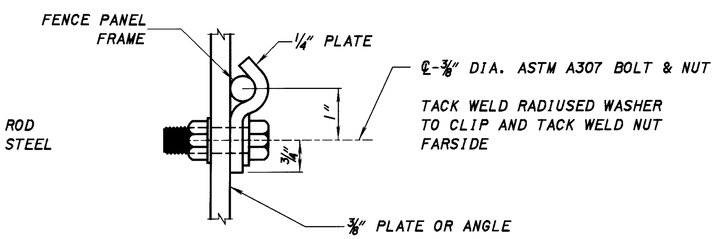
(16 REQUIRED)
(AT PIER LOOKING TOWARD ABUTMENT)




## GATE PANEL ELEVATION

(REQUIRED BETWEEN GIRDERS F & E)

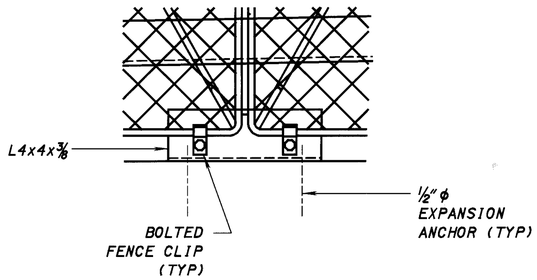
SEE SHEET 23/34 FOR LOCATION OF FENCE PANELS.




## BOLTED FENCE CLIP

(4 REQUIRED ON FIXED PANEL)
(6 REQUIRED ON GATE PANEL)

BEFORE SPOILING THE THREADS THE CONTRACTOR SHALL VERIFY THAT THE SIDE CLIPS ON THE GATE PANEL WILL ACT AS HINGES. BOTTOM CLIPS ON THE GATE PANEL SHALL BE REMOVABLE. BOLTED FENCE CLIP AND MISC. DETAILS TO BE BENT TO ACCOMODATE THE OFFSET OF THE BEARING STIFFENERS.




## DETAIL A

ANCHORS TO BE SET INTO BRIDGE SEAT

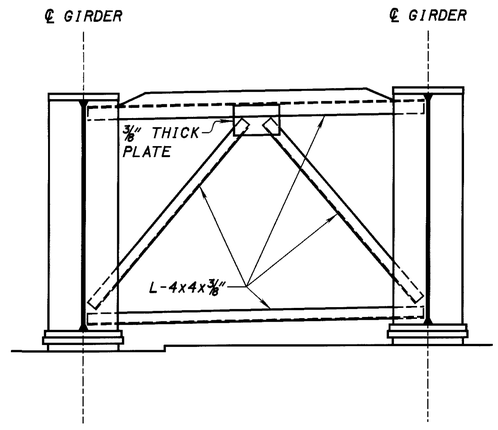
ITEM 607-FENCE, MISC.: SCREEN FENCE

DESCRIPTION: THIS ITEM SHALL CONSIST OF FURNISHING ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO FABRICATE AND INSTALL CHAIN LINK FENCE PANELS BETWEEN GIRDERS AS SHOWN ON THE PLANS AND AS SPECIFIED HEREIN.

MATERIALS: FENCE FABRIC AND INCIDENTALS SHALL BE PER 710.03 EXCEPT THE VINYL COVERING SHALL BE FEDERAL COLOR STANDARD NO. 16440 (LIGHT GRAY). THE FRAME SHALL BE FABRICATED FROM WELDED ½ INCH DIAMETER STEEL RODS. BOLTS SHALL BE ASTM A307. THE FRAME, LATCH AND HINGE TABS, AND HARDWARE SHALL BE GALVANIZED PER 711.02 AFTER FABRICATION AND POWDER POLYESTER COATED TO MANUFACTURER'S RECOMMENDATIONS USING FEDERAL COLOR STANDARD NO. 16440 (LIGHT GRAY).

CONSTRUCTION REQUIREMENTS: TWO WIRE-MESHED FRAMES SHALL BE PROVIDED FOR THE GATE SCREEN PANEL IN THE CENTER GIRDER BAY. SINGLE WIRE-MESHED FRAMES SHALL BE PROVIDED FOR THE SCREEN PANEL IN ALL OTHER BAYS, FIELD DRILL HOLES AT THE CONNECTION PLATES AND ANGLES TO MATCH THE LOCATION OF THE LATCH AND HINGE TABS. THE BOLTS FOR THE TABS SHALL BE DRAWN UP TIGHT. BOLTS THROUGH HINGE TABS (LOCATED ON VERTICAL SIDE OF GATE FRAMES) SHALL HAVE THREADS BURRED AT THE FACE OF THE NUT.

BASIS OF PAYMENT: THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE LUMP SUM WHICH PRICE SHALL INCLUDE ALL COSTS FOR PERFORMING THE WORK AS SHOWN ON THE PLANS AND AS SPECIFIED HEREIN.




## END CROSSFRAME LAYOUT

SEE GSD-1-96 FOR ADDITIONAL DETAILS

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
DESIGNED: DFT
DRAWN: RJH
CHECKED: RJH
REVISED: REVISED
REVIEWED: TAA
DATE: 12-10-99
STRUCTURE FILE NUMBER: 5203589L/5203619R

FENCE AND END CROSS FRAME DETAILS
MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

33/34

719/940

| MARK | NUMBER RIGHT | NUMBER LEFT | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | E | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PARAPET** | | | | | | | | | | | | | |
| X501 | 32 | 32 | 64 | 10'-0" | 668 | ST | | | | | | | |
| X502 | 9 | 9 | 18 | 5'-6" | 103 | 25 | 1'-8" | 2'-5" | 1'-4" | 0'-1½" | 0'-5" | | |
| X503 | 23 | 23 | 46 | 5'-6" | 264 | ST | | | | | | | |
| X504 | 72 | 72 | 144 | 30'-0" | 4506 | ST | | | | | | | |
| X505 | 12 | 12 | 24 | 11'-2" | 280 | ST | | | | | | | |
| X506 | 24 | 24 | 48 | 13'-6" | 676 | ST | | | | | | | |
| X601 | 12 | 12 | 24 | 30'-0" | 1081 | ST | | | | | | | |
| X602 | 2 | 2 | 4 | 14'-2" | 85 | ST | | | | | | | |
| X603 | 4 | 4 | 8 | 14'-0" | 168 | ST | | | | | | | |
| Y501 | 396 | 396 | 792 | 7'-5" | 6127 | 23 | 1'-1" | 3'-2" | 3'-0" | | | 2¾" | |
| Y601 | 396 | 396 | 792 | 3'-9" | 4461 | 33 | 1'-9" | 1'-1" | 1'-1" | | | | |
| Y602 | 396 | 396 | 792 | 2'-8" | 3172 | 1 | 1'-1" | 1'-9" | | | | | |
| Y603 | 8 SERIES OF 11 | 8 SERIES OF 11 | 16 SERIES OF 11 | 4'-3" TO 5'-1" | 1234 | 1 | 10½" | 3'-6" TO 4'-4" | | | | | 1" |
| Y604 | 40 | 40 | 80 | 4'-3" | 511 | 1 | 10½" | 3'-6" | | | | | |
| **SUPERSTRUCTURE (DECK)** | | | | | | | | | | | | | |
| S401 | 252 | 252 | 504 | 40'-0" | 13467 | ST | | | | | | | |
| S402 | 63 | 63 | 126 | 24'-4" | 2048 | ST | | | | | | | |
| S501 | 284 | 284 | 568 | 40'-0" | 23697 | ST | | | | | | | |
| S502 | 71 | 71 | 142 | 26'-4" | 3900 | ST | | | | | | | |
| S503 | 1332 | 1332 | 2664 | 33'-0" | 91692 | ST | | | | | | | |
| S504 | 4 SERIES OF 18 | 4 SERIES OF 18 | 8 SERIES OF 18 | 4'-10" TO 31'-9" | 2747 | ST | | | | | | | 1'-7" |
| S505 | 4 SERIES OF 17 | 4 SERIES OF 17 | 8 SERIES OF 17 | 4'-9" TO 30'-1" | 2470 | ST | | | | | | | 1'-7" |
| S506 | 8 | 8 | 16 | 5'-0" | 84 | ST | | | | | | | |
| S601 | 248 | 248 | 496 | 33'-0" | 24585 | ST | | | | | | | |
| S602 | 24 | 24 | 48 | 33'-6" | 2415 | ST | | | | | | | |

| MARK | NUMBER REAR ABUT. RIGHT | REAR ABUT. LEFT | FWD. ABUT. RIGHT | FWD. ABUT. LEFT | TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A501 | 12 | 10 | 10 | 10 | 43 | 31'-11" | 1432 | STR | | | | |
| A502 | 2 | 2 | 2 | 2 | 8 | 13'-7" | 113 | STR | | | | |
| A503 | 2 | 2 | 2 | 2 | 8 | 22'-0" | 184 | STR | | | | |
| A504 | 10 | 12 | 12 | 12 | 45 | 33'-4" | 1565 | STR | | | | |
| A505 | 31 | 31 | 31 | 31 | 124 | 15'-8" | 2027 | 2 | 4'-7" | 6'-8" | 4'-7" | |
| A506 | 66 | 66 | 66 | 66 | 264 | 4'-6" | 1239 | 13 | 1'-2" | 1'-1" | 1'-1" | 1'-2" |
| A507 | 66 | 66 | 66 | 66 | 264 | 4'-5" | 1217 | 1 | 1'-6" | 3'-0" | | |
| A508 | 11 | 11 | 11 | 11 | 44 | 35'-4" | 1621 | 19 | 33'-4" | 7¼" | 1'-11" | |
| A509 | 21 | 21 | 21 | 21 | 84 | 10'-5" | 913 | 100 | 1'-3" | 3'-8" | | |
| A510 | 18 | 18 | 18 | 18 | 72 | 34'-4" | 2578 | STR | | | | |
| A511 | 18 | 18 | 18 | 18 | 72 | 35'-9" | 2685 | STR | | | | |
| A512 | 11 | 11 | 11 | 11 | 44 | 36'-9" | 1686 | 19 | 34'-9" | 7¼" | 1'-11" | |
| A513 | 14 | 14 | 14 | 14 | 56 | 4'-6" | 263 | STR | | | | |
| A514 | 35 | 35 | 35 | 35 | 140 | 6'-3" | 913 | 2 | 2'-6" | 1'-6" | 2'-6" | |
| A515 | 42 | 42 | 42 | 42 | 168 | 6'-8" | 1169 | STR | | | | |
| A601 | 132 | 132 | 132 | 132 | 528 | 8'-8" | 6875 | 2 | 4'-0" | 11" | 4'-0" | |
| A801 | 53 | 53 | 53 | 53 | 212 | 25'-4" | 14338 | 2 | 11'-0" | 3'-8" | 11'-0" | |
| A802 | 53 | 53 | 53 | 53 | 212 | 17'-4" | 9809 | 2 | 7'-0" | 3'-8" | 7'-0" | |
| D801 | 66 | 66 | 66 | 66 | 264 | 4'-3" | 2996 | 18 | 2'-7" | 1'-0" | 2'-7" | |

| MARK | PIER1 RIGHT | PIER1 LEFT | PIER2 RIGHT | PIER2 LEFT | TOTAL | LENGTH | WEIGHT | TYPE | DIMENSIONS A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P401 | 72 | 72 | 72 | 72 | 288 | 3'-9" | 721 | 31 | 2'-8" | | | |
| P501 | 24 | 24 | 24 | 24 | 96 | 35'-5" | 3547 | STR | | | | |
| P502 | 24 | 24 | 24 | 24 | 96 | 34'-9" | 3479 | STR | | | | |
| P503 | 103 | 103 | 103 | 103 | 412 | 8'-0" | 3438 | 2 | 2'-9" | 2'-8" | 2'-9" | |
| P504 | 16 | 16 | 16 | 16 | 64 | 34'-3" | 2286 | STR | | | | |
| P505 | 16 | 16 | 16 | 16 | 64 | 38'-6" | 2570 | STR | | | | |
| P506 | 49 | 49 | 49 | 49 | 196 | 9'-8" | 1977 | STR | | | | |
| P801 | | 208 | | | 208 | 17'-10" | 9902 | STR | | | | |
| P802 | 208 | 208 | 208 | 208 | 832 | 10'-0" | 22214 | 1 | 1'-2" | 9'-0" | | |
| P803 | 83 | 83 | 83 | 83 | 332 | 11'-6" | 10194 | 17 | 9'-8" | | | |
| P804 | 6 | 6 | 6 | 6 | 24 | 37'-7" | 2408 | STR | | | | |
| P805 | 6 | 6 | 6 | 6 | 24 | 35'-5" | 2270 | STR | | | | |
| P806 | | | 208 | 208 | 416 | 19'-10" | 11013 | STR | | | | |
| P807 | 208 | | | | 208 | 18'-10" | 10457 | STR | | | | |
| P901 | 24 | 24 | 24 | 24 | 96 | 3'-6" | 1142 | 1 | 1'-3" | 2'-4" | | |
| P902 | 4 | 4 | 4 | 4 | 16 | 2'-8" | 145 | STR | | | | |
| P903 | 6 | 6 | 6 | 6 | 24 | 2'-4" | 190 | STR | | | | |

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT DATE 12-10-99
STRUCTURE FILE NUMBER 5203589L/5203619R

DRAWN TAA REVISED
DESIGNED TAA CHECKED HLG

# REINFORCING STEEL LIST

MED-71-1685 L/R
I-71 OVER S.R. 18

MED-71-15.78

34/34

720
940

| MARK | NUMBER REAR ABUT. RIGHT | NUMBER REAR ABUT. LEFT | NUMBER FWD. ABUT. RIGHT | NUMBER FWD. ABUT. LEFT | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W601 | -- | 16 | 16 | -- | 32 | 50'-2" | 2412 | STR | | | | | |
| W602 | -- | 4 | -- | -- | 4 | 49'-0" | 295 | STR | | | | | |
| W603 | -- | 4 | -- | -- | 4 | 43'-8" | 263 | STR | | | | | |
| W604 | -- | 24 | 24 | -- | 48 | 42'-2" | 3040 | STR | | | | | |
| W605 | 4 | 4 | 4 | 4 | 16 | 25'-2" | 606 | STR | | | | | |
| W606 | 8 | 8 | 8 | 8 | 32 | 17'-4" | 834 | STR | | | | | |
| W607 | 4 | 4 | -- | -- | 8 | 22'-2" | 266 | 101 | 3'-0" | 16'-2" | 1.15 | | |
| W608 | 8 | 8 | 8 | 8 | 32 | 12'-4" | 593 | 8 | 7'-8" | 2'-0" | 3'-0" | | |
| W609 | 8 | 8 | -- | -- | 16 | 21'-0" | 505 | 101 | 3'-0" | 15'-0" | 1.43 | | |
| W610 | 12 | 12 | 12 | 12 | 48 | 10'-4" | 745 | STR | | | | | |
| W611 | -- | -- | 4 | 4 | 8 | 23'-10" | 288 | 101 | 3'-0" | 18'-0" | 0.92 | | |
| W612 | 58 | 58 | 58 | 58 | 232 | 12'-2" | 4240 | 3 | 2'-11" | 2'-7" | | | |
| W613 | 16 | 16 | 16 | 16 | 64 | 16'-2" | 1554 | 3 | 2'-11" | 4'-7" | | | |
| | 4 | 4 | 4 | 4 | | 11'-5" | | | 4'-5" | | 4'-5" | | |
| W614 | SETS | SETS | SETS | SETS | 192 | TO | 2764 | 2 | TO | 2'-11" | TO | | 2" |
| | OF 12 | OF 12 | OF 12 | OF 12 | | 7'-9" | | | 2'-7" | | 2'-7" | | |
| W615 | -- | -- | 8 | 8 | 16 | 22'-5" | 540 | 101 | 3'-0" | 16'-5" | 1.09 | | |
| | 4 | 4 | | | | 17'-2" | | | | | | | |
| W616 | SETS | SETS | -- | -- | 56 | TO | 1003 | STR | | | | | 1'-9" |
| | OF 7 | OF 7 | | | | 6'-8" | | | | | | | |
| | | | 2 | | | 18'-8" | | | | | | | |
| W617 | -- | -- | SETS | -- | 20 | TO | 381 | STR | | | | | 1'-4" |
| | | | OF 10 | | | 6'-8" | | | | | | | |
| | | | 2 | 4 | | 18'-0" | | | | | | | |
| W618 | -- | -- | SETS | SETS | 54 | TO | 1001 | STR | | | | | 1'-5" |
| | | | OF 9 | OF 9 | | 6'-8" | | | | | | | |
| W619 | 16 | -- | -- | 16 | 32 | 51'-10" | 2491 | STR | | | | | |
| W620 | 4 | -- | -- | 4 | 8 | 51'-1" | 614 | STR | | | | | |
| W621 | 4 | -- | -- | 4 | 8 | 47'-1" | 566 | STR | | | | | |
| W622 | 24 | -- | -- | 24 | 48 | 43'-11" | 3167 | STR | | | | | |
| W623 | -- | -- | 4 | -- | 4 | 49'-6" | 297 | STR | | | | | |
| W624 | -- | -- | 4 | -- | 4 | 46'-2" | 278 | STR | | | | | |
| W626 | -- | 4 | -- | -- | 4 | 14'-9" | 89 | 13 | 3'-0" | 8'-0" | 3'-8" | 3'-0" | |
| W627 | -- | -- | 4 | -- | 4 | 14'-3" | 86 | 13 | 3'-0" | 8'-0" | 2'-3" | 3'-0" | |
| W628 | 4 | -- | -- | 4 | 8 | 14'-6" | 175 | 13 | 3'-0" | 8'-0" | 3'-0" | 3'-0" | |
| | | 2 | | | | 25'-3" | | | | | | | |
| W801 | -- | SETS | -- | -- | 16 | TO | 887 | STR | | | | | 1'-3½" |
| | | OF 8 | | | | 16'-3" | | | | | | | |
| W802 | 124 | 116 | 116 | 124 | 480 | 11'-7" | 14845 | 1 | 1'-2" | 10'-8" | | | |
| | | 4 | | | | 6'-4" | | | | | | | |
| W803 | -- | SETS | -- | -- | 24 | TO | 331 | STR | | | | | 5½" |
| | | OF 6 | | | | 4'-0" | | | | | | | |
| W804 | -- | 64 | 64 | -- | 128 | 14'-5" | 4927 | STR | | | | | |
| W805 | 10 | 10 | -- | -- | 20 | 25'-10" | 1380 | STR | | | | | |
| W806 | -- | -- | 10 | -- | 10 | 28'-6" | 761 | STR | | | | | |
| W807 | -- | 10 | -- | -- | 10 | 25'-1" | 669 | STR | | | | | |
| W808 | -- | -- | 10 | 10 | 20 | 27'-10" | 1487 | STR | | | | | |
| | | | 2 | | | 27'-9" | | | | | | | |
| W809 | -- | -- | SETS | -- | 16 | TO | 954 | STR | | | | | 1'-6½" |
| | | | OF 8 | | | 16'-11" | | | | | | | |
| | | 2 | | | | 24'-5" | | | | | | | |
| W810 | -- | SETS | -- | -- | 16 | TO | 860 | STR | | | | | 1'-2½" |
| | | OF 8 | | | | 16'-0" | | | | | | | |
| | | | 2 | | | 27'-1" | | | | | | | |
| W811 | -- | -- | SETS | -- | 16 | TO | 938 | STR | | | | | 1'-5½" |
| | | | OF 8 | | | 16'-10" | | | | | | | |

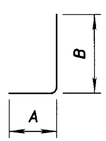
| MARK | NUMBER REAR ABUT. RIGHT | NUMBER REAR ABUT. LEFT | NUMBER FWD. ABUT. RIGHT | NUMBER FWD. ABUT. LEFT | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 4 | | | 7'-7" | | | | | | | |
| W812 | -- | -- | SETS | -- | 24 | TO | 372 | STR | | | | | 8½" |
| | | | OF 6 | | | 4'-0" | | | | | | | |
| W813 | 10 | -- | -- | -- | 10 | 26'-7" | 710 | STR | | | | | |
| W814 | -- | -- | -- | 10 | 10 | 27'-2" | 725 | STR | | | | | |
| W815 | 72 | -- | -- | 72 | 144 | 14'-9" | 5671 | STR | | | | | |
| | 2 | | | | | 26'-0" | | | | | | | |
| W816 | SETS | -- | -- | -- | 16 | TO | 918 | STR | | | | | 1'-3½" |
| | OF 8 | | | | | 17'-0" | | | | | | | |
| | | | | 2 | | 27'-1" | | | | | | | |
| W817 | -- | -- | -- | SETS | 16 | TO | 926 | STR | | | | | 1'-6½" |
| | | | | OF 8 | | 16'-3" | | | | | | | |
| | 2 | | | | | 25'-4" | | | | | | | |
| W818 | SETS | -- | -- | -- | 16 | TO | 903 | STR | | | | | 1'-2½" |
| | OF 8 | | | | | 16'-11" | | | | | | | |
| | | | | 2 | | 26'-5" | | | | | | | |
| W819 | -- | -- | -- | SETS | 16 | TO | 910 | STR | | | | | 1'-5½" |
| | | | | OF 8 | | 16'-2" | | | | | | | |
| | 4 | | | 4 | | 6'-11" | | | | | | | |
| W820 | SETS | -- | -- | SETS | 48 | TO | 700 | STR | | | | | 7" |
| | OF 6 | | | OF 6 | | 4'-0" | | | | | | | |

THIS REINFORCING STEEL LIST IS FOR INFORMATION PURPOSES ONLY

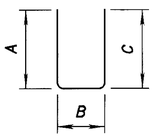
## NOTES

NOTE: ALL REINFORCING STEEL SHALL BE EPOXY COATED.

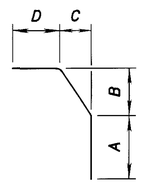
THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INIDICATES THE BAR SIZE. FOR EXAMPLE, AN W601 IS A #5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. "R" INDICATES INSIDE RADIUS.



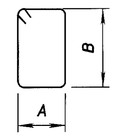
TYPE-1



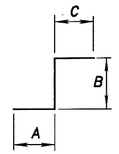
TYPE-2



TYPE-13

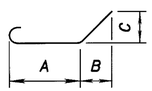


TYPE-3

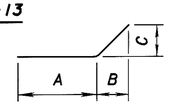


TYPE 8

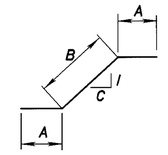
TYPE-17



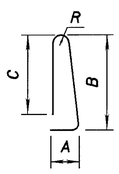
TYPE-18



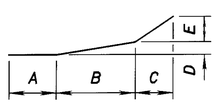
TYPE-19



TYPE 101

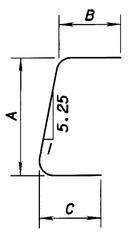


TYPE-23

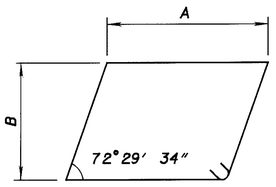


TYPE-25

TYPE-31



TYPE 33



TYPE 100

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

REVISED DFT DATE 12-10-99

STRUCTURE FILE NUMBER 52035891/52036191R

DRAWN BRC REVISED

DESIGNED BRC CHECKED BH

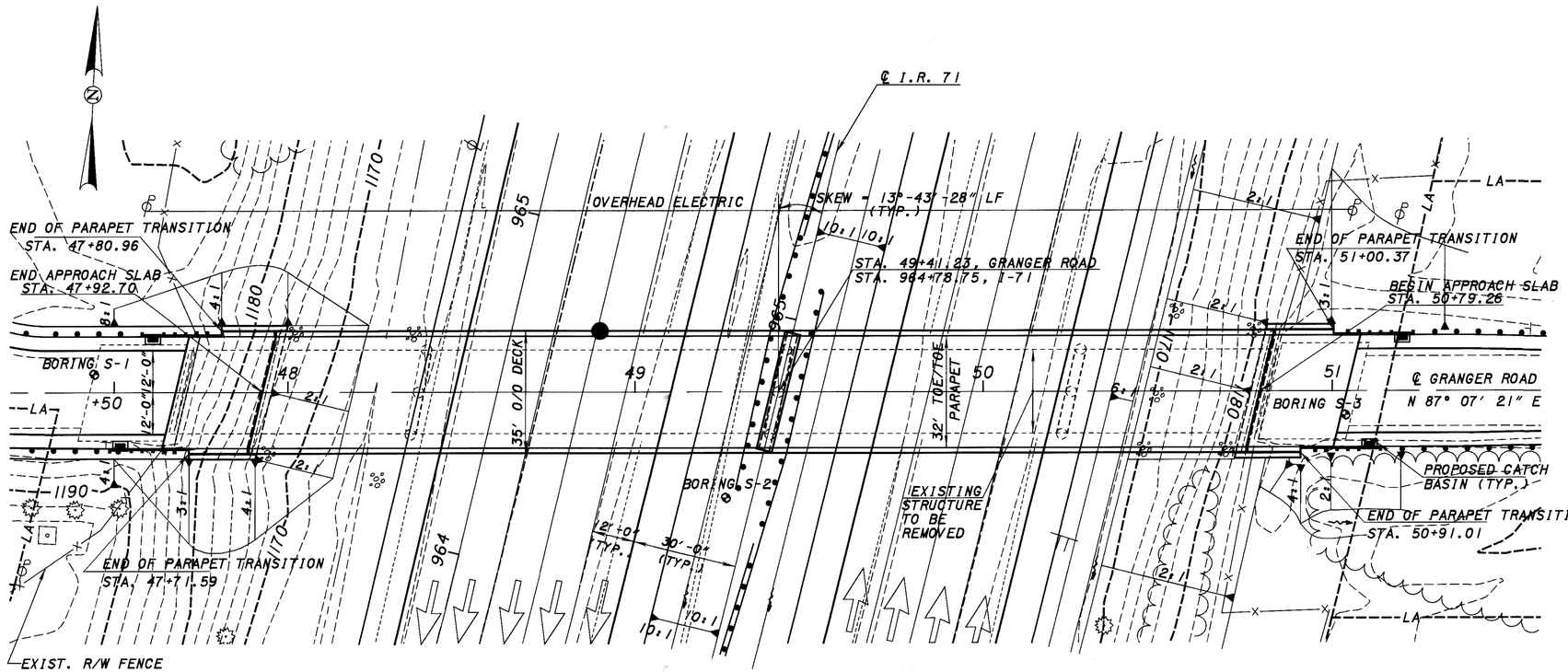
# REINFORCING STEEL LIST

MED-71-1685 L/R
I-71 OVER S.R. 18

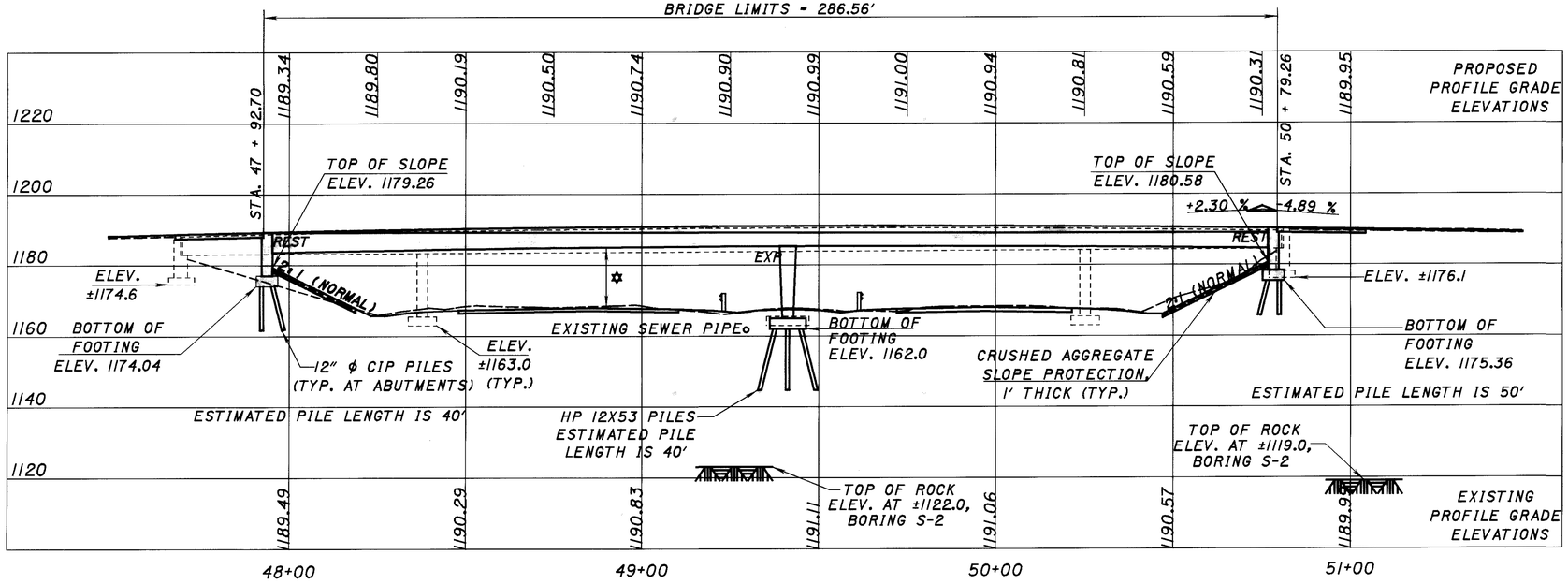
MED-71-15.78

34a/34

720a/940




PLAN VIEW




PROFILE ALONG ℄ SURVEY & CONSTRUCTION GRANGER ROAD

**BENCHMARK DATA**

STA. 954+80.07 ELEVATION - 1157.18
ODOT DISC IN HEADWALL, STAMPED

**NOTES:**

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS. TRANSITION THE GRADING TO MATCH EXISTING CONDITION.

CURRENT YEAR ADT (2000) - 3330
DESIGN YEAR ADT (2020) - 4680
DESIGN YEAR ADTT (2020) - 610

LEGEND:

REST - RESTRAINED ABUTMENT, EXP. BRG.
EXP - EXPANSION BRG.

✡ REQUIRED MINIMUM VERTICAL CLEARANCE - 16'-6"
ACTUAL MINIMUM VERTICAL CLEARANCE - 16'-10"

● LOCATION OF MINIMUM VERTICAL CLEARANCE

**VERTICAL CURVE DATA, GRANGER ROAD**

V.P.I. STATION - 50+75.00
VPI ELEV. - 1,195.70
LVC - 600'
$g_1$ - +2.30 %
$g_2$ - -4.89 %

## EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 67'-6", 103'-6", 84'-0", 54'-9"

ROADWAY: 24'-0" FACE TO FACE OF 2'-3" SAFETY CURBS

LOADING: CF - 130 (57)

SKEW: 13°-42'-30" LF

WEARING SURFACE: 3/4" MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-54 (25' LONG)

ALIGNMENT: TANGENT

CROWN: 3/16"/FT

DATE BUILT: 1964

SFN: 5203635

## PROPOSED STRUCTURE

TYPE: CONTINUOUS A572 STEEL COMPOSITE GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURES

SPANS: 147'-6", 137'-0" ℄ BEARING

ROADWAY: 32'-0" TOE/TOE CONCRETE PARAPET

LOADING: HS20-44 CASE II AND ALTERNATE MILITARY LOADING

SKEW: 13°-43'-28" LF

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81 (25' LONG), 32'-0" T/T CURB

ALIGNMENT: TANGENT

CROWN: 3/16"/FT

COORDINATES: LATITUDE: 41°-9'-22"
LONGITUDE: 81°-47'-10"

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 6-1-99
STRUCTURE FILE NUMBER: 5203643
DRAWN: HLG
REVISED:
DESIGNED: HLG
CHECKED: RJH

MEDINA COUNTY
STA. 47+92.70
STA. 50+79.26

SITE PLAN
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD CH-21

MED-71-15.78

1/16

721/940

| ESTIMATED QUANTITIES | | | | | ABUTMENTS | | PIER | SUPER | GEN. | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|
| ITEM | EXTENSION | TOTAL | UNIT | DESCRIPTION | REAR | FORWARD | | | | |
| 202 | 11002 | LUMP | | STRUCTURE REMOVED, OVER 20 FOOT SPAN | | | | | LUMP | |
| | | | | | | | | | | |
| 503 | 11100 | LUMP | | COFFERDAMS, CRIBS AND SHEETING | | | | | LUMP | |
| 503 | 21301 | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | | | | | LUMP | 3 |
| | | | | | | | | | | |
| 505 | 11100 | LUMP | | PILE DRIVING EQUIPMENT MOBILIZATION | | | | | LUMP | |
| | | | | | | | | | | |
| 507 | 00200 | 885 | LF | STEEL PILES HP12X53, FURNISHED | | | 885 | | | |
| 507 | 00250 | 885 | LF | STEEL PILES HP12X53, DRIVEN | | | 885 | | | |
| 507 | 00500 | 1170 | LF | 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN | 520 | 650 | | | | |
| 507 | 00550 | 1170 | LF | 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED | 520 | 650 | | | | |
| 507 | 50500 | 24 | EACH | STEEL PILE SPLICES | 6 | 7 | 11 | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| SPECIAL | 51267510 | 1090 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 94 | 94 | 168 | 734 | | 3 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 516 | 13600 | 18 | SF | 1" PREFORMED EXPANSION JOINT FILLER | 9 | 9 | | | | |
| 516 | 13900 | 160 | SF | 2" PREFORMED EXPANSION JOINT FILLER | 80 | 80 | | | | |
| 516 | 44100 | 5 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)(18"X24"X2¼" PAD & 19"X25"X2" PLATE) | | | 5 | | | |
| 516 | 44201 | 10 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN(12"X18"X3½" PAD & 13"X19"X1½" PLATE) | 5 | 5 | | | | 13 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 518 | 21231 | LUMP | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | LUMP | | | | 3 |
| 518 | 40000 | 104 | LF | 6" PERFORATED CORRUGATED PLASTIC PIPE | 52 | 52 | | | | |
| 518 | 40010 | 44 | LF | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 22 | 22 | | | | |
| | | | | | | | | | | |
| 601 | 20500 | 90 | CY | CRUSHED AGGREGATE SLOPE PROTECTION | 45 | 45 | | | | |
| | | | | | | | | | | |
| 816 | 00600 | LUMP | | FIELD PAINTING OF NEW STEEL, INTERMEDIATE AND FINISH COAT, SYSTEM IZEU | | | | LUMP | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 842 | 40501 | 95 | CY | CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN | | | 95 | | | 3 |
| 842 | 44101 | 66 | CY | CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN | 33 | 33 | | | | 3 |
| 842 | 46501 | 108 | CY | CLASS C CONCRETE, FOOTING, AS PER PLAN | 34 | 34 | 40 | | | 3 |
| | | | | | | | | | | |
| 844 | 48001 | 291 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK), AS PER PLAN (MIX 4) | | | | 291 | | 3 |
| 844 | 48021 | 101 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET*), AS PER PLAN (MIX 4) | | | | 101 | | 3 |
| 844 | 48041 | 42 | CY | HIGH PERFORMANCE CONCRETE SUBSTRUCTURE, AS PER PLAN (MIX 4) | 21 | 21 | | | | 3 |
| 844 | 49000 | LUMP | | HIGH PERFORMANCE CONCRETE TRIAL MIX | | | | | LUMP | |
| 844 | 49010 | LUMP | | HIGH PERFORMANCE CONCRETE TESTING | | | | | LUMP | |
| | | | | | | | | | | |
| 863 | 10080 | LUMP | | STRUCTURAL STEEL MEMBERS, LEVEL FOUR (4) FABRICATION, A572 | | | | LUMP | | |
| 863 | 20000 | 1590 | EACH | WELDED STUD SHEAR CONNECTORS | | | | 1590 | | |

*PARAPET ON THE APPROACH SLAB IS INCLUDED WITH THIS PAY ITEM.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED HLG | DRAWN HLG | REVIEWED RJH | DATE 8-27-99
CHECKED DFT | REVISED | STRUCTURE FILE NUMBER 5203643

ESTIMATED QUANTITIES
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21)

MED-71-15.78



722
940

**STANDARD DRAWINGS AND SPECIFICATIONS:**

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

| | |
|---|---|
| AS-1-81 | REVISED 09-15-94 |
| SBR-1-99 | DATED 01-12-99 |
| GSD-1-96 | DATED 02-12-97 |

AND TO SUPPLEMENTAL SPECIFICATIONS:

| | |
|---|---|
| 816 | DATED 04-21-97 |
| 842 | DATED 01-06-99 |
| 844 | DATED 01-06-99 |
| 863 | DATED 10-12-99 |
| 899 | DATED 10-21-98 |
| 910 | DATED 07-28-98 |
| 911 | DATED 07-10-97 |
| 954 | DATED 09-09-97 |

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997 AND 1998 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

**DESIGN LOADING:**

HS20-44, CASE II AND THE ALTERNATE MILITARY LOADING.

**DESIGN DATA:**

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

ITEM 842 CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617
GRADE 60 MINIMUM YIELD STRENGTH 60 Ksi. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

STRUCTURAL STEEL - A572 - YIELD STRENGTH 50 Ksi

**DECK PROTECTION METHOD** - EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER AND HIGH PERFORMANCE CONCRETE.

**MONOLITHIC WEARING SURFACE** IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

**REMOVAL OF EXISTING STRUCTURE:**

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER.

**EXISTING BRIDGE PLANS** MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT THREE OFFICE IN ASHLAND, OHIO.

**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)**

EPOXY-URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722. FOR ADDITIONAL NOTES SEE THE NOTE IN THE PROPOSAL "ITEM SPECIAL - SEALING OF CONCRETE SURFACES."

**ITEM 842, CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN**

INSTALL A 3 FOOT WIDE STRIP, 3/32 INCH THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 3 FOOT WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X 3/32" (LENGTH X SHANK DIAMETER) #10 GALVANIZED BUTTON HEAD SPIKE THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS, AT 6 INCHES CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS WHERE THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST ONE FOOT IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32 INCH THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

| DESCRIPTION OF TEST | ASTM METHOD | REQUIREMENT |
|---|---|---|
| THICKNESS, INCHES | D 751 | 0.094 ± .01 |
| BREAKING STRENGTH, GRAB WXF, LBS, MINIMUM | D 751 | 700 X 700 |
| ADHESIVE 1" STRIP, 2" MINIMUM, LBS, MINIMUM | D 751 | 9 |
| BURST STRENGTH (MULLEN) PSI, MINIMUM | D 751 | 1400 |
| HEAT AGING 70 HOURS T 212 F, 180 BEND WITHOUT CRACKING | D 2136 | NO CRACKING OF COATING |
| LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40 F, BEND AROUND ¼ INCH MANDREL | D 2136 | NO CRACKING OF COATING |

PAYMENT FOR LABOR, MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN ITEM 842, CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN.

**ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:**

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 6" LIFTS. EXCAVATION AT ABUTMENTS IN ADDITION TO THAT NECESSARY TO REMOVE PORTION OF THE EXISTING STRUCTURE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION FOR PAYMENT.

**ITEM 842 CLASS C CONCRETE, (FOOTINGS, PIERS AND ABUTMENTS) AS PER PLAN**

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITEM 844 HIGH PERFORMANCE CONCRETE, AS PER PLAN**

THE DESIGN MIX SHALL BE MIX NO. 4 LIMESTONE. THE OPTION OF SLIPFORM CONSTRUCTION OF THE BRIDGE PARAPET IS NOT PERMITTED. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**REINFORCING STEEL:**

NEW REINFORCING STEEL MAY REQUIRE BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED UNER ITEM 844 HIGH PERFORMANCE CONCRETE OR ITEM 842, CLASS C CONCRETE.

**ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN**

POROUS BACKFILL SHALL BE #57 GRAVEL ONLY.

**PILE DRIVING CONSTRAINTS:**

PRIOR TO DRIVING PILES, THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE REAR ABUTMENT SHALL BE CONSTRUCTED UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 25 FEET BEHIND THE REAR ABUTMENT. THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES SHALL NOT BEGIN UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

**ITEM 507 12" CAST-IN PLACE REINFORCED CONCRETE PILES**

THE DESIGN LOAD IS 53 TONS PER PILE FOR THE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 106 TONS PER PILE. THE ULTIMATE BEARING VALUE IS TWO TIMES THE ACTUAL DESIGN LOAD. THE ABUTMENT PILES SHALL BE DRIVEN TO THE ULTIMATE BEARING VALUE.

**ITEM 507 STEEL PILES HP12X53**

THE DESIGN LOAD IS 65 TONS PER PILE FOR THE PIER PILES. THE ULTIMATE BEARING VALUE IS 130 TONS PER PILE. THE PIER PILES SHALL BE DRIVEN TO REFUSAL ON THE BEDROCK. REFUSAL SHALL BE CONSIDERED AS OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES WITH A MINIMUM RESISTANCE OF 20 BLOWS PER ONE INCH OR REFUSAL SHALL BE CONSIDERED AS OBTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECEIVED AT LEAST 20 BLOWS.

**SURVEY DISC ON STRUCTURE:**

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

**PAINTING OF 863 STEEL**

THE COLOR OF THE FINISH COAT SHALL BE A LIGHT GRAY COLOR MEETING FEDERAL STANDARD NUMBER 16440. IN ADDITION TO THE SURFACE AREA OF THE STEEL STRINGERS TO BE PAINTED SHALL INCLUDE INCIDENTALS SUCH AS CROSS FRAMES, STIFFENERS AND BEARINGS.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| HLG | HLG | RJH | 8-27-99 |

CHECKED: DFT — REVISED — STRUCTURE FILE NUMBER 5203643

GENERAL NOTES

BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21)

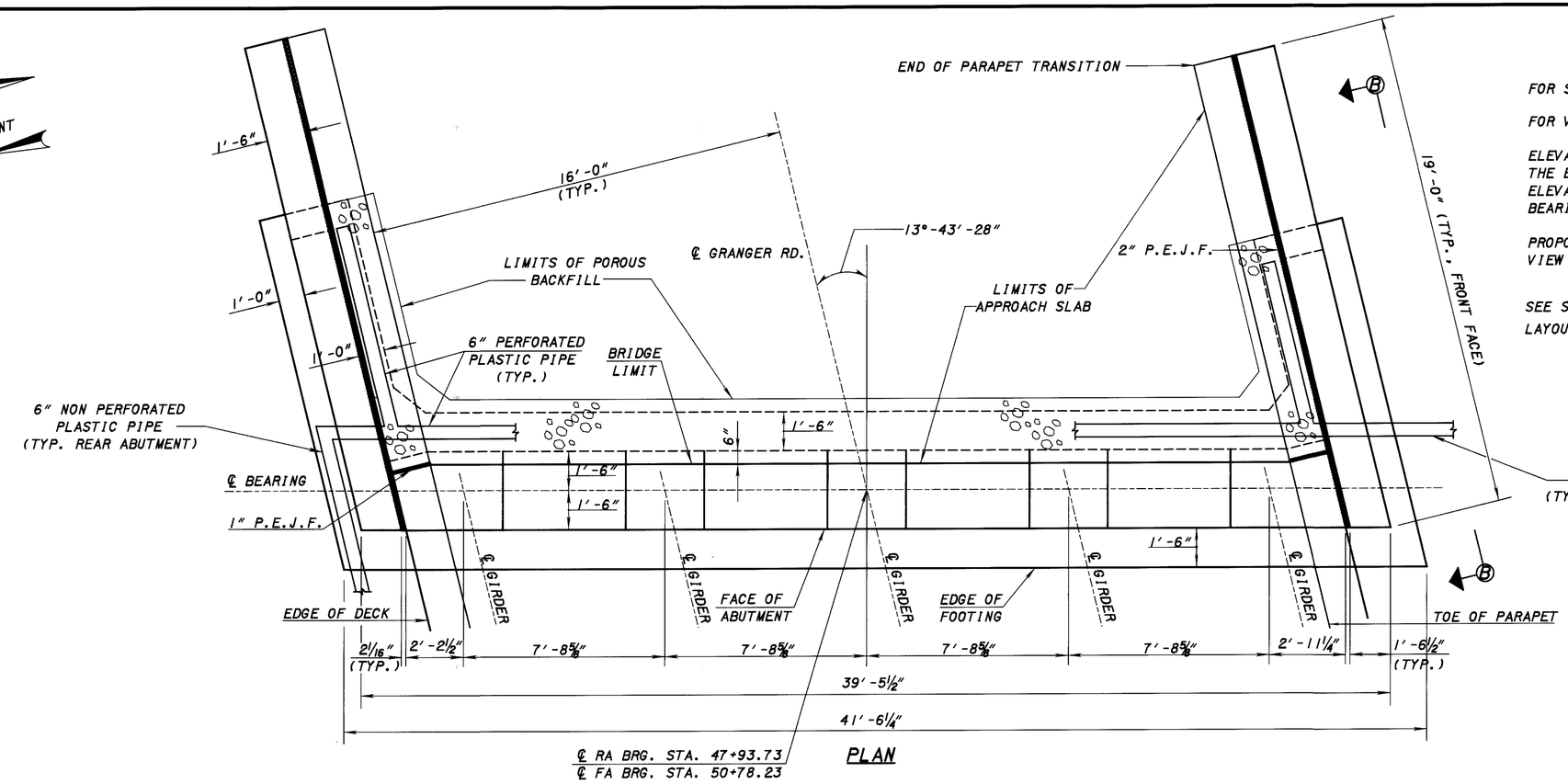
MED-71-15.78



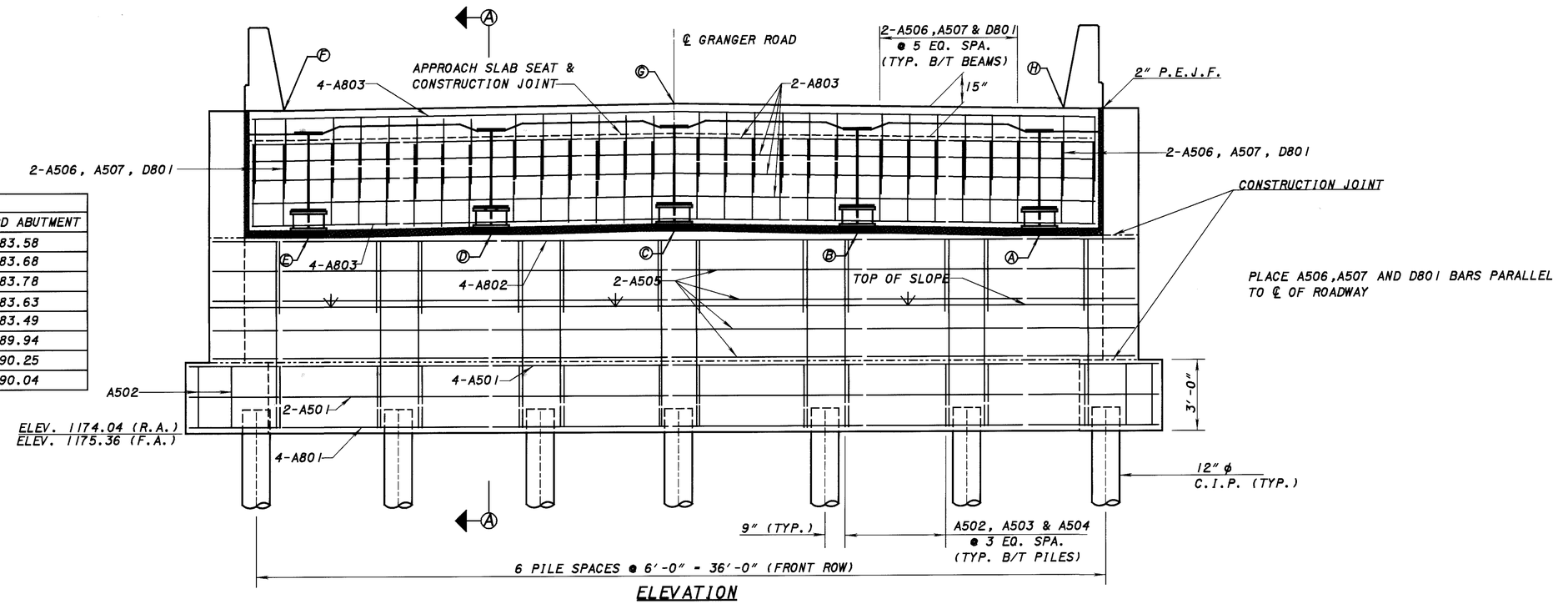
723/940

REAR ABUTMENT (N)

FORWARD ABUTMENT (N)




PLAN




ELEVATION

| LOCATION | ELEVATION | |
|---|---|---|
| | REAR ABUTMENT | FORWARD ABUTMENT |
| A | 1182.55 | 1183.58 |
| B | 1182.64 | 1183.68 |
| C | 1182.72 | 1183.78 |
| D | 1182.56 | 1183.63 |
| E | 1182.40 | 1183.49 |
| F | 1188.85 | 1189.94 |
| G | 1189.19 | 1190.25 |
| H | 1189.01 | 1190.04 |

NOTES:

FOR SECTION (A)-(A) SEE SHEET 5/16

FOR VIEW (B)-(B) SEE SHEET 5/16

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

PROPOSED PILES ARE NOT SHOWN IN PLAN VIEW FOR CLARITY.

SEE SHEET 6/16 FOR ABUTMENT PILE LAYOUT PLAN

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

DESIGNED HLG | DRAWN HLG | REVIEWED RJH | DATE 8-27-99

CHECKED | REVISED | STRUCTURE FILE NUMBER 5203643

# ABUTMENT PLAN & ELEVATION

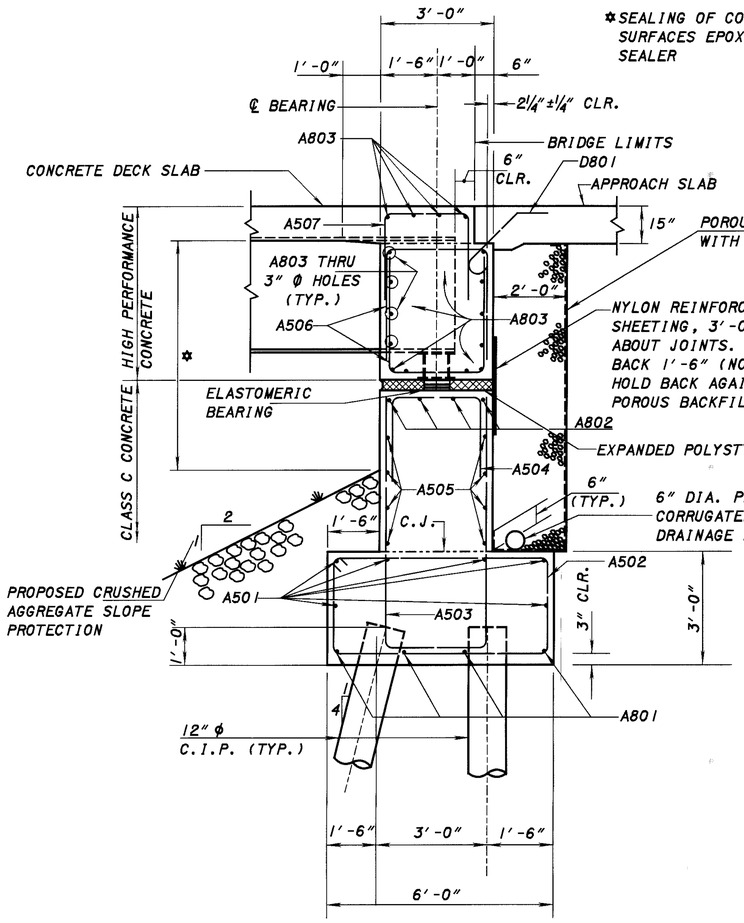
BRIDGE NO. MED-71-1828

IR-71 UNDER GRANGER ROAD (CH 21)

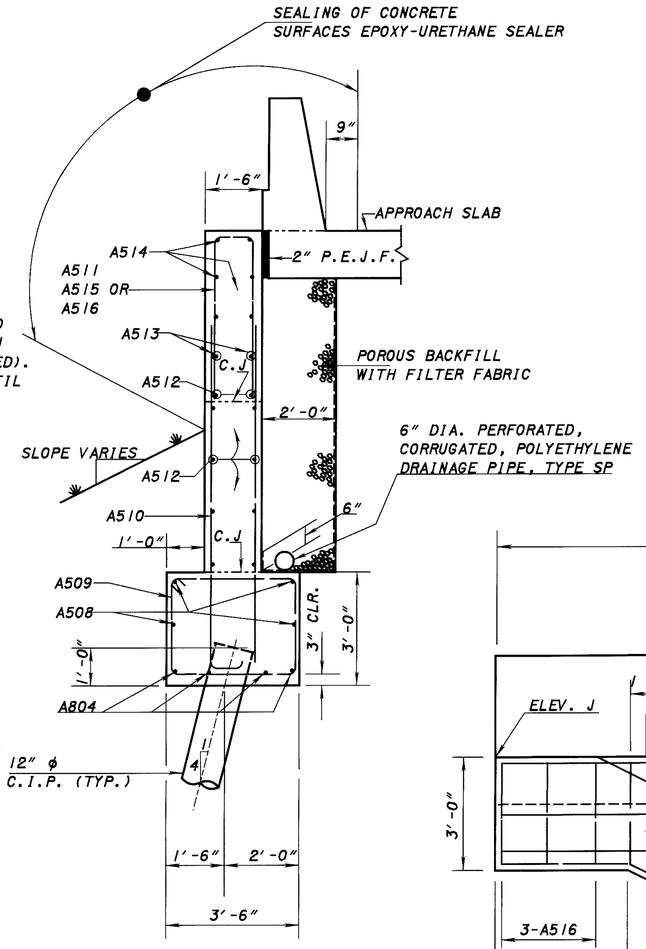
MED-71-15.78

4/16

724/940




SECTION A-A



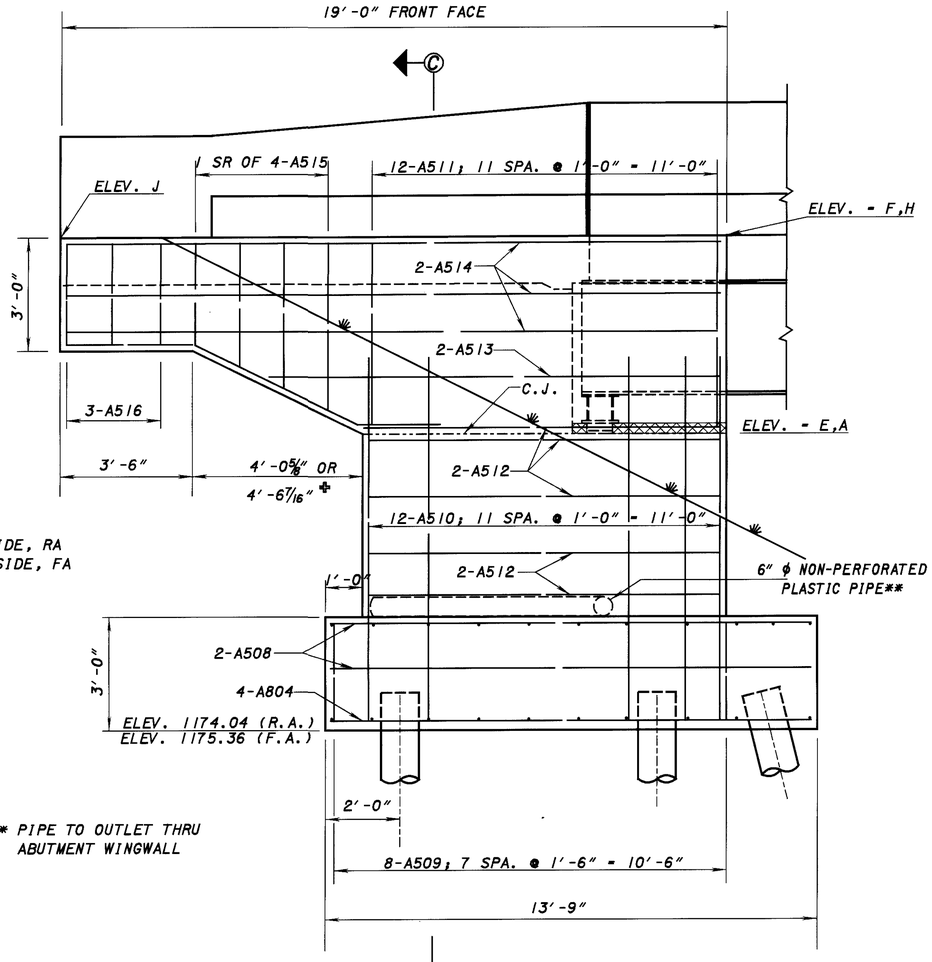

SECTION C-C

## NOTES

**POROUS BACKFILL:**
POROUS BACKFILL WITH FILTER FABRIC, 2′-0″ THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 12″ BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALL FOOTINGS.

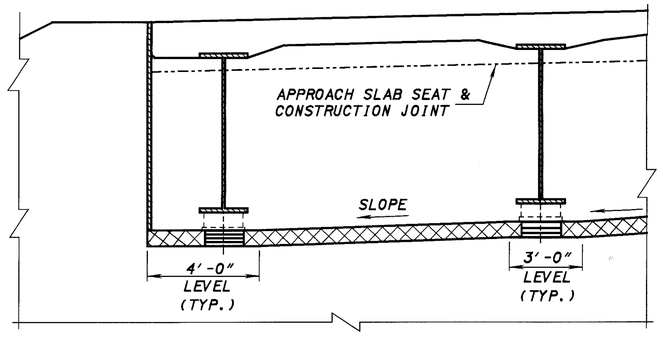
**DIAPHRAGM** CONCRETE ENCASING THE STEEL BEAMS SUPPORTED IN THE SEMI INTEGRAL ABUTMENT SHALL BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.

PROVIDE 3″ Ø HOLE THRU WEB AS NOTED, PAYMENT TO BE INCLUDED AS INCIDENTAL WITH ITEM 863 STRUCTURAL STEEL. PAYMENT FOR THE EXPANDED POLYSTYRENE FILLER TO BE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE AS INCIDENTAL.




| | ELEV. J | STATION |
|---|---|---|
| R.A., RT | 1188.46 | 47+71.59 |
| R.A., LT | 1188.67 | 47+80.96 |
| F.A., RT | 1189.82 | 50+91.01 |
| F.A., LT | 1189.68 | 51+00.37 |

** PIPE TO OUTLET THRU ABUTMENT WINGWALL




PART ELEVATION OF BEAM SEAT

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| HLG | HLG | RJH | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5203643 | |

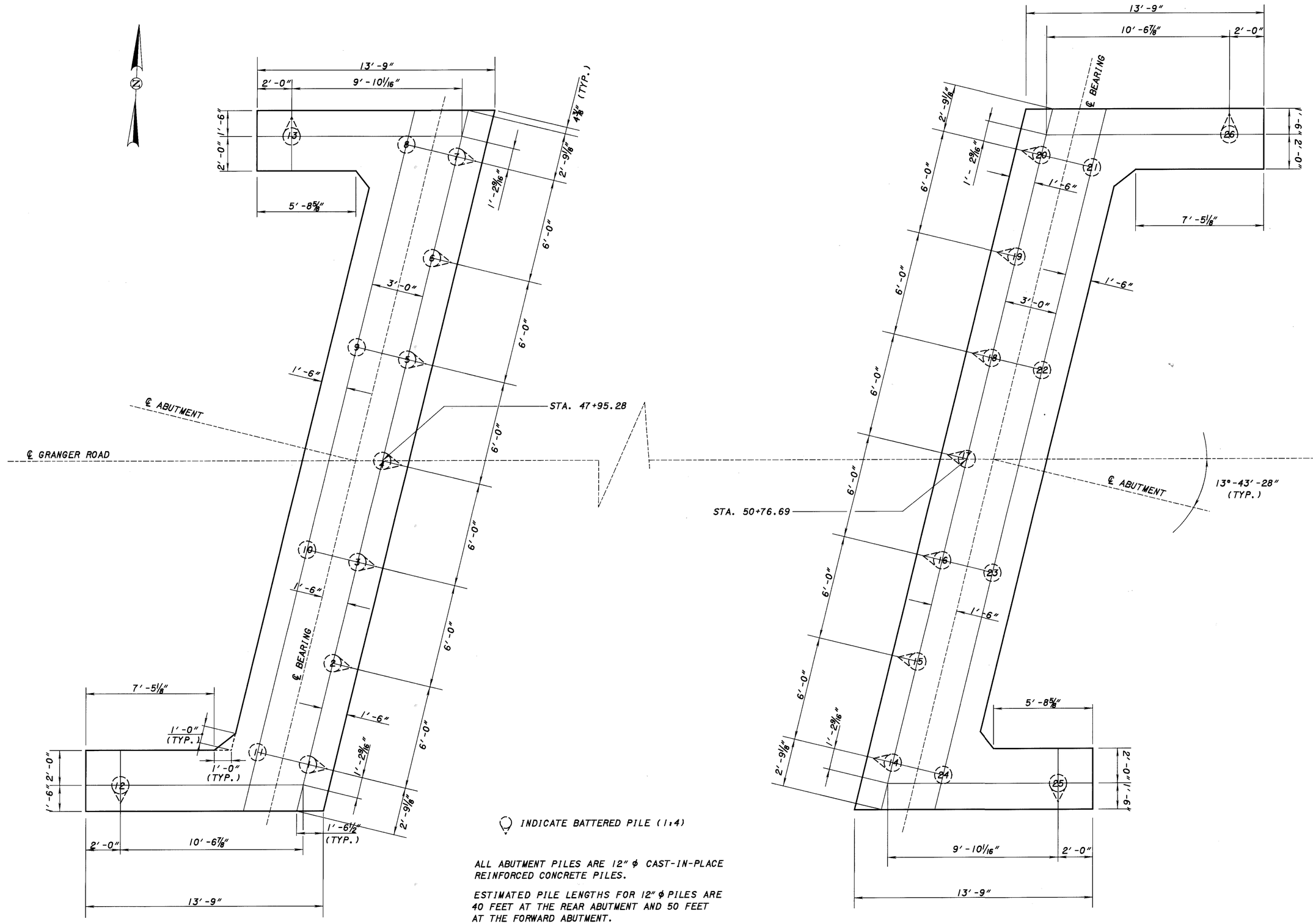
# ABUTMENT DETAILS

BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21)

MED-71-15.78

5/16

725/940




INDICATE BATTERED PILE (1:4)

ALL ABUTMENT PILES ARE 12" ϕ CAST-IN-PLACE REINFORCED CONCRETE PILES.

ESTIMATED PILE LENGTHS FOR 12" ϕ PILES ARE 40 FEET AT THE REAR ABUTMENT AND 50 FEET AT THE FORWARD ABUTMENT.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| HLG | HLG | RJH | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5203643 | |

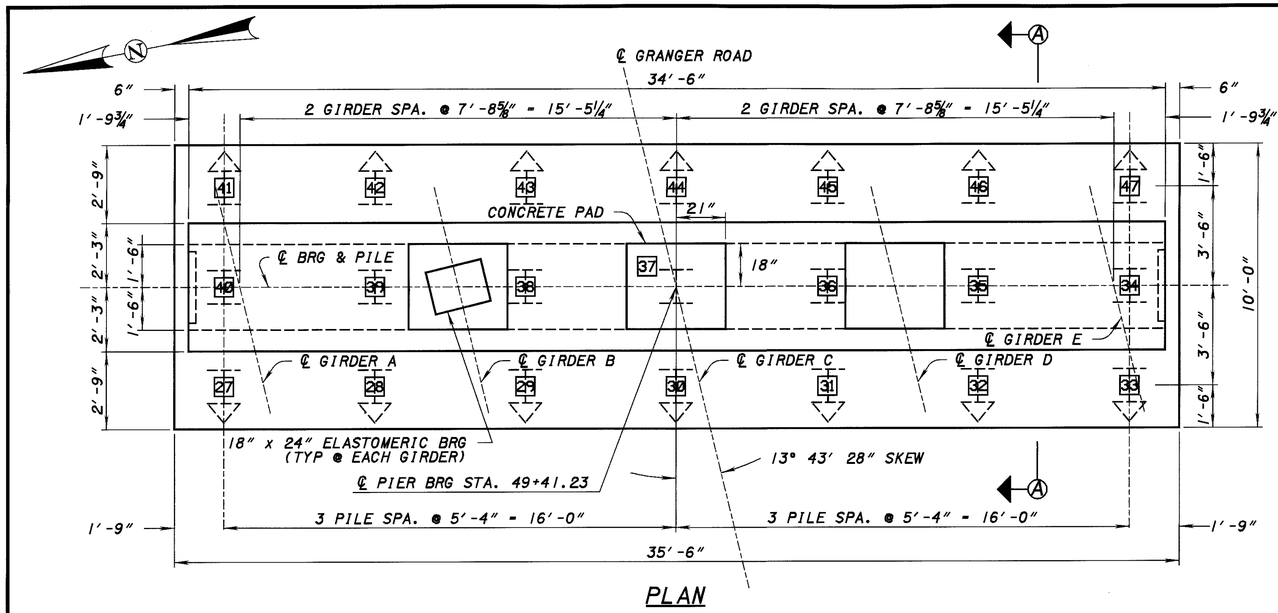
# ABUTMENT PILING LAYOUT

BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21)

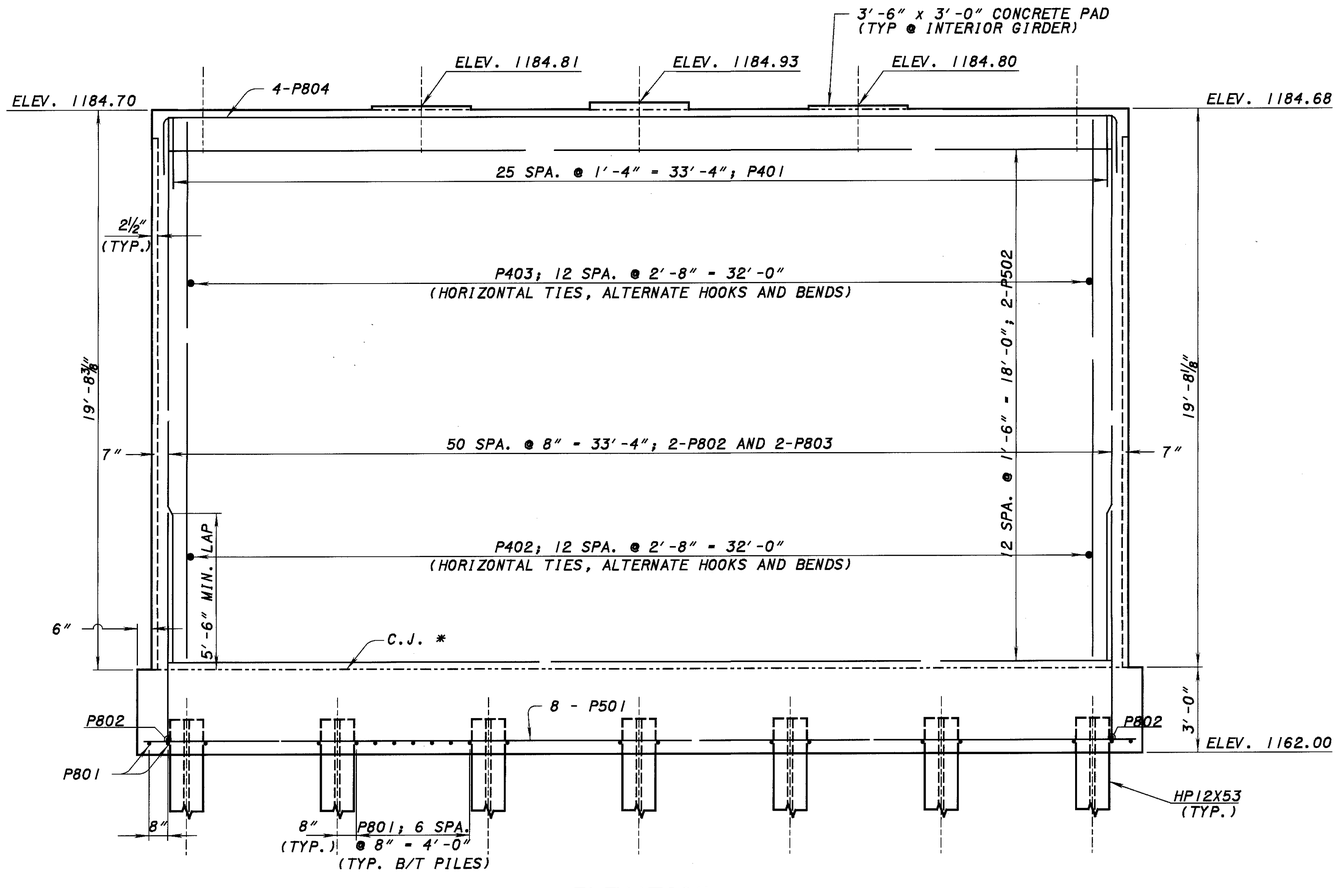
MED-71-15.78

6/16

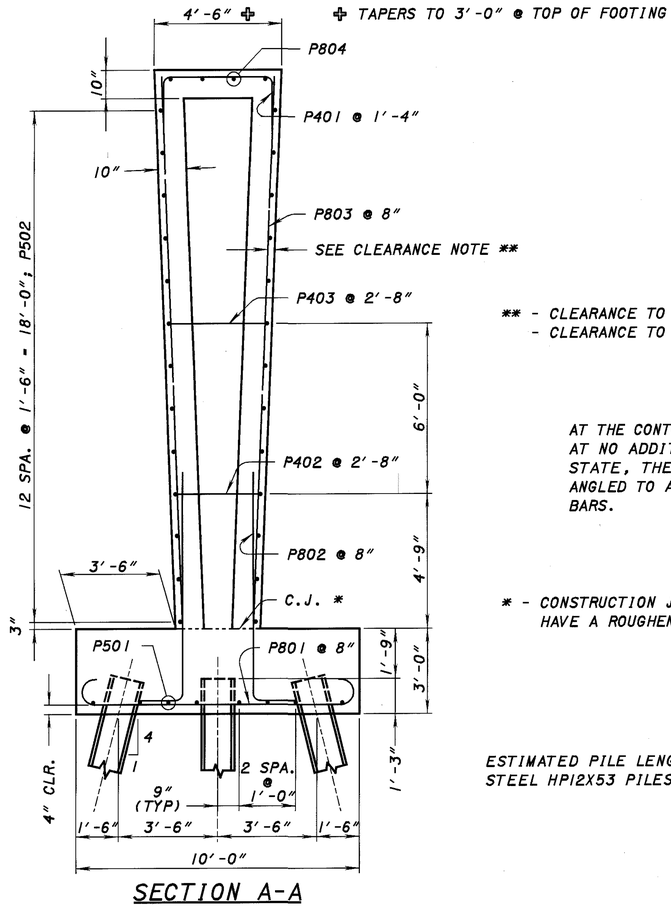
726/940




PLAN




ELEVATION




SECTION A-A

## NOTES

THE VERTICAL SURFACE OF THE PIER FROM THE TOP OF FOOTING TO BRIDGE SEAT SHALL BE SEALED WITH AN EPOXY URETHANE SEALER. BRIDGE SEAT NEED NOT BE SEALED.

## LEGEND

INDICATES STEEL HP12X53 PILES

INDICATES BATTERED PILE (1:4)

43 INDICATES PILE NUMBERING

** - CLEARANCE TO P803 - 3″
- CLEARANCE TO P502 - 2⅜″

AT THE CONTRACTOR'S OPTION AND AT NO ADDITIONAL COST TO THE STATE, THE P802 BARS MAY BE ANGLED TO ALIGN WITH THE P803 BARS.

* - CONSTRUCTION JOINT SHALL HAVE A ROUGHENED FINISH

ESTIMATED PILE LENGTH FOR STEEL HP12X53 PILES IS 40′.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

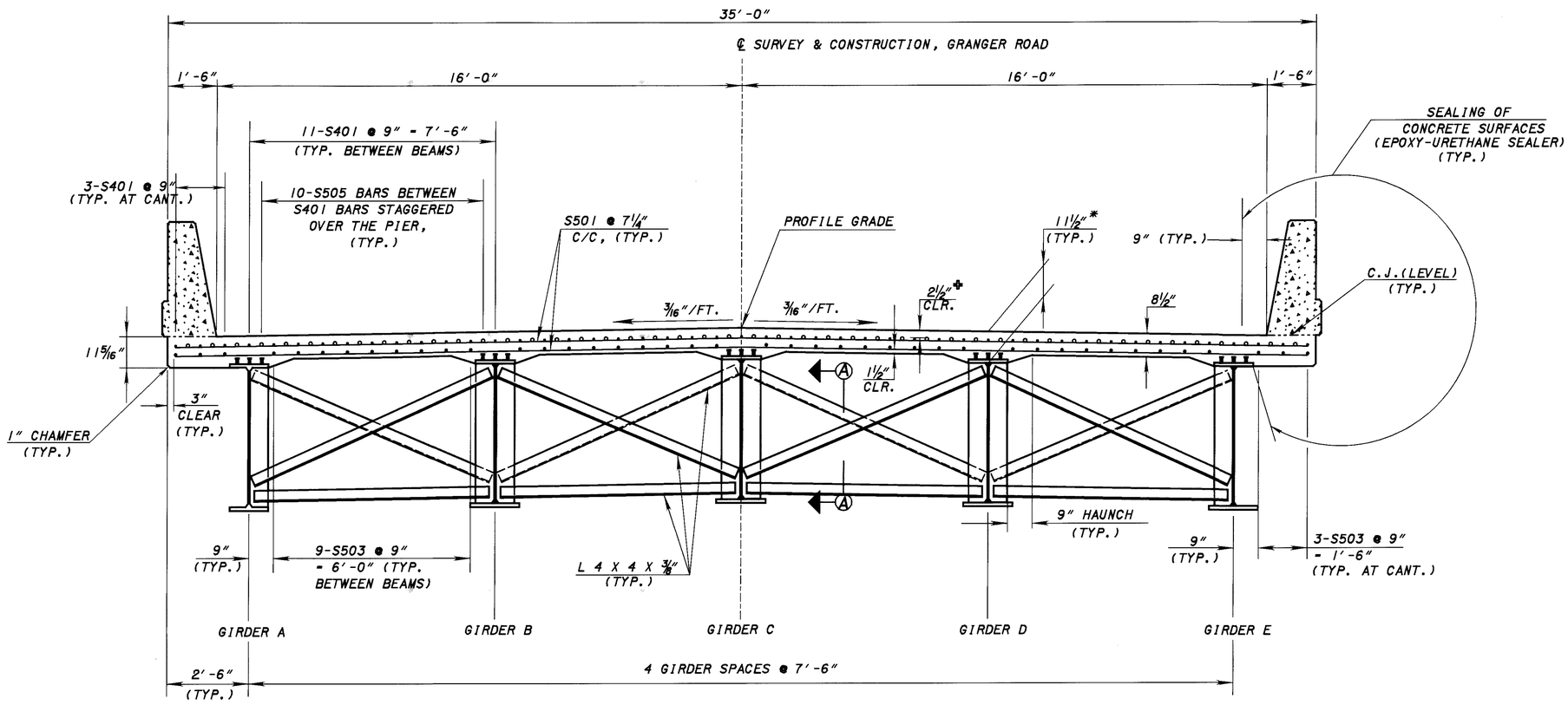
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| DFT | D W | | |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| HLG | | 5203643 | |

PIER DETAILS
MED-71-1828
1-71 UNDER GRANGER ROAD (CH 21)

MED-71-15.94

7 / 16

727
940




## TRANSVERSE SECTION

## NOTES AND LEGEND:

ALL REINFORCING STEEL IS EPOXY COATED.

**DECK SLAB DEPTH:**
THE DISTANCE SHOWN FROM THE TOP OF THE DECK SLAB TO THE BOTTOM OF THE FLANGE IS THE CONCRETE DECK DESIGN DIMENSION, PLUS THE DESIGN HAUNCH THICKNESS OF 3″. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED UPON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL PLATES AS PER 863.31.

*THE DISTANCE FROM THE BOTTOM OF THE DECK TO THE BOTTOM OF THE TOP FLANGE REMAINS 3″ AT ALL LOCATIONS ON THE BRIDGE. THE HAUNCH DEPTH WILL VARY BECAUSE OF THE DIFFERENCE IN TOP FLANGE THICKNESS.

✤THE 2½″ CLEARANCE SHALL BE TO THE #4 BARS.

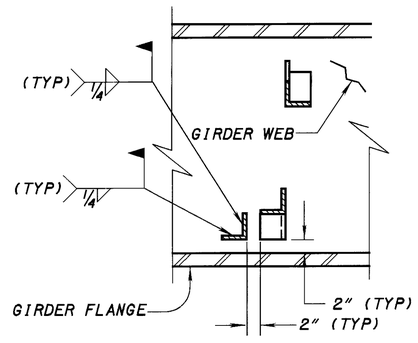
REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE.

MINIMUM LAP SPLICES: #4 BARS = 2′-0″
#5 BARS = 2′-6″
#6 BARS = 3′-0″

SEE STANDARD DRAWING GSD-1-96 FOR CROSS FRAME CONNECTION DETAILS. TYPE 3 OR 4 MAY BE USED AT THE CONTRACTOR'S OPTION AT NO ADDITIONAL COST TO THE STATE.

SEE SHEET 14/16 FOR PARAPET TRANSITION DETAILS.

SEE SHEET 9/16 FOR PARAPET REINFORCEMENT ON DECK.




SECTION A-A

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

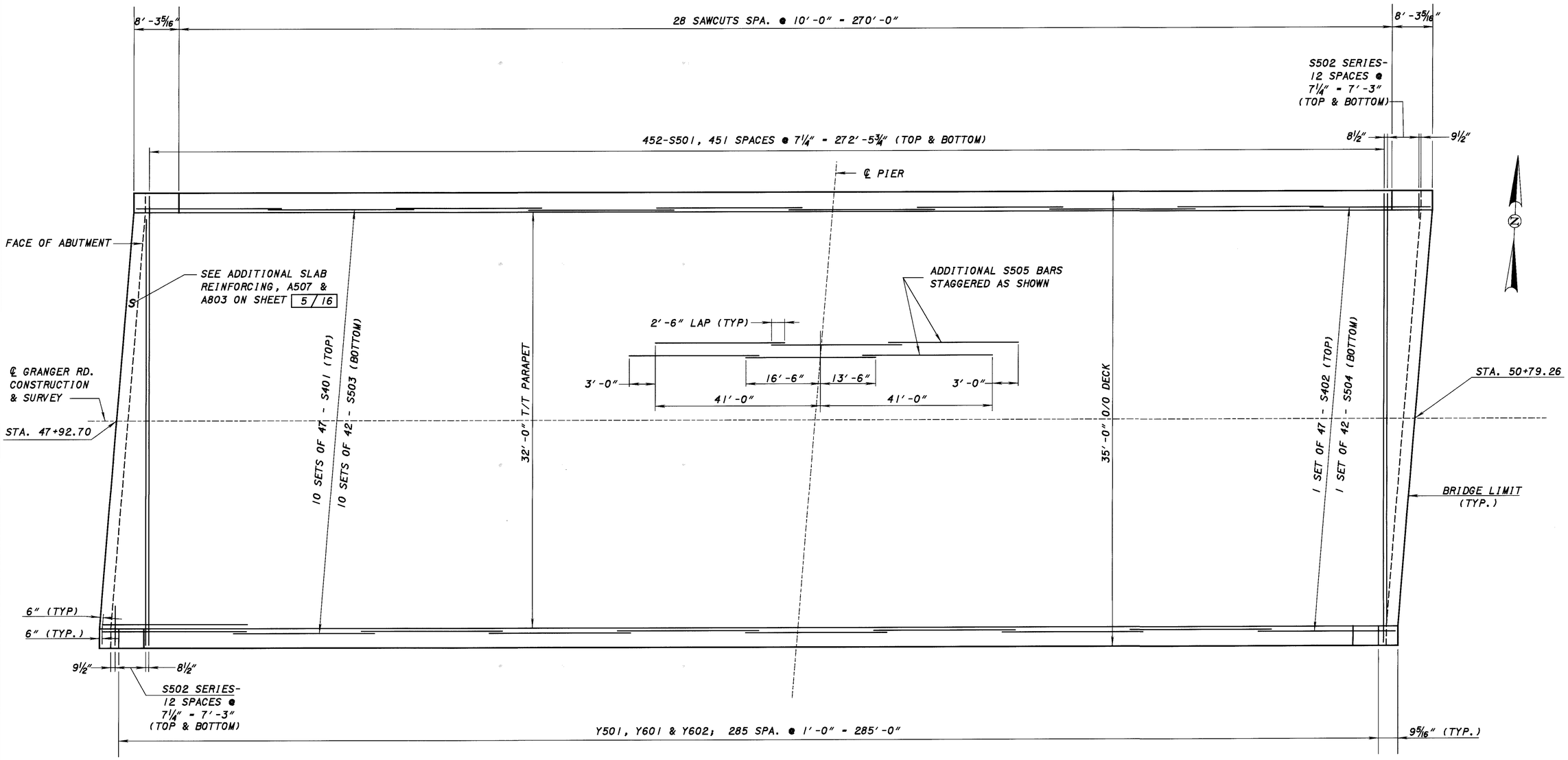
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| HLG | HLG | DFT | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| RJH | | 5203643 | |

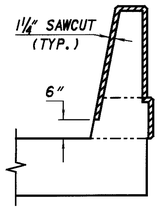
TRANSVERSE SECTION
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21)

MED-71-15.78

8/16

728
940




SAWCUT DETAIL

Sawcut Perimeter = 7′-6″

DECK SLAB PLAN AND PARAPET DETAILS

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

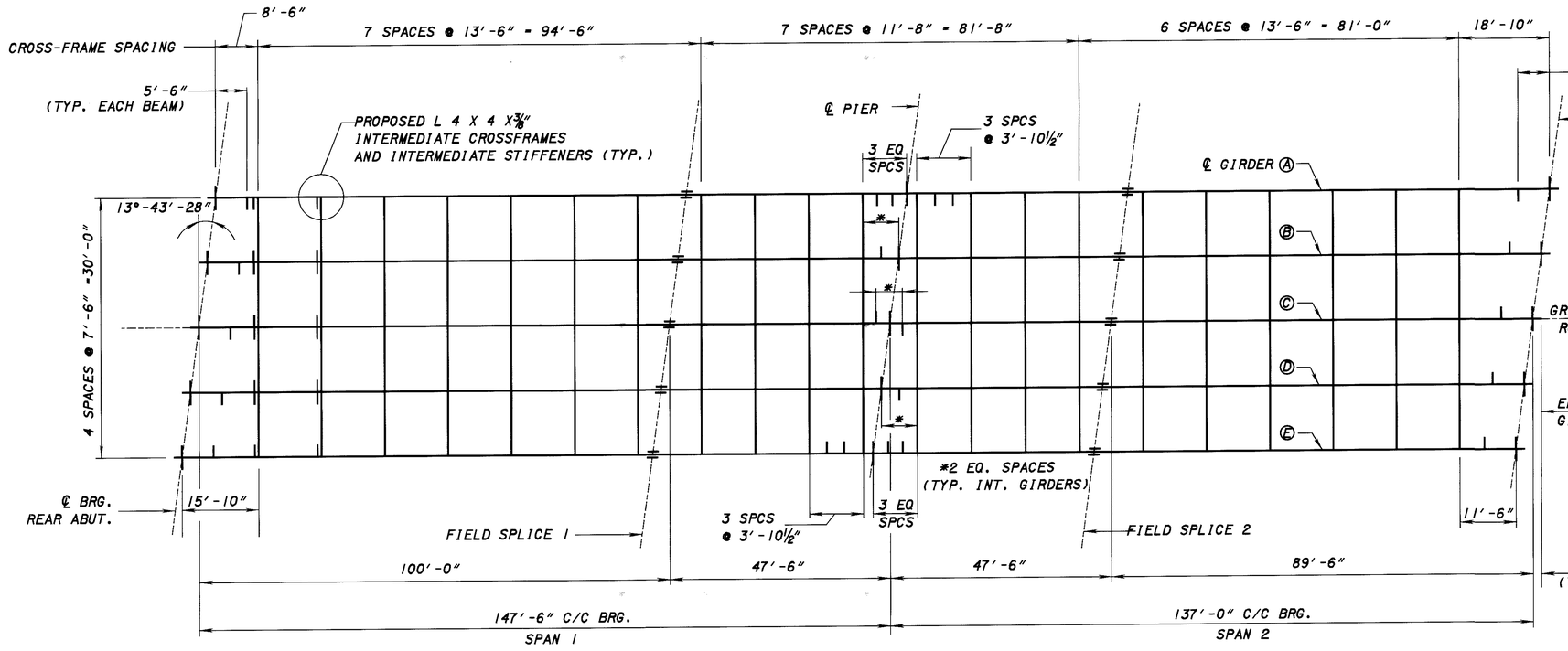
| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| HLG | RJH | | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| RJH | DFT | 5203643 | |

DECK SLAB PLAN
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD CH 21

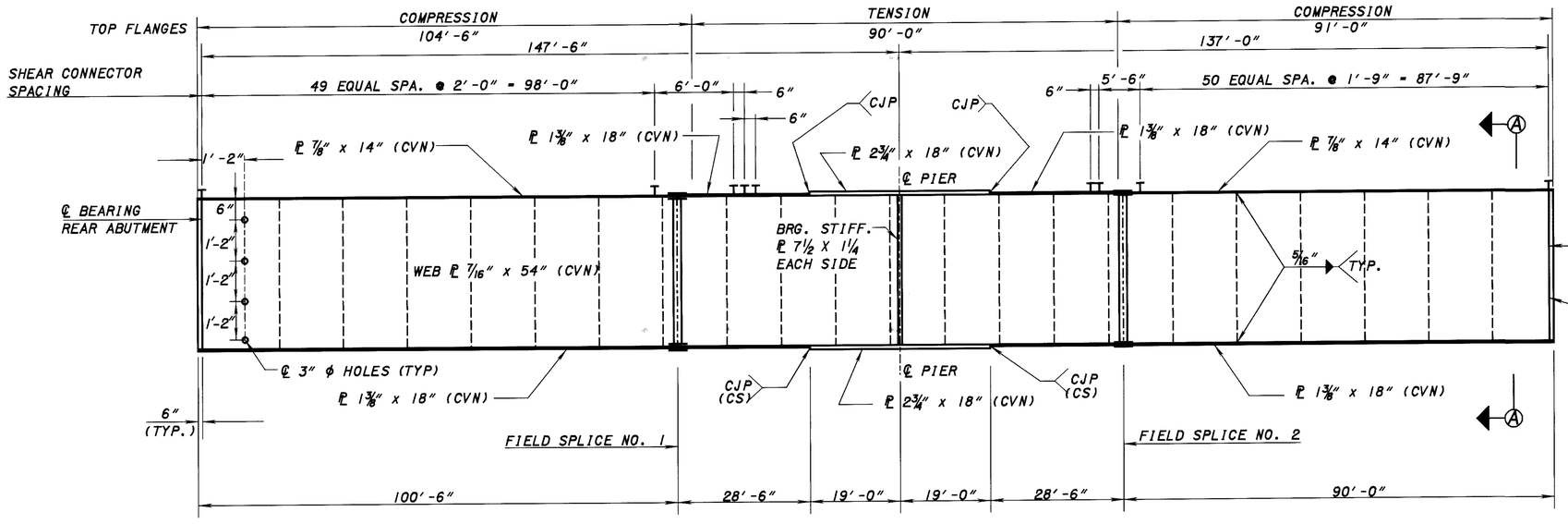
MED-71-15.78

9/16

729
940

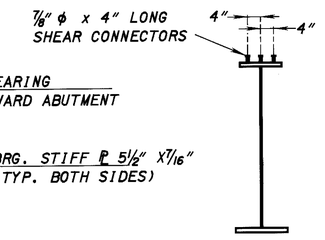



## FRAMING PLAN




## GIRDER ELEVATION

(NOTE: NOT DRAWN TO SCALE)




SECTION Ⓐ-Ⓐ

CJP - COMPLETE JOINT PENETRATION
CS - BUTT WELD SUBJECT TO COMPRESSIVE STRESSES ONLY

### NOTES:

WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF THE CMS.

WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO THE AREA OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION." ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION." FILLET WELDS TO COMPRESSION FLANGES SHALL NOT BE CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

ALL STRUCTURAL STEEL TO BE A572 PAINTED.

INTERMEDIATE STIFFENERS SHALL BE SPACED EVENLY BETWEEN INTERMEDIATE CROSSFRAMES, AS SHOWN ON THE FRAMING PLAN.

STEEL ERECTION: DURING THE ERECTION OF CROSSFRAMES, CARE SHALL BE TAKEN TO ENSURE THAT GIRDERS, BEARING PARTS AND BRIDGE SEATS REMAIN IN BEARING CONTACT.

ALL GIRDER LENGTH DIMENSIONS ARE AT 60°F, AND ALL DIMENSIONS ARE MEASURED ALONG THE ℄ OF THE GIRDER.

TRANSVERSE STIFFENERS SHALL BE PLACED ON THE INSIDE FACE OF EXTERIOR GIRDERS AND ON ALTERNATE SIDES OF THE INTERIOR GIRDERS. ALL TRANSVERSE STIFFENERS ARE SET NORMAL TO THE GIRDER WEBS.

FOR ADDITIONAL STRUCTURAL STEEL DETAILS SEE STANDARD DRAWING GSD-1-96.

BEARING STIFFENERS AND ENDS OF BEAMS TO BE VERTICAL. BEARING STIFFENERS LOCATED AT ℄ BRGS.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

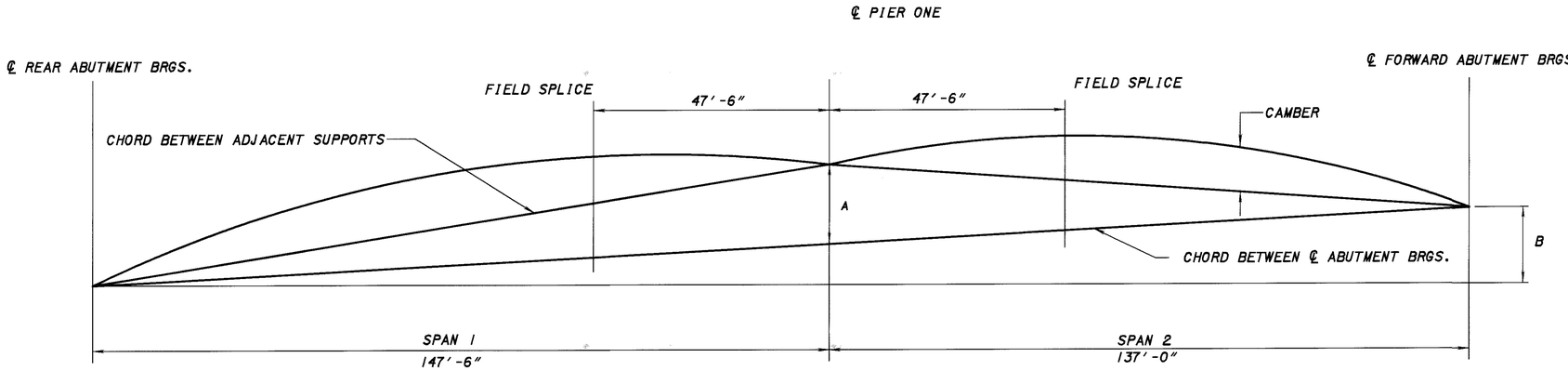
DESIGNED RJH | DRAWN RJH | REVIEWED DFT | DATE 8-27-99 | STRUCTURE FILE NUMBER 5203643 | REVISED | CHECKED HLG

FRAMING PLAN
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD CH 21

MED-71-15.78

10 / 16

730
940




| LOCATION | A | B |
|---|---|---|
| GIRDER A | 1.21 | 0.94 |
| GIRDER B | 1.21 | 0.99 |
| GIRDER C | 1.21 | 1.06 |
| GIRDER D | 1.21 | 1.12 |
| GIRDER E | 1.22 | 1.18 |

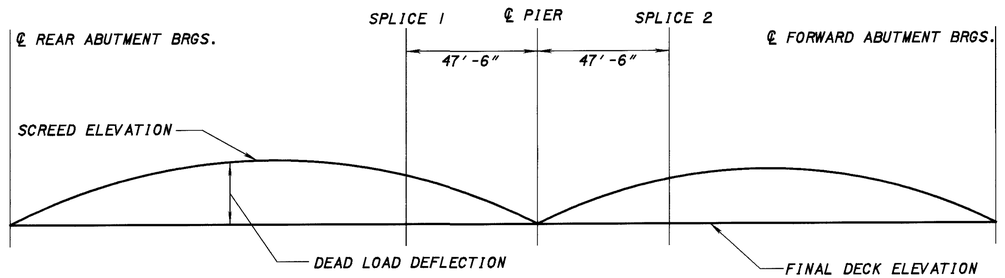
DIMENSIONS GIVEN IN FEET

## BLOCKING AND CAMBER DIAGRAM

| DEFLECTION & CAMBER TABLE, IN. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SPAN 1 | | | | SPAN 2 | | | |
| LOCATION | 1/4 | 1/2 | SPL | 3/4 | 1/4 | SPL | 1/2 | 3/4 |
| DEFLECTION DUE TO WEIGHT OF STEEL | 15/16 | 1 | 5/8 | 7/16 | 3/16 | 5/16 | 9/16 | 9/16 |
| *REMAINING DL DEFLECTION | 3 5/16 | 3 13/16 | 2 7/16 | 1 11/16 | 9/16 | 1 3/16 | 2 1/16 | 1 15/16 |
| VERTICAL CURVE CORRECTION | 2 7/8 | 3 15/16 | 3 1/2 | 2 7/8 | 2 3/8 | 3 | 3 3/8 | 2 1/2 |
| SHOP CAMBER | 7 1/8 | 8 3/4 | 6 9/16 | 5 | 3 1/8 | 4 1/2 | 6 | 5 |

| SCREED ELEVATIONS | | | | | | |
|---|---|---|---|---|---|---|
| LOCATION | LEFT TOE OF PARAPET | | ℄ GRANGER RD. | | RIGHT TOE OF PARAPET | |
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 47+97.64 | 1189.03 | 47+93.73 | 1189.21 | 47+89.82 | 1188.87 |
| 1/4 SPAN | 48+34.51 | 1189.98 | 48+30.61 | 1190.17 | 48+26.70 | 1189.85 |
| MIDSPAN | 48+71.39 | 1190.52 | 48+67.48 | 1190.73 | 48+63.57 | 1190.43 |
| SPLICE | 48+97.64 | 1190.66 | 48+93.73 | 1190.89 | 48+89.82 | 1190.59 |
| 3/4 SPAN | 49+08.26 | 1190.68 | 49+04.36 | 1190.91 | 49+00.45 | 1190.62 |
| ℄ PIER | 49+45.14 | 1190.72 | 49+41.23 | 1190.97 | 49+37.32 | 1190.69 |
| 1/4 SPAN | 49+79.39 | 1190.79 | 49+75.48 | 1191.05 | 49+71.57 | 1190.80 |
| SPLICE | 49+92.64 | 1190.81 | 49+88.73 | 1191.08 | 49+84.82 | 1190.83 |
| MIDSPAN | 50+13.64 | 1190.79 | 50+09.73 | 1191.07 | 50+05.82 | 1190.83 |
| 3/4 SPAN | 50+47.89 | 1190.51 | 50+43.98 | 1190.81 | 50+40.07 | 1190.59 |
| ℄ FORWARD ABUTMENT | 50+82.14 | 1189.95 | 50+78.23 | 1190.27 | 50+74.32 | 1190.06 |

SCREED SETTING ELEVATIONS GIVEN ARE TO THE TOP OF CONCRETE DECK AND ARE REQUIRED PRIOR TO PLACEMENT OF CONCRETE. THEY INCLUDE AN ALLOWANCE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE SLAB AND PARAPET*.




## DIAGRAM FOR SCREED ELEVATIONS

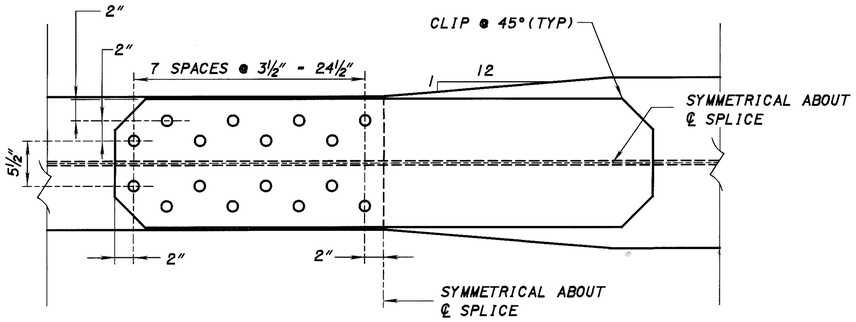
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED HLG | DRAWN HLG | REVIEWED DFT | DATE 8-27-99
CHECKED RJH | REVISED | STRUCTURE FILE NUMBER 5203643

SUPERSTRUCTURE DETAILS
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21)

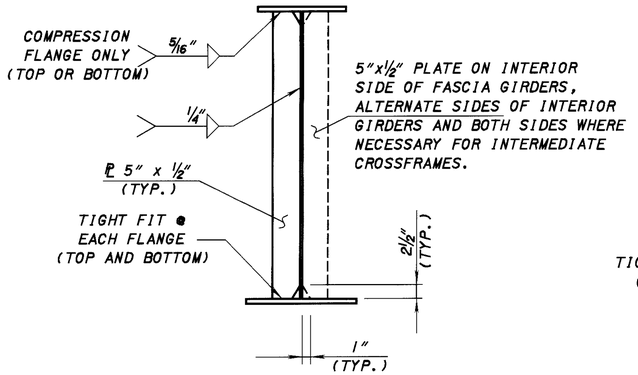
MED-71-15.78

11 / 16

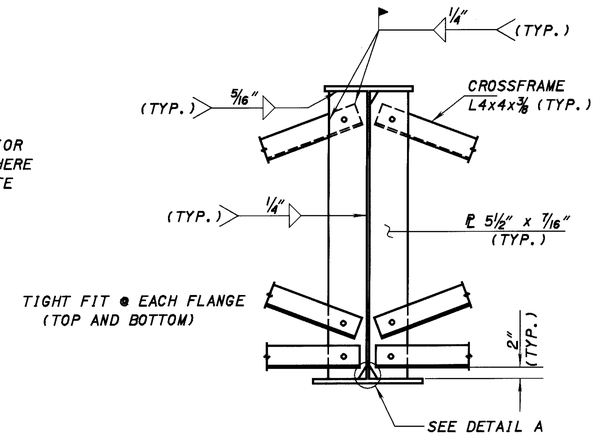
731
940




PLAN - TOP FLANGE
(32 BOLTS)

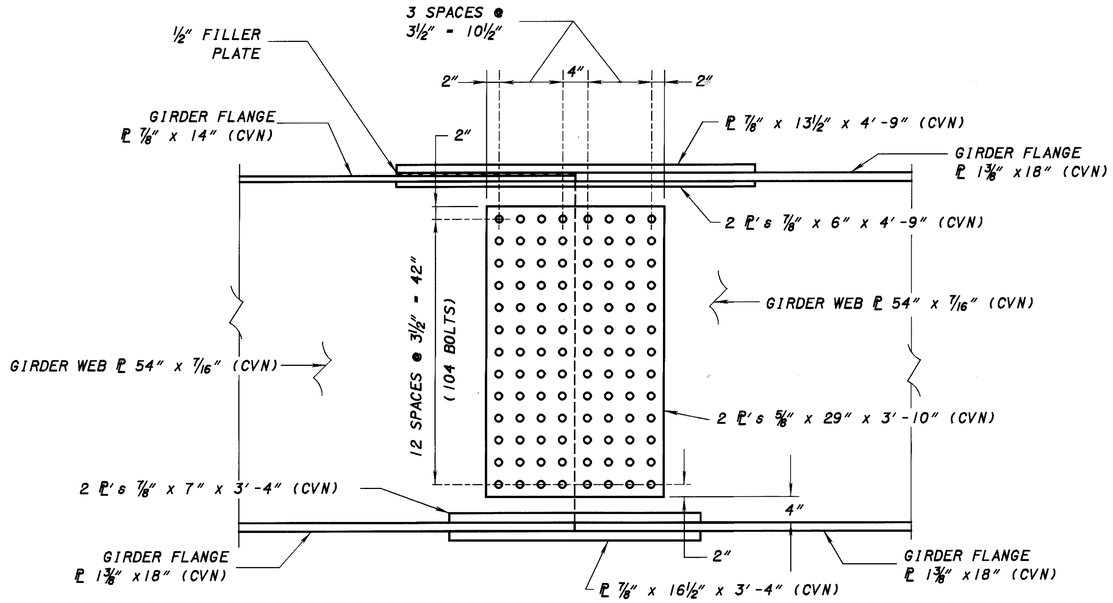



TYPICAL INTERMEDIATE
TRANSVERSE STIFFENER

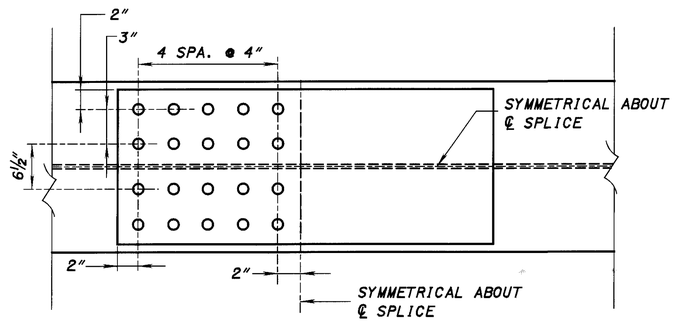



INTERMEDIATE TRANSVERSE STIFFENER
@ CROSS-FRAME LOCATIONS

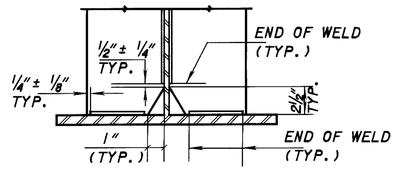
SEE STD. DRWG. GSD-1-96 FOR ADDITIONAL DETAILS
(TYPE 3 CROSSFRAMES SHOWN)



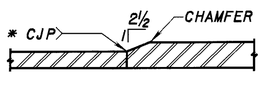

GIRDER FIELD SPLICE




PLAN - BOTTOM FLANGE
(40 BOLTS)




DETAIL A
WELD TERMINATION AND STIFFENER
PLATE CLIPPING DETAIL



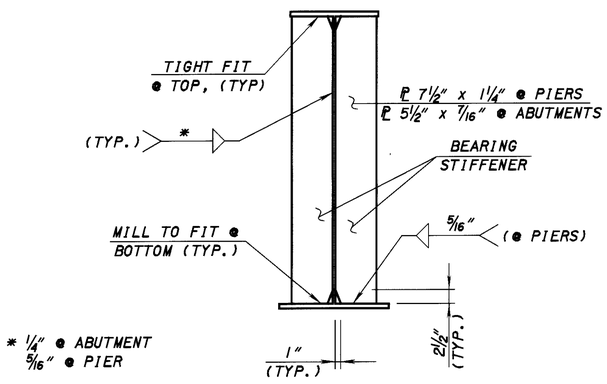

FLANGE WELD DETAIL

* COMPLETE JOINT PENETRATION WELDS SHALL BE GROUND SMOOTH IN A LONGITUDINAL DIRECTION TO REMOVE WELD REINFORCEMENT.

## NOTES:

WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

ALL BOLTS SHALL BE HIGH STRENGTH 1" DIAMETER, A325 GALVANIZED BOLTS, UNLESS OTHERWISE NOTED. WEB BOLTS OF FIELD SPLICES SHALL BE PLACED WITH THE HEADS ON THE OUTSIDE FACE OF EXTERIOR GIRDERS. FLANGE BOLTS FOR THE BOTTOM FLANGES OF THE FIELD SPLICES OF ALL GIRDERS SHALL BE PLACED WITH HEADS ON THE BOTTOM FACE. THREADS SHALL BE EXCLUDED FROM THE SHEAR PLANE. BOLTED SPLICES SHALL HAVE FRICTION TYPE CONNECTORS.




BEARING STIFFENER

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

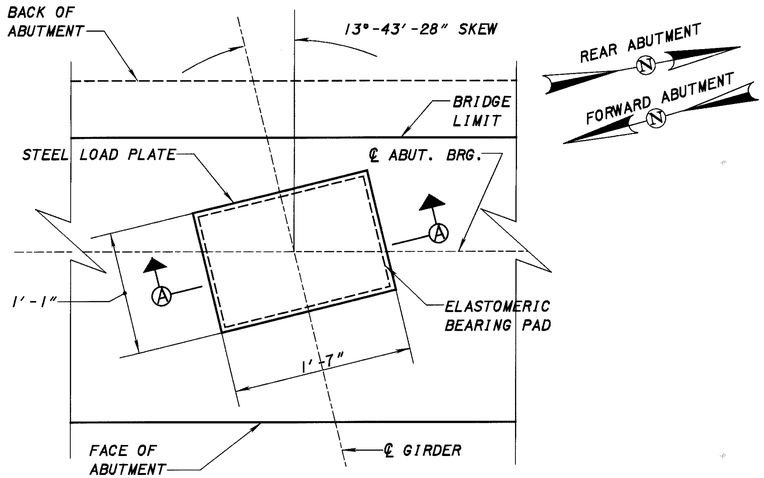
| REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|
| DFT | 8-27-99 | 5203643 |
| DRAWN | REVISED | |
| RJH | | |
| DESIGNED | CHECKED | |
| RJH | HLG | |

BOLTED SPLICE AND MISC. DETAILS
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21)

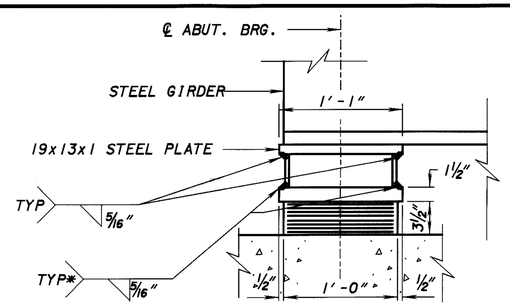
MED-71-15.78

12/16

732
940

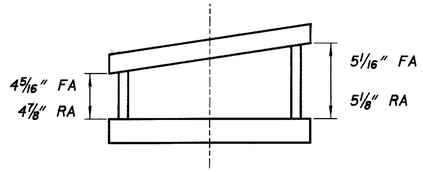



PART PLAN AT ABUTMENT



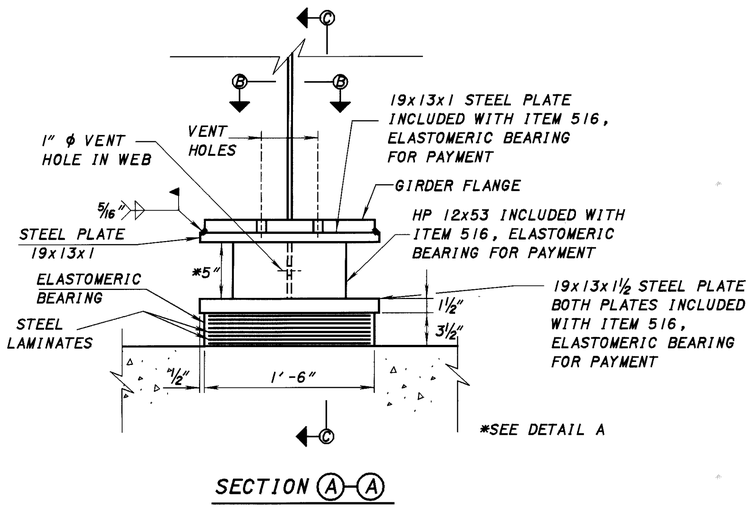

*FIELD WELD OPTIONAL

SECTION Ⓒ-Ⓒ

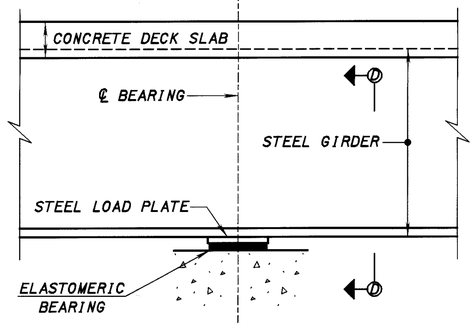



TOP OF HP 12X53 TO BE SLOPED TO ACCOMMODATE ROADWAY GRADE OF 2.2% AT REAR ABUT. AND 1.3% AT FWD ABUT.

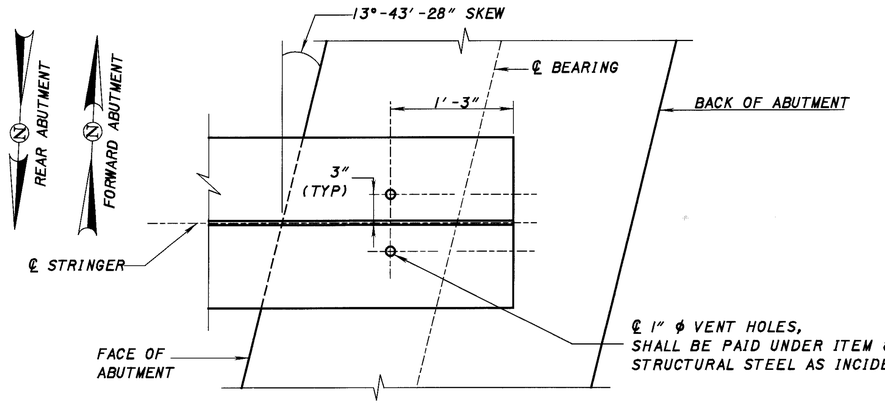
DETAIL A



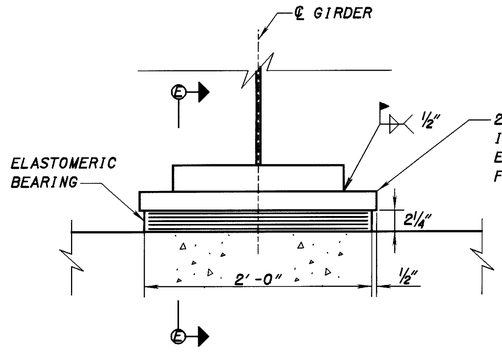

SECTION Ⓐ-Ⓐ



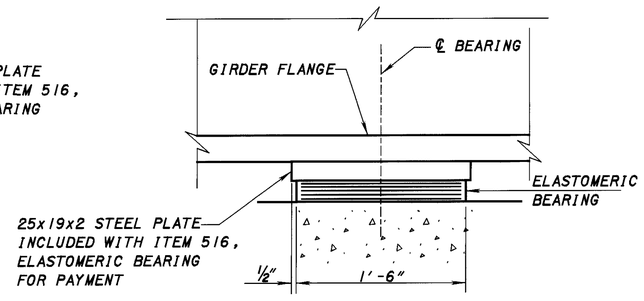

SECTION THRU PIER




SECTION Ⓑ-Ⓑ




SECTION Ⓓ-Ⓓ




SECTION Ⓔ-Ⓔ

## BEARING TABLE

| BEARING LOCATION | TYPE | L | W | $t_1$ | $t_e$ | $n_1$ | $n_2$ | STEEL LOAD PL | TOTAL HEIGHT* | DL, KIPS | LL, KIPS | TOTAL, KIPS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENT | REST | 12 | 18 | .401 | .286 | 6 | 7 | 19x13x1½ | 5 | 119 | 50 | 169 |
| PIER | EXP | 18 | 24 | 0.441 | 0.315 | 3 | 4 | 25x19x2 | 4¼ | 325 | 96 | 421 |

$n_1$ - NUMBER OF INTERNAL ELASTOMER LAYERS, $t_1$
$n_2$ - NUMBER OF STEEL LAMINATES, 0.0747 THICKNESS
EXP - EXPANSION

ELASTOMER LAYERS ARE 50 DUROMETERS
* TOTAL HEIGHT INCLUDES LOAD PLATE
REST - RESTRAINT

NOTES:

MATERIALS: THE HP SHAPE (SUPPORT MEMBER) AND STEEL PLATES MAY BE GRADE 36 STEEL. THE HP SHAPE AND STEEL PLATES SHALL HAVE THE SAME PROTECTIVE COATING AS THE MAIN STRUCTURAL STEEL.

PAYMENT FOR MATERIALS, LABOR, FABRICATION, VENT HOLES, PROTECTIVE COATING AND INSTALLATION OF THE HP SHAPE AND STEEL PLATE SHALL BE INCLUDED WITH ITEM 516 ABUTMENT ELASTOMERIC BEARINGS, AS PER PLAN, FOR PAYMENT.

WELDING: WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. STEEL LOAD PLATE MAY BE A36 OR A572 WITH PAYMENT INCLUDED IN ITEM 516.

BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE SIXTH OF THE BEARING HEIGHT AT 60°F ± 10°F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.

ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 18, BEARINGS, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 (DIVISION II) OF THE AASHTO DOCUMENT LISTED ABOVE. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL LOAD PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, ANCHOR RODS, HP10x42, STEEL PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):

12"x18"x3½" WITH 19"x13"x1½" LOAD PLATE, AS PER PLAN (ABUTMENT)
18"x24"x2¼" WITH 25"x19"x2" LOAD PLATE (PIER)

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

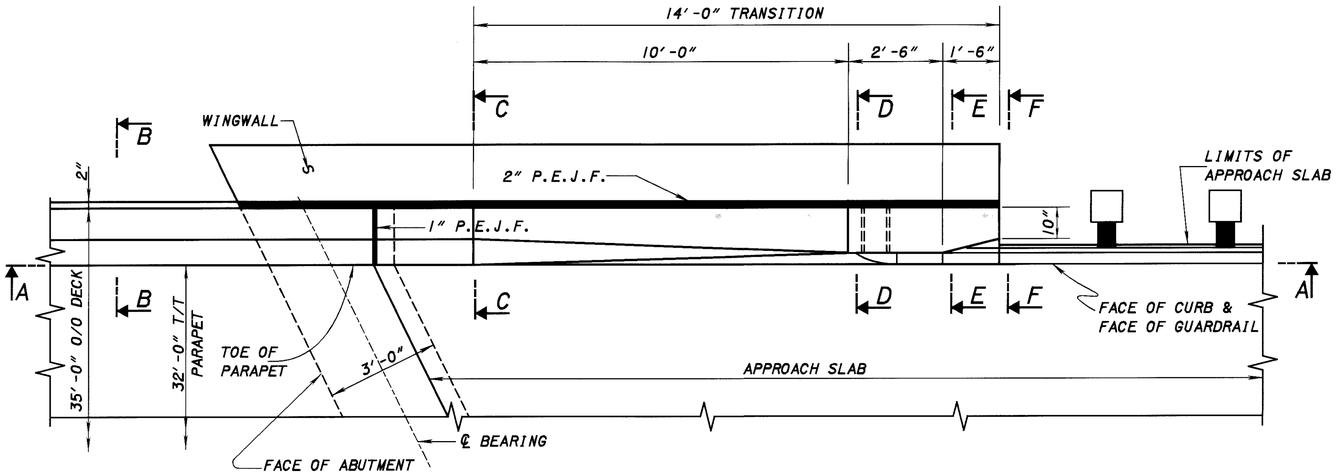
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| RJH | RJH | DFT | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| HLG | | 5203643 | |

BEARING DETAILS
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21.28)

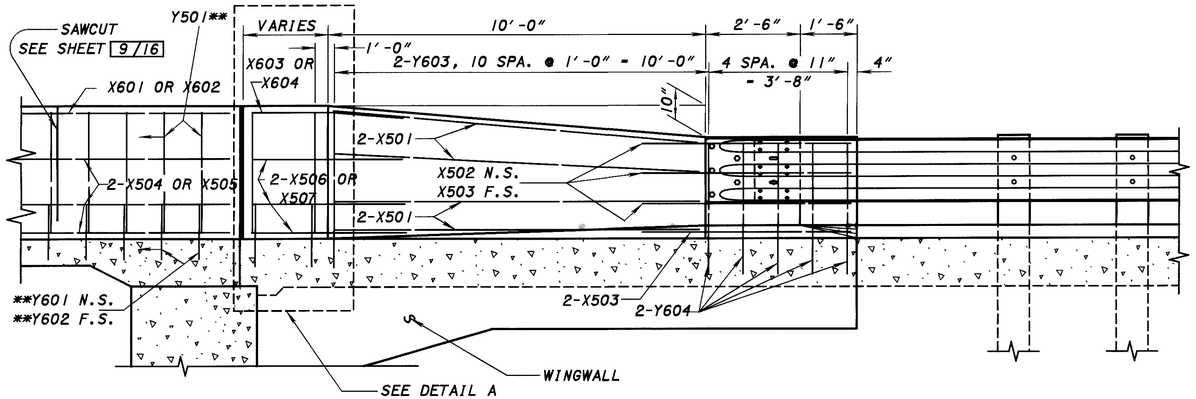
MED-71-15.78

13 / 16

733
940

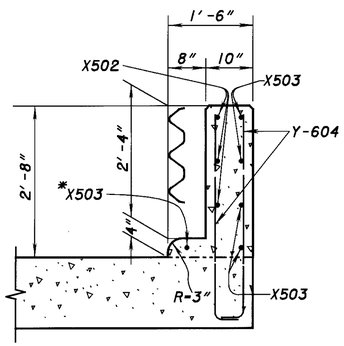



## PART PLAN AT ABUTMENT



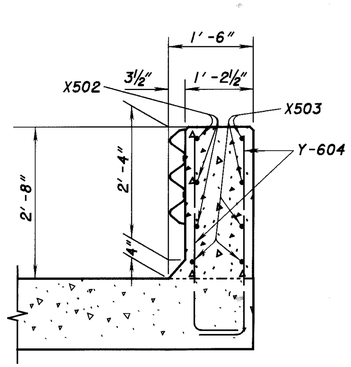

**SPACING SHOWN ON SHEET 9/16

## VIEW A-A

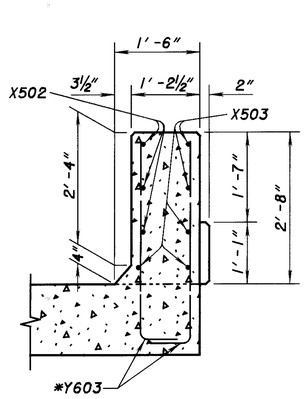



## SECTION F-F

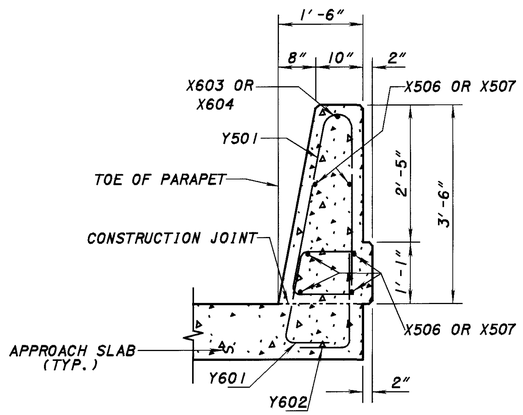
* FIELD BEND IF NECESSARY



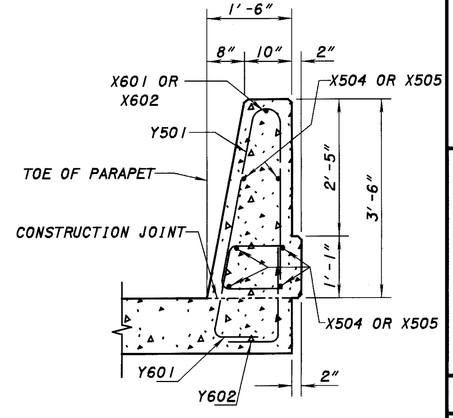

## SECTION E-E




## SECTION D-D

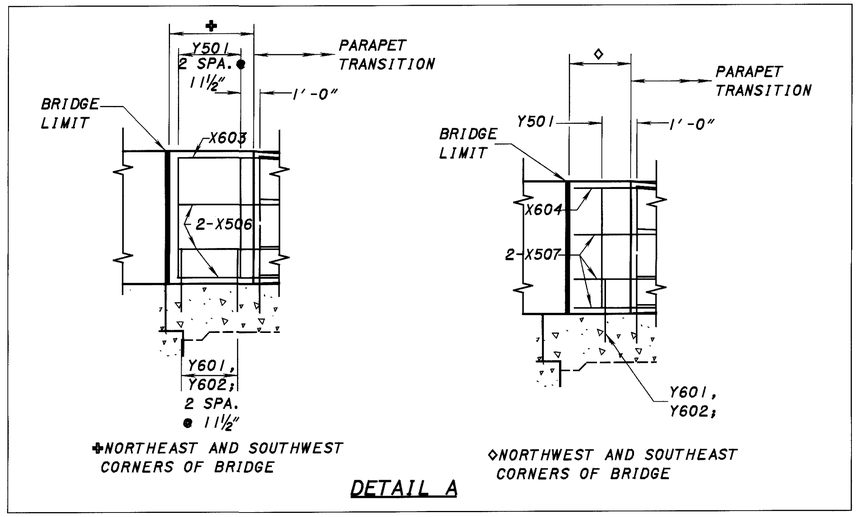



## SECTION C-C




## SECTION B-B

Area = 4.26 ft²




## DETAIL A

## NOTES

**CONTROL JOINTS FOR CONCRETE PARAPETS:** THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL TO A MINIMUM DEPTH OF ONE INCH CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE-HALF INCH OF THE OUTSIDE FACE OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

MIN. LAP SPLICES: #5 BAR - 2'-6"
#6 BAR - 3'-0"

LEGEND: N.S. - NEAR SIDE
F.S. - FAR SIDE

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|---|---|
| HLG | HLG | RJH | 8-27-99 | 5203643 |
| CHECKED | REVISED | | | |
| DFT | | | | |

# PARAPET TRANSITION DETAILS

BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21)

MED-71.15.78

14/16

734/940

| MARK | NUMBER | | | LENGTH | WEIGHT LB | TYPE | DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. | FORWD. ABUT. | TOTAL | | | | A | B | C | D | E | R | INC |
| REAR AND FORWARD ABUTMENTS | | | | | | | | | | | | | |
| A501 | 6 | 6 | 12 | 41'-2" | 515 | ST | | | | | | | |
| A502 | 28 | 28 | 56 | 17'-1" | 998 | 3 | 5'-8" | 2'-7" | | | | | |
| A503 | 24 | 24 | 48 | 17'-10" | 893 | 2 | 7'-8½" | 2'-8" | 7'-8½" | | | | |
| A504 | 24 | 24 | 48 | 8'-7" | 430 | 2 | 3'-1" | 2'-8" | 3'-1" | | | | |
| A505 | 8 | 8 | 16 | 39'-0" | 651 | ST | | | | | | | |
| A506 | 56 | 56 | 112 | 9'-5" | 1100 | 2 | 3'-6" | 2'-8" | 3'-6" | | | | |
| A507 | 28 | 28 | 56 | 8'-11" | 521 | 2 | 3'-6" | 2'-2" | 3'-6" | | | | |
| A508 | 8 | 8 | 16 | 13'-5" | 224 | ST | | | | | | | |
| A509 | 16 | 16 | 32 | 12'-1" | 403 | 3 | 3'-2" | 2'-8" | | | | | |
| A510 | 24 | 24 | 48 | 22'-5" | 1122 | 2 | 10'-9" | 1'-2" | 10'-9" | | | | |
| A511 | 24 | 24 | 48 | 12'-11" | 647 | 2 | 6'-0" | 1'-2" | 6'-0" | | | | |
| A512 | 20 | 20 | 40 | 11'-0" | 459 | ST | | | | | | | |
| A513 | 4 | 4 | 8 | 12'-8" | 106 | ST | | | | | | | |
| A514 | 12 | 12 | 24 | 18'-3" | 457 | ST | | | | | | | |
| A515 | 2 SERIES OF 4 | 2 SERIES OF 4 | 4 SERIES OF 4 | 6'-3" TO 10'-9" | 142 | 2 | 2'-8" TO 4'-11" | 1'-2" | 2'-8" TO 4'-11" | | | | 9" |
| A516 | 6 | 6 | 12 | 6'-3" | 78 | 2 | 2'-8" | 1'-2" | 2'-8" | | | | |
| A801 | 4 | 4 | 8 | 41'-2" | 879 | ST | | | | | | | |
| A802 | 4 | 4 | 8 | 39'-0" | 833 | ST | | | | | | | |
| A803 | 16 | 16 | 32 | 35'-6" | 3033 | ST | | | | | | | |
| A804 | 8 | 8 | 16 | 13-5" | 573 | ST | | | | | | | |
| | | | | | | | | | | | | | |
| D801 | 28 | 28 | 56 | 4'-11" | 735 | 18 | 2'-7" | 1'-0" | 1'-0" | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| MARK | NUMBER | | | LENGTH | WEIGHT LB | TYPE | DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SLAB | PIER | TOTAL | | | | A | B | C | D | E | R | INC |
| SLAB | | | | | | | | | | | | | |
| S401 | 470 | | 470 | 30'-0" | 9419 | ST | | | | | | | |
| S402 | 47 | | 47 | 5'-7" | 175 | ST | | | | | | | |
| | | | | | | | | | | | | | |
| S501 | 904 | | 904 | 34'-6" | 32,529 | ST | | | | | | | |
| S502 | | | 4 SERIES OF 13 | 3'-0" TO 33'-0" | 976 | ST | | | | | | | 2'-6" |
| S503 | 420 | | 420 | 30'-0" | 13,142 | ST | | | | | | | |
| S504 | 42 | | 42 | 10'-7" | 464 | ST | | | | | | | |
| S505 | 138 | | 138 | 30'-0" | 4318 | ST | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| PIER | | | | | | | | | | | | | |
| P401 | | 26 | 26 | 9-0" | 156 | 2 | 2'-8" | 3'-10" | 2'-8" | | | | |
| P402 | | 13 | 13 | 4'-0" | 35 | 31 | 2'-11" | | | | | | |
| P403 | | 13 | 13 | 4'-5" | 38 | 31 | 3'-4" | | | | | | |
| | | | | | | | | | | | | | |
| P501 | | 8 | 8 | 35'-0" | 292 | ST | | | | | | | |
| P502 | | 26 | 26 | 34'-0" | 922 | ST | | | | | | | |
| | | | | | | | | | | | | | |
| P801 | | 46 | 46 | 11'-4" | 1392 | 17 | 9'-6" | | | | | | |
| P802 | | 102 | 102 | 9'-9" | 2655 | 1 | 1'-6" | 8'-6" | | | | | |
| P803 | | 102 | 102 | 19'-5" | 5288 | ST | | | | | | | |
| P804 | | 4 | 4 | 37'-7" | 401 | 2 | 2'-0" | 34'-0" | 2'-0" | | | | |

THIS REINFORCING STEEL LIST IS FOR INFORMATION PURPOSES ONLY

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED HLG | DRAWN HLG | REVIEWED RJH | DATE 8-27-99
CHECKED DFT | REVISED | STRUCTURE FILE NUMBER 5203643

# REINFORCING STEEL LIST

BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21)

MED-71-15.78



735/940

| MARK | NUMBER | LENGTH | WEIGHT LB | TYPE | DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | A | B | C | D | E | R | INC |
| | PARAPET | | | | | | | | | | |
| X501 | 32 | 10'-0" | 334 | ST | | | | | | | |
| X502 | 12 | 5'-6" | 69 | 25 | 1'-8" | 2'-5" | 1'-4" | 0'-1½" | 0'-5" | | |
| X503 | 20 | 5'-6" | 115 | ST | | | | | | | |
| X504 | 120 | 30'-0" | 3755 | ST | | | | | | | |
| X505 | 12 | 13'-6" | 169 | ST | | | | | | | |
| X506 | 12 | 5'-3" | 66 | ST | | | | | | | |
| X507 | 12 | 3'-9" | 47 | ST | | | | | | | |
| | | | | | | | | | | | |
| X601 | 20 | 30'-0" | 901 | ST | | | | | | | |
| X602 | 2 | 19'-0" | 57 | ST | | | | | | | |
| X603 | 2 | 5'-9" | 17 | ST | | | | | | | |
| X604 | 2 | 4'-3" | 13 | ST | | | | | | | |
| | | | | | | | | | | | |
| Y501 | 580 | 7'-5" | 4487 | 23 | 1'-1" | 3'-2" | 3'-0" | | | 2¾" | |
| Y601 | 580 | 3'-9" | 3267 | 33 | 1'-9" | 1'-1" | 1'-1" | | | | |
| Y602 | 580 | 2'-8" | 2323 | 1 | 1'-1" | 1'-9" | | | | | |
| | 8 | 4'-3" | | | | 3'-6" | | | | | |
| Y603 | SERIES OF | TO | 615 | 1 | 10½" | TO | | | | | 1" |
| | 11 | 5'-1" | | | | 4'-4" | | | | | |
| Y604 | 40 | 4'-3" | 255 | 1 | 10½" | 3'-6" | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

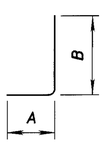
## NOTES

NOTE: ALL REINFORCING STEEL SHALL BE EPOXY COATED.

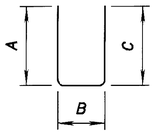
THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INIDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. "R" INDICATES INSIDE RADIUS.

MIN. LAP SPLICES: #4 BAR - 2'-0"
#5 BAR - 2'-6"
#6 BAR - 3'-0"

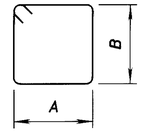
THIS REINFORCING STEEL LIST IS FOR INFORMATION PURPOSES ONLY



TYPE-1

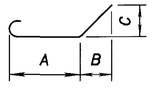


TYPE-2



TYPE-3

TYPE-17



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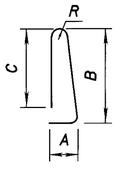

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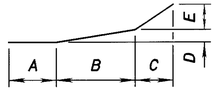
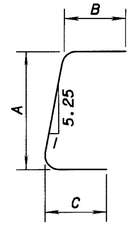


TYPE-25

TYPE-31



TYPE 33

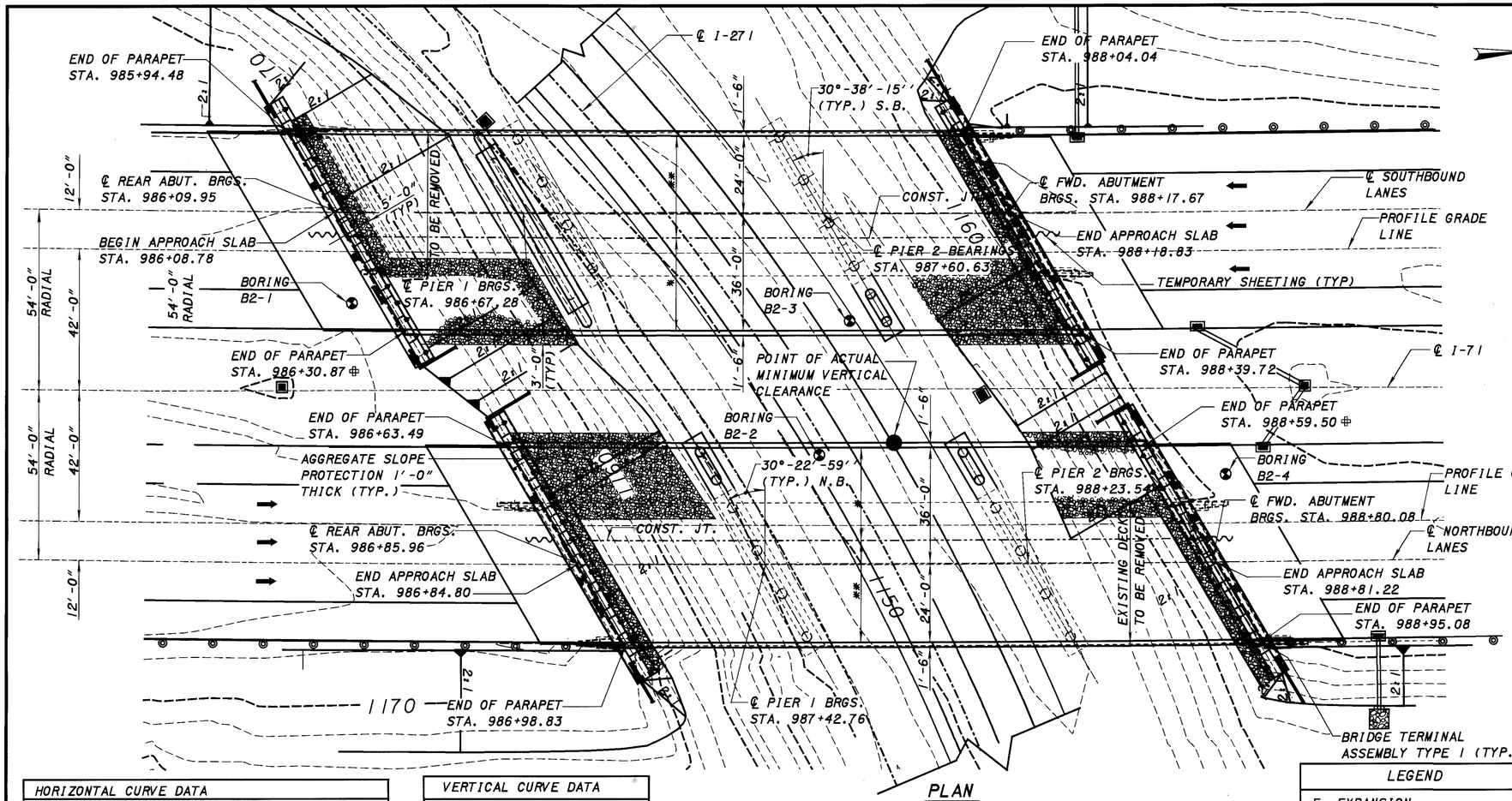
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: HLG
DRAWN: HLG
REVISED: DFT
CHECKED:
REVIEWED: RJH
DATE: 8-27-99
STRUCTURE FILE NUMBER: 5203643

REINFORCING STEEL LIST
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD (CH 21)

MED-71-15.78

16/16

736
940




## NOTES:

- ⊕ - SOIL BORINGS
- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- THE BRIDGE LIMITS ARE MEASURED ALONG THE ℄ I-71.
- PILES ARE HP 10 X 42 FOR THE ABUTMENTS AND HP 12 X 53 FOR THE PIERS. THE ESTIMATED PAY LENGTH ARE:
- SOUTHBOUND LANES:
- REAR ABUTMENT - 35 FT.
- PIER 1 AND PIER 2 - 35 FT.
- FORWARD ABUTMENT - 50 FT.
- NORTHBOUND LANES:
- REAR ABUTMENT - 35 FT.
- PIER 1 AND PIER 2 - 35 FT.
- FORWARD ABUTMENT - 50 FT.

## BENCHMARK DATA

BM #4 - STATION 990+93.07 ELEVATION - 1149.65 ODOT DISC IN HEADWALL STAMPED

## DESIGN TRAFFIC

CURRENT YEAR (2000) ADT - 54,430
CURRENT YEAR (2000) ADTT - 8,709
DESIGN YEAR (2020) ADT - 74,300
DESIGN YEAR (2020) ADTT - 11,888

## EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 57'-0",81'-3",57'-0"

ROADWAY: 39'-8" FACE TO FACE OF SAFETY CURB

LOADING:CF 2000 (57) AND A.A.S.H.O. ALTERNATE LOADING

SKEW: 30°-24'-42'' RIGHT FORWARD TO LOCAL TANGENT

WEARING SURFACE: ASPHALT

APROACH SLABS:AS-1-54 (25'-0" LONG)

ALIGNMENT: HORIZONTAL CURVE

CROWN:3/16" PER FOOT

DATE BUILT: 1963

## PROPOSED STRUCTURE

TYPE: CONTINUOUS A572 STEEL COMPOSITE BEAM WITH REINFORCED CONCRETE DECK ON REINFORCED CONCRETE SUBSTRUCTURES (SEE SHEET 5 / 39 FOR LIST OF PROPOSED WORK)

SPANS: 57'-0",81'-3",57'-0" C/C BRGS. N.B.
57'-0",93'-0",57'-0" C/C BRGS. S.B.
(MEASURED ALONG THE REFERENCE CHORD)

ROADWAY: 60'-0" T/T PARAPET WITH 1'-6" PARAPET EACH SIDE

LOADING: HS20-44 CASE I AND ALTERNATE MILITARY LOADING

SKEW: 30°22'59'' N.B. , 30°38'15'' S.B. RIGHT FORWARD TO LOCAL TANGENT

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81, 25' LONG, 60'-0" T/T CURB

ALIGNMENT: HORIZONTAL AND VERTICAL CURVE

CROWN:3/16"/FT. FROM C.L. N.B. AND S.B. LANES

COORDINATES: LAT. N 41°-09'-41'', LONG. W 81°-47'-06"

### HORIZONTAL CURVE DATA

| ℄ I.R.-71 | ℄ I.R.-271 |
|---|---|
| P.I. STA. - 984+41.65 | P.I. STA. - 986+92.26 |
| Δ - 26°45'35'' | Δ - 83°24'37'' |
| R - 15,626.07 FT. | R - 716.20 FT. |
| L - 7,298.08 FT. | L - 1.042.63 FT. |
| T - 3,716.85 FT. | T - 638.23 FT. |

### VERTICAL CURVE DATA

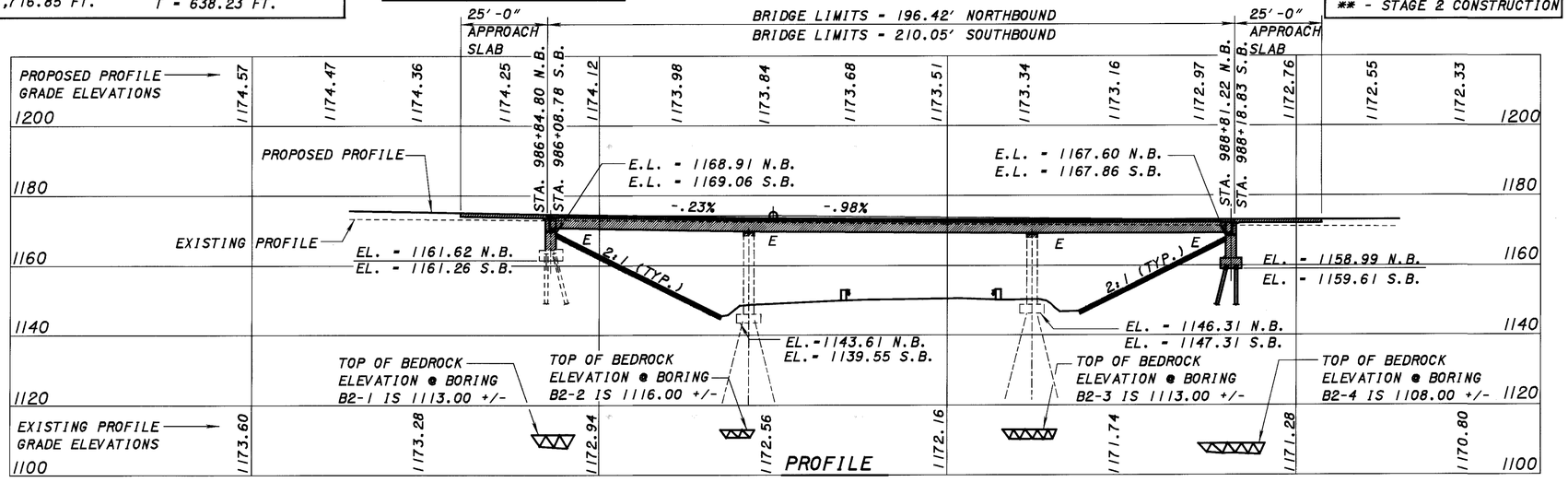
V.P.I. STA. - 987+50.00
V.P.I. ELEVATION - 1174.31
L.V.C. - 500 FT.
G1 - -.23%
G2 - -.98%

### PLAN

- ● 16'-6" REQUIRED MINIMUM VERTICAL CLEARANCE 17'-0" ACTUAL MINIMUM VERTICAL CLEARANCE
- ⊕ NO BRIDGE TERMINAL ASSEMBLY, SEE CSS2 FOR ADDITIONAL DETAILS

### LEGEND

E- EXPANSION
F - FIXED
N.B. - NORTHBOUND
S.B. - SOUTHBOUND
EL. - ELEVATION
* - STAGE 1 CONSTRUCTION
** - STAGE 2 CONSTRUCTION




ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION
DESIGN AGENCY

| REVISED | DATE |
|---|---|
| DFT | 10-22-99 |

STRUCTURE FILE NUMBER 5203694L/5203724R

| DRAWN | REVISED |
|---|---|
| DB | |

| DESIGNED | CHECKED |
|---|---|
| DB | TAA |

MEDINA COUNTY
STA. 986+08.78L
STA. 988+18.83L

MEDINA COUNTY
STA. 986+84.80 R
STA. 988+81.22 R

SITE PLAN
MED-71-1870 L/R
I-71 OVER I.R.-271

MED-71-15.78

1 / 39

737 / 940

| | | MED-71-1870 L | MED-71-1870 R | | ESTIMATED QUANTITIES | MED-71-1870 L (SOUTHBOUND) | | | | MED-71-1870 R (NORTHBOUND) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM | EXTENSION | TOTAL | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS | SUPER. | GEN. | ABUT. | PIERS | SUPER. | GEN. |
| 202 | 11203 | LUMP | LUMP | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | LUMP | LUMP | LUMP | | LUMP | LUMP | LUMP | |
| 503 | 11100 | LUMP | LUMP | | COFFERDAMS, CRIBS AND SHEETING | | | | LUMP | | | | LUMP |
| 503 | 21301 | LUMP | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | | | | LUMP | | | | LUMP |
| 505 | 11100 | LUMP | LUMP | | PILE DRIVING EQUIPMENT MOBILIZATION | LUMP | | | | LUMP | | | |
| 507 | 00100 | 2160 | 1720 | LF | STEEL PILES HP10x42, FURNISHED | 2160 | | | | 1720 | | | |
| 507 | 00150 | 2160 | 1720 | LF | STEEL PILES HP10x42, DRIVEN | 2160 | | | | 1720 | | | |
| 507 | 00200 | 1400 | 700 | LF | STEEL PILES HP12x53, FURNISHED | | 1400 | | | | 700 | | |
| 507 | 00250 | 1400 | 700 | LF | STEEL PILES HP12x53, DRIVEN | | 1400 | | | | 700 | | |
| 507 | 50500 | 44 | 29 | EACH | STEEL PILE SPLICES | 24 | 20 | | | 19 | 10 | | |
| 512 | 44400 | 11 | 11 | SY | TYPE B WATERPROOFING | 11 | | | | 11 | | | |
| SPECIAL | 51267200 | 51 | 48 | SY | WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING | 51 | | | | 48 | | | |
| SPECIAL | 51267510 | 1126 | 1040 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 116 | 539 | 471 | | 118 | 477 | 445 | |
| 516 | 13900 | 76 | 76 | SF | 2" PREFORMED EXPANSION JOINT FILLER | 76 | | | | 76 | | | |
| 516 | 44000 | 16 | 16 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), (12"x19"x1 7/8" PAD AND 13"x20"x2" PLATE) | | 16 | | | | 16 | | |
| 516 | 44101 | 16 | 16 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (9"x14"x2 7/16" PAD AND 12"x15"x1 1/2" PLATE) | 16 | | | | 16 | | | |
| 518 | 21231 | LUMP | LUMP | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | | | | LUMP | | | |
| 518 | 40000 | 187 | 190 | LF | 6" PERFORATED CORRUGATED PLASTIC PIPE | 187 | | | | 190 | | | |
| 518 | 40010 | 48 | 48 | LF | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 48 | | | | 48 | | | |
| 519 | 11101 | 8 | 15 | SF | PATCHING CONCRETE STRUCTURE, AS PER PLAN ** | | 8 | | | | 15 | | |
| 601 | 20500 | 110 | 112 | CY | CRUSHED AGGREGATE SLOPE PROTECTION | | | | 110 | | | | 112 |
| 816 | 00600 | LUMP | LUMP | | FIELD PAINTING NEW STEEL, INTERMEDIATE AND FINISH COAT, SYSTEMS IZEU | | | LUMP | | | | LUMP | |
| 842 | 41001 | 23 | 47 | CY | CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN | | 23 | | | | 47 | | |
| 842 | 40501 | 164 | | CY | CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN | | 164 | | | | | | |
| 842 | 44101 | 149 | 129 | CY | CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN | 149 | | | | 129 | | | |
| 842 | 46501 | 212 | 131 | CY | CLASS C CONCRETE, FOOTING, AS PER PLAN | 137 | 75 | | | 109 | 22 | | |
| 844 | 48001 | 375 | 354 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK), AS PER PLAN, MIX 4 | | | 375 | | | | 354 | |
| 844 | 48021 | 65 | 61 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET), AS PER PLAN, MIX 4 | | | | 65 | | | | 61 |
| 844 | 48041 | 81 | 72 | CY | HIGH PERFORMANCE CONCRETE SUBSTRUCTURE, AS PER PLAN | 81 | | | | 72 | | | |
| 844 | 49000 | LUMP | LUMP | | HIGH PERFORMANCE CONCRETE TRIAL MIX | | | LUMP | | | | LUMP | |
| 863 | 10060 | LUMP | LUMP | | STRUCTURAL STEEL MEMBERS, LEVEL THREE (3) FABRICATION, A572 | | | LUMP | | | | LUMP | |
| 863 | 20000 | 4248 | 4056 | EACH | WELDED STUD SHEAR CONNECTORS | | | 4248 | | | | 4056 | |

** ESTIMATED QUANTITY IS 3x MEASURED VALUE

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED BRC
DRAWN BRC
CHECKED DB
REVIEWED DFT
DATE 10-22-99
REVISED
STRUCTURE FILE NUMBER 5203694L/5203742R

ESTIMATED QUANTITIES
MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78

# GENERAL NOTES

**STANDARD DRAWINGS AND SPECIFICATIONS:**

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

| | |
|---|---|
| AS-1-81 | REVISED 09-15-94 |
| SBR-1-99 | DATED 01-12-99 |
| PCB-1-91 | REVISED 07-06-99 |
| BS-1-93 | DATED 12-19-94 |
| GSD-1-96 | DATED 02-12-97 |

AND TO SUPPLEMENTAL SPECIFICATIONS:

| | |
|---|---|
| 816 | DATED 04-21-97 |
| 842 | DATED 01-06-99 |
| 844 | DATED 01-06-99 |
| 863 | DATED 10-12-99 |
| 899 | DATED 10-21-98 |
| 910 | DATED 07-28-98 |
| 911 | DATED 07-10-97 |
| 954 | DATED 09-09-97 |

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997 AND 1998 INTERIM SPECIFICATIONS AND THE ODOT DESIGN MANUAL.

**DESIGN LOADING:**

HS20-44, CASE I AND THE ALTERNATE MILITARY LOADING.

**DESIGN DATA:**

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

ITEM 842 CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60 Ksi. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

STRUCTURAL STEEL - A572 - YIELD STRENGTH 50 Ksi

**DECK PROTECTION METHOD** - EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER AND HIGH PERFORMANCE CONCRETE.

**MONOLITHIC WEARING SURFACE** IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

**EXISTING BRIDGE PLANS** MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT THREE OFFICE IN ASHLAND, OHIO.

**DOWEL HOLES WITH NON-SHRINK, NON METALLIC GROUT**

ALL DOWEL HOLES SHALL BE CORE DRILLED AND GROUTED WITH AN EPOXY MORTAR MEETING THE REQUIREMENTS OF CMS 510. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

**ITEM 202 PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN:**

PORTION OF THE STRUCTURE REMOVED, AS PER PLAN, SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED.

PROTECTION OF TRAFFIC:
PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE ENGINEER FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

SUBSTRUCTURE CONCRETE REMOVAL:
SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 90 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

¼ INCH SCARIFICATION: THE EXISTING PIER BRIDGE SEAT SURFACE SHALL BE SCARIFIED ¼ INCH INTO SOUND CONCRETE PRIOR TO PLACEMENT OF THE CONCRETE. THE SURFACE SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER, AIR UNDER PRESSURE, OR ANOTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

PAYMENT
ALL WORK SHALL BE PAID FOR UNDER ITEM 202 PORTIONS OF STRUCTURES REMOVED, AS PER PLAN

**TRAFFIC MAINTENANCE:**

SEE ROADWAY PLANS FOR ADDITIONAL TRAFFIC NOTES AND DETAILS.

**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)**

EPOXY-URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722 AS PER THE DETAILS IN THE PLAN.

**ITEM SPECIAL - WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING**

INSTALL A 3 FOOT WIDE STRIP, 3/32 INCH THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 3 FOOT WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X 3/32" (LENGTH X SHANK DIAMETER) #10 GALVANIZED BUTTON HEAD SPIKE THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS, AT 6 INCHES CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS WHERE THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST ONE FOOT IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32 INCH THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

| DESCRIPTION OF TEST | ASTM METHOD | REQUIREMENT |
|---|---|---|
| THICKNESS, INCHES | D 751 | 0.094 ± .01 |
| BREAKING STRENGTH, GRAB WXF, LBS, MINIMUM | D 751 | 700 X 700 |
| ADHESIVE 1" STRIP, 2" MINIMUM, LBS, MINIMUM | D 751 | 9 |
| BURST STRENGTH (MULLEN) PSI, MINIMUM | D 751 | 1400 |
| HEAT AGING 70 HOURS T 212 F, 180 BEND WITHOUT CRACKING | D 2136 | NO CRACKING OF COATING |
| LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40 F, BEND AROUND ¼ INCH MANDREL | D 2136 | NO CRACKING OF COATING |

PAYMENT FOR LABOR MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN INTEM SPECIAL- WATERPROOFING, MISC. : SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING.

**PAINTING OF 863 STEEL**

THE COLOR OF THE FINISH COAT SHALL BE A LIGHT GRAY COLOR MEETING FEDERAL STANDARD NUMBER 16440. IN ADDITION TO THE STEEL STRINGER TO BE PAINTED INCIDENTALS SUCH AS CROSSFRAMES AND BEARINGS SHALL BE INCLUDED FOR PAYMENT.

**ITS CONDUIT**

THE CONDUIT SHALL BE PLACED WITHIN THE OUTSIDE PARAPET OF L & R STRUCTURES. SEE CSS3 & CSS4 FOR DETAILS.

**ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:**

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 6" LIFTS. EXCAVATION AT ABUTMENTS IN ADDITION TO THAT NECESSARY TO REMOVE PORTION OF THE EXISTING STRUCTURE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION FOR PAYMENT.

**ITEM 842 CLASS C CONCRETE, (FOOTINGS, PIERS AND ABUTMENTS) AS PER PLAN**

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITEM 844 HIGH PERFORMANCE CONCRETE, AS PER PLAN**

THE DESIGN MIX SHALL BE MIX NO. 4 LIMESTONE. THE OPTION OF SLIPFORM CONSTRUCTION OF THE BRIDGE PARAPET IS NOT PERMITTED. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**REINFORCING STEEL:**

NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED UNDER ITEM 844 HIGH PERFORMANCE CONCRETE.

**ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN**

POROUS BACKFILL SHALL BE #57 GRAVEL ONLY.

**ITEM 507 STEEL PILES HP 10X42 (REAR ABUTMENT PILES)**

THE DESIGN LOAD IS 40 TONS PER PILE FOR THE REAR ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 80 TONS PER PILE. THE ULTIMATE BEARING VALUE IS TWO TIMES THE ACTUAL DESIGN LOAD. THE ABUTMENT PILES SHALL BE DRIVEN TO THE ULTIMATE BEARING VALUE.

**ITEM 507 STEEL PILES HP 12X53 (PIER PILES) AND HP 10X42 (FORWARD ABUTMENT PILES) :**

THE DESIGN LOAD IS 65 TONS PER PILE FOR THE PIER PILES AND 40 TONS PER PILE OF THE FORWARD ABUTMENT PILES. THE PILE SHALL BE DRIVEN TO REFUSAL ON THE BEDROCK. REFUSAL SHALL BE CONSIDERED AS OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES WITH A MINIMUM RESISTANCE OF 20 BLOWS PER ONE INCH OR REFUSAL SHALL BE CONSIDERED AS OBTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECEIVED AT LEAST 20 BLOWS.

**SURVEY DISC ON STRUCTURE:**

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

**ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION**

THE QUANTITIES INCLUDES 10 % OF THE EXISTING AGGREGATE SLOPE PROTECTION SURFACE AREA IN ADDITION TO WHAT IT IS DETAILED ON THE PLANS. THE SLOPE PROTECTION TO BE PLACED UNDER WIDENED STRUCTURE AND MATCH EXISTING.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

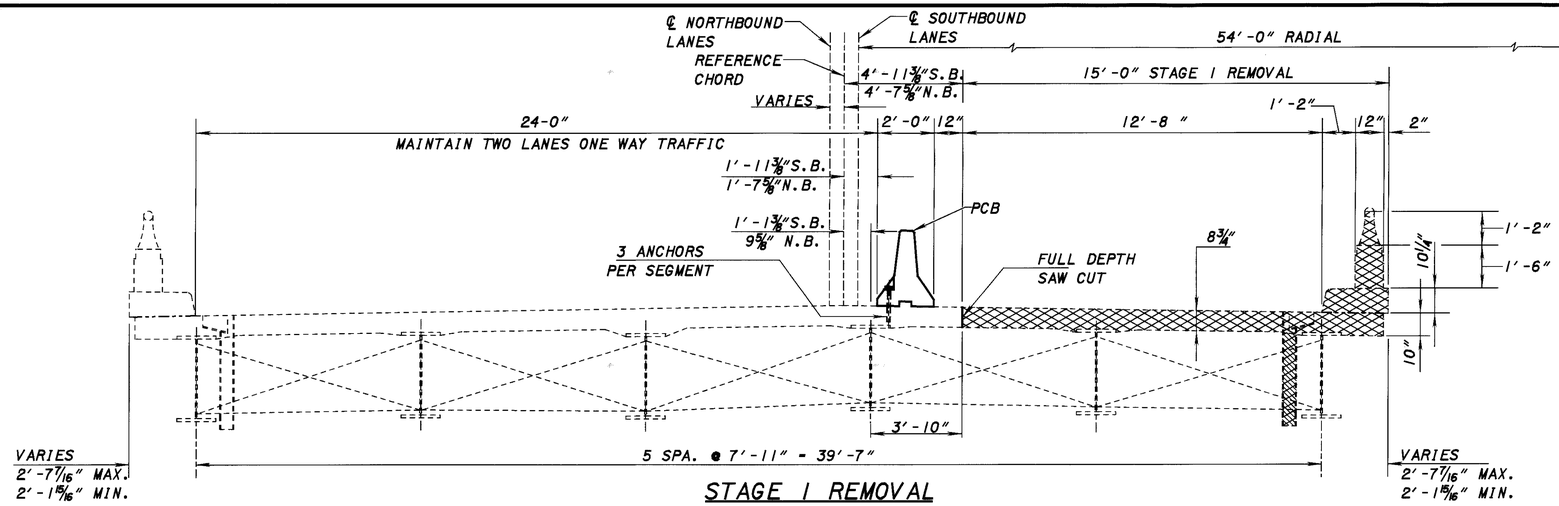
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| DB | DB | SER | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5203694 L/5203724 R | |

GENERAL NOTES
MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78

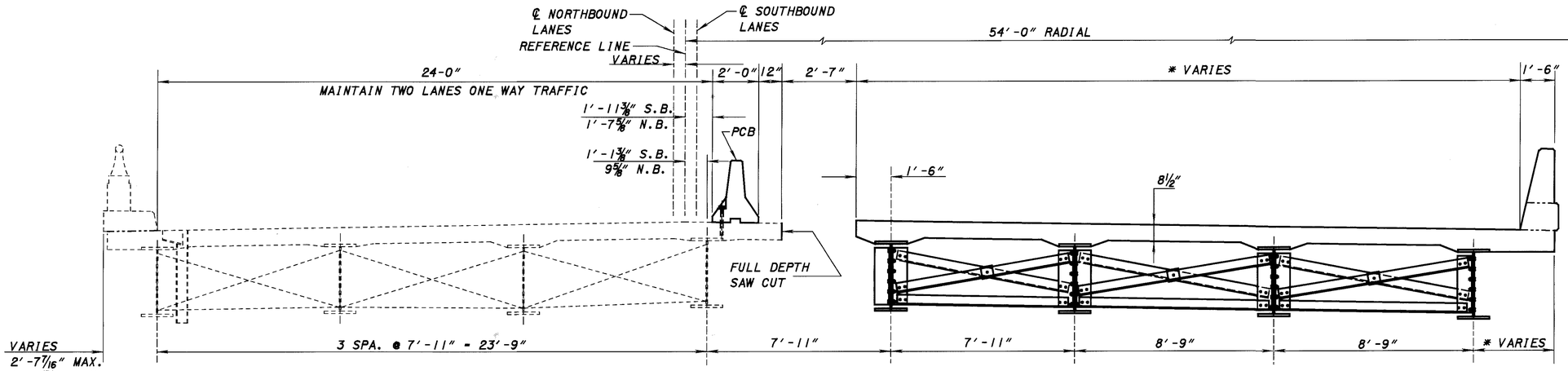


739
940



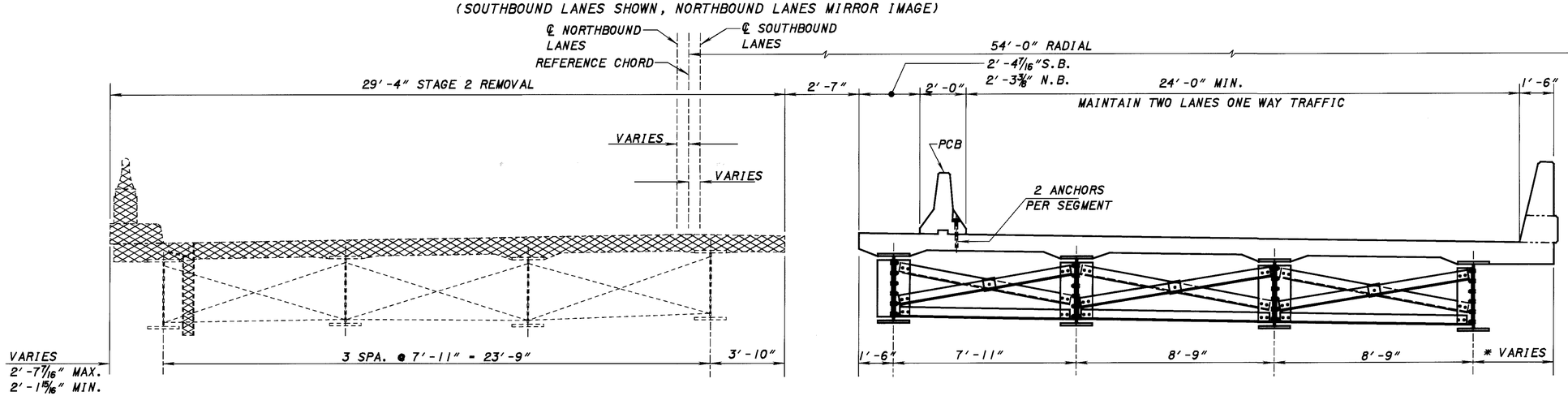

## STAGE 1 REMOVAL

(SOUTHBOUND LANES SHOWN, NORTHBOUND LANES MIRROR IMAGE)




## STAGE 1 CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND LANES MIRROR IMAGE)




## STAGE 2 REMOVAL

(SOUTHBOUND LANES SHOWN, NORTHBOUND LANES MIRROR IMAGE)

* FOR THE DIMENSIONS THAT VARY SEE SHEET 24/39 .

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT DATE 10-22-94
STRUCTURE FILE NUMBER 5203694L & 5203724R

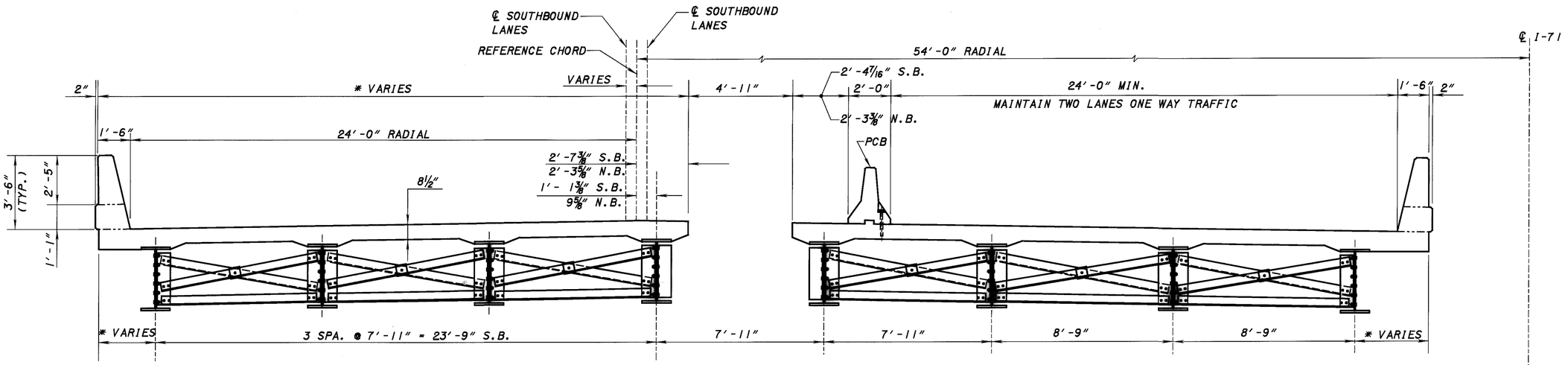
DRAWN DB REVISED

DESIGNED DB CHECKED TAA

# STAGE CONSTRUCTION DETAILS

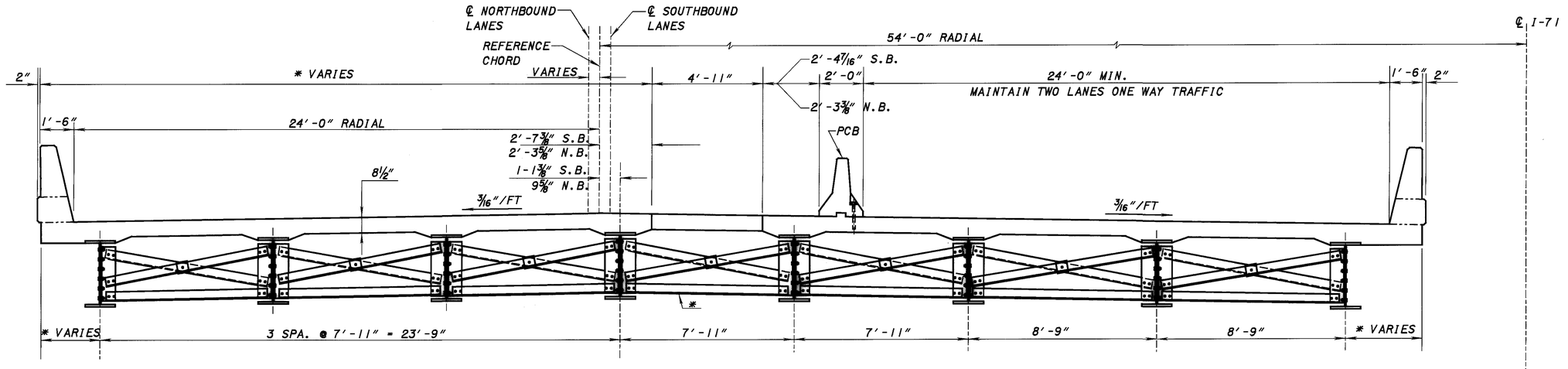
MED-71-1.870 L/R
I-71 OVER 127

MED-71-15.78




## STAGE 2 CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND LANES MIRROR IMAGE)




## CLOSURE SECTION CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND LANES MIRROR IMAGE)

* PLACE CROSSFRAMES IN POSITION PRIOR TO POURING OF THE CLOSURE POUR

## NOTES AND LEGEND

TEMPORARY BARRIERS SHALL BE ANCHORED TO EXISTING AND PROPOSED BRIDGE DECK. TWO (2) OR THREE (3) ANCHORS PER TEMPORARY BARRIER SEGMENT ARE REQUIRED ON THE TRAFFIC SIDE OF THE BARRIER. THE ANCHOR BOLT PATTERN SHALL BE SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. SEE STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.

PCB - INDICATES PORTABLE CONCRETE BARRIER.

* FOR THE DIMENSIONS THAT VARY SEE SHEET 24/39.

## PROPOSED WORK

1. MAINTAIN TRAFFIC BY USE OF STAGE CONSTRUCTION.
2. REPLACE CONCRETE DECK AND STEEL BEAMS.
3. WIDEN AND MODIFY EXISTING SUBSTRUCTURE UNITS.

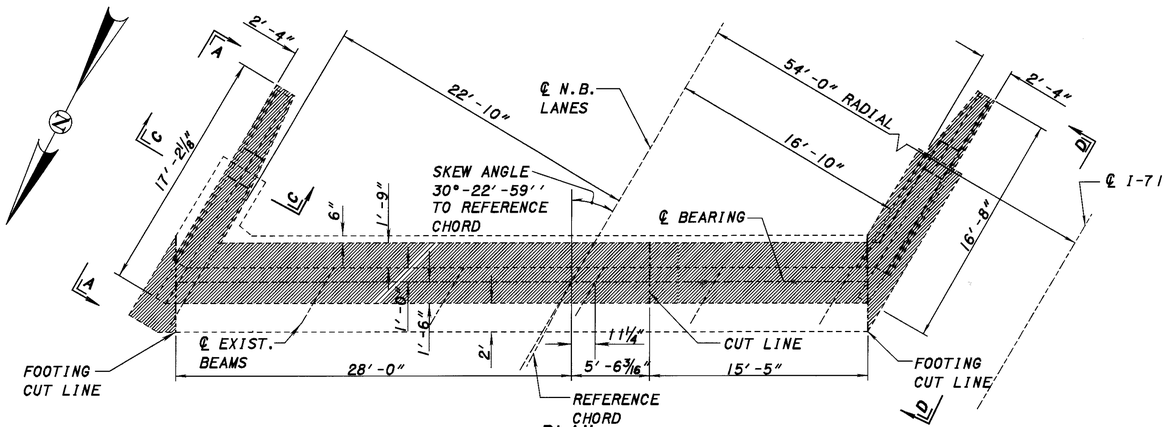
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 10-22-94
STRUCTURE FILE NUMBER: 5203694L & 5203724R
DRAWN: DB
REVISED:
DESIGNED: DB
CHECKED: TAA

STAGE CONSTRUCTION DETAILS
MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78

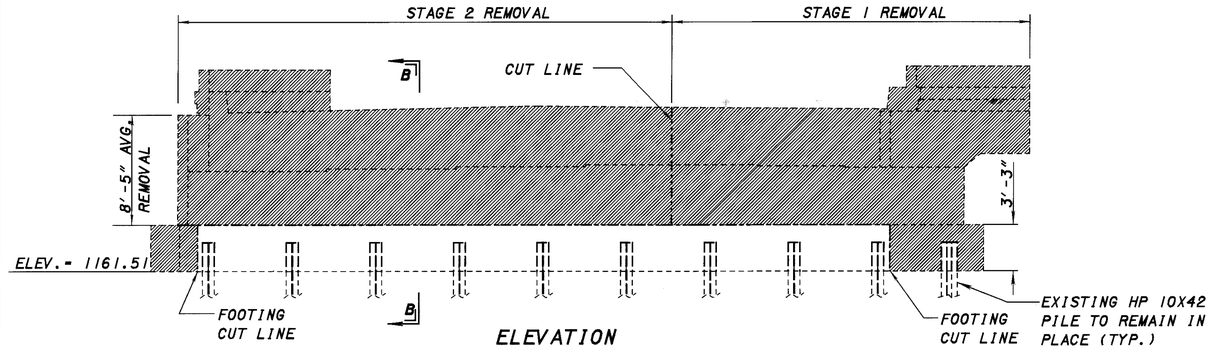
5/39

741/940



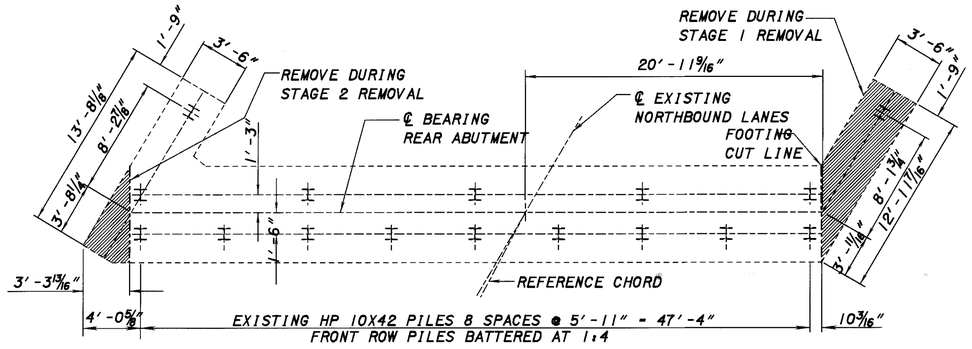

PLAN

(REAR ABUTMENT NORTHBOUND)



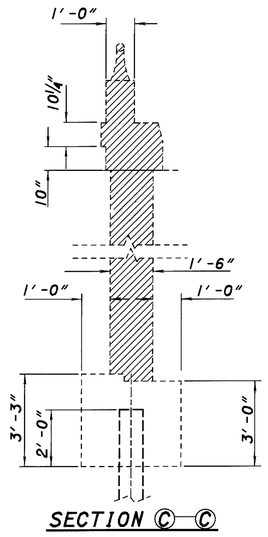

ELEVATION

(REAR ABUTMENT NORTHBOUND)

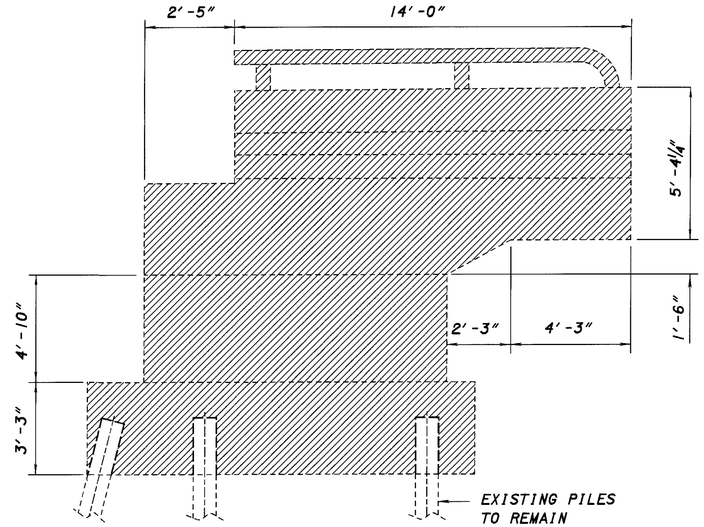



FOOTING PLAN

(REAR ABUTMENT NORTHBOUND)




SECTION Ⓒ—Ⓒ

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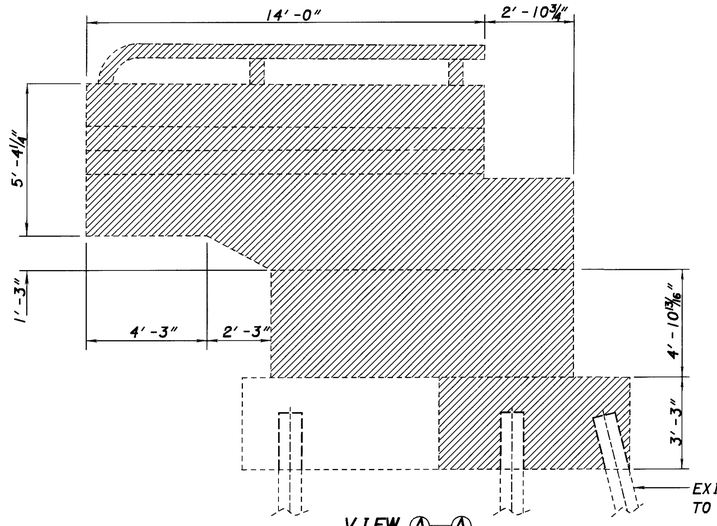


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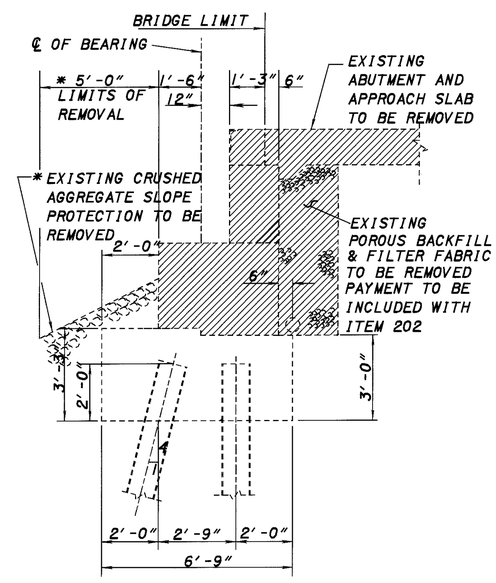



SECTION Ⓑ—Ⓑ

**LEGEND**

▨ - PORTION OF STRUCTURE TO BE REMOVED

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

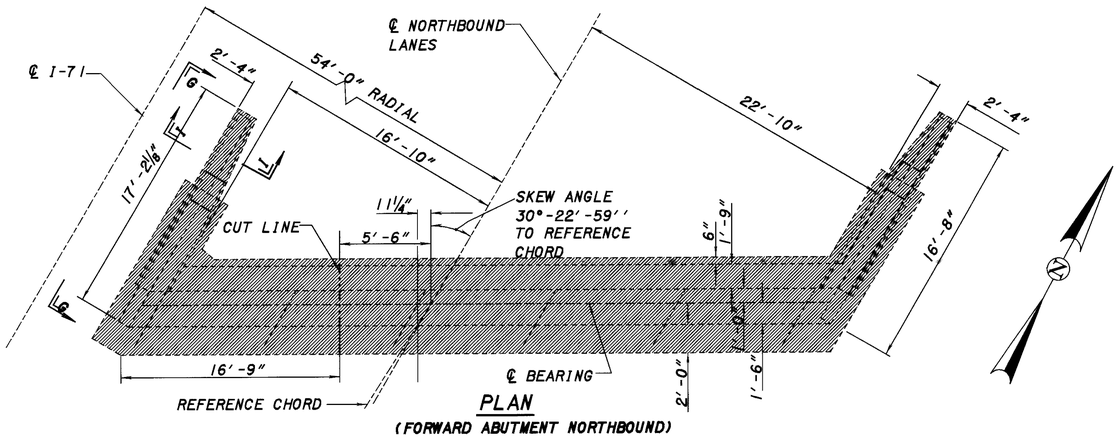
| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| DB | DB | DFT | 10-22-94 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203724R | |

REAR ABUTMENT NORTHBOUND REMOVALS
MED-71-1870 R
I-71 OVER I-271

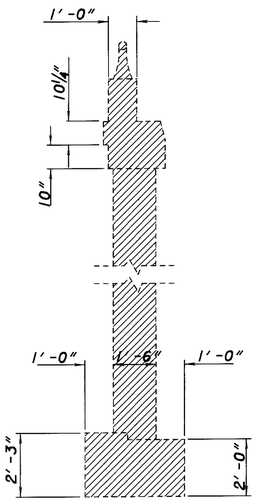
MED-71-15.78

6 / 39

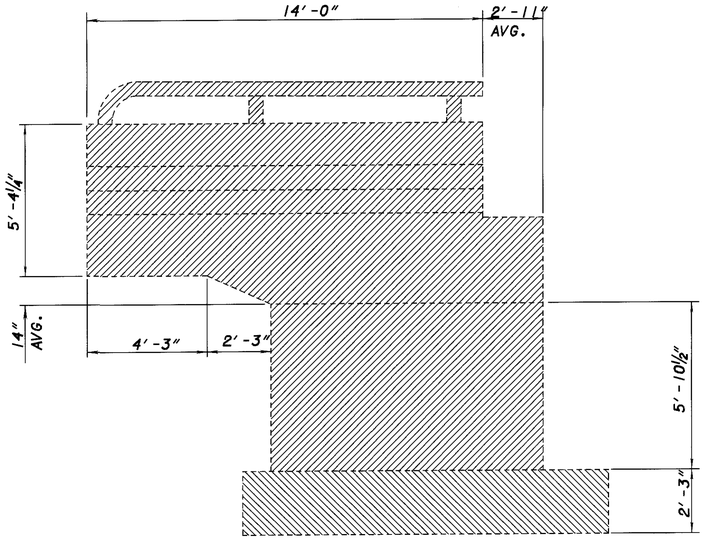
742 / 940




PLAN
(FORWARD ABUTMENT NORTHBOUND)




SECTION Ⓘ—Ⓘ

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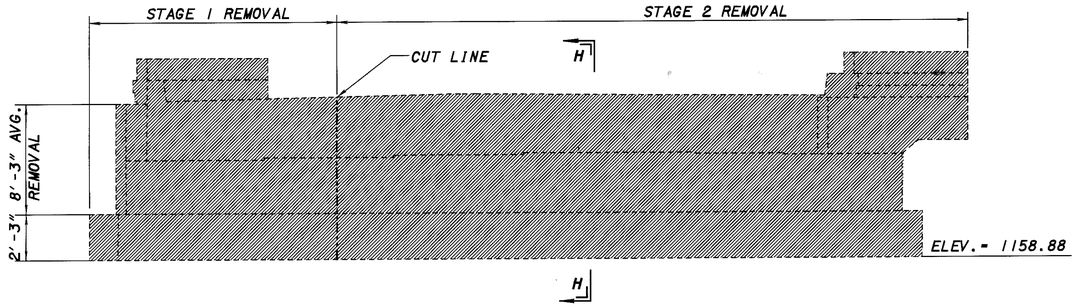
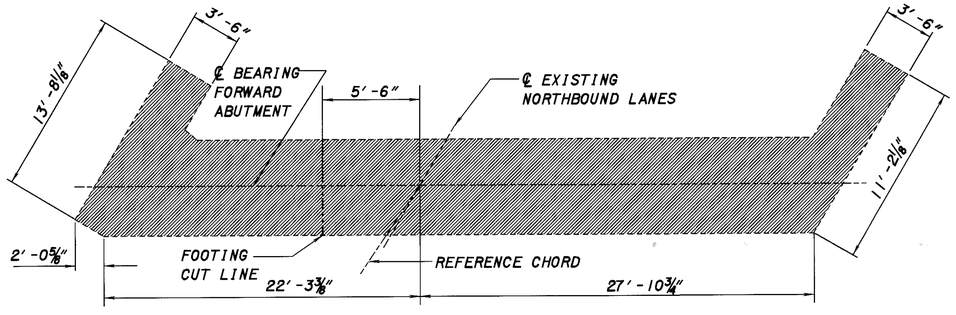
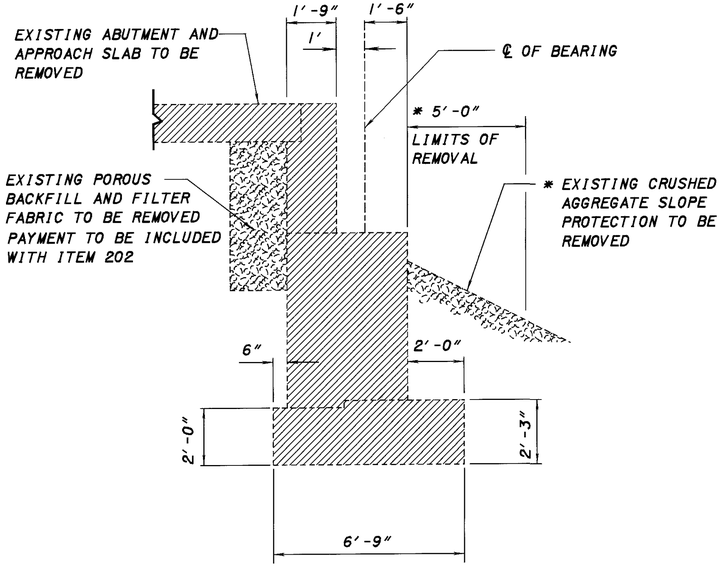



ELEVATION
(FORWARD ABUTMENT NORTHBOUND)




FOOTING PLAN
(FORWARD ABUTMENT NORTHBOUND)




SECTION Ⓗ—Ⓗ

## NOTES

THE ENTIRE NORTHBOUND FORWARD ABUTMENT TO BE REMOVED

## LEGEND

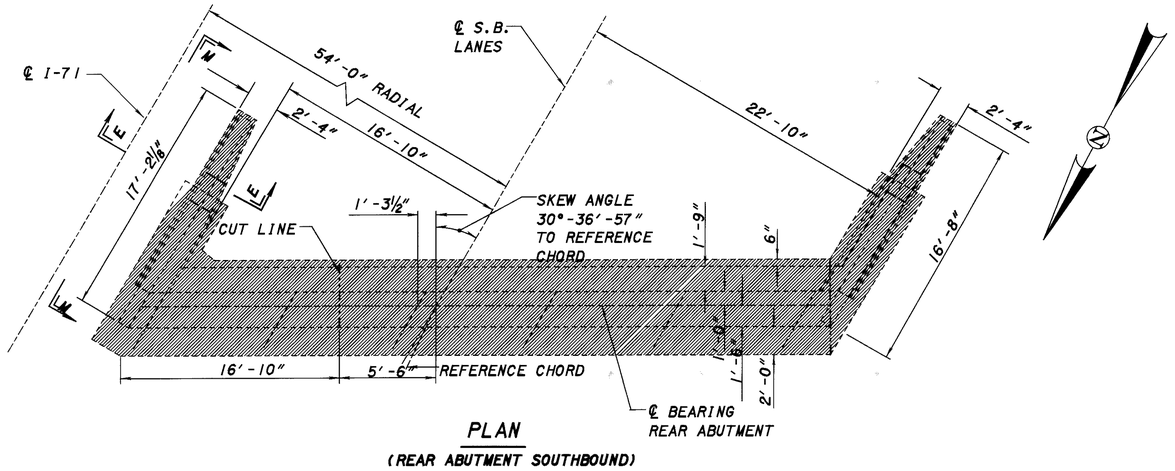
▨ - PORTION OF STRUCTURE TO BE REMOVED

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

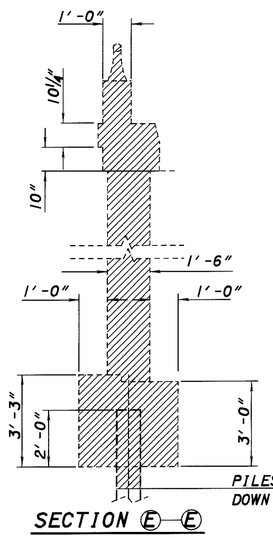
| DESIGNED | DRAWN | REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|---|---|
| DB | DB | | 10-22-99 | 5203724R |
| CHECKED | | | | |
| TAA | | | | |

FORWARD ABUTMENT NORTHBOUND REMOVALS
MED-71-1870 R
I-71 OVER I-271

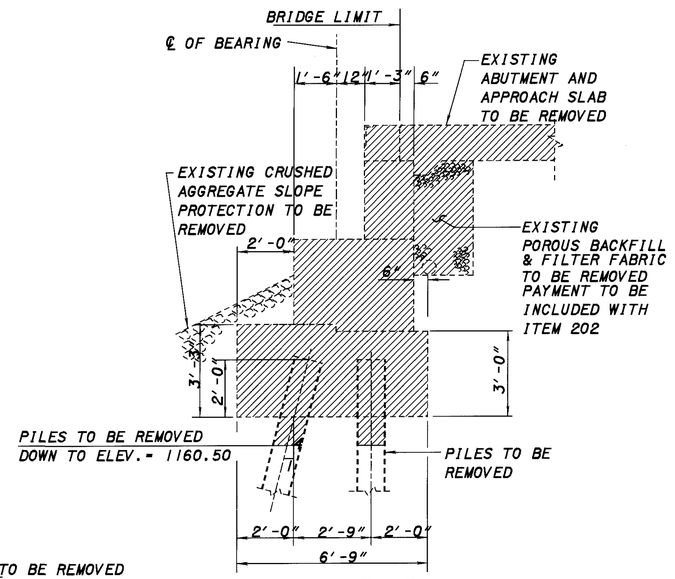
MED-71-15.78



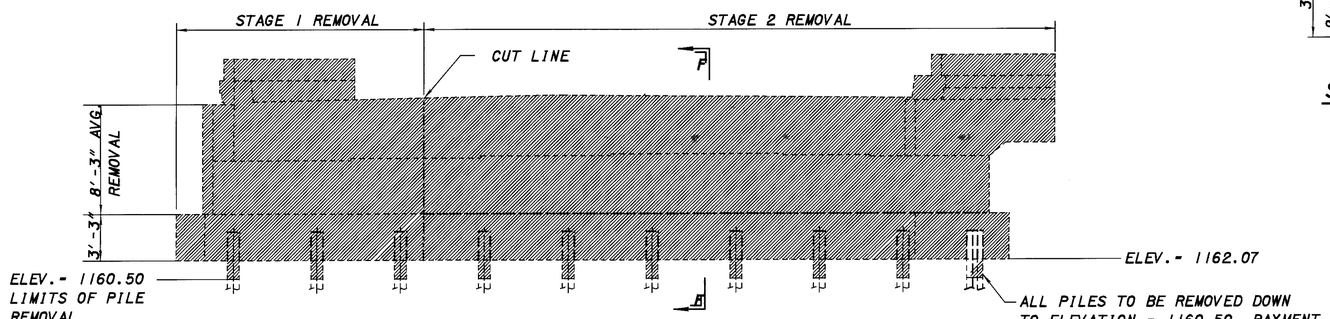

**PLAN**
**(REAR ABUTMENT SOUTHBOUND)**



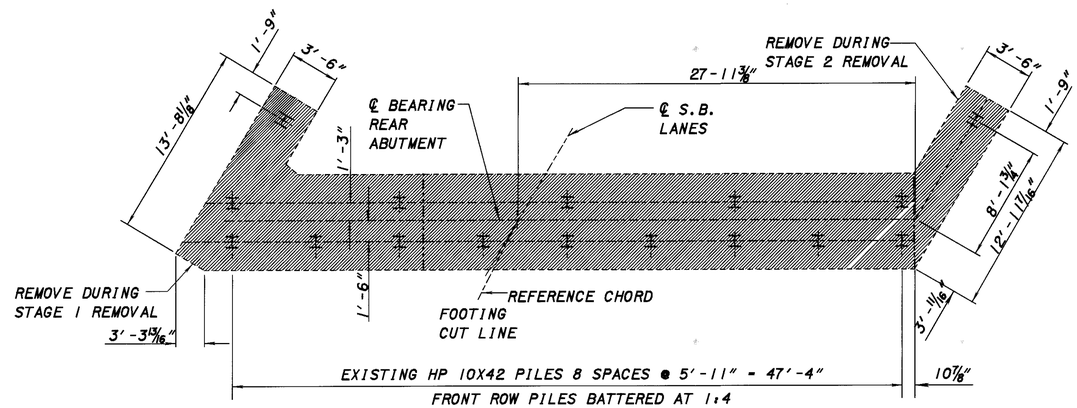

**SECTION Ⓔ—Ⓔ**



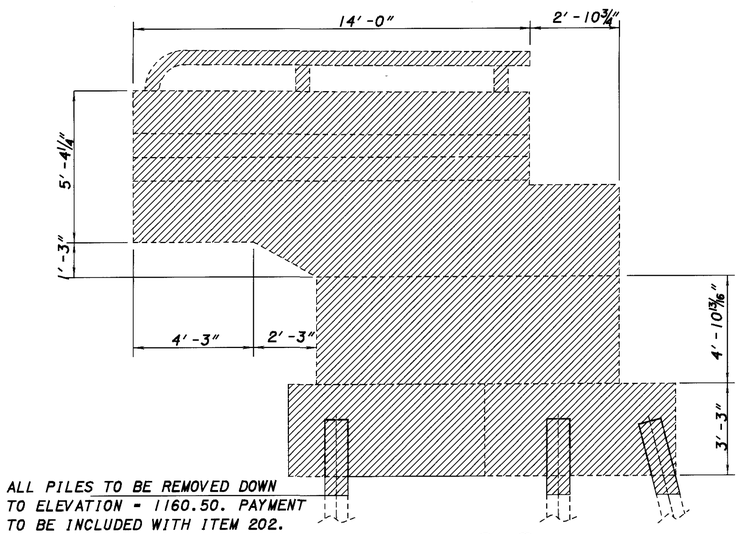

**SECTION Ⓕ—Ⓕ**




**ELEVATION**
**(REAR ABUTMENT SOUTHBOUND)**




**FOOTING PLAN**
**(REAR ABUTMENT SOUTHBOUND)**




**VIEW Ⓜ—Ⓜ**

## NOTES

THE ENTIRE SOUTHBOUND REAR ABUTMENT TO BE REMOVED

## LEGEND

▨ - PORTION OF STRUCTURE TO BE REMOVED

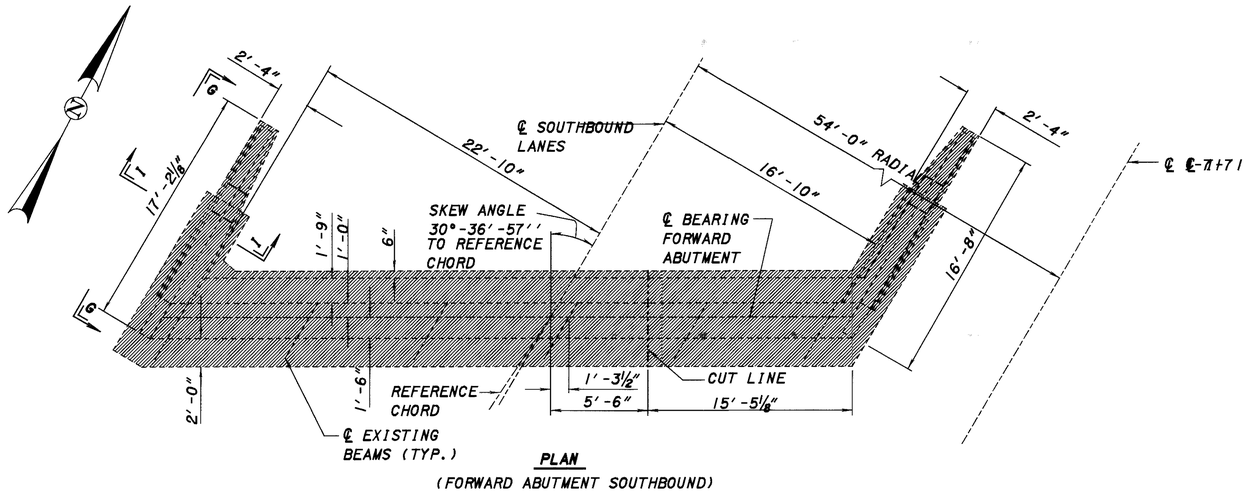
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED DFT DATE 10-22-99
STRUCTURE FILE NUMBER 5203694L
DRAWN DB REVISED
DESIGNED DB CHECKED TAA

REAR ABUTMENT SOUTHBOUND REMOVALS
MED-71-1870 L
I-71 OVER I-271

MED-71-15.78

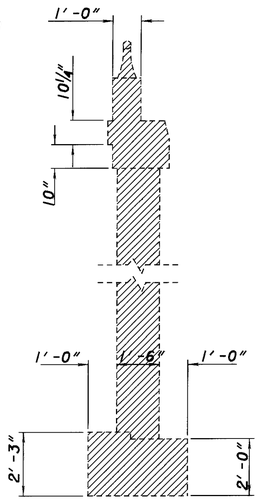
8 / 39

744 / 940

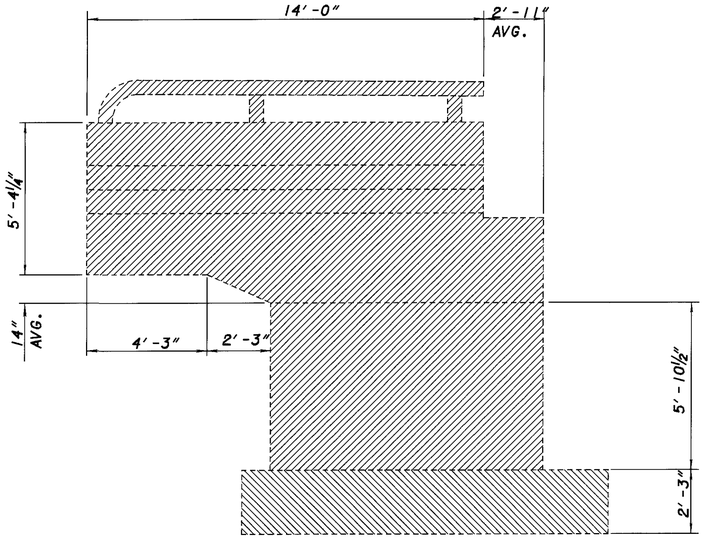



**PLAN**

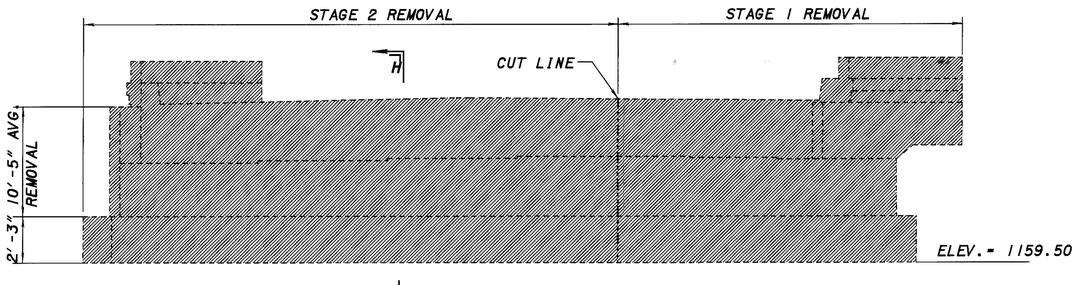
(FORWARD ABUTMENT SOUTHBOUND)




**SECTION Ⓘ—Ⓘ**

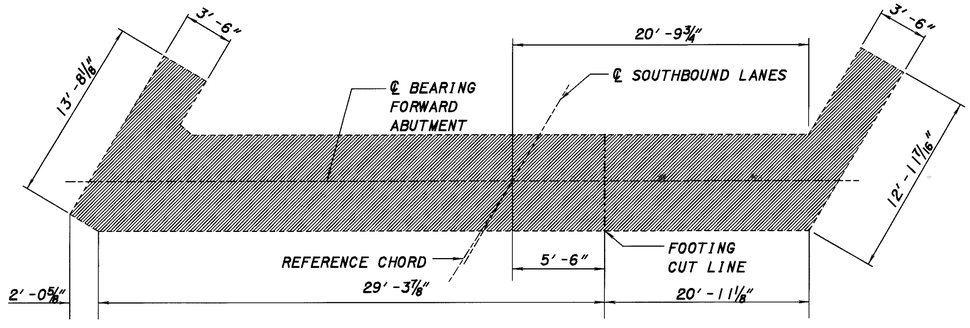



**VIEW Ⓖ—Ⓖ**



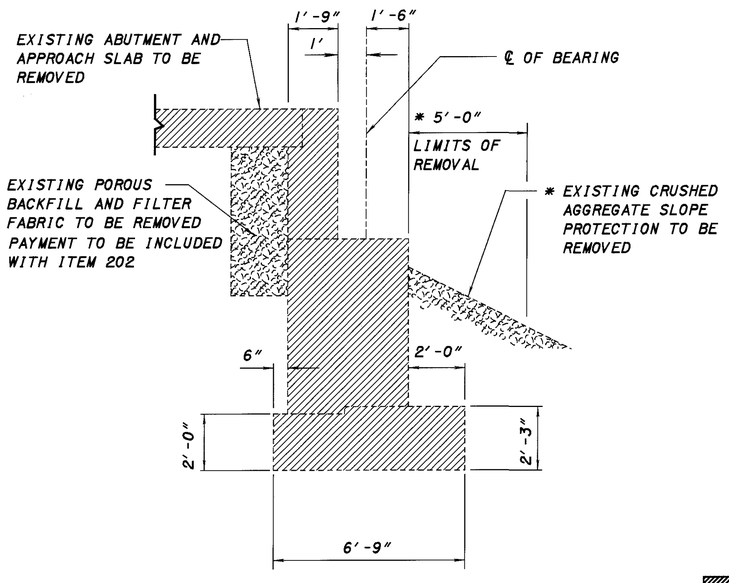

**ELEVATION**

(FORWARD ABUTMENT SOUTHBOUND)




**FOOTING PLAN**

(FORWARD ABUTMENT SOUTHBOUND)




**SECTION Ⓗ—Ⓗ**

**NOTES**

THE ENTIRE SOUTHBOUND FORWARD ABUTMENT TO BE REMOVED.

**LEGEND**

▨ - PORTION OF STRUCTURE TO BE REMOVED

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|
| DFT | 10-22-99 | 5203694L |

| DRAWN | REVISED |
|---|---|
| DB | |

| DESIGNED | CHECKED |
|---|---|
| DB | TAA |

FORWARD ABUTMENT SOUTHBOUND REMOVALS

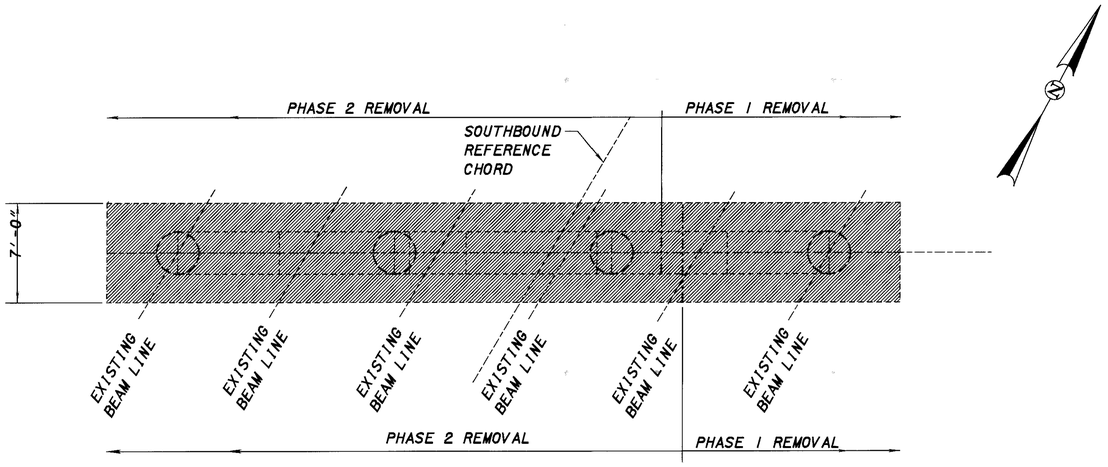
MED-71-1870 L

I-71 OVER I-271

MED-71-15.78

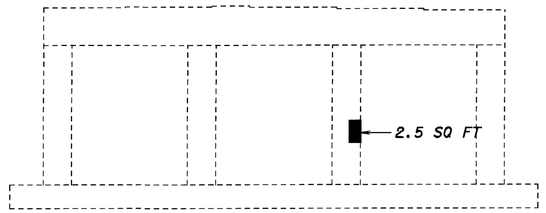
9 / 39

745 / 940

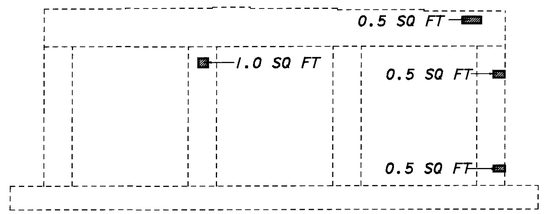



PLAN

PIER 1 SOUTHBOUND LANES REMOVAL

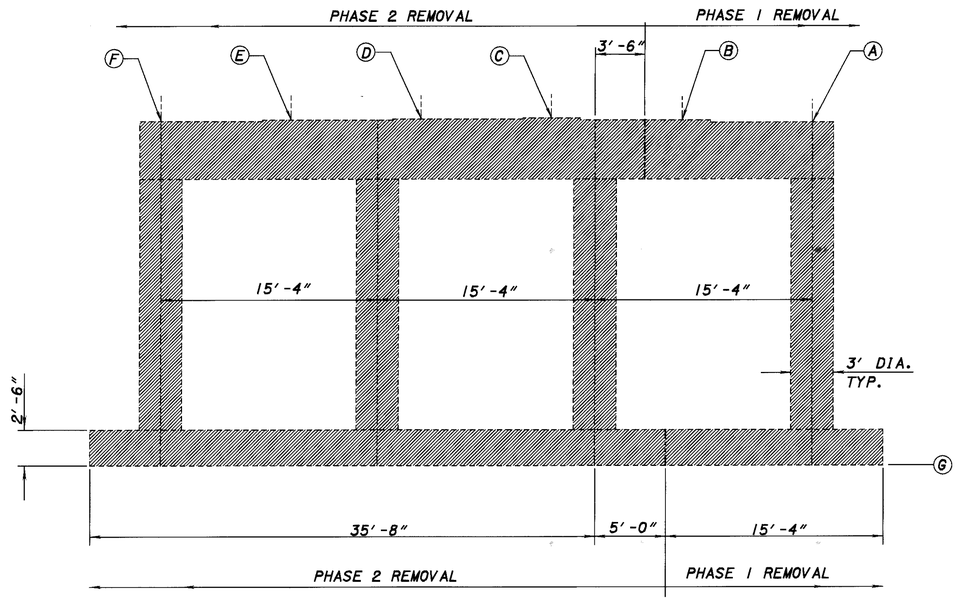



NORTH FACE/PIER 2 - NORTHBOUND BRIDGE



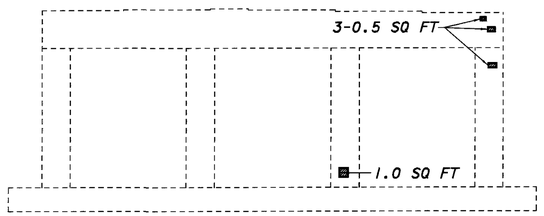

SOUTH FACE/ PIER 2 - SOUTHBOUND BRIDGE

| ELEVATIONS | |
|---|---|
| A | 1168.75 |
| B | 1168.91 |
| C | 1169.06 |
| D | 1169.00 |
| E | 1168.91 |
| F | 1168.82 |
| G | 1144.61 |




ELEVATION

PIER 1 SOUTHBOUND LANES REMOVAL




SOUTH FACE/ PIER 2 - NORTHBOUND BRIDGE

ALL SURFACES TO BE PATCHED AND THE EXPOSED REINFORCING STEEL WITHIN SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING PRIOR TO THE CLEANING SPECIFIED BY 519.04. CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL OR ERECTION OF THE FORMS BY NOT MORE THAN 24 HOURS.

- AREA TO BE PATCHED

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT DATE 10-22-99
STRUCTURE FILE NUMBER 5203724 R

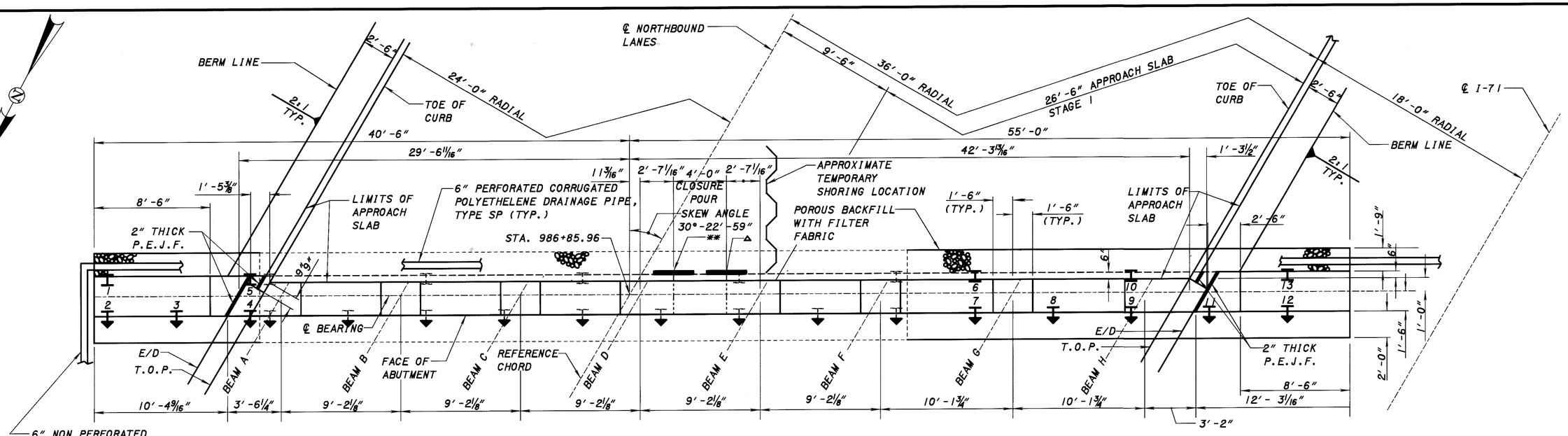
DRAWN DB REVISED
DESIGNED DB CHECKED TAA

PIER REMOVAL AND PATCHING DETAILS
MED-71-1870 R
I-71 OVER I-271

MED-71-15.78

10 / 39

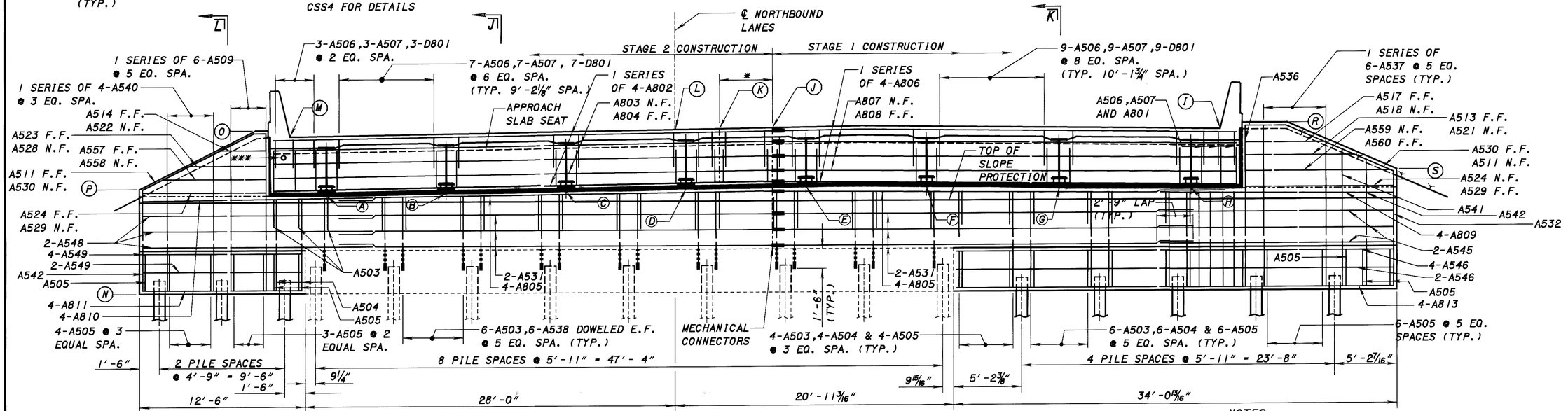
746
940




6" NON PERFORATED CORRUGATED POLYETHYLENE DRAINAGE PIPE, TYPE S (TYP.)

*** - 4" CONDUIT, SEE CSS3 AND CSS4 FOR DETAILS

## PLAN
(REAR ABUTMENT NORTHBOUND LANES)




## ELEVATION
(REAR ABUTMENT NORTHBOUND LANES)

| LOCATION / ELEVATION | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | R | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHBOUND LANE FWD. ABUTMENT | 1169.41 | 1169.57 | 1169.71 | 1169.84 | 1169.74 | 1169.64 | 1169.53 | 1169.42 | 1173.93 | 1174.30 | 1174.35 | 1174.39 | 1173.94 | 1161.62 | 1174.44 | 1170.90 | 1174.43 | 1170.90 |

### NOTES

FOR SECTIONS AND DETAILS SEE SHEET 15/39 AND 16/39.

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

△ TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB 1'-0" BELOW BEAM SEAT ACROSS THE CONSTRUCTION JOINT.

ALL ABUTMENT PILES ARE HP 10X42.

MINIMUM LAP FOR A #8 BAR - 3'-8"

### LEGEND

- INDICATES BATTERED PILE.
- E/D - EDGE OF DECK
- C.J. - CONSTRUCTION JOINT
- E.F. TO - EACH FACE
- T.O.P. - TOE OF PARAPET
- * - CLOSURE POUR IN THE BACKWALL

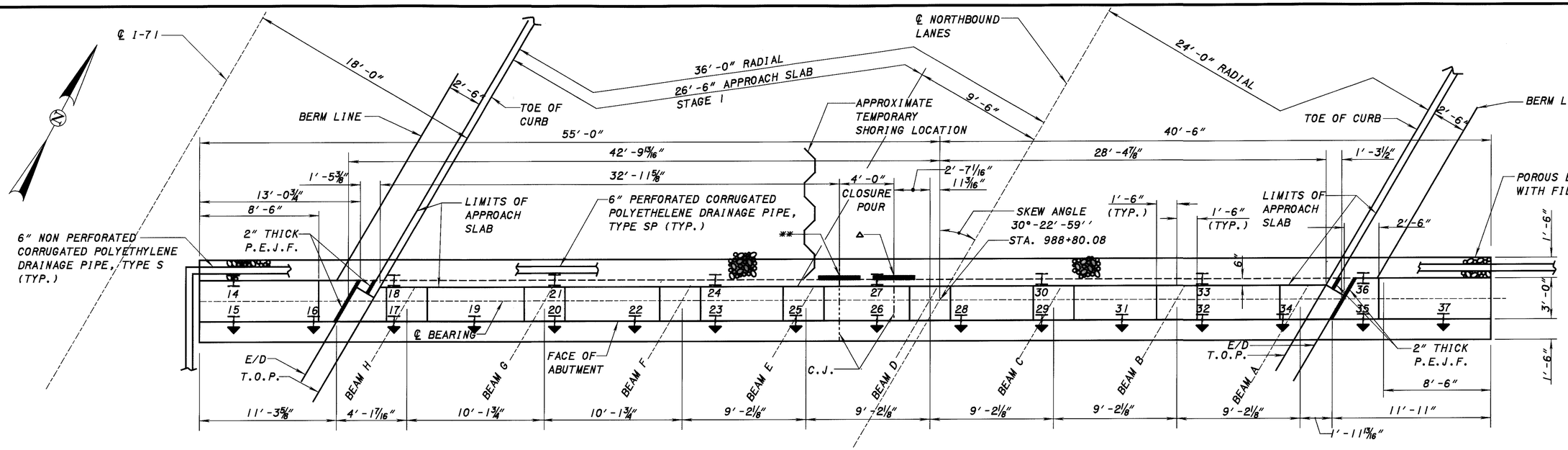
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED: DFT | DATE: 10-22-99 | STRUCTURE FILE NUMBER: 5203724 R
DRAWN: DB | REVISED:
DESIGNED: DB | CHECKED: TAA

ABUTMENT DETAILS
MED-71-1870 R
I-71 OVER I-271

MED-71-15.78

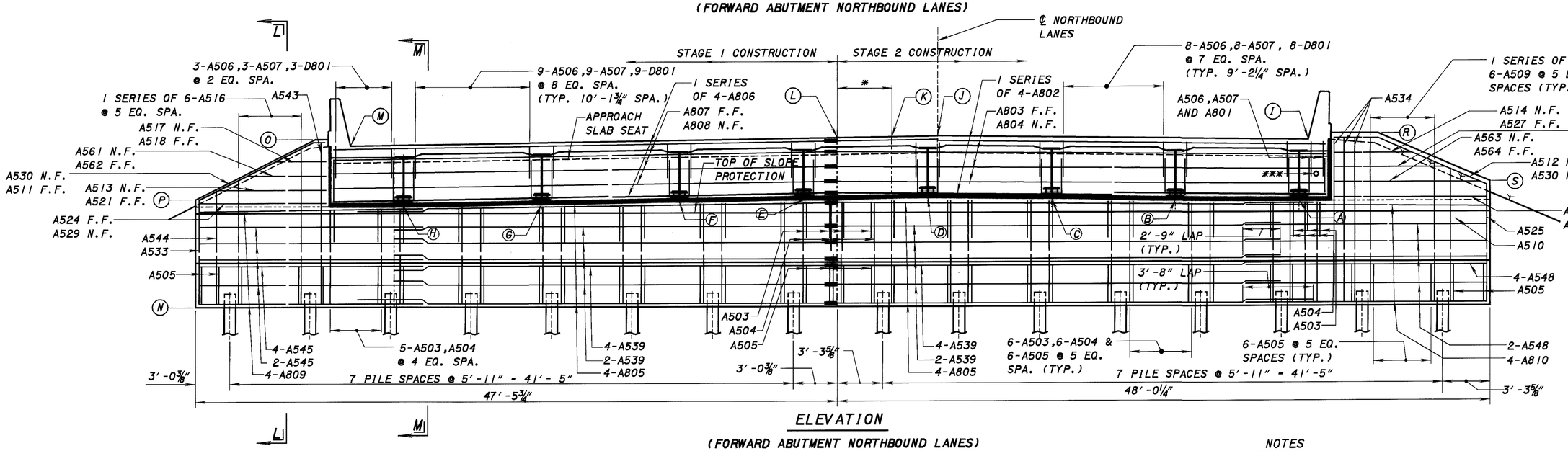
11/39

747/940




## PLAN

(FORWARD ABUTMENT NORTHBOUND LANES)




## ELEVATION

(FORWARD ABUTMENT NORTHBOUND LANES)

*** - 4" CONDUIT, SEE CSS3 AND CSS4 FOR DETAILS

| LOCATION / ELEVATION | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | R | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHBOUND LANE FWD. ABUTMENT | 1168.10 | 1168.27 | 1168.43 | 1168.56 | 1168.48 | 1168.39 | 1168.28 | 1168.19 | 1172.62 | 1173.10 | 1173.07 | 1173.03 | 1172.70 | 1158.99 | 1173.20 | 1169.70 | 1173.12 | 1169.70 |

### NOTES

FOR SECTIONS AND DETAILS SEE SHEET 16/39.

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

△ TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO 1'-0" BELOW BEAM SEAT ACROSS THE CONSTRUCTION JOINT.

ALL ABUTMENT PILES ARE HP 10X42

### LEGEND

- INDICATES BATTERED PILE.
E/D - EDGE OF DECK
C.J. - CONSTRUCTION JOINT
E.F. - EACH FACE
T.O.P. - TOE OF PARAPET

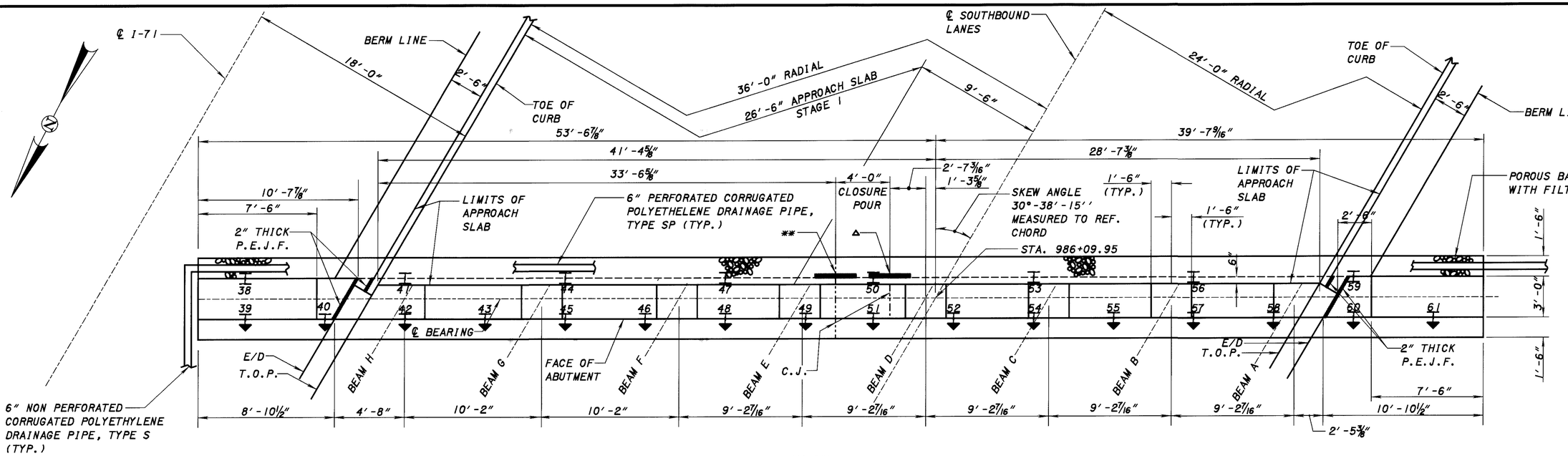
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
DATE: 10-22-99
REVIEWED: DFT
STRUCTURE FILE NUMBER: 5203724 R
DRAWN: DB
REVISED:
DESIGNED: DB
CHECKED: TAA

ABUTMENT DETAILS
MED-71-1870 R
I-71 OVER I-271

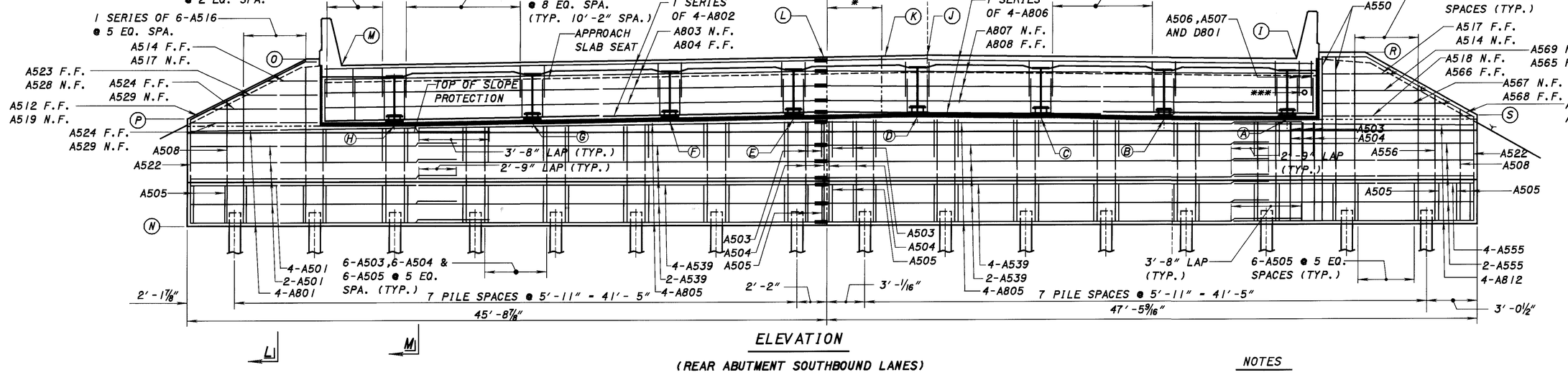
MED-71-15.78

12/39

748/940




## PLAN
(REAR ABUTMENT SOUTHBOUND LANES)




## ELEVATION
(REAR ABUTMENT SOUTHBOUND LANES)

*** - 4" CONDUIT, SEE CSS3 AND CSS4 FOR DETAILS

| LOCATION / ELEVATION | ELEVATIONS | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | R | S |
| SOUTHBOUND LANE REAR ABUTMENT | 1169.89 | 1169.99 | 1170.10 | 1170.17 | 1170.03 | 1169.89 | 1169.73 | 1169.56 | 1174.41 | 1174.73 | 1174.68 | 1174.59 | 1174.08 | 1161.26 | 1174.58 | 1171.06 | 1174.91 | 1171.06 |

### NOTES

FOR SECTIONS AND DETAILS SEE SHEET 16/39

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

△ TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO 1'-0" BELOW BEAM SEAT ACROSS THE CONSTRUCTION JOINT.

ALL ABUTMENT PILES ARE HP 10X42

### LEGEND

▼ - INDICATES BATTERED PILE.

E/D - EDGE OF DECK

C.J. - CONSTRUCTION JOINT

E.F. - EACH FACE

T.O.P. - TOE OF PARAPET

* - CLOSURE POUR IN THE BACKWALL

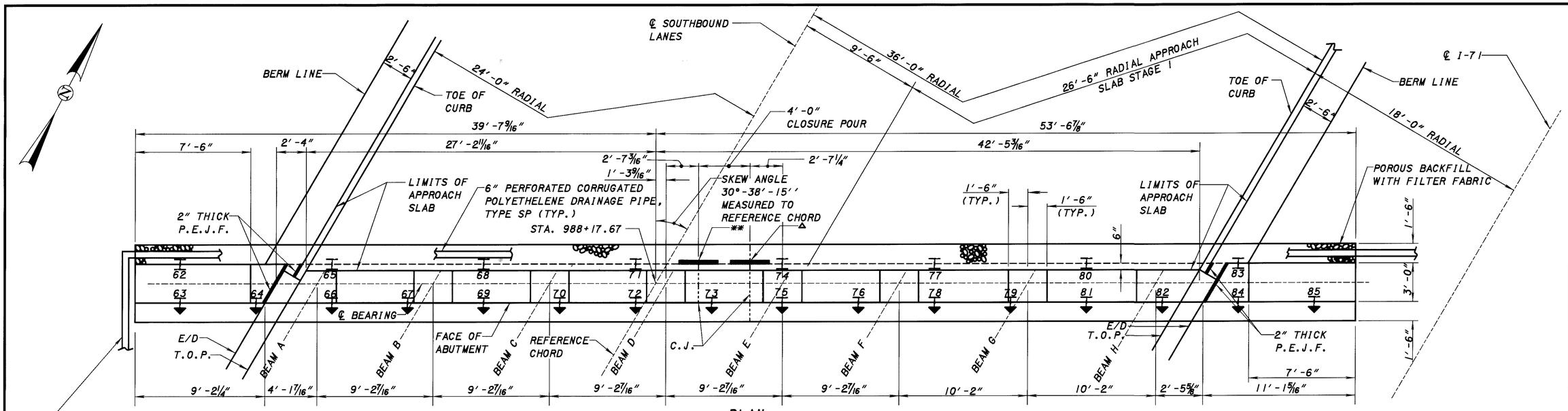
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 10-22-99
STRUCTURE FILE NUMBER: 5203694 L
DRAWN: DB
REVISED:
DESIGNED: DB
CHECKED: TAA

ABUTMENT DETAILS
MED-71-1870 L
I-71 OVER I-271

MED-71-15.78

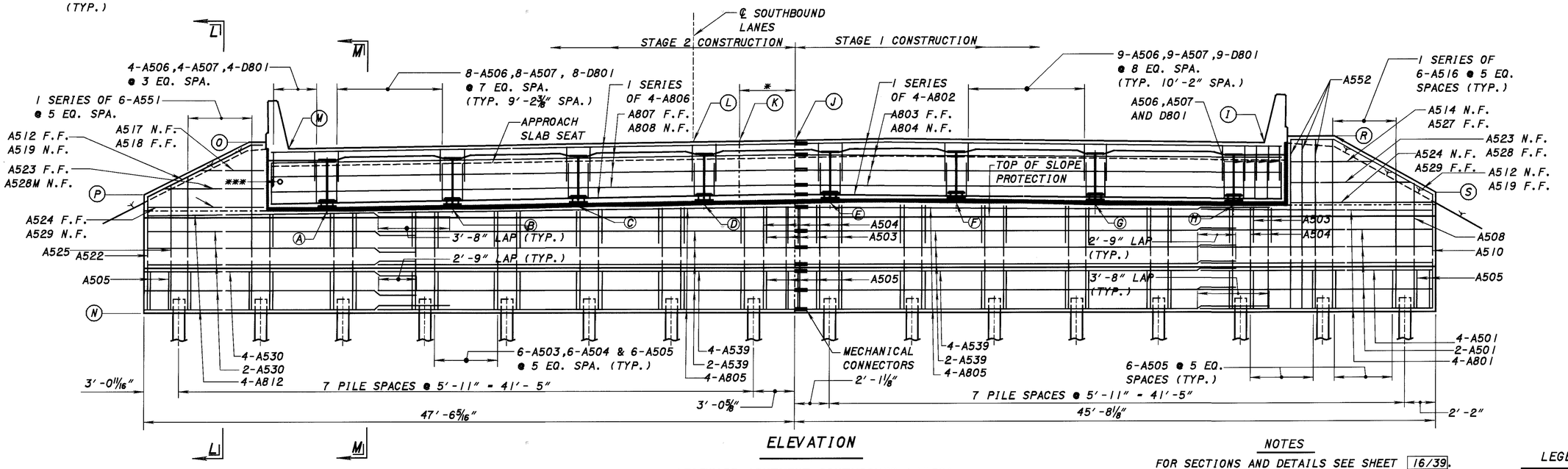
13/39

749/940




## PLAN

(FORWARD ABUTMENT SOUTHBOUND LANES)




## ELEVATION

(FORWARD ABUTMENT SOUTHBOUND LANES)

| LOCATION / ELEVATION | ELEVATIONS | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | R | S |
| NORTHBOUND LANE FWD. ABUTMENT | 1168.78 | 1168.88 | 1168.97 | 1169.02 | 1168.87 | 1168.71 | 1168.53 | 1168.36 | 1172.86 | 1173.45 | 1173.52 | 1173.57 | 1173.30 | 1159.61 | 1173.80 | 1169.86 | 1173.36 | 1169.86 |

### NOTES

FOR SECTIONS AND DETAILS SEE SHEET 16/39.

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

△ TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO 1'-0" BELOW BEAM SEAT ACROSS THE CONSTRUCTION JOINT.
ALL ABUTMENT PILES ARE HP 10X42

### LEGEND

*** - 4" CONDUIT, SEE CSS3 AND CSS4 FOR DETAILS

▼ - INDICATES BATTERED PILE.

E/D - EDGE OF DECK

C.J. - CONSTRUCTION JOINT

E.F. - EACH FACE

T.O.P. - TOE OF PARAPET

* - CLOSURE POUR IN THE BACKWALL

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|
| DFT | 10-22-99 | 5203694 L |

| DRAWN | REVISED |
|---|---|
| DB | |

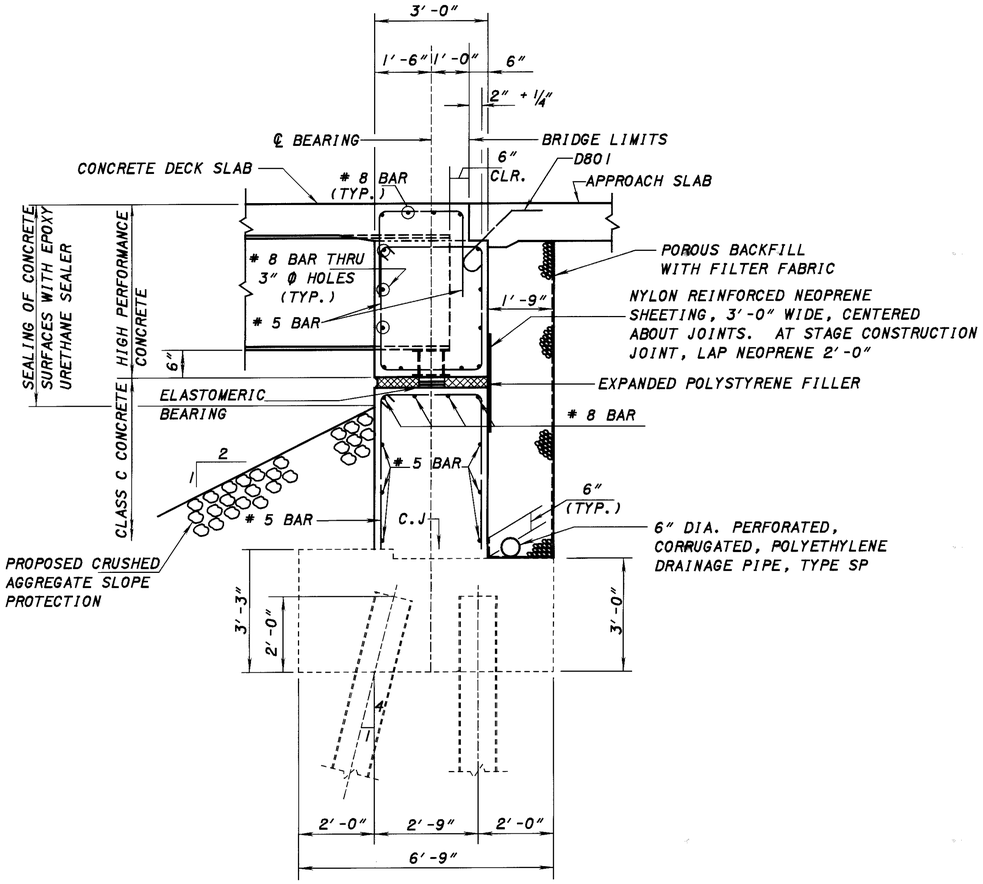
| DESIGNED | CHECKED |
|---|---|
| DB | TAA |

ABUTMENT DETAILS
MED-71-1870 L
I-71 OVER I-271

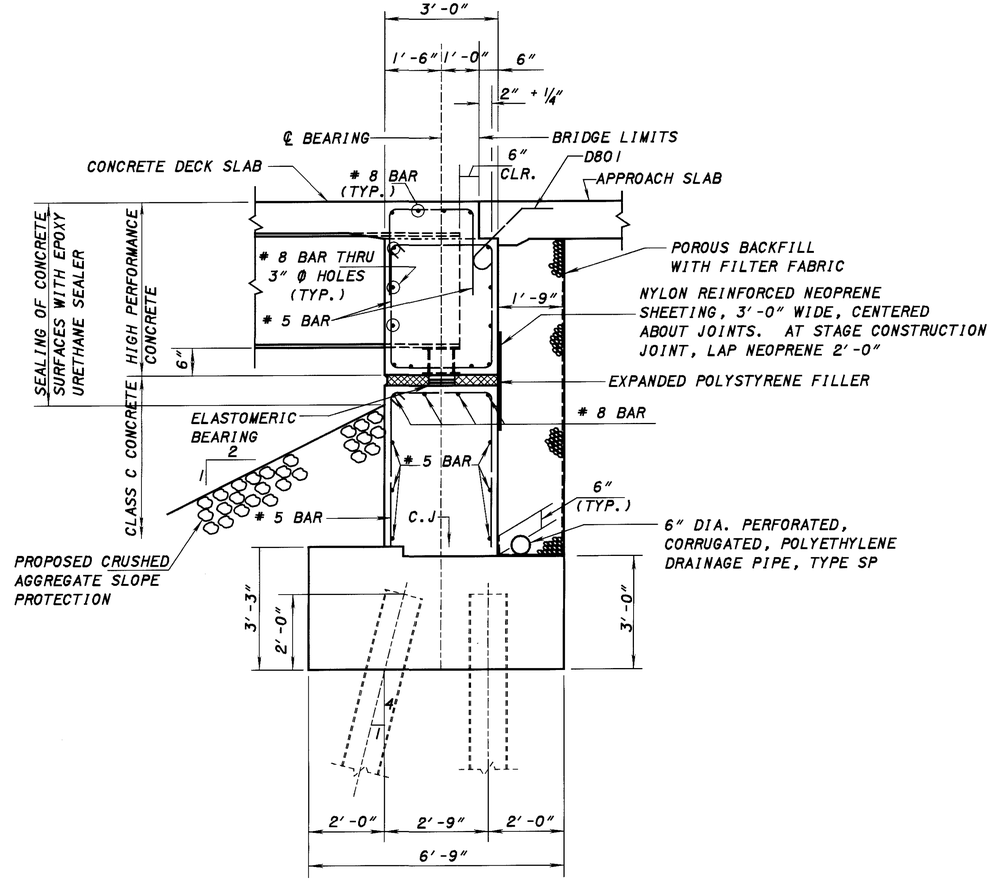
MED-71-15.78

14/39

750/940




SECTION (J)–(J)




SECTION (K)–(K)

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

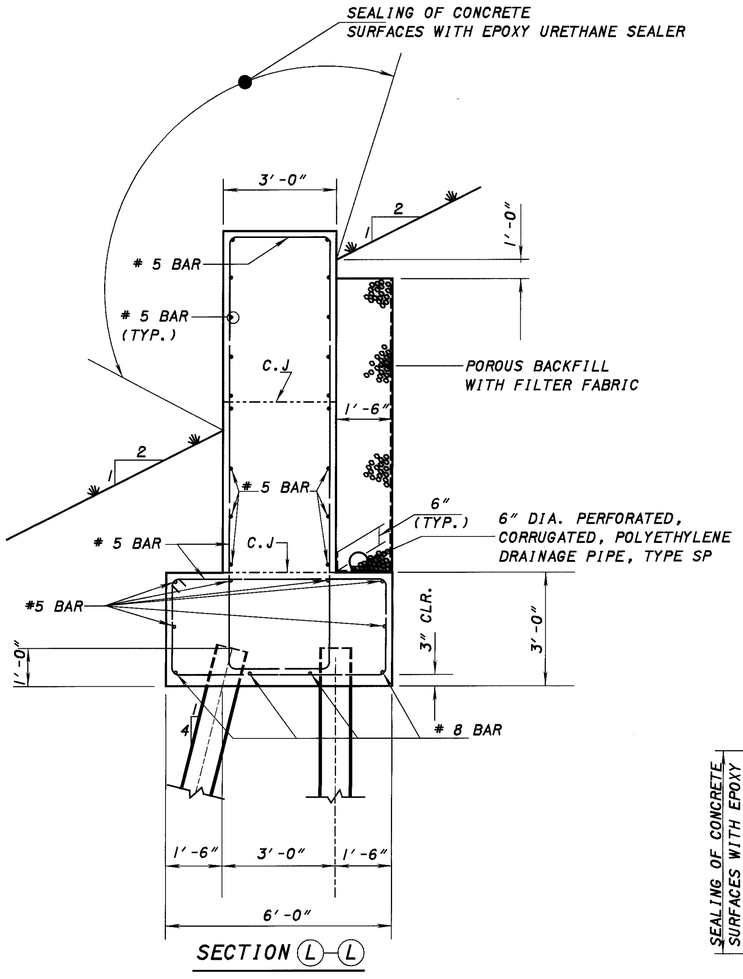
| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| DB | DB | | 10-22-99 |
| CHECKED | REVISED | | STRUCTURE FILE NUMBER |
| TAA | | | 5203694 L&S203724 R |

ABUTMENT DETAILS
MED-71-1870 L/R
I-71 OVER I-271

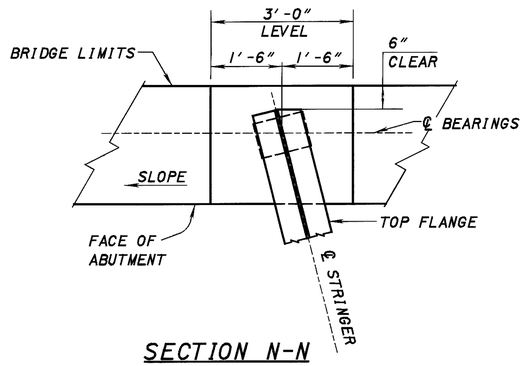
MED-71-15.78

15/39

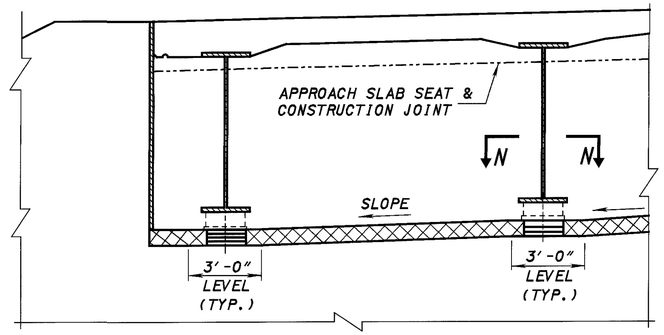
751/940




SECTION (L)-(L)




SECTION N-N
(CLIP TOP FLANGE ONLY)



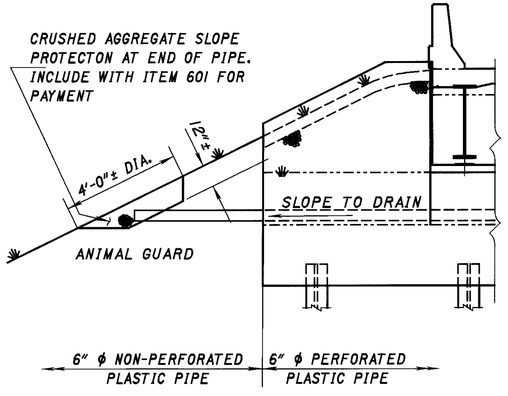

PART ELEVATION OF BEAM SEAT

## NOTES

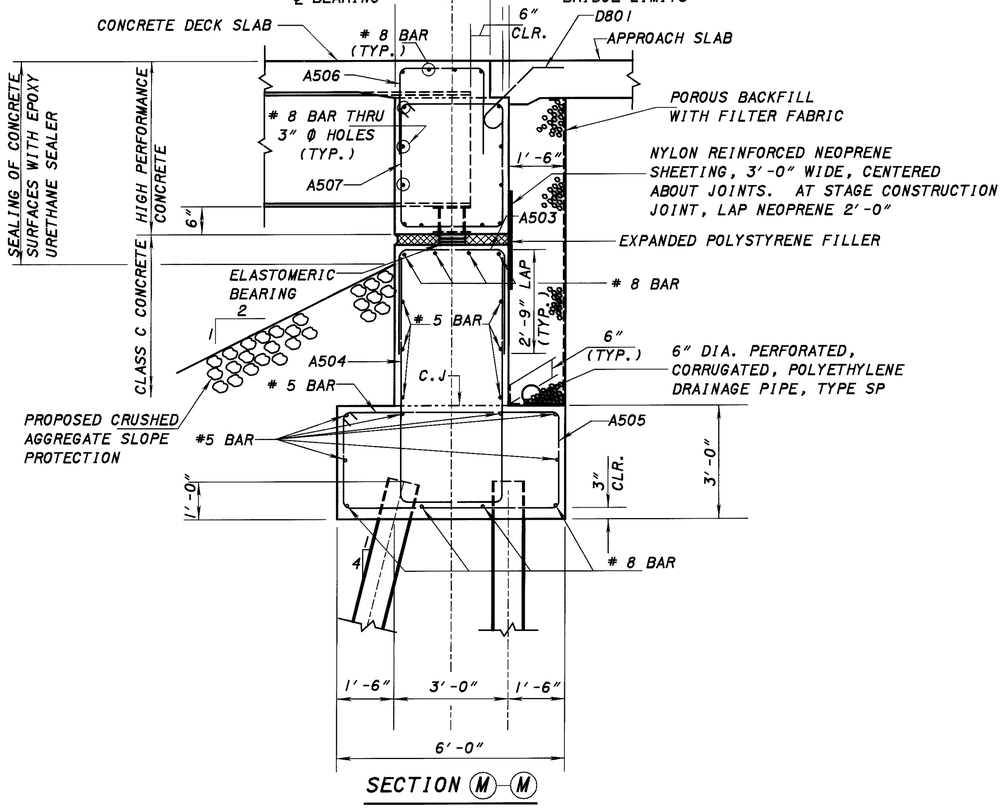
***DIAPHRAGM*** *CONCRETE ENCASING THE STEEL BEAMS SUPPORTED IN THE SEMI INTEGRAL ABUTMENT SHALL BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.*

*PROVIDE 3" O HOLE THRU WEB AS NOTED, PAYMENT TO BE INCLUDED AS INCIDENTAL WITH ITEM 863 STRUCTURAL STEEL. PAYMENT FOR THE EXPANDED POLYSTYRENE FILLER TO BE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE AS INCIDENTAL.*

***POROUS BACKFILL:***
*POROUS BACKFILL WITH FILTER FABRIC, 1'-6" OR 1'-9" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 12" BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.*




PIPE OUTLET DETAIL




SECTION (M)-(M)

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

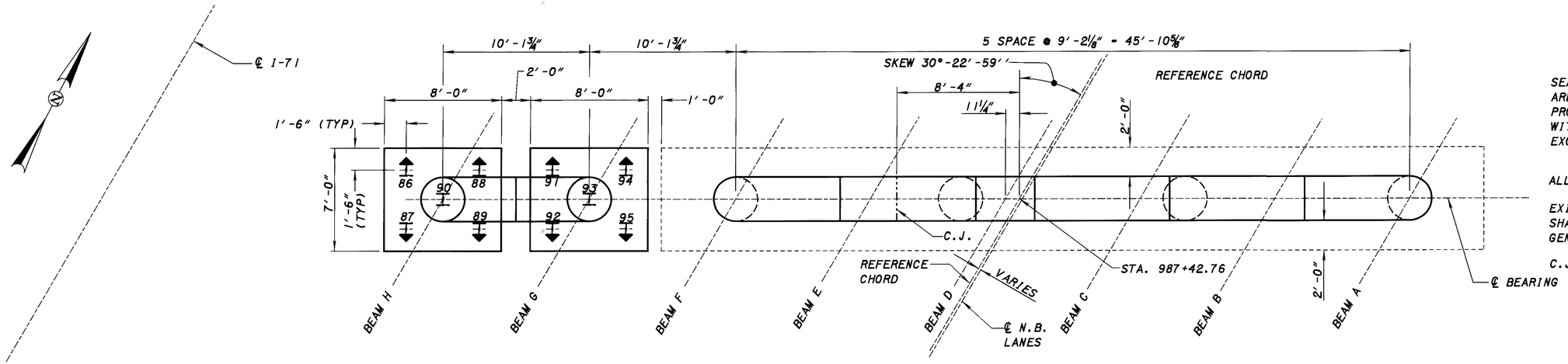
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| DB | DB | DFT | 10-22-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203694L & 5203724R | |

ABUTMENT DETAILS
MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78

16 / 39

752
940




## PLAN

## PIER 1 NORTHBOUND LANES

### NOTES:

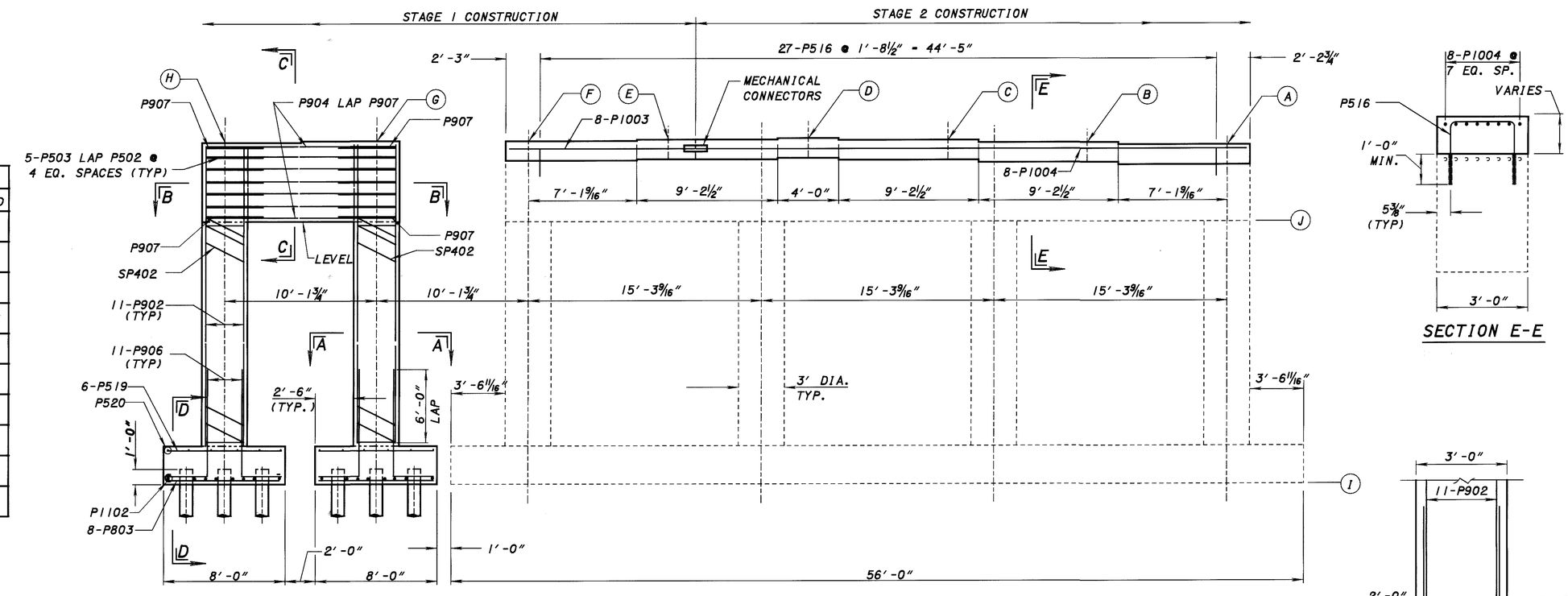
SEAL THE ENITRE SURFACE AREA OF THE EXISTING AND PROPOSED PIER ABOVE GROUND WITH EPOXY URETHANE SEALER EXCEPT BRIDGE SEAT.

ALL PIER PILES ARE HP 12X53

EXISTING PIER BRIDGE SEATS SHALL BE SCARIFIED ¼″ SEE GENERAL NOTES

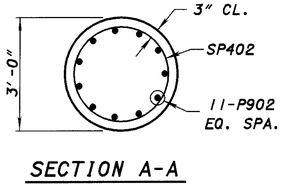
C.J.-CONSTRUCTION JOINT

| ELEVATIONS | | |
|---|---|---|
| | EXISTING | PROPOSED |
| A | 1168.16 | 1169.40 |
| B | 1168.32 | 1169.55 |
| C | 1168.48 | 1169.70 |
| D | 1168.60 | 1169.81 |
| E | 1168.51 | 1169.72 |
| F | 1168.43 | 1169.62 |
| G | N.A. | 1169.52 |
| H | N.A. | 1169.41 |
| I | 1143.61 | 1143.61 |
| J | 1164.16 | 1164.16 |

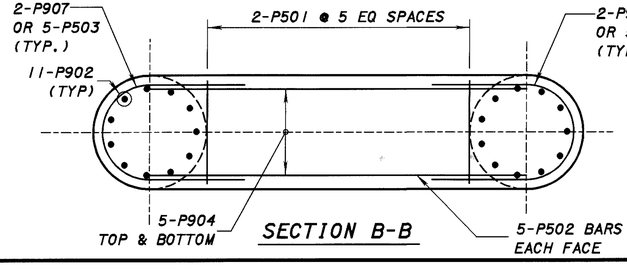



## ELEVATION

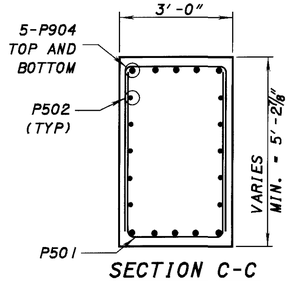
## PIER 1 NORTHBOUND LANES



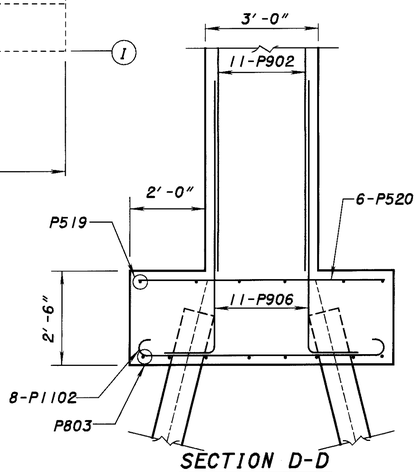

SECTION A-A




SECTION B-B




SECTION C-C




SECTION D-D




SECTION E-E

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| REVISED | DATE |
|---|---|
| DFT | 10-22-99 |

STRUCTURE FILE NUMBER: 5203724 R

| DESIGNED | DRAWN | CHECKED | REVISED |
|---|---|---|---|
| DB | DB | TAA | |

NORTHBOUND PIER 1 DETAILS

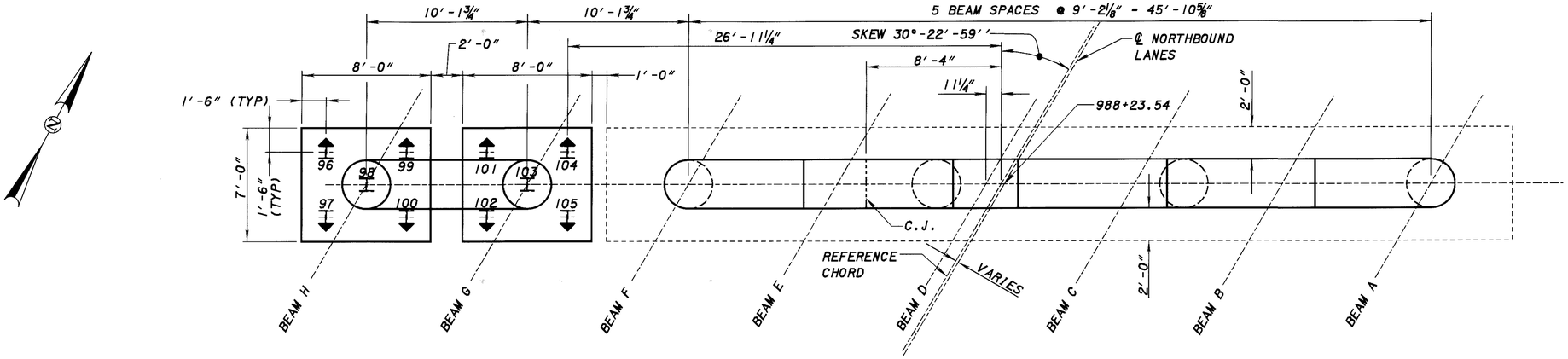
MED-71-1870 R

I-71 OVER I-271

MED-71-15.78

17 / 39

753 / 940




## PLAN
## PIER 2 NORTHBOUND LANES

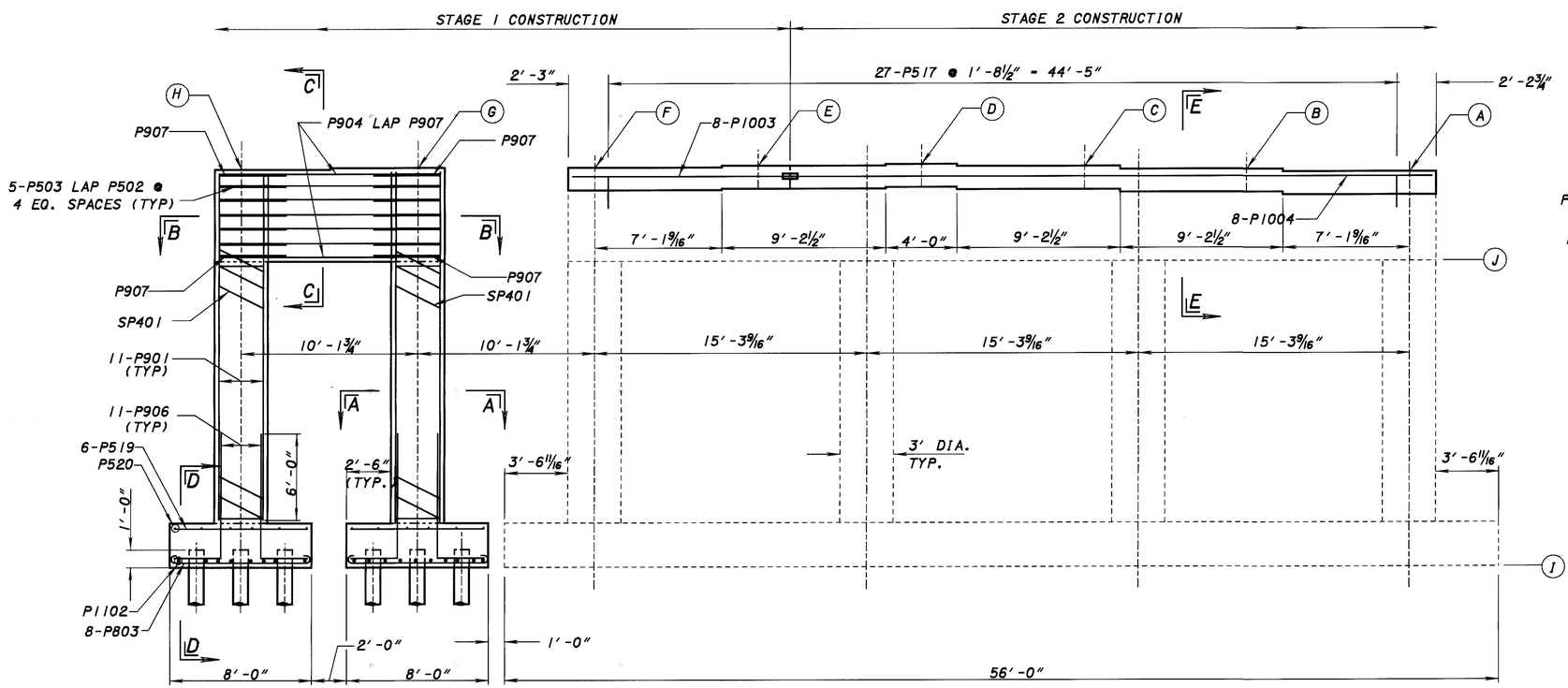
### NOTES:

SEAL THE ENITRE SURFACE AREA OF THE EXISTING AND PROPOSED PIER ABOVE GROUND WITH EPOXY URETHANE SEALER EXCEPT BRIDGE SEAT.

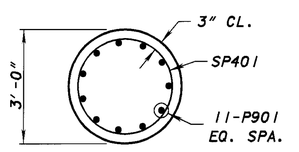
ALL PIER PILES ARE HP 12X53

EXISTING PIER BRIDGE SEATS SHALL BE SCARIFIED ¼" SEE GENERAL NOTES

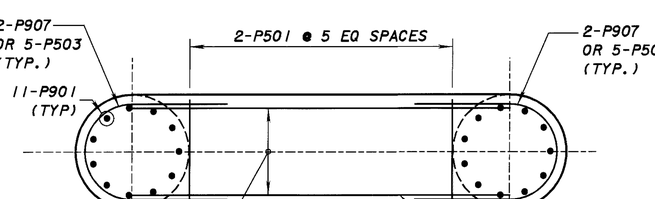
| ELEVATIONS | | |
|---|---|---|
| | EXISTING | PROPOSED |
| A | 1167.22 | 1168.86 |
| B | 1167.38 | 1169.02 |
| C | 1167.54 | 1169.17 |
| D | 1167.67 | 1169.29 |
| E | 1167.58 | 1169.20 |
| F | 1167.50 | 1169.11 |
| G | N.A. | 1169.01 |
| H | N.A. | 1168.91 |
| I | 1146.31 | 1146.31 |
| J | 1163.50 | 1163.50 |



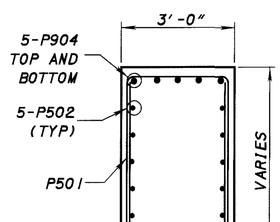

## ELEVATION
## PIER 2 NORTHBOUND LANES



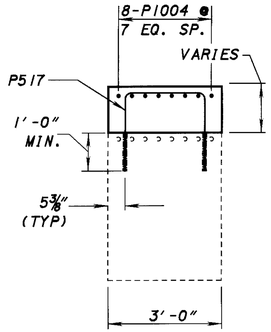

SECTION A-A



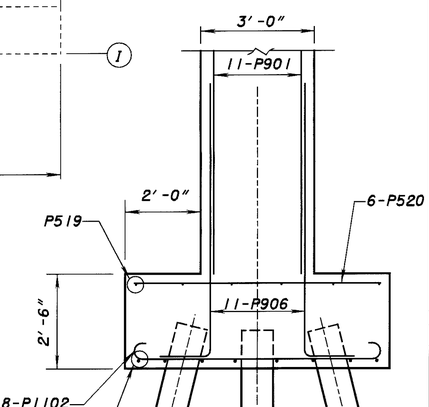

SECTION B-B




SECTION C-C




SECTION E-E




SECTION D-D

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT DATE 10-22-99
STRUCTURE FILE NUMBER 5203724 R

DRAWN DB REVISED

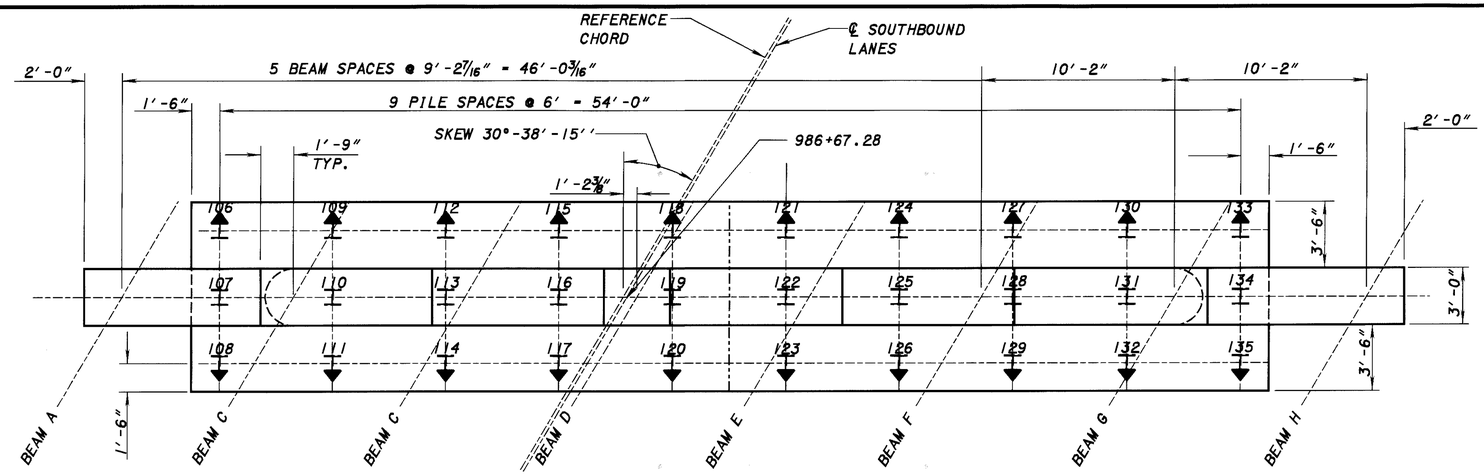
DESIGNED DB CHECKED TAA

NORTHBOUND PIER 2 DETAILS
MED-71-1870 R
I-71 OVER I-271

MED-71-15.78

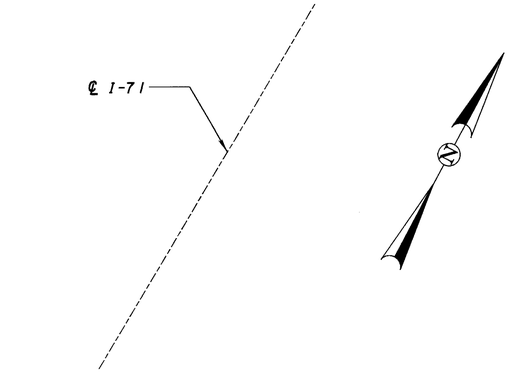
18 / 39

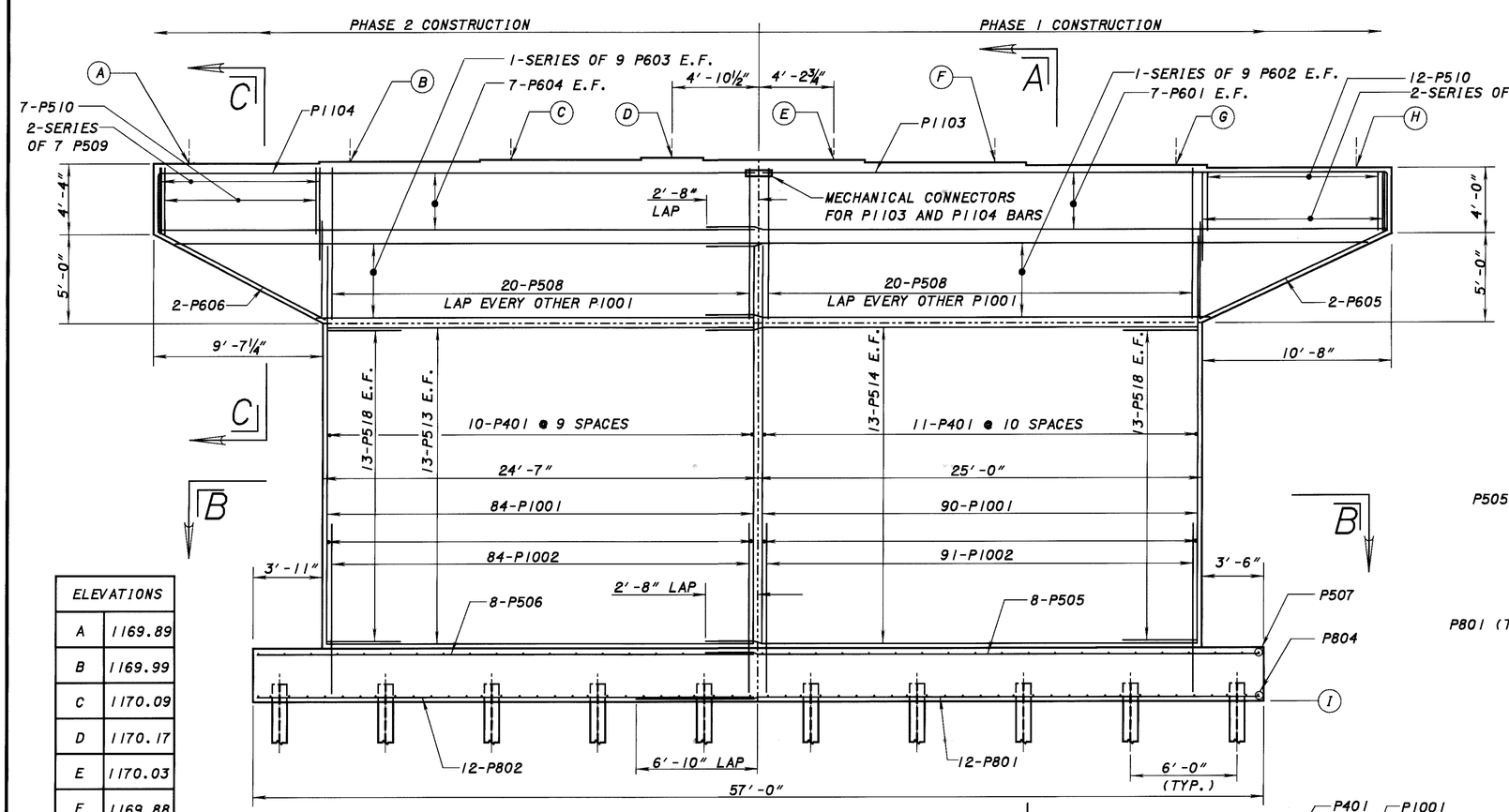
754 / 940




PLAN

PIER 1 SOUTHBOUND LANES

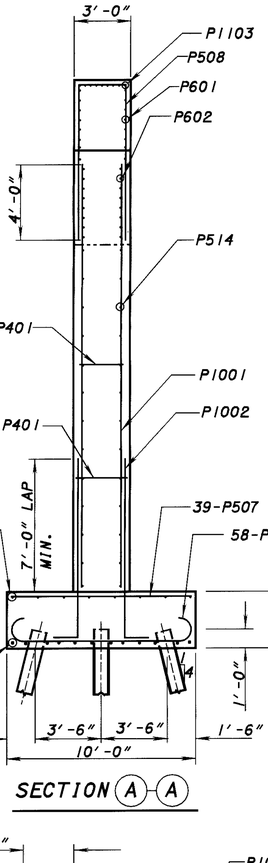


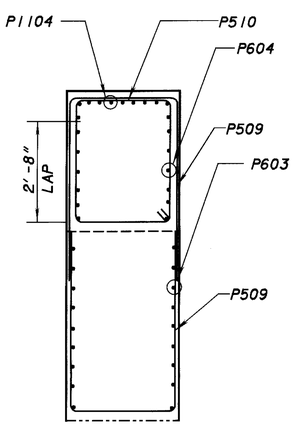

| ELEVATIONS | |
|---|---|
| A | 1169.89 |
| B | 1169.99 |
| C | 1170.09 |
| D | 1170.17 |
| E | 1170.03 |
| F | 1169.88 |
| G | 1169.72 |
| H | 1169.56 |
| I | 1139.55 |

ELEVATION

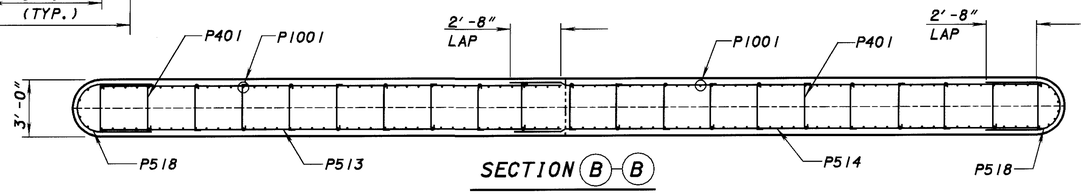
PIER 1 SOUTHBOUND LANES




SECTION (A)-(A)




SECTION (C)-(C)




SECTION (B)-(B)

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT
DATE 10-22-99
STRUCTURE FILE NUMBER 5203694 L

DRAWN DB
REVISED

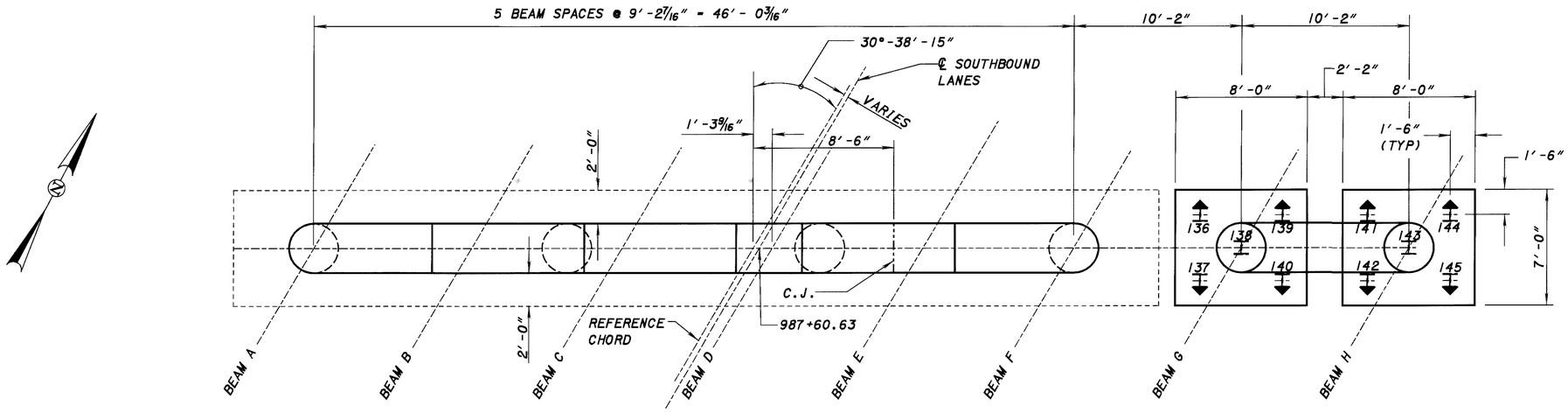
DESIGNED DB
CHECKED TAA

SOUTHBOUND PIER 1 DETAILS
MED-71-1870 L
I-71 OVER I-271

MED-71-15.78

19 / 39

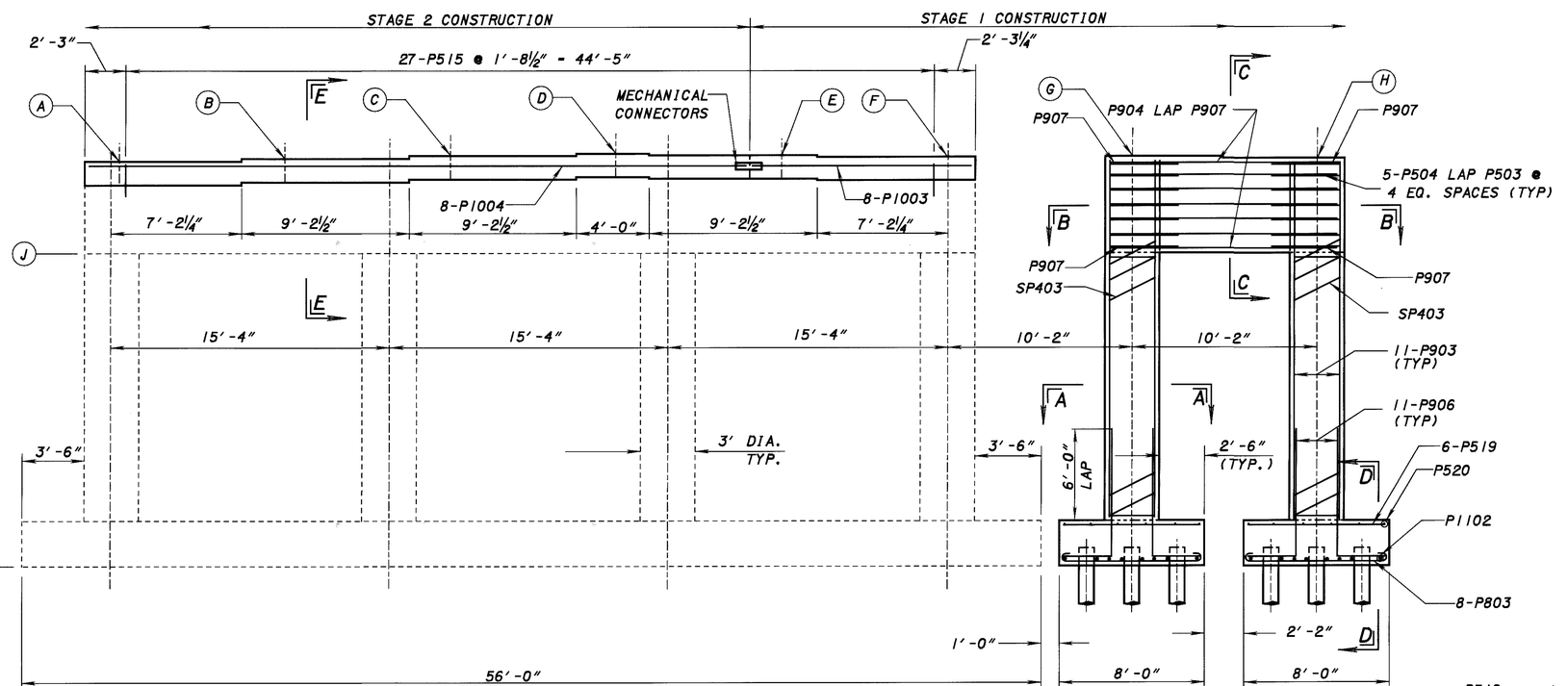
755 / 940




## PLAN

## PIER 2 SOUTHBOUND LANES

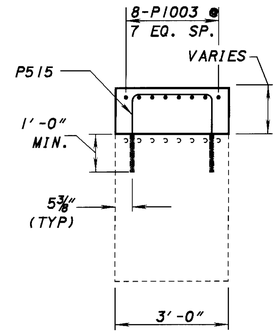
| ELEVATIONS | | |
|---|---|---|
| | EXISTING | PROPOSED |
| A | 1167.93 | 1169.40 |
| B | 1168.02 | 1169.49 |
| C | 1168.11 | 1169.58 |
| D | 1168.17 | 1169.66 |
| E | 1168.01 | 1169.51 |
| F | 1167.85 | 1169.36 |
| G | N.A. | 1169.19 |
| H | N.A. | 1169.02 |
| I | 1147.31 | 1147.31 |
| J | 1163.85 | 1163.85 |



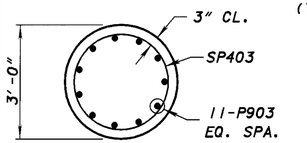

## ELEVATION

## PIER 2 SOUTHBOUND LANES

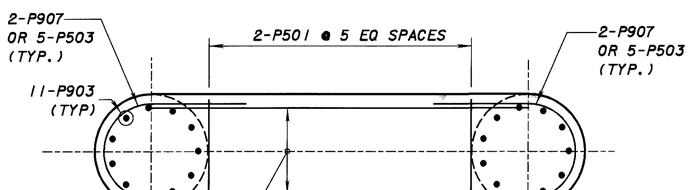


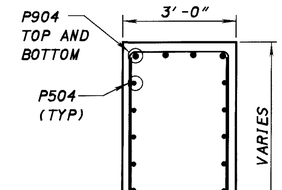

## SECTION E-E



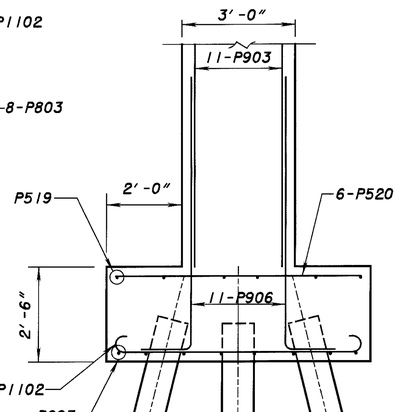

## SECTION A-A




## SECTION B-B




## SECTION C-C




## SECTION D-D

## NOTES:

SEAL THE ENTIRE SURFACE AREA OF THE EXISTING AND PROPOSED PIER ABOVE GROUND WITH EPOXY URETHANE SEALER

ALL PILES ARE HP 12X53

EXISTING PIER BRIDGE SEATS SHALL BE SCARIFIED 1/4" SEE GENERAL NOTES

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

REVIEWED: DFT DATE: 10-22-99 STRUCTURE FILE NUMBER: 5203694 L

DRAWN: DB REVISED:

DESIGNED: DB CHECKED: TAA

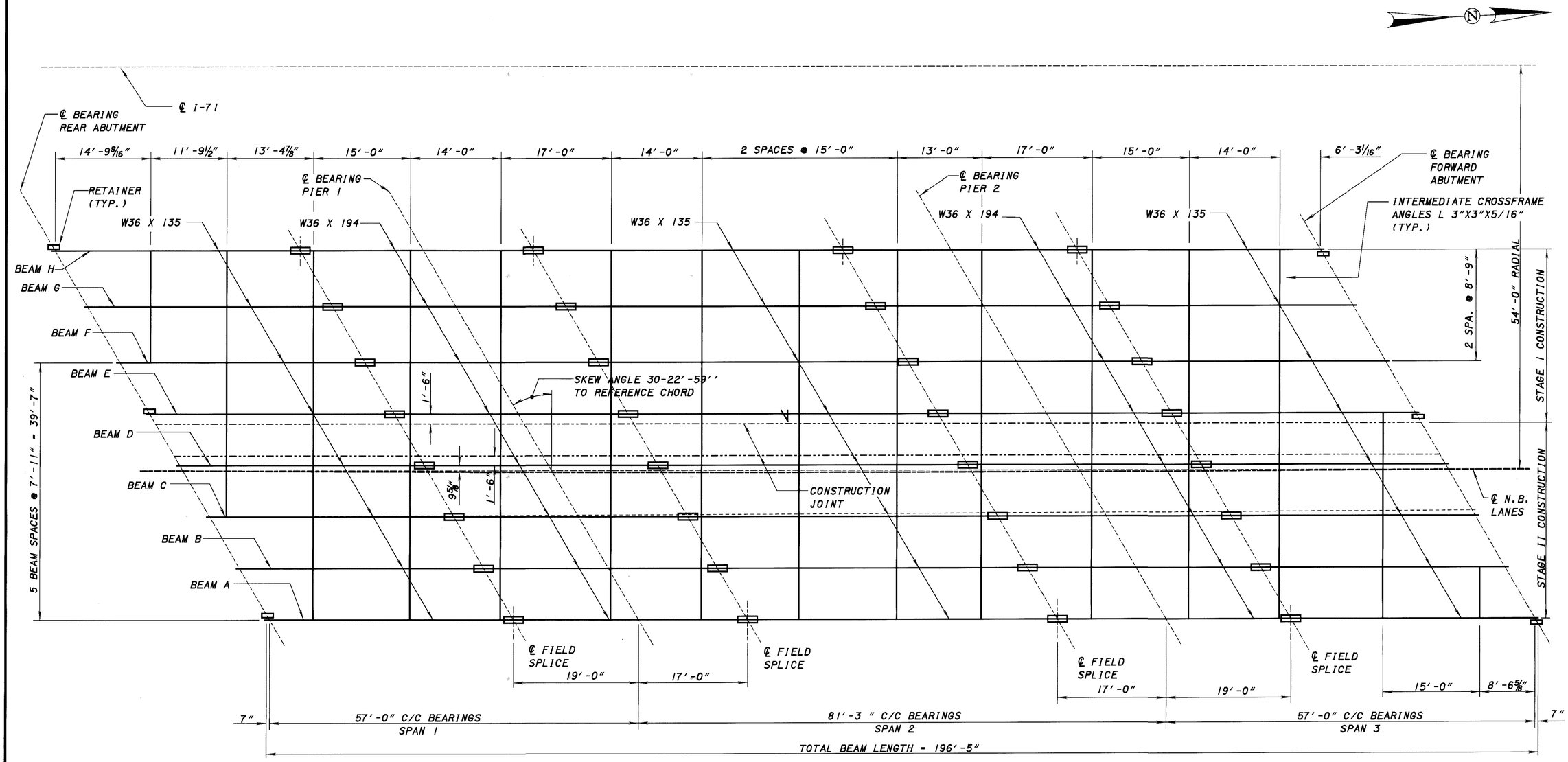
# SOUTHBOUND PIER 2 DETAIL

MED-71-1870 L
I-71 OVER I-271

MED-71-15.78

20 / 39

756 / 940




## FRAMING PLAN

NORTHBOUND LANES SHOWN

### NOTES:

FOR INTERMEDIATE CROSSFRAME DETAILS SEE STANDARD DRAWING GSD-1-96 TYPE 2 CROSSFRAME DETAIL

SEE ADDITIONAL NOTES ON SHEET 22/39 .

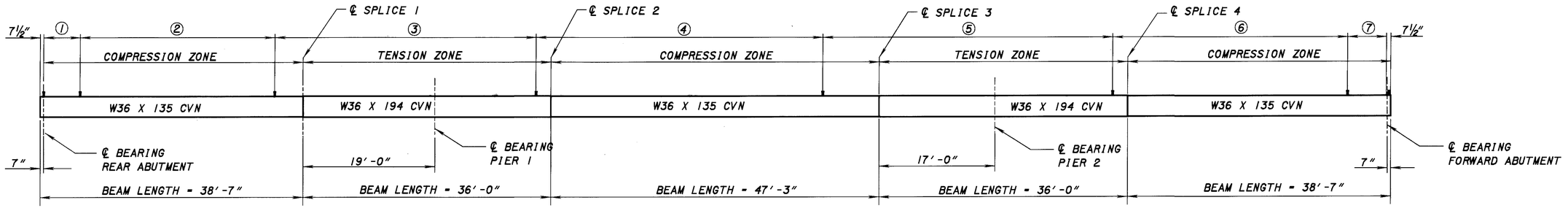
BEAM LINES ARE PARALLEL TO REFERENCE CHORD.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| DB | DB | DFT | 10-22-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203724 R | |

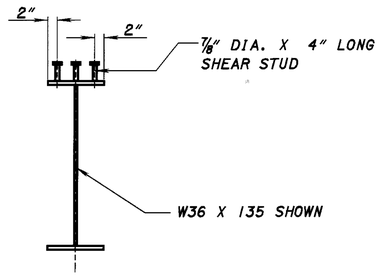
FRAMING PLAN
MED-71-1870 R
I-71 OVER I-271

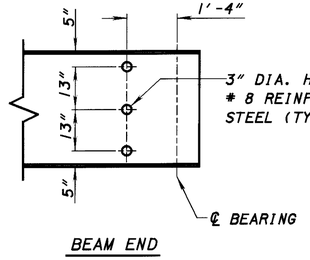
MED-71-15.78




## PROPOSED BEAM LINE LAYOUT
## NORTHBOUND BRIDGE

| SHEAR CONNECTOR SPACING |
|---|
| FOR ALL BEAM LINES |
| CONNECTORS REQUIRED PER BEAM = 507 |
| ① - 4 SPACES @ 9" = 3'-0" |
| ② - 34 SPACES @ 12" = 34'-0" |
| ③ - 19 SPACES @ 24" = 38'-0" |
| ④ - 54 SPACES @ 10" = 45'-0" |
| ⑤ - 19 SPACES @ 24" = 38'-0" |
| ⑥ - 34 SPACES @ 12" = 34'-0" |
| ⑦ - 4 SPACES @ 9" = 3'-0" |



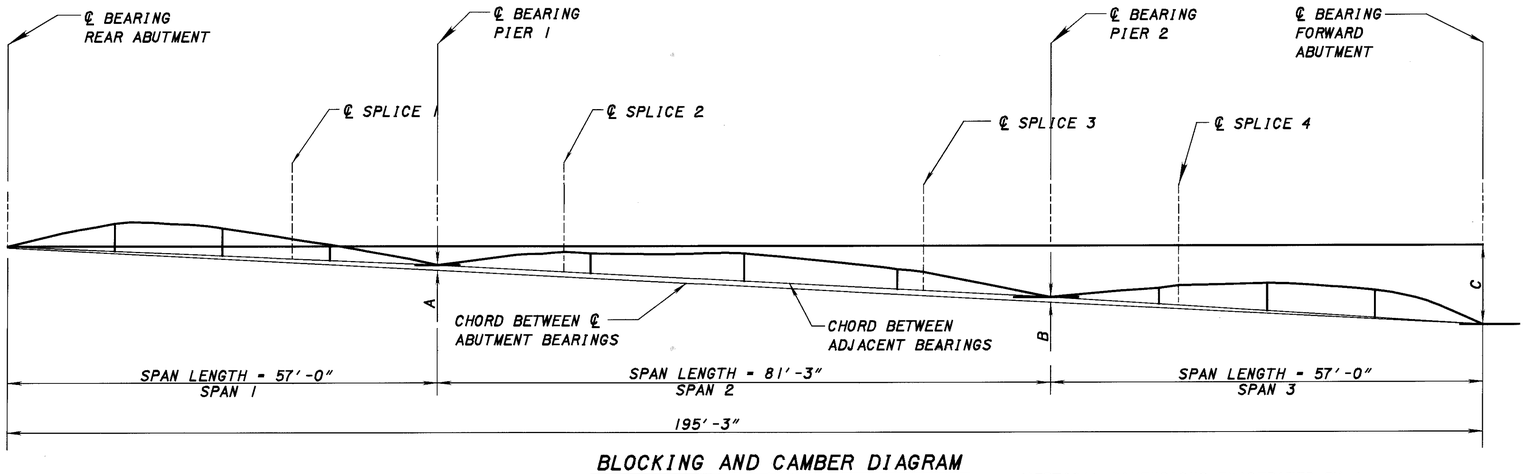




BEAM END

| BEAMLINE | A | B | C |
|---|---|---|---|
| A | 11/16" | 11/16" | 1'-2 9/16" |
| B | 11/16" | 11/16" | 1'-2 11/16" |
| C | 11/16" | 11/16" | 1'-2 7/8" |
| D | 11/16" | 11/16" | 1'-3" |
| E | 11/16" | 11/16" | 1'-3" |
| F | 11/16" | 11/16" | 1'-3 5/16" |
| G | 11/16" | 11/16" | 1'-3 1/2" |
| H | 11/16" | 11/16" | 1'-3 5/8" |

### DEFLECTION AND CAMBER

| | SPAN 1 | | | | SPAN 2 | | | | | SPAN 3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LOCATION OF POINT | 1/4 | 1/2 | SPL | 3/4 | SPL | 1/4 | 1/2 | 3/4 | SPL | 1/4 | SPL | 1/2 | 3/4 |
| BEAM DEFLECTION | 1/16" | 1/16" | 1/16" | 1/16" | 1/8" | 1/8" | 3/16" | 1/8" | 1/8" | 1/16" | 1/16" | 1/16" | 1/16" |
| REMAINING DL DEFLECTION | 1/4" | 1/4" | 1/8" | 1/16" | 7/16" | 1/2" | 7/8" | 1/2" | 7/16" | 1/16" | 1/8" | 1/4" | 1/4" |
| CORRECTION FOR VERT. & HORIZONTAL CURVE | 1/16" | 1/16" | 1/16" | 1/16" | 1/8" | 1/8" | 1/8" | 1/8" | 1/8" | 1/16" | 1/16" | 1/16" | 1/16" |
| SHOP CAMBER | 3/8" | 3/8" | 1/4" | 3/16" | 11/16" | 3/4" | 1 3/16" | 3/4" | 11/16" | 3/16" | 1/4" | 3/8" | 3/8" |




## BLOCKING AND CAMBER DIAGRAM
## NORTHBOUND LANES

VERTICAL DIMENSIONS EXAGERATED BY A FACTOR OF 10 FOR CLARITY

## NOTES & LEGEND:

**STRUCTURAL STEEL:**
WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

ALL BOLTED FIELD SPLICES ARE OPTIONAL, THE CONTRACTOR MAY OMIT THE SPLICES AS DETAILED IN THE PLANS. WHERE SPLICES ARE OMITED, THE LARGER OF THE ADJACENT BEAM TO THE SPLICE SHALL BE REQUIRED. IN ADDITION THE BEAM SIZES AS DETAILED MAY BE SUBSTITUTED FOR LARGER BEAM SIZES WITH THE SAME DEPTH. THE CONTRACTOR SHALL SUBMIT ALL OPTIONS TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO ORDERING ANY STRUCTURAL STEEL.

PENDING ANY CHANGES AS DESCRIBED ABOVE AND TYPE OF CROSSFRAME USED, THE SPACING OF THE INTERMEDIATE CROSSFRAMES SHALL BE ADJUSTED TO AVOID CONFLICT WITH THE SPLICES. THE NUMBER OF CROSSFRAMES SHALL REMAIN THE SAME, A MAXIMUM SPACING OF 18'-0" WILL BE ALLOWED AND SHALL REMAIN IN LINE ACROSS THE WIDTH OF THE STRUCTURE.

FOR SCREED DIAGRAM AND TABLE SEE SHEET 24/39

**WELDED ATTACHMENT:**
WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FACIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

3"ϕ HOLES DRILLED IN THE PROPOSED BEAM SHALL BE PAID UNDER ITEM 863 STRUCTURAL STEEL. THIS PAYMENT IS INCIDENTAL TO THE PAY ITEM.

LATERAL AND LONGITUDINAL SPACING OF WELDED STUD CONNECTORS MAY BE ALTERED AT FIELD SPLICE LOCATIONS TO AVOID INTERFERENCE WITH FLANGE SPLICE BOLTS PROVIDED THAT AT LEAST THE NUMBER OF STUDS SPECIFIED IN THE BEAM ELEVATION ARE PROVIDED.

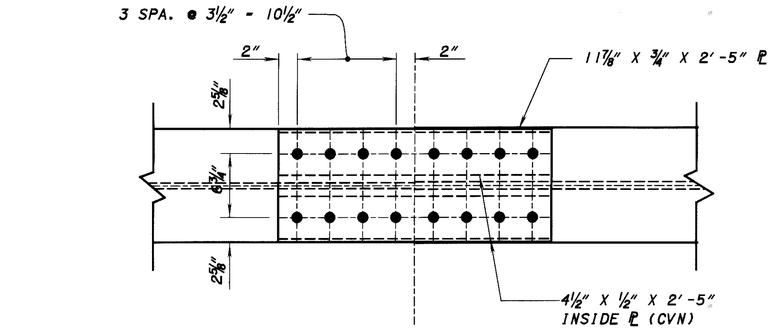
STRUCTURAL STEEL SHALL BE ASTM A572.

ALL BEAM LENGTH DIMENSION ARE AT 60 °F

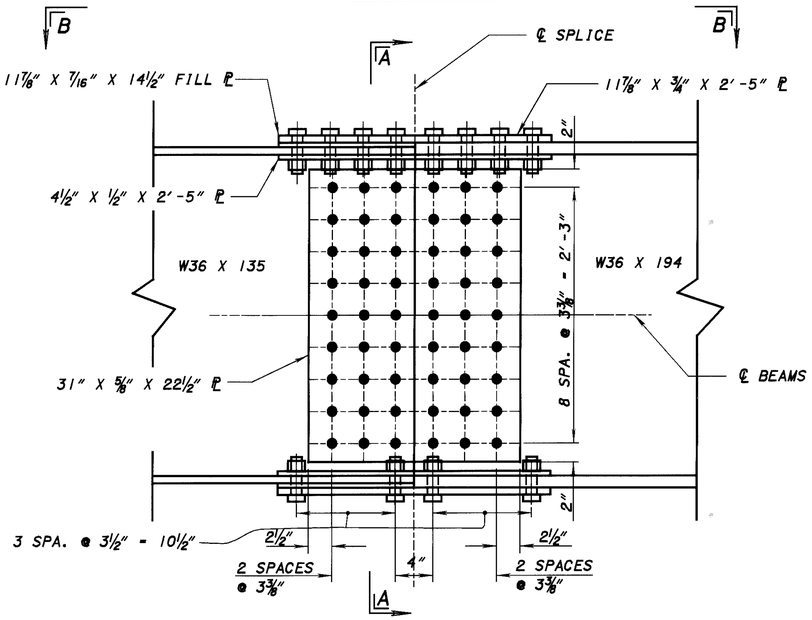
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: DFT | DATE: 10-22-99 | STRUCTURE FILE NUMBER: 5203724 R
DRAWN: DB | REVISED:
DESIGNED: DB | CHECKED: TAA

N.B. SUPERSTRUCTURE DETAILS
MED-71-1870 R
I-71 OVER I-271

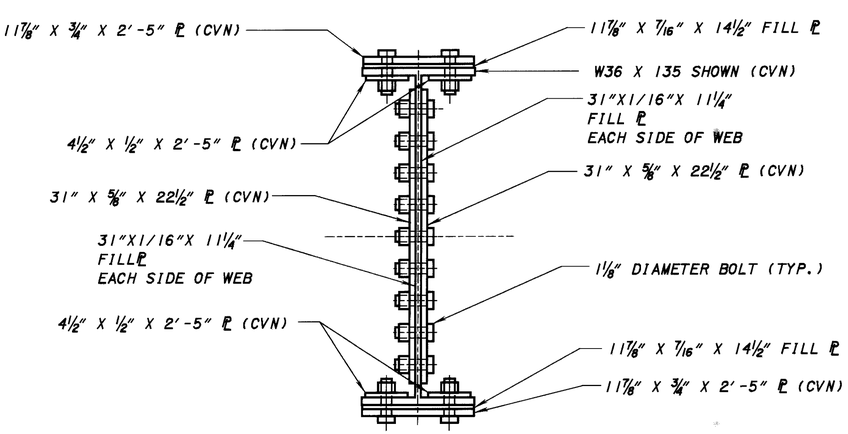
MED-71-15.78




VIEW B-B




SPLICE 1 & 4 DETAILS




SECTION A-A

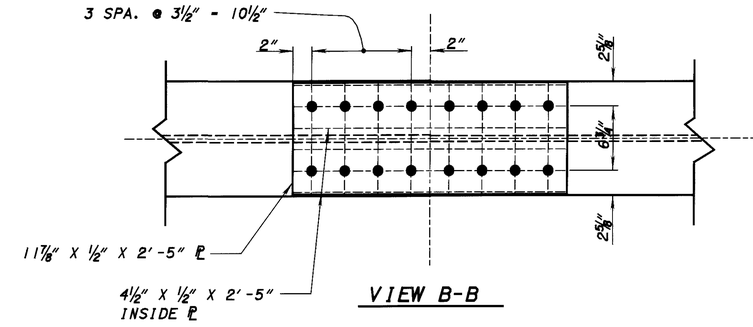
## NOTES

WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

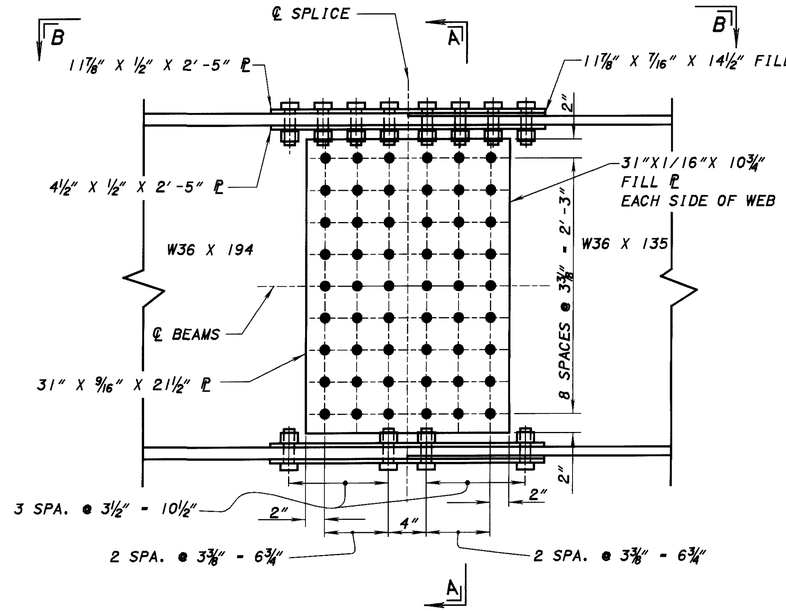
SEE STANDARD DRAWINGS BS-1-93 FOR ADDITIONAL DETAILS AND NOTES NOT SHOWN.

HIGH STRENGTH BOLTS SHALL BE 1⅛" DIAMETER ASTM A-325 UNLESS OTHERWISE NOTED.

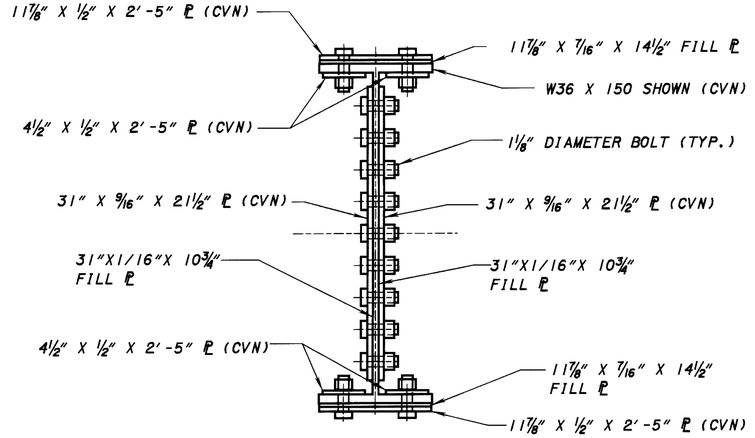
ALL BOLT LAYOUTS FOR BOTH SPLICE 1 AND SPLICE 2 ARE SYMMETRICAL ABOUT THE ℄ OF THE SPLICE AND THE ℄ OF THE BEAMS.




VIEW B-B




SPLICE 2 & 3 DETAILS




SECTION A-A

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|
| DFT | 10-22-99 | 5203724 R |
| DRAWN | REVISED | |
| DB | | |
| DESIGNED | CHECKED | |
| DB | TAA | |

SPLICE DETAILS FOR N.B. BEAMS
MED-71-1870 R
I-71 OVER I-271

MED-71-15.78

23 / 39

759 / 940

## SCREED ELEVATION - SOUTHBOUND BRIDGE

| LOCATION | RIGHT TOE OF PARAPET | | PROFILE GRADE | | RIGHT CONSTR JT | | CLOSURE POUR C.J. | | SOUTHBOUND LANE ℄ | | LEFT TOE OF PARAPET | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 986+31.61 | 1174.07 | 986+17.19 | 1174.51 | 986+14.40 | 1174.59 | 986+11.43 | 1174.68 | 986+09.95 | 1174.72 | 985+95.44 | 1174.40 |
| 1/4 SPAN | 986+45.88 | 1174.02 | 986+31.49 | 1174.46 | 986+28.71 | 1174.55 | 986+25.75 | 1174.63 | 986+24.27 | 1174.68 | 986+09.80 | 1174.36 |
| MIDSPAN | 986+60.18 | 1173.96 | 986+45.82 | 1174.40 | 986+43.04 | 1174.49 | 986+40.09 | 1174.57 | 986+38.61 | 1174.62 | 986+24.17 | 1174.30 |
| FIELD SPLICE #1 | 986+63.94 | 1173.94 | 986+49.34 | 1174.38 | 986+46.81 | 1174.46 | 986+44.62 | 1174.55 | 986+42.28 | 1174.60 | 986+27.95 | 1174.28 |
| 3/4 SPAN | 986+74.47 | 1173.86 | 986+59.14 | 1174.31 | 986+57.37 | 1174.40 | 986+54.42 | 1174.48 | 986+52.95 | 1174.53 | 986+38.54 | 1174.22 |
| ℄ PIER # 1 | 986+88.76 | 1173.80 | 986+74.45 | 1174.25 | 986+71.69 | 1174.34 | 986+68.75 | 1174.43 | 986+67.28 | 1174.47 | 986+52.90 | 1174.16 |
| FIELD SPLICE #2 | 987+07.81 | 1173.72 | 986+93.54 | 1174.17 | 986+90.79 | 1174.26 | 986+87.86 | 1174.35 | 986+86.39 | 1174.40 | 986+72.05 | 1174.09 |
| 1/4 SPAN | 987+12.05 | 1173.71 | 986+97.64 | 1174.16 | 986+95.04 | 1174.25 | 986+92.11 | 1174.34 | 986+90.64 | 1174.38 | 986+76.31 | 1174.08 |
| MIDSPAN | 987+35.31 | 1173.59 | 987+21.11 | 1174.05 | 987+18.36 | 1174.14 | 987+15.44 | 1174.23 | 987+13.98 | 1174.27 | 986+99.70 | 1173.99 |
| 3/4 SPAN | 987+58.56 | 1173.44 | 987+44.40 | 1173.90 | 987+41.67 | 1173.99 | 987+38.76 | 1174.08 | 987+37.30 | 1174.13 | 987+23.07 | 1173.83 |
| FIELD SPLICE #3 | 987+62.84 | 1173.40 | 987+48.69 | 1173.87 | 987+45.96 | 1173.96 | 987+43.05 | 1174.05 | 987+41.60 | 1174.09 | 987+27.37 | 1173.80 |
| ℄ PIER # 2 | 987+81.82 | 1173.26 | 987+67.70 | 1173.73 | 987+64.98 | 1173.82 | 987+62.08 | 1173.91 | 987+60.63 | 1173.96 | 987+46.43 | 1173.67 |
| 1/4 SPAN | 987+96.05 | 1173.16 | 987+81.96 | 1173.63 | 987+79.24 | 1173.72 | 987+76.34 | 1173.81 | 987+74.90 | 1173.86 | 987+60.73 | 1173.57 |
| FIELD SPLICE #4 | 988+06.54 | 1173.11 | 987+91.71 | 1173.58 | 987+89.76 | 1173.67 | 987+86.87 | 1173.76 | 987+85.30 | 1173.81 | 987+71.28 | 1173.53 |
| MIDSPAN | 988+10.27 | 1173.09 | 987+96.21 | 1173.56 | 987+93.49 | 1173.65 | 987+90.61 | 1173.74 | 987+89.16 | 1173.79 | 987+74.94 | 1173.51 |
| 3/4 SPAN | 988+24.48 | 1172.99 | 988+10.45 | 1173.46 | 988+07.74 | 1173.55 | 988+04.86 | 1173.65 | 988+03.42 | 1173.70 | 987+89.32 | 1173.42 |
| ℄ FORWARD ABUTMENT | 988+38.69 | 1172.87 | 988+24.69 | 1173.34 | 988+21.99 | 1173.40 | 988+19.11 | 1173.50 | 988+17.67 | 1173.58 | 988+03.60 | 1173.30 |

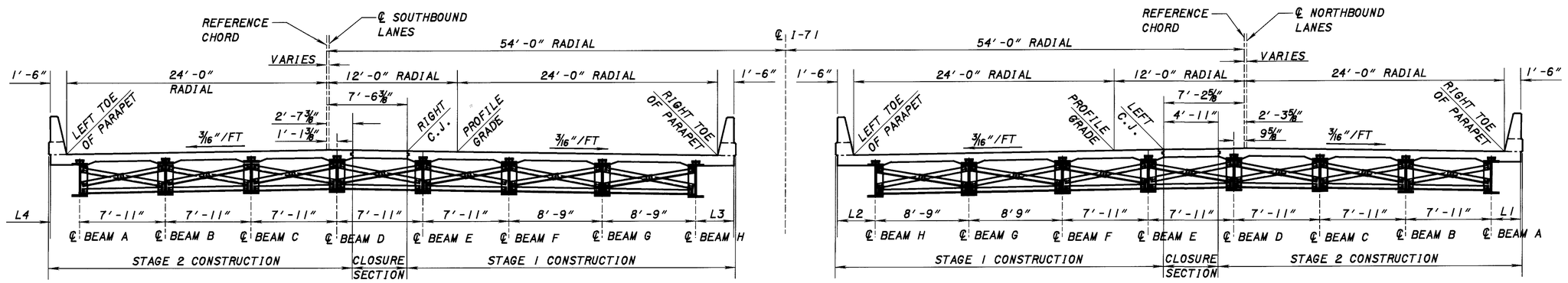
## SCREED ELEVATION - NORTHBOUND BRIDGE

| LOCATION | RIGHT TOE OF PARAPET | | NORTHBOUND LANE ℄ | | CLOSURE POUR C.J. | | LEFT CONSTR JT | | PROFILE GRADE | | LEFT TOE OF PARAPET | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 987+00.02 | 1173.93 | 986+85.96 | 1174.38 | 986+84.51 | 1174.35 | 986+81.62 | 1174.29 | 986+78.90 | 1174.23 | 986+64.76 | 1173.92 |
| 1/4 SPAN | 987+14.24 | 1173.88 | 987+00.20 | 1174.33 | 986+98.76 | 1174.30 | 986+95.88 | 1174.24 | 986+93.17 | 1174.18 | 986+79.05 | 1173.88 |
| MIDSPAN | 987+28.55 | 1173.80 | 987+14.54 | 1174.25 | 987+13.10 | 1174.22 | 987+10.23 | 1174.16 | 987+07.52 | 1174.11 | 986+93.43 | 1173.81 |
| FIELD SPLICE #1 | 987+37.79 | 1173.74 | 987+23.80 | 1174.19 | 987+22.36 | 1174.16 | 987+19.49 | 1174.10 | 987+16.79 | 1174.05 | 987+02.72 | 1173.75 |
| 3/4 SPAN | 987+42.66 | 1173.70 | 987+28.68 | 1174.16 | 987+27.24 | 1174.13 | 987+24.37 | 1174.07 | 987+21.67 | 1174.01 | 987+07.61 | 1173.71 |
| ℄ PIER # 1 | 987+56.72 | 1173.61 | 987+42.77 | 1174.07 | 987+41.34 | 1174.03 | 987+38.47 | 1173.98 | 987+35.78 | 1173.92 | 987+21.76 | 1173.63 |
| FIELD SPLICE #2 | 987+73.65 | 1173.51 | 987+59.74 | 1173.97 | 987+58.31 | 1173.94 | 987+55.45 | 1173.88 | 987+52.76 | 1173.83 | 987+38.96 | 1173.53 |
| 1/4 SPAN | 987+76.94 | 1173.49 | 987+63.04 | 1173.95 | 987+61.61 | 1173.92 | 987+58.75 | 1173.86 | 987+56.06 | 1173.81 | 987+42.08 | 1173.51 |
| MIDSPAN | 987+97.15 | 1173.36 | 987+83.29 | 1173.83 | 987+81.86 | 1173.79 | 987+79.02 | 1173.74 | 987+76.34 | 1173.68 | 987+62.40 | 1173.40 |
| 3/4 SPAN | 988+17.34 | 1173.21 | 988+03.52 | 1173.68 | 988+02.10 | 1173.65 | 987+99.26 | 1173.60 | 987+96.59 | 1173.54 | 987+82.69 | 1173.26 |
| FIELD SPLICE #3 | 988+20.43 | 1173.19 | 988+06.62 | 1173.66 | 988+05.20 | 1173.63 | 988+02.36 | 1173.58 | 987+99.69 | 1173.52 | 987+85.80 | 1173.24 |
| ℄ PIER # 2 | 988+37.33 | 1173.07 | 988+23.54 | 1173.54 | 988+22.13 | 1173.51 | 988+19.30 | 1173.45 | 988+16.63 | 1173.40 | 988+02.77 | 1173.12 |
| 1/4 SPAN | 988+51.47 | 1172.97 | 988+37.72 | 1173.45 | 988+36.31 | 1173.42 | 988+33.48 | 1173.36 | 988+30.82 | 1173.31 | 988+16.99 | 1173.04 |
| FIELD SPLICE #4 | 988+56.19 | 1172.94 | 988+42.44 | 1173.42 | 988+41.03 | 1173.39 | 988+38.21 | 1173.33 | 988+35.45 | 1173.28 | 988+21.73 | 1173.01 |
| MIDSPAN | 988+65.61 | 1172.88 | 988+51.89 | 1173.36 | 988+50.48 | 1173.33 | 988+47.66 | 1173.27 | 988+45.01 | 1173.22 | 988+31.21 | 1172.95 |
| 3/4 SPAN | 988+79.75 | 1172.77 | 988+66.05 | 1173.25 | 988+64.64 | 1173.22 | 988+61.83 | 1173.17 | 988+59.18 | 1173.11 | 988+45.41 | 1172.84 |
| ℄ FORWARD ABUTMENT | 988+93.75 | 1172.63 | 988+80.08 | 1173.11 | 988+78.67 | 1173.08 | 988+75.87 | 1173.03 | 988+73.72 | 1172.98 | 988+59.48 | 1172.71 |

## NOTES

SCREED SETTING ELEVATIONS GIVEN ARE TO THE TOP OF CONCRETE DECK AND ARE REQUIRED PRIOR TO PLACEMENT OF CONCRETE. THEY INCLUDE AN ALLOWANCE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE.

| | C.L. REAR ABUT. | MID-SPAN | C.L. PIER 1 | MID-SPAN | C.L. PIER 2 | MID-SPAN | C.L. FORWARD ABUT. |
|---|---|---|---|---|---|---|---|
| L1 | 2'-7 11/16" | 2'-9 1/8" | 2'-10 1/16" | 2'-10 5/16" | 2'-9 1/4" | 2'-7 11/16" | 2'-5 5/8" |
| L2 | 3'-5 5/8" | 3'-3 5/8" | 3'-2 1/16" | 3'-1 5/16" | 3'-1 5/16" | 3'-1 9/16" | 3'-2 7/8" |
| L3 | 3'-3" | 3'-4 7/16" | 3'-5 3/16" | 3'-4 15/16" | 3'-3 1/8" | 3'-1 3/16" | 2'-10 11/16" |
| L4 | 2'-10 5/16" | 2'-8 1/4" | 2'-6 3/4" | 2'-5 3/4" | 2'-6 3/8" | 2'-7 9/16" | 2'-9 3/8" |




SOUTHBOUND LANE BRIDGE

TRANSVERSE SECTION

NORTHBOUND LANE BRIDGE

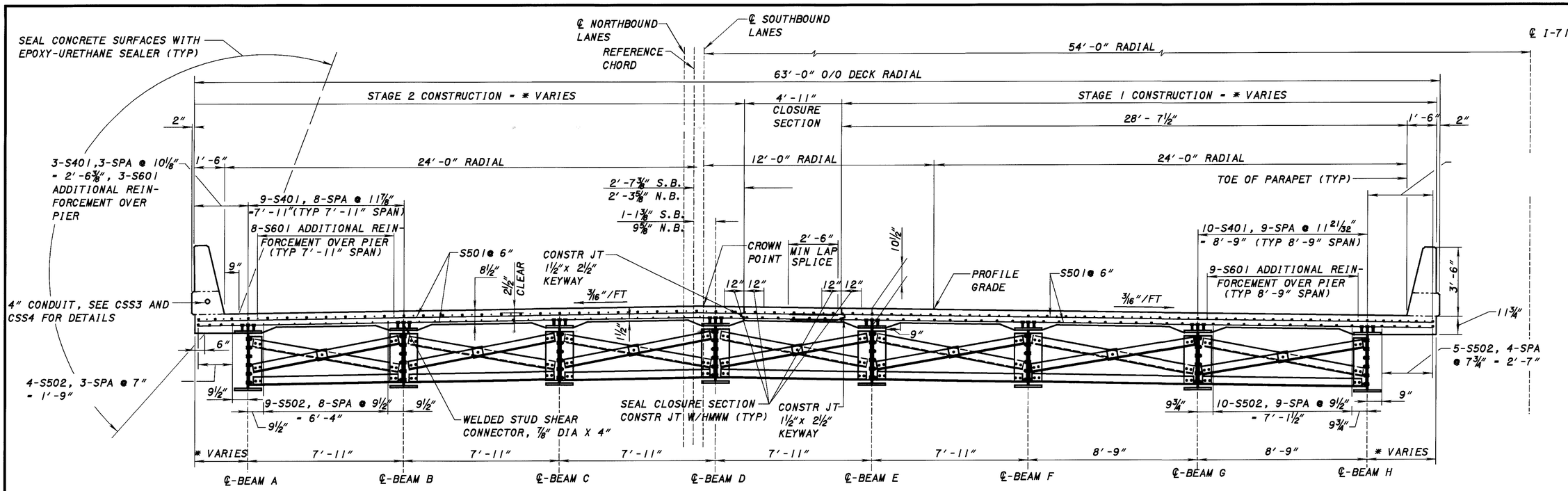
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 10-22-99
STRUCTURE FILE NUMBER: 5203694L & 5203724R
DRAWN: DB
REVISED:
DESIGNED: DB
CHECKED: TAA

SCREED ELEVATIONS
MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78

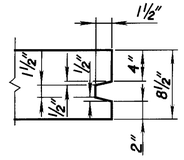
24 / 39

760 / 940




## TRANSVERSE SECTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND MIRROR IMAGE)




KEYWAY DETAILS AT CLOSURE SECTION

NOTES:

1. HMWM: HIGH MOLECULAR WEIGHT METHACRYLATE, SEE SUPPLEMENTAL SPEC.
2. ALL REINFORCING STEEL IS EPOXY COATED.
3. FOR PARAPET DETAILS, SEE SHEET 33/39 .
4. REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH HIGH PERFORMANCE CONCRETE.
5. FOR CROSS-FRAME CONNECTION DETAILS SEE STD DWG GSD-1-96, GENERAL STEEL DETAILS.
6. DECK SLAB DEPTH: THE THEORETICAL DESIGN THICKNESS FOR THE SLAB IS 8½". THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFIGURATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. A HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12".
7. * - FOR DIMENSIONS THAT VARY SEE SHEET 24/39 .

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| DB | DB | DFT | 10-22-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203694L & 5203724R | |

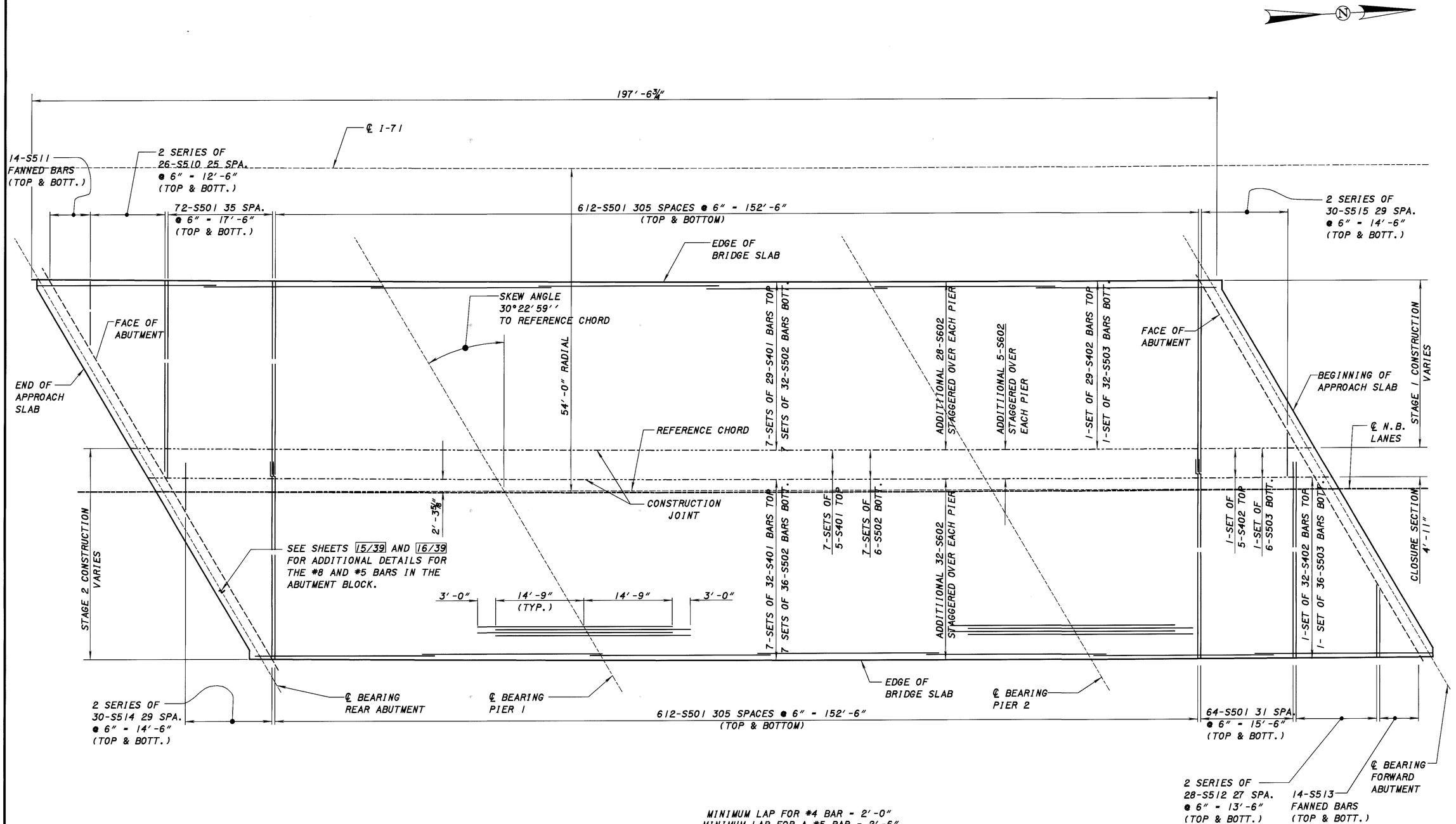
SUPERSTRUCTURE DETAILS

MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78

25/39

761/940




MINIMUM LAP FOR #4 BAR = 2′-0″
MINIMUM LAP FOR A #5 BAR = 2′-6″

## DECK REINFORCEMENT PLAN
### NORTHBOUND LANES

## NOTES

HORIZONTAL REINFORCING STEEL TO BE PLACE PARALLEL TO REFERENCE CHORD. TRANSVERSE REINFORCING STEEL TO BE PLACED PERPINDICULAR TO REFERENCE CHORD.

REFERENCE CHORD IS A CHORD BETWEEN ℄ ABUTMENT BEARING.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

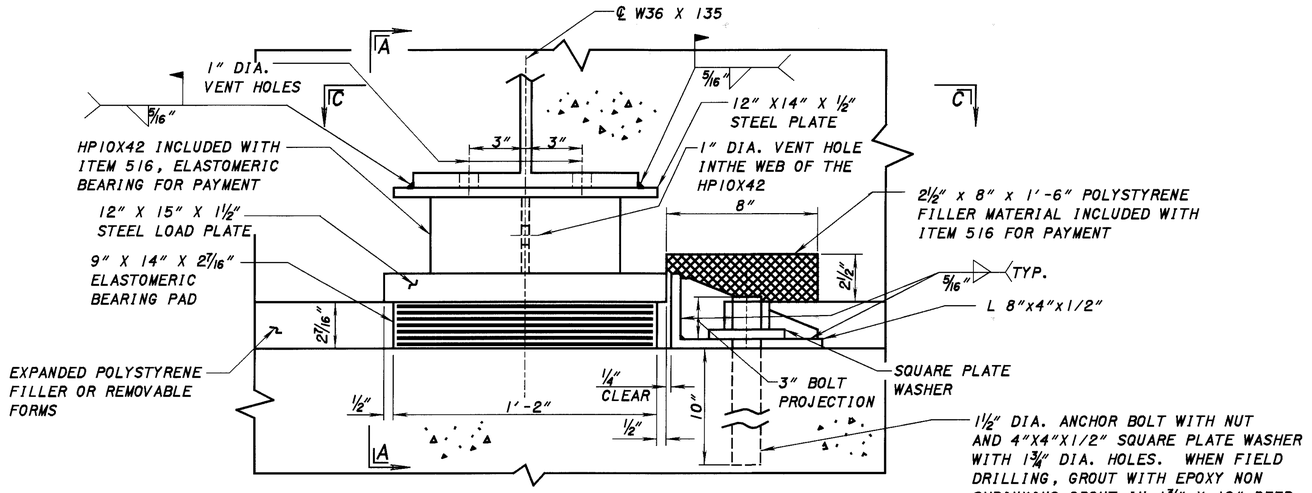
| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| DB | DB | DFT | 10-22-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203724 R | |

SUPERSTRUCTURE DETAILS
MED-71-1870 R
I-71 OVER I-271

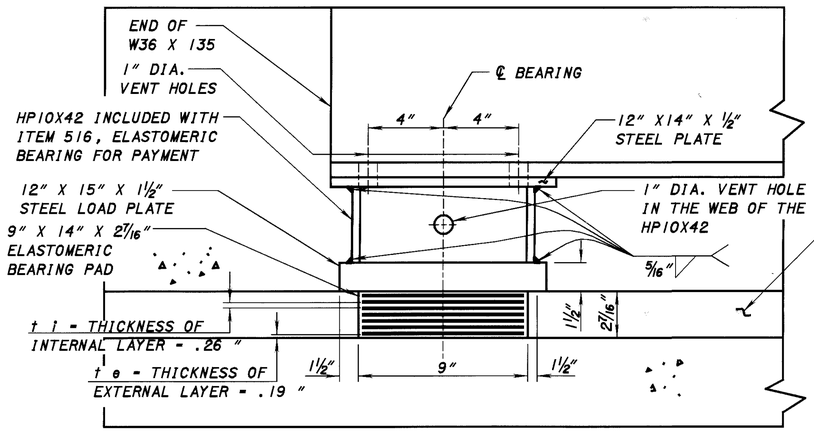
MED-71-15.78

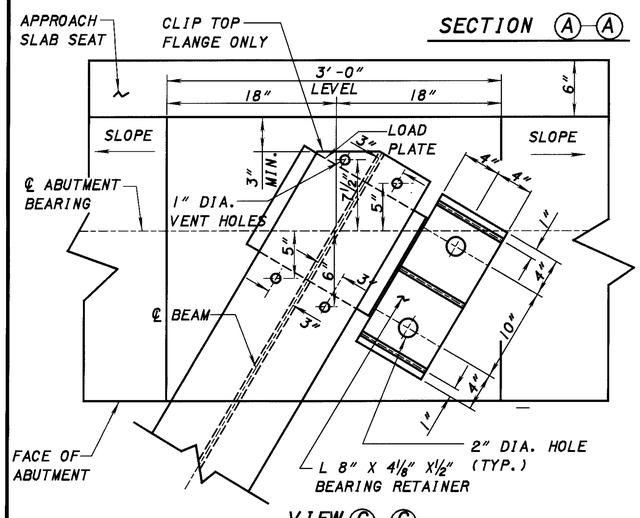
26/39

762/940



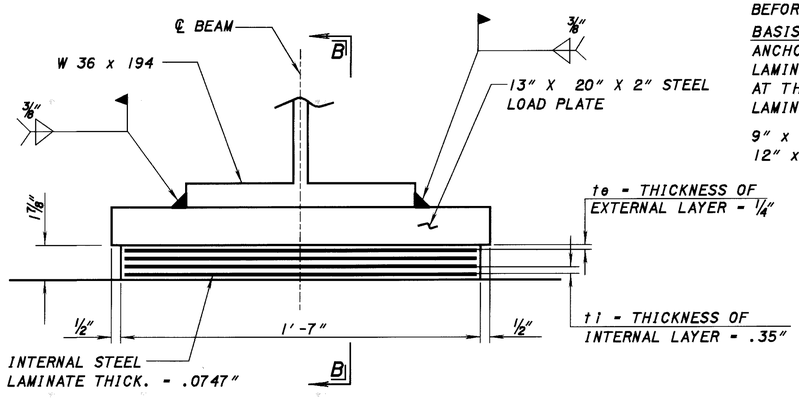

## REAR AND FORWARD ABUTMENT
## LAMINATED ELASTOMERIC EXPANSION BEARING



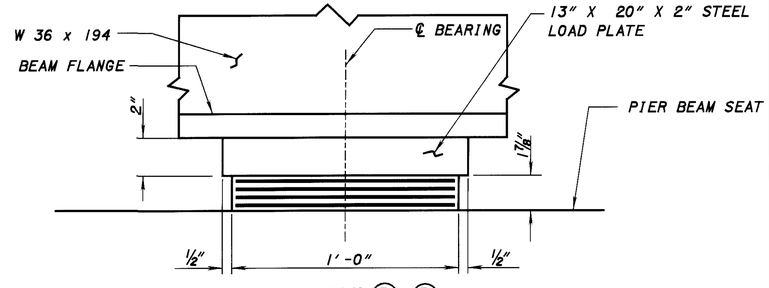




SECTION (A)–(A)

VIEW (C)–(C)




## PIER 1 AND 2
## LAMINATED ELASTOMERIC EXPANSION BEARING




SECTION (B)–(B)

## BEARING TABLE

| BEARING LOCATION | TYPE | L | W | $t_i$ in. | $t_e$ in. | $n_1$ | $n_2$ | STEEL LOAD ℄ | TOTAL HEIGHT* | DL, Kips | LL, Kips | TOTAL, Kips |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REAR & FORWARD ABUTMENT | EXP | 9" | 14" | .26" | .19" | 6 | 7 | 12"x15"x1½" | 3 5/16" | 68 | 50 | 118 |
| PIER 1 & 2 | EXP | 12" | 19" | .35" | .25" | 3 | 4 | 13"x20"x2" | 3⅞" | 147 | 62 | 209 |

$n_1$ - NUMBER OF INTERNAL ELASTOMER LAYERS, $t_i$ ELASTOMER LAYERS ARE 50 DUROMETERS
$n_2$ - NUMBER OF STEEL LAMINATES, 0.0747" THICKNESS * TOTAL HEIGHT INCLUDES LOAD PLATE

## NOTES:

INSTALLATION PROCEDURE: ANCHOR BOLTS SHALL BE EITHER CAST IN PLACE BY USE OF A TEMPLATE OR FIELD DRILLED AND GROUTED AT THE CONTRACTOR'S OPTION. CARE SHALL BE TAKEN TO ASSURE THAT THE ANCHOR BOLTS DO NOT INTERFERE WITH REINFORCING STEEL.

MATERIALS: THE HP SHAPE (SUPPORT MEMBER) SHALL BE A36 STEEL. STEEL PLATES SHALL BE THE SAME GRADE OF THE STEEL AS THE PROPOSED STEEL BEAM. THE HP SHAPE AND STEEL PLATES SHALL HAVE THE SAME PROTECTIVE COATING AS THE MAIN STRUCTURAL STEEL.

PAYMENT FOR MATERIALS, LABOR, FABRICATION, PROTECTIVE COATING, VENT HOLES AND INSTALLATION OF THE HP SHAPE AND STEEL PLATE SHALL BE INCLUDED WITH ITEM 516 ABUTMENT ELASTOMERIC BEARINGS, AS PER PLAN, FOR PAYMENT.

WELDING: WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

BRIDGE SEAT REINFORCING:
REINFORCING STEEL IN THE VICINITY OF BRIDGE RETAINER SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING RETAINER ANCHOR HOLES OR THE PRE-SETTING OF BEARING RETAINING ANCHORS.

ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL LOAD PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).

BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60°F + 10°F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDERFORMED SHAPE AT 60°F +/- 10°F.

BEARING RETAINERS SHALL BE INSTALLED AS SHOWN ON SHEET 21/39 .

CONSTRUCTION PROCEDURE: ANCHOR BOLTS SHALL BE EITHER CAST IN PLACE BY USE OF A TEMPLATE OR FIELD DRILLED AND EPOXY GROUTED AFTER THE ERECTION OF THE STRUCTURAL STEEL BEAMS. CARE SHALL BE TAKEN TO ASSURE THAT THE ANCHOR BOLTS DO NOT INTEFERE WITH REINFORCING STEEL. THE RETAINER SHALL BE POSITIONED AND TIGHTENED BEFORE THE CONCRETE IS POURED FOR THE BEAM END ENCASEMENT. A BLOCK OF POLYSTYRENE FILLER MATERIAL, 8" IN WIDTH AND THE HEIGHT AS REQUIRED BY THE PLANS SHALL BE INSTALLED OVER THE TOP OF THE RETAINER ASSEMBLY BEFORE THE CONCRETE PLACEMENT.

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, ANCHOR RODS, HP10x42, STEEL PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):

9" x 14" x 2 7/16" WITH 12" x 15" x 1½" LOAD PLATE, AS PER PLAN
12" x 19" x 1⅞" WITH 13" x 20" x 2" LOAD PLATE.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
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| DB | DB | DFT | 10-22-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203724 R | |

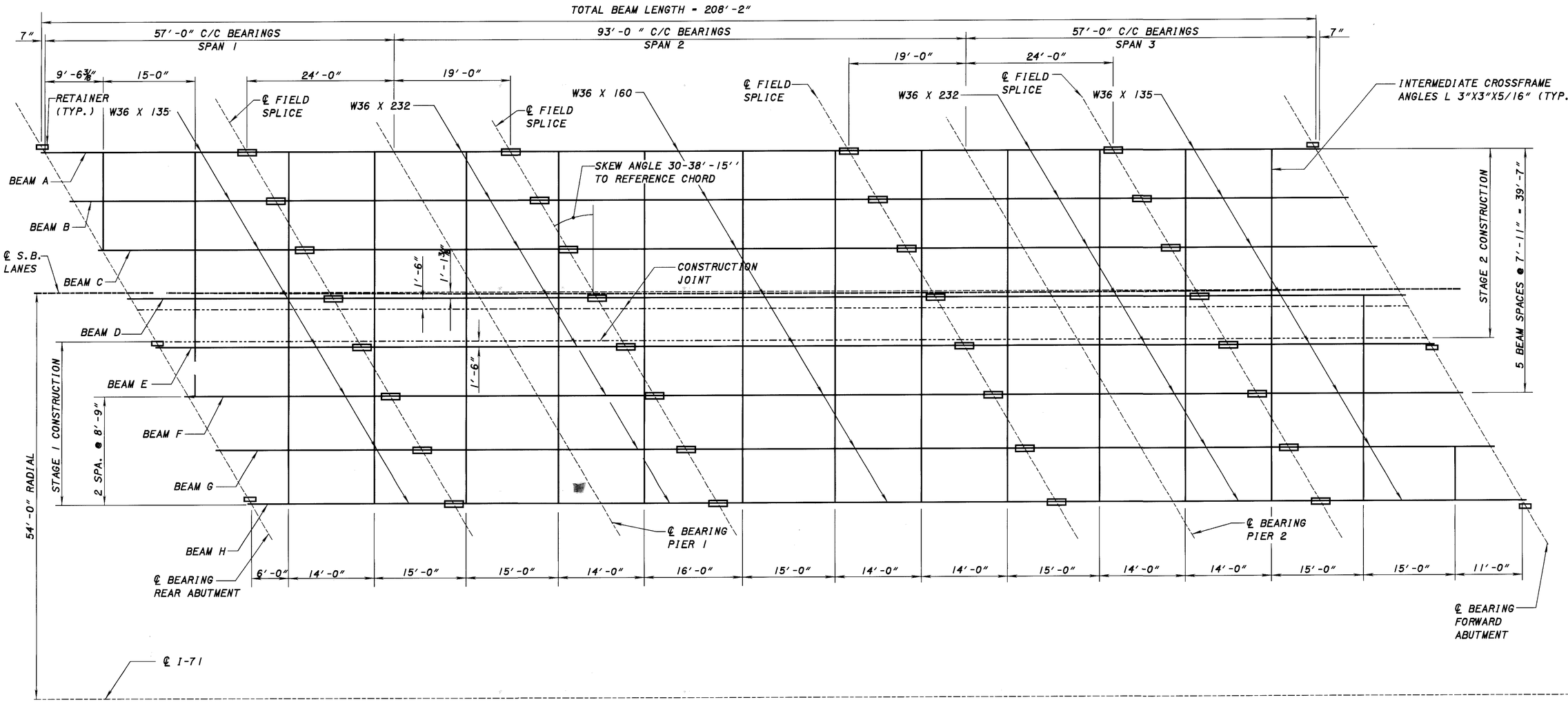
# N.B. BEARING PAD DETAILS

MED-71-1870 R
I-71 OVER I-271

MED-71-15.78

27 / 39

763
940




## FRAMING PLAN

SOUTHBOUND LANES SHOWN

**NOTES:**

FOR INTERMEDIATE CROSSFRAME DETAILS SEE STANDARD DRAWING GSD-1-96 TYPE 2 CROSSFRAME DETAIL

FOR ADDITIONAL NOTES SEE SHEET 29/39 .

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT DATE 10-22-99
STRUCTURE FILE NUMBER 5203694 L

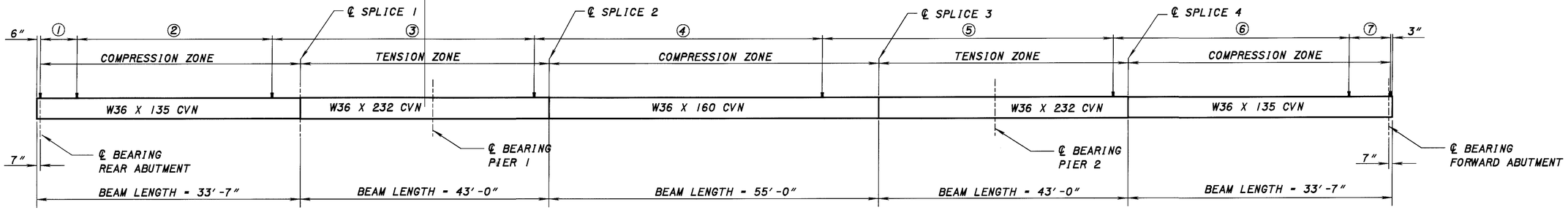
DRAWN DB REVISED
DESIGNED DB CHECKED TAA

FRAMING PLAN
MED-71-1870 L
I-71 OVER I-271

MED-71-15.78

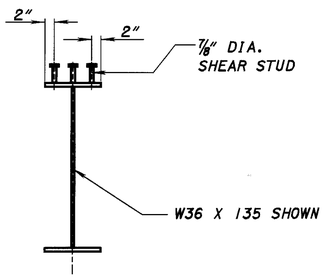
28/39

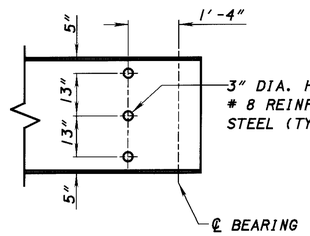
764/940




## PROPOSED BEAM LINE LAYOUT
## SOUTHBOUND BRIDGE

| SHEAR CONNECTOR SPACING |
|---|
| FOR ALL BEAM LINES |
| CONNECTORS REQUIRED PER BEAM = 531 |
| ① - 8 SPACES @ 9" = 6'-0" |
| ② - 24 SPACES @ 12" = 24'-0" |
| ③ - 23 SPACES @ 24" = 46'-0" |
| ④ - 66 SPACES @ 10" = 55'-0" |
| ⑤ - 23 SPACES @ 24" = 46'-0" |
| ⑥ - 24 SPACES @ 12" = 24'-0" |
| ⑦ - 8 SPACES @ 9" = 6'-0" |



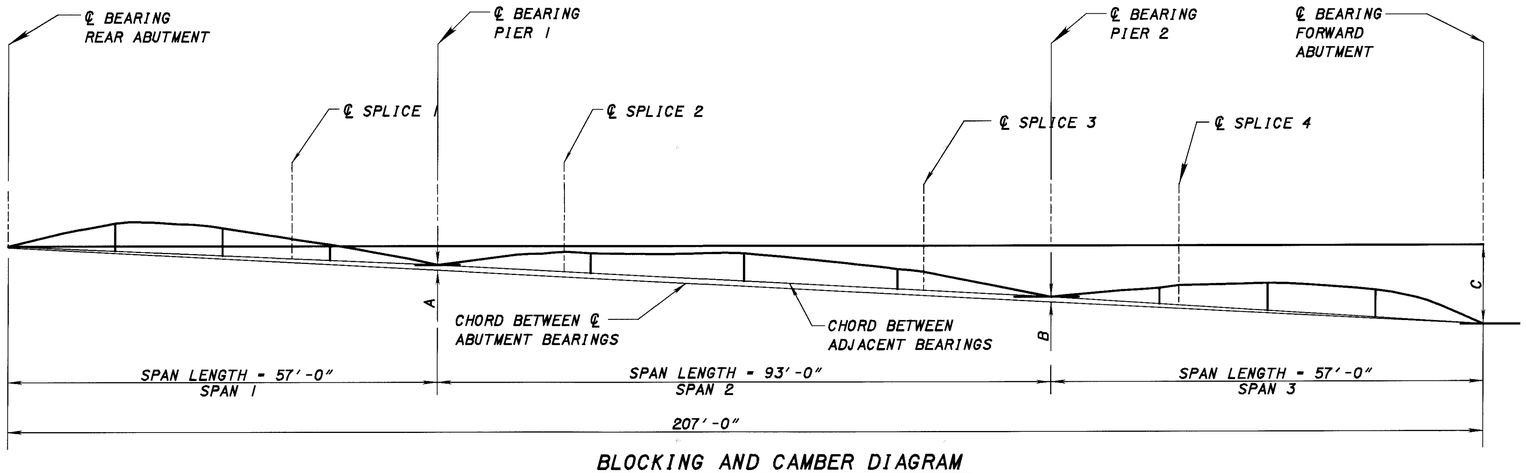




BEAM END

| BEAMLINE | A | B | C |
|---|---|---|---|
| A | 3/4" | 3/4" | 1'-2 3/4" |
| B | 3/4" | 3/4" | 1'-2 13/16" |
| C | 3/4" | 3/4" | 1'-2" |
| D | 3/4" | 3/4" | 1'-1 7/8" |
| E | 3/4" | 3/4" | 1'-1 11/16" |
| F | 3/4" | 3/4" | 1'-1 1/2" |
| G | 3/4" | 3/4" | 1'-1 5/16" |
| H | 3/4" | 3/4" | 1'-1 3/16" |

### DEFLECTION AND CAMBER

| | SPAN 1 | | | | SPAN 2 | | | | | SPAN 3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LOCATION OF POINT | 1/4 | 1/2 | SPL | 3/4 | SPL | 1/4 | 1/2 | 3/4 | SPL | 1/4 | SPL | 1/2 | 3/4 |
| BEAM DEFLECTION | 1/16" | 1/16" | -1/16" | -1/16" | 3/16" | 3/16" | 5/16" | 3/16" | 3/16" | -1/16" | -1/16" | 1/16" | 1/16" |
| REMAINING DL DEFLECTION | 1/8" | 1/8" | 0" | 0" | 7/8" | 1 1/8" | 1 7/8" | 1 1/8" | 7/8" | 0" | 0" | 1/8" | 1/8" |
| CORRECTION FOR VERT. & HORIZONTAL CURVE | 1/16" | 1/16" | 1/8" | 1/16" | 1/8" | 3/16" | 1/4" | 3/16" | 1/8" | 1/16" | 1/8" | 1/8" | 1/16" |
| SHOP CAMBER | 1/4" | 5/16" | 1/16" | 0" | 1 3/16" | 1 1/2" | 2 7/16" | 1 1/2" | 1 3/16" | 0" | 1/16" | 5/16" | 1/4" |




## BLOCKING AND CAMBER DIAGRAM
## SOUTHBOUND LANES

VERTICAL DIMENSIONS EXAGGERATED BY A FACTOR OF 10 FOR CLARITY

## NOTES & LEGEND:

**STRUCTURAL STEEL:**
WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

ALL BOLTED FIELD SPLICES ARE OPTIONAL, THE CONTRACTOR MAY OMIT THE SPLICES AS DETAILED IN THE PLANS. WHERE SPLICES ARE OMITED, THE LARGER OF THE ADJACENT BEAM TO THE SPLICE SHALL BE REQUIRED. IN ADDITION THE BEAM SIZES AS DETAILED MAY BE SUBSTITUTED FOR LARGER BEAM SIZES WITH THE SAME DEPTH. THE CONTRACTOR SHALL SUBMIT ALL OPTIONS TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO ORDERING ANY STRUCTURAL STEEL.

PENDING ANY CHANGES AS DESCRIBED ABOVE AND TYPE OF CROSSFRAME USED, THE SPACING OF THE INTERMEDIATE CROSSFRAMES SHALL BE ADJUSTED TO AVOID CONFLICT WITH THE SPLICES. THE NUMBER OF CROSSFRAMES SHALL REMAIN THE SAME, A MAXIMUM SPACING OF 18'-0" WILL BE ALLOWED AND SHALL REMAIN IN LINE ACROSS THE WIDTH OF THE STRUCTURE.

FOR SCREED DIAGRAM AND TABLE SEE SHEET 24/39

**WELDED ATTACHMENT:**
WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FACIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

3"ϕ HOLES DRILLED IN THE PROPOSED BEAM SHALL BE PAID UNDER ITEM 863 STRUCTURAL STEEL. THIS PAYMENT IS INCIDENTAL TO THE PAY ITEM.

LATERAL AND LONGITUDINAL SPACING OF WELDED STUD CONNECTORS MAY BE ALTERED AT FIELD SPLICE LOCATIONS TO AVOID INTERFERENCE WITH FLANGE SPLICE BOLTS PROVIDED THAT AT LEAST THE NUMBER OF STUDS SPECIFIED IN THE BEAM ELEVATION ARE PROVIDED.

STRUCTURAL STEEL SHALL BE ASTM A572.

ALL BEAM LENGTH DIMENSION ARE AT 60 °F

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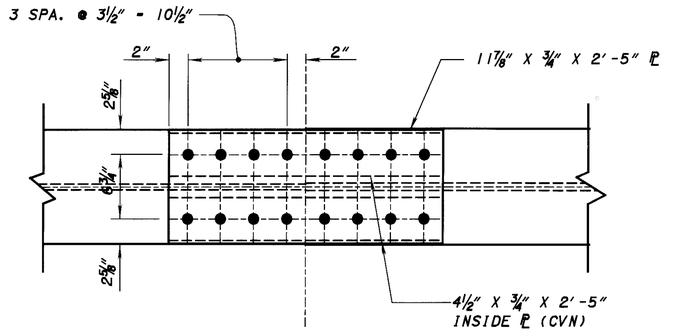
REVIEWED: DFT
DATE: 10-22-99
STRUCTURE FILE NUMBER: 5203694 L
DRAWN: DB
REVISED:
DESIGNED: DB
CHECKED: TAA

S.B. SUPERSTRUCTURE DETAILS
MED-71-1870 L
I-71 OVER I-271

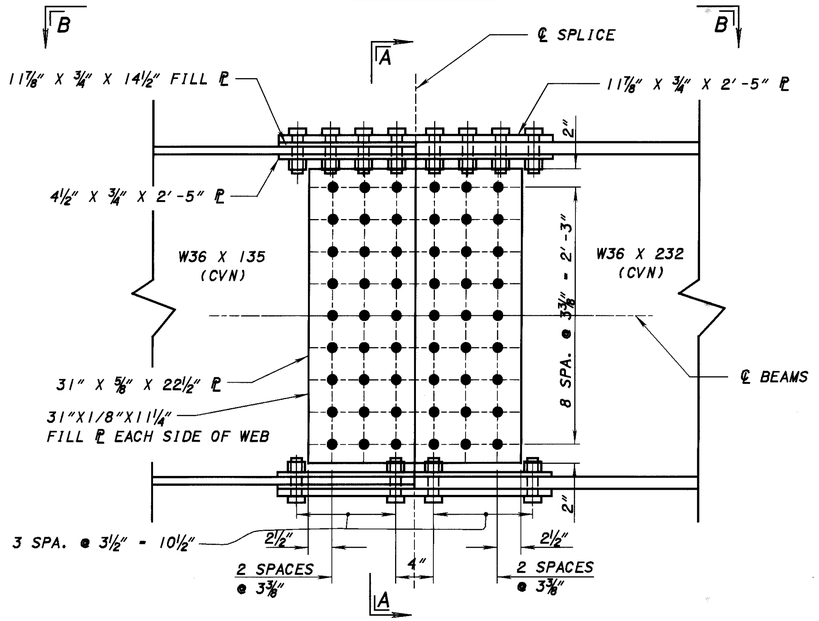
MED-71-15.78



765/940

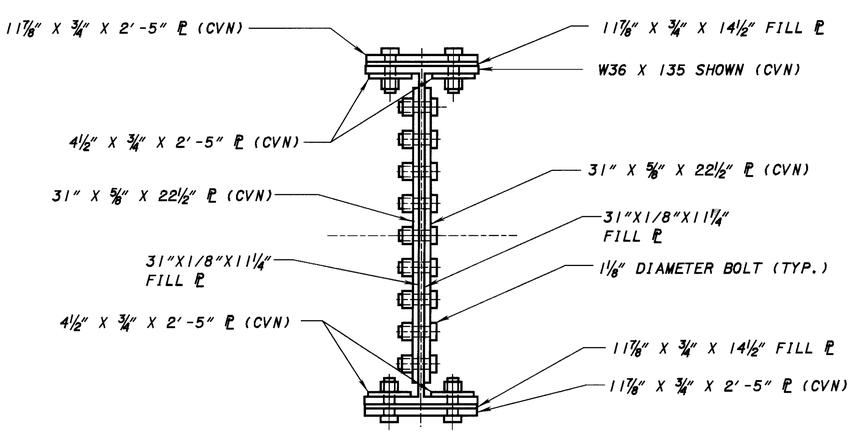



VIEW B-B




SPLICE 1 & 4 DETAILS

FOR SOUTHBOUND LANES




SECTION A-A

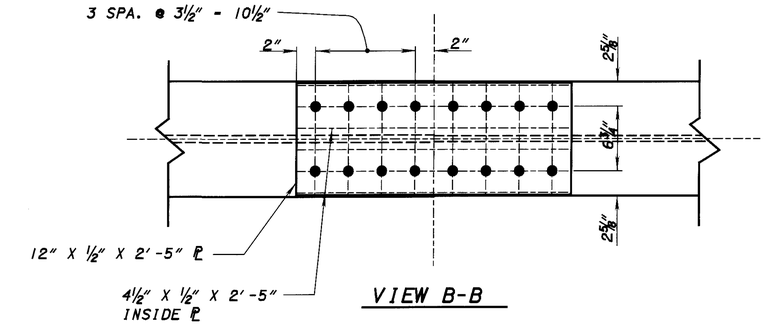
## NOTES

WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

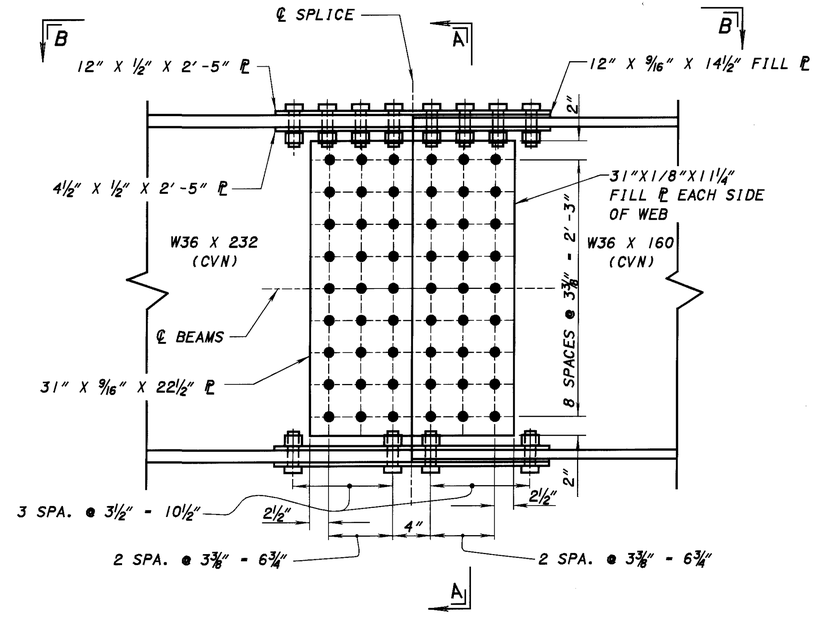
SEE STANDARD DRAWINGS BS-1-93 FOR ADDITIONAL DETAILS AND NOTES NOT SHOWN.

HIGH STRENGTH BOLTS SHALL BE 1⅛" DIAMETER ASTM A-325 UNLESS OTHERWISE NOTED.

ALL BOLT LAYOUTS FOR BOTH SPLICE 1 AND SPLICE 2 ARE SYMMETRICAL ABOUT THE ℄ OF THE SPLICE AND THE ℄ OF THE BEAMS.

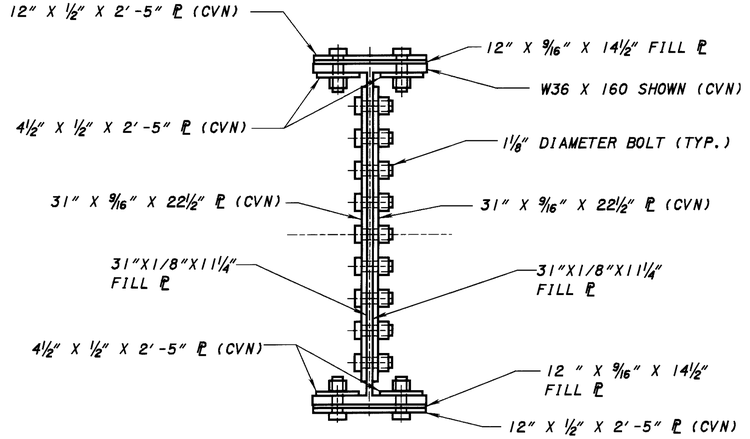



VIEW B-B




SPLICE 2 & 3 DETAILS

FOR SOUTHBOUND LANES




SECTION A-A

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

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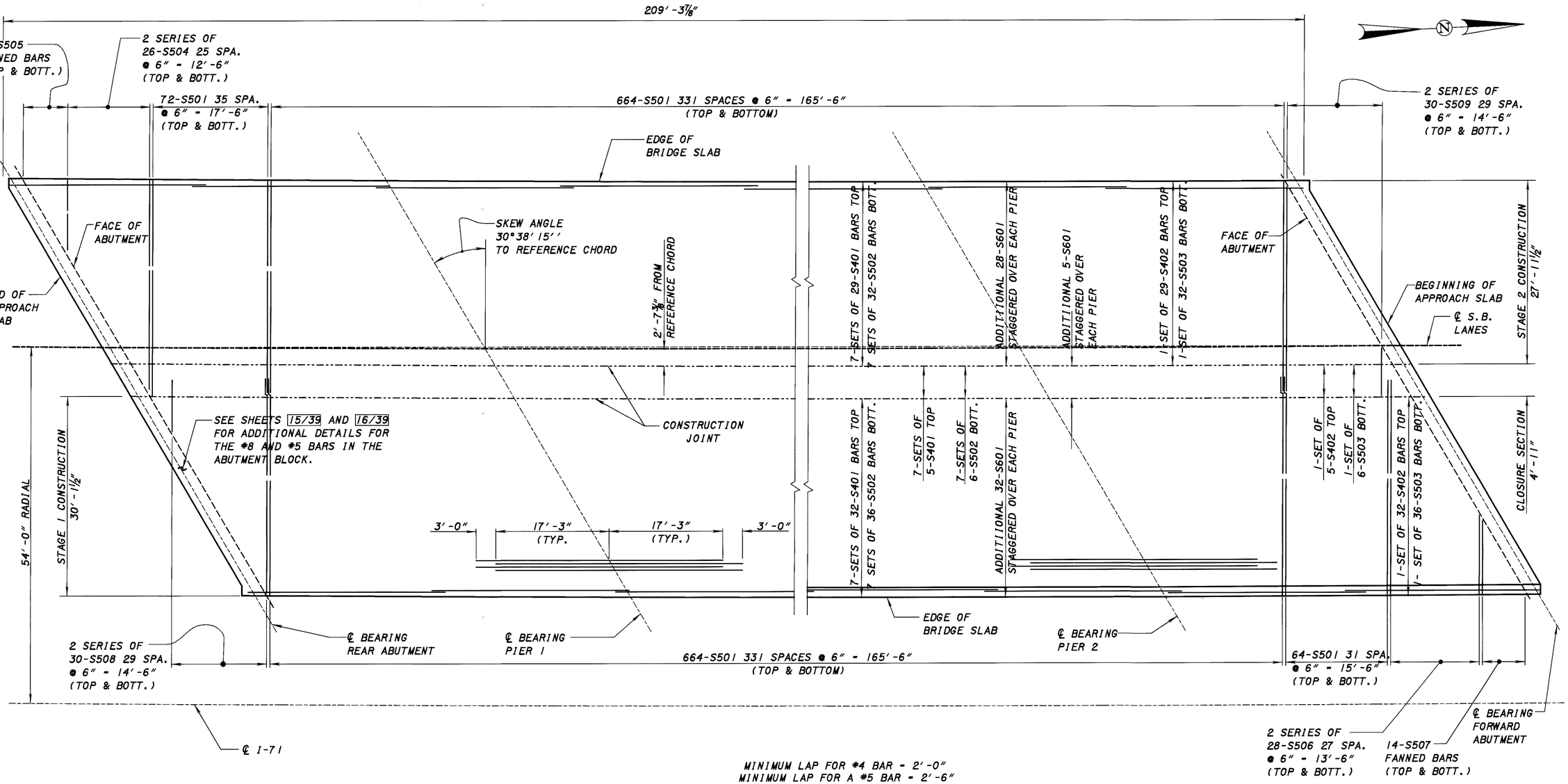
# SPLICE DETAILS S.B. BEAMS

MED-71-1870 L
I-71 OVER I-271

MED-71-15.78




MINIMUM LAP FOR #4 BAR - 2′-0″
MINIMUM LAP FOR A #5 BAR - 2′-6″

## DECK REINFORCEMENT PLAN

### SOUTHBOUND LANES

## NOTES

HORIZONTAL REINFORCING STEEL TO BE PLACE PARALLEL TO REFERENCE CHORD. TRANSVERSE REINFORCING STEEL TO BE PLACED PERPINDICULAR TO REFERENCE CHORD.

REFERENCE CHORD IS A CHORD BETWEEN ℄ ABUTMENT BEARING.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

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| DB | DB | DFT | 10-22-99 | 5203694 L |
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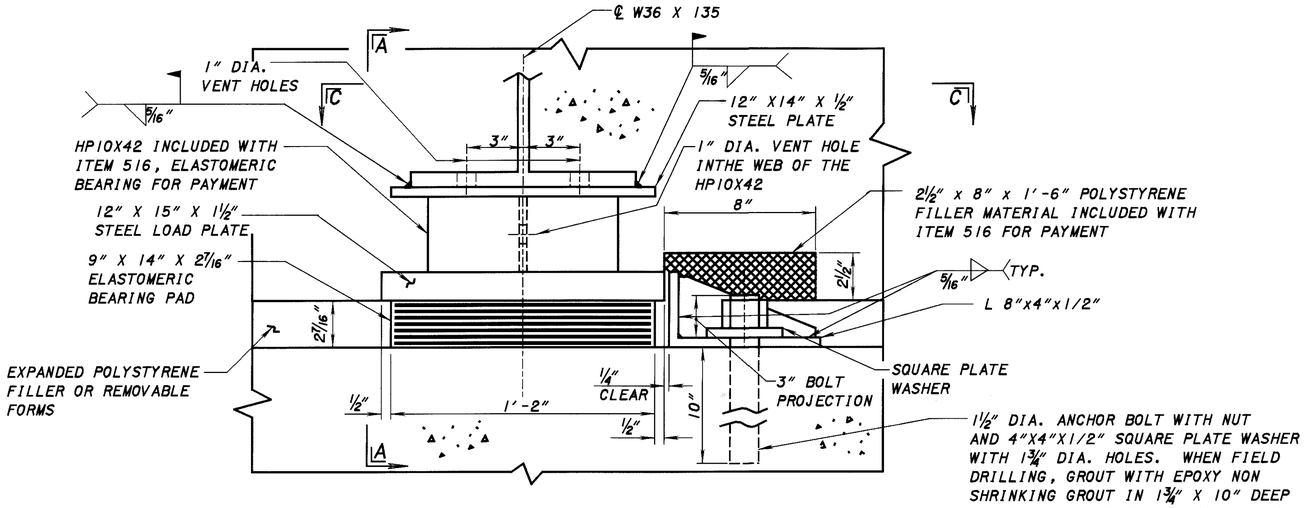
| TAA | | | | |

SUPERSTRUCTURE DETAILS
MED-71-1870 L
I-71 OVER I-271

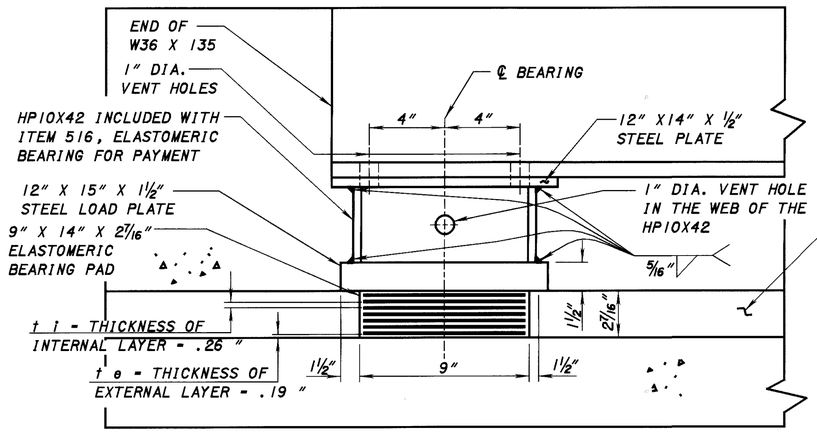
MED-71-15.78

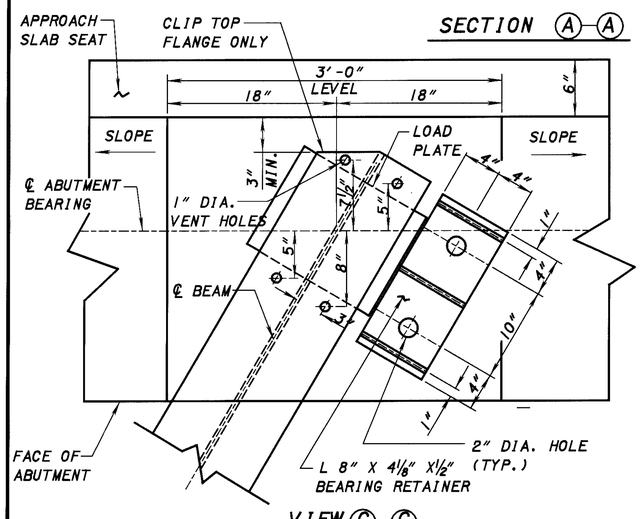
31 / 39

767 / 940



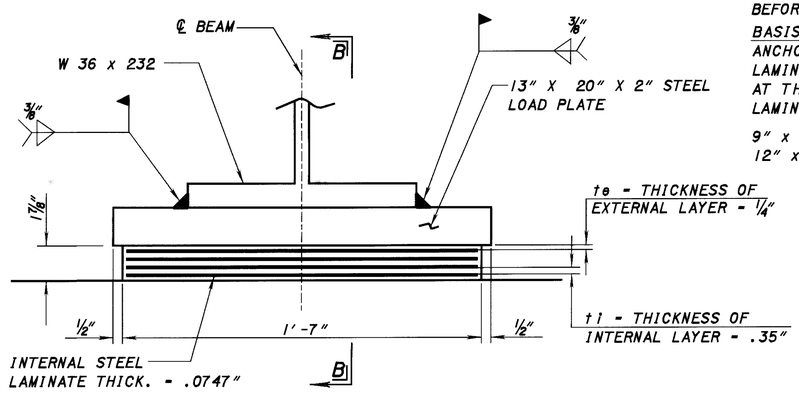

## REAR AND FORWARD ABUTMENT
## LAMINATED ELASTOMERIC EXPANSION BEARING



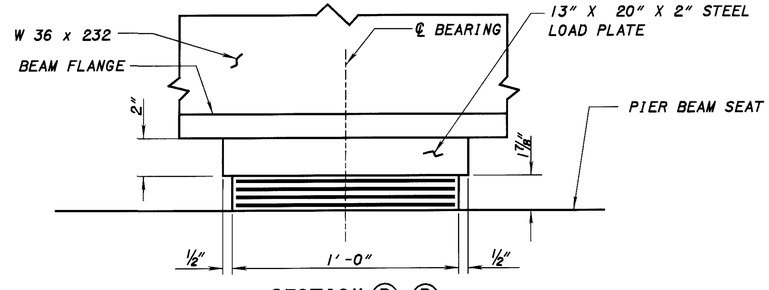




VIEW (C)–(C)

SECTION (A)–(A)




## PIER 1 AND 2
## LAMINATED ELASTOMERIC EXPANSION BEARING




SECTION (B)–(B)

## BEARING TABLE

| BEARING LOCATION | TYPE | L | W | $t_1$ In. | $t_e$ In. | $n_1$ | $n_2$ | STEEL LOAD ℄ | TOTAL HEIGHT* | DL, Kips | LL, Kips | TOTAL, Kips |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REAR & FORWARD ABUTMENT | EXP | 9" | 14" | .26" | .19" | 6 | 7 | 12"x15"x1 1/2" | 3 5/16" | 61 | 50 | 111 |
| PIER 1 & 2 | EXP | 12" | 19" | .35" | .25" | 3 | 4 | 13"x20"x2" | 3 7/16" | 157 | 66 | 223 |

$n_1$ - NUMBER OF INTERNAL ELASTOMER LAYERS, $t_1$ ELASTOMER LAYERS ARE 50 DUROMETERS
$n_2$ - NUMBER OF STEEL LAMINATES, 0.0747" THICKNESS * TOTAL HEIGHT INCLUDES LOAD PLATE

## NOTES:

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MATERIALS: THE HP SHAPE (SUPPORT MEMBER) SHALL BE A36 STEEL. STEEL PLATES SHALL BE THE SAME GRADE OF THE STEEL AS THE PROPOSED STEEL BEAM. THE HP SHAPE AND STEEL PLATES SHALL HAVE THE SAME PROTECTIVE COATING AS THE MAIN STRUCTURAL STEEL.

PAYMENT FOR MATERIALS, LABOR, FABRICATION, PROTECTIVE COATING, VENT HOLES AND INSTALLATION OF THE HP SHAPE AND STEEL PLATE SHALL BE INCLUDED WITH ITEM 516 ABUTMENT ELASTOMERIC BEARINGS, AS PER PLAN, FOR PAYMENT.

WELDING: WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

BRIDGE SEAT REINFORCING:
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ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL LOAD PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).

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BEARING RETAINERS SHALL BE INSTALLED AS SHOWN ON SHEET 28/39 .

CONSTRUCTION PROCEDURE: ANCHOR BOLTS SHALL BE EITHER CAST IN PLACE BY USE OF A TEMPLATE OR FIELD DRILLED AND EPOXY GROUTED AFTER THE ERECTION OF THE STRUCTURAL STEEL BEAMS. CARE SHALL BE TAKEN TO ASSURE THAT THE ANCHOR BOLTS DO NOT INTEFERE WITH REINFORCING STEEL. THE RETAINER SHALL BE POSITIONED AND TIGHTENED BEFORE THE CONCRETE IS POURED FOR THE BEAM END ENCASEMENT. A BLOCK OF POLYSTYRENE FILLER MATERIAL, 8" IN WIDTH AND THE HEIGHT AS REQUIRED BY THE PLANS SHALL BE INSTALLED OVER THE TOP OF THE RETAINER ASSEMBLY BEFORE THE CONCRETE PLACEMENT.

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DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

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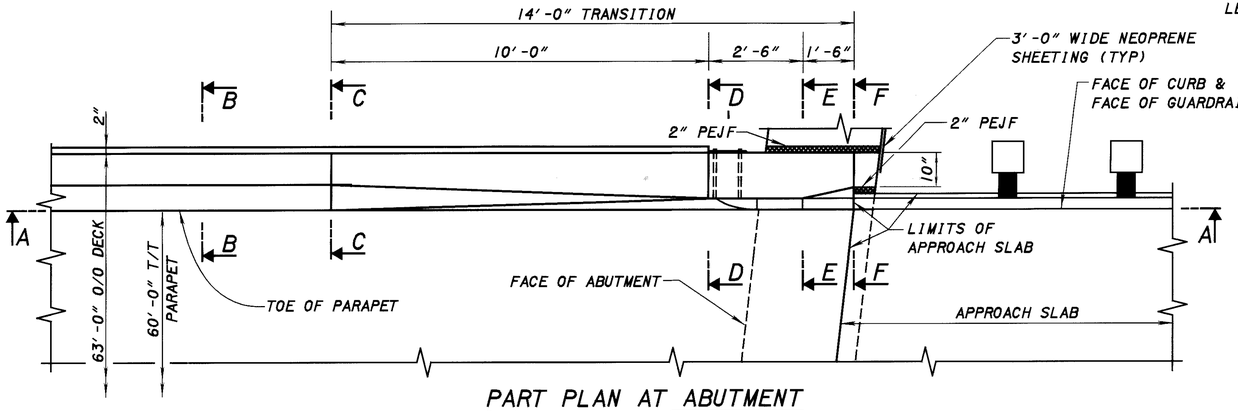
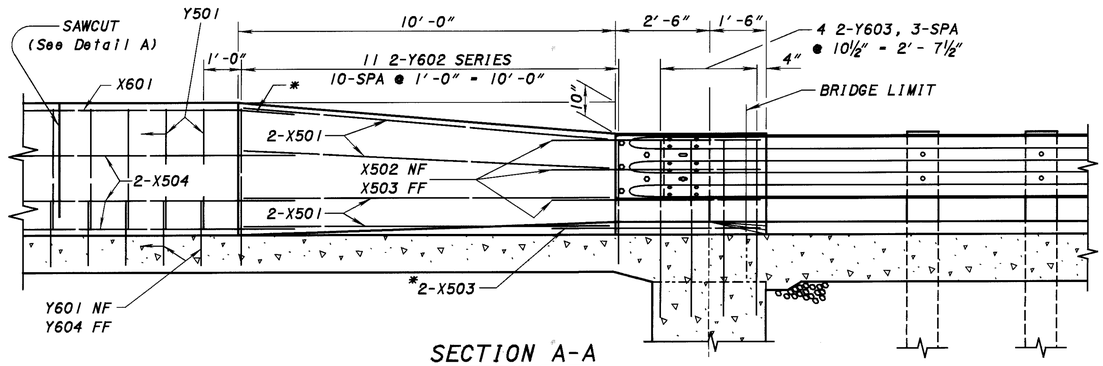
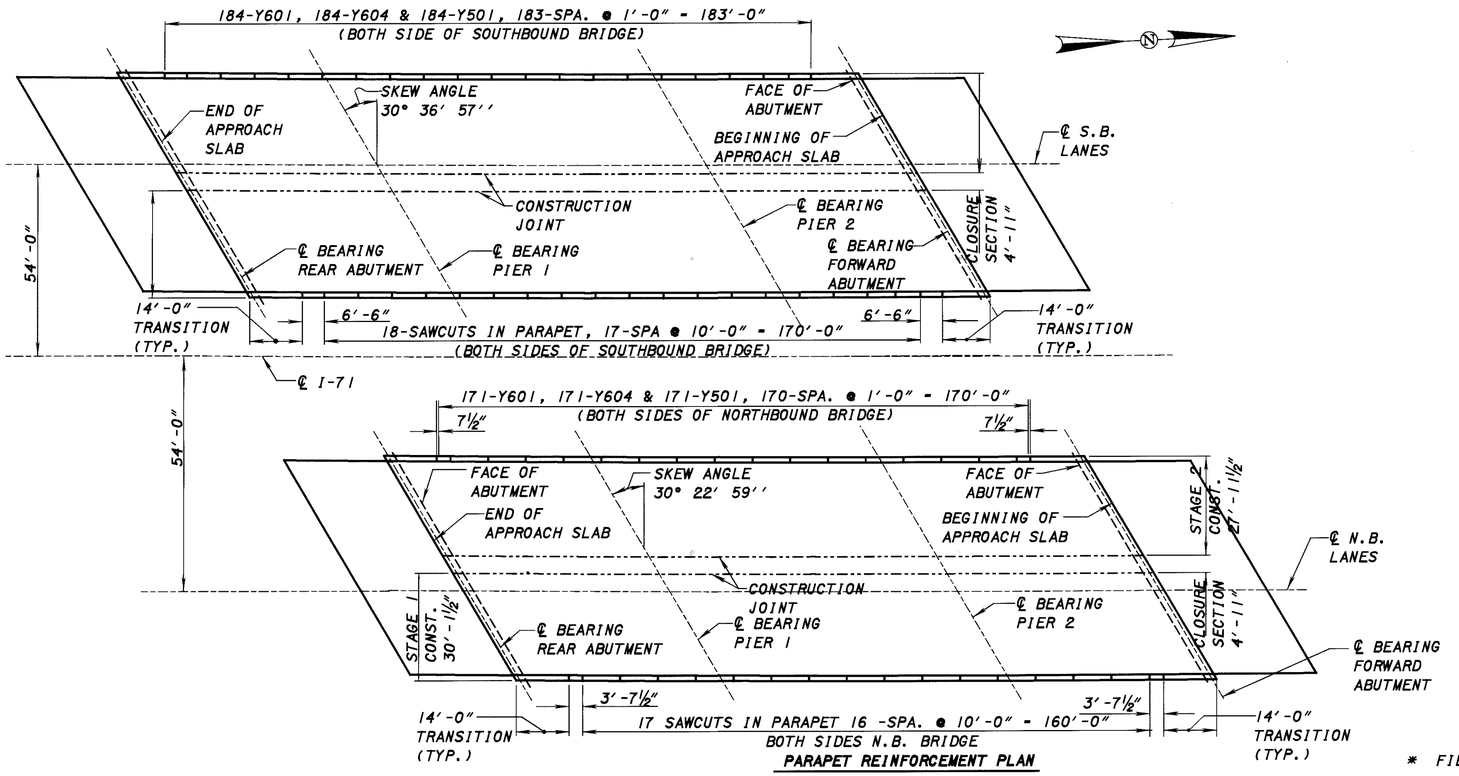



## PART PLAN AT ABUTMENT

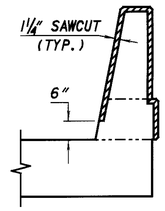



## SECTION A-A




## PARAPET REINFORCEMENT PLAN

LEGEND: NF - NEAR FACE
FF - FAR FACE
* FIELD BEND IF NECESSARY




## DETAIL A

(Section through sawcut)
Sawcut Perimeter = 7′-6″

**CONTROL JOINTS FOR CONCRETE PARAPETS:** THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

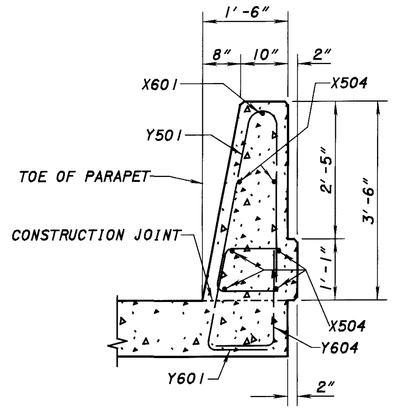
THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL TO A MINIMUM DEPTH OF ONE INCH CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE-HALF INCH OF THE OUTSIDE FACE OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

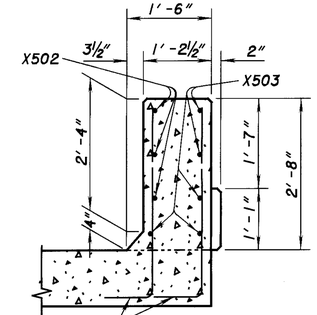
**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

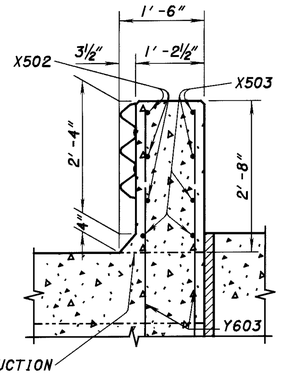
MIN LAP SPLICE LENGTH: #5 BAR - 2′-6″
#6 BAR - 3′-0″



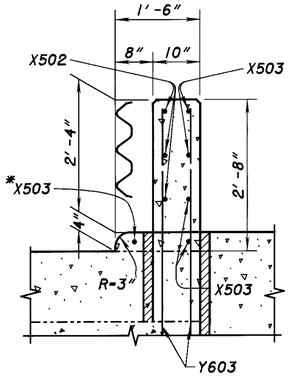

## SECTION B-B & C-C




## SECTION D-D




## SECTION E-E




## SECTION F-F

* FIELD BEND IF NECESSARY

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED: DFT | DATE: 10-22-99 | STRUCTURE FILE NUMBER: 5203694L/5203724R
DRAWN: DB | REVISED:
DESIGNED: DB | CHECKED: TAA

SUPERSTRUCTURE DETAILS
MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78

33 / 39

769
940

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | INC |
| ABUTMENTS - MED-71-1870 L | | | | | | | | | | | | |
| A501 | 12 | | 12 | | 24 | 18'-9" | 469 | STR | | | | |
| A502 | | | | | 0 | | | | | | | |
| A503 | 38 | 36 | 34 | 38 | 146 | 12-1" | 1840 | 2 | 4'-10" | 2'-8" | 4'-10" | |
| | | | | | | | | | | | | |
| A504 | 38 | 36 | 34 | 38 | 146 | 17'-1" | 2601 | 2 | 7'-4" | 2'-8" | 7'-4" | |
| | | | | | | | | | | | | |
| A505 | 46 | 47 | 46 | 46 | 185 | 17'-1" | 3296 | 3 | 5'-8" | 2'-7" | | |
| A506 | 31 | 32 | 34 | 32 | 129 | 8'-7" | 1155 | 2 | 3'-4" | 2'-2" | 3'-4" | |
| A507 | 31 | 32 | 34 | 32 | 129 | 10'-11" | 1469 | 3 | 2'-8" | 2'-6" | | |
| A508 | 1 | | | | 1 | 22'-5" | 24 | 2 | 10'-0" | 2'-8" | 10'-0" | |
| A509 | | | | | 0 | | | | | | | |
| A510 | | | | | 0 | | | | | | | |
| A511 | | | | | 0 | | | | | | | |
| A512 | 1 | | | 1 | 3 | 10'-8" | 41 | 19 | 8'-2" | 2'-3" | 1'-0" | |
| A513 | | | | | 0 | | | | | | | |
| A514 | 1 | 1 | 1 | 1 | 4 | 5'-1" | 27 | STR | | | | |
| A515 | | | | | 0 | | | | | | | |
| A516 | 1 SERIES OF 6 | | | | 1 SERIES OF 6 | 22'-9" TO 27'-11" | 160 | 2 | 10'-8" TO 12'-9" | 2'-8" | 10'-8" TO 12'-9" | 5" |
| A517 | 1 | 1 | 1 | 1 | 4 | 3'-6" | 15 | STR | | | | |
| | | | | | | | | | | | | |
| A518 | | 1 | | | | 9'-8" | 11 | STR | | | | |
| | | | | | | | | | | | | |
| A519 | 1 | | | 1 | 2 | 11'-3" | 20 | 19 | 8'-2" | 0'-11" | 0'-5" | |
| A520 | | | | 1 | 1 | 21'-9" | 23 | 2 | 9'-8" | 2'-8" | 9'-8" | |
| A521 | | | | 1 | 1 | 23'-11" | 25 | 2 | 10'-9" | 2'-8" | 10'-9" | |
| A522 | 1 | 1 | | | 2 | 20'-5" | 43 | 2 | 9'-5" | 2'-8" | 9'-5" | |
| A523 | 1 | | 1 | 1 | 3 | 7'-7" | 24 | STR | | | | |
| A524 | 2 | 1 | 1 | 1 | 4 | 9'-11" | 42 | STR | | | | |
| A525 | | | | | 0 | | | | | | | |
| A526 | | | 1 | | 1 | 21'-9" | 23 | 2 | 9'-8" | 2'-8" | 9'-8" | |
| A527 | | | 1 | 1 | 2 | 4'-4" | 9 | STR | | | | |
| A528 | 1 | | 1 | 1 | 3 | 6'-0" | 19 | STR | | | | |
| A529 | 1 | | 1 | 1 | 3 | 8'-4" | 27 | STR | | | | |
| A530 | | | 1 | | 1 | 11'-3" | 12 | 19 | 9'-10" | 1'-2" | 0'-9" | |
| A531 | | | 1 | | 1 | 23'-2" | 24 | 2 | 10'-4½" | 2'-8" | 10'-4½" | |
| A532 | | | | | 0 | | | | | | | |
| A533 | | | | | 0 | | | | | | | |
| A534 | | | | | 0 | | | | | | | |
| A535 | | | 1 SERIES OF 6 | | 1 SERIES OF 6 | 24'-8" TO 28'-9" | 167 | 2 | 11'-1½" TO 13'-2" | 2'-8" | 11'-1½" TO 13'-2" | 9½" |
| A536 | | | | | | 0 | | | | | | |
| A537 | | | | | | 0 | | | | | | |
| A538 | | | | | | 0 | | | | | | |
| A539 | 12 | 12 | 12 | 12 | 48 | 30'-0" | 1502 | STR | | | | |
| A540 | | | | | | 0 | | | | | | |
| A541 | | | | | | 0 | | | | | | |
| A542 | | | | | | 0 | | | | | | |
| A543 | | | | | | 0 | | | | | | |
| A544 | | | | | | 0 | | | | | | |
| A545 | | | | | | 0 | | | | | | |

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | INC |
| ABUTMENTS - MED-71-1870 L | | | | | | | | | | | | |
| A546 | | | | | 0 | | | | | | | |
| A547 | | | 1 | | 1 | 12'-11" | 13 | 19 | 9'-10" | 2'-6½" | 1'-8" | |
| A548 | | | | | 0 | | | | | | | |
| A549 | | | | | 0 | | | | | | | |
| A550 | | 2 | | | 2 | 28'-7" | 60 | 2 | 13'-1" | 2'-8" | 13'-1" | |
| A551 | | 1 SERIES OF 6 | | | 1 SERIES OF 6 | 24'-11" TO 28'-8" | 167 | 2 | 11'-3" TO 13'-1½" | 2'-8" | 11'-3" TO 13'-1½" | 4½" |
| A552 | | | 3 | | 3 | 28'-9" | 90 | 2 | 13'-2" | 2'-8" | 13'-2" | |
| A553 | | 1 | | | 1 | 11'-2" | 12 | 24 | 8'-3" | 2'-6" | 1'-3" | |
| A554 | | 1 | | | 1 | 9'-7" | 11 | 24 | 8'-3" | 1'-2" | 0'-7" | |
| A555 | | 12 | | | 12 | 20'-4" | 254 | STR | | | | |
| A556 | | 1 | | | 1 | 23'-5" | 25 | 2 | 10'-6" | 2'-8" | 10'-6" | |
| A557 | | 1 | | | 1 | 22'-7" | 24 | 2 | 10-1" | 2'-8" | 10'-1" | |
| A558 | | 1 | | | 1 | 24'-1" | 25 | 2 | 10-10" | 2'-8" | 10'-10" | |
| A559 | | | 1 | 1 | 2 | 9'6" | 20 | STR | | | | |
| A560 | | | 1 | 1 | 2 | 7'-11" | 17 | STR | | | | |
| A565 | | 1 | | | 1 | 5'-10" | 6 | STR | | | | |
| A566 | | 1 | | | 1 | 8'-11" | 9 | STR | | | | |
| A567 | | 1 | | | 1 | 10'-2" | 11 | STR | | | | |
| A568 | | 1 | | | 1 | 8'-7" | 9 | STR | | | | |
| A569 | | 1 | | | 1 | 7'-5" | 8 | STR | | | | |
| A801 | 8 | | 8 | | 16 | 19'-4" | 826 | STR | | | | |
| A802 | 2 SERIES OF 4 | | 2 SERIES OF 4 | | 4 SERIES OF 4 | 33'-5" TO 34'-8" | 1590 | STR | | | | 5" |
| A803 | 3 | | 3 | | 6 | 34'-8" | 554 | STR | | | | |
| A804 | 3 | | 3 | | 6 | 33'-5" | 536 | STR | | | | |
| A805 | 8 | 8 | 8 | 8 | 32 | 30'-0" | 2563 | STR | | | | |
| A806 | | 2 SERIES OF 4 | | 2 SERIES OF 4 | 4 SERIES OF 4 | 34'-10" TO 35'-1" | 1493 | STR | | | | 5" |
| A807 | | 3 | | 3 | 6 | 34'-10" | 558 | STR | | | | |
| A808 | | 3 | | 3 | 6 | 36'-1" | 578 | STR | | | | |
| A809 | | | | | 0 | | | | | | | |
| A810 | | | | | 0 | | | | | | | |
| A811 | | | | | 0 | | | | | | | |
| A812 | | 8 | | 8 | 16 | 21'-0" | 897 | STR | | | | |
| | | | | | | | | | | | | |
| D801 | 31 | 32 | 34 | 32 | 129 | 4'-10" | 1665 | 18 | 2'-7" | 1'-0" | 1'-0" | |

## NOTES:

1. THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| DB | DB | DFT | 10-22-99 |

| CHECKED | REVISED | STRUCTURE FILE NUMBER |
|---|---|---|
| TAA | | 52036?4 & 52037?4 |

REINFORCING LIST
MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78



770
940

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | INC |
| ABUTMENTS - MED-71-1870 R | | | | | | | | | | | | |
| A501 | | | | | 0 | | | | | | | |
| A502 | | 1 | 1 | | 2 | 11'-1" | 23 | 19 | 10'-3" | 0'-9" | 0'-5½" | |
| A503 | 35 | 38 | 37 | 35 | 145 | 12'-1" | 1827 | 2 | 4'-10" | 2'-8" | 4'-10" | |
| A504 | 21 | 2 | 37 | 35 | 95 | 17'-1" | 1693 | 2 | 7'-4" | 2'-8" | 7'-4" | |
| A505 | 31 | 10 | 46 | 46 | 133 | 17'-1" | 2370 | 3 | 5'-8" | 2'-7" | | |
| A506 | 30 | 29 | 31 | 32 | 122 | 8'-7" | 1092 | 2 | 3'-4" | 2'-2" | 3'-4" | |
| A507 | 30 | 29 | 31 | 32 | 122 | 10'-11" | 1389 | 3 | 2'-8" | 2'-6" | | |
| A508 | | | | | 0 | | | | | | | |
| A509 | | | | 1 SERIES OF 6 | 1 SERIES OF 6 | 25'-11" TO 29'-7" | 174 | 2 | 11'-9" TO 13'-7" | 2'-8" | 11'-9" TO 13'-7" | 8½" |
| A510 | | | | 1 | 1 | 24'-11" | 26 | 2 | 11'-3" | 2'-8" | 11'-3" | |
| A511 | | 1 | 1 | | 2 | 13'-1" | 27 | 19 | 10'-3" | 2'-3" | 1'-5" | |
| A512 | | | | | 0 | | | | | | | |
| A513 | | 1 SERIES OF 6 | | | 1 SERIES OF 6 | 25'-5" TO 26'-11" | 164 | 2 | 11'-6" TO 12'-3" | 2'-8" | 11'-6" TO 12'-3" | 3½" |
| A514 | 1 | 1 | 1 | 1 | 4 | 5'-11" | 25 | STR | | | | |
| A515 | | | 1 SERIES OF 6 | | 1 SERIES OF 6 | 24'-9" TO 27'-8" | 164 | 2 | 11'-2" TO 12'-7½" | 2'-8" | 11'-2" TO 12'-7½" | 7" |
| A516 | | | | | 0 | | | | | | | |
| A517 | | | | | 0 | | | | | | | |
| A518 | | | | | 0 | | | | | | | |
| A519 | | | | | 0 | | | | | | | |
| A520 | | | | | 0 | | | | | | | |
| A521 | | | | | 0 | | | | | | | |
| A522 | | | | | 0 | | | | | | | |
| A523 | 1 | 1 | 1 | 1 | 4 | 7'-8" | 32 | STR | | | | |
| A524 | 1 | 1 | 1 | 1 | 4 | 11'-3" | 47 | STR | | | | |
| A525 | | | | 1 | 1 | 22'-5" | 23 | 2 | 10'-0" | 2'-8" | 10'-0" | |
| A526 | | | | | 0 | | | | | | | |
| A527 | 1 | 1 | 1 | 1 | 4 | 4'-4 | 18 | STR | | | | |
| A528 | 1 | 1 | 1 | 1 | 4 | 6'-1" | 25 | STR | | | | |
| A529 | 1 | 1 | 1 | 1 | 4 | 9'-8" | 40 | STR | | | | |
| A530 | 1 | | | 1 | 2 | 11'-3" | 23 | 19 | 9'-10" | 1'-2" | 0'-9" | |
| A531 | | | | | 0 | | | | | | | |
| A532 | 1 | 1 | | | 2 | 19'-10" | 41 | 2 | 8'-8½" | 2'-8" | 8'-8½" | |
| A533 | | | 1 | | 1 | 22'-8" | 24 | 2 | 10'-1½" | 2'-8" | 10'-1½" | |
| A534 | | | | 3 | 3 | 29'-7" | 93 | 2 | 13'-7" | 2'-8" | 13'-7" | |
| A535 | | | | | 0 | | | | | | | |
| A536 | 1 | | | | 1 | 26'-11" | 28 | 2 | 12'-3" | 2'-8" | 12'-3" | |
| A537 | 1 SERIES OF 6 | | | | 1 SERIES OF 6 | 24'-5" TO 26'-11" | 161 | 2 | 11'-0" TO 12'-3" | 2'-8" | 11'-0" TO 12'-3" | 6" |
| A538 | 26 | 70 | | | 96 | 10'-6" | 1051 | STR | | | | |
| A539 | 12 | 12 | 12 | 12 | 48 | 30'-0" | 1502 | STR | | | | |
| A540 | | 1 SERIES OF 4 | | | 1 SERIES OF 4 | 21'-7" TO 24'-4" | 96 | 2 | 9'-7" TO 10'-11½" | 2'-8" | 9'-7" TO 10'-11½" | 11" |
| A541 | 1 | | | | 1 | 23'-4" | 24 | 2 | 10'-5½" | 2'-8" | 10'-5½" | |
| A542 | 1 | | | | 1 | 21'-8" | 23 | 2 | 9'-7½" | 2'-8" | 9'-7½" | |
| A543 | | | 1 | | 1 | 29'-8" | 31 | 2 | 13'-7½" | 2'-8" | 13'-7½" | |

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | INC |
| ABUTMENTS - MED-71-1870 R | | | | | | | | | | | | |
| A544 | | | 1 | | 1 | 24'-4" | 25 | 2 | 10-11½" | 2'-8" | 10'-11½" | |
| A545 | 6 | | 12 | | 18 | 18'-10" | 354 | STR | | | | |
| A546 | 6 | | | | 6 | 30'-8" | 192 | STR | | | | |
| A547 | 1 | | | 1 | 2 | 12'-11" | 27 | 19 | 9'-10" | 2'-6½" | 1'-8" | |
| A548 | | 6 | | 12 | 18 | 20'-10" | 391 | STR | | | | |
| A549 | | 6 | | | 6 | 12'-1" | 76 | STR | | | | |
| A550 | | | | | 0 | | | | | | | |
| A551 | | | | | 0 | | | | | | | |
| A552 | | | | | 0 | | | | | | | |
| A553 | | | | | 0 | | | | | | | |
| A554 | | | | | 0 | | | | | | | |
| A555 | | | | | 0 | | | | | | | |
| A556 | | | | | 0 | | | | | | | |
| A557 | | | | | 0 | | | | | | | |
| A558 | | | | | 0 | | | | | | | |
| A559 | 1 | 1 | 1 | 1 | 4 | 9'-6" | 40 | STR | | | | |
| A560 | 1 | 1 | 1 | 1 | 4 | 7'-11" | 33 | STR | | | | |
| | | | | | | | | | | | | |
| A801 | | | | | 0 | | | | | | | |
| A802 | | 2 SERIES OF 4 | | 2 SERIES OF 4 | 4SERIES OF 4 | 36'-7" TO 37'-10" | 1590 | STR | | | | |
| A803 | | 3 | | 3 | 6 | 37'-10" | 606 | STR | | | | |
| A804 | | 3 | | 3 | 6 | 36'-4" | 582 | STR | | | | |
| A805 | 4 | 4 | 8 | 8 | 24 | 30'-0" | 1922 | STR | | | | |
| A806 | 2 SERIES OF 4 | | 2 SERIES OF 4 | | 4SERIES OF 4 | 34'-4" TO 35'-7" | 1493 | STR | | | | |
| A807 | 3 | | 3 | | 6 | 34'-4" | 550 | STR | | | | |
| A808 | 3 | | 3 | | 6 | 35'-10" | 574 | STR | | | | |
| A809 | 4 | | 8 | | 12 | 21'-3" | 681 | STR | | | | |
| A810 | | 4 | | 8 | 12 | 23'-3" | 745 | STR | | | | |
| A811 | | 4 | | | 4 | 12'-1" | 129 | STR | | | | |
| A812 | | | | | 0 | | | | | | | |
| A813 | 4 | | | | 4 | 30'-8" | 328 | STR | | | | |
| | | | | | | | | | | | | |
| D801 | 30 | 29 | 31 | 32 | 122 | 4'-10" | 1574 | 18 | 2'-7" | 1'-0" | 1'-0" | |

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT
DATE 10-22-99
STRUCTURE FILE NUMBER 5203694 & 5203724

DRAWN DB
REVISED

DESIGNED DB
CHECKED TAA

REINFORCING LIST
MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78

35 / 39

771 / 940

## PIERS - MED-71-1870 L

| MARK | NUMBER PIER 1 | NUMBER PIER 2 | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P501 | | 12 | 12 | 12'-5" | 155 | 2 | 5'1" | 2'-6" | 5'1" | | | |
| P502 | | | 0 | | | | | | | | | |
| P503 | | 10 | 10 | 8'-11" | 93 | 24 | 2'-6" | 2'-6" | | | 1'-3" | |
| P504 | | 10 | 10 | 10'-2" | 106 | STR | | | | | | |
| P505 | 8 | | 8 | 31'-0" | 259 | STR | | | | | | |
| P506 | 8 | | 8 | 28'-2" | 235 | STR | | | | | | |
| P507 | 39 | | 39 | 9'-6" | 386 | STR | | | | | | |
| P508 | 40 | | 40 | 19'-3" | 803 | 2 | 8'-6" | 2'-6" | 8'-6" | | | |
| P509 | 2 SERIES OF 7 | | 2 SERIES OF 7 | 8'-9" TO 13'-9" | 126 | 2 | 3'-2" TO 5'-8" | 2'-8" | | | | 5" |
| P510 | 19 | | 19 | 13'-0" | 258 | 3 | 3'-8" | 2'-8" | | | | |
| P511 | 2 SERIES OF 12 | | 2 SERIES OF 12 | 8'-9" TO 14'-3" | 231 | 2 | 3'-2" TO 5'-11" | 2'-8" | 3'-2" TO 5'-11" | | | 3" |
| P512 | 8 | | 8 | 8'-11" | 74 | 2 | 3'-4" | 2'-6" | 3'-4" | | | |
| P513 | 26 | | 26 | 24'-5" | 662 | STR | | | | | | |
| P514 | 26 | | 26 | 27'-6" | 746 | STR | | | | | | |
| P515 | | 27 | 27 | 6'-8" | 188 | 2 | 2'-5" | 2'-1" | 2'-5" | | | |
| P516 | | | 0 | | | | | | | | | |
| P517 | | | 0 | | | | | | | | | |
| P518 | 26 | | 26 | 9'-6" | 258 | 24 | 2'-8" | 2'-8" | | | 1'-4" | |
| P519 | | 12 | 12 | 7'-8" | 96 | STR | | | | | | |
| P520 | | 12 | 12 | 6'-8" | 83 | STR | | | | | | |
| P601 | 14 | | 14 | 38'-4" | 806 | STR | | | | | | |
| P602 | 2 SERIES OF 9 | | 2 SERIES OF 9 | 27'-8" TO 38'-4" | 892 | STR | | | | | | 1'-4" |
| P603 | 2 SERIES OF 9 | | 2 SERIES OF 9 | 24'-4" TO 34'-0" | 789 | STR | | | | | | 1'-2½" |
| P604 | 14 | | 14 | 33'-10" | 711 | STR | | | | | | |
| P605 | 2 | | 2 | 11'-9" | 36 | STR | | | | | | |
| P606 | 2 | | 2 | 10'-10" | 33 | STR | | | | | | |
| P801 | 12 | | 12 | 35'-4" | 1132 | STR | | | | | | |
| P802 | 12 | | 12 | 28'-2" | 902 | STR | | | | | | |
| P803 | | 16 | 16 | 7'-8" | 328 | STR | | | | | | |
| P804 | 58 | | 58 | 11'-4" | 1755 | 17 | 10'-0" | | | | | |
| P903 | | 22 | 22 | 19'-0" | 1421 | STR | | | | | | |
| P904 | | 8 | 8 | 10'-0" | 272 | STR | | | | | | |
| P905 | | | 0 | | | | | | | | | |
| P906 | | 22 | 22 | 10'-8" | 798 | 1 | 1'-8" | 9'-4" | | | | |
| P907 | | 4 | 4 | 13'-11" | 189 | 24 | 2'-6" | 5'-0" | | | 1'-3" | |
| P1001 | 174 | | 174 | 22'-4" | 16271 | STR | | | | | | |
| P1002 | 175 | | 175 | 11'-3" | 8472 | 1 | 1'-11" | 9'-8" | | | | |
| P1003 | | 8 | 8 | 11'-5" | 245 | STR | | | | | | |
| P1004 | | 8 | 8 | 37'-4" | 798 | STR | | | | | | |
| P1101 | 133 | | 133 | 12'-10" | 9068 | 17 | 9'-8" | | | | | |
| P1102 | | 16 | 16 | 9'-10" | 836 | 17 | 6'-8" | | | | | |
| P1103 | 9 | | 9 | 35'-5" | 1695 | STR | | | | | | |
| P1102 | 9 | | 9 | 34'-2" | 1634 | STR | | | | | | |
| SP401 | | | 0 | | | | | | | | | |
| SP402 | | | 0 | | | | | | | | | |
| SP403 | | 2 | 2 | 14'0" | 416 | 27 | 4½" | 2'-6" | | | | |

## PIERS - MED-71-1870 R

| MARK | NUMBER PIER 1 | NUMBER PIER 2 | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P501 | 12 | 12 | 24 | 12'-5" | 311 | 2 | 5'1" | 2'-6" | 5'1" | | | |
| P502 | 10 | 10 | 20 | 10'-0" | 209 | STR | | | | | | |
| P503 | 10 | 10 | 20 | 8'-11" | 186 | 24 | 2'-6" | 2'-6" | | | 1'-3" | |
| P504 | | | 0 | | | | | | | | | |
| P505 | | | 0 | | | | | | | | | |
| P506 | | | 0 | | | | | | | | | |
| P507 | | | 0 | | | | | | | | | |
| P508 | | | 0 | | | | | | | | | |
| P509 | | | 0 | | | | | | | | | |
| P510 | | | 0 | | | | | | | | | |
| P511 | | | 0 | | | | | | | | | |
| P512 | | | 0 | | | | | | | | | |
| P513 | | | 0 | | | | | | | | | |
| P514 | | | 0 | | | | | | | | | |
| P515 | | | 0 | | | | | | | | | |
| P516 | 27 | | 27 | 6'-2" | 174 | 2 | 2'-2" | 2'-1" | 2'-2" | | | |
| P517 | | 27 | 27 | 7'-0" | 197 | 2 | 2'-7" | 2'-1" | 2'-7" | | | |
| P518 | | | 0 | | | | | | | | | |
| P519 | 12 | 12 | 24 | 7'-8" | 192 | STR | | | | | | |
| P520 | 12 | 12 | 24 | 6'-8" | 167 | STR | | | | | | |
| | | | | | | | | | | | | |
| P601 | | | 0 | | | | | | | | | |
| P602 | | | 0 | | | | | | | | | |
| P603 | | | 0 | | | | | | | | | |
| P604 | | | 0 | | | | | | | | | |
| | | | | | | | | | | | | |
| P801 | | | 0 | | | | | | | | | |
| P802 | | | 0 | | | | | | | | | |
| P803 | 16 | 16 | 32 | 7'-8" | 655 | STR | | | | | | |
| | | | | | | | | | | | | |
| P901 | | 22 | 22 | 19'-11" | 1490 | STR | | | | | | |
| P902 | 22 | | 22 | 23'-1" | 1727 | STR | | | | | | |
| P903 | | | 0 | | | | | | | | | |
| P904 | 10 | 10 | 20 | 10'-0" | 680 | STR | | | | | | |
| P905 | | | 0 | | | | | | | | | |
| P906 | 22 | 22 | 44 | 10'-8" | 1596 | 1 | 1'-8" | 9'-4" | | | | |
| P907 | 4 | 4 | 8 | 13'-11" | 379 | 24 | 2'-6" | 5'-0" | | | 1'-3" | |
| P1003 | 8 | 8 | 16 | 11'-5" | 490 | STR | | | | | | |
| P1004 | 8 | 8 | 16 | 37'-4" | 1596 | STR | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| P1101 | | | 0 | | | | | | | | | |
| P1102 | 16 | 16 | 32 | 9'-10" | 1672 | 17 | 6'-8" | | | | | |
| SP401 | | 2 | 2 | 14'-8" | 434 | 27 | 4½" | 2'-6" | | | | |
| SP402 | 2 | | 2 | 17'-4" | 508 | 27 | 4½" | 2'-6" | | | | |
| | | | | | | | | | | | | |

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED BRH
DRAWN BRH
CHECKED TAA
REVISED
REVIEWED DFT
DATE 10-22-99
STRUCTURE FILE NUMBER 5203694 & 5203724

# REINFORCING LIST

MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78

| MARK | NUMBER | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPER STAGE I | SUPER STAGE II | TOTAL | | LB | | A | B | C | D | R | INC |
| SUPERSTRUCTURE - MED-71-1870 L | | | | | | | | | | | | |
| S401 | 224 | 238 | 462 | 30'-0" | 9259 | STR | | | | | | |
| S402 | 32 | 34 | 66 | 41'-0" | 1808 | STR | | | | | | |
| | | | | | | | | | | | | |
| S501 | 1456 | 1472 | 2928 | 18'-6" | 56497 | STR | | | | | | |
| S502 | 252 | 266 | 518 | 30'-0" | 17109 | STR | | | | | | |
| S503 | 36 | 38 | 74 | 44'-0" | 3396 | STR | | | | | | |
| S504 | | 2 SERIES OF 26 | 2 SERIES OF 26 | 11'-6" TO 32'-4" | 1189 | STR | | | | | | 10" |
| S505 | | 14 | 14 | 10'-8" | 156 | STR | | | | | | |
| S506 | 2 SERIES OF 28 | | 2 SERIES OF 28 | 9'-6" TO 32'-0" | 1212 | STR | | | | | | 10" |
| S507 | 14 | | 14 | 8'-8" | 127 | STR | | | | | | |
| S508 | 2 SERIES OF 30 | | 2 SERIES OF 30 | 7'-10" TO 32'-0" | 1246 | STR | | | | | | 10" |
| S509 | | 2 SERIES OF 30 | 2 SERIES OF 30 | 8'-2" TO 32'-4" | 1267 | STR | | | | | | 10" |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| S601 | 64 | 66 | 130 | 37'-6" | 7322 | STR | | | | | | |
| | | | | | | | | | | | | |

| MARK | NUMBER | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPER STAGE I | SUPER STAGE II | TOTAL | | LB | | A | B | C | D | R | INC |
| SUPERSTRUCTURE - MED-71-1870 R | | | | | | | | | | | | |
| S401 | 203 | 259 | 462 | 30'-0" | 9258 | STR | | | | | | |
| S402 | 29 | 37 | 66 | 41'-0" | 1808 | STR | | | | | | |
| | | | | | | | | | | | | |
| S501 | 1368 | 1352 | 2720 | 18'-6" | 52484 | STR | | | | | | |
| S502 | 224 | 294 | 518 | 30'-0" | 16208 | STR | | | | | | |
| S503 | 32 | 42 | 74 | 44'-0" | 3396 | STR | | | | | | |
| S504 | | | 0 | | | | | | | | | |
| S505 | | | 0 | | | | | | | | | |
| S506 | | | 0 | | | | | | | | | |
| S507 | | | 0 | | | | | | | | | |
| S508 | | | 0 | | | | | | | | | |
| S509 | | | 0 | | | | | | | | | |
| S510 | 2 SERIES OF 26 | | 2 SERIES OF 26 | 13'-6" TO 34'-4" | 1297 | STR | | | | | | 10" |
| S511 | 14 | | 14 | 12'-8" | 185 | STR | | | | | | |
| S512 | | 2 SERIES OF 28 | 2 SERIES OF 28 | 7'-3" TO 29'-9" | 1081 | STR | | | | | | 10" |
| S513 | | 14 | 14 | 6'-5" | 94 | STR | | | | | | |
| S514 | | 2 SERIES OF 30 | 2 SERIES OF 30 | 5'-6" TO 29'-8" | 1100 | STR | | | | | | 10" |
| S515 | 2 SERIES OF 30 | | 2 SERIES OF 30 | 10'-1" TO 34'-3" | 1387 | STR | | | | | | 10" |
| | | | | | | | | | | | | |
| S601 | | | 0 | | | | | | | | | |
| S602 | 56 | 74 | 130 | 32'-6" | 6346 | STR | | | | | | |

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| DB | DB | DFT | 10-22-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203694 & 5203724 | |

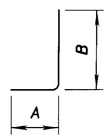
REINFORCING LIST
MED-71-1870 L/R
I-71 OVER I-271

MED-71-15.78

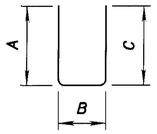


773/940

| MARK | NUMBER | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPER STAGE I | SUPER STAGE II | TOTAL | | LB | | A | B | C | D | E | R | INC |
| **PARAPETS - MED-71-1870 L** | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 334 | STR | | | | | | | |
| X502 | 3 | 6 | 9 | 5'-6" | 52 | 25 | 1'-8" | 2'-5" | 1'-4" | 1½" | 5" | | |
| X503 | 13 | 10 | 23 | 6'-6" | 132 | STR | | | | | | | |
| X504 | 48 | 48 | 96 | 33'-5" | 2795 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| Y501 | 184 | 184 | 368 | 7'-5" | 2847 | 23 | 1'-1" | 3'-2" | 3'-0" | | | 2¾" | |
| | | | | | | | | | | | | | |
| X601 | 8 | 8 | 16 | 26'-4" | 695 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| Y601 | 184 | 184 | 368 | 3'-5" | 1889 | 33 | 1'-1" | 1'-5½" | 1'-1" | | | | |
| Y602 | 4 SERIES OF 11 | 4 SERIES OF 11 | 8 SERIES OF 11 | 3'-11" TO 4'-9" | 573 | 1 | 1'-1" | 3'-0½" TO 3'-10½" | | | | | 1" |
| Y603 | 16 | 16 | 32 | 5'-4" | 256 | STR | | | | | | | |
| Y604 | 184 | 184 | 368 | 2'-4" | 1290 | 1 | 1'-1" | 1'-5½" | | | | | |
| | | | | | | | | | | | | | |
| **PARAPETS - MED-71-1870 R** | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 334 | STR | | | | | | | |
| X502 | 3 | 6 | 9 | 5'-6" | 52 | 25 | 1'-8" | 2'-5" | 1'-4" | 1½" | 5" | | |
| X503 | 13 | 10 | 23 | 6'-6" | 132 | STR | | | | | | | |
| X504 | 48 | 48 | 96 | 31'-3" | 2628 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| Y501 | 171 | 171 | 342 | 7'-5" | 2646 | 23 | 1'-1" | 3'-2" | 3'-0" | | | 2¾" | |
| | | | | | | | | | | | | | |
| X601 | 8 | 8 | 16 | 24'-8" | 655 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| Y601 | 171 | 171 | 342 | 3'-5" | 1755 | 33 | 1'-1" | 1'-5½" | 1'-1" | | | | |
| Y602 | 4 SERIES OF 11 | 4 SERIES OF 11 | 8 SERIES OF 11 | 3'-11" TO 4'-9" | 573 | 1 | 1'-1" | 3'-0½" TO 3'-10½" | | | | | 1" |
| Y603 | 16 | 16 | 32 | 5'-4" | 256 | STR | | | | | | | |
| Y604 | 171 | 171 | 342 | 2'-4" | 1199 | 1 | 1'-1" | 1'-5½" | | | | | |
| | | | | | | | | | | | | | |



TYPE-1



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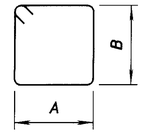
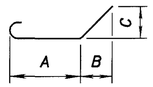


TYPE-3

TYPE-17



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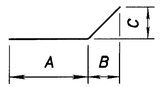

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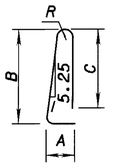

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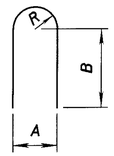

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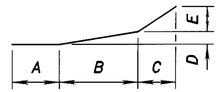

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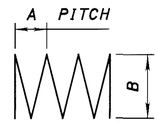

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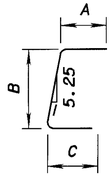


TYPE-33

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT DATE 10-22-99
STRUCTURE FILE NUMBER 5203694 & 5203724

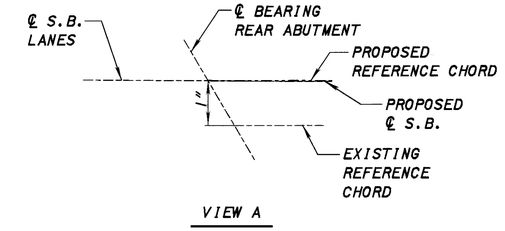
DRAWN DB REVISED
DESIGNED DB CHECKED TAA

REINFORCING LIST
MED-71-1870 L/R
I-71 OVER I-271

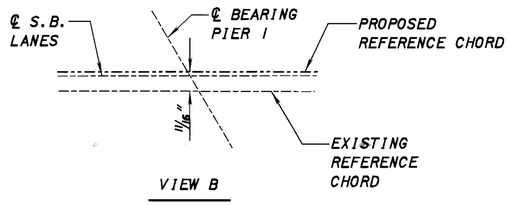
MED-71-15.78

38/39

774/940




VIEW A

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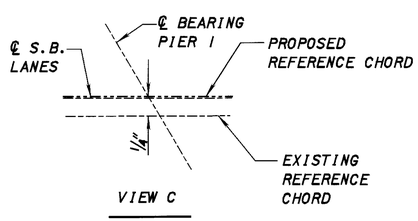
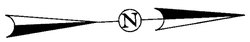
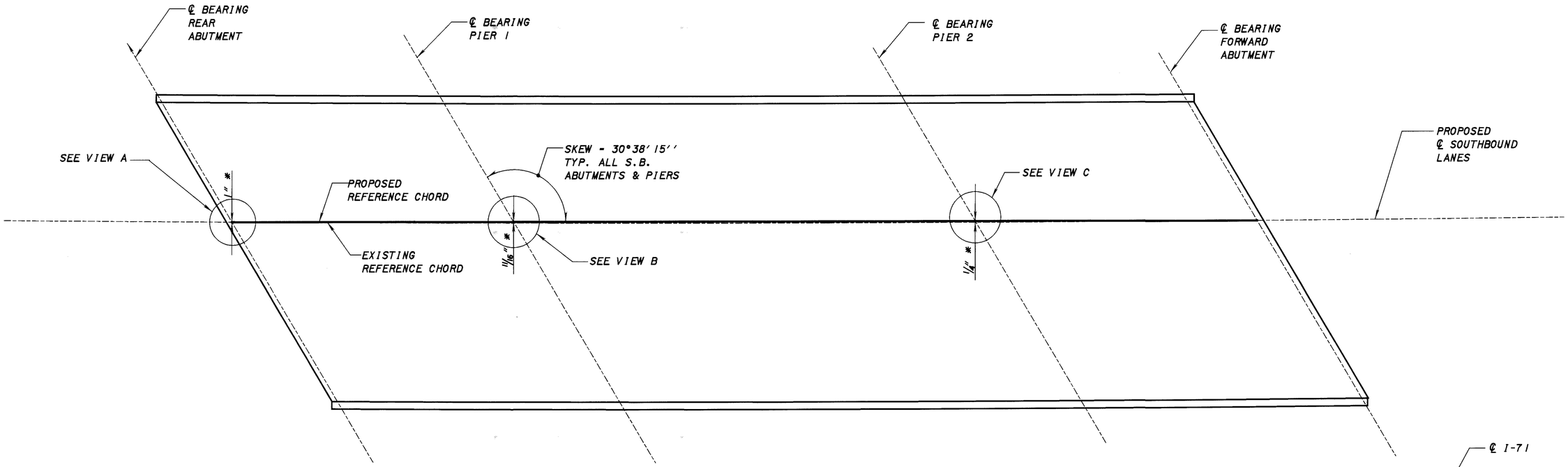
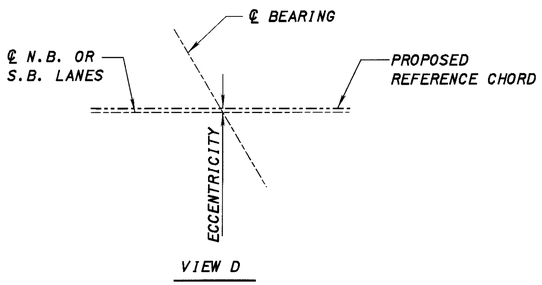



VIEW C




VIEW D

(SEE TABLE OF ECCENTRICITIES)

| TABLE OF ECCENTRICITIES | | | |
|---|---|---|---|
| SOUTHBOUND | | | |
| REAR ABUT. | PIER 1 | PIER 2 | FORWARD ABUT. |
| 0'-0" | 3 3/16" | 3 1/4" | 0'-0" |
| NORTHBOUND | | | |
| REAR ABUT. | PIER 1 | PIER 2 | FORWARD ABUT. |
| 0'-0" | 3 1/16" | 3 1/16" | 0'-0" |

(SEE VIEW D FOR CLARIFICATION)

NOTES

1. THE REAR ABUTMENT AND PIER 1 OF THE SOUTHBOUND STRUCTURE WERE MOVED FROM THE ORIGINAL LOCATION FROM THE EXISTING PLANS. BECAUSE OF THIS THE EXISTING AND PROPOSED REFERENCE CHORDS ARE NOT IN THE SAME LOCATION. BOTH REFERENCE CHORDS INTERSECT AT THE SAME POINT AT THE FORWARD ABUTMENT BUT AT THE OTHER S.B. SUBSTRUCTURE UNITS WE HAVE GIVEN DIMENSIONS BETWEEN THE EXISTING AND PROPOSED REFERENCE CHORDS.
2. THE BEAMS ARE LAYED OUT PARALLEL TO THE EXISTING REFERENCE CHORD.
3. THE SKEWS ARE MEASURE BETWEEEN THE PROPOSED REFERENCE CHORD AND THE ℄ BEARINGS
4. * - THE DIMENSION GIVEN IS BETWEEN THE EXISTING AND PROPOSED REFERENCE CHORD MEASURED PERPINDICULAR TO THE PROPOSED REFERENCE CHORD.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT | DATE 10-22-99
STRUCTURE FILE NUMBER 5203694L&5203724R

DRAWN DB | REVISED
DESIGNED DB | CHECKED TAA

SUPERSTRUCTURE DETAILS
MED-71-1870 L/R
I-71 OVER I-271

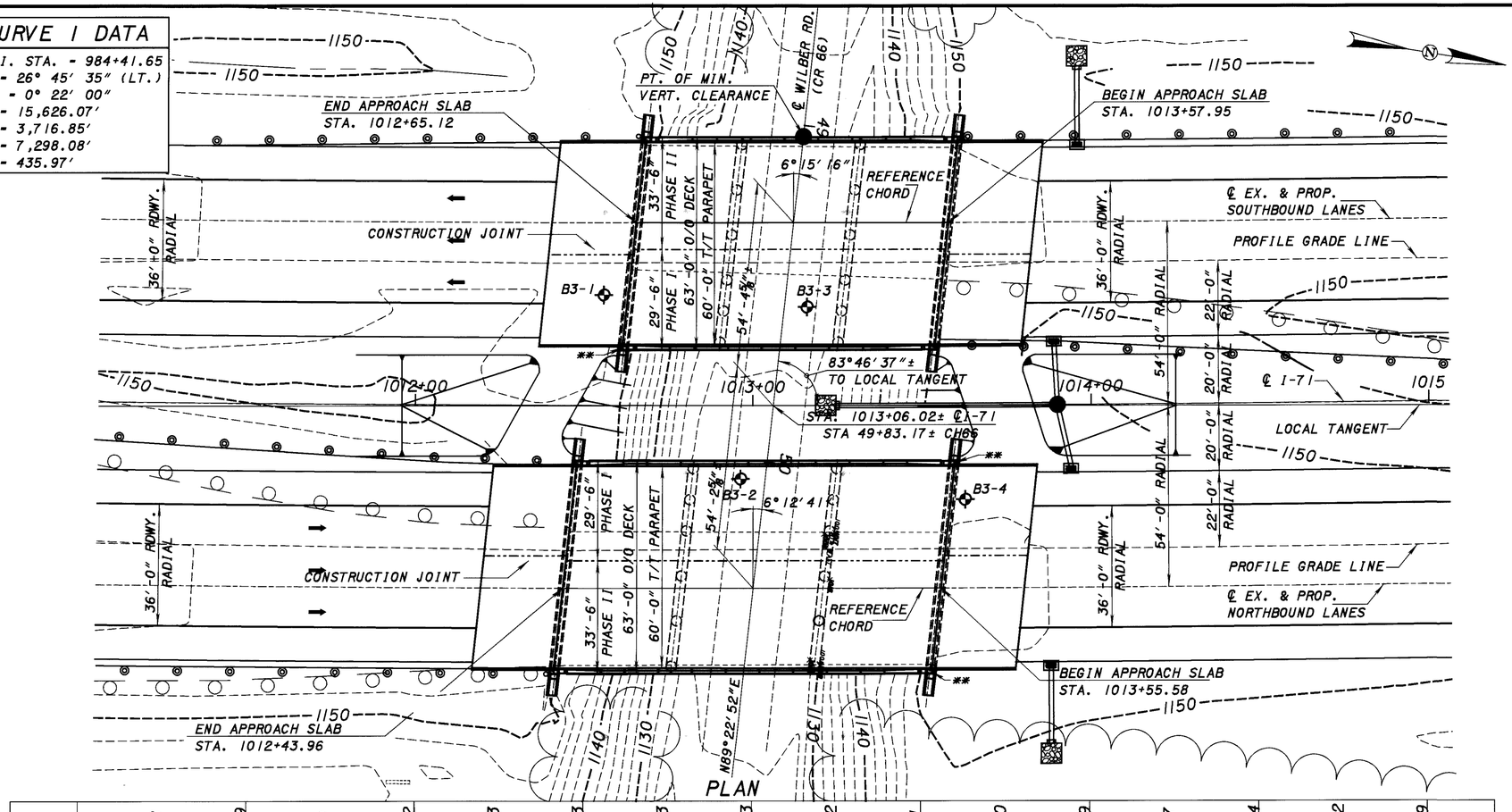
MED-71-15.78

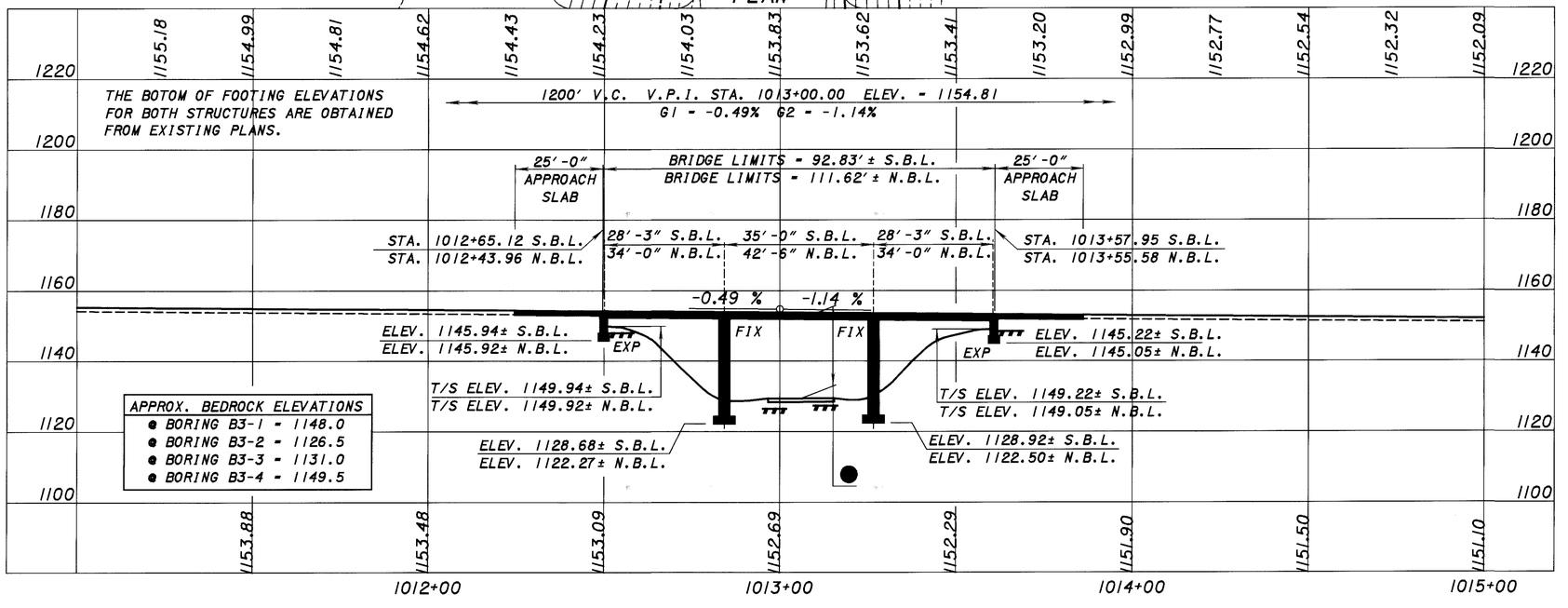
39 / 39

775
940

## CURVE I DATA

P.I. STA. = 984+41.65
D = 26° 45′ 35″ (LT.)
Dc = 0° 22′ 00″
R = 15,626.07′
T = 3,716.85′
L = 7,298.08′
E = 435.97′




** - PARAPET TRANSITION AT THIS LOCATION IS DIFFERENT FROM STANDARD TRANSITION. SEE SHEET CSS2 FOR DETAILS.

PROFILE

▮▮▮ - APPROXIMATE TOP OF ROCK AT BORING

(ALONG ℄ NORTHBOUND SHOWN, SOUTHBOUND LANE IS SIMILAR)

## BENCHMARK DATA

BM # 6 - STATION 1007+13.07 ELEVATION = 1146.97
ODOT DISC IN HEADWALL, STAMPED

## NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS-SECTIONS.
2. REFERENCE CHORDS ARE MEASURED FROM THE INTERSECTIONS OF THE CENTERLINES OF LANES AND THE CENTERLINES OF ABUTMENTS BEARINGS. SPAN LENGTHS AND BRIDGE LIMITS ARE MEASURED ALONG REFERENCE CHORDS. SEE SCHEMATIC SHEET 2/22.
3. PROPOSED PROFILE ELEVATIONS ARE ALONG THE PROFILE GRADE LINE.

## TRAFFIC DATA

| | | | |
|---|---|---|---|
| 2000 ADT | = 34010 | 2000 ADTT | = 4081 |
| 2020 ADT | = 46690 | 2020 ADTT | = 5603 |

⌖ - ORIGINAL SOIL BORING LOCATION

● 14′-6″ REQUIRED MINIMUM VERTICAL CLEARANCE
15′-3″ ACTUAL MINIMUM VERTICAL CLEARANCE

## EXISTING STRUCTURE

TYPE: CONTINUOUS SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURES

SPANS: S.B. LANES; 28′-0″±, 35′-0″±, 28′-0″±
N.B. LANES; 34′-0″±, 42′-6″±, 34′-0″±

ROADWAY: 2 @ 39′-8″ F/F SAFETY CURBS

LOADING: CF-2000(57) AND AASHO ALTERNATE LOADING

SKEW: 6°-13′-23″± (LF) TO LOCAL TANGENT

WEARING SURFACE: ASPHALT

APPROACH SLABS: 25′-0″ LONG AS-1-54

ALIGNMENT: 0°-22′± CURVE LEFT

CROWN: 3/16″± PER FOOT

DATE BUILT: 1964

SFN: 5203759 (LEFT), 5203783 (RIGHT)

## PROPOSED STRUCTURE

PROPOSED WORK: NEW SUPERSTRUCTURE ON NEW ABUTMENTS AND WIDENED PIERS

TYPE: CONTINUOUS SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURES

SPANS: S.B. LANES: 28′-3″, 35′-0″, 28′-3″ C/C BRGS.
N.B. LANES: 34′-0″, 42′-6″, 34′-0″ C/C BRGS.

ROADWAY: 60′-0″ TOE/TOE OF PARAPETS

LOADING: HS20-44 AND ALTERNATE MILITARY LOADING

SKEW: SEE PLAN VIEW

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: 25′ LONG, AS-1-81, 60′-0″ TOE/TOE CURB

ALIGNMENT: 0°-22′ CURVE LEFT

CROWN: 3/16″ PER FOOT

COORDINATES: LAT. N 39°-56′-07″, LONG. W 82°-0′-24″

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: DFT DATE: 10-8-99
STRUCTURE FILE NUMBER: 5203759L & 5203783R
DRAWN: TDB REVISED:
DESIGNED: TDB CHECKED: TAA

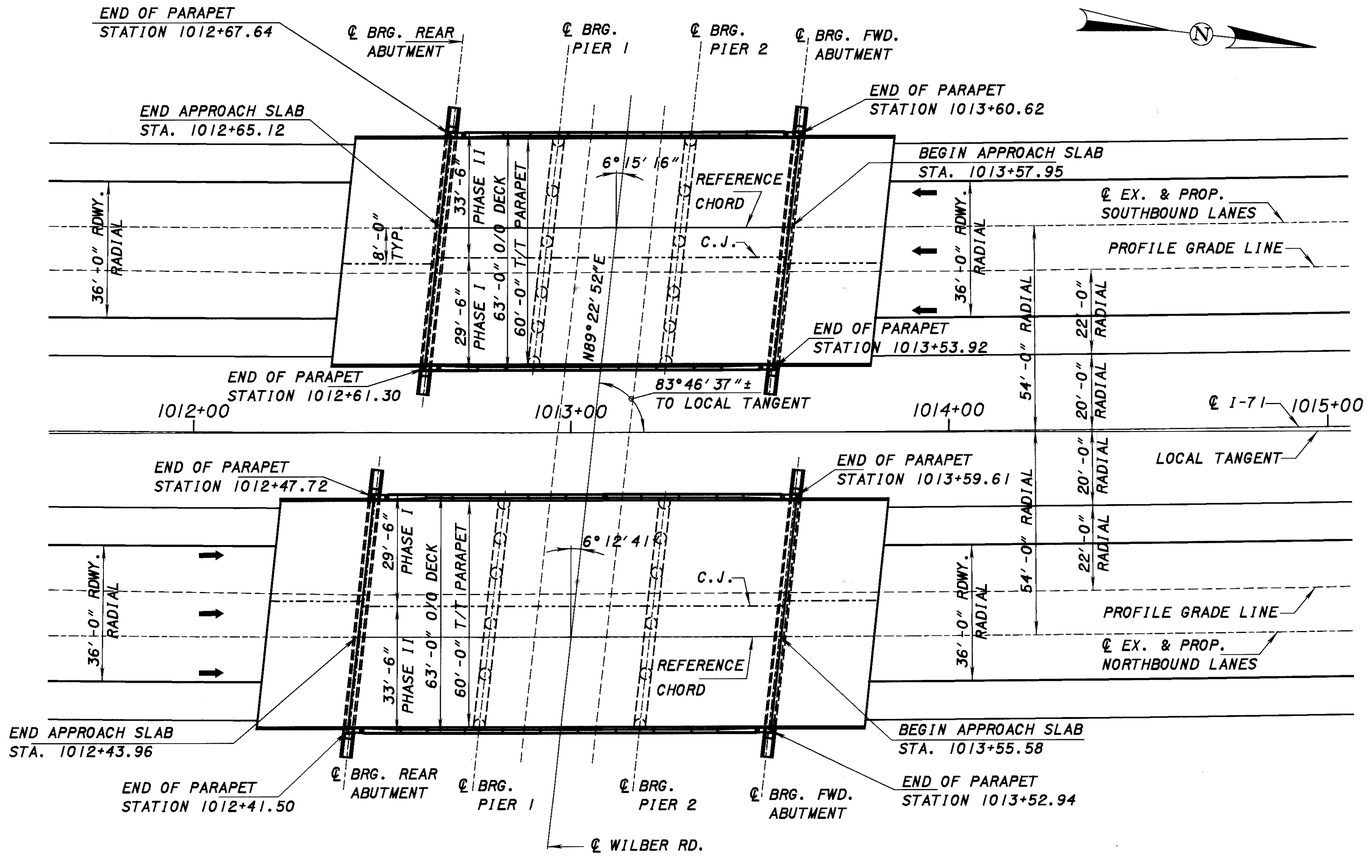
STA. 1012+65.12 SBL
STA. 1013+57.95 SBL
STA. 1012+43.96 NBL
STA. 1013+55.58 NBL

SITE PLAN
BRIDGE NO. MED-71-1918 L&R
I-71 OVER WILBER ROAD (CR66)

MED-71-15.78

1/22

776/940



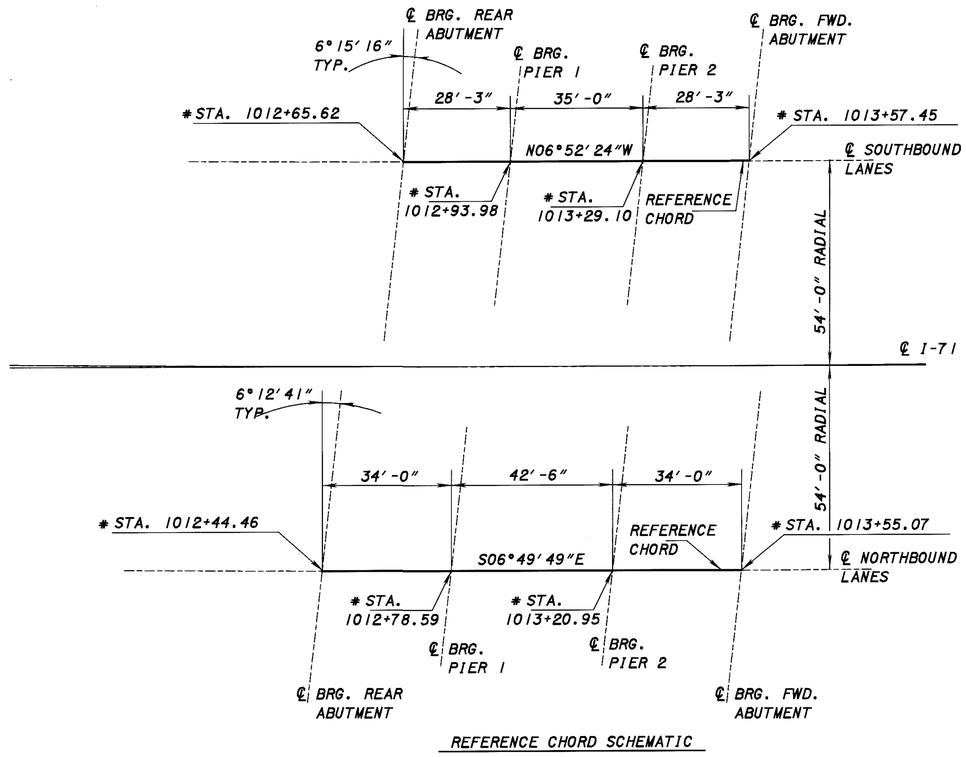

PLAN

## NOTES AND LEGEND

\# - STATIONS ARE ALONG ℄ I-71. STATIONS ARE LOCATED AT THE INTERSECTION OF THE REFERENCE CHORD AND ℄ OF THE LANES.

THE SPANS ARE MEASURED ALONG THE REFERENCE CHORD.

REFERENCE CHORD IS A CHORD BETWEEN ℄ OF ABUTMENTS BEARINGS




REFERENCE CHORD SCHEMATIC

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TDB | TDB | DFT | 10-8-99 |

CHECKED: TAA — REVISED: — STRUCTURE FILE NUMBER: 5203759L & 5203783R

GENERAL PLAN
MED-71-19.18 L/R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

# GENERAL NOTES

**STANDARD DRAWINGS AND SPECIFICATIONS:**

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

| | |
|---|---|
| AS-1-81 | REVISED 09-15-94 |
| SBR-1-99 | DATED 01-12-99 |
| PCB-91 | REVISED 07-06-99 |
| CS-1-93 | REVISED 06-30-95 |

AND TO SUPPLEMENTAL SPECIFICATIONS:

| | |
|---|---|
| 842 | DATED 01-06-99 |
| 844 | DATED 01-06-99 |
| 899 | DATED 10-21-98 |
| 954 | DATED 09-09-97 |
| 911 | DATED 07-10-97 |

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997 AND 1998 INTERIM SPECIFICATIONS AND THE ODOT DESIGN MANUAL.

**DESIGN LOADING:**

HS20-44, AND THE ALTERNATE MILITARY LOADING.

**DESIGN DATA:**

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

ITEM 842 CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60 Ksi. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

**DECK PROTECTION METHOD** - EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER AND HIGH PERFORMANCE CONCRETE.

**MONOLITHIC WEARING SURFACE** IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

**EXISTING BRIDGE PLANS** MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT THREE OFFICE IN ASHLAND, OHIO.

**DOWEL HOLES WITH NON-SHRINK, NON METALLIC GROUT**

ALL DOWEL HOLES SHALL BE CORE DRILLED AND GROUTED WITH AN EPOXY MORTAR MEETING THE REQUIREMENTS OF CMS 510. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

**ITEM 202 PORTIONS OF STRUCTURE REMOVED OVER 20 FEET SPAN, AS PER PLAN:**

PORTION OF THE STRUCTURE REMOVED, AS PER PLAN, SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED.

PROTECTION OF TRAFFIC:
PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE ENGINEER FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

SUBSTRUCTURE CONCRETE REMOVAL:
SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 90 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

¼ INCH SCARIFICATION: THE EXISTING PIER BRIDGE SEAT SURFACE SHALL BE SCARIFIED ¼ INCH INTO SOUND CONCRETE PRIOR TO PLACEMENT OF THE CONCRETE. THE SURFACE SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER, AIR UNDER PRESSURE, OR ANOTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

PAYMENT
ALL WORK SHALL BE PAID FOR UNDER ITEM 202 PORTIONS OF STRUCTURES REMOVED, AS PER PLAN

**TRAFFIC MAINTENANCE:**

SEE ROADWAY PLANS FOR ADDITIONAL TRAFFIC NOTES AND DETAILS.

**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)**

EPOXY-URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722 AS PER THE DETAILS IN THE PLAN.

**ITEM SPECIAL - WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING**

INSTALL A 3 FOOT WIDE STRIP, 3/32 INCH THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 3 FOOT WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X 3/32" (LENGTH X SHANK DIAMETER) #10 GALVANIZED BUTTON HEAD SPIKE THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS, AT 6 INCHES CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS WHERE THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST ONE FOOT IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32 INCH THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

| DESCRIPTION OF TEST | ASTM METHOD | REQUIREMENT |
|---|---|---|
| THICKNESS, INCHES | D 751 | 0.094 ± .01 |
| BREAKING STRENGTH, GRAB WXF, LBS, MINIMUM | D 751 | 700 X 700 |
| ADHESIVE 1" STRIP, 2" MINIMUM, LBS, MINIMUM | D 751 | 9 |
| BURST STRENGTH (MULLEN) PSI, MINIMUM | D 751 | 1400 |
| HEAT AGING 70 HOURS T 212 F, 180 BEND WITHOUT CRACKING | D 2136 | NO CRACKING OF COATING |
| LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40 F, BEND AROUND ¼ INCH MANDREL | D 2136 | NO CRACKING OF COATING |

PAYMENT FOR LABOR MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN INTEM SPECIAL- WATERPROOFING, MISC. : SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING.

**ITEM 503, UNCLASSIFIED EXCAVATION, INCLUDING ROCK AND SHALE, AS PER PLAN:**

PROPOSED BOTTOM OF FOOTINGS IN THE WIDENED PORTION SHALL MATCH THE PLAN ELEVATION AS SHOWN OR THE ACTUAL FOOTING ELEVATION DETERMINED AFTER STAGE 1 REMOVAL. IN ADDITION, THE FOOTINGS SHALL EXTEND A MINIMUM OF 3 INCHES INTO BED-ROCK IN THE WIDENED PORTION AT THE ABUTMENT.

PIER FOOTING SHALL EXTEND A MINIMUM OF 3 INCHES INTO BED-ROCK OR THE ELEVATION SHOWN IN THE PLANS.

DETAILS SHALL BE ADJUSTED AS NECESSARY BASED ON THE FOOTING ELEVATION. ALL EXCAVATION NECESSARY SHALL BE INCLUDED IN LUMP SUM PRICE UNDER THIS PAY ITEM.

**ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:**

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 6" LIFTS. EXCAVATION AT ABUTMENTS IN ADDITION TO THAT NECESSARY TO REMOVE PORTION OF THE EXISTING STRUCTURE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION FOR PAYMENT.

**ITEM 842 CLASS C CONCRETE, (FOOTINGS, PIERS AND ABUTMENTS) AS PER PLAN**

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITEM 844 HIGH PERFORMANCE CONCRETE, AS PER PLAN**

THE DESIGN MIX SHALL BE MIX NO. 4 LIMESTONE. THE OPTION OF SLIPFORM CONSTRUCTION OF THE BRIDGE PARAPET IS NOT PERMITTED. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**REINFORCING STEEL:**

NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED UNDER ITEM 844 HIGH PERFORMANCE CONCRETE.

**ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN**

POROUS BACKFILL SHALL BE #57 GRAVEL ONLY.

**FOUNDATION BEARING PRESSURE:**

ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 4.0 TONS PER SQUARE FEET. THE ALLOWABLE BEARING PRESSURE IS 8.0 TONS PER SQUARE FOOT.

PIER FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 4.0 TONS PER SQUARE FEET. THE ALLOWABLE BEARING PRESSURE IS 8.0 TONS PER SQUARE FOOT.

**SURVEY DISC ON STRUCTURE:**

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

**ITS CONDUIT:**

ITS CONDUIT SHALL BE PLACED WITHIN OUTSIDE PARAPET OF LEFT AND RIGHT STRUCTURES. SEE SHEETS CSS3 AND CSS4 FOR DETAILS.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TDB | TDB | DFT | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203759L & 5203783R | |

GENERAL NOTES
MED-71-19.18 L/R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

3 / 22

778
940

| | | MED-71-1918 L | MED-71-1918 R | | ESTIMATED QUANTITIES | MED-71-1918 L | | | | MED-71-1918 R | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM | EXTENSION | TOTAL | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS | SUPER. | GEN. | ABUT. | PIERS | SUPER. | GEN. |
| 202 | 11203 | LUMP | LUMP | | PORTIONS OF STRUCTURE, REMOVED OVER 20 FOOT SPAN, AS PER PLAN | LUMP | | LUMP | | LUMP | | LUMP | |
| 503 | 11100 | LUMP | LUMP | | COFFERDAMS, CRIBS AND SHEETING | | | | LUMP | | | | LUMP |
| 503 | 21301 | LUMP | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LUMP | LUMP | | | LUMP | LUMP | | |
| 503 | 21331 | LUMP | LUMP | | UNCLASSIFIED EXCAVATION, INCLUDING ROCK AND SHALE, AS PER PLAN | LUMP | LUMP | | | LUMP | LUMP | | |
| 512 | 44400 | 5 | 5 | SY | TYPE B WATERPROOFING | 5 | | | | 5 | | | |
| SPECIAL | 51267200 | 44 | 44 | SY | WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING | 44 | | | | 44 | | | |
| SPECIAL | 51267510 | 592 | 739 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 54 | 311 | 227 | | 54 | 405 | 280 | |
| 516 | 13900 | 27 | 27 | SF | 2" PREFORMED EXPANSION JOINT FILLER | 27 | | | | 27 | | | |
| 516 | 43101 | 30 | 30 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN (9"x48"x1" PAD) | 30 | | | | 30 | | | |
| 518 | 21231 | LUMP | LUMP | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | | | | LUMP | | | |
| 519 | 11101 | 7 | 14 | SF | PATCHING CONCRETE STRUCTURE, AS PER PLAN | | 7 | | | | 14 | | |
| 842 | 41001 | 48 | 54 | CY | CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN | | 48 | | | | 54 | | |
| 842 | 44101 | 45 | 45 | CY | CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN | 45 | | | | 45 | | | |
| 842 | 46501 | 46 | 46 | CY | CLASS C CONCRETE, FOOTING, AS PER PLAN | 35 | 11 | | | 35 | 11 | | |
| 844 | 48001 | 339 | 474 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK), AS PER PLAN, MIX 4 | | | 339 | | | | 474 | |
| 844 | 48021 | 29 | 35 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET), AS PER PLAN, MIX 4 | | | 29 | | | | 35 | |
| 844 | 49000 | LUMP | LUMP | | HIGH PERFORMANCE CONCRETE TRIAL MIX | | | LUMP | | | | LUMP | |
| 844 | 49010 | LUMP | LUMP | | HIGH PERFORMANCE CONCRETE TESTING | | | LUMP | | | | LUMP | |

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT | DATE 10-8-99 | STRUCTURE FILE NUMBER 5203759L & 5203783R

DRAWN TDB | REVISED

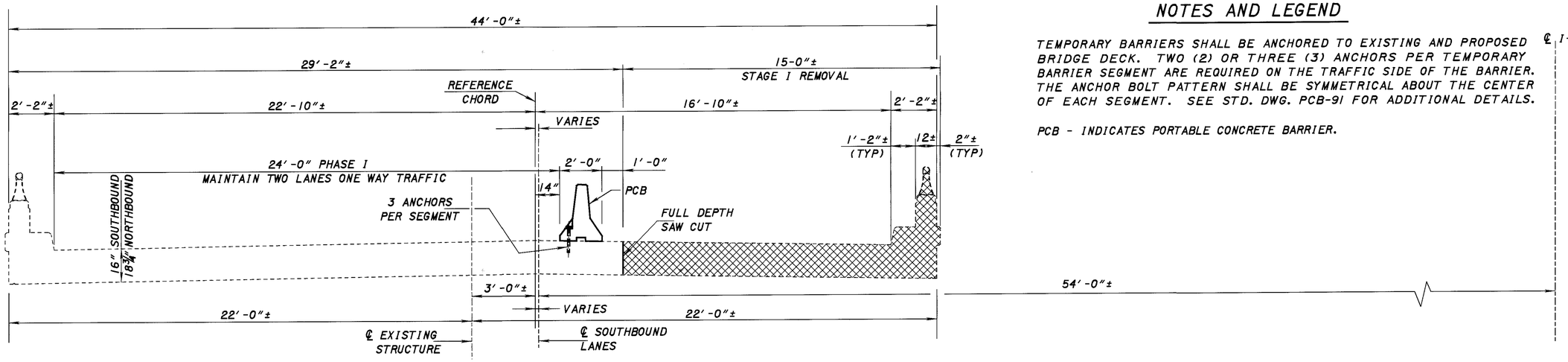
DESIGNED TDB | CHECKED TAA

ESTIMATED QUANTITIES
MED-71-1918 L/R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78



779
940



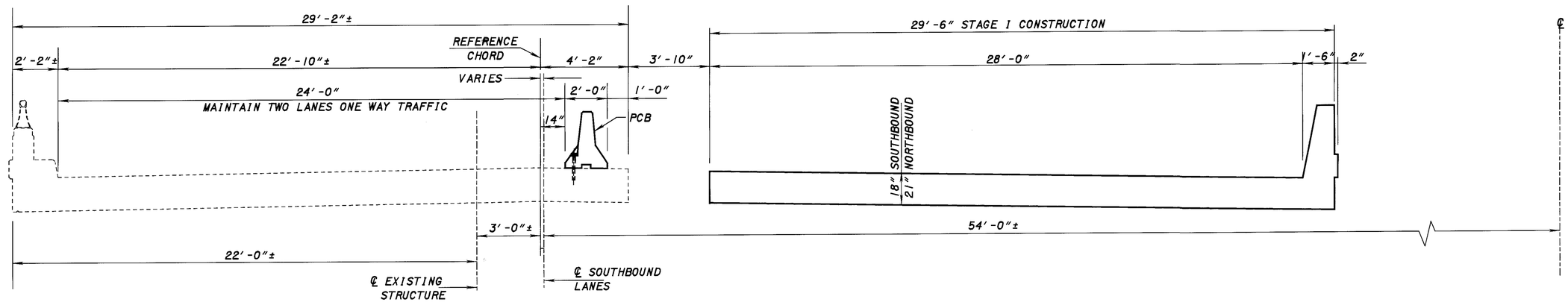

## NOTES AND LEGEND

TEMPORARY BARRIERS SHALL BE ANCHORED TO EXISTING AND PROPOSED BRIDGE DECK. TWO (2) OR THREE (3) ANCHORS PER TEMPORARY BARRIER SEGMENT ARE REQUIRED ON THE TRAFFIC SIDE OF THE BARRIER. THE ANCHOR BOLT PATTERN SHALL BE SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. SEE STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.

PCB - INDICATES PORTABLE CONCRETE BARRIER.

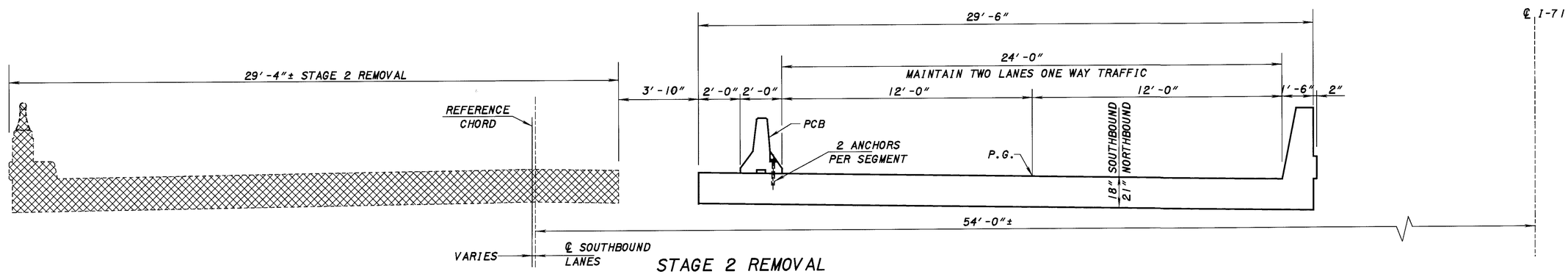
## STAGE I REMOVAL

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)




## STAGE I CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)




## STAGE 2 REMOVAL

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

DESIGNED TDB | DRAWN TDB | REVIEWED DFT | DATE 10-8-99 | CHECKED TAA | REVISED | STRUCTURE FILE NUMBER 5203759L & 5203783R

STAGE CONSTRUCTION DETAILS

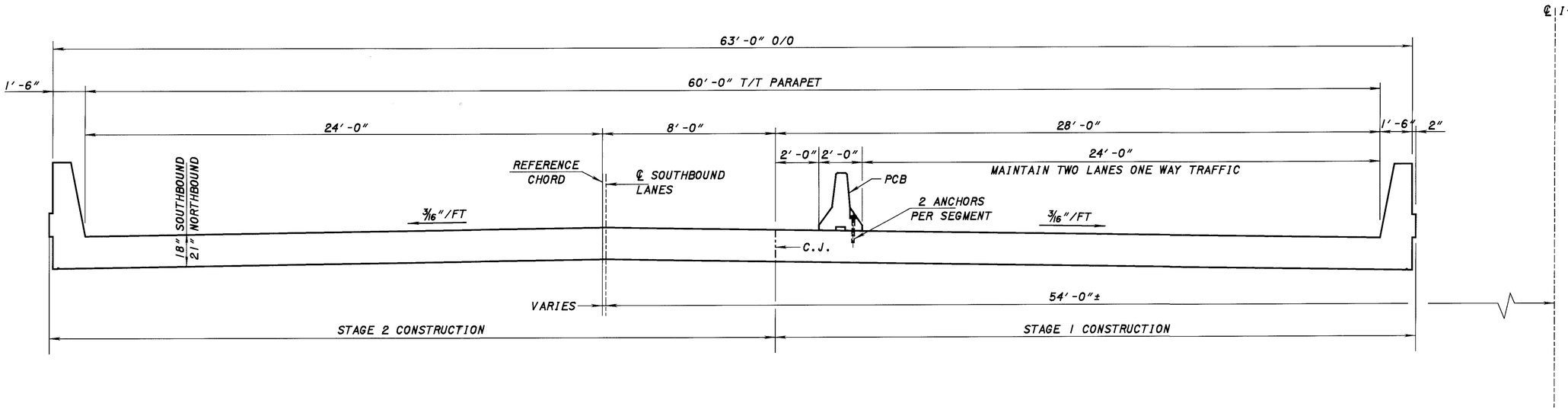
MED-71-1918 L/R

I-71 OVER WILBER RD. (CR66)

MED-71-15.78

5 / 22

780 / 940




## STAGE 2 CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)

## PROPOSED WORK

1. MAINTAIN TRAFFIC BY USE OF STAGE CONSTRUCTION
2. REPLACE CONCRETE DECK
3. WIDEN AND MODIFIED EXISTING SUBSTRUCTURE UNITS

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT
DATE 10-8-99
STRUCTURE FILE NUMBER 5203759L & 5203783R

DRAWN TDB
REVISED

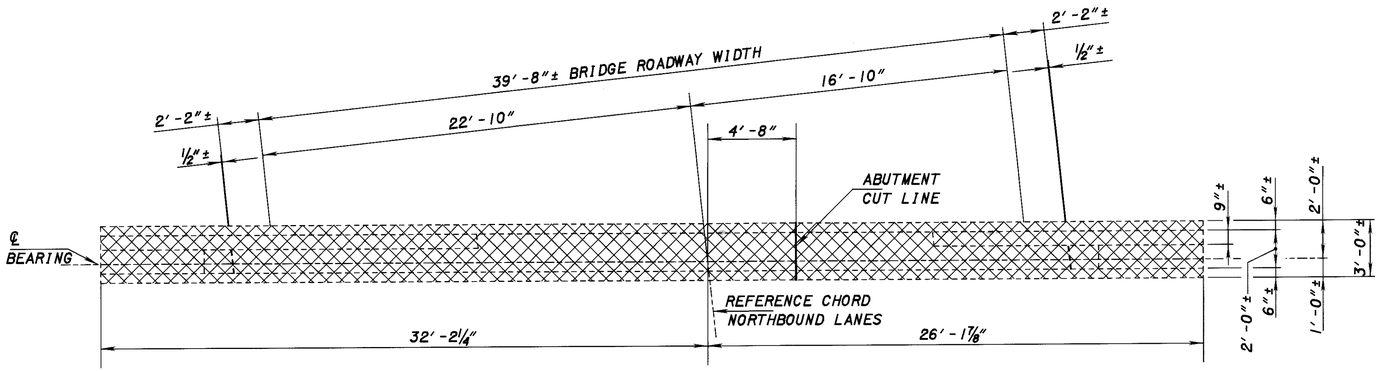
DESIGNED TDB
CHECKED TAA

PHASE CONSTRUCTION DETAILS
MED-71-19.18 L/R
I-71 OVER WILBER RD.(CR66)

MED-71-15.78

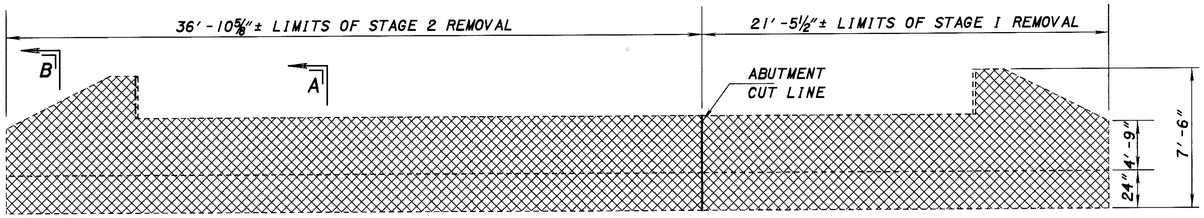
6 / 22

781
940



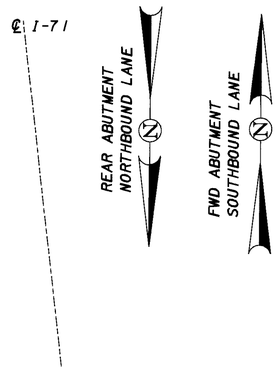

## PLAN

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)



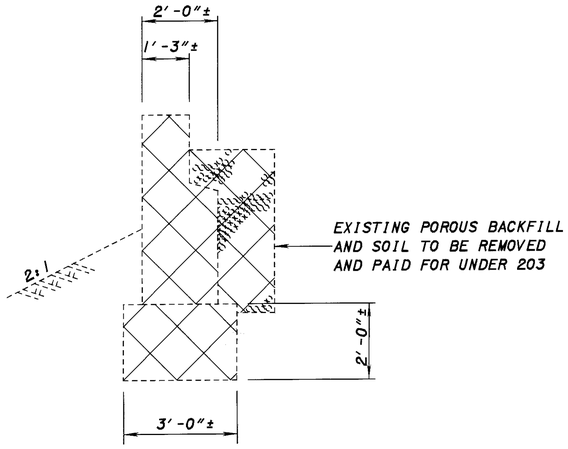

## ELEVATION

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)

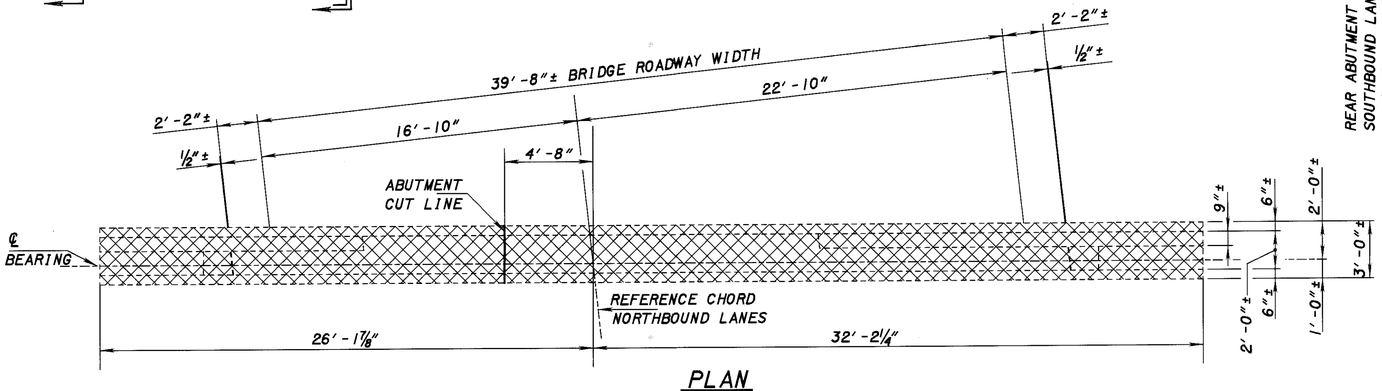



## LEGEND

PORTION OF STRUCTURE TO BE REMOVED

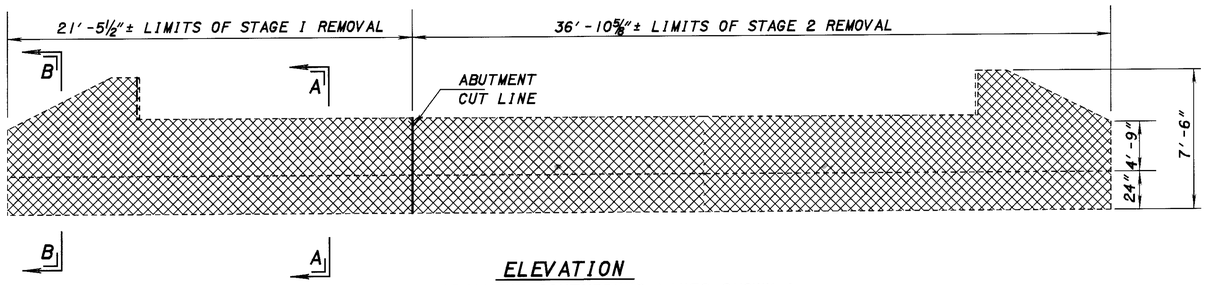



## SECTION B-B



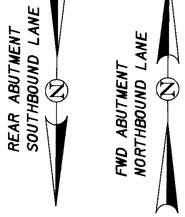

## PLAN

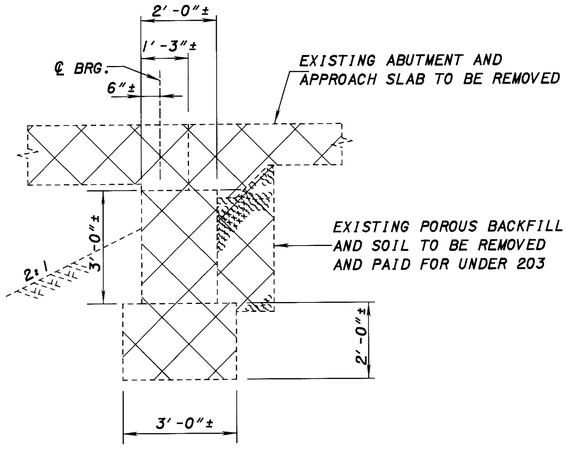
(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)




## ELEVATION

(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)




## SECTION A-A

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| REVISED | DATE |
|---|---|
| DFT | 10-8-99 |

STRUCTURE FILE NUMBER
5203759L & 5203783R

| DRAWN | REVISED |
|---|---|
| TDB | |

| DESIGNED | |
|---|---|
| TDB | |

| CHECKED | |
|---|---|
| TAA | |

# EXISTING ABUTMENT PLAN AND ELEVATION

MED-71-1918 L/R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

7 / 22

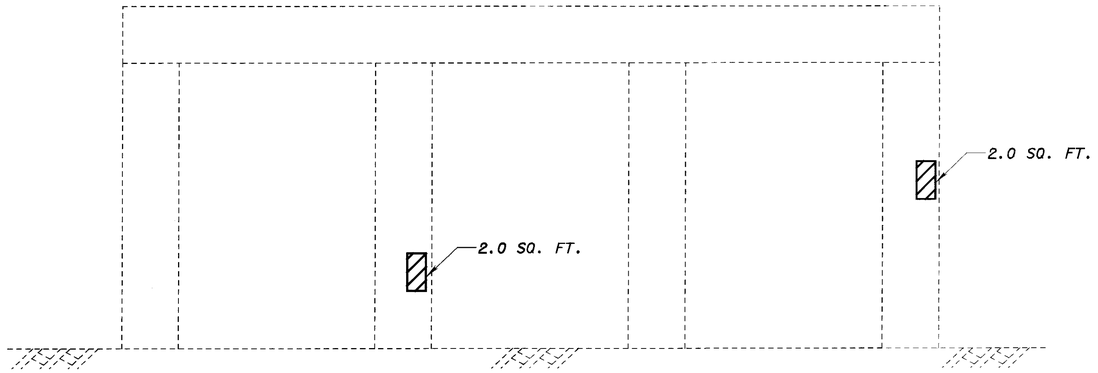
782
940

ALL SURFACES TO BE PATCHED AND THE EXPOSED REINFORCING STEEL WITHIN SHALL BE THROROUGHLY CLEANED BY ABRASIVE BLASTING PRIOR TO THE CLEANING SPECIFIED BY 519.04. CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL OR ERECTION OF THE FORMS BY NOT MORE THAN 24 HOURS.

## QUANTITY SUMMARY

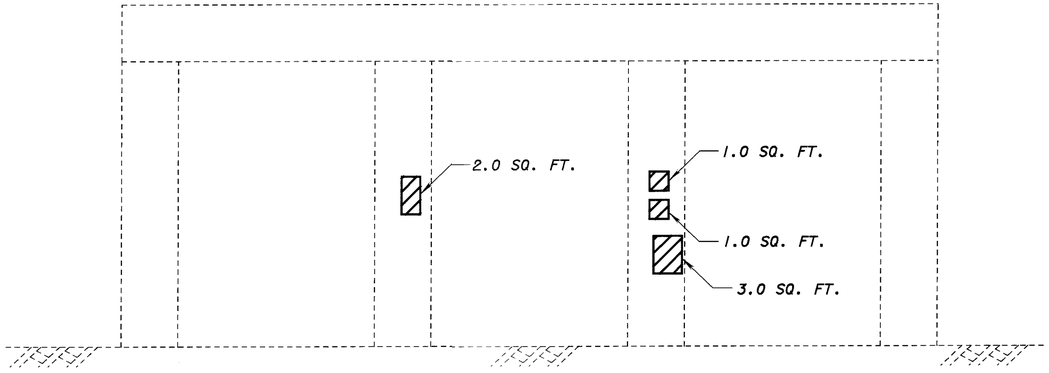
| | LEFT | RIGHT |
|---|---|---|
| SOUTH PIER | | 8.0 SQ. FT |
| NORTH PIER | 7.0 SQ. FT. | 6.0 SQ. FT. |
| TOTAL | 7.0 SQ. FT. | 14.0 SQ. FT. |

▨ - DENOTES AREA TO BE PATCHED. REPAIRS SHALL BE PAID FOR UNDER ITEM 519 - PATCHING CONCRETE STRUCTURE. THE AREAS SHOWN ARE APPROXIMATE. FINAL DETERMINATION OF THE AREA TO BE REPAIRED WILL BE MADE BY THE ENGINEER AT THE TIME OF CONSTRUCTION.



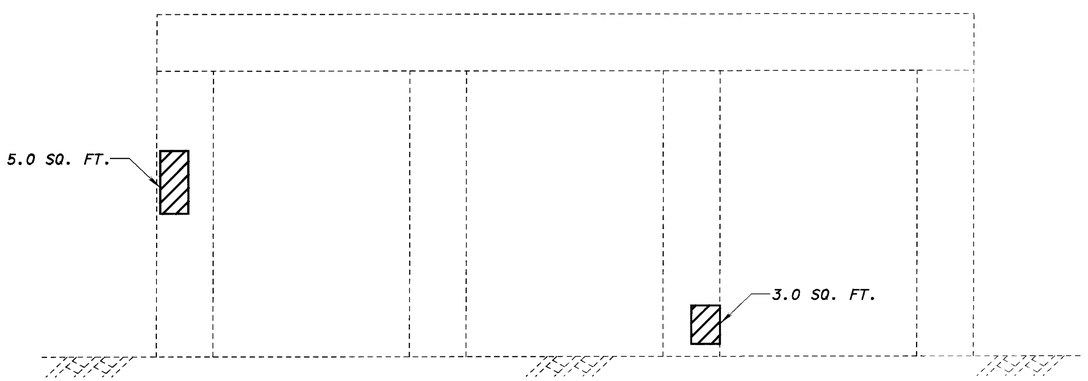

SOUTH FACE/PIER 2 - RIGHT STRUCTURE

TOTAL - 4.0 SQ. FT.



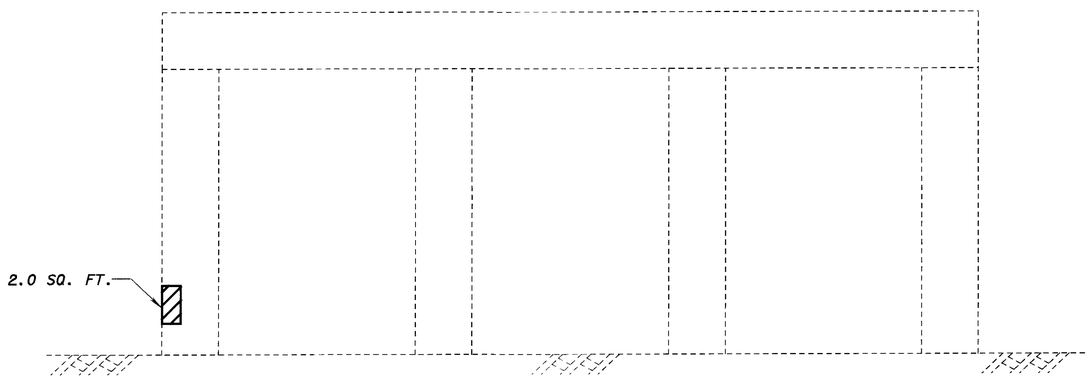

SOUTH FACE/PIER 2 - LEFT STRUCTURE

TOTAL - 7.0 SQ. FT.




NORTH FACE/PIER 1 - RIGHT STRUCTURE

TOTAL - 8.0 SQ. FT.




NORTH FACE/PIER 2 - RIGHT STRUCTURE

TOTAL - 2.0 SQ. FT.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

REVIEWED: DFT DATE: 10-8-99

DRAWN: TDB REVISED:

DESIGNED: TDB CHECKED: TAA

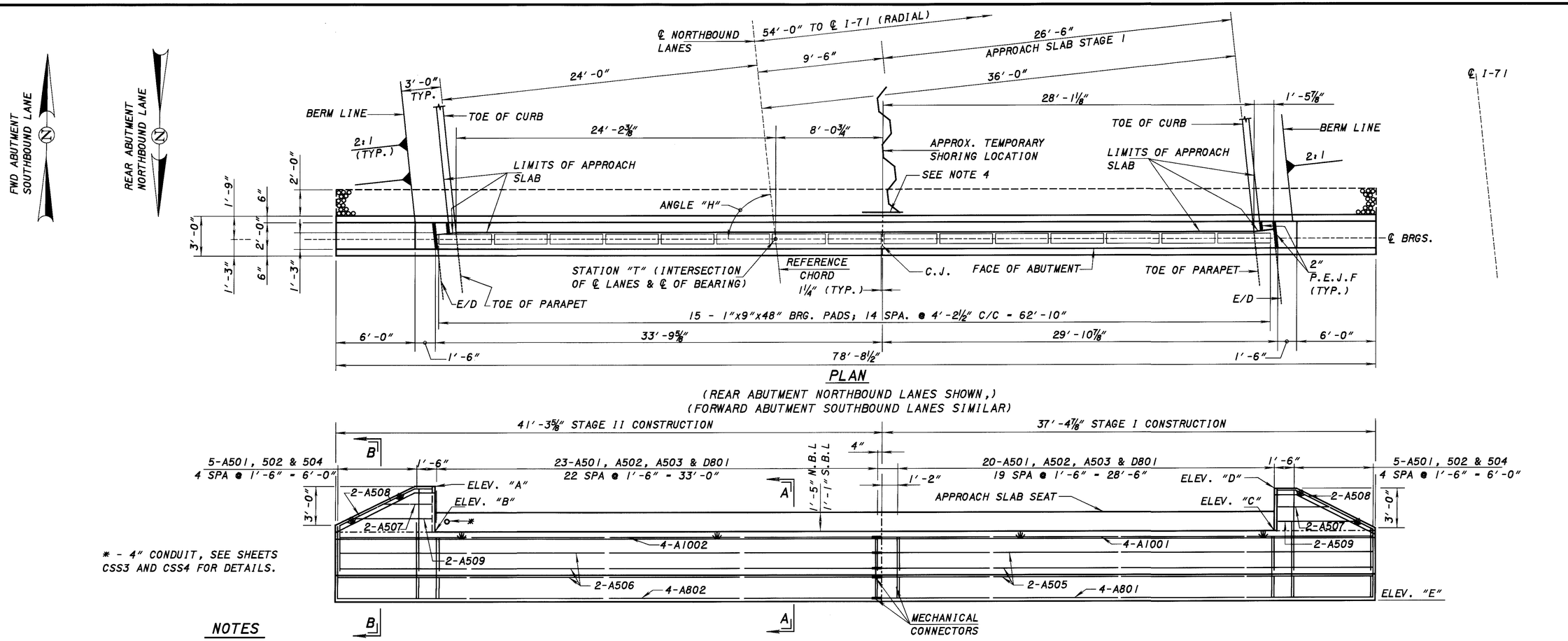
STRUCTURE FILE NUMBER: 5203759L & 5203783R

SUBSTRUCTURE REPAIRS
MED-71-1918 L/R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

8 / 22

783
940




## PLAN

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)




* - 4" CONDUIT, SEE SHEETS CSS3 AND CSS4 FOR DETAILS.

## NOTES

1. ALL ELEVATIONS ARE MEASURED ALONG THE BRIDGE LIMITS.
2. NYLON REINFORCED NEOPRENE SHEETING 3'-0" WIDE, CENTERED ABOUT JOINTS. AT STAGE CONSTRUCTION JOINT, LAP NEOPRENE 2'-0".
3. UPON REMOVAL OF THE EXISTING ABUTMENT, SHOULD IT BE FOUND THAT INSITU ROCK CUT VERTICALLY A DISTANCE LESS THAN 2'-0" BEHIND THE ABUTMENT, POROUS BACKFILL NEED ONLY BE PLACED BETWEEN THE ABUTMENT AND THE INSITU ROCK. THIS DOES NOT RELIEVE THE CONTRACTOR FROM THE REQUIREMENTS OF THE FILTER FABRIC OR NEOPRENE PLACEMENT. THE POROUS BACKFILL AND FILTER FABRIC SHALL EXTEND TO THE PLANE OF THE SUBGRADE, TO ONE FOOT BELOW THE EMBANKMENT SURFACE AND LATERALLY TO THE ENDS OF THE WINGWALLS.
4. TYPE B WATERPROOFING, 3'-0" WIDE. EXTEND FROM THE BOTTOM OF APPROACH SLAB TO THE BOTTOM OF THE FOOTING. NEOPRENE SHEETING MAY BE USED IN LIEU OF TYPE B WATERPROOFING.
5. THE EXPANDED POLYSTYRENE SHEET MATERIAL IS INCIDENTAL TO ITEM 842 - CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN.

## LEGEND

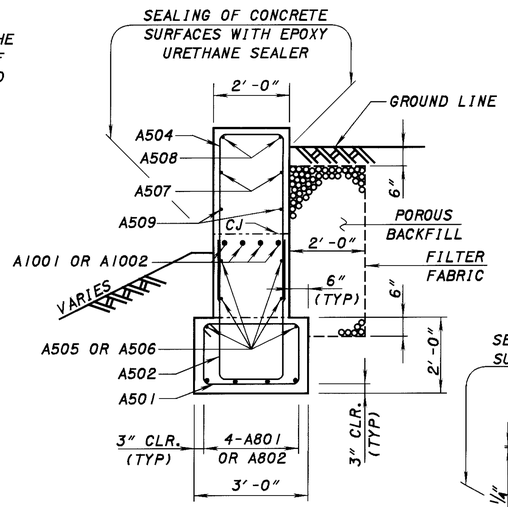
CJ - CONSTRUCTION JOINT
BRIDGE SEAT IS LEVEL ACROSS ABUTMENT ELEV. B & C. (TYP.)

# - ALONG ℄ I-71

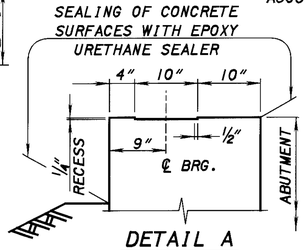
| | ELEVATION | | | | | ANGLE | STATION |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | H | # T |
| S.B.L. FWD ABUT. | 1153.64 | 1150.62 | 1150.62 | 1153.51 | 1145.22 | 83°44'44" | 1013+57.45 |
| N.B.L. REAR ABUT. | 1154.62 | 1151.22 | 1151.22 | 1154.38 | 1145.92 | 83°47'19" | 1012+44.46 |

## ELEVATION

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)

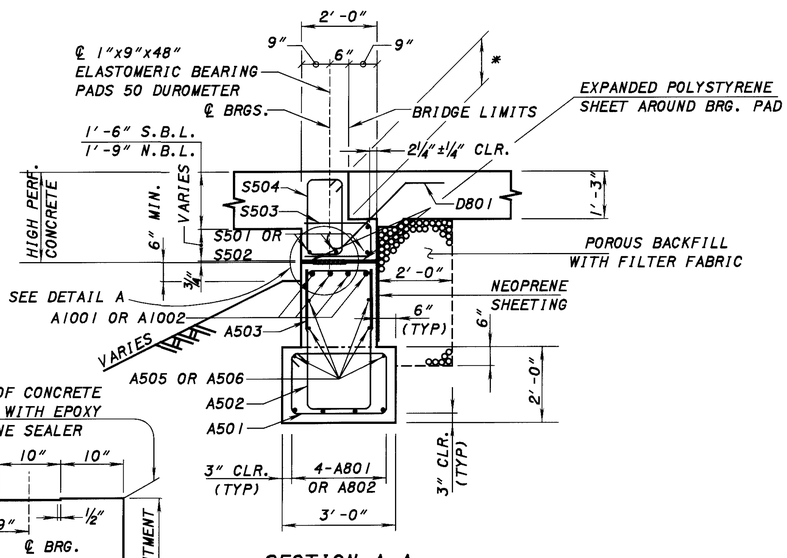



## SECTION B-B




## DETAIL A

* THIS DIMENSION WILL VARY (TYP.)




## SECTION A-A

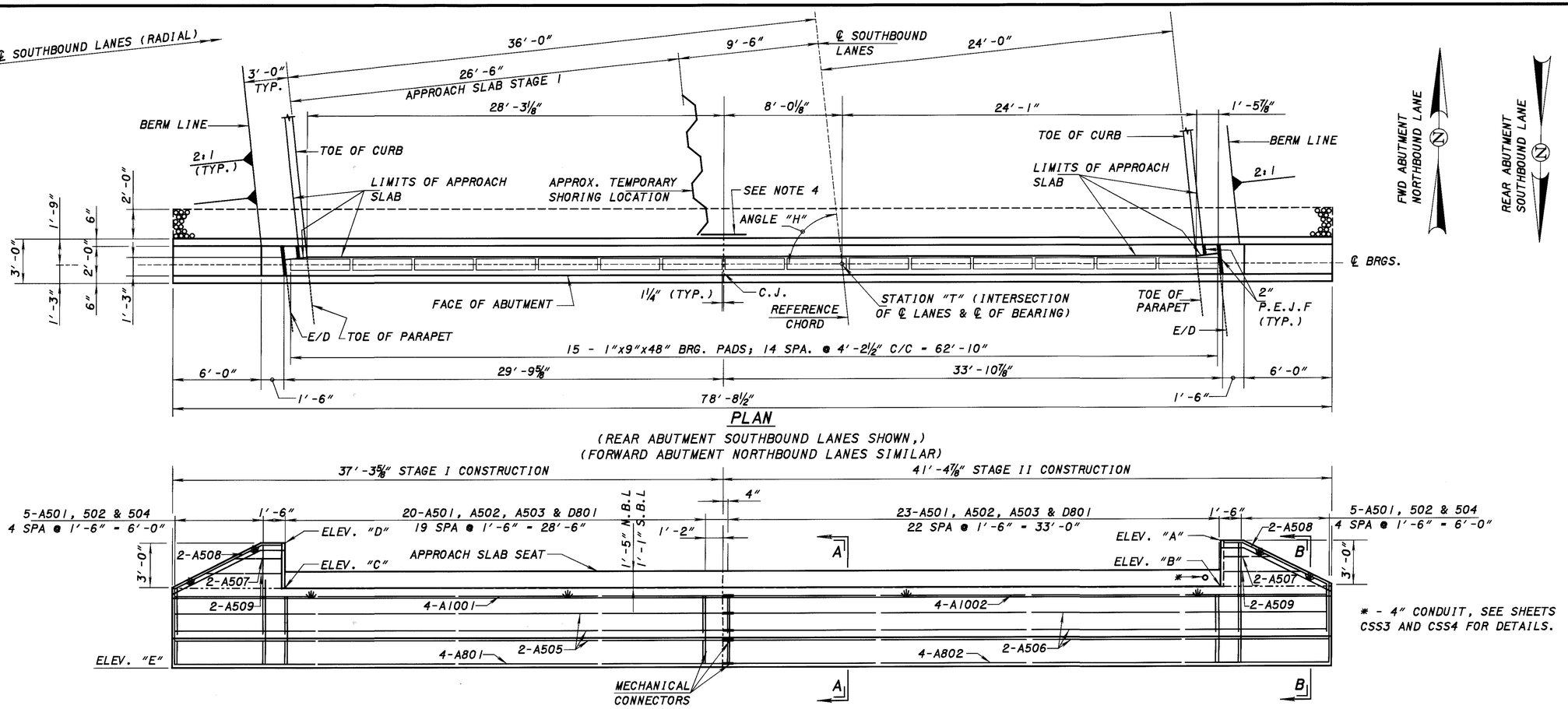
| | |
|---|---|
| DESIGNED | TDB |
| DRAWN | TDB |
| CHECKED | TAA |
| REVISED | |
| REVISED | DFT |
| DATE | 10-8-99 |
| STRUCTURE FILE NUMBER | 5203759L & 5203783R |
| DESIGN AGENCY | ODOT CENTRAL OFFICE OFFICE OF PRODUCTION |

ABUTMENT DETAILS
MED-71-1918 L/R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

9 / 22

784 / 940




## PLAN

(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)




## NOTES

1. ALL ELEVATIONS ARE MEASURED ALONG THE BRIDGE LIMITS.
2. NYLON REINFORCED NEOPRENE SHEETING 3'-0" WIDE, CENTERED ABOUT JOINTS. AT STAGE CONSTRUCTION JOINT, LAP NEOPRENE 2'-0".
3. UPON REMOVAL OF THE EXISTING ABUTMENT, SHOULD IT BE FOUND THAT INSITU ROCK CUT VERTICALLY A DISTANCE LESS THAN 2'-0" BEHIND THE ABUTMENT, POROUS BACKFILL NEED ONLY BE PLACED BETWEEN THE ABUTMENT AND THE INSITU ROCK. THIS DOES NOT RELIEVE THE CONTRACTOR FROM THE REQUIREMENTS OF THE FILTER FABRIC OR NEOPRENE PLACEMENT. THE POROUS BACKFILL AND FILTER FABRIC SHALL EXTEND TO THE PLANE OF THE SUBGRADE, TO ONE FOOT BELOW THE EMBANKMENT SURFACE AND LATERALLY TO THE ENDS OF THE WINGWALLS.
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5. THE EXPANDED POLYSTYRENE SHEET MATERIAL IS INCIDENTAL TO ITEM 842 - CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN.

## LEGEND

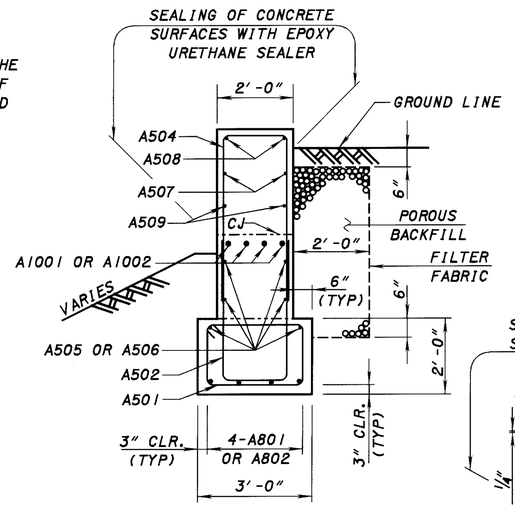
CJ - CONSTRUCTION JOINT

\# - ALONG ℄ I-71

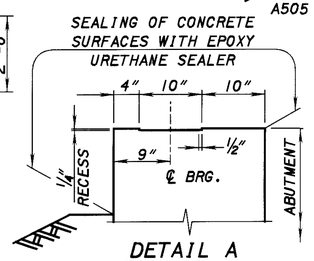
| | ELEVATION | | | | | ANGLE | STATION |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | H | #T |
| S.B.L. REAR ABUT. | 1154.40 | 1151.38 | 1151.38 | 1154.27 | 1145.94 | 83°44'44" | 1012+65.62 |
| N.B.L. FWD. ABUT. | 1153.71 | 1150.32 | 1150.32 | 1153.47 | 1145.05 | 83°47'19" | 1013+55.07 |

## ELEVATION

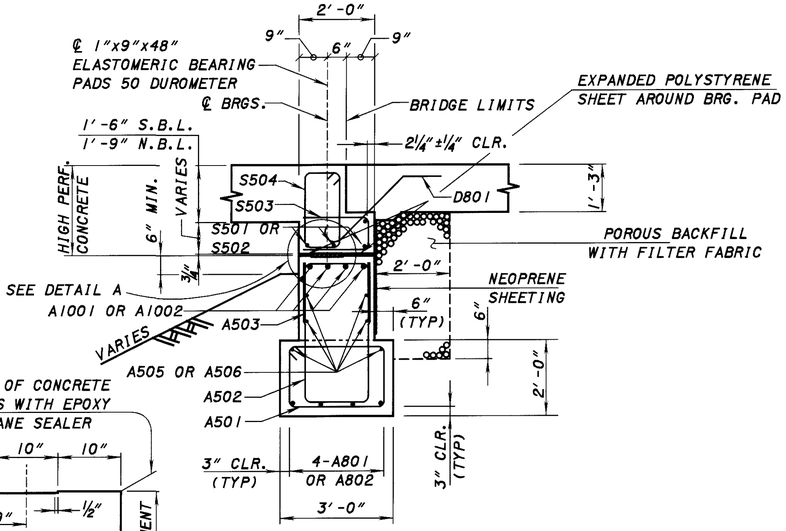
(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)




SECTION B-B




DETAIL A




SECTION A-A

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT
DATE 10-8-99
STRUCTURE FILE NUMBER 5203759L & 5203783R

DRAWN TDB
REVISED

DESIGNED TDB
CHECKED TAA

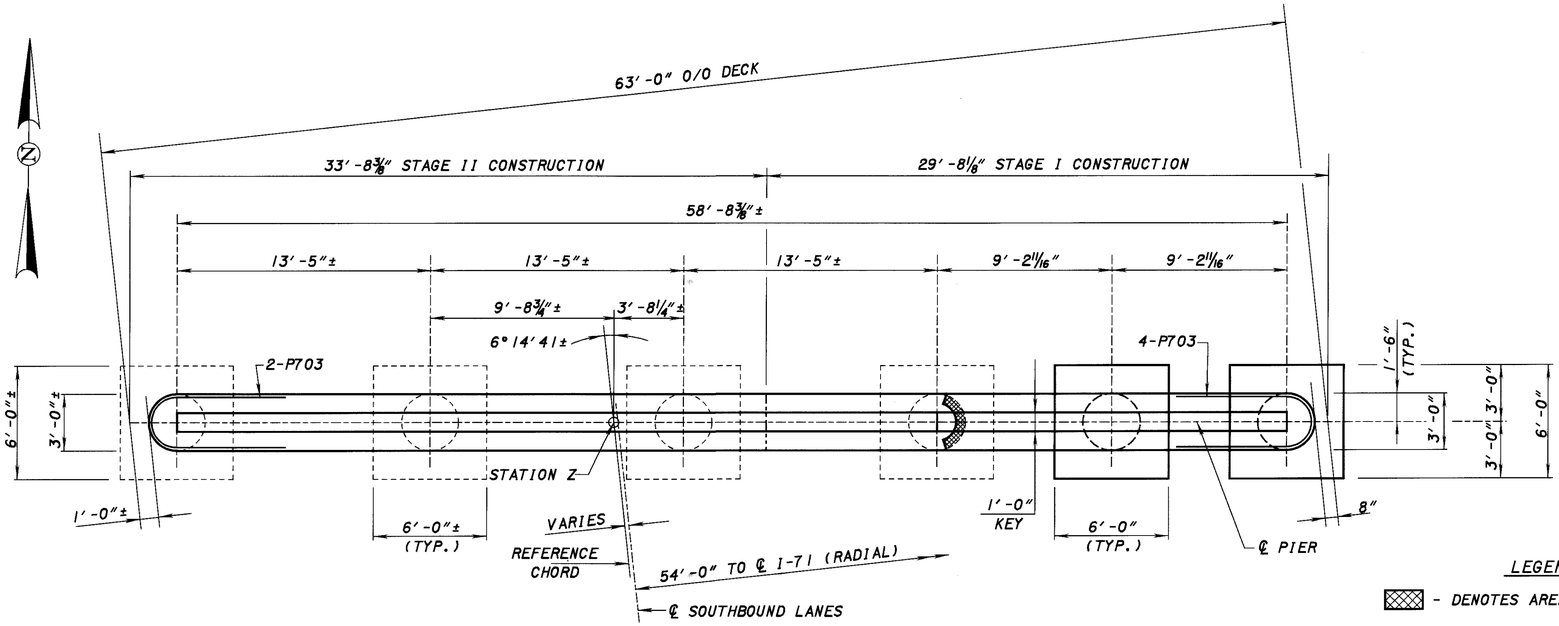
# ABUTMENT DETAILS

MED-71-1918 L/R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

10/22

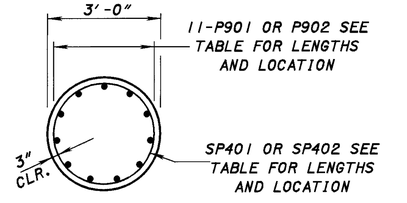
785/940




PLAN

(SOUTHBOUND LANES PIERS 1 & 2)

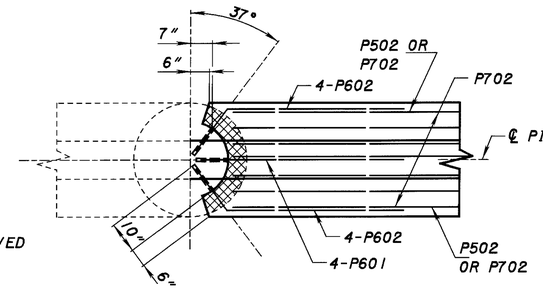
℄ I-71



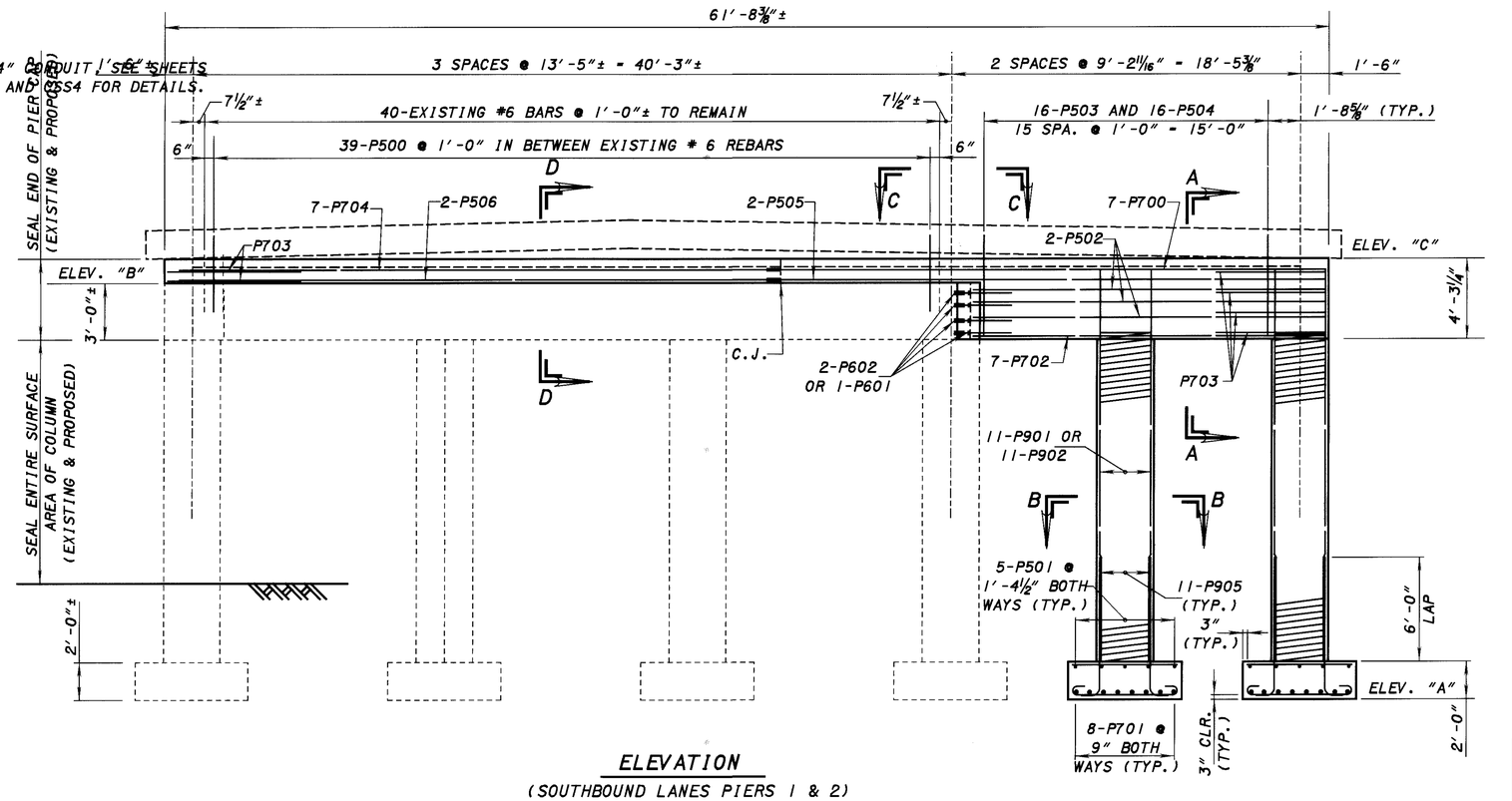

SECTION B-B

LEGEND

▨ - DENOTES AREA TO BE REMOVED

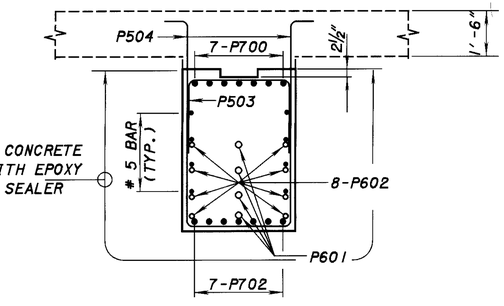



VIEW C-C



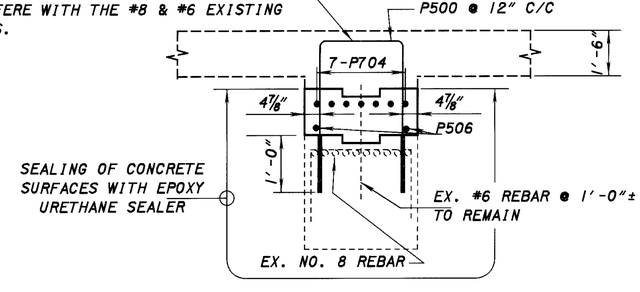

ELEVATION

(SOUTHBOUND LANES PIERS 1 & 2)




SECTION A-A

P500 SHALL BE DOWELED INTO THE EXISTING CONCRETE IN A MANNER THAT DOES NOT INTERFERE WITH THE #8 & #6 EXISTING REBARS.




SECTION D-D

* ALONG ℄ I71

| | ELEVATION A (MATCH EX.) | ELEVATION B (MATCH EX.) | ELEVATION C | * STATION Z | COLUMN REINFORCING | |
|---|---|---|---|---|---|---|
| | | | | | VERTICALS | TIES |
| PIER 1 | 1128.68 (±) | 1150.74 (±) | 1152.02 | 1012+93.98 | 22-P901 | 2-SP401 |
| PIER 2 | 1128.92 (±) | 1150.46 (±) | 1151.73 | 1013+29.10 | 22-P902 | 2-SP402 |

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVISED: DFT — DATE: 10-8-99 — STRUCTURE FILE NUMBER: 5203759L & 5203783R

DRAWN: TDB — REVISED:

DESIGNED: TDB — CHECKED: TAA

PIER DETAILS

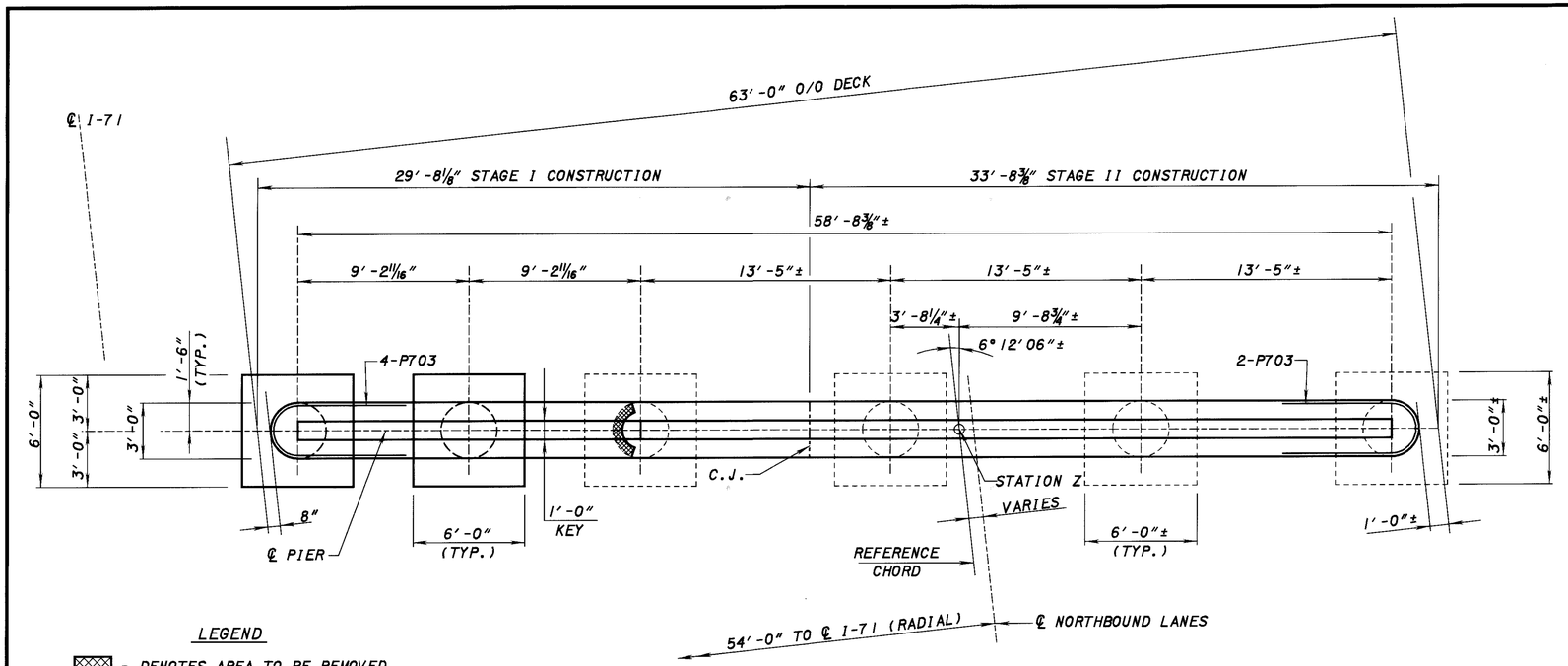
MED-71-1918 L/R

I-71 OVER WILBER RD. (CR66)

MED-71-15.78

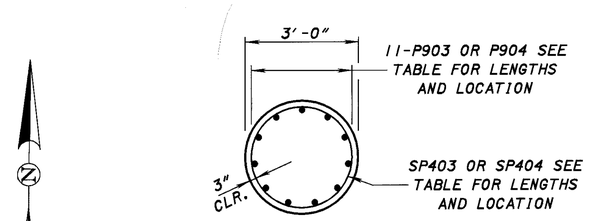
11 / 22

786 / 940

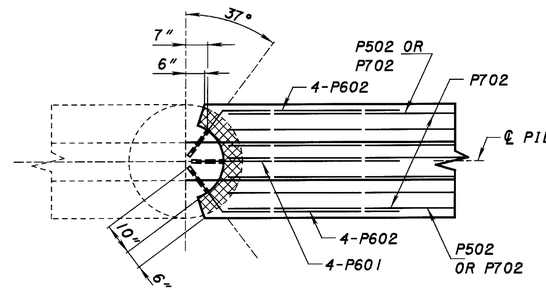



## PLAN

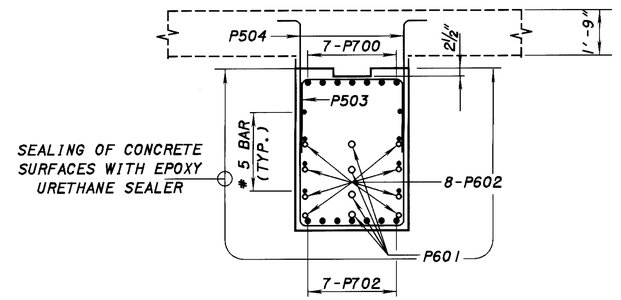
(NORTHBOUND LANES PIERS 1 & 2)



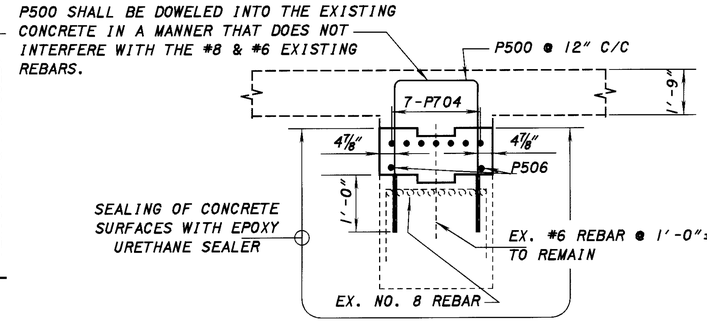

## SECTION B-B



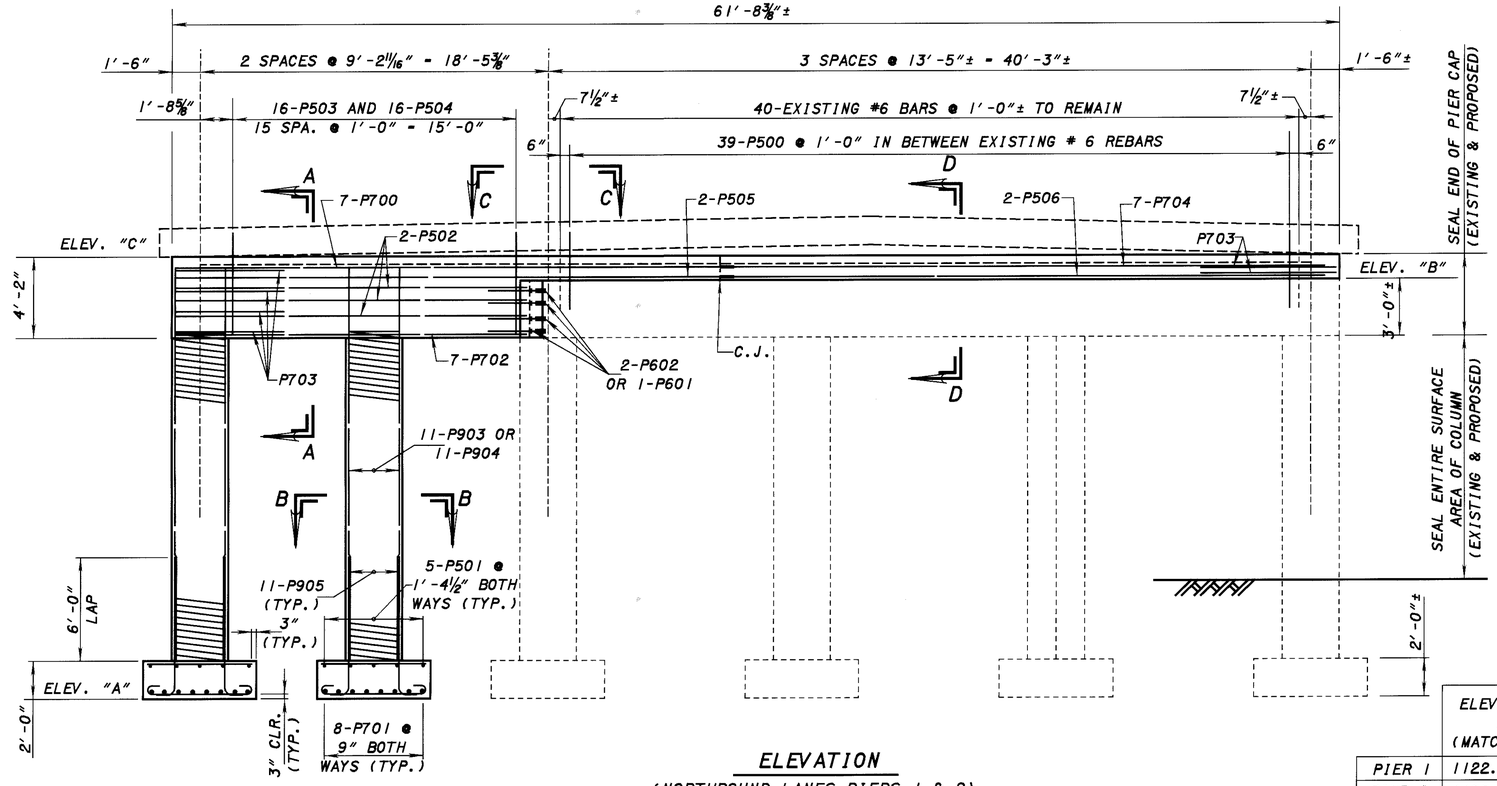

## VIEW C-C




## SECTION A-A




## SECTION D-D




## ELEVATION

(NORTHBOUND LANES PIERS 1 & 2)

| | ELEVATION A (MATCH EX.) | ELEVATION B (MATCH EX.) | ELEVATION C | # STATION Z | COLUMN REINFORCING | |
|---|---|---|---|---|---|---|
| | | | | | VERTICALS | TIES |
| PIER 1 | 1122.27 (±) | 1150.67 (±) | 1151.83 | 1012+78.59 | 22-P903 | 2-SP403 |
| PIER 2 | 1122.50 (±) | 1150.34 (±) | 1151.48 | 1013+20.95 | 22-P904 | 2-SP404 |

# ALONG ℄ I71

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| REVISED | DATE |
|---|---|
| DFT | 10-8-99 |
| DRAWN | REVISED |
| TDB | |
| DESIGNED | CHECKED |
| TDB | TAA |

STRUCTURE FILE NUMBER: 5203759L & 5203783R

# PIER DETAILS

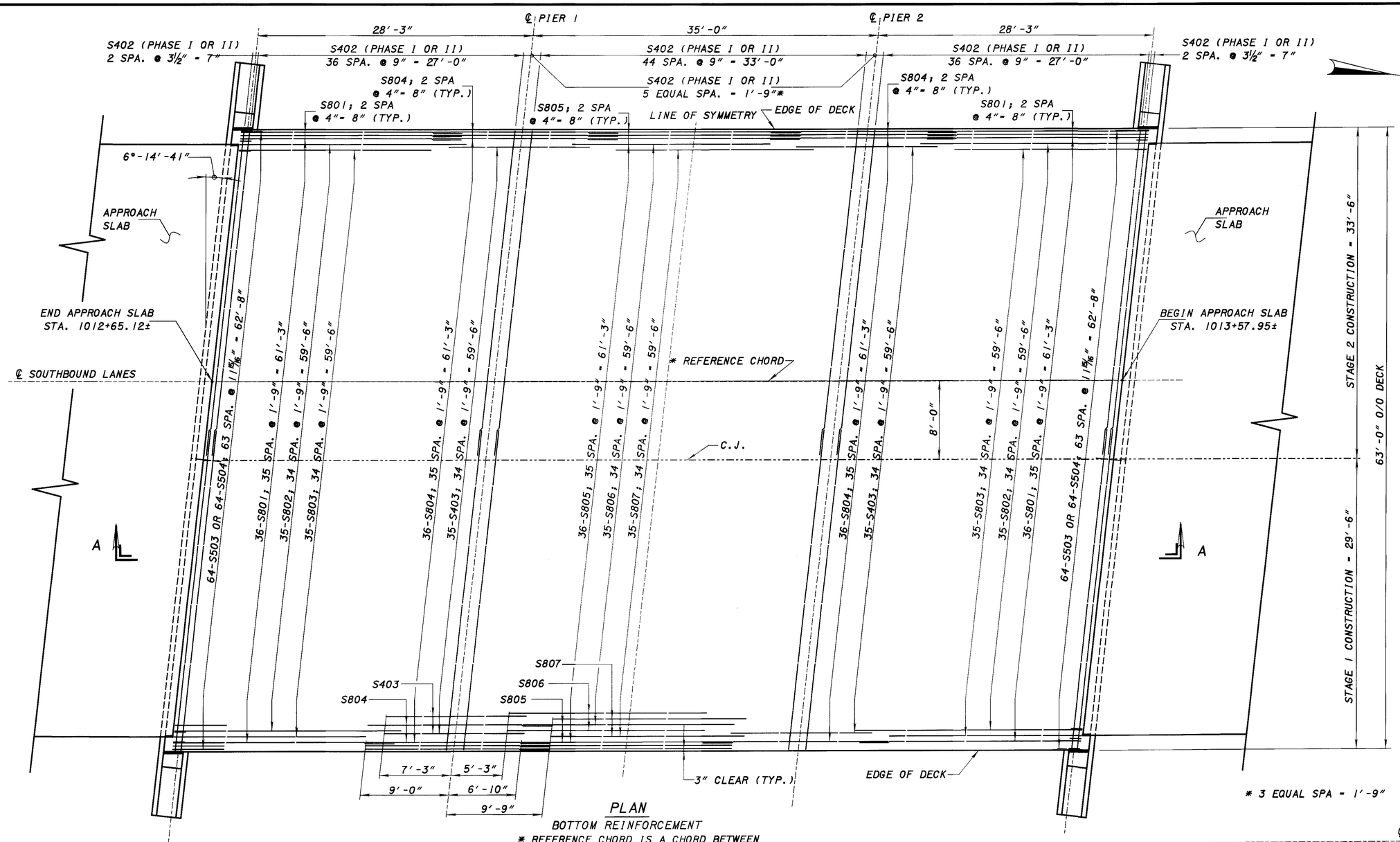
MED-71-19.18 L/R

I-71 OVER WILBER RD. (CR66)

MED-71-15.78

12/22

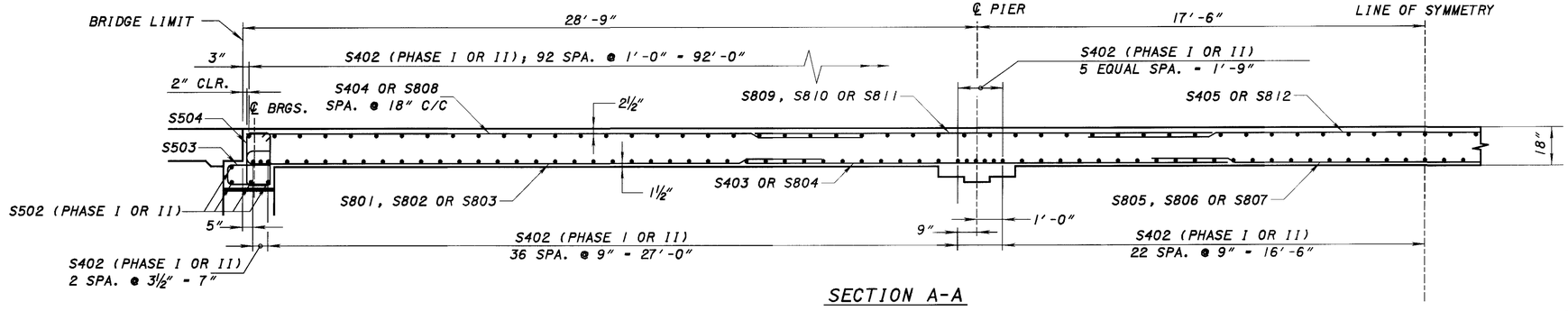
787/940




## PLAN

BOTTOM REINFORCEMENT

* REFERENCE CHORD IS A CHORD BETWEEN ℄ OF ABUTMENTS BEARINGS




## SECTION A-A

## NOTE

CONSTRUCTION JOINT AND LONGITUDINAL RE-STEEL ARE PARALELL TO REFERENCE CHORD

ADJUST TO FIT REBAR AT CONSTRUCTION JOINT

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TDB | TDB | DFT | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203759L & 5203783R | |

# SUPERSTRUCTURE DETAILS

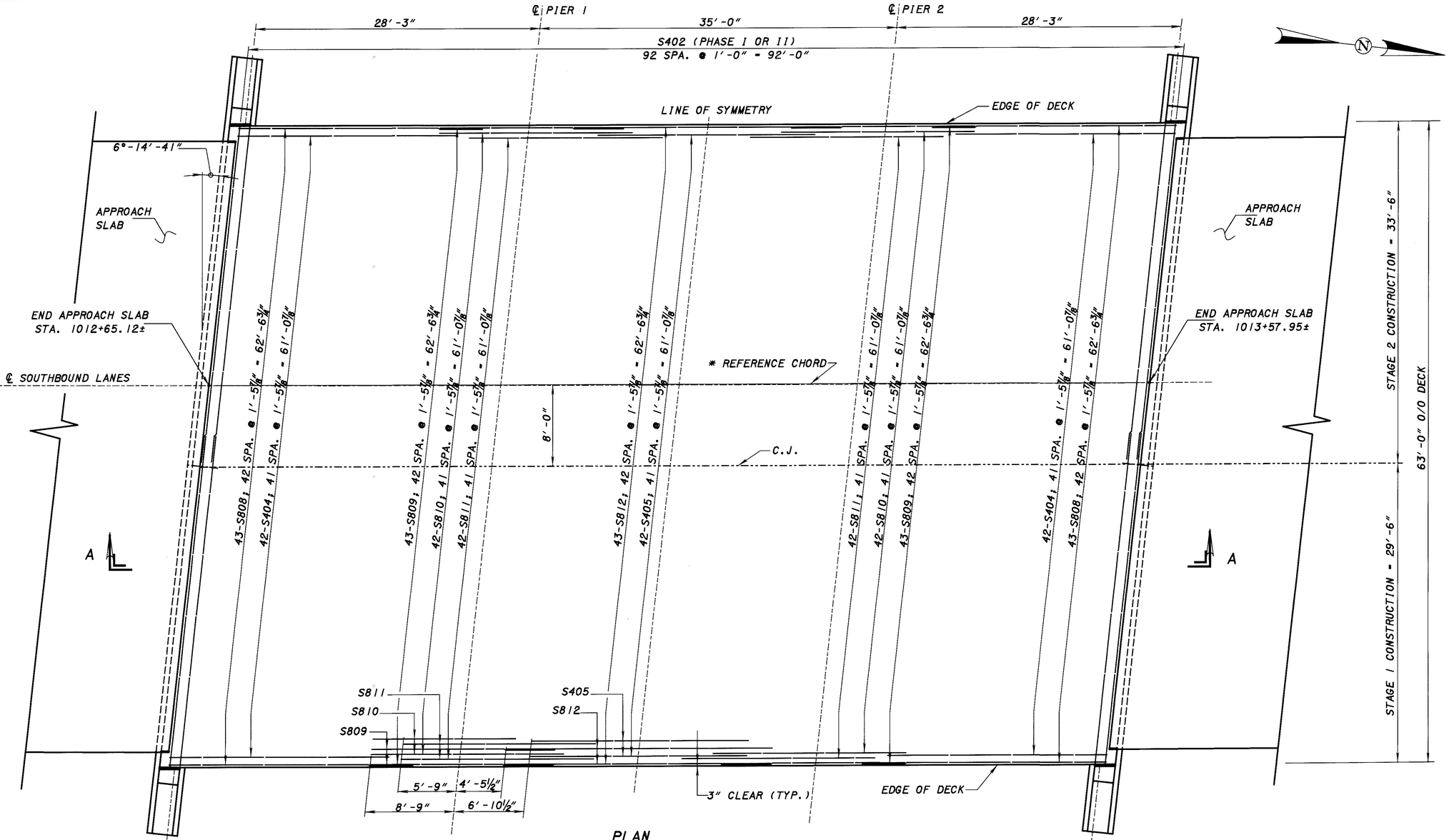
MED-71-1918 L

I-71 OVER WILBER RD. (CR66)

MED-71-15.78

13/22

788/940




## PLAN

TOP REINFORCEMENT

* REFERENCE CHORD IS A CHORD BETWEEN ℄ OF ABUTMENTS BEARINGS

℄ I-71

## NOTE

CONSTRUCTION JOINT AND LONGITUDINAL RE-STEEL ARE PARALELL TO REFERENCE CHORD

ADJUST TO FIT REBAR AT CONSTRUCTION JOINT

FOR SECTION A-A SEE SHEET 13 / 22

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

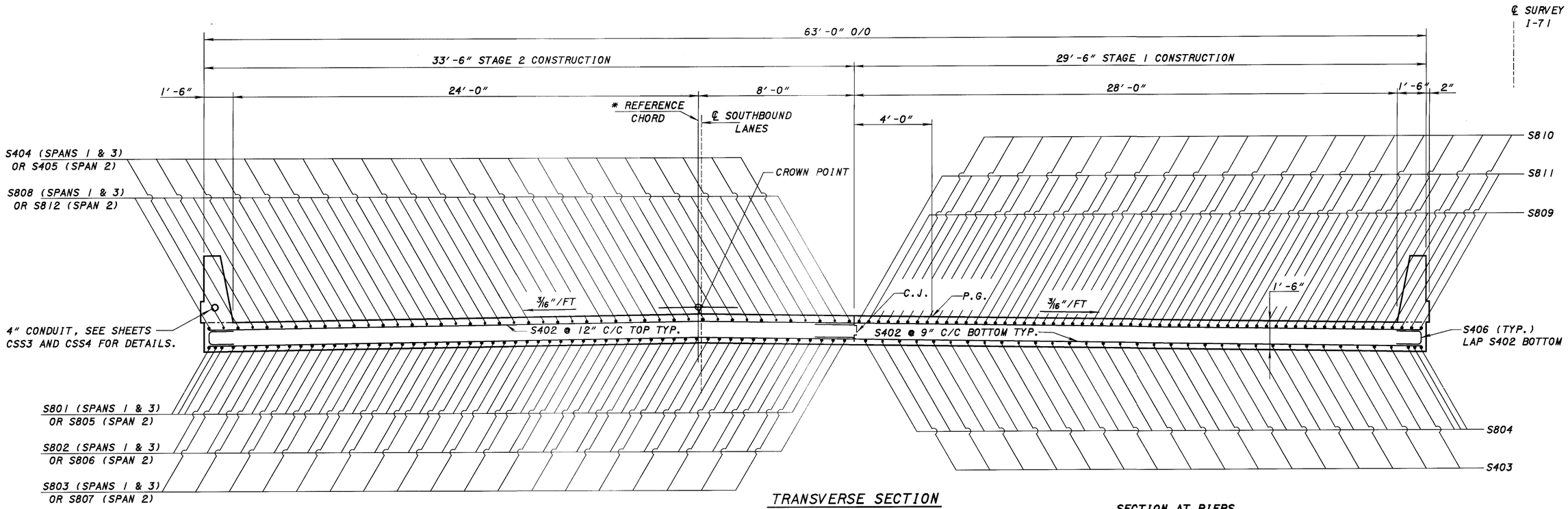
| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| TDB | TDB | DFT | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203759L & 5203783R | |

# SUPERSTRUCTURE DETAILS

MED-71-1918 L

I-71 OVER WILBER RD. (CR66)

MED-71-15.78




## SECTION AT MIDSPAN

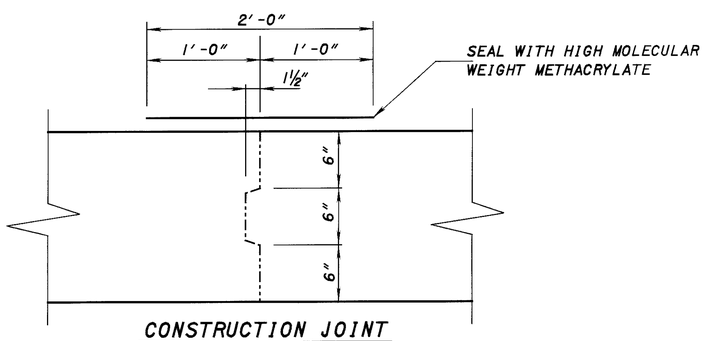
## TRANSVERSE SECTION

* REFERENCE CHORD IS A CHORD BETWEEN ℄ OF ABUTMENTS BEARINGS

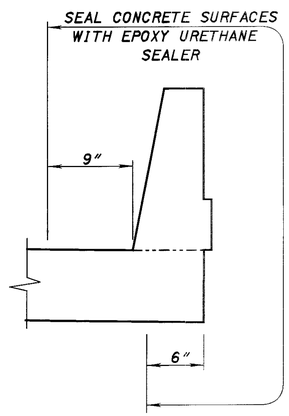
## SECTION AT PIERS

**DECK SLAB NOTES:**

1. HIGH MOLECULAR WEIGHT METHACRYLATE SHALL BE INCLUDED IN THE COST OF THE CONCRETE AND NO SEPARATE PAYMENT WILL BE MADE.
2. CAMBER: CAMBER OF 1/4" AT MIDSPAN OF SPANS 1 & 3 AND 1/2" AT MIDSPAN OF SPAN 2 SHALL BE PROVIDED TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, IN ADDITION TO ANY CAMBER REQUIRED FOR CONFORMANCE WITH PROFILE OF THE ROADWAY. ALLOWANCE SHALL BE MADE FOR THE DEFLECTION OF ANY FALSEWORK MEMBERS SUPPORTING THE ACTUAL CONCRETE DURING PLACEMENT.
3. SEE STD. DWG. CS-1-93 FOR MORE DETAILS.
4. DRIP GROOVES, AS DETAILED IN CS-1-93 SHALL NOT BE PLACED ON THIS STRUCTURE.
5. MIN. LAP SPLICES: #4 BAR = 2'-0", #6 BAR = 3'-0"
6. ALL REINFORCING STEEL IS EPOXY COATED.
7. FOR PARAPET DETAILS, SEE SHEET 19/22
8. REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH HIGH PERFORMANCE CONCRETE.




CONSTRUCTION JOINT

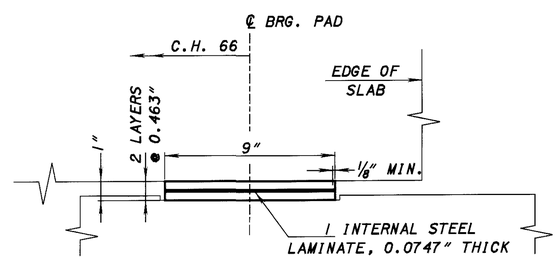



LIMITS OF SEALING CONCRETE

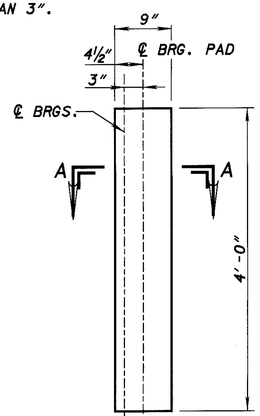
**ELASTOMERIC BEARING PAD NOTES:**

1. ALL ELASTOMER FOR BEARINGS TO BE 50 DUROMETER
2. ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7 (DESIGN METHOD B). THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE).
3. AT THE CONTRACTORS OPTION, BEARING PADS OF A DIFFERENT WIDTH MAY BE PROVIDED. THE CLEAR DISTANCE BETWEEN BEARING PADS SHALL NOT BE GREATER THAN 3".
4. BEARINGS HAVE BEEN DESIGNED FOR THE FOLLOWING REACTIONS:

| DEAD LOAD | LIVE LOAD | TOTAL |
|---|---|---|
| 18.0 K | 18.5 K | 36.5 K |




SECTION A-A
LAMINATED ELASTOMERIC BEARING 9"x48"x1"




PLAN
LAMINATED ELASTOMERIC BEARING 9"x48"x1"

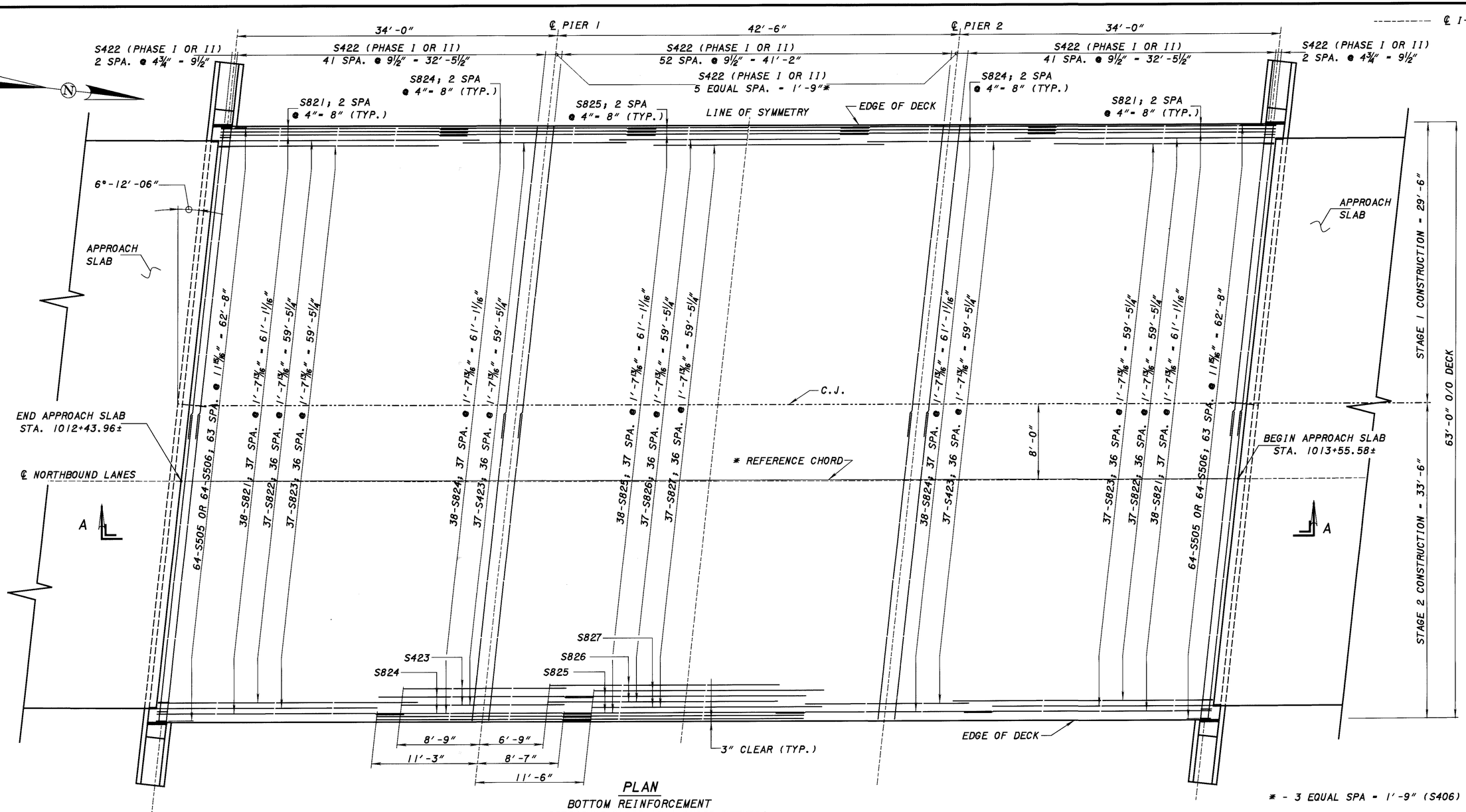
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED DFT DATE 10-8-99
STRUCTURE FILE NUMBER 5203759L & 5203783R
DRAWN TDB REVISED
DESIGNED TDB CHECKED TAA

SUPERSTRUCTURE DETAILS
MED-71-1918 L
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

15/22

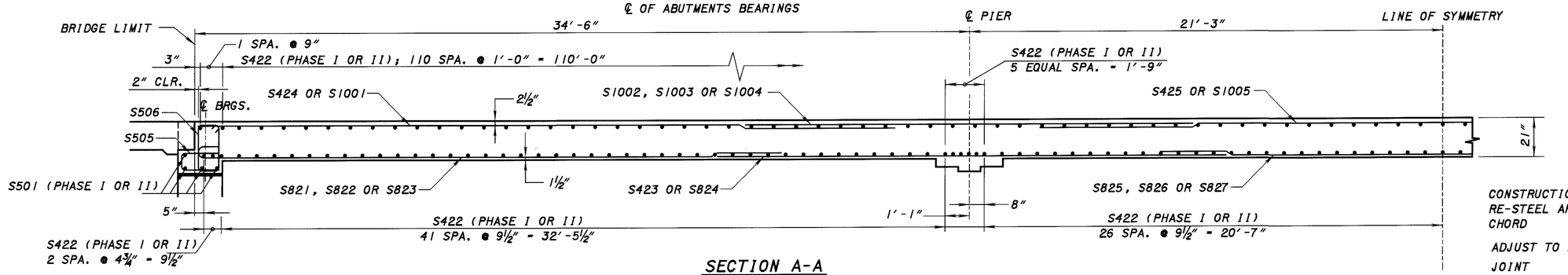
790
940




## PLAN

BOTTOM REINFORCEMENT

* REFERENCE CHORD IS A CHORD BETWEEN ℄ OF ABUTMENTS BEARINGS




## SECTION A-A

### NOTE

CONSTRUCTION JOINT AND LONGITUDINAL RE-STEEL ARE PARALELL TO REFERENCE CHORD

ADJUST TO FIT REBAR AT CONSTRUCTION JOINT

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED TDB | DRAWN TDB | REVIEWED DFT | DATE 10-8-99
CHECKED TAA | REVISED | STRUCTURE FILE NUMBER 5203759L & 5203783R

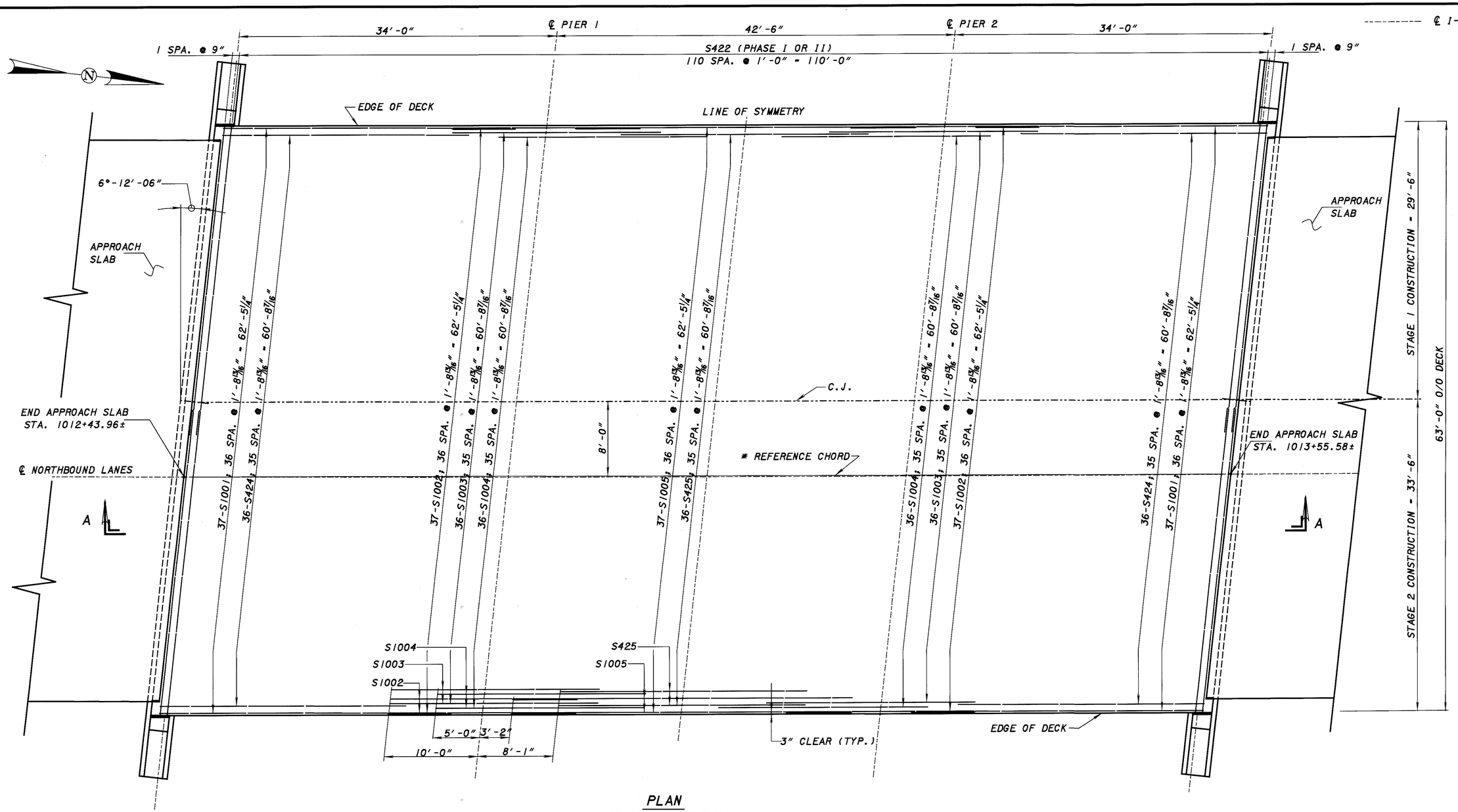
# SUPERSTRUCTURE DETAILS

MED-71-1918 R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

16 / 22

791
340




## PLAN

TOP REINFORCEMENT

* REFERENCE CHORD IS A CHORD BETWEEN ℄ OF ABUTMENTS BEARINGS

## NOTE

CONSTRUCTION JOINT AND LONGITUDINAL RE-STEEL ARE PARALELL TO REFERENCE CHORD

ADJUST TO FIT REBAR AT CONSTRUCTION JOINT

FOR SECTION A-A SEE SHEET 16 / 22

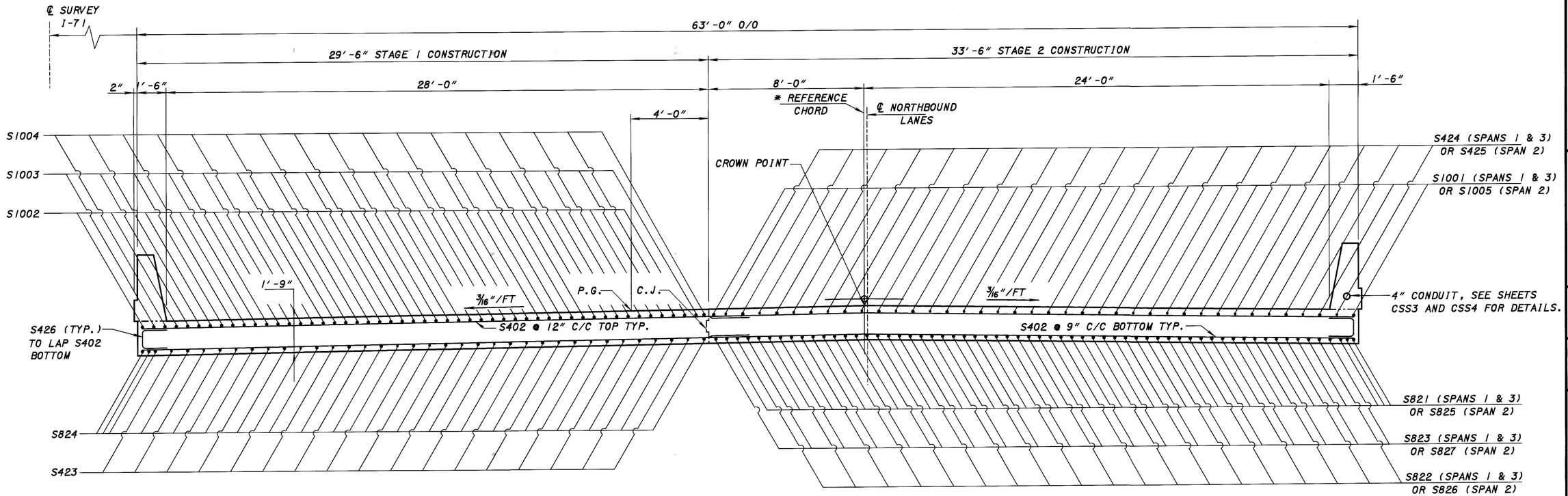
DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TDB | TDB | DFT | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203759L & 5203783R | |

# SUPERSTRUCTURE DETAILS

MED-71-1918 R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78




SECTION AT PIERS

SECTION AT MIDSPAN

## TRANSVERSE SECTION

* REFERENCE CHORD IS A CHORD BETWEEN ℄ OF ABUTMENTS BEARINGS

DECK SLAB NOTES:

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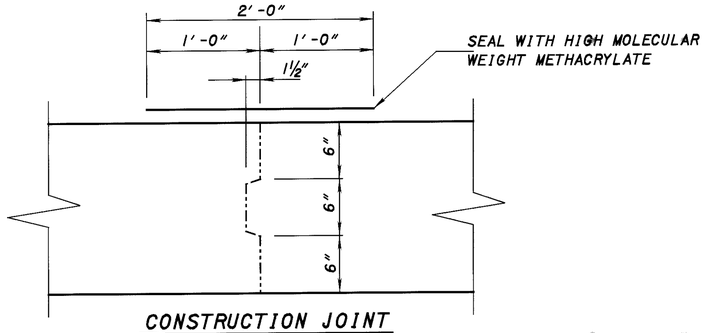
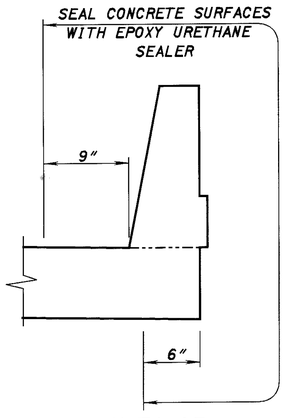
7. FOR PARAPET DETAILS, SEE SHEET 19/22
8. REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH HIGH PERFORMANCE CONCRETE.




CONSTRUCTION JOINT




LIMITS OF SEALING CONCRETE

ELASTOMERIC BEARING PAD NOTES:

1. ALL ELASTOMER FOR BEARINGS TO BE 50 DUROMETER
2. ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7 (DESIGN METHOD B). THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE).
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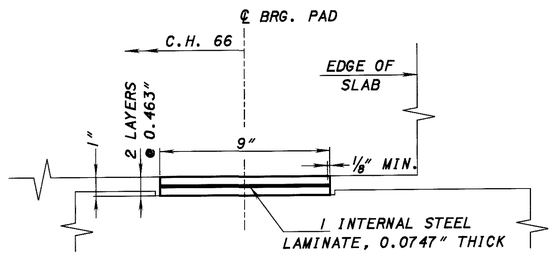
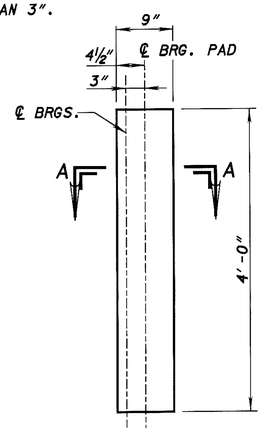
| DEAD LOAD | LIVE LOAD | TOTAL |
|---|---|---|
| 18.0 K | 18.5 K | 36.5 K |




SECTION A-A

LAMINATED ELASTOMERIC BEARING 9"x48"x3/4"




PLAN

LAMINATED ELASTOMERIC BEARING 9"x48"x3/4"

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

REVIEWED: DFT | DATE: 10-8-99 | STRUCTURE FILE NUMBER: 5203759L & 5203783R

DRAWN: TDB | REVISED:

DESIGNED: TDB | CHECKED: TAA

SUPERSTRUCTURE DETAILS

MED-71-1918 R

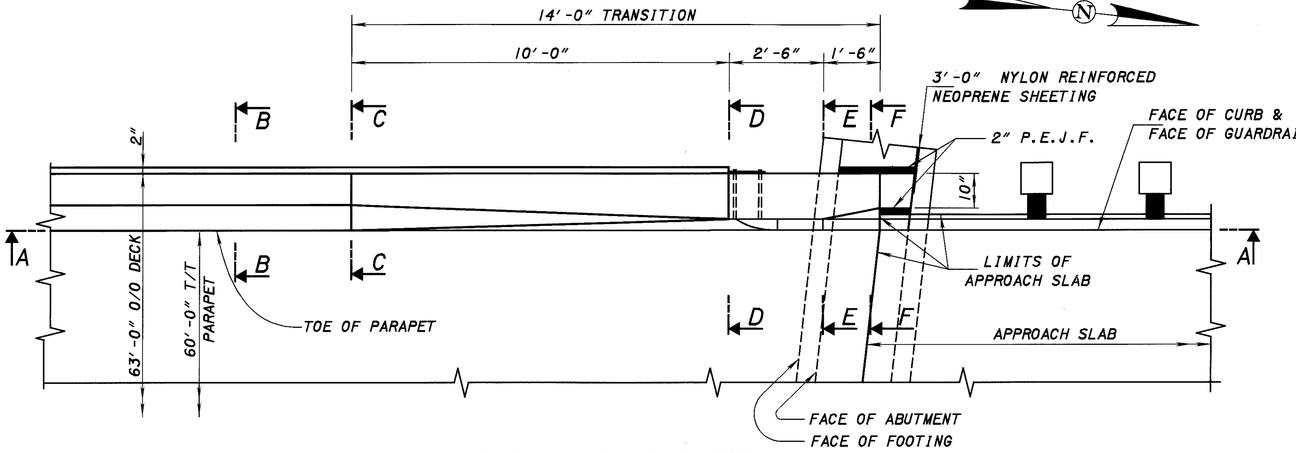
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

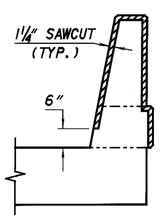
18/22

793/940

LEGEND: N.S. - NEAR SIDE
F.S. - FAR SIDE




## PART PLAN AT ABUTMENT




## DETAIL A

(Section through sawcut)
Sawcut Perimeter = 7′-6″

**CONTROL JOINTS FOR CONCRETE PARAPETS:** THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

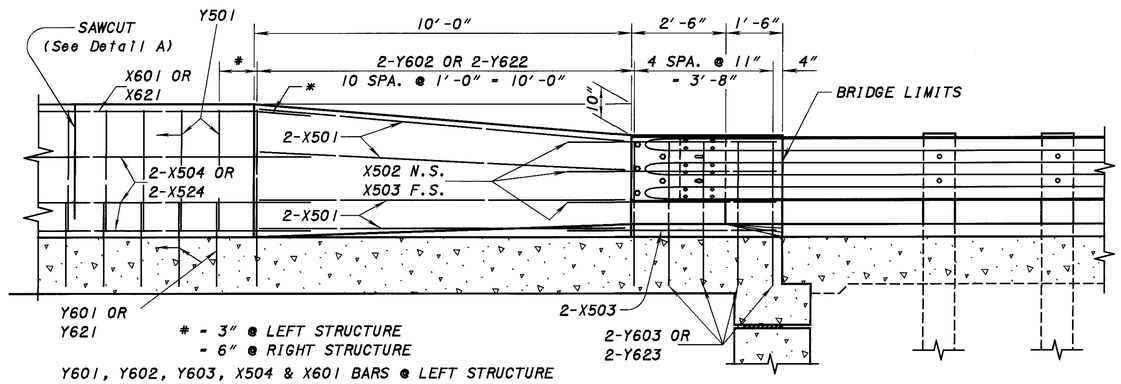
THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL TO A MINIMUM DEPTH OF ONE INCH CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE-HALF INCH OF THE OUTSIDE FACE OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

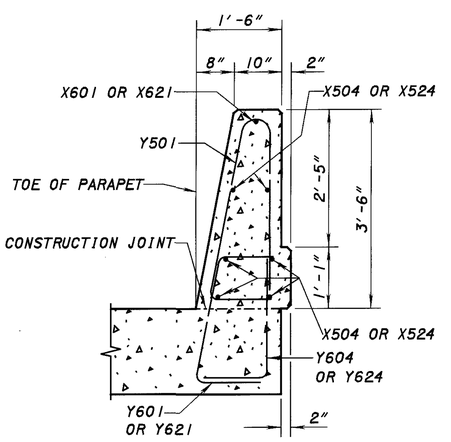
**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

MIN. LAP SPLICES: #5 BAR - 2′-6″
#6 BAR - 3′-0″

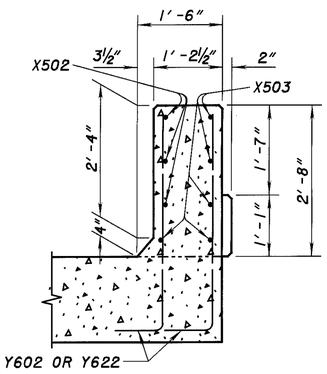



## SECTION A-A

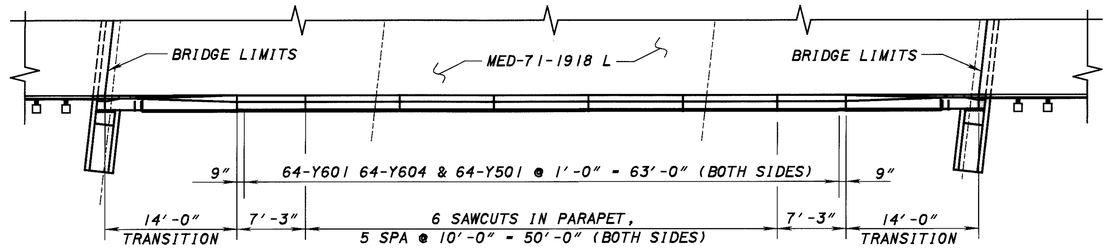



## SECTION B-B & C-C

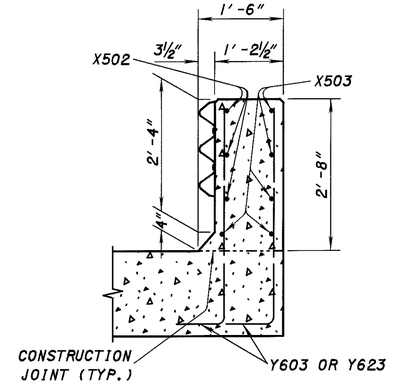
Area = 4.26 ft²



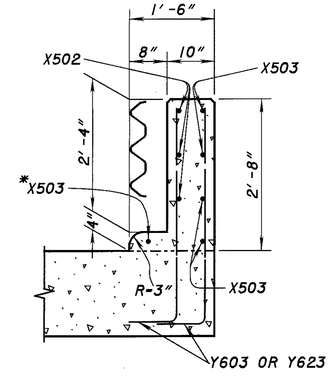

## SECTION D-D




## PART PLAN




## SECTION E-E




## SECTION F-F

* FIELD BEND IF NECESSARY

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 10-8-99
STRUCTURE FILE NUMBER: 5203759L & 5203783R
DRAWN: TDB
REVISED
DESIGNED: TDB
CHECKED: TAA

PARAPET DETAILS
MED-71-1918 L/R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

19/22

794
340

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | D | R | INC |
| **ABUTMENTS - MED-71-1918 L** | | | | | | | | | | | | | | |
| A501 | 25 | 28 | 25 | 28 | 106 | 8'-8" | 958 | 3 | 2'-6" | 1'-7" | | | | |
| A502 | 25 | 28 | 25 | 28 | 106 | 10'-11" | 1207 | 2 | 4'-9" | 1'-8" | 4'-9" | | | |
| A503 | 20 | 23 | 20 | 23 | 86 | 6'-11" | 621 | 2 | 2'-9" | 1'-8" | 2'-9" | | | |
| A504 | 1 SERIES OF 5 | 1 SERIES OF 5 | 1 SERIES OF 5 | 1 SERIES OF 5 | 4 SERIES OF 5 | 7'-7" TO 13'-5" | 219 | 2 | 3'-1" TO 6'-0" | 1'-8" | 3'-1" TO 6'-0" | | | 8¾" |
| A505 | 6 | | 6 | | 12 | 37'-2" | 466 | STR | | | | | | |
| A506 | | 6 | | 6 | 12 | 41'-0" | 514 | STR | | | | | | |
| A507 | 2 | 2 | 2 | 2 | 8 | 3'-8" | 31 | STR | | | | | | |
| A508 | 2 | 2 | 2 | 2 | 8 | 7'-7" | 64 | 19 | 6'-5" | 1'-2" | 7" | | | |
| A509 | 2 | 2 | 2 | 2 | 8 | 6'-0" | 50 | STR | | | | | | |
| A801 | 4 | | 4 | | 8 | 37'-2" | 794 | STR | | | | | | |
| A802 | | 4 | | 4 | 8 | 41'-0" | 876 | STR | | | | | | |
| A1001 | 4 | | 4 | | 8 | 37'-2" | 1280 | STR | | | | | | |
| A1002 | | 4 | | 4 | 8 | 41'-0" | 1412 | STR | | | | | | |
| D801 | 20 | 23 | 20 | 23 | 86 | 4'-11" | 1129 | 34 | 2'-7" | 1'-5" | | | | |
| **ABUTMENTS - MED-71-1918 R** | | | | | | | | | | | | | | |
| A501 | 25 | 28 | 25 | 28 | 106 | 8'-8" | 958 | 3 | 2'-6" | 1'-7" | | | | |
| A502 | 25 | 28 | 25 | 28 | 106 | 10'-11" | 1207 | 2 | 4'-9" | 1'-8" | 4'-9" | | | |
| A503 | 20 | 23 | 20 | 23 | 86 | 6'-11" | 621 | 2 | 2'-9" | 1'-8" | 2'-9" | | | |
| A504 | 1 SERIES OF 5 | 1 SERIES OF 5 | 1 SERIES OF 5 | 1 SERIES OF 5 | 4 SERIES OF 5 | 7'-7" TO 13'-5" | 219 | 2 | 3'-1" TO 6'-0" | 1'-8" | 3'-1" TO 6'-0" | | | 8¾" |
| A505 | 6 | | 6 | | 12 | 37'-2" | 466 | STR | | | | | | |
| A506 | | 6 | | 6 | 12 | 41'-0" | 514 | STR | | | | | | |
| A507 | 2 | 2 | 2 | 2 | 8 | 3'-8" | 31 | STR | | | | | | |
| A508 | 2 | 2 | 2 | 2 | 8 | 7'-7" | 63 | 19 | 6'-5" | 1'-2" | 7" | | | |
| A509 | 2 | 2 | 2 | 2 | 8 | 6'-0" | 50 | STR | | | | | | |
| A801 | 4 | | 4 | | 8 | 37'-2" | 794 | STR | | | | | | |
| A802 | | 4 | | 4 | 8 | 41'-0" | 876 | STR | | | | | | |
| A1001 | 4 | | 4 | | 8 | 37'-2" | 1280 | STR | | | | | | |
| A1002 | | 4 | | 4 | 8 | 41'-0" | 1412 | STR | | | | | | |
| D801 | 20 | 23 | 20 | 23 | 86 | 4'-11" | 1129 | 34 | 2'-7" | 1'-5" | | | | |

| MARK | NUMBER | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIER 1 | PIER 2 | TOTAL | | LB | | A | B | C | D | R | INC |
| **PIERS - MED-71-1918 L** | | | | | | | | | | | | |
| SP401 | 2 | | 2 | 17'-2" | 503 | 27 | 4½" | 2'-6" | | | | |
| SP402 | | 2 | 2 | 16'-8" | 488 | 27 | 4½" | 2'-6" | | | | |
| P500 | 39 | 39 | 78 | 8'-11" | 725 | 2 | 3'-6" | 2'-2" | 3'-6" | | | |
| P501 | 20 | 20 | 40 | 5'-6" | 229 | STR | | | | | | |
| P502 | 6 | 6 | 12 | 17'-5" | 218 | STR | | | | | | |
| P503 | 16 | 16 | 32 | 6'-5" | 214 | 2 | 2'-0" | 2'-8" | 2'-0" | | | |
| P504 | 16 | 16 | 32 | 14'-4" | 478 | 6 | 2'-8" | 5'-3" | 10" | | | |
| P505 | 2 | 2 | 4 | 27'-6" | 115 | STR | | | | | | |
| P506 | 2 | 2 | 4 | 31'-2" | 130 | STR | | | | | | |
| P601 | 4 | 4 | 8 | 4'-9" | 57 | STR | | | | | | |
| P602 | 8 | 8 | 16 | 5'-5" | 130 | 19 | 4'-0" | 11" | 1'-1" | | | |
| P700 | 7 | 7 | 14 | 27'-6" | 787 | STR | | | | | | |
| P701 | 32 | 32 | 64 | 7'-2" | 938 | 17 | 5'-6" | | | | | |
| P702 | 7 | 7 | 14 | 17'-5" | 499 | STR | | | | | | |
| P703 | 6 | 6 | 12 | 10'-7" | 260 | 24 | 2'-7" | 3'-3" | | | 1'-3½" | |
| P704 | 7 | 7 | 14 | 31'-2" | 892 | STR | | | | | | |
| P901 | 22 | | 22 | 20'-11" | 1565 | STR | | | | | | |
| P902 | | 22 | 22 | 20'-5" | 1527 | STR | | | | | | |
| P905 | 22 | 22 | 44 | 9'-0" | 1347 | 1 | 1'-6" | 7'-9" | | | | |
| **PIERS - MED-71-1918 R** | | | | | | | | | | | | |
| SP403 | 2 | | 2 | 23'-6" | 676 | 27 | 4½" | 2'-6" | | | | |
| SP404 | | 2 | 2 | 22'-11" | 660 | 27 | 4½" | 2'-6" | | | | |
| P500 | 39 | 39 | 78 | 9'-11" | 807 | 2 | 4'-0" | 2'-2" | 4'-0" | | | |
| P501 | 20 | 20 | 40 | 5'-6" | 229 | STR | | | | | | |
| P502 | 6 | 6 | 12 | 17'-5" | 218 | STR | | | | | | |
| P503 | 16 | 16 | 32 | 6'-5" | 214 | 2 | 2'-0" | 2'-8" | 2'-0" | | | |
| P504 | 16 | 16 | 32 | 14'-4" | 478 | 6 | 2'-8" | 5'-3" | 10" | | | |
| P505 | 2 | 2 | 4 | 27'-6" | 115 | STR | | | | | | |
| P506 | 2 | 2 | 4 | 31'-2" | 130 | STR | | | | | | |
| P601 | 4 | 4 | 8 | 4'-9" | 57 | STR | | | | | | |
| P602 | 8 | 8 | 16 | 5'-5" | 130 | 19 | 4'-0" | 11" | 1'-1" | | | |
| P700 | 7 | 7 | 14 | 27'-6" | 787 | STR | | | | | 1'-3½" | |
| P701 | 32 | 32 | 64 | 7'-2" | 938 | 17 | 5'-6" | | | | | |
| P702 | 7 | 7 | 14 | 17'-5" | 499 | STR | | | | | | |
| P703 | 6 | 6 | 12 | 10'-7" | 260 | 24 | 2'-7" | 3'-3" | | | 1'-3½" | |
| P704 | 7 | 7 | 14 | 31'-2" | 892 | STR | | | | | | |
| P903 | 22 | | 22 | 27'-0" | 2020 | STR | | | | | | |
| P904 | | 22 | 22 | 26'-7" | 1988 | STR | | | | | | |
| P905 | 22 | 22 | 44 | 9'-0" | 1347 | 1 | 1'-6" | 7'-9" | | | | |

**NOTES:**

1. THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.
2. ALL REINFORCING STEEL SHALL BE EPOXY CODED.
3. THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVIEWED: DFT | DATE: 10-8-99 | STRUCTURE FILE NUMBER: 5203759L & 5203783R

DRAWN: TDB | REVISED:

DESIGNED: TDB | CHECKED: TAA

# REINFORCING SCHEDULE

MED-71-1918 L/R

I-71 OVER WILBER RD. (CR66)

MED-71-15.78



795/940

| MARK | NUMBER SUPER STAGE I | NUMBER SUPER STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SUPERSTRUCTURE - MED-71-1918 L** | | | | | | | | | | | | |
| S402 | 224 | 224 | 448 | 32'-6" | 9726 | STR | | | | | | |
| S403 | 32 | 38 | 70 | 14'-3" | 666 | STR | | | | | | |
| S404 | 40 | 44 | 84 | 21'-7" | 1211 | STR | | | | | | |
| S405 | 20 | 22 | 42 | 21'-3" | 596 | STR | | | | | | |
| S406 | 125 | 125 | 250 | 3'-4" | 557 | 2 | 1'-3" | 1'-0" | 1'-3" | | | |
| S502 | 8 | 8 | 16 | 33'-0" | 551 | STR | | | | | | |
| S503 | 60 | 68 | 128 | 3'-10" | 512 | 2 | 1'-8" | 9" | 1'-8" | | | |
| S504 | 60 | 68 | 128 | 6'-5" | 857 | 3 | 2'-0" | 11" | | | | |
| S801 | 38 | 42 | 80 | 22'-5" | 4789 | STR | | | | | | |
| S802 | 32 | 38 | 70 | 20'-8" | 3863 | 16 | 19'-6" | | | | | |
| S803 | 34 | 36 | 70 | 23'-0" | 4299 | STR | | | | | | |
| S804 | 38 | 42 | 80 | 18'-9" | 4005 | STR | | | | | | |
| S805 | 19 | 21 | 40 | 21'-4" | 2278 | STR | | | | | | |
| S806 | 16 | 19 | 35 | 20'-0" | 1869 | STR | | | | | | |
| S807 | 17 | 18 | 35 | 20'-0" | 1869 | STR | | | | | | |
| S808 | 40 | 46 | 86 | 24'-0" | 5511 | STR | | | | | | |
| S809 | 40 | 46 | 86 | 18'-0" | 4133 | STR | | | | | | |
| S810 | 38 | 46 | 84 | 18'-11" | 4243 | STR | | | | | | |
| S811 | 40 | 44 | 84 | 18'-11" | 4243 | STR | | | | | | |
| S812 | 20 | 23 | 43 | 26'-1" | 2994 | STR | | | | | | |
| **SUPERSTRUCTURE - MED-71-1918 R** | | | | | | | | | | | | |
| S422 | 262 | 262 | 524 | 32'-6" | 11376 | STR | | | | | | |
| S423 | 34 | 40 | 74 | 17'-3" | 853 | STR | | | | | | |
| S424 | 34 | 38 | 72 | 26'-4" | 1266 | STR | | | | | | |
| S425 | 17 | 19 | 36 | 26'-4" | 633 | STR | | | | | | |
| S426 | 143 | 143 | 286 | 3'-7" | 685 | 2 | 1'-3" | 1'-3" | 1'-3" | | | |
| S501 | 8 | 8 | 16 | 33'-0" | 551 | STR | | | | | | |
| S505 | 60 | 68 | 128 | 4'-2" | 557 | 2 | 1'-8" | 1'-1" | 1'-8" | | | |
| S506 | 60 | 68 | 128 | 7'-0" | 935 | 3 | 2'-4" | 11" | | | | |
| S821 | 40 | 44 | 84 | 26'-2" | 5869 | STR | | | | | | |
| S822 | 34 | 40 | 74 | 24'-5" | 4825 | 16 | 23'-3" | | | | | |
| S823 | 36 | 38 | 74 | 27'-6" | 5433 | STR | | | | | | |
| S824 | 40 | 44 | 84 | 22'-9" | 5102 | STR | | | | | | |
| S825 | 20 | 22 | 42 | 25'-4" | 2841 | STR | | | | | | |
| S826 | 17 | 20 | 37 | 24'-3" | 2396 | STR | | | | | | |
| S827 | 17 | 20 | 37 | 24'-3" | 2396 | STR | | | | | | |
| S1001 | 34 | 40 | 74 | 31'-3" | 9951 | STR | | | | | | |
| S1002 | 34 | 40 | 74 | 20'-0" | 6368 | STR | | | | | | |
| S1003 | 34 | 38 | 72 | 22'-3" | 6893 | STR | | | | | | |
| S1004 | 34 | 38 | 72 | 22'-3" | 6893 | STR | | | | | | |
| S1005 | 17 | 20 | 37 | 36'-2" | 5759 | STR | | | | | | |

| MARK | NUMBER SUPER STAGE I | NUMBER SUPER STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | E | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PARAPETS - MED-71-1918 L** | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 334 | STR | | | | | | | |
| X502 | 3 | 6 | 9 | 5'-6" | 52 | 25 | 1'-8" | 2'-5" | 1'-4" | 1½" | 5" | | |
| X503 | 13 | 10 | 23 | 5'-6" | 132 | STR | | | | | | | |
| X504 | 18 | 18 | 36 | 24'-11" | 936 | STR | | | | | | | |
| Y501 | 64 | 64 | 128 | 7'-5" | 991 | 23 | 1'-1" | 3'-2" | 3'-0" | | | 2¾" | |
| X601 | 3 | 3 | 6 | 25'-6" | 230 | STR | | | | | | | |
| Y601 | 64 | 64 | 128 | 4'-2" | 801 | 33 | 1'-1" | 2'-2" | 1'-1" | | | | |
| Y602 | 4 SERIES OF 11 | 4 SERIES OF 11 | 8 SERIES OF 11 | 4'-8" TO 5'-6" | 672 | 1 | 1'-1" | 3'-9" TO 4'-7" | | | | | 1" |
| Y603 | 16 | 16 | 32 | 4'-8" | 224 | 1 | 1'-1" | 3'-9" | | | | | |
| Y604 | 64 | 64 | 128 | 3'-2" | 609 | 1 | 1'-1" | 2'-2" | | | | | |
| **PARAPETS - MED-71-1918 R** | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 334 | STR | | | | | | | |
| X502 | 3 | 3 | 6 | 5'-6" | 35 | 25 | 1'-8" | 2'-5" | 1'-4" | 1½" | 5" | | |
| X503 | 13 | 13 | 26 | 5'-6" | 150 | STR | | | | | | | |
| X524 | 18 | 18 | 36 | 31'-6" | 1183 | STR | | | | | | | |
| Y501 | 84 | 84 | 168 | 7'-5" | 1300 | 23 | 1'-1" | 3'-2" | 3'-0" | | | 2¾" | |
| X621 | 3 | 3 | 6 | 32'-0" | 288 | STR | | | | | | | |
| Y621 | 84 | 84 | 168 | 4'-5" | 1115 | 33 | 1'-1" | 2'-5" | 1'-1" | | | | |
| Y622 | 4 SERIES OF 11 | 4 SERIES OF 11 | 8 SERIES OF 11 | 4'-11" TO 5'-9" | 705 | 1 | 1'-1" | 4'-0" TO 4'-10" | | | | | 1" |
| Y623 | 16 | 16 | 32 | 4'-11" | 236 | 1 | 1'-1" | 4'-0" | | | | | |
| Y624 | 84 | 84 | 168 | 3'-5" | 863 | 1 | 1'-1" | 2'-5" | | | | | |

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2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.

**NOTES:**

3. THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED DFT | DATE 10-8-99 | STRUCTURE FILE NUMBER 52037591 & 52037831R
DRAWN TDB | REVISED
DESIGNED TDB | CHECKED TAA

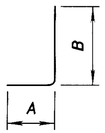
# REINFORCING SCHEDULE

MED-71-1918 L/R
I-71 OVER WILBER RD. (CR66)

MED-71-15.78

21/22

796/940



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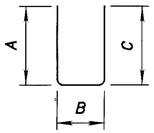

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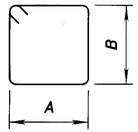

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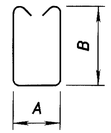

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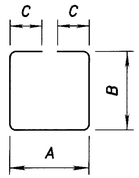

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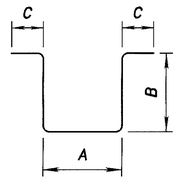

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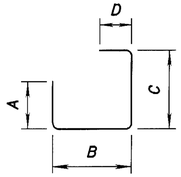

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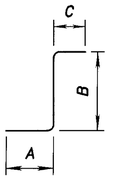

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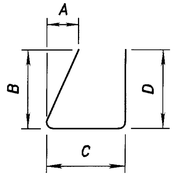

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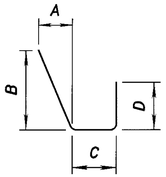

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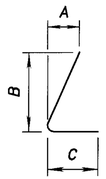

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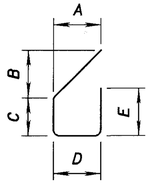

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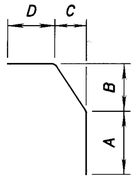

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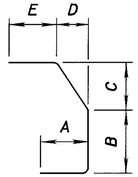

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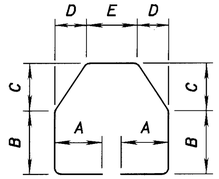
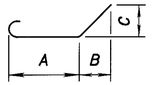


TYPE-15

TYPE-16

TYPE-17



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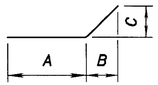

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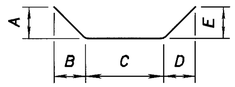

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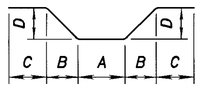

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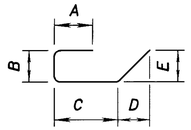

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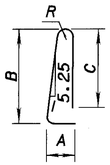

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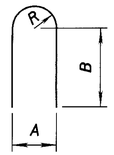

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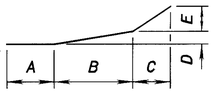

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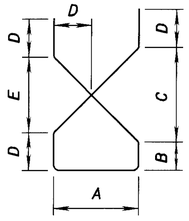

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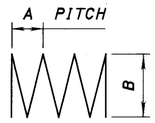

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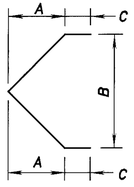

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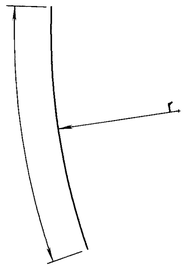

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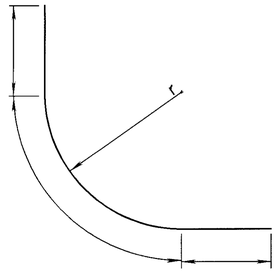
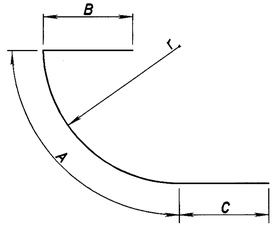


TYPE-30

TYPE-31



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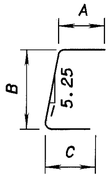

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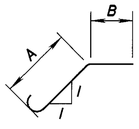


TYPE-34

## NOTES

NOTE: ALL REINFORCING STEEL SHALL BE EPOXY COATED.

THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INIDCATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. "R" INDICATES INSIDE RADIUS.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT
DATE 10-8-99
STRUCTURE FILE NUMBER 5203759L & 5203783R

DRAWN TDB
REVISED

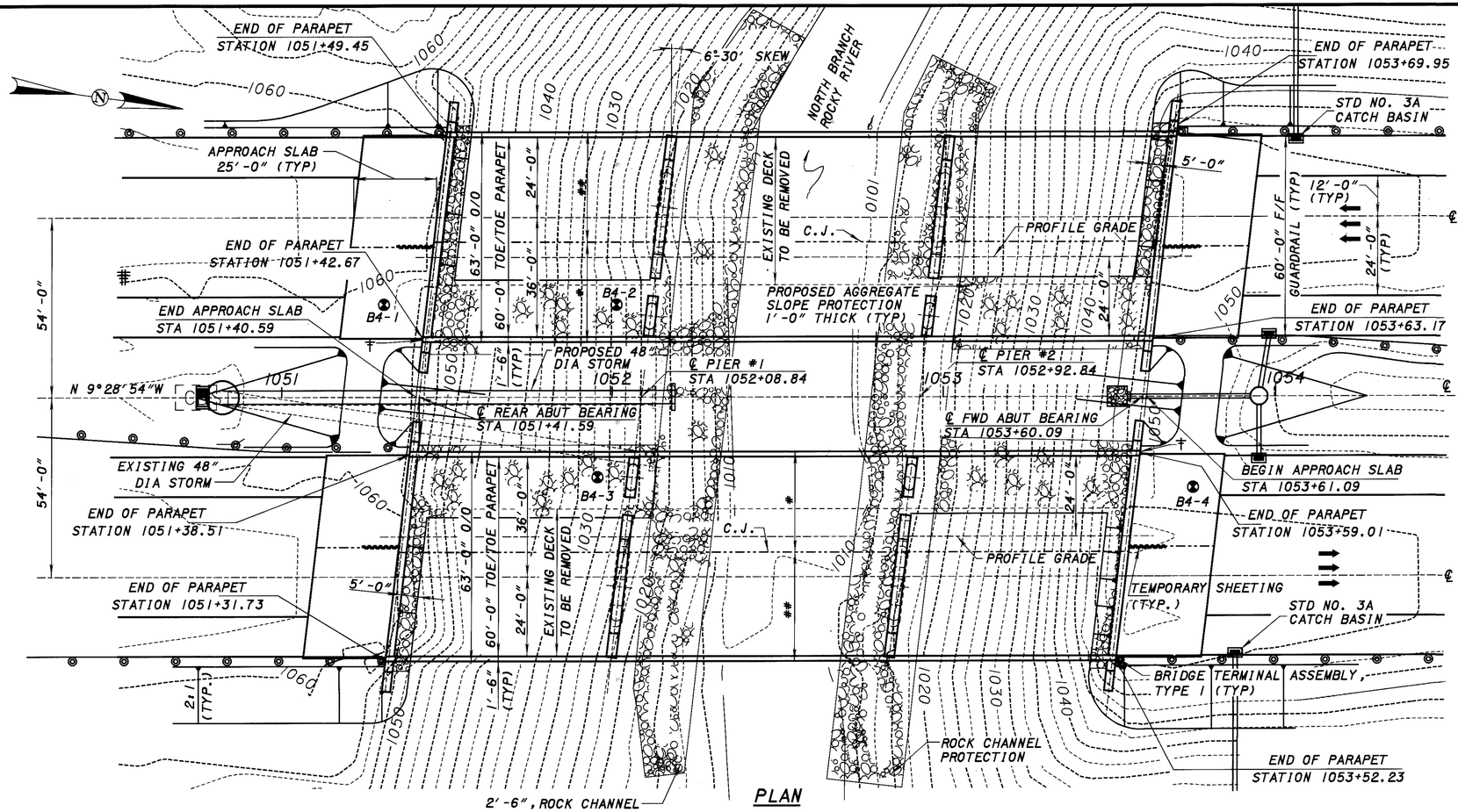
DESIGNED TDB
CHECKED TAA

GENERAL PLAN
MED-71-1918 L/R
I-71 OVER WILBER RD. (CR66)

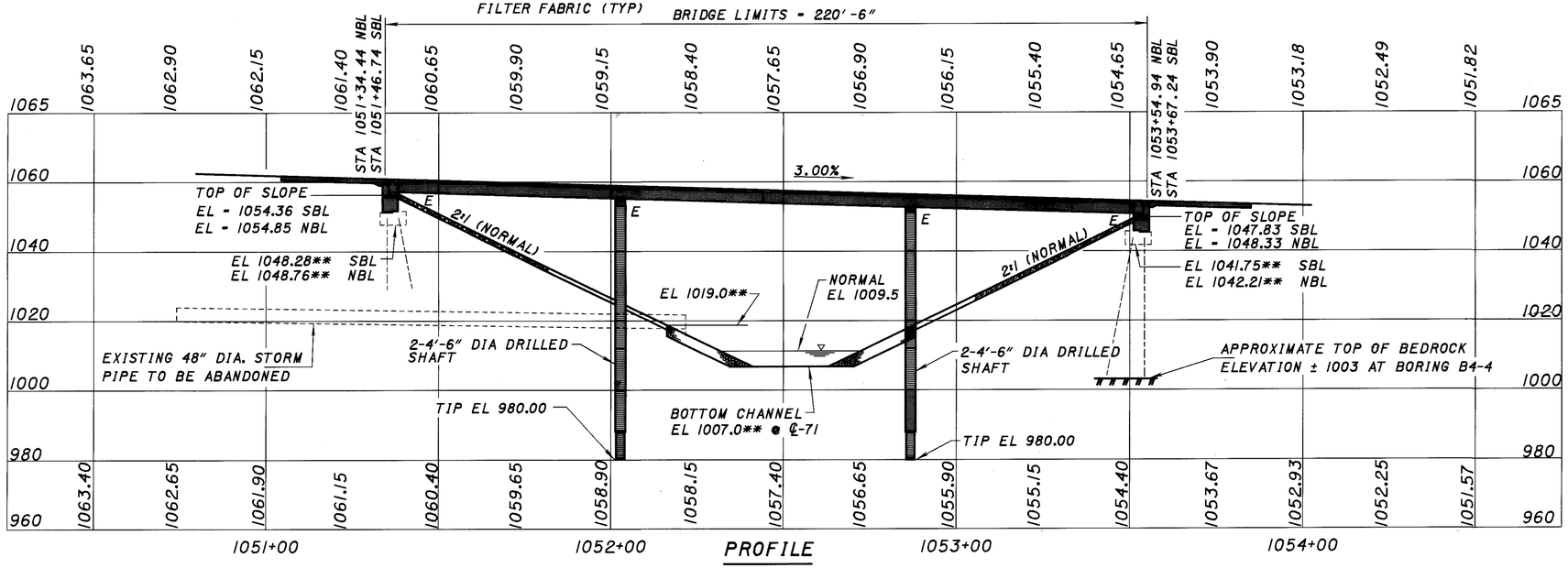
MED-71-15.78

22/22

797
940




PLAN




PROFILE

(PROFILE ALONG ℄ NORTHBOUND BRIDGE SHOWN, SOUTHBOUND BRIDGES IS SIMILAR)

## BENCHMARK DATA

BM #9 - STATION 1058+98.99, ODOT GEODETIC MONUMENT STAMPED, ELEV. - 1041.83

## NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

PROPOSED PROFILE ELEVATIONS ARE ALONG THE PROFILE GRADE LINE.

PILES ARE HP10x42. THE ESTIMATED PAY LENGTHS ARE:

REAR ABUTMENT- 50'
FORWARD ABUTMENT - 45'

LEGEND:

E - EXPANSION

** FROM EXISTING PLANS

⊠ ORIGINAL SOIL BORING LOCATION

\# - PHASE 1
## - PHASE 2

† - NO BRIDGE TERMINAL ASSEMBLY, SEE CSS2 FOR ADDITIONAL DETAILS.

DESIGN TRAFFIC:

2000 ADT - 3401O  2000 ADTT - 4082
2020 ADT - 46690  2020 ADTT - 5603

## EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 67'-3"±, 84'-0"±, 67'-3"± C/C BEARINGS

ROADWAY: 2 @ 39'-8"± FACE TO FACE OF SAFETY CURB

LOADING: CF 2000(57) AND AASHO ALTERNATE LOADING

SKEW: 6°-30'± LF

WEARING SURFACE: ASPHALT SOUTHBOUND BRIDGE
WEARING SURFACE: CONCRETE NORTHBOUND BRIDGE

APPROACH SLABS: 25'-0"± LONG (AS-1-54)

ALIGNMENT: TANGENT

CROWN: 3/16" PER FOOT

STRUCTURAL FILE NUMBER: 5203813L/5203848R

DATE BUILT: 1964

## PROPOSED STRUCTURE

TYPE: REPLACE ALL BEAMS AND WIDEN SUPERSTRUCTURE BY ADDING TWO BEAM LINES TO ACCOMMODATE A ROADWAY WIDTH OF 60'-0" T/T PARAPET. REHABILITATE THE ABUTMENTS TO SEMI-INTEGRAL. NEW COMPOSITE CONCRETE DECK. A588 WEATHERING STEEL BEAMS.

SPANS: 67'-3", 84'-0", 67'-3" C/C BEARINGS

ROADWAY: 60'-0" T/T PARAPET

LOADING: HS20-44 CASE I AND ALTERNATE MILITARY

SKEW: 6°-30'± LF

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0" LONG (AS-1-81)
60'-0" TOE/TOE CURB

ALIGNMENT: TANGENT

CROWN: 3/16" PER FOOT

COORDINATES: LAT. N 41°-10'-48", LONG. W 81°-47'-13"

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

| DESIGNED | CHECKED | DRAWN | REVISED | REVIEWED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|---|---|---|---|
| BRC | TAA | BRC | | DFT | 10-4-99 | 5203813L/5203848R |

MEDINA COUNTY
STA. 1051+40.59
STA. 1053+61.09

SITE PLAN
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

1 / 23

798
940

# GENERAL NOTES

**STANDARD DRAWINGS AND SPECIFICATIONS:**

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

| | |
|---|---|
| AS-1-81 | REVISED 09-15-94 |
| SBR-1-99 | DATED 01-12-99 |
| PCB-1-91 | REVISED 07-06-99 |
| BS-1-93 | DATED 12-19-94 |
| GSD-1-96 | DATED 02-12-97 |

AND TO SUPPLEMENTAL SPECIFICATIONS:

| | |
|---|---|
| 816 | DATED 04-21-97 |
| 842 | DATED 01-06-99 |
| 844 | DATED 01-06-99 |
| 863 | DATED 10-12-99 |
| 899 | DATED 10-21-98 |
| 910 | DATED 07-28-98 |
| 911 | DATED 07-10-97 |
| 954 | DATED 09-09-97 |

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997 AND 1998 INTERIM SPECIFICATIONS AND THE ODOT DESIGN MANUAL.

**DESIGN LOADING:**

HS20-44, CASE I AND THE ALTERNATE MILITARY LOADING.

**DESIGN DATA:**

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60 Ksi. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

STRUCTURAL STEEL ASTM A588 - YIELD STRENGTH 50 KSI (WEATHERING)

**DECK PROTECTION METHOD** - EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER AND HIGH PERFORMANCE CONCRETE.

**MONOLITHIC WEARING SURFACE** IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

**EXISTING BRIDGE PLANS** MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT THREE OFFICE IN ASHLAND, OHIO.

**DOWEL HOLES WITH NON-SHRINK, NON METALLIC GROUT**

ALL DOWEL HOLES SHALL BE CORE DRILLED AND GROUTED WITH AN EPOXY MORTAR MEETING THE REQUIREMENTS OF CMS 510. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

**ITEM 202 PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN:**

PORTION OF THE STRUCTURE REMOVED, AS PER PLAN, SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED.

PROTECTION OF TRAFFIC:
PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE ENGINEER FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER.

CUT LINE CONSTRUCTION JOINT PREPARATION:
SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

SUBSTRUCTURE CONCRETE REMOVAL:
SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 90 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

¼ INCH SCARIFICATION: THE EXISTING PIER BRIDGE SEAT SURFACE SHALL BE SCARIFIED ¼ INCH INTO SOUND CONCRETE PRIOR TO PLACEMENT OF THE CONCRETE. THE SURFACE SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER, AIR UNDER PRESSURE, OR ANOTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

PAYMENT
ALL WORK SHALL BE PAID FOR UNDER ITEM 202 PORTIONS OF STRUCTURES REMOVED, AS PER PLAN

**TRAFFIC MAINTENANCE:**

SEE ROADWAY PLANS FOR ADDITIONAL TRAFFIC NOTES AND DETAILS.

**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)**

EPOXY-URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722 AS PER THE DETAILS IN THE PLAN.

**DRILLED SHAFT CONSTRUCTION METHOD**

CONSTRUCTION ON THIS PROJECT SHALL PROCEED PER 524.04(D) PERMANENT CASING CONSTRUCTION METHOD.

**ITEM SPECIAL - WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING**

INSTALL A 3 FOOT WIDE STRIP, 3/32 INCH THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 3 FOOT WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X 3/32" (LENGTH X SHANK DIAMETER) #10 GALVANIZED BUTTON HEAD SPIKE THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS, AT 6 INCHES CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS WHERE THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST ONE FOOT IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32 INCH THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

| DESCRIPTION OF TEST | ASTM METHOD | REQUIREMENT |
|---|---|---|
| THICKNESS, INCHES | D 751 | 0.094 ± .01 |
| BREAKING STRENGTH, GRAB WXF, LBS, MINIMUM | D 751 | 700 X 700 |
| ADHESIVE 1" STRIP, 2" MINIMUM, LBS, MINIMUM | D 751 | 9 |
| BURST STRENGTH (MULLEN) PSI, MINIMUM | D 751 | 1400 |
| HEAT AGING 70 HOURS T 212 F, 180 BEND WITHOUT CRACKING | D 2136 | NO CRACKING OF COATING |
| LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40 F, BEND AROUND ¼ INCH MANDREL | D 2136 | NO CRACKING OF COATING |

PAYMENT FOR LABOR MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN INTEM SPECIAL- WATERPROOFING, MISC. : SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING.

**ITEM 524 DRILLED SHAFTS, 54" DIAMETER, AS PER PLAN**

THE EXISTING 48" STORM CORRUGATED PIPE WILL CONFLICT WITH THE CONSTRUCTION OF THE DRILLED SHAFT AT THE REAR PIER. THE CONTRACTOR WILL BE REQUIRED TO DRILL THEM THRU THE EXISTING PIPE AND ALSO PROVIDE A CASING TO CONFINE THE CONCRETE IN THE SHAFT. THESE REQUIREMENTS ARE IN ADDITION TO ANY OTHER REQUIREMENT FOR THIS PAY ITEM.

**ITEM 601 - ROCK CHANNEL PROTECTION**

DUMPED ROCK CHANNEL PROTECTION SHALL BE USED TO REPAIR EXISTING CHANNEL PROTECTION BY MIXING IT IN WITH EXISTING AND REPLACING ERODED ROCK CHANNEL PROTECTION. QUANTITIES INCLUDE A 20% CONTINGENCY FACTOR.

**ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:**

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 6" LIFTS. EXCAVATION AT ABUTMENTS IN ADDITION TO THAT NECESSARY TO REMOVE PORTION OF THE EXISTING STRUCTURE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION FOR PAYMENT.

**ITEM 842 CLASS C CONCRETE, (FOOTINGS, PIERS AND ABUTMENTS) AS PER PLAN**

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITEM 844 HIGH PERFORMANCE CONCRETE, AS PER PLAN**

THE DESIGN MIX SHALL BE MIX NO. 4 LIMESTONE. THE OPTION OF SLIPFORM CONSTRUCTION OF THE BRIDGE PARAPET IS NOT PERMITTED. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITS CONDUIT:**

THE CONDUIT WILL BE PLACED WITHIN THE OUTSIDE PARAPET OF LEFT AND RIGHT STRUCTURES. SEE CSS3 &CSS4 FOR DETAILS.

**REINFORCING STEEL:**

NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED UNDER ITEM 844 HIGH PERFORMANCE CONCRETE.

**ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN**

POROUS BACKFILL SHALL BE #57 GRAVEL ONLY.

**PILE DESIGN LOADS (ULTIMATE BEARING VALUE):**

THE ULTIMATE BEARING VALUE IS 70 TONS. FOR REAR AND FORWARD ABUTMENTS THE PILES ARE HP10x42.

24 PILES, 50' LONG, ESTIMATED LENGTH (REAR ABUTMENT)
24 PILES, 45' LONG, ESTIMATED LENGTH (FORWARD ABUTMENT)
24 PILES OF ORDER LENGTH 50' (REAR ABUTMENT)
24 PILES OF ORDER LENGTH 45' (FORWARD ABUTMENT)
24 SPLICES

THE ULTIMATE BEARING VALUE IS TWO TIMES THE ACTUAL DESIGN LOAD.

**DRILLED SHAFT DESIGN VALUE:**

THE ALLOWABLE END BEARING PRESSURE ASSUMED IS 15 TONS/SQ FT. THE ALLOWABLE SIDE ADHESION PRESSURE IS 0.5 TONS/SQ FT.

**SURVEY DISC ON STRUCTURE:**

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

**ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION**

THE QUANTITIES GIVEN ARE FOR ADDING SLOPE PROTECTION TO WIDENED SIDES, FOR REPAIR OF EXISTING SLOPE PROTECTION AND FOR MIXING IN/REPAIR OF SLOPE PROTECTION. QUANTITIES INCLUDE A 20% CONTINGENCY FACTOR.

**ITEM 507 - PILES**

ABUTMENT PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK. REFUSAL SHALL BE CONSIDERED AS OBTAINED BY PENETRATING SOFT BEDROCK FOR ⅛" WITH A MINIMUM RESISTANCE OF 20 BLOWS PER 1" OR REFUSAL SHALL BE CONSIDERED AS OBTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECEIVED AT LEAST 20 BLOWS.
SEE REAR ABUT PILE NOTE ON SHEET 8 23.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TAA | DRAWN: TAA | CHECKED: DFT
REVIEWED: BRC | DATE: 10-4-99
REVISED | REVISED
STRUCTURE FILE NUMBER: 5203813L/5203848R

GENERAL NOTES
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

2 / 23

799
940

| | | MED-71-1992 L | MED-71-1992 R | | ESTIMATED QUANTITIES | MED-71-1992 L (SOUTHBOUND) | | | | MED-71-1992 R (NORTHBOUND) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM | EXTENSION | TOTAL | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS | SUPER. | GEN. | ABUT. | PIERS | SUPER. | GEN. |
| 202 | 11203 | LUMP | LUMP | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | LUMP | LUMP | LUMP | | LUMP | LUMP | LUMP | |
| | | | | | | | | | | | | | |
| 503 | 11100 | LUMP | LUMP | | COFFERDAMS, CRIBS AND SHEETING | | | | LUMP | | | | LUMP |
| 503 | 21301 | LUMP | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LUMP | | | | LUMP | | | |
| | | | | | | | | | | | | | |
| 505 | 11100 | LUMP | LUMP | | PILE DRIVING EQUIPMENT MOBILIZATION | LUMP | | | | LUMP | | | |
| | | | | | | | | | | | | | |
| 507 | 00100 | 1140 | 1140 | LF | STEEL PILES HP10x42, FURNISHED | 1140 | | | | 1140 | | | |
| 507 | 00150 | 1140 | 1140 | LF | STEEL PILES HP10x42, DRIVEN | 1140 | | | | 1140 | | | |
| 507 | 50500 | 12 | 12 | EACH | STEEL PILE SPLICES | 12 | | | | 12 | | | |
| | | | | | | | | | | | | | |
| 512 | 44400 | 9 | 9 | SY | TYPE B WATERPROOFING | 9 | | | | 9 | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| SPECIAL | 51267200 | 50 | 50 | SY | WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING | 50 | | | | 50 | | | |
| SPECIAL | 51267510 | 640 | 640 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 125 | 515 | | | 125 | 515 | | |
| | | | | | | | | | | | | | |
| 516 | 13900 | 58 | 58 | SF | 2" PREFORMED EXPANSION JOINT FILLER | 58 | | | | 58 | | | |
| 516 | 44000 | 16 | 16 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), (12"x20"x1 15/16" PAD | | 16 | | | | 16 | | |
| | | | | | AND 13"x21"x2 1/4" BEVELED PLATE) | | | | | | | | |
| 516 | 44101 | 16 | 16 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | 16 | | | | 16 | | | |
| | | | | | (NEOPRENE), AS PER PLAN (9"x14"x2 3/4" PAD AND 11"x15"x1 5/8" PLATE) | | | | | | | | |
| 518 | 21231 | LUMP | LUMP | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | | | | LUMP | | | |
| 518 | 40000 | 164 | 164 | LF | 6" PERFORATED CORRUGATED PLASTIC PIPE | 164 | | | | 164 | | | |
| 518 | 40010 | 39 | 39 | LF | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 39 | | | | 39 | | | |
| | | | | | | | | | | | | | |
| 519 | 11101 | 28 | 49 | SF | PATCHING CONCRETE STRUCTURE, AS PER PLAN ** | | 28 | | | | 49 | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 524 | 94804 | 32 | 32 | LF | DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK | | 32 | | | | 32 | | |
| 524 | 94906 | 96 | 96 | LF | DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK, AS PER PLAN | | 96 | | | | 96 | | |
| | | | | | | | | | | | | | |
| 601 | 20500 | 164 | 164 | CY | CRUSHED AGGREGATE SLOPE PROTECTION | | | | 164 | | | | 164 |
| 601 | 32100 | 529 | 530 | CY | ROCK CHANNEL PROTECTION, TYPE B WITH FILTER | | | | 529 | | | | 530 |
| | | | | | | | | | | | | | |
| 842 | 40501 | 132 | 132 | CY | CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN | | 132 | | | | 132 | | |
| 842 | 44101 | 104 | 104 | CY | CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN | 104 | | | | 104 | | | |
| 842 | 46501 | 52 | 52 | CY | CLASS C CONCRETE, FOOTING, AS PER PLAN | 52 | | | | 52 | | | |
| | | | | | | | | | | | | | |
| 844 | 48001 | 381 | 381 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK), AS PER PLAN, MIX 4 | | | 381 | | | | 381 | |
| 844 | 48021 | 69 | 69 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET), AS PER PLAN, MIX 4 | | | 69 | | | | 69 | |
| 844 | 48041 | 56 | 56 | CY | HIGH PERFORMANCE CONCRETE SUBSTRUCTURE, AS PER PLAN | 56 | | | | 56 | | | |
| 844 | 49000 | LUMP | LUMP | | HIGH PERFORMANCE CONCRETE TRIAL MIX | | | LUMP | | | | LUMP | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 863 | 10060 | LUMP | LUMP | | STRUCTURAL STEEL MEMBERS, LEVEL THREE (3) FABRICATION, A588 | | | LUMP | | | | LUMP | |
| 863 | 20000 | 5040 | 5040 | EACH | WELDED STUD SHEAR CONNECTORS | | | 5040 | | | | 5040 | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

** ESTIMATED QUANTITY IS 3x MEASURED VALUE.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVIEWED: DFT | DATE: 10-4-99 | STRUCTURE FILE NUMBER: 5203813L/5203848R

DRAWN: TAA | REVISED:

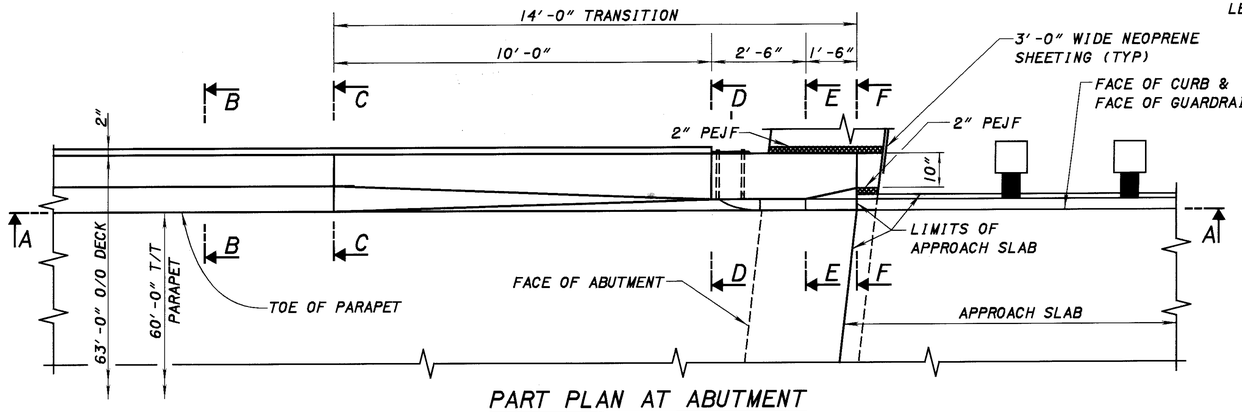
DESIGNED: TAA | CHECKED: BKL

ESTIMATED QUANTITIES
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

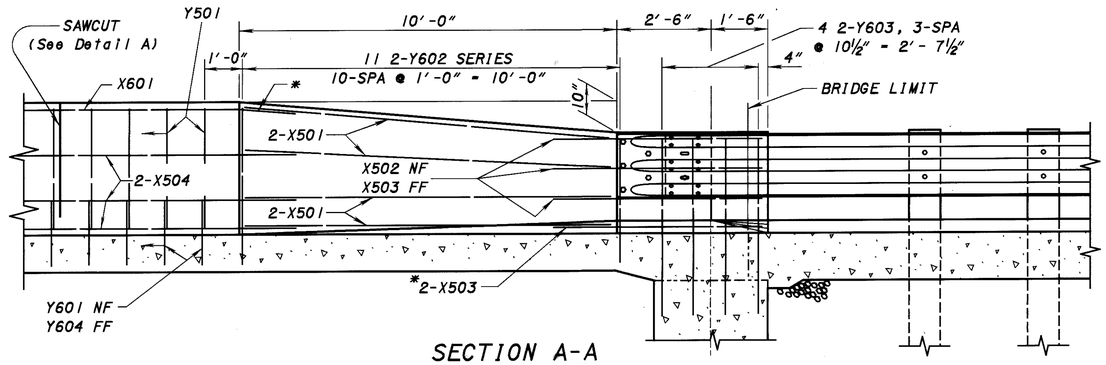
MED-71-15.78



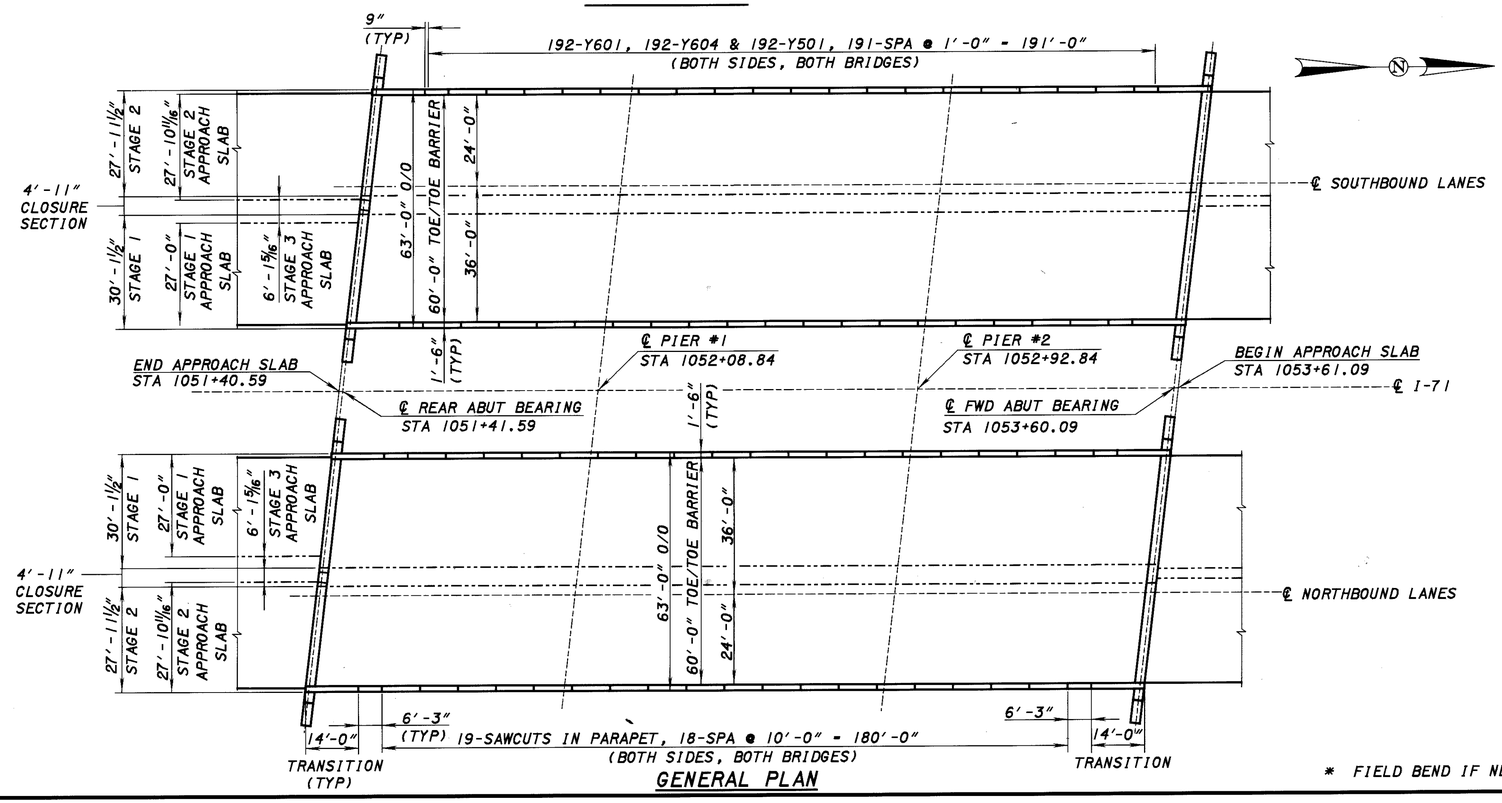
800
940




## PART PLAN AT ABUTMENT

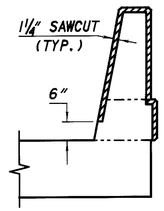



## SECTION A-A




## GENERAL PLAN

LEGEND: NF - NEAR FACE
FF - FAR FACE
* FIELD BEND IF NECESSARY




## DETAIL A

(Section through sawcut)
Sawcut Perimeter = 7′-6″

**CONTROL JOINTS FOR CONCRETE PARAPETS:** THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

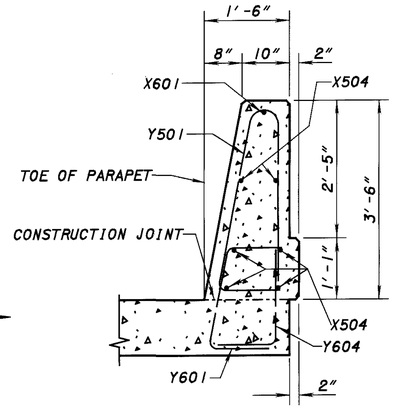
THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL TO A MINIMUM DEPTH OF ONE INCH CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE-HALF INCH OF THE OUTSIDE FACE OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

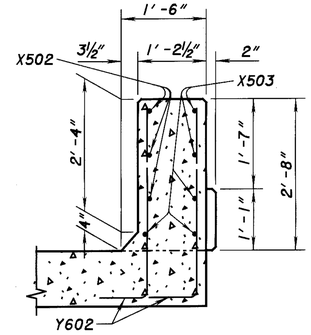
**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

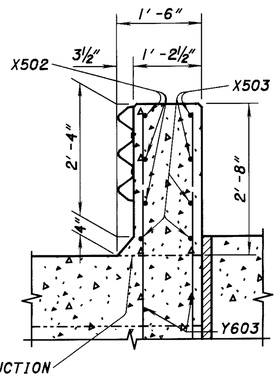
MIN LAP SPLICE LENGTH: #5 BAR - 2′-6″
#6 BAR - 3′-0″



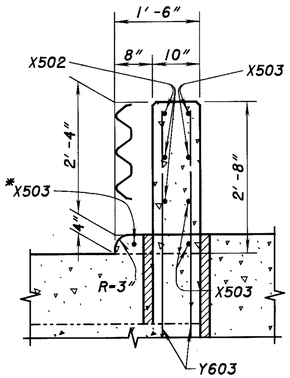

## SECTION B-B & C-C




## SECTION D-D




## SECTION E-E




## SECTION F-F

* FIELD BEND IF NECESSARY

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: DFT | DATE: 10-4-99 | STRUCTURE FILE NUMBER: 5203813L/5203848R
DRAWN: TDB | REVISED:
DESIGNED: TDB | CHECKED: TAA

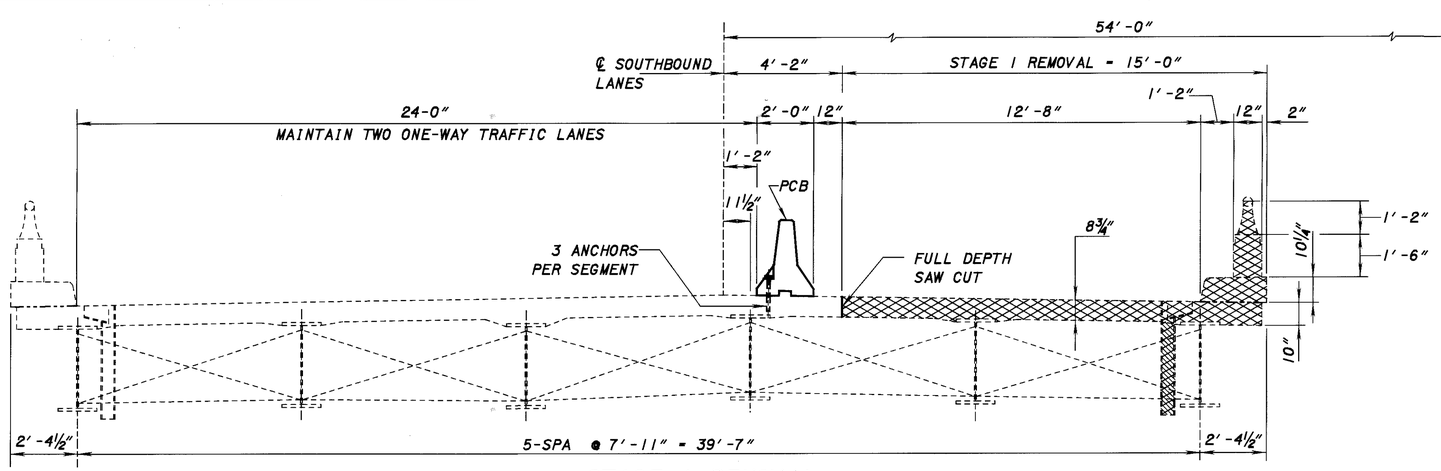
# SUPERSTRUCTURE DETAILS

MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

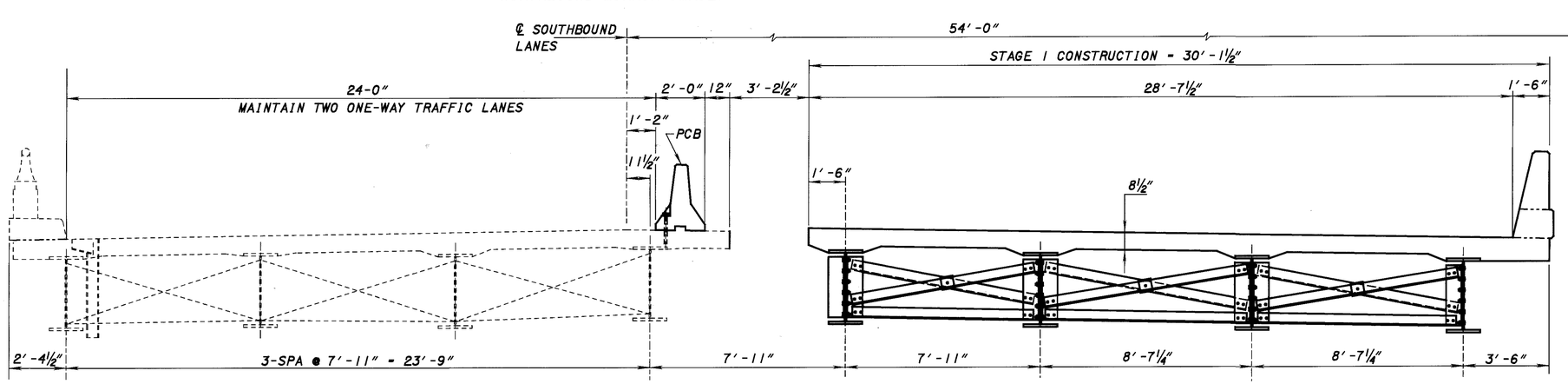
4 / 23

801
340



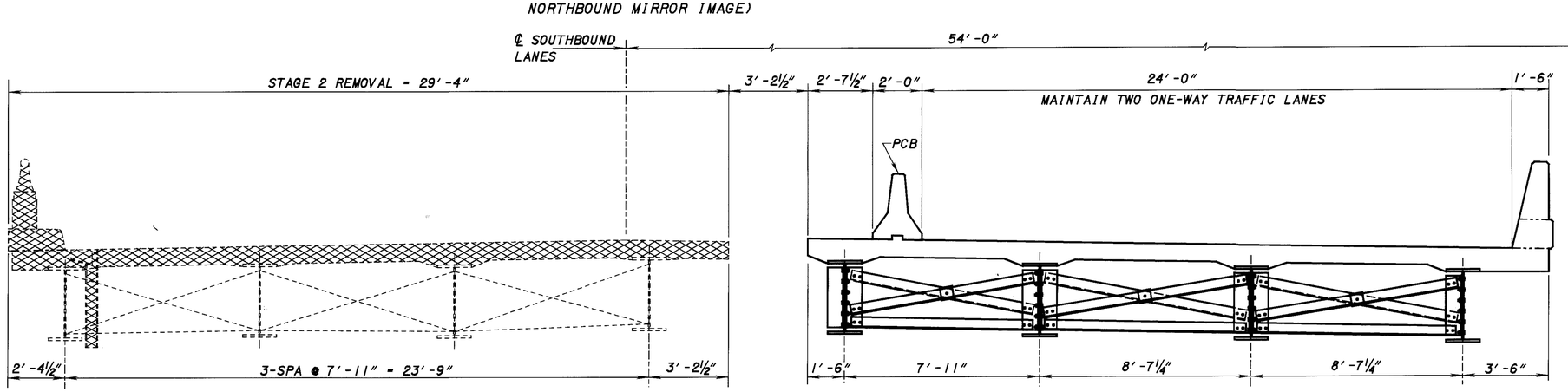

## STAGE I REMOVAL

(SOUTHBOUND LANES SHOWN, NORTHBOUND MIRROR IMAGE)




## STAGE I CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND MIRROR IMAGE)




## STAGE 2 REMOVAL

(SOUTHBOUND LANES SHOWN, NORTHBOUND MIRROR IMAGE)

## LEGEND

PCB - PORTABLE CONCRETE BARRIER.

PORTION OF STRUCTURE TO BE REMOVED

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVIEWED: DFT | DATE: 10-4-99 | STRUCTURE FILE NUMBER: 5203813L/5203848R

DRAWN: TAA | REVISED:

DESIGNED: TAA | CHECKED: TDB

# STAGE CONSTRUCTION DETAILS

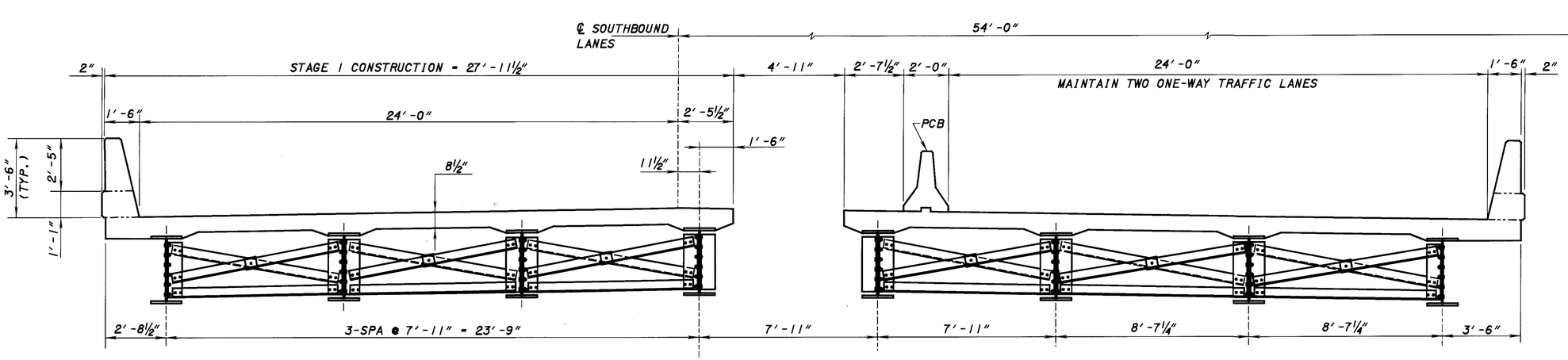
MED-71-1992 L/R

I-71 OVER ROCKY RIVER

MED-71-15.78

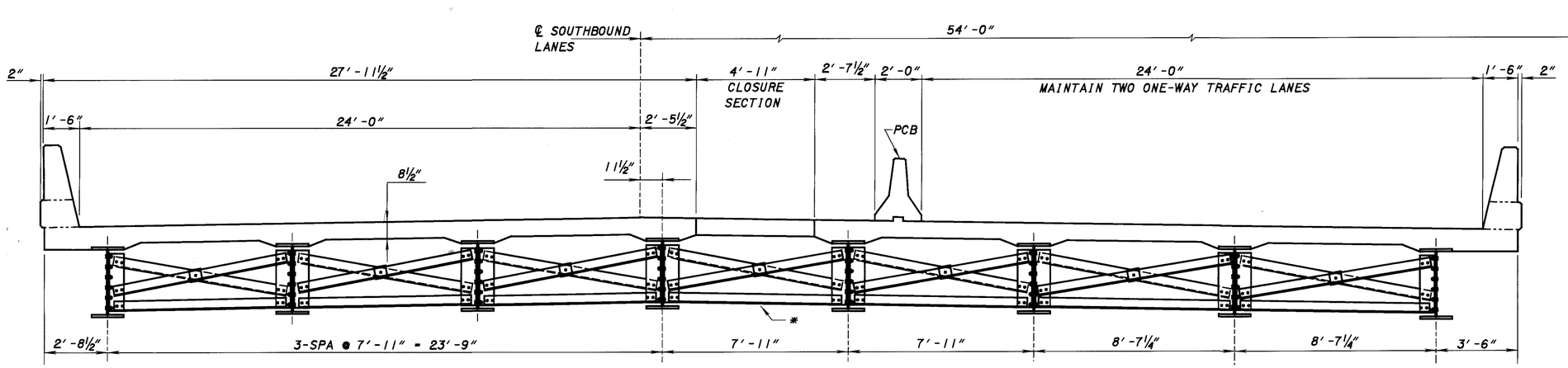
5/23

802/940




## STAGE 2 CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND MIRROR IMAGE)




## CLOSURE SECTION CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND MIRROR IMAGE)

## NOTES AND LEGEND

TEMPORARY BARRIERS SHALL BE ANCHORED TO EXISTING BRIDGE DECK. THREE (3) ANCHORS PER TEMPORARY BARRIER SEGMENT ARE REQUIRED ON THE TRAFFIC SIDE OF THE BARRIER. THE ANCHOR BOLT PATTERN SHALL BE SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. SEE STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.

* PLACE CROSSFRAMES IN POSITION PRIOR TO POURING OF THE CLOSURE POUR.

PCB - PORTABLE CONCRETE BARRIER.

## PROPOSED WORK

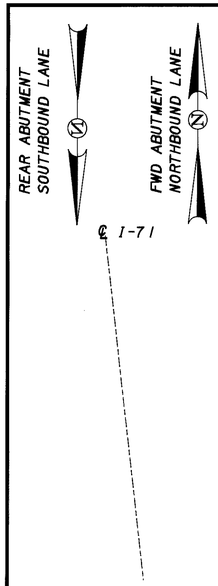
1. MAINTAIN TRAFFIC BY USE OF STAGE CONSTRUCTION
2. REPLACE CONCRETE DECK AND STEEL BEAMS
3. WIDEN AND MODIFY EXISTING SUBSTRUCTURE UNITS

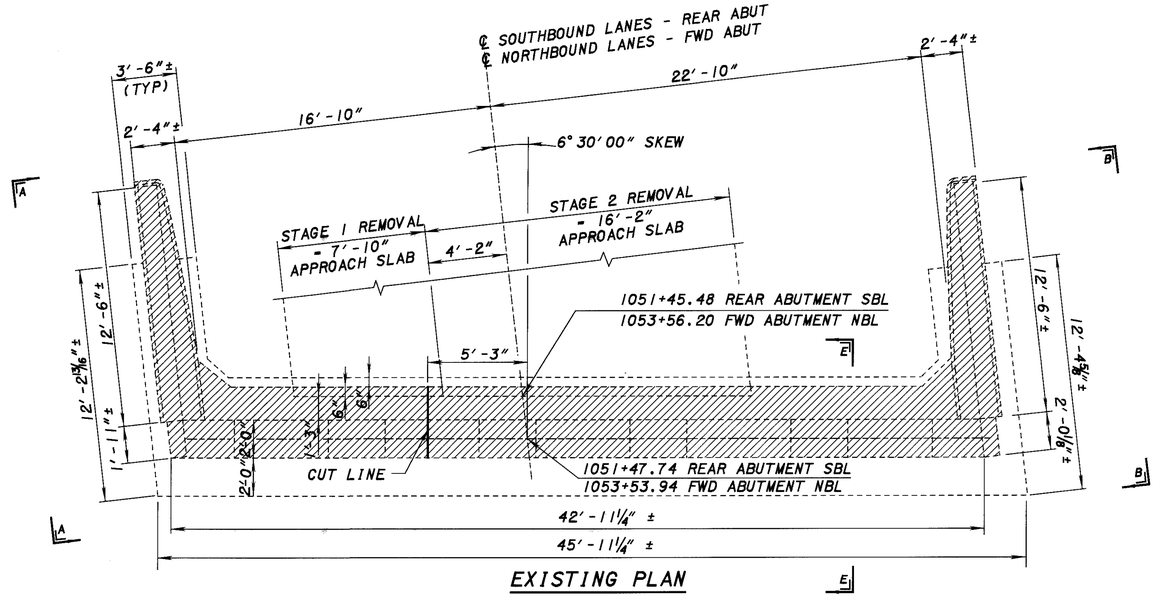
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: DFT — DATE: 10-4-99
STRUCTURE FILE NUMBER: 5203813L/5203848R
DRAWN: TAA — REVISED:
DESIGNED: TAA — CHECKED: TDB

# STAGE CONSTRUCTION DETAILS

MED-71-1992 L/R
I-71 OVER ROCKY RIVER

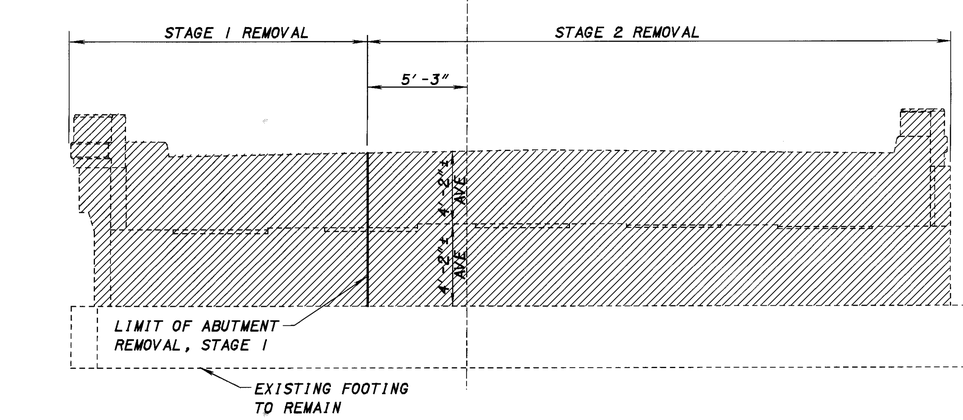
MED-71-15.78



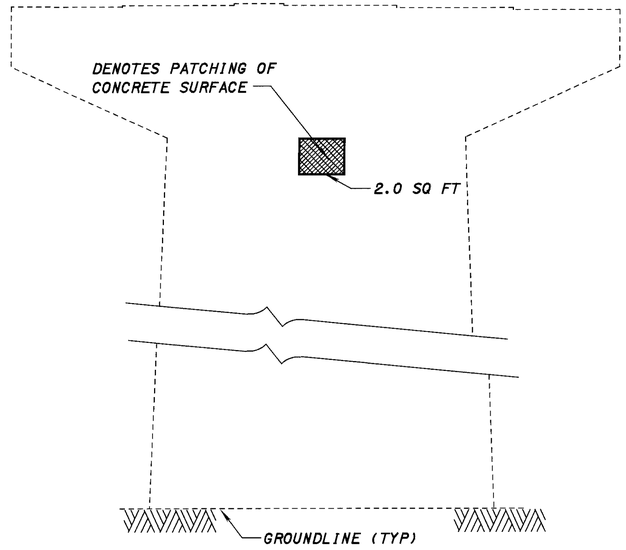

## EXISTING PLAN

REAR ABUTMENT SOUTHBOUND LANES
FWD ABUTMENT NORTHBOUND LANES
EXISTING PILES NOT SHOWN FOR CLARITY



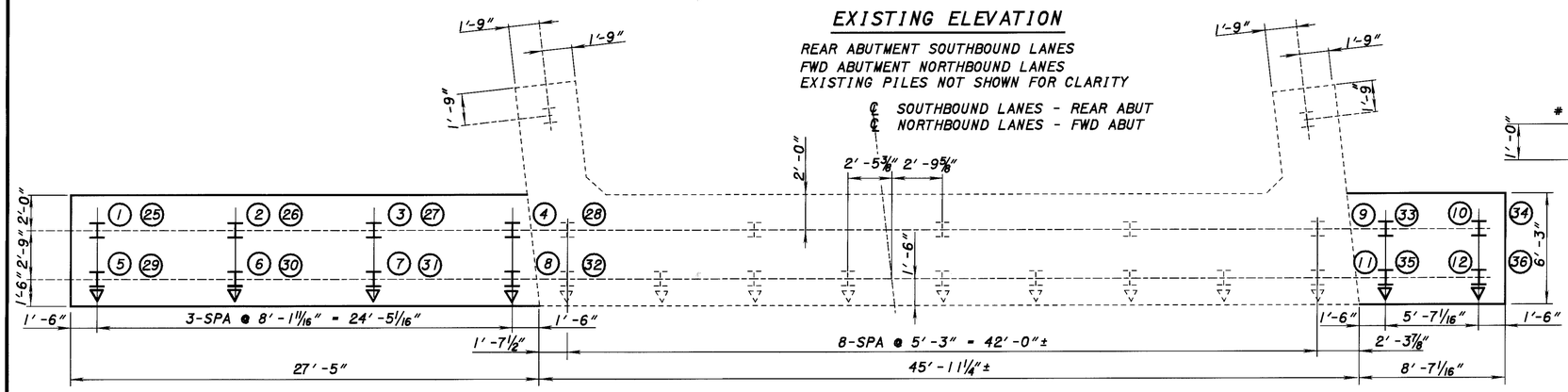

## LEGEND

PORTION OF STRUCTURE TO BE REMOVED




## PIER #2 - LEFT/SOUTH FACE

FOR REST OF PIER PATCHING DETAILS, SEE SHEET 9/23.



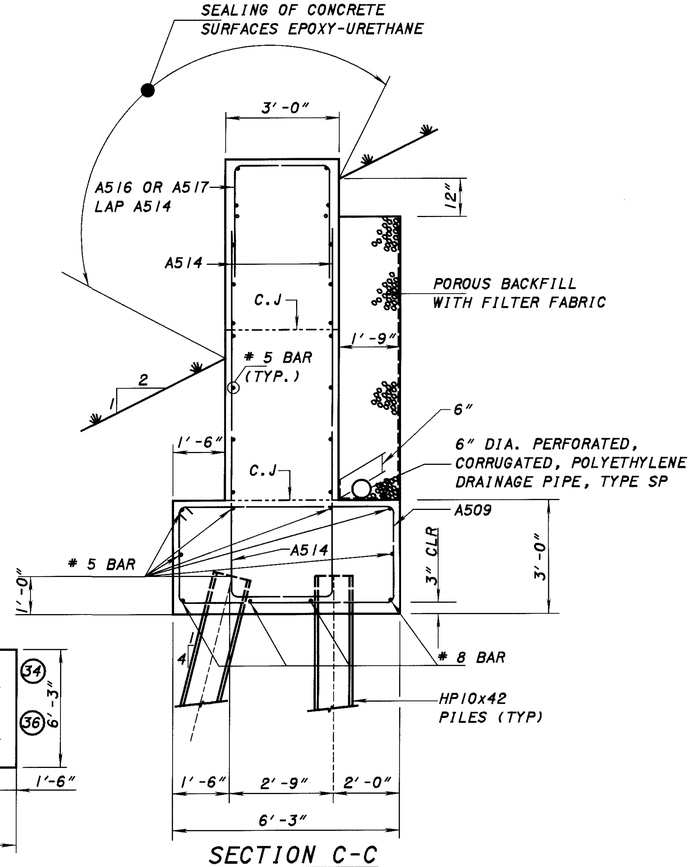

## EXISTING ELEVATION

REAR ABUTMENT SOUTHBOUND LANES
FWD ABUTMENT NORTHBOUND LANES
EXISTING PILES NOT SHOWN FOR CLARITY

℄ SOUTHBOUND LANES - REAR ABUT
℄ NORTHBOUND LANES - FWD ABUT

## FOOTING PLAN

FOR SECTIONS AND DETAILS SEE SHEET 8/23.




## SECTION C-C

FOR SECTION CUT, SEE SHEETS 10/23 AND 11/23.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED: DFT
DATE: 10-4-99
STRUCTURE FILE NUMBER: 5203813L/5203848R
DRAWN: BRC
REVISED:
DESIGNED: BRC
CHECKED: TAA

EXISTING ABUTMENT PLAN AND ELEVATION
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

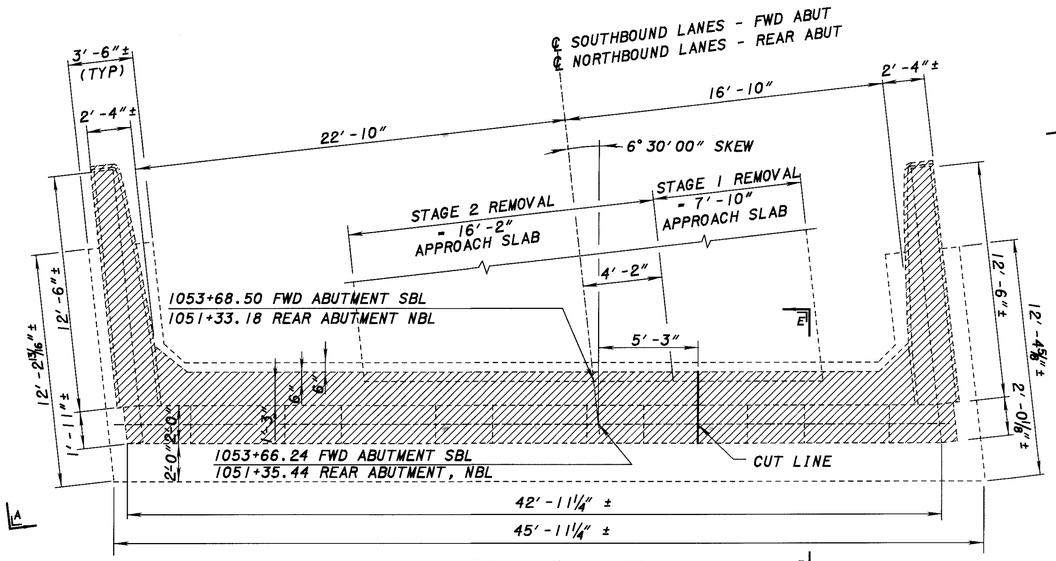
MED-71-15.78

7/23

804
940

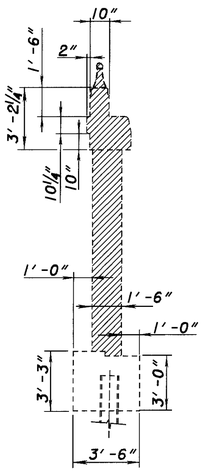
REAR ABUTMENT SOUTHBOUND LANE

FWD ABUTMENT NORTHBOUND LANE

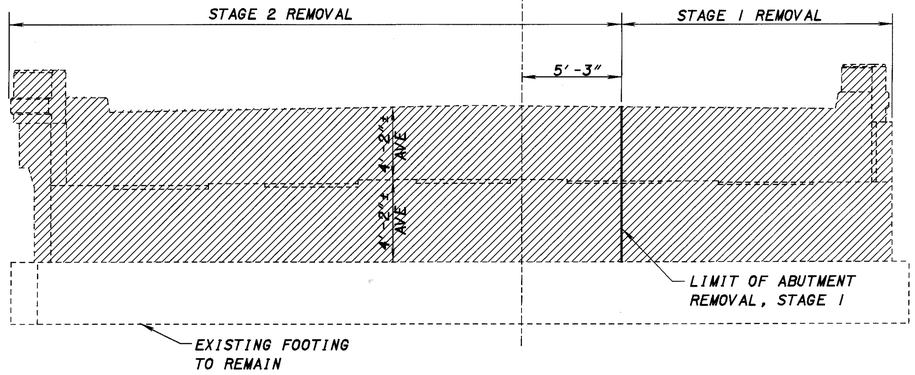



## EXISTING PLAN

FWD ABUTMENT SOUTHBOUND LANES
REAR ABUTMENT NORTHBOUND LANES
EXISTING PILES NOT SHOWN FOR CLARITY

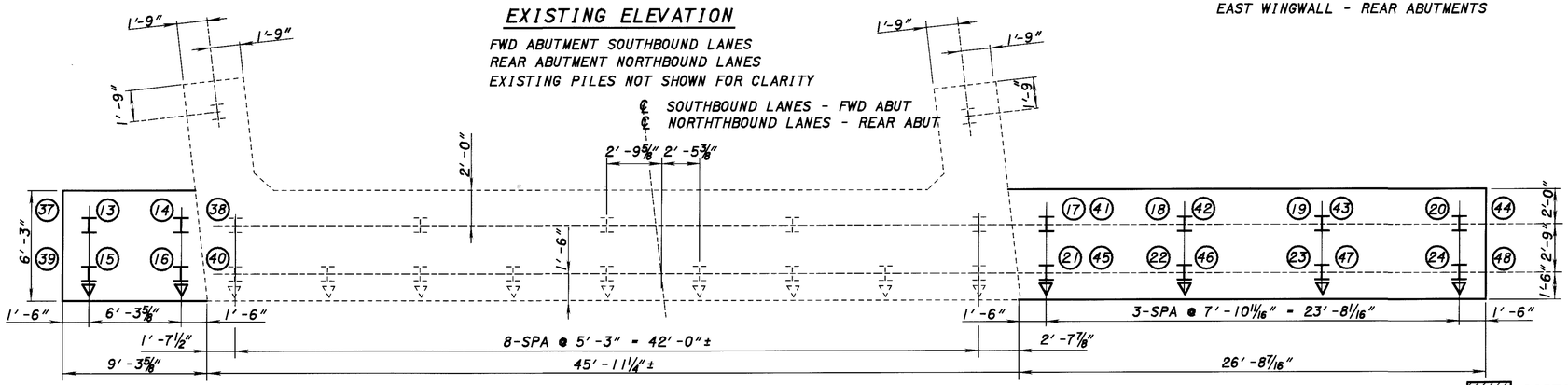



## SECTION D-D



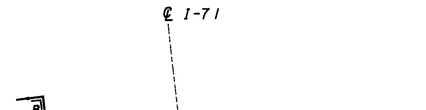

## EXISTING ELEVATION

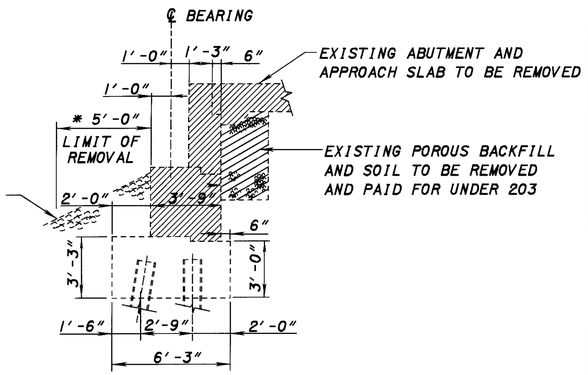
FWD ABUTMENT SOUTHBOUND LANES
REAR ABUTMENT NORTHBOUND LANES
EXISTING PILES NOT SHOWN FOR CLARITY



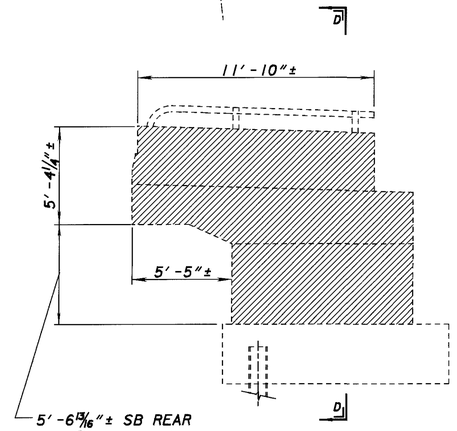

## FOOTING PLAN

AT REAR ABUTMENT NORTHBOUND BRIDGE, STOP PILES #20 & #24 SHORT OF 48" DIAMETER STORM PIPE.



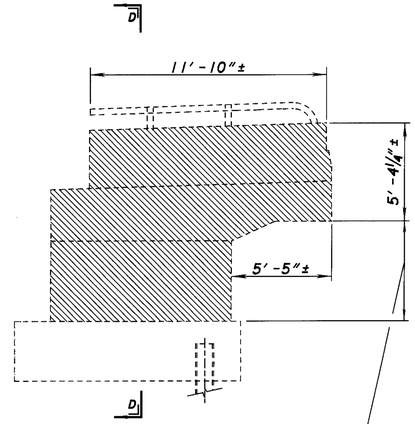

## SECTION E-E




5'-6 13/16"± SB REAR
4'-6 7/16"± SB FWD
5'-4 5/8"± NB REAR
4'-6 7/16"± NB FWD

## VIEW A-A

WEST WINGWALL - FWD ABUTMENTS
EAST WINGWALL - REAR ABUTMENTS




5'-3 15/16"± SB REAR
4'-9 3/16"± SB FWD
5'-4"± NB REAR
4'-7"± NB FWD

## VIEW B-B

WEST WINGWALL - REAR ABUTMENTS
EAST WINGWALL - FWD ABUTMENTS

## LEGEND

PORTION OF STRUCTURE TO BE REMOVED

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVISED: DFT — DATE: 10-4-99

DRAWN: BRC — REVISED:

DESIGNED: BRC — CHECKED: TAA

STRUCTURE FILE NUMBER: 5203813L/5203848R

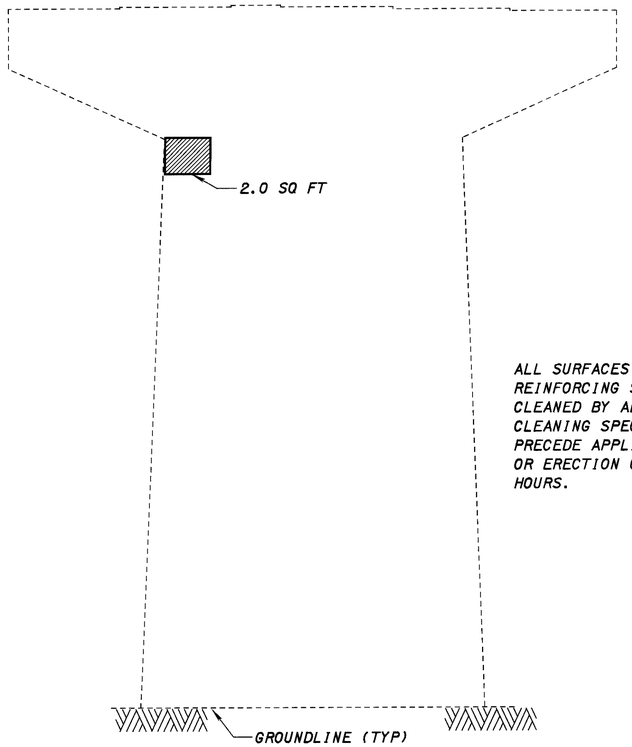
# EXISTING ABUTMENT PLAN AND ELEVATION

MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

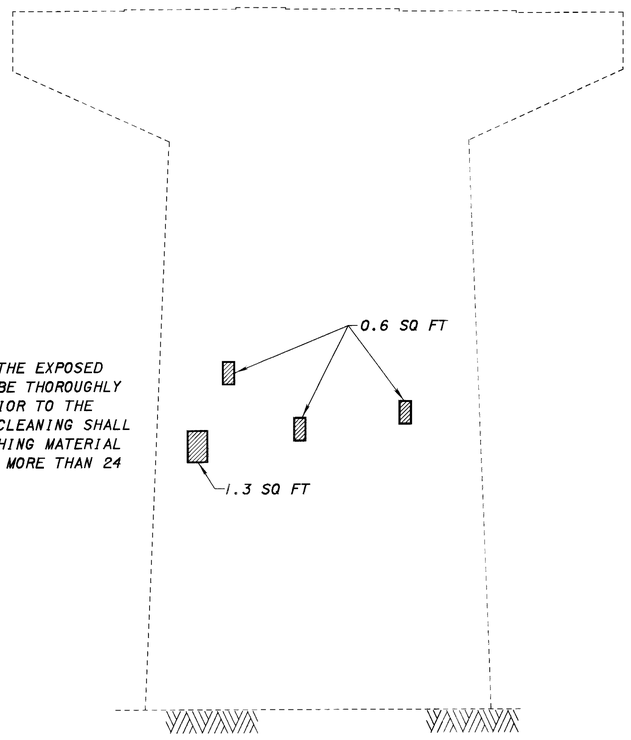
8 / 23

805/940

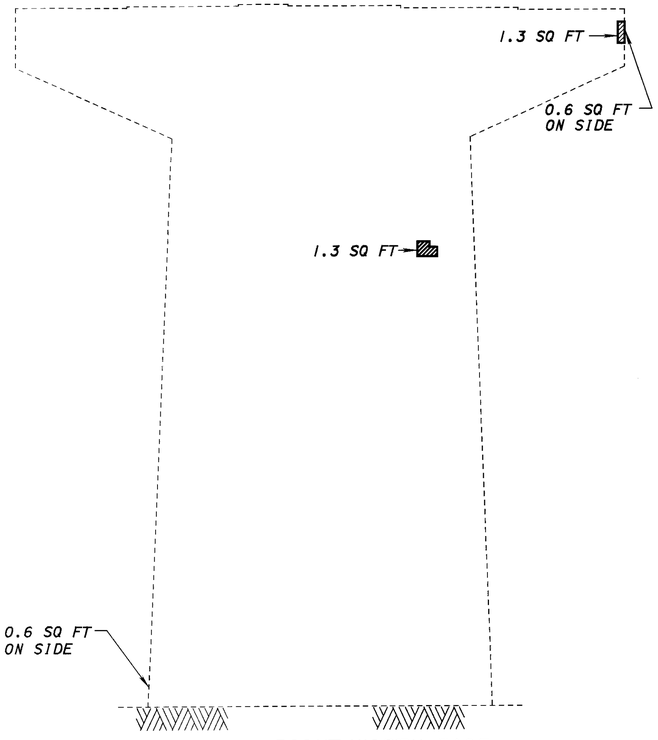



PIER #1 - LEFT/NORTH FACE

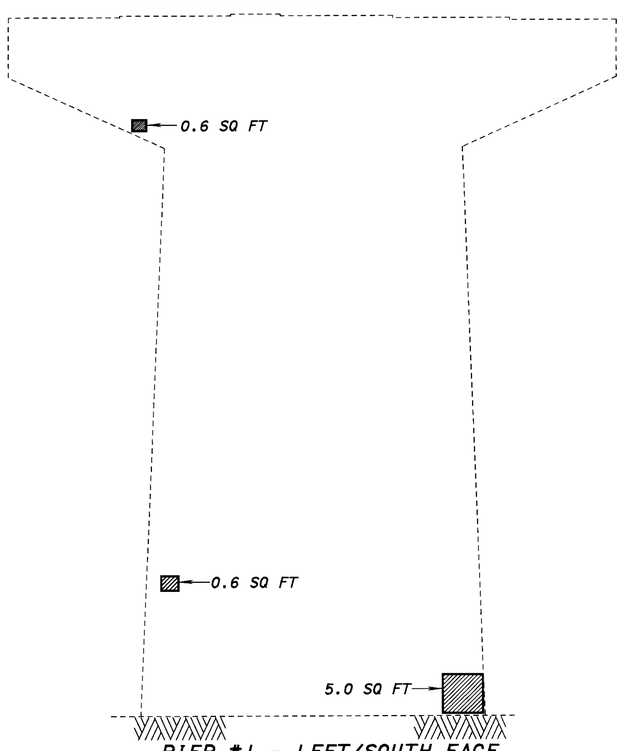
ALL SURFACES TO BE PATCHED AND THE EXPOSED REINFORCING STEEL WITHIN SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING PRIOR TO THE CLEANING SPECIFIED BY 519.04. CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL OR ERECTION OF THE FORMS BY NOT MORE THAN 24 HOURS.



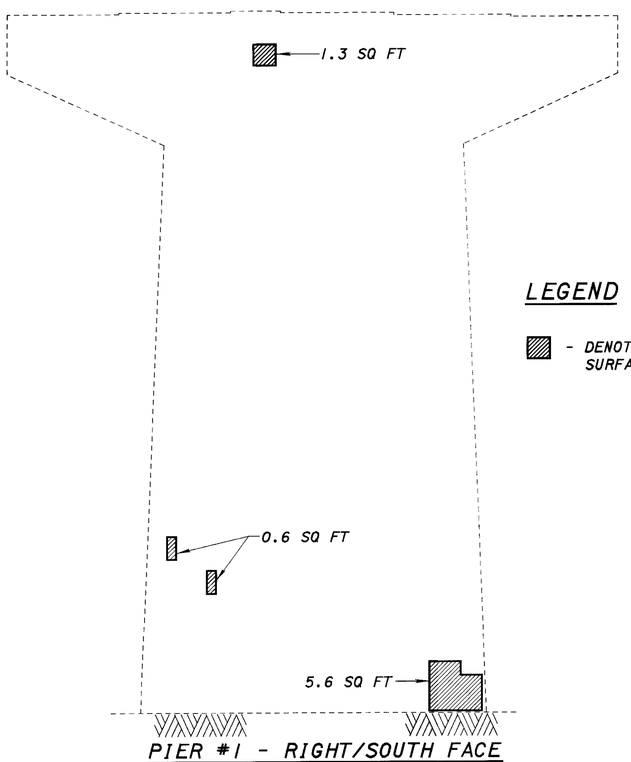

PIER #1 - RIGHT/NORTH FACE



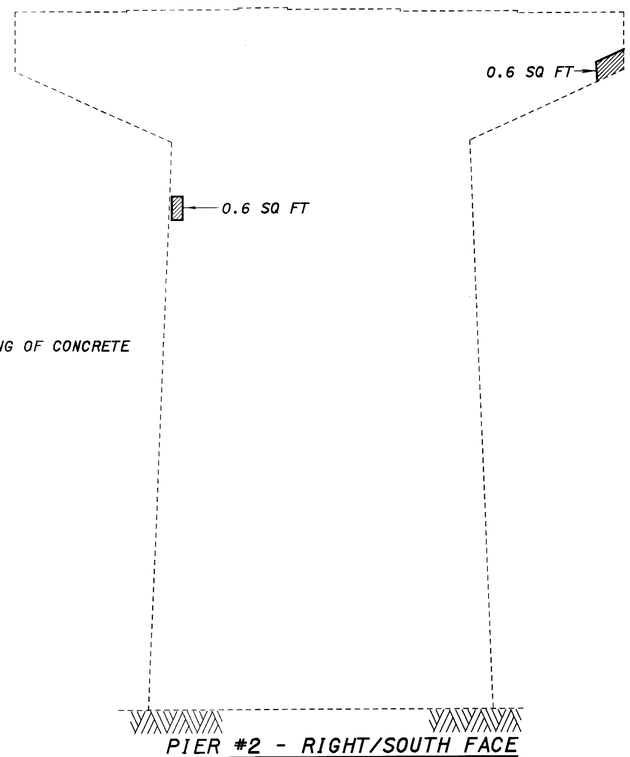

PIER #2 - RIGHT/NORTH FACE




PIER #1 - LEFT/SOUTH FACE




PIER #1 - RIGHT/SOUTH FACE




PIER #2 - RIGHT/SOUTH FACE

LEGEND

▨ - DENOTES PATCHING OF CONCRETE SURFACES

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

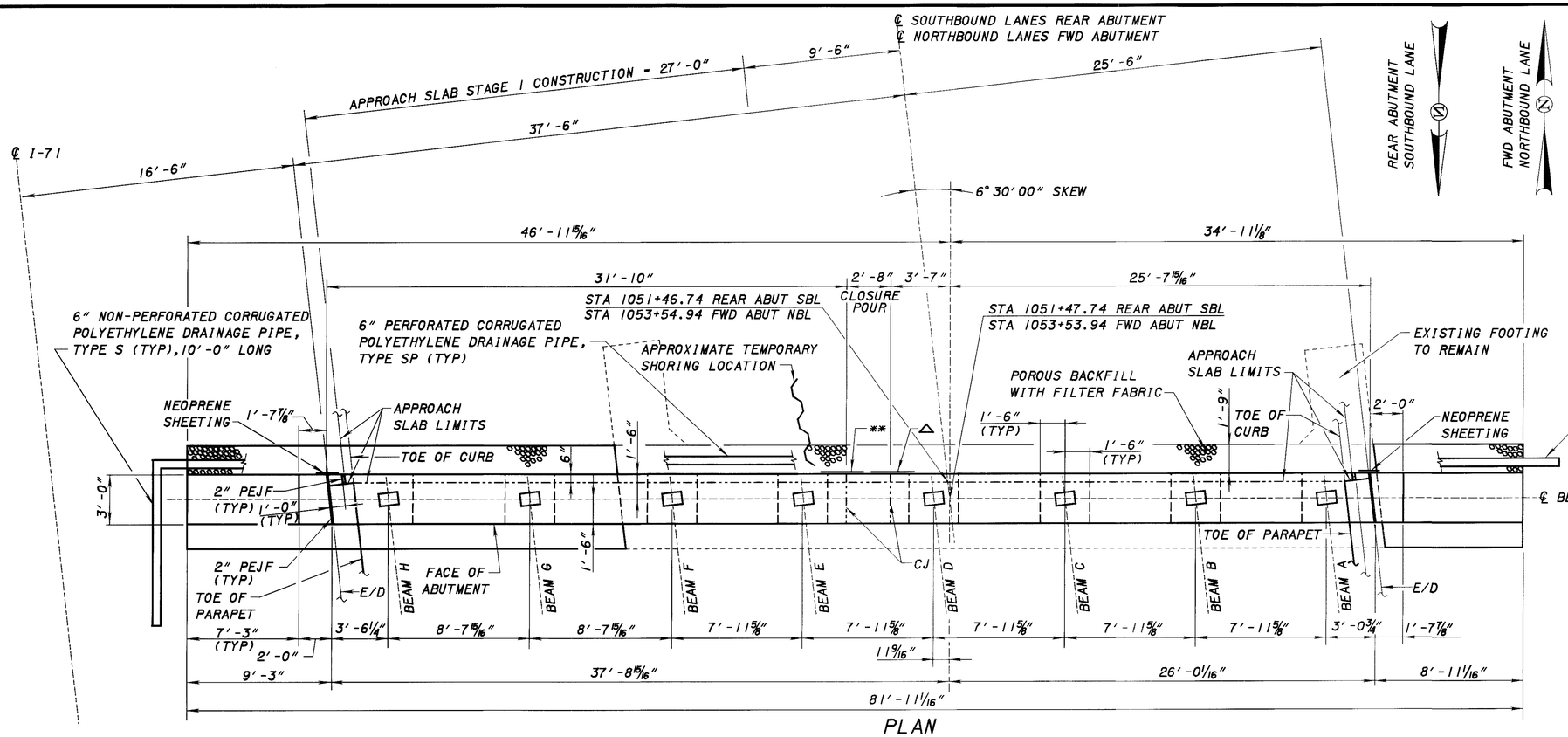
| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| BRC | BRC | DFT | 10-4-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| TAA | | 5203813L/5203848R | |

PIER PATCHING DETAILS
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

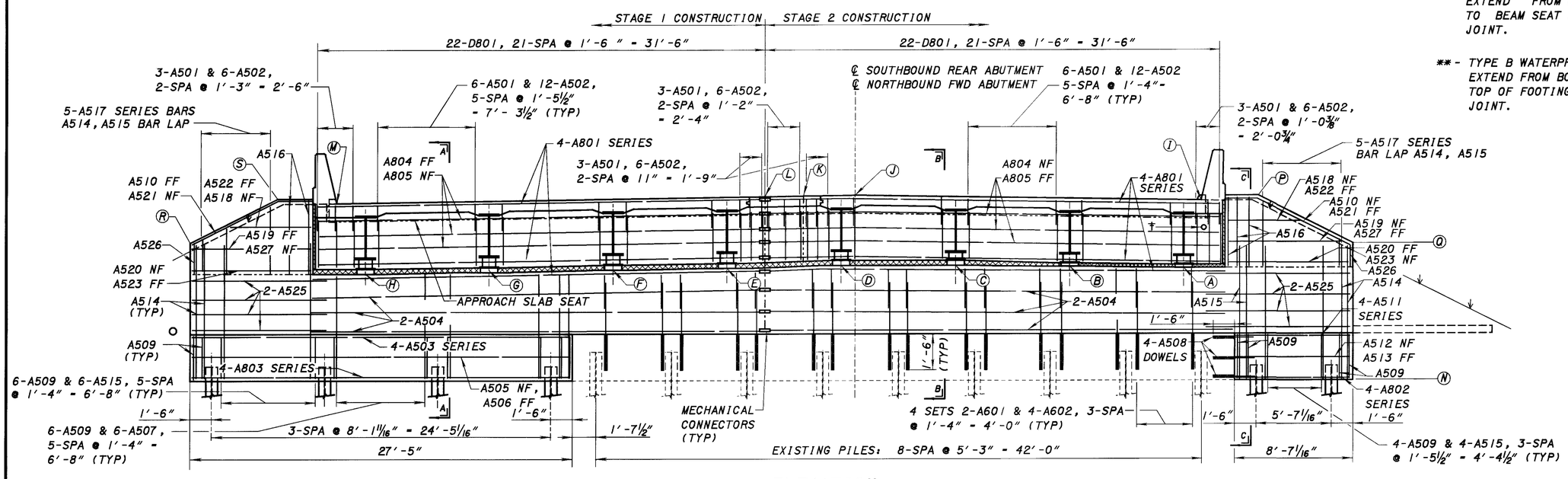
9 / 23

806
940




## PLAN

REAR ABUTMENT SOUTHBOUND LANE AND FWD ABUTMENT NORTHBOUND LANE SHOWN




## ELEVATION

REAR ABUTMENT SOUTHBOUND LANE AND FWD ABUTMENT NORTHBOUND LANE SHOWN

SEE SHEET 12/23 FOR PIPE DETAIL




### NOTES

1. FOR SECTIONS AND DETAILS SEE SHEETS 7/23 AND 12/23.
2. FOOTING ELEVATION SHOULD MATCH EXISTING FOOTING.
3. MINIMUM LAP FOR #5 BAR - 2'-6".
4. ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.
5. EXISTING AND PROPOSED PILES ARE NOT SHOWN IN PLAN VIEW FOR CLARITY.
6. A602 TO BE DOWELED 1'-6" INTO EXISTING CONCRETE.

### LEGEND

EF - EACH FACE
NF - NEAR FACE
FF - FAR FACE
PEJF - PREFORMED EXPANSION JOINT FILLER
CJ - CONSTRUCTION JOINT
E/D - EDGE OF DECK

† - 4" CONDUIT. SEE CSS3 AND CSS4 FOR DETAILS

△ - TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO BEAM SEAT ACROSS THE CONSTRUCTION JOINT.

** - TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 10-4-99
STRUCTURE FILE NUMBER: 5203813L/5203848R
DRAWN: BRC
REVISED:
DESIGNED: BRC
CHECKED: TAA

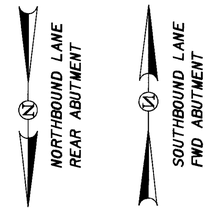
# ABUTMENT DETAILS

MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

10/23

807
940




NOTES

1. FOR SECTIONS AND DETAILS SEE SHEETS 7 123 AND 12123 .
2. FOOTING ELEVATION SHOULD MATCH EXISTING FOOTING.
3. MINIMUM LAP FOR #5 BAR = 2'-6".
4. ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.
5. EXISTING AND PROPOSED PILES ARE NOT SHOWN FOR CLARITY.
6. A602 TO BE DOWELED 1'-6" INTO EXISTING CONCRETE.

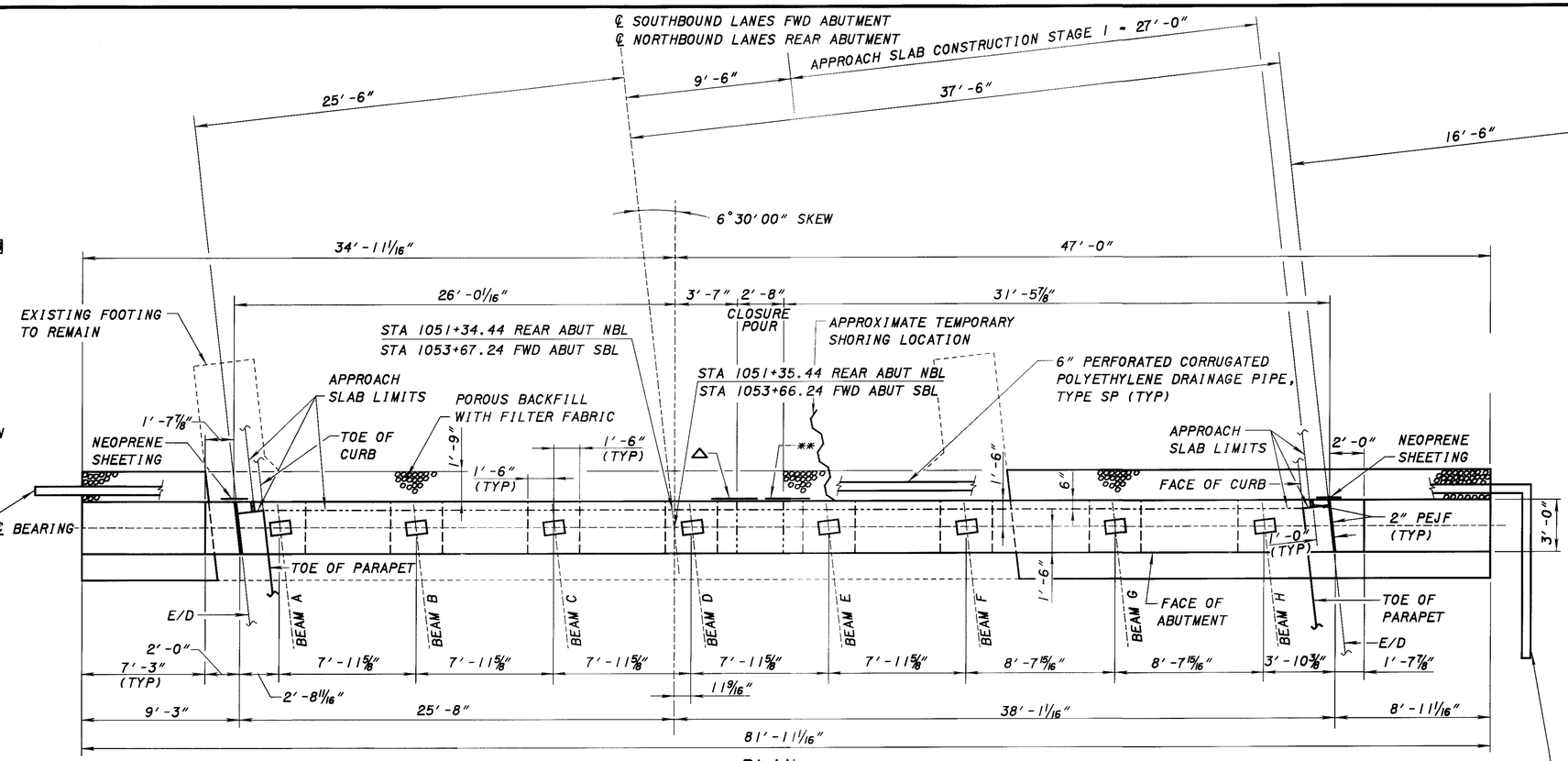
LEGEND

EF - EACH FACE
NF - NEAR FACE
FF - FAR FACE
PEJF - PREFORMED EXPANSION JOINT FILLER
CJ - CONSTRUCTION JOINT
E/D - EDGE OF DECK

† - 4" CONDUIT. SEE CSS3 AND CSS4 FOR DETAILS

△ - TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO BEAM SEAT ACROSS THE CONSTRUCTION JOINT.

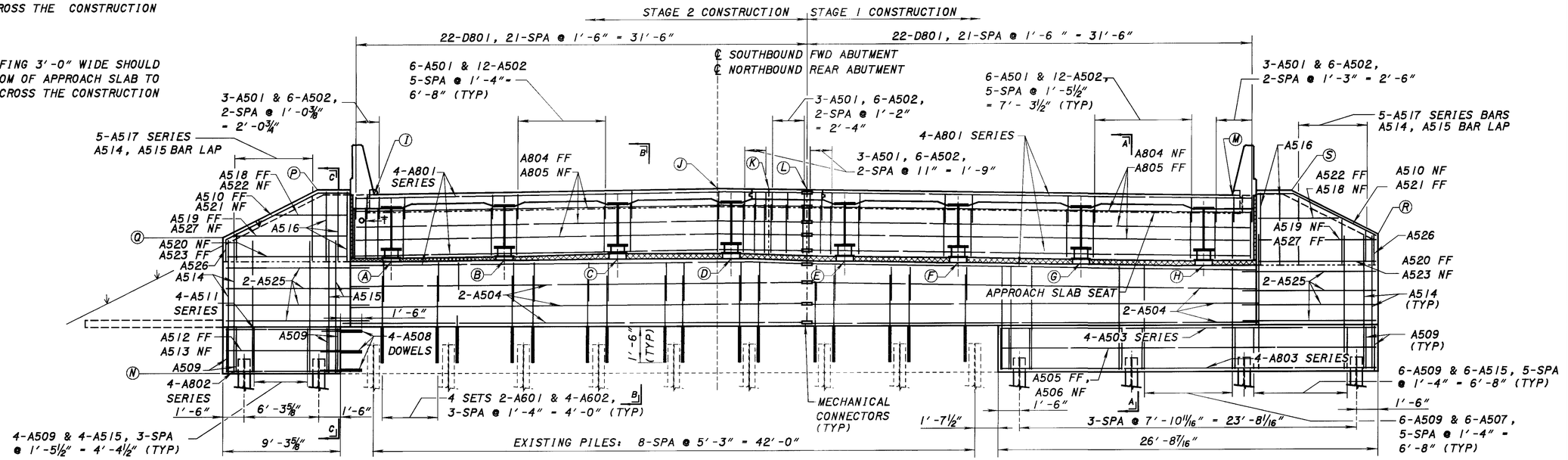
** - TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.




PLAN

FWD ABUTMENT SOUTHBOUND LANE AND REAR ABUTMENT NORTHBOUND LANE SHOWN

6" NON-PERFORATED CORRUGATED POLYETHYLENE DRAINAGE PIPE, TYPE S (TYP), 10'-0" LONG




ELEVATION

FWD ABUTMENT SOUTHBOUND LANE AND REAR ABUTMENT NORTHBOUND LANE SHOWN

SEE SHEET 12123 FOR PIPE DETAIL

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 10-4-99
STRUCTURE FILE NUMBER: 5203813L/5203848R
DRAWN: BRC
REVISED:
DESIGNED: BRC
CHECKED: TAA

ABUTMENT DETAILS
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

11/23

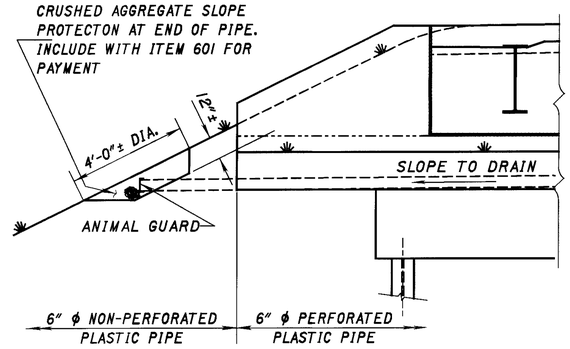
808/940

## SOUTHBOUND ABUTMENT ELEVATIONS

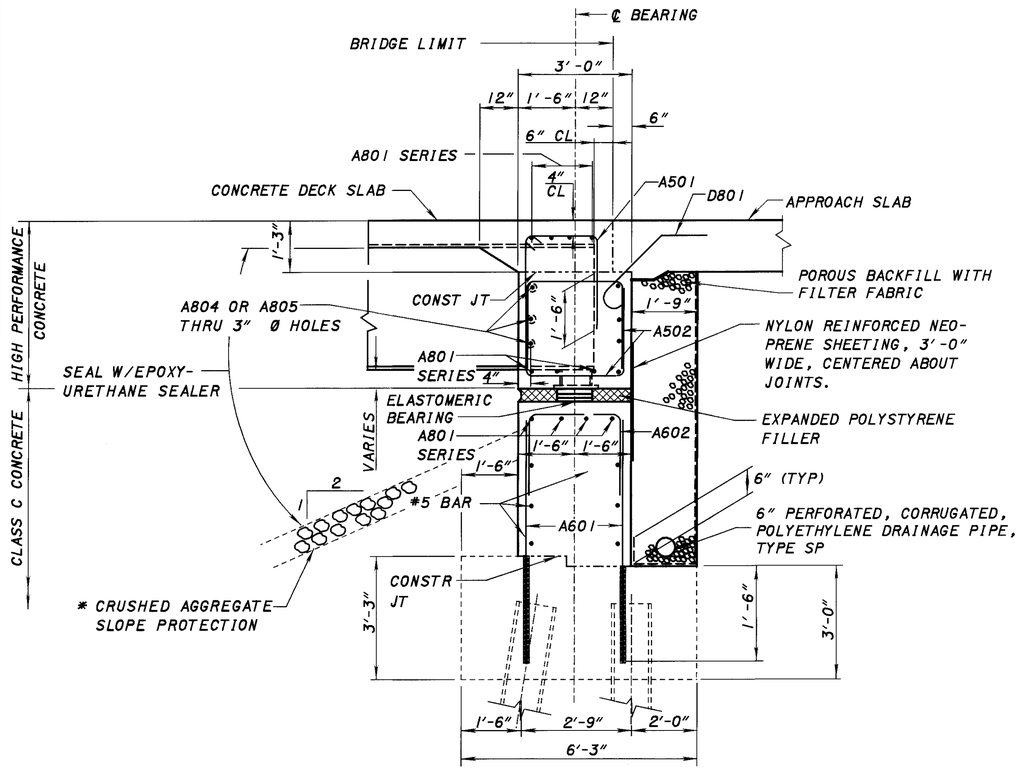
| ABUTMENT | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | P | Q | R | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REAR | ELEVATION | 1055.90 | 1056.05 | 1056.20 | 1056.31 | 1056.22 | 1056.12 | 1056.02 | 1055.92 | 1060.48 | 1060.94 | 1060.88 | 1060.85 | 1060.50 | 1048.28 | 1060.81 | 1057.18 | 1057.21 | 1060.83 |
| FORWARD | ELEVATION | 1049.34 | 1049.49 | 1049.64 | 1049.76 | 1049.67 | 1049.57 | 1049.46 | 1049.36 | 1053.86 | 1054.32 | 1054.29 | 1054.23 | 1053.88 | 1041.75 | 1054.19 | 1050.57 | 1050.58 | 1054.21 |

## NORTHBOUND ABUTMENT ELEVATIONS

| ABUTMENT | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | P | Q | R | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REAR | ELEVATION | 1056.42 | 1056.52 | 1056.61 | 1056.68 | 1056.53 | 1056.38 | 1056.22 | 1056.05 | 1061.01 | 1061.31 | 1061.26 | 1061.22 | 1060.62 | 1048.76 | 1061.34 | 1057.72 | 1057.32 | 1060.95 |
| FORWARD | ELEVATION | 1049.87 | 1049.96 | 1050.06 | 1050.12 | 1049.97 | 1049.82 | 1049.66 | 1049.50 | 1054.40 | 1054.69 | 1054.64 | 1054.60 | 1054.01 | 1042.21 | 1054.73 | 1051.10 | 1050.72 | 1054.34 |

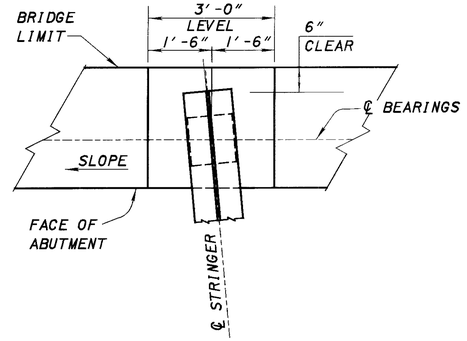



## PIPE OUTLET DETAIL

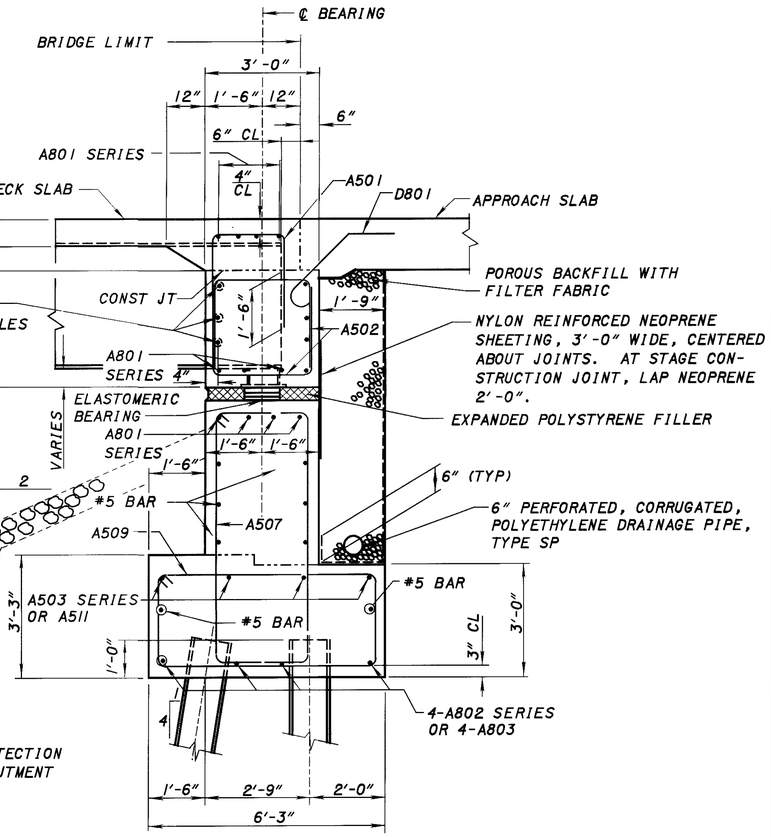



## SECTION B-B

FOR SECTION CUT B-B, SEE SHEETS 10/23 AND 11/23




## SECTION C-C




## SECTION A-A

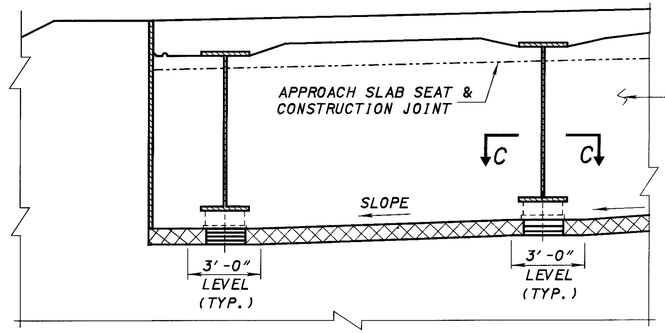
FOR SECTION CUT A-A, SEE SHEETS 10/23 AND 11/23 .

NOTES:

**POROUS BACKFILL:**
POROUS BACKFILL WITH FILTER FABRIC, 1'-9" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 12" BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE FACE OF THE WINGWALLS.

**DIAPHRAGM** CONCRETE ENCASING THE STEEL BEAMS SUPPORTED IN THE SEMI INTEGRAL ABUTMENT SHALL BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.

PROVIDE 3" Ø HOLE THRU WEB AS NOTED, PAYMENT TO BE INCLUDED AS INCIDENTAL WITH ITEM 863 STRUCTURAL STEEL. PAYMENT FOR THE EXPANDED POLYSTYRENE FILLER TO BE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE AS INCIDENTAL.




## PART ELEVATION OF BEAM SEAT

* PROVIDE NEW SLOPE PROTECTION AT T/S AT EXISTING ABUTMENT FOR 5'-0".

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DATE REVIEWED: 10-4-99 DFT
STRUCTURE FILE NUMBER: 5203813L/5203848R
DRAWN: BRC
REVISED:
DESIGNED: BRC
CHECKED: TAA

# ABUTMENT DETAILS

MED-71-1992 L/R
I-71 OVER ROCKY RIVER

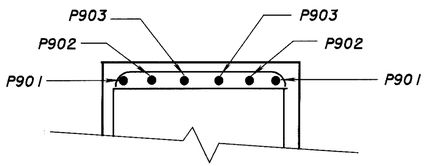
MED-71-15.78

12/23

809
940

| SOUTHBOUND PIER SEAT ELEVATIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | Z |
| PIER #1 | 1054.14 | 1054.29 | 1054.44 | 1054.61 | 1054.46 | 1054.36 | 1054.26 | 1054.15 | 1052+14.99 |
| PIER #2 | 1051.62 | 1051.77 | 1051.92 | 1052.09 | 1051.94 | 1051.84 | 1051.74 | 1051.63 | 1052+98.99 |

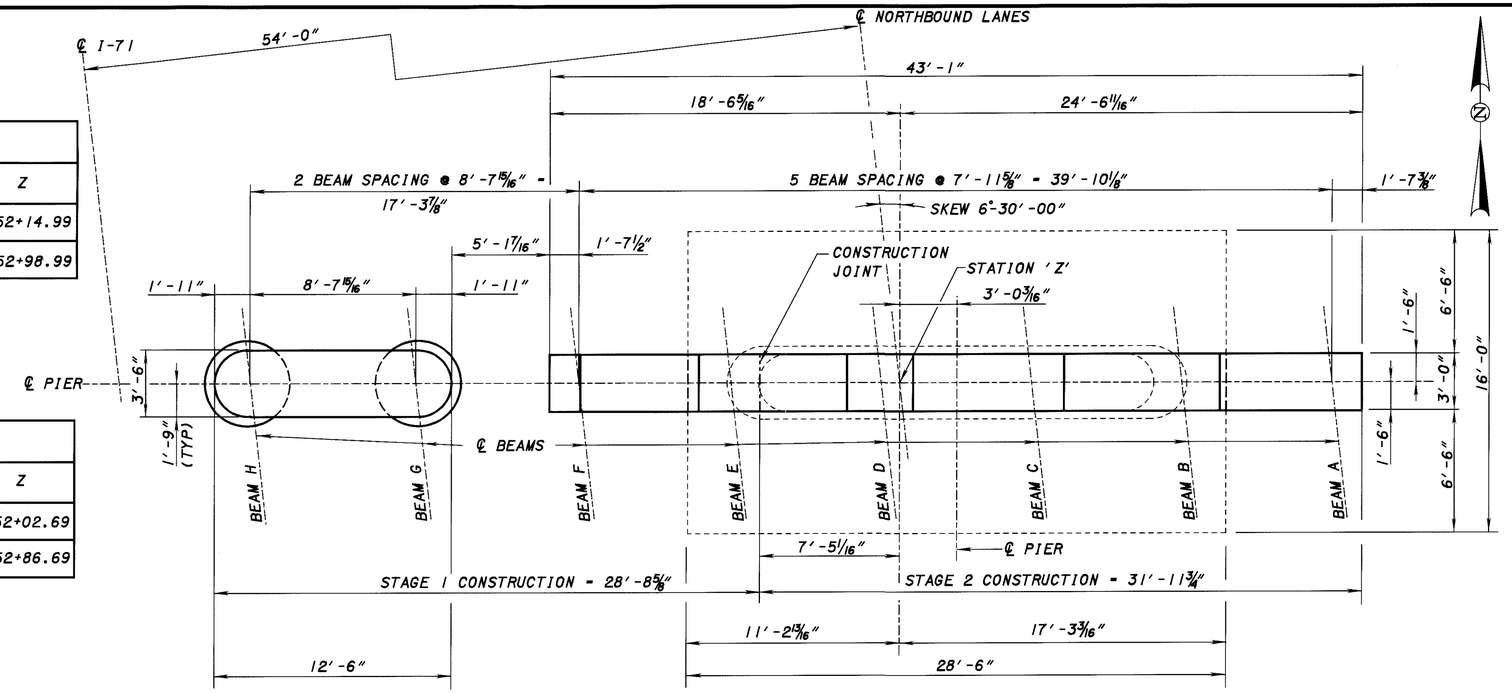
| NORTHBOUND PIER SEAT ELEVATIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | Z |
| PIER #1 | 1054.66 | 1054.76 | 1054.85 | 1054.92 | 1054.77 | 1054.62 | 1054.45 | 1054.29 | 1052+02.69 |
| PIER #2 | 1052.14 | 1052.24 | 1052.33 | 1052.40 | 1052.25 | 1052.10 | 1051.93 | 1051.77 | 1052+86.69 |




DETAIL A

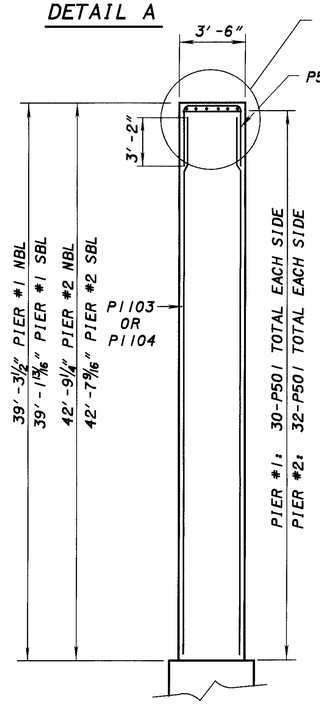
NOTES:

EXISTING PIER BRIDGE SEATS SHALL BE SCARIFIED 1/4", SEE GENERAL NOTES.

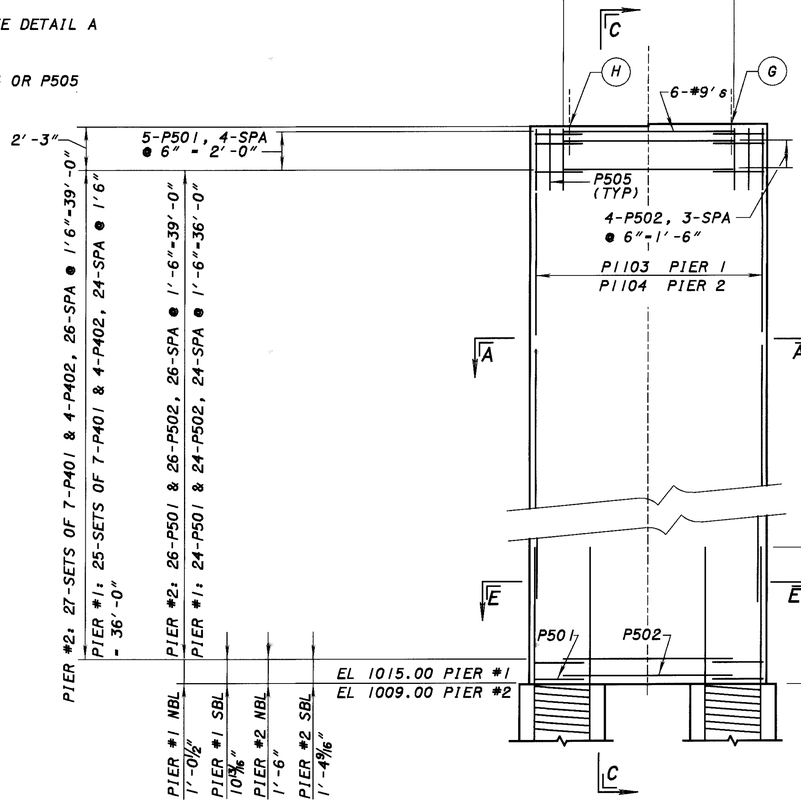


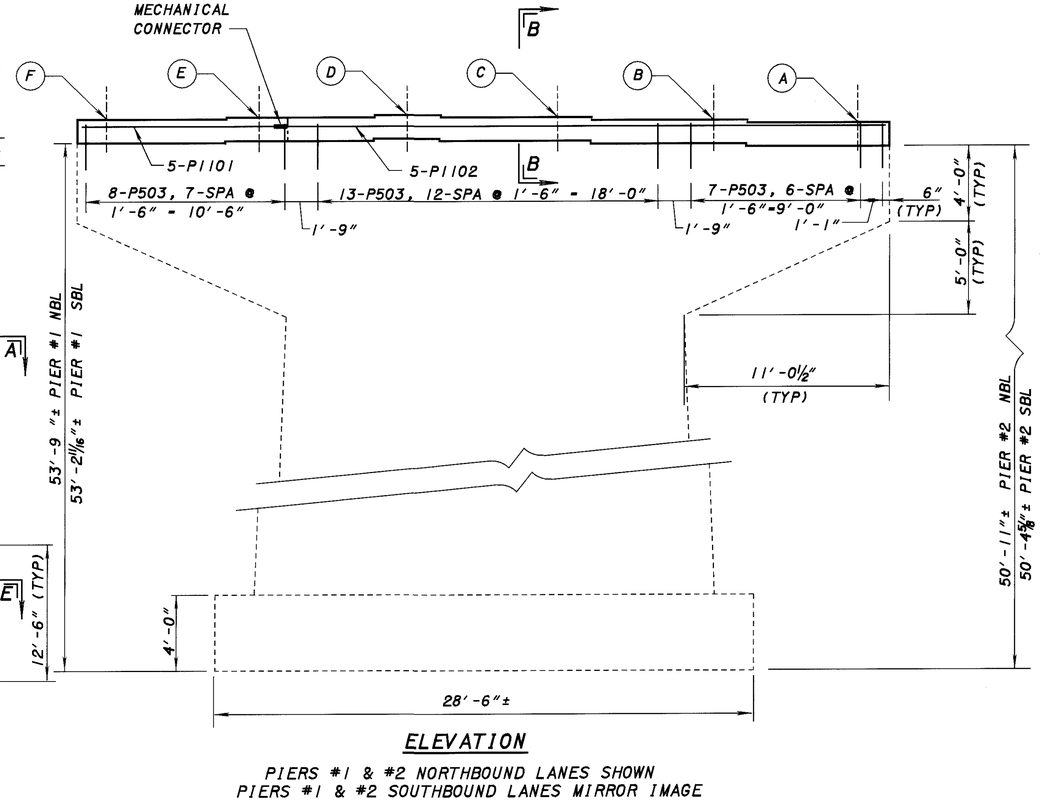

PLAN

PIERS #1 & #2 NORTHBOUND LANES SHOWN
PIERS #1 & #2 SOUTHBOUND LANES MIRROR IMAGE




SECTION C-C




ELEVATION

PIERS #1 & #2 NORTHBOUND LANES SHOWN
PIERS #1 & #2 SOUTHBOUND LANES MIRROR IMAGE

FOR SECTIONS A-A, B-B & E-E, SEE SHEET 14 23.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|---|---|
| BRC | BRC | DFT | 10-4-99 | 5203813L/5203848R |

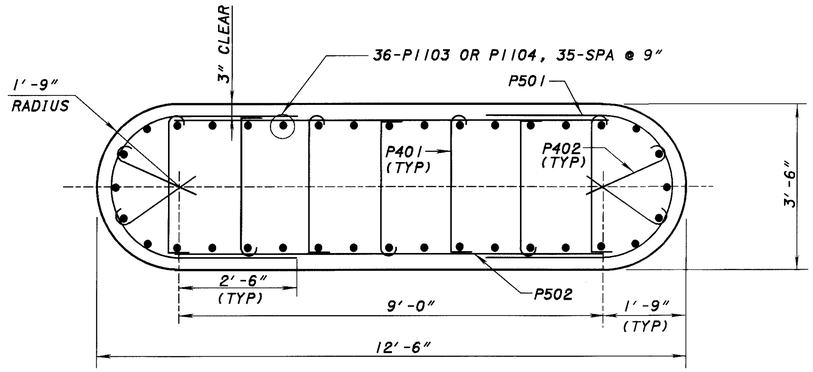
DESIGNED BRC
DRAWN BRC
CHECKED JS
REVISED DFT
DATE 10-4-99
STRUCTURE FILE NUMBER 5203813L/5203848R

PIER DETAILS
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

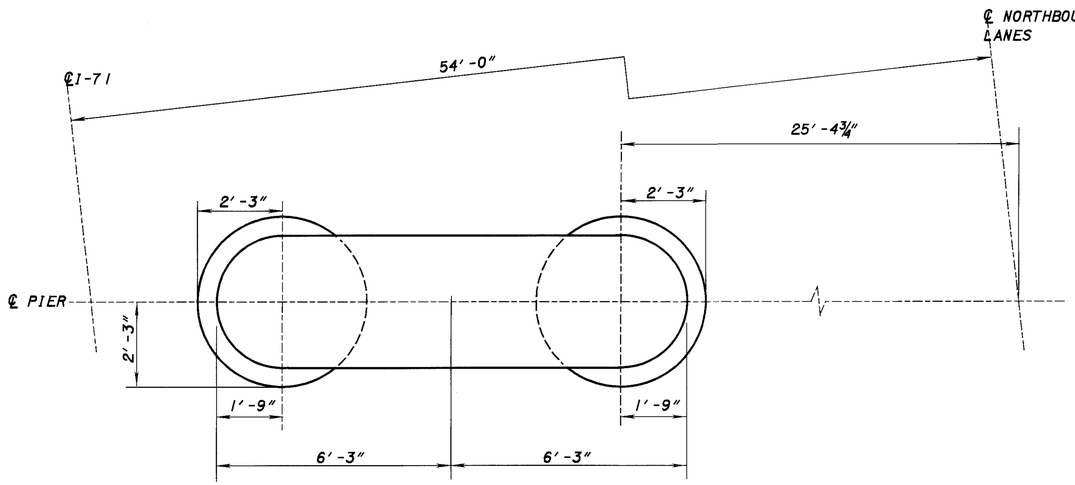
MED-71-15.78

13/23

810
940

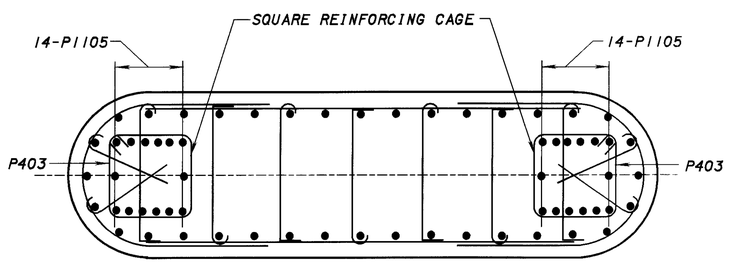



## SECTION A-A



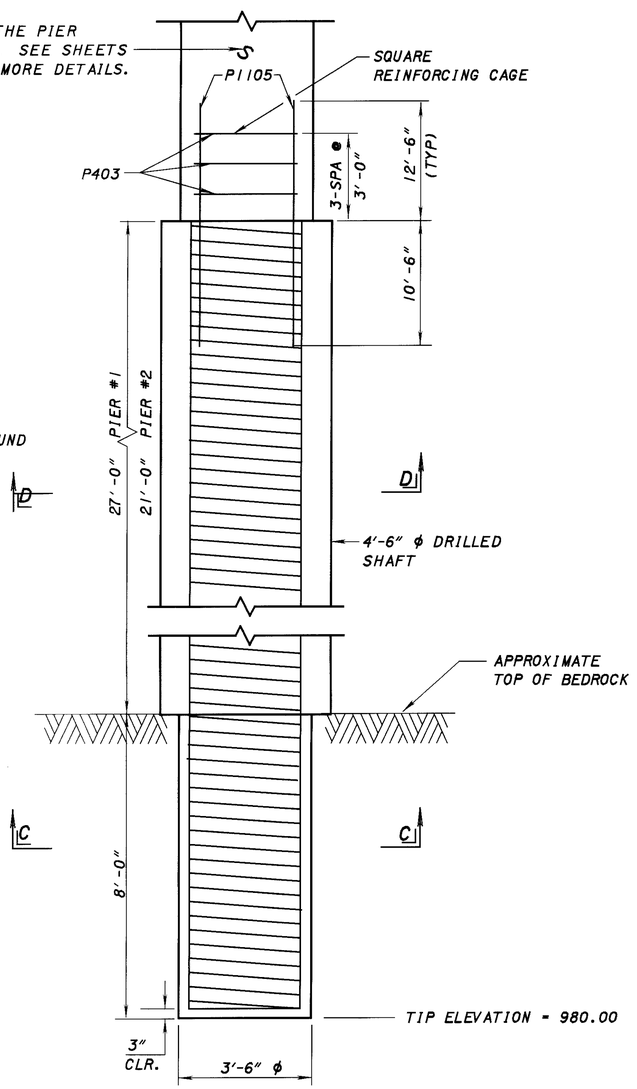

## DRILLED SHAFT LAYOUT

NORTHBOUND LANES SHOWN
SOUTHBOUND LANES MIRROR IMAGE

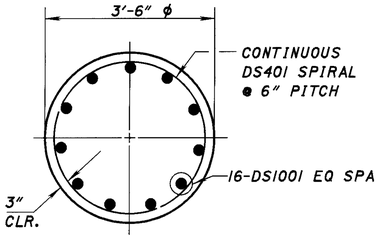



## SECTION E-E

RE-STEEL IN THE PIER IS NOT SHOWN. SEE SHEETS 13 / 23 FOR MORE DETAILS.



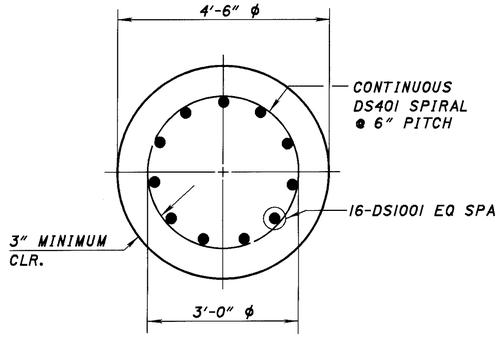

## DRILLED SHAFT DETAIL




## SECTION C-C

DRILLED SHAFT REINFORCING DETAIL

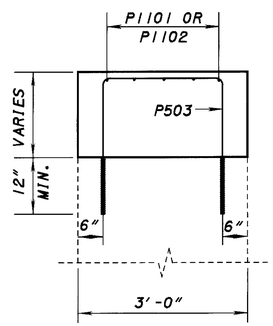
DRILLED SHAFT REINFORCING PAID WITH ITEM 524.




## SECTION D-D

DRILLED SHAFT REINFORCING DETAIL

DRILLED SHAFT REINFORCING PAID WITH ITEM 524.




## SECTION B-B

FOR SECTION CUT AND DETAILS SEE SHEET 13/23.

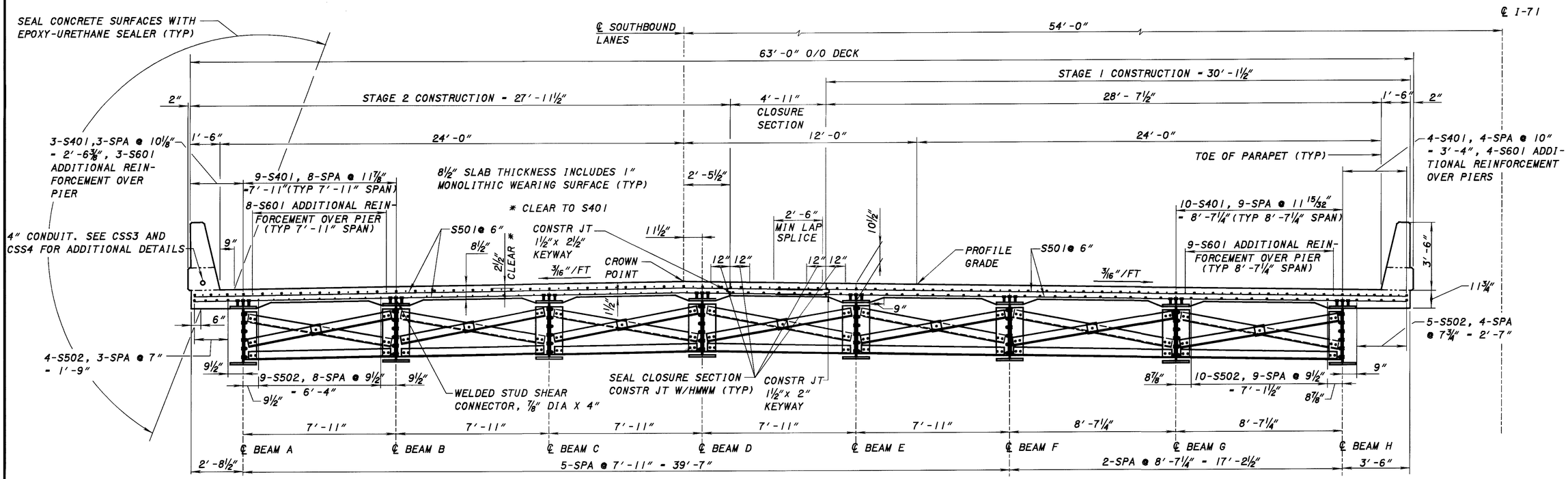
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
DESIGNED: BRC
DRAWN: BRC
CHECKED: JS
REVIEWED: DFT
DATE: 10-4-99
REVISED:
STRUCTURE FILE NUMBER: 5203813L/5203848R

PIER DETAILS
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

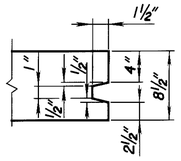


811
940




## TRANSVERSE SECTION

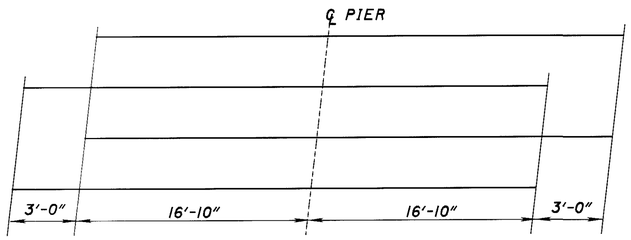
(SOUTHBOUND LANES SHOWN, NORTHBOUND MIRROR IMAGE)




KEYWAY DETAILS AT CLOSURE SECTION

NOTES:

1. HMWM: HIGH MOLECULAR WEIGHT METHACRYLATE, SEE SUPPLEMENTAL SPECIFICATION.
2. ALL REINFORCING STEEL IS EPOXY COATED.
3. FOR PARAPET DETAILS, SEE SHEET 4/23 .
4. REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH HIGH PERFORMANCE CONCRETE.
5. FOR CROSS-FRAME CONNECTION DETAILS SEE STD DWG GSD-1-96, GENERAL STEEL DETAILS.
6. DECK SLAB DEPTH: THE THEORETICAL DESIGN THICKNESS FOR THE SLAB IS 8½". THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFIGURATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. A HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12".
7. LONGITUDINAL REINFORCEMENTS IN PARAPET ARE 7-SETS OF 6-X504, 7-SETS OF 1-X601, 1-SET OF 6-X505 AND 1-SET OF 1-X602.




STAGGER OF S601 BARS OVER PIERS

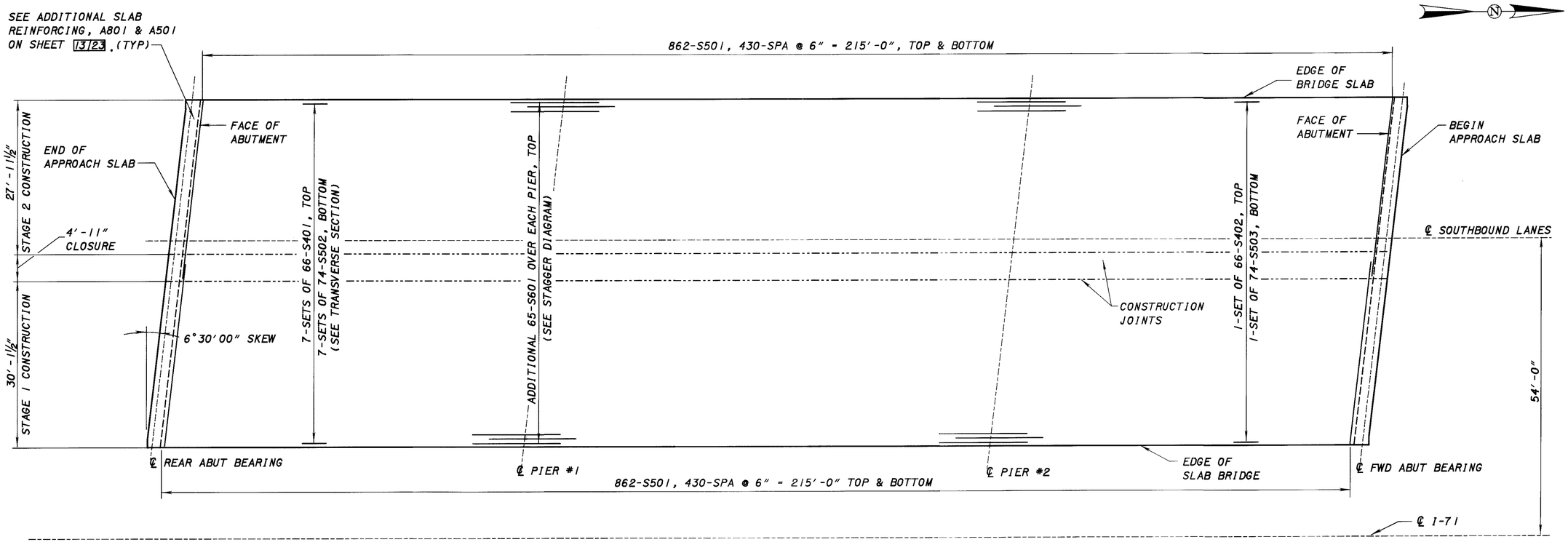
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: DFT — DATE: 10-4-99 — STRUCTURE FILE NUMBER: 5203813L/5203848R
DRAWN: TAA — REVISED:
DESIGNED: BRC — CHECKED: TAA

TRANSVERSE SECTION
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

15/23

812
940




## DECK REINFORCEMENT

(SOUTHBOUND DECK SHOWN, NORTHBOUND DECK MIRROR IMAGE AND OPPOSITE HAND)

MINIMUM LAP FOR S401 = 2'-0"
MINIMUM LAP FOR S501 = 2'-6"

### SCREED ELEVATION - NORTHBOUND BRIDGE

| LOCATION | LEFT TOE OF PARAPET | | PROFILE GRADE | | LEFT CONSTR JT | | CLOSURE POUR CJ | | NORTHBOUND LANE ℄ | | RIGHT TOE OF PARAPET | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 1051+39.54 | 1060.59 | 1051+36.81 | 1061.05 | 1051+36.28 | 1061.13 | 1051+35.72 | 1061.23 | 1051+35.44 | 1061.28 | 1051+32.70 | 1060.98 |
| ¼ SPAN | 1051+56.35 | 1060.13 | 1051+53.62 | 1060.59 | 1051+53.09 | 1060.63 | 1051+52.53 | 1060.77 | 1051+52.25 | 1060.82 | 1051+49.51 | 1060.53 |
| MIDSPAN | 1051+73.17 | 1059.63 | 1051+70.44 | 1060.09 | 1051+69.91 | 1060.18 | 1051+69.35 | 1060.27 | 1051+69.07 | 1060.32 | 1051+66.33 | 1060.03 |
| FIELD SPLICE #1 | 1051+86.71 | 1059.21 | 1051+83.98 | 1059.66 | 1051+83.45 | 1059.75 | 1051+82.89 | 1059.84 | 1051+82.61 | 1059.89 | 1051+79.87 | 1059.60 |
| ¾ SPAN | 1051+89.98 | 1059.10 | 1051+87.25 | 1059.56 | 1051+86.72 | 1059.64 | 1051+86.16 | 1059.74 | 1051+85.88 | 1059.79 | 1051+83.14 | 1059.49 |
| ℄ PIER # 1 | 1052+06.79 | 1058.57 | 1052+04.06 | 1059.03 | 1052+03.53 | 1059.12 | 1052+02.97 | 1059.21 | 1052+02.69 | 1059.26 | 1051+99.95 | 1058.97 |
| ¼ SPAN | 1052+27.79 | 1057.97 | 1052+25.06 | 1058.43 | 1052+24.53 | 1058.51 | 1052+23.97 | 1058.61 | 1052+23.69 | 1058.65 | 1052+20.95 | 1058.36 |
| FIELD SPLICE #2 | 1052+27.87 | 1057.97 | 1052+25.14 | 1058.42 | 1052+24.61 | 1058.51 | 1052+24.05 | 1058.60 | 1052+23.77 | 1058.65 | 1052+21.03 | 1058.36 |
| MIDSPAN | 1052+48.79 | 1057.36 | 1052+46.06 | 1057.82 | 1052+45.53 | 1057.91 | 1052+44.97 | 1058.00 | 1052+44.69 | 1058.05 | 1052+41.95 | 1057.75 |
| FIELD SPLICE #3 | 1052+69.70 | 1056.71 | 1052+66.97 | 1057.17 | 1052+66.44 | 1057.25 | 1052+65.88 | 1057.35 | 1052+65.60 | 1057.39 | 1052+62.86 | 1057.10 |
| ¾ SPAN | 1052+69.79 | 1056.71 | 1052+67.06 | 1057.17 | 1052+66.53 | 1057.25 | 1052+65.97 | 1057.35 | 1052+65.69 | 1057.39 | 1052+62.95 | 1057.10 |
| ℄ PIER # 2 | 1052+90.79 | 1056.05 | 1052+88.06 | 1056.51 | 1052+87.53 | 1056.60 | 1052+86.97 | 1056.69 | 1052+86.69 | 1056.74 | 1052+83.95 | 1056.45 |
| ¼ SPAN | 1053+07.60 | 1055.57 | 1053+04.87 | 1056.03 | 1053+04.34 | 1056.12 | 1053+03.78 | 1056.21 | 1053+03.50 | 1056.26 | 1053+00.76 | 1055.96 |
| FIELD SPLICE #4 | 1053+10.87 | 1055.48 | 1053+08.14 | 1055.94 | 1053+07.61 | 1056.03 | 1053+07.05 | 1056.12 | 1053+06.77 | 1056.16 | 1053+04.03 | 1055.87 |
| MIDSPAN | 1053+24.42 | 1055.10 | 1053+21.69 | 1055.56 | 1053+21.16 | 1055.64 | 1053+20.60 | 1055.74 | 1053+20.32 | 1055.78 | 1053+17.58 | 1055.49 |
| ¾ SPAN | 1053+41.23 | 1054.59 | 1053+38.50 | 1055.05 | 1053+37.97 | 1055.13 | 1053+37.41 | 1055.22 | 1053+37.13 | 1055.27 | 1053+34.39 | 1054.98 |
| ℄ FORWARD ABUTMENT | 1053+58.04 | 1054.04 | 1053+55.31 | 1054.49 | 1053+54.78 | 1054.58 | 1053+54.22 | 1054.67 | 1053+53.94 | 1054.72 | 1053+51.20 | 1054.43 |

SCREED SETTING ELEVATIONS GIVEN ARE TO THE TOP OF CONCRETE DECK AND ARE REQUIRED PRIOR TO PLACEMENT OF CONCRETE. THEY INCLUDE AN ALLOWANCE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE.

CONCRETE PARAPET NOT SHOWN. FOR DETAILS, SEE SHEET 4/23.

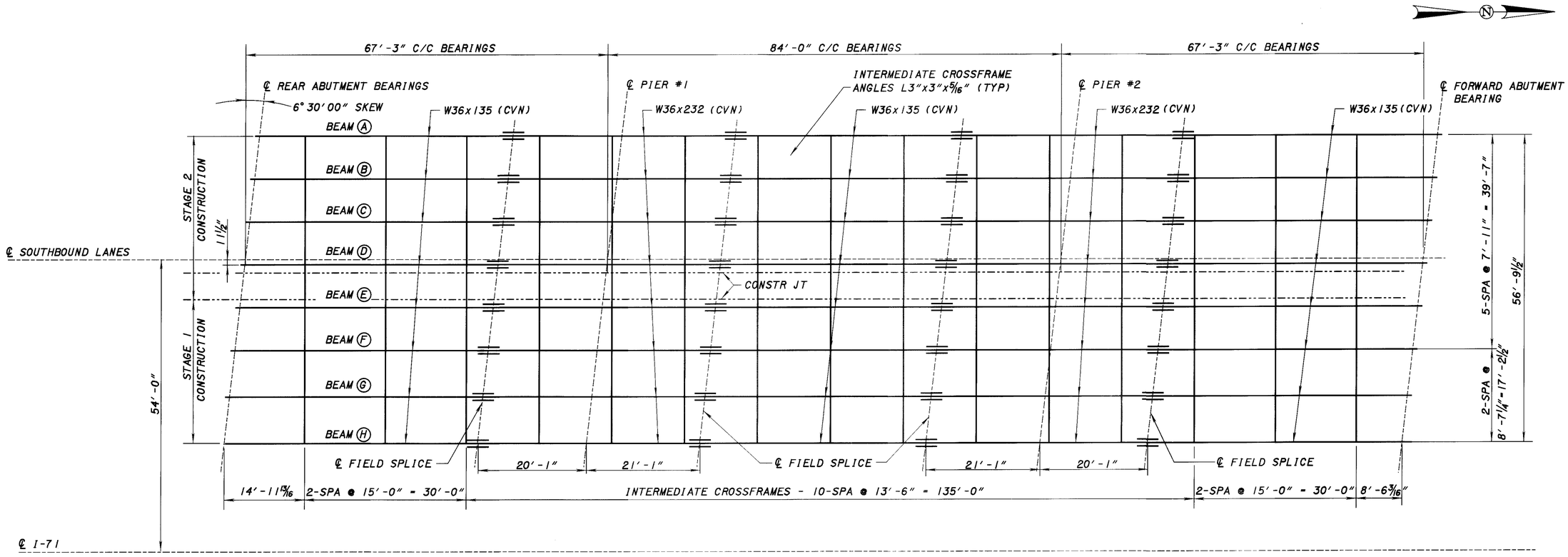
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED BRC | DRAWN BRC | CHECKED TAA | REVISED | REVIEWED DFT | DATE 10-4-99
STRUCTURE FILE NUMBER 52038|3L/52038|48R

SUPERSTRUCTURE DETAILS
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

16/23

813
940




## FRAMING PLAN

NORTHBOUND MIRROR IMAGE, OPPOSITE HAND

### SCREED ELEVATION - SOUTHBOUND BRIDGE

| LOCATION | RIGHT TOE OF PARAPET | | PROFILE GRADE | | RIGHT CONSTR JT | | CLOSURE POUR CJ | | SOUTHBOUND LANE ℄ | | LEFT TOE OF PARAPET | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 1051+43.64 | 1060.47 | 1051+46.37 | 1060.76 | 1051+46.90 | 1060.82 | 1051+47.46 | 1060.88 | 1051+47.74 | 1060.91 | 1051+50.48 | 1060.45 |
| 1/4 SPAN | 1051+60.45 | 1060.01 | 1051+63.18 | 1060.30 | 1051+63.71 | 1060.36 | 1051+64.27 | 1060.42 | 1051+64.55 | 1060.45 | 1051+67.29 | 1059.99 |
| MIDSPAN | 1051+77.27 | 1059.51 | 1051+80.00 | 1059.80 | 1051+80.53 | 1059.86 | 1051+81.09 | 1059.92 | 1051+81.37 | 1059.95 | 1051+84.11 | 1059.49 |
| FIELD SPLICE #1 | 1051+90.81 | 1059.08 | 1051+93.54 | 1059.37 | 1051+94.07 | 1059.43 | 1051+94.63 | 1059.49 | 1051+94.91 | 1059.52 | 1051+97.65 | 1059.07 |
| 3/4 SPAN | 1051+94.08 | 1058.98 | 1051+96.81 | 1059.27 | 1051+97.34 | 1059.33 | 1051+97.90 | 1059.39 | 1051+98.18 | 1059.42 | 1052+00.92 | 1058.96 |
| ℄ PIER # 1 | 1052+10.89 | 1058.45 | 1052+13.62 | 1058.74 | 1052+14.15 | 1058.80 | 1052+14.71 | 1058.86 | 1052+14.99 | 1058.89 | 1052+17.73 | 1058.43 |
| 1/4 SPAN | 1052+31.89 | 1057.84 | 1052+34.62 | 1058.14 | 1052+35.15 | 1058.19 | 1052+35.71 | 1058.25 | 1052+35.99 | 1058.29 | 1052+38.73 | 1057.83 |
| FIELD SPLICE #2 | 1052+31.97 | 1057.84 | 1052+34.70 | 1058.13 | 1052+35.23 | 1058.19 | 1052+35.79 | 1058.25 | 1052+36.07 | 1058.28 | 1052+38.81 | 1057.82 |
| MIDSPAN | 1052+52.89 | 1057.24 | 1052+55.62 | 1057.53 | 1052+56.15 | 1057.59 | 1052+56.71 | 1057.65 | 1052+56.99 | 1057.68 | 1052+59.73 | 1057.22 |
| FIELD SPLICE #3 | 1052+73.80 | 1056.59 | 1052+76.53 | 1056.88 | 1052+77.06 | 1056.94 | 1052+77.62 | 1057.00 | 1052+77.90 | 1057.02 | 1052+80.64 | 1056.57 |
| 3/4 SPAN | 1052+73.89 | 1056.58 | 1052+76.62 | 1056.88 | 1052+77.15 | 1056.93 | 1052+77.71 | 1056.99 | 1052+77.99 | 1057.03 | 1052+80.73 | 1056.57 |
| ℄ PIER # 2 | 1052+94.89 | 1055.93 | 1052+97.62 | 1056.22 | 1052+98.15 | 1056.28 | 1052+98.71 | 1056.34 | 1052+98.99 | 1056.37 | 1053+01.73 | 1055.91 |
| 1/4 SPAN | 1053+11.70 | 1055.45 | 1053+14.43 | 1055.74 | 1053+14.96 | 1055.80 | 1053+15.52 | 1055.86 | 1053+15.80 | 1055.89 | 1053+18.54 | 1055.43 |
| FIELD SPLICE #4 | 1053+14.97 | 1055.36 | 1053+17.70 | 1055.65 | 1053+18.23 | 1055.71 | 1053+18.79 | 1055.77 | 1053+19.07 | 1055.80 | 1053+21.81 | 1055.34 |
| MIDSPAN | 1053+28.52 | 1054.97 | 1053+31.25 | 1055.27 | 1053+31.78 | 1055.32 | 1053+32.34 | 1055.38 | 1053+32.62 | 1055.42 | 1053+35.36 | 1054.96 |
| 3/4 SPAN | 1053+45.33 | 1054.46 | 1053+48.06 | 1054.76 | 1053+48.59 | 1054.81 | 1053+49.15 | 1054.87 | 1053+49.43 | 1054.91 | 1053+52.17 | 1054.45 |
| ℄ FORWARD ABUTMENT | 1053+62.14 | 1053.91 | 1053+64.87 | 1054.20 | 1053+65.40 | 1054.26 | 1053+65.96 | 1054.32 | 1053+66.24 | 1054.35 | 1053+68.98 | 1053.89 |

SCREED SETTING ELEVATIONS GIVEN ARE TO THE TOP OF CONCRETE DECK AND ARE REQUIRED PRIOR TO PLACEMENT OF CONCRETE. THEY INCLUDE AN ALLOWANCE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE.

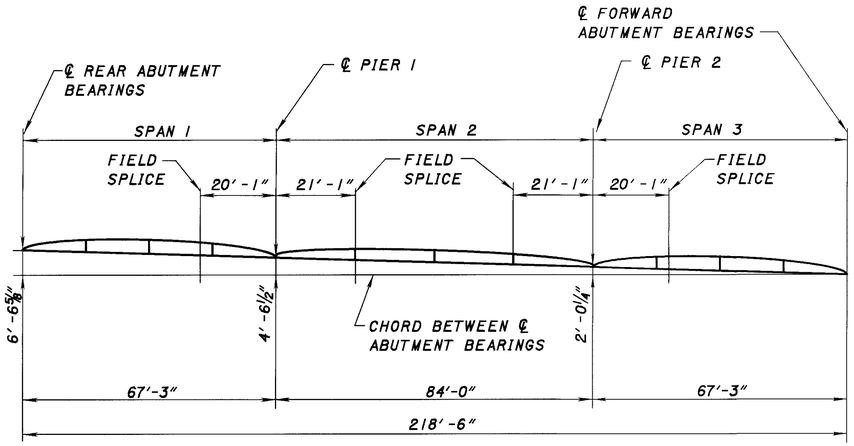
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: BRC | DRAWN: BRC | CHECKED: TAA | REVISED: DFT | DATE: 10-4-99 | REVISED | STRUCTURE FILE NUMBER: 5203813L/5203848R

SUPERSTRUCTURE DETAILS
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

17 / 23

814 / 940




## BLOCKING AND CAMBER DIAGRAM

STEEL IN UNLOADED POSITION

| DEFLECTION AND CAMBER, INCHES | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SPAN 1 | | | | SPAN 2 | | | | | SPAN 3 | | | |
| LOCATION OF POINT | ¼ | ½ | SPL | ¾ | ¼ | SPL | ½ | SPL | ¾ | ¼ | SPL | ½ | ¾ |
| BEAM DEFLECTION | ⅛ | ⅛ | ⅛ | 0 | ⅛ | ⅛ | ⅛ | ⅛ | ⅛ | 0 | ⅛ | ⅛ | ⅛ |
| REMAINING DL DEFLECTION | ⅝ | 11/16 | ½ | 5/16 | ⅜ | ⅜ | ⅝ | ⅜ | ⅜ | 5/16 | ½ | 11/16 | ⅝ |
| SHOP CAMBER | ¾ | ⅞ | ⅝ | ⅜ | ½ | ½ | ¾ | ½ | ½ | ⅜ | ⅝ | ⅞ | ¾ |

## NOTES

**STRUCTURAL STEEL:**
WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

ALL BOLTED FIELD SPLICES ARE OPTIONAL, THE CONTRACTOR MAY OMIT THE SPLICES AS DETAILED IN THE PLANS. WHERE SPLICES ARE OMITTED, THE LARGER OF THE ADJACENT BEAM TO THE SPLICE SHALL BE REQUIRED. IN ADDITION THE BEAM SIZES AS DETAILED MAY BE SUBSTITUTED FOR LARGER BEAM SIZES WITH THE SAME DEPTH. THE CONTRACTOR SHALL SUBMIT ALL OPTIONS TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO ORDERING ANY STRUCTURAL STEEL.

PENDING ANY CHANGES AS DESCRIBED ABOVE AND TYPE OF CROSSFRAME USED, THE SPACING OF THE INTERMEDIATE CROSSFRAMES SHALL BE ADJUSTED TO AVOID CONFLICT WITH THE SPLICES. THE NUMBER OF CROSSFRAMES SHALL REMAIN THE SAME, A MAXIMUM SPACING OF 18'-0" WILL BE ALLOWED AND SHALL REMAIN IN LINE ACROSS THE WIDTH OF THE STRUCTURE.

**BOLTED SPLICES:**

FOR FIELD SPLICE DETAILS SEE STD. DWG. BS-1-93 (50 KSI) EXCEPT AS MODIFIED HEREIN. THE INSIDE AND OUTSIDE FLANGE PLATES FOR THE BOLTED SPLICE SHALL BE 9/16" THICK (⅛" THICKER THAN GIVEN IN THE STANDARD).

¾" FILL PLATES ARE REQUIRED BETWEEN OUTSIDE FLANGE SPLICE PLATES AND W36x135 BEAM FLANGE. SIZE TO MATCH OUTSIDE FLANGE SPLICE PLATE WIDTH AND ½ FLANGE PLATE LENGTH.

⅛" FILL PLATES ARE REQUIRED BETWEEN THE WEB SPLICE PLATES AND W36x135 BEAM WEB. SIZE TO MATCH HEIGHT OF THE WEB SPLICE PLATE AND ½ THE WEB SPLICE PLATE WIDTH.

FOR SCREED TABLE SEE SHEETS 16/23 AND 17/23 .

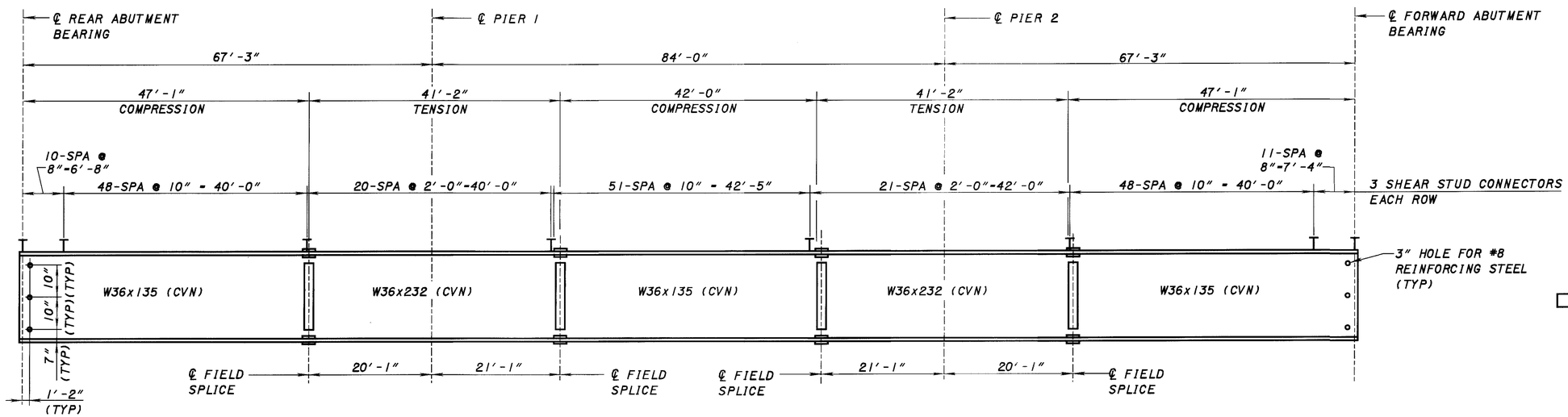
**WELDED ATTACHMENT:**
WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FACIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

3"ϕ HOLES DRILLED IN THE PROPOSED BEAM SHALL BE PAID UNDER ITEM 863 STRUCTURAL STEEL. THIS PAYMENT IS INCIDENTAL TO THE PAY ITEM.

LATERAL AND LONGITUDINAL SPACING OF WELDED STUD CONNECTORS MAY BE ALTERED AT FIELD SPLICE LOCATIONS TO AVOID INTERFERENCE WITH FLANGE SPLICE BOLTS PROVIDED THAT AT LEAST THE NUMBER OF STUDS SPECIFIED IN THE BEAM ELEVATION ARE PROVIDED.

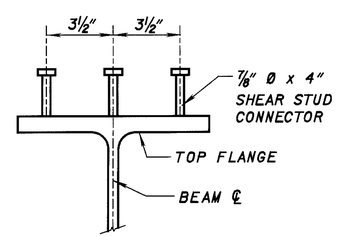
STRUCTURAL STEEL SHALL BE ASTM A588, WEATHERING STEEL.

ALL BEAM LENGTH DIMENSIONS ARE AT 60 °F.




## BEAM ELEVATION

EXAGGERATED VERTICAL SCALE




## TYPICAL SECTION SHEAR CONNECTOR DETAIL

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 10-4-99
STRUCTURE FILE NUMBER: 5203813L/5203848R
DRAWN: BRC
REVISED:
DESIGNED: BRC
CHECKED: TAA

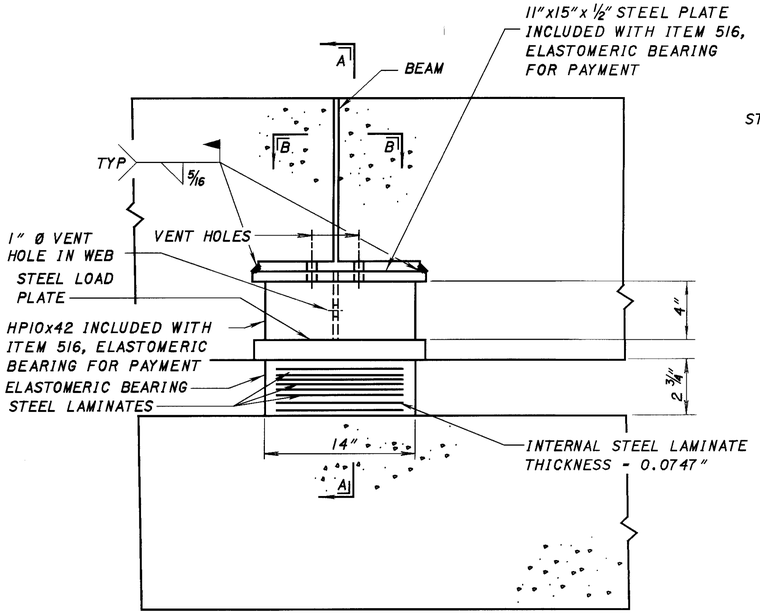
# SUPERSTRUCTURE DETAILS

MED-71-1992 L/R
I-71 OVER ROCKY RIVER

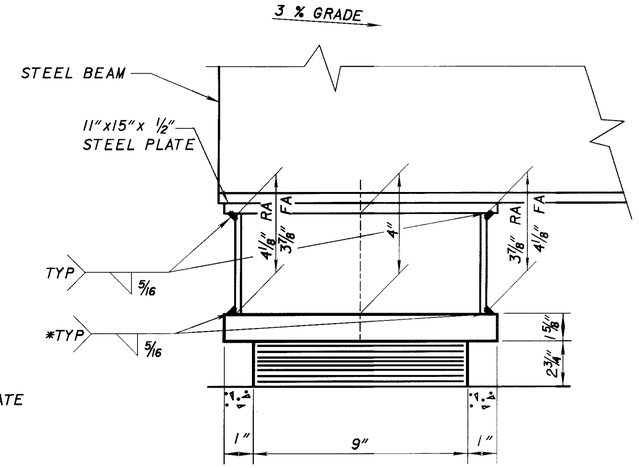
MED-71-15.78



815/940




**ABUTMENT BEARING ELEVATION**



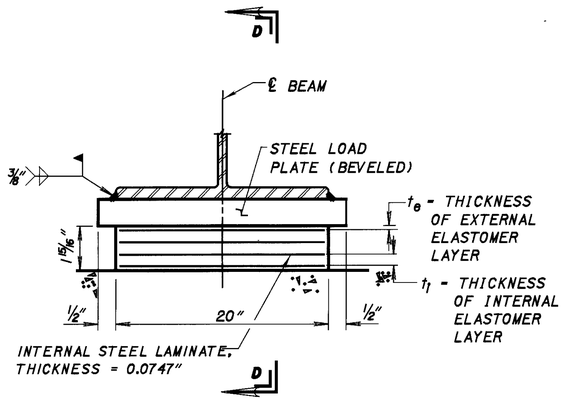

* FIELD WELD OPTIONAL

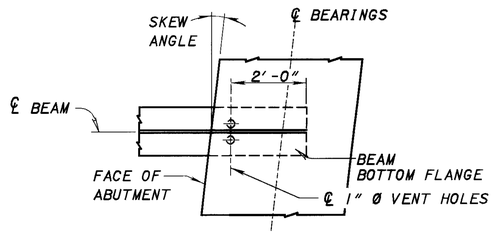
**SECTION A-A**
**LAMINATED ELASTOMERIC EXPANSION ABUTMENT BEARING**
REAR ABUTMENT SHOWN

| BEARING TABLE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEARING LOCATION | TYPE | L | W | $t_i$ | $t_e$ | $n_1$ | $n_2$ | STEEL LOAD PL | TOTAL HEIGHT* | DL, KIPS | LL, KIPS | TOTAL, KIPS |
| ABUTMENT | EXP | 9" | 14" | 1/4" | 3/16" | 7 | 8 | 11"x15"x1 5/8" | 4 3/8" | 70 | 51 | 121 |
| PIER 1 | EXP | 12" | 20" | 3/8" | 1/4" | 3 | 4 | 13"x21"x2 1/4" (BEVELED) ** | 4 3/16" | 156 | 66 | 222 |
| PIER 2 | EXP | 12" | 20" | 3/8" | 1/4" | 3 | 4 | 13"x21"x2 1/4" (BEVELED) ** | 4 3/16" | 156 | 66 | 222 |

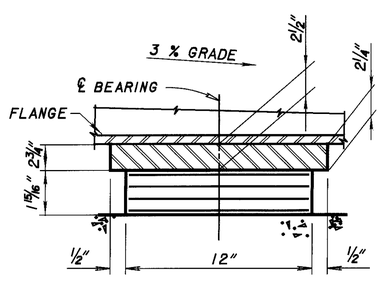
$n_1$ - NUMBER OF INTERNAL ELASTOMER LAYERS, $t_1$
$n_2$ - NUMBER OF STEEL LAMINATES, 0.0747" THICKNESS

ELASTOMER LAYERS ARE 50 DUROMETERS
* TOTAL HEIGHT INCLUDES LOAD PLATE
** LOAD PLATE MINIMUM THICKNESS BECAUSE IT IS BEVELED.

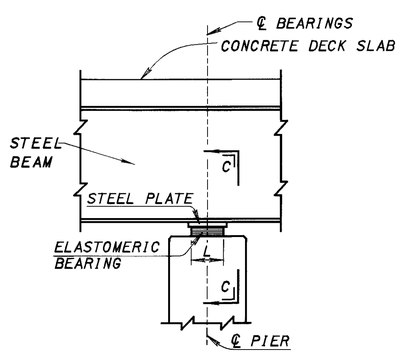


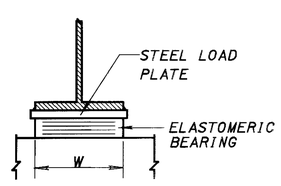

**SECTION B-B**




**SECTION D-D**
**LAMINATED ELASTOMERIC EXPANSION PIER BEARING**




**SECTION THRU PIER**




**SECTION C-C**

NOTES:

MATERIALS: THE HP SHAPE (SUPPORT MEMBER) SHALL BE GRADE 36 AND STEEL PLATES SHALL BE GRADE 50 STEEL, A 588.

WELDING: WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60°F ± 10°F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDERFORMED SHAPE AT 60°F ± 10°F.

ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL LOAD PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, HP10x42, STEEL PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC EXPANSION BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):

9" x 14" x 2 3/4" WITH 11" x 15" x 1 5/8" LOAD PLATE, AS PER PLAN.
12" x 20" x 1 5/16" WITH 13" x 21" x 2 1/4" LOAD PLATE.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DATE: 10-4-99
REVISED: DFT
STRUCTURE FILE NUMBER: 5203813L/5203848R
DRAWN: BRC
REVISED:
DESIGNED: BRC
CHECKED: TAA

BEARING DETAILS
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

| MARK | NUMBER REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENTS - MED-71-1992 L (SOUTHBOUND LANES) | | | | | | | | | | | | | | |
| A501 | 24 | 27 | 24 | 27 | 102 | 6'-5" | 683 | 2 | 2'-5" | 1'-10" | 2'-5" | | | |
| A502 | 48 | 54 | 48 | 54 | 204 | 7'-9" | 1649 | 2 | 2'-8" | 2'-8" | 2'-8" | | | |
| | 1 | | 1 | | | 27'-1" | | | | | | | | |
| A503 | SET OF | -- | SET OF | -- | 8 | TO | 223.4 | STR | | | | | | 2½" |
| | 4 | | 4 | | | 26'-5½" | | | | | | | | |
| A504 | 6 | 6 | 6 | 6 | 24 | 31'-11" | 799.0 | STR | | | | | | |
| A505 | 1 | -- | 1 | -- | 2 | 27'-1" | 56.5 | STR | | | | | | |
| A506 | 1 | -- | 1 | -- | 2 | 26'-5" | 55.2 | STR | | | | | | |
| A507 | 18 | -- | 18 | -- | 36 | 19'-4" | 726 | 3 | 2'-8" | 6'-8½" | | | | |
| A508 | -- | 12 | -- | 12 | 24 | 3'-0" | 75.1 | STR | | | | | | |
| A509 | 22 | 8 | 22 | 8 | 60 | 17'-7" | 1101 | 3 | 5'-11" | 2'-7" | | | | |
| A510 | 1 | 1 | 1 | 1 | 4 | 9'-4" | 38.9 | 19 | 7'-10" | 1'-6" | | | | |
| | | 1 | | 1 | | 8'-11" | | | | | | | | |
| A511 | -- | SET OF | -- | SET OF | 8 | TO | 71.8 | STR | | | | | | 2½" |
| | | 4 | | 4 | | 8'-3½" | | | | | | | | |
| A512 | -- | 1 | -- | 1 | 2 | 8'-3" | 17.3 | STR | | | | | | |
| A513 | -- | 1 | -- | 1 | 2 | 8'-11" | 18.6 | STR | | | | | | |
| A514 | 2 | 2 | 2 | 2 | 8 | 18'-11" | 158 | 2 | 8'-3" | 2'-8" | 8'-3" | | | |
| A515 | 6 | 6 | 6 | 6 | 24 | 21'-7" | 541 | 2 | 9'-7" | 2'-8" | 9'-7" | | | |
| A516 | 2 | 3 | 2 | 3 | 10 | 11'-9" | 123 | 2 | 4'-8" | 2'-8" | 4'-8" | | | |
| | 1 | 1 | 1 | 1 | | 10'-11" | | | 4'-3" | | 4'-3" | | | |
| A517 | SET OF | SET OF | SET OF | SET OF | 20 | TO | 172 | 2 | TO | 2'-8" | TO | | | 8½" |
| | 5 | 5 | 5 | 5 | | 5'-6" | | | 1'-5" | | 1'-5" | | | |
| A518 | 1 | 1 | 1 | 1 | 4 | 4'-7" | 19.1 | STR | | | | | | |
| A519 | 1 | 1 | 1 | 1 | 4 | 7'-9" | 33.0 | STR | | | | | | |
| A520 | 1 | 1 | 1 | 1 | 4 | 8'-10" | 36.9 | STR | | | | | | |
| A521 | 1 | 1 | 1 | 1 | 4 | 9'-8" | 40.3 | 19 | 7'-10" | 1'-10" | | | | |
| A522 | 1 | 1 | 1 | 1 | 4 | 4'-11" | 20.5 | STR | | | | | | |
| A523 | 1 | 1 | 1 | 1 | 4 | 8'-6" | 35.5 | STR | | | | | | |
| A524 | | | | | 2 | 9'-0" | 18.8 | STR | | | | | | |
| A525 | 8 | 8 | 8 | 8 | 32 | 11'-7" | 386.6 | STR | | | | | | |
| A526 | 1 | 1 | 1 | 1 | 4 | 4'-7" | 19 | 2 | 1'-1" | 2'-8" | 1'-1" | | | |
| A527 | 1 | 1 | 1 | 1 | 4 | 8'-1" | 34 | STR | | | | | | |
| A601 | 18 | 46 | 18 | 46 | 128 | 5'-7" | 1074 | STR | | | | | | |
| A602 | 9 | 23 | 9 | 23 | 64 | 9-'9" | 938 | 2 | 3'-8" | 2'-8" | 3'-8" | | | |
| | 3 | 3 | 3 | 3 | | 31'-6" | | | | | | | | |
| A801 | SETS OF | SETS OF | SETS OF | SETS OF | 48 | TO | 4017.0 | STR | | | | | | 1¼" |
| | 4 | 4 | 4 | 4 | | 31'-2¼" | | | | | | | | |
| | | 1 | | 1 | | 8'-11" | | | | | | | | |
| A802 | -- | SET OF | -- | SET OF | 8 | TO | 183.8 | STR | | | | | | 2½" |
| | | 4 | | 4 | | 8'-3½" | | | | | | | | |
| | 1 | | 1 | | | 27'-1" | | | | | | | | |
| A803 | SET OF | -- | SET OF | -- | 8 | TO | 571.8 | STR | | | | | | 2½" |
| | 4 | | 4 | | | 26'-5" | | | | | | | | |
| A804 | 3 | 3 | 3 | 3 | 12 | 31'-2" | 999.2 | STR | | | | | | |
| A805 | 3 | 3 | 3 | 3 | 12 | 31'-6" | 1009.2 | STR | | | | | | |
| D801 | 22 | 22 | 22 | 22 | 88 | 4'-11" | 1155.2 | 18 | 2'-7" | 1'-0" | 1'-0" | | | |

| MARK | NUMBER PIER 1 | PIER 2 | TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIERS - MED-71-1992 L (SOUTHBOUND LANES) | | | | | | | | | | | | |
| P401 | 175 | 189 | 364 | 4'-1" | 993 | 31 | 3'-0" | | | | | |
| P402 | 100 | 108 | 208 | 2'-6" | 347 | 16 | 2'-0" | | | | | |
| P403 | 6 | 6 | 12 | 9'-2" | 74 | 3 | 2'-2" | 2'-2" | | | | |
| P501 | 60 | 64 | 124 | 9'-7" | 1239 | 24 | 3'-0" | 2'-6" | 2'-6" | | 1'-5⅜" | |
| P502 | 58 | 62 | 120 | 9'-0" | 1126 | STR | | | | | | |
| P503 | | | 58 | 6'-9" | 409 | 2 | 2'-6" | 2'-0" | 2'-6" | | | |
| P504 | 13 | 13 | 26 | 10'-1" | 274 | 2 | 3'-8" | 3'-0" | 3'-8" | | | |
| P505 | 2 | 2 | 4 | 9'-7" | 40 | 2 | 3'-8" | 2'-6" | 3'-8" | | | |
| P901 | 2 | 2 | 4 | 9'-1" | 123.5 | STR | | | | | | |
| P902 | 2 | 2 | 4 | 11'-1" | 150.7 | STR | | | | | | |
| P903 | 2 | 2 | 4 | 11'-8" | 158.7 | STR | | | | | | |
| P1101 | | | 10 | 10'-10" | 575.6 | STR | | | | | | |
| P1102 | | | 10 | 31'-9" | 1686.9 | STR | | | | | | |
| P1103 | 36 | -- | 36 | 38'-10" | 7428 | STR | | | | | | |
| P1104 | -- | 36 | 36 | 42'-3" | 8081 | STR | | | | | | |
| P1105 | 28 | 28 | 56 | 23'-0" | 6843 | STR | | | | | | |
| PIERS - MED-71-1992 R (NORTHBOUND LANES) | | | | | | | | | | | | |
| P401 | 175 | 189 | 364 | 4'-1" | 993 | 31 | 3'-0" | | | | | |
| P402 | 100 | 108 | 208 | 2'-6" | 347 | 16 | 2'-0" | | | | | |
| P403 | 6 | 6 | 12 | 9'-2" | 74 | 3 | 2'-2" | 2'-2" | | | | |
| P501 | 60 | 64 | 124 | 9'-7" | 1239 | 24 | 3'-0" | 2'-6" | 2'-6" | | 1'-5⅜" | |
| P502 | 58 | 62 | 120 | 9'-0" | 1126 | STR | | | | | | |
| P503 | | | 58 | 6'-9" | 409 | 2 | 2'-6" | 2'-0" | 2'-6" | | | |
| P504 | 13 | 13 | 26 | 10'-1" | 274 | 2 | 3'-8" | 3'-0" | 3'-8" | | | |
| P505 | 2 | 2 | 4 | 9'-7" | 40 | 2 | 3'-8" | 2'-6" | 3'-8" | | | |
| P901 | 2 | 2 | 4 | 9'-1" | 123.5 | STR | | | | | | |
| P902 | 2 | 2 | 4 | 11'-1" | 150.7 | STR | | | | | | |
| P903 | 2 | 2 | 4 | 11'-8" | 158.7 | STR | | | | | | |
| P1101 | | | 10 | 10'-10" | 575.6 | STR | | | | | | |
| P1102 | | | 10 | 31'-9" | 1686.9 | STR | | | | | | |
| P1103 | 36 | -- | 36 | 38'-10" | 7428 | STR | | | | | | |
| P1104 | -- | 36 | 36 | 42'-3" | 8081 | STR | | | | | | |
| P1105 | 28 | 28 | 56 | 23'-0" | 6843 | STR | | | | | | |

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT
DATE 10-4-99
STRUCTURE FILE NUMBER 5203813L/5203848R

DRAWN BRC
REVISED

DESIGNED BRC
CHECKED JFF

# REINFORCING SCHEDULE

MED-71-1992 L/R
OVER ROCKY RIVER

MED-71-15.78

| MARK | NUMBER SUPER STAGE I | NUMBER SUPER STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | E | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PARAPETS - MED-71-1992 L (SOUTHBOUND LANES) | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 333.8 | STR | | | | | | | |
| X502 | 3 | 6 | 9 | 5'-6" | 52 | 25 | 1'-8" | 2'-5" | 1'-4" | 1½" | 5" | | |
| X503 | 13 | 10 | 23 | 5'-6" | 132 | STR | | | | | | | |
| X504 | 42 | 42 | 84 | 30'-0" | 2628.4 | STR | | | | | | | |
| X505 | 6 | 6 | 12 | 6'-0" | 75.1 | STR | | | | | | | |
| X601 | 7 | 7 | 14 | 30'-0" | 630.9 | STR | | | | | | | |
| X602 | 1 | 1 | 2 | 10'-6" | 31.5 | STR | | | | | | | |
| Y501 | 192 | 192 | 384 | 7'-5" | 3156.1 | 23 | 1'-1" | 3'-2" | 3'-0" | | | 2¾" | |
| Y601 | 192 | 192 | 384 | 3'-9" | 2163 | 33 | 1'-1" | 1'-8½" | 1'-1" | 0 | | | |
| | 4 | 4 | | 5'-2" | | | | 4'-1½" | | | | | |
| Y602 | SETS OF | SETS OF | 88 | TO | 617 | 1 | 1'-1" | TO | | | | | 1" |
| | 11 | 11 | | 4'-2" | | | | 3'-4½" | | | | | |
| Y603 | 16 | 16 | 32 | 4'-3" | 204 | 1 | 1'-1" | 3'-3½" | | | | | |
| Y604 | 192 | 192 | 384 | 2'-8" | 1634.4 | 1 | 1'-1" | 1'-8½" | | | | | |
| PARAPETS - MED-71-1992 R (NORTHBOUND LANES) | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 333.8 | STR | | | | | | | |
| X502 | 3 | 6 | 9 | 5'-6" | 52 | 25 | 1'-8" | 2'-5" | 1'-4" | 1½" | 5" | | |
| X503 | 13 | 10 | 23 | 5'-6" | 132 | STR | | | | | | | |
| X504 | 42 | 42 | 84 | 30'-0" | 2628.4 | STR | | | | | | | |
| X505 | 6 | 6 | 12 | 6'-0" | 75.1 | STR | | | | | | | |
| X601 | 7 | 7 | 14 | 30'-0" | 630.9 | STR | | | | | | | |
| X602 | 1 | 1 | 2 | 10'-6" | 31.5 | STR | | | | | | | |
| Y501 | 192 | 192 | 384 | 7'-5" | 3156.1 | 23 | 1'-1" | 3'-2" | 3'-0" | | | 2¾" | |
| Y601 | 192 | 192 | 384 | 3'-9" | 2163 | 33 | 1'-1" | 1'-8½" | 1'-1" | 0 | | | |
| | 4 | 4 | | 5'-2" | | | | 4'-1½" | | | | | |
| Y602 | SETS OF | SETS OF | 88 | TO | 617 | 1 | 1'-1" | TO | | | | | 1" |
| | 11 | 11 | | 4'-2" | | | | 3'-4½" | | | | | |
| Y603 | 16 | 16 | 32 | 4'-3" | 204 | 1 | 1'-1" | 3'-3½" | | | | | |
| Y604 | 192 | 192 | 384 | 2'-8" | 1634.4 | 1 | 1'-1" | 1'-8½" | | | | | |

| MARK | NUMBER SUPER STAGE I | NUMBER SUPER STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SUPERSTRUCTURE - MED-71-1992 L (SOUTHBOUND LANES) | | | | | | | | | | | | |
| S401 | 224 | 238 | 462 | 30'-0" | 9258.5 | STR | | | | | | |
| S402 | 32 | 34 | 66 | 24'-0" | 1058.1 | STR | | | | | | |
| S501 | 862 | 862 | 1724 | 32'-10" | 59038.7 | STR | | | | | | |
| S502 | 245 | 273 | 518 | 30'-0" | 16208.2 | STR | | | | | | |
| S503 | 35 | 39 | 74 | 27'-6" | 2122.5 | STR | | | | | | |
| S601 | 64 | 66 | 130 | 36'-8" | 7159.4 | STR | | | | | | |
| SUPERSTRUCTURE - MED-71-1992 R (NORTHBOUND LANES) | | | | | | | | | | | | |
| S401 | 224 | 238 | 462 | 30'-0" | 9258.5 | STR | | | | | | |
| S402 | 32 | 34 | 66 | 24'-0" | 1058.1 | STR | | | | | | |
| S501 | 862 | 862 | 1724 | 32'-10" | 59038.7 | STR | | | | | | |
| S502 | 245 | 273 | 518 | 30'-0" | 16208.2 | STR | | | | | | |
| S503 | 35 | 39 | 74 | 27'-6" | 2122.5 | STR | | | | | | |
| S601 | 64 | 66 | 130 | 36'-8" | 7159.4 | STR | | | | | | |

NOTES:

1. THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 10-4-99
STRUCTURE FILE NUMBER: 5203813L/5203848R
DRAWN: BRC
REVIEWED:
DESIGNED: BRC
CHECKED: JFF

# REINFORCING SCHEDULE

MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78



818/940

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | D | R | INC |
| ABUTMENTS - MED-71-1992 R (NORTHBOUND LANES) | | | | | | | | | | | | | | |
| A501 | 24 | 27 | 24 | 27 | 102 | 6'-5" | 683 | 2 | 2'-5" | 1'-10" | 2'-5" | | | |
| A502 | 48 | 54 | 48 | 54 | 204 | 7'-9" | 1649 | 2 | 2'-8" | 2'-8" | 2'-8" | | | |
| | 1 | | 1 | | | 27'-1" | | | | | | | | |
| A503 | SET OF | -- | SET OF | -- | 8 | TO | 223.4 | STR | | | | | | 2½" |
| | 4 | | 4 | | | 26'-5½" | | | | | | | | |
| A504 | 6 | 6 | 6 | 6 | 24 | 31'-11" | 799.0 | STR | | | | | | |
| A505 | 1 | -- | 1 | -- | 2 | 27'-1" | 56.5 | STR | | | | | | |
| A506 | 1 | -- | 1 | -- | 2 | 26'-5" | 55.2 | STR | | | | | | |
| A507 | 18 | -- | 18 | -- | 36 | 19'-4" | 726 | 3 | 2'-8" | 6'-8½" | | | | |
| A508 | -- | 12 | -- | 12 | 24 | 3'-0" | 75.1 | STR | | | | | | |
| A509 | 22 | 8 | 22 | 8 | 60 | 17'-7" | 1101 | 3 | 5'-11" | 2'-7" | | | | |
| A510 | 1 | 1 | 1 | 1 | 4 | 9'-4" | 38.9 | 19 | 7'-10" | 1'-6" | | | | |
| | | 1 | | 1 | | 8'-11" | | | | | | | | |
| A511 | -- | SET OF | -- | SET OF | 8 | TO | 71.8 | STR | | | | | | 2½" |
| | | 4 | | 4 | | 8'-3½" | | | | | | | | |
| A512 | -- | 1 | -- | 1 | 2 | 8'-3" | 17.3 | STR | | | | | | |
| A513 | -- | 1 | -- | 1 | 2 | 8'-11" | 18.6 | STR | | | | | | |
| A514 | 2 | 2 | 2 | 2 | 8 | 18'-11" | 158 | 2 | 8'-3" | 2'-8" | 8'-3" | | | |
| A515 | 6 | 6 | 6 | 6 | 24 | 21'-7" | 541 | 2 | 9'-7" | 2'-8" | 9'-7" | | | |
| A516 | 2 | 3 | 2 | 3 | 10 | 11'-9" | 123 | 2 | 4'-8" | 2'-8" | 4'-8" | | | |
| | 1 | 1 | 1 | 1 | | 10'-11" | | | 4'-3" | | 4'-3" | | | |
| A517 | SET OF | SET OF | SET OF | SET OF | 20 | TO | 172 | 2 | TO | 2'-8" | TO | | | 8½" |
| | 5 | 5 | 5 | 5 | | 5'-6" | | | 1'-5" | | 1'-5" | | | |
| A518 | 1 | 1 | 1 | 1 | 4 | 4'-7" | 19.1 | STR | | | | | | |
| A519 | 1 | 1 | 1 | 1 | 4 | 7'-9" | 33.0 | STR | | | | | | |
| A520 | 1 | 1 | 1 | 1 | 4 | 8'-10" | 36.9 | STR | | | | | | |
| A521 | 1 | 1 | 1 | 1 | 4 | 9'-8" | 40.3 | 19 | 7'-10" | 1'-10" | | | | |
| A522 | 1 | 1 | 1 | 1 | 4 | 4'-11" | 20.5 | STR | | | | | | |
| A523 | 1 | 1 | 1 | 1 | 4 | 8'-6" | 35.5 | STR | | | | | | |
| A524 | | | | | 2 | 9'-0" | 18.8 | STR | | | | | | |
| A525 | 8 | 8 | 8 | 8 | 32 | 11'-7" | 386.6 | STR | | | | | | |
| A526 | 1 | 1 | 1 | 1 | 4 | 4'-7" | 19 | 2 | 1'-1" | 2'-8" | 1'-1" | | | |
| A527 | 1 | 1 | 1 | 1 | 4 | 8'-1" | 34 | STR | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| A601 | 18 | 46 | 18 | 46 | 128 | 5'-7" | 1074 | STR | | | | | | |
| A602 | 9 | 23 | 9 | 23 | 64 | 9-'9" | 938 | 2 | 3'-8" | 2'-8" | 3'-8" | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | 3 | 3 | 3 | 3 | | 31'-6" | | | | | | | | |
| A801 | SETS OF | SETS OF | SETS OF | SETS OF | 48 | TO | 4017.0 | STR | | | | | | 1¼" |
| | 4 | 4 | 4 | 4 | | 31'-2¼" | | | | | | | | |
| | | 1 | | 1 | | 8'-11" | | | | | | | | |
| A802 | -- | SET OF | -- | SET OF | 8 | TO | 183.8 | STR | | | | | | 2½" |
| | | 4 | | 4 | | 8'-3½" | | | | | | | | |
| | 1 | | 1 | | | 27'-1" | | | | | | | | |
| A803 | SET OF | -- | SET OF | -- | 8 | TO | 571.8 | STR | | | | | | 2½" |
| | 4 | | 4 | | | 26'-5" | | | | | | | | |
| | | | | | | | | | | | | | | |
| A804 | 3 | 3 | 3 | 3 | 12 | 31'-2" | 999.2 | STR | | | | | | |
| A805 | 3 | 3 | 3 | 3 | 12 | 31'-6" | 1009.2 | STR | | | | | | |
| D801 | 22 | 22 | 22 | 22 | 88 | 4'-11" | 1155.2 | 18 | 2'-7" | 1'-0" | 1'-0" | | | |

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

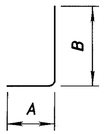
REVIEWED DFT DATE 10-4-99
STRUCTURE FILE NUMBER 5203813L/5203848R

DRAWN BRC REVIEWED
DESIGNED BRC CHECKED JFF

# REINFORCING SCHEDULE

MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

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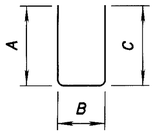


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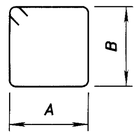


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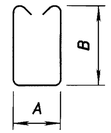


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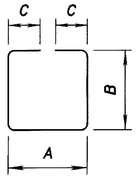


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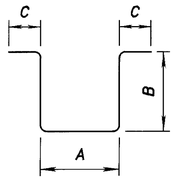
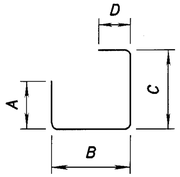



TYPE-6

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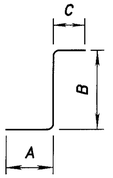


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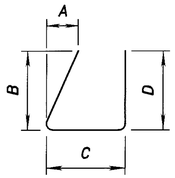


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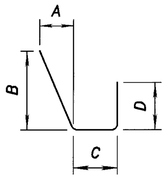


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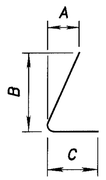


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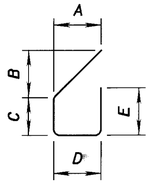
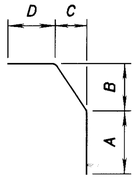



TYPE-12

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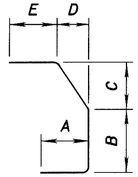


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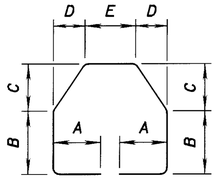
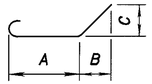



TYPE-15

TYPE-16

TYPE-17

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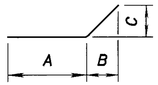


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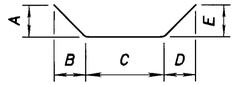


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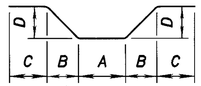


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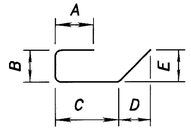


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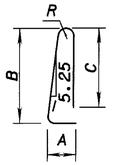


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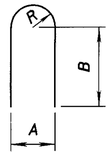


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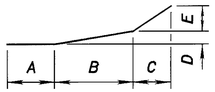


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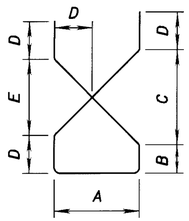


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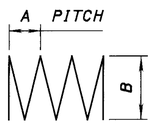


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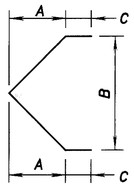


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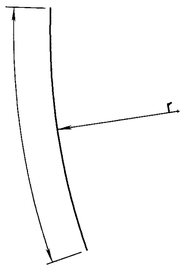


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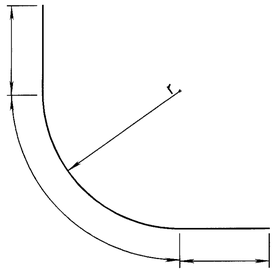


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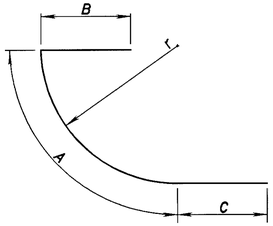


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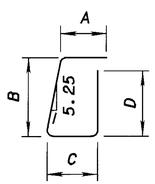



TYPE-33

## NOTES

NOTE: ALL REINFORCING STEEL SHALL BE EPOXY COATED.

THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INIDCATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. "R" INDICATES INSIDE RADIUS.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT DATE 10-4-99
STRUCTURE FILE NUMBER 5203813L/5203848R

DRAWN TDB REVIEWED

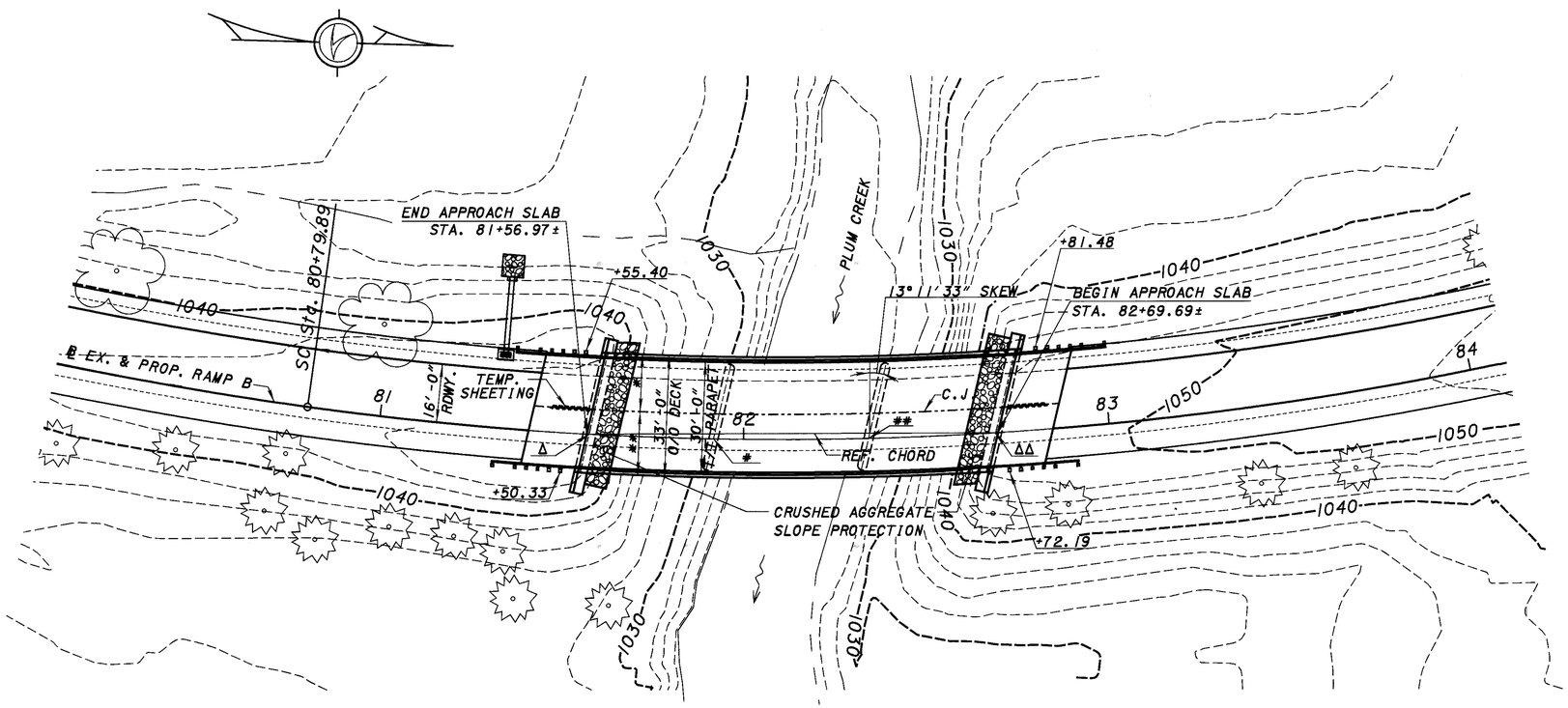
DESIGNED TDB CHECKED JFF

GENERAL PLAN
MED-71-1992 L/R
I-71 OVER ROCKY RIVER

MED-71-15.78

23/23

820
940

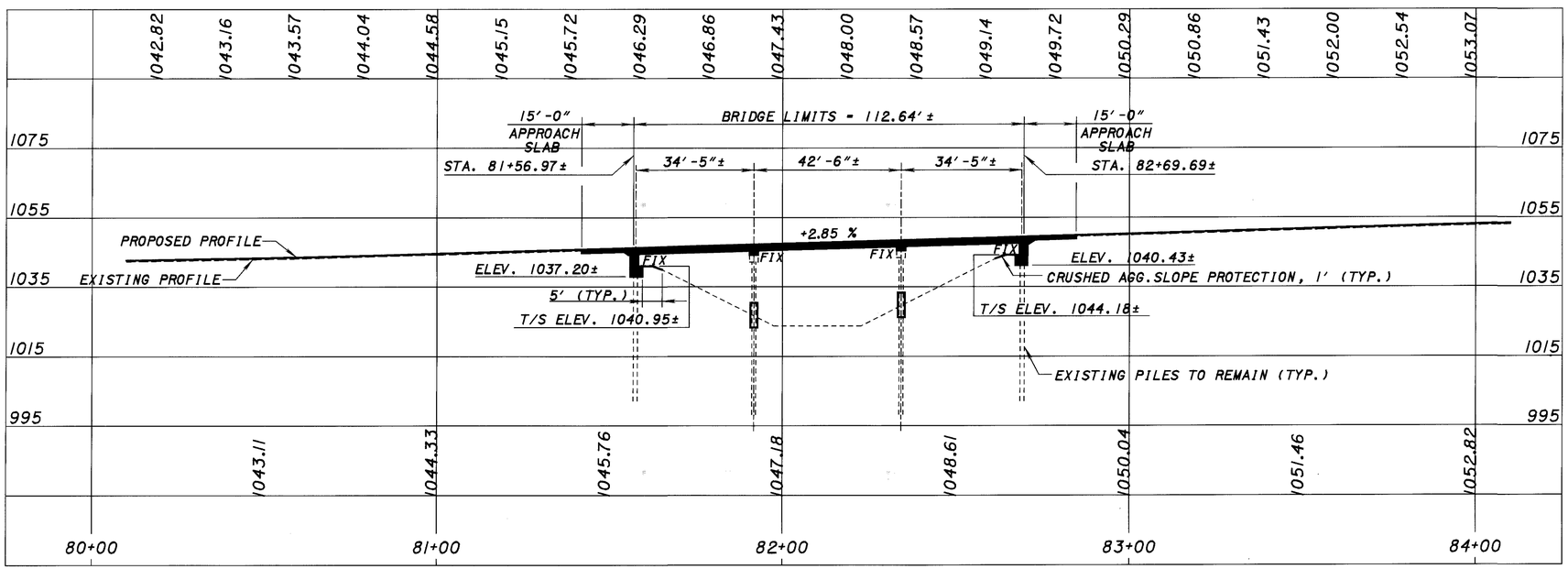



LEGEND

* 15'-8"; STAGE I CONSTRUCTION
** 17'-4"; STAGE II CONSTRUCTION
Δ ℄ BRG. REAR ABUTMENT; STA.81+57.61
ΔΔ ℄ BRG. FWD. ABUTMENT; STA.82+69.03
\# ℄ BRG. PIER 1; STA.81+91.73
\#\# ℄ BRG. PIER 2; STA.82+34.25

CURVE DATA

P.I. Sta - 82+14.54
Δ - 27° 59' 10" (LT)
Dc - 6° 00' 00"
R - 954.93'
Δc - 21° 59' 10" (LT)
Lc - 366.44'
Es - 30.11'




## BENCHMARK DATA

BM#1 - STATION 1110+35.99 IR-71 ELEVATION - 1069.77
ODOT DISC IN HEADWALL, STAMPED

TRAFFIC DATA

CURRENT YEAR ADT (2000) - 890
DESIGN YEAR ADT (2020) - 1290
DESIGN YEAR ADTT (2020) - 90

NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS-SECTIONS.
2. REFERENCE CHORD IS MEASURED FROM THE INTERSECTION OF THE BASELINE OF THE RAMP AND THE FACE OF THE ABUTMENTS. SPAN LENGTHS ARE MEASURED ALONG REFERENCE CHORD.

## EXISTING STRUCTURE

TYPE: CONTINUOUS SLAB BRIDGE WITH CAPPED PILE PIERS AND ABUTMENTS

SPANS: 34'-0"; 42'-6"; 34'-0"

ROADWAY: 28'-0" FACE TO FACE OF PARAPETS

LOADING: CF-400(57)

SKEW: 12°-59'-36" (L.F.) TO LOCAL TANGENT

WEARING SURFACE: ASPHALT CONCRETE

APPROACH SLABS: 25'-0"± LONG (AS-1-54)

ALIGNMENT: 6°-00' CURVE LEFT

SUPERELEVATION : ¾" PER FOOT

DATE BUILT: 1964

SFN: 5203902

## PROPOSED STRUCTURE

PROPOSED WORK: NEW SUPERSTRUCTURE ON NEW ABUTMENTS AND EXISTING PIERS

TYPE: CONTINUOUS SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURES

SPANS: 34'-5", 42'-6"±, 34'-5" C/C BRGS. (ALONG REFERENCE CHORD)

ROADWAY: 30'-0" T/T PARAPET

LOADING: HS20-44 AND ALTERNATE MILITARY LOADING

SKEW: 13°-11'-33"± L.F. TO LOCAL TANGENT

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81, 15' LONG; 30'-0" T/T CURB

ALIGNMENT: 6°-00'± CURVE LEFT

SUPERELEVATION: ¾" PER FOOT

LONGITUDE: 81°47'25" LATITUDE 41°11'45"

DESIGN AGENCY: ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT DATE 9-7-99
STRUCTURE FILE NUMBER 5203902

DRAWN TKB REVISED
DESIGNED TKB CHECKED RJH

MEDINA COUNTY
STA. 81+56.97
STA. 82+69.69

SITE PLAN
MED-71-2088 E
RAMP "B" OVER PLUM CREEK

MED-71-15.78

1 / 16

821 / 940

| ESTIMATED QUANTITIES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ITEM | EXTENSION | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS | SUPER. | GEN. |
| 202 | 11203 | LUMP | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | LUMP | | LUMP | |
| 503 | 11100 | LUMP | | COFFERDAMS, CRIBS AND SHEETING | | | | LUMP |
| 503 | 21301 | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LUMP | | | |
| SPECIAL | 50771200 | 252 | LIN FT | PILE ENCASEMENT | | 252 | | |
| 512 | 44400 | 4 | SY | TYPE B WATERPROOFING | 4 | | | |
| SPECIAL | 51267510 | 390 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 50 | 60* | 280 | |
| 516 | 13600 | 11 | SF | 1" PREFORMED EXPANSION JOINT FILLER | 11 | | | |
| 516 | 13900 | 8 | SF | 2" PREFORMED EXPANSION JOINT FILLER | 8 | | | |
| 518 | 21231 | LUMP | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | | | |
| 518 | 40000 | 93 | LF | 6" PERFORATED CORRUGATED PLASTIC PIPE | 93 | | | |
| 518 | 40010 | 54 | LF | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 54 | | | |
| 601 | 20500 | 17 | CY | CRUSHED AGGREGATE SLOPE PROTECTION | 17 | | | |
| 842 | 42501 | 6 | CY | CLASS C CONCRETE, PIER CAP, AS PER PLAN | | 6 | | |
| 842 | 43501 | 66 | CY | CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING, AS PER PLAN | 66 | | | |
| 844 | 48001 | 241 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK), AS PER PLAN, MIX 4 | | | 241 | |
| 844 | 48021 | 35 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET), AS PER PLAN, MIX 4 | | | 35 | |
| 844 | 49000 | LUMP | | HIGH PERFORMANCE CONCRETE TRIAL MIX | | | LUMP | |

* EXPOSED SURFACES OF PIER CAP, NEW AND EXISTING, TO BE SEALED.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED TKB | DRAWN TKB | REVIEWED DFT | DATE 9-7-99
CHECKED RJH | REVISED | STRUCTURE FILE NUMBER 5203902

ESTIMATED QUANTITIES
MED-71-2088 E
RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78



822/940

**STANDARD DRAWINGS AND SPECIFICATIONS:**

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

| | |
|---|---|
| AS-1-81 | REVISED 09-15-94 |
| SBR-1-99 | DATED 01-12-99 |
| PCB-1-91 | REVISED 07-6-99 |
| CS-1-93 | DATED 06-30-95 |

AND TO SUPPLEMENTAL SPECIFICATIONS:

| | |
|---|---|
| 842 | DATED 01-06-99 |
| 844 | DATED 01-06-99 |
| 899 | DATED 10-21-98 |
| 911 | DATED 07-10-97 |
| 954 | DATED 09-09-97 |

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997 AND 1998 INTERIM SPECIFICATIONS AND THE ODOT DESIGN MANUAL.

**DESIGN LOADING:**

HS20-44 AND THE ALTERNATE MILITARY LOADING.

**DESIGN DATA:**

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
ITEM 842 CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60 Ksi.

**DECK PROTECTION METHOD** - EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER AND HIGH PERFORMANCE CONCRETE.

**MONOLITHIC WEARING SURFACE** IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 & 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

**EXISTING BRIDGE PLANS** MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT THREE OFFICE IN ASHLAND, OHIO.

**TRAFFIC MAINTENANCE:**

SEE ROADWAY PLANS FOR ADDITIONAL TRAFFIC NOTES AND DETAILS.

**ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):**

EPOXY-URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722 AS PER THE DETAILS IN THE PLAN. FOR ADDITIONAL NOTES, SEE NOTE IN THE PROPOSAL "ITEM SPECIAL - SEALING OF CONCRETE SURFACES".

**ITEM 202 PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN:**

PORTION OF THE STRUCTURE REMOVED, AS PER PLAN, SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED.

PROTECTION OF TRAFFIC:

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE ENGINEER FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

SUBSTRUCTURE CONCRETE REMOVAL:

SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 90 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

PAYMENT
ALL WORK SHALL BE PAID FOR UNDER ITEM 202 PORTIONS OF STRUCTURES REMOVED, AS PER PLAN

**ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:**

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 6" LIFTS. EXCAVATION AT ABUTMENTS IN ADDITION TO THAT NECESSARY TO REMOVE PORTION OF THE EXISTING STRUCTURE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION FOR PAYMENT.

**ITEM 842 CLASS C CONCRETE, (FOOTINGS, PIERS AND ABUTMENTS) AS PER PLAN**

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITEM 844 HIGH PERFORMANCE CONCRETE, AS PER PLAN**

THE DESIGN MIX SHALL BE MIX NO. 4 LIMESTONE. THE OPTION OF SLIPFORM CONSTRUCTION OF THE BRIDGE PARAPET IS NOT PERMITTED. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**REINFORCING STEEL:**

NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED UNDER ITEM 844 HIGH PERFORMANCE CONCRETE.

**ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN:**

POROUS BACKFILL SHALL BE #57 GRAVEL ONLY.

**SURVEY DISC ON STRUCTURE:**

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

**ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION**

THE QUANTITIES INCLUDES 10 % OF THE EXISTING AGGREGATE SLOPE PROTECTION SURFACE AREA IN ADDITION TO WHAT IS DETAILED ON THE PLANS.

**REPLACEMENT OF EXISTING REINFORCING STEEL**

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THE CONTRACTOR'S COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 200 POUNDS SHALL BE INCLUDED IN THE COST OF THE APPROPRIATE PIER CONCRETE BID ITEM.

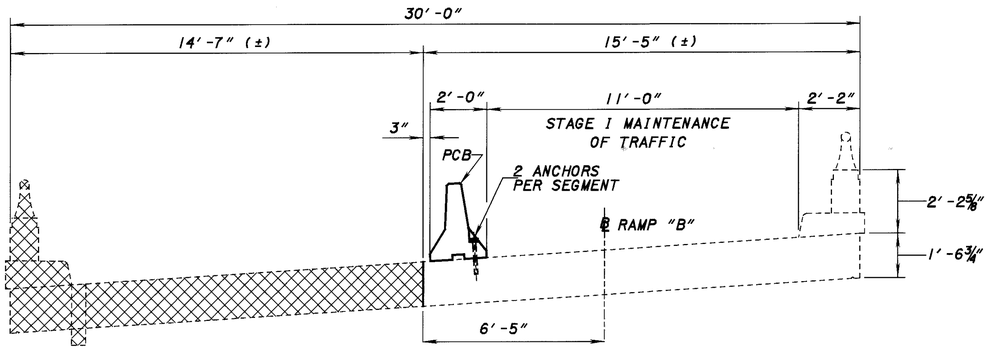
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TKB | DRAWN: TKB | CHECKED: RJH | REVISED:
REVISED: DFT | DATE: 9-7-99
STRUCTURE FILE NUMBER: 5203902

GENERAL NOTES
MED-71-2088 E
RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

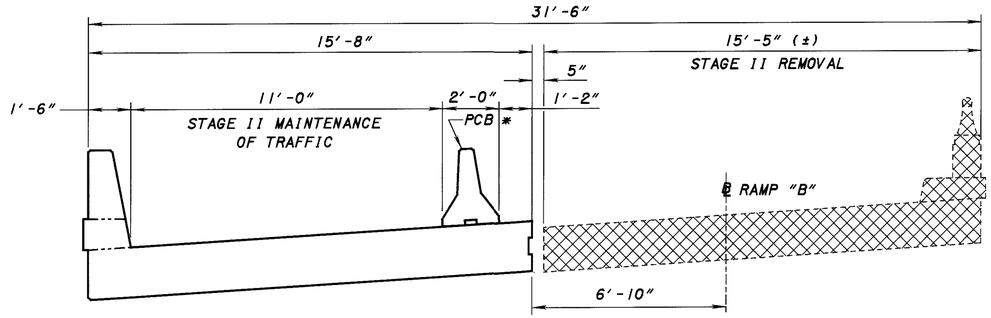
MED-71-15.78



823
940

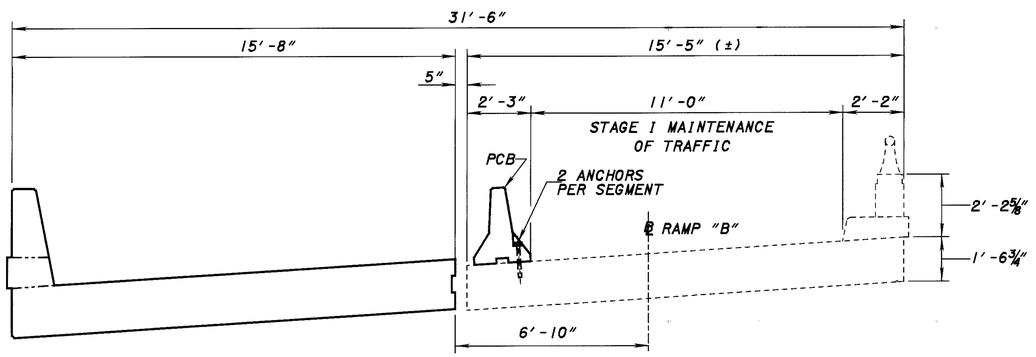



STAGE I REMOVAL

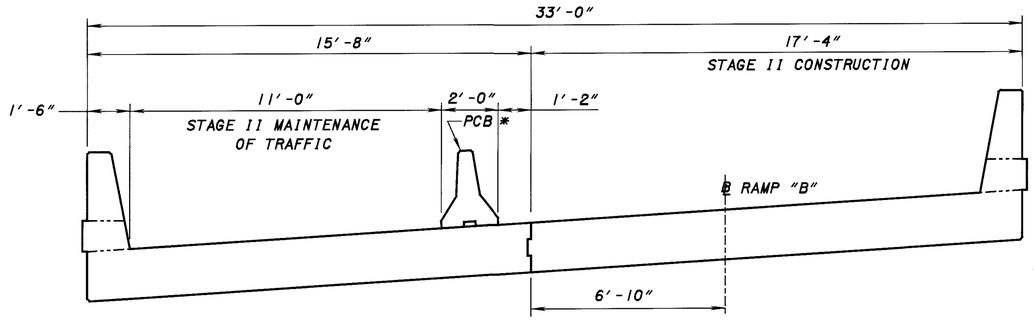



STAGE II REMOVAL

* BARRIER UNANCHORED




STAGE I CONSTRUCTION




STAGE II CONSTRUCTION

* BARRIER UNANCHORED

▨ - REMOVAL

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

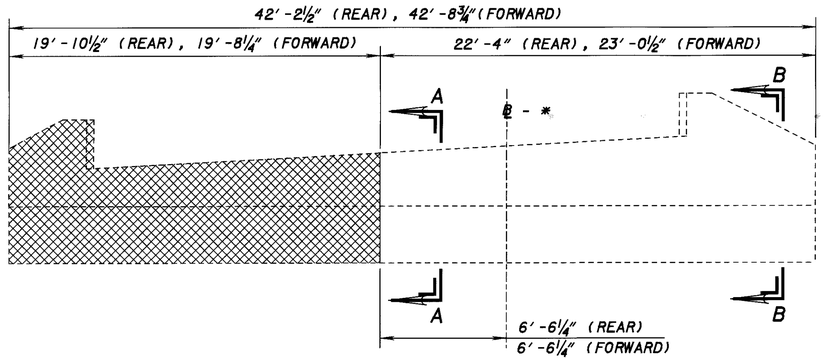
| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| TKB | TKB | DFT | 9-7-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| RJH | | 5203902 | |

DECK STAGE CONSTRUCTION DETAILS

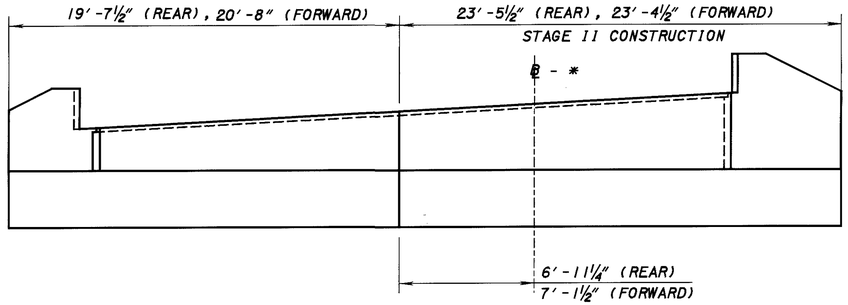
MED-71-2088 E

RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

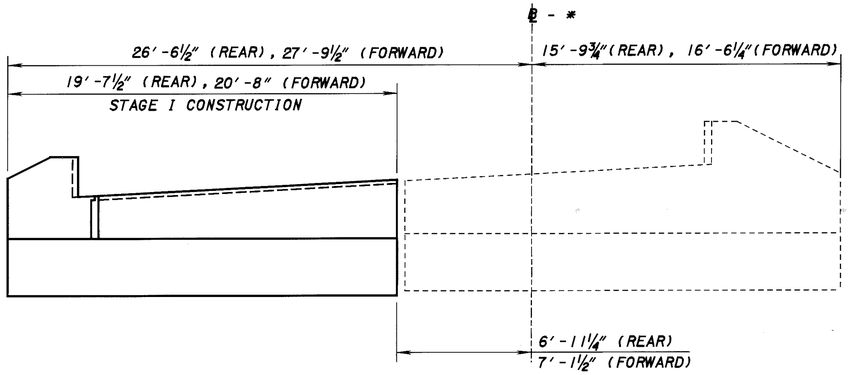
MED-71-15.78




STAGE I REMOVAL

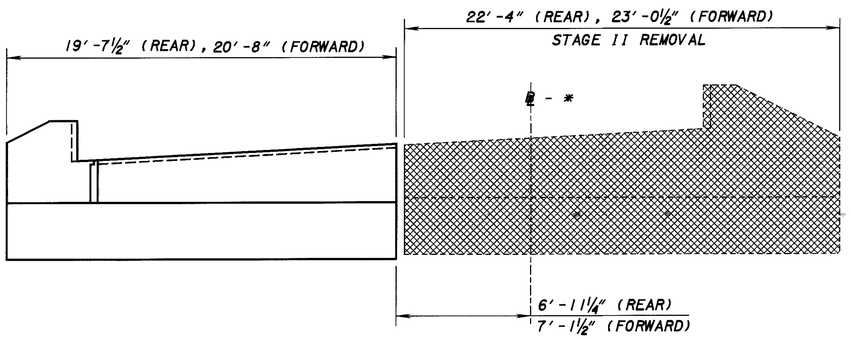



STAGE II CONSTRUCTION



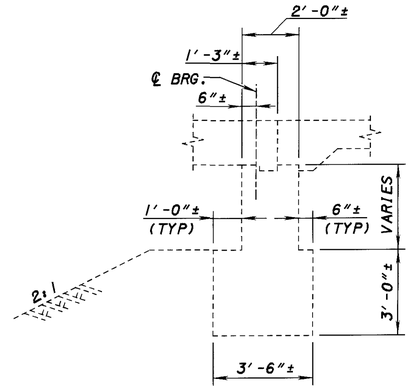

STAGE I CONSTRUCTION

( FORWARD ABUTMENT SHOWN, REAR OPPOSITE HAND )

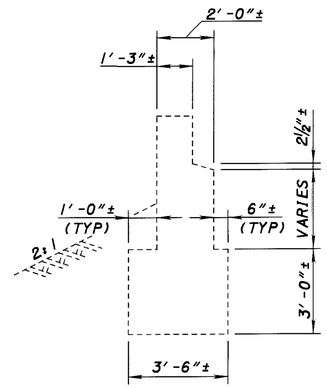



STAGE II REMOVAL

℄ - *




SECTION A-A




SECTION B-B

*: CONSRUCTION, RAMP B & PROP. STRUCTURE ℄ INTERSECTION REF. CHORD & FACE OF ABUTMENT

- REMOVAL

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| TKB | TKB | DFT | 9-7-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| RJH | | 5203902 | |

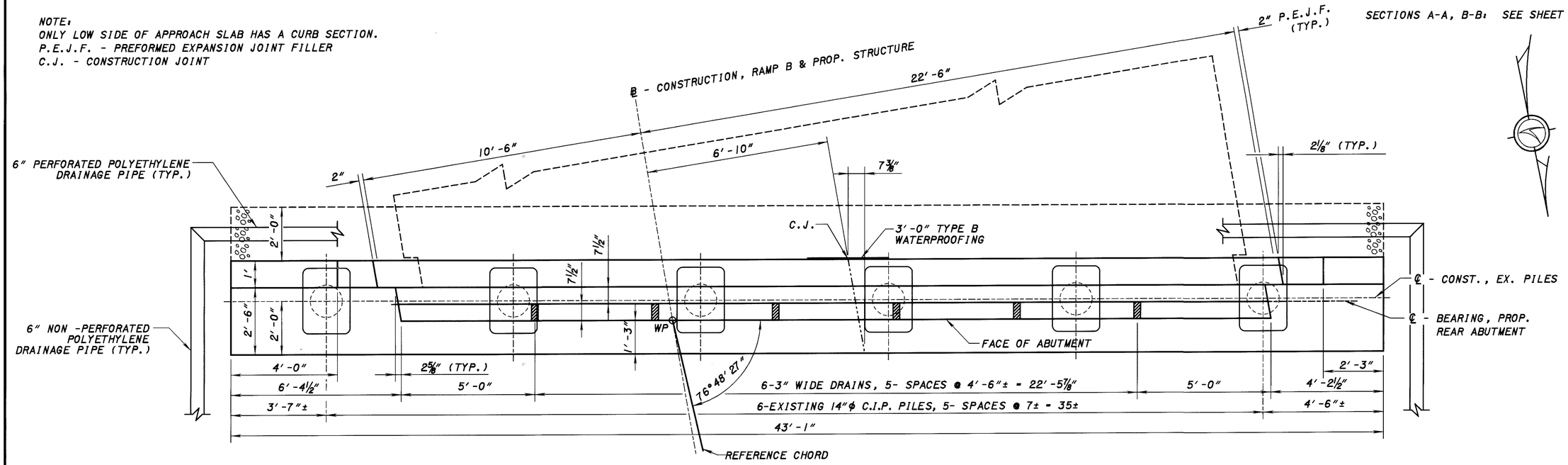
ABUTMENT STAGE CONSTRUCTION DETAILS
MED-71-2088 E
RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

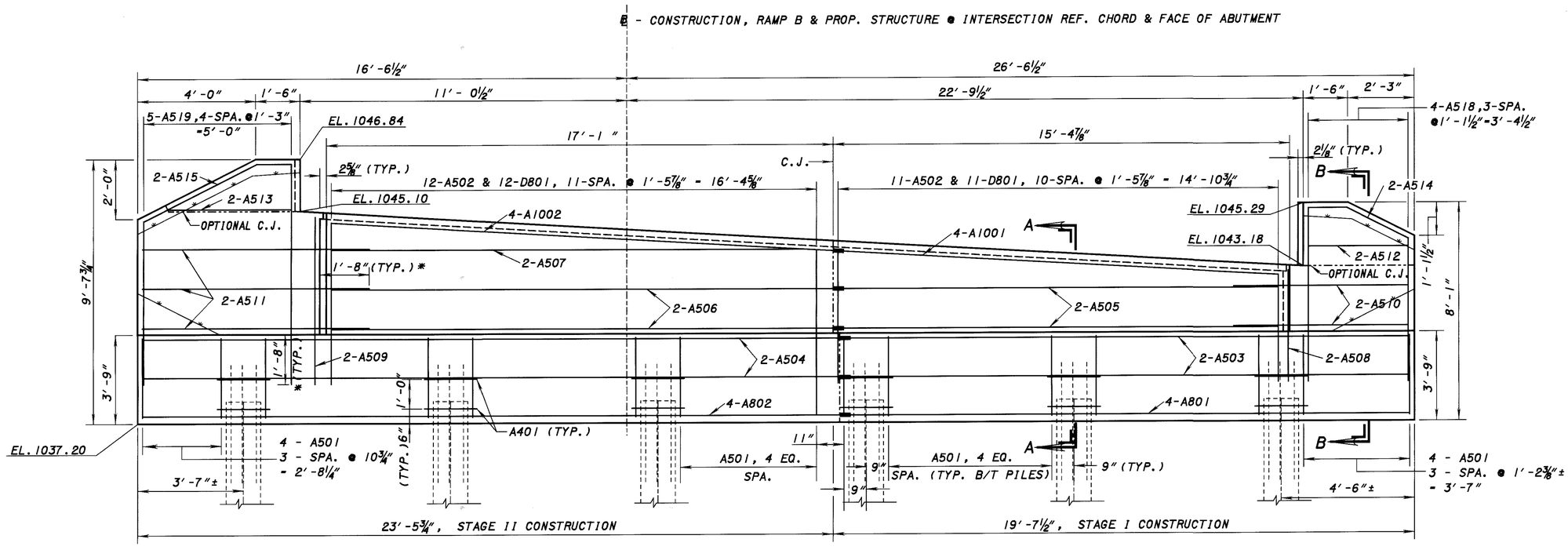
5 / 16

825
940

NOTE:
ONLY LOW SIDE OF APPROACH SLAB HAS A CURB SECTION.
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
C.J. - CONSTRUCTION JOINT




PLAN




* MIN. DIMENSION

REAR ABUTMENT ELEVATION

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED: DFT | DATE: 9-7-99 | STRUCTURE FILE NUMBER: 5203902
DRAWN: TKB | REVISED:
DESIGNED: TKB | CHECKED: RJH

REAR ABUTMENT DETAIL
MED-71-2088 E
RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

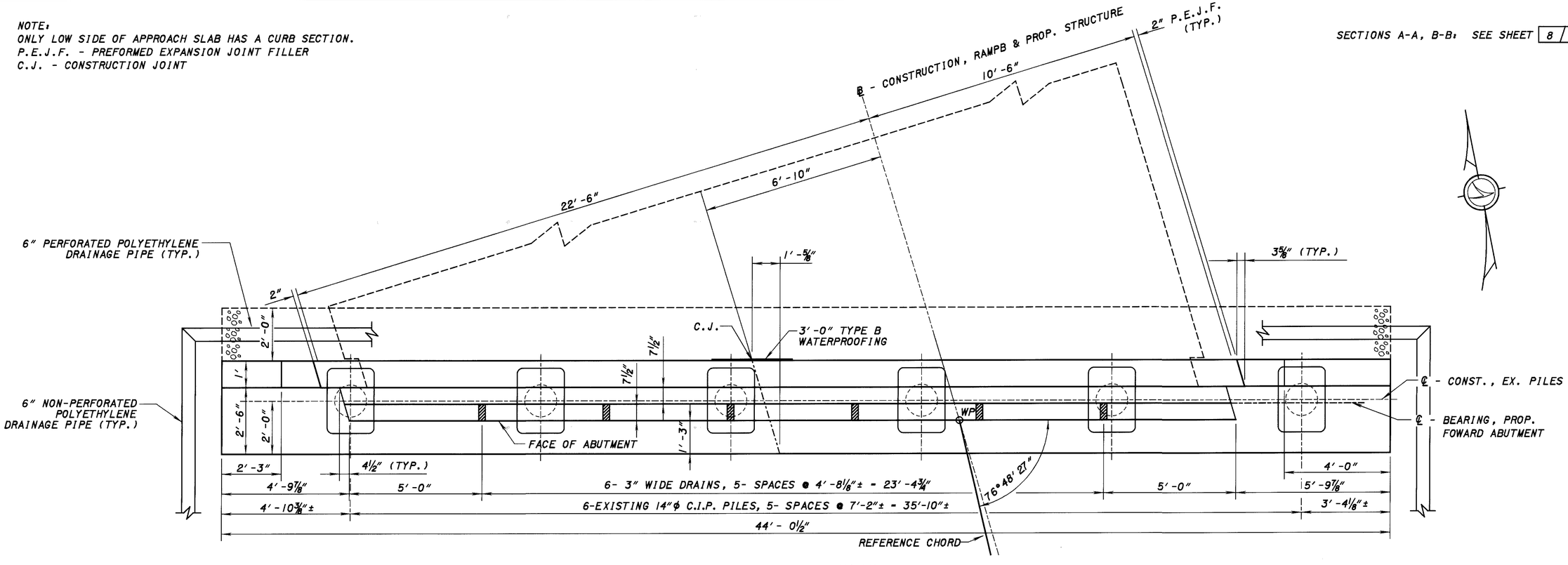
MED-71-15.78

6 / 16

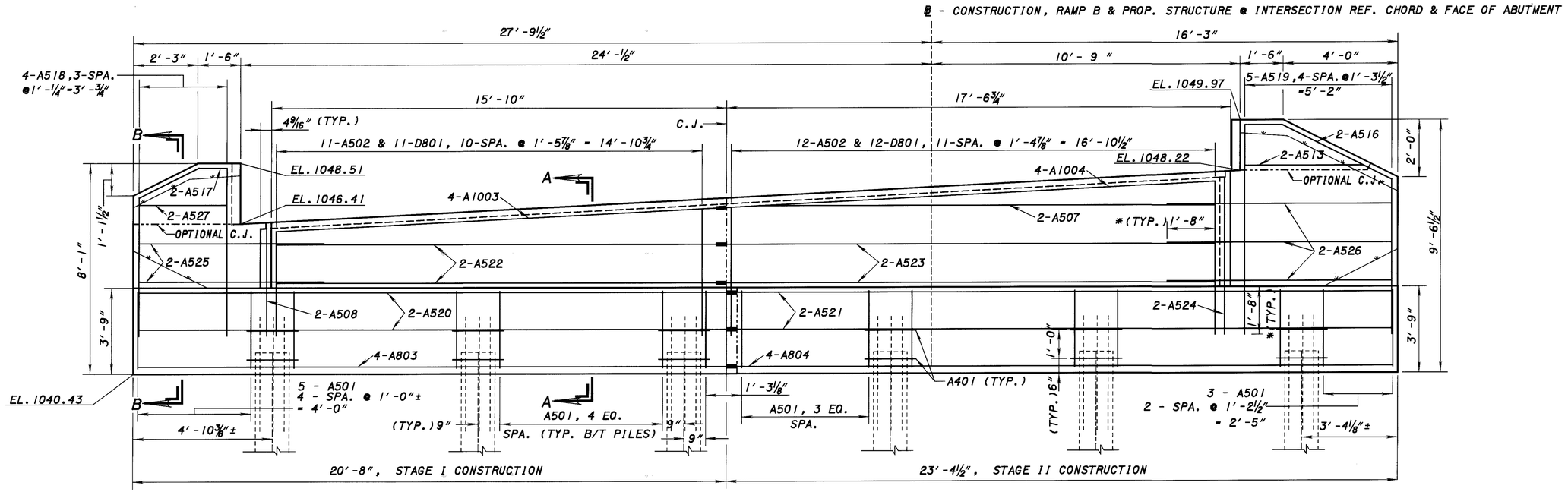
826 / 940

NOTE:
ONLY LOW SIDE OF APPROACH SLAB HAS A CURB SECTION.
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
C.J. - CONSTRUCTION JOINT

SECTIONS A-A, B-B: SEE SHEET 8 / 16




PLAN




FORWARD ABUTMENT ELEVATION

* MIN. DIMENSION

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

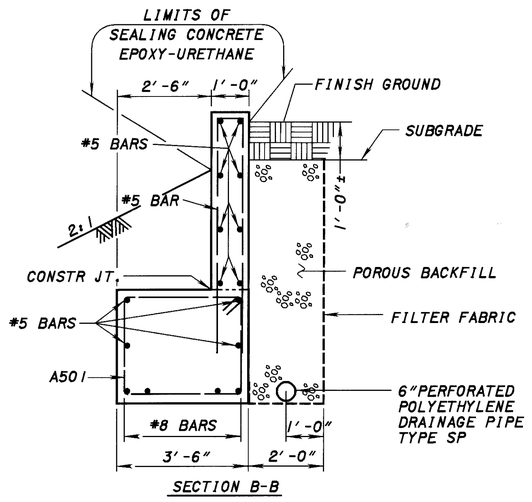
DESIGNED TKB | DRAWN TKB | REVISED DFT | DATE 9-7-99
CHECKED RJH | REVISED | STRUCTURE FILE NUMBER 5203902

FORWARD ABUTMENT DETAIL
MED-71-2088 E
RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

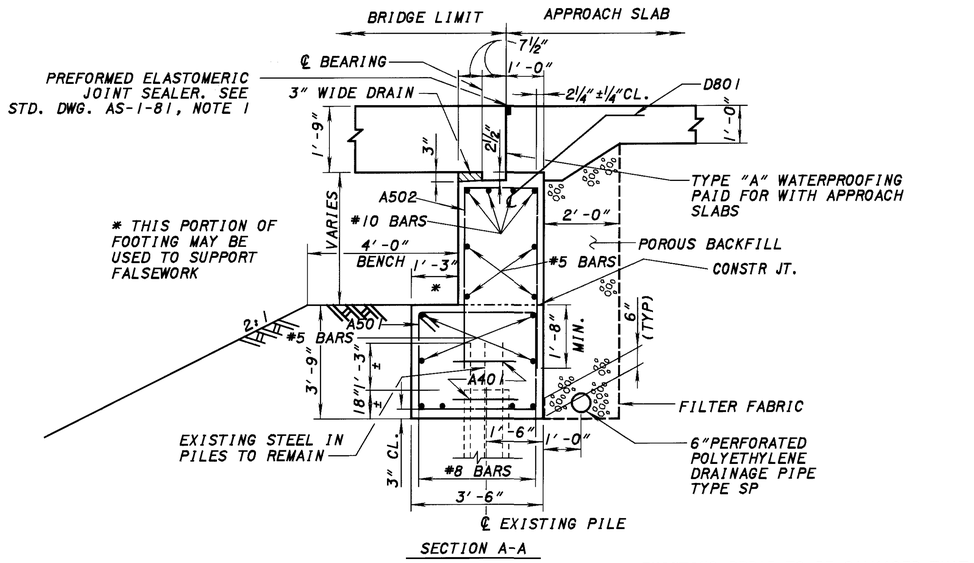
MED-71-15.78

7 / 16

827
940




SECTION B-B




SECTION A-A

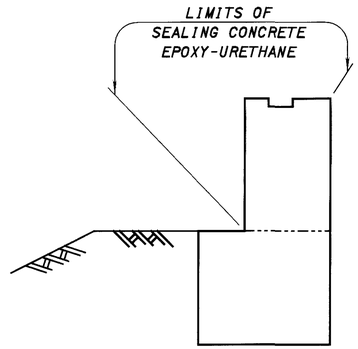
EXISTING REBAR TO BE SALVAGED THAT EXTENDS FROM EXISTING PILES.

## NOTES

1. ALL ELEVATIONS AND DIMENSIONS MEASURED ALONG THE FACE OF ABUTMENT.

2. MINIMUM SPLICES ARE AS FOLLOWS:
   #5 BAR = 3'-0"
   #6 BAR = 3'-6"
   #8 BAR = 5'-9"

3. TYPE B WATERPROOFING, 3'-0" WIDE. EXTEND FROM THE BOTTOM OF APPROACH SLAB TO THE BOTTOM OF THE FOOTING. NEOPRENE SHEETING MAY BE USED IN LIEU OF TYPE B WATERPROOFING.




SEALING LIMITS

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

DESIGNED TKB | DRAWN TKB | REVISED DFT | DATE 9-7-99

CHECKED RJH | REVISED | STRUCTURE FILE NUMBER 5203902

# ABUTMENT DETAIL

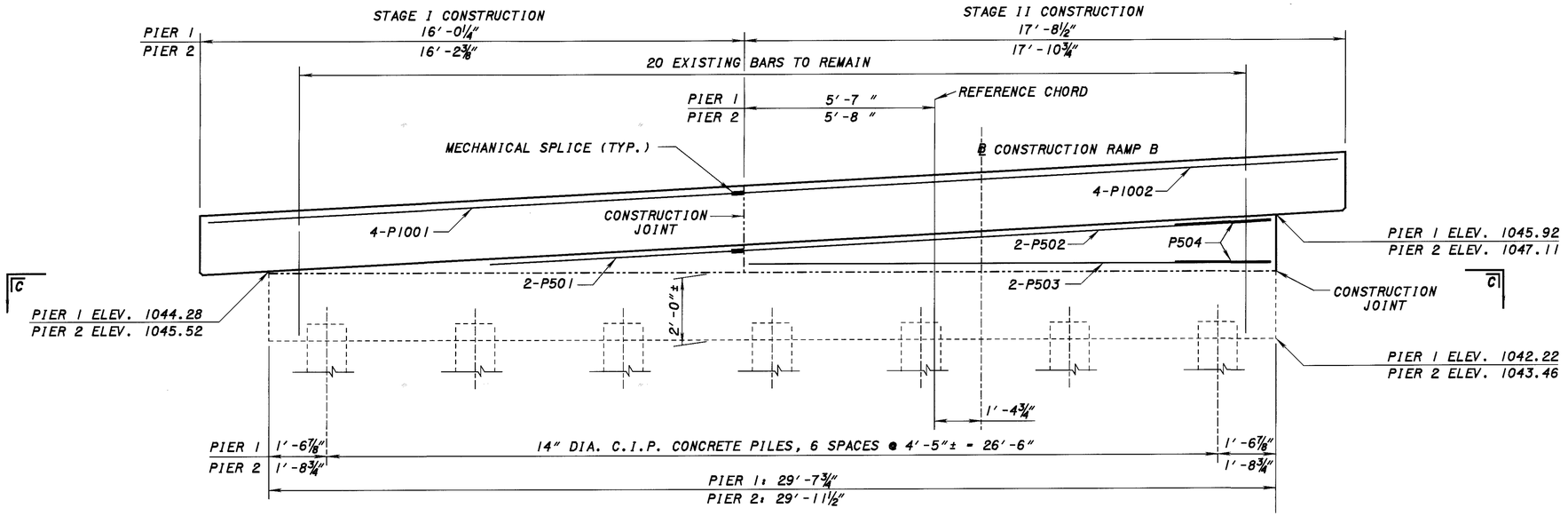
MED-71-2088 E

RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

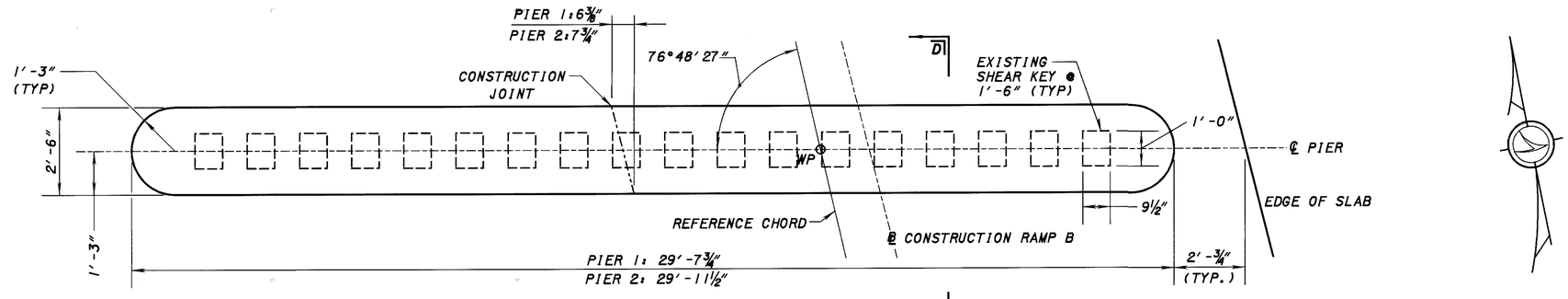
MED-71-15.78



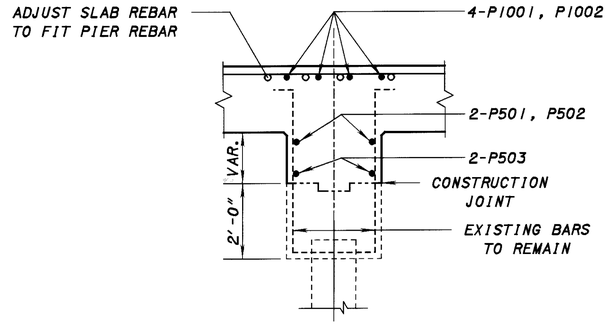
828/940




ELEVATION - PIERS 1 & 2




SECTION C-C




SECTION D-D

## NOTES

1. ALL ELEVATIONS AND DIMENSIONS ARE MEASURED ALONG THE ℄ BEARINGS.
2. PIER CAP SHALL BE REMOVED AND REPLACED ABOVE ORIGINAL CONSTRUCTION JOINT AS SHOWN IN THE DETAILS.
3. CONCRETE SHALL BE SUFFICIENTLY REMOVED FROM THE ORIGINAL SHEAR KEYS TO PRODUCE A POSITIVE CONNECTION BETWEEN THE EXISTING AND NEW CONCRETE.
4. VERTICAL REINFORCING STEEL SHALL REMAIN IN PLACE.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

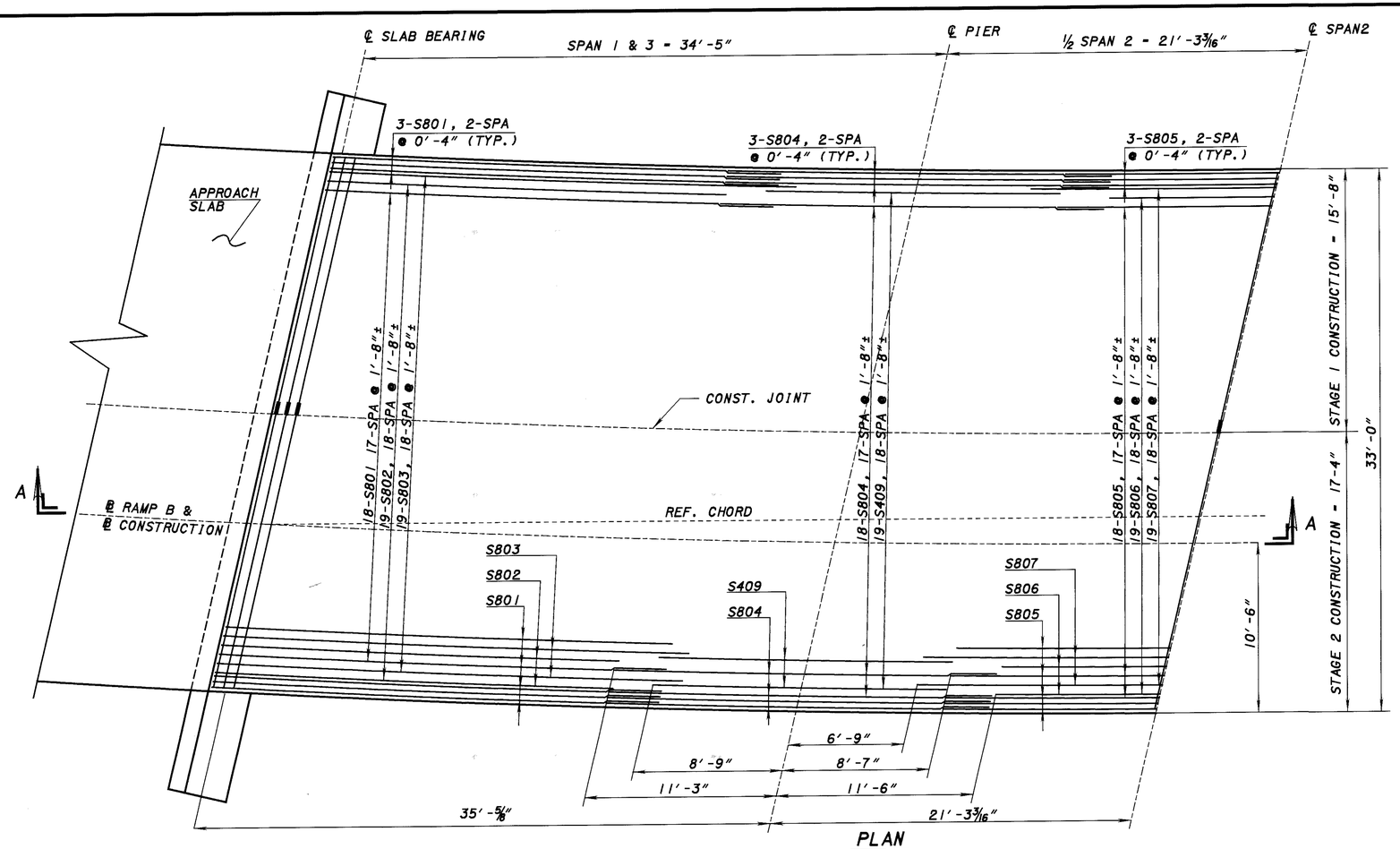
| DESIGNED | DRAWN | REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|---|---|
| TKB | TKB | DFT | 9-7-99 | 5203902 |
| CHECKED | REVISED | | | |
| RJH | | | | |

PIER DETAILS
MED-71-2088 E
RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

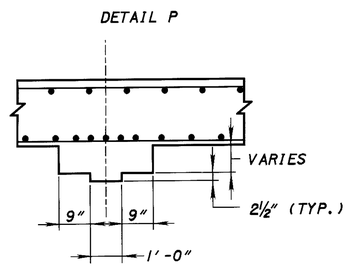
MED-71-15.78

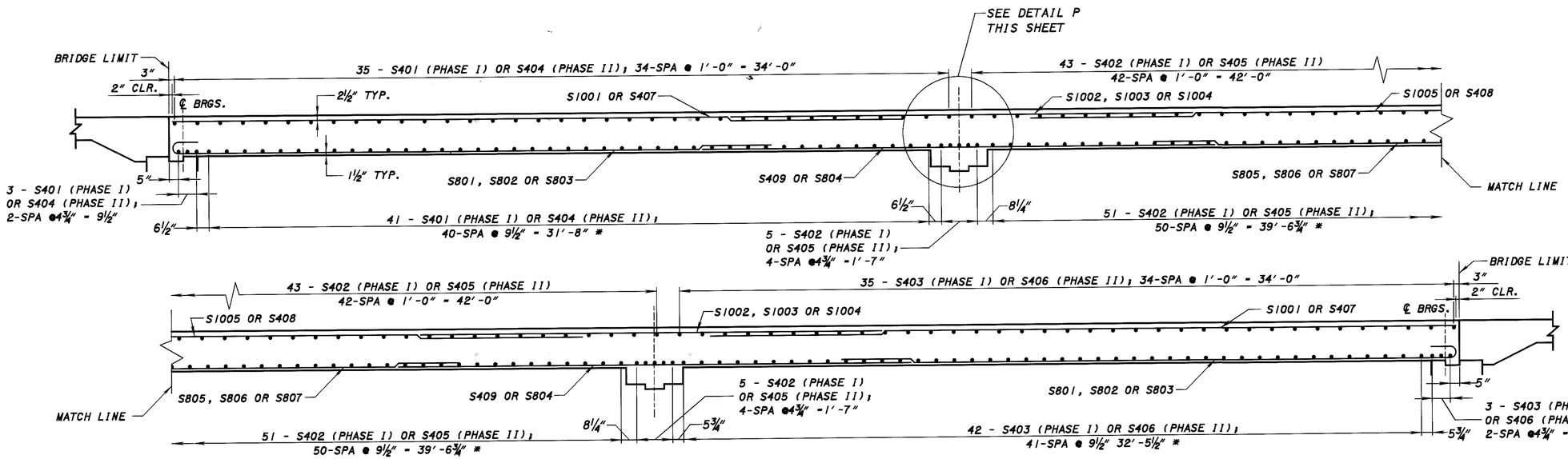
9 / 16

829
940




PLAN
BOTTOM REINFORCEMENT




SECTION A-A

* MEASURED AT AND ALONG THE ℄ OF CONSTRUCTION AND SURVEY

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TKB | TKB | DFT | 9-7-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| RJH | | 5203902 | |

SUPERSTRUCTURE DETAILS

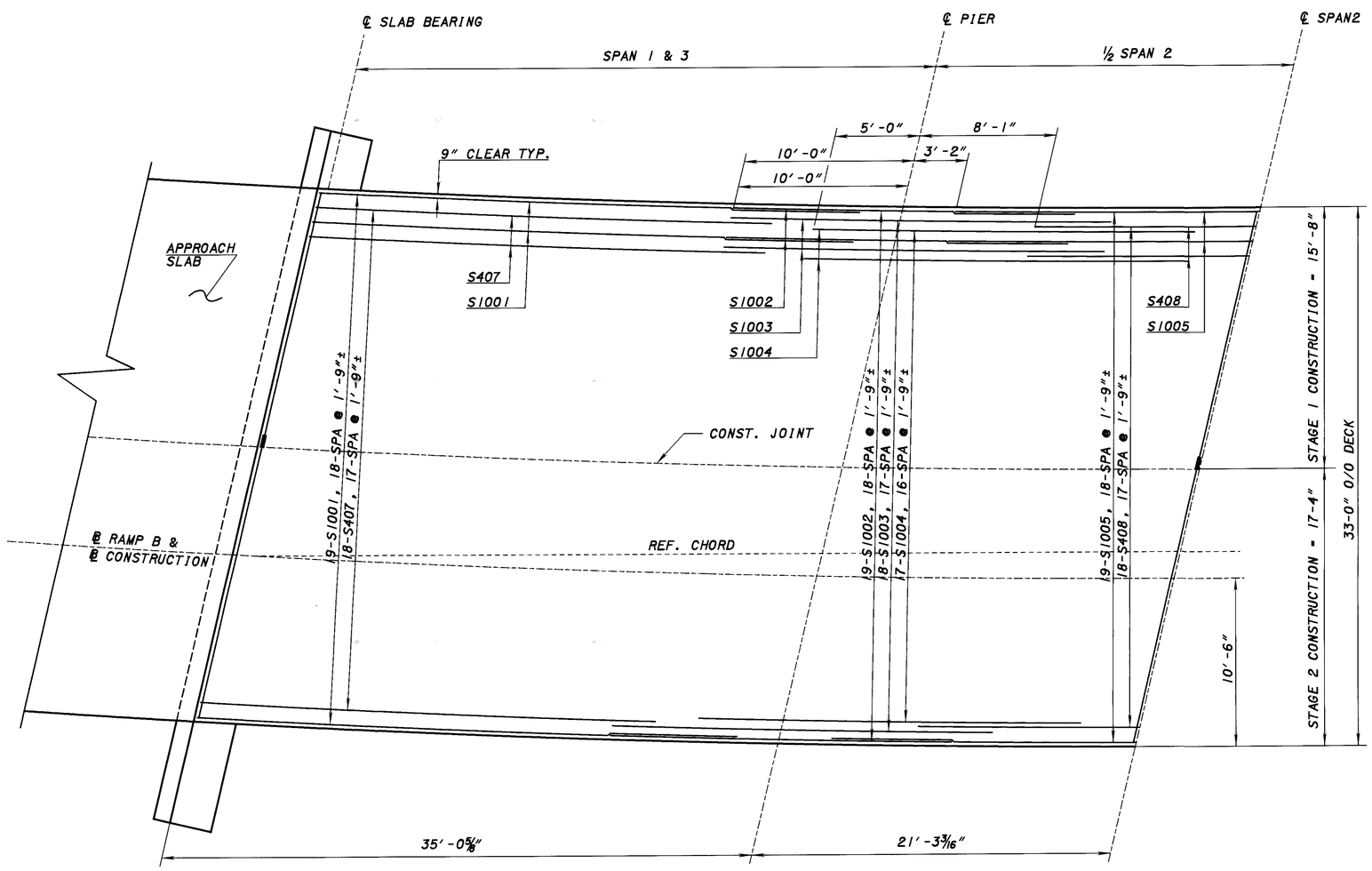
MED-71-2088 E

RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

10 / 16

830
940




PLAN
TOP REINFORCEMENT

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT DATE 9-7-99
STRUCTURE FILE NUMBER 5203902

DRAWN TKB
REVISED

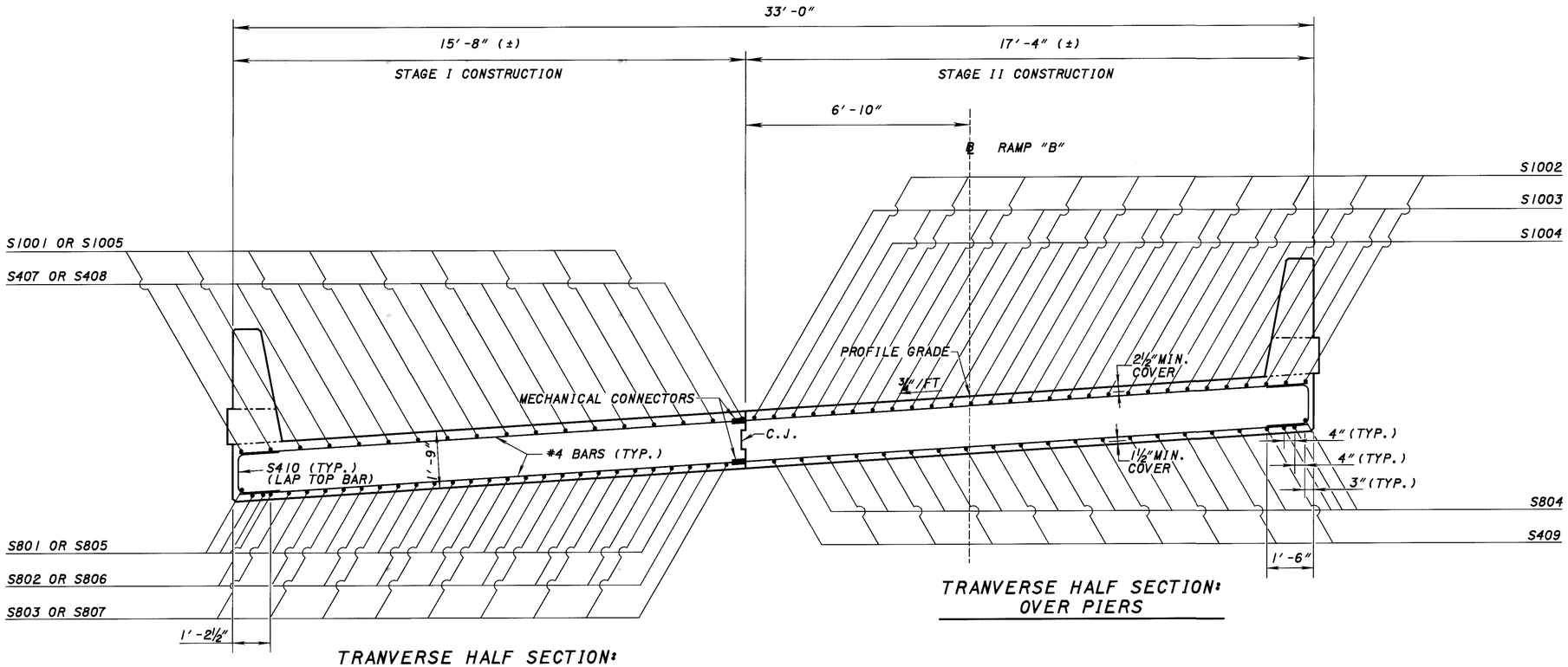
DESIGNED TKB
CHECKED RJH

SUPERSTRUCTURE DETAILS
MED-71-2088 E
RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

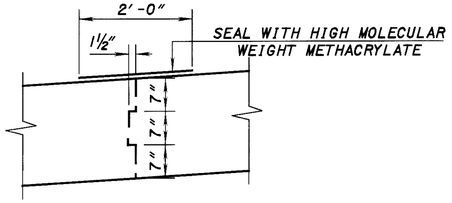
11 / 16

831
940

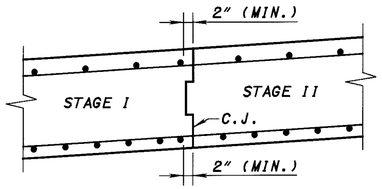



TRANVERSE HALF SECTION:
END SPANS & MID SPAN

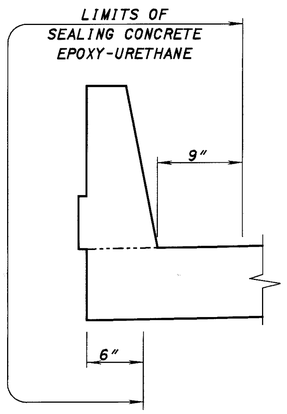
TRANVERSE HALF SECTION:
OVER PIERS




CONSTRUCTION JOINT




NOTE:
ADJUST REBAR SPACING AT THE CONSTRUCTION JOINT TO MAINTAIN MIN. 2″ CLEAR DISTANCE DURING STAGE I CONSTRUCTION.




LIMITS OF SEALING CONCRETE

DECK SLAB NOTES:

1. HIGH MOLECULAR WEIGHT METHACRYLATE SHALL BE INCLUDED IN THE COST OF THE CONCRETE AND NO SEPARATE PAYMENT WILL BE MADE.
2. SEE STD. DWG. CS-1-93 FOR MORE DETAILS.
3. DRIP GROOVES, AS DETAILED IN CS-1-93 SHALL NOT BE PLACED ON THIS STRUCTURE.

## FINAL DECK ELEVATIONS

| LOCATION | STATION | LEFT PARAPET TOE | PROFILE GRADE | RIGHT PARAPET TOE |
|---|---|---|---|---|
| BEGIN APPROACH SLAB | 81+41.97 | 1044.40 | 1045.78 | 1046.34 |
| END APPROACH SLAB | 81+56.97 | 1044.89 | 1046.20 | 1046.76 |
| MIDSPAN | 81+74.35 | 1045.39 | 1046.70 | 1047.26 |
| PIER #1 | 81+91.73 | 1045.89 | 1047.20 | 1047.76 |
| MIDSPAN | 82+13.00 | 1046.49 | 1047.80 | 1048.36 |
| PIER #2 | 82+34.26 | 1047.10 | 1048.41 | 1048.97 |
| MIDSPAN | 82+51.98 | 1047.61 | 1048.92 | 1049.48 |
| BEGIN APPROACH SLAB | 82+69.69 | 1048.11 | 1049.42 | 1049.98 |
| END APPROACH SLAB | 82+84.69 | 1048.54 | 1049.85 | 1050.41 |

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| TKB | TKB | DFT | 9-7-99 |

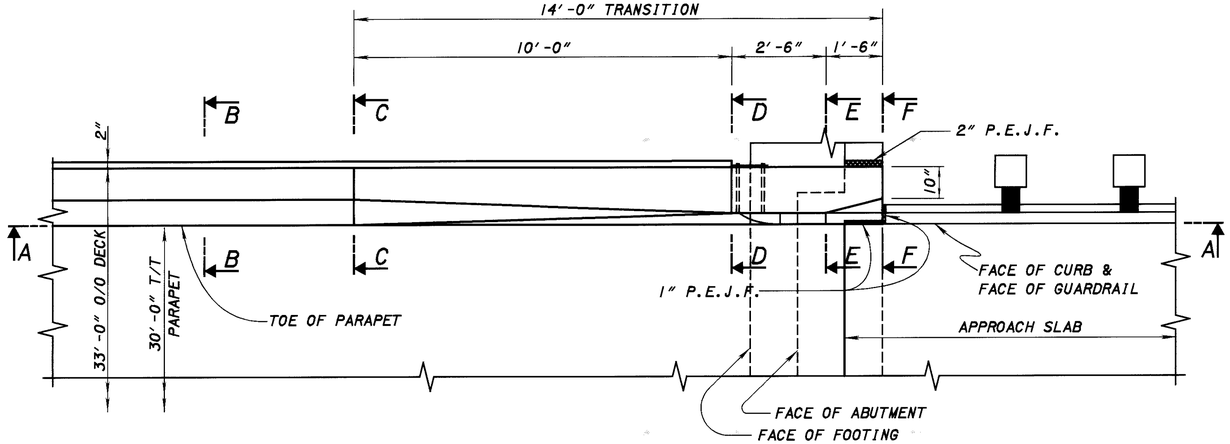
CHECKED RJH — REVISED — STRUCTURE FILE NUMBER 5203902

SUPERSTRUCTURE DETAILS
MED-71-2088 E
RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

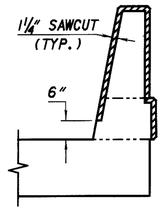
MED-71-15.78

12/16

832
940




LEGEND: N.S. - NEAR SIDE
F.S. - FAR SIDE




DETAIL A

(Section through sawcut)
Sawcut Perimeter = 7'-6"

**CONTROL JOINTS FOR CONCRETE PARAPETS:** THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL TO A MINIMUM DEPTH OF ONE INCH CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE-HALF INCH OF THE OUTSIDE FACE OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

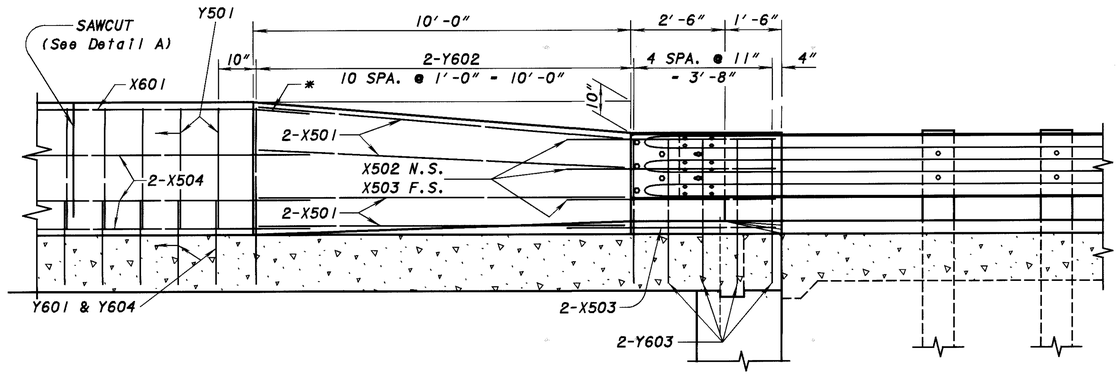
**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

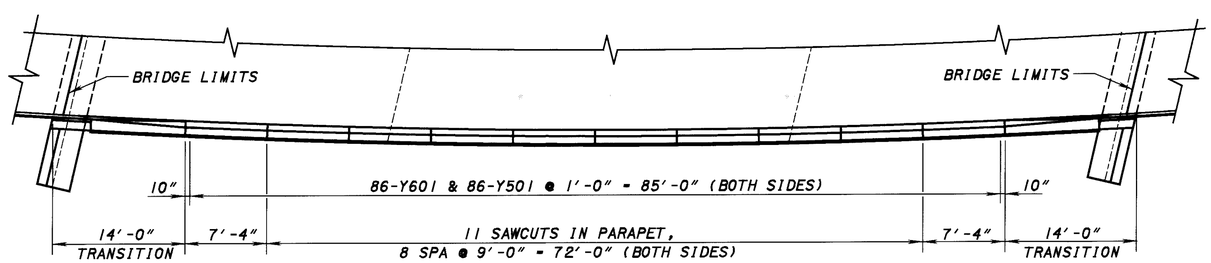
MIN. LAP SPLICES: #5 BAR - 2'-6"
#6 BAR - 3'-0"

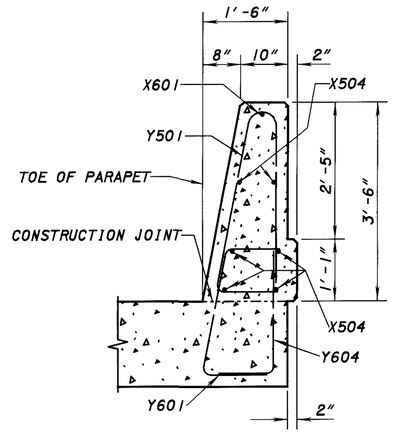
NOTE
CURB DETAIL APPLIES ONLY TO THE LEFT SIDE (LOW SIDE OF SUPERELEVATION) OF THE APPROACH SLAB. RIGHT SIDE SHALL BE FLUSH WITH FACE OF GUARDRAIL

## PART PLAN AT ABUTMENT



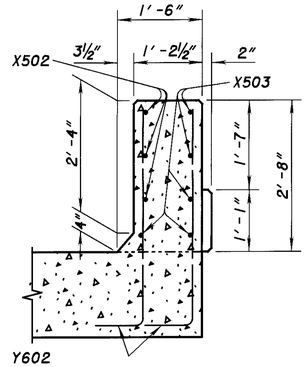

SECTION A-A



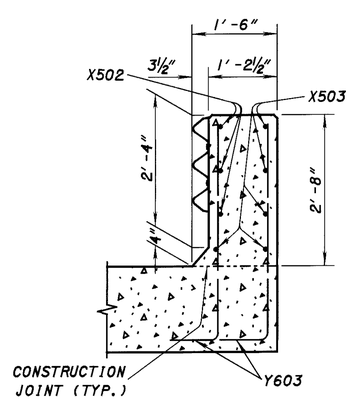




SECTION B-B & C-C

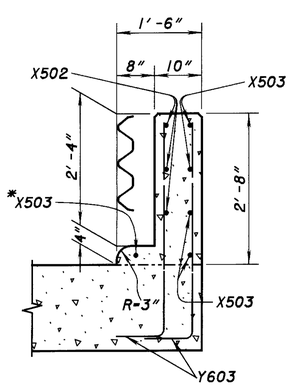
Area = 4.26 ft²




SECTION D-D




SECTION E-E




SECTION F-F

* FIELD BEND IF NECESSARY

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION
DESIGN AGENCY

| REVISED | DATE |
|---|---|
| DFT | 9-7-99 |
| STRUCTURE FILE NUMBER | 5203902 |
| DRAWN | REVISED |
| TKB | |
| DESIGNED | CHECKED |
| TKB | RJH |

SUPERSTRUCTURE DETAILS
MED-71-2088 E
RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

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833
940

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | R | INC |
| ABUTMENTS - MED-71-2088 E | | | | | | | | | | | | | |
| A401 | 6 | 6 | 6 | 6 | 24 | 9'-0" | 144 | 3 | 1'-9" | 2'-6" | | | |
| | | | | | | | | | | | | | |
| A501 | 14 | 19 | 16 | 17 | 66 | 13'-4" | 918 | 3 | 3'-2" | 3'-3" | | | |
| A502 | 11 OF 1 SERIES OF 23 | 12 OF 1 SERIES OF 23 | 11 OF 1 SERIES OF 23 | 12 OF 1 SERIES OF 23 | 2 SERIES OF 23 | 8'-9" TO 12'-5" | 508 | 2 | 3'-7" TO 5'-5" | 1'-10" | 3'-7" TO 5'-5" | | 1" |
| A503 | 2 SERIES OF 2 | | | | 2 SERIES OF 2 | 19'-3" TO 19'-9" | 81 | STR | | | | | 6" |
| A504 | | 2 SERIES OF 2 | | | 2 SERIES OF 2 | 22'-11" TO 23'-5" | 97 | STR | | | | | 6" |
| A505 | 2 SERIES OF 2 | | | | 2 SERIES OF 2 | 15'-1" TO 15'-5" | 64 | STR | | | | | 4" |
| A506 | | 2 SERIES OF 2 | | | 2 SERIES OF 2 | 16'-7" TO 16'-11" | 70 | STR | | | | | 4" |
| A507 | | 2 | | 2 | 4 | 16'-1" | 67 | STR | | | | | |
| A508 | 2 | | 2 | | 4 | 3'-9" | 16 | STR | | | | | |
| A509 | | 2 | | | 2 | 5'-8" | 12 | STR | | | | | |
| A510 | 4 | | | | 4 | 5'-11" | 24 | STR | | | | | |
| A511 | | 6 | | | 6 | 7'-8" | 48 | STR | | | | | |
| A512 | 2 | | | | 2 | 3'-5" | 8 | STR | | | | | |
| A513 | | 2 | | 2 | 4 | 4'-2" | 17 | STR | | | | | |
| A514 | 2 | | | | 2 | 3'-8" | 8 | 19 | 2'-4½" | 1'-2" | 7" | | |
| A515 | | 2 | | | 2 | 5'-5" | 11 | 19 | 4'-4" | 1'-0" | 6" | | |
| A516 | | | 2 | | 2 | 5'-7" | 12 | 19 | 4'-4" | 1'-2" | 7" | | |
| A517 | | | | 2 | 2 | 3'-4" | 7 | 19 | 2'-4½" | 0'-10½" | 5½" | | |
| A518 | 1 SERIES OF 4 | | 1 SERIES OF 4 | | 2 SERIES OF 4 | 10'-1" TO 12'-1" | 92 | 2 | 4'-10" TO 5'-10" | 0'-8" | 4'-10" TO 5'-10" | | 4" |
| A519 | | 1 SERIES OF 5 | | 1 SERIES OF 5 | 2 SERIES OF 5 | 11'-5" TO 15'-3" | 139 | 2 | 5'-6" TO 7'-5" | 0'-8" | 5'-6" TO 7'-5" | | 5¾" |
| A520 | | | 2 SERIES OF 2 | | 2 SERIES OF 2 | 19'-11" TO 20'-8" | 85 | STR | | | | | 9" |
| A521 | | | | 2 SERIES OF 2 | 2 SERIES OF 2 | 22'-9" TO 23'-6" | 96 | STR | | | | | 9" |
| A522 | | | 2 SERIES OF 2 | | 2 SERIES OF 2 | 15'-1" TO 15'-8" | 64 | STR | | | | | 7" |
| A523 | | | | 2 SERIES OF 2 | 2 SERIES OF 2 | 17'-1" TO 17'-8" | 73 | STR | | | | | 7" |
| A524 | | | | 2 | 2 | 5'-6" | 12 | STR | | | | | |
| A525 | | | 4 | | 4 | 6'-6" | 27 | STR | | | | | |
| A526 | | | | 6 | 6 | 7'-10" | 49 | STR | | | | | |
| A527 | | | 2 | | 2 | 3'-1" | 6 | STR | | | | | |

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | R | INC |
| ABUTMENTS - MED-71-2088 E (CONT.) | | | | | | | | | | | | | |
| A801 | 1 SERIES OF 4 | | | | 1 SERIES OF 4 | 19'-3" TO 19'-9" | 208 | STR | | | | | 2" |
| A802 | | 1 SERIES OF 4 | | | 1 SERIES OF 4 | 22'-11" TO 23'-5" | 247 | STR | | | | | 2" |
| A803 | | | 1 SERIES OF 4 | | 1 SERIES OF 4 | 19'-11" TO 20'-8" | 217 | STR | | | | | 3" |
| A804 | | | | 1 SERIES OF 4 | 1 SERIES OF 4 | 22'-9" TO 23'-6" | 247 | STR | | | | | 3" |
| A1001 | 1 SERIES OF 4 | | | | 1 SERIES OF 4 | 15'-1" TO 15'-5" | 262 | STR | | | | | 1½" |
| A1002 | | 1 SERIES OF 4 | | | 1 SERIES OF 4 | 16'-4" TO 16'-8" | 284 | STR | | | | | 1½" |
| A1003 | | | 1 SERIES OF 4 | | 1 SERIES OF 4 | 15'-1" TO 15'-8" | 265 | STR | | | | | 2⅜" |
| A1004 | | | | 1 SERIES OF 4 | 1 SERIES OF 4 | 17'-1" TO 17'-8" | 299 | STR | | | | | 2⅜" |
| | | | | | | | | | | | | | |
| D801 | 11 | 12 | 11 | 12 | 46 | 5'-7" | 685 | 18 | 3'-3" | 1'-0" | 1'-0" | | |

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIER 1 STAGE I | PIER 1 STAGE II | PIER 2 STAGE I | PIER 2 STAGE II | TOTAL | | LB | | A | B | C | R | INC |
| PIERS - MED-71-2088 E | | | | | | | | | | | | | |
| P501 | 2 | | 2 | | 4 | 7'-4" | 31 | STR | | | | | |
| P502 | | 2 | | 2 | 4 | 14'-2" | 59 | STR | | | | | |
| P503 | | 2 | | 2 | 4 | 14'-2" | 59 | STR | | | | | |
| P504 | | 2 | | 2 | 4 | 8'-0" | 33 | 24 | 2'-1/4" | 2'-6" | | 11½" | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| P1001 | 4 | | 4 | | 8 | 15'-10" | 545 | STR | | | | | |
| P1002 | | 4 | | 4 | 8 | 17'-6" | 606 | STR | | | | | |

**NOTES:**

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3. THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.
4. REINFORCING STEEL IS INCLUDED WITH THE APPROPRIATE CONCRETE ITEM FOR PAYMENT.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVISIONED: DFT | DATE: 9-7-99 | STRUCTURE FILE NUMBER: 5203902

DESIGNED: TKB | DRAWN: TKB | REVISED:

CHECKED: RJH

# REINFORCING SCHEDULE

MED-71-2088 E

RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

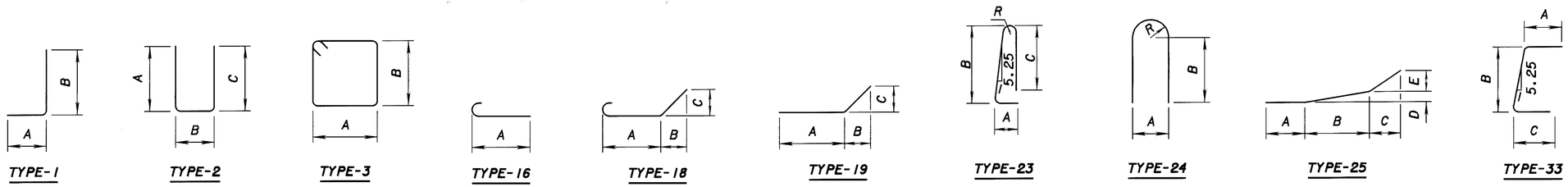
MED-71-15.78

14 | 16

834 / 940

| MARK | NUMBER | | | LENGTH | WEIGHT LB | TYPE | DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPER STAGE I | SUPER STAGE II | TOTAL | | | | A | B | C | D | E | R | INC |
| PARAPETS - MED-71-2088 E | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 334 | STR | | | | | | | |
| X502 | 6 | 6 | 12 | 5'-6" | 69 | 25 | 1'-8" | 2'-5" | 1'-4" | 1½" | 5" | | |
| X503 | 10 | 10 | 20 | 5'-6" | 115 | STR | | | | | | | |
| X504 | 24 | 24 | 48 | 24'-10" | 1243 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| Y501 | 86 | 86 | 172 | 7'-5" | 1331 | 23 | 1'-1" | 3'-2" | 3'-0" | | | 2¾" | |
| | | | | | | | | | | | | | |
| X601 | 4 | 4 | 8 | 25'-5" | 305 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| Y601 | 86 | 86 | 172 | 4'-5" | 1141 | 33 | 1'-1" | 2'-5" | 1'-3" | | | | |
| Y602 | 4 SERIES OF 11 | 4 SERIES OF 11 | 8 SERIES OF 11 | 4'-10" TO 5'-8" | 694 | 1 | 1'-1" | 3'-11" TO 4'-9" | | | | | 1" |
| Y603 | 16 | 16 | 32 | 4'-9" | 232 | 1 | 1'-1" | 3'-11" | | | | | |
| Y604 | 86 | 86 | 172 | 3'-2" | 818 | 1 | 1'-1" | 2'-5" | | | | | |

| MARK | NUMBER | | | LENGTH | WEIGHT LB | TYPE | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPER STAGE I | SUPER STAGE II | TOTAL | | | | A | B | C | D | R | INC |
| SUPERSTRUCTURE - MED-71-2088 E | | | | | | | | | | | | |
| S401 | 79 | | 79 | 15'-8" | 827 | STR | | | | | | |
| S402 | 104 | | 104 | 15'-10" | 1100 | STR | | | | | | |
| S403 | 80 | | 80 | 16'-0" | 855 | STR | | | | | | |
| S404 | | 79 | 79 | 17'-4" | 915 | STR | | | | | | |
| S405 | | 104 | 104 | 17'-6" | 1216 | STR | | | | | | |
| S406 | | 80 | 80 | 17'-8" | 944 | STR | | | | | | |
| S407 | 18 | 18 | 36 | 26'-7" | 639 | STR | | | | | | |
| S408 | 9 | 9 | 18 | 26'-4" | 317 | STR | | | | | | |
| S409 | 18 | 20 | 38 | 17'-3" | 438 | STR | | | | | | |
| S410 | 113 | 113 | 226 | 3'-7" | 541 | 2 | 1'-3" | 1'-3" | 1'-3" | | | |
| | | | | | | | | | | | | |
| S801 | 22 | 26 | 48 | 26'-5" | 3386 | STR | | | | | | |
| S802 | 18 | 20 | 38 | 25'-7" | 2596 | 16 | 24'-8" | | | | | |
| S803 | 18 | 20 | 38 | 27'-9" | 2816 | STR | | | | | | |
| S804 | 22 | 26 | 48 | 22'-9" | 2916 | STR | | | | | | |
| S805 | 11 | 13 | 24 | 25'-4" | 1623 | STR | | | | | | |
| S806 | 9 | 10 | 19 | 24'-3" | 1230 | STR | | | | | | |
| S807 | 9 | 10 | 19 | 24'-3" | 1230 | STR | | | | | | |
| | | | | | | | | | | | | |
| S1001 | 18 | 20 | 38 | 31'-6" | 5151 | STR | | | | | | |
| S1002 | 18 | 20 | 38 | 20'-0" | 3270 | STR | | | | | | |
| S1003 | 16 | 20 | 36 | 22'-3" | 3447 | STR | | | | | | |
| S1004 | 16 | 18 | 34 | 22'-3" | 3255 | STR | | | | | | |
| S1005 | 9 | 10 | 19 | 36'-2" | 2957 | STR | | | | | | |

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4. REINFORCING STEEL IS INCLUDED WITH THE APPROPRIATE CONCRETE ITEM FOR PAYMENT.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT DATE 9-7-99
STRUCTURE FILE NUMBER 5203902

DRAWN TKB REVISED
DESIGNED TKB CHECKED RJH

# REINFORCING SCHEDULE

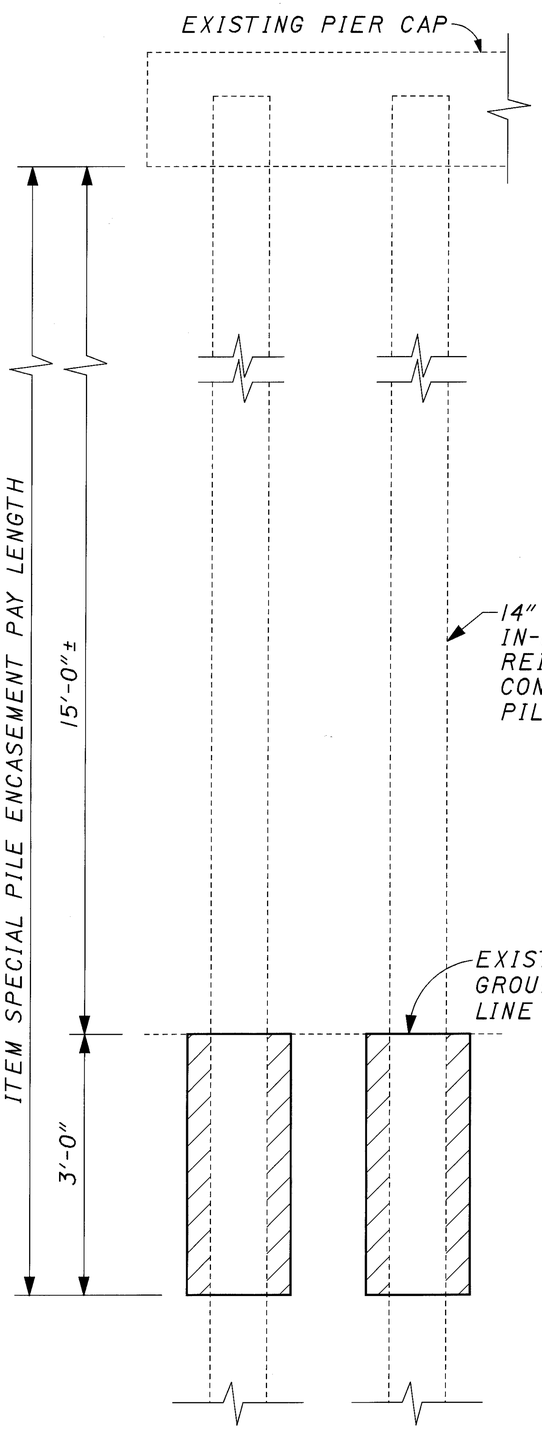
MED-71-2088 E

RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

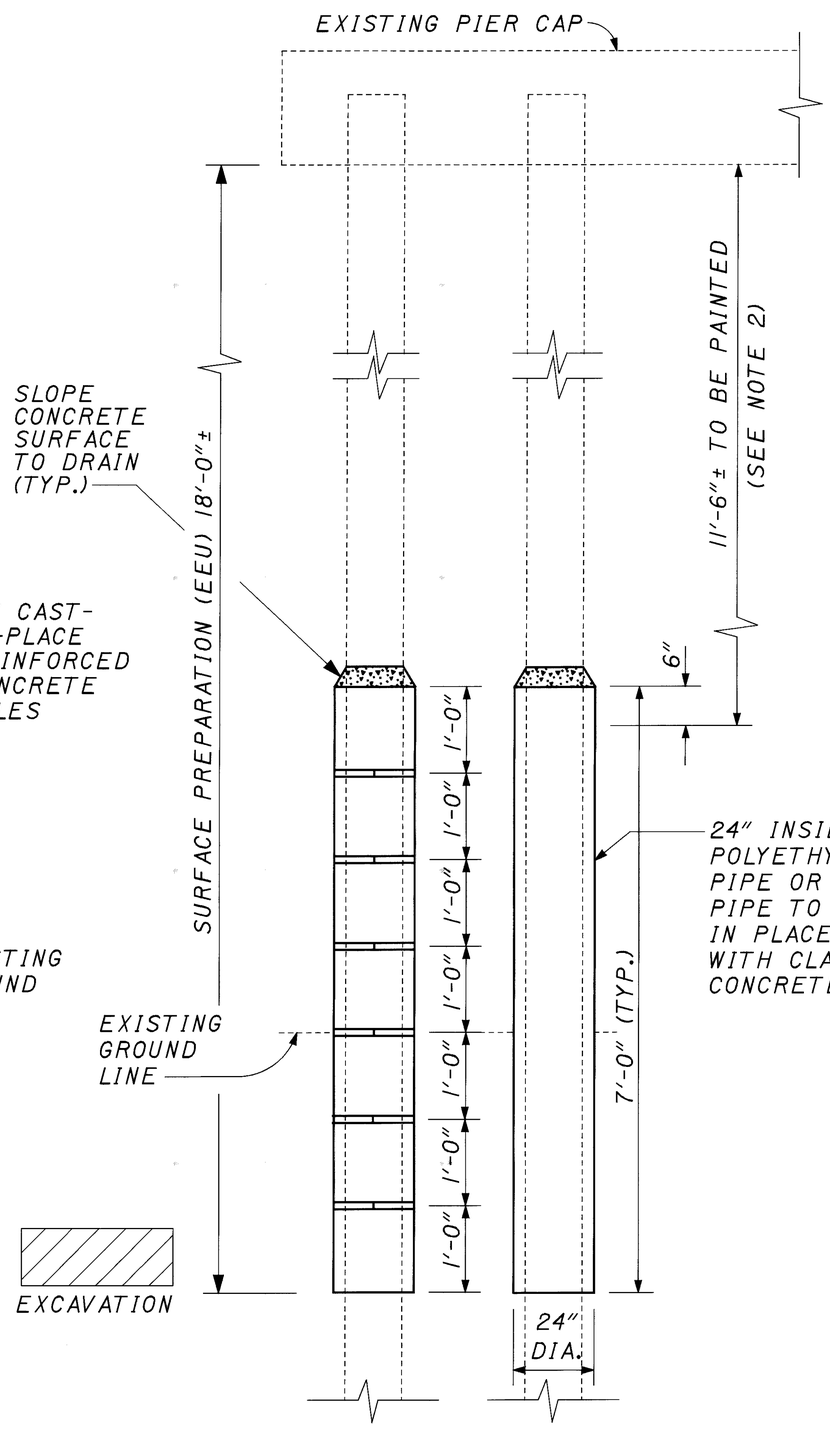
MED-71-15.78



835/940




EXISTING PILES




PROPOSED PILES

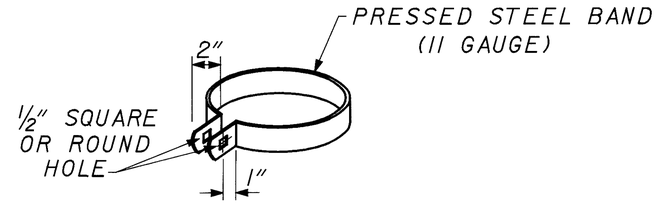
NOTE:

1. ALL PAINTING AS PER THE FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EEU) PROPOSAL NOTE OMITTING THE QUALITY CONTROL SPECIALIST AND TEST SECTION.

   THERE ARE 7 (SEVEN) COLUMNS PER PIER.
   THERE ARE 2 (TWO) PIERS ON STRUCTURE.

2. AT THE CONTRACTOR'S OPTION AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY EXTEND THE ENCASEMENT TO THE BOTTOM OF THE EXISTING PIER CAP IN LIEU OF PAINTING. SURFACE PREPARATION SHALL STILL BE PERFORMED.

3. STABILITY OF CAPPED PILE PIERS SHALL BE MAINTAINED DURING CONSTRUCTION. THE WORK ON THE EXISTING PIER PILES SHALL TAKE PLACE PRIOR TO STAGE CONSTRUTION OR AFTER ALL WORK IS COMPLETE ON THE SUPERSTRUCTURE.




## ITEM SPECIAL PILE ENCASEMENT

THIS ITEM SHALL INCLUDE THE FOLLOWING: EXCAVATION AND REPLACEMENT OF THE EMBANKMENT TO ITS NATURAL STATE AT THE EXISTING PILES, POLYETHYLENE OR PVC PIPE, GALVANIZED STEEL BANDS, NUTS AND BOLTS. THE POLYETHYLENE 707.33 OR PVC PIPE (707.45) SHALL BE CUT LENGTHWISE ON ONE SIDE OR IN TWO (2) SECTIONS AS NEEDED TO ENCOMPASS THE EXISTING 14" CAST-IN-PLACE PILES. THE BANDS SHALL BE 1" IN WIDTH AND THICKNESS SHALL NOT BE LESS THAN 11 GAUGE (.1196"). BANDS SHALL BE TIGHTENED SO AS NOT TO ELONGATE WHEN CONCRETE IS PLACED WITHIN THE PIPE. MAXIMUM SPACING OF THE BANDS SHALL BE 1'-0". ALTERNATE METHODS MAY BE USED TO CLAMP THE SECTIONS TOGETHER AS APPROVED BY THE ENGINEER. THE POLYETHYLENE OR PVC PIPE SHALL BE FILLED WITH CLASS C CONCRETE AND INCLUDED WITH ITEM SPECIAL, PILE ENCASEMENT FOR PAYMENT. ALL PAINTING PER PLAN NOTES SHALL BE INCLUDED WITH ITEM SPECIAL, PILE ENCASEMENT FOR PAYMENT.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT DATE 9-7-99
STRUCTURE FILE NUMBER 5203902

DRAWN TKB
REVISED

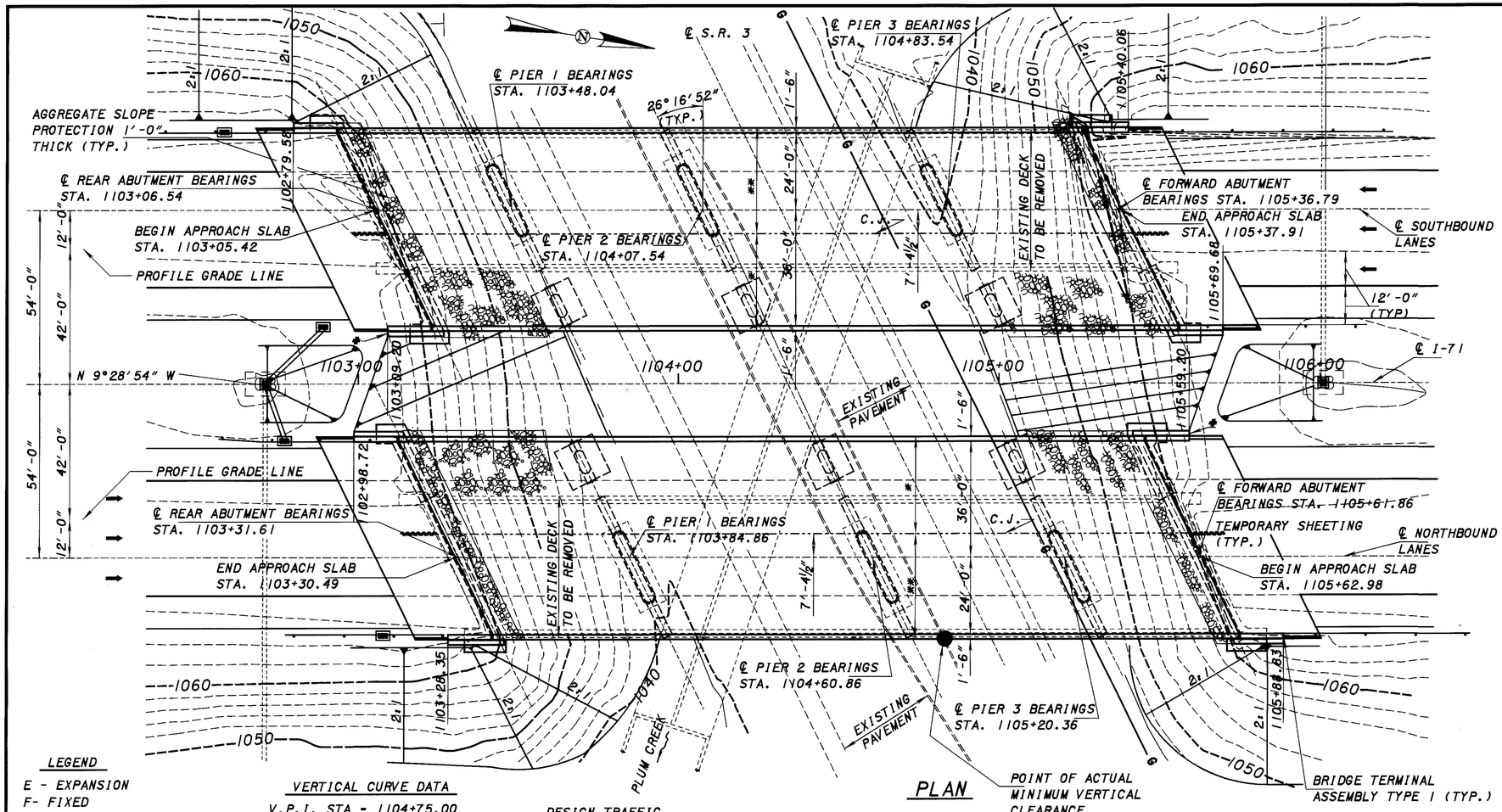
DESIGNED TKB
CHECKED RJH

PIER ENCASEMENT
MED-71-2088 E
RAMP "B" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

16 / 16

836
940




## PLAN

**LEGEND**

E - EXPANSION
F- FIXED
N.B.L. - NORTH BOUND LANE
S.B.L. - SOUTH BOUND LANE
EL. - ELEVATION
* STAGE I CONSTRUCTION
** STAGE 2 CONSTRUCTION

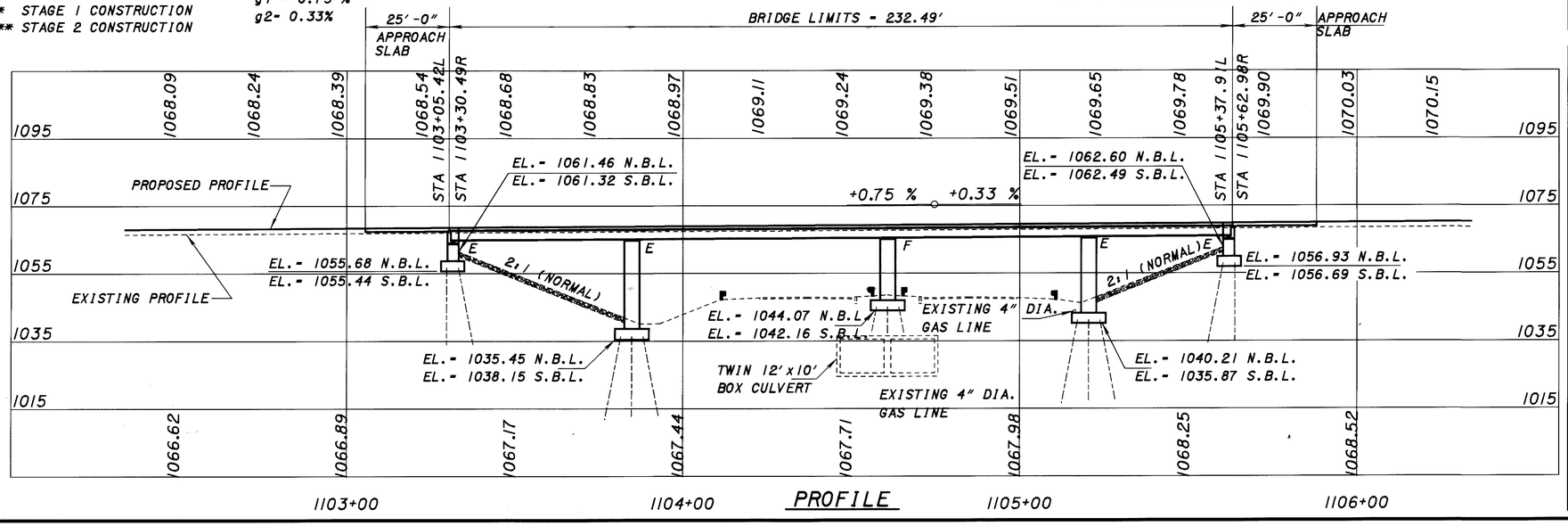
**VERTICAL CURVE DATA**

V.P.I. STA - 1104+75.00
V.P.I. ELEVATION - 1070.12
L.V.C. - 1400 FEET
g1 - 0.75 %
g2- 0.33%

**DESIGN TRAFFIC**

2000 ADT - 34010 2000 ADTT - 4082
2020 ADT - 46690 2020 ADTT - 5603

● 15'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
16'-0" ACTUAL MINIMUM VERTICAL CLEARANCE




## PROFILE

(ALONG ℄ NORTHBOUND SHOWN, SOUTHBOUND PROFILE IS SIMILAR)

## NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

PILES ARE 12" REINFORCED CONCRETE PILES FOR THE ABUTMENTS AND 14" REINFORCED CONCRETE PILES FOR THE PIERS. THE ESTIMATED PAY LENGTHS ARE:

REAR ABUTMENT - 40 FEET
PIER 1 AND PIER 2 - 35 FEET
PIER 3 - 50 FEET
FORWARD ABUTMENT - 35 FEET

## BENCHMARK DATA

BENCHMARK #12
STATION 1110+35.99 ELEVATION - 1069.77
ODOT DISC IN HEADWALL, STAMPED

*- NO BRIDGE TERMINAL ASSEMBLY
SEE CSS2 FOR ADDITIONAL DETAILS

## EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.

SPANS:
S.B.L.: 41'-6"±, 59'-6"±, 76'-0"±, 53'-3"± C/C BRGS.
N.B.L.: 53'3"±, 76'-0"±, 59'-6"±, 41'-6"± C/C BRGS.

ROADWAY: 2 @ 42'-0"± F/F OF PARAPETS

LOADING: CF 2000 (57) AND A.A.S.H.O. ALTERNATIVE LOADING

SKEW: 26°16'38"± (R.F)

WEARING SURFACE: ASPHALT

APPROACH SLABS: 25'-0" LONG AS-1-54

ALIGNMENT: TANGENT

CROWN: 3/16" PER FOOT

DATE BUILT: 1964

SFN: 5203937 L / 5203961 R

## PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
(SEE SHEET 5 / 31 FOR LIST OF PROPOSED WORK)

SPANS:
S.B.L.: 41'-6"±, 59'-6"±, 76'-0"±, 53'-3"± C/C BRGS.
N.B.L.: 53'3"±, 76'-0"±, 59'-6"±, 41'-6"± C/C BRGS.

ROADWAY: 60'-0" TOE/TOE OF PARAPETS

LOADING: HS 20-44 (CASE I) AND ALTERNATE MILITARY LOADING

SKEW: 26°16'52" (R.F)

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0" LONG (AS-1-81)
60'-0" TOE/TOE OF CURB

ALIGNMENT: TANGENT

CROWN: 3/16" PER FOOT

LONGITUDE: 81°47'25" LATITUDE 41°11'45"

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: SER DATE: 8-27-99
STRUCTURE FILE NUMBER: 5203937L/5203961R
DRAWN: TAA REVISED:
DESIGNED: TAA CHECKED: DFT

MEDINA COUNTY STA. 1103+05.42L STA. 1105+37.91L
MEDINA COUNTY STA. 1103+30.49R STA. 1105+62.98R

SITE PLAN
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

1 / 31

837
940

| | | MED-71-2090 L | MED-71-2090 R | | ESTIMATED QUANTITIES | MED-71-2090 L | | | | MED-71-2090 R | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM | EXTENSION | TOTAL | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS | SUPER. | GEN. | ABUT. | PIERS | SUPER. | GEN. |
| 202 | 11203 | LUMP | LUMP | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | LUMP | | LUMP | | LUMP | | LUMP | |
| | | | | | | | | | | | | | |
| 503 | 11100 | LUMP | LUMP | | COFFERDAMS, CRIBS AND SHEETING | | | | LUMP | | | | LUMP |
| 503 | 21301 | LUMP | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LUMP | LUMP | | | LUMP | LUMP | | |
| 505 | 11100 | LUMP | LUMP | | PILE DRIVING EQUIPMENT MOBILIZATION | | | | LUMP | | | | LUMP |
| 507 | 00500 | 935 | 935 | LF | 12" CAST-IN PLACE REINFORCED CONCRETE PILES, DRIVEN | 935 | | | | 935 | | | |
| 507 | 00550 | 935 | 935 | LF | 12" CAST-IN PLACE REINFORCED CONCRETE PILES, FURNISHED | 935 | | | | 935 | | | |
| 507 | 00601 | 1080 | 1080 | LF | 14" CAST-IN PLACE REINFORCED CONCRETE PILES, DRIVEN, AS PER PLAN | | 1080 | | | | 1080 | | |
| 507 | 00650 | 1080 | 1080 | LF | 14" CAST-IN PLACE REINFORCED CONCRETE PILES, FURNISHED | | 1080 | | | | 1080 | | |
| 507 | 50500 | 23 | 23 | EACH | STEEL PILE SPLICES | 11 | 12 | | | 11 | 12 | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 512 | 44400 | 8 | 8 | SY | TYPE B WATERPROOFING | 8 | | | | 8 | | | |
| | | | | | | | | | | | | | |
| SPECIAL | 51267200 | 49 | 49 | SY | WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING | 49 | | | | 49 | | | |
| SPECIAL | 51267510 | 1257 | 1257 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 90 | 603 | 564 | | 90 | 603 | 564 | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 516 | 13600 | 21 | 21 | SF | 1" PREFORMED EXPANSION JOINT FILLER | | | 21 | | | | 21 | |
| 516 | 13900 | 155 | 155 | SF | 2" PREFORMED EXPANSION JOINT FILLER | 155 | | | | 155 | | | |
| 516 | 44101 | 16 | 16 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | 16 | | | | 16 | | | |
| | | | | | (NEOPRENE), AS PER PLAN (9"x13"x2⅝" PAD AND 12"x14"x1½" PLATE) | | | | | | | | |
| 516 | 44000 | 16 | 16 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), (12"x18"x1¾" PAD | | 16 | | | | 16 | | |
| | | | | | AND 13"x19"x2" PLATE) | | | | | | | | |
| 516 | 44001 | 8 | 8 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | | 8 | | | | 8 | | |
| | | | | | (NEOPRENE), AS PER PLAN (10½"x18"x1 15/16" PAD AND 11½"x24"x2" PLATE) | | | | | | | | |
| | | | | | | | | | | | | | |
| 518 | 21231 | LUMP | LUMP | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | | | | LUMP | | | |
| 518 | 40000 | 139 | 139 | LF | 6" PERFORATED CORRUGATED PLASTIC PIPE | 139 | | | | 139 | | | |
| 518 | 40010 | 54 | 54 | LF | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 54 | | | | 54 | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 523 | 11100 | 6 | 6 | HOUR | DYNAMIC LOAD TEST * | | 6 | | | | 6 | | |
| 601 | 20500 | 130 | 130 | CY | CRUSHED AGGREGATE SLOPE PROTECTION | | | | 130 | | | | 130 |
| | | | | | | | | | | | | | |
| 816 | 00600 | LUMP | LUMP | | FIELD PAINTING NEW STEEL, INTERMEDIATE AND FINISH COAT, SYSTEM IZEU | | | LUMP | | | | LUMP | |
| | | | | | | | | | | | | | |
| 842 | 42001 | 91 | 94 | CY | CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN | | 91 | | | | 94 | | |
| 842 | 44101 | 102 | 102 | CY | CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN | 102 | | | | 102 | | | |
| 842 | 46501 | 113 | 113 | CY | CLASS C CONCRETE, FOOTING, AS PER PLAN | 58 | 55 | | | 58 | 55 | | |
| | | | | | | | | | | | | | |
| 844 | 48001 | 425 | 425 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK), AS PER PLAN, MIX 4 | | | 425 | | | | 425 | |
| 844 | 48021 | 80 | 80 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET), AS PER PLAN **, MIX 4 | | | 80 | | | | 80 | |
| 844 | 48041 | 64 | 64 | CY | HIGH PERFORMANCE CONCRETE SUBSTRUCTURE, AS PER PLAN | 64 | | | | 64 | | | |
| 844 | 49000 | LUMP | LUMP | | HIGH PERFORMANCE CONCRETE TRIAL MIX | | | LUMP | | | | LUMP | |
| 844 | 49010 | LUMP | LUMP | | HIGH PERFORMANCE CONCRETE TESTING | | | LUMP | | | | LUMP | |
| | | | | | | | | | | | | | |
| 863 | 10060 | LUMP | LUMP | | STRUCTURAL STEEL MEMBERS, LEVEL THREE (3) FABRICATION, A572 | | | LUMP | | | | LUMP | |
| 863 | 20000 | 5640 | 5640 | EACH | WELDED STUD SHEAR CONNECTORS | | | 5640 | | | | 5640 | |

**PARAPET ON THE APPROACH SLAB IS INCLUDED WITH THIS PAY ITEM.

* SEE CSS1 FOR EXPLANATION

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED SER
DATE 8-27-99
STRUCTURE FILE NUMBER 5203937L/5203961R

DRAWN TAA
REVISED

DESIGNED TAA
CHECKED DFT

ESTIMATED QUANTITIES
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

# GENERAL NOTES

**STANDARD DRAWINGS AND SPECIFICATIONS:**

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

| | |
|---|---|
| AS-1-81 | REVISED 09-15-94 |
| SBR-1-99 | DATED 01-12-99 |
| PCB-1-91 | REVISED 07-06-99 |
| BS-1-93 | DATED 12-19-94 |
| GSD-1-96 | DATED 02-12-97 |

AND TO SUPPLEMENTAL SPECIFICATIONS:

| | |
|---|---|
| 816 | DATED 04-21-97 |
| 842 | DATED 01-06-99 |
| 844 | DATED 01-06-99 |
| 863 | DATED 10-12-99 |
| 899 | DATED 10-21-98 |
| 910 | DATED 07-28-98 |
| 911 | DATED 07-10-97 |
| 954 | DATED 09-09-97 |

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997 AND 1998 INTERIM SPECIFICATIONS AND THE ODOT DESIGN MANUAL.

**DESIGN LOADING:**

HS20-44, CASE I AND THE ALTERNATE MILITARY LOADING.

**DESIGN DATA:**

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

ITEM 842 CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60 Ksi. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

STRUCTURAL STEEL - A572 - YIELD STRENGTH 50 Ksi

**DECK PROTECTION METHOD** - EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER AND HIGH PERFORMANCE CONCRETE.

**MONOLITHIC WEARING SURFACE** IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

**EXISTING BRIDGE PLANS** MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT THREE OFFICE IN ASHLAND, OHIO.

**DOWEL HOLES WITH NON-SHRINK, NON METALLIC GROUT**

ALL DOWEL HOLES SHALL BE CORE DRILLED AND GROUTED WITH AN EPOXY MORTAR MEETING THE REQUIREMENTS OF CMS 510. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

**ITEM 202 PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN:**

PORTION OF THE STRUCTURE REMOVED, AS PER PLAN, SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED.

PROTECTION OF TRAFFIC:

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE ENGINEER FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

SUBSTRUCTURE CONCRETE REMOVAL:

SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 90 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

¼ INCH SCARIFICATION: THE EXISTING PIER BRIDGE SEAT SURFACE SHALL BE SCARIFIED ¼ INCH INTO SOUND CONCRETE PRIOR TO PLACEMENT OF THE CONCRETE. THE SURFACE SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER, AIR UNDER PRESSURE, OR ANOTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

PAYMENT

ALL WORK SHALL BE PAID FOR UNDER ITEM 202 PORTIONS OF STRUCTURES REMOVED, AS PER PLAN

**TRAFFIC MAINTENANCE:**

SEE ROADWAY PLANS FOR ADDITIONAL TRAFFIC NOTES AND DETAILS.

**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)**

EPOXY-URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722 AS PER THE DETAILS IN THE PLAN.

**ITEM SPECIAL - WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING**

INSTALL A 3 FOOT WIDE STRIP, 3/32 INCH THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 3 FOOT WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X 3/32" (LENGTH X SHANK DIAMETER) #10 GALVANIZED BUTTON HEAD SPIKE THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS, AT 6 INCHES CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS WHERE THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST ONE FOOT IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32 INCH THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

| DESCRIPTION OF TEST | ASTM METHOD | REQUIREMENT |
|---|---|---|
| THICKNESS, INCHES | D 751 | 0.094 ± .01 |
| BREAKING STRENGTH, GRAB WXF, LBS, MINIMUM | D 751 | 700 X 700 |
| ADHESIVE 1" STRIP, 2" MINIMUM, LBS, MINIMUM | D 751 | 9 |
| BURST STRENGTH (MULLEN) PSI, MINIMUM | D 751 | 1400 |
| HEAT AGING 70 HOURS T 212 F, 180 BEND WITHOUT CRACKING | D 2136 | NO CRACKING OF COATING |
| LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40 F, BEND AROUND ¼ INCH MANDREL | D 2136 | NO CRACKING OF COATING |

PAYMENT FOR LABOR MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN INTEM SPECIAL- WATERPROOFING, MISC. : SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING.

**PAINTING OF 863 STEEL**

THE COLOR OF THE FINISH COAT SHALL BE A LIGHT GRAY COLOR MEETING FEDERAL STANDARD NUMBER 16440. IN ADDITION TO THE STEEL STRINGER TO BE PAINTED INCIDENTALS SUCH AS CROSSFRAMES AND BEARINGS SHALL BE INCLUDED FOR PAYMENT.

**ITS CONDUIT**

THE CONDUIT SHALL BE PLACED WITHIN THE OUTSIDE PARAPET OF L & R STRUCTURES. SEE CSS3 & CSS4 FOR DETAILS.

**ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:**

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 6" LIFTS. EXCAVATION AT ABUTMENTS IN ADDITION TO THAT NECESSARY TO REMOVE PORTION OF THE EXISTING STRUCTURE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION FOR PAYMENT.

**ITEM 842 CLASS C CONCRETE, (FOOTINGS, PIERS AND ABUTMENTS) AS PER PLAN**

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITEM 844 HIGH PERFORMANCE CONCRETE, AS PER PLAN**

THE DESIGN MIX SHALL BE MIX NO. 4 LIMESTONE. THE OPTION OF SLIPFORM CONSTRUCTION OF THE BRIDGE PARAPET IS NOT PERMITTED. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**UTILITY LINES:**

ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES). THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

**REINFORCING STEEL:**

NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED UNDER ITEM 844 HIGH PERFORMANCE CONCRETE.

**ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN**

POROUS BACKFILL SHALL BE #57 GRAVEL ONLY.

**ITEM 507 14" CAST-IN PLACE REINFORCED CONCRETE PILES, AS PER PLAN**

PRIOR TO DRIVING PILES FOR PIER #2 THE LOCATION OF THE BOX CULVERT SHALL BE VERIFIED BY PREBORING AUGUERED HOLES. CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE CULVERT DURING PILE INSTALLATION. THE PREBORED HOLES SHALL BE DONE IN ACCORDANCE WITH CMS 507.13. PAYMENT TO BE INCLUDED WITH ITEM 507.

**THE DESIGN LOAD** IS 44 TONS PER PILE FOR THE ABUTMENT PILES AND 55 TONS PER PILE FOR THE PIER PILES. THE ULTIMATE BEARING VALUE IS 88 TONS PER PILE FOR THE ABUTMENTS AND 110 TONS PER PILE FOR THE PIERS. †THE ULTIMATE BEARING VALUE IS TWO TIMES THE ACTUAL DESIGN LOAD.

**SURVEY DISC ON STRUCTURE:**

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

**ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION**

THE QUANTITIES INCLUDES 10 % OF THE EXISTING AGGREGATE SLOPE PROTECTION SURFACE AREA IN ADDITION TO WHAT IT IS DETAILED ON THE PLANS. THE SLOPE PROTECTION TO BE PLACED UNDER WIDENED STRUCTURE AND MATCH EXISTING.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | SER | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5203937L/5203961R | |

GENERAL NOTES
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

3 | 31

839
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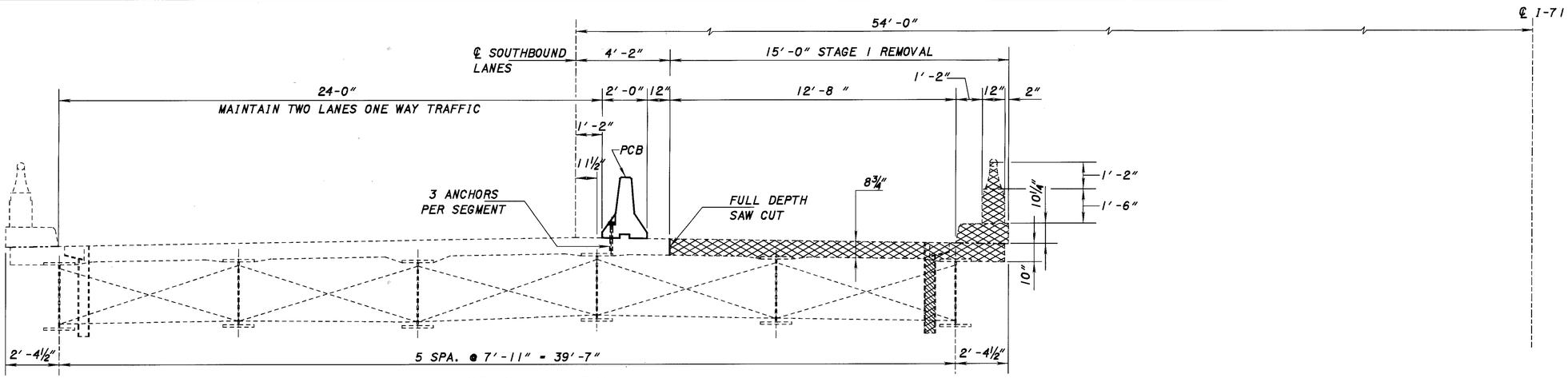
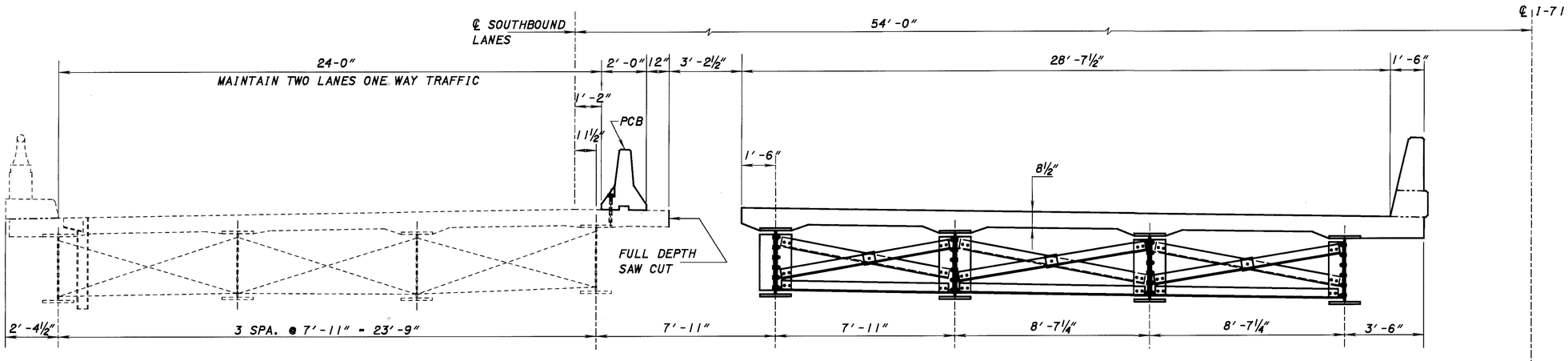


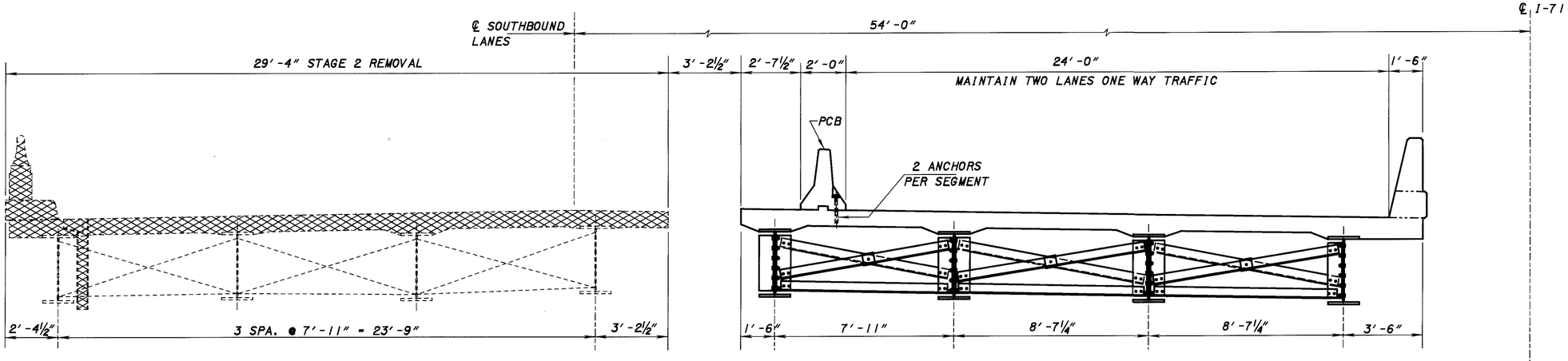

## STAGE 1 REMOVAL

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)




## STAGE 1 CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)




## STAGE 2 REMOVAL

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | SER | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5203937L/5203961R | |

STAGE CONSTRUCTION
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

4 / 31

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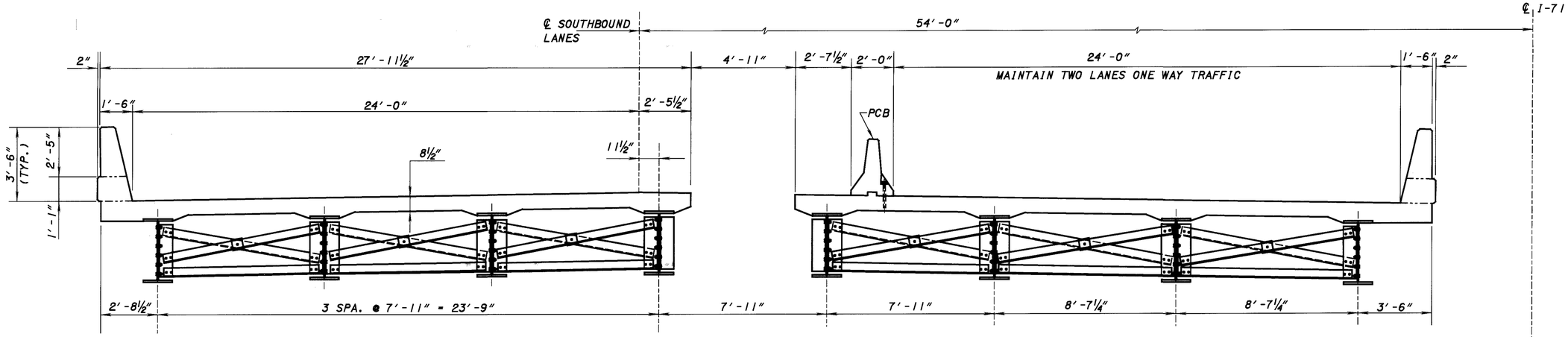
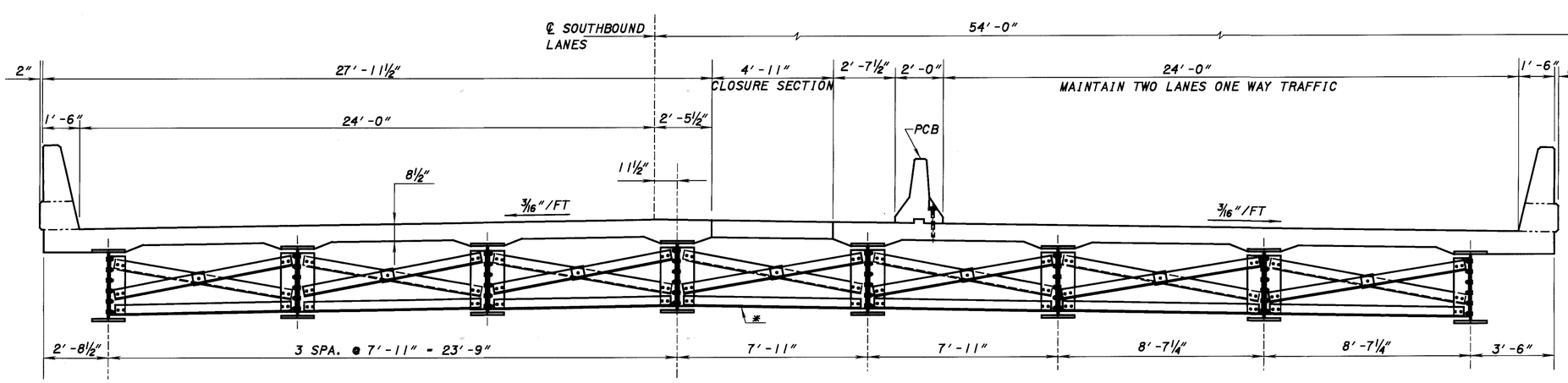



## STAGE 2 CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)




## CLOSURE SECTION CONSTRUCTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)

* PLACE CROSSFRAMES IN POSITION PRIOR TO POURING OF THE CLOSURE POUR

## NOTES AND LEGEND

TEMPORARY BARRIERS SHALL BE ANCHORED TO EXISTING AND PROPOSED BRIDGE DECK. TWO (2) OR THREE (3) ANCHORS PER TEMPORARY BARRIER SEGMENT ARE REQUIRED ON THE TRAFFIC SIDE OF THE BARRIER. THE ANCHOR BOLT PATTERN SHALL BE SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. SEE STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.

PCB - INDICATES PORTABLE CONCRETE BARRIER.

## PROPOSED WORK

1. MAINTAIN TRAFFIC BY USE OF STAGE CONSTRUCTION
2. REPLACE CONCRETE DECK AND STEEL BEAMS
3. WIDEN AND MODIFIED EXISTING SUBSTRUCTURE UNITS

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: SER
DATE: 8-27-99
STRUCTURE FILE NUMBER: 5203937L/5203961R
DRAWN: TAA
REVISED:
DESIGNED: TAA
CHECKED: DFT

STAGE CONSTRUCTION
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78



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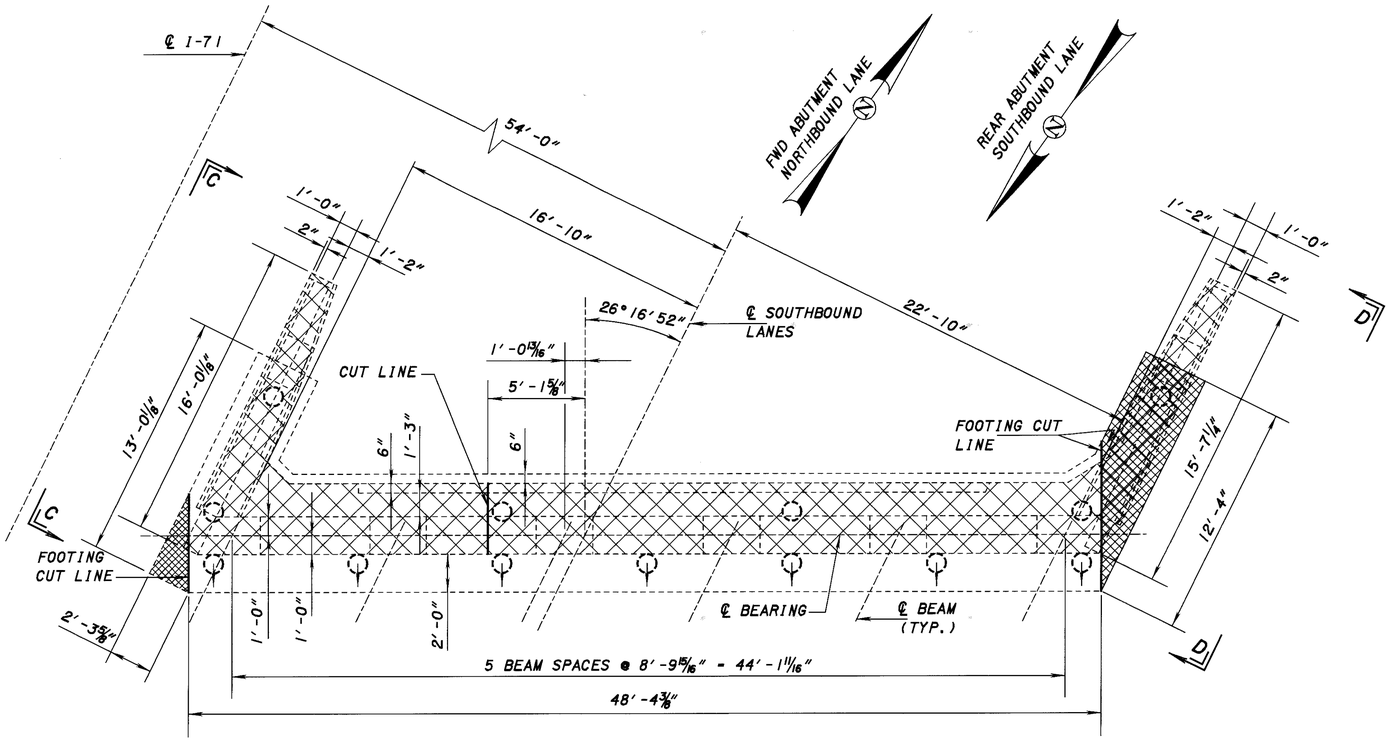
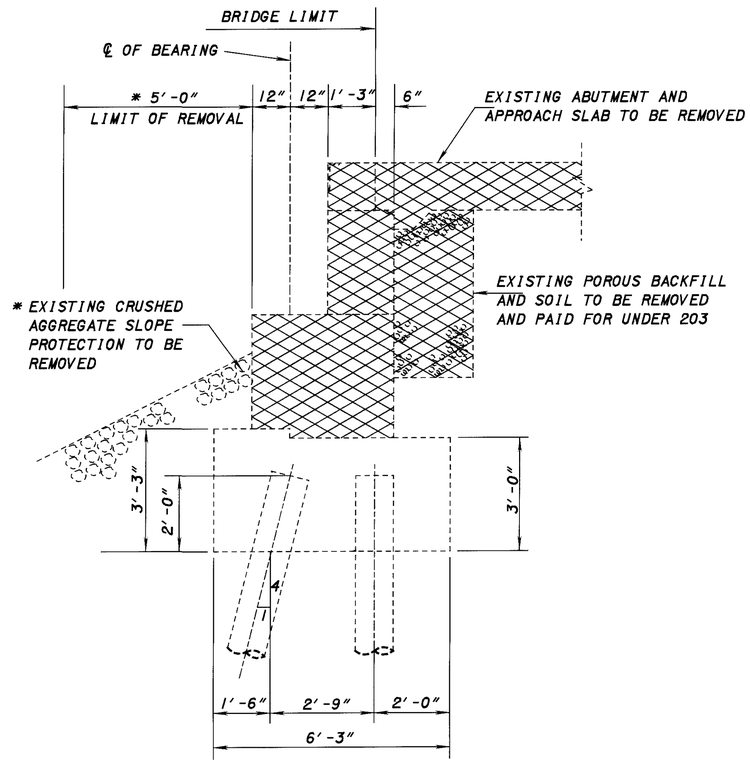
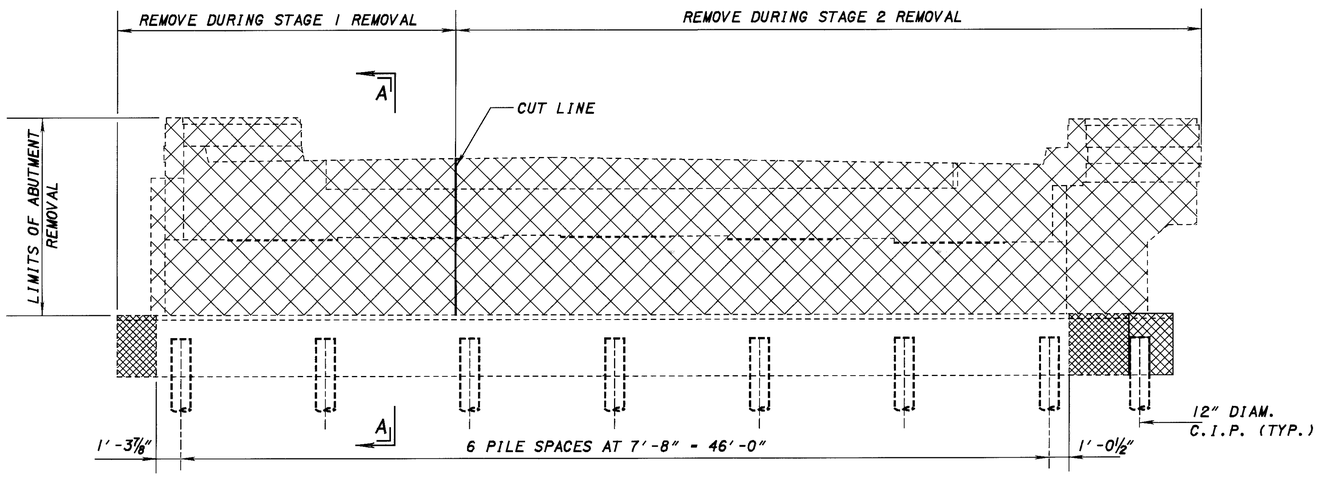



## PLAN

(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)




## SECTION A-A




## ELEVATION

(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)

## NOTES

FOR VIEW C-C AND D-D SEE SHEET 7/31

## LEGEND

PORTION OF STRUCTURE TO BE REMOVED

INDICATE BATTERED PILE

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| TAA | TAA | SER | 8-27-99 |
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| DFT | | 5203937L/5203961R | |

EXISTING ABUTMENT PLAN AND ELEVATION
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

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940

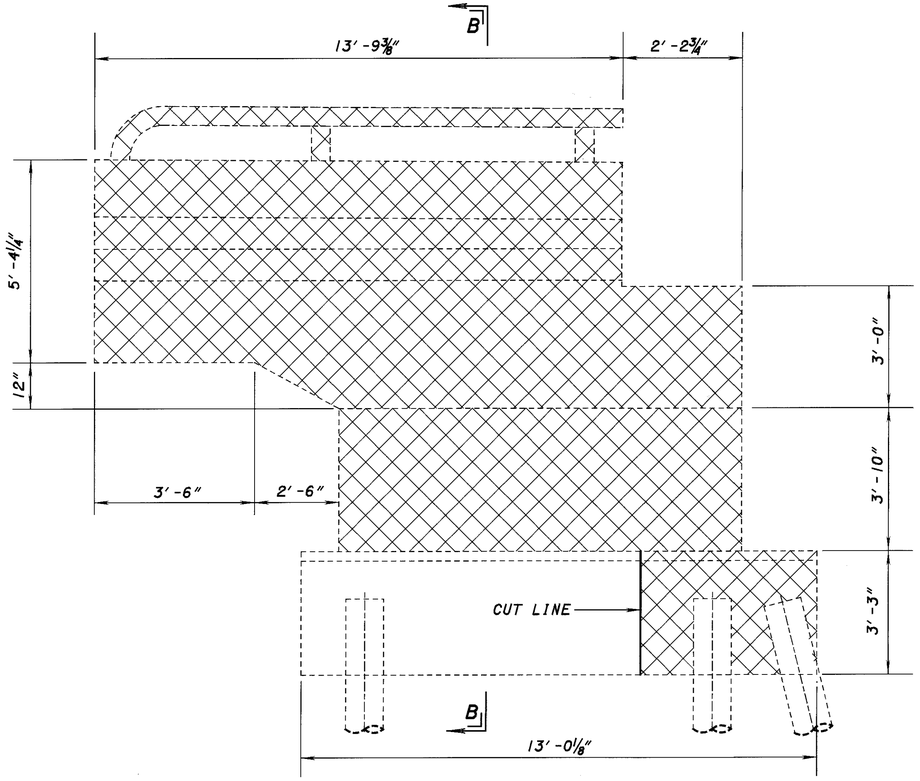
## NOTES AND LEGEND

FOR SECTION B-B SEE SHEET 8 / 31

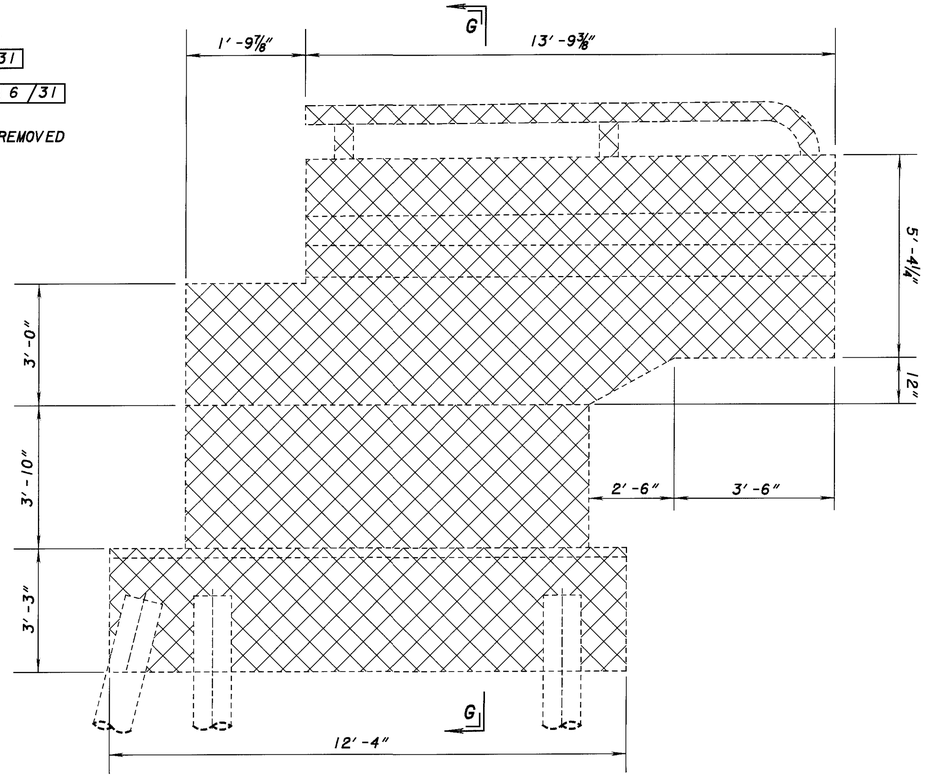
FOR VIEW C-C AND D-D SEE SHEET 6 / 31

PORTION OF STRUCTURE TO BE REMOVED

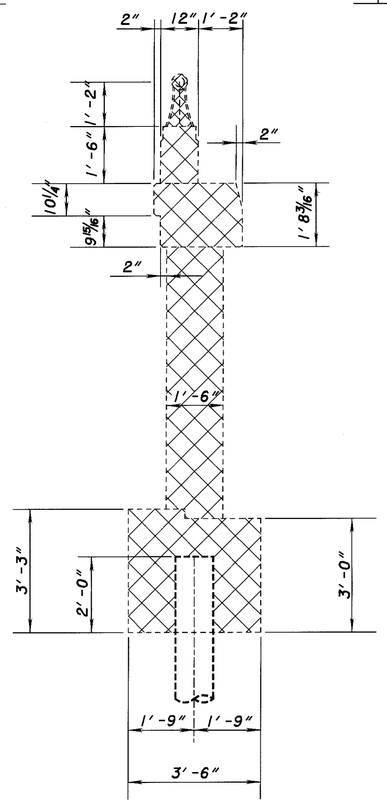
INDICATE BATTERED PILE




VIEW C-C




VIEW D-D




SECTION G-G

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

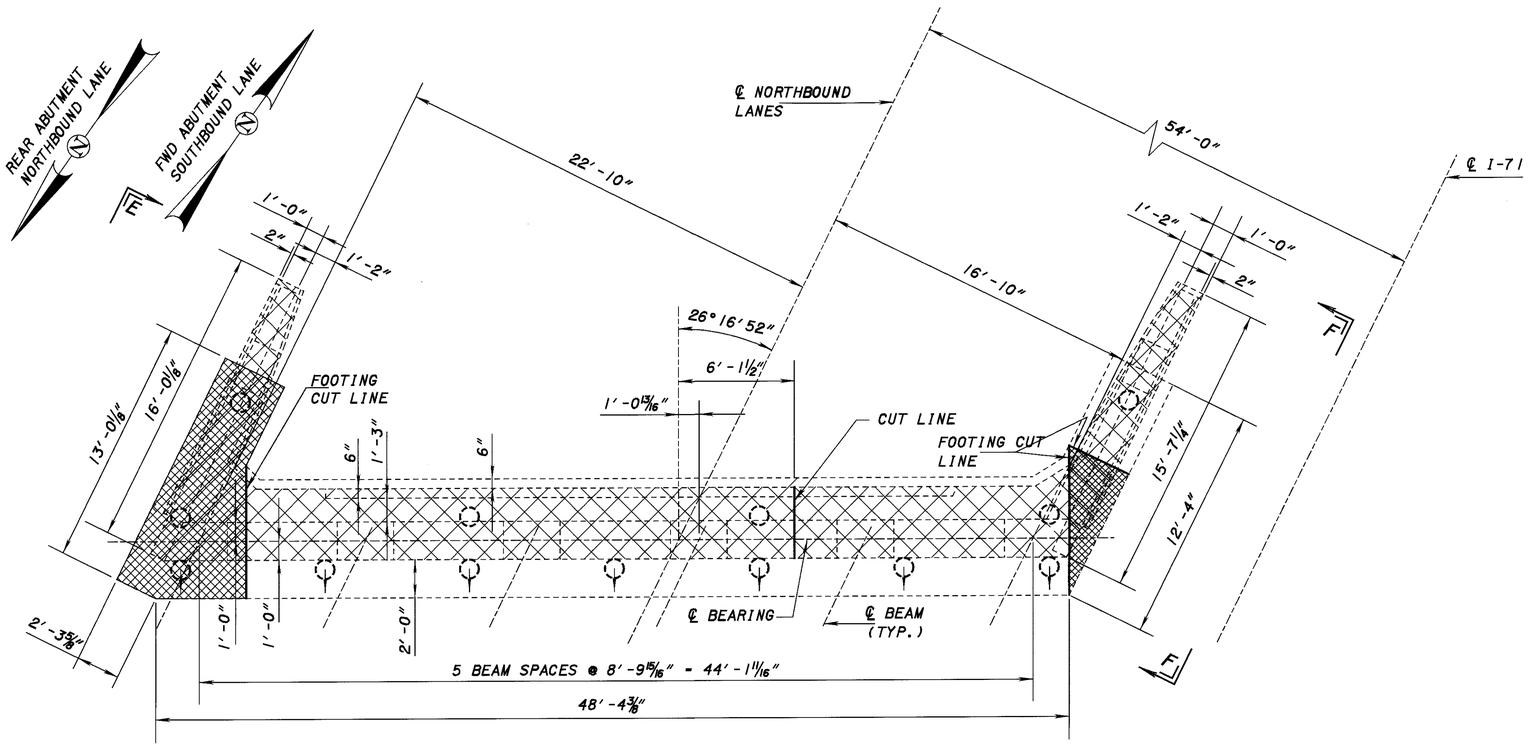
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | SER | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5203937L/5203961R | |

EXISTING WINGWALL DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

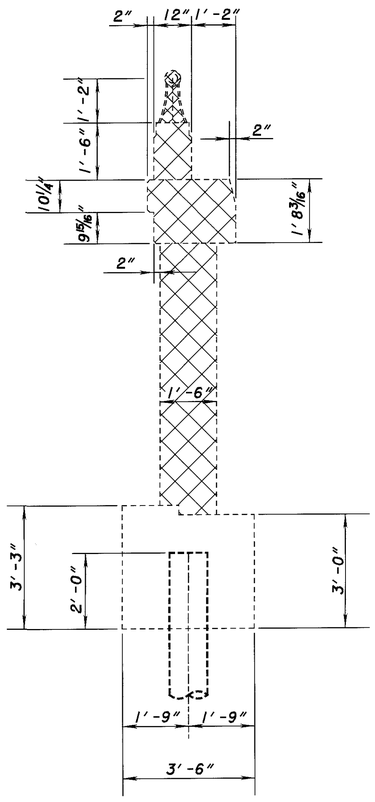
7 / 31

843
940

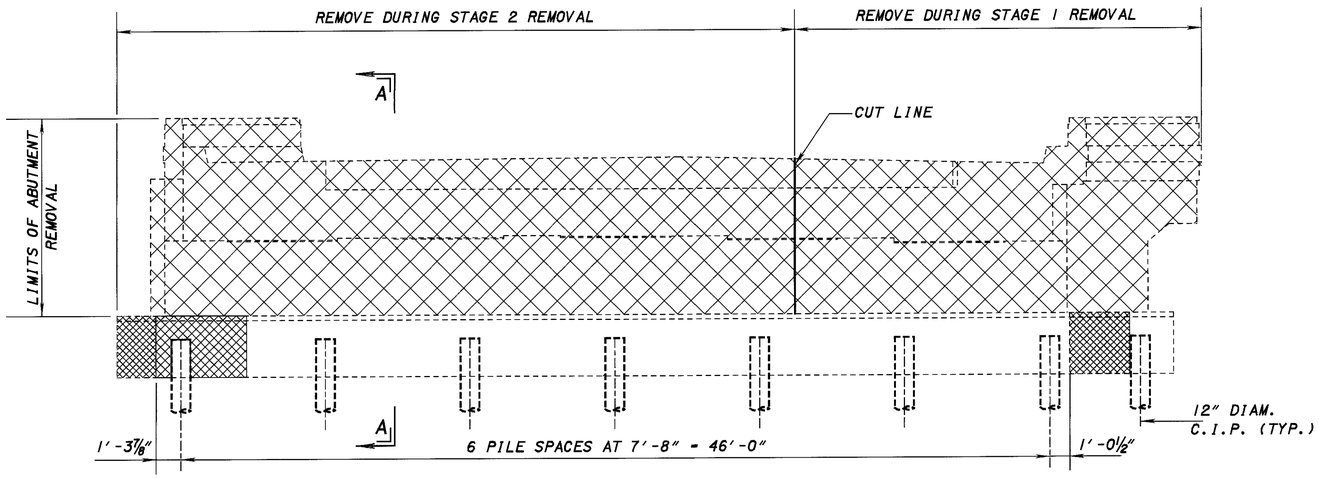



## PLAN

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)




## SECTION B-B




## ELEVATION

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)

## NOTES

FOR SECTION A-A SEE SHEET 6/31

FOR VIEW E-E AND F-F SEE SHEET 9/31

## LEGEND

PORTION OF STRUCTURE TO BE REMOVED

INDICATE BATTERED PILE

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED SER DATE 8-27-99
STRUCTURE FILE NUMBER 5203937L/5203961R

DESIGNED TAA
DRAWN TAA
REVISED
CHECKED DFT

# EXISTING ABUTMENT PLAN AND ELEVATION

MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

8/31

844/940

## NOTES AND LEGEND

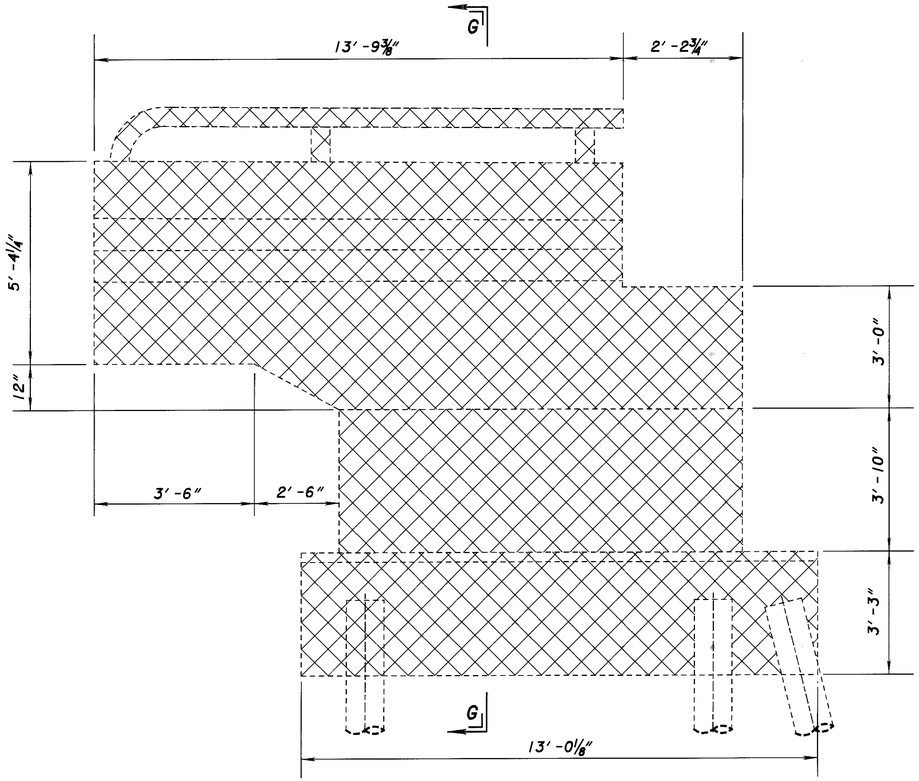
FOR SECTION B-B SEE SHEET 8/31

FOR SECTION G-G SEE SHEET 7/31

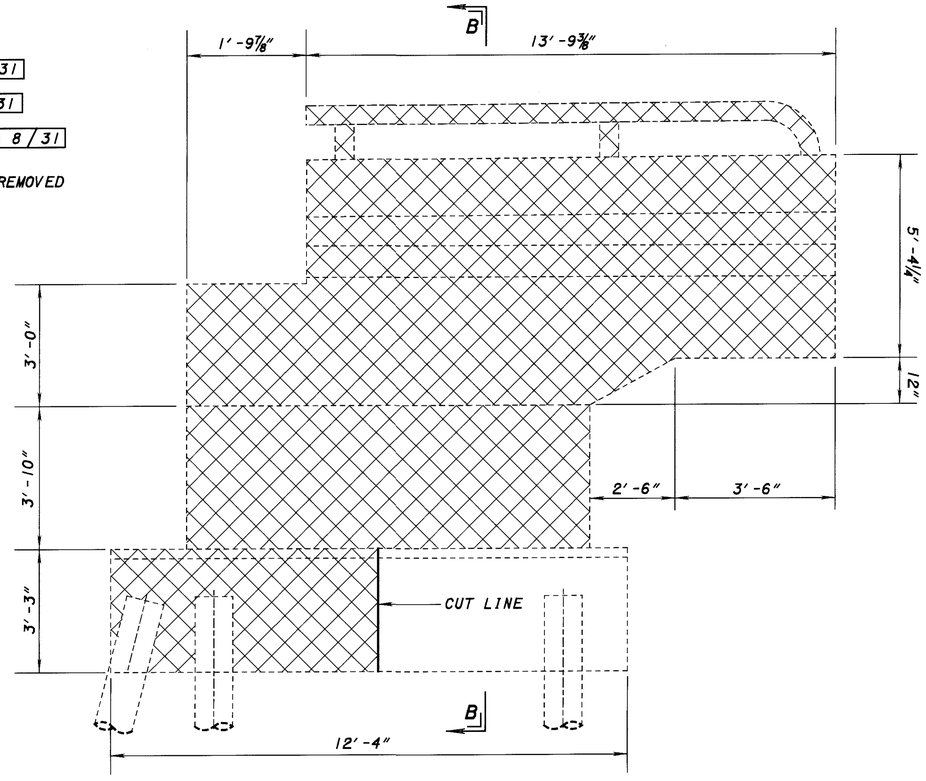
FOR VIEW E-E AND F-F SEE SHEET 8/31

PORTION OF STRUCTURE TO BE REMOVED

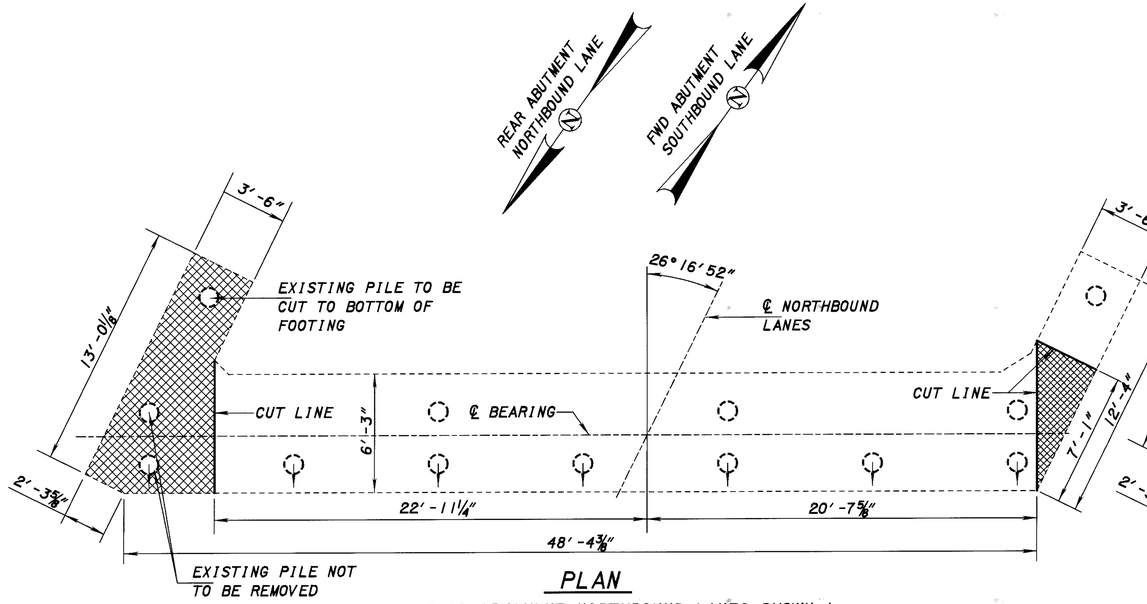
INDICATE BATTERED PILE




VIEW E-E

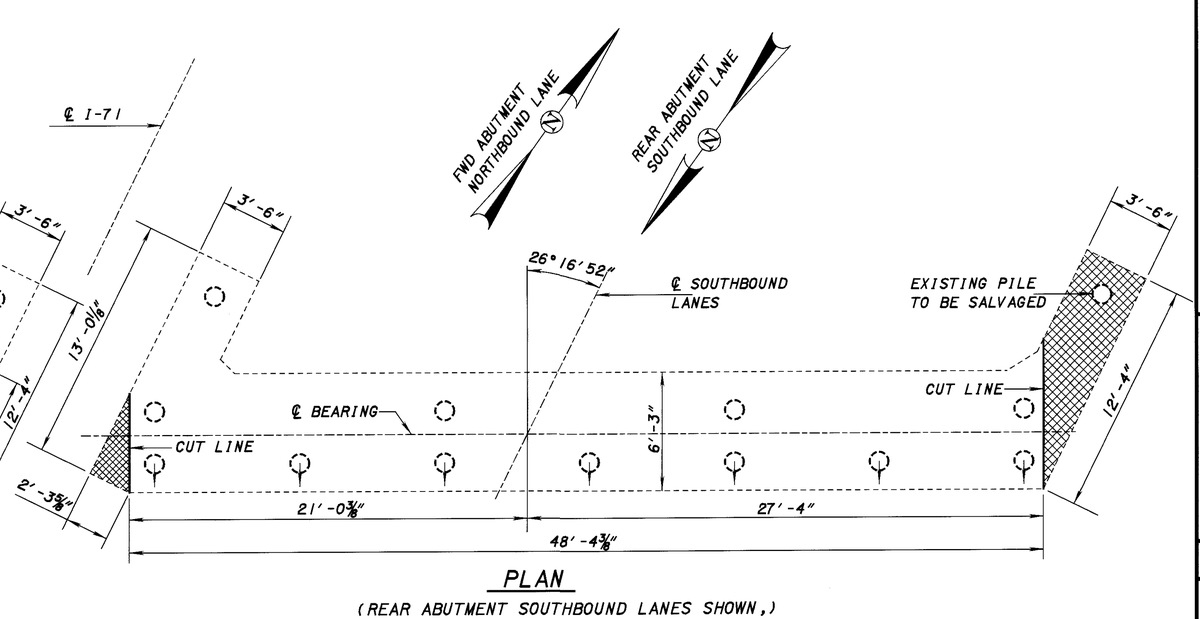



VIEW F-F




PLAN

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)




PLAN

(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| TAA | TAA | SER | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5203937L/5203961R | |

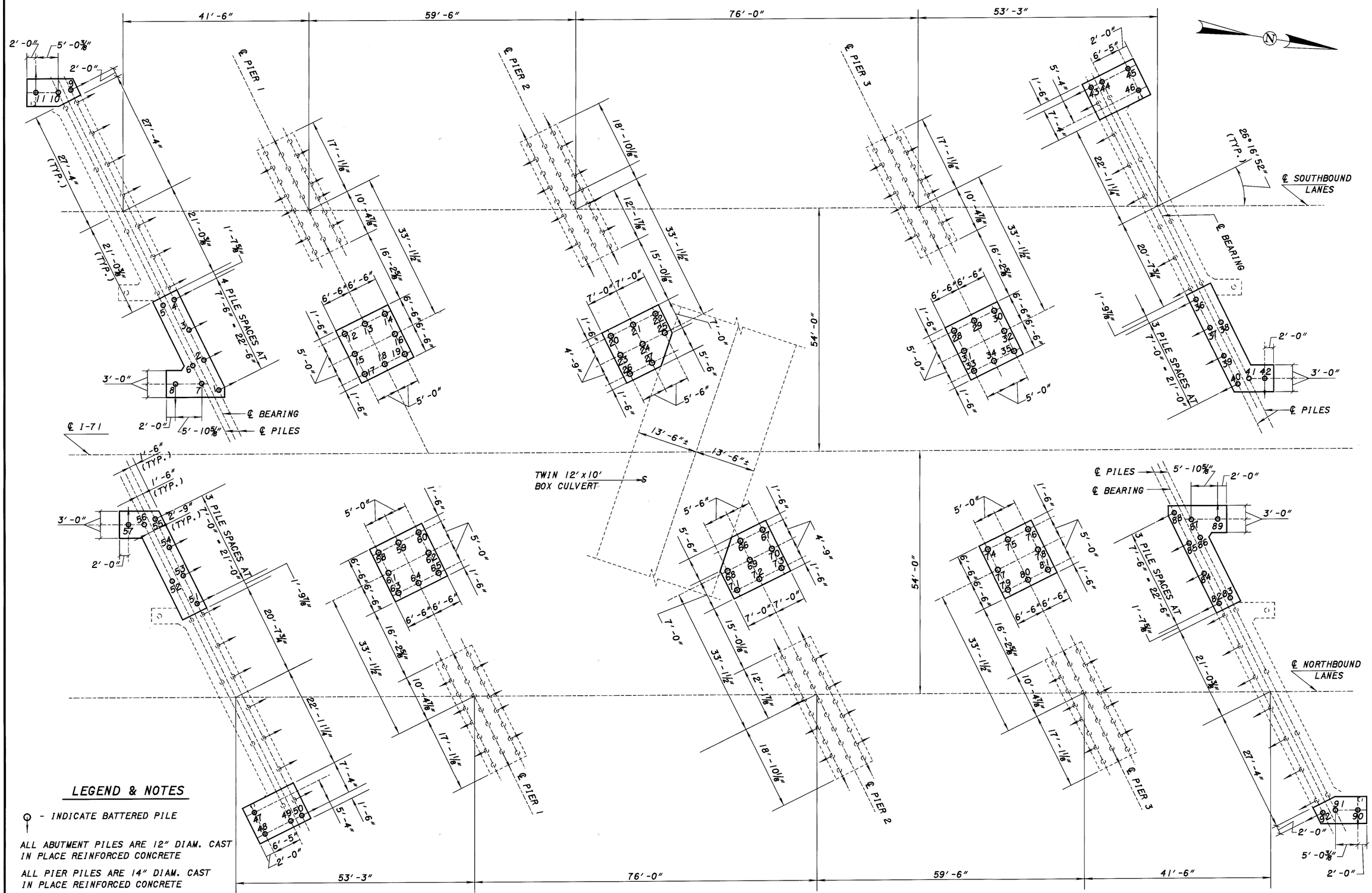
EXISTING FOOTING AND WINGWALL DETAILS

MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

9 / 31

845
940




DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED SER DATE 8-27-99
STRUCTURE FILE NUMBER 5203937L/5203961R

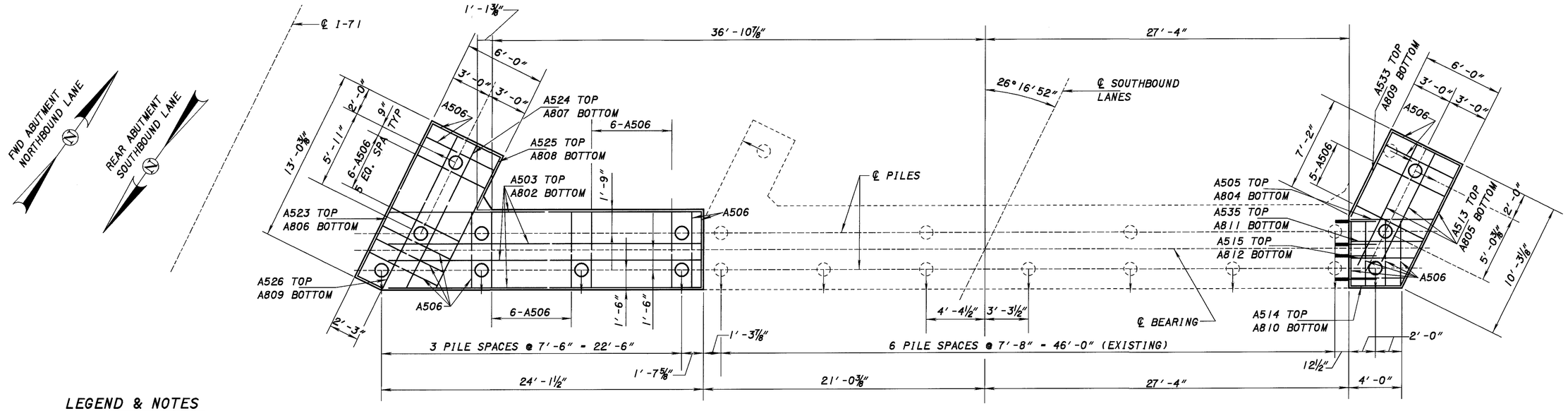
DESIGNED TAA
DRAWN TAA
CHECKED DFT
REVISED

FOUNDATION DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

10/31

846/940



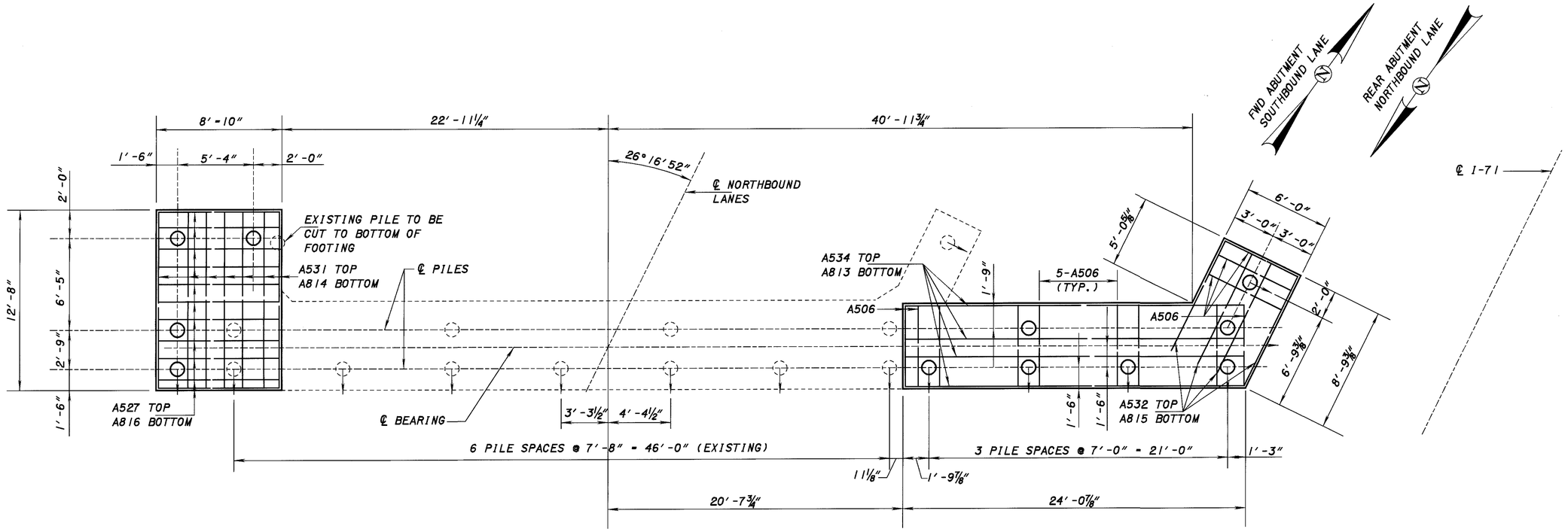

## LEGEND & NOTES

⚲ - INDICATE BATTERED PILE

ALL PILES ARE 12" DIAM. CAST IN PLACE REINFORCED CONCRETE

## FOOTING PLAN

(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)




## FOOTING PLAN

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED | DATE | STRUCTURE FILE NUMBER: 5203937L/5203961R
DRAWN: TAA | REVISED
DESIGNED: TAA | CHECKED: DFT

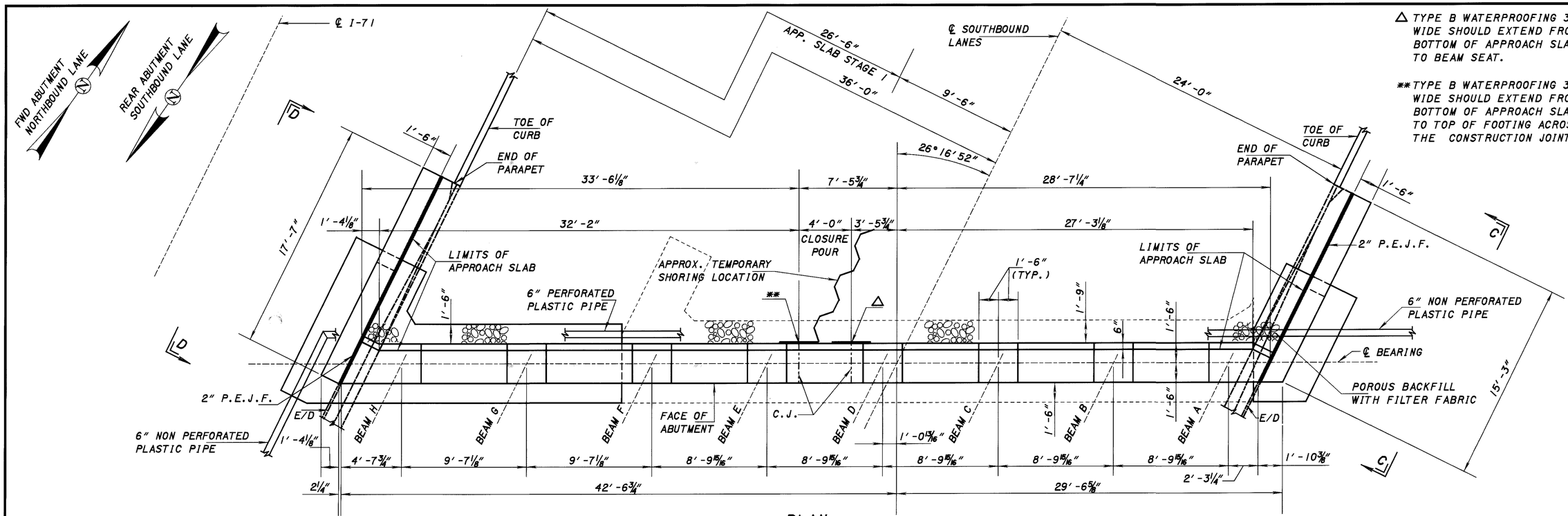
# FOOTING DETAILS

MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

11 / 31

847
940




## PLAN

(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)

| LOCATION / ELEVATION | ELEVATIONS | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
| SOUTHBOUND LANE REAR ABUTMENT | 1063.27 | 1063.42 | 1063.57 | 1063.68 | 1063.58 | 1063.48 | 1063.37 | 1063.26 | 1068.17 | 1068.61 | 1068.57 | 1068.53 | 1068.16 | 1055.44 |
| NORTHBOUND LANE FWD. ABUTMENT | 1064.81 | 1064.91 | 1065.01 | 1065.09 | 1064.94 | 1064.80 | 1064.65 | 1064.49 | 1069.72 | 1070.04 | 1069.99 | 1069.95 | 1069.38 | 1056.93 |

## NOTES

FOR SECTION A-A & B-B SEE SHEET 16/31

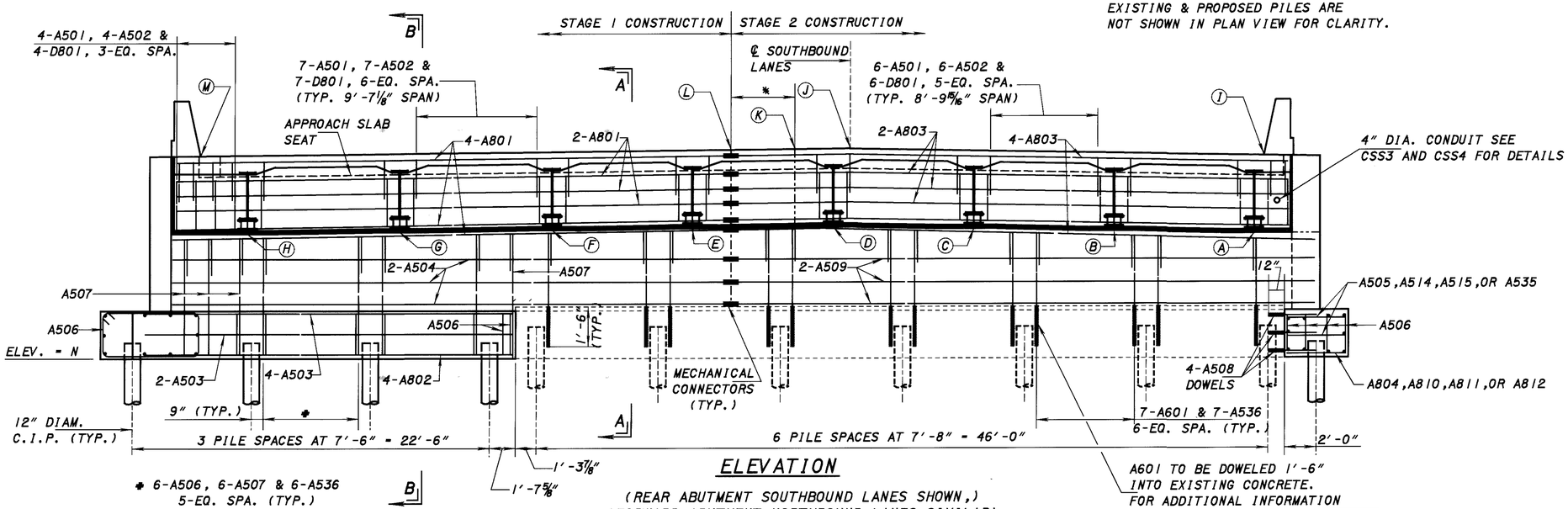
FOR VIEW C-C & D-D SEE SHEET 13/31

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

EXISTING & PROPOSED PILES ARE NOT SHOWN IN PLAN VIEW FOR CLARITY.

## LEGEND

| | |
|---|---|
| E/D | - EDGE OF DECK |
| C.J. | - CONSTRUCTION JOINT |
| E.F. | - EACH FACE |
| T.O.P. | - TOE OF PARAPET |
| * | - CLOSURE POUR IN THE BACKWALL |




## ELEVATION

(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)

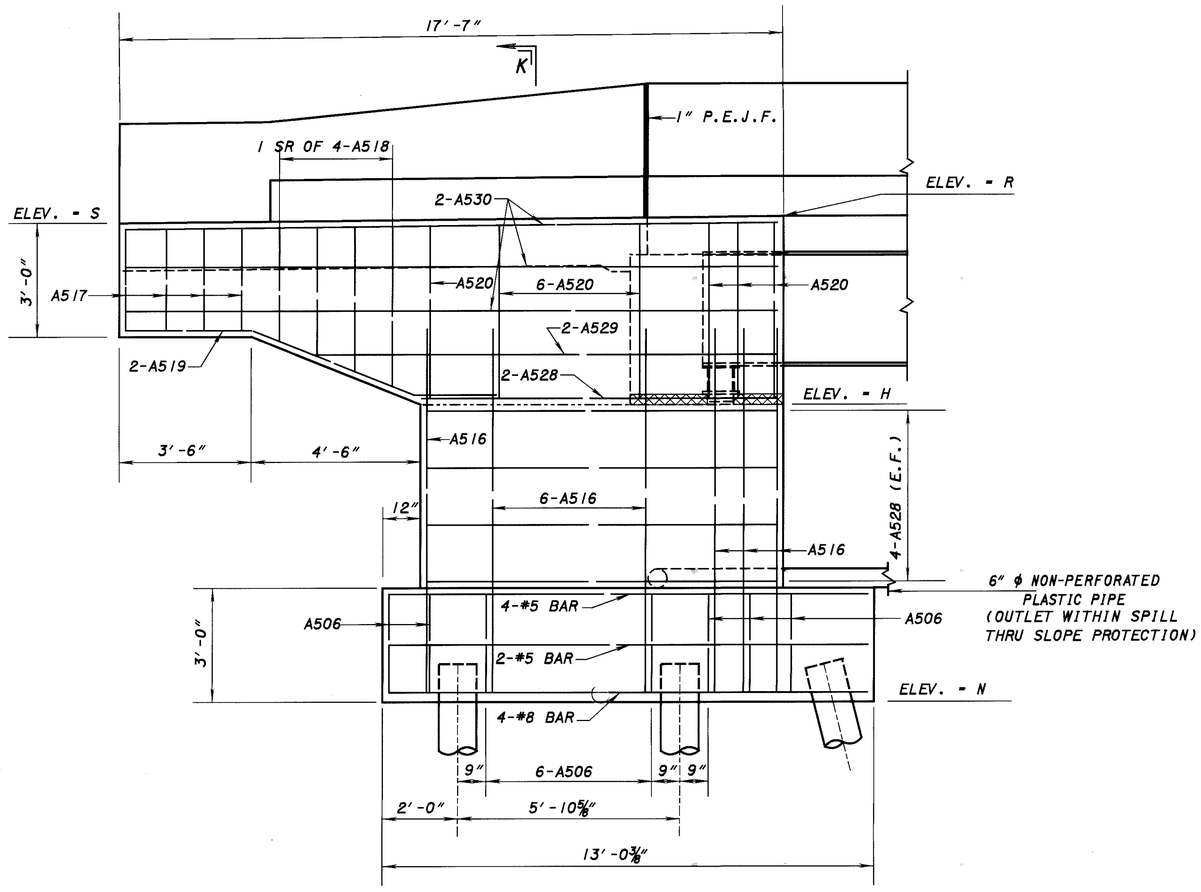
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: SER — DATE: 8-27-99
DRAWN: TAA — REVISED
DESIGNED: TAA — CHECKED: DFT
STRUCTURE FILE NUMBER: 5203937L/5203961R

ABUTMENT DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

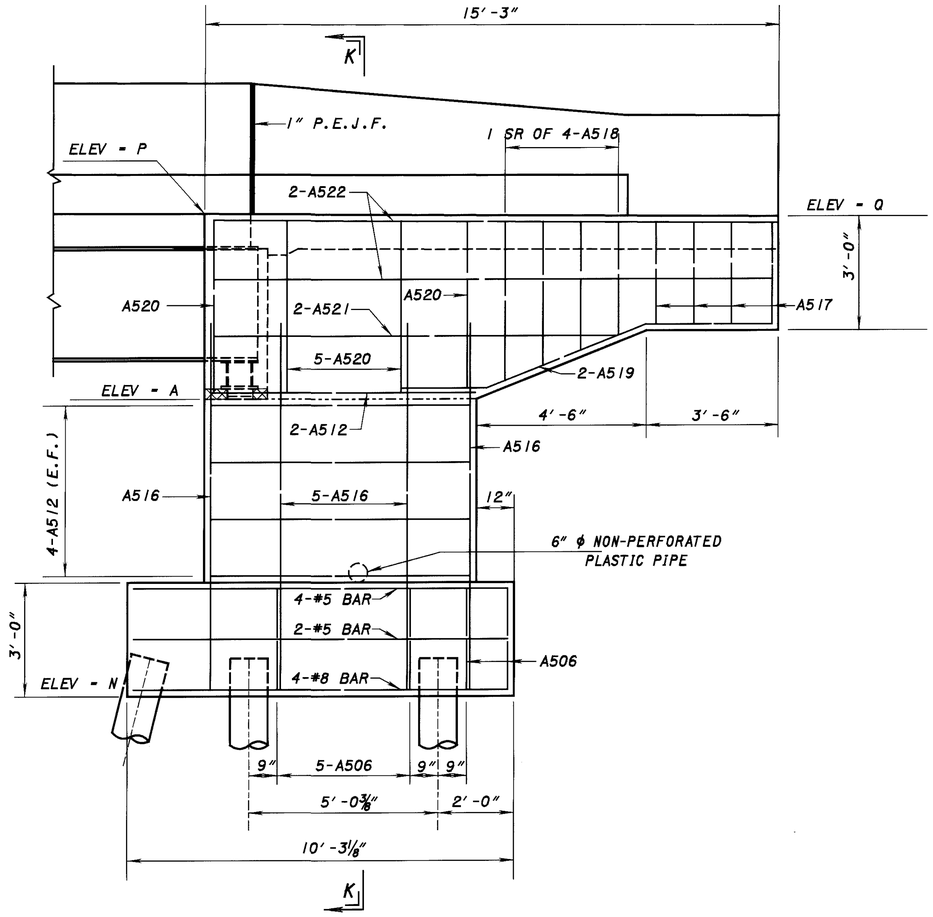
12/31

848/940




VIEW D-D

(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)




VIEW C-C

(REAR ABUTMENT SOUTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT NORTHBOUND LANES SIMILAR)

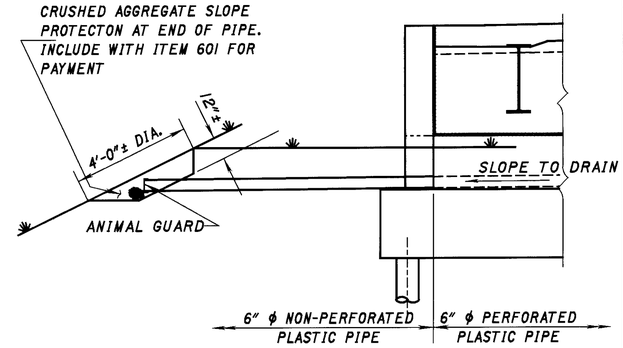
| LOCATION / ELEVATION | ELEVATIONS | | | |
|---|---|---|---|---|
| | N | H | R | S |
| SOUTHBOUND LANE REAR ABUTMENT | 1055.44 | 1063.26 | 1068.17 | 1068.07 |
| NORTHBOUND LANE FWD. ABUTMENT | 1056.93 | 1064.49 | 1069.33 | 1069.42 |

| LOCATION / ELEVATION | ELEVATIONS | | | |
|---|---|---|---|---|
| | A | N | P | Q |
| SOUTHBOUND LANE REAR ABUTMENT | 1063.27 | 1055.44 | 1068.17 | 1068.08 |
| NORTHBOUND LANE FWD. ABUTMENT | 1064.81 | 1056.93 | 1069.68 | 1069.76 |

## NOTES

FOR SECTIONS K-K SEE SHEET 16/31

ALL PILES ARE 12″ DIAM. CAST IN PLACE CONCRETE




PIPE OUTLET DETAIL
(AT VIEW C-C)

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

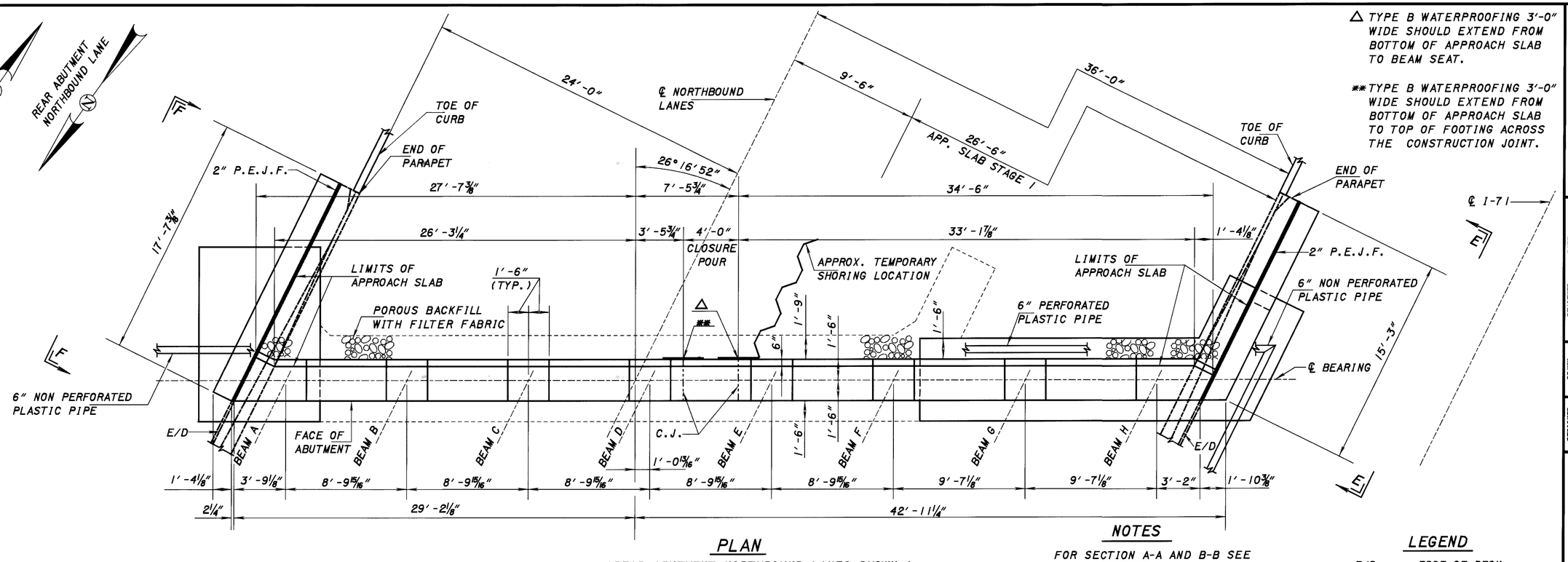
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | SER | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5203937L/5203961R | |

WINGWALL DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

13/31

849
940




△ TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO BEAM SEAT.

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

## PLAN

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)

| LOCATION / ELEVATION | ELEVATIONS | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
| NORTHBOUND LANE REAR ABUTMENT | 1063.55 | 1063.65 | 1063.75 | 1063.82 | 1063.68 | 1063.53 | 1063.37 | 1063.22 | 1068.46 | 1068.76 | 1068.72 | 1068.67 | 1068.09 | 1055.68 |
| SOUTHBOUND LANE FWD. ABUTMENT | 1064.56 | 1064.71 | 1064.85 | 1064.96 | 1064.86 | 1064.76 | 1064.65 | 1064.53 | 1069.47 | 1069.91 | 1069.87 | 1069.82 | 1069.44 | 1056.69 |

## NOTES

FOR SECTION A-A AND B-B SEE SHEET 16/31

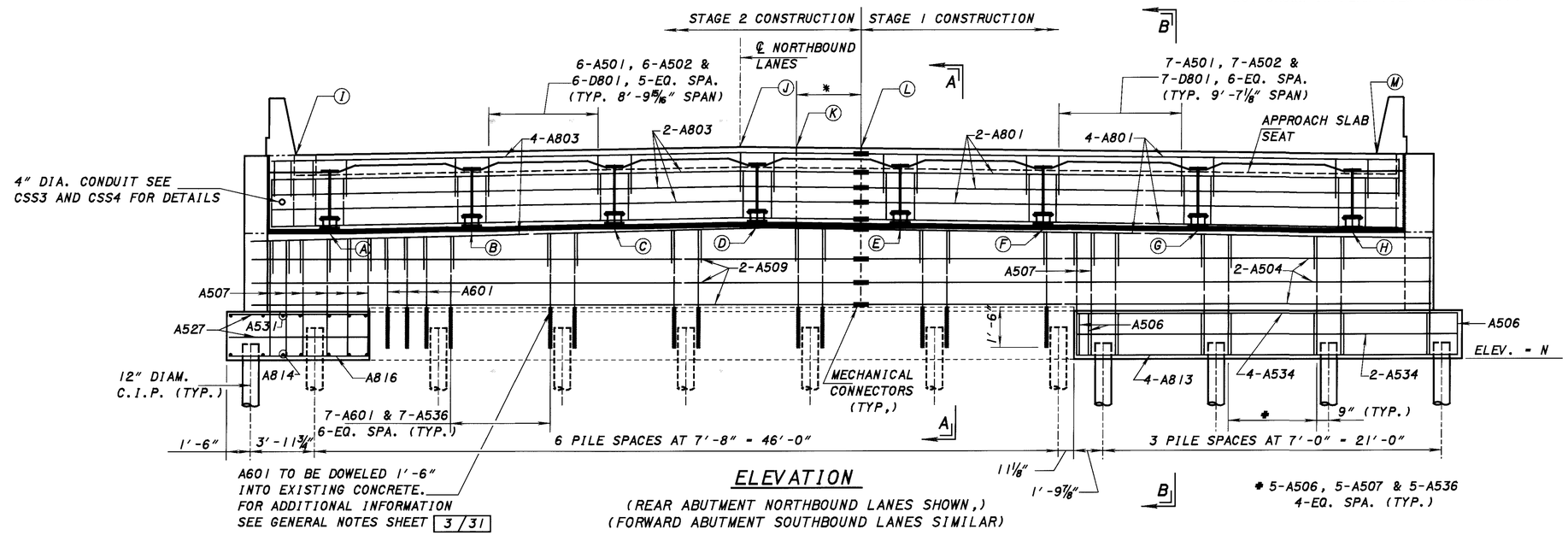
FOR VIEW E-E & F-F SEE SHEET 15/31

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

EXISTING & PROPOSED PILES ARE NOT SHOWN IN PLAN VIEW FOR CLARITY.

## LEGEND

| | |
|---|---|
| E/D | - EDGE OF DECK |
| C.J. | - CONSTRUCTION JOINT |
| E.F. | - EACH FACE |
| T.O.P. | - TOE OF PARAPET |
| * | - CLOSURE POUR IN THE BACKWALL |




## ELEVATION

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)

* 5-A506, 5-A507 & 5-A536 4-EQ. SPA. (TYP.)

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGN AGENCY

| REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|
| SER | 8-27-99 | 5203937L/5203961R |

| DRAWN | REVISED |
|---|---|
| TAA | |

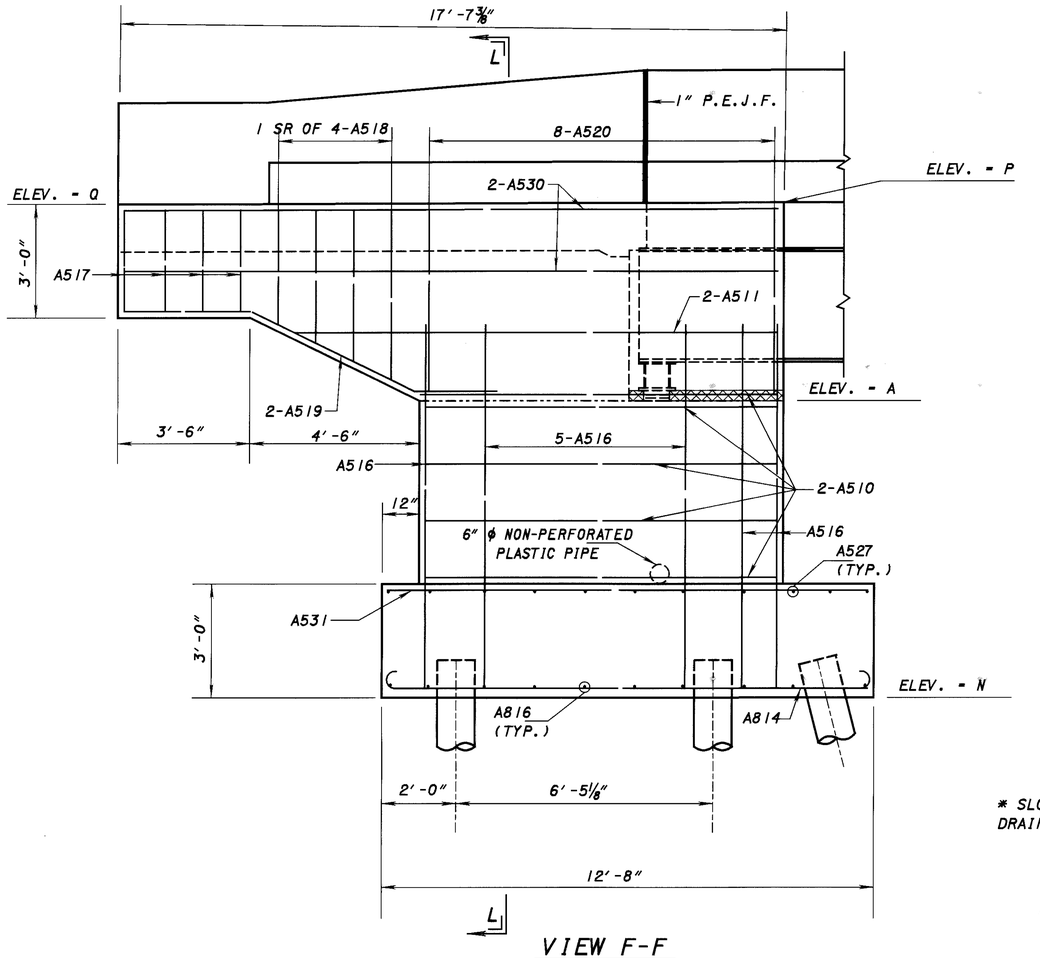
| DESIGNED | CHECKED |
|---|---|
| TAA | DFT |

ABUTMENT DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

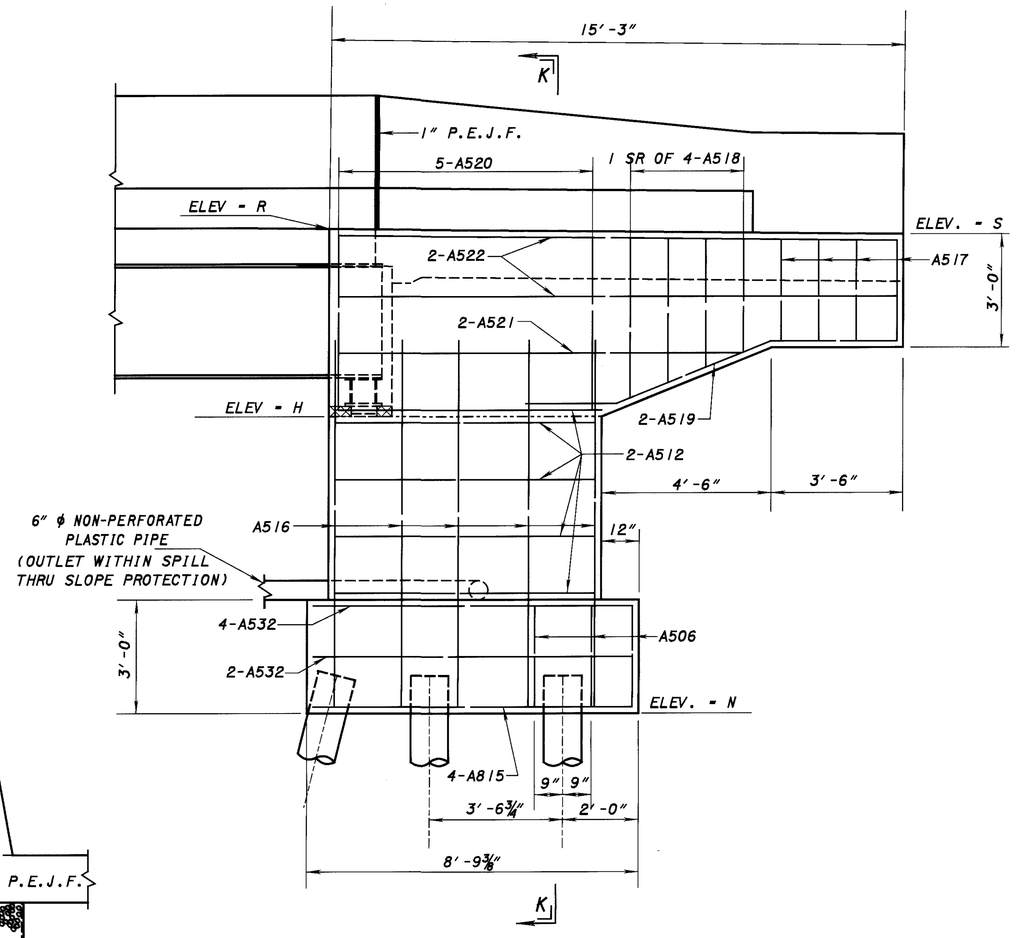
14/31

850/940



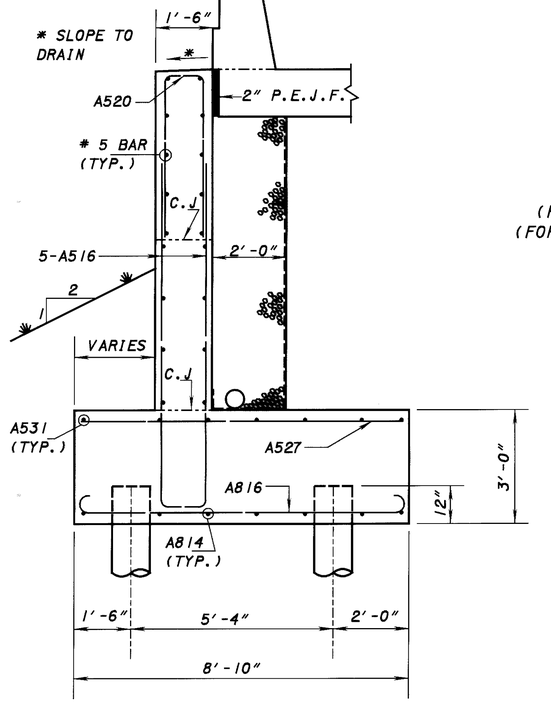

## VIEW F-F

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)
(FOOTING ORIENTED PERPENDICULAR TO ℄ BEARING)




## VIEW E-E

(REAR ABUTMENT NORTHBOUND LANES SHOWN,)
(FORWARD ABUTMENT SOUTHBOUND LANES SIMILAR)




## SECTION L-L

| LOCATION / ELEVATION | ELEVATIONS | | | |
|---|---|---|---|---|
| | N | H | R | S |
| NORTHBOUND LANE REAR ABUTMENT | 1055.68 | 1063.22 | 1068.08 | 1067.99 |
| SOUTHBOUND LANE FWD. ABUTMENT | 1056.69 | 1064.53 | 1069.40 | 1069.47 |

| LOCATION / ELEVATION | ELEVATIONS | | | |
|---|---|---|---|---|
| | A | N | P | Q |
| NORTHBOUND LANE REAR ABUTMENT | 1063.55 | 1055.68 | 1068.46 | 1068.36 |
| SOUTHBOUND LANE FWD. ABUTMENT | 1064.56 | 1056.69 | 1069.41 | 1069.51 |

## NOTES

FOR SECTIONS K-K SEE SHEET 16/31

ALL PILES ARE 12″ DIAM. CAST IN PLACE CONCRETE

FOR ADDITIONAL INFORMATION NOT SHOWN IN SECTION L-L SEE SECTION K-K SHEET 16/31

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED SER DATE 8-27-99
STRUCTURE FILE NUMBER 5203937L/5203961R

DRAWN TAA
REVISED

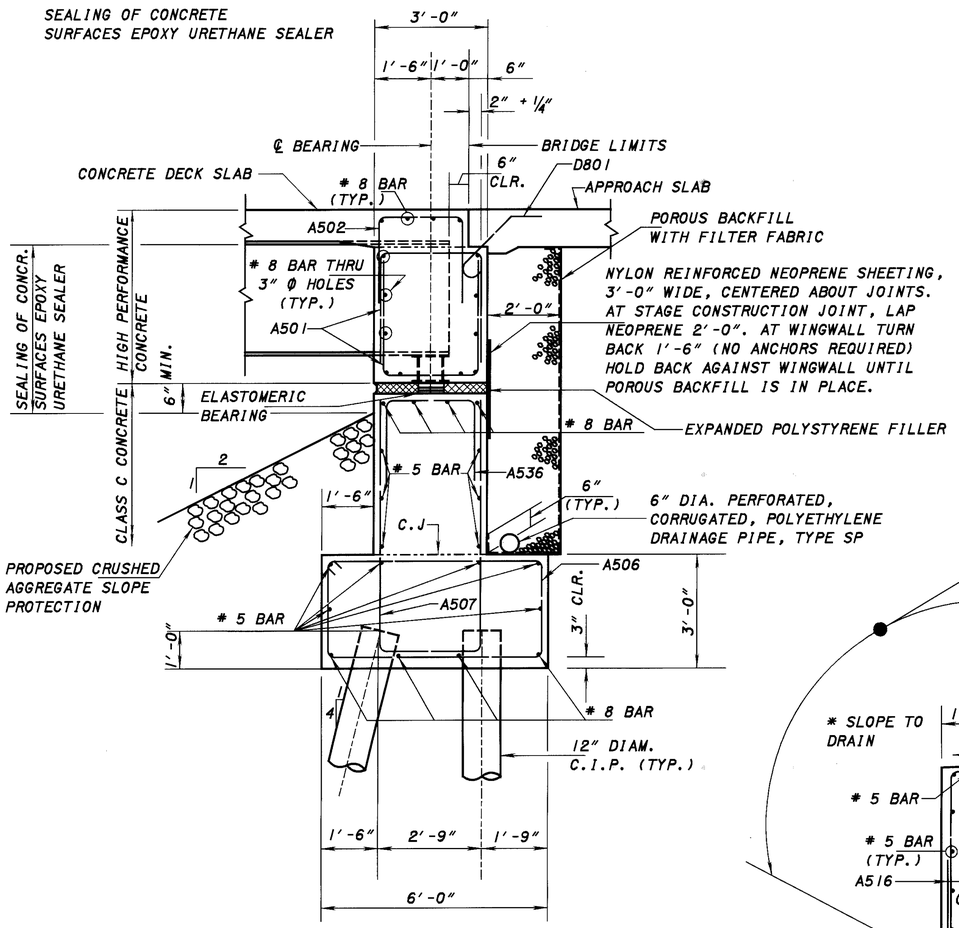
DESIGNED TAA
CHECKED DFT

WINGWALL DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

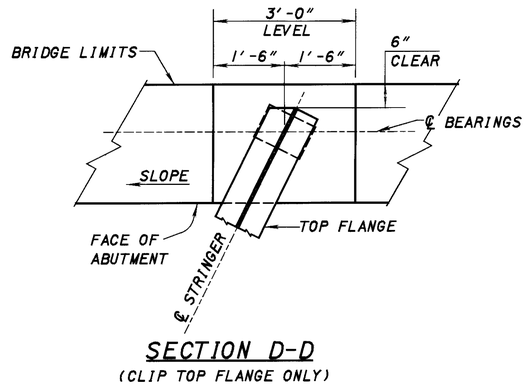
MED-71-15.78

15/31

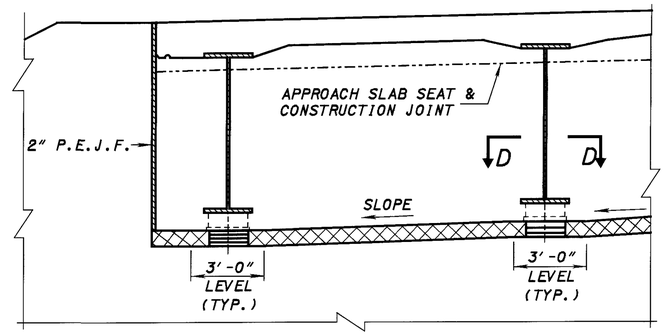
851
940



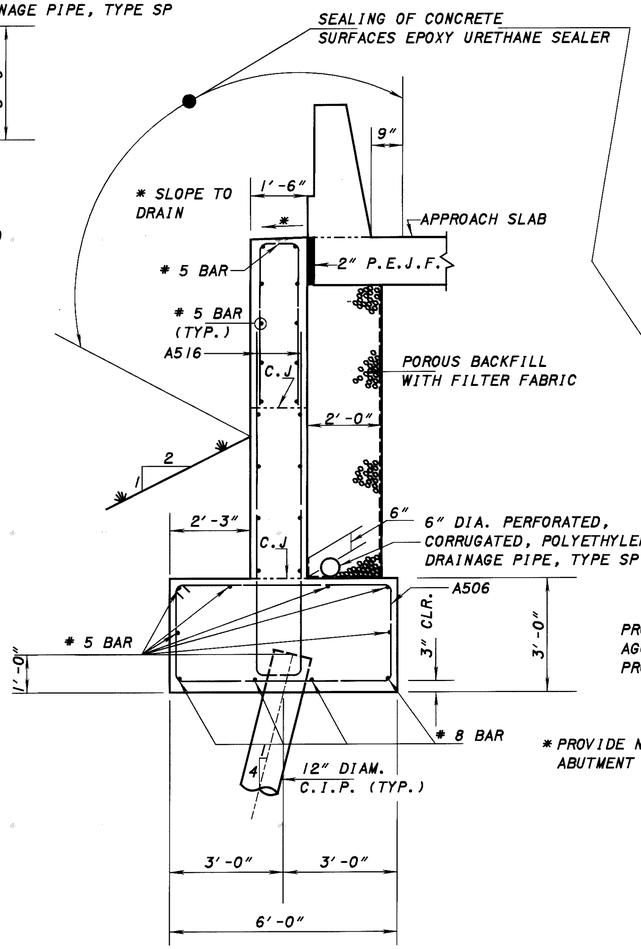

## SECTION B-B



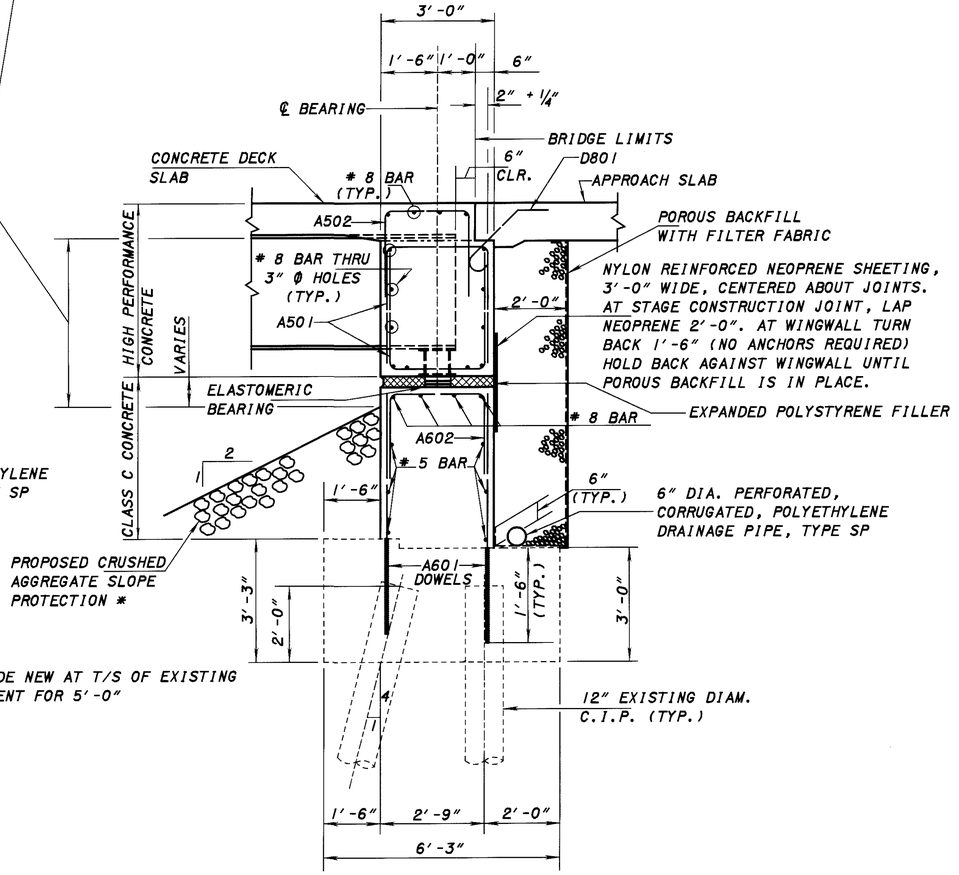

## SECTION D-D
(CLIP TOP FLANGE ONLY)




## PART ELEVATION OF BEAM SEAT




## SECTION K-K




## SECTION A-A

* PROVIDE NEW AT T/S OF EXISTING ABUTMENT FOR 5'-0"

## NOTES

**POROUS BACKFILL:**
POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 12" BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE FACE OF THE WINGWALLS.

**DIAPHRAGM** CONCRETE ENCASING THE STEEL BEAMS SUPPORTED IN THE SEMI INTEGRAL ABUTMENT SHALL BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.

PROVIDE 3" Ø HOLE THRU WEB AS NOTED, PAYMENT TO BE INCLUDED AS INCIDENTAL WITH ITEM 863 STRUCTURAL STEEL. PAYMENT FOR THE EXPANDED POLYSTYRENE FILLER TO BE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE AS INCIDENTAL.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE | REVISED |
|---|---|---|---|---|
| TAA | TAA | | 8-27-99 | SER |

STRUCTURE FILE NUMBER: 5203937L/5203961R

CHECKED: DFT

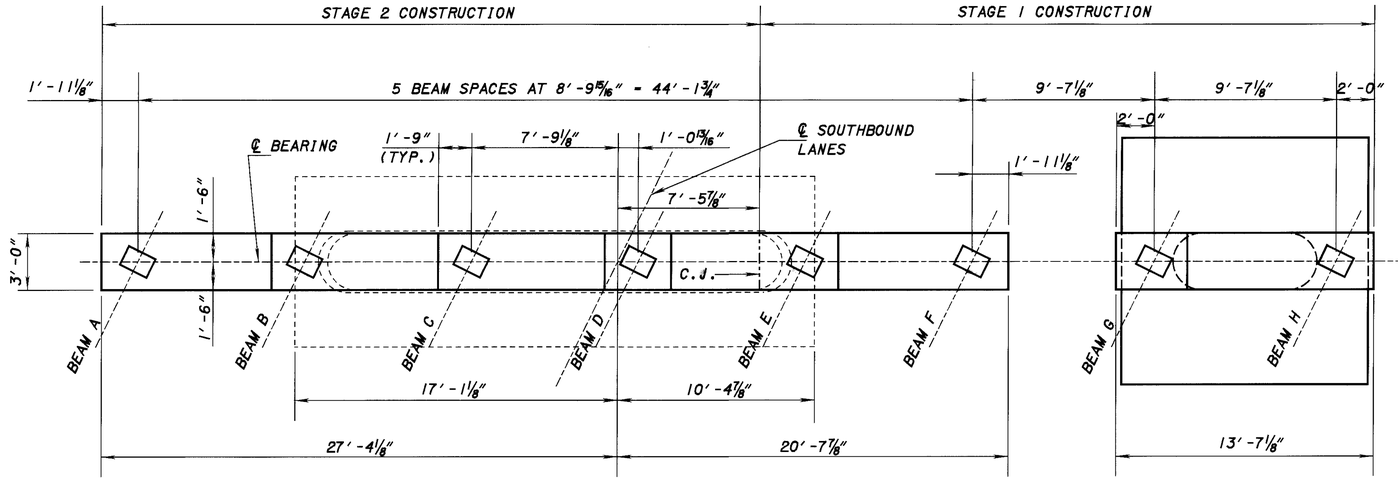
# MISCELLANEOUS DETAILS

MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

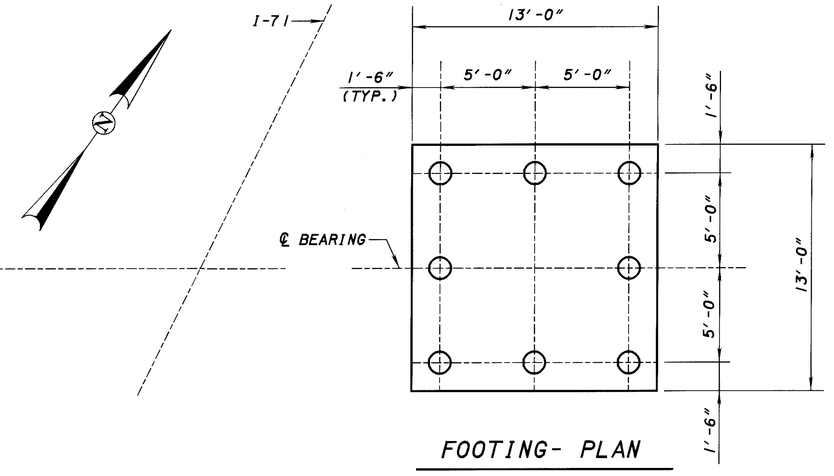
16 / 31

852
940



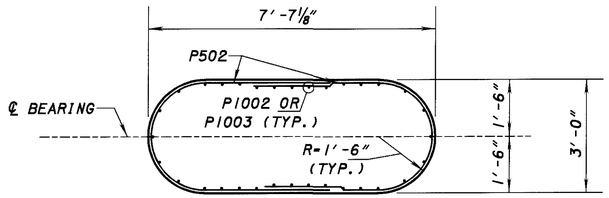

## PLAN

PIER 1 AND PIER 3 SOUTHBOUND LANES



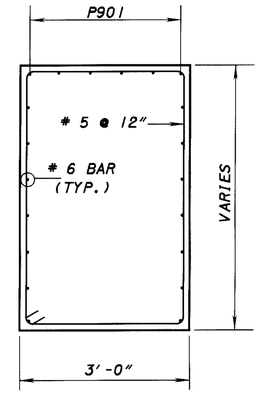

## FOOTING- PLAN

| LOCATION / ELEVATION | ELEVATIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I |
| SOUTHBOUND LANE PIER 1 | 1064.27 | 1064.41 | 1064.56 | 1064.68 | 1064.57 | 1064.47 | 1064.36 | 1064.25 | 1038.15 |
| SOUTHBOUND LANE PIER 3 | 1065.02 | 1065.16 | 1065.31 | 1065.42 | 1065.32 | 1065.22 | 1065.10 | 1064.99 | 1035.87 |

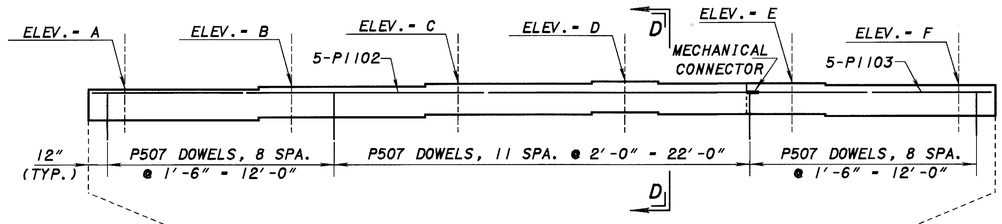


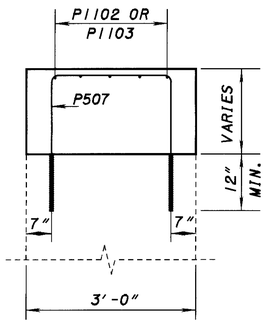

## PLAN

(32 #10 BARS EQUALLY SPACED)



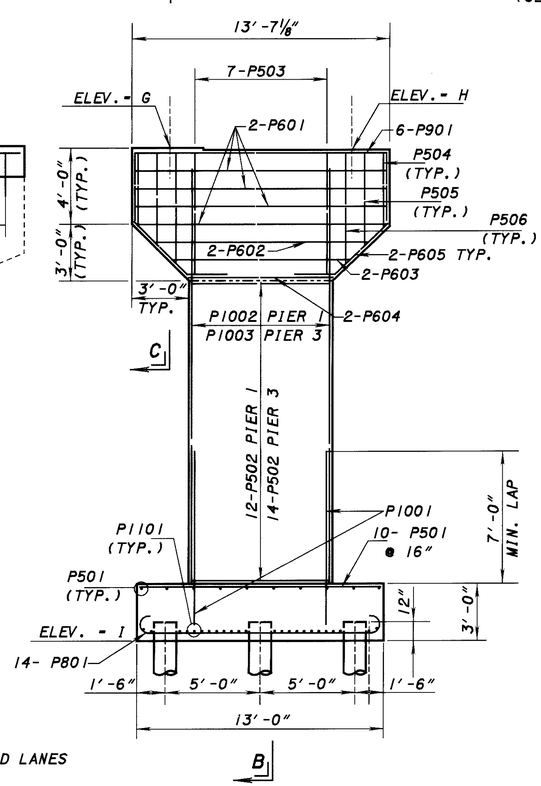

## SECTION C-C



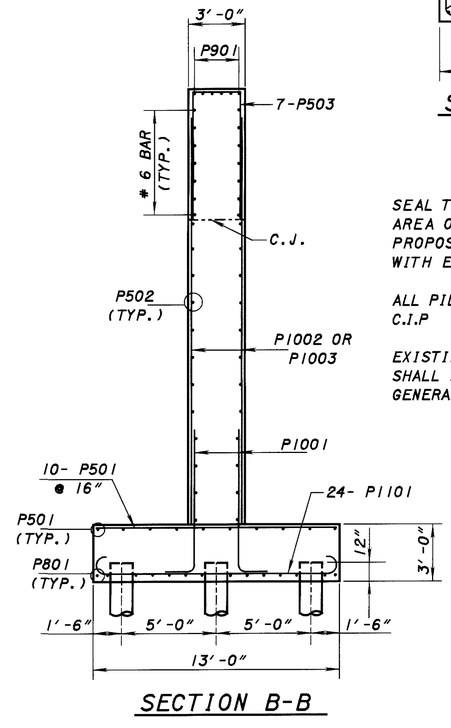

## SECTION D-D




## ELEVATION

PIER 1 AND PIER 3 SOUTHBOUND LANES




## SECTION B-B

## NOTES

SEAL THE ENTIRE SURFACE AREA OF THE EXISTING AND PROPOSED PIER ABOVE GROUND WITH EPOXY URETHANE SEALER

ALL PILES ARE 14" DIAMETER C.I.P

EXISTING PIER BRIDGE SEATS SHALL BE SCARIFIED ¼", SEE GENERAL NOTES.

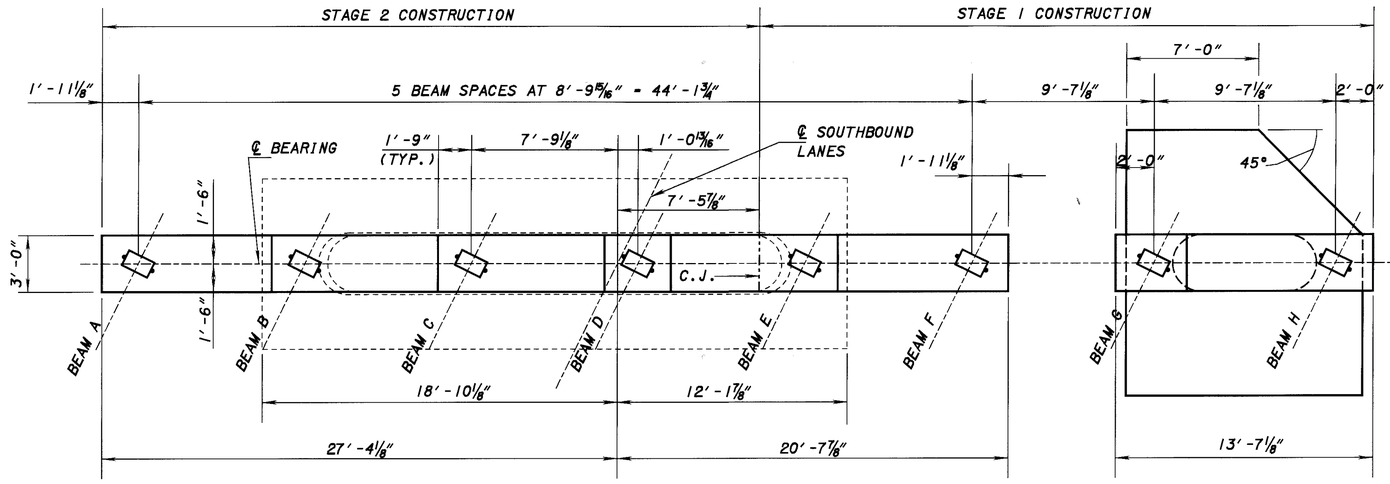
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED: SER — DATE: 8-27-99 — STRUCTURE FILE NUMBER: 5203937L/520396IR
DRAWN: TAA — REVISED:
DESIGNED: TAA — CHECKED: DFT

PIER DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

17 / 31

853
940




## PLAN

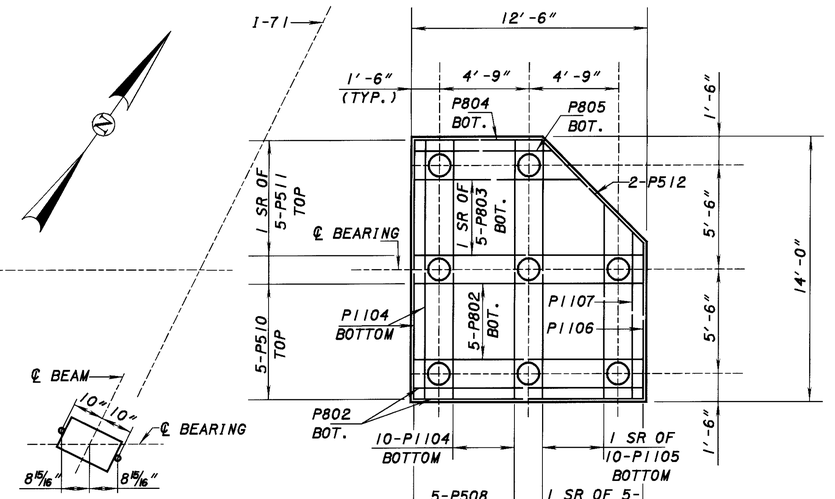
PIER 2 SOUTHBOUND LANES

| LOCATION / ELEVATION | ELEVATIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I |
| SOUTHBOUND LANE PIER 2 | 1064.52 | 1064.67 | 1064.81 | 1064.93 | 1064.83 | 1064.73 | 1064.61 | 1064.50 | 1042.16 |

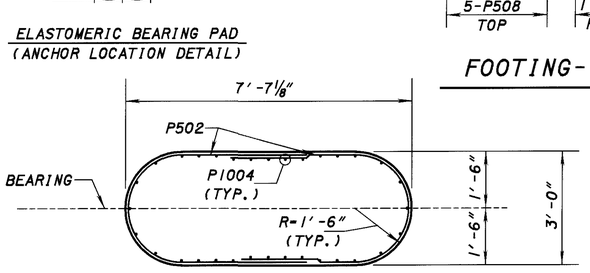
## NOTES

REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRESETTING OF BEARING ANCHORS.

AT THE OPTION OF THE CONTRACTOR, BEARING ANCHORS, LOCATED AND SUPPORTED BY TEMPLATES, MAY BE CAST IN PLACE.




## FOOTING- PLAN

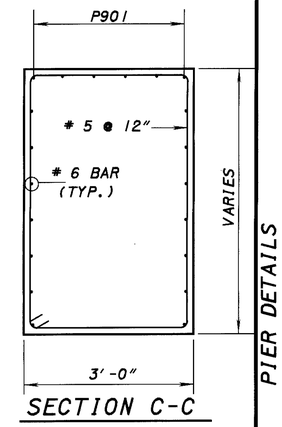



ELASTOMERIC BEARING PAD (ANCHOR LOCATION DETAIL)




## PLAN

(32 #10 BARS EQUALLY SPACED)



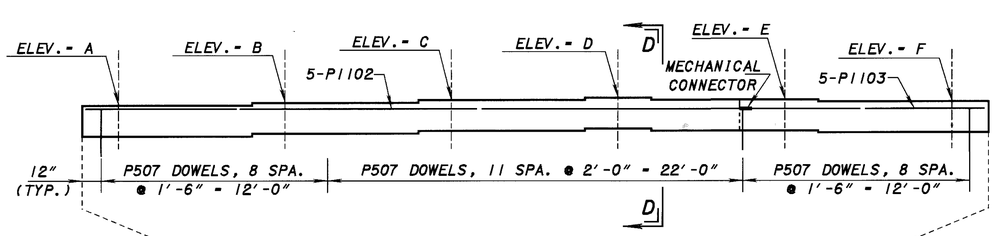

## SECTION C-C

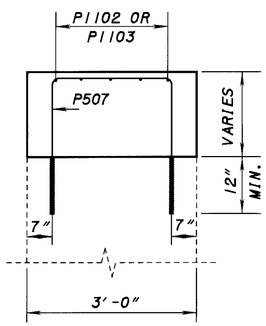
## NOTES

SEAL THE ENTIRE SURFACE AREA OF THE EXISTING AND PROPOSED PIER ABOVE GROUND WITH EPOXY URETHANE SEALER

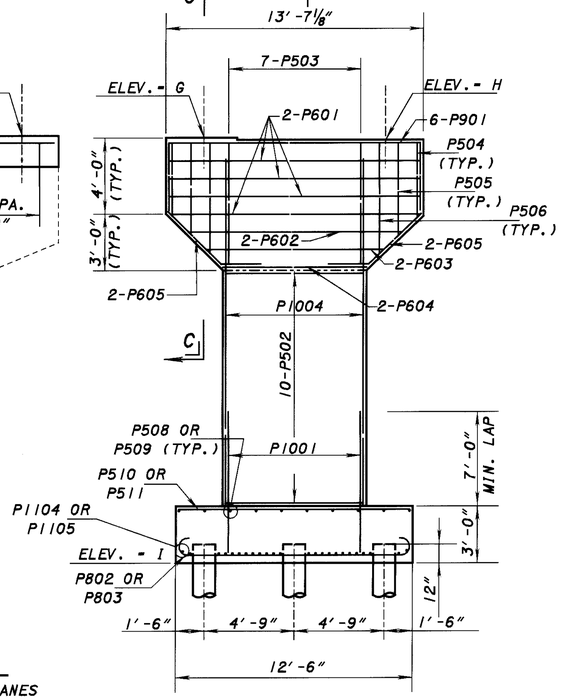
ALL PILES ARE 14" DIAMETER C.I.P

EXISTING PIER BRIDGE SEATS SHALL BE SCARIFIED ¼", SEE GENERAL NOTES.



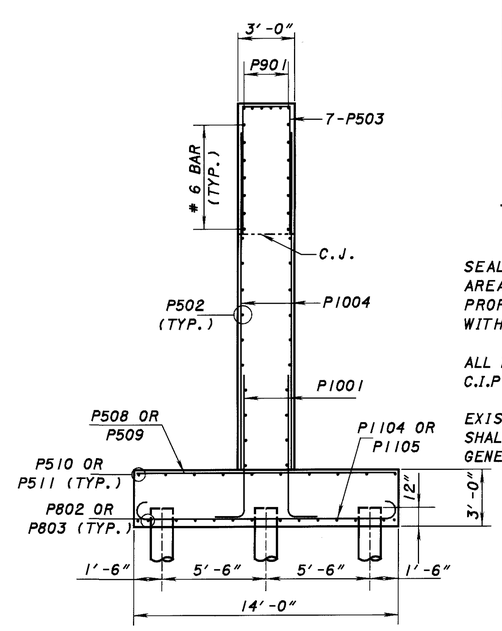




## SECTION D-D




## ELEVATION

PIER 2 SOUTHBOUND LANES




## SECTION B-B

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

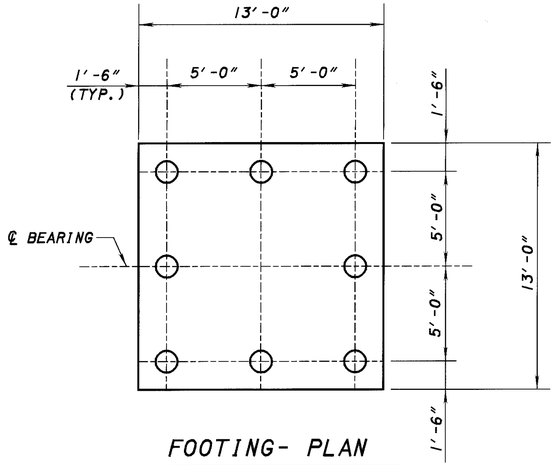
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | SER | 8-27-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5203937L/5203961R | |

PIER DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

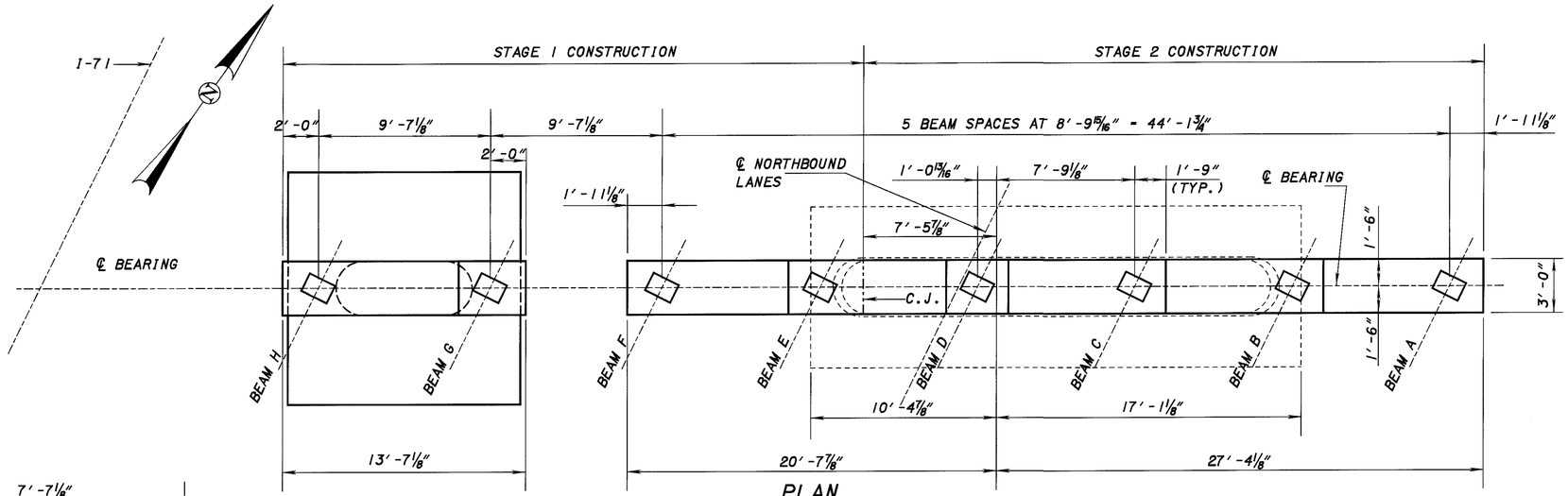
MED-71-15.78

18/31

854/940

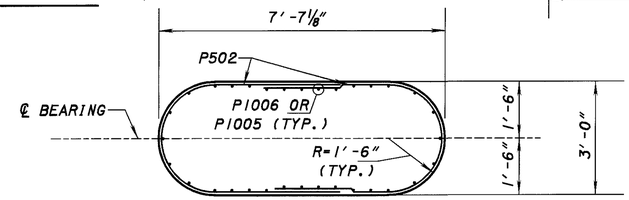



FOOTING- PLAN




PLAN

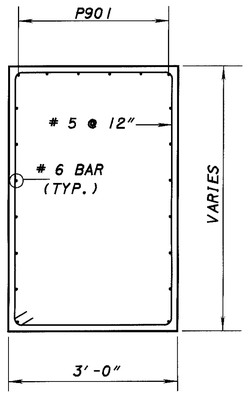
PIER 1 AND PIER 3 NORTHBOUND LANES



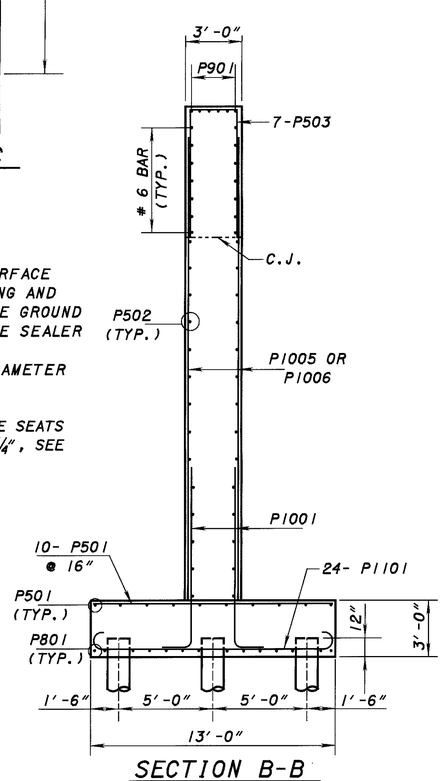

PLAN

(32 #10 BARS EQUALLY SPACED)

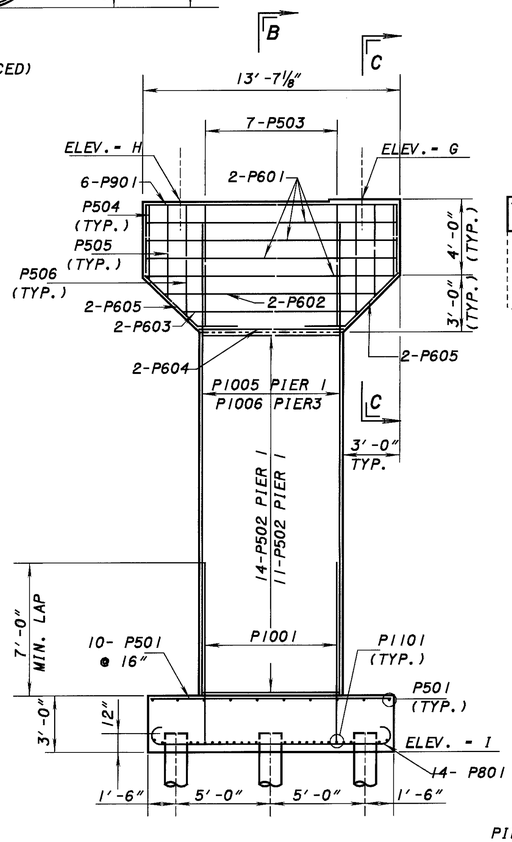
| LOCATION / ELEVATION | ELEVATIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I |
| NORTHBOUND LANE PIER 1 | 1064.61 | 1064.71 | 1064.81 | 1064.88 | 1064.73 | 1064.59 | 1064.43 | 1064.28 | 1035.45 |
| NORTHBOUND LANE PIER 3 | 1065.33 | 1065.44 | 1065.54 | 1065.61 | 1065.47 | 1065.32 | 1065.17 | 1065.01 | 1040.21 |

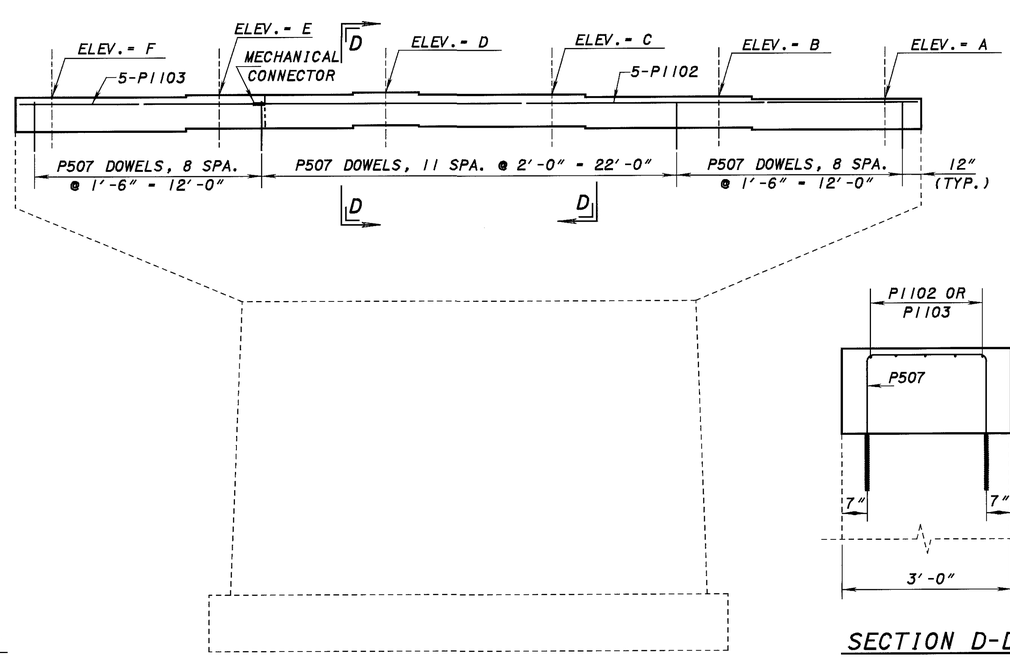



SECTION C-C



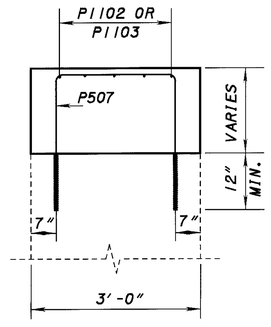

SECTION B-B




ELEVATION

PIER 1 AND PIER 3 NORTHBOUND LANES




SECTION D-D

## NOTES

SEAL THE ENTIRE SURFACE AREA OF THE EXISTING AND PROPOSED PIER ABOVE GROUND WITH EPOXY URETHANE SEALER

ALL PILES ARE 14" DIAMETER C.I.P

EXISTING PIER BRIDGE SEATS SHALL BE SCARIFIED ¼", SEE GENERAL NOTES.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

REVIEWED SER | DATE 8-27-99 | STRUCTURE FILE NUMBER 5203937L/5203961R

DRAWN TAA | REVISED

DESIGNED TAA | CHECKED DFT

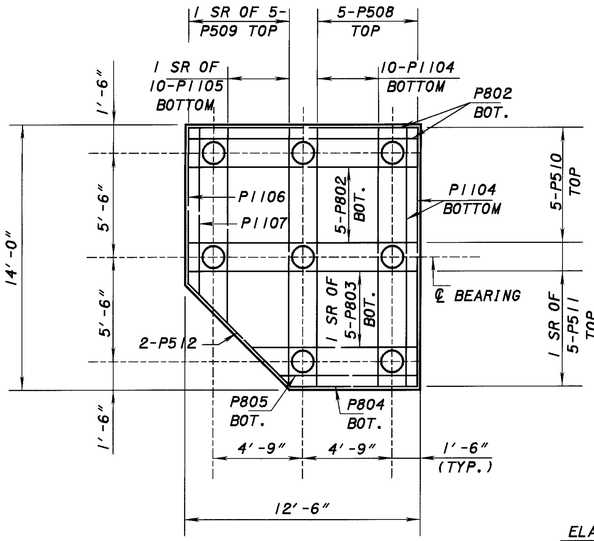
PIER DETAILS

MED-71-2090 L/R
I-71 OVER S.R. 3

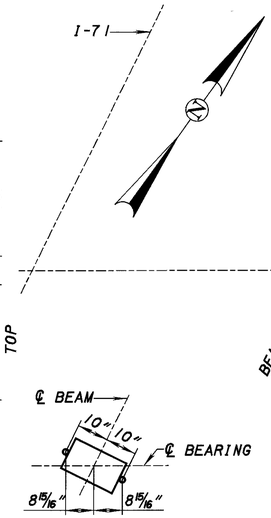
MED-71-15.78

19/31

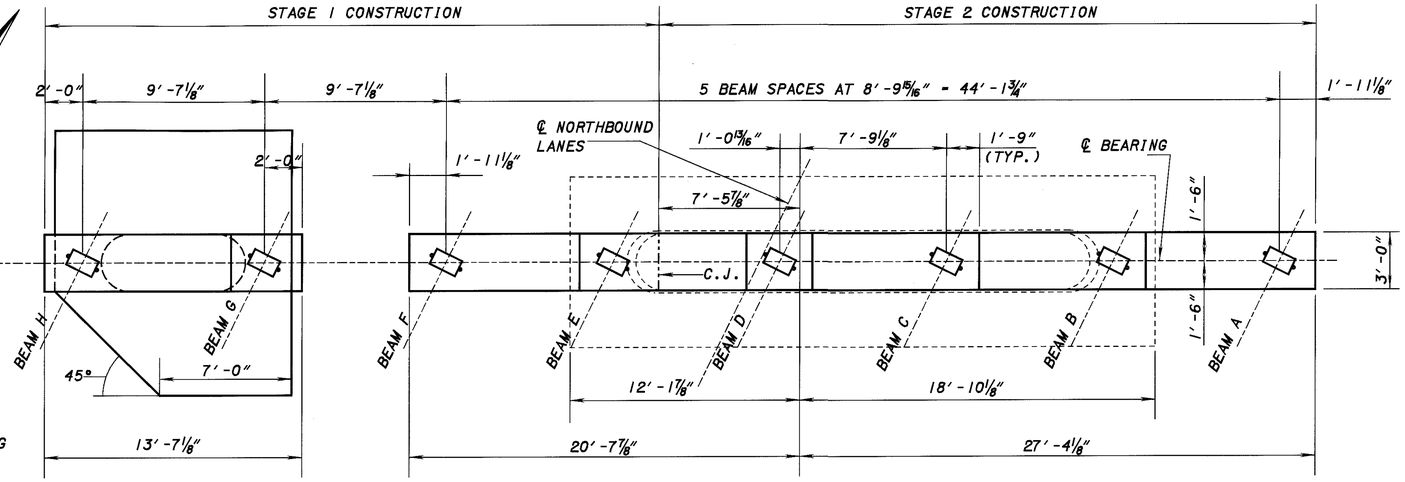
855/940



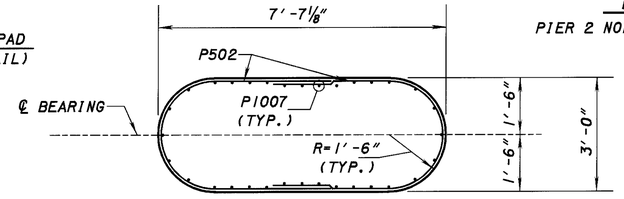

## FOOTING- PLAN




ELASTOMERIC BEARING PAD
(ANCHOR LOCATION DETAIL)




## PLAN
PIER 2 NORTHBOUND LANES




## PLAN
(32 #10 BARS EQUALLY SPACED)

| LOCATION / ELEVATION | ELEVATIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I |
| NORTHBOUND LANE PIER 2 | 1064.94 | 1065.04 | 1065.15 | 1065.22 | 1065.07 | 1064.93 | 1064.77 | 1064.62 | 1044.07 |




## SECTION C-C

## NOTES

SEAL THE ENTIRE SURFACE AREA OF THE EXISTING AND PROPOSED PIER ABOVE GROUND WITH EPOXY URETHANE SEALER

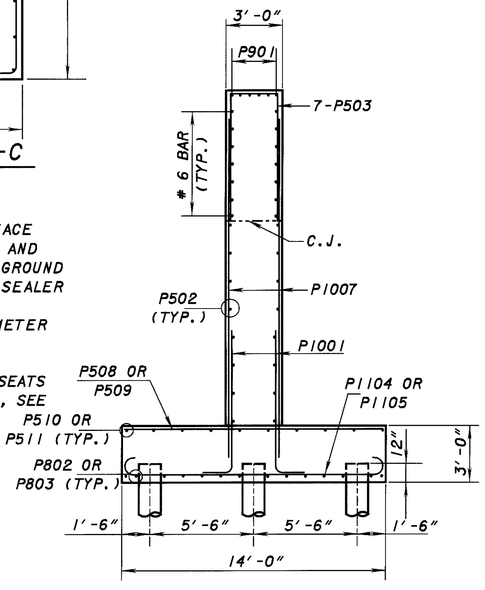
ALL PILES ARE 14" DIAMETER C.I.P

EXISTING PIER BRIDGE SEATS SHALL BE SCARIFIED 1/4", SEE GENERAL NOTES.

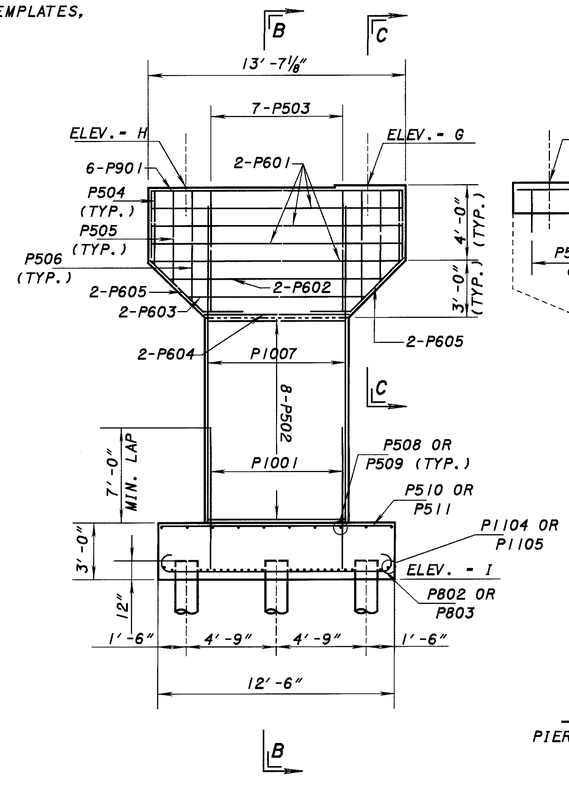
## NOTES

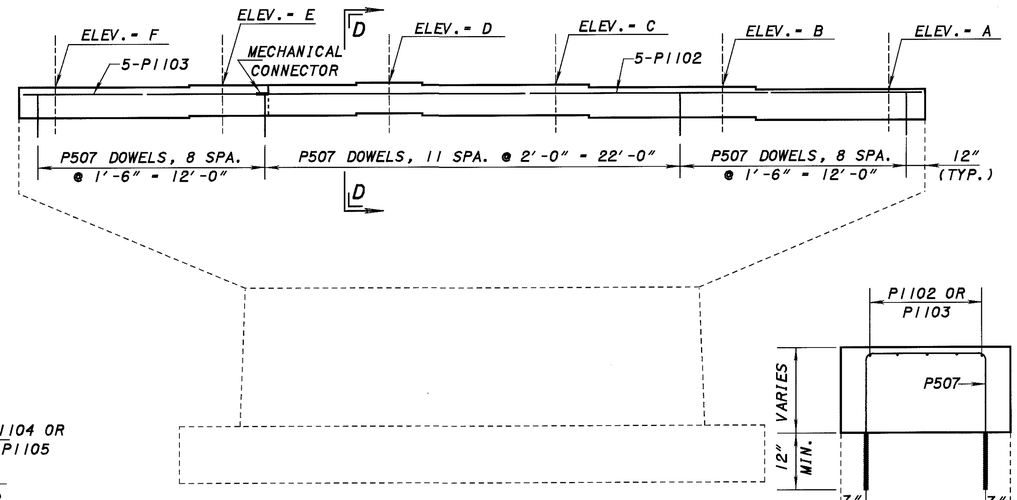
REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRESETTING OF BEARING ANCHORS.

AT THE OPTION OF THE CONTRACTOR, BEARING ANCHORS, LOCATED AND SUPPORTED BY TEMPLATES, MAY BE CAST IN PLACE.

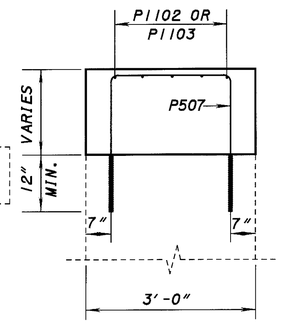



## SECTION B-B




## ELEVATION
PIER 2 NORTHBOUND LANES




## SECTION D-D

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | SER | 8-27-99 |

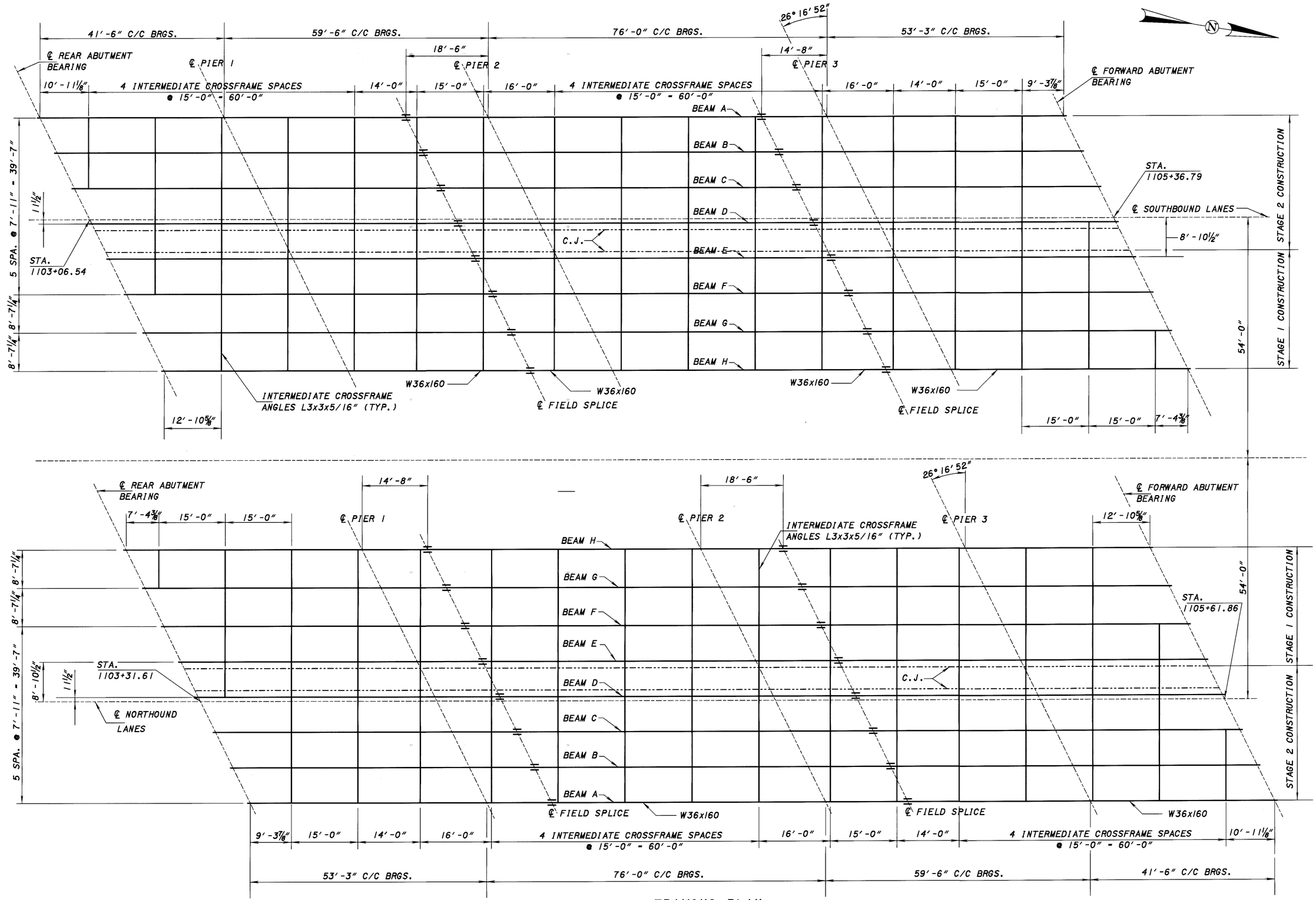
CHECKED DFT
REVISED
STRUCTURE FILE NUMBER 5203937L/5203961R

PIER DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

20 / 31

856
940




## FRAMING PLAN

SEE ADDITIONAL NOTES ON SHEET 22/31

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED TAA
DRAWN TAA
CHECKED DFT
REVISED
REVISED SER 8-27-99
DATE
STRUCTURE FILE NUMBER 5203937L/5203961R

FRAMING PLAN
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

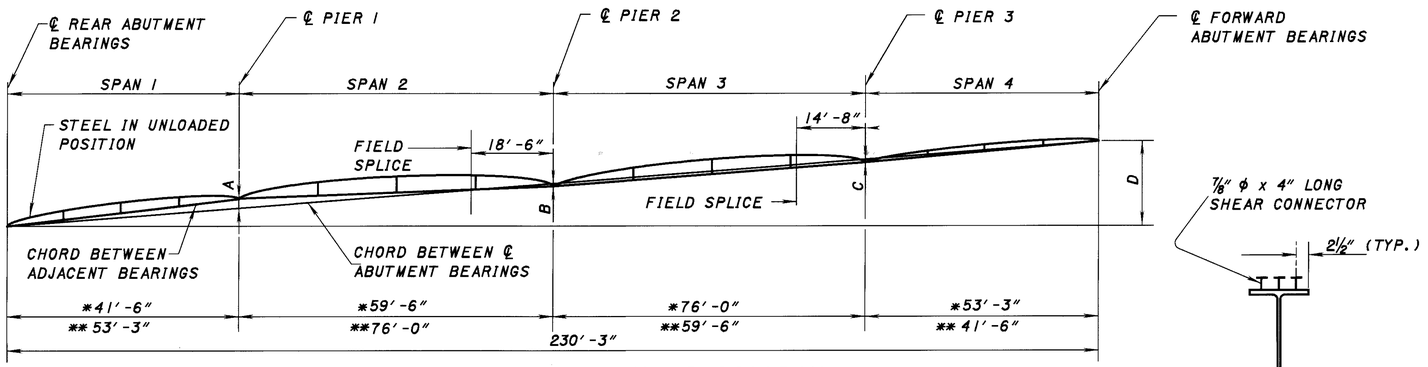
21/31

857/940

| | LOCATION | A | B | C | D |
|---|---|---|---|---|---|
| SOUTHBOUND LANE | BEAMLINE A THRU H | 1/4" | 9/16" | 5/8" | 15 1/2" |
| NORTHBOUND LANE | BEAMLINE A THRU H | 1/8" | 1/4" | 1/16" | 15 1/8" |

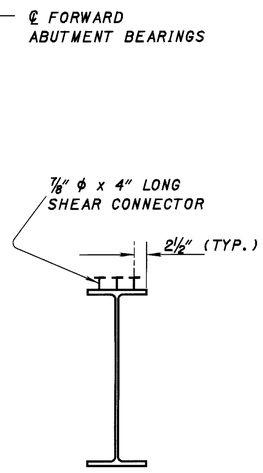
## DEFLECTION AND CAMBER

| | SPAN 1 | | | SPAN 2 | | | | SPAN 3 | | | | | SPAN 4 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LOCATION OF POINT | 1/4 | 1/2 | 3/4 | 1/4 | 1/2 | SPL | 3/4 | SPL | 1/4 | 1/2 | 3/4 | SPL | 1/4 | SPL | 1/2 | 3/4 |
| BEAM DEFLECTION | 1/16" | 1/16" | 1/16" | 1/16" | 1/16" | 0 | 0 | 1/8" | 1/8" | 3/16" | 1/8" | 1/8" | 0 | 1/16" | 1/16" | 1/16" |
| REMAINING DL DEFLECTION | 1/8" | 1/8" | 1/16" | 1/8" | 3/16" | 1/16" | 1/16" | 1/4" | 1/4" | 9/16 | 1/4" | 1/4" | 1/8" | 1/8" | 3/16" | 3/16" |
| CORRECTION FOR VERTICAL CURVE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SHOP CAMBER | 3/16" | 3/16" | 1/8" | 3/16" | 1/4" | 1/16" | 1/16" | 3/8" | 3/8" | 3/4" | 3/8" | 3/8" | 1/8" | 3/16" | 1/4" | 1/4" |

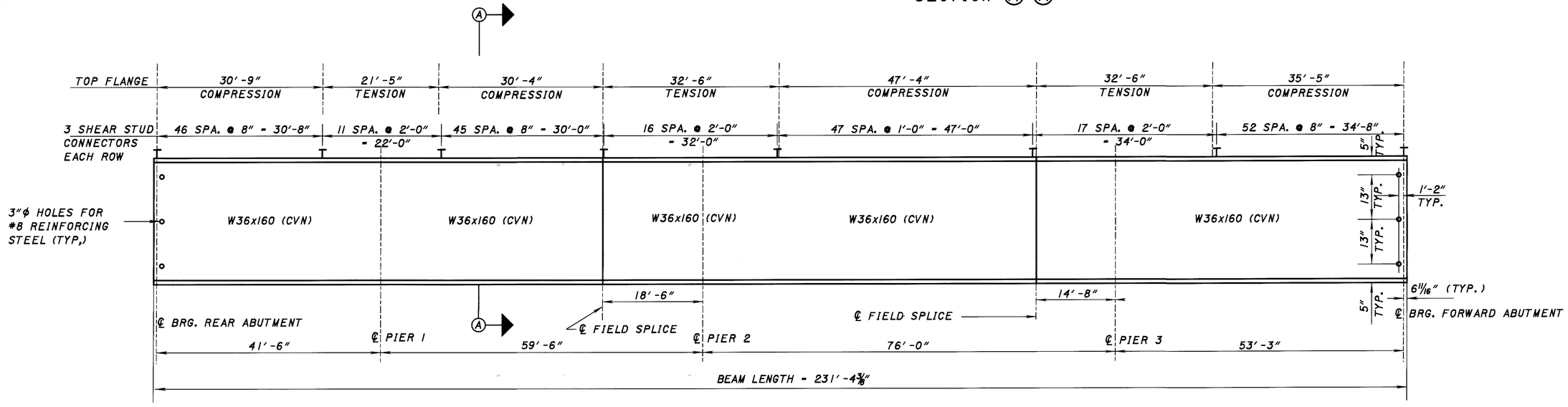



## BLOCKING AND CAMBER DIAGRAM

* SOUTHBOUND LANE
** NORTHBOUND LANE




SECTION Ⓐ-Ⓐ




## BEAM ELEVATION

(VERTICAL SCALE IS EXAGGERATED)
(SOUTHBOUND LANE SHOWN)

## NOTES & LEGEND:

**STRUCTURAL STEEL:**
WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

FOR FIELD SPLICE DETAILS SEE STD. DWG. BS-1-93 (50 KSI) NO FILL PLATES REQUIRED.

FOR SCREED DIAGRAM AND TABLE SEE SHEET 23/31

**WELDED ATTACHMENT:**
WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FACIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

3"ϕ HOLES DRILLED IN THE PROPOSED BEAM SHALL BE PAID UNDER ITEM 863 STRUCTURAL STEEL. THIS PAYMENT IS INCIDENTAL TO THE PAY ITEM.

LATERAL AND LONGITUDINAL SPACING OF WELDED STUD CONNECTORS MAY BE ALTERED AT FIELD SPLICE LOCATIONS TO AVOID INTERFERENCE WITH FLANGE SPLICE BOLTS PROVIDED THAT AT LEAST THE NUMBER OF STUDS SPECIFIED IN THE BEAM ELEVATION ARE PROVIDED.

STRUCTURAL STEEL SHALL BE ASTM A572.

ALL BEAM LENGTH DIMENSION ARE AT 60 °F

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVISED SER DATE 8-27-99
STRUCTURE FILE NUMBER 5203937L/5203961R
DRAWN TAA
REVISED
DESIGNED TAA
CHECKED DFT

SUPERSTRUCTURE DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

22/31

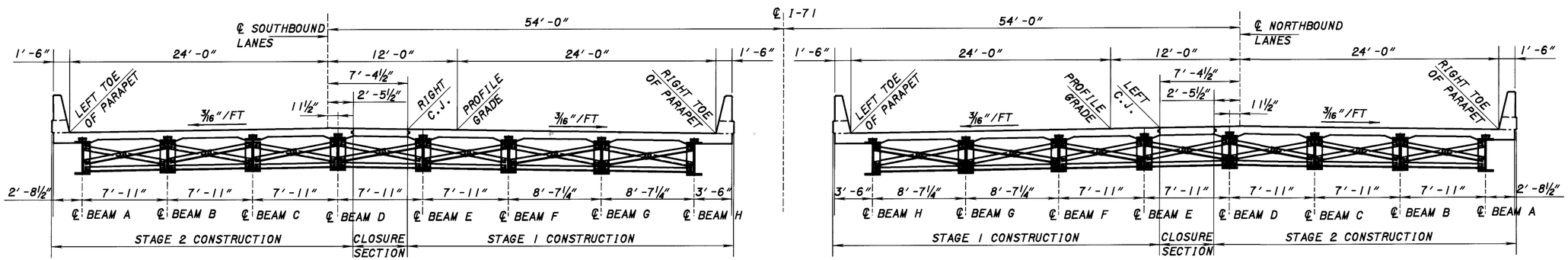
858/940

## SCREED ELEVATION - SOUTHBOUND BRIDGE

| LOCATION | RIGHT TOE OF PARAPET | | PROFILE GRADE | | RIGHT CONSTR JT | | CLOSURE POUR C.J. | | SOUTHBOUND LANE ℄ | | LEFT TOE OF PARAPET | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 1103+24.32 | 1068.16 | 1103+12.47 | 1068.47 | 1103+10.18 | 1068.53 | 1103+07.75 | 1068.59 | 1103+06.54 | 1068.62 | 1102+94.69 | 1068.18 |
| MIDSPAN | 1103+45.07 | 1068.29 | 1103+33.22 | 1068.60 | 1103+30.93 | 1068.66 | 1103+28.50 | 1068.72 | 1103+27.29 | 1068.75 | 1103+15.44 | 1068.31 |
| ℄ PIER # 1 | 1103+65.82 | 1068.40 | 1103+53.97 | 1068.71 | 1103+51.68 | 1068.77 | 1103+49.25 | 1068.83 | 1103+48.04 | 1068.86 | 1103+36.19 | 1068.42 |
| 1/4 SPAN | 1103+80.69 | 1068.50 | 1103+68.84 | 1068.81 | 1103+66.56 | 1068.86 | 1103+64.13 | 1068.93 | 1103+62.92 | 1068.96 | 1103+51.07 | 1068.52 |
| MIDSPAN | 1103+95.57 | 1068.59 | 1103+83.72 | 1068.90 | 1103+81.43 | 1068.95 | 1103+79.00 | 1069.02 | 1103+77.79 | 1069.05 | 1103+65.94 | 1068.61 |
| FIELD SPLICE | 1104+06.82 | 1068.64 | 1103+94.97 | 1068.95 | 1103+92.68 | 1069.01 | 1103+90.26 | 1069.07 | 1103+89.04 | 1069.10 | 1103+77.19 | 1068.66 |
| 3/4 SPAN | 1104+10.44 | 1068.66 | 1103+98.59 | 1068.97 | 1103+96.31 | 1069.03 | 1103+93.88 | 1069.09 | 1103+92.67 | 1069.12 | 1103+80.82 | 1068.68 |
| ℄ PIER # 2 | 1104+25.32 | 1068.74 | 1104+13.47 | 1069.05 | 1104+11.18 | 1069.11 | 1104+08.75 | 1069.17 | 1104+07.54 | 1069.20 | 1103+95.69 | 1068.76 |
| FIELD SPLICE | 1104+39.31 | 1068.84 | 1104+27.46 | 1069.15 | 1104+25.18 | 1069.21 | 1104+22.75 | 1069.27 | 1104+21.54 | 1069.30 | 1104+09.69 | 1068.86 |
| 1/4 SPAN | 1104+44.32 | 1068.86 | 1104+32.47 | 1069.17 | 1104+30.18 | 1069.23 | 1104+27.75 | 1069.30 | 1104+26.54 | 1069.33 | 1104+14.69 | 1068.89 |
| MIDSPAN | 1104+63.32 | 1068.99 | 1104+51.47 | 1069.30 | 1104+49.18 | 1069.36 | 1104+46.75 | 1069.43 | 1104+45.54 | 1069.46 | 1104+33.69 | 1069.02 |
| 3/4 SPAN | 1104+82.32 | 1069.07 | 1104+70.47 | 1069.38 | 1104+68.18 | 1069.44 | 1104+65.75 | 1069.50 | 1104+64.54 | 1069.54 | 1104+52.69 | 1069.10 |
| FIELD SPLICE | 1104+86.64 | 1069.09 | 1104+74.80 | 1069.40 | 1104+72.51 | 1069.46 | 1104+70.08 | 1069.53 | 1104+68.87 | 1069.56 | 1104+57.02 | 1069.12 |
| ℄ PIER # 3 | 1105+01.32 | 1069.15 | 1104+89.47 | 1069.46 | 1104+87.18 | 1069.52 | 1104+84.75 | 1069.59 | 1104+83.54 | 1069.62 | 1104+71.69 | 1069.18 |
| FIELD SPLICE | 1105+19.23 | 1069.26 | 1105+07.38 | 1069.57 | 1105+05.10 | 1069.63 | 1105+02.67 | 1069.69 | 1105+01.46 | 1069.72 | 1104+89.61 | 1069.29 |
| MIDSPAN | 1105+27.94 | 1069.31 | 1105+16.09 | 1069.62 | 1105+13.81 | 1069.68 | 1105+11.38 | 1069.74 | 1105+10.17 | 1069.78 | 1104+98.32 | 1069.34 |
| ℄ FORWARD ABUTMENT | 1105+54.57 | 1069.43 | 1105+42.72 | 1069.74 | 1105+40.43 | 1069.80 | 1105+38.00 | 1069.87 | 1105+36.79 | 1069.90 | 1105+24.94 | 1069.46 |

## SCREED ELEVATION - NORTHBOUND BRIDGE

| LOCATION | LEFT TOE OF PARAPET | | PROFILE GRADE | | LEFT CONSTR JT | | CLOSURE POUR C.J. | | NORTHBOUND LANE ℄ | | RIGHT TOE OF PARAPET | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 1103+13.84 | 1068.10 | 1103+25.69 | 1068.55 | 1103+27.97 | 1068.63 | 1103+30.40 | 1068.72 | 1103+31.61 | 1068.77 | 1103+43.46 | 1068.46 |
| MIDSPAN | 1103+40.46 | 1068.27 | 1103+52.31 | 1068.72 | 1103+54.59 | 1068.80 | 1103+57.02 | 1068.89 | 1103+58.24 | 1068.94 | 1103+70.09 | 1068.63 |
| FIELD SPLICE | 1103+49.17 | 1068.32 | 1103+61.02 | 1068.76 | 1103+63.30 | 1068.85 | 1103+65.73 | 1068.94 | 1103+66.94 | 1068.98 | 1103+78.79 | 1068.68 |
| ℄ PIER # 1 | 1103+67.09 | 1068.41 | 1103+78.94 | 1068.85 | 1103+81.22 | 1068.94 | 1103+83.65 | 1069.03 | 1103+84.86 | 1069.07 | 1103+96.71 | 1068.77 |
| FIELD SPLICE | 1103+81.75 | 1068.52 | 1103+93.60 | 1068.96 | 1103+95.89 | 1069.04 | 1103+98.31 | 1069.02 | 1103+99.53 | 1069.18 | 1104+11.38 | 1068.87 |
| 1/4 SPAN | 1103+86.09 | 1068.54 | 1103+97.94 | 1068.98 | 1104+00.22 | 1069.07 | 1104+02.65 | 1069.16 | 1104+03.86 | 1069.20 | 1104+15.71 | 1068.89 |
| MIDSPAN | 1104+05.09 | 1068.67 | 1104+16.94 | 1069.11 | 1104+19.22 | 1069.20 | 1104+21.65 | 1069.29 | 1104+22.86 | 1069.33 | 1104+34.71 | 1069.03 |
| 3/4 SPAN | 1104+24.09 | 1068.75 | 1104+35.94 | 1069.19 | 1104+38.22 | 1069.28 | 1104+40.65 | 1069.37 | 1104+41.86 | 1069.41 | 1104+53.71 | 1069.10 |
| FIELD SPLICE | 1104+29.10 | 1068.78 | 1104+40.95 | 1069.22 | 1104+43.24 | 1069.31 | 1104+45.66 | 1069.40 | 1104+46.88 | 1069.44 | 1104+58.73 | 1069.13 |
| ℄ PIER # 2 | 1104+43.09 | 1068.84 | 1104+54.94 | 1069.28 | 1104+57.22 | 1069.36 | 1104+59.65 | 1069.45 | 1104+60.86 | 1069.50 | 1104+72.71 | 1069.19 |
| 1/4 SPAN | 1104+57.96 | 1068.92 | 1104+69.81 | 1069.36 | 1104+72.09 | 1069.45 | 1104+74.52 | 1069.54 | 1104+75.74 | 1069.58 | 1104+87.59 | 1069.27 |
| FIELD SPLICE | 1104+61.53 | 1068.94 | 1104+73.38 | 1069.38 | 1104+75.66 | 1069.47 | 1104+78.09 | 1069.56 | 1104+79.31 | 1069.60 | 1104+91.16 | 1069.29 |
| MIDSPAN | 1104+72.84 | 1069.01 | 1104+84.69 | 1069.45 | 1104+86.97 | 1069.54 | 1104+89.40 | 1069.63 | 1104+90.61 | 1069.67 | 1105+02.46 | 1069.36 |
| 3/4 SPAN | 1104+87.71 | 1069.09 | 1104+99.56 | 1069.53 | 1105+01.84 | 1069.61 | 1105+04.27 | 1069.70 | 1105+05.49 | 1069.75 | 1105+17.34 | 1069.43 |
| ℄ PIER # 3 | 1105+02.59 | 1069.16 | 1105+14.44 | 1069.60 | 1105+16.72 | 1069.68 | 1105+19.15 | 1069.77 | 1105+20.36 | 1069.81 | 1105+32.21 | 1069.50 |
| MIDSPAN | 1105+23.34 | 1069.28 | 1105+35.19 | 1069.72 | 1105+37.47 | 1069.80 | 1105+39.90 | 1069.89 | 1105+41.11 | 1069.93 | 1105+52.96 | 1069.62 |
| ℄ FORWARD ABUTMENT | 1105+44.09 | 1069.38 | 1105+55.94 | 1069.81 | 1105+58.22 | 1069.90 | 1105+60.65 | 1069.99 | 1105+61.86 | 1070.03 | 1105+73.71 | 1069.72 |




SOUTHBOUND LANE BRIDGE

TRANSVERSE SECTION

NORTHBOUND LANE BRIDGE

### NOTES

SCREED SETTING ELEVATIONS GIVEN ARE TO THE TOP OF CONCRETE DECK AND ARE REQUIRED PRIOR TO PLACEMENT OF CONCRETE. THEY INCLUDE AN ALLOWANCE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVIEWED: SER | DATE: 8-27-99 | STRUCTURE FILE NUMBER: 5203937L/5203961R

DRAWN: TAA | REVISED:

DESIGNED: TAA | CHECKED: DFT

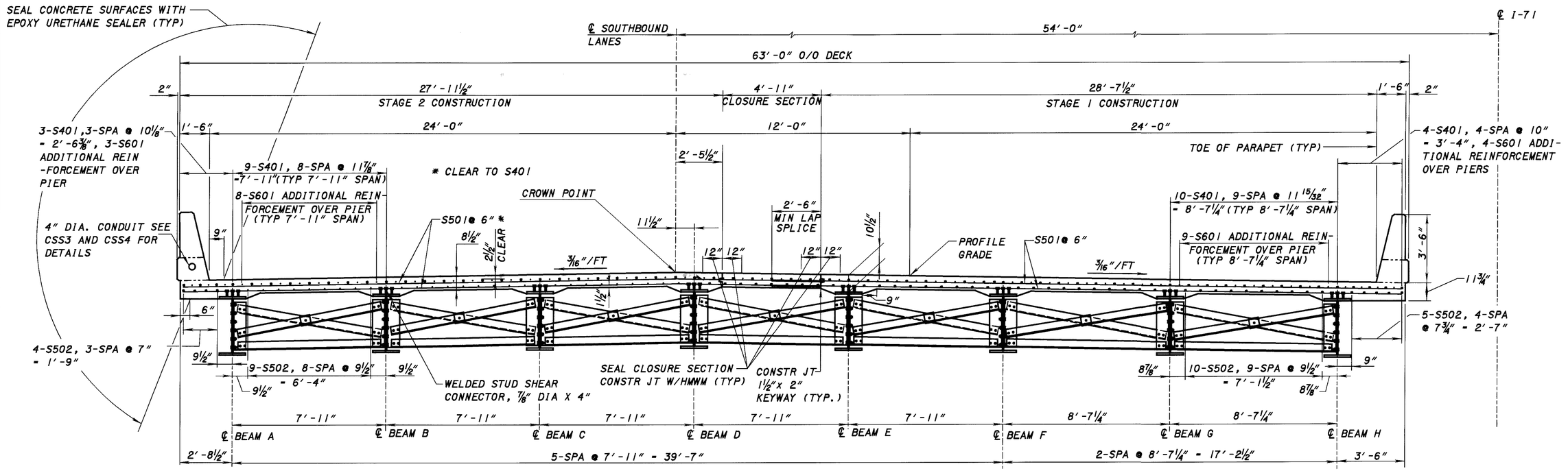
SCREED TABLES

MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

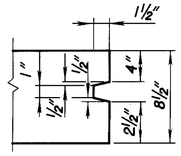


859/940




## TRANSVERSE SECTION

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)




KEYWAY DETAILS AT CLOSURE SECTION

## NOTES

1. HMWM: HIGH MOLECULAR WEIGHT METHACRYLATE, SEE SUPPLEMENTAL SPEC.
2. ALL REINFORCING STEEL IS EPOXY COATED.
3. FOR PARAPET DETAILS, SEE SHEET 27 & 28/ 31
4. REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH HIGH PERFORMANCE CONCRETE.
5. FOR CROSS-FRAME CONNECTION DETAILS SEE STD DWG GSD-1-96, GENERAL STEEL DETAILS.
6. DECK SLAB DEPTH: THE THEORETICAL DESIGN THICKNESS FOR THE SLAB IS 8½". THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFIGURATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. A HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12".

**THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.**

| MARK | NUMBER SUPER STAGE I | NUMBER SUPER STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | DIMENSIONS B | DIMENSIONS INC |
|---|---|---|---|---|---|---|---|---|---|
| SUPERSTRUCTURE - MED-71-2090 L (SOUTHBOUND LANE) | | | | | | | | | |
| S401 | 256 | 272 | 528 | 30'-10" | 10875 | STR | | | |
| | | | | | | | | | |
| S501 | 840 | 840 | 1680 | 32'-7" | 57094 | STR | | | |
| S502 | 280 | 312 | 592 | 31'-3" | 19296 | STR | | | |
| | 2 SR | 2 SR | 4 SR | 13'-9" | | | | | |
| S503 | OF | OF | OF | TO | 1803 | STR | | | 1'-0" |
| | 19 | 19 | 19 | 31'-9" | | | | | |
| | 2 SR | 2 SR | 4 SR | 6'-0" | | | | | |
| S504 | OF | OF | OF | TO | 2140 | STR | | | 1'-0" |
| | 27 | 27 | 27 | 32'-0" | | | | | |
| S505 | 24 | 24 | 48 | 13'-6" | 676 | STR | | | |
| | | | | | | | | | |
| S601 | 93 | 102 | 195 | 33'-6" | 9812 | STR | | | |
| | | | | | | | | | |
| | | | | TOTAL | 101696 | | | | |

| MARK | NUMBER SUPER STAGE I | NUMBER SUPER STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | DIMENSIONS B | DIMENSIONS INC |
|---|---|---|---|---|---|---|---|---|---|
| SUPERSTRUCTURE - MED-71-2090 R (NORTHBOUND LANE) | | | | | | | | | |
| S401 | 256 | 272 | 528 | 30'-10" | 10875 | STR | | | |
| | | | | | | | | | |
| S501 | 840 | 840 | 1680 | 32'-7" | 57094 | STR | | | |
| S502 | 280 | 312 | 592 | 31'-3" | 19296 | STR | | | |
| | 2 SR | 2 SR | 4 SR | 13'-9" | | | | | |
| S503 | OF | OF | OF | TO | 1803 | STR | | | 1'-0" |
| | 19 | 19 | 19 | 31'-9" | | | | | |
| | 2 SR | 2 SR | 4 SR | 6'-0" | | | | | |
| S504 | OF | OF | OF | TO | 2140 | STR | | | 1'-0" |
| | 27 | 27 | 27 | 32'-0" | | | | | |
| S505 | 24 | 24 | 48 | 13'-6" | 676 | STR | | | |
| | | | | | | | | | |
| S601 | 93 | 102 | 195 | 33'-6" | 9812 | STR | | | |
| | | | | | | | | | |
| | | | | TOTAL | 101696 | | | | |

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

DESIGNED TAA | DRAWN TAA | REVIEWED SER | DATE 8-27-99 | STRUCTURE FILE NUMBER 5203937L/5203961R | CHECKED DFT | REVISED

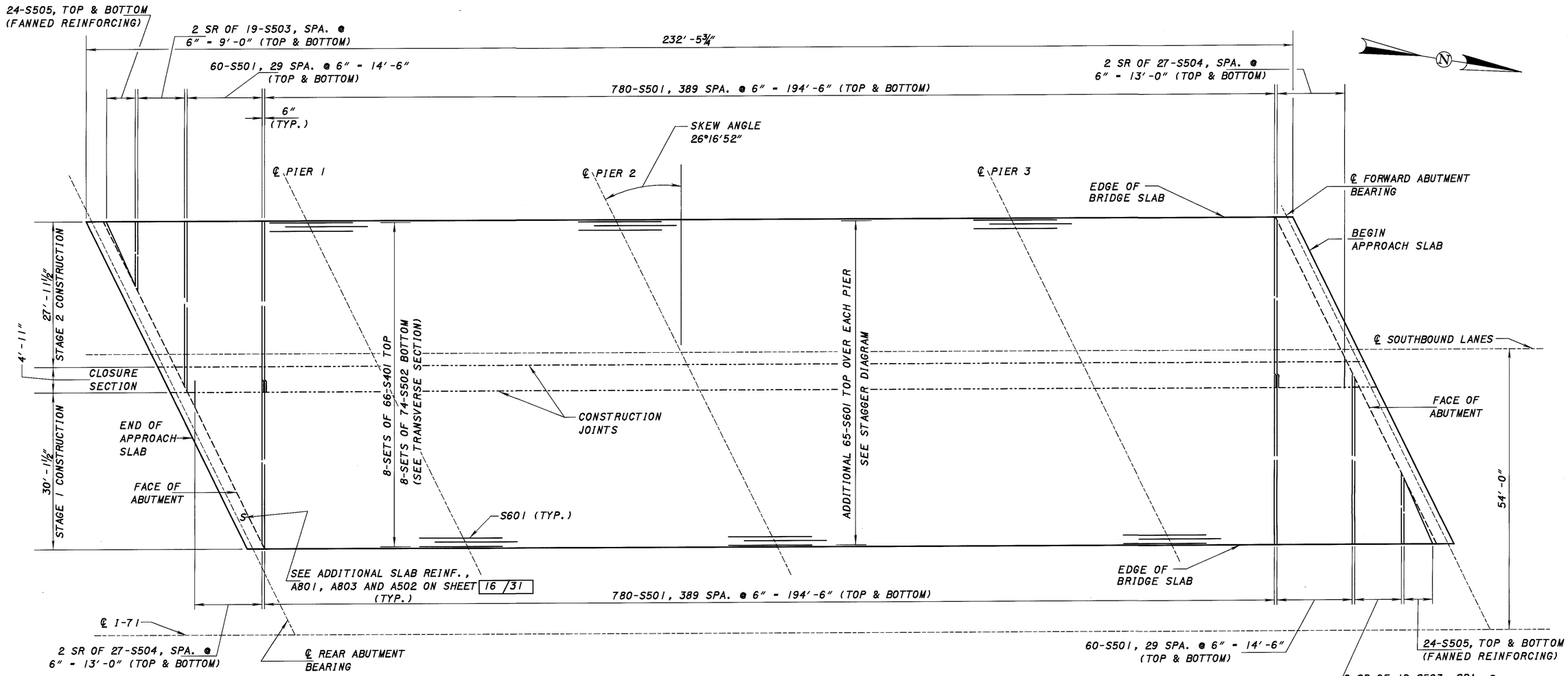
SUPERSTRUCTURE DETAILS

MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

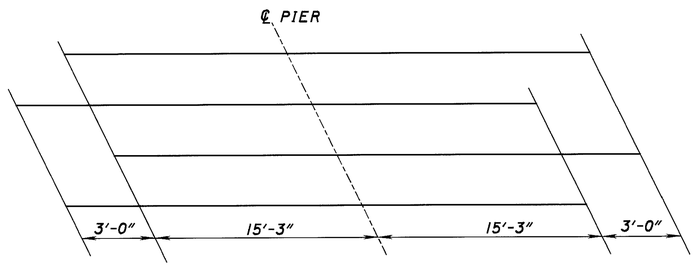
24/31

860/940




## DECK REINFORCEMENT

(SOUTHBOUND LANES SHOWN, NORTHBOUND SIMILAR)
MINIMUM LAP FOR # 4 BAR - 2'-0"
MINIMUM LAP FOR # 5 BAR - 2'-6"




## STAGGER OF S601 BARS OVER PIERS

## NOTES

CONCRETE PARAPET NOT SHOWN. FOR DETAILS,
SEE SHEET 27 & 28/31

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

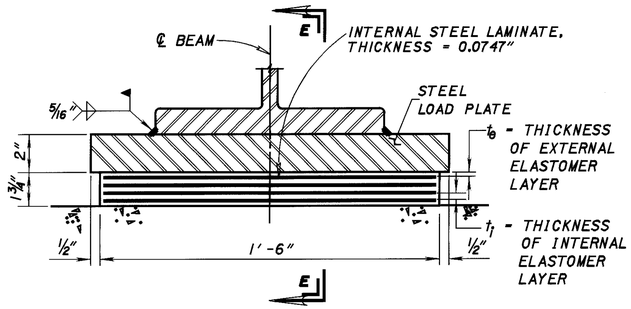
DESIGNED TAA
DRAWN TAA
REVIEWED SER
DATE 8-27-99
CHECKED DFT
REVISED
STRUCTURE FILE NUMBER 5203937L/5203961R

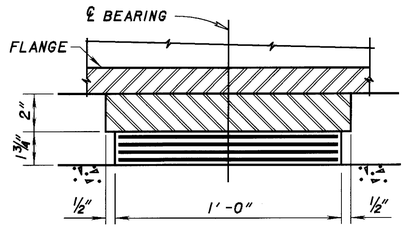
SUPERSTRUCTURE DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

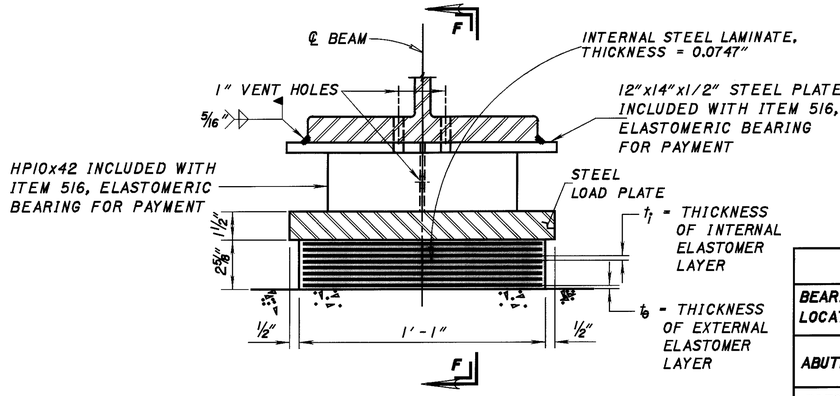
25/31

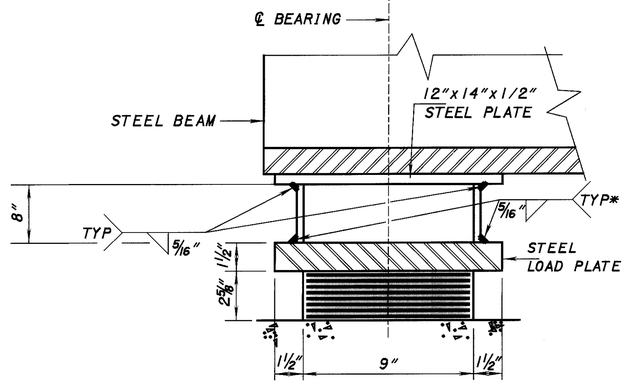
861
940



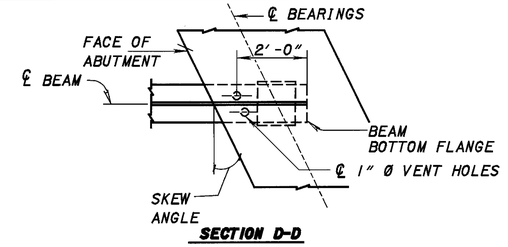

**SECTION E-E**
**LAMINATED ELASTOMERIC EXPANSION PIER BEARING**




* FIELD WELD OPTIONAL

**SECTION F-F**
**LAMINATED ELASTOMERIC EXPANSION ABUTMENT BEARING**




**SECTION D-D**

LEGEND

EXP - EXPANSION

## BEARING TABLE

| BEARING LOCATION | TYPE | L | W | $t_1$ In. | $t_0$ In. | $n_1$ | $n_2$ | STEEL LOAD ℄ | TOTAL HEIGHT* | DL, Kips | LL, Kips | TOTAL, Kips |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENT | EXP | 9" | 13" | 0.24 | 0.17 | 7 | 8 | 12"x14"x1 1/2" | 4 1/8" | 63 | 49 | 112 |
| PIER 1 & PIER 3 | EXP | 12" | 18" | 0.33 | 0.24 | 3 | 4 | 13"x19"x2" | 3 3/4" | 136 | 59 | 195 |
| PIER 2 | FIXED | 10 1/2" | 18" | 0.29 | 0.21 | 4 | 5 | 11 1/2"x24"x2" | 3 15/16" | 131 | 59 | 190 |

$n_1$ - NUMBER OF INTERNAL ELASTOMER LAYERS, $t_1$ ELASTOMER LAYERS ARE 50 DUROMETERS
$n_2$ - NUMBER OF STEEL LAMINATES, 0.0747" THICKNESS * TOTAL HEIGHT INCLUDES LOAD PLATE

## NOTES:

INSTALLATION PROCEDURE: ANCHOR BOLTS SHALL BE EITHER CAST IN PLACE BY USE OF A TEMPLATE OR FIELD DRILLED AND GROUTED AT THE CONTRACTOR'S OPTION. CARE SHALL BE TAKEN TO ASSURE THAT THE ANCHOR BOLTS DO NOT INTERFERE WITH REINFORCING STEEL.

MATERIALS: THE HP SHAPE (SUPPORT MEMBER) AND STEEL PLATES MAY BE GRADE 36 STEEL. THE HP SHAPE AND STEEL PLATES SHALL HAVE THE SAME PROTECTIVE COATING AS THE MAIN STRUCTURAL STEEL.

PAYMENT FOR MATERIALS, LABOR, FABRICATION, PROTECTIVE COATING, VENT HOLES AND INSTALLATION OF THE HP SHAPE AND STEEL PLATE SHALL BE INCLUDED WITH ITEM 516 ABUTMENT ELASTOMERIC BEARINGS, AS PER PLAN, FOR PAYMENT.

WELDING: WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

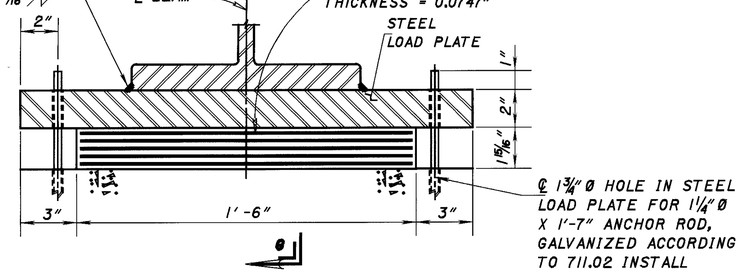
BRIDGE SEAT REINFORCING:
REINFORCING STEEL IN THE VICINITY OF BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.

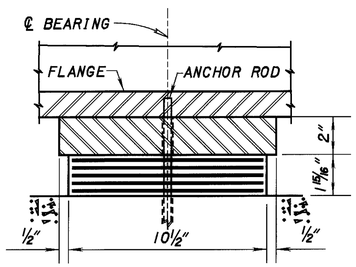
BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60° F ± 10° F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDERFORMED SHAPE AT 60° F ± 10° F.

ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL LOAD PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).

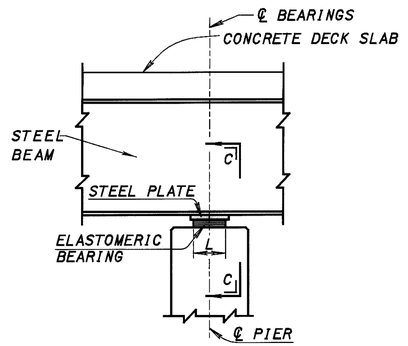
BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, ANCHOR RODS, HP10x42, STEEL PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):

9" x 13" x 2 5/8" WITH 12" x 14" x 1 1/2" LOAD PLATE, AS PER PLAN (ABUTMENT)
10 1/2" x 18" x 1 15/16" WITH 11 1/2" x 24" x 2" LOAD PLATE, AS PER PLAN (PIER #2)
12" x 18" x 1 3/4" WITH 13" x 19" x 2" LOAD PLATE (PIER # 3)

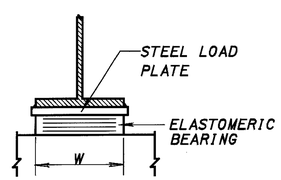



**SECTION G-G**
**LAMINATED ELASTOMERIC FIXED PIER BEARING**




**SECTION THRU PIER**




**SECTION C-C**

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGN AGENCY

REVIEWED SER
DATE 8-27-99
STRUCTURE FILE NUMBER 5203937L/5203961R

DRAWN TAA
REVISED

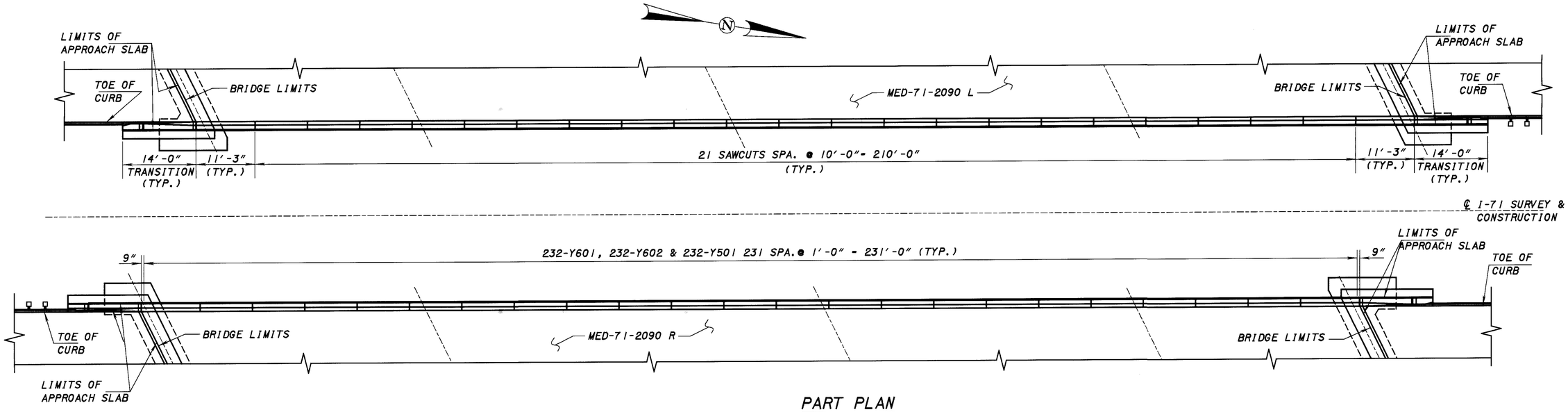
DESIGNED TAA
CHECKED DFT

BEARING DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

26 / 31

862
940

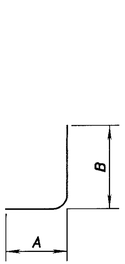



## PART PLAN

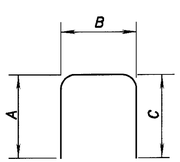
**THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.**

| MARK | NUMBER SUPER STAGE I | NUMBER SUPER STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | E | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PARAPETS - MED-71-2090 L (SOUTHBOUND LANE) | | | | | | | | | | | | | |
| Y501 | 232 | 232 | 464 | 7'-5" | 3589 | 23 | | | | | | | |
| | | | | | | | | | | | | | |
| Y601 | 232 | 232 | 464 | 3'-9" | 2613 | 34 | | | | | | | |
| Y602 | 232 | 232 | 464 | 2'-8" | 1858 | 1 | 1'-1" | 1'-9" | | | | | |
| | 4 SR | 4 SR | 8 SR | 4'-4" | | | 3'-7" | | | | | | |
| Y603 | OF | OF | OF | TO | 628 | 1 | TO | 10" | | | | | 1" |
| | 11 | 11 | 11 | 5'-2" | | | 4'-5" | | | | | | |
| Y604 | 16 | 16 | 32 | 4'-3" | 204 | 1 | 3'-6" | 10" | | | | | |
| | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 333 | STR | | | | | | | |
| X502 | 3 | 6 | 9 | 5'-6" | 52 | 25 | | | | | | | |
| X503 | 13 | 10 | 23 | 5'-6" | 132 | STR | | | | | | | |
| X504 | 48 | 48 | 96 | 31'-3" | 3129 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| X601 | 8 | 8 | 16 | 31'-9" | 763 | STR | | | | | | | |
| | | | | TOTAL | 13330 | | | | | | | | |

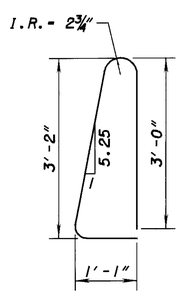
| MARK | NUMBER SUPER STAGE I | NUMBER SUPER STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | E | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PARAPETS - MED-71-2090 R (NORTHBOUND LANE) | | | | | | | | | | | | | |
| Y501 | 232 | 232 | 464 | 7'-5" | 3589 | 23 | | | | | | | |
| | | | | | | | | | | | | | |
| Y601 | 232 | 232 | 464 | 3'-9" | 2613 | 34 | | | | | | | |
| Y602 | 232 | 232 | 464 | 2'-8" | 1858 | 1 | 1'-1" | 1'-9" | | | | | |
| | 4 SR | 4 SR | 8 SR | 4'-4" | | | 3'-7" | | | | | | |
| Y603 | OF | OF | OF | TO | 628 | 1 | TO | 10" | | | | | 1" |
| | 11 | 11 | 11 | 5'-2" | | | 4'-5" | | | | | | |
| Y604 | 16 | 16 | 32 | 4'-3" | 204 | 1 | 3'-6" | 10" | | | | | |
| | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 333 | STR | | | | | | | |
| X502 | 3 | 6 | 9 | 5'-6" | 52 | 25 | | | | | | | |
| X503 | 13 | 10 | 23 | 5'-6" | 132 | STR | | | | | | | |
| X504 | 48 | 48 | 96 | 31'-3" | 3129 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| X601 | 8 | 8 | 16 | 31'-9" | 763 | STR | | | | | | | |
| | | | | TOTAL | 13330 | | | | | | | | |



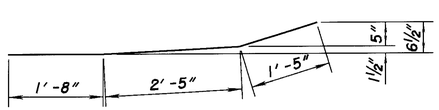

TYPE 1



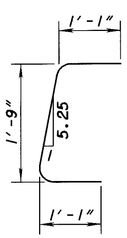

TYPE 2




TYPE 23




TYPE 25




TYPE 34

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVIEWED SER | DATE 8-27-99 | STRUCTURE FILE NUMBER 5203937L/5203961R

DRAWN TAA | REVISED

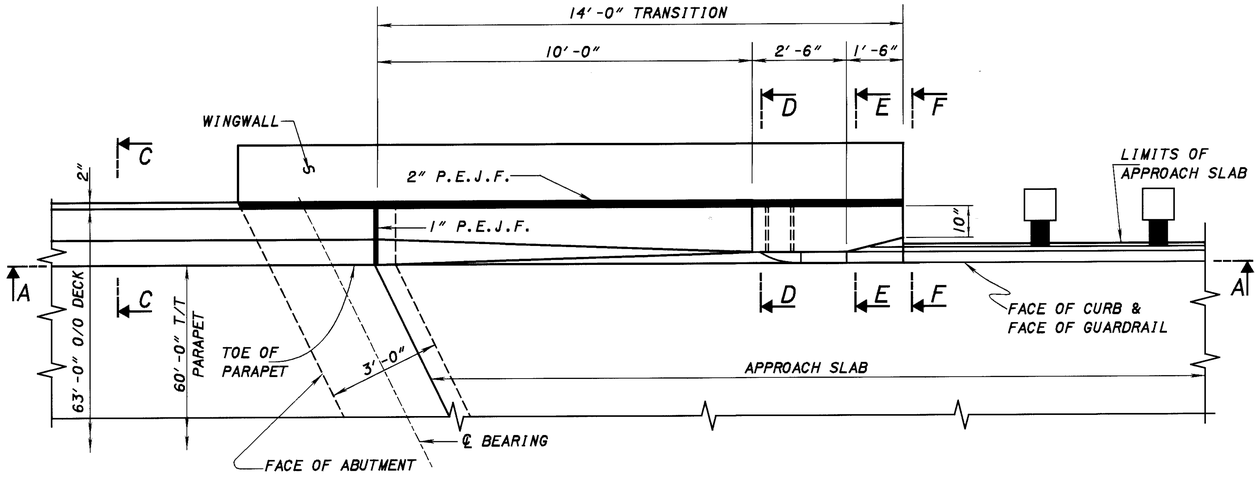
DESIGNED TAA | CHECKED DFT

PARAPET DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

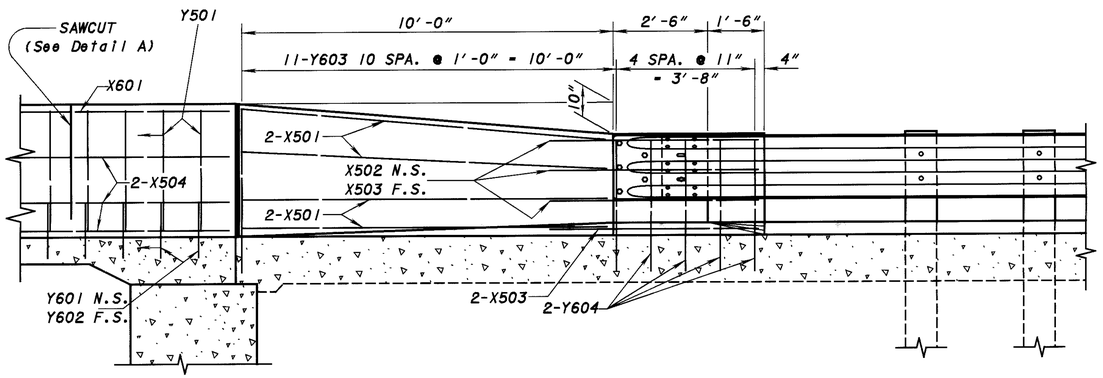
MED-71-15.78

27 / 31

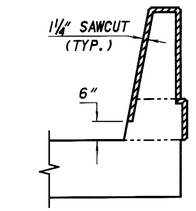
863
940




## PART PLAN AT ABUTMENT




## SECTION A-A




## DETAIL A

(Section through sawcut)
Sawcut Perimeter = 7'-6"

## NOTES

**CONTROL JOINTS FOR CONCRETE PARAPETS:** THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL TO A MINIMUM DEPTH OF ONE INCH CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE-HALF INCH OF THE OUTSIDE FACE OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

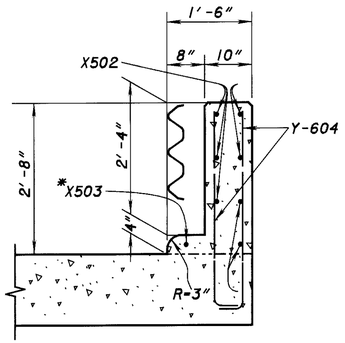
**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

FOR ADDITIONAL PARAPET DETAILS SEE SHEET 27 / 31

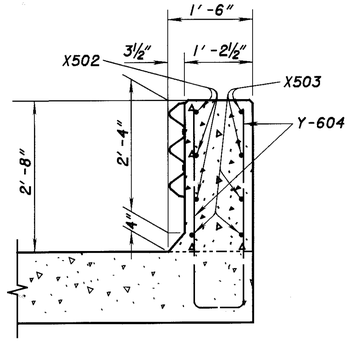
MIN. LAP SPLICES: #5 BAR - 2'-6"
#6 BAR - 3'-0"

LEGEND: N.S. - NEAR SIDE
F.S. - FAR SIDE

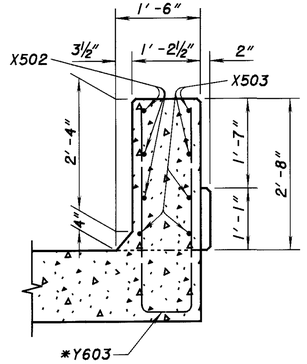



## SECTION F-F

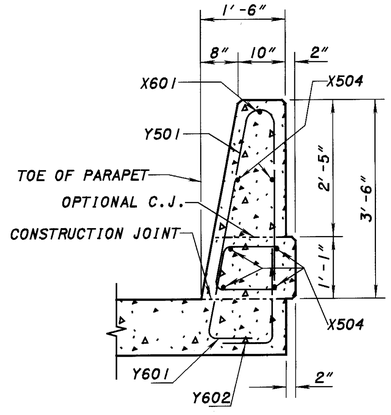
* FIELD BEND IF NECESSARY




## SECTION E-E




## SECTION D-D




## SECTION C-C

Area = 4.26 ft²

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | SER | 8-27-99 |

| CHECKED | REVISED | STRUCTURE FILE NUMBER |
|---|---|---|
| DFT | | 5203937L/5203961R |

PARAPET DETAILS
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

28 / 31

864 / 940

THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.

| MARK | NUMBER | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIER 1 | PIER 2 | PIER 3 | TOTAL | | LB | | A | B | C | D | R | INC |
| | PIERS - MED-71-2090 L (SOUTHBOUND LANE) | | | | | | | | | | | | |
| P501 | 20 | | 20 | 40 | 12'-8" | 529 | STR | | | | | | |
| P502 | 24 | 20 | 28 | 72 | 12'-4" | 926 | 24 | 2'-8" | 3'-8" | | | 1'-3⅜" | |
| P503 | 7 | 7 | 7 | 21 | 9'-1" | 199 | 2 | 6'-8" | 2'-8" | 6'-8" | | | |
| P504 | 2 | 2 | 2 | 6 | 13'-1" | 82 | 3 | 2'-8" | 3'-9" | | | | |
| P505 | 2 | 2 | 2 | 6 | 15'-3" | 95 | 3 | 2'-8" | 4'-10" | | | | |
| P506 | 2 | 2 | 2 | 6 | 17'-3" | 108 | 3 | 2'-8" | 5'-10" | | | | |
| P507 | 39 | 39 | 39 | 117 | 7'-1" | 864 | 2 | 2'-9" | 1'-10" | 2'-9" | | | |
| P508 | | 5 | 5 | 10 | 13'-8" | 143 | STR | | | | | | |
| | | 1 SR | | 1 SR | 8'-3" | | | | | | | | |
| P509 | | OF | | OF | TO | 57 | STR | | | | | | 1'-4" |
| | | 5 | | 5 | 13'-7" | | | | | | | | |
| P510 | | 5 | | 5 | 12'-2" | 63 | STR | | | | | | |
| | | 1 SR | | 1 SR | 6'-8" | | | | | | | | |
| P511 | | OF | | OF | TO | 49 | STR | | | | | | 1'-4½" |
| | | 5 | | 5 | 12'-2" | | | | | | | | |
| P512 | | 2 | | 2 | 7'-8" | 16 | STR | | | | | | |
| | | | | | | | | | | | | | |
| P601 | 8 | 8 | 8 | 24 | 13'-3" | 477 | STR | | | | | | |
| P602 | 2 | 2 | 2 | 6 | 11'-3" | 101 | STR | | | | | | |
| P603 | 2 | 2 | 2 | 6 | 9'-4" | 84 | STR | | | | | | |
| P604 | 2 | 2 | 2 | 6 | 7'-7" | 68 | STR | | | | | | |
| P605 | 4 | 4 | 4 | 12 | 5'-10" | 105 | 19 | 2'-0" | 2'-9" | 2'-8" | | | |
| | | | | | | | | | | | | | |
| P801 | 14 | | 14 | 28 | 14'-1" | 1053 | 17 | 12'-8" | | | | | |
| P802 | | 7 | | 7 | 13'-7" | 253 | 17 | 12'-2" | | | | | |
| | | 1 SR | | 1 SR | 10'-3" | | | 8'-10" | | | | | |
| P803 | | OF | | OF | TO | 159 | 17 | TO | | | | | 10" |
| | | 5 | | 5 | 13'-7" | | | 12'-2" | | | | | |
| P804 | | 1 | | 1 | 8'-1" | 22 | 17 | 6'-8" | | | | | |
| P805 | | 1 | | 1 | 8'-9" | 23 | 17 | 7'-4" | | | | | |
| | | | | | | | | | | | | | |
| P901 | 6 | 6 | 6 | 18 | 20'-0" | 1224 | 2 | 3'-8" | 13'-3" | 3'-8" | | | |
| | | | | | | | | | | | | | |
| P1001 | 32 | 32 | 32 | 96 | 11'-6" | 4751 | 1 | 1'-10" | 10'-0" | | | | |
| P1002 | 32 | | | 32 | 22'-7" | 3109 | STR | | | | | | |
| P1003 | | | 32 | 32 | 25'-7" | 3522 | STR | | | | | | |
| P1004 | | 32 | | 32 | 18'-10" | 2593 | STR | | | | | | |
| | | | | | | | | | | | | | |
| P1101 | 22 | | 22 | 44 | 15'-2" | 3546 | 17 | 12'-8" | | | | | |
| P1102 | 5 | 5 | 5 | 15 | 34'-8" | 2763 | STR | | | | | | |
| P1103 | 5 | 5 | 5 | 15 | 13'-0" | 1036 | STR | | | | | | |
| P1104 | | 12 | | 12 | 16'-2" | 1030 | 17 | 13'-8" | | | | | |
| | | 1 SR | | 1 SR | 12'-9" | | | 10'-3" | | | | | |
| P1105 | | OF | | OF | TO | 768 | 17 | TO | | | | | 4½" |
| | | 10 | | 10 | 16'-2" | | | 13'-8" | | | | | |
| P1106 | | 1 | | 1 | 10'-8" | 57 | 17 | 8'-2" | | | | | |
| P1107 | | 1 | | 1 | 11'-3" | 60 | 17 | 8'-9" | | | | | |

| MARK | NUMBER | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIER 1 | PIER 2 | PIER 3 | TOTAL | | LB | | A | B | C | D | R | INC |
| | PIERS - MED-71-2090 R (NORTHBOUND LANE) | | | | | | | | | | | | |
| P501 | 20 | | 20 | 40 | 12'-8" | 529 | STR | | | | | | |
| P502 | 24 | 20 | 28 | 72 | 12'-4" | 926 | 24 | 2'-8" | 3'-8" | | | 1'-3⅜" | |
| P503 | 7 | 7 | 7 | 21 | 9'-1" | 199 | 2 | 6'-8" | 2'-8" | 6'-8" | | | |
| P504 | 2 | 2 | 2 | 6 | 13'-1" | 82 | 3 | 2'-8" | 3'-9" | | | | |
| P505 | 2 | 2 | 2 | 6 | 15'-3" | 95 | 3 | 2'-8" | 4'-10" | | | | |
| P506 | 2 | 2 | 2 | 6 | 17'-3" | 108 | 3 | 2'-8" | 5'-10" | | | | |
| P507 | 39 | 39 | 39 | 117 | 7'-1" | 864 | 2 | 2'-9" | 1'-10" | 2'-9" | | | |
| P508 | | 5 | 5 | 10 | 13'-8" | 143 | STR | | | | | | |
| | | 1 SR | | 1 SR | 8'-3" | | | | | | | | |
| P509 | | OF | | OF | TO | 57 | STR | | | | | | 1'-4" |
| | | 5 | | 5 | 13'-7" | | | | | | | | |
| P510 | | 5 | | 5 | 12'-2" | 63 | STR | | | | | | |
| | | 1 SR | | 1 SR | 6'-8" | | | | | | | | |
| P511 | | OF | | OF | TO | 49 | STR | | | | | | 1'-4½" |
| | | 5 | | 5 | 12'-2" | | | | | | | | |
| P512 | | 2 | | 2 | 7'-8" | 16 | STR | | | | | | |
| | | | | | | | | | | | | | |
| P601 | 8 | 8 | 8 | 24 | 13'-3" | 477 | STR | | | | | | |
| P602 | 2 | 2 | 2 | 6 | 11'-3" | 101 | STR | | | | | | |
| P603 | 2 | 2 | 2 | 6 | 9'-4" | 84 | STR | | | | | | |
| P604 | 2 | 2 | 2 | 6 | 7'-7" | 68 | STR | | | | | | |
| P605 | 4 | 4 | 4 | 12 | 5'-10" | 105 | 19 | 2'-0" | 2'-9" | 2'-8" | | | |
| | | | | | | | | | | | | | |
| P801 | 14 | | 14 | 28 | 14'-1" | 1053 | 17 | 12'-8" | | | | | |
| P802 | | 7 | | 7 | 13'-7" | 253 | 17 | 12'-2" | | | | | |
| | | 1 SR | | 1 SR | 10'-3" | | | 8'-10" | | | | | |
| P803 | | OF | | OF | TO | 159 | 17 | TO | | | | | 10" |
| | | 5 | | 5 | 13'-7" | | | 12'-2" | | | | | |
| P804 | | 1 | | 1 | 8'-1" | 22 | 17 | 6'-8" | | | | | |
| P805 | | 1 | | 1 | 8'-9" | 23 | 17 | 7'-4" | | | | | |
| | | | | | | | | | | | | | |
| P901 | 6 | 6 | 6 | 18 | 20'-0" | 1224 | 2 | 3'-8" | 13'-3" | 3'-8" | | | |
| | | | | | | | | | | | | | |
| P1001 | 32 | 32 | 32 | 96 | 11'-6" | 4751 | 1 | 1'-10" | 10'-0" | | | | |
| P1005 | | | 32 | 32 | 21'-3" | 3109 | STR | | | | | | |
| P1006 | 32 | | | 32 | 25'-4" | 3522 | STR | | | | | | |
| P1007 | | 32 | | 32 | 17'-0" | 2593 | STR | | | | | | |
| | | | | | | | | | | | | | |
| P1101 | 22 | | 22 | 44 | 15'-2" | 3546 | 17 | 12'-8" | | | | | |
| P1102 | 5 | 5 | 5 | 15 | 34'-8" | 2763 | STR | | | | | | |
| P1103 | 5 | 5 | 5 | 15 | 13'-0" | 1036 | STR | | | | | | |
| P1104 | | 12 | | 12 | 16'-2" | 1030 | 17 | 13'-8" | | | | | |
| | | 1 SR | | 1 SR | 12'-9" | | | 10'-3" | | | | | |
| P1105 | | OF | | OF | TO | 768 | 17 | TO | | | | | 4½" |
| | | 10 | | 10 | 16'-2" | | | 13'-8" | | | | | |
| P1106 | | 1 | | 1 | 10'-8" | 57 | 17 | 8'-2" | | | | | |
| P1107 | | 1 | | 1 | 11'-3" | 60 | 17 | 8'-9" | | | | | |

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED TAA
DRAWN TAA
CHECKED DFT
REVISED
REVIEWED SER
DATE 8-27-99
STRUCTURE FILE NUMBER 5203937L/5203961R

REINFORCING STEEL
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78

29 / 31

865
940

THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | INC |
| ABUTMENTS - MED-71-2090 L (SOUTHBOUND LANE) | | | | | | | | | | | | |
| A501 | 50 | 58 | 50 | 58 | 216 | 8'-5" | 1897 | 2 | 3'-0" | 2'-8" | 3'-0" | |
| A502 | 25 | 25 | 25 | 25 | 100 | 7'-11" | 826 | 2 | 3'-0" | 2'-2" | 3'-0" | |
| A503 | 6 | | | | 6 | 23'-5" | 146 | STR | | | | |
| A504 | 6 | | 6 | | 12 | 34'-9" | 435 | STR | | | | |
| A505 | | 2 | | | 2 | 6'-1" | 13 | STR | | | | |
| A506 | 26 | 11 | 20 | | 57 | 16'-9" | 996 | 3 | 5'-8" | 2'-7" | | |
| A507 | 16 | | 17 | 6 | 39 | 16'-5" | 668 | 2 | 7'-0" | 2'-8" | 7'-0" | |
| A508 | | 12 | | | 12 | 3'-0" | 38 | STR | | | | |
| A509 | | 6 | | 6 | 12 | 36'-4" | 455 | STR | | | | |
| A510 | | | | 10 | 10 | 9'-3" | 96 | STR | | | | |
| A511 | | | | 2 | 2 | 12'-9" | 27 | STR | | | | |
| A512 | | 10 | 10 | | 20 | 7'-6" | 156 | STR | | | | |
| A513 | | 4 | | | 4 | 9'-11" | 41 | STR | | | | |
| A514 | | 2 | | | 2 | 3'-8" | 8 | STR | | | | |
| A515 | | 1 | | | 1 | 4'-9" | 5 | STR | | | | |
| A516 | 10 | 7 | 5 | 8 | 30 | 19'-9" | 618 | 2 | 9'-5" | 1'-2" | 9'-5" | |
| A517 | 4 | 4 | 4 | 4 | 16 | 7'-9" | 129 | 3 | 1'-2" | 2'-7" | | |
| | 1 SR | 1 SR | 1 SR | 1 SR | 4 SR | 8'-5" | | | | 2'-11" | | |
| A518 | OF | OF | OF | OF | OF | TO | 161 | 3 | 1'-2" | TO | | 5" |
| | 4 | 4 | 4 | 4 | 4 | 10'-11" | | | | 4'-2" | | |
| A519 | 2 | 2 | 2 | 2 | 8 | 10'-2" | 85 | 35 | 2'-0" | 3'-4" | 4'-10" | |
| A520 | 10 | 7 | 5 | 8 | 30 | 9'-11" | 310 | 2 | 4'-6" | 1'-2" | 4'-6" | |
| A521 | | 2 | 2 | | 4 | 10'-9" | 45 | STR | | | | |
| A522 | | 2 | 4 | | 6 | 14'-10" | 93 | STR | | | | |
| A523 | 2 | | | | 2 | 14'-6" | 30 | 1 | 2'-0" | 12'-8" | | |
| A524 | 1 | | | | 1 | 11'-10" | 12 | STR | | | | |
| A525 | 2 | | | | 2 | 10'-10" | 24 | STR | | | | |
| A526 | 1 | | | | 1 | 12'-8" | 13 | STR | | | | |
| A527 | | | | 11 | 11 | 12'-4" | 141 | STR | | | | |
| A528 | 6 | | | | 6 | 9'-3" | 58 | STR | | | | |
| A529 | 2 | | | | 2 | 12'-3" | 26 | STR | | | | |
| A530 | 6 | | | 4 | 10 | 17'-3" | 180 | STR | | | | |
| A531 | | | | 7 | 7 | 8'-6" | 62 | STR | | | | |
| A532 | | | 6 | | 6 | 8'-5" | 53 | STR | | | | |
| A533 | | 2 | | | 2 | 6'-11" | 14 | STR | | | | |
| A534 | | | 6 | | 6 | 23'-8" | 148 | STR | | | | |
| A535 | | 1 | | | 1 | 5'-4" | 6 | STR | | | | |
| A536 | 27 | 31 | 27 | 31 | 116 | 7'-4" | 886 | 2 | 2'-6" | 2'-8" | 2'-6" | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| A601 | 26 | 60 | 26 | 60 | 172 | 6'-2" | 1593 | STR | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| A801 | 18 | | 18 | | 36 | 34'-11" | 3357 | STR | | | | |
| A802 | 4 | | | | 4 | 23'-4" | 249 | STR | | | | |
| A803 | | 18 | | 18 | 36 | 34'-11" | 3357 | STR | | | | |
| A804 | | 1 | | | 1 | 4'-0" | 11 | STR | | | | |
| A805 | | 3 | | | 3 | 9'-11" | 79 | STR | | | | |
| A806 | 1 | | | | 1 | 13'-6" | 36 | 1 | | | | |
| A807 | 1 | | | | 1 | 11'-10" | 32 | STR | | | | |
| A808 | 1 | | | | 1 | 10'-10" | 29 | STR | | | | |

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | INC |
| ABUTMENTS - MED-71-2090 L (SOUTHBOUND LANE) | | | | | | | | | | | | |
| A809 | 1 | | | | 1 | 12'-8" | 34 | STR | | | | |
| A810 | | 1 | | | 1 | 6'-0" | 16 | STR | | | | |
| A811 | | 1 | | | 1 | 4'-8" | 12 | STR | | | | |
| A812 | | 1 | | | 1 | 5'-4" | 14 | STR | | | | |
| A813 | | | 4 | | 4 | 23'-10" | 256 | STR | | | | |
| A814 | | | | 7 | 7 | 12'-4" | 230 | 17 | | | | |
| A815 | | | 4 | | 4 | 8'-6" | 91 | STR | | | | |
| A816 | | | | 11 | 11 | 8'-7" | 252 | 17 | | | | |
| | | | | | | | | | | | | |
| D801 | 25 | 25 | 25 | 25 | 100 | 4'-3" | 1135 | 18 | 2'-7" | 1'-0" | 1'-0" | |

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED SER | DATE 8-27-99 | STRUCTURE FILE NUMBER 5203937L/5203961R

DRAWN TAA | REVISED

DESIGNED TAA | CHECKED DFT

REINFORCING STEEL
MED-71-2090 L/R
I-71 OVER S.R. 3

MED-71-15.78



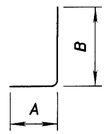
866/940

THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.

| MARK | NUMBER REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENTS - MED-71-2090 R (NORTHBOUND LANE) | | | | | | | | | | | | |
| A501 | 50 | 58 | 50 | 58 | 216 | 8'-5" | 1897 | 2 | 3'-0" | 2'-8" | 3'-0" | |
| A502 | 25 | 25 | 25 | 25 | 100 | 7'-11" | 826 | 2 | 3'-0" | 2'-2" | 3'-0" | |
| A503 | 6 | | | | 6 | 23'-5" | 146 | STR | | | | |
| A504 | 6 | | 6 | | 12 | 34'-9" | 435 | STR | | | | |
| A505 | | 2 | | | 2 | 6'-1" | 13 | STR | | | | |
| A506 | 26 | 11 | 20 | | 57 | 16'-9" | 996 | 3 | 5'-8" | 2'-7" | | |
| A507 | 16 | | 17 | 6 | 39 | 16'-5" | 668 | 2 | 7'-0" | 2'-8" | 7'-0" | |
| A508 | | | | 12 | 12 | 3'-0" | 38 | STR | | | | |
| A509 | | 6 | | 6 | 12 | 36'-4" | 455 | STR | | | | |
| A510 | | | | 10 | 10 | 9'-3" | 96 | STR | | | | |
| A511 | | | | 2 | 2 | 12'-9" | 27 | STR | | | | |
| A512 | | 10 | 10 | | 20 | 7'-6" | 156 | STR | | | | |
| A513 | | 4 | | | 4 | 9'-11" | 41 | STR | | | | |
| A514 | | 2 | | | 2 | 3'-8" | 8 | STR | | | | |
| A515 | | 1 | | | 1 | 4'-9" | 5 | STR | | | | |
| A516 | 10 | 7 | 5 | 8 | 30 | 19'-9" | 618 | 2 | 9'-5" | 1'-2" | 9'-5" | |
| A517 | 4 | 4 | 4 | 4 | 16 | 7'-9" | 129 | 3 | 1'-2" | 2'-7" | | |
| | 1 SR | 1 SR | 1 SR | 1 SR | 4 SR | 8'-5" | | | | 2'-11" | | |
| A518 | 0F | 0F | 0F | 0F | 0F | TO | 161 | 3 | 1'-2" | TO | | 5" |
| | 4 | 4 | 4 | 4 | 4 | 10'-11" | | | | 4'-2" | | |
| A519 | 2 | 2 | 2 | 2 | 8 | 10'-2" | 85 | 29 | 2'-0" | 3'-4" | 4'-10" | |
| A520 | 10 | 7 | 5 | 8 | 30 | 9'-11" | 310 | 2 | 4'-6" | 1'-2" | 4'-6" | |
| A521 | | 2 | 2 | | 4 | 10'-9" | 45 | STR | | | | |
| A522 | | 2 | 4 | | 6 | 14'-10" | 93 | STR | | | | |
| A523 | 2 | | | | 2 | 14'-6" | 30 | 1 | 2'-0" | 12'-8" | | |
| A524 | 1 | | | | 1 | 11'-10" | 12 | STR | | | | |
| A525 | 2 | | | | 2 | 10'-10" | 24 | STR | | | | |
| A526 | 1 | | | | 1 | 12'-8" | 13 | STR | | | | |
| A527 | | | | 11 | 11 | 12'-4" | 141 | STR | | | | |
| A528 | 6 | | | | 6 | 9'-3" | 58 | STR | | | | |
| A529 | 2 | | | | 2 | 12'-3" | 26 | STR | | | | |
| A530 | 6 | | | 4 | 10 | 17'-3" | 180 | STR | | | | |
| A531 | | | | 7 | 7 | 8'-6" | 62 | STR | | | | |
| A532 | | | 6 | | 6 | 8'-5" | 53 | STR | | | | |
| A533 | | 2 | | | 2 | 6'-11" | 14 | STR | | | | |
| A534 | | | 6 | | 6 | 23'-8" | 148 | STR | | | | |
| A535 | | 1 | | | 1 | 5'-4" | 6 | STR | | | | |
| A536 | 27 | 31 | 27 | 31 | 116 | 7'-4" | 886 | 2 | 2'-6" | 2'-8" | 2'-6" | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| A601 | 26 | 60 | 26 | 60 | 172 | 6'-2" | 1593 | STR | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| A801 | 18 | | 18 | | 36 | 34'-11" | 3357 | STR | | | | |
| A802 | 4 | | | | 4 | 23'-4" | 249 | STR | | | | |
| A803 | | 18 | | 18 | 36 | 34'-11" | 3357 | STR | | | | |
| A804 | | 1 | | | 1 | 4'-0" | 11 | STR | | | | |
| A805 | | 3 | | | 3 | 9'-11" | 79 | STR | | | | |
| A806 | 1 | | | | 1 | 13'-6" | 36 | 1 | | | | |
| A807 | 1 | | | | 1 | 11'-10" | 32 | STR | | | | |
| A808 | 1 | | | | 1 | 10'-10" | 29 | STR | | | | |

| MARK | NUMBER REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENTS - MED-71-2090 R (NORTHBOUND LANE) | | | | | | | | | | | | |
| A809 | 1 | | | | 1 | 12'-8" | 34 | STR | | | | |
| A810 | | 1 | | | 1 | 6'-0" | 16 | STR | | | | |
| A811 | | 1 | | | 1 | 4'-8" | 12 | STR | | | | |
| A812 | | 1 | | | 1 | 5'-4" | 14 | STR | | | | |
| A813 | | | 4 | | 4 | 23'-10" | 256 | STR | | | | |
| A814 | | | | 7 | 7 | 13'-4" | 230 | 17 | 12'-4" | | | |
| A815 | | | 4 | | 4 | 8'-6" | 91 | STR | | | | |
| A816 | | | | 11 | 11 | 9'-7" | 252 | 17 | 8'-7" | | | |
| | | | | | | | | | | | | |
| D801 | 25 | 25 | 25 | 25 | 100 | 4'-3" | 1135 | 18 | 2'-7" | 1'-0" | 1'-0" | |

TYPE-1

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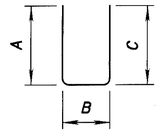


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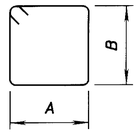


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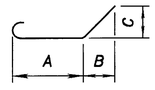


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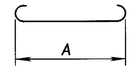


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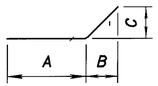
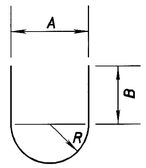
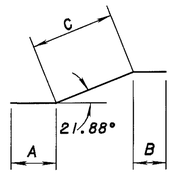



TYPE-24




TYPE-35




## BENDING DIAGRAMS

## NOTES

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

REIFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED SER
DATE 8-27-99
STRUCTURE FILE NUMBER 5203937L/5203961R

DRAWN TAA
REVISED

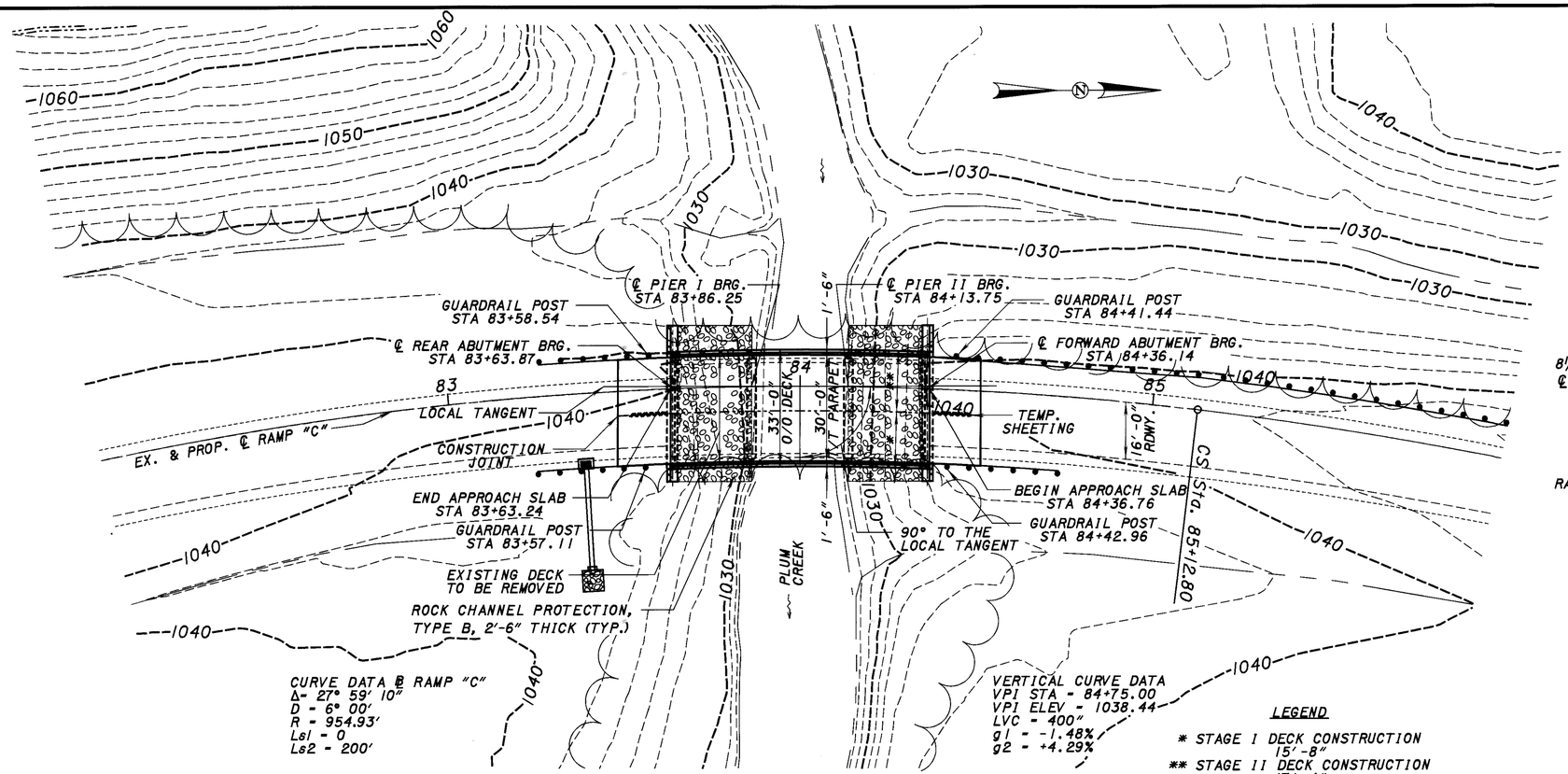
DESIGNED TAA
CHECKED DFT

REINFORCING STEEL
MED-71-2090 L/R
I-71 OVER S.R. 3

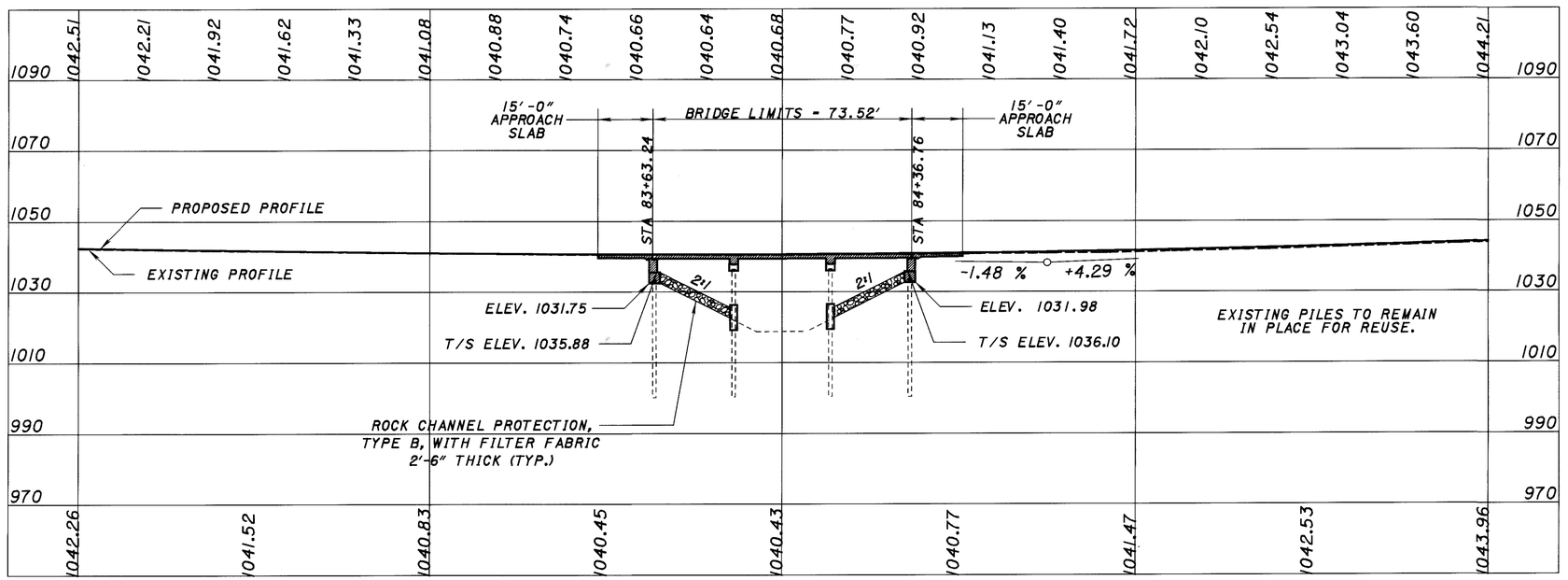
MED-71-15.78

31/31

867
940




PLAN




PROFILE

## BENCHMARK DATA

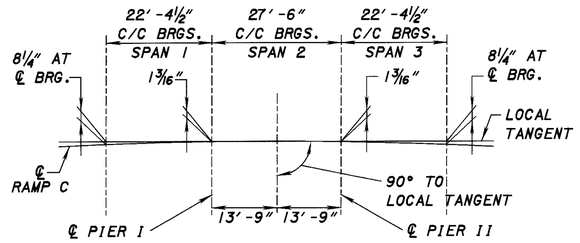
BM #1 - STATION 1110+35.99 IR-71 ELEVATION - 1069.77
ODOT DISC IN HEADWALL, STAMPED

## TRAFFIC DATA

CURRENT YEAR ADT (2000) - 6180
DESIGN YEAR ADT (2020) - 8960
DESIGN YEAR ADTT (2020) - 450

NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS-SECTIONS




TANGENT SCHEMATIC

## EXISTING STRUCTURE

TYPE: CONTINUOUS SLAB BRIDGE WITH CAPPED PILE PIERS

SPANS: 22'-0"±, 27'-6"±, 22'-0"± C/C BRGS.

ROADWAY: 25'-10"± F/F SAFETY CURBS

LOADING: CF-400 (57)

SKEW: NONE

WEARING SURFACE: ASPHALT CONCRETE

APPROACH SLABS: 25'-0"± LONG (AS-1-54)

ALIGNMENT: 6°00'± CURVE RIGHT

SUPERELEVATION: 0.063± FT./FT.

DATE BUILT: 1964

SFN: 5203996

## PROPOSED STRUCTURE

TYPE: CONTINUOUS SLAB BRIDGE WITH CAPPED PILE PIERS

SPANS: 22'-4½"±, 27'-6"±, 22'-4½"± C/C BRGS.

ROADWAY: 30'-0"± T/T PARAPETS

LOADING: HS-20-44 AND ALTERNATE MILITARY LOADING

SKEW: NONE

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: 15' LONG, AS-1-81; 30'-0" T/T CURB

ALIGNMENT: 6°00'± CURVE RIGHT

SUPERELEVATION: 0.063± FT./FT.

COORDINATES: LAT. N 41° 11' 39"
LONG. W 81° 47' 35"

DESIGN AGENCY: ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DATE: 9-20-99
REVIEWED: DFT
STRUCTURE FILE NUMBER: 5203996

DRAWN: BKL
REVISED:

DESIGNED: BKL
CHECKED: RJH

MEDINA COUNTY
STA. 83+63.24
STA. 84+36.76

SITE PLAN
MED-71-2092 W, RAMP "C"
OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

1 / 18

868
940

| MED-71-2092 W | | | | ESTIMATED QUANTITIES | ABUTMENTS | | PIERS | SUPER. | GEN. | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|
| ITEM | EXTENSION | TOTAL | UNIT | DESCRIPTION | REAR | FORWARD | | | | |
| 202 | 11203 | LUMP | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | LUMP | LUMP | LUMP | LUMP | | 3 |
| 503 | 11100 | LUMP | | COFFERDAMS, CRIBS AND SHEETING | | | | | LUMP | |
| 503 | 21301 | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LUMP | LUMP | | | | 3 |
| SPECIAL | 50771200 | 156 | LIN FT | PILE ENCASEMENT | | | 156 | | | |
| 512 | 44400 | 4 | SQ YD | TYPE B WATERPROOFING | 2 | 2 | | | | |
| SPECIAL | 51267510 | 291 | SQ YD | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 25 | 25 | 60* | 181 | | |
| 516 | 13200 | 18 | SQ FT | 1/2" PREFORMED EXPANSION JOINT FILLER | 9 | 9 | | | | |
| 518 | 12200 | 3 | EACH | SCUPPER, INCLUDING SUPPORTS | | | | 3 | | |
| 518 | 21231 | LUMP | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | LUMP | | | | 3 |
| 518 | 40000 | 90 | LIN FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | 45 | 45 | | | | |
| 518 | 40010 | 60 | LIN FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 30 | 30 | | | | |
| 601 | 32104 | 195 | CU YD | ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER | | | | | 195 | |
| 842 | 42501 | 4 | CU YD | CLASS C CONCRETE, PIER CAP, AS PER PLAN | | | 4 | | | 3 |
| 842 | 43501 | 60 | CU YD | CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING, AS PER PLAN | 30 | 30 | | | | 3 |
| 844 | 48001 | 113 | CU YD | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK), AS PER PLAN, MIX 4 | | | | 113 | | 3 |
| 844 | 48021 | 23 | CU YD | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET), AS PER PLAN, MIX 4 | | | 23 | | | 3 |
| 844 | 49000 | LUMP | | HIGH PERFORMANCE CONCRETE TRIAL MIX | | | | LUMP | | |

* EXPOSED SURFACES OF PIER CAP, NEW AND EXISTING, TO BE SEALED.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT DATE 9-20-99
STRUCTURE FILE NUMBER 5203996

DRAWN BKL REVISED
DESIGNED BKL CHECKED RJH

# ESTIMATED QUANTITIES

BRIDGE NO. MED-71-2092 W
RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78



869/940

# GENERAL NOTES

**STANDARD DRAWINGS AND SPECIFICATIONS:**

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

| | |
|---|---|
| AS-1-81 | REVISED 09-15-94 |
| SBR-1-99 | DATED 01-12-99 |
| PCB-1-91 | REVISED 07-06-99 |
| CS-1-93 | DATED 06-30-95 |

AND TO SUPPLEMENTAL SPECIFICATIONS:

| | |
|---|---|
| 842 | DATED 01-06-99 |
| 844 | DATED 01-06-99 |
| 899 | DATED 10-21-98 |
| 911 | DATED 07-10-97 |
| 954 | DATED 09-09-97 |

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997 AND 1998 INTERIM SPECIFICATIONS AND THE ODOT DESIGN MANUAL.

**DESIGN LOADING:**

HS20-44, CASE I AND THE ALTERNATE MILITARY LOADING.

**DESIGN DATA:**

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
ITEM 842 CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60 Ksi. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

**DECK PROTECTION METHOD** - EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER AND HIGH PERFORMANCE CONCRETE.

**MONOLITHIC WEARING SURFACE** IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

**EXISTING BRIDGE PLANS** MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT THREE OFFICE IN ASHLAND, OHIO.

**TRAFFIC MAINTENANCE:**

SEE ROADWAY PLANS FOR ADDITIONAL TRAFFIC NOTES AND DETAILS.

**ITEM 202 PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN:**

PORTION OF THE STRUCTURE REMOVED, AS PER PLAN, SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED.

PROTECTION OF TRAFFIC:

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE ENGINEER FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT WHERE OTHERWISE APPROVED BY THE ENGINEER.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE FREE WATER AS CONCRETE IS PLACED.

SUBSTRUCTURE CONCRETE REMOVAL:

SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 90 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. ALL WORK SHALL BE PAID FOR UNDER ITEM 202 - PORTION OF STRUCTURES REMOVED, AS PER PLAN.

**ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:**

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 6" LIFTS. EXCAVATION AT ABUTMENTS IN ADDITION TO THAT NECESSARY TO REMOVE PORTIONS OF THE EXISTING STRUCTURE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN, FOR PAYMENT.

**ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN:**

POROUS BACKFILL SHALL BE #57 GRAVEL ONLY.

**ITEM 842 CLASS C CONCRETE, FOOTING, PIER AND ABUTMENT, AS PER PLAN:**

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK), AS PER PLAN, MIX 4:**
**ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET), AS PER PLAN, MIX 4:**

THE DESIGN MIX SHALL BE MIX NO. 4 LIMESTONE. THE OPTION OF SLIPFORM CONSTRUCTION OF THE BRIDGE PARAPET IS NOT PERMITTED. THIS ITEM SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**REPLACEMENT OF EXISTING REINFORCING STEEL:**

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THE CONTRACTOR'S COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 200 POUNDS SHALL BE INCLUDED IN THE COST OF THE APPROPRIATE PIER CONCRETE BID ITEM.

**REINFORCING STEEL:**

NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED UNDER ITEM 844 HIGH PERFORMANCE CONCRETE.

**ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):**

EPOXY-URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722 AS PER THE DETAILS IN THE PLAN. FOR ADDITIONAL NOTES SEE THE NOTE IN THE PROPOSAL "ITEM SPECIAL - SEALING OF CONCRETE SURFACES".

**SURVEY DISC ON STRUCTURE:**

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: BKL | DRAWN: BKL | CHECKED: RJH | REVISED: | REVIEWED: DFT | DATE: 9-20-99
STRUCTURE FILE NUMBER: 5203996

GENERAL NOTES
MED-71-2092 W
RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78



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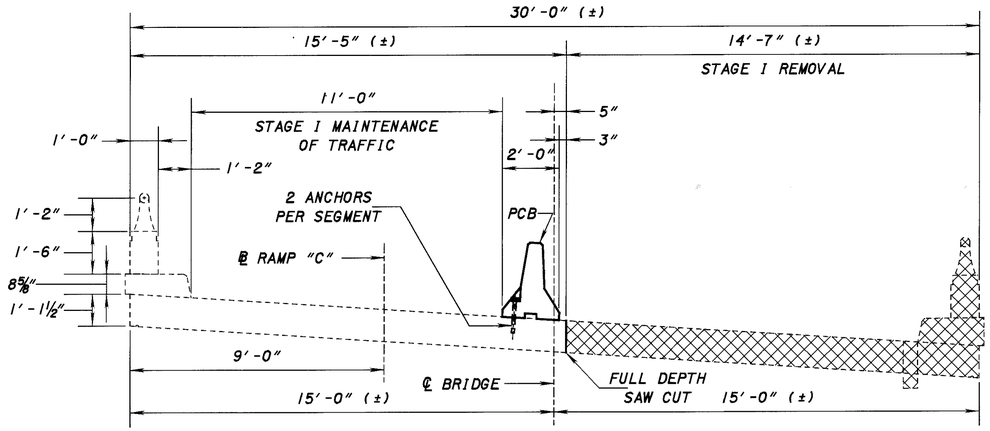
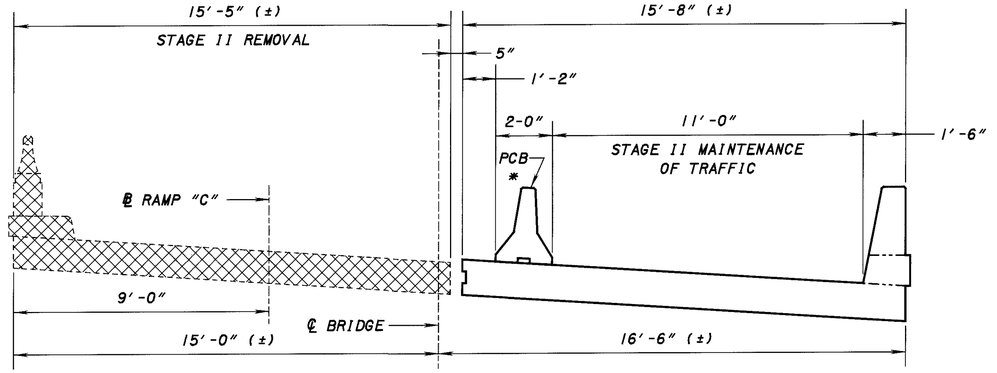
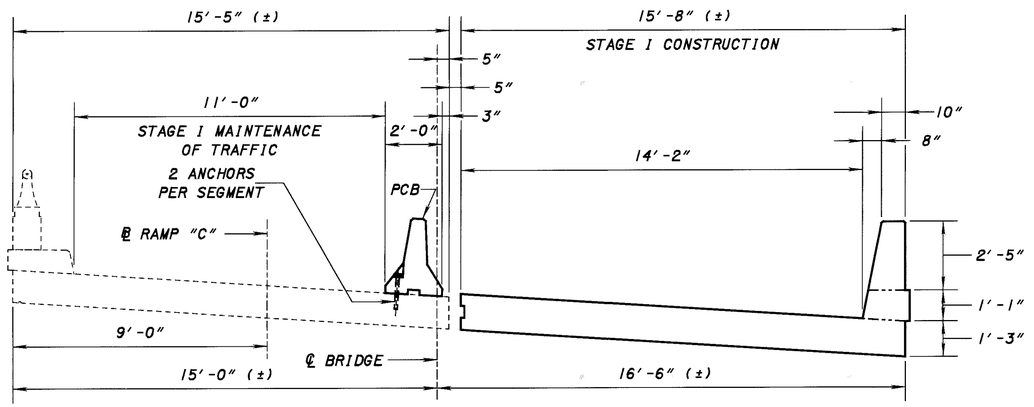



STAGE I REMOVAL




STAGE II REMOVAL

* BARRIER UNANCHORED

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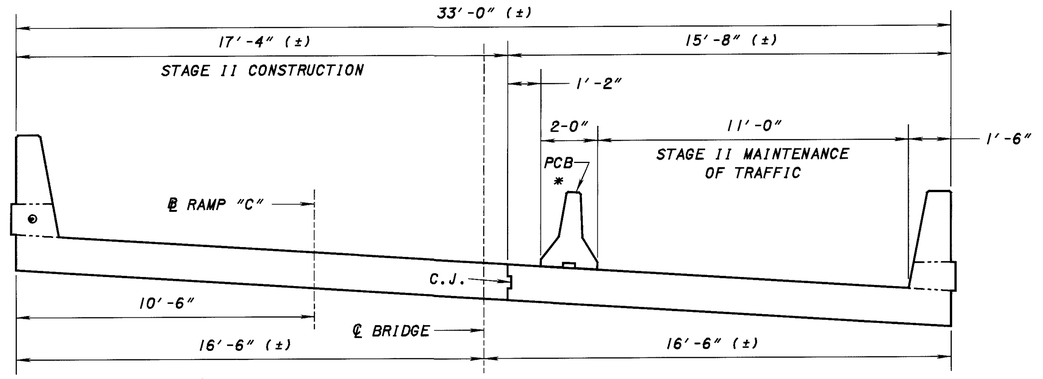


STAGE II CONSTRUCTION

* BARRIER UNANCHORED

PORTION OF STRUCTURE TO BE REMOVED

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT DATE 9-20-99
STRUCTURE FILE NUMBER 5203996

DRAWN BKL REVISED
DESIGNED BKL CHECKED RJH

STAGE CONSTRUCTION DETAILS
MED-71-2092 W
RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

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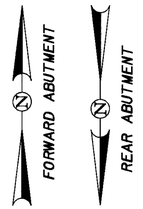
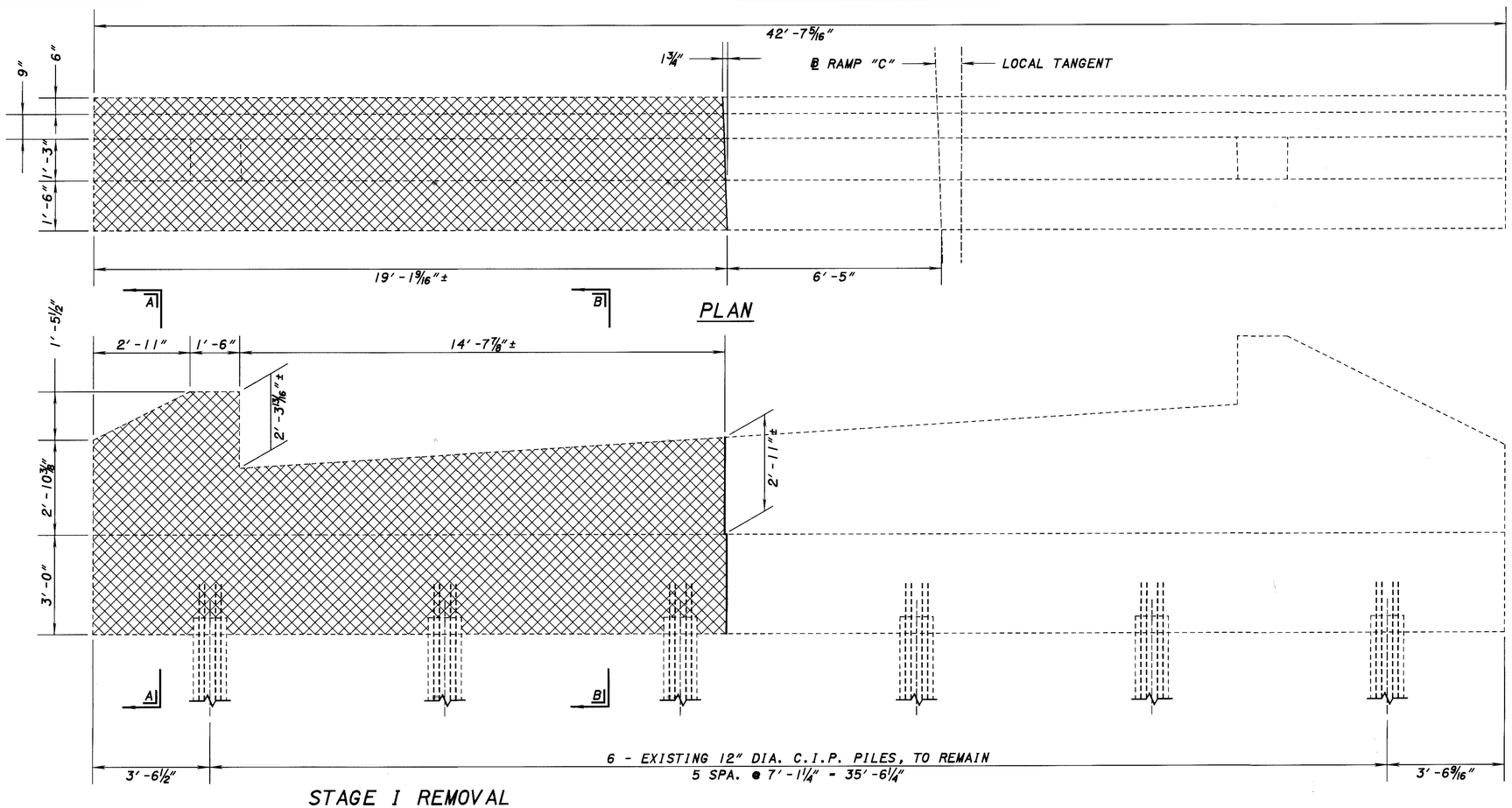
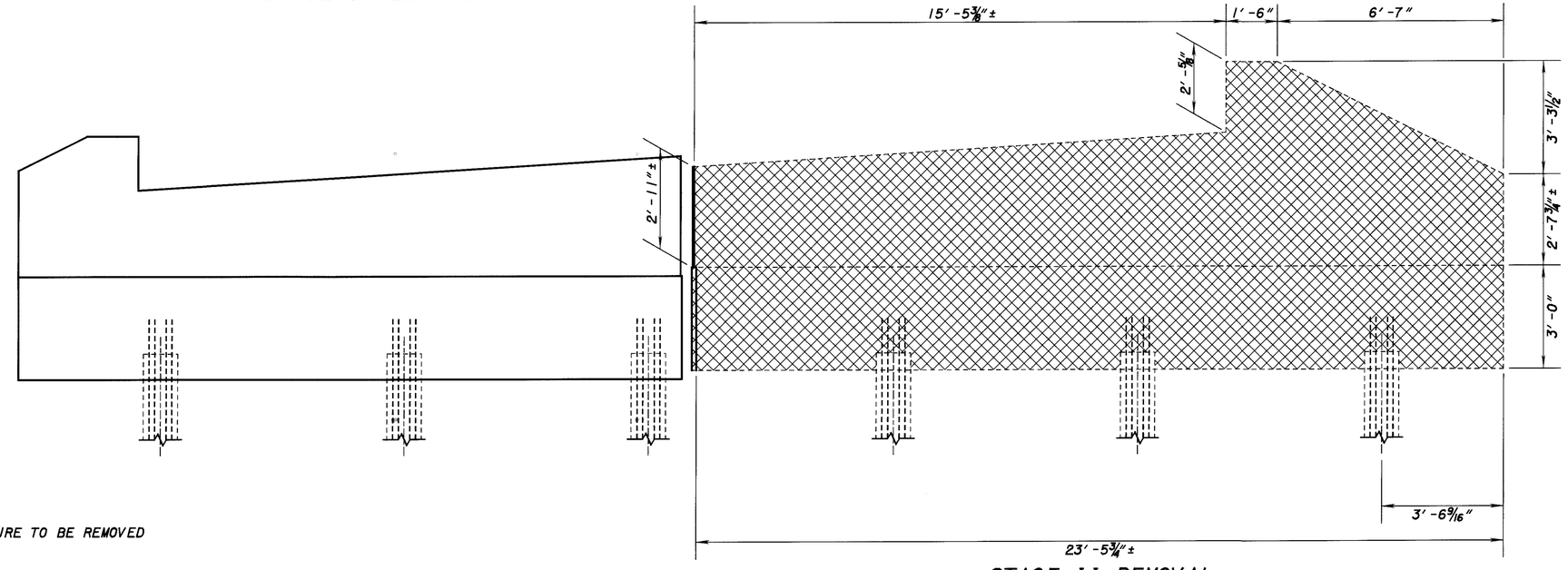



REAR ABUTMENT SHOWN
FORWARD ABUTMENT IS
OPPOSITE HAND

FOR SECTION A-A & B-B
SEE SHEET 7/18




PORTION OF STRUCTURE TO BE REMOVED

ELEVATION

STAGE II REMOVAL

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| REVISED | DATE |
|---|---|
| DFT | 9-20-99 |

STRUCTURE FILE NUMBER
5203996

| DESIGNED | DRAWN | REVISED |
|---|---|---|
| BKL | BKL | |
| CHECKED | REVISED | |
| RJH | | |

# ABUTMENT DEMOLITION PLAN

MED-71-2092 W

RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

5/18

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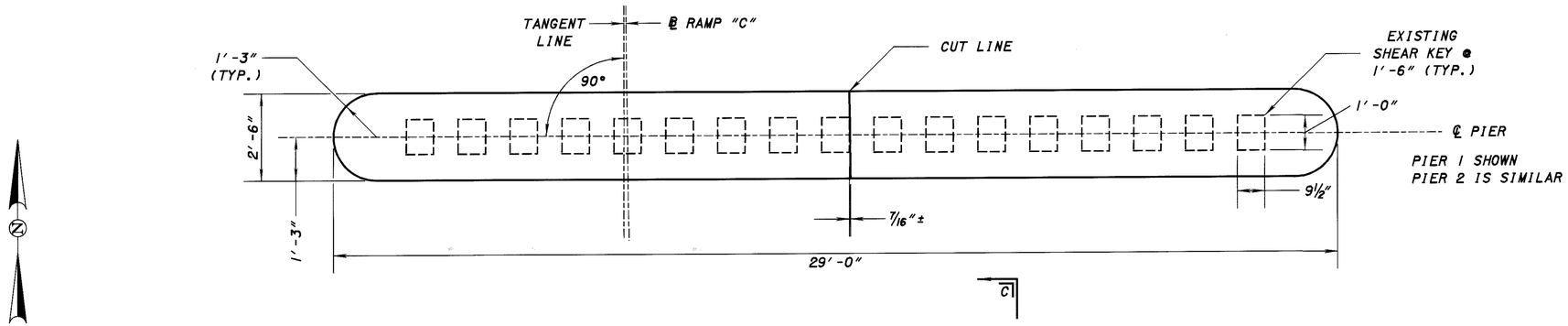
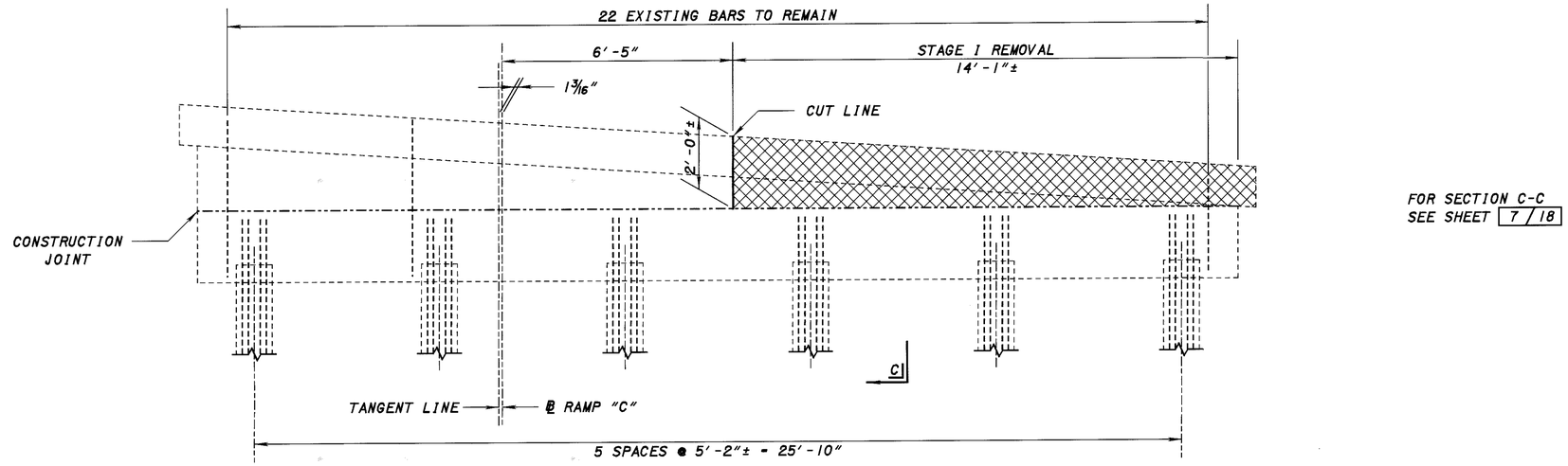
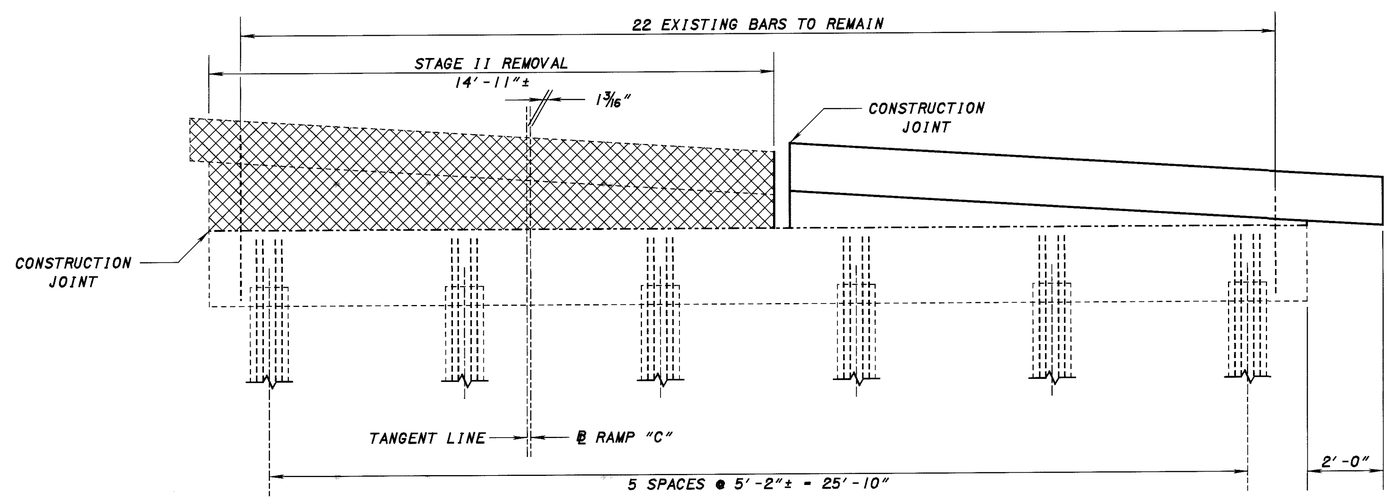



FOR SECTION C-C
SEE SHEET 7/18

STAGE I REMOVAL

PORTION OF STRUCTURE TO BE REMOVED




STAGE II REMOVAL

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| BKL | BKL | DFT | 9-20-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| RJH | | 5203996 | |

PIER DEMOLITION PLAN
MED-71-2092 W
RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

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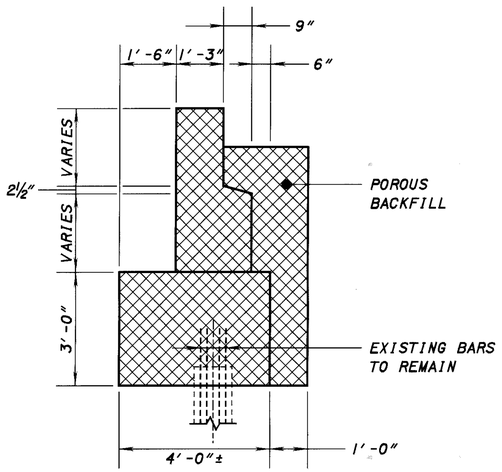
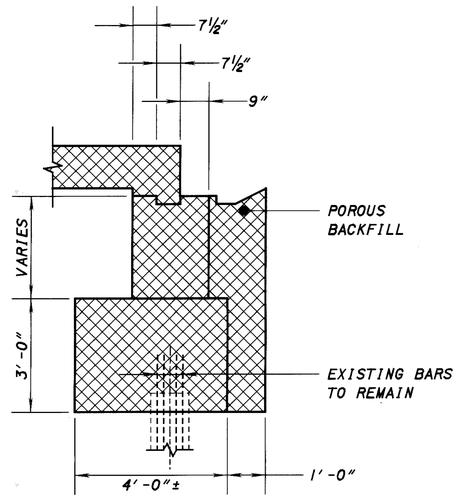
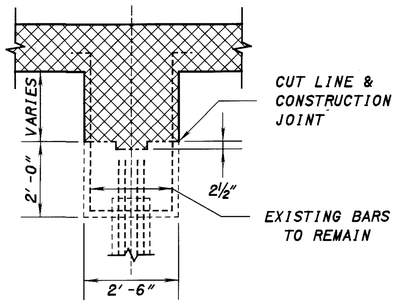



SECTION A-A




SECTION B-B




SECTION C-C

PIER REMOVAL NOTES

1. ALL ELEVATIONS AND DIMENSIONS ARE MEASURED ALONG THE ℄ BEARINGS.
2. PIER CAP SHALL BE REMOVED AND REPLACED ABOVE ORIGINAL CONSTRUCTION JOINT AS SHOWN IN THE DETAILS.
3. CONCRETE SHALL BE SUFFICIENTLY REMOVED FROM THE ORIGINAL SHEAR KEYS TO PRODUCE A POSITIVE CONNECTION BETWEEN THE EXISTING AND NEW CONCRETE.
4. VERTICAL REINFORCING STEEL SHALL REMAIN IN PLACE.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT | DATE 9-20-99
STRUCTURE FILE NUMBER 5203996

DESIGNED BKL | DRAWN BKL | REVISED
CHECKED RJH | REVISED

ABUTMENT & PIER DEMOLITION DETAILS
RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE
MED-71-2092 W

MED-71-15.78

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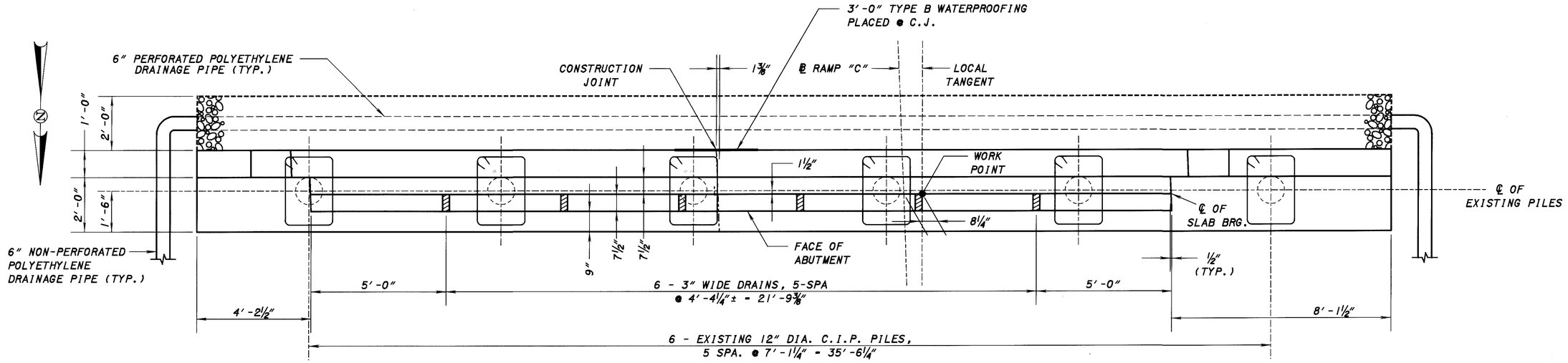
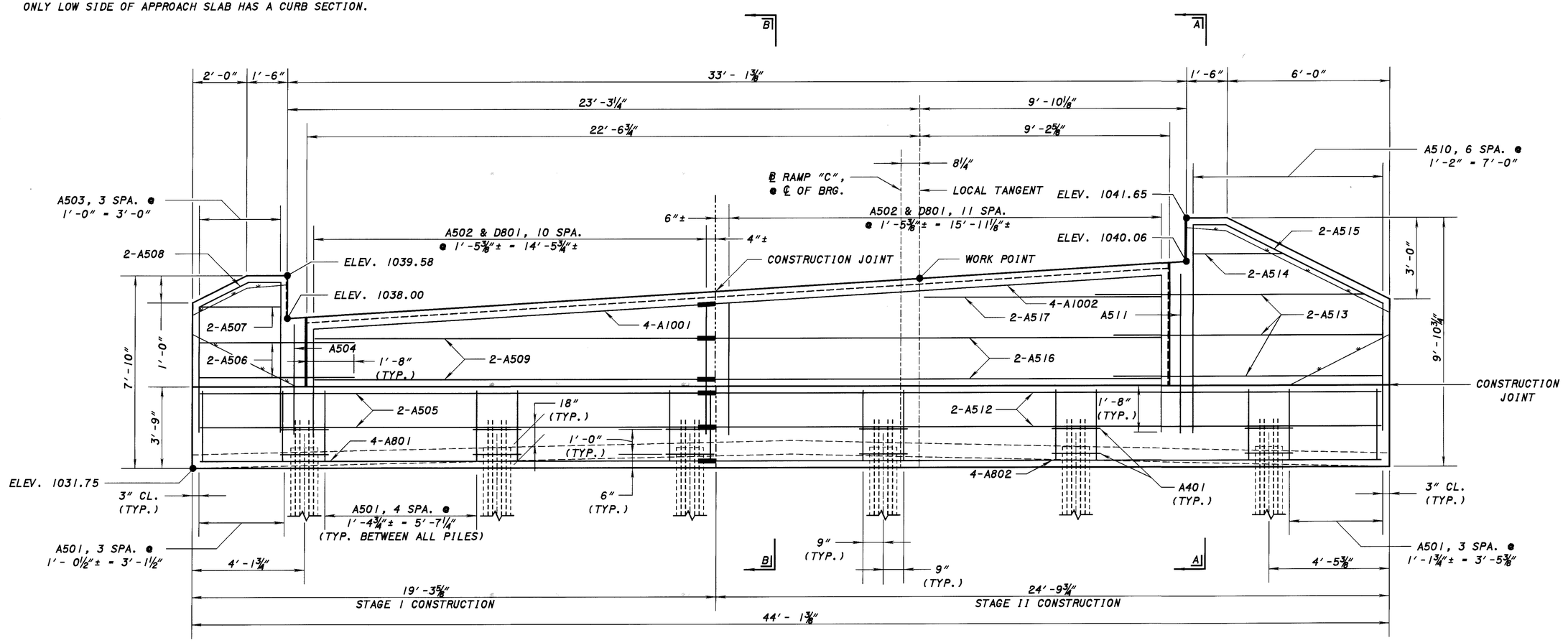



## PLAN - REAR ABUTMENT

FOR SECTIONS A-A & B-B SEE SHEET 10/18

NOTE:
ONLY LOW SIDE OF APPROACH SLAB HAS A CURB SECTION.




## ELEVATION - REAR ABUTMENT

ALL DIMENSIONS AND ELEVATIONS ARE SHOWN ALONG THE FACES OF THE ABUTMENTS.

ADJUST REBAR TO FIT @ CONSTRUCTION JOINT

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| BKL | BKL | DFT | 9-20-99 |

| CHECKED | REVISED | STRUCTURE FILE NUMBER |
|---|---|---|
| RJH | | 5203996 |

ABUTMENT DETAILS
MED-71-2092 W
RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

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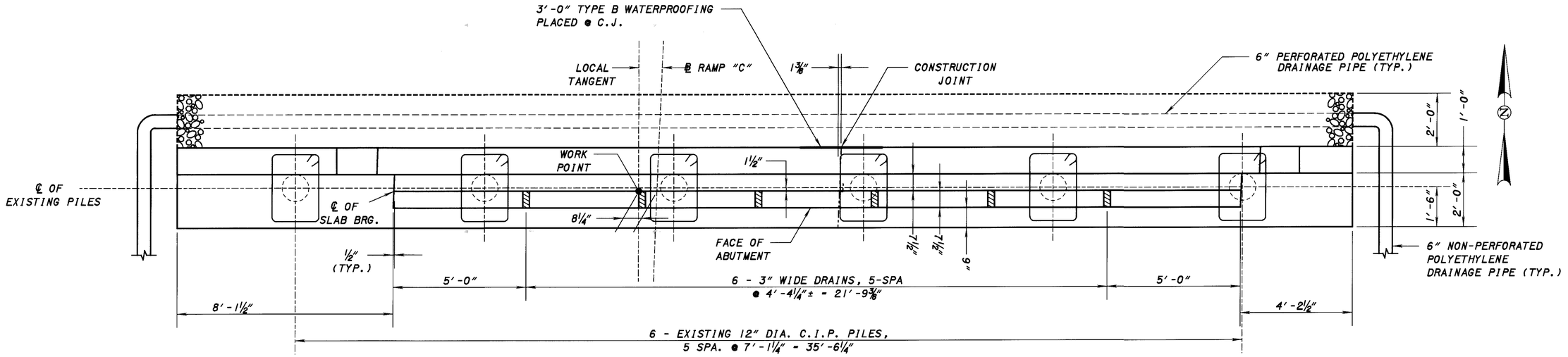
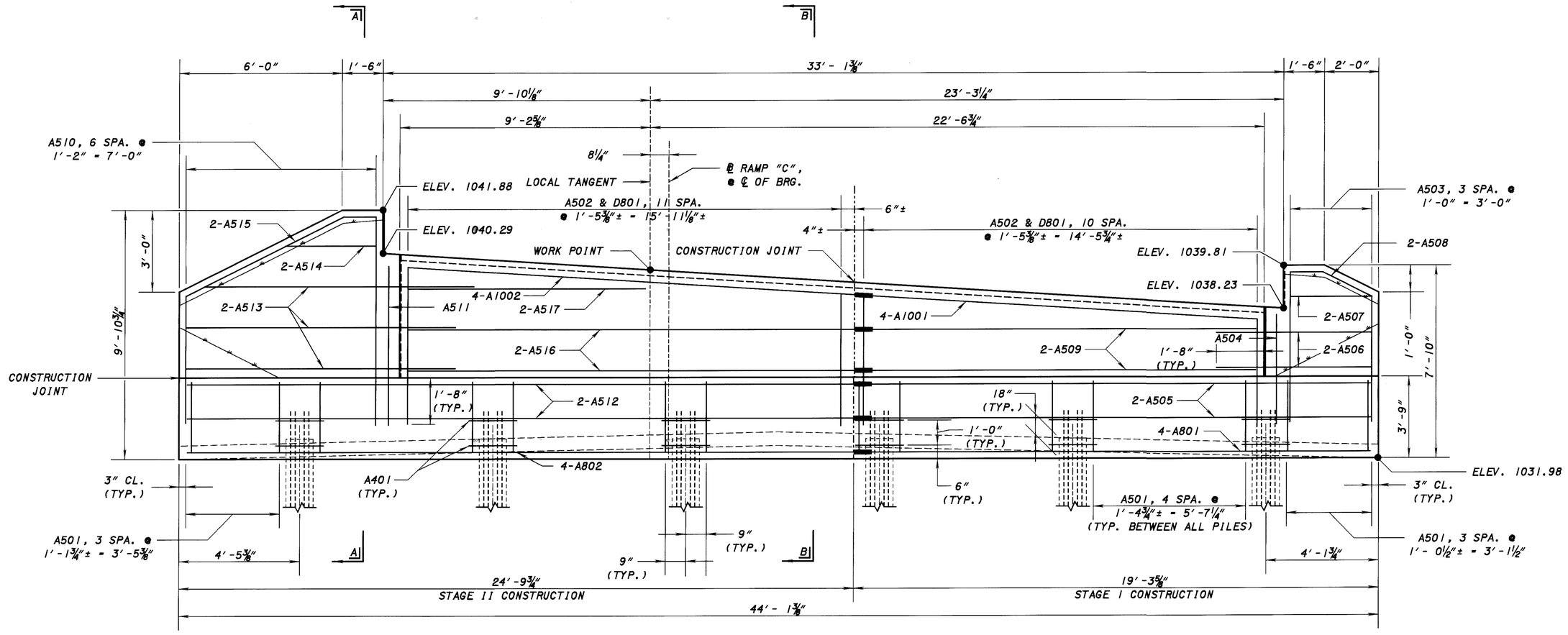



## PLAN - FORWARD ABUTMENT

NOTE:
ONLY LOW SIDE OF APPROACH SLAB HAS A CURB SECTION.

FOR SECTIONS A-A & B-B SEE SHEET 10/18




ADJUST REBAR TO FIT @ CONSTRUCTION JOINT

## ELEVATION - FORWARD ABUTMENT

ALL DIMENSIONS AND ELEVATIONS ARE SHOWN ALONG THE FACES OF THE ABUTMENTS.

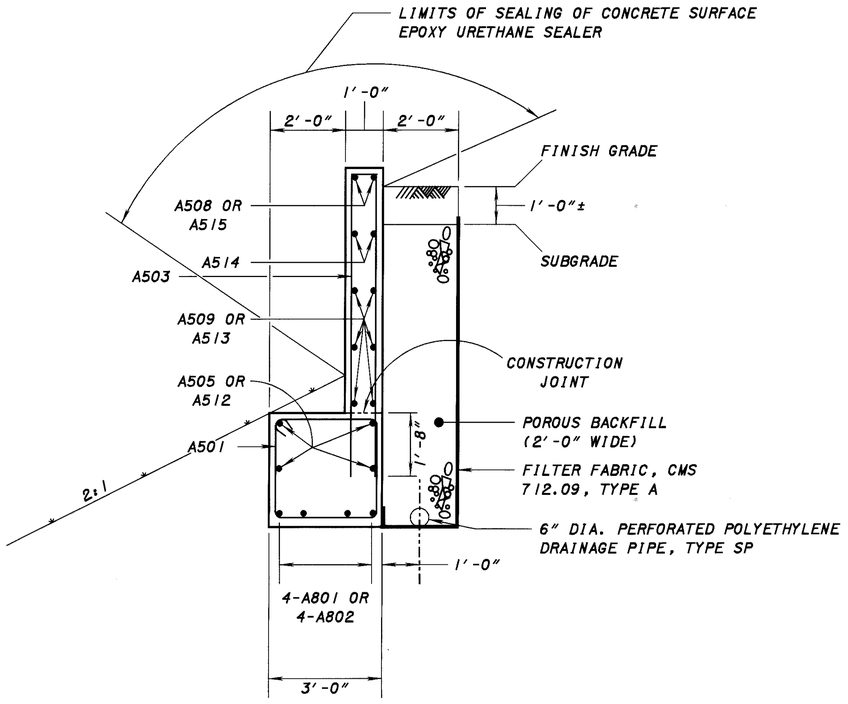
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: BKL | DRAWN: BKL | REVISED: DFT | DATE: 9-20-99 | CHECKED: RJH | STRUCTURE FILE NUMBER: 5203996

# ABUTMENT DETAILS

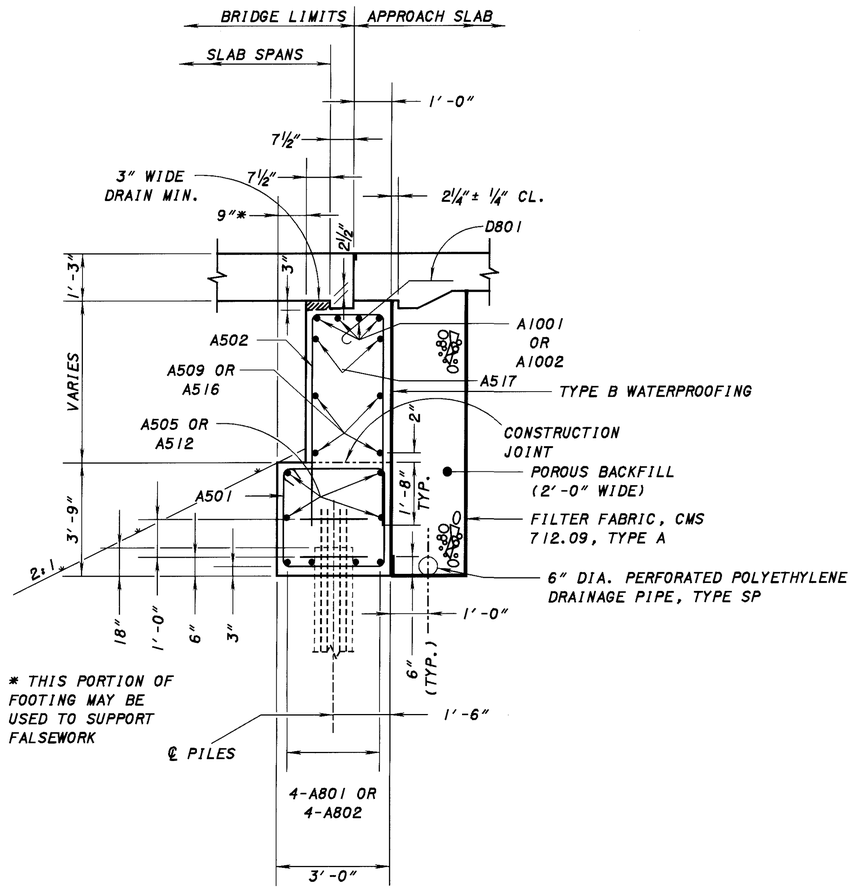
MED-71-2092 W

RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78




## SECTION A-A




* THIS PORTION OF FOOTING MAY BE USED TO SUPPORT FALSEWORK

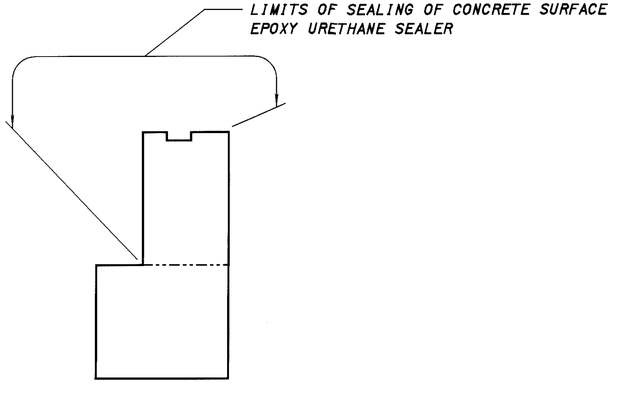
## SECTION B-B

### NOTES

1. ALL ELEVATIONS AND DIMENSIONS MEASURED ALONG THE FACE OF ABUTMENT.

2. MINIMUM SPLICES ARE AS FOLLOWS:
   - #5 BAR - 3'-0"
   - #6 BAR - 3'-6"
   - #8 BAR - 5'-9"

3. TYPE B WATERPROOFING, 3'-0" WIDE, CENTERED AT THE CONSTRUCTION JOINT, SHALL EXTEND FROM THE BOTTOM OF THE APPROACH SLAB TO THE BOTTOM OF THE FOOTING. NEOPRENE SHEETING MAYBE USED IN LIEU OF THE TYPE B WATERPROOFING.




SEALING LIMITS

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT DATE 9-20-99
STRUCTURE FILE NUMBER 5203996

DRAWN BKL
REVISED

DESIGNED BKL
CHECKED RJH

# ABUTMENT DETAILS

MED-71-2092 W

RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

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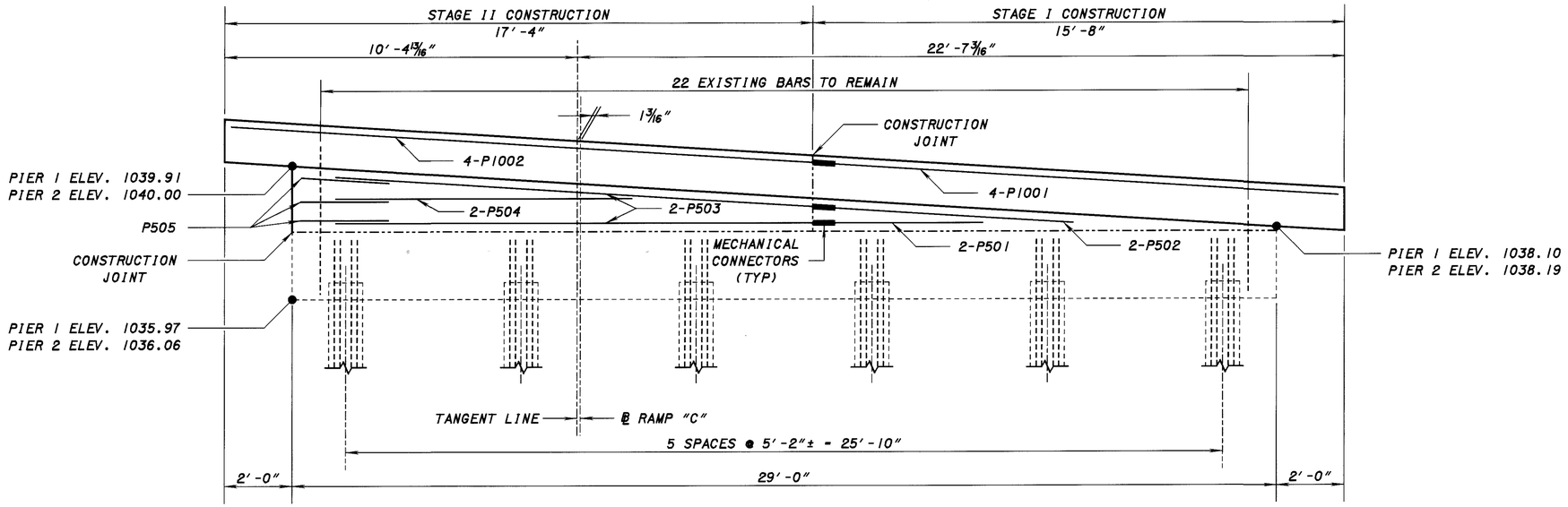
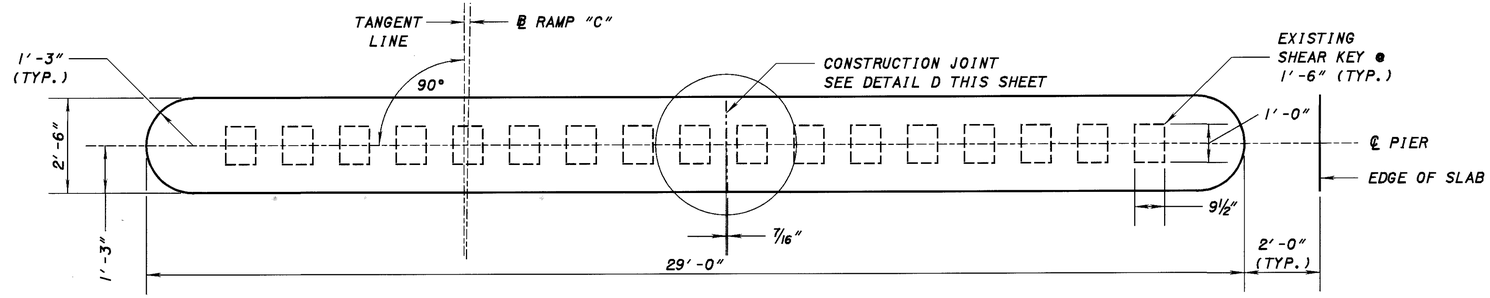
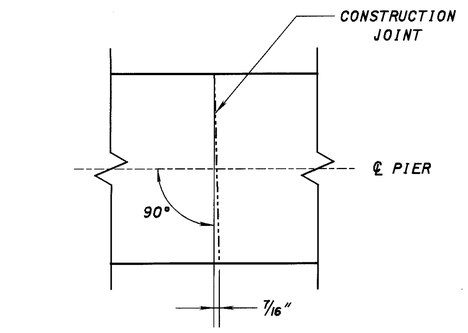


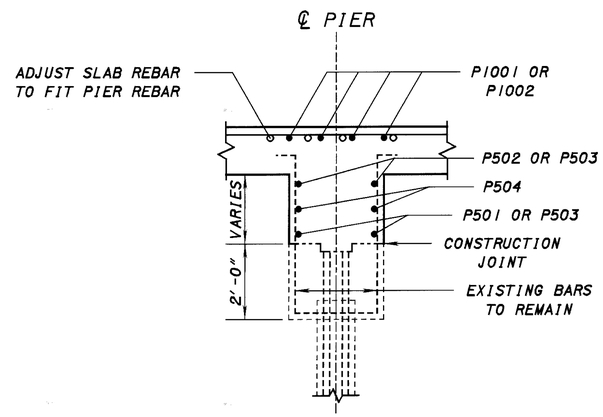

## ELEVATION - PIERS 1 & 2




## PLAN - PIERS 1 & 2




## DETAIL D




## SECTION C-C

### NOTES

1. ALL ELEVATIONS AND DIMENSIONS ARE MEASURED ALONG THE ℄ BEARINGS.
2. PIER CAP SHALL BE REMOVED AND REPLACED ABOVE ORIGINAL CONSTRUCTION JOINT AS SHOWN IN THE DETAILS.
3. CONCRETE SHALL BE SUFFICIENTLY REMOVED FROM THE ORIGINAL SHEAR KEYS TO PRODUCE A POSITIVE CONNECTION BETWEEN THE EXISTING AND NEW CONCRETE.
4. VERTICAL REINFORCING STEEL SHALL REMAIN IN PLACE.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

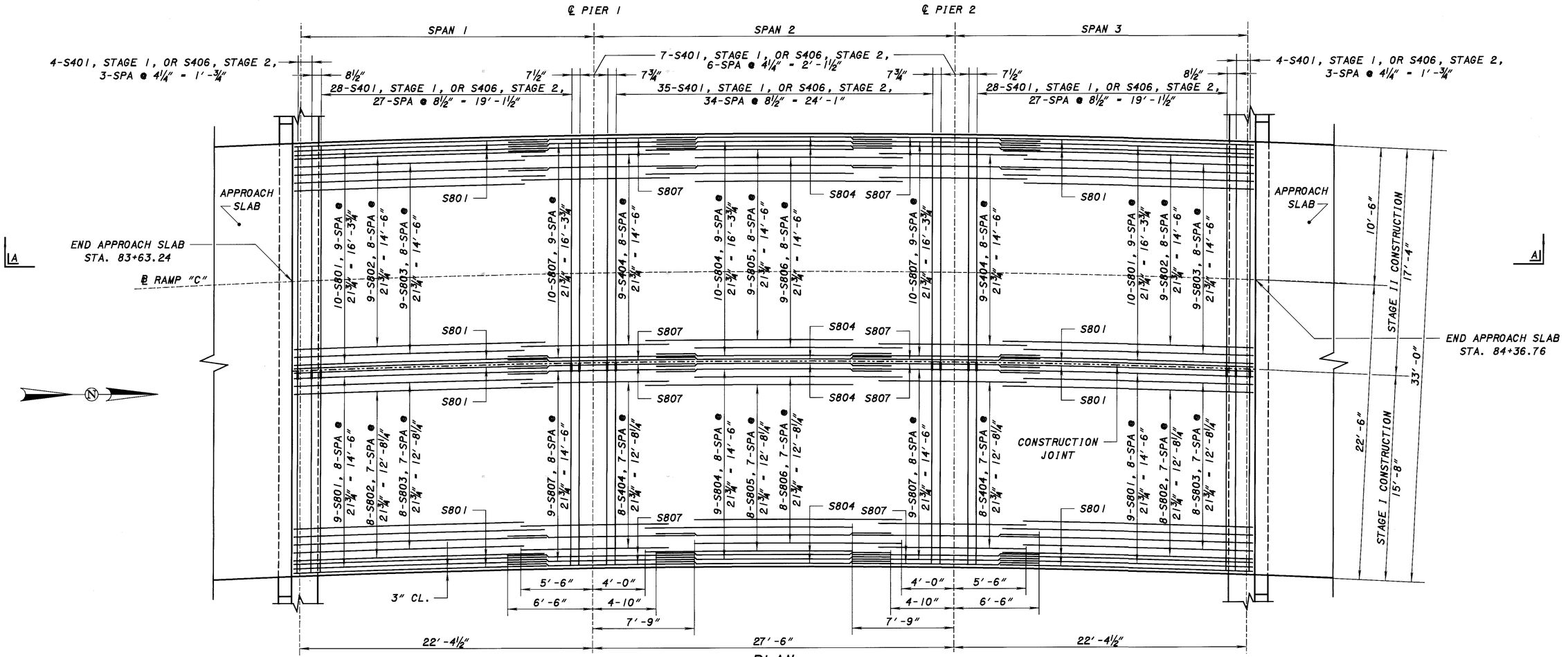
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| BKL | BKL | DFT | 9-20-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| RJH | | 5203996 | |

PIER DETAILS

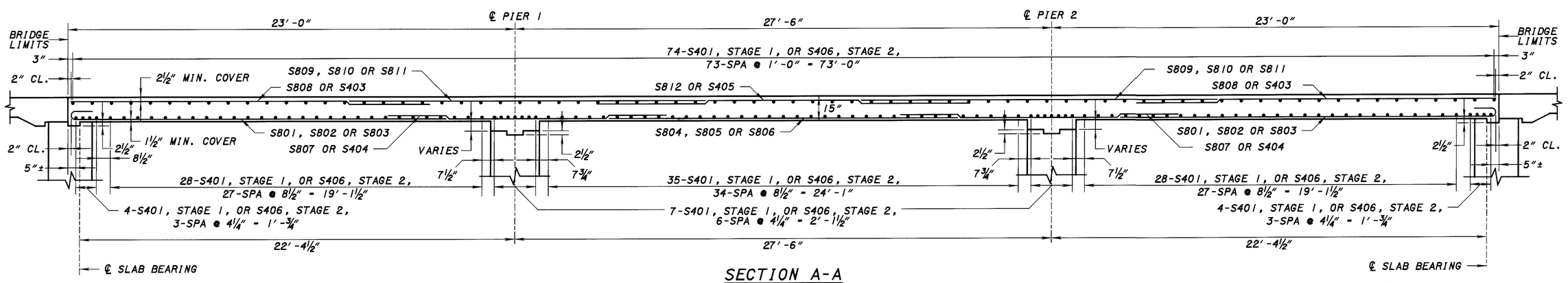
MED-71-2092 W

RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78




## PLAN
BOTTOM REINFORCEMENT




## SECTION A-A

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| BKL | BKL | DFT | 9-20-99 |
| CHECKED | REVISED | REVISED | STRUCTURE FILE NUMBER |
| RJH | | | 5203996 |

# SUPERSTRUCTURE DETAILS

MED-71-2092 W

RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

12/18

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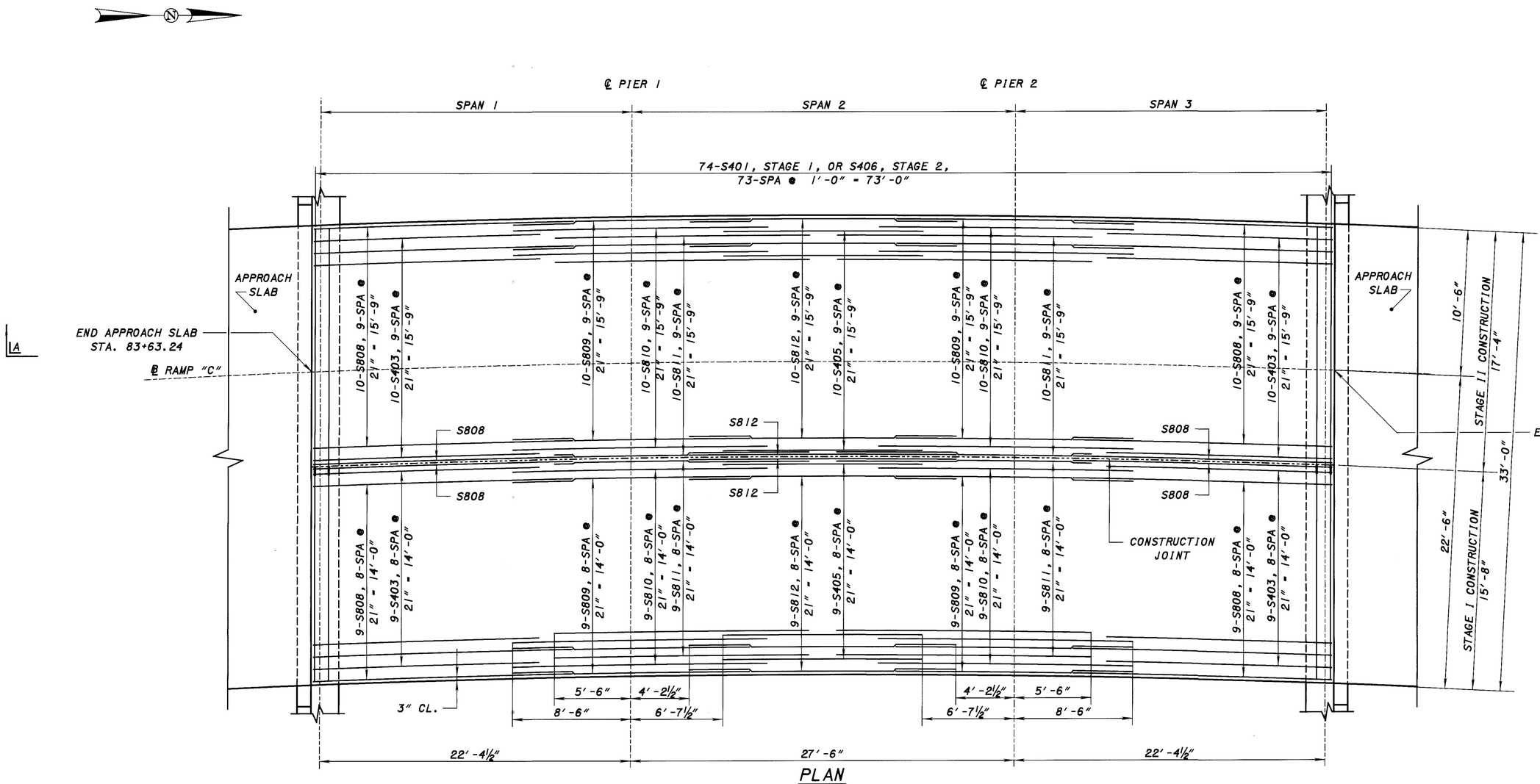



PLAN

TOP REINFORCEMENT

FOR SCUPPER DETAILS
SEE SHEET 17/18

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| BKL | BKL | DFT | 9-20-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| RJH | | 5203996 | |

# SUPERSTRUCTURE DETAILS

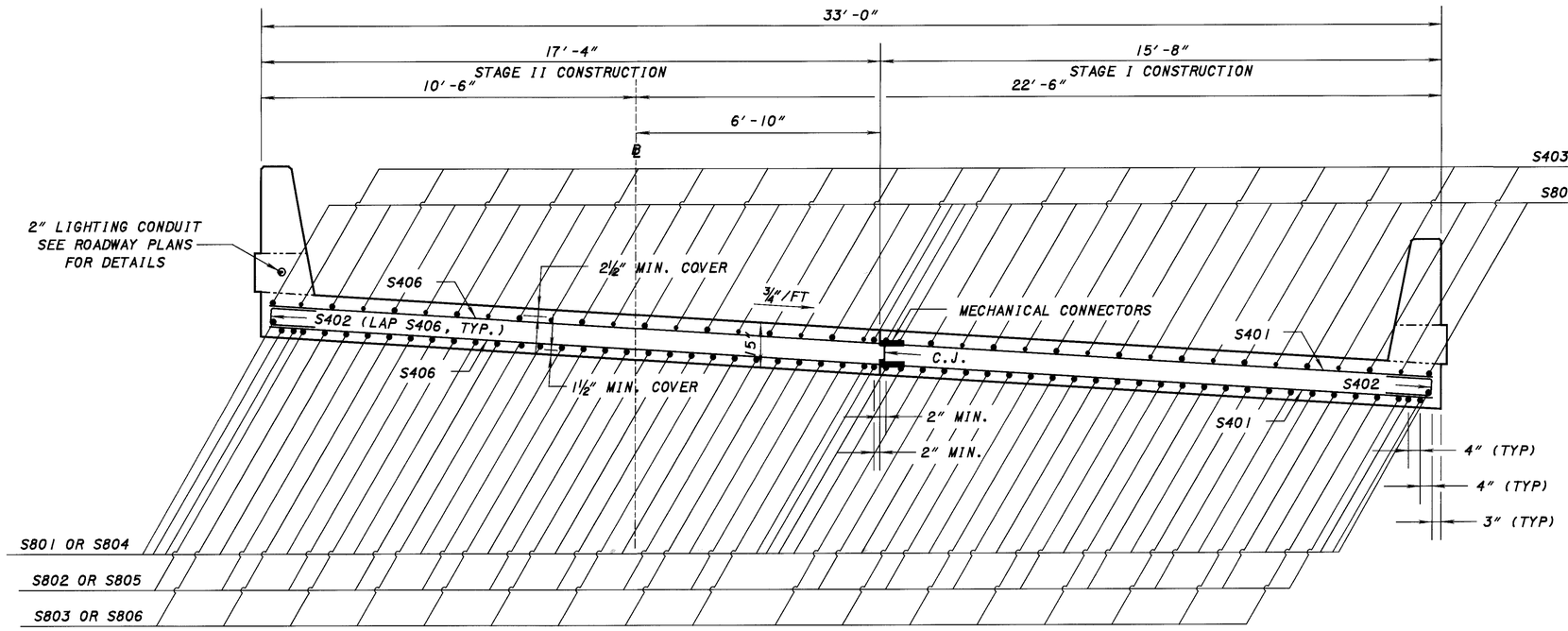
MED-71-2092 W

RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

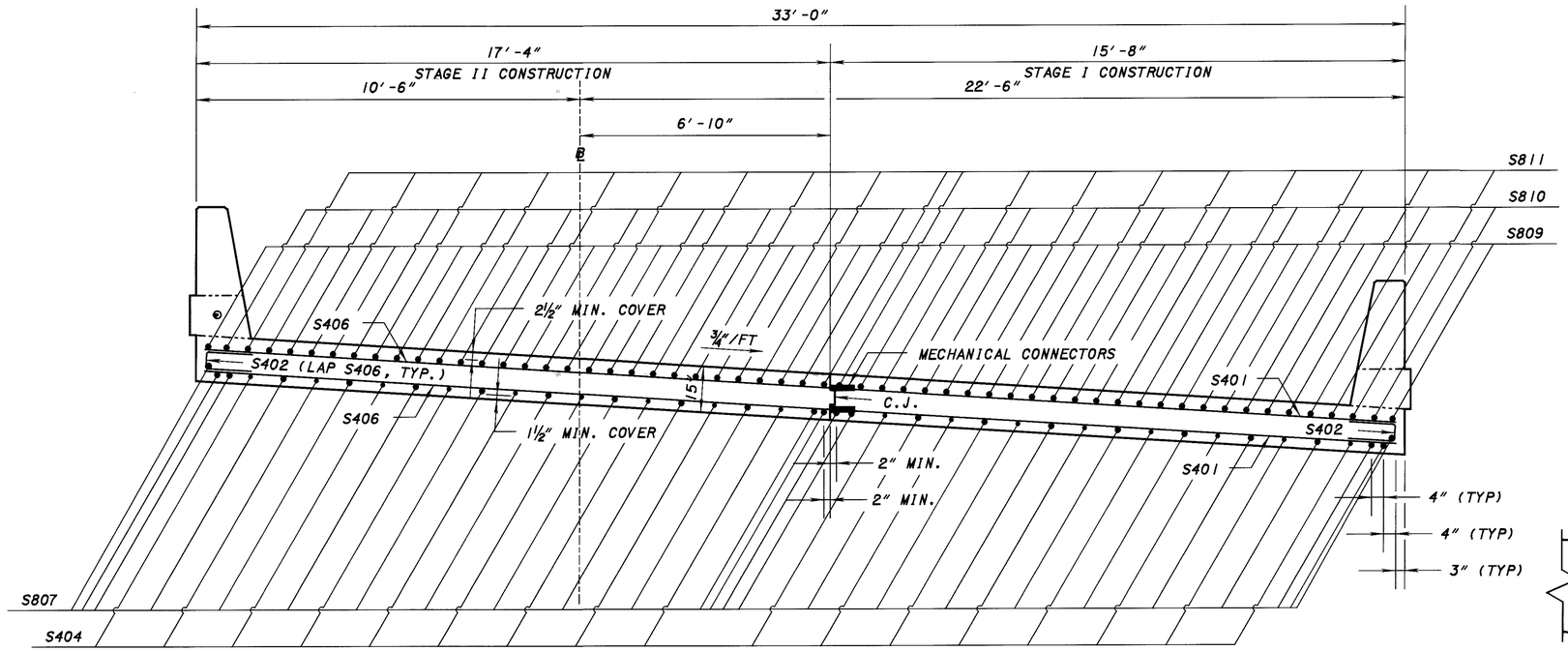
MED-71-15.78



880
940



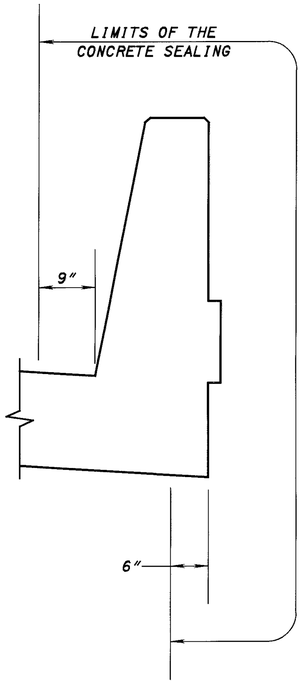

TRANSVERSE SECTION AT SPAN 1, SPAN 2 AND SPAN 3

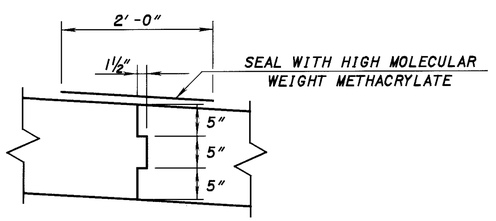



TRANSVERSE SECTION AT THE PIERS

## DECK NOTES

1. HIGH MOLECULAR WEIGHT METHACRYLATE SHALL BE INCLUDED IN THE COST OF THE CONCRETE AND NO SEPARATE PAYMENT WILL BE MADE.
2. DRIP GROOVES, AS DETAILED IN CS-1-93 SHALL BE NON-PERFORMED.
3. SEE STD. DRWG. CS-1-93 FOR ADDITIONAL DETAILS.




CONSTRUCTION JOINT

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|
| DFT | 9-20-99 | 5203996 |

| DRAWN | REVISED |
|---|---|
| BKL | |

| DESIGNED | CHECKED |
|---|---|
| BKL | RJH |

SUPERSTRUCTURE DETAILS

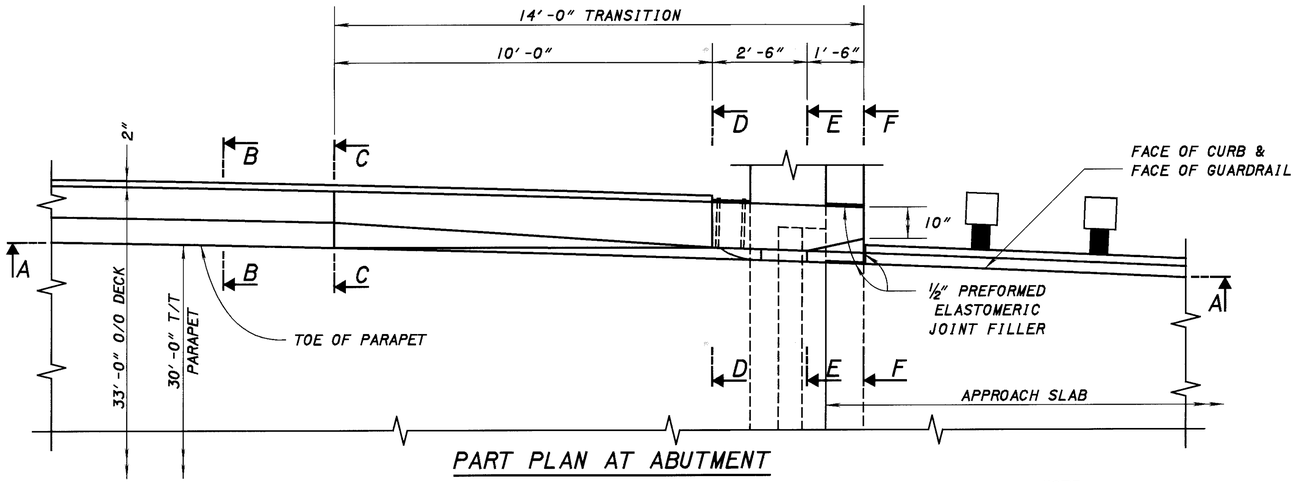
MED-71-2092 W

RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

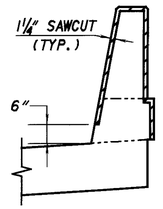
14/18

881
340




PART PLAN AT ABUTMENT

LEGEND: N.S. - NEAR SIDE
F.S. - FAR SIDE




DETAIL A

(Section through sawcut)
Sawcut Perimeter = 7'-6"

**CONTROL JOINTS FOR CONCRETE PARAPETS:** THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

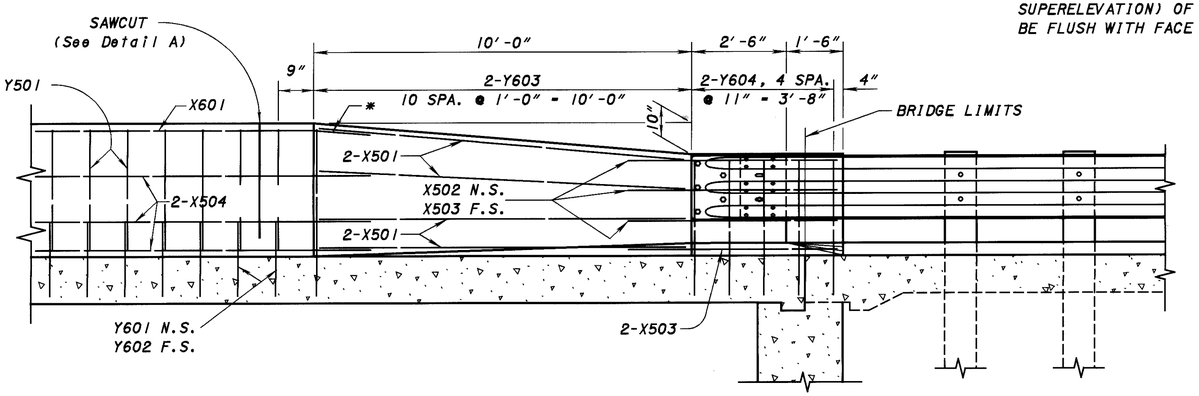
THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL TO A MINIMUM DEPTH OF ONE INCH CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE-HALF INCH OF THE OUTSIDE FACE OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

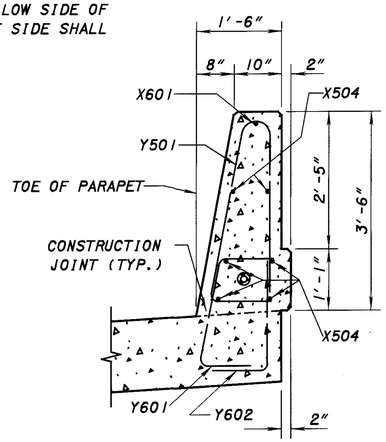
FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

MIN. LAP SPLICES: #5 BAR - 2'-6"
#6 BAR - 3'-0"

NOTE
CURB DETAIL APPLIES ONLY TO THE RIGHT SIDE (LOW SIDE OF SUPERELEVATION) OF THE APPROACH SLAB. LEFT SIDE SHALL BE FLUSH WITH FACE OF GUARDRAIL

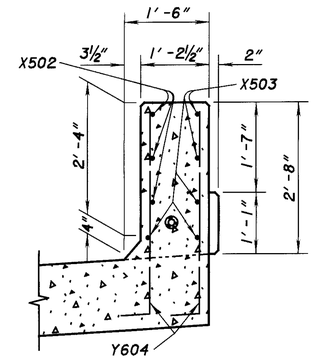



SECTION A-A

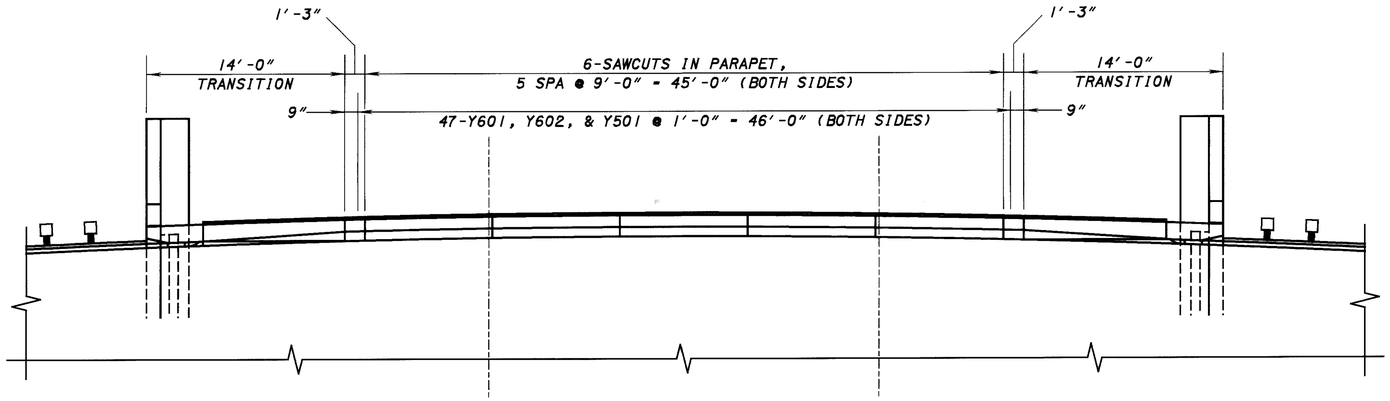



SECTION B-B & C-C

Area = 4.26 ft²

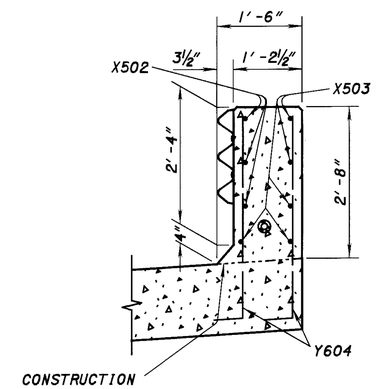



SECTION D-D

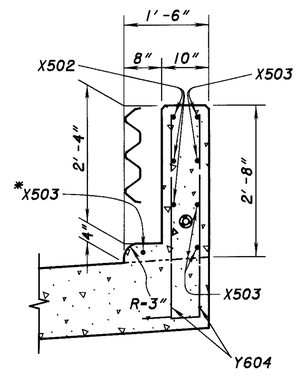



PART PLAN

2" CONDUIT (WEST SIDE ONLY)




SECTION E-E




SECTION F-F

* FIELD BEND IF NECESSARY

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGN AGENCY

| REVISED | DATE |
|---|---|
| DFT | 9-20-99 |

STRUCTURE FILE NUMBER 5203996

| DRAWN | REVISED |
|---|---|
| BKL | |

| DESIGNED | |
|---|---|
| BKL | |
| CHECKED | |
| RJH | |

SUPERSTRUCTURE DETAILS
MED-71-2092 W
RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

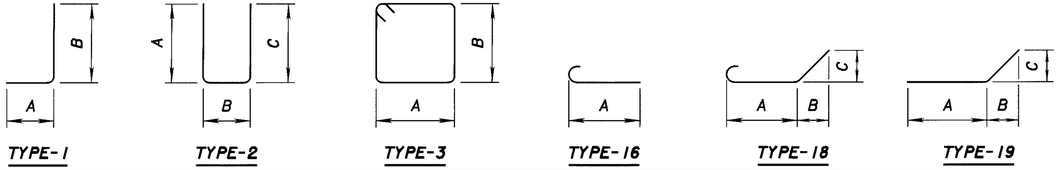
MED-71-15.78

15 / 18

882
942

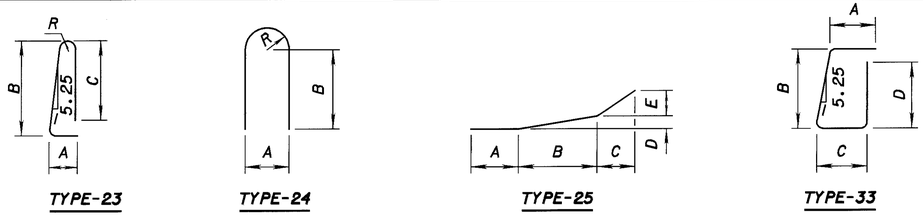
| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | R | INC |
| ABUTMENTS - MED-71-2092 W | | | | | | | | | | | | | |
| A401 | 6 | 6 | 6 | 6 | 24 | 9'-0" | 144 | 3 | 1'-9" | 2'-6" | | | |
| | | | | | | | | | | | | | |
| A501 | 15 | 18 | 15 | 18 | 66 | 12'-4 | 849 | 3 | 2'-8" | 3'-3" | | | |
| A502 | 11 OF 1 SERIES OF 23 | 12 OF 1 SERIES OF 23 | 11 OF 1 SERIES OF 23 | 12 OF 1 SERIES OF 23 | 2 SERIES OF 23 | 9'-6" TO 13'-2" | 544 | 2 | 3'-11" TO 5'-9" | 1'-11" | 3'-11" TO 5'-9" | | 1" |
| A503 | 1 SERIES OF 4 | | 1 SERIES OF 4 | | 2 SERIES OF 4 | 9'-9" TO 12'-3" | 92 | 2 | 4'-8" TO 5'-11" | 8" | 4'-8" TO 5'-11" | | 5" |
| A504 | 1 | | 1 | | 2 | 8'-5" | 18 | 2 | 4'-0" | 8" | 4'-0" | | |
| A505 | 4 | | 4 | | 8 | 18'-11" | 158 | STR | | | | | |
| A506 | 4 | | 4 | | 8 | 5'-9" | 48 | STR | | | | | |
| A507 | 2 | | 2 | | 4 | 3'-0" | 13 | STR | | | | | |
| A508 | 2 | | 2 | | 4 | 3'-1" | 13 | 19 | 2'-0" | 1'-0" | 6" | | |
| A509 | 4 | | 4 | | 8 | 14'-9" | 123 | STR | | | | | |
| A510 | | 1 SERIES OF 7 | | 1 SERIES OF 7 | 2 SERIES OF 7 | 9'-9" TO 16'-9" | 193 | 2 | 4'-8" TO 8'-2" | 8" | 4'-8" TO 8'-2" | | 7" |
| A511 | | 1 | | 1 | 2 | 12'-7" | 26 | 2 | 6'-1" | 8" | 6'-1" | | |
| A512 | | 4 | | 4 | 8 | 24'-6" | 205 | STR | | | | | |
| A513 | | 6 | | 6 | 12 | 9'-11" | 124 | STR | | | | | |
| A514 | | 2 | | 2 | 4 | 3'-4" | 14 | STR | | | | | |
| A515 | | 2 | | 2 | 4 | 7'-7" | 32 | 19 | 6'-6" | 1'-1" | 6" | | |
| A516 | | 4 | | 4 | 8 | 16'-5" | 137 | STR | | | | | |
| A517 | | 2 | | 2 | 4 | 8'-9" | 37 | STR | | | | | |
| | | | | | | | | | | | | | |
| A801 | 4 | | 4 | | 8 | 18'-9" | 401 | STR | | | | | |
| A802 | | 4 | | 4 | 8 | 24'-4" | 520 | STR | | | | | |
| | | | | | | | | | | | | | |
| A1001 | 4 | | 4 | | 8 | 14'-9" | 508 | STR | | | | | |
| A1002 | | 4 | | 4 | 8 | 16'-5" | 565 | STR | | | | | |
| | | | | | | | | | | | | | |
| D801 | 11 | 12 | 11 | 12 | 46 | 4'-11" | 604 | 18 | 2'-7" | 1'-0" | 1'-0" | | |
| | | | | | | | | | | | | | |

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIER 1 STAGE I | PIER 1 STAGE II | PIER 2 STAGE I | PIER 2 STAGE II | TOTAL | | LB | | A | B | C | R | INC |
| PIERS - MED-71-2092 W | | | | | | | | | | | | | |
| P501 | 2 | | 2 | | 4 | 5'-0" | 21 | STR | | | | | |
| P502 | 2 | | 2 | | 4 | 7'-8" | 32 | STR | | | | | |
| P503 | | 4 | | 4 | 8 | 14'-0" | 117 | STR | | | | | |
| P504 | | 2 | | 2 | 4 | 8'-7" | 36 | STR | | | | | |
| P505 | | 3 | | 3 | 6 | 6'-9" | 42 | 24 | 2'-1/4" | 1'-10" | | 11 1/2" | |
| | | | | | | | | | | | | | |
| P1001 | 4 | | 4 | | 8 | 15'-5" | 531 | STR | | | | | |
| P1002 | | 4 | | 4 | 8 | 17'-1" | 588 | STR | | | | | |
| | | | | | | | | | | | | | |




| MARK | NUMBER | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPER STAGE I | SUPER STAGE II | TOTAL | | LB | | A | B | C | D | E | R | INC |
| SUPERSTRUCTURE - MED-71-2092 W | | | | | | | | | | | | | |
| S401 | 187 | | 187 | 15'-5" | 1926 | STR | | | | | | | |
| S402 | 74 | 74 | 148 | 3'-1" | 305 | 2 | 1'-3" | 9" | 1'-3" | | | | |
| S403 | 18 | 20 | 38 | 16'-2 1/2" | 411 | STR | | | | | | | |
| S404 | 16 | 18 | 34 | 11'-3" | 256 | STR | | | | | | | |
| S405 | 9 | 10 | 19 | 14'-3" | 181 | STR | | | | | | | |
| S406 | | 187 | 187 | 17'-1" | 2134 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| S801 | 24 | 26 | 50 | 19'-3 1/2" | 2575 | STR | | | | | | | |
| S802 | 16 | 18 | 34 | 19'-1 1/2" | 1736 | STR | | | | | | | |
| S803 | 16 | 18 | 34 | 17'-3 1/2" | 1570 | 16 | 16'-4 1/2" | | | | | | |
| S804 | 12 | 13 | 25 | 17'-10" | 1190 | STR | | | | | | | |
| S805 | 8 | 9 | 17 | 15'-9" | 715 | STR | | | | | | | |
| S806 | 8 | 9 | 17 | 15'-9" | 715 | STR | | | | | | | |
| S807 | 24 | 26 | 50 | 14'-3" | 1902 | STR | | | | | | | |
| S808 | 20 | 22 | 42 | 18'-7 1/2" | 2089 | STR | | | | | | | |
| S809 | 18 | 20 | 38 | 17'-0" | 1725 | STR | | | | | | | |
| S810 | 18 | 20 | 38 | 18'-3" | 1852 | STR | | | | | | | |
| S811 | 18 | 20 | 38 | 18'-3" | 1852 | STR | | | | | | | |
| S812 | 10 | 11 | 21 | 19'-1" | 1070 | STR | | | | | | | |
| | | | | | | | | | | | | | |

| MARK | NUMBER | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUPER STAGE I | SUPER STAGE II | TOTAL | | LB | | A | B | C | D | E | R | INC |
| PARAPETS - MED-71-2092 W | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 334 | STR | | | | | | | |
| X502 | 6 | 6 | 12 | 5'-6" | 69 | 25 | 1'-8" | 2'-5" | 1'-4" | 1 1/2" | 5" | | |
| X503 | 10 | 10 | 20 | 5'-6" | 115 | STR | | | | | | | |
| X504 | 18 | 18 | 36 | 19'-4" | 726 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| X601 | 3 | 3 | 6 | 20'-0" | 180 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| Y501 | 47 | 47 | 94 | 7'-5" | 727 | 23 | 1'-1" | 3'-2" | 3'-0" | | | 2 3/4" | |
| | | | | | | | | | | | | | |
| Y601 | 47 | 47 | 94 | 4'-0" | 565 | 33 | 1'-1" | 2'-0" | 1'-3" | 0" | | | |
| Y602 | 47 | 47 | 94 | 2'-11" | 412 | 1 | 1'-1" | 2'-0" | | | | | |
| Y603 | 4 SERIES OF 11 | 4 SERIES OF 11 | 8 SERIES OF 11 | 4'-5" TO 5'-3" | 639 | 1 | 1'-1" | 3'-6" TO 4'-4" | | | | | 1" |
| Y604 | 20 | 20 | 40 | 4'-5" | 265 | 1 | 1'-1" | 3'-6" | | | | | |
| | | | | | | | | | | | | | |




**NOTES:**
1. THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

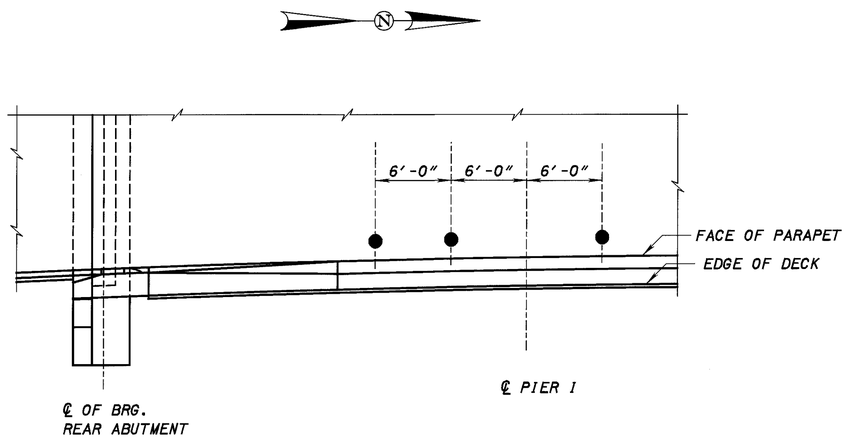
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: BKL | DRAWN: BKL | CHECKED: RJH | REVISED: | REVISED: DFT | DATE: 9-20-99
STRUCTURE FILE NUMBER: 5203996

# REINFORCING SCHEDULE
MED-71-2092 W
RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

16 / 18

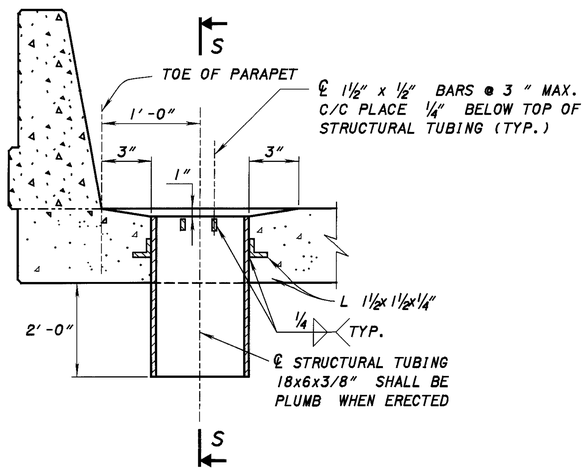
883 / 940



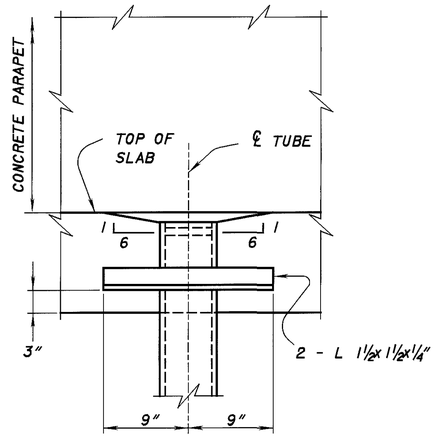

SCUPPER LOCATION

NOTES:

1. THE SUPPORT ANGLES AND BARS ARE INCLUDED WITH SCUPPERS FOR PAYMENT.
2. SCUPPERS INCLUDING SUPPORT ANGLES AND BARS SHALL BE GALVANIZED IN ACCORDANCE WITH CMS 711.02.
3. REARRANGE THE REINFORCING STEEL IN THE DECK TO ACCOMODATE THE PLACEMENT OF THE SCUPPER.
4. PLACE 30° BEND IN SCUPPER, 12" FROM BOTTOM, SLOPE SCUPPER AWAY FROM PIER.




SCUPPER DETAILS




SECTION S-S

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

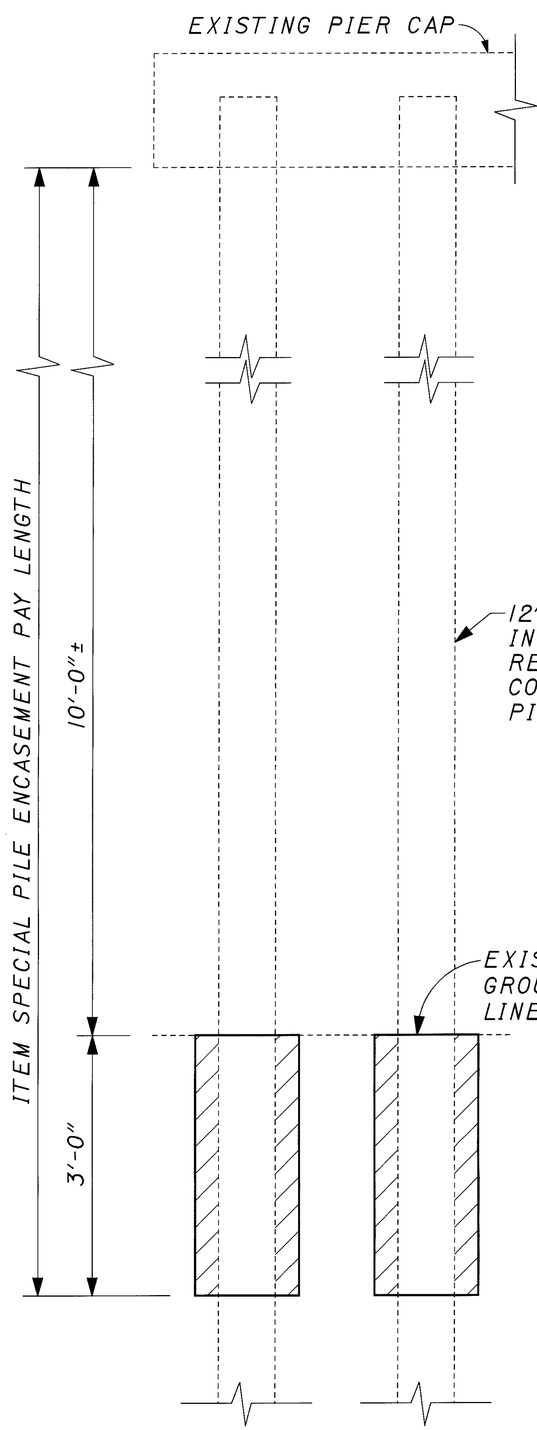
DESIGNED BKL | DRAWN BKL | REVIEWED DFT | DATE 9-20-99
CHECKED RJH | REVISED | STRUCTURE FILE NUMBER 5203996

SCUPPER DETAILS
MED-71-2092 W
RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

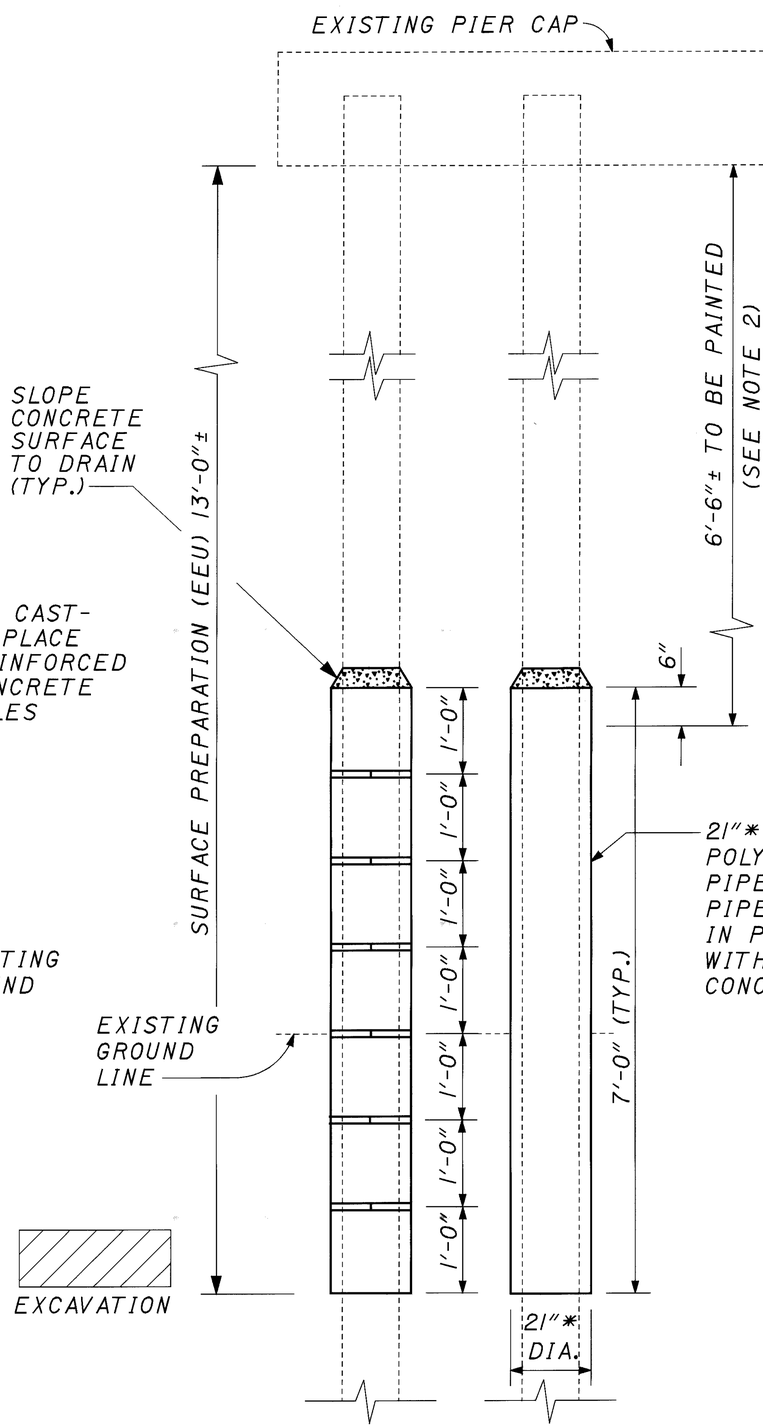
MED-71-15.78

17 / 18

884 / 940




EXISTING PILES




PROPOSED PILES

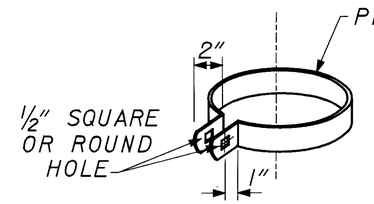
NOTE:

1. ALL PAINTING AS PER THE FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EEU) PROPOSAL NOTE OMITTING THE QUALITY CONTROL SPECIALIST AND TEST SECTION.

   THERE ARE 6 (SIX) COLUMNS PER PIER.
   THERE ARE 2 (TWO) PIERS ON STRUCTURE.

2. AT THE CONTRACTOR'S OPTION AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY EXTEND THE ENCASEMENT TO THE BOTTOM OF THE EXISTING PIER CAP IN LIEU OF PAINTING. SURFACE PREPARATION SHALL STILL BE PERFORMED.

3. STABILITY OF CAPPED PILE PIERS SHALL BE MAINTAINED DURING CONSTRUCTION. THE WORK ON THE EXISTING PIER PILES SHALL TAKE PLACE PRIOR TO STAGE CONSTRUTION OR AFTER ALL WORK IS COMPLETE ON THE SUPERSTRUCTURE.




* 24" DIA. PIPE MAY BE USED AT THE CONTRACTOR'S OPTION AT NO ADDITIONAL COST TO THE STATE.

## ITEM SPECIAL PILE ENCASEMENT

THIS ITEM SHALL INCLUDE THE FOLLOWING: EXCAVATION AND REPLACEMENT OF THE EMBANKMENT TO ITS NATURAL STATE AT THE EXISTING PILES, POLYETHYLENE OR PVC PIPE, GALVANIZED STEEL BANDS, NUTS AND BOLTS. THE POLYETHYLENE 707.33 OR PVC PIPE (707.45) SHALL BE CUT LENGTHWISE ON ONE SIDE OR IN TWO (2) SECTIONS AS NEEDED TO ENCOMPASS THE EXISTING 12" CAST-IN-PLACE PILES. THE BANDS SHALL BE 1" IN WIDTH AND THICKNESS SHALL NOT BE LESS THAN 11 GAUGE (.1196"). BANDS SHALL BE TIGHTENED SO AS NOT TO ELONGATE WHEN CONCRETE IS PLACED WITHIN THE PIPE. MAXIMUM SPACING OF THE BANDS SHALL BE 1'-0". ALTERNATE METHODS MAY BE USED TO CLAMP THE SECTIONS TOGETHER AS APPROVED BY THE ENGINEER. THE POLYETHYLENE OR PVC PIPE SHALL BE FILLED WITH CLASS C CONCRETE AND INCLUDED WITH ITEM SPECIAL, PILE ENCASEMENT FOR PAYMENT. ALL PAINTING PER PLAN NOTES SHALL BE INCLUDED WITH ITEM SPECIAL, PILE ENCASEMENT FOR PAYMENT.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| D5 | D5 | DFT | 9-20-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| RJH | | 5203996 | |

PIER ENCASEMENT

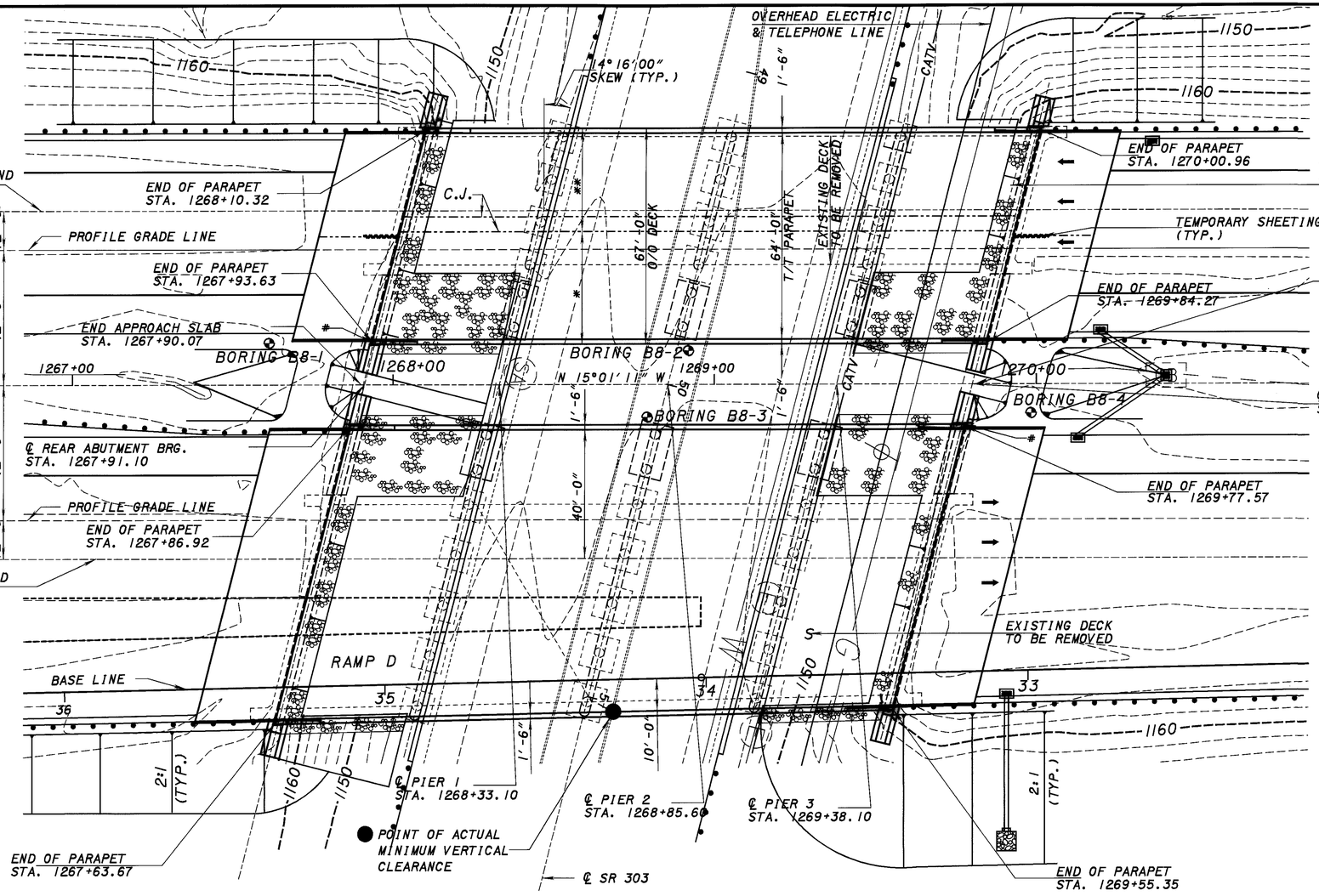
MED-71-2092 W

RAMP "C" OVER PLUM CREEK, S.R. 3 INTERCHANGE

MED-71-15.78

18 / 18

885
940




## PLAN

## DESIGN TRAFFIC

2000 ADT - 44560 2000 ADTT - 4456
2020 ADT - 61280 2020 ADTT - 6128

## BENCHMARK DATA

BENCHMARK #21
STATION 1271+68.99 ELEVATION - 1144.04
ODOT DISC IN HEADWALL STAMPED

## NOTES AND LEGEND

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

FOR PROFILE GRADE INFORMATION SEE SHEET 2 / 46

* STAGE 1 CONSTRUCTION
** STAGE 2 CONSTRUCTION

● 15'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
15'-7" ACTUAL MINIMUM VERTICAL CLEARANCE

(SA) SANITARY SEWER LINE

# - NO BRIDGE TERMINAL ASSEMBLY, SEE CSS2 FOR ADDITIONAL DETAILS.

## EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.

SPANS:
S.B.L.: 42'-0"±, 52'-6"±, 52'-6"±, 42'-0"± C/C BRGS.
N.B.L.: 42'0"±, 52'-6"±, 52'-6"±, 42'-0"± C/C BRGS.

ROADWAY: SOUTHBOUND LANE 42'-0"± F/F OF PARAPETS
NORTHBOUND LANE VARIES F/F OF PARAPETS

LOADING: CF 2000 (57) AND A.A.S.H.O. ALTERNATIVE LOADING

SKEW: 14°16'00"± (L.F)

WEARING SURFACE: ASPHALT

APPROACH SLABS: 25'-0" LONG AS-1-54

ALIGNMENT: TANGENT

CROWN: 3/16" PER FOOT

DATE BUILT: 1964

SFN: 5204135 L / 5204143 R

## PROPOSED STRUCTURE

TYPE: 4-SPAN CONTINUOUS COMPOSITE STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE UNITS WITH SEMI-INTEGRAL ABUTMENTS. SEE SHEET 6 / 46 FOR LIST OF PROPOSED WORK

SPANS:
S.B.L.: 42'-0", 52'-6", 52'-6", 42'-0" C/C BRGS.
N.B.L.: 42'0", 52'-6", 52'-6", 42'-0" C/C BRGS.

ROADWAY: SOUTHBOUND LANE 64'-0"± T/T OF PARAPETS
NORTHBOUND LANE VARIES T/T OF PARAPETS

LOADING: HS-20-44 (CASE 1) AND ALTERNATE MILITARY LOADING

SKEW: 14°16'00" (L.F)

WEARING SURFACE: CONCRETE

APPROACH SLABS: 25'-0" LONG AS-1-81, WIDTH VARIES NB 64'-0" T/T CURB SB

ALIGNMENT: TANGENT

CROWN: 3/16" PER FOOT

LONGITUDE: 81°47'25" LATITUDE 41°11'14"

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: HLG DATE: 10-08-99
STRUCTURE FILE NUMBER: 5204135L/5204143R
DRAWN: TAA REVISED:
DESIGNED: TAA CHECKED: DFT

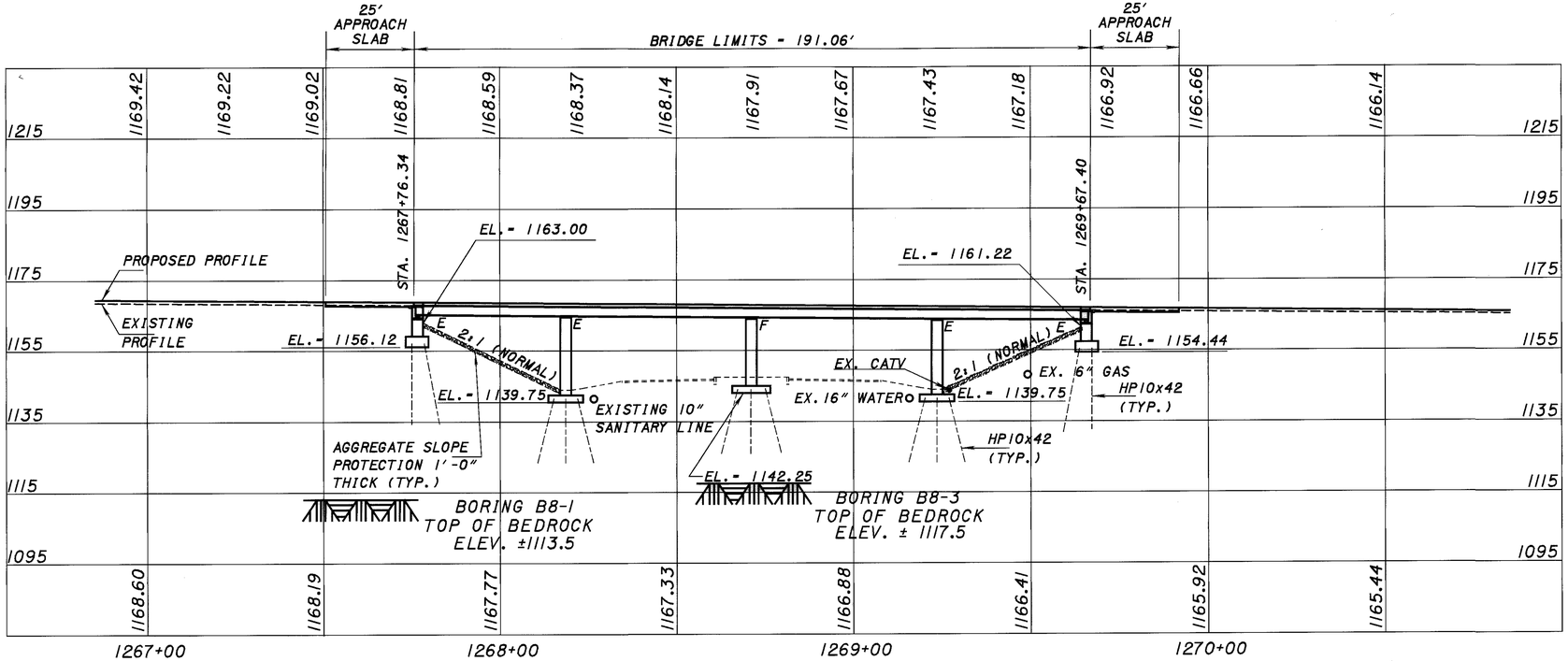
MEDINA COUNTY
STA. 1267+90.07
STA. 1269+81.13

SITE PLAN
MED-71-2402 L/R
I-71 OVER S.R. 303

MED-71-15.78

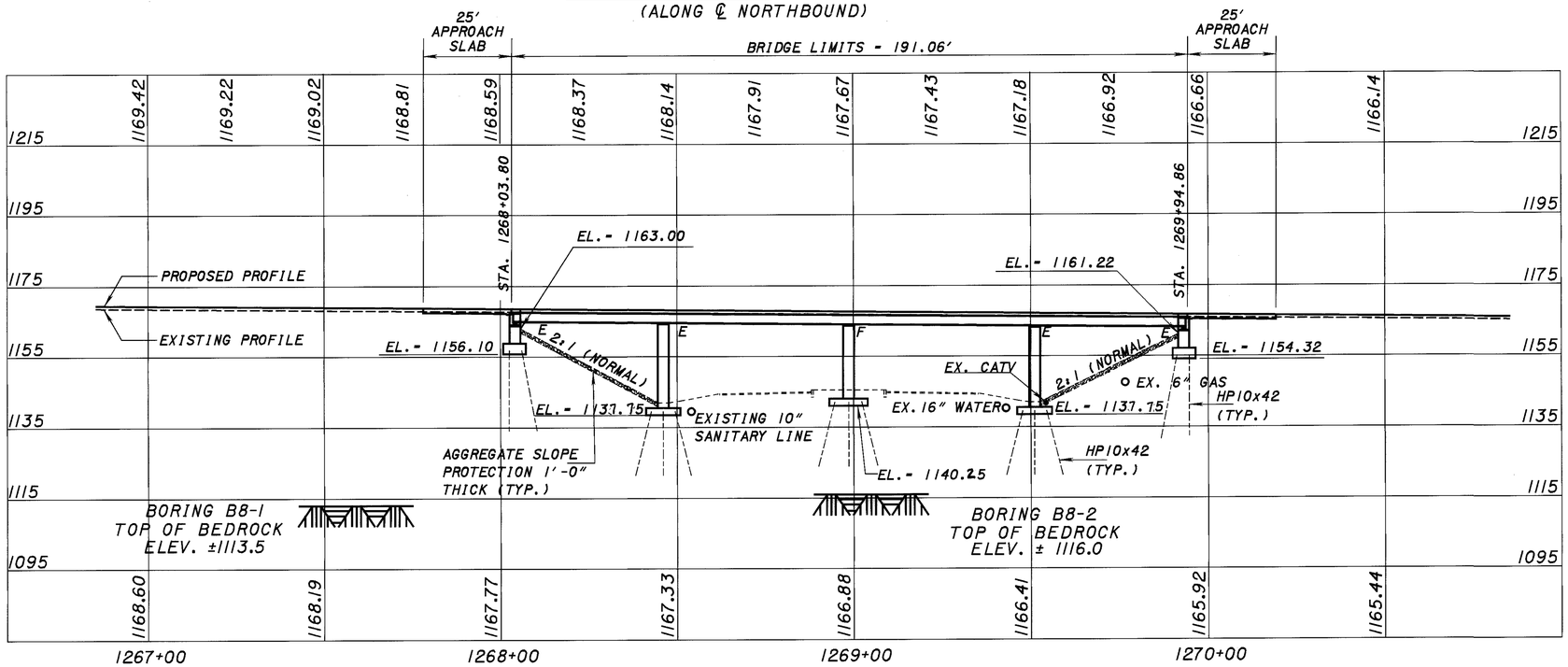
1 / 46

886
940




## NORTHBOUND LANE STRUCTURE

(ALONG ℄ NORTHBOUND)




## SOUTHBOUND LANE STRUCTURE

(ALONG ℄ SOUTHBOUND)

## NOTES AND LEGEND

THE PROPOSED PROFILE ELEVATION SHOWN ARE ALONG THE PROFILE GRADE OF THE STRUCTURE.

PILES ARE HP10x42 FOR THE ABUTMENTS. THE ESTIMATED PAY LENGTHS ARE:

REAR ABUTMENT - 45 FEET
FORWARD ABUTMENT - 45 FEET

PILES ARE HP10x42 FOR THE PIERS. THE ESTIMATED PAY LENGTHS ARE:

PIER 1 - 25 FEET
PIER 2 - 25 FEET
PIER 3 - 25 FEET

E - EXPANSION
F- FIXED
EL. - ELEVATION
CATV - CABLE TELEVISION LINE

### VERTICAL CURVE DATA

V.P.I. STA = 1266+00.00
V.P.I. ELEVATION = 1170.87
L.V.C. = 800 FEET
g1 = -0.34 %
g2= -1.05%

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: HLG
DATE: 10-08-99
STRUCTURE FILE NUMBER: 5204135L/5204143R
DRAWN: TAA
REVISED:
DESIGNED: TAA
CHECKED: DFT

MEDINA COUNTY
STA. 1267+90.07
STA. 1269+81.13

SITE PLAN
MED-71-2402 L/R
I-71 OVER S.R. 303

MED-71-15.78



887/940

| | | | | ESTIMATED QUANTITIES | | | | |
|---|---|---|---|---|---|---|---|---|
| ITEM | EXTENSION | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS | SUPER. | GEN. |
| 202 | 11203 | LUMP | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | LUMP | LUMP | LUMP | |
| | | | | | | | | |
| 503 | 11100 | LUMP | | COFFERDAMS, CRIBS AND SHEETING | | | | LUMP |
| 503 | 21301 | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LUMP | | | |
| | | | | | | | | |
| 505 | 11100 | LUMP | | PILE DRIVING EQUIPMENT MOBILIZATION | | | | LUMP |
| | | | | | | | | |
| 507 | 00100 | 1680 | LF | STEEL PILES HP10X42, FURNISHED | 1080 | 600 | | |
| 507 | 00150 | 1680 | LF | STEEL PILES HP10X42, DRIVEN | 1080 | 600 | | |
| 507 | 50500 | 24 | EACH | STEEL PILE SPLICES | 12 | 12 | | |
| | | | | | | | | |
| | | | | | | | | |
| 512 | 44400 | 8 | SY | TYPE B WATERPROOFING | 8 | | | |
| | | | | | | | | |
| SPECIAL | 51267200 | 49 | SY | WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING | 49 | | | |
| SPECIAL | 51267510 | 1064 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 35 | 588 | 441 | |
| | | | | | | | | |
| | | | | | | | | |
| 516 | 13900 | 61 | SF | 2" PREFORMED EXPANSION JOINT FILLER | 61 | | | |
| 516 | 44000 | 18 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | | 18 | | |
| | | | | (NEOPRENE) (10"x16"x1½" PAD AND 11"x17"x1½" PLATE) | | | | |
| 516 | 44001 | 9 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | | 9 | | |
| | | | | (NEOPRENE), AS PER PLAN (10"x16"x1½" PAD AND 11"x22"x1½" PLATE) | | | | |
| 516 | 44101 | 18 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | 18 | | | |
| | | | | (NEOPRENE), AS PER PLAN (9"x12"x2" PAD AND 12"x13"x1½" PLATE) | | | | |
| | | | | | | | | |
| 518 | 21231 | LUMP | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | | | |
| 518 | 40000 | 179 | LF | 6" PERFORATED CORRUGATED PLASTIC PIPE | 179 | | | |
| 518 | 40010 | 49 | LF | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 49 | | | |
| | | | | | | | | |
| 519 | 11101 | 15 | SF | PATCHING CONCRETE STRUCTURE , AS PER PLAN | | 15 | | |
| 530 | 00200 | LUMP | | STRUCTURE, MISC.: METALLIC COATING SYSTEM | | | LUMP | |
| | | | | | | | | |
| 601 | 20500 | 65 | CY | CRUSHED AGGREGATE SLOPE PROTECTION | | | | 65 |
| | | | | | | | | |
| 842 | 41001 | 76 | CY | CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN | | 76 | | |
| 842 | 44101 | 105 | CY | CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN | 105 | | | |
| 842 | 46501 | 110 | CY | CLASS C CONCRETE, FOOTING, AS PER PLAN | 58 | 52 | | |
| | | | | | | | | |
| 844 | 48001 | 364 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK), AS PER PLAN, MIX 4 | | | 364 | |
| 844 | 48021 | 58 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET), AS PER PLAN, MIX 4 | | | 58 | |
| 844 | 48041 | 56 | CY | HIGH PERFORMANCE CONCRETE SUBSTRUCTURE, AS PER PLAN | 56 | | | |
| 844 | 49000 | LUMP | | HIGH PERFORMANCE CONCRETE TRIAL MIX | | | LUMP | |
| 844 | 49010 | LUMP | | HIGH PERFORMANCE CONCRETE TESTING * | | | LUMP | |
| | | | | | | | | |
| 863 | 10060 | LUMP | | STRUCTURAL STEEL MEMBERS, LEVEL THREE (3) FABRICATION, A572 | | | LUMP | |
| 863 | 20000 | 5373 | EACH | WELDED STUD SHEAR CONNECTORS | | | 5373 | |
| | | | | | | | | |
| | | | | | | | | |

* SEE CSSI FOR FURTHER INFORMATION REGARDING TESTING

**ITEM 519 PATCHING CONCRET STRUCTURE, AS PER PLAN**

PATCHING SHALL OCCUR ON THE PIER COLUMNS, AS DIRECTED BY THE PROJECT ENGINEER. ALL SURFACES TO BE PATCHED AND THE EXPOSED REINFORCING STEEL WITHIN SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING PRIOR TO THE CLEANING SPECIFIED BY 519.04 CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL OR ERECTION OF THE FORMS BY NO MORE THAN 24 HOURS.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | DFT | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| BLK | | 5204135 | |

ESTIMATED QUANTITIES
MED-71-2402 L
I-71 OVER S.R. 303

MED-71-15.78



888
940

# GENERAL NOTES

**STANDARD DRAWINGS AND SPECIFICATIONS:**

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

| | |
|---|---|
| AS-1-81 | REVISED 09-15-94 |
| SBR-1-99 | DATED 01-12-99 |
| PCB-1-91 | REVISED 07-06-99 |
| BS-1-93 | DATED 12-19-94 |
| GSD-1-96 | DATED 02-12-97 |

AND TO SUPPLEMENTAL SPECIFICATIONS:

| | |
|---|---|
| 816 | DATED 04-21-97 |
| 842 | DATED 01-06-99 |
| 844 | DATED 01-06-99 |
| 863 | DATED 10-12-99 |
| 899 | DATED 10-21-98 |
| 910 | DATED 07-28-98 |
| 911 | DATED 07-10-97 |
| 954 | DATED 09-09-97 |

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997 AND 1998 INTERIM SPECIFICATIONS AND THE ODOT DESIGN MANUAL.

**DESIGN LOADING:**

HS20-44, CASE I AND THE ALTERNATE MILITARY LOADING.

**DESIGN DATA:**

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

ITEM 842 CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60 Ksi. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

STRUCTURAL STEEL - A572 - YIELD STRENGTH 50 Ksi

**DECK PROTECTION METHOD** - EPOXY COATED REINFORCING STEEL AND 2½" CONCRETE COVER AND HIGH PERFORMANCE CONCRETE.

**MONOLITHIC WEARING SURFACE** IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

**EXISTING BRIDGE PLANS** MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT THREE OFFICE IN ASHLAND, OHIO.

**DOWEL HOLES WITH NON-SHRINK, NON METALLIC GROUT**

ALL DOWEL HOLES SHALL BE CORE DRILLED AND GROUTED WITH AN EPOXY MORTAR MEETING THE REQUIREMENTS OF CMS 510. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

**ITEM 202 PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN:**

PORTION OF THE STRUCTURE REMOVED, AS PER PLAN, SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED.

PROTECTION OF TRAFFIC:
PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE ENGINEER FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

SUBSTRUCTURE CONCRETE REMOVAL:
SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 90 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

¼ INCH SCARIFICATION: THE EXISTING PIER BRIDGE SEAT SURFACE SHALL BE SCARIFIED ¼ INCH INTO SOUND CONCRETE PRIOR TO PLACEMENT OF THE CONCRETE. THE SURFACE SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER, AIR UNDER PRESSURE, OR ANOTHER METHOD THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

PAYMENT
ALL WORK SHALL BE PAID FOR UNDER ITEM 202 PORTIONS OF STRUCTURES REMOVED, AS PER PLAN

**TRAFFIC MAINTENANCE:**
SEE ROADWAY PLANS FOR ADDITIONAL TRAFFIC NOTES AND DETAILS.

**SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)**

EPOXY-URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722 AS PER THE DETAILS IN THE PLAN.

**ITEM SPECIAL - WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING**

INSTALL A 3 FOOT WIDE STRIP, 3/32 INCH THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 3 FOOT WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X 3/32" (LENGTH X SHANK DIAMETER) #10 GALVANIZED BUTTON HEAD SPIKE THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS, AT 6 INCHES CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS WHERE THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST ONE FOOT IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32 INCH THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

| DESCRIPTION OF TEST | ASTM METHOD | REQUIREMENT |
|---|---|---|
| THICKNESS, INCHES | D 751 | 0.094 ± .01 |
| BREAKING STRENGTH, GRAB WXF, LBS, MINIMUM | D 751 | 700 X 700 |
| ADHESIVE 1" STRIP, 2" MINIMUM, LBS, MINIMUM | D 751 | 9 |
| BURST STRENGTH (MULLEN) PSI, MINIMUM | D 751 | 1400 |
| HEAT AGING 70 HOURS T 212 F, 180 BEND WITHOUT CRACKING | D 2136 | NO CRACKING OF COATING |
| LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40 F, BEND AROUND ¼ INCH MANDREL | D 2136 | NO CRACKING OF COATING |

PAYMENT FOR LABOR MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN INTEM SPECIAL- WATERPROOFING, MISC. : SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING.

**ITEM 507 STEEL PILES HP10X42**

ALL PILES SHALL BE DRIVEN TO REFUSAL ON THE BEDROCK. REFUSAL SHALL BE CONSIDERED AS OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES WITH A MINIMUM RESISTANCE OF 20 BLOWS PER ONE INCH OR REFUSAL SHALL BE CONSIDERED AS OBTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECEIVED AT LEAST 20 BLOWS.

**ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:**

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 6" LIFTS. EXCAVATION AT ABUTMENTS IN ADDITION TO THAT NECESSARY TO REMOVE PORTION OF THE EXISTING STRUCTURE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 503, UNCLASSIFIED EXCAVATION FOR PAYMENT.

**ITEM 842 CLASS C CONCRETE, (FOOTINGS, PIERS AND ABUTMENTS) AS PER PLAN**

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITEM 844 HIGH PERFORMANCE CONCRETE, AS PER PLAN**

THE DESIGN MIX SHALL BE MIX NO. 4 LIMESTONE. THE OPTION OF SLIPFORM CONSTRUCTION OF THE BRIDGE PARAPET IS NOT PERMITTED. THESE ITEMS SHALL INCLUDE THE COST OF THE REINFORCING STEEL.

**ITEM 530 - STRUCTURE MISC.: METALLIC COATING SYSTEM**

THE STRUCTURE STEEL FOR BOTH THE LEFT AND RIGHT STRUCTURES SHALL BE COATED AS DESCRIBED IN THE NOTES ON SHEETS CSS5 THRU CSS7. THESE NOTES ARE IN THE COMMON STRUCTURE SHEETS (CSS) AT THE BEGINNING OF THE STRUCTURE SHEETS FOR THIS PROJECT.

**REINFORCING STEEL:**

NEW REINFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED UNDER ITEM 844 HIGH PERFORMANCE CONCRETE.

**ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN**

POROUS BACKFILL SHALL BE #57 GRAVEL ONLY.

**THE DESIGN LOAD** IS 44 TONS PER PILE FOR THE ABUTMENT PILES AND 55 TONS PER PILE FOR THE PIER PILES. THE ULTIMATE BEARING VALUE IS 88 TONS PER PILE FOR THE ABUTMENTS AND 110 TONS PER PILE FOR THE PIERS. THE ULTIMATE BEARING VALUE IS TWO TIMES THE ACTUAL DESIGN LOAD. THESE DESIGN LOADS APPLY TO BOTH LEFT AND RIGHT STRUCTURES.

**SURVEY DISC ON STRUCTURE:**

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE ABUTMENT, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

**ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION**

THE QUANTITIES INCLUDES 10 % OF THE EXISTING AGGREGATE SLOPE PROTECTION SURFACE AREA IN ADDITION TO WHAT IT IS DETAILED ON THE PLANS. THE SLOPE PROTECTION TO BE PLACED UNDER WIDENED STRUCTURE AND MATCH EXISTING.

**ITEM 863 STRUCTURAL STEEL MEMBERS, LEVEL THREE (3) FABRICATION, A572**

THE CONTRACTOR AT HIS OPTION MAY SUBMIT A COST SAVINGS TO THE STATE, TO FURNISH A36 STEEL, (YIELD STRENGTH OF 36 K.S.I.) IN LEUI OF THE A572 STEEL AS SPECIFIED FOR MED-71-2402 ONLY. THE USE OF A36 STEEL WILL ONLY BE ACCEPTABLE IF APPROVED BY THE PROJECT ENGINEER, PENDING THE SUBMITTED AMOUNT OF THE COST SAVINGS. THE LUMP SUM CONTRACT AMOUNT WILL BE ADJUSTED ACCORDINGLY.

**ITS CONDUIT**

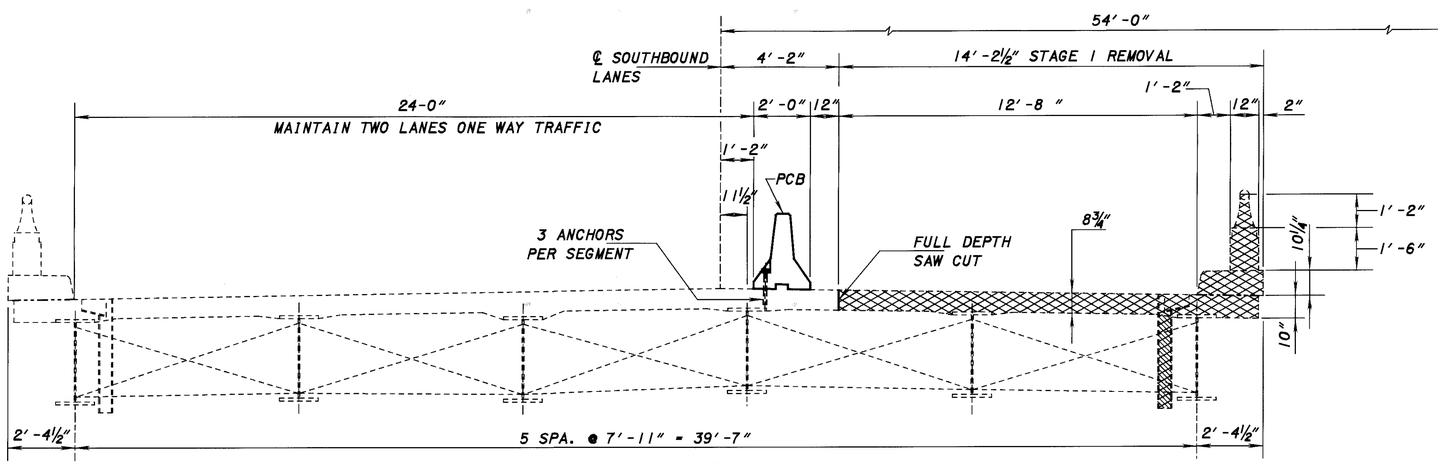
THE CONDUIT SHALL BE PLACED WITHIN THE OUTSIDE PARAPET OF LEFT AND RIGHT STRUCTURES. SEE CSS3 AND CSS4 FOR DETAILS.

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION
DESIGN AGENCY

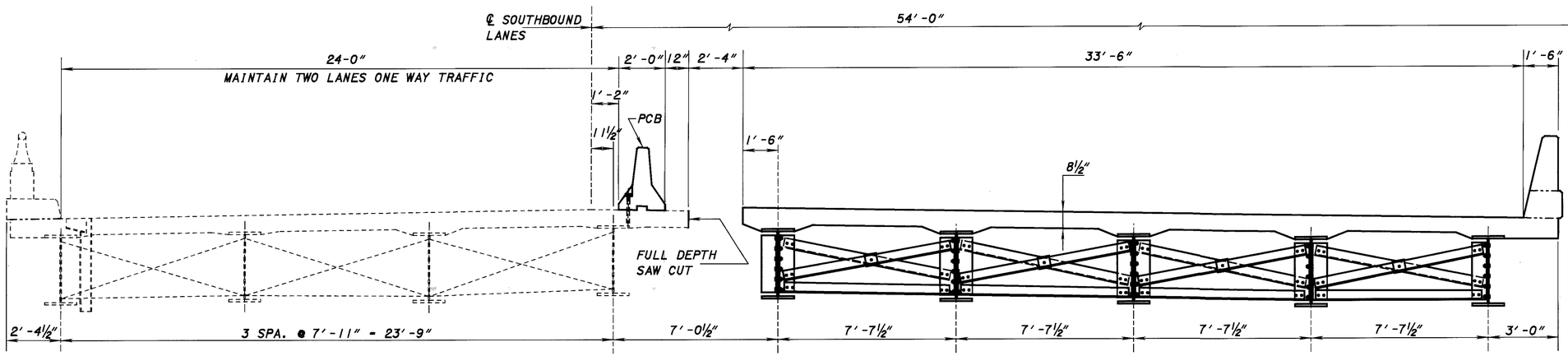
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | DRL | 10-08-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5204135L/5204143R | |

GENERAL NOTES
MED-71-2402 L/R
I-71 OVER S.R. 303

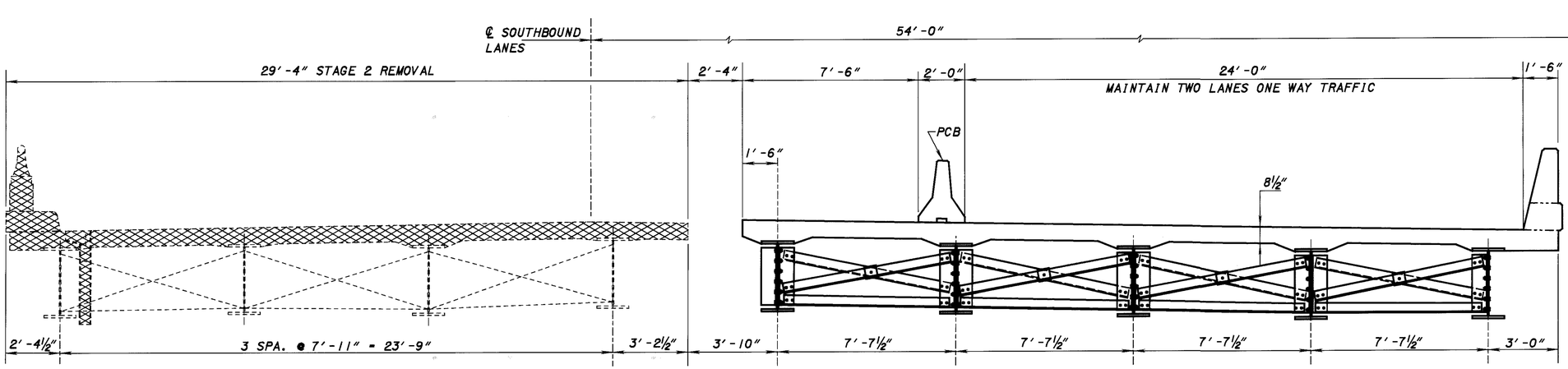
MED-71-15.78




## STAGE I REMOVAL




## STAGE I CONSTRUCTION




## STAGE 2 REMOVAL

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DRL DATE 10-08-99
STRUCTURE FILE NUMBER 5204135

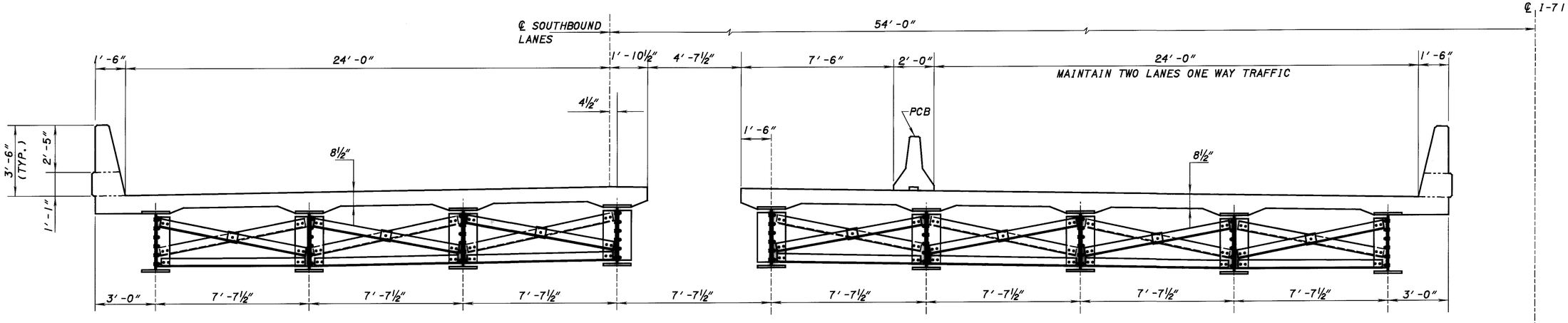
DRAWN TAA REVISED
DESIGNED TAA CHECKED DFT

STAGE CONSTRUCTION
MED-71-2402 L
I-71 OVER S.R. 303

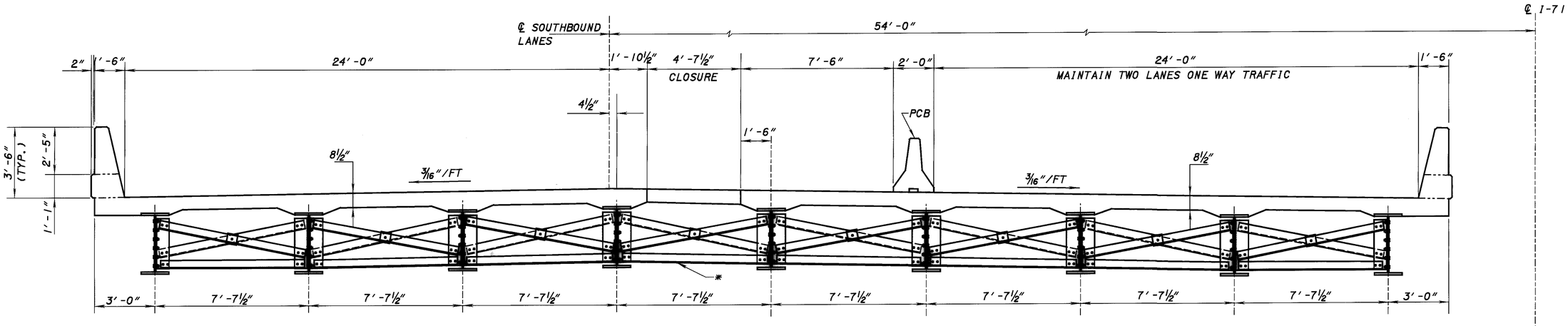
MED-71-15.78

5 / 46

890
940




## STAGE 2 CONSTRUCTION




## CLOSURE SECTION CONSTRUCTION

## NOTES AND LEGEND

TEMPORARY BARRIERS SHALL BE ANCHORED TO THE EXISTING BRIDGE DECK TWO (2) OR THREE (3) ANCHORS PER TEMPORARY BARRIER SEGMENT ARE REQUIRED ON THE TRAFFIC SIDE OF THE BARRIER. THE ANCHOR BOLT PATTERN SHALL BE SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. SEE STD. DWG. PCB-91 FOR ADDITIONAL DETAILS.

PCB - INDICATES PORTABLE CONCRETE BARRIER.

* PLACE CROSSFRAMES IN POSITION PRIOR TO POURING OF THE CLOSURE POUR

## PROPOSED WORK

1. MAINTAIN TRAFFIC BY USE OF STAGE CONSTRUCTION
2. REPLACE CONCRETE DECK AND STEEL BEAMS
3. WIDEN AND MODIFIED EXISTING SUBSTRUCTURE UNITS

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

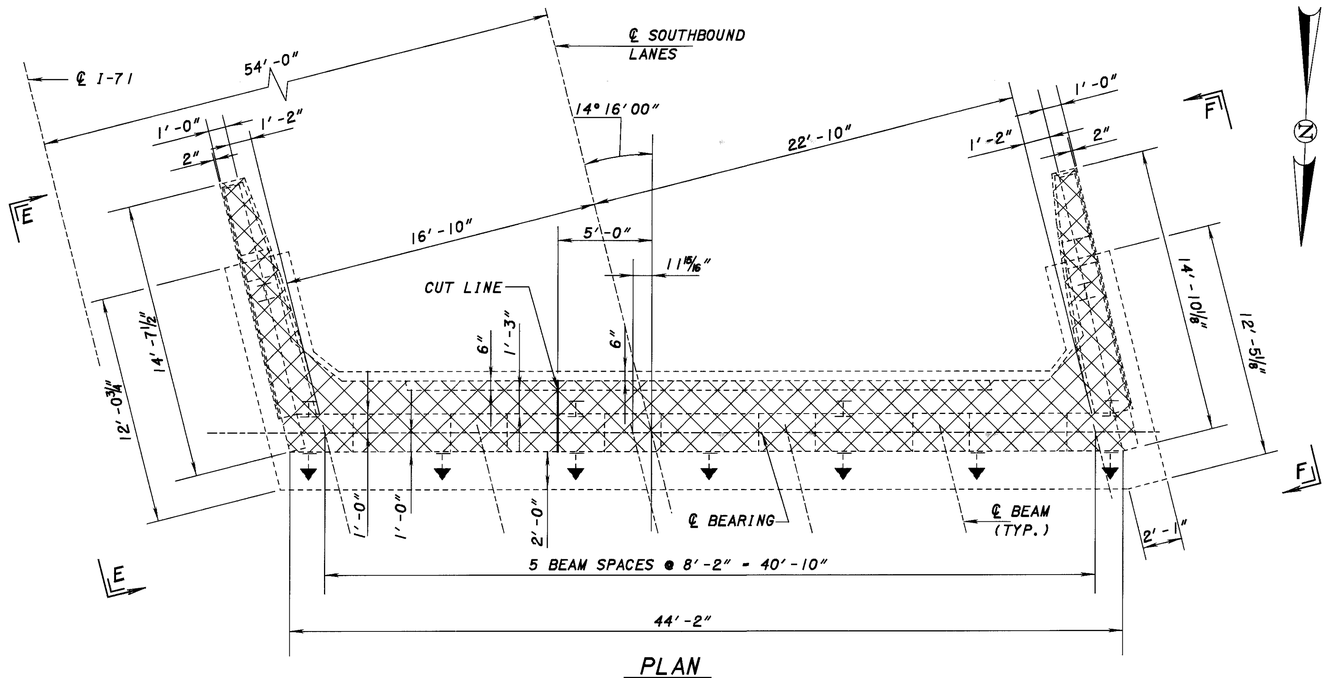
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | DRL | 10-08-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5204135 | |

STAGE CONSTRUCTION
MED-71-2402 L
I-71 OVER S.R. 303

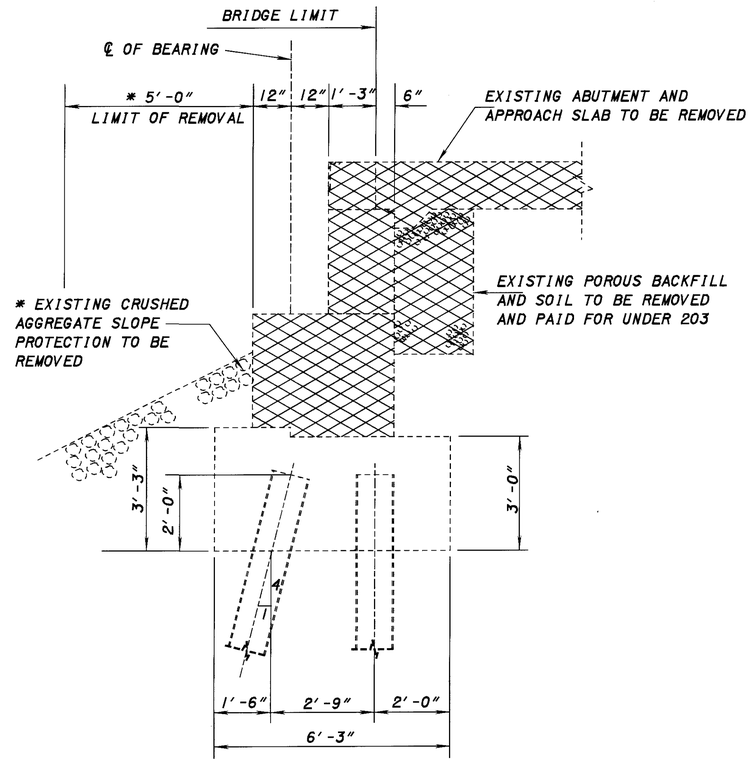
MED-71-15.78

6 / 46

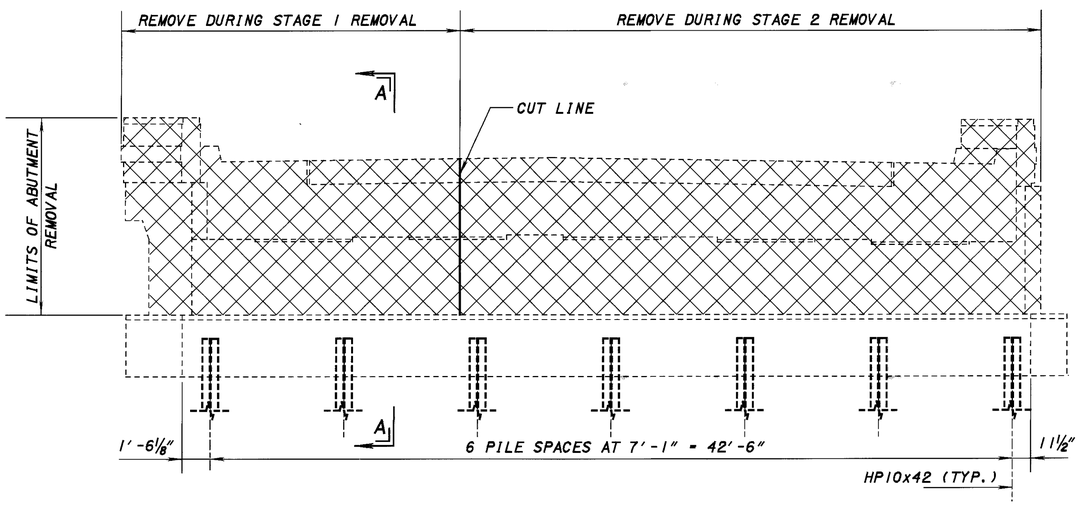
891
940




PLAN
(REAR ABUTMENT)




SECTION A-A




ELEVATION
(REAR ABUTMENT)

## NOTES

FOR VIEW E-E AND F-F SEE SHEET 9/46

## LEGEND

PORTION OF STRUCTURE TO BE REMOVED

INDICATE BATTERED PILE

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

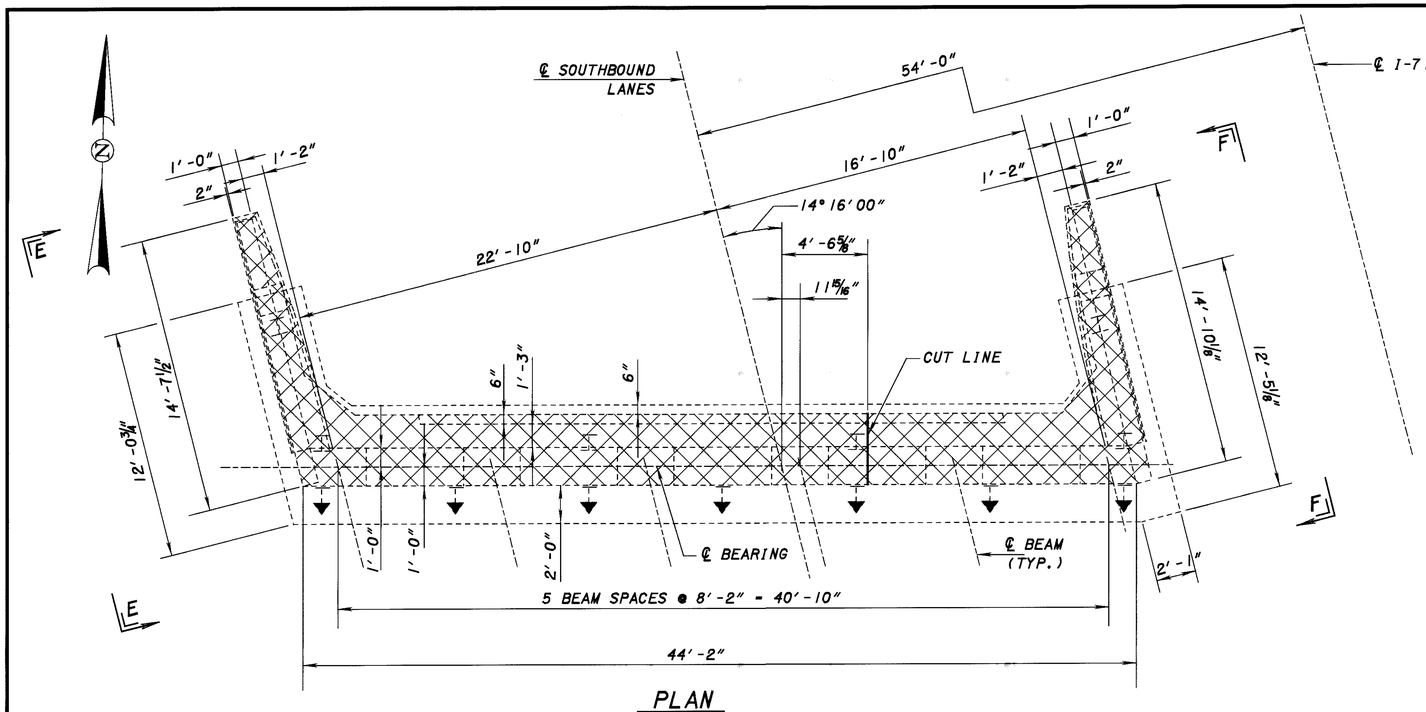
| DESIGNED | DRAWN | REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|---|---|
| TAA | TAA | DRL | 10-8-99 | 5204135 |
| CHECKED | REVISED | | | |
| DFT | | | | |

EXISTING ABUTMENT PLAN AND ELEVATION
MED-71-2402 L
I-71 OVER S.R. 303

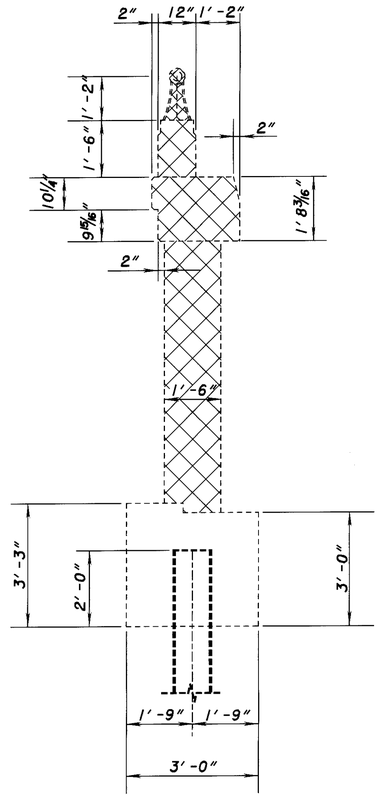
MED-71-15.78

7 / 46

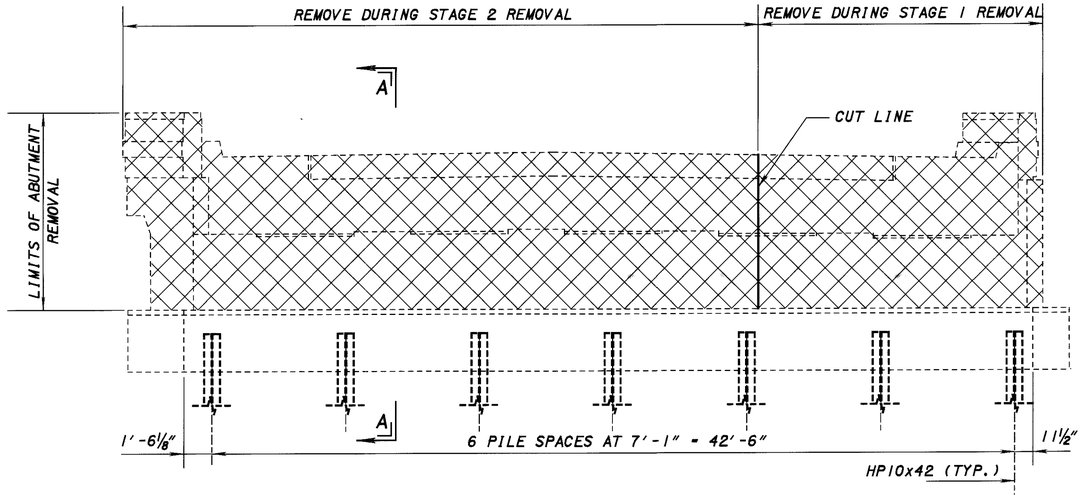
892
940




PLAN
(FORWARD ABUTMENT)




SECTION B-B




ELEVATION
(FORWARD ABUTMENT)

## NOTES

FOR VIEW E-E AND F-F SEE SHEET 9/46

## LEGEND

PORTION OF STRUCTURE TO BE REMOVED

INDICATE BATTERED PILE

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | DRL | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5204135 | |

EXISTING ABUTMENT PLAN AND ELEVATION
MED-71-2402 L
I-71 OVER S.R. 303

MED-71-15.78

8/46

893
940

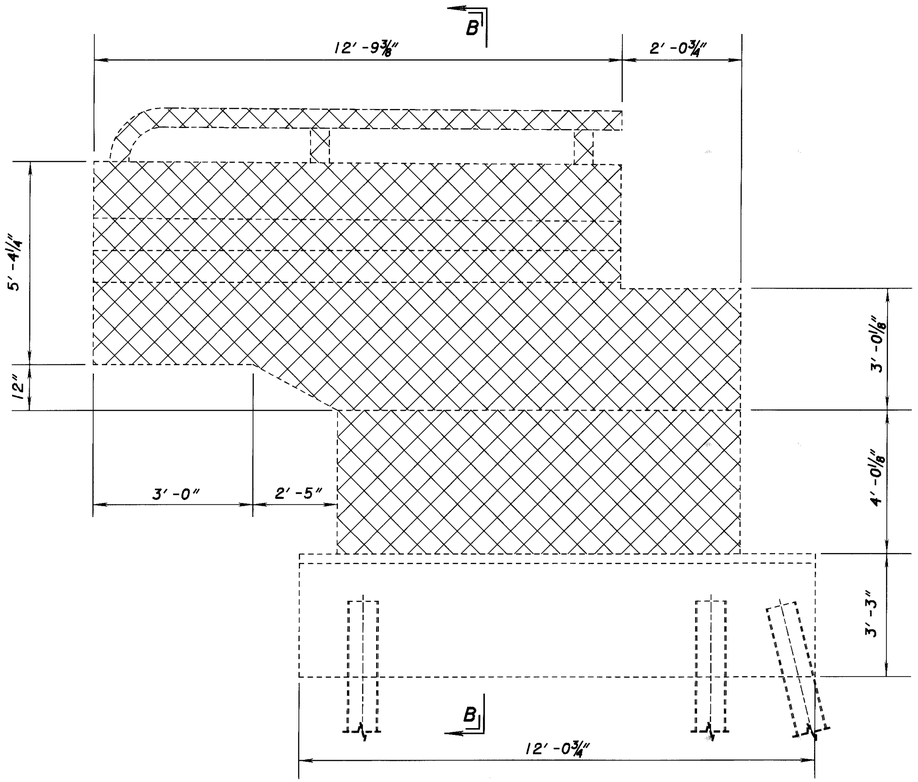
## NOTES AND LEGEND

FOR SECTION B-B SEE SHEET 8 / 46

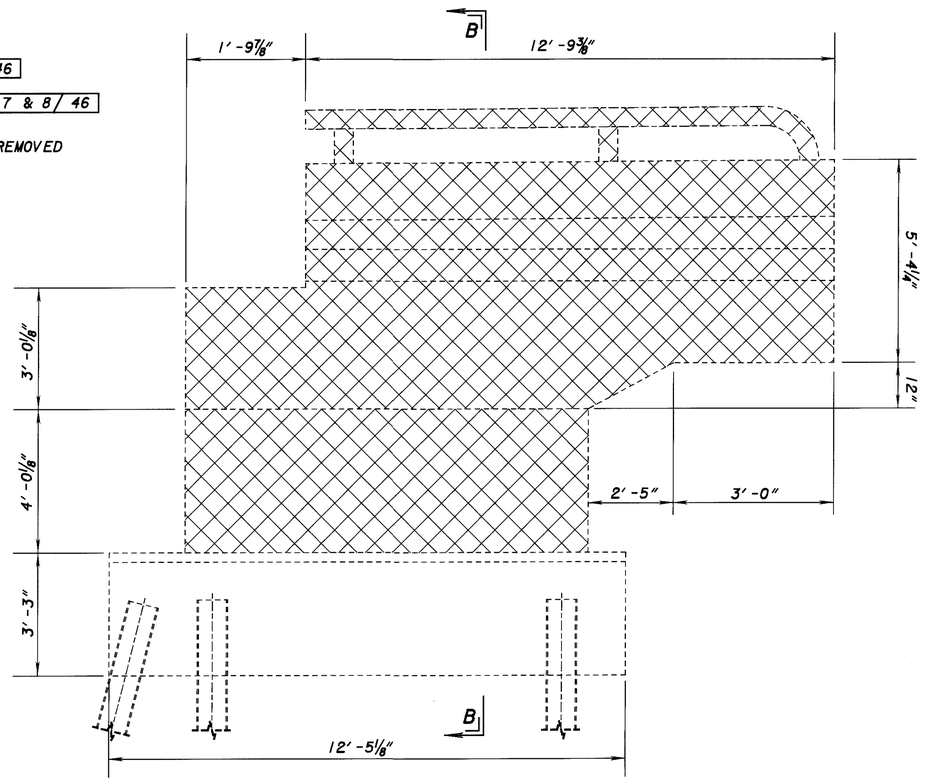
FOR VIEW E-E AND F-F SEE SHEET 7 & 8 / 46

PORTION OF STRUCTURE TO BE REMOVED

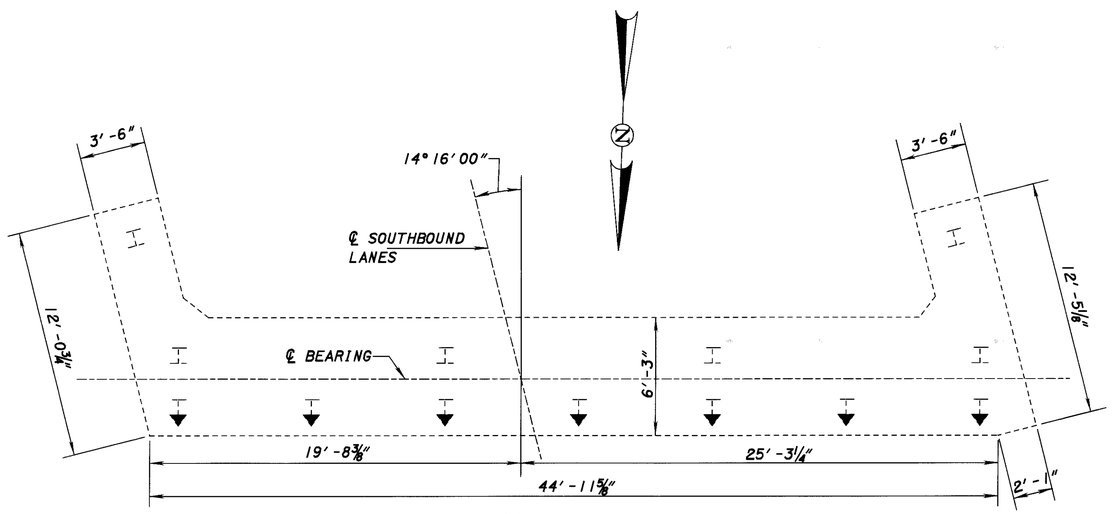
INDICATE BATTERED PILE



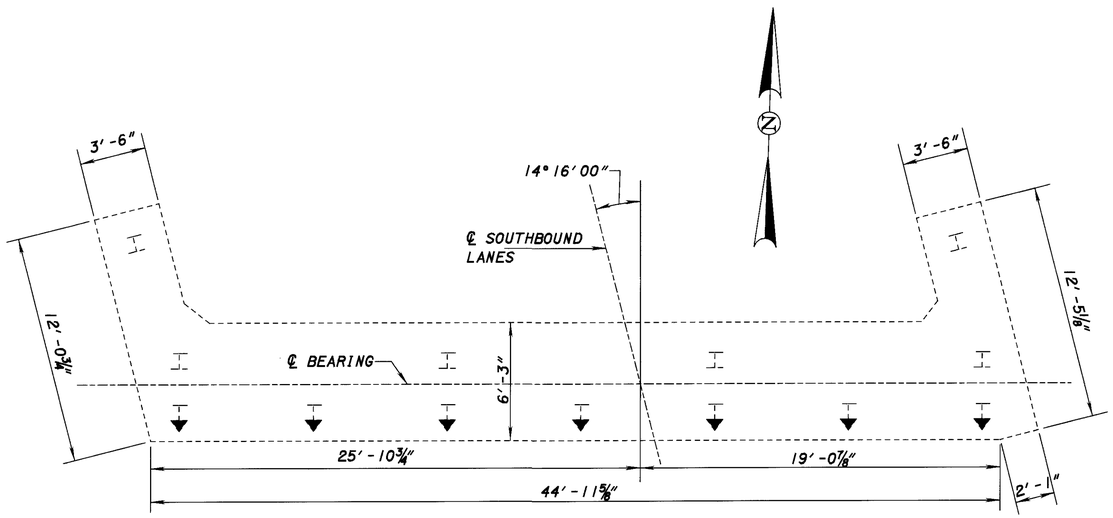

VIEW E-E




VIEW F-F




PLAN
(REAR ABUTMENT)




PLAN
(FORWARD ABUTMENT)

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | DRL | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5204135 | |

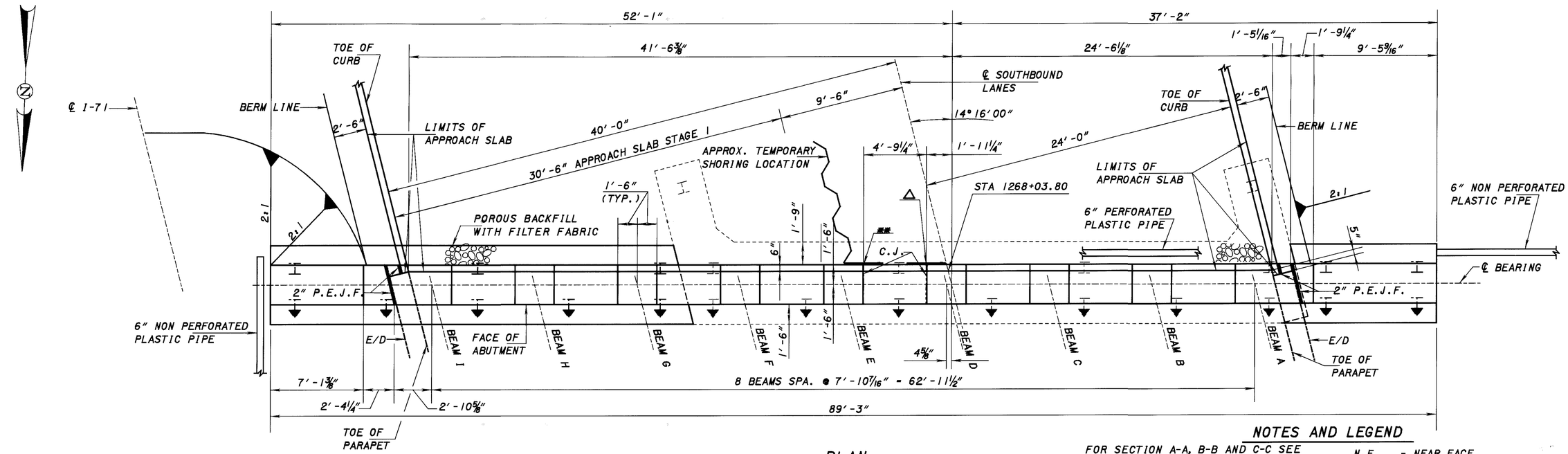
# EXISTING FOOTING AND WINGWALL DETAILS

MED-71-2402 L
I-71 OVER S.R. 303

MED-71-15.78

9 / 46

894
940




PLAN
(REAR ABUTMENT)

| LOCATION | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| ELEVATIONS | 1163.69 | 1163.83 | 1163.96 | 1164.09 | 1163.99 | 1163.88 | 1163.78 | 1163.68 | 1163.58 |

## NOTES AND LEGEND

FOR SECTION A-A, B-B AND C-C SEE SHEET 12/46

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

▼ INDICATE BATTERED PILE

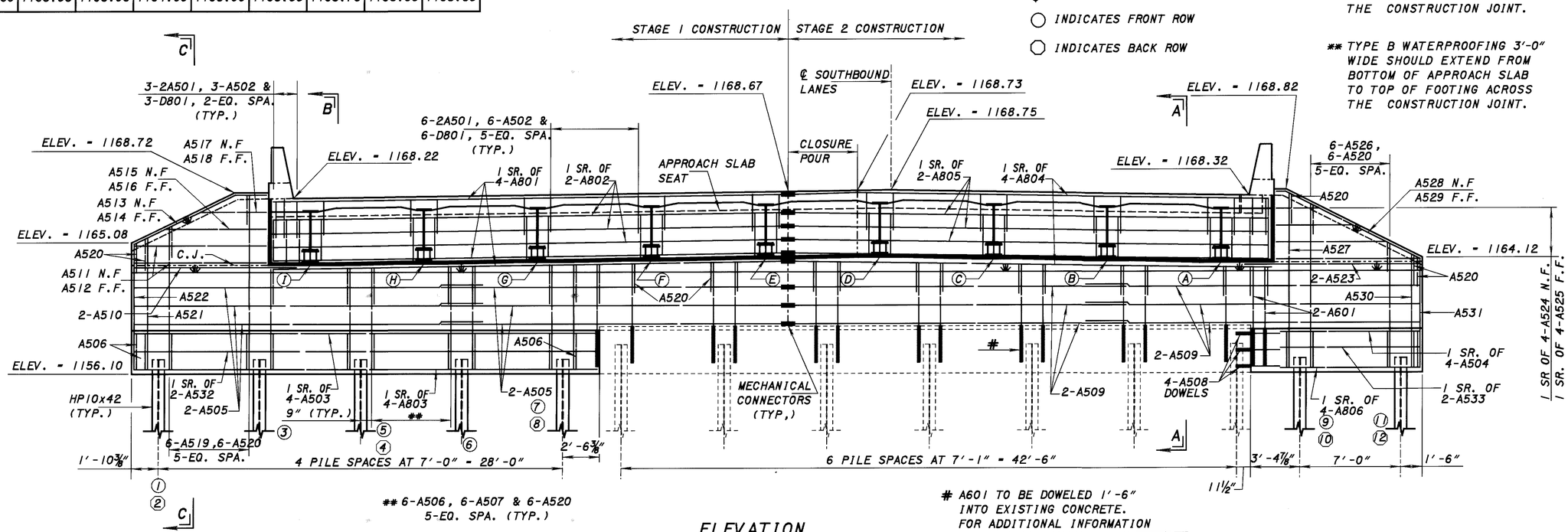
○ INDICATES FRONT ROW

⬡ INDICATES BACK ROW

N.F. - NEAR FACE
F.F. - FAR FACE
E/D - EDGE OF DECK
C.J. - CONSTRUCTION JOINT

△ TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO THE BEAM SEAT ACROSS THE CONSTRUCTION JOINT.

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.




** 6-A506, 6-A507 & 6-A520 5-EQ. SPA. (TYP.)

# A601 TO BE DOWELED 1'-6" INTO EXISTING CONCRETE. FOR ADDITIONAL INFORMATION SEE GENERAL NOTES SHEET 4/46

ELEVATION
(REAR ABUTMENT)

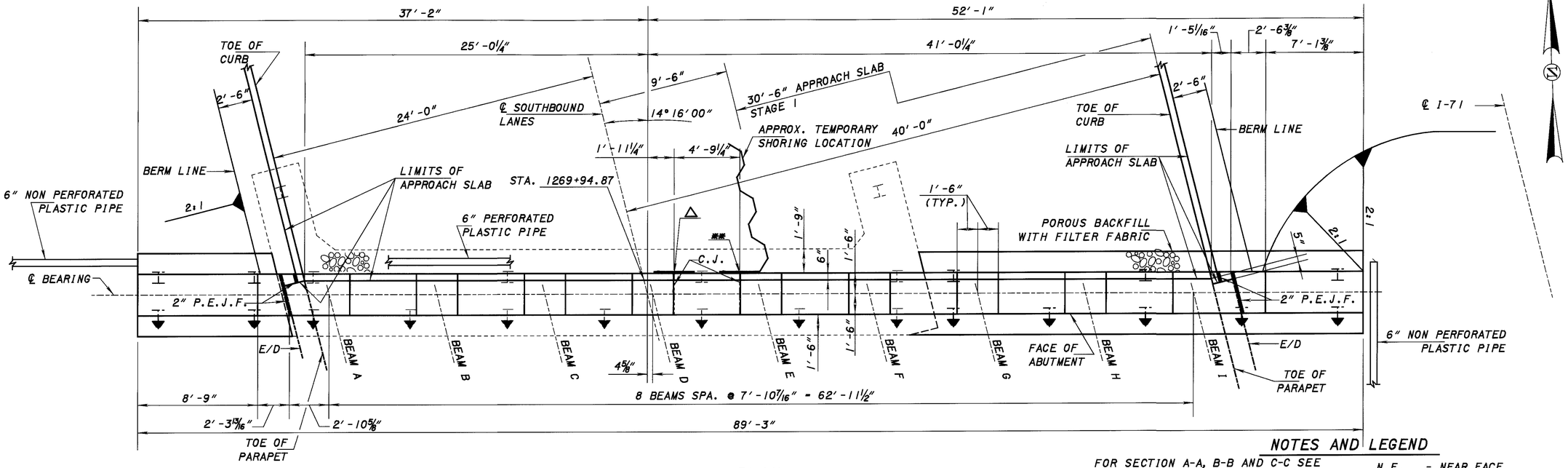
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
DATE REVISED: 10-8-99 DRL
STRUCTURE FILE NUMBER: 5204135
DRAWN: TAA
REVISED:
DESIGNED: TAA
CHECKED: DFT

ABUTMENT DETAILS
MED-71-2402 L
I-71 OVER S.R. 303

MED-71-15.78

10/46

895/940




## PLAN
(FORWARD ABUTMENT)

| LOCATION | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| ELEVATIONS | 1161.86 | 1162.00 | 1162.14 | 1162.27 | 1162.17 | 1162.07 | 1161.97 | 1161.87 | 1161.77 |

## NOTES AND LEGEND

FOR SECTION A-A, B-B AND C-C SEE SHEET 12/46

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

INDICATE BATTERED PILE

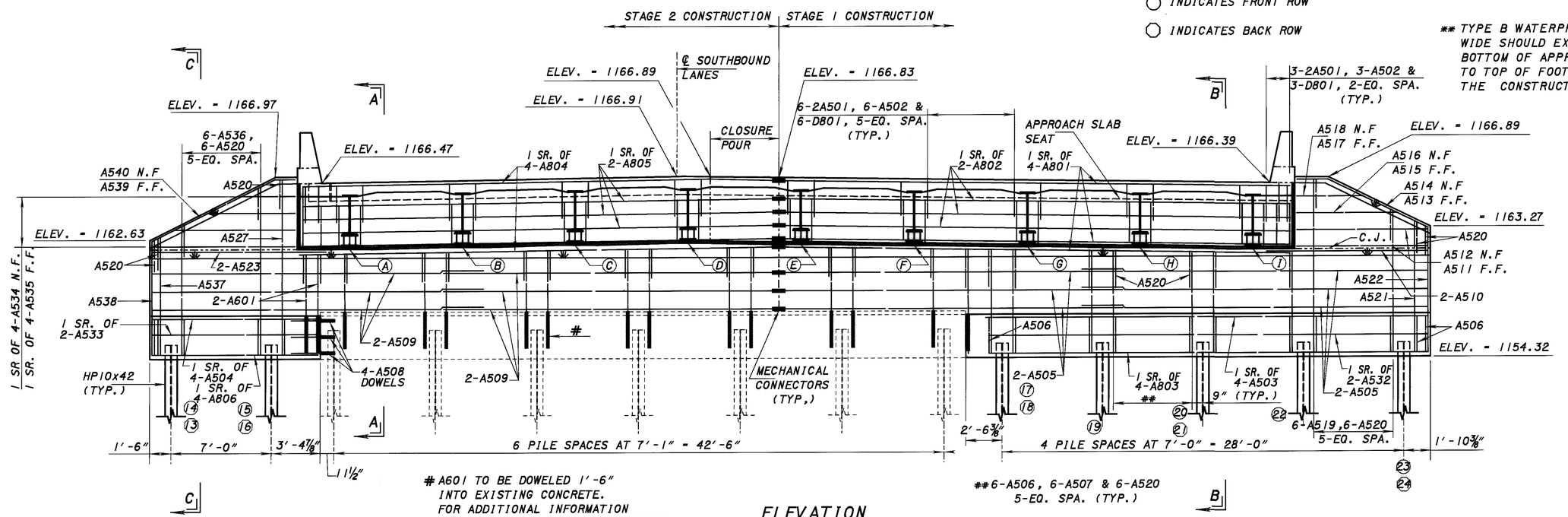
INDICATES FRONT ROW

INDICATES BACK ROW

N.F. - NEAR FACE
F.F. - FAR FACE
E/D - EDGE OF DECK
C.J. - CONSTRUCTION JOINT

△ TYPE B WATERPROOFING 3′-0″ WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO THE BEAM SEAT ACROSS THE CONSTRUCTION JOINT.

** TYPE B WATERPROOFING 3′-0″ WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.




# A601 TO BE DOWELED 1′-6″ INTO EXISTING CONCRETE. FOR ADDITIONAL INFORMATION SEE GENERAL NOTES SHEET 4/46

## ELEVATION
(FORWARD ABUTMENT)

**##** 6-A506, 6-A507 & 6-A520 5-EQ. SPA. (TYP.)

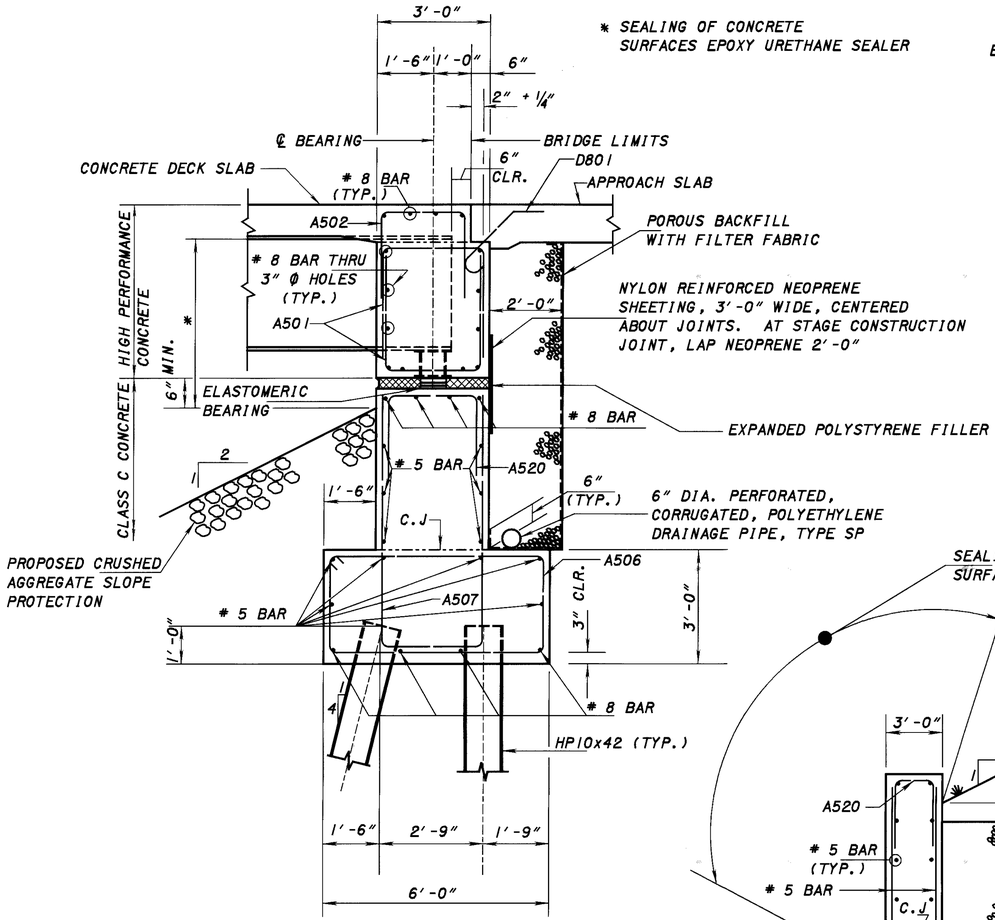
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: DRL
DATE: 10-8-99
STRUCTURE FILE NUMBER: 5204135
DRAWN: TAA
REVISED:
DESIGNED: TAA
CHECKED: DFT

ABUTMENT DETAILS
MED-71-2402 L
I-71 OVER S.R. 303

MED-71-15.78

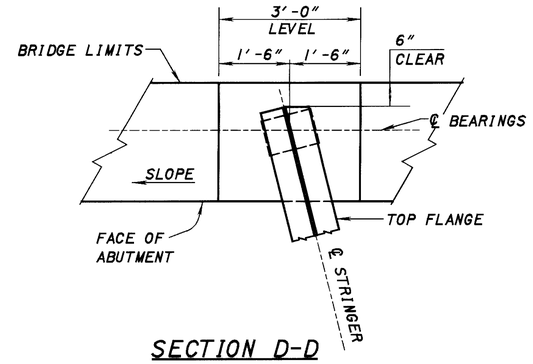
11/46

896
940

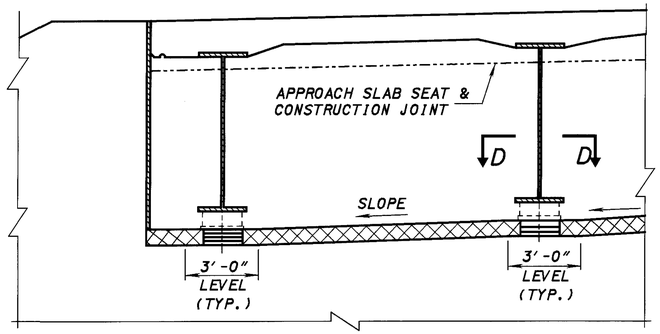



SECTION B-B

* SEALING OF CONCRETE SURFACES EPOXY URETHANE SEALER




SECTION D-D
(CLIP TOP FLANGE ONLY)



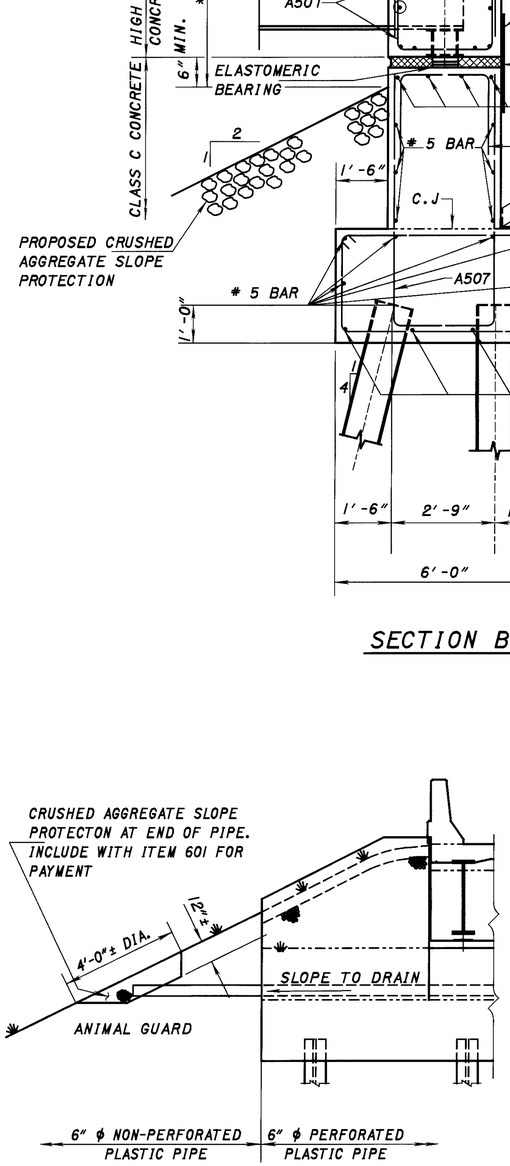

PART ELEVATION OF BEAM SEAT

## NOTES

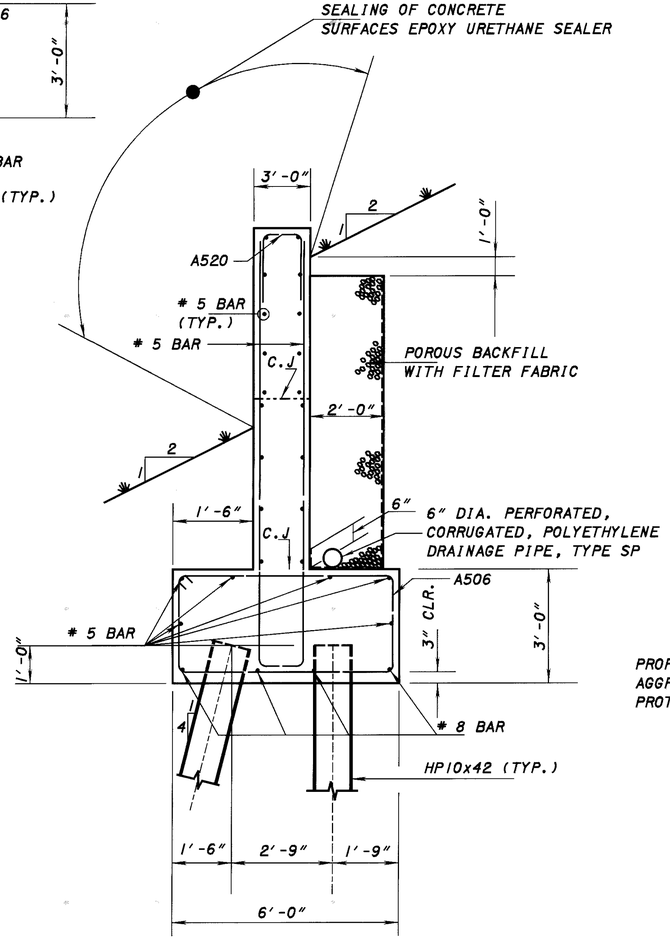
***DIAPHRAGM*** CONCRETE ENCASING THE STEEL BEAMS SUPPORTED IN THE SEMI INTEGRAL ABUTMENT SHALL BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.

PROVIDE 3" Ø HOLE THRU WEB AS NOTED, PAYMENT TO BE INCLUDED AS INCIDENTAL WITH ITEM 863 STRUCTURAL STEEL. PAYMENT FOR THE EXPANDED POLYSTYRENE FILLER TO BE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE AS INCIDENTAL.

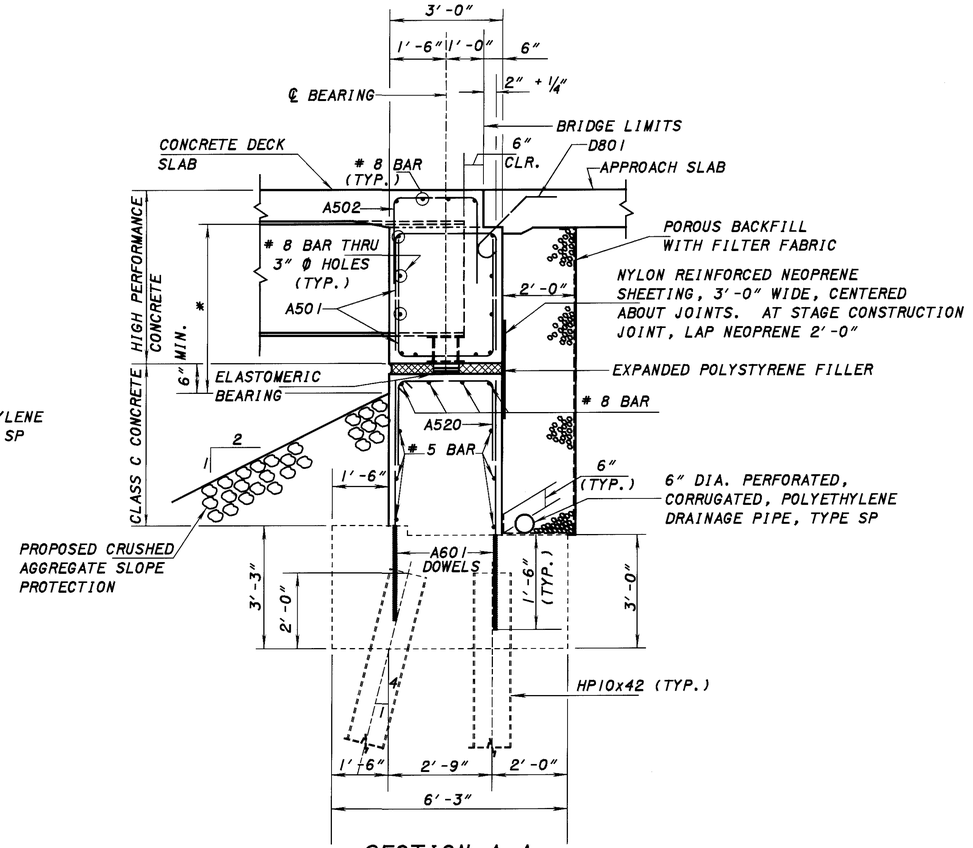
***POROUS BACKFILL:***
POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 12" BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.




PIPE OUTLET DETAIL




SECTION C-C




SECTION A-A

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|
| DRL | 10-8-99 | 5204135 |

| DRAWN | REVISED |
|---|---|
| TAA | |

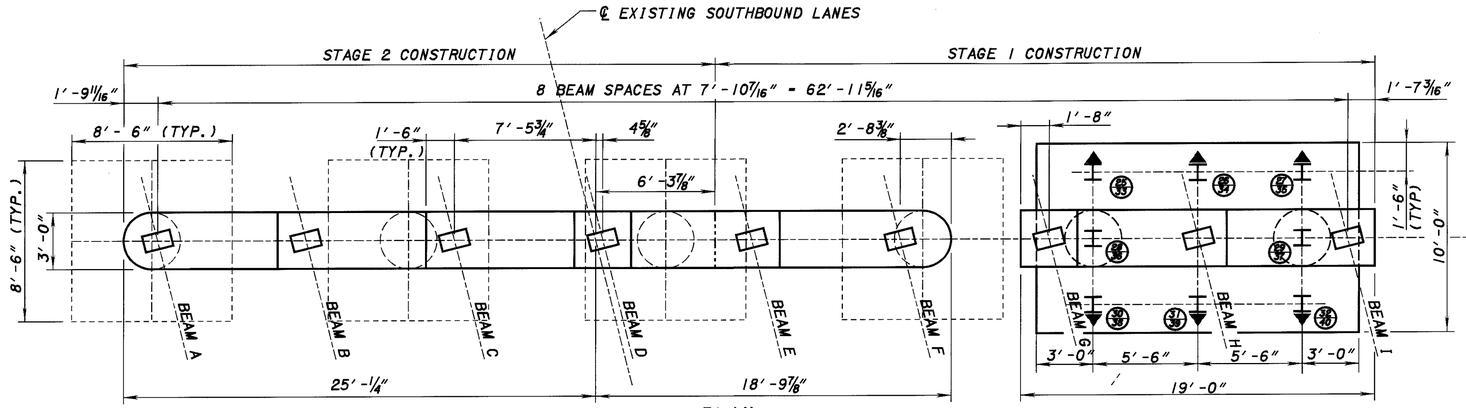
| DESIGNED | CHECKED |
|---|---|
| TAA | DFT |

MISCELLANEOUS DETAILS
MED-71-2402 L
I-71 OVER S.R. 303

MED-71-15.78

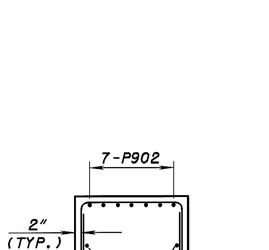
12/46

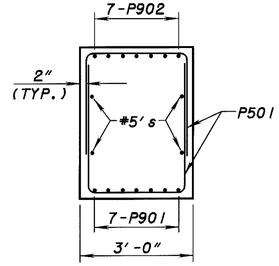
897
940




## PLAN

PIER 1 & 3 SOUTHBOUND LANES




## SECTION C-C

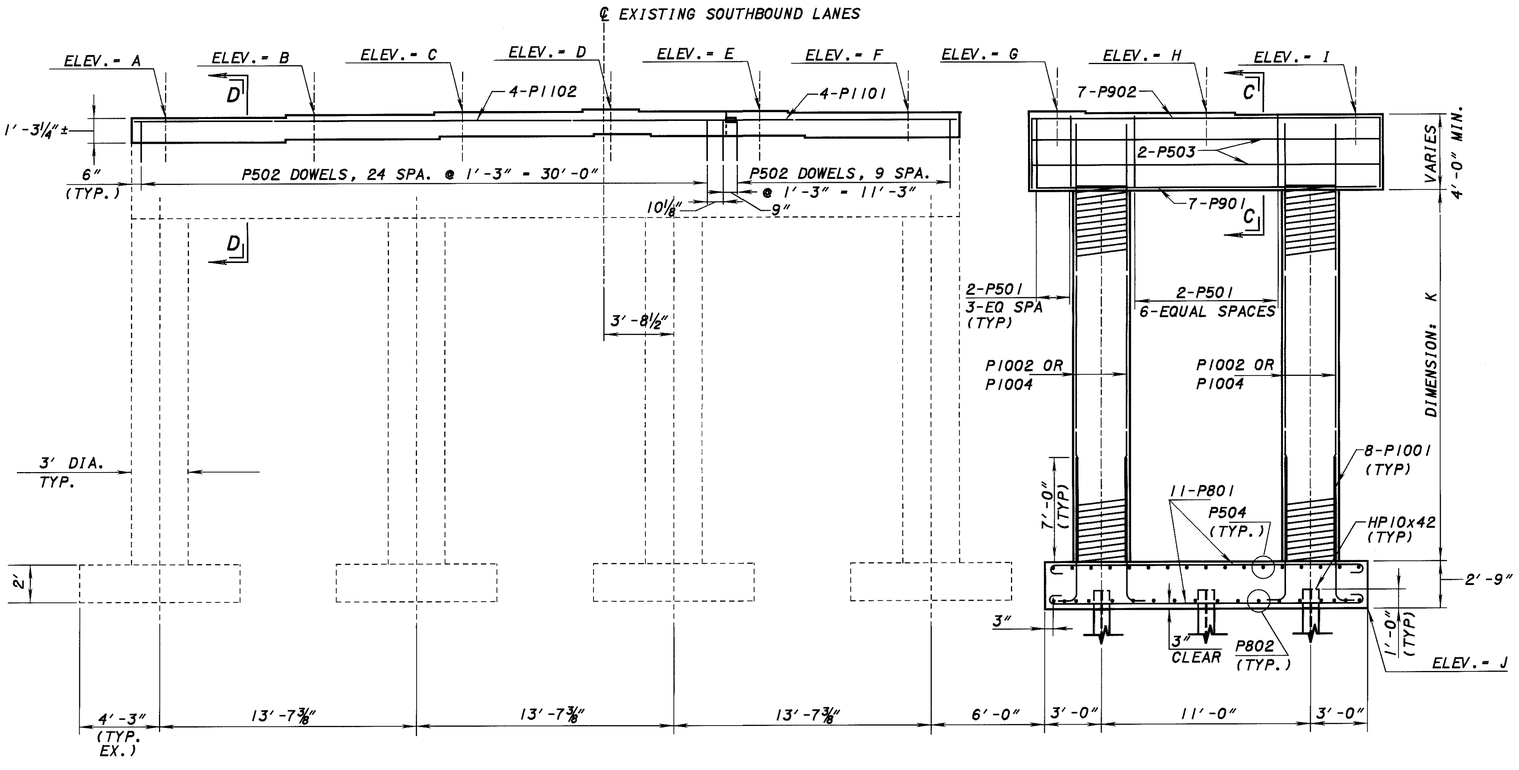
| LOCATION / ELEVATION | ELEVATIONS | | | | | | | | | | DIMENSION |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K |
| SOUTHBOUND LANE PIER 1 | 1164.06 | 1164.20 | 1164.34 | 1164.46 | 1164.36 | 1164.26 | 1164.16 | 1164.06 | 1163.95 | 1137.75 | 19'-5 3/8" |
| SOUTHBOUND LANE PIER 3 | 1163.04 | 1163.18 | 1163.32 | 1163.45 | 1163.35 | 1163.25 | 1163.15 | 1163.05 | 1162.95 | 1137.75 | 18'-5 3/8" |

NOTES:

EXISTING PIER BRIDGE SEATS SHALL BE SCARIFIED 1/4", SEE GENERAL NOTES.

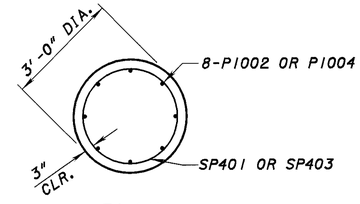
LEGEND

⊖ - (P1/P3) PILE NUMBERING

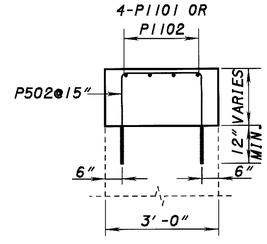



## ELEVATION

PIER 1 & 3 SOUTHBOUND LANES




## PLAN




## SECTION D-D

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

REVIEWED: DRL DATE: 10-8-99

STRUCTURE FILE NUMBER: 5204135

DRAWN: TAA REVISED:

DESIGNED: TAA CHECKED: DFT

PIER DETAILS

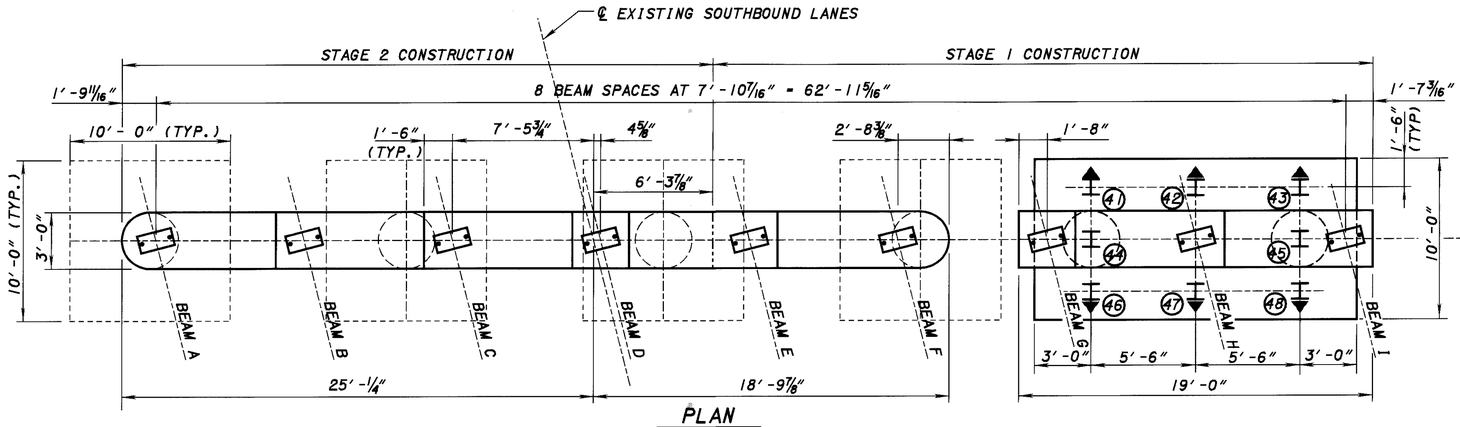
MED-71-2402 L

I-71 OVER S.R. 303

MED-71-15.78

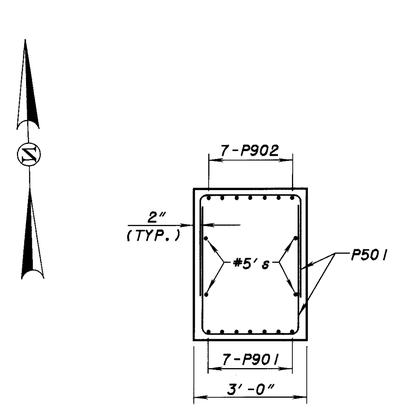
13/46

898/940




## PLAN

PIER 2 SOUTHBOUND LANES




## SECTION C-C

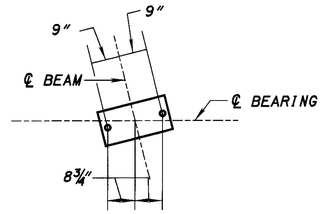
| LOCATION / ELEVATION | ELEVATIONS | | | | | | | | | | DIMENSION |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K |
| SOUTHBOUND LANE PIER 2 | 1163.56 | 1163.70 | 1163.84 | 1163.97 | 1163.87 | 1163.77 | 1163.67 | 1163.57 | 1163.47 | 1140.25 | 16'-5 5/8" |

NOTES:

EXISTING PIER BRIDGE SEATS SHALL BE SCARIFIED 1/4", SEE GENERAL NOTES.

LEGEND

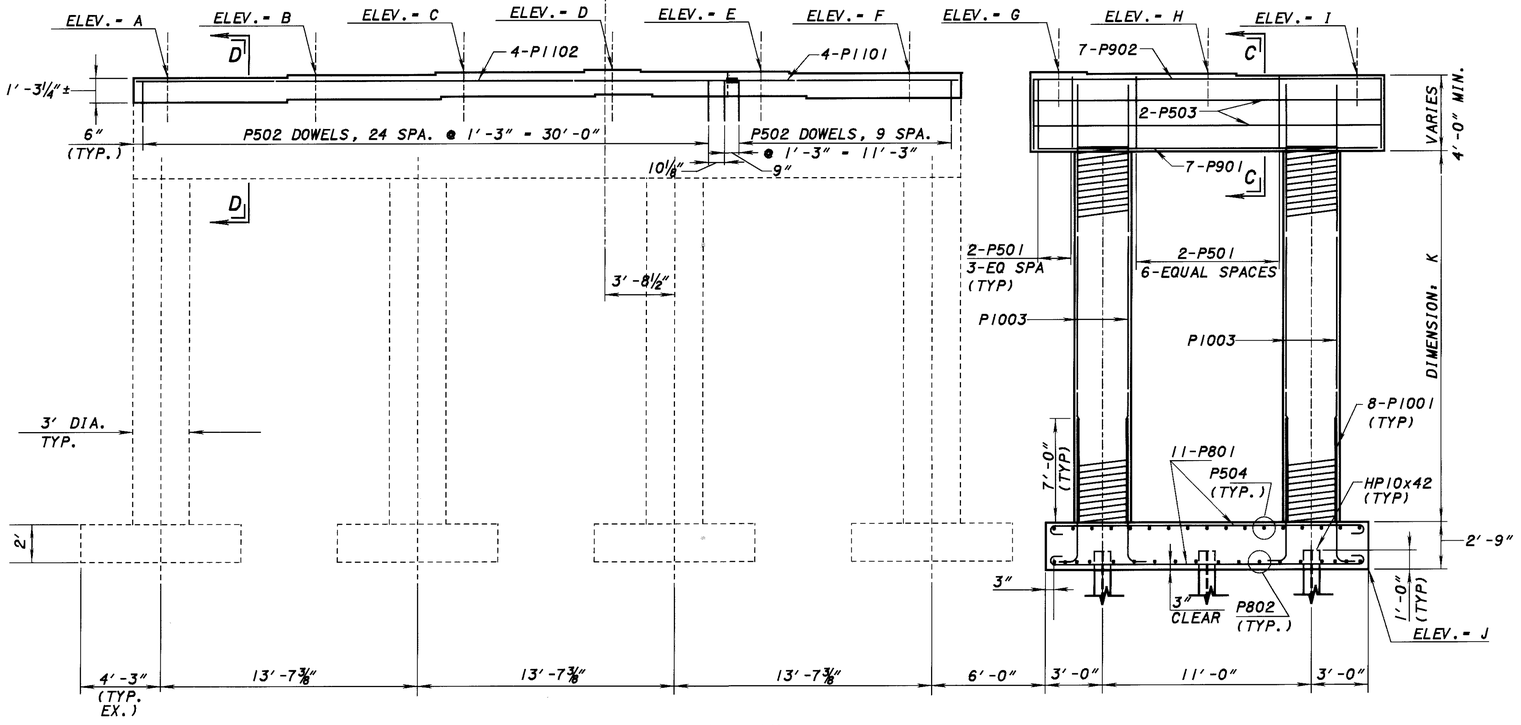
○ - (P2) PILE NUMBERING




## BEARING ANCHOR ROD LOCATION

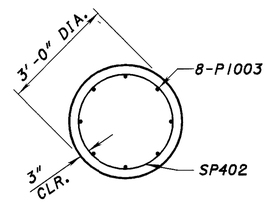
REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRESETTING OF BEARING ANCHORS.

AT THE OPTION OF THE CONTRACTOR, BEARING ANCHORS, LOCATED AND SUPPORTED BY TEMPLATES, MAY BE CAST IN PLACE.

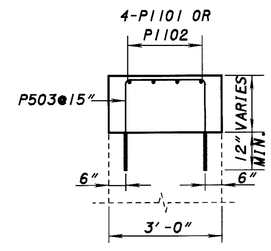



## ELEVATION

PIER 2 SOUTHBOUND LANES




## PLAN




## SECTION D-D

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVISED: DRL | DATE: 10-8-99 | STRUCTURE FILE NUMBER: 5204135

DRAWN: TAA | REVISED:

DESIGNED: TAA | CHECKED: DFT

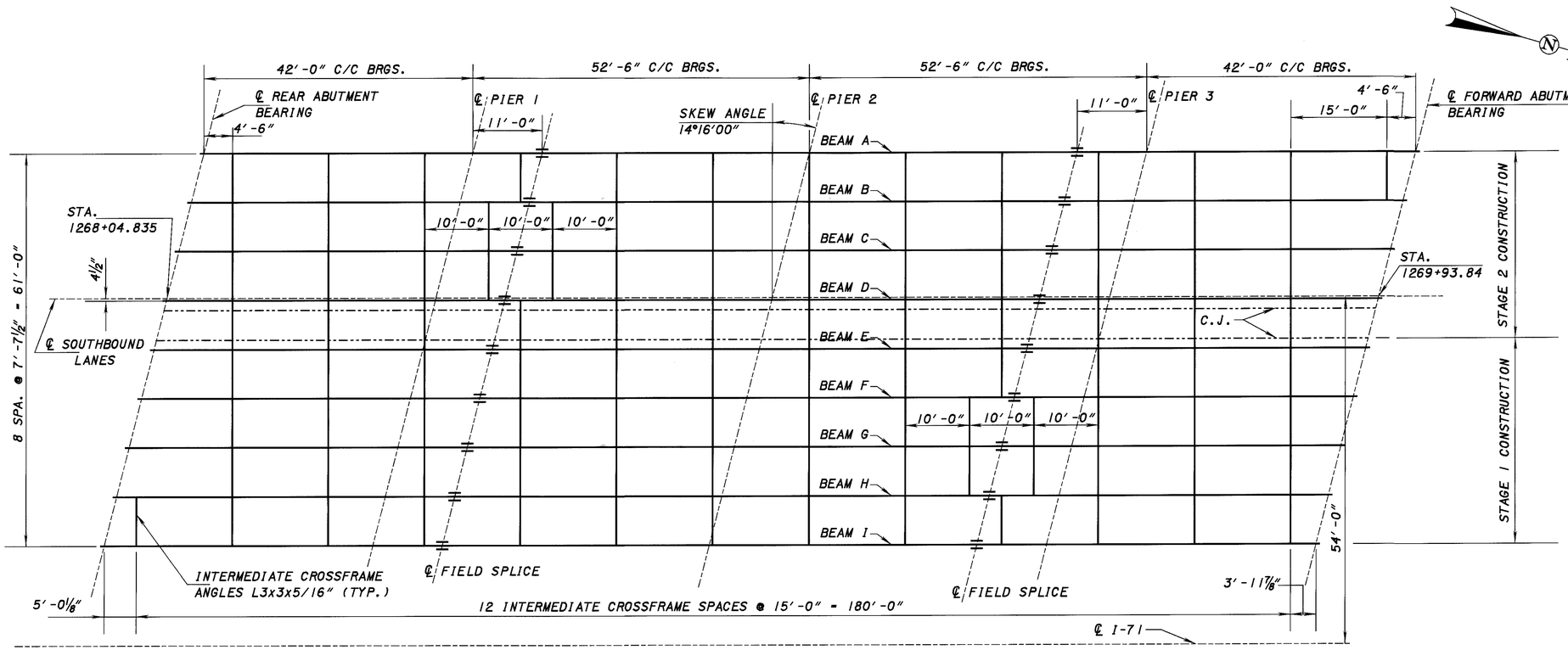
# PIER DETAILS

MED-71-2402 L
I-71 OVER S.R. 303

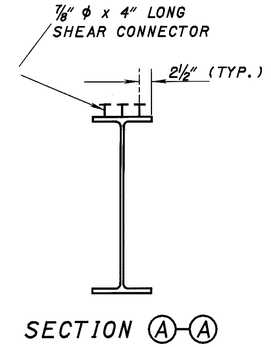
MED-71-15.78

14 / 46

899
940

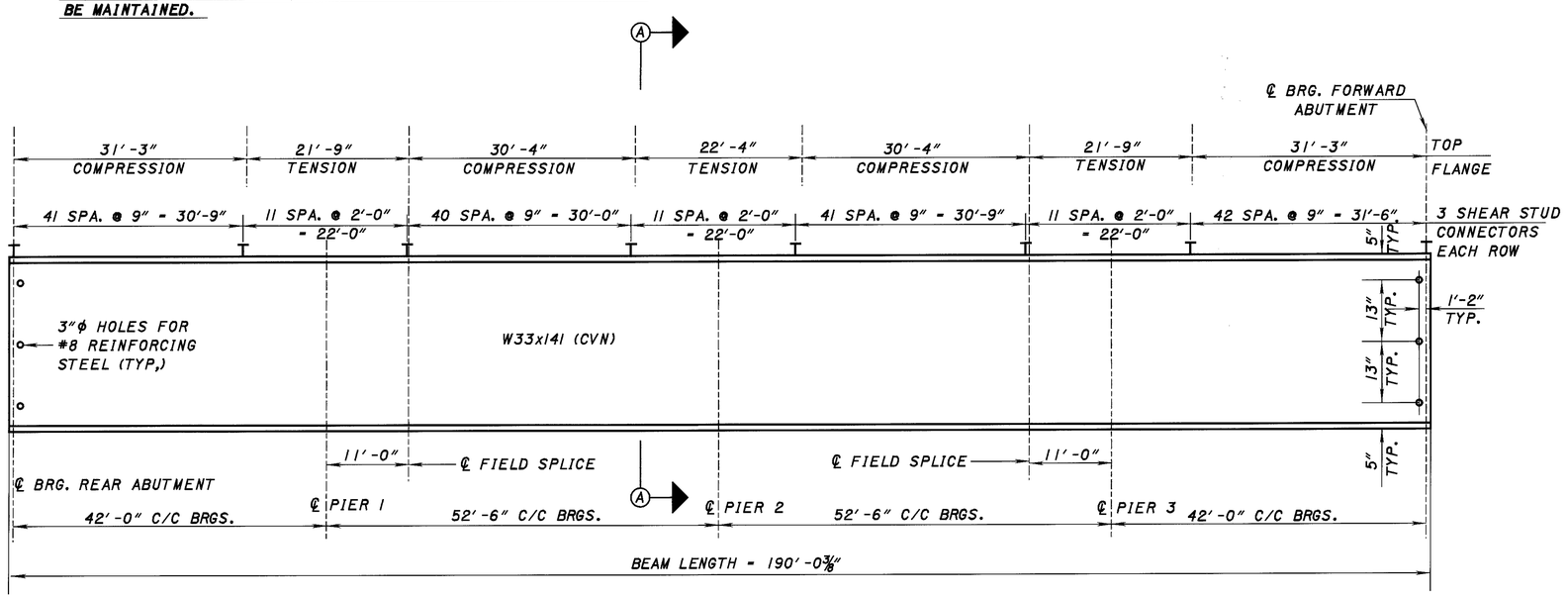



FRAMING PLAN




SECTION Ⓐ-Ⓐ

**SHOP CAMBER IS NOT REQUIRED. NATURAL CAMBER OF THE BEAM SHALL BE MAINTAINED.**




BEAM ELEVATION

(VERTICAL SCALE IS EXAGGERATED)

## NOTES

***STRUCTURAL STEEL:***
*WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.*

*FOR FIELD SPLICE DETAILS SEE STD. DWG. BS-1-93 (50 KSI) NO FILL PLATES REQUIRED.*

*FOR SCREED DIAGRAM AND TABLE SEE SHEET* 16/46

***WELDED ATTACHMENT:***
*WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FACIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.*

*3"ϕ HOLES DRILLED IN THE PROPOSED BEAM SHALL BE PAID UNDER ITEM 863 STRUCTURAL STEEL. THIS PAYMENT IS INCIDENTAL TO THE PAY ITEM.*

*LATERAL AND LONGITUDINAL SPACING OF WELDED STUD CONNECTORS MAY BE ALTERED AT FIELD SPLICE LOCATIONS TO AVOID INTERFERENCE WITH FLANGE SPLICE BOLTS PROVIDED THAT AT LEAST THE NUMBER OF STUDS SPECIFIED IN THE BEAM ELEVATION ARE PROVIDED.*

*STRUCTURAL STEEL SHALL BE ASTM A572.*

*ALL BEAM LENGTH DIMENSION ARE AT 60 °F*

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | DRL | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5204135 | |

SUPERSTRUCTURE DETAILS

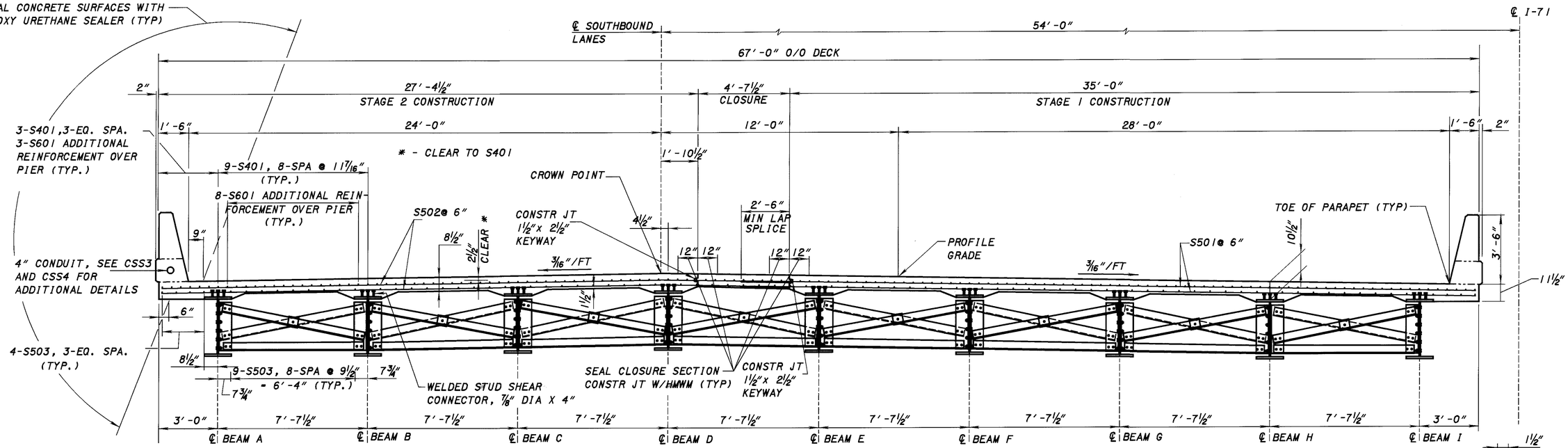
MED-71-2402 L

I-71 OVER S.R. 303

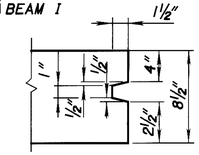
MED-71-15.78



900/940




## TRANSVERSE SECTION



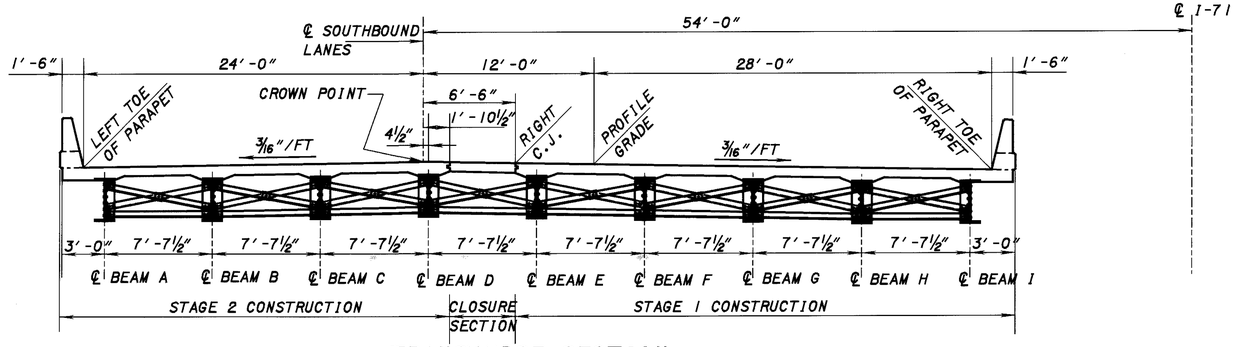

KEYWAY DETAILS AT CLOSURE SECTION

## SCREED ELEVATION - SOUTHBOUND BRIDGE

| LOCATION | RIGHT TOE OF PARAPET | | PROFILE GRADE | | RIGHT CONSTR JT | | CLOSURE POUR C.J. | | SOUTHBOUND LANE ℄ | | LEFT TOE OF PARAPET | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 1267+94.66 | 1168.21 | 1268+01.78 | 1168.58 | 1268+03.18 | 1168.66 | 1268+04.35 | 1168.72 | 1268+04.84 | 1168.74 | 1268+10.94 | 1168.31 |
| MIDSPAN | 1268+15.66 | 1168.02 | 1268+22.78 | 1168.40 | 1268+24.18 | 1168.47 | 1268+25.35 | 1168.53 | 1268+25.84 | 1168.56 | 1268+31.94 | 1168.13 |
| ℄ PIER # 1 | 1268+36.66 | 1167.83 | 1268+43.78 | 1168.21 | 1268+45.18 | 1168.28 | 1268+46.35 | 1168.34 | 1268+46.84 | 1168.37 | 1268+52.94 | 1167.93 |
| FIELD SPLICE | 1268+47.66 | 1167.73 | 1268+54.78 | 1168.10 | 1268+56.18 | 1168.18 | 1268+57.35 | 1168.23 | 1268+57.83 | 1168.26 | 1268+63.93 | 1167.83 |
| MIDSPAN | 1268+62.91 | 1167.59 | 1268+70.03 | 1167.96 | 1268+71.43 | 1168.04 | 1268+72.60 | 1168.10 | 1268+73.09 | 1168.12 | 1268+79.19 | 1167.69 |
| ℄ PIER # 2 | 1268+89.16 | 1167.35 | 1268+96.28 | 1167.71 | 1268+97.68 | 1167.79 | 1268+98.85 | 1167.85 | 1268+99.34 | 1167.87 | 1269+05.44 | 1167.44 |
| MIDSPAN | 1269+15.41 | 1167.09 | 1269+22.53 | 1167.46 | 1269+23.93 | 1167.53 | 1269+25.10 | 1167.59 | 1269+25.59 | 1167.62 | 1269+31.67 | 1167.18 |
| FIELD SPLICE | 1269+30.66 | 1166.94 | 1269+37.78 | 1167.31 | 1269+39.18 | 1167.38 | 1269+40.35 | 1167.44 | 1269+40.84 | 1167.46 | 1269+46.94 | 1167.03 |
| ℄ PIER # 3 | 1269+41.66 | 1166.83 | 1269+48.78 | 1167.20 | 1269+50.18 | 1167.27 | 1269+51.35 | 1167.33 | 1269+51.84 | 1167.35 | 1269+57.94 | 1166.92 |
| MIDSPAN | 1269+62.66 | 1166.62 | 1269+69.78 | 1166.98 | 1269+71.18 | 1167.06 | 1269+72.35 | 1167.12 | 1269+72.84 | 1167.14 | 1269+78.94 | 1166.70 |
| ℄ FORWARD ABUTMENT | 1269+83.66 | 1166.40 | 1269+90.78 | 1166.77 | 1269+92.18 | 1166.84 | 1269+93.35 | 1166.90 | 1269+93.84 | 1166.92 | 1269+99.94 | 1166.48 |

## NOTES

SCREED SETTING ELEVATIONS GIVEN ARE TO THE TOP OF CONCRETE DECK AND ARE REQUIRED PRIOR TO PLACEMENT OF CONCRETE. THEY DO NOT INCLUDE AN ALLOWANCE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE BECAUSE THE BEAM IS NOT CAMBERED.




## TRANSVERSE SECTION

## NOTES

1. HMWM: HIGH MOLECULAR WEIGHT METHACRYLATE, SEE PROPOSAL NOTE.
2. ALL REINFORCING STEEL IS EPOXY COATED.
3. FOR PARAPET DETAILS, SEE SHEET 17 & 18/ 46
4. REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH HIGH PERFORMANCE CONCRETE.
5. FOR CROSS-FRAME CONNECTION DETAILS SEE STD DWG GSD-1-96, GENERAL STEEL DETAILS.
6. DECK SLAB DEPTH: THE THEORETICAL DESIGN THICKNESS FOR THE SLAB IS 8½". THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFIGURATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. A HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12".

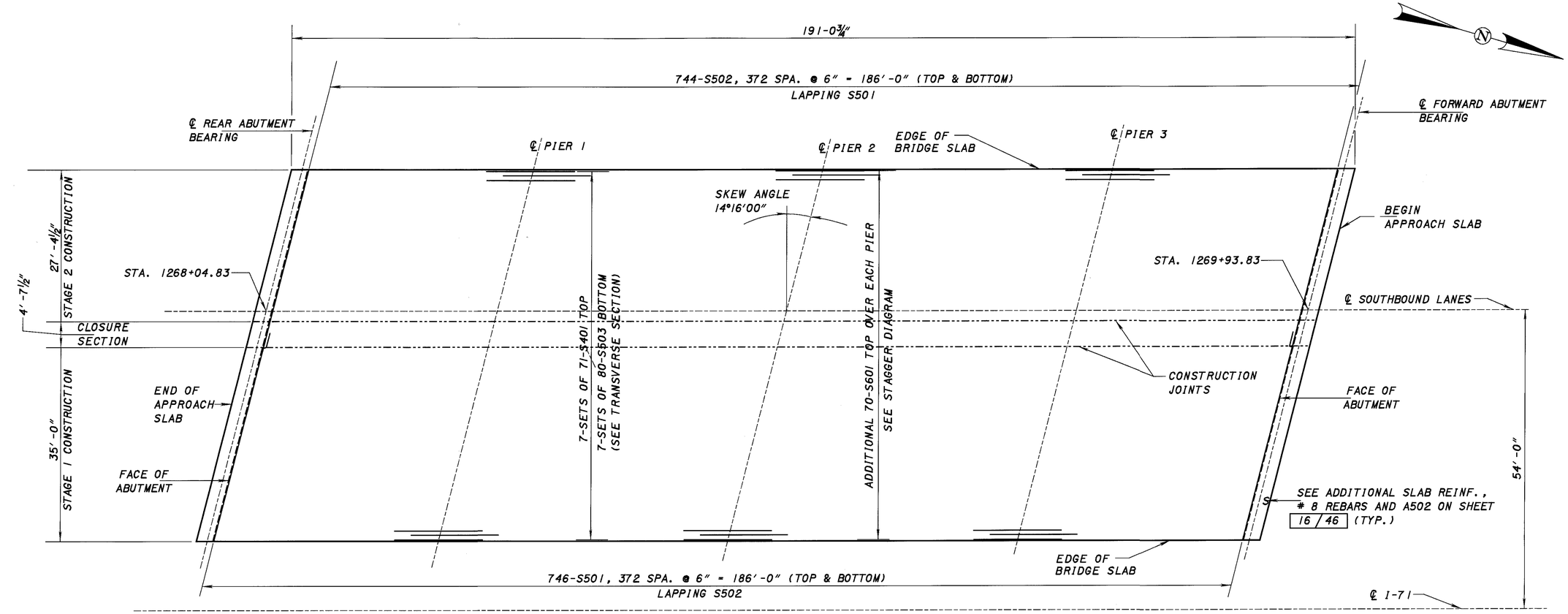
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
DESIGNED: TAA | DRAWN: TAA | CHECKED: DFT | REVISED | REVISED: DRL | DATE: 10-8-99
STRUCTURE FILE NUMBER: 5204135

SUPERSTRUCTURE DETAILS
MED-71-2402 L
I-71 OVER S.R. 303

MED-71-15.78

16/46

901
940

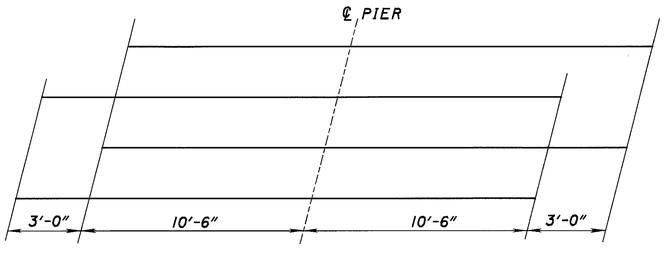



## DECK REINFORCEMENT

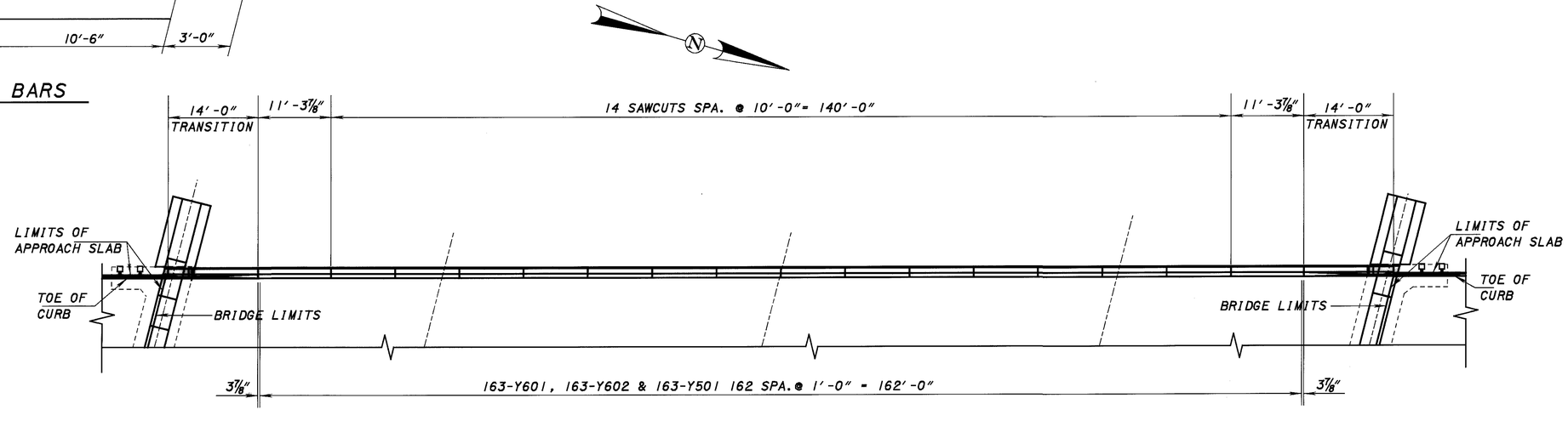
MINIMUM LAP FOR # 4 BAR = 2'-0"
MINIMUM LAP FOR # 5 BAR = 2'-6"

## NOTES

FOR ADDITIONAL INFORMATION ON THE CONCRETE PARAPET SEE SHEET 18/46




## STAGGER OF S601 BARS OVER PIERS




## PARAPET- PART PLAN

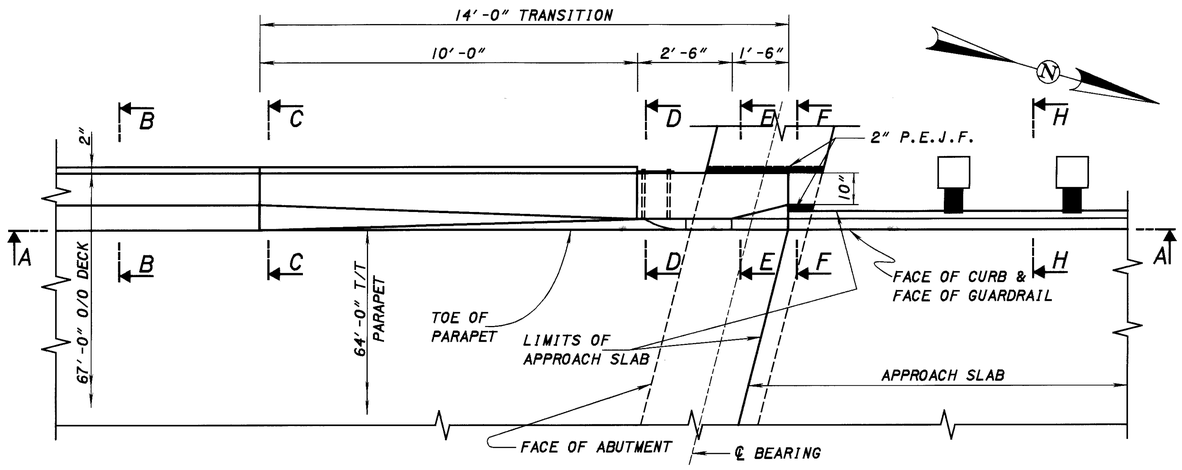
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
REVIEWED: DRL DATE: 10-8-99
STRUCTURE FILE NUMBER: 5204135
DRAWN: TAA REVISED:
DESIGNED: TAA CHECKED: DFT

SUPERSTRUCTURE DETAILS
MED-71-2402 L
I-71 OVER S.R. 303

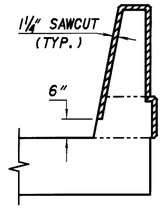
MED-71-15.78

17/46

902
940

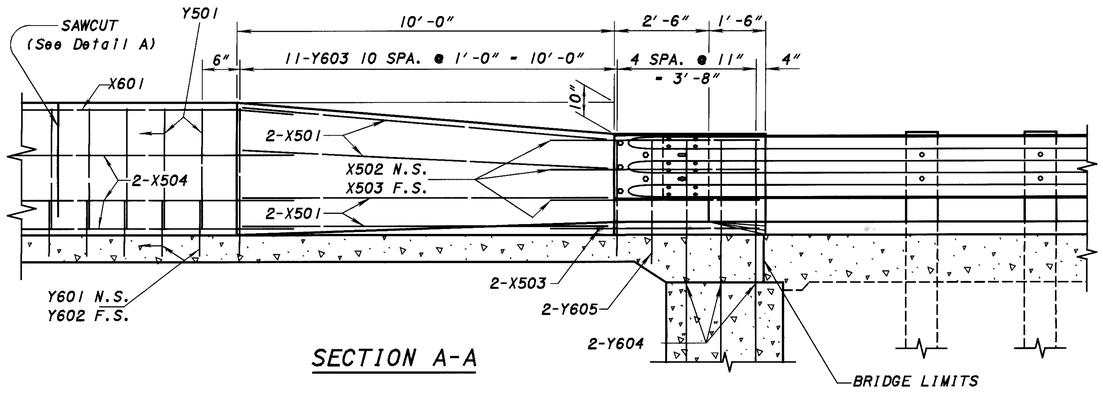



## PART PLAN AT ABUTMENT

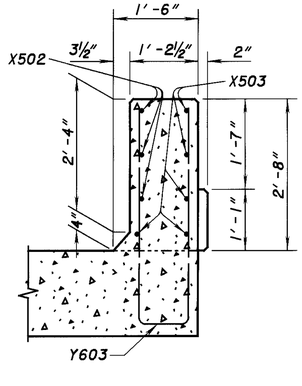



## DETAIL A

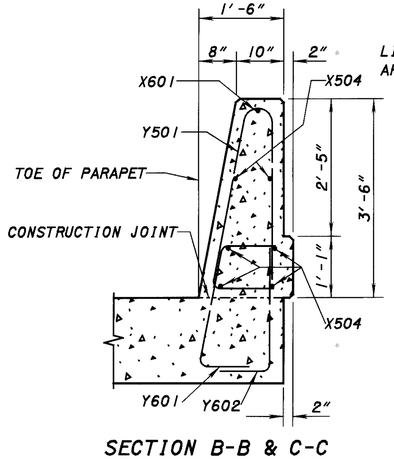
(Section through sawcut)
Sawcut Perimeter = 7'-6"




## SECTION A-A

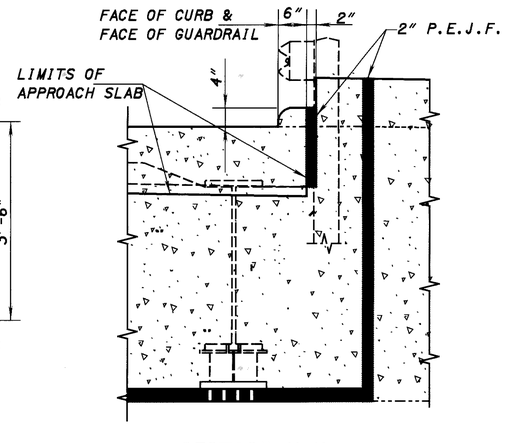



## SECTION D-D

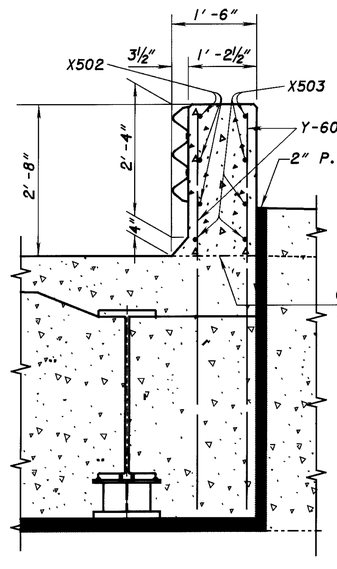



## SECTION B-B & C-C

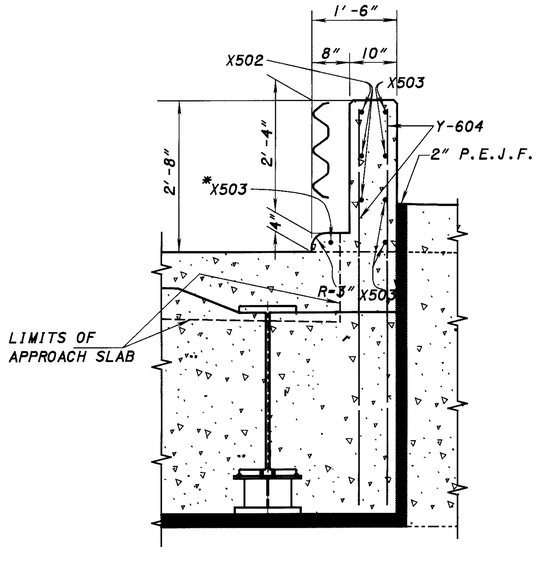
Area = 4.26 ft²




## SECTION H-H




## SECTION E-E




## SECTION F-F

* FIELD BEND IF NECESSARY

## NOTES

**CONTROL JOINTS FOR CONCRETE PARAPETS:** THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL TO A MINIMUM DEPTH OF ONE INCH CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE-HALF INCH OF THE OUTSIDE FACE OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

FOR ADDITIONAL INFORMATION ON THE CONCRETE CURB SHOWN IN SECTION H-H SEE STD. CONST. DWG. BP-5.1. THE CURB SHALL BE TYPE 4-A.

MIN. LAP SPLICES: #5 BAR = 2'-6"
#6 BAR = 3'-0"

LEGEND: N.S. = NEAR SIDE
F.S. = FAR SIDE

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

REVIEWED: DRL DATE: 10-8-99
STRUCTURE FILE NUMBER: 5204135

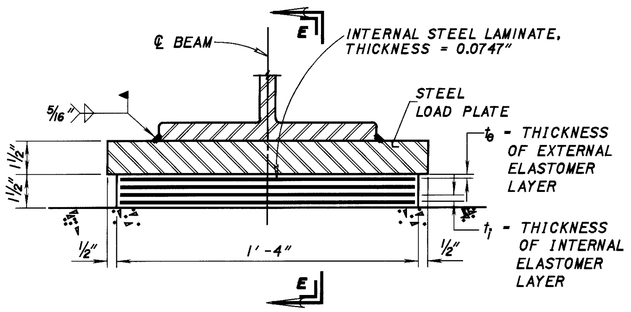
DRAWN: TAA REVISED:
DESIGNED: TAA CHECKED: DFT

PARAPET DETAILS
MED-71-2402 L
I-71 OVER S.R. 303

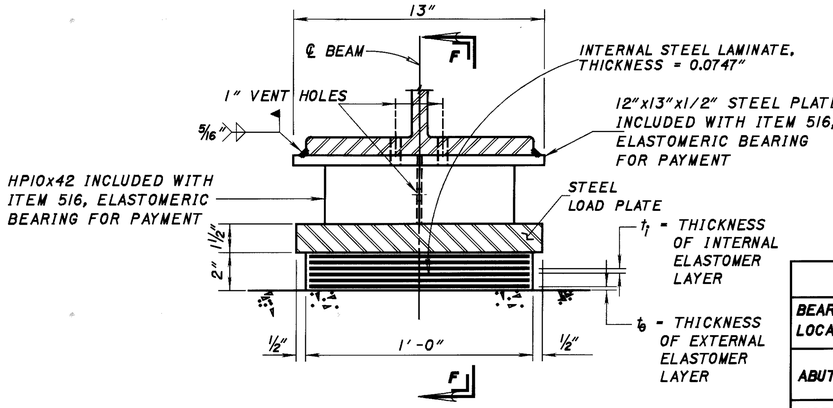
MED-71-15.78

18 / 46

903
940

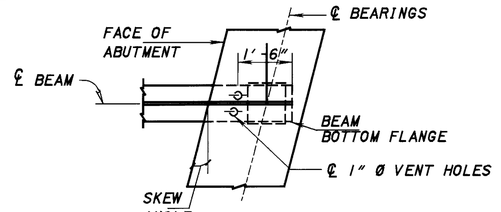



**SECTION E-E**
**LAMINATED ELASTOMERIC EXPANSION PIER BEARING**




* FIELD WELD OPTIONAL

**SECTION F-F**
**LAMINATED ELASTOMERIC EXPANSION ABUTMENT BEARING**




**SECTION D-D**

LEGEND

EXP - EXPANSION

## BEARING TABLE

| BEARING LOCATION | TYPE | L | W | $t_1$ In. | $t_o$ In. | $n_1$ | $n_2$ | STEEL LOAD ℄ | TOTAL HEIGHT* | DL, Kips | LL, Kips | TOTAL, Kips |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENT | EXP | 9" | 12" | 0.24 | 0.17 | 5 | 6 | 12"x13"x1½" | 3½" | 56 | 42 | 98 |
| PIER 1 & PIER 3 | EXP | 10" | 16" | 0.28 | 0.20 | 3 | 4 | 11"x17"x1½" | 3" | 85 | 49 | 134 |
| PIER 2 | FIXED | 10" | 16" | 0.28 | 0.20 | 3 | 4 | 11"x22"x1½" | 3" | 85 | 49 | 134 |

$n_1$ - NUMBER OF INTERNAL ELASTOMER LAYERS, $t_1$ ELASTOMER LAYERS ARE 50 DUROMETERS
$n_2$ - NUMBER OF STEEL LAMINATES, 0.0747" THICKNESS * TOTAL HEIGHT INCLUDES LOAD PLATE

## NOTES:

INSTALLATION PROCEDURE: ANCHOR BOLTS SHALL BE EITHER CAST IN PLACE BY USE OF A TEMPLATE OR FIELD DRILLED AND GROUTED AT THE CONTRACTOR'S OPTION. CARE SHALL BE TAKEN TO ASSURE THAT THE ANCHOR BOLTS DO NOT INTERFERE WITH REINFORCING STEEL.

MATERIALS: THE HP SHAPE (SUPPORT MEMBER) AND STEEL PLATES MAY BE GRADE 36 STEEL. THE HP SHAPE AND STEEL PLATES SHALL METALIZED.

PAYMENT FOR MATERIALS, LABOR, FABRICATION, PROTECTIVE COATING, VENT HOLES AND INSTALLATION OF THE HP SHAPE AND STEEL PLATE SHALL BE INCLUDED WITH ITEM 516 ABUTMENT ELASTOMERIC BEARINGS, AS PER PLAN, FOR PAYMENT.

WELDING: WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

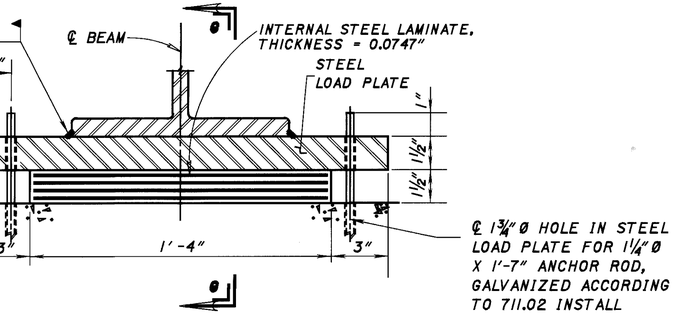
BRIDGE SEAT REINFORCING:
REINFORCING STEEL IN THE VICINITY OF BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.

BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60° F ± 10° F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDERFORMED SHAPE AT 60° F ± 10° F.

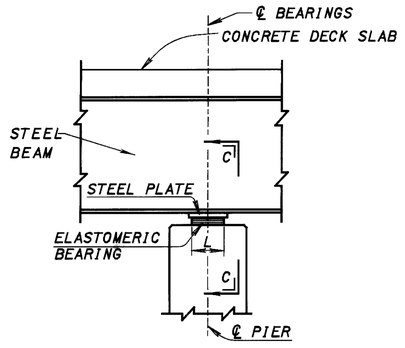
ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL LOAD PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, ANCHOR RODS, HP10x42, STEEL PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):

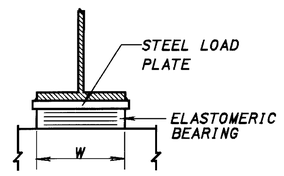
9" x 12" x 2" WITH 12" x 13" x 1½" LOAD PLATE, AS PER PLAN (ABUTMENT)
10" x 16" x 1½" WITH 11" x 17" x 1½" LOAD PLATE (PIER #1 & #3)
10" x 16" x 1½" WITH 11" x 22" x 1½" LOAD PLATE, AS PER PLAN (PIER # 2)




**SECTION E-E**
**LAMINATED ELASTOMERIC FIXED PIER BEARING**




**SECTION THRU PIER**




**SECTION C-C**

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGN AGENCY

DATE 10-8-99
REVIEWED DRL
STRUCTURE FILE NUMBER 5204135

DRAWN TAA
REVISED

DESIGNED TAA
CHECKED DFT

BEARING DETAILS
MED-71-2402 L
I-71 OVER S.R. 303

MED-71-15.78

19/46

304
340

THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.

| MARK | NUMBER REAR ABUT. STAGE I | NUMBER REAR ABUT. STAGE II | NUMBER FWD. ABUT. STAGE I | NUMBER FWD. ABUT. STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | DIMENSIONS B | DIMENSIONS C | DIMENSIONS INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENTS - MED-71-2402 L (SOUTHBOUND LANE) | | | | | | | | | | | | |
| A501 | 56 | 52 | 56 | 52 | 216 | 8'-5" | 1896 | 2 | 3'-0" | 2'-8" | 3'-0" | |
| A502 | 28 | 26 | 28 | 26 | 108 | 7'-11" | 892 | 2 | 3'-0" | 2'-2" | 3'-0" | |
| | 1 SR | | 1 SR | | 2 SR | 30'-6" | | | | | | |
| A503 | 0F | | 0F | | 0F | TO | 261 | STR | | | | 6" |
| | 4 | | 4 | | 4 | 32'-0" | | | | | | |
| | | 1 SR | | 1 SR | 2 SR | 9'-7" | | | | | | |
| A504 | | 0F | | 0F | 0F | TO | 86 | STR | | | | 6" |
| | | 4 | | 4 | 4 | 11'-1" | | | | | | |
| A505 | 12 | | 12 | | 24 | 24'-0" | 601 | STR | | | | |
| A506 | 28 | 9 | 26 | 11 | 74 | 17'-0" | 1312 | 3 | 5'-8" | 2'-7" | | |
| A507 | 20 | | 18 | 2 | 40 | 16'-5" | 685 | 2 | 7'-0" | 2'-8" | 7'-0" | |
| A508 | | 12 | | 12 | 24 | 3'-0" | 75 | STR | | | | |
| A509 | | 12 | | 12 | 24 | 23'-4" | 584 | STR | | | | |
| A510 | 2 | | 2 | | 4 | 11'-3" | 47 | STR | | | | |
| A511 | 2 | | 2 | | 4 | 9'-1" | 38 | STR | | | | |
| A512 | 2 | | 2 | | 4 | 8'-5" | 35 | STR | | | | |
| A513 | 1 | | 1 | | 2 | 9'-11" | 21 | 19 | 7'-9" | 1'-11" | 0'-11" | |
| A514 | 1 | | 1 | | 2 | 9'-2" | 19 | 19 | 7'-9" | 1'-3" | 0'-7" | |
| A515 | 1 | | 1 | | 2 | 6'-11" | 14 | STR | | | | |
| A516 | 1 | | 1 | | 2 | 6'-3" | 7 | STR | | | | |
| A517 | 1 | | 1 | | 2 | 4'-6" | 9 | STR | | | | |
| A518 | 1 | | 1 | | 2 | 3'-10" | 8 | STR | | | | |
| | 1 SR | | 1 SR | | 2 SR | 21'-11" | | | 9'-9" | | 9'-9" | |
| A519 | 0F | | 0F | | 0F | TO | 302 | 2 | TO | 2'-8" | TO | 5 3/8" |
| | 6 | | 6 | | 6 | 26'-5" | | | 12'-0" | | 12'-0" | |
| A520 | 38 | 37 | 38 | 37 | 150 | 6'-5" | 1004 | 2 | 2'-0" | 2'-8" | 2'-0" | |
| A521 | 1 | | 1 | | 2 | 20'-5" | 43 | 2 | 9'-0" | 2'-8" | 9'-0" | |
| A522 | 1 | | 1 | | 2 | 19'-5" | 41 | 2 | 8'-6" | 2'-8" | 8'-6" | |
| A523 | | 2 | | 2 | 4 | 12'-2" | 51 | STR | | | | |
| | | 1 SR | | | 1 SR | 3'-0" | | | | | | |
| A524 | | 0F | | | 0F | TO | 27 | STR | | | | 2'-4" |
| | | 4 | | | 4 | 10'-0" | | | | | | |
| | | 1 SR | | | 1 SR | 10'-9" | | | | | | |
| A525 | | 0F | | | 0F | TO | 30 | STR | | | | 2'-4" |
| | | 4 | | | 4 | 3'-9" | | | | | | |
| | | 1 SR | | | 1 SR | 19'-5" | | | 8'-6" | | 8'-6" | |
| A526 | | 0F | | | 0F | TO | 139 | 2 | TO | 2'-8" | TO | 6 5/8" |
| | | 6 | | | 6 | 24'-11" | | | 11'-3" | | 11'-3" | |
| A527 | | 1 | | 1 | 2 | 26'-7" | 55 | 2 | 12'-1" | 2'-8" | 12'-1" | |
| A528 | | 1 | | | 1 | 11'-0" | 11 | 19 | 10'-5" | 0'-7" | 0'-3" | |
| A529 | | 1 | | | 1 | 12'-6" | 13 | 19 | 10'-5" | 1'-3" | 0'-8" | |
| A530 | | 1 | | | 1 | 17'-11" | 19 | 2 | 7'-9" | 2'-8" | 7'-9" | |
| A531 | | 1 | | | 1 | 17'-5" | 18 | 2 | 7'-6" | 2'-8" | 7'-6" | |
| | 1 SR | | 1 SR | | 2 SR | 30'-6" | | | | | | |
| A532 | 0F | | 0F | | 0F | TO | 130 | STR | | | | 1'-6" |
| | 2 | | 2 | | 2 | 32'-0" | | | | | | |
| | | 1 SR | | 1 SR | 2 SR | 9'-7" | | | | | | |
| A533 | | 0F | | 0F | 0F | TO | 43 | STR | | | | 1'-6" |
| | | 2 | | 2 | 2 | 11'-1" | | | | | | |
| | | | | 1 SR | 1 SR | 3'-9" | | | | | | |
| A534 | | | | 0F | 0F | TO | 29 | STR | | | | 2'-1" |
| | | | | 4 | 4 | 10'-0" | | | | | | |
| | | | | 1 SR | 1 SR | 4'-4" | | | | | | |
| A535 | | | | 0F | 0F | TO | 30 | STR | | | | 2'-1" |
| | | | | 4 | 4 | 10'-7" | | | | | | |
| | | | | | 1 SR | 1 SR | 20'-3" | | | 8'-11" | | 8'-11" | |
| A536 | | | | | 0F | 0F | TO | 144 | 2 | TO | 2'-8" | TO | 6 5/8" |
| | | | | | 6 | 6 | 25'-9" | | | 11'-8" | | 11'-8" | |
| A537 | | | | | 1 | 1 | 18'-9" | 20 | 2 | 8'-2" | 2'-8" | 8'-2" | |
| A538 | | | | | 1 | 1 | 18'-3" | 19 | 2 | 7'-11" | 2'-8" | 7'-11" | |
| A539 | | | | | 1 | 1 | 10'-7" | 11 | 19 | 9'-5" | 1'-0" | 6" | |
| A540 | | | | | 1 | 1 | 11'-5" | 12 | 19 | 9'-5" | 1'-9" | 10" | |
| A601 | 32 | 22 | 32 | 22 | 108 | 6'-8" | 1081 | STR | | | | |
| | 3 SR | | 3 SR | | 6 SR | 35'-6" | | | | | | |
| A801 | 0F | | 0F | | 0F | TO | 2299 | STR | | | | 3" |
| | 4 | | 4 | | 4 | 36'-3" | | | | | | |
| | 3 SR | | 3 SR | | 6 SR | 35'-6" | | | | | | |
| A802 | 0F | | 0F | | 0F | TO | 1149 | STR | | | | 9" |
| | 2 | | 2 | | 2 | 36'-3" | | | | | | |
| | 1 SR | | 1 SR | | 2 SR | 30'-6" | | | | | | |
| A803 | 0F | | 0F | | 0F | TO | 668 | STR | | | | 6" |
| | 4 | | 4 | | 4 | 32'-0" | | | | | | |
| | | 3 SR | | 3 SR | 6 SR | 32'-6" | | | | | | |
| A804 | | 0F | | 0F | 0F | TO | 2107 | STR | | | | 3" |
| | | 4 | | 4 | 4 | 33'-3" | | | | | | |
| | | 3 SR | | 3 SR | 6 SR | 32'-6" | | | | | | |
| A805 | | 0F | | 0F | 0F | TO | 1053 | STR | | | | 9" |
| | | 2 | | 2 | 2 | 33'-3" | | | | | | |
| | | 1 SR | | 1 SR | 2 SR | 9'-7" | | | | | | |
| A806 | | 0F | | 0F | 0F | TO | 221 | STR | | | | 6" |
| | | 4 | | 4 | 4 | 11'-1" | | | | | | |
| D801 | 28 | 26 | 28 | 26 | 108 | 4'-3" | 1226 | 18 | 2'-7" | 1'-0" | 1'-0" | |

| MARK | NUMBER SUPER STAGE I | NUMBER SUPER STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | DIMENSIONS B | DIMENSIONS C | DIMENSIONS D | DIMENSIONS E | DIMENSIONS R | DIMENSIONS INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PARAPETS - MED-71-2090 L (SOUTHBOUND LANE) | | | | | | | | | | | | | |
| Y501 | 233 | 233 | 466 | 7'-5" | 3605 | 23 | | | | | | | |
| Y601 | 233 | 233 | 466 | 3'-11" | 2741 | 34 | | | | | | | |
| Y602 | 233 | 233 | 466 | 2'-8" | 1866 | 1 | 1'-1" | 1'-9" | | | | | |
| | 2 SR | 2 SR | 4 SR | 8'-2" | | | 3'-7" | | 3'-7" | | | | |
| Y603 | 0F | 0F | 0F | TO | 595 | 2 | TO | 1'-2" | TO | | | | 1" |
| | 11 | 11 | 11 | 9'-10" | | | 4'-5" | | 4'-5" | | | | |
| Y604 | 16 | 16 | 32 | 3'-7" | 172 | STR | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-10" | 362 | STR | | | | | | | |
| X502 | 3 | 3 | 6 | 5'-6" | 34 | 25 | | | | | | | |
| X503 | 13 | 13 | 26 | 5'-6" | 149 | STR | | | | | | | |
| X504 | 42 | 42 | 84 | 31'-3" | 2738 | STR | | | | | | | |
| X601 | 7 | 7 | 14 | 31'-9" | 668 | STR | | | | | | | |

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

DATE: 10-8-99

REVIEWED: DRL

STRUCTURE FILE NUMBER: 5204135

DRAWN: TAA

REVISED:

DESIGNED: TAA

CHECKED: DFT

REINFORCING STEEL

MED-71-2402 L

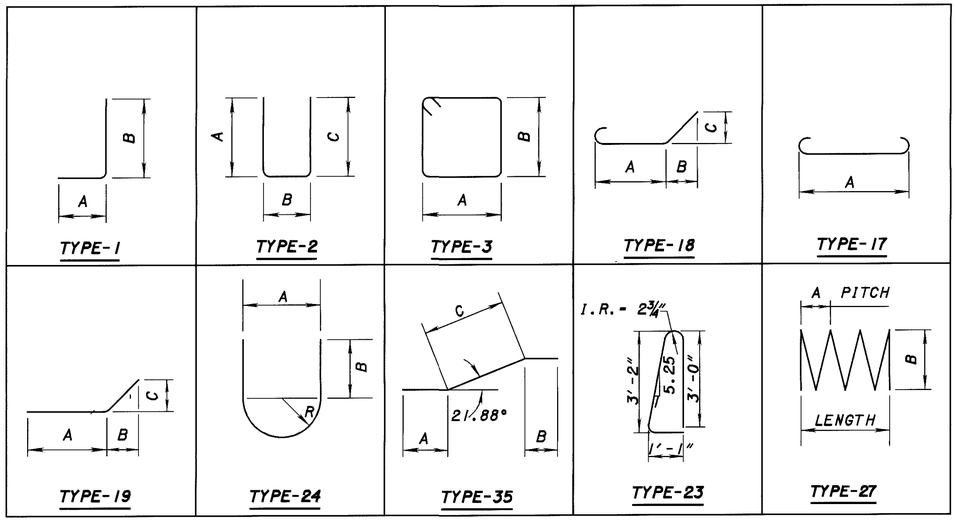
I-71 OVER S.R. 303

MED-71-15.78

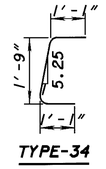
THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.

| MARK | NUMBER PIER 1 | PIER 2 | PIER 3 | TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIERS - MED-71-2402 L (SOUTHBOUND LANE) | | | | | | | | | | | | | |
| SP401 | 2 | | | 2 | 19'-7" | 570 | 27 | 4½" | 2'-6" | | | | |
| SP402 | | 2 | | 2 | 16'-8" | 490 | 27 | 4½" | 2'-6" | | | | |
| SP403 | | | 2 | 2 | 18'-7" | 543 | 27 | 4½" | 2'-6" | | | | |
| P500 | 4 | 4 | 4 | 12 | 18'-6" | 232 | STR | | | | | | |
| P501 | 32 | 32 | 32 | 96 | 9'-1" | 910 | 2 | 3'-4" | 2'-8" | 3'-4" | | | |
| P502 | 36 | | 36 | 72 | 6'-5" | 482 | 2 | 2'-4" | 2'-0⅝" | 2'-4" | | | |
| P503 | | 36 | | 36 | 6'-9" | 253 | 2 | 2'-6" | 2'-0⅝" | 2'-6" | | | |
| P504 | 17 | 17 | 17 | 51 | 9'-8" | 514 | STR | | | | | | |
| P1001 | 16 | 16 | 16 | 48 | 10'-8" | 2203 | 1 | 1'-6" | 9'-6" | | | | |
| P1002 | 16 | | | 16 | 22'-6" | 1549 | STR | | | | | | |
| P1003 | | 16 | | 16 | 19'-6" | 1343 | STR | | | | | | |
| P1004 | | | 16 | 16 | 21'-6" | 1480 | STR | | | | | | |
| P1101 | 4 | 4 | 4 | 12 | 11'-6" | 733 | STR | | | | | | |
| P1102 | 4 | 4 | 4 | 12 | 30'-8" | 1955 | STR | | | | | | |
| P801 | 22 | 22 | 22 | 66 | 18'-4" | 3231 | 17 | 16'-6" | | | | | |
| P802 | 18 | 18 | 18 | 54 | 11'-4" | 1634 | 17 | 9'-6" | | | | | |
| P901 | 7 | 7 | 7 | 21 | 18'-6" | 1321 | STR | | | | | | |
| P902 | 7 | 7 | 7 | 21 | 23'-6" | 1678 | 2 | 2'-9" | 18'-6" | 2'-9" | | | |

| MARK | NUMBER SUPER STAGE I | SUPER STAGE II | TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | INC |
|---|---|---|---|---|---|---|---|---|---|
| SUPERSTRUCTURE - MED-71-2402 L (SOUTHBOUND LANE) | | | | | | | | | |
| S401 | 259 | 238 | 497 | 29'-0" | 9628 | STR | | | |
| S501 | 746 | | 746 | 38'-8" | 30086 | STR | | | |
| S502 | | 746 | 746 | 32'-9" | 25482 | STR | | | |
| S503 | 294 | 266 | 560 | 29'-6" | 17230 | STR | | | |
| S601 | 108 | 102 | 210 | 24'-0" | 7570 | STR | | | |




## BENDING DIAGRAMS

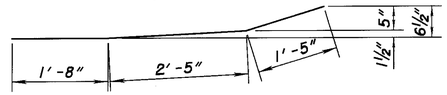



## NOTES

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

REIFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.




DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

DESIGNED TAA | DRAWN TAA | REVISED DFT | DATE 10-8-99
CHECKED DFT/HLG | REVISED | STRUCTURE FILE NUMBER 5204135

REINFORCING STEEL
MED-71-2402 L
I-71 OVER S.R. 303

MED-71-15.78

21 / 46

906
940

| | | | | ESTIMATED QUANTITIES | | | | |
|---|---|---|---|---|---|---|---|---|
| ITEM | EXTENSION | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS | SUPER. | GEN. |
| 202 | 11203 | LUMP | | PORTIONS OF STRUCTURE REMOVED OVER 20 FOOT SPAN, AS PER PLAN | LUMP | LUMP | LUMP | |
| | | | | | | | | |
| 503 | 11100 | LUMP | | COFFERDAMS, CRIBS AND SHEETING | | | | LUMP |
| 503 | 21301 | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LUMP | | | |
| 505 | 11100 | LUMP | | PILE DRIVING EQUIPMENT MOBILIZATION | | | | LUMP |
| 507 | 00100 | 1680 | LF | STEEL PILES HP10X42, FURNISHED | 1080 | 600 | | |
| 507 | 00150 | 1680 | LF | STEEL PILES HP10X42, DRIVEN | 1080 | 600 | | |
| | | | | | | | | |
| | | | | | | | | |
| 507 | 50500 | 24 | EACH | STEEL PILE SPLICES | 12 | 12 | | |
| | | | | | | | | |
| | | | | | | | | |
| 512 | 44400 | 10 | SY | TYPE B WATERPROOFING | 10 | | | |
| | | | | | | | | |
| SPECIAL | 51267200 | 71 | SY | WATERPROOFING, MISC.: SEMI-INTEGRAL ABUTMENT JOINT WATERPROOFING | 71 | | | |
| SPECIAL | 51267510 | 1291 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 116 | 712 | 463 | |
| | | | | | | | | |
| 516 | 13900 | 72 | SF | 2" PREFORMED EXPANSION JOINT FILLER | 72 | | | |
| | | | | | | | | |
| | | | | | | | | |
| 516 | 44000 | 24 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | | 24 | | |
| | | | | (NEOPRENE), (10"x16"x1½" PAD AND 11"x17"x1½" PLATE) | | | | |
| 516 | 44001 | 12 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | | 12 | | |
| | | | | (NEOPRENE), AS PER PLAN (10"x16"x1½" PAD AND 11"x22"x1½" PLATE) | | | | |
| 516 | 44101 | 24 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE | 24 | | | |
| | | | | (NEOPRENE), AS PER PLAN (9"x12"x2" PAD AND 12"x13"x1½" PLATE) | | | | |
| | | | | | | | | |
| 518 | 21231 | LUMP | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | | | |
| 518 | 40000 | 224 | LF | 6" PERFORATED CORRUGATED PLASTIC PIPE | 224 | | | |
| 518 | 40010 | 42 | LF | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 42 | | | |
| 519 | 11101 | 15 | SF | PATCHING CONCRETE STRUCTURE, AS PER PLAN | | 15 | | |
| 530 | 00200 | LUMP | | STRUCTURE, MISC.: METALLIC COATING SYSTEM | | | LUMP | |
| | | | | | | | | |
| 601 | 20500 | 65 | CY | CRUSHED AGGREGATE SLOPE PROTECTION | | | | 65 |
| | | | | | | | | |
| 842 | 41001 | 174 | CY | CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN | | 174 | | |
| 842 | 44101 | 134 | CY | CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN | 134 | | | |
| 842 | 46501 | 109 | CY | CLASS C CONCRETE, FOOTING, AS PER PLAN | 57 | 52 | | |
| | | | | | | | | |
| 844 | 48001 | 474 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (DECK), AS PER PLAN (MIX 4) | | | 474 | |
| 844 | 48021 | 60 | CY | HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPET), AS PER PLAN (MIX 4) | | | 60 | |
| 844 | 48041 | 63 | CY | HIGH PERFORMANCE CONCRETE SUBSTRUCTURE, AS PER PLAN | 63 | | | |
| 844 | 49000 | LUMP | | HIGH PERFORMANCE CONCRETE TRIAL MIX | | | LUMP | |
| | | | | | | | | |
| | | | | | | | | |
| 863 | 10060 | LUMP | | STRUCTURAL STEEL MEMBERS, LEVEL THREE (3) FABRICATION, A572 | | | LUMP | |
| 863 | 20000 | 7140 | EACH | WELDED STUD SHEAR CONNECTORS | | | 7140 | |
| | | | | | | | | |
| | | | | | | | | |

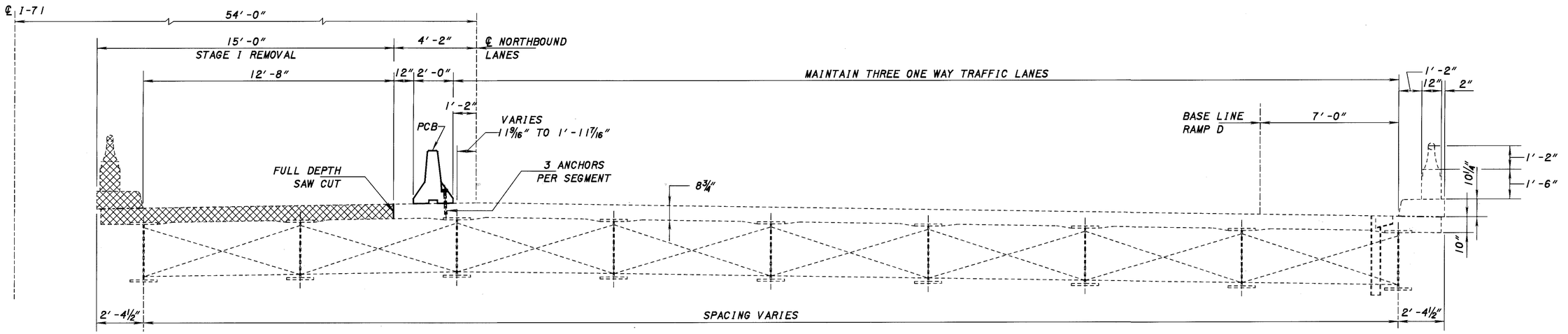
**ITEM 519 PATCHING CONCRET STRUCTURE, AS PER PLAN**

PATCHING SHALL OCCUR ON THE PIER COLUMNS, AS DIRECTED BY THE PROJECT ENGINEER. ALL SURFACES TO BE PATCHED AND THE EXPOSED REINFORCING STEEL WITHIN SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING PRIOR TO THE CLEANING SPECIFIED BY 519.04 CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL OR ERECTION OF THE FORMS BY NO MORE THAN 24 HOURS.

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVISED: DFT DATE: 10-08-99
STRUCTURE FILE NUMBER: 5204143
DRAWN: TAA REVISED:
DESIGNED: TAA CHECKED: HLG

ESTIMATED QUANTITIES
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78

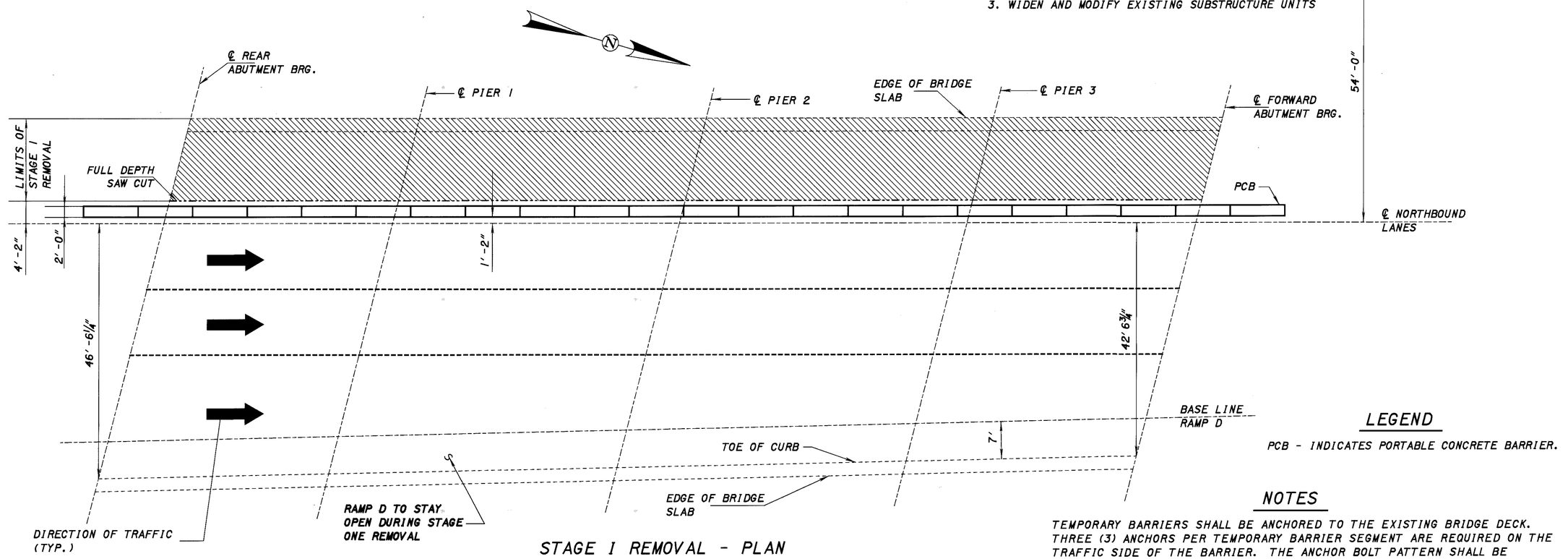



## STAGE I REMOVAL

℄ I-71

## PROPOSED WORK

1. MAINTAIN TRAFFIC BY USE OF STAGE CONSTRUCTION
2. REPLACE CONCRETE DECK AND STEEL BEAMS
3. WIDEN AND MODIFY EXISTING SUBSTRUCTURE UNITS




## STAGE I REMOVAL - PLAN

## LEGEND

PCB - INDICATES PORTABLE CONCRETE BARRIER.

## NOTES

TEMPORARY BARRIERS SHALL BE ANCHORED TO THE EXISTING BRIDGE DECK. THREE (3) ANCHORS PER TEMPORARY BARRIER SEGMENT ARE REQUIRED ON THE TRAFFIC SIDE OF THE BARRIER. THE ANCHOR BOLT PATTERN SHALL BE SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. SEE STD. DWG PCB-91 FOR ADDITIONAL DETAILS.

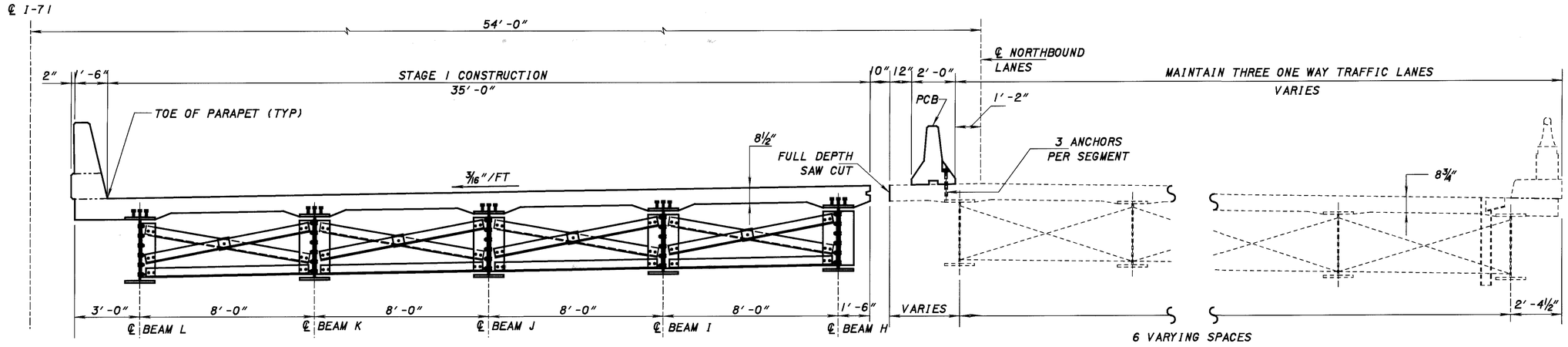
DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
REVIEWED: DFT
DATE: 10-8-99
STRUCTURE FILE NUMBER: 5204143
DRAWN: BKL
REVISED:
DESIGNED: BKL
CHECKED: TAA

STAGE CONSTRUCTION
MED-71-2402 R
I-71 OVER S.R. 303

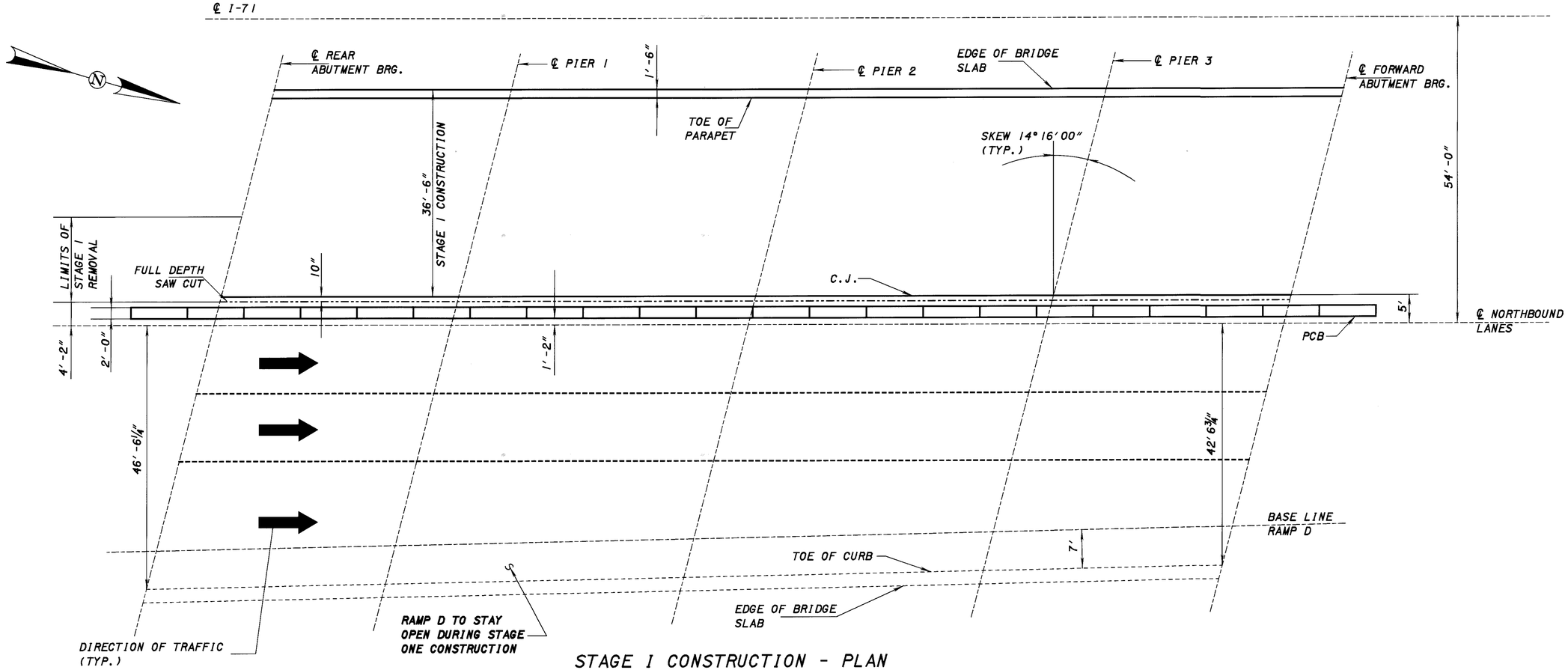
MED-71-15.78

23/46

908/940




## STAGE I CONSTRUCTION




## STAGE I CONSTRUCTION - PLAN

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DFT
DATE 10-8-99
STRUCTURE FILE NUMBER 5204143

DRAWN BKL
REVISED

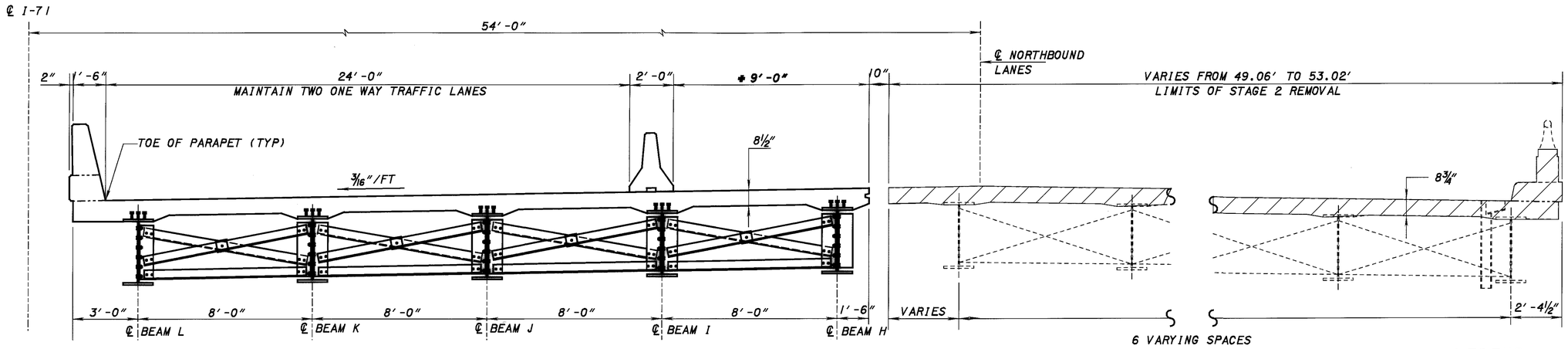
DESIGNED BKL
CHECKED TAA

STAGE CONSTRUCTION
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78

24/46

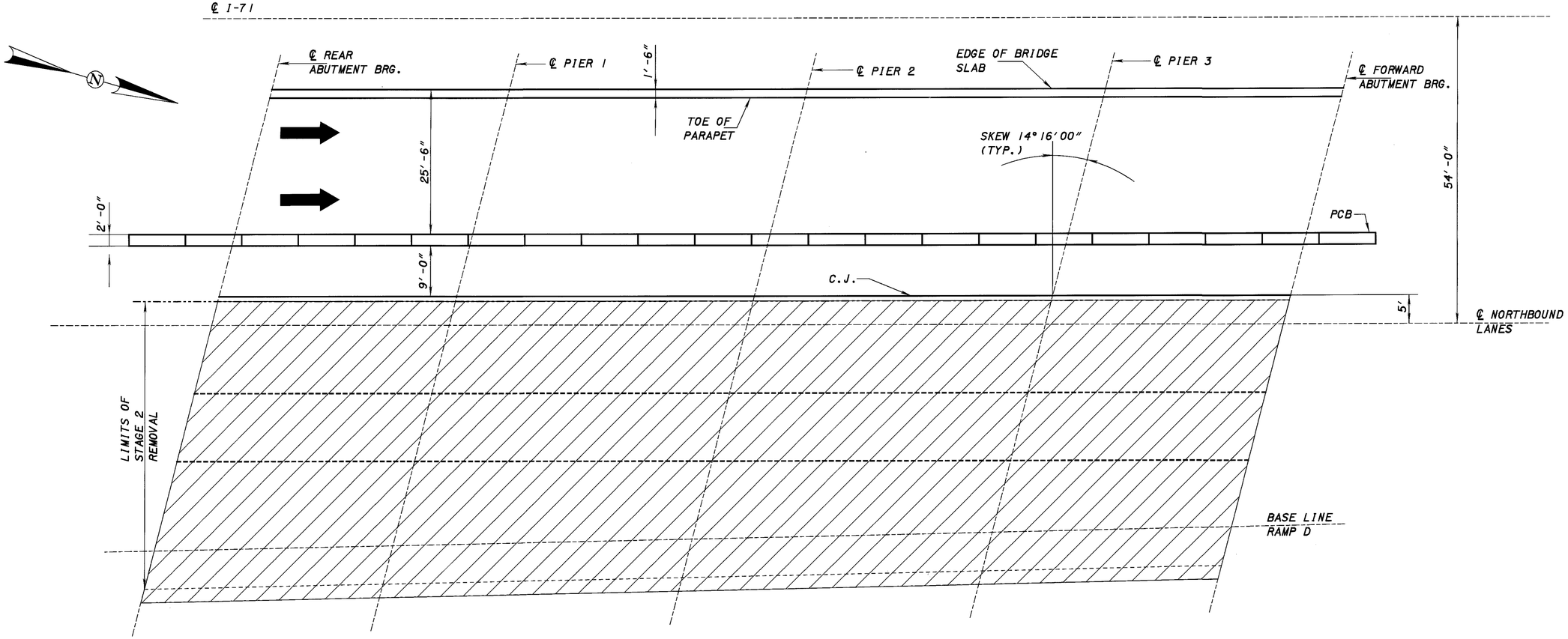
909/940




## STAGE 2 REMOVAL

## LEGEND

**#- DURING STAGE 2 REMOVAL AND STAGE 2 CONSTRUCTION ALL LIVE AND DEAD LOADS DUE TO THE CONTRACTOR'S CONSTRUCTION EQUIPMENT EXCEPT FOR THE SCREED RAIL SHALL NOT BE CONTAINED INSIDE THE 7'-6" AREA OF THE DECK.**




## STAGE 2 REMOVAL- PLAN

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

REVISED DFT DATE 10-8-99

STRUCTURE FILE NUMBER 5204143

DRAWN BKL REVISED

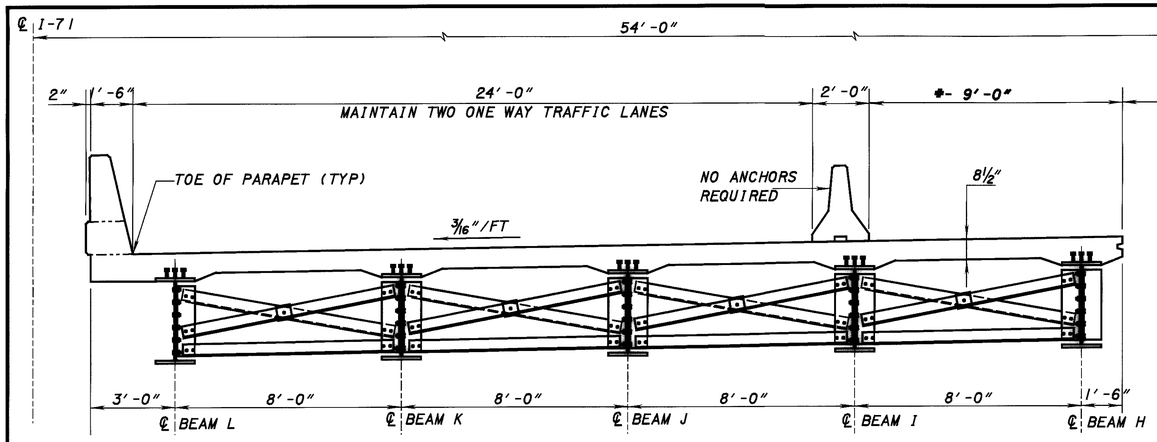
DESIGNED BKL CHECKED TAA

STAGE CONSTRUCTION

MED-71-2402 R

I-71 OVER S.R. 303

MED-71-15.78



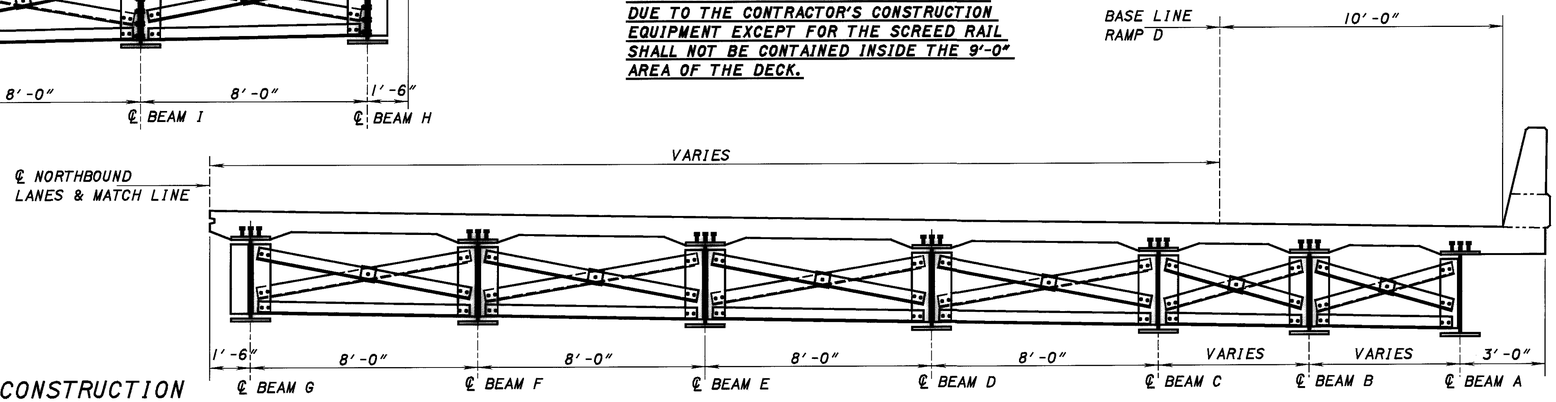

## NOTES

PLACE CROSSFRAMES IN POSITION PRIOR TO POURING OF THE CLOSURE POUR

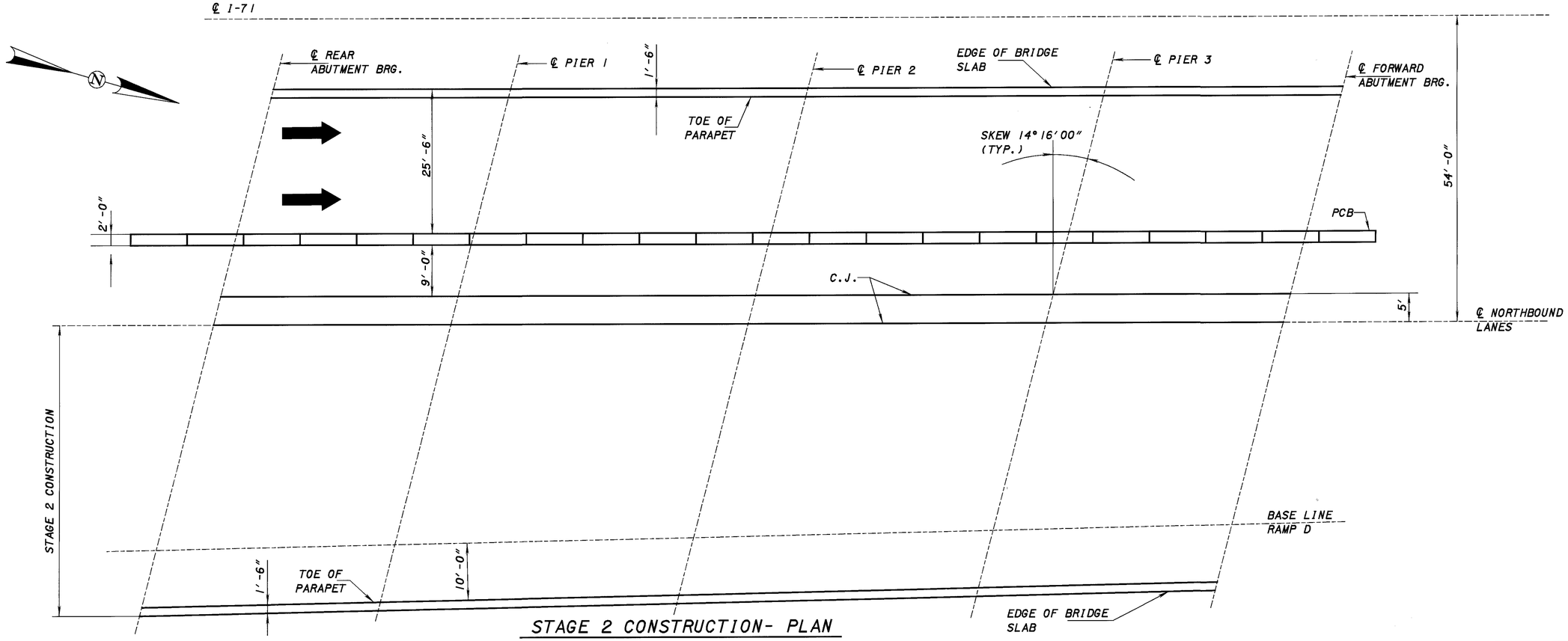
FOR INFORMATION ON THE THE CLOSURE POUR STAGE SEE SHEET 39 & 41 / 46

## LEGEND

**#- DURING STAGE 2 REMOVAL AND STAGE 2 CONSTRUCTION ALL LIVE AND DEAD LOADS DUE TO THE CONTRACTOR'S CONSTRUCTION EQUIPMENT EXCEPT FOR THE SCREED RAIL SHALL NOT BE CONTAINED INSIDE THE 9'-0" AREA OF THE DECK.**




## STAGE 2 CONSTRUCTION




## STAGE 2 CONSTRUCTION- PLAN

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

DESIGNED BKL | DRAWN BKL | CHECKED TAA | REVISED | REVISED DFT | DATE 10-8-99

STRUCTURE FILE NUMBER 5204143

STAGE CONSTRUCTION

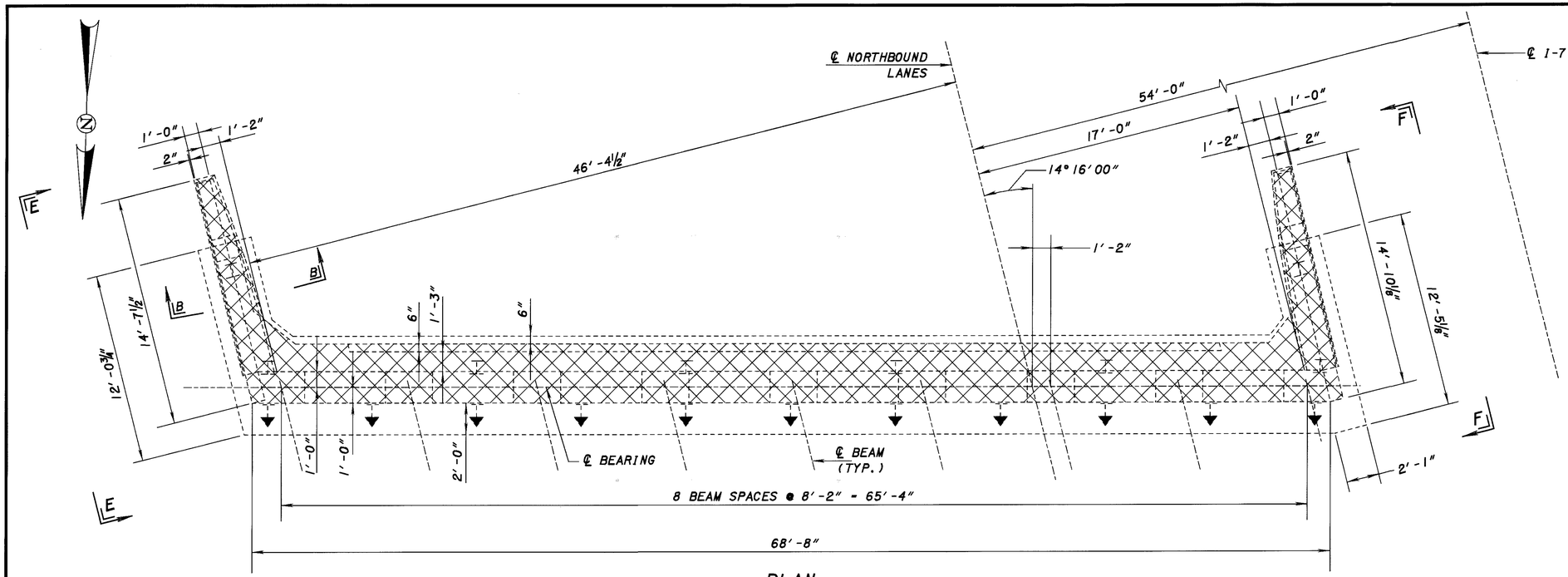
MED-71-2402 R

I-71 OVER S.R. 303

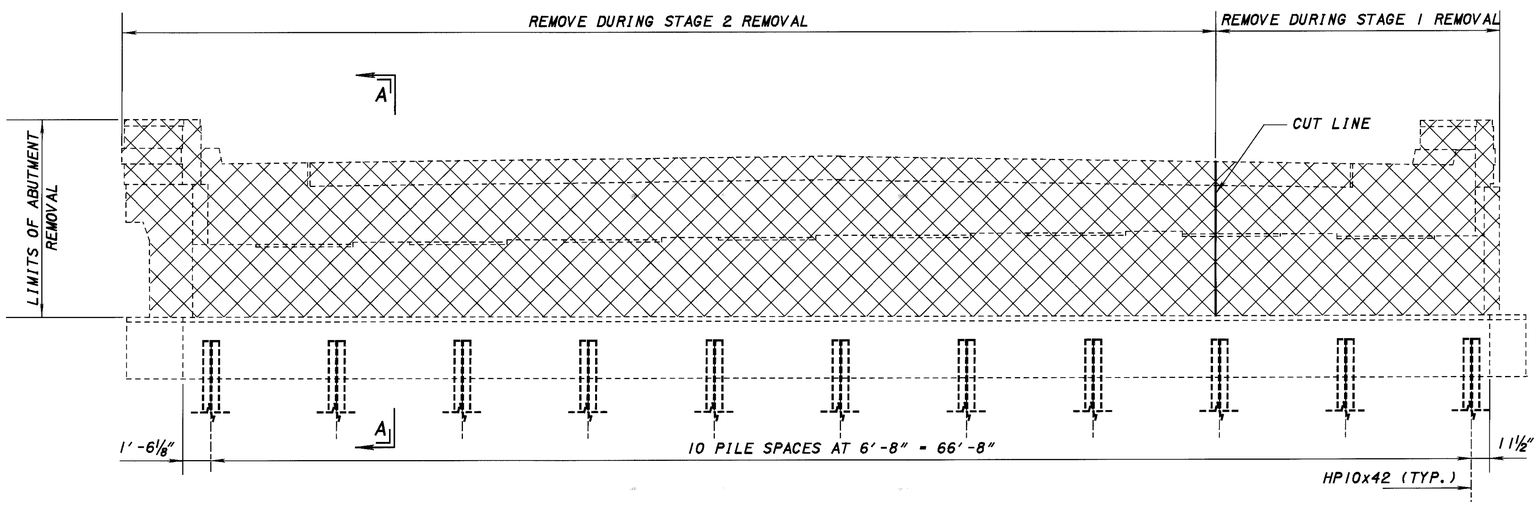
MED-71-15.78

26/46

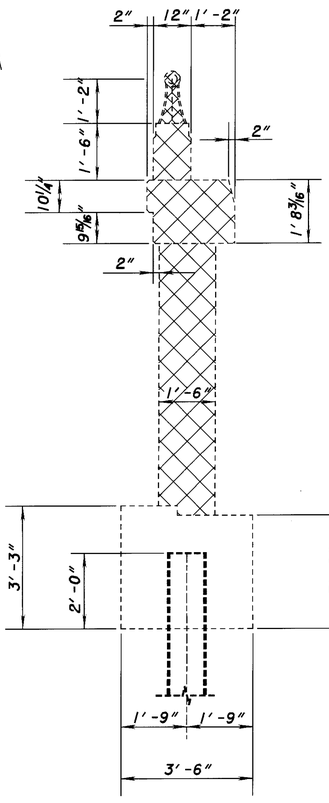
911/940




PLAN
(REAR ABUTMENT)




ELEVATION
(REAR ABUTMENT)




SECTION B-B

## NOTES

FOR VIEW E-E AND F-F SEE SHEET 29/46

FOR SECTION A-A SEE SHEET 28/46

## LEGEND

PORTION OF STRUCTURE TO BE REMOVED

INDICATE BATTERED PILE

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

DESIGNED: TAA | DRAWN: TAA | REVIEWED: DFT | DATE: 10-08-99

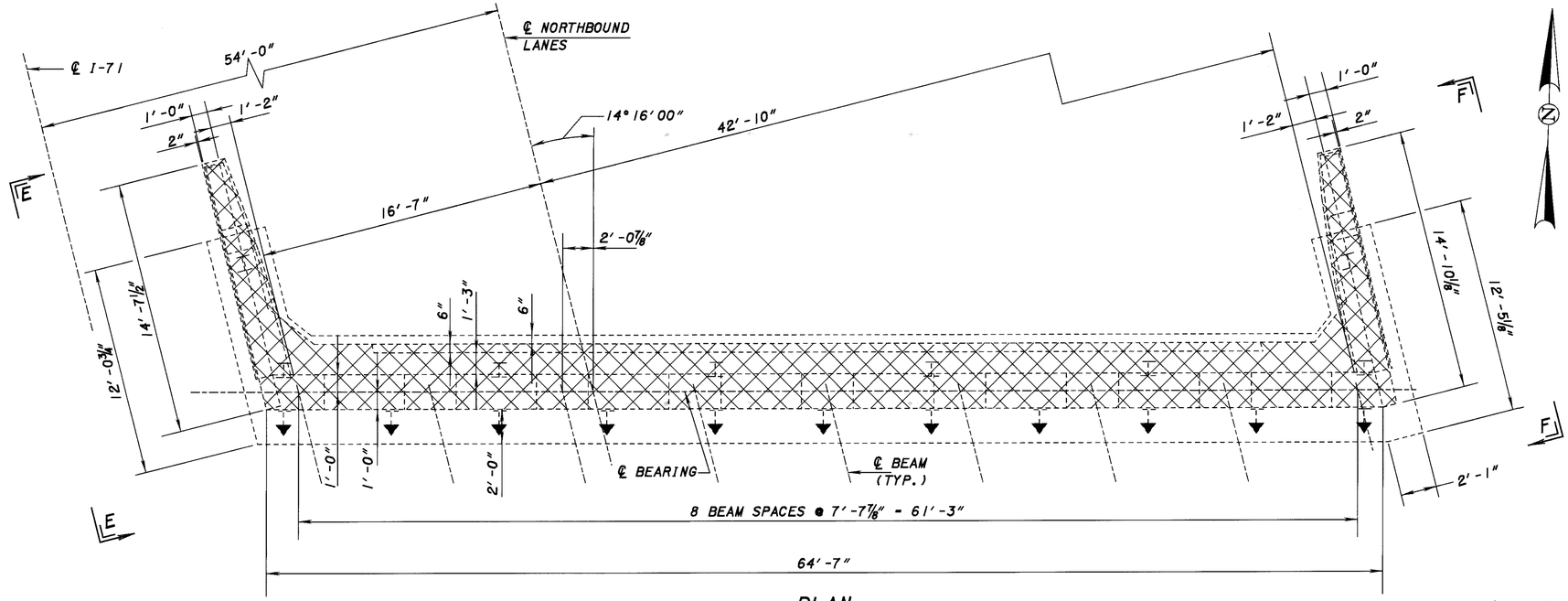
CHECKED: BKL | REVISED: | REVISED: | STRUCTURE FILE NUMBER: 5204143

EXISTING ABUTMENT PLAN AND ELEVATION
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78

27/46

912
940




PLAN
(FORWARD ABUTMENT)

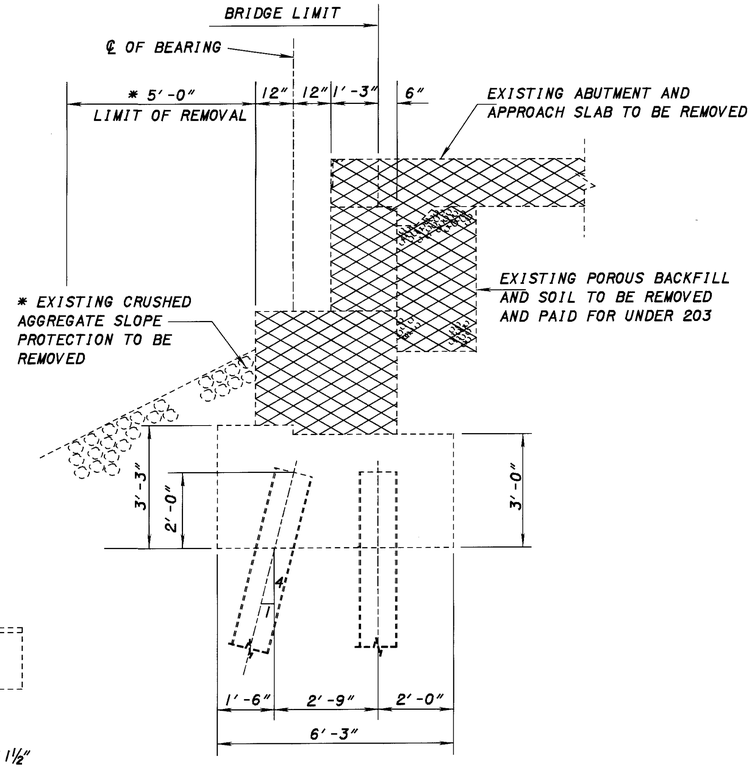
## NOTES

FOR VIEW E-E AND F-F SEE SHEET 29/46

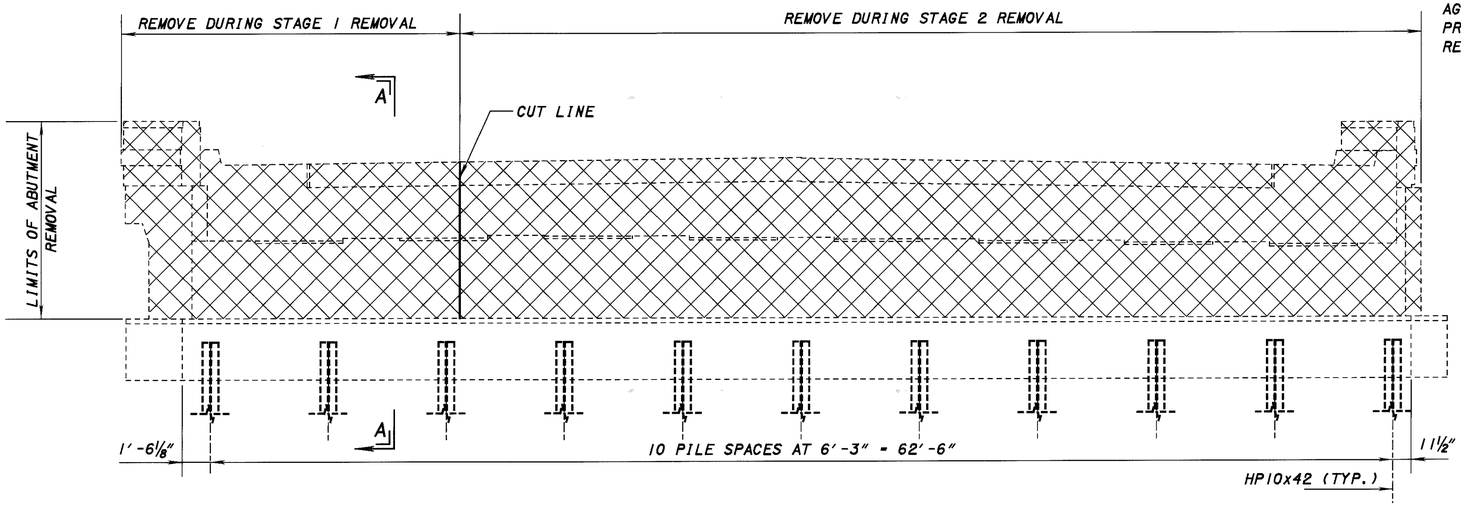
## LEGEND

PORTION OF STRUCTURE TO BE REMOVED

INDICATE BATTERED PILE




SECTION A-A




ELEVATION
(FORWARD ABUTMENT)

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVISED DFT DATE 10-08-99

STRUCTURE FILE NUMBER 5204143

DESIGNED TAA | DRAWN TAA | REVISED

CHECKED BKL

EXISTING ABUTMENT PLAN AND ELEVATION

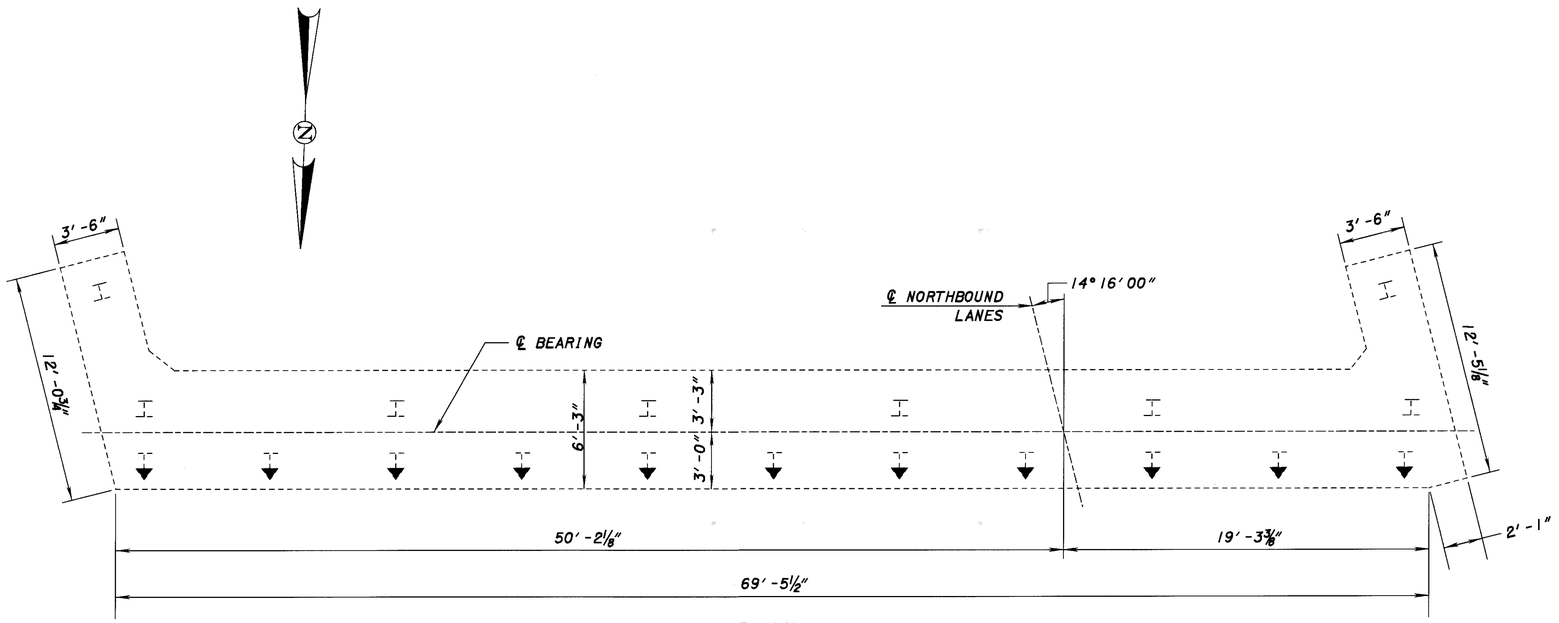
MED-71-2402 R

I-71 OVER S.R. 303

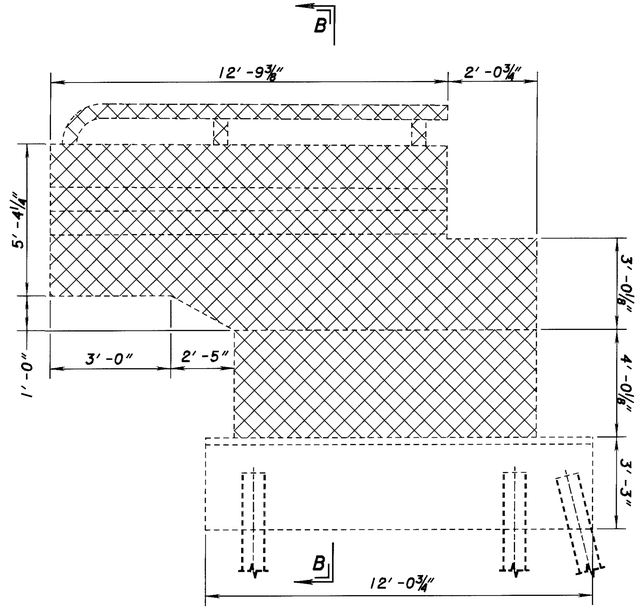
MED-71-15.78

28/46

913/940




PLAN
(REAR ABUTMENT)




VIEW E-E

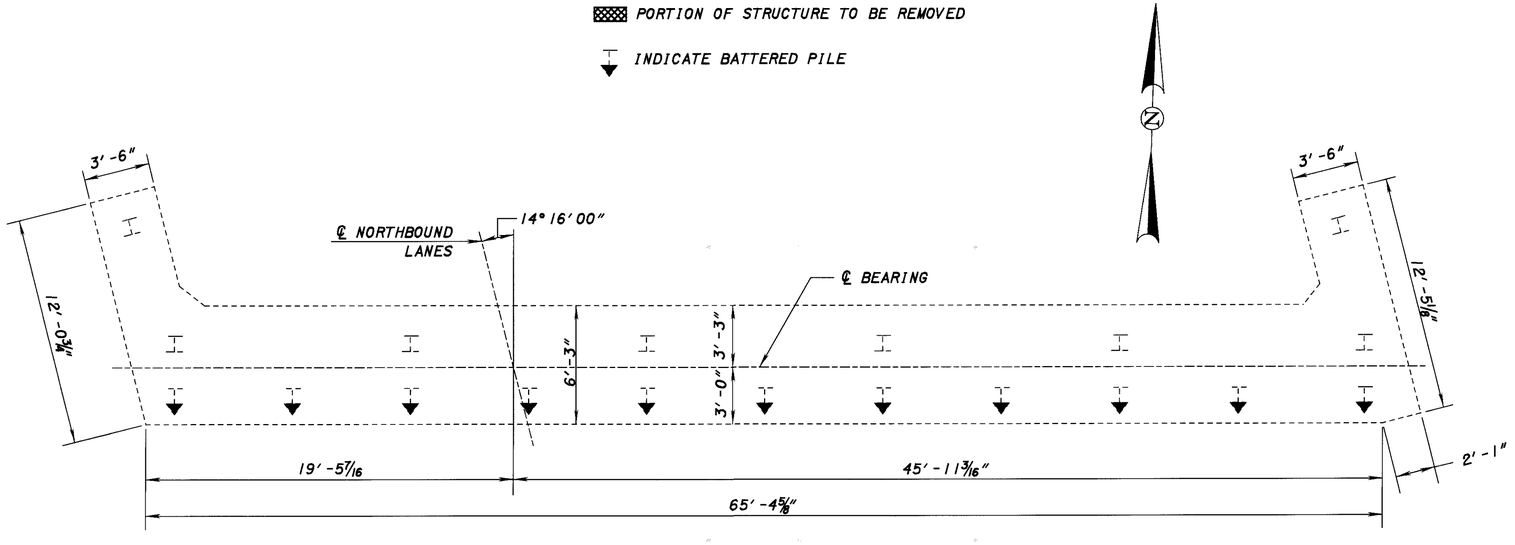
## NOTES AND LEGEND

FOR SECTION B-B SEE SHEET 27 / 46

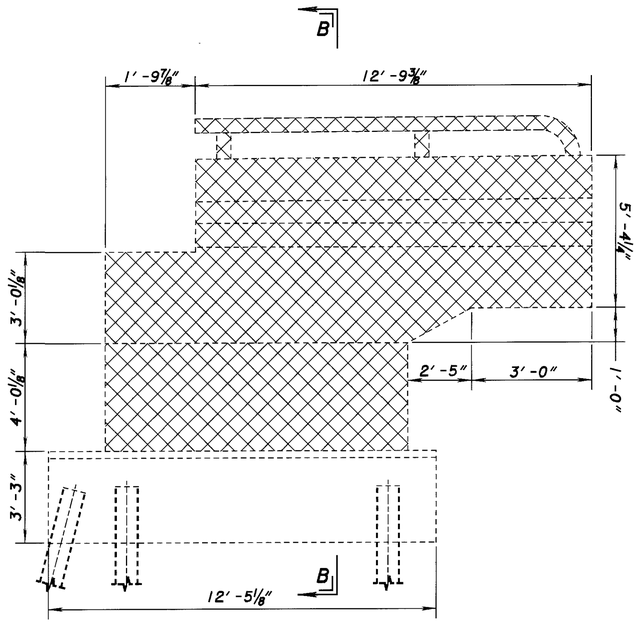
FOR VIEW E-E AND F-F SEE SHEET 27 & 28/46

PORTION OF STRUCTURE TO BE REMOVED

INDICATE BATTERED PILE




PLAN
(FORWARD ABUTMENT)




VIEW F-F

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVIEWED DFT
DATE 10-08-99
STRUCTURE FILE NUMBER 5204143

DRAWN TAA
REVISED

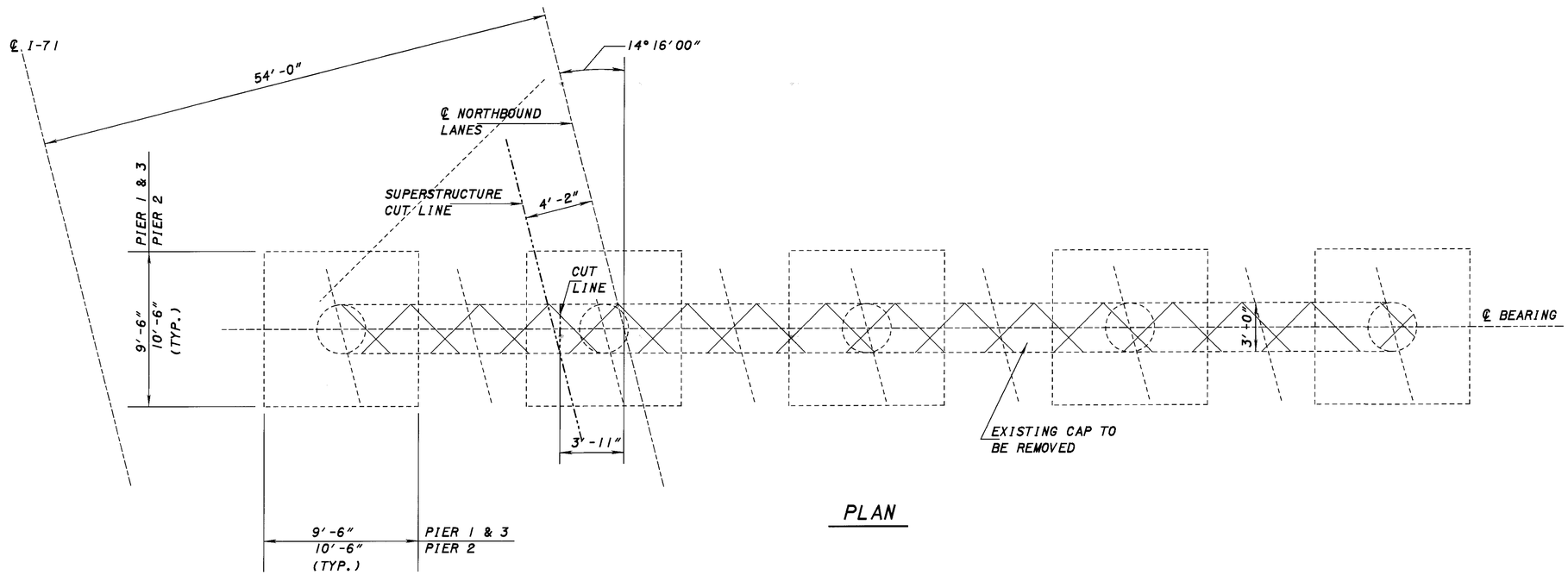
DESIGNED TAA
CHECKED BKL

REMOVAL DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

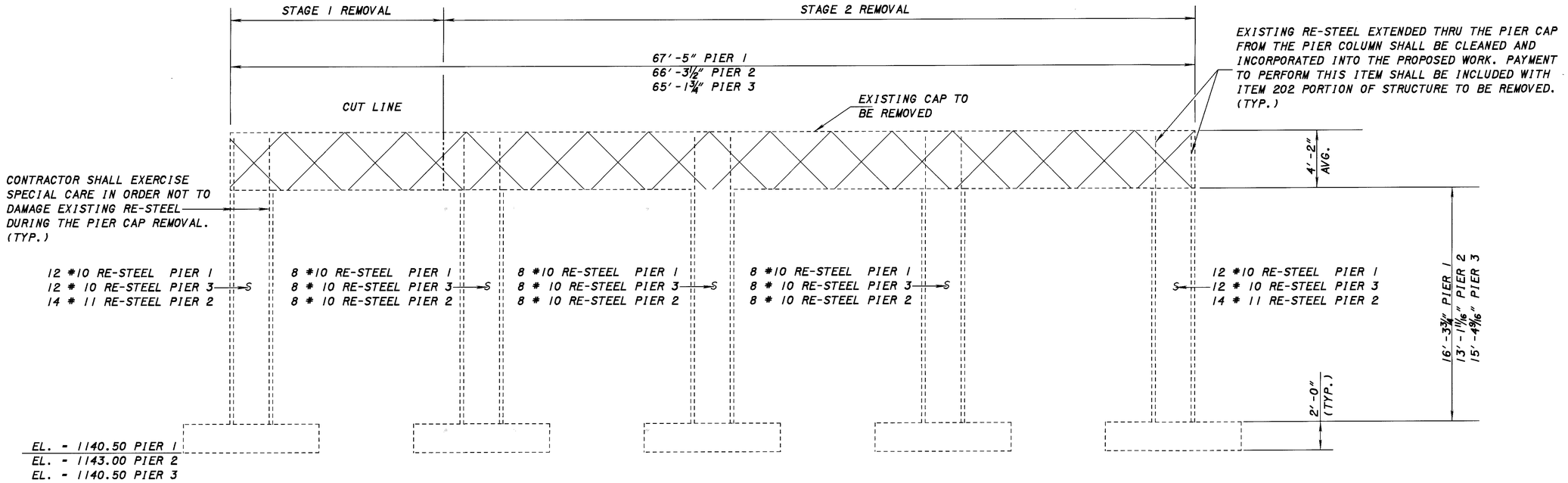
MED-71-15.78

29 / 46

314
940




PLAN




ELEVATION

LEGEND

PORTION OF STRUCTURE TO BE REMOVED

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

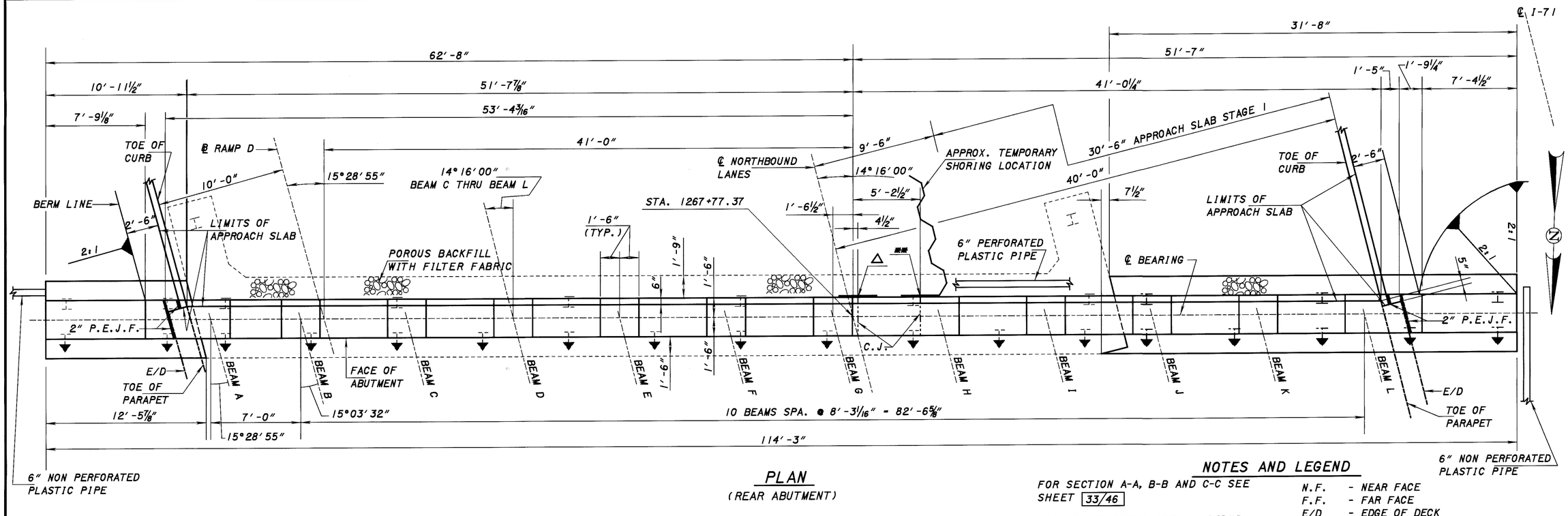
| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| TAA | TAA | DRL | 10-08-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5204143 | |

PIER REMOVAL DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78

30 / 46

915
940




## PLAN
(REAR ABUTMENT)

| LOCATION | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ELEVATIONS | 1163.68 | 1163.77 | 1163.88 | 1163.99 | 1164.10 | 1164.20 | 1164.31 | 1164.21 | 1164.07 | 1163.93 | 1163.79 | 1163.65 |

| LOCATION | X | Y | V | Z | M |
|---|---|---|---|---|---|
| ELEVATIONS | 1165.00 | 1168.82 | 1168.78 | 1165.15 | 1156.12 |

## NOTES AND LEGEND

FOR SECTION A-A, B-B AND C-C SEE SHEET 33/46

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

INDICATE BATTERED PILE

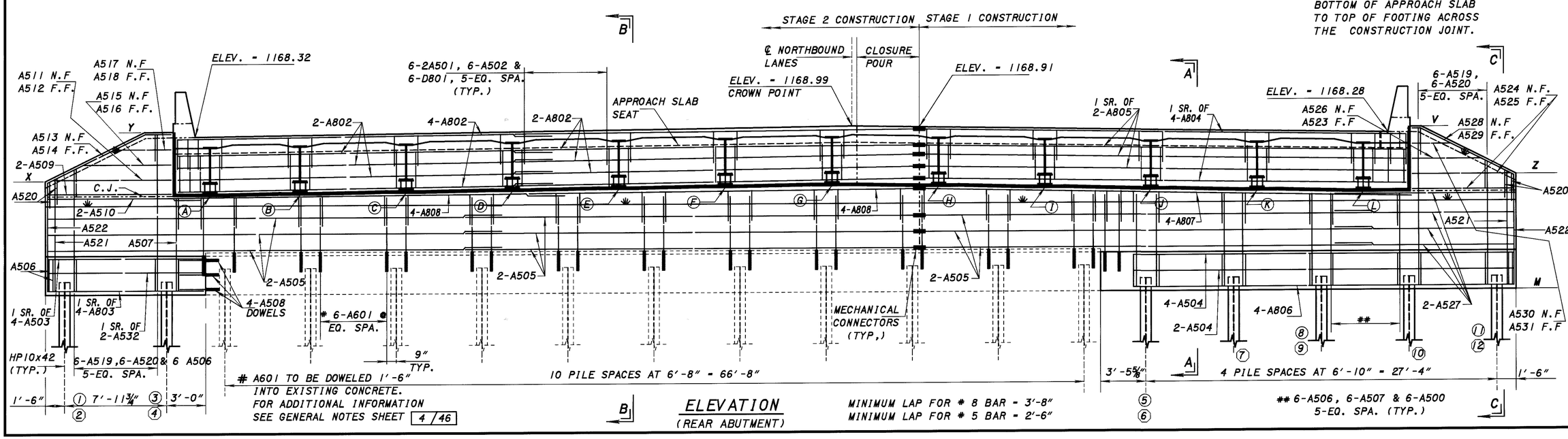
INDICATES FRONT ROW

INDICATES BACK ROW

N.F. - NEAR FACE
F.F. - FAR FACE
E/D - EDGE OF DECK
C.J. - CONSTRUCTION JOINT

△ TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO THE BEAM SEAT ACROSS THE CONSTRUCTION JOINT.

** TYPE B WATERPROOFING 3'-0" WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.

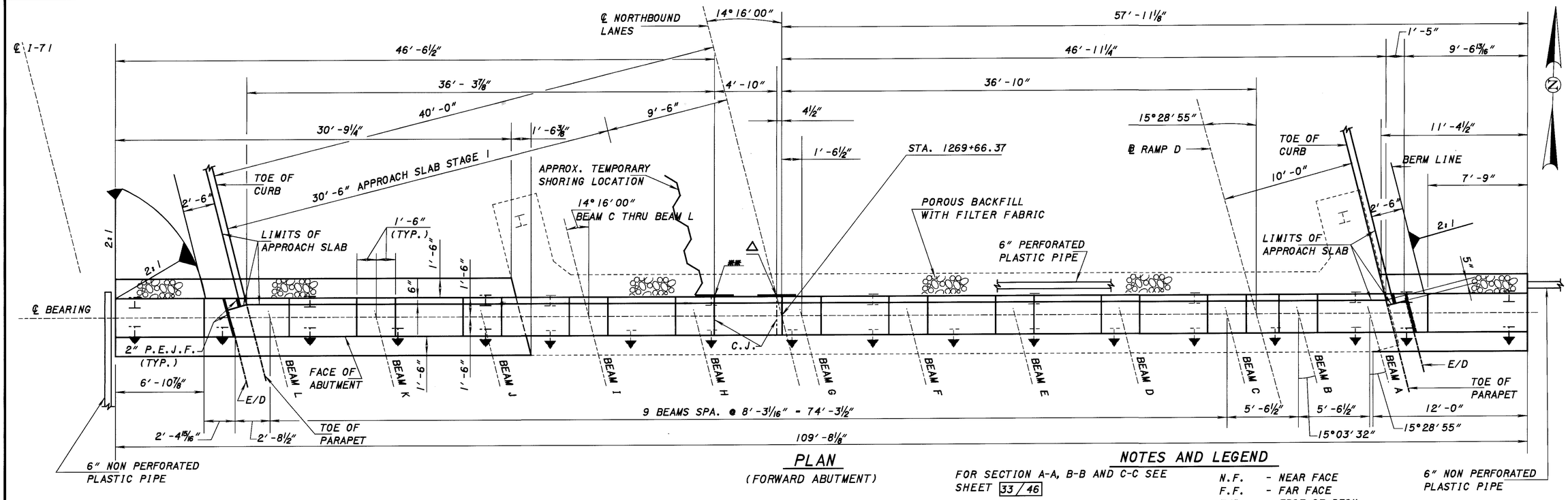



## ELEVATION
(REAR ABUTMENT)

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION
DESIGNED: TAA | DRAWN: TAA | CHECKED: DFT | REVISED: DRL | DATE: 10-8-99
STRUCTURE FILE NUMBER: 5204143

# ABUTMENT DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78




## PLAN
(FORWARD ABUTMENT)

| LOCATION | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ELEVATIONS | 1161.98 | 1162.05 | 1162.12 | 1162.23 | 1162.33 | 1162.43 | 1162.54 | 1162.44 | 1162.29 | 1162.15 | 1162.00 | 1161.86 |

| LOCATION | X | Y | V | Z | M |
|---|---|---|---|---|---|
| ELEVATIONS | 1163.25 | 1167.10 | 1166.97 | 1163.50 | 1154.44 |

## NOTES AND LEGEND

FOR SECTION A-A, B-B AND C-C SEE SHEET 33 / 46

ELEVATIONS SHOWN ARE MEASURED ALONG THE BRIDGE LIMITS. BEAM SEAT ELEVATIONS ARE MEASURED ALONG ℄ OF BEARING.

INDICATE BATTERED PILE

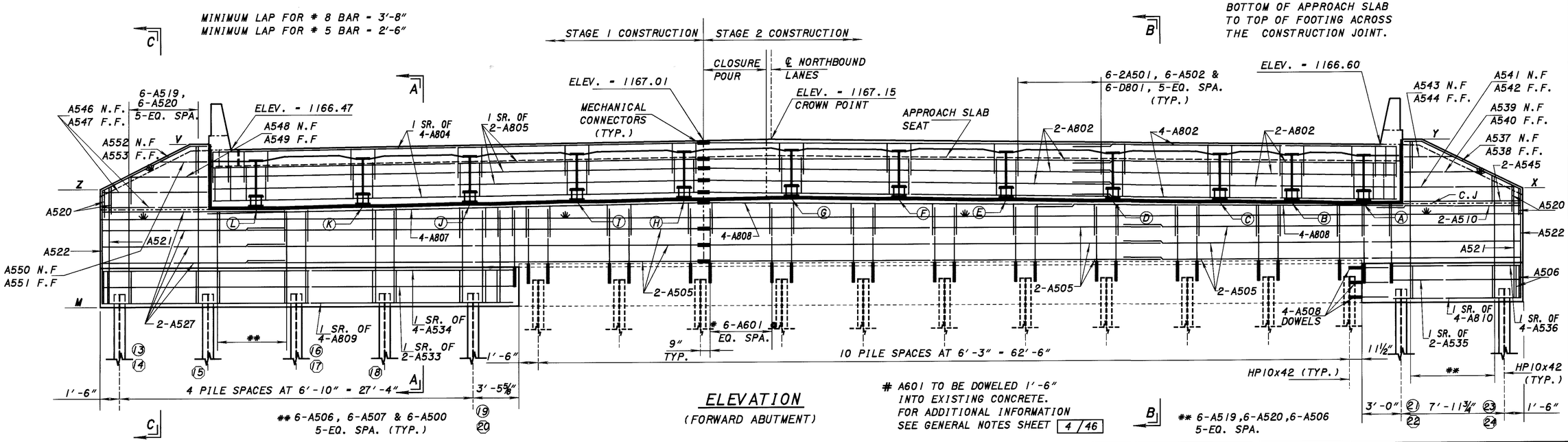
INDICATES FRONT ROW

INDICATES BACK ROW

N.F. - NEAR FACE
F.F. - FAR FACE
E/D - EDGE OF DECK
C.J. - CONSTRUCTION JOINT

△ TYPE B WATERPROOFING 3′-0″ WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO THE BEAM SEAT ACROSS THE CONSTRUCTION JOINT.

** TYPE B WATERPROOFING 3′-0″ WIDE SHOULD EXTEND FROM BOTTOM OF APPROACH SLAB TO TOP OF FOOTING ACROSS THE CONSTRUCTION JOINT.




## ELEVATION
(FORWARD ABUTMENT)

# A601 TO BE DOWELED 1′-6″ INTO EXISTING CONCRETE. FOR ADDITIONAL INFORMATION SEE GENERAL NOTES SHEET 4 / 46

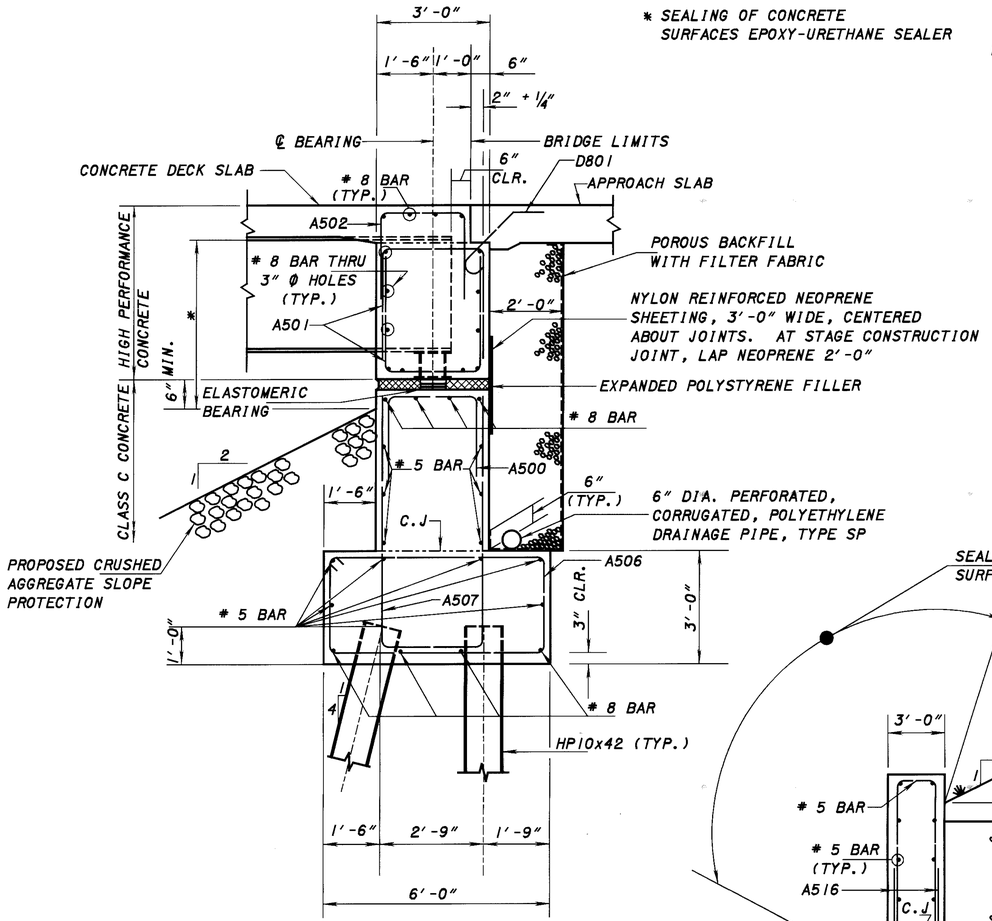
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
DATE REVISED: 10-8-99 DRL
STRUCTURE FILE NUMBER: 5204143
DRAWN: TAA
REVISED:
DESIGNED: TAA
CHECKED: DFT

ABUTMENT DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78

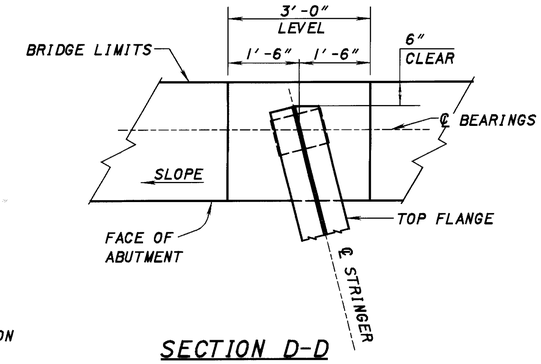
32 / 46

917
940

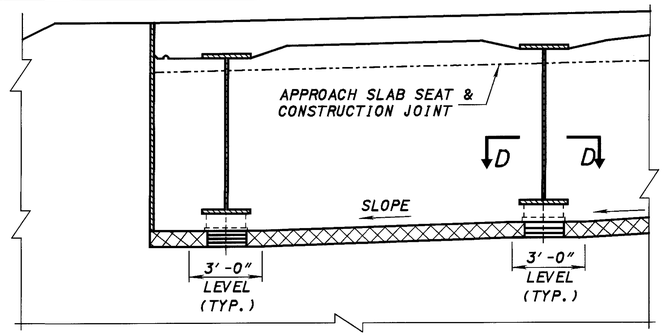



SECTION B-B

* SEALING OF CONCRETE SURFACES EPOXY-URETHANE SEALER




SECTION D-D
(CLIP TOP FLANGE ONLY)



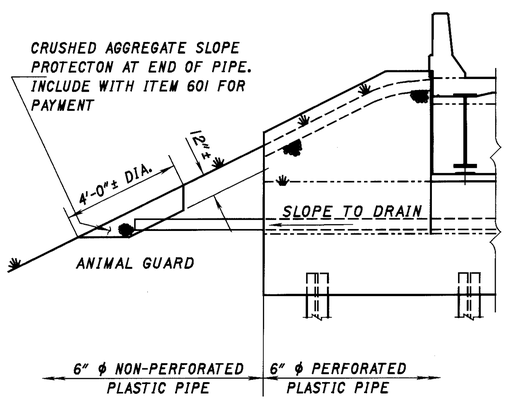

PART ELEVATION OF BEAM SEAT

## NOTES

***DIAPHRAGM*** *CONCRETE ENCASING THE STEEL BEAMS SUPPORTED IN THE SEMI INTEGRAL ABUTMENT SHALL BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.*

*PROVIDE 3" ∅ HOLE THRU WEB AS NOTED, PAYMENT TO BE INCLUDED AS INCIDENTAL WITH ITEM 863 STRUCTURAL STEEL. PAYMENT FOR THE EXPANDED POLYSTYRENE FILLER TO BE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE AS INCIDENTAL.*

***POROUS BACKFILL:***
*POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 12" BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.*




PIPE OUTLET DETAIL




SECTION C-C




SECTION A-A

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

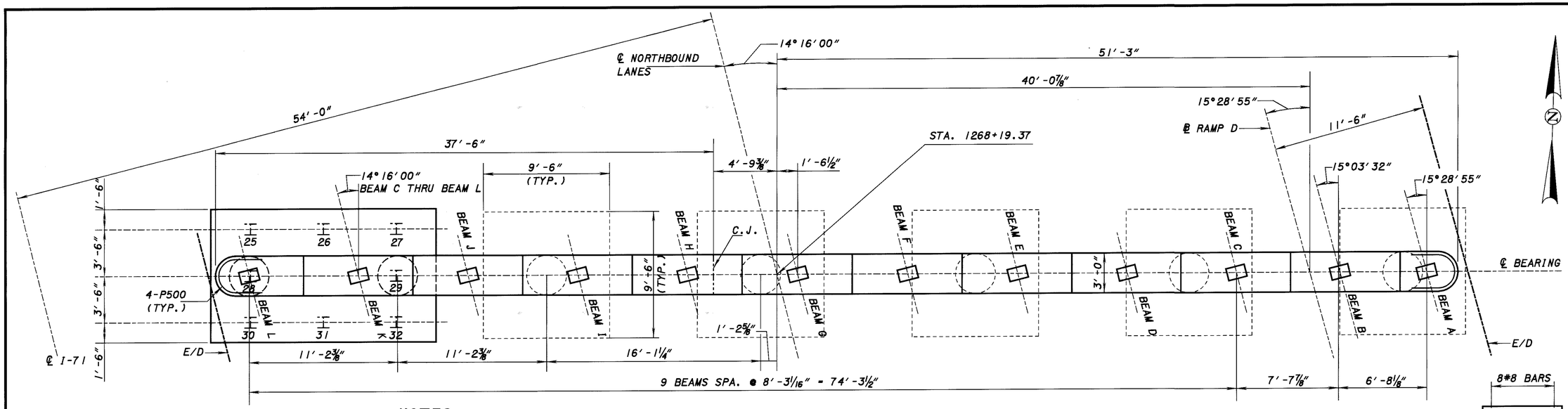
| REVISED | DATE |
|---|---|
| DRL | 10-8-99 |
| STRUCTURE FILE NUMBER | |
| 5204143 | |
| DRAWN | REVISED |
| TAA | |
| DESIGNED | CHECKED |
| TAA | DFT |

MISCELLANEOUS DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

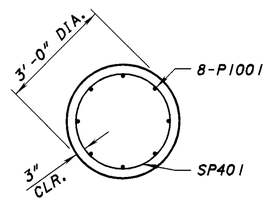
MED-71-15.78

33/46

918
940



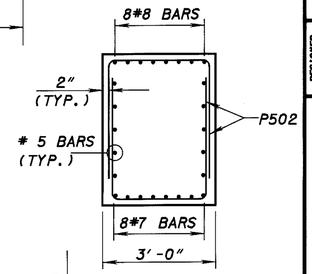

## PIER 1 - PLAN




## NOTES

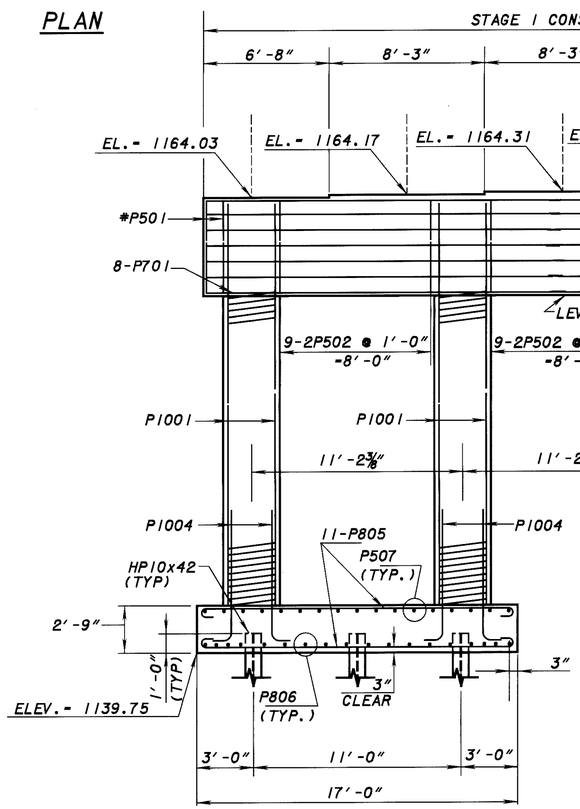
SEAL THE ENTIRE SURFACE AREA OF THE EXISTING AND PROPOSED PIER COLUMNS ABOVE THE GROUND WITH EPOXY-URETHANE SEALER.

SEAL THE ENTIRE SURFACE AREA OF THE PROPOSED PIER CAP, WITH THE EXCEPTION OF THE TOP OF PIER CAP, WITH EPOXY-URETHANE SEALER.

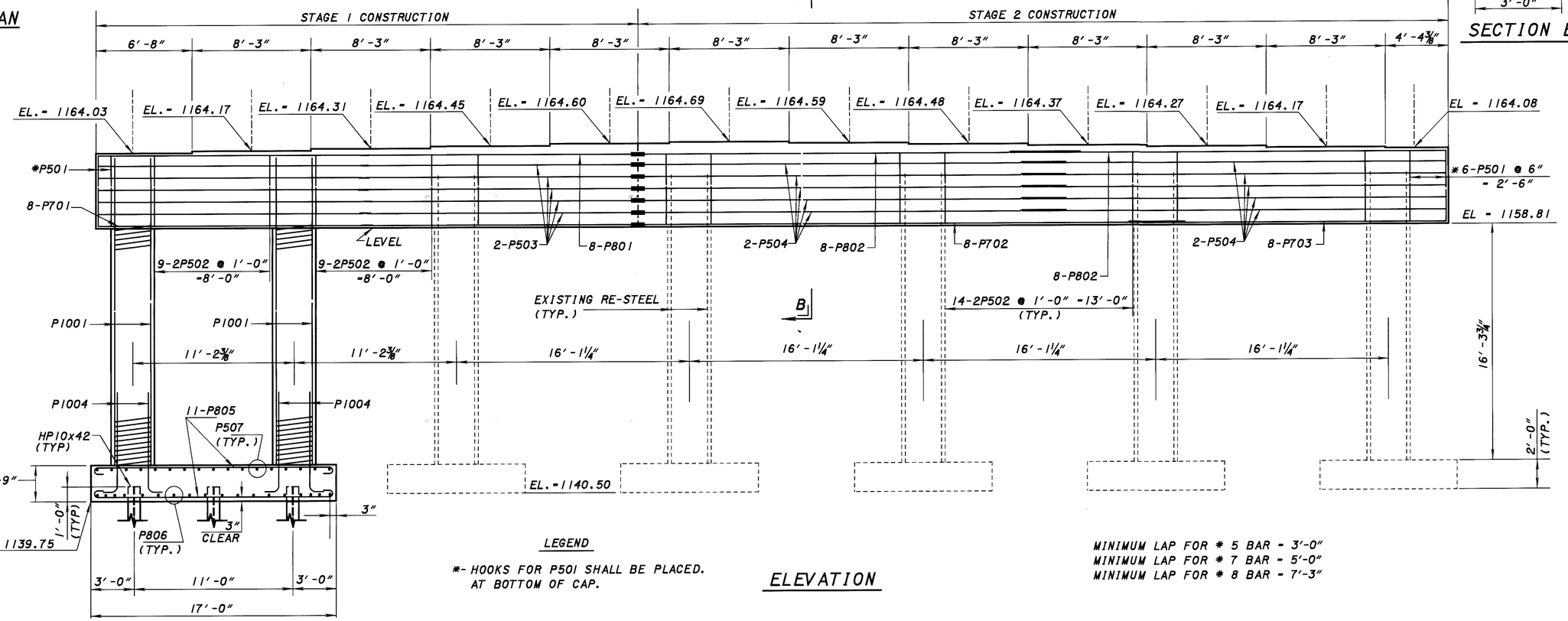



## SECTION B-B

## PLAN




## ELEVATION




### LEGEND

*- HOOKS FOR P501 SHALL BE PLACED AT BOTTOM OF CAP.

MINIMUM LAP FOR # 5 BAR - 3'-0"
MINIMUM LAP FOR # 7 BAR - 5'-0"
MINIMUM LAP FOR # 8 BAR - 7'-3"

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

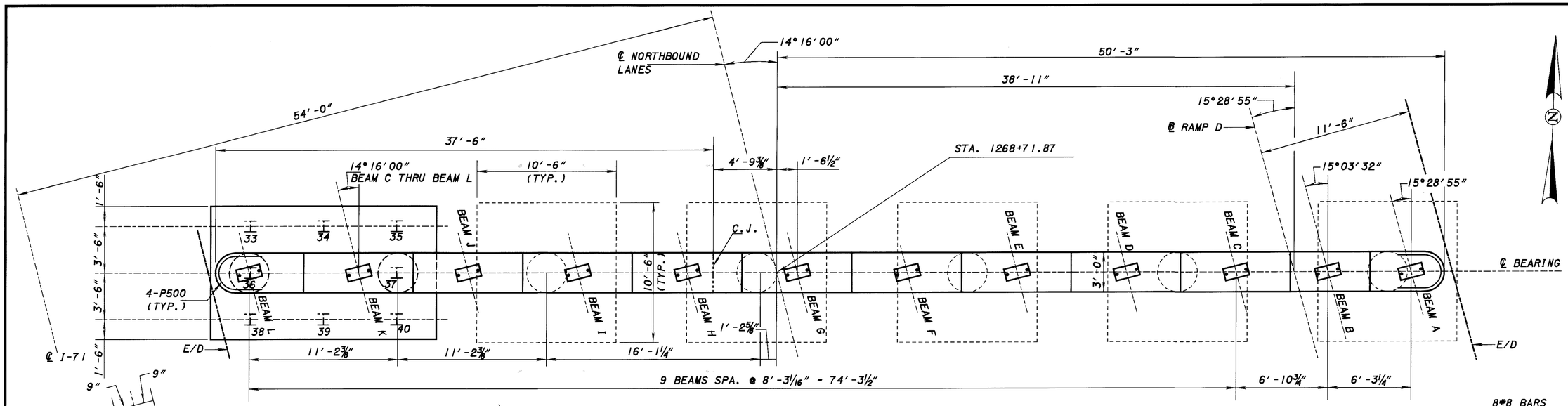
| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| TAA | TAA | DRL | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5204143 | |

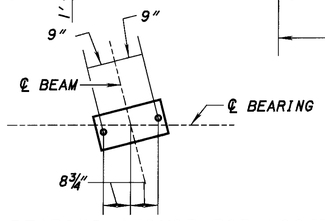
PIER 1 DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78

34/46

919/940

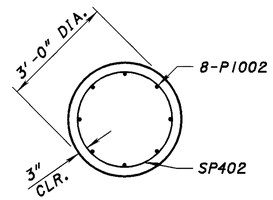



## BEARING ANCHOR ROD LOCATION

REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRESETTING OF BEARING ANCHORS.

AT THE OPTION OF THE CONTRACTOR, BEARING ANCHORS, LOCATED AND SUPPORTED BY TEMPLATES, MAY BE CAST IN PLACE.



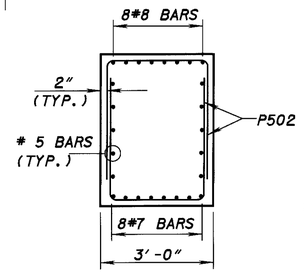

PLAN

## PIER 2 - PLAN

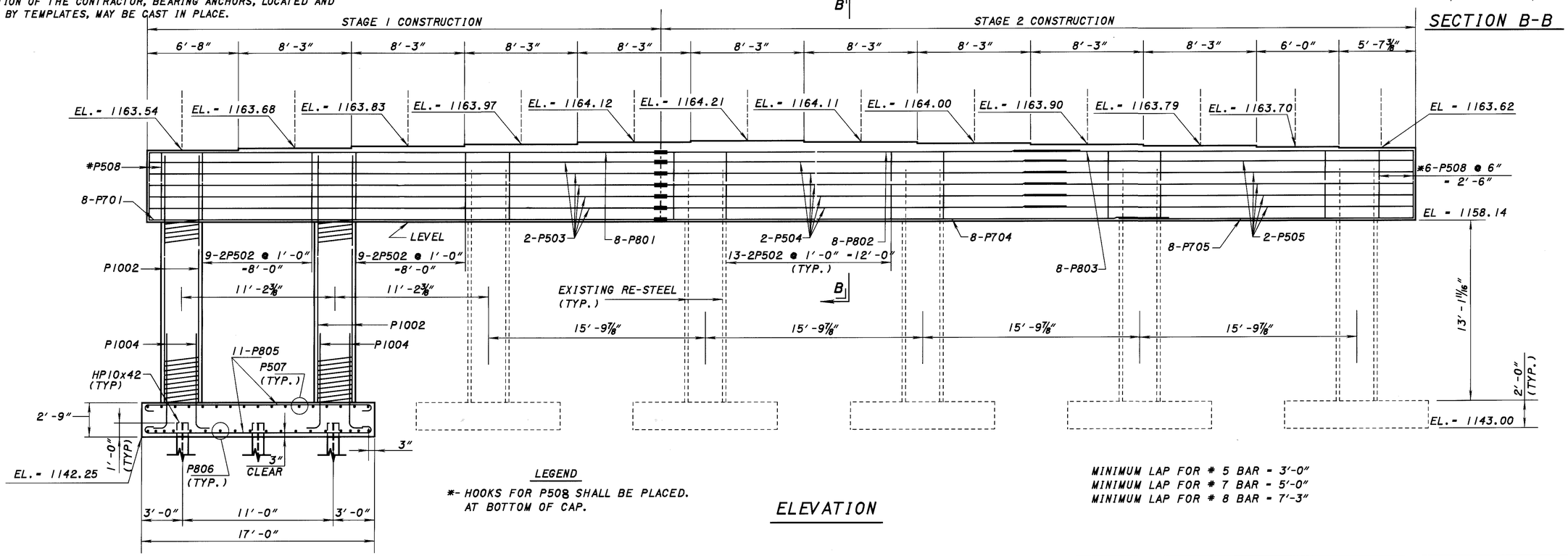
## NOTES

SEAL THE ENTIRE SURFACE AREA OF THE EXISTING AND PROPOSED PIER COLUMNS ABOVE THE GROUND WITH EPOXY-URETHANE SEALER.

SEAL THE ENTIRE SURFACE AREA OF THE PROPOSED PIER CAP, WITH THE EXCEPTION OF THE TOP OF PIER CAP, WITH EPOXY-URETHANE SEALER.




SECTION B-B




LEGEND

*- HOOKS FOR P508 SHALL BE PLACED AT BOTTOM OF CAP.

MINIMUM LAP FOR # 5 BAR - 3′-0″
MINIMUM LAP FOR # 7 BAR - 5′-0″
MINIMUM LAP FOR # 8 BAR - 7′-3″

ELEVATION

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

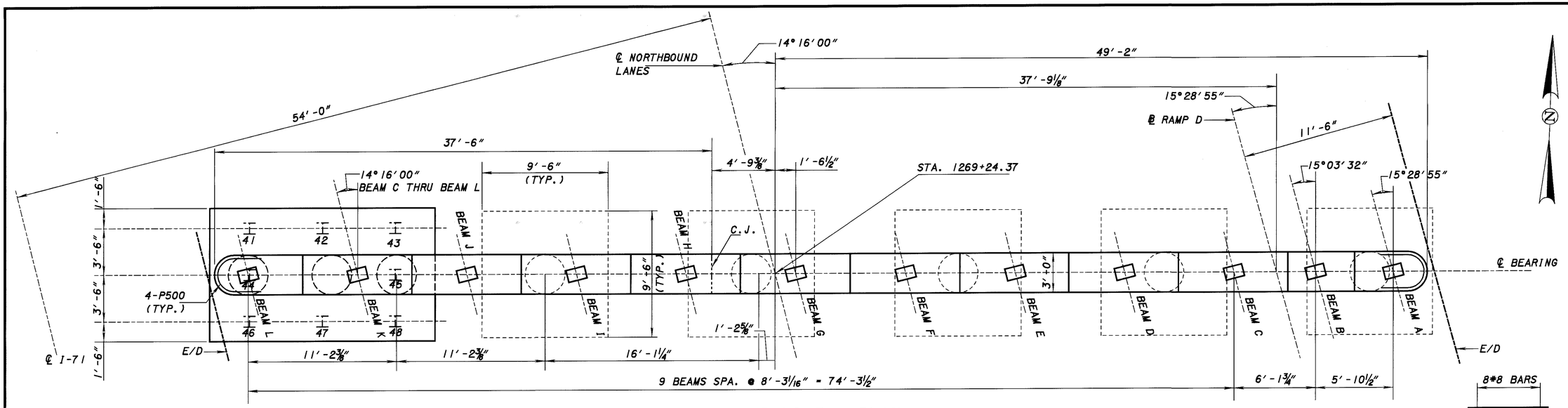
| DESIGNED | DRAWN | CHECKED | REVISED | DATE REVISED | STRUCTURE FILE NUMBER |
|---|---|---|---|---|---|
| TAA | TAA | DFT | | 10-8-99 DRL | 5204143 |

PIER 2 DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

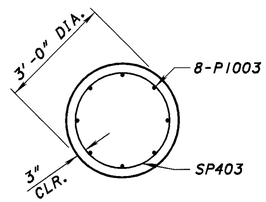
MED-71-15.78

35/46

920
940




## PIER 3 - PLAN

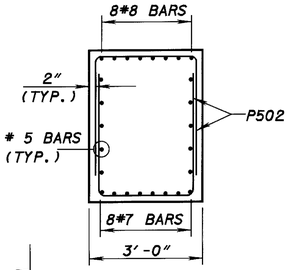



## PLAN

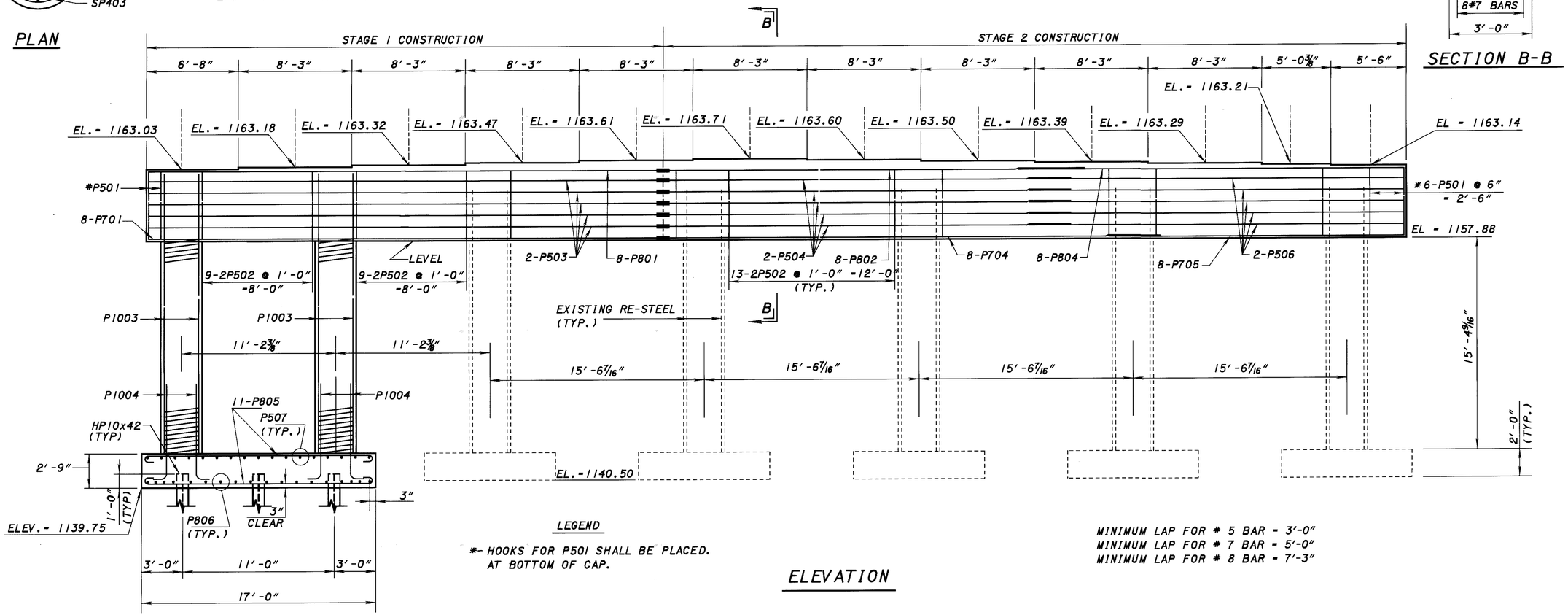
### NOTES

SEAL THE ENTIRE SURFACE AREA OF THE EXISTING AND PROPOSED PIER COLUMNS ABOVE THE GROUND WITH EPOXY-URETHANE SEALER.

SEAL THE ENTIRE SURFACE AREA OF THE PROPOSED PIER CAP, WITH THE EXCEPTION OF THE TOP OF PIER CAP, WITH EPOXY-URETHANE SEALER.




## SECTION B-B




## ELEVATION

### LEGEND

*- HOOKS FOR P501 SHALL BE PLACED AT BOTTOM OF CAP.

MINIMUM LAP FOR # 5 BAR - 3′-0″
MINIMUM LAP FOR # 7 BAR - 5′-0″
MINIMUM LAP FOR # 8 BAR - 7′-3″

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | CHECKED | REVISED | DATE |
|---|---|---|---|---|
| TAA | TAA | DFT | DRL | 10-8-99 |

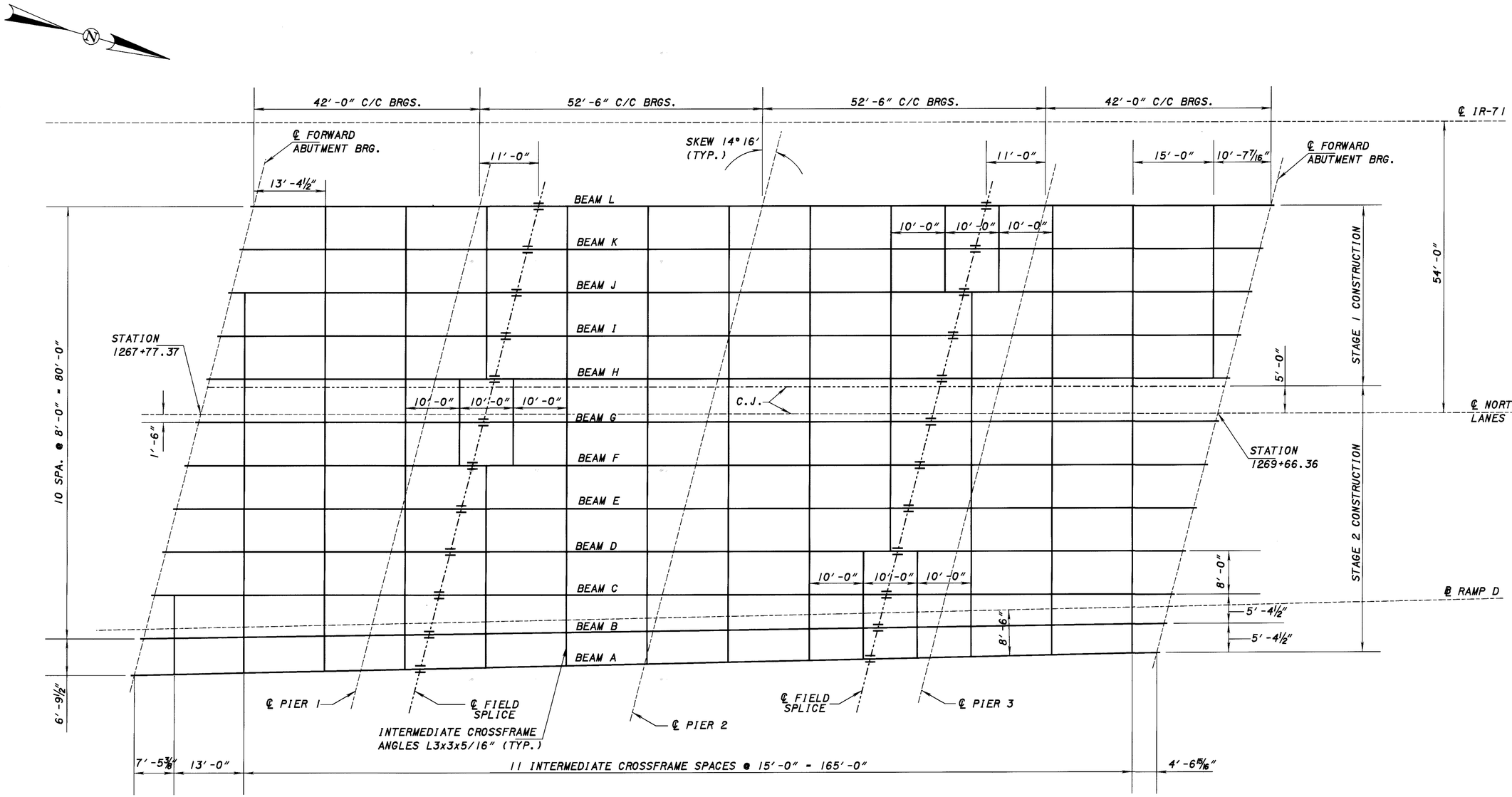
STRUCTURE FILE NUMBER 5204143

PIER 3 DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78

36/46

921
940




## FRAMING PLAN

## NOTES

SEE ADDITIONAL NOTES ON SHEET 38/46

FOR BEAM ELEVATION SEE SHEET 38/46

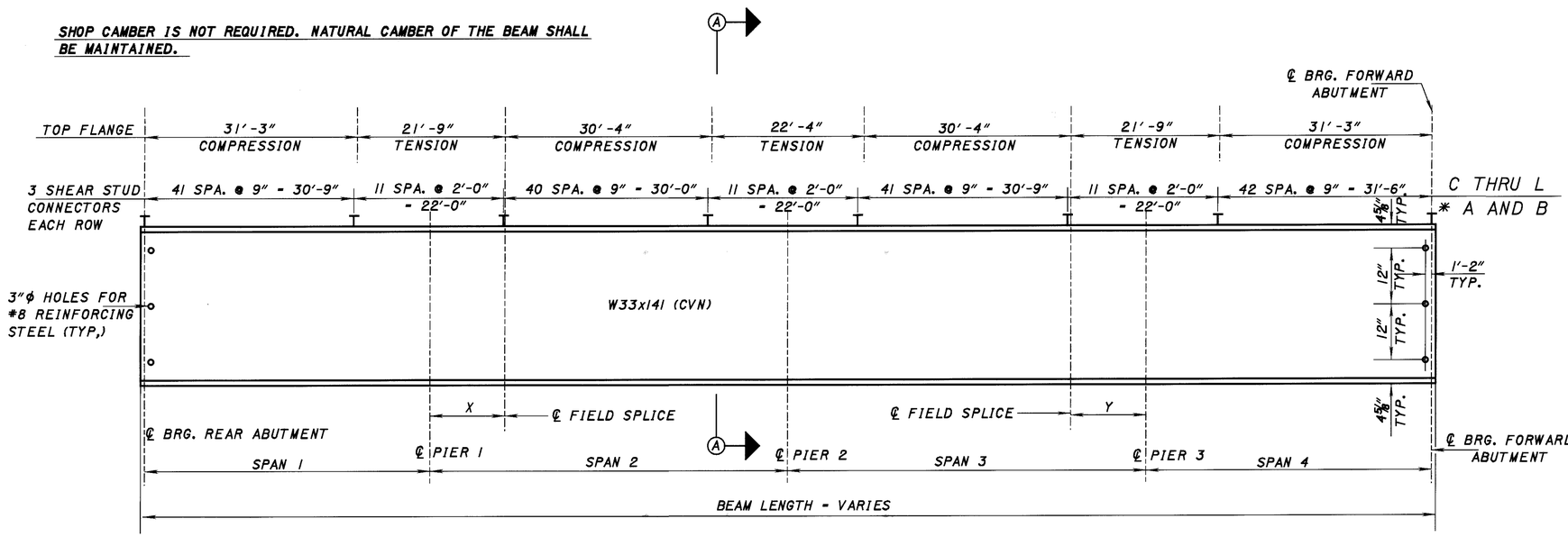
DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | DRL | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5204143 | |

SUPERSTRUCTURE DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

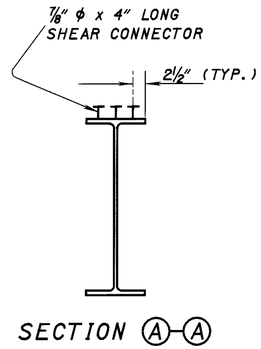
MED-71-15.78

**SHOP CAMBER IS NOT REQUIRED. NATURAL CAMBER OF THE BEAM SHALL BE MAINTAINED.**




## BEAM A THRU L ELEVATION

(VERTICAL SCALE IS EXAGGERATED)




SECTION Ⓐ-Ⓐ

* TWO ROWS CONNECTORS SHALL BE ADDED TO BEAM A AND BEAM B AND THE SPACINGS SHALL BE ADJUSTED ACCORDINGLY

| BEAM | SPAN 1 | SPAN 2 | SPAN 3 | SPAN 4 | X | Y | TOTAL LENGTH |
|---|---|---|---|---|---|---|---|
| A | 42'-2⅞" | 52'-9½" | 52'-9½" | 42'-2⅞" | 11'-0¾" | 11'-0¾" | 191'-1⅛" |
| B | 42'-1⅞" | 52'-8¼" | 52'-8¼" | 42'-1⅞" | 11'-0½" | 11'-0½" | 190'-8⅝" |
| C THRU L | 42'-0" | 52'-6" | 52'-6" | 42'-0" | 11'-0" | 11'-0" | 190'-0⅜" |

## NOTES

**STRUCTURAL STEEL:**
WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.

FOR FIELD SPLICE DETAILS SEE STD. DWG. BS-1-93 (50 KSI) NO FILL PLATES REQUIRED.

FOR SCREED DIAGRAM AND TABLE SEE SHEET 41/46

STRUCTURAL STEEL SHALL BE ASTM A572.

ALL BEAM LENGTH DIMENSION ARE AT 60 °F

**WELDED ATTACHMENT:**
WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FACIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.

3"ϕ HOLES DRILLED IN THE PROPOSED BEAM SHALL BE PAID UNDER ITEM 863 STRUCTURAL STEEL. THIS PAYMENT IS INCIDENTAL TO THE PAY ITEM.

LATERAL AND LONGITUDINAL SPACING OF WELDED STUD CONNECTORS MAY BE ALTERED AT FIELD SPLICE LOCATIONS TO AVOID INTERFERENCE WITH FLANGE SPLICE BOLTS PROVIDED THAT AT LEAST THE NUMBER OF STUDS SPECIFIED IN THE BEAM ELEVATION ARE PROVIDED.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|---|---|
| TAA | TAA | DRL | 10-8-99 | 5204143 |
| CHECKED | | REVISED | | |
| DFT | | | | |

SUPERSTRUCTURE DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

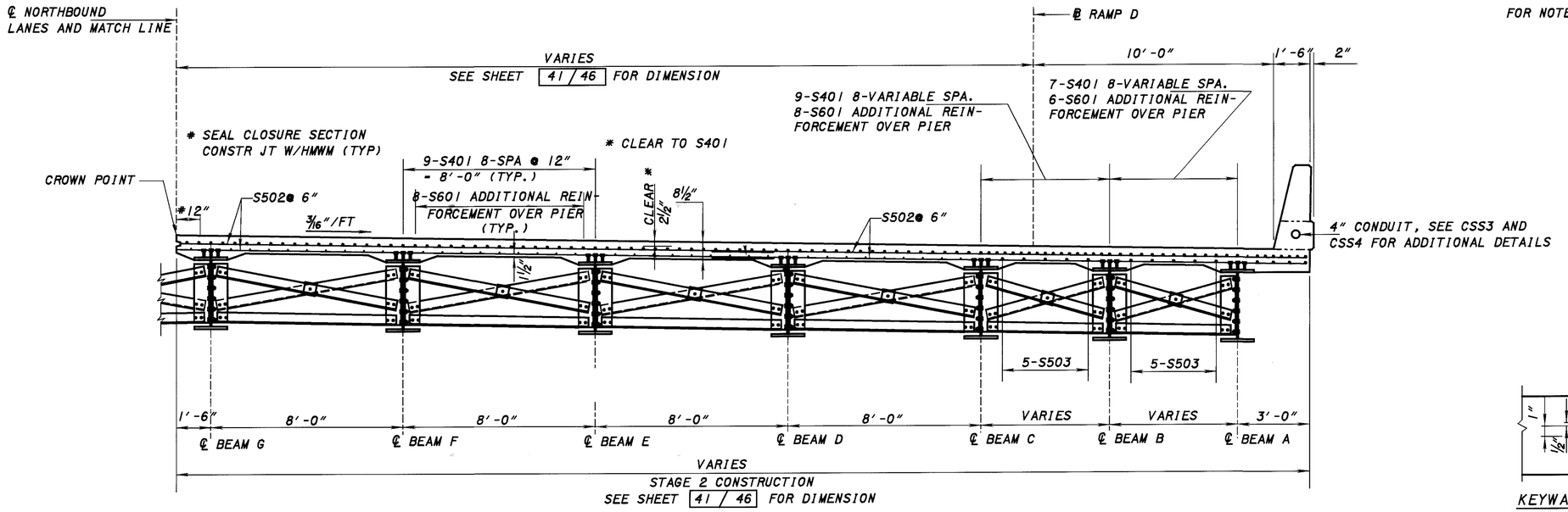
MED-71-15.78



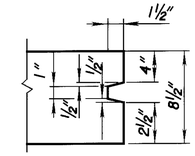
923
940

## NOTES

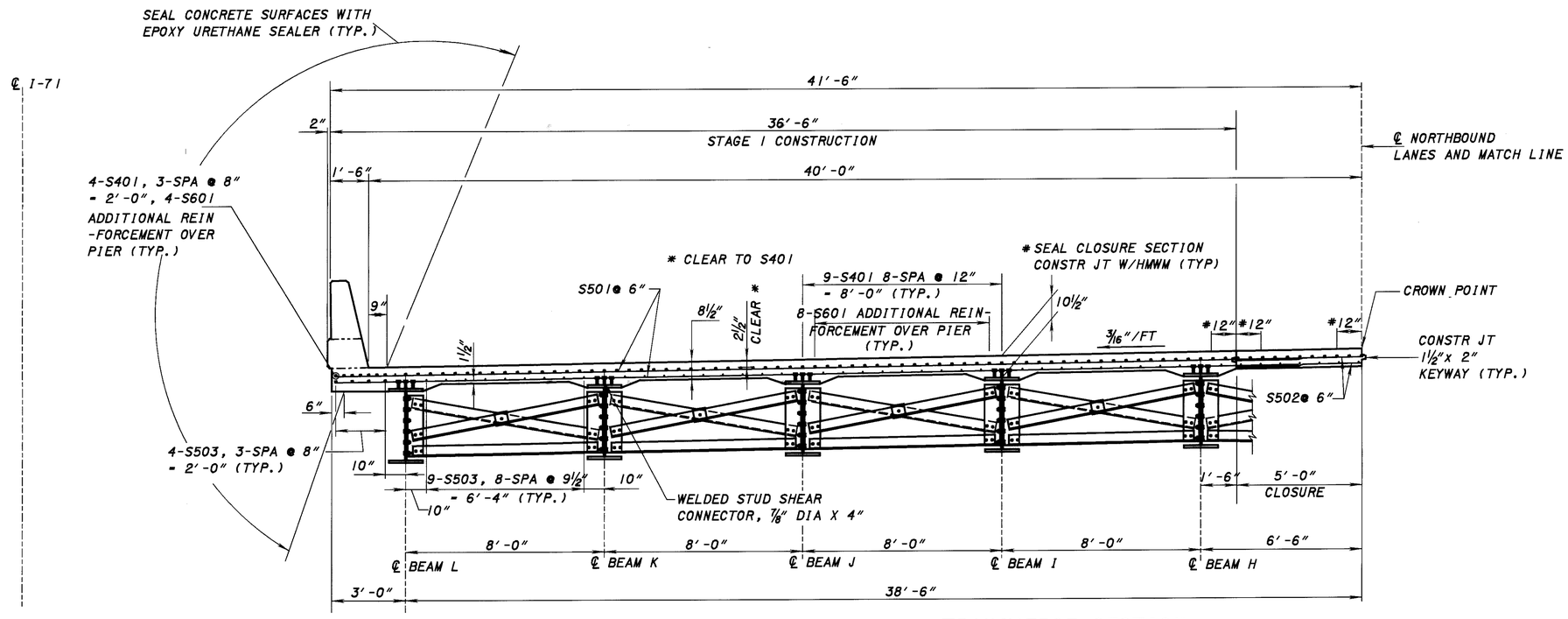
FOR NOTES SEE SHEET 40 / 46




## TRANSVERSE SECTION




KEYWAY DETAILS AT CLOSURE SECTION




## TRANSVERSE SECTION

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

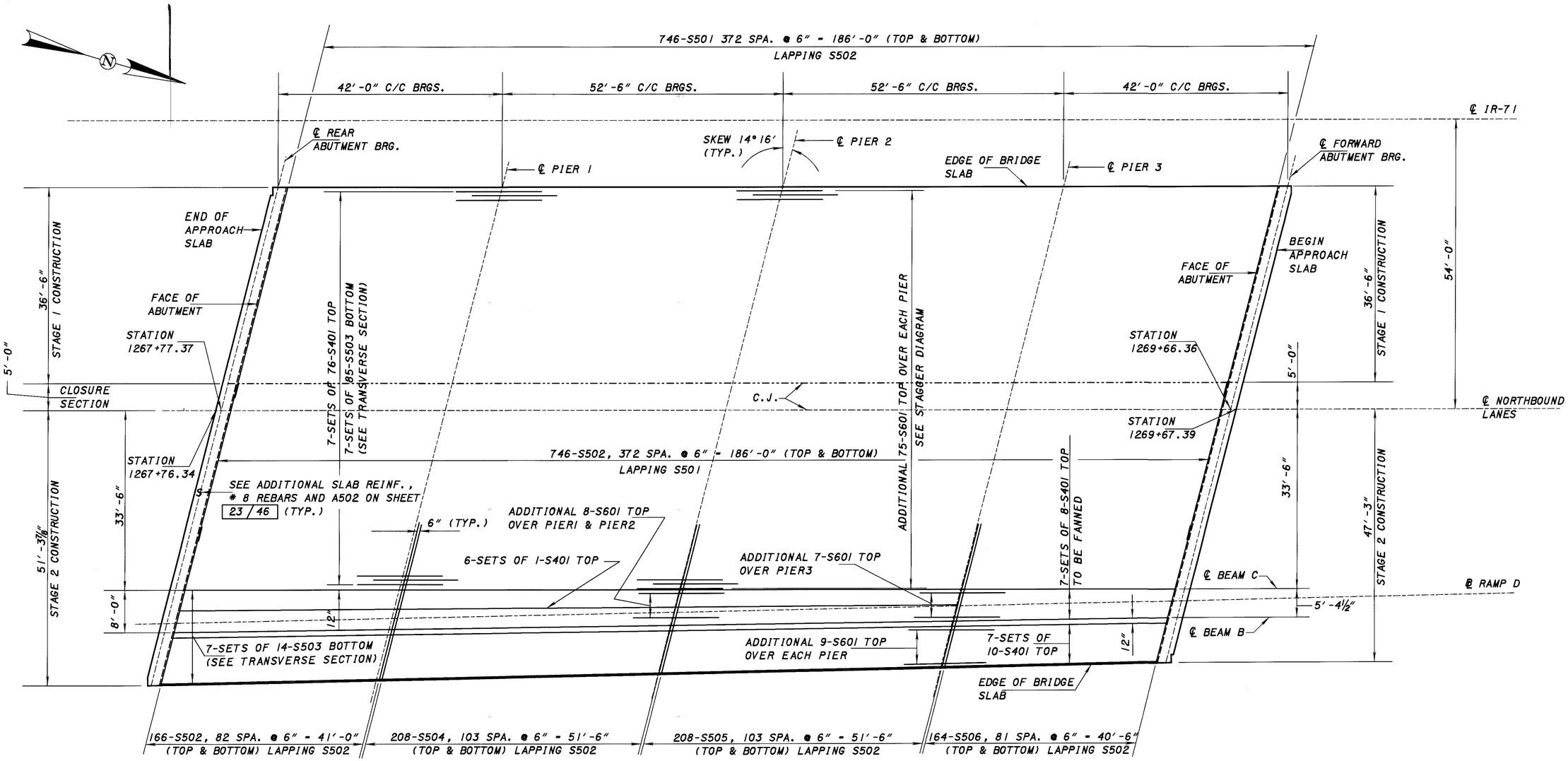
| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TAA | TAA | DRL | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT/HLG | | 5204143 | |

SUPERSTRUCTURE DETAILS

MED-71-2402 R

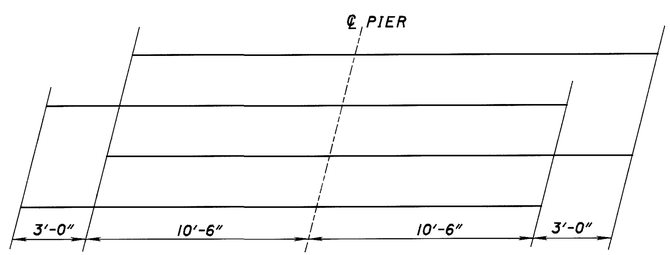
I-71 OVER S.R. 303

MED-71-15.78




## DECK REINFORCEMENT

MINIMUM LAP FOR # 4 BAR - 2'-0"
MINIMUM LAP FOR # 5 BAR - 2'-6"




## STAGGER OF S601 BARS OVER PIERS

## NOTES

1. HMWM: HIGH MOLECULAR WEIGHT METHACRYLATE, SEE SUPPLEMENTAL SPEC.
2. ALL REINFORCING STEEL IS EPOXY COATED.
3. FOR PARAPET DETAILS, SEE SHEET 42 & 43/46
4. REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMMODATE THE CROWN OF THE DECK. PAYMENT SHALL BE INCLUDED WITH HIGH PERFORMANCE CONCRETE.
5. FOR CROSS-FRAME CONNECTION DETAILS SEE STD DWG GSD-1-96, GENERAL STEEL DETAILS.
6. DECK SLAB DEPTH: THE THEORETICAL DESIGN THICKNESS FOR THE SLAB IS 8½". THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFIGURATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. A HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12".

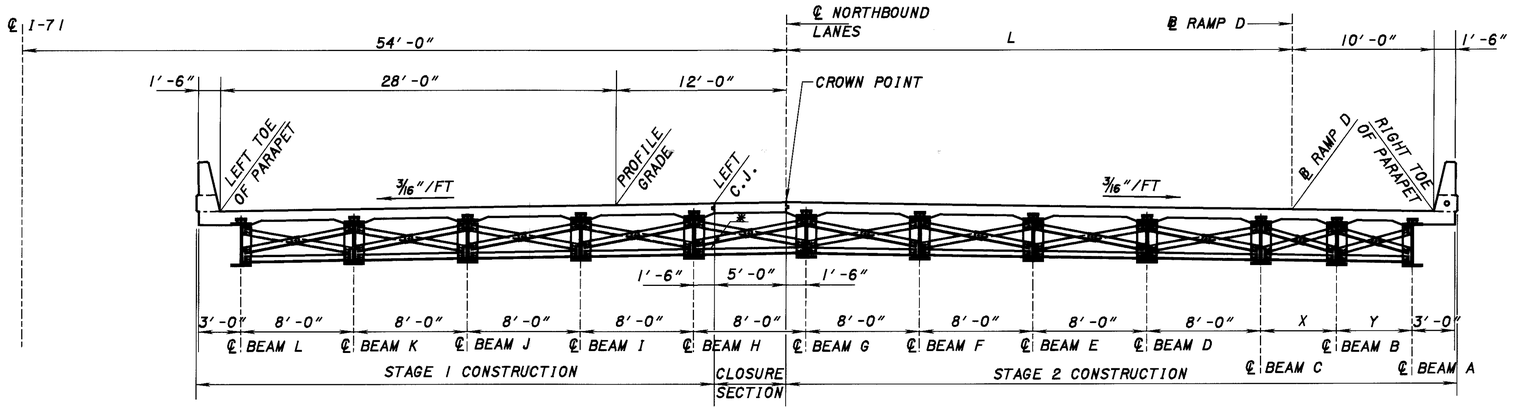
DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION
DESIGNED: TAA | DRAWN: TAA | REVIEWED: DRL | DATE: 10-8-99 | REVISED:
CHECKED: DFT/HLG | STRUCTURE FILE NUMBER: 5204143

SUPERSTRUCTURE DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78

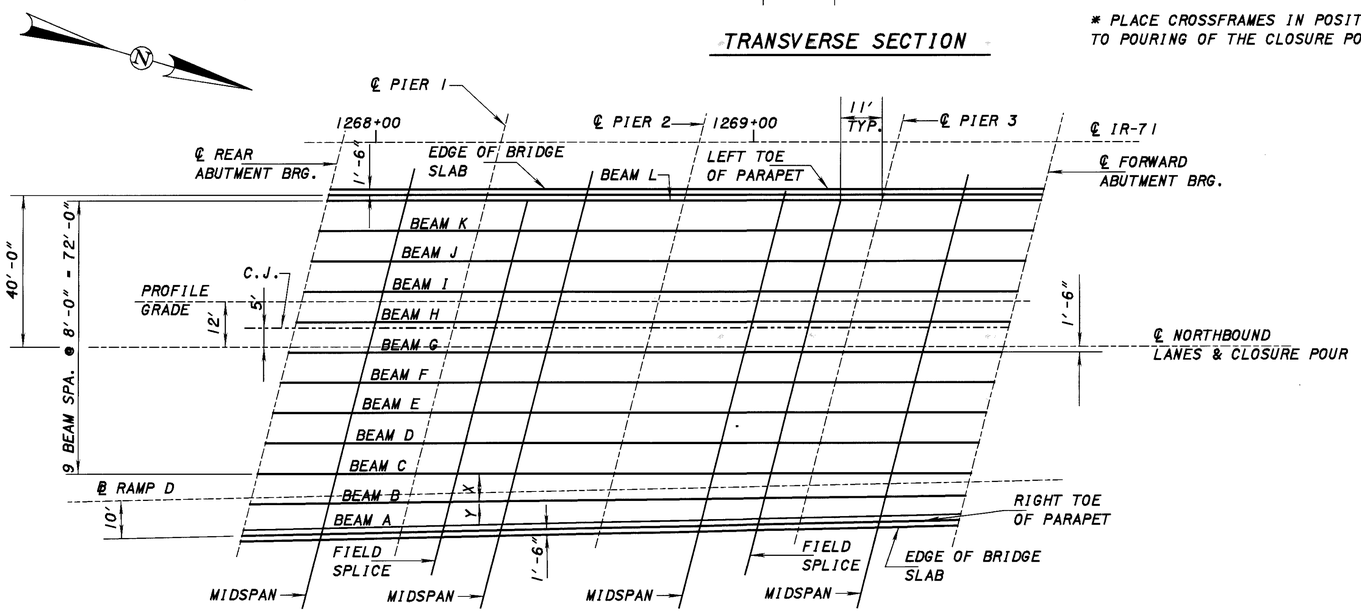
40/46

925
940




## TRANSVERSE SECTION

* PLACE CROSSFRAMES IN POSITION PRIOR TO POURING OF THE CLOSURE POUR




## PLAN

## NOTES

SCREED SETTING ELEVATIONS GIVEN ARE TO THE TOP OF CONCRETE DECK AND ARE REQUIRED PRIOR TO PLACEMENT OF CONCRETE. THEY DO NOT INCLUDE AN ALLOWANCE FOR THE DEAD LOAD DEFLECTION CAUSED BY THE WEIGHT OF THE CONCRETE BECAUSE THE BEAM IS NOT CAMBERED.

| LOCATION | ℄ RAMP D | |
|---|---|---|
| | STATION | L (FEET) |
| ℄ REAR ABUTMENT | 1267+67.26 | 39.74' |
| MIDSPAN | 1267+88.38 | 39.29' |
| ℄ PIER # 1 | 1268+09.49 | 38.84' |
| FIELD SPLICE | 1268+20.55 | 38.60' |
| MIDSPAN | 1268+35.88 | 38.28' |
| ℄ PIER # 2 | 1268+62.28 | 37.72' |
| MIDSPAN | 1268+88.67 | 37.16' |
| FIELD SPLICE | 1269+04.00 | 36.83' |
| ℄ PIER # 3 | 1269+15.06 | 36.60' |
| MIDSPAN | 1269+36.18 | 36.15' |
| ℄ FORWARD ABUTMENT | 1269+57.29 | 35.70' |

| STATION | X (FEET) | Y (FEET) |
|---|---|---|
| 1267+75.00 | 7.89' | 6.68' |
| 1268+00.00 | 7.54' | 6.50' |
| 1268+25.00 | 7.19' | 6.32' |
| 1268+50.00 | 6.85' | 6.13' |
| 1268+75.00 | 6.50' | 5.94' |
| 1269+00.00 | 6.15' | 5.76' |
| 1269+25.00 | 5.81' | 5.58' |
| 1269+50.00 | 5.46' | 5.39' |

## SCREED ELEVATION - NORTHBOUND BRIDGE

| LOCATION | RIGHT TOE OF PARAPET | | ℄ RAMP D | | PROFILE GRADE | | LEFT CONSTR JT | | NORTHBOUND LANE ℄ & CLOSURE POUR | | LEFT TOE OF PARAPET | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION | STATION | ELEVATION |
| ℄ REAR ABUTMENT | 1267+64.71 | 1168.31 | 1267+67.26 | 1168.45 | 1267+80.42 | 1168.77 | 1267+78.64 | 1168.89 | 1267+77.37 | 1168.98 | 1267+87.54 | 1168.27 |
| MIDSPAN | 1267+85.82 | 1168.14 | 1267+88.38 | 1168.27 | 1268+01.42 | 1168.58 | 1267+99.64 | 1168.71 | 1267+98.37 | 1168.80 | 1268+08.54 | 1168.09 |
| ℄ PIER # 1 | 1268+06.94 | 1167.96 | 1268+09.49 | 1168.10 | 1268+22.42 | 1168.40 | 1268+20.64 | 1168.52 | 1268+19.37 | 1168.61 | 1268+29.54 | 1167.90 |
| FIELD SPLICE | 1268+18.00 | 1167.87 | 1268+20.55 | 1168.00 | 1268+33.42 | 1168.30 | 1268+31.64 | 1168.42 | 1268+30.37 | 1168.52 | 1268+40.54 | 1167.80 |
| MIDSPAN | 1268+33.33 | 1167.73 | 1268+35.88 | 1167.87 | 1268+48.67 | 1168.16 | 1268+46.89 | 1168.29 | 1268+45.62 | 1168.38 | 1268+55.79 | 1167.66 |
| ℄ PIER # 2 | 1268+59.72 | 1167.50 | 1268+62.28 | 1167.63 | 1268+74.92 | 1167.92 | 1268+73.14 | 1168.04 | 1268+71.87 | 1168.13 | 1268+82.04 | 1167.41 |
| MIDSPAN | 1268+86.11 | 1167.26 | 1268+88.67 | 1167.39 | 1269+01.17 | 1167.67 | 1268+99.39 | 1167.79 | 1268+98.12 | 1167.88 | 1269+08.29 | 1167.16 |
| FIELD SPLICE | 1269+01.45 | 1167.12 | 1269+04.00 | 1167.26 | 1269+16.42 | 1167.52 | 1269+14.64 | 1167.65 | 1269+13.37 | 1167.74 | 1269+23.54 | 1167.01 |
| ℄ PIER # 3 | 1269+12.50 | 1167.02 | 1269+15.06 | 1167.15 | 1269+27.42 | 1167.41 | 1269+25.64 | 1167.54 | 1269+24.37 | 1167.63 | 1269+34.54 | 1166.90 |
| MIDSPAN | 1269+33.62 | 1166.82 | 1269+36.18 | 1166.95 | 1269+48.42 | 1167.20 | 1269+46.64 | 1167.33 | 1269+45.37 | 1167.42 | 1269+55.54 | 1166.69 |
| ℄ FORWARD ABUTMENT | 1269+54.73 | 1166.61 | 1269+57.29 | 1166.74 | 1269+69.42 | 1166.99 | 1269+67.64 | 1167.12 | 1269+66.37 | 1167.21 | 1269+76.54 | 1166.48 |

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

DESIGNED TAA | DRAWN TAA | REVIEWED DRL | DATE 10-8-99 | STRUCTURE FILE NUMBER 5204143

CHECKED DFT/HLG | REVISED | REVISED

SUPERSTRUCTURE DETAILS

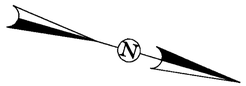
MED-71-2402 R

I-71 OVER S.R. 303

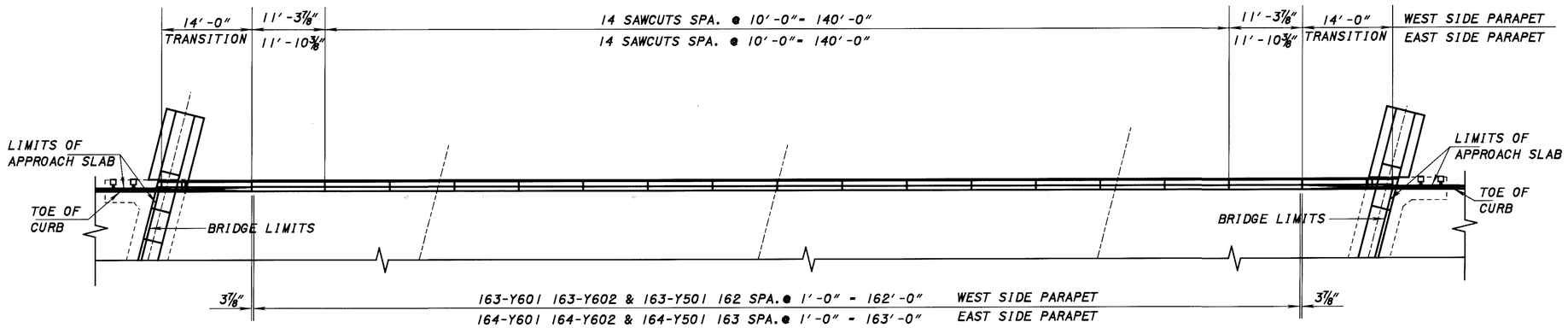
MED-71-15.78

41 / 46

926 / 940




℄ I-71



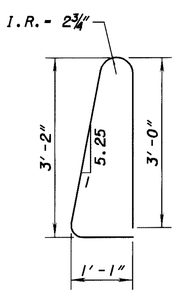

## NOTES

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

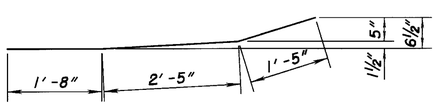
THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

REIFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

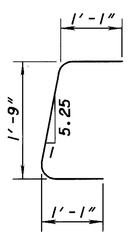
## PARAPET- PART PLAN



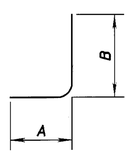

TYPE 23




TYPE 25




TYPE 34




TYPE 1

| MARK | NUMBER SUPER STAGE I | NUMBER SUPER STAGE II | NUMBER TOTAL | LENGTH | WEIGHT LB | TYPE | DIMENSIONS A | B | C | D | E | R | INC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PARAPETS - MED-71-2090 R (NORTHBOUND LANE) | | | | | | | | | | | | | |
| Y501 | 163 | 164 | 327 | 7'-5" | 2531 | 23 | | | | | | | |
| | | | | | | | | | | | | | |
| Y601 | 163 | 164 | 327 | 3'-11" | 1925 | 34 | | | | | | | |
| Y602 | 163 | 164 | 327 | 2'-8" | 1311 | 1 | 1'-1" | 1'-9" | | | | | |
| | 4 SR | 4 SR | 8 SR | 4'-4" | | | 3'-7" | | | | | | |
| Y603 | OF | OF | OF | TO | 628 | 1 | TO | 10" | | | | | 1" |
| | 11 | 11 | 11 | 5'-2" | | | 4'-5" | | | | | | |
| Y604 | 16 | 16 | 32 | 5'-6" | 264 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| X501 | 16 | 16 | 32 | 10'-0" | 334 | STR | | | | | | | |
| X502 | 3 | 6 | 9 | 5'-6" | 52 | 25 | | | | | | | |
| X503 | 13 | 10 | 23 | 5'-6" | 132 | STR | | | | | | | |
| X504 | 36 | 36 | 72 | 30'-0" | 2253 | STR | | | | | | | |
| | | | | | | | | | | | | | |
| X601 | 6 | 6 | 12 | 30'-0" | 541 | STR | | | | | | | |
| | | | | | | | | | | | | | |

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

REVISED DRL DATE 10-8-99 | STRUCTURE FILE NUMBER 5204143

DRAWN TAA | REVISED

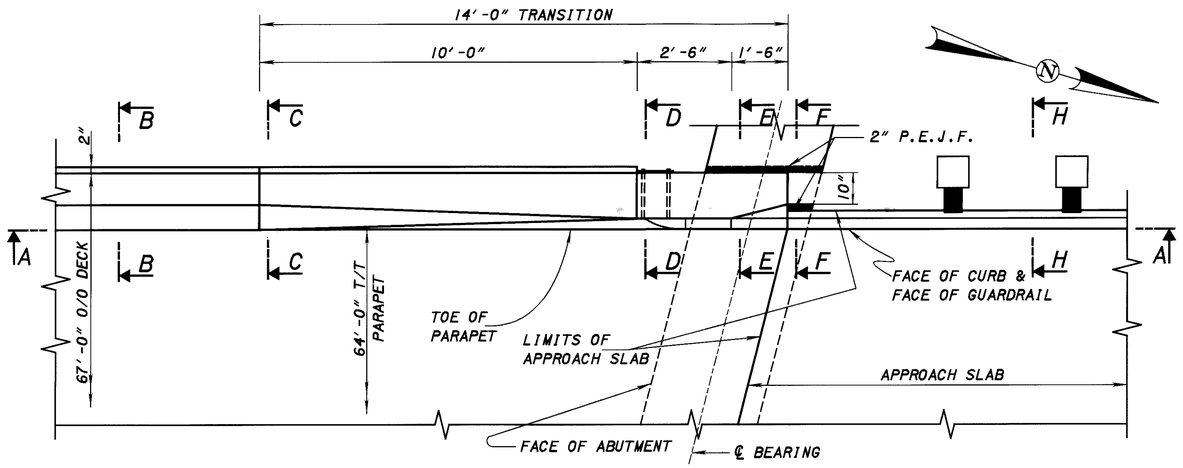
DESIGNED TAA | CHECKED DFT

SUPERSTRUCTURE DETAILS

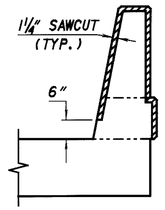
MED-71-2402 R

I-71 OVER S.R. 303

MED-71-15.78

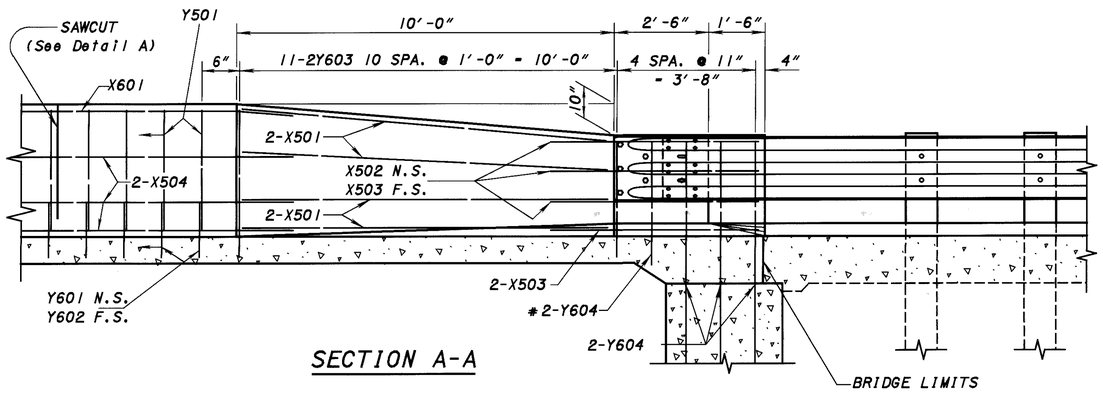



## PART PLAN AT ABUTMENT

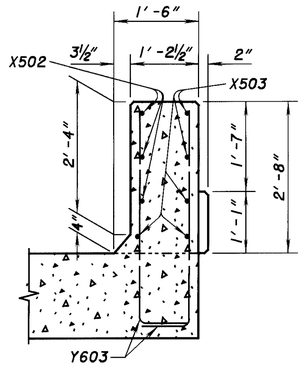



## DETAIL A

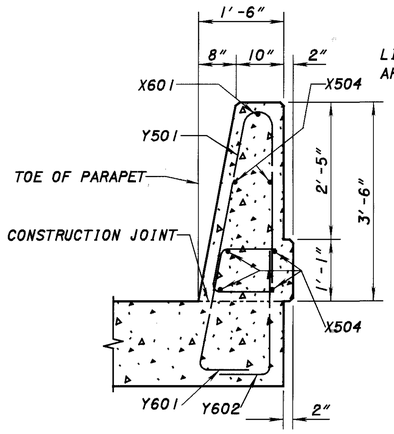
(Section through sawcut)
Sawcut Perimeter = 7'-6"




## SECTION A-A

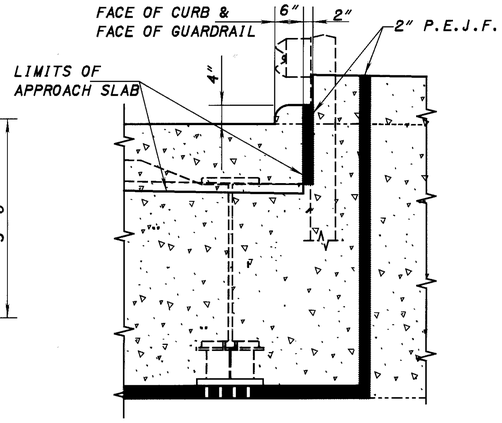



## SECTION D-D

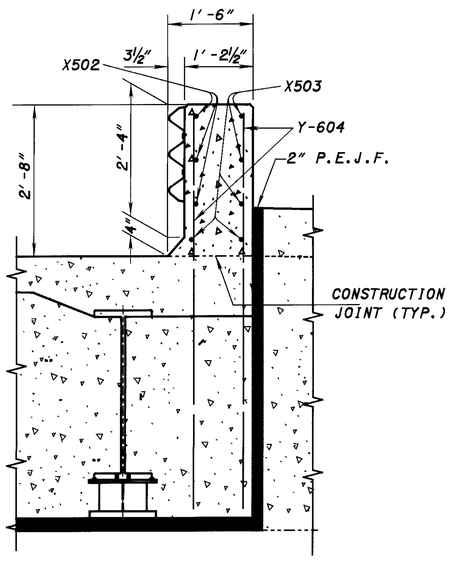



## SECTION B-B & C-C

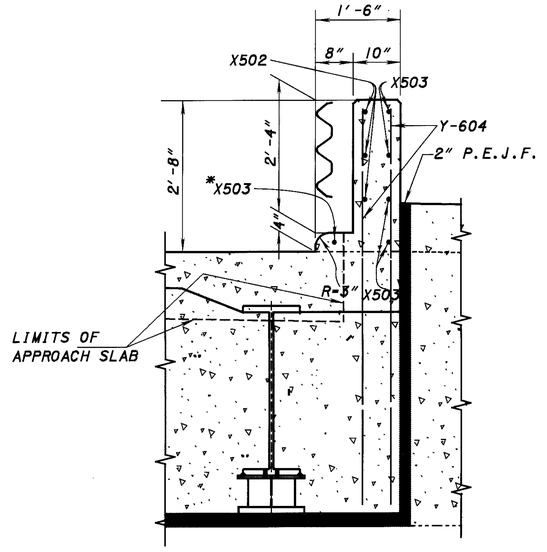
Area = 4.26 ft²




## SECTION H-H




## SECTION E-E




## SECTION F-F

* FIELD BEND IF NECESSARY

## NOTES

**CONTROL JOINTS FOR CONCRETE PARAPETS:** THE JOINTS SHALL BE CONSTRUCTED BY SAWING 1¼ INCH DEEP ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF ¼ INCH.

THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL TO A MINIMUM DEPTH OF ONE INCH CONFORMING TO FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE-HALF INCH OF THE OUTSIDE FACE OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

**QUANTITIES** OF CONCRETE, REINFORCING STEEL, DEFLECTION JOINT SAWCUT AND CAULKING MATERIAL FOR PARAPET ARE INCLUDED WITH ITEM 844 HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

FOR BRIDGE TERMINAL ASSEMBLY SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.

FOR ADDITIONAL INFORMATION ON THE CONCRETE CURB SHOWN IN SECTION H-H SEE STD. CONST. DWG. BP-5.1. THE CURB SHALL BE TYPE 4-A.

MIN. LAP SPLICES: #5 BAR - 2'-6"
#6 BAR - 3'-0"

LEGEND: N.S. - NEAR SIDE
F.S. - FAR SIDE

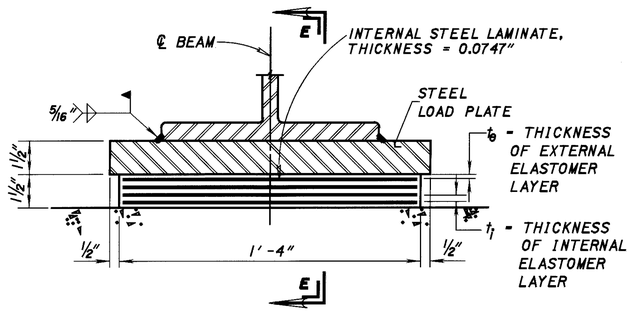
#- REQUIRE FIELD CUTTING

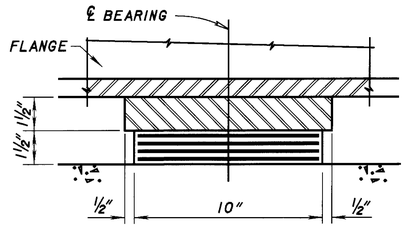
DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| TAA | TAA | DRL | 10-8-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | 5204143 | |

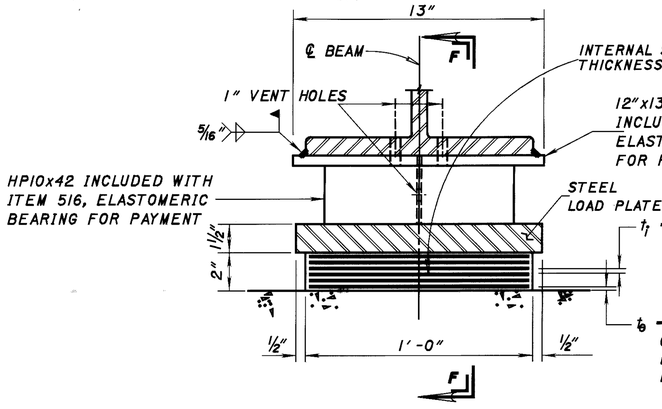
PARAPET DETAILS
MED-71-2402 L
I-71 OVER S.R. 303

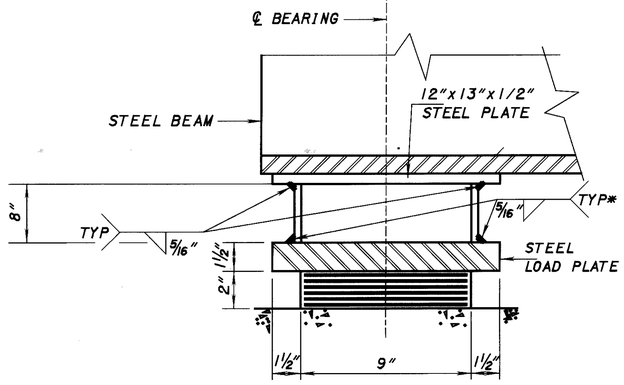
MED-71-15.78



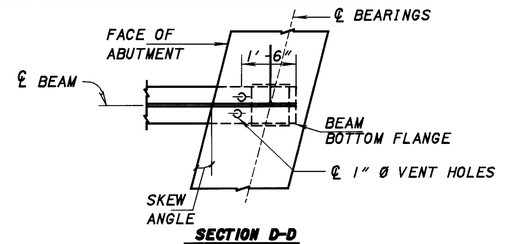

**SECTION E-E**
**LAMINATED ELASTOMERIC EXPANSION PIER BEARING**




* FIELD WELD OPTIONAL

**SECTION F-F**
**LAMINATED ELASTOMERIC EXPANSION ABUTMENT BEARING**




**SECTION D-D**

LEGEND

EXP - EXPANSION

## BEARING TABLE

| BEARING LOCATION | TYPE | L | W | $t_i$ In. | $t_o$ In. | $n_1$ | $n_2$ | STEEL LOAD ℄ | TOTAL HEIGHT* | DL, Kips | LL, Kips | TOTAL, Kips |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENT | EXP | 9" | 12" | 0.24 | 0.17 | 5 | 6 | 12"x13"x1½" | 3½" | 56 | 42 | 98 |
| PIER 1 & PIER 3 | EXP | 10" | 16" | 0.28 | 0.20 | 3 | 4 | 11"x17"x1½" | 3" | 85 | 49 | 134 |
| PIER 2 | FIXED | 10" | 16" | 0.28 | 0.20 | 3 | 4 | 11"x22"x1½" | 3" | 85 | 49 | 134 |

$n_1$ - NUMBER OF INTERNAL ELASTOMER LAYERS, $t_i$ ELASTOMER LAYERS ARE 50 DUROMETERS
$n_2$ - NUMBER OF STEEL LAMINATES, 0.0747" THICKNESS * TOTAL HEIGHT INCLUDES LOAD PLATE

## NOTES:

INSTALLATION PROCEDURE: ANCHOR BOLTS SHALL BE EITHER CAST IN PLACE BY USE OF A TEMPLATE OR FIELD DRILLED AND GROUTED AT THE CONTRACTOR'S OPTION. CARE SHALL BE TAKEN TO ASSURE THAT THE ANCHOR BOLTS DO NOT INTERFERE WITH REINFORCING STEEL.

MATERIALS: THE HP SHAPE (SUPPORT MEMBER) AND STEEL PLATES MAY BE GRADE 36 STEEL. THE HP SHAPE AND STEEL PLATES SHALL BE METALIZED.

PAYMENT FOR MATERIALS, LABOR, FABRICATION, PROTECTIVE COATING, VENT HOLES AND INSTALLATION OF THE HP SHAPE AND STEEL PLATE SHALL BE INCLUDED WITH ITEM 516 ABUTMENT ELASTOMERIC BEARINGS, AS PER PLAN, FOR PAYMENT.

WELDING: WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

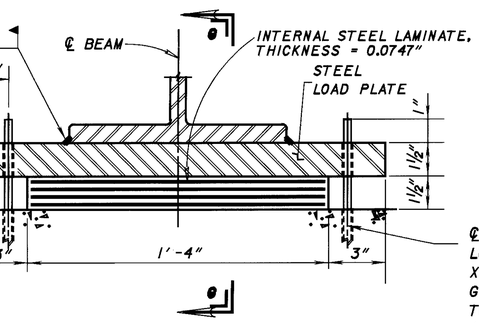
BRIDGE SEAT REINFORCING:
REINFORCING STEEL IN THE VICINITY OF BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.

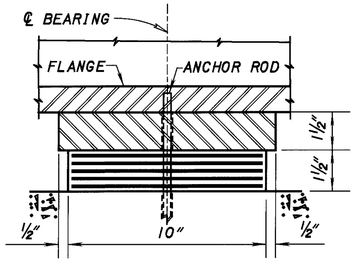
BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60° F ± 10° F, THE BEAMS SHALL BE RAISED TO ALLOW THE BEARING TO RETURN TO THEIR UNDERFORMED SHAPE AT 60° F ± 10° F.

ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL LOAD PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).

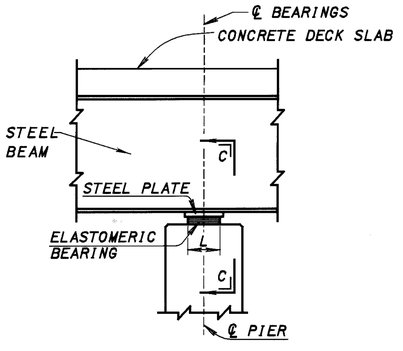
BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, ANCHOR RODS, HP10x42, STEEL PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):

9" x 12" x 2" WITH 12" x 13" x 1½" LOAD PLATE, AS PER PLAN (ABUTMENT)
10" x 16" x 1½" WITH 11" x 17" x 1½" LOAD PLATE (PIER #1 & #3)
10" x 16" x 1½" WITH 11" x 22" x 1½" LOAD PLATE, AS PER PLAN (PIER # 2)

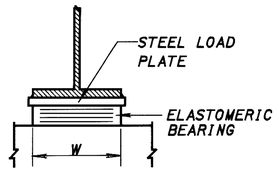



**SECTION G-G**
**LAMINATED ELASTOMERIC FIXED PIER BEARING**




**SECTION THRU PIER**




**SECTION C-C**

ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION
DESIGN AGENCY

DATE 10-8-99
REVIEWED DRL
STRUCTURE FILE NUMBER 5204143

DRAWN TAA
REVISED

DESIGNED TAA
CHECKED DFT

BEARING DETAILS
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78

44/46

929
940

THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | INC |
| ABUTMENTS - MED-71-2402 R (NORTHBOUND LANE) | | | | | | | | | | | | |
| A500 | 34 | 50 | 34 | 50 | 168 | 8'-5" | 1475 | 2 | 3'-0" | 2'-8" | 3'-0" | |
| A501 | 54 | 90 | 54 | 90 | 288 | 8'-1" | 2427 | 2 | 2'-10" | 2'-8" | 2'-10" | |
| A502 | 27 | 45 | 27 | 45 | 144 | 8'-5" | 1265 | 2 | 3'-3" | 2'-2" | 3'-3" | |
| | | 1 SR | | | 1 SR | 10'-7" | | | | | | |
| A503 | | OF | | | OF | TO | 47 | STR | | | | 6 3/8" |
| | | 4 | | | 4 | 12'-2" | | | | | | |
| A504 | 6 | | | | 6 | 31'-4" | 196 | STR | | | | |
| A505 | 6 | 12 | 6 | 12 | 36 | 35'-0" | 1314 | STR | | | | |
| A506 | 28 | 8 | 28 | 8 | 72 | 16'-9" | 1258 | 3 | 5'-8" | 2'-7" | | |
| A507 | 17 | | 17 | | 34 | 16'-5" | 582 | 2 | 7'-0" | 2'-8" | 7'-0" | |
| A508 | | 12 | | 12 | 24 | 3'-0" | 75 | STR | | | | |
| | | 1 SR | | | 1 SR | 8'-10 | | | | | | |
| A509 | | OF | | | OF | TO | 19 | STR | | | | 9" |
| | | 2 | | | 2 | 9'-7" | | | | | | |
| A510 | | 2 | | 2 | 4 | 12'-1" | 50 | STR | | | | |
| A511 | | 1 | | | 1 | 9'-3" | 10 | STR | | | | |
| A512 | | 1 | | | 1 | 8'-6" | 9 | STR | | | | |
| A513 | | 1 | | | 1 | 10'-3" | 11 | 19 | 8'-3" | 1'-9" | 2'-0" | |
| A514 | | 1 | | | 1 | 9'-6" | 10 | 19 | 8'-3" | 1'-1" | 1'-3" | |
| A515 | | 1 | | | 1 | 6'-10" | 7 | STR | | | | |
| A516 | | 1 | | | 1 | 6'-1" | 6 | STR | | | | |
| A517 | | 1 | | | 1 | 4'-5" | 5 | STR | | | | |
| A518 | | 1 | | | 1 | 3'-8" | 4 | STR | | | | |
| | 1 SR | 1 SR | 1 SR | 1 SR | 4 SR | 21'-3" | | | 9'-5" | | 9'-5" | |
| A519 | OF | OF | OF | | OF | TO | 601 | 2 | TO | 2'-8" | TO | 6 1/2" |
| | 6 | 6 | 6 | | 6 | 26'-9" | | | 12'-2" | | 12'-2" | |
| A520 | 8 | 8 | 8 | 8 | 32 | 6'-5" | 214 | 2 | 2'-0" | 2'-8" | 2'-0" | |
| A521 | 1 | 1 | 1 | 1 | 4 | 19'-9" | 82 | 2 | 8'-8" | 2'-8" | 8'-8" | |
| A522 | 1 | 1 | 1 | 1 | 4 | 19'-3" | 80 | 2 | 8'-5" | 2'-8" | 8'-5" | |
| A523 | 1 | | | | 1 | 6'-0" | 6 | STR | | | | |
| A524 | 2 | | | | 2 | 7'-11" | 17 | STR | | | | |
| A525 | 2 | | | | 2 | 8'-6" | 18 | STR | | | | |
| A526 | 1 | | | | 1 | 5'-4" | 6 | STR | | | | |
| A527 | 8 | | 8 | | 16 | 14'-0" | 234 | STR | | | | |
| A528 | 1 | | | | 1 | 8'-6" | 9 | 19 | 7'-10 | 0'-7" | 0'-8" | |
| A529 | 1 | | | | 1 | 9'-2" | 10 | 19 | 7'-10 | 1'-2" | 1'-4" | |
| A530 | 1 | | | | 1 | 2'-11" | 3 | STR | | | | |
| A531 | 1 | | | | 1 | 3'-5" | 4 | STR | | | | |
| | 1 SR | | | | 1 SR | 10'-7" | | | | | | |
| A532 | OF | | | | OF | TO | 24 | STR | | | | 1'-7" |
| | 2 | | | | 2 | 12'-2" | | | | | | |
| | | | 1 SR | | 1 SR | 30'-5" | | | | | | |
| A533 | | | OF | | OF | TO | 65 | STR | | | | 1'-6" |
| | | | 2 | | 2 | 31'-11" | | | | | | |
| | | | 1 SR | | 1 SR | 30'-5" | | | | | | |
| A534 | | | OF | | OF | TO | 130 | STR | | | | 6" |
| | | | 4 | | 4 | 31'-11" | | | | | | |
| | | | | 1 SR | 1 SR | 9'-6" | | | | | | |
| A535 | | | | OF | OF | TO | 21 | STR | | | | 1'-6" |
| | | | | 2 | 2 | 11'-0" | | | | | | |
| | | | | 1 SR | 1 SR | 9'-6" | | | | | | |
| A536 | | | | OF | OF | TO | 43 | STR | | | | 6" |
| | | | | 4 | 4 | 11'-0" | | | | | | |
| A537 | | | | 1 | 1 | 9'-1" | 9 | 19 | 8'-5" | 0'-11" | 0'-8" | |
| A538 | | | | 1 | 1 | 9'-11" | 10 | 19 | 8'-5" | 1'-7" | 1'-6" | |

| MARK | NUMBER | | | | | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REAR ABUT. STAGE I | REAR ABUT. STAGE II | FWD. ABUT. STAGE I | FWD. ABUT. STAGE II | TOTAL | | LB | | A | B | C | INC |
| ABUTMENTS - MED-71-2402 R (NORTHBOUND LANE) | | | | | | | | | | | | |
| A539 | | | | 1 | 1 | 5'-6" | 6 | STR | | | | |
| A540 | | | | 1 | 1 | 6'-4" | 7 | STR | | | | |
| A541 | | | | 1 | 1 | 7'-10" | 8 | STR | | | | |
| A542 | | | | 1 | 1 | 8'-9" | 9 | STR | | | | |
| A543 | | | | 1 | 1 | 3'-2" | 4 | STR | | | | |
| A544 | | | | 1 | 1 | 4'-0" | 4 | STR | | | | |
| | | | | 1 SR | 1 SR | 8'-4" | | | | | | |
| A545 | | | | OF | OF | TO | 18 | STR | | | | 10" |
| | | | | 2 | 2 | 9'-2" | | | | | | |
| A546 | | | 2 | | 2 | 8'-9" | 18 | STR | | | | |
| A547 | | | 2 | | 2 | 7'-11" | 17 | STR | | | | |
| A548 | | | 1 | | 1 | 6'-8" | 7 | STR | | | | |
| A549 | | | 1 | | 1 | 5'-10" | 6 | STR | | | | |
| A550 | | | 1 | | 1 | 4'-8" | 5 | STR | | | | |
| A551 | | | 1 | | 1 | 3'-10" | 4 | STR | | | | |
| A552 | | | 1 | | 1 | 9'-8" | 10 | 19 | 7'7" | 1'-10" | 2'-1" | |
| A553 | | | 1 | | 1 | 8'-10" | 9 | 19 | 7'7" | 1'-2" | 1'-3" | |
| A601 | 30 | 98 | 30 | 98 | 256 | 5'-11" | 2277 | STR | | | | |
| A802 | | 28 | | 28 | 56 | 30'-6" | 4560 | STR | | | | |
| | | 1 SR | | | 1 SR | 10'-7" | | | | | | |
| A803 | | OF | | | OF | TO | 121 | STR | | | | 6 3/8" |
| | | 4 | | | 4 | 12'-2" | | | | | | |
| | 1 SR | | 1 SR | | 2 SR | 36'-11" | | | | | | |
| A804 | OF | | OF | | OF | TO | 796 | STR | | | | 2 5/8" |
| | 4 | | 4 | | 4 | 37'-7" | | | | | | |
| | 1 SR | | 1 SR | | 2 SR | 36'-11" | | | | | | |
| A805 | OF | | OF | | OF | TO | 398 | STR | | | | 8" |
| | 2 | | 2 | | 2 | 37'-7" | | | | | | |
| A806 | 4 | | | | 4 | 31'-4" | 335 | STR | | | | |
| A807 | 4 | | 4 | | 8 | 38'-3" | 817 | STR | | | | |
| A808 | | 8 | | 8 | 16 | 30'-8" | 1310 | STR | | | | |
| | | | 1 SR | | 1 SR | 30'-5" | | | | | | |
| A809 | | | OF | | OF | TO | 333 | STR | | | | 6" |
| | | | 4 | | 4 | 31'-11" | | | | | | |
| | | | | 1 SR | 1 SR | 9'-6" | | | | | | |
| A810 | | | | OF | OF | TO | 109 | STR | | | | 6" |
| | | | | 4 | 4 | 11'-0" | | | | | | |
| D801 | 28 | 44 | 28 | 44 | 144 | 4'-4" | 1665 | 18 | 2'-7" | 1'-0" | 1'-0" | |

DESIGN AGENCY: ODOT CENTRAL OFFICE, OFFICE OF PRODUCTION

DESIGNED TAA | DRAWN TAA | CHECKED DFT | REVISED | REVIEWED DRL | DATE 10-8-99 | STRUCTURE FILE NUMBER 5204143

REINFORCING STEEL
MED-71-2402 R
I-71 OVER S.R. 303

MED-71-15.78

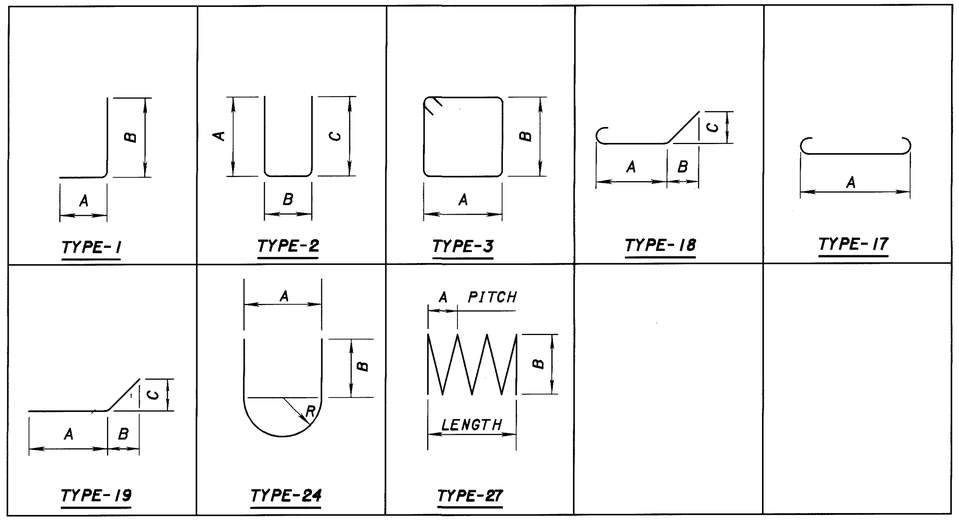
45/46

930
940

THIS REINFORCING SCHEDULE IS FOR INFORMATION ONLY.

| MARK | NUMBER | | | | LENGTH | WEIGHT LB | TYPE | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PIER 1 | PIER 2 | PIER 3 | TOTAL | | | | A | B | C | D | R | INC |
| | PIERS - MED-71-2402 R (NORTHBOUND LANE) | | | | | | | | | | | | |
| SP401 | 2 | | | 2 | 16'-6" | 488 | 27 | 4½" | 2'-6" | | | | |
| SP402 | | 2 | | 2 | 12'-4" | 370 | 27 | 4½" | 2'-6" | | | | |
| SP403 | | | 2 | 2 | 15'-7" | 458 | 27 | 4½" | 2'-6" | | | | |
| P500 | 8 | 8 | 8 | 24 | 8'-0" | 200 | 24 | 2'-8" | 2'-0" | | | 1'-3⅜" | |
| P501 | 8 | | 8 | 16 | 15'-5" | 257 | 3 | 2'-8" | 4'-10" | | | | |
| P502 | 148 | 140 | 140 | 428 | 12'-0" | 5357 | 2 | 4'-9" | 2'-8" | 4'-9" | | | |
| P503 | 10 | 10 | 10 | 30 | 35'-8" | 1116 | STR | | | | | | |
| P504 | 20 | 10 | 10 | 40 | 28'-7" | 1192 | STR | | | | | | |
| P505 | | 10 | | 10 | 27'-11" | 291 | STR | | | | | | |
| P506 | | | 10 | 10 | 26'-10" | 280 | STR | | | | | | |
| P507 | 17 | 17 | 17 | 51 | 9'-8" | 514 | STR | | | | | | |
| P508 | | 8 | | 8 | 15'-9" | 131 | 3 | 2'-8" | 5'-0" | | | | |
| P701 | 8 | 8 | 8 | 24 | 35'-8" | 1750 | STR | | | | | | |
| P702 | 8 | | | 8 | 38'-3" | 625 | STR | | | | | | |
| P703 | 8 | | | 8 | 21'-6" | 352 | STR | | | | | | |
| P704 | | 8 | 8 | 16 | 37'-5" | 1223 | STR | | | | | | |
| P705 | | 8 | 8 | 16 | 21'-2" | 692 | STR | | | | | | |
| P801 | 8 | 8 | 8 | 24 | 35'-8" | 2286 | STR | | | | | | |
| P802 | 16 | 8 | 8 | 32 | 31'-0" | 2649 | STR | | | | | | |
| P803 | | 8 | | 8 | 29'9" | 635 | STR | | | | | | |
| P804 | | | 8 | 8 | 28'-8" | 612 | STR | | | | | | |
| P805 | 22 | 22 | 22 | 66 | 18'-4" | 3230 | 17 | 16'-6" | | | | | |
| P806 | 18 | 18 | 18 | 54 | 11'-4" | 1634 | 17 | 9'-6" | | | | | |
| P1001 | 16 | | | 16 | 21'-0" | 1444 | STR | | | | | | |
| P1002 | | 16 | | 16 | 17'-0" | 1170 | STR | | | | | | |
| P1003 | | | 16 | 16 | 20'-0" | 1374 | STR | | | | | | |
| P1004 | 16 | 16 | 16 | 48 | 10'-8" | 2203 | 1 | 1'-6" | 9'-6" | | | | |

| MARK | NUMBER | | | LENGTH | WEIGHT LB | TYPE | DIMENSIONS | | |
|---|---|---|---|---|---|---|---|---|---|
| | SUPER STAGE I | SUPER STAGE II | TOTAL | | | | A | B | INC |
| | SUPERSTRUCTURE - MED-71-2402 R (NORTHBOUND LANE) | | | | | | | | |
| S401 | 266 | 398 | 664 | 29'-0" | 12863 | STR | | | |
| S501 | 746 | | 746 | 40'-0" | 31123 | STR | | | |
| S502 | | 912 | 912 | 30'-2" | 28695 | STR | | | |
| S503 | 287 | 406 | 693 | 29'-6" | 21323 | STR | | | |
| S504 | | 208 | 208 | 29'-9" | 6454 | STR | | | |
| S505 | | 208 | 208 | 28'-7" | 6200 | STR | | | |
| S506 | | 164 | 164 | 27'-5" | 4690 | STR | | | |
| S601 | 111 | 164 | 275 | 24'-0" | 9913 | STR | | | |




## BENDING DIAGRAMS

## NOTES

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. THE DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES THE INSIDE RADIUS.

REIFORCING STEEL MAY REQUIRE FIELD CUTTING OR BENDING TO BE PROPERLY FITTED. PAYMENT SHALL BE INCLUDED WITH THE ASSOCIATED CONCRETE ITEM.

DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

REVISED DRL DATE 10-8-99
STRUCTURE FILE NUMBER 5204143

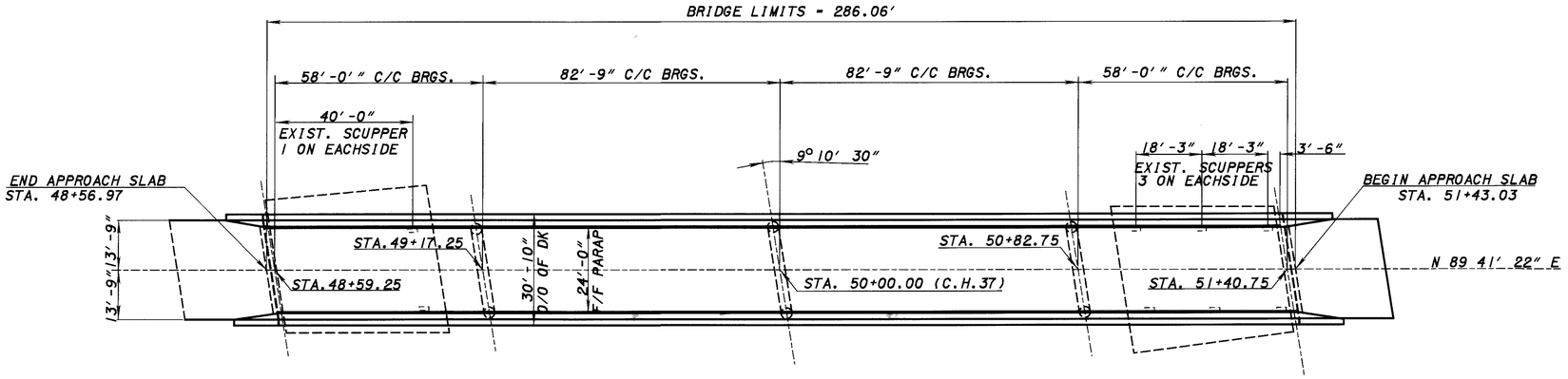
DRAWN TAA REVISED
DESIGNED TAA CHECKED DFT

REINFORCING STEEL
MED-71-2402 R
I-71 OVER S.R. 303

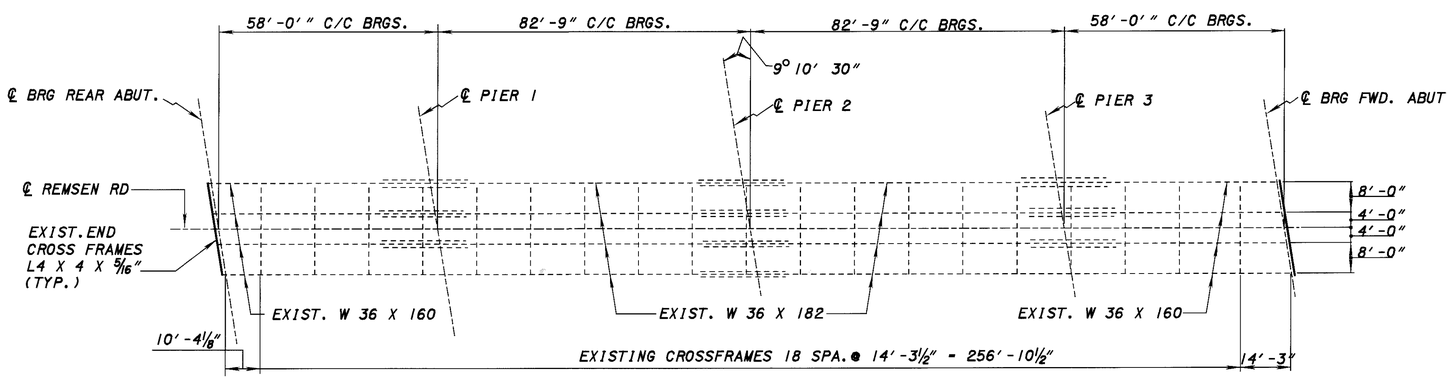
MED-71-15.78

46/46

931
940




## PLAN VIEW




## EXISITING STEEL FRAMING PLAN

### PROPOSED WORK

1. ENCASE THE EXISTING PIERS WITH 6 INCHES OF CONCRETE. SOUND AND PATCH PRIOR TO ADDING ENCASEMENT.
2. PAINT THE EXISTING STEEL BEAMS
3. REPLACE THE ABUTMENT BEARINGS, MASONRY PLATES AND LOAD PLATES
4. MODIFY EXISTING SCUPPERS
5. REPLACE END CROSSFRAMES
6. SEAL EXPOSED SUBSTRUCTURE SURFACES.

### NOTES

FOR PIER COLUMN ENCASEMENT DETAILS SEE SHEET 7 / 9

FOR BEARING DETAILS, SEE SHEET 8 / 9

FOR SCUPPER MODIFICATION SEE SHEET 6 / 9

STATIONING AND DIMENSIONS SHOWN ARE FROM EXISTING PLANS.

FOR END CROSSFRAMES REMOVAL DETAILS SEE SHEET 9 / 9

DESIGN AGENCY
OHIO DEPARTMENT
OF TRANSPORTATION
OFFICE OF PRODUCTION

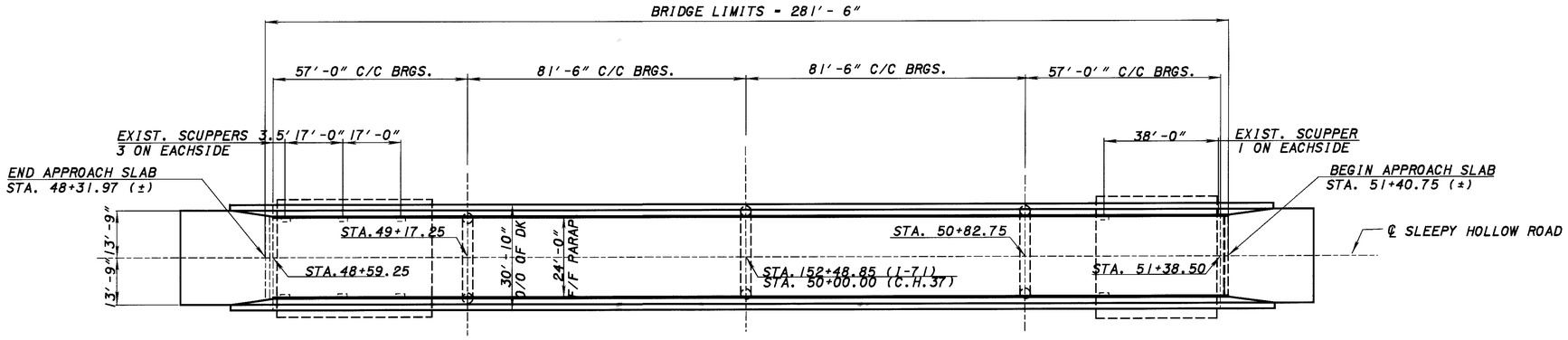
DESIGNED JFF
DRAWN JFF
CHECKED HLG
REVISED DFT
DATE 9-15-99
REVISED
STRUCTURE FILE NUMBER 5203872

PLAN VIEW
BRIDGE NO. MED-71-2034
IR 71 UNDER REMSEN RD (CH37)

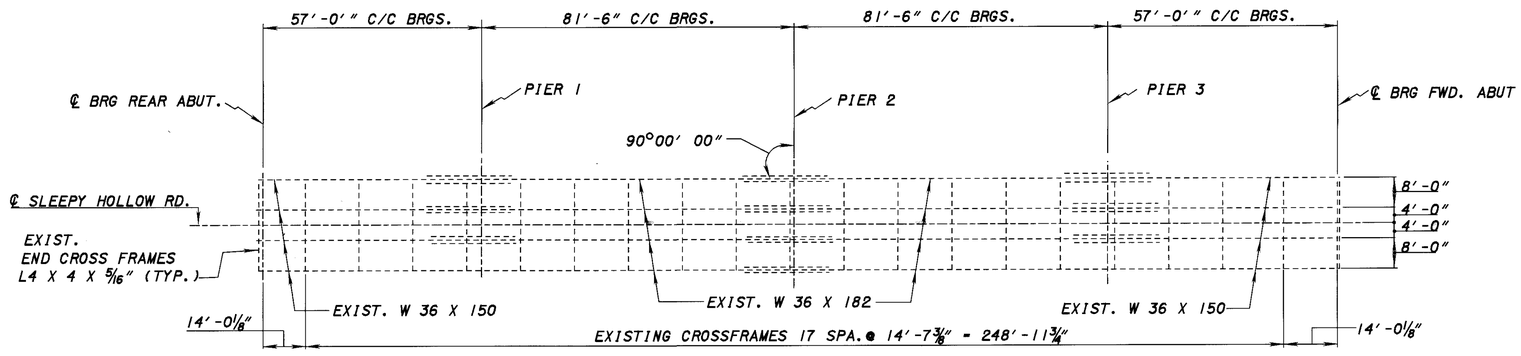
MED-71-15.78

1 / 9

932
940




TYPICAL PLAN VIEW




EXISITING STEEL FRAMING PLAN

PROPOSED WORK

1. ENCASE THE EXISTING PIERS WITH 6 INCHES OF CONCRETE. SOUND AND PATCH PRIOR TO ADDING ENCASEMENT.
2. PAINT THE EXISTING STEEL BEAMS
3. REPLACE THE ABUTMENT BEARINGS, MASONRY PLATES AND LOAD PLATES
4. MODIFY EXISTING SCUPPERS
5. REPLACE END CROSSFRAMES
6. SEAL EXPOSED SUBSTRUCTURE SURFACES.

NOTES

FOR PIER COLUMN ENCASEMENT DETAILS
SEE SHEET 7 / 9

FOR BEARING DETAILS, SEE SHEET 8 / 9

FOR SCUPPER MODIFICATION SEE SHEET 6 / 9

STATIONING AND DIMENSIONS SHOWN ARE FROM EXISTING PLANS.

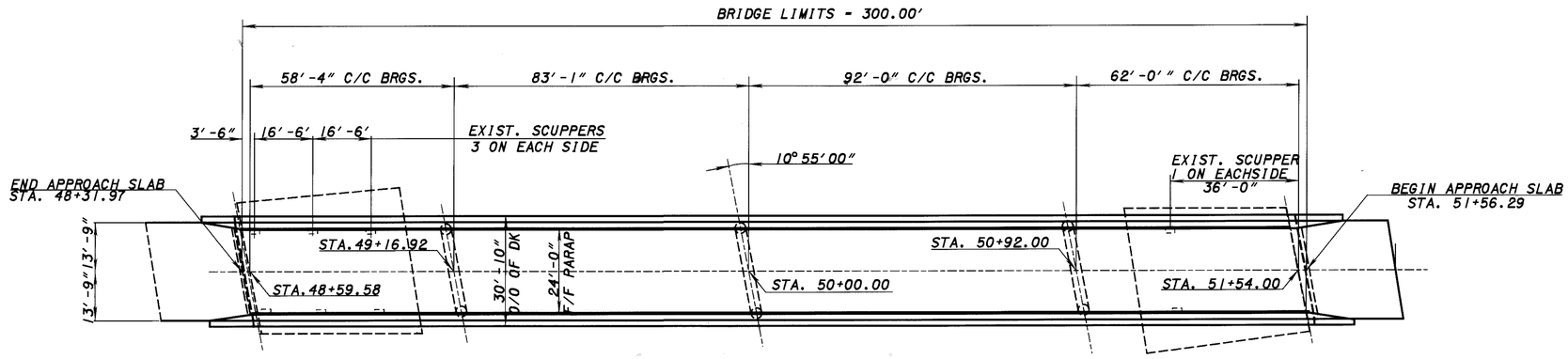
FOR END CROSSFRAMES REMOVAL DETAILS
SEE SHEET 9 / 9

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF PRODUCTION

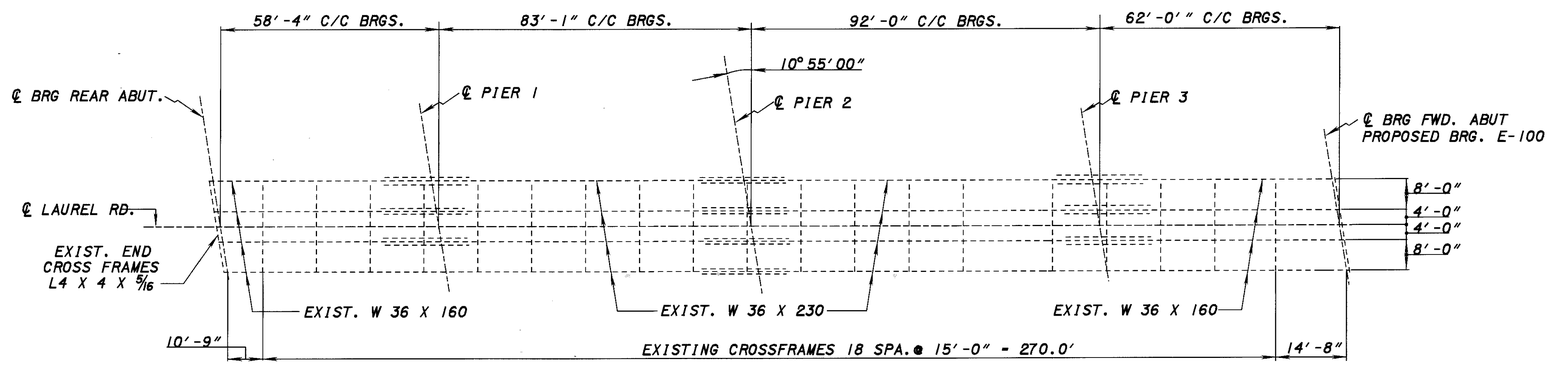
| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| JFF | JFF | DFT | 9-15-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| HLG | | 5204054 | |

PLAN VIEW
BRIDGE NO. MED-71-2242
I-R UNDER SLEEPY HOLLOW ROAD (CH.136)

MED-71-15.78




TYPICAL PLAN VIEW




EXISITING STEEL FRAMING PLAN

PROPOSED WORK

1. ENCASE THE EXISTING PIERS WITH 6 INCHES OF CONCRETE. SOUND AND PATCH PRIOR TO ADDING ENCASEMENT.
2. PAINT THE EXISTING STEEL BEAMS
3. REPLACE THE ABUTMENT BEARINGS, MASONRY PLATES AND LOAD PLATES
4. MODIFY EXISTING SCUPPERS
5. REPLACE END CROSSFRAMES
6. SEAL EXPOSED SUBSTRUCTURE SURFACES.

NOTES

FOR PIER COLUMN ENCASEMENT DETAILS SEE SHEET 7 / 9

FOR BEARING DETAILS, SEE SHEET 8 / 9

FOR SCUPPER MODIFICATION SEE SHEET 6 / 9

STATIONING AND DIMENSIONS SHOWN ARE FROM EXISTING PLANS.

FOR END CROSSFRAMES REMOVAL DETAILS SEE SHEET 9 / 9

DESIGN AGENCY
OHIO DEPARTMENT
OF TRANSPORTATION
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| JFF | JFF | DFT | 9-15-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| HLG | | 5204119 | |

PLAN VIEW
BRIDGE NO. MED-71-2321
IR 71 UNDER LAUREL ROAD (CH38)

MED-71-15.78

| MED-71-2034 | MED-71-2242 | MED-71-2321 | MED-71-2565 | | | | | ESTIMATED QUANTITIES |
|---|---|---|---|---|---|---|---|---|
| QUANTITY | | | | ITEM | EXT | TOTAL | UNIT | DESCRIPTION |
| LUMP | LUMP | LUMP | LUMP | 202 | 11203 | | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN |
| | | | | | | | | |
| 310 | 325 | 320 | 350 | SPECIAL | 51267510 | 1305 | SQ YD | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) |
| | | | | | | | | |
| 8 | 8 | 8 | | 516 | 44101 | 24 | EACH | ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (8½"x12"x2½" PAD) |
| LUMP | LUMP | LUMP | | 516 | 47000 | | | JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE |
| | | | | | | | | |
| 8 | 8 | 8 | | 518 | 12901 | 24 | EACH | SCUPPER, LENGTHENING, AS PER PLAN |
| | | | | | | | | |
| 12,390 | 12,200 | 13,035 | | 815 | 00050 | 37,625 | SQ FT | SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU* |
| 12,390 | 12,200 | 13,035 | | 815 | 00056 | 37,625 | SQ FT | FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU* |
| 12,390 | 12,200 | 13,035 | | 815 | 00060 | 37,625 | SQ FT | FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU* |
| 12,390 | 12,200 | 13,035 | | 815 | 00066 | 37,625 | SQ FT | FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU* |
| | | | | | | | | |
| 40 | 40 | 40 | | 815 | 00504 | 120 | MAN HR | GRINDING FINS, TEARS, SLIVERS |
| 580 | 580 | 580 | | 815 | 00508 | 1740 | LIN FT | GRINDING FLANGE EDGES |
| | | | | | | | | |
| 20 | 20 | 20 | 20 | 842 | 34450 | 80 | CU YD | CLASS S CONCRETE, MISC.: PIER ENCASEMENT |
| | | | | | | | | |
| LUMP | LUMP | LUMP | | 863 | 10001 | LUMP | | STRUCTURAL STEEL MEMBERS, MISCELLANEOUS LEVEL FABRICATION, AS PER PLAN |

* THESE QUANTITIES CONTAIN AN ADDITIONAL 25% FOR INCIDENTALS

## NOTES

NOTE: ALL REINFORCING STEEL SHALL BE EPOXY COATED.

THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INIDICATES THE BAR SIZE. FOR EXAMPLE, AN A501 IS A #5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. "R" INDICATES INSIDE RADIUS.

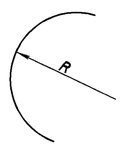
MIN. LAP SPLICES: #4 BAR - 2'-0"

THIS REINFORCING STEEL LIST IS FOR INFORMATION PURPOSES ONLY

SEE SHEET 7/9 FOR PIER COLUMN ENCASEMENT DETAILS.

| MARK | NUMBER TOTAL | LENGTH | WEIGHT | TYPE | DIMENSIONS A | B | C | D | E | R | INC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| PIERS | | | | | | | | | | | |
| MED-71-2034 | | | | | | | | | | | |
| P401 | 33 | 15'-3" | 336 | STR | | | | | | | |
| P402 | 33 | 13'-10" | 305 | STR | | | | | | | |
| SP401 | 234 | 7'-6" | 1172 | 33 | | | | | | 1'-9" | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| MED-71-2242 | | | | | | | | | | | |
| P403 | 33 | 13'-10" | 305 | STR | | | | | | | |
| P404 | 33 | 17'-8" | 389 | STR | | | | | | | |
| SP401 | 252 | 7'-6" | 1263 | 33 | | | | | | 1'-9" | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| MED-71-2321 | | | | | | | | | | | |
| P405 | 33 | 14'-5" | 318 | STR | | | | | | | |
| P406 | 33 | 16'-10" | 371 | STR | | | | | | | |
| SP401 | 252 | 7'-6" | 1263 | 33 | | | | | | 1'-9" | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| MED-71-2526 | | | | | | | | | | | |
| P407 | 66 | 13'-9" | 606 | STR | | | | | | | |
| SP401 | 222 | 7'-6" | 1112 | 33 | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

NOTE: THE GRAND TOTAL IS SHOWN FOR INFORMATION ONLY.




TYPE 33

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF PRODUCTION

DESIGNED JFF | DRAWN JFF | REVISED DFT | DATE 9-18-99

CHECKED HLG | REVISED | STRUCTURE FILE NUMBER

# ESTIMATED QUANTITIES AND REINFORCING STEEL LIST

BRIDGE NOS. MED-71-2034, MED-71-2242, MED-71-2321, MED-71-2565
IR-71 UNDER REWSEN RD, SLEEPY HOLLOW RD, LAUREL RD, GRAFTON RD

MED-71-15.78

4/9

935
940

**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AND TO SUPPLEMENTAL SPECIFICATIONS:
815 DATED 5-30-96
863 DATED 10-12-99
910 DATED 7-28-98

**DESIGN SPECIFICATION:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION FOR STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1997, INCLUDING THE 1998 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

**DESIGN LOADING:**

HS20-44, CASE II AND THE ALTERNATE MILITARY LOADING.

**DESIGN DATA:**

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I.
REINFORCING STEEL - ASTM A615, A616 OR A617
GRADE 60, MINIMUM YIELD STRENGTH 60,000 P.S.I.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO THE CONSTRUCTION MATERIAL SPECIFICATION (CMS SECTIONS 102.05, 105.02 AND 513.02).

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER , ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

**EXISTING BRIDGE PLANS** MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT OFFICE IN ASHLAND, OHIO.

**REPLACEMENT OF EXISTING REINFORCING STEEL:**

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THE CONTRACTOR'S COST.

**ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN**

DESCRIPTION:
THIS WORK SHALL CONSIST OF THE REMOVAL OF PORTIONS OF EXISTING SCUPPERS, END CROSSFRAMES, GUSSET PLATES AND EXISTING ABUTMENT BEARINGS AND THIER LOAD PLATES. THE EXISTING ABUTMENT BRIDGE SEATS SHALL BE THOROUGHLY CLEANED PRIOR TO PLACEMENT OF NEW BEARINGS. THE CONCRETE SURFACE SHALL BE CLEANED OF ALL DIRT OR OTHER FOREIGN MATERIALS BY USE OF WATER, AIR UNDER PRESSURE OR ANY OTHER METHOD THAT PRODUCES SATISFACTORY RESULTS, APPROVED BY THE ENGINEER.

PAYMENT:
THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

**TRAFFIC MAINTENANCE:**

SEE ROADWAY PLANS FOR ADDITIONAL TRAFFIC NOTES AND DETAILS.

**ITEM 516-JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE**

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO RAISE THE EXISTING STRUCTURES AS NECESSARY TO REPLACE EXISTING ABUTMENT BEARINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND OPERATION OF AN ADEQUATE JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS NECESSARY TO PERFORM THE WORK DESCRIBED IN THESE PLANS. THREE (3) SETS OF JACKING PLANS, WHICH INCLUDE THE INFORMATION DESCRIBED IN THIS NOTE, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN. THE PLANS SHALL BE PREPARED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.

JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.

2. A DRAWING SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF THE JACKS WITH RESPECT TO THE STRUCTURE INCLUDING CLEARANCES AND CENTER OF LIFT.

3. A SCHEMATIC LAYOUT OF JACKS, CHECK VALVES, PUMPS WITH 3 WAY RETRACTOR VALVE, PRESSURE GAGES, FLOW CONTROL VALVES, ETC. IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL JACKS FOR EACH ABUTMENT SHALL BE CONNECTED. ALL JACKS AT EACH ABUTMENT SHALL BE THE SAME SIZE.

4. ANALYSIS AND CALCULATIONS OF THE STRESSES INDUCED OR CREATED IN THE STRUCTURE DUE TO JACKING OPERATIONS IF A DIFFERENTIAL JACKING HEIGHT OF 1" IS EXCEEDED BETWEEN SUBSTRUCTURE UNITS.

5. PHYSICAL DIMENSIONS, MATERIALS, AND FABRICATION DETAILS OF ANY TEMPORARY SUPPORTS.

6. A STEP BY STEP PROCEDURE DETAILING ALL STEPS IN THE JACKING OPERATION.

THE ENTIRE SYSTEM, INCLUDING JACKS, SHALL HAVE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS.

FOR LIFTS GREATER THAN 1", JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE. JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOMED PISTON HEAD OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK.

JACKS ALONE SHALL NOT BE USED TO SUPPORT LOADS EXCEPT DURING THE ACTUAL JACKING OPERATION. TEMPORARY SUPPORTS, BLOCKING OR OTHER METHODS APPROVED BY THE DIRECTOR SHALL BE USED. HORIZONTAL AND VERTICAL MOVEMENT RESTRAINT SHALL BE PROVIDED.

SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM SHALL NOT BE USED.

SPARE EQUIPMENT SHALL BE AVAILABLE ON SITE FOR THE REQUIRED STRUCTURE RAISING TO PROCEED IN THE EVENT OF BREAKDOWN. A LIST OF SPARE EQUIPMENT SHALL BE PROVIDED TO THE ENGINEER.

THE JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT SIMULTANEOUSLY IF THE HEIGHT OF THE LIFT EXCEEDS ¼". MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS OR PIERS SHALL BE 1" OR LESS.

IF DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, THE JACKING OPERATION SHALL IMMEDIATELY CEASE AND APPROVED SUPPORTS SHALL BE INSTALLED. THE CONTRACTOR SHALL THEN ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. ANY BEAMS THAT SEPARATE FROM THE DECK SHALL BE EPOXY INJECTED FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH THE PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION." COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT THE BRIDGE BEARINGS ARE FULLY SEATED BETWEEN ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUITABLE MEANS OF REPAIR, SUBJECT TO THE APPROVAL OF THE ENGINEER, WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

THE JACKING OPERATION SHALL BE DIRECTED BY A PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR. FAILURE TO HAVE A PROFESSIONAL ENGINEER PRESENT SHALL BE CAUSE FOR CEASING JACKING OPERATIONS.

PAYMENT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE AND SHALL INCLUDE ALL NECESSARY TOOLS, LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS ITEM OF WORK.

**ITEM 842, CLASS S CONCRETE, MISCELLANEOUS: PIER ENCASEMENT.**

THIS ITEM SHALL BE USED AS PER DETAILS IN THESE PLANS.

SURFACE PREPARATION: THE PIER CONCRETE COLUMNS SHALL BE SOUNDED AND PATCHED. ALL LOOSE AND DELAMINATED CONCRETE SHALL BE REMOVED. RUSTED EXPOSED REINFORCING STEEL AND EXPOSED CONCRETE SURFACES SHALL BE CLEANED AND THE SURFACE PREPARED PER 519.04. UP TO 10% OF THE SURFACE AREA SHALL BE ASSUMED TO BE PATCHED, AS DIRECTED BY THE ENGINEER. THE 10% QUANTITY SHALL BE ASSUMED AS THE TOTAL BASED UPON ALL THE PIERS, NOT USED FOR AN INDIVIDUAL PIER COLUMN. PATCHING OF CENTER PIERS SHALL ALSO BE INCLUDED UNER THIS PAY ITEM, EVEN THOUGH NO ENCASEMENT WILL BE PROVIDED. PATCHING CONCRETE SHALL BE AS PER 519.

ANY EXCAVATION IS INCLUDED IN THIS ITEM.

CONRETE FOR ENCASEMENT SHALL BE AS FOLLOWS:

IN LIEU OF THE PROPORTIONING SPECIFIED IN 499.03 AND 511.02, THE FOLLOWING TABLE SHALL BE USED TO ESTABLISH THE QUANTITIES PER CUBIC YARD FOR CONCRETE. THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE. CEMENT USED SHALL BE EXPANSIVE HYDRAULIC CEMENT CONFORMING TO ASTM C845, TYPE K AS PER 701.08.

QUANTITIES PER CUBIC YARD

| FINES (LB) | AGGREGATE COURSE (LB) | TOTAL (LB) | CEMENT CONTENT (LB) | WATER/ CEMENT RATIO |
|---|---|---|---|---|
| 1300 | 1275 | 2575 | 715 | 0.50 |

AIR CONTENT - 8% PLUS OR MINUS 2%

TYPE D CHEMICAL ADMIXTURE SHALL BE USED.

THE SLUMP AT THE TIME OF CONCRETE PLACEMENT SHALL BE BETWEEN 5 AND 7 INCHES.

CURING SHALL BE IN ACCORDANCE WITH 511.14 TYPE A WATER CURING.

A CEMENT COMPANY REPRESENTATIVE SHALL BE ON HAND DURING THE MIXING AND PLACING OPERATION DURING THE FIRST POUR, IF THE REDI-MIX PRODUCER HAS NOT HAD PREVIOUS EXPERIENCE WITH TYPE K CEMENT.

REDI-MIX PRODUCERS WHO HAVE HAD PREVIOUS EXPERIENCE SHALL HAVE ON HAND A PERSON WHO HAS BEEN FACTORY TRAINED IN THE USE OF TYPE K CEMENT.

ALL OTHER PROVISIONS OF ITEM 842 SHALL REMAIN IN EFFECT.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 842, CLASS S CONCRETE, MISCELLANEOUS: PIER ENCASEMENT, WHICH SHALL INCLUDE ALL EXCAVATION, LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

DESIGN AGENCY
OHIO DEPARTMENT
OF TRANSPORTATION
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVISED | DATE |
|---|---|---|---|
| JFF | JFF | DFT | 9-15-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| HLG | | | |

GENERAL NOTES

BRIDGE NOS. MED-71-2034, MED-71-2242, MED-71-2321, MED-71-2565
IR-71 UNDER REMSEN RD, SLEEPY HOLLOW RD, LAUREL RD, GRAFTON RD

MED-71-15.78

5 / 9

936
940

**ITEM 518, SCUPPER LENGTHENING, AS PER PLAN**

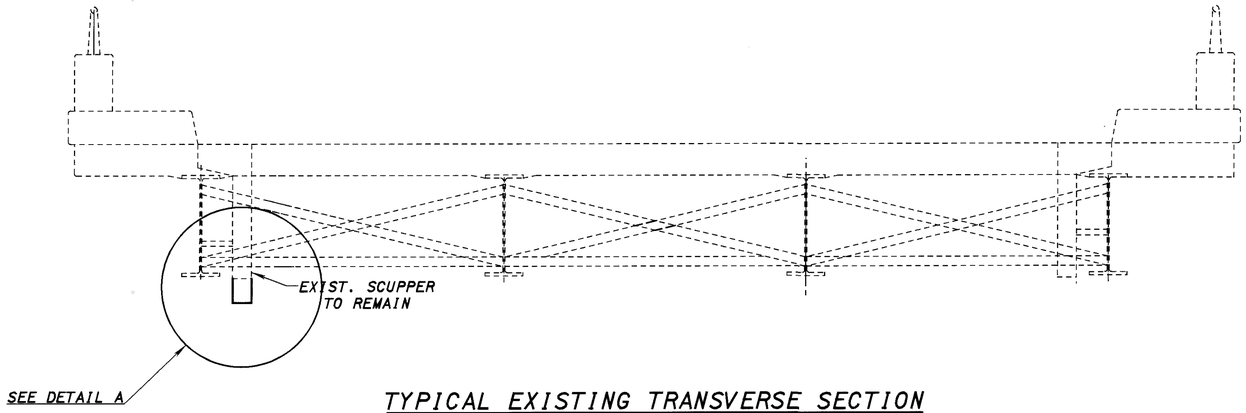
THE CONTRACTOR SHALL REMOVE THE BOTTOM OF EACH SCUPPER DOWNSPOUT, AS INDICATED IN THE PLANS. THE CONTRACTOR SHALL THEN WELD AN EXTENSION TO THE EXISTING SCUPPER DOWNSPOUT. THE DOWNSPOUT EXTENSION SHALL BE IN ACCORDANCE WITH 518 AND SHALL EXTEND A MINIMUM OF 6" BELOW THE BOTTOM FLANGE OF THE ADJACENT BEAM. THE MATERIAL AND THE SIZE OF THE EXTENSION SHALL BE THE SAME AS THAT OF THE EXISTING SCUPPER DOWNSPOUT. THE CONTRACTOR SHALL ALSO CLEAN AND PAINT THE ENTIRE SCUPPER DOWNSPOUT INCLUDING THE EXTENSION, COST TO BE INCLUDED WITH THE APPROPRIATE OZEU PAY ITEMS. COST FOR ALL MATERIAL, LABOR AND INCIDENTALS FOR THE ABOVE WORK SHALL BE INCLUDED UNDER ITEM 518 SCUPPER LENGTHENING, AS PER PLAN.

**ITEM 815 GRINDING FLANGE EDGES**

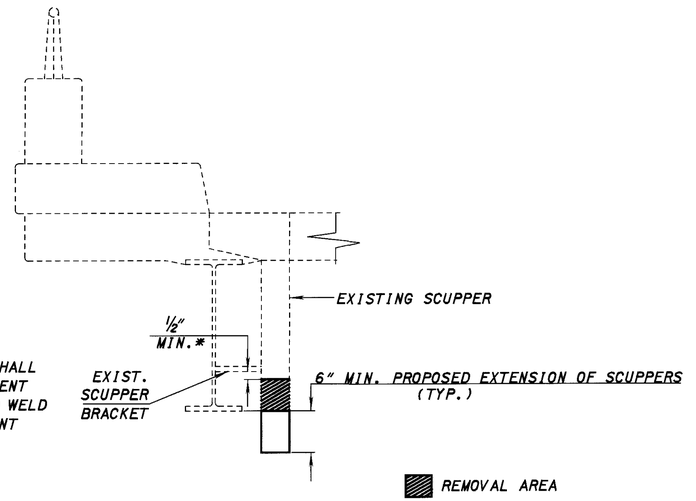
GRIND BOTTOM FLANGES OF EXISTING BEAMS OF THE TWO MIDDLE SPANS OVER THE TRAVEL ROADWAY LANES (36' LENGTH).

**ITEM 815 FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU**

THE COLOR OF THE FINISH COAT SHALL BE A LIGHT GRAY COLOR MEETING FEDERAL STANDARD NUMBER 16440. IN ADDITION TO THE SURFACE AREA OF THE STEEL STRINGERS TO BE PAINTED, AN ADDITIONAL 25% OF THIS AMOUNT HAS BEEN ADDED TO THE SURFACE SQUARE FOOT TOTALS TO ACCOUNT FOR INCIDENTALS SUCH AS CROSS FRAMES AND BEARINGS.




TYPICAL EXISTING TRANSVERSE SECTION




DETAIL A

*FOR THE REMSEN ROAD OVERPASS STRUCTURE THE EXISTING SCUPPER SHALL BE REMOVED A MINIMUM OF 10 INCHES, WHICH WILL INCLUDE REPLACEMENT OF SCUPPER BRACKET. THE EXISTING BRACKET SHALL BE REMOVED AND WELD GROUND FLUSH. A NEW BRACKET SHALL BE FURNISHED IN KIND, PAYMENT INCLUDED WITH ITEM 518, SCUPPER LENGTHENING.

SEE SHEETS 1-3/ 9 FOR EXISTING SCUPPER LOCATIONS

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF PRODUCTION

DATE 9-18-99
REVIEWED DFT
STRUCTURE FILE NUMBER

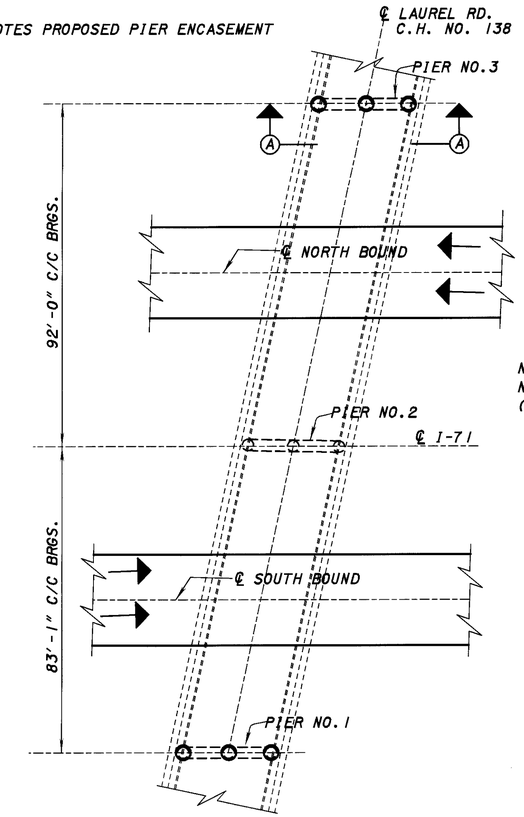
DRAWN JFF
REVISED

DESIGNED JFF
CHECKED HLG

GENERAL NOTES AND SCUPPER DETAILS
BRIDGE NOS. MED-71-2034, MED-71-2242, AND MED-71-2321
IR-71 UNDER REMSEN RD, SLEEPY HOLLOW RD, LAUREL RD

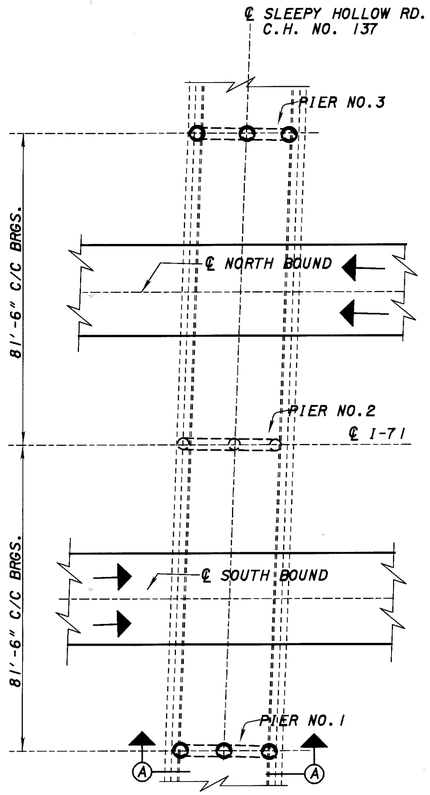
MED-71-15.78

○ - DENOTES PROPOSED PIER ENCASEMENT

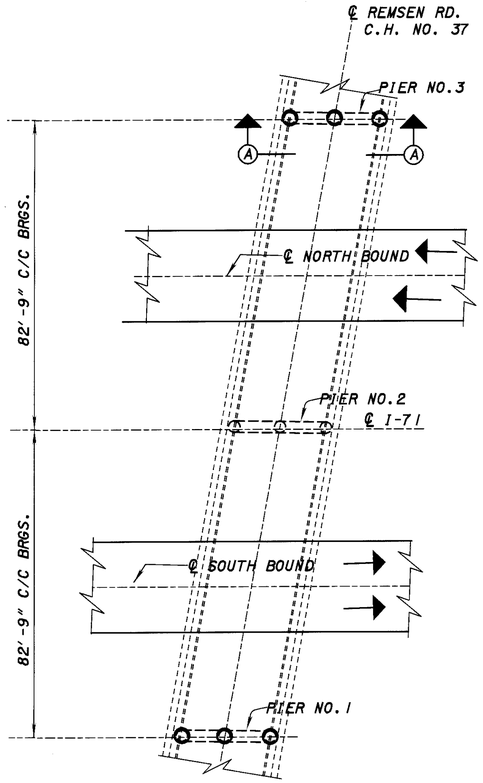



MED-71-2321

NOTE:
NO ENCASEMENT OF CENTER PIER.
(TYP.)




MED-71-2242

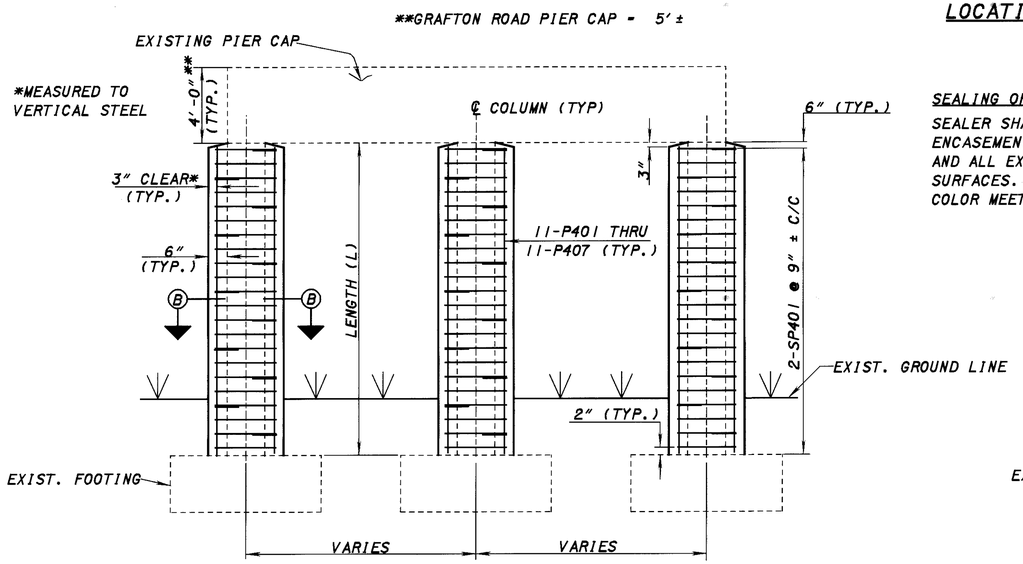



MED-71-2034

## LOCATIONS OF PIER ENCASEMENTS

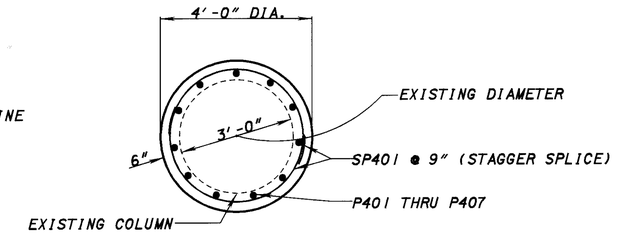
## PROPOSED WORK

1. PIERS 1&3 TO BE SOUNDED, PATCHED AND CONCRETE ENCASED THEN A CONCRETE SEALER TO BE APPLIED.
2. MIDDLE PIERS TO BE SOUNDED, PATCHED THEN SEALED.




VIEW Ⓐ - Ⓐ
PROPOSED PIER COLUMN ENCASEMENT

SEALING OF CONCRETE SURFACES (EPOXY URETHANE):
SEALER SHALL BE APPLIED TO ALL COLUMNS (AFTER ENCASEMENT), PIER CAP SIDES, ENDS AND BOTTOM AND ALL EXPOSED ABUTMENT WINGWALL AND BREASTWALL SURFACES. EPOXY URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722.




SECTION Ⓑ - Ⓑ

SEE SHEET 4/9 FOR REINFORCING STEEL SCHEDULE

| BRIDGE | PIER COLUMNS ENCASEMENT LENGTH* (L) | | |
|---|---|---|---|
| | PIER 1 | PIER 2 | PIER 3 |
| MED-71-2034 | 15'-8½" | 0 | 14'-3⅛" |
| MED-71-2242 | 14'-3½" | 0 | 18'-1 7/16" |
| MED-71-2321 | 14'-10¼" | 0 | 17'-2⅛" |
| MED-71-2565 | 14'-2¾" | 0 | 14'-2¾" |

*DIMENSIONS GIVEN ARE FROM THE EXISTING PLANS
SEE NOTE 1

NOTE 1. A PLAN VIEW OF GRAFTON ROAD OVERHEAD STRUCTURE HAS NOT BEEN SHOWN, BUT DETAILS ARE SIMILAR. "L" INCLUDED IN ABOVE TABLE.

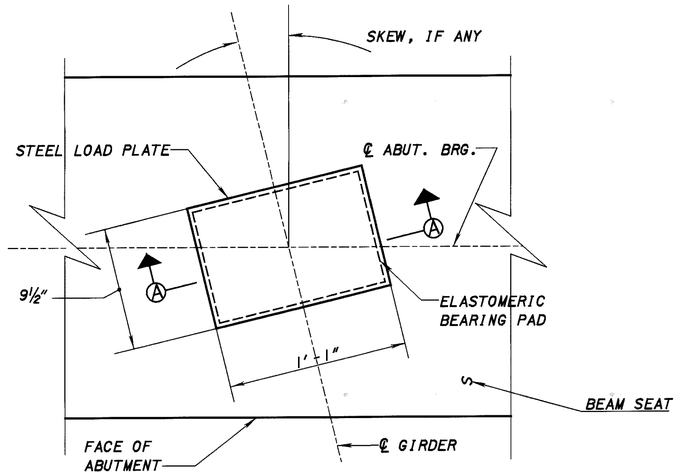
DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| JFF | JFF | DFT | 9-15-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| HLG | | | |

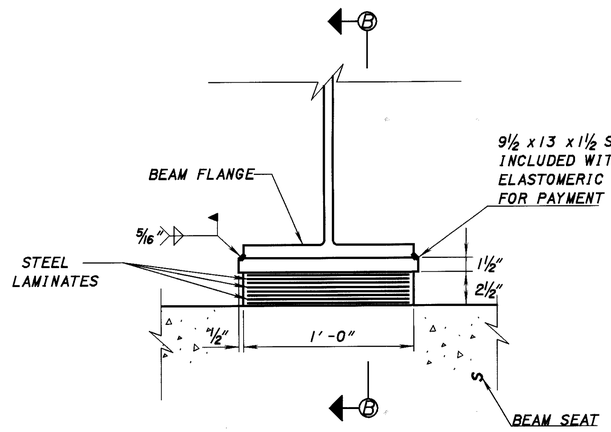
# PIER COLUMN ENCASEMENT DETAIL

BRIDGE NOS. MED-71-2034, MED-71-2242, MED-71-2321, MED-71-2565
IR-71 UNDER REMSEN RD, SLEEPY HOLLOW RD, LAUREL RD, GRAFTON RD

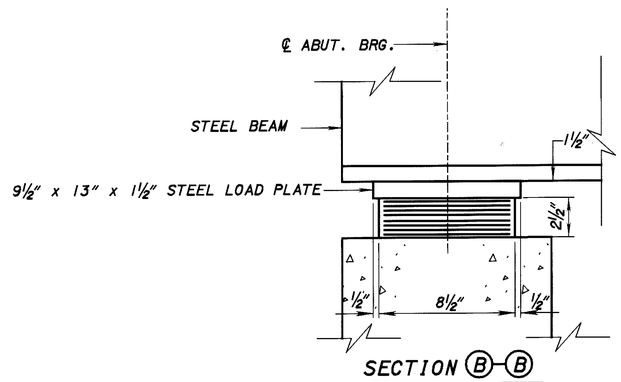
MED-71-15.78




PART PLAN AT ABUTMENTS




SECTION Ⓐ-Ⓐ




SECTION Ⓑ-Ⓑ

## NOTES:

MATERIALS: THE STEEL PLATES MAY BE GRADE 36 STEEL. THE STEEL PLATES SHALL HAVE THE SAME PROTECTIVE COATING AS THE MAIN STRUCTURAL STEEL.

PAYMENT FOR MATERIALS (INCLUDING STEEL LOAD PLATE AND SHIM PLATES OR OTHER MEANS OF FIT UP) LABOR, FABRICATION, PROTECTIVE COATING AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 ELASTOMERIC BEARINGS, AS PER PLAN, FOR PAYMENT.

WELDING: WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 300 F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. STEEL LOAD PLATE MAY BE A36 OR A572 WITH PAYMENT INCLUDED IN ITEM 516.

ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 18, BEARINGS, DIVISION II, CONSTRUCTION ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 (DIVISION II) OF THE AASHTO DOCUMENT LISTED ABOVE. THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL LOAD PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

THE EXISTING PLAN DIMENSION BETWEEN THE BRIDGE SECTION AND BOTTOM OF STEEL BEAM IS 4½". THIS DIMENSION SHALL BE FIELD VERIFIED. AFTER VERIFICATION THE CONTRACTOR SHALL SELECT A METHOD TO SET THE BEAMS TO THEIR ORIGINAL POSITION. THE CONSTRACTOR MAY USE STEEL SHIMS, ADJUST LOAD PLATE THICKNESS OR ADJUST THE CONCRETE BRIDGE SECTION TO PROVIDE THE APPROPRIATE CLEARANCE. THE PLAN SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL. ALL COSTS SHALL BE INCLUDED WITH ITEM 516 ELASTOMERIC BEARING PAD.

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, ELEVATION ADJUSTMENT, STEEL PLATES AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, EACH, ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE):

8½"x12"x 2½" WITH 9½"x13"x1½" LOAD PLATE, AS PER PLAN (ABUTMENTS)

PROPOSED BEARING TABLE

| BRIDGE NOS. | BEARING LOCATION | TYPE | L | W | $t_i$ | $t_e$ | $n_1$ | $n_2$ | STEEL LOAD PL | TOTAL HEIGHT* | DL, KIPS | LL, KIPS | TOTAL, KIPS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MED-71-2034<br>MED-71-2242<br>MED-71-2321 | REAR & FORWARD ABUTMENTS | EXP. | 8½ | 12 | .260 | .190 | 6 | 7 | 9½x 13 x 1½ | 4 | 38 | 47 | 85 |

$n_1$ - NUMBER OF INTERNAL ELASTOMER LAYERS, $t_i$
$n_2$ - NUMBER OF STEEL LAMINATES, 0.0747 THICKNESS
$t_e$ - THICKNESS OF EXTERNAL ELASTOMER LAYER

ELASTOMER LAYERS ARE 50 DUROMETERS
* TOTAL HEIGHT INCLUDES LOAD PLATE

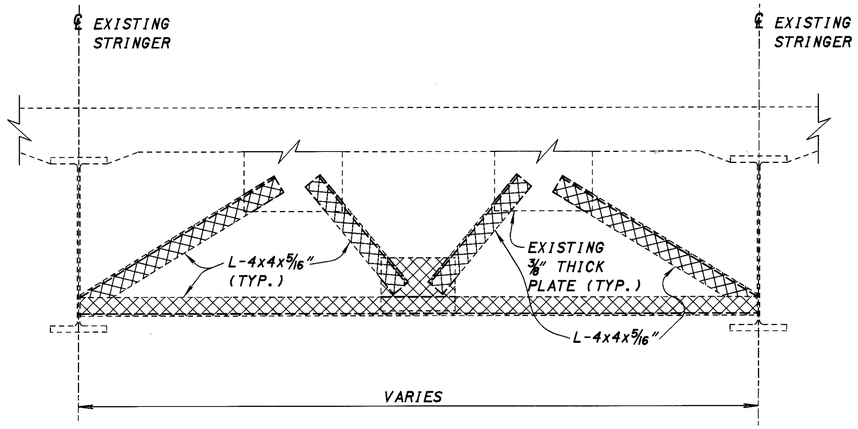
DESIGN AGENCY
ODOT CENTRAL OFFICE
OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| HLG | HLG | DFT | 9-16-99 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| DFT | | | |

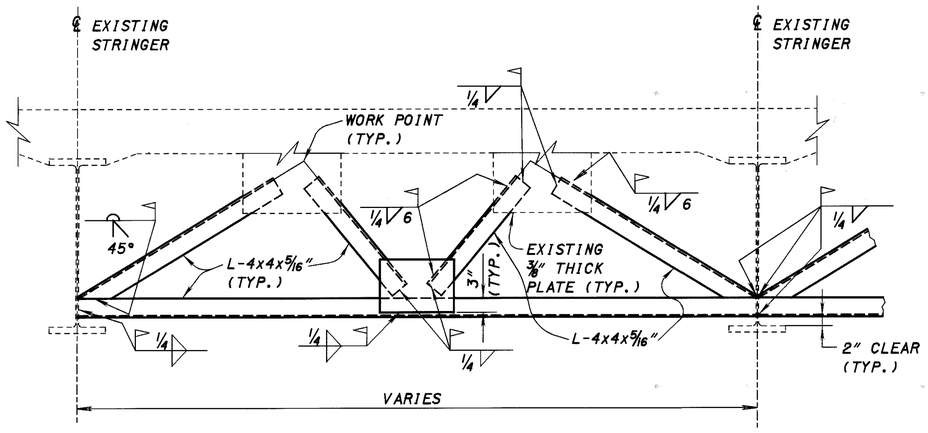
BEARING DETAILS

BRIDGE NOS. MED-71-2034, MED-71-2242, MED-71-2321
IR-71 UNDER REMSEN RD, SLEEPY HOLLOW RD, LAUREL RD

MED-71-15.78




END CROSSFRAME REMOVAL




PROPOSED END CROSSFRAME DETAILS

NOTES

1. ▨ DENOTES CROSSFRAME MEMBERS TO BE REMOVED AND REPLACED. THE CONNECTIONS TO THE BEAM AND PLATE SHALL BE GROUND SMOOTH. COST FOR THE REMOVAL OF CROSSFRAME MEMBERS SHALL BE INCLUDED IN ITEM 202 - PORTION OF STRUCTURE REMOVED AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIAL AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK. CROSSFRAME MEMBERS SHALL BE REPLACED IN KIND IN THE SAME MANNER AS THE EXISTING BRIDGE. PAYMENT FOR MEMBERS REPLACED SHALL BE INCLUDED IN ITEM 863 - STRUCTURAL STEEL, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIAL AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. CROSSFRAME MEMBERS REPLACED SHALL BE REATTACHED CONSISTENT WITH PROPOSED END CROSSFRAME DETAIL.

2. ITEM 863 - STRUCTURAL STEEL MEMBERS, MISCELLANEOUS LEVEL FABRICATION, AS PER PLAN (STRUCTURAL STEEL, REPLACEMENT OF DETERIORATED END CROSS-FRAMES). STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE ENGINEER SHALL HAVE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING STEEL ITEMS INTO THE WORK. AFTER FABRICATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK, PER 863.08. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE OFFICE OF STRUCTURAL ENGINEERING. STEEL MEMBERS INCLUDED IN THIS ITEM INCLUDE THE END CROSSFRAMES AND GUSSET PLATES AS DETAILED IN THE PLANS. PAYMENT SHALL BE LUMP SUM.

3. PAINTING OF 863 STEEL: NEW STEEL SHALL BE SHOP PRIMED, WHICH SHALL BE INCLUDED IN THE COST OF ITEM 863. THE NEW STEEL SHALL ALSO BE PREPARED AND PAINTED PER SUPPLEMENTAL SPECIFICATION 815 IN THE FIELD AS IF IT WERE EXISTING STEEL. QUANTITIES AND PAYMENTS FOR THIS WORK SHALL BE INCLUDED IN THE SQUARE FOOT UNIT PRICE BID FOR EACH OF THE 815 ITEMS.

4. ALL END CROSSFRAMES AT EACH ABUTMENT SHALL BE REPLACED AT MED-71-2034, MED-71-2242 AND MED-71-2321.

DESIGN AGENCY: ODOT CENTRAL OFFICE OFFICE OF PRODUCTION

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| DFT | BKL | DFT | 9-16-99 |
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| HLG | | | |

END CROSSFRAME DETAILS

BRIDGE NOS. MED-71-2034, MED-71-2242, MED-71-2321
IR-71 UNDER REMSEN RD, SLEEPY HOLLOW RD, LAUREL RD

MED-71-15.78

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# SPECIAL PROVISIONS

## WATERWAY PERMITS
FOR
MED-71-15.78
PID # 7885

U.S. ARMY CORPS OF ENGINEERS
PERMIT NUMBER: NWP #3 & 14

OHIO EPA
PERMIT NUMBER: NOT APPLICABLE

DATE: 1-28-98



**3. Maintenance**. The repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area including those due to changes in materials, construction techniques, or current construction codes or safety standards which are necessary to make repair, rehabilitation, or replacement, are permitted provided the environmental effects resulting from such repair, rehabilitation, or replacement are minimal. Currently serviceable means useable as is or with some maintenance but not so degraded as to essentially require reconstruction. This NWP authorizes the repair, rehabilitation, or replacement of those structures destroyed by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced or under contract to commence within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the District Engineer, provided the permittee can demonstrate funding, contract, or other similar delays. Maintenance dredging and beach restoration are not authorized by this NWP. (Sections 10 and 404)

For activities involving a discharge, the Ohio State Certification General Conditions apply to this nationwide permit.

## NATIONWIDE PERMIT

**14. Road Crossings**. Fills for roads crossing waters of the United States (including wetlands and other special aquatic sites) provided the activity meets all of the following criteria:

a. The width of the fill is limited to the minimum necessary for the actual crossing;

b. The fill placed in waters of the United States is limited to a filled area of no more than 1/3 acre. Furthermore, no more than a total of 200 linear feet of the fill for the roadway can occur in special aquatic sites, including wetlands;

c. The crossing is culverted, bridged or otherwise designed to prevent the restriction of, and to withstand, expected high flows and tidal flows, and to prevent the restriction of low flows and the movement of aquatic organisms;

d. The crossing, including all attendant features, both temporary and permanent, is part of a single and complete project for crossing of a water of the United States; and,

e. For fills in special aquatic sites, including wetlands, the permittee notifies the District Engineer in accordance with the "Notification" general condition. The notification must also include a delineation of affected special aquatic sites, including wetlands.

This NWP may not be combined with NWP 18 or NWP 26 for the purpose of increasing the footprint of the road crossing. Some road fills may be eligible for an exemption from the need for a Section 404 permit altogether (see 33 CFR 323.4). Also, where local circumstances indicate the need, District Engineers will define the term "expected high flows" for the purpose of establishing applicability of this NWP. (Sections 10 and 404)

The Ohio State Certification General Conditions apply to this nationwide permit.



## OHIO STATE CERTIFICATION GENERAL CONDITIONS FOR NATIONWIDE PERMITS.

The following general conditions apply to Nationwide Permits 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 18, 19, 20, 22, 23, 25, 26, 27, 29, 30, 31, 32, 33, 34, 36, 37, 38, and 40.

Steps shall-be taken, upon completion of the projects, to ensure bank stability. This may include, but is not limited to, the placement of riprap or bank seeding.

Any damages to the immediate environment of the project by equipment needed for construction or hauling will be repaired immediately.

Care must be employed throughout the course of this project to avoid the creation of unnecessary turbidity which may degrade water quality or adversely affect aquatic life outside the project areas.

For Nationwide Permits 14, 21, 26 (1-3 acres), 29, 33, 37, and 38, that require Agency coordination, in accordance with the Nationwide Permit General Condition entitled "Notification", Number 13(e)(i), the Corps shall submit a pre-construction notification to Ohio EPA for review and comment.

## NATIONWIDE PERMIT CONDITIONS

## GENERAL CONDITIONS:

The following general conditions must be followed in order for any authorization by a NWP to be valid:

**1. Navigation**. No activity may cause more than a minimal adverse effect on navigation.

**2. Proper maintenance**. Any structure or fill authorized shall be properly maintained, including maintenance to ensure public safety.

**3. Erosion and siltation controls**. Appropriate erosion and siltation controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date.

**4. Aquatic life movements**. No activity may substantially disrupt the movement of those species of aquatic life indigenous to the waterbody, including those species which normally migrate through the area, unless the activity @ s primary purpose is to impound water.

**5. Equipment**. Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.

**6. Regional and case-by-case conditions**. The activity must comply with any regional conditions which may have been added by the Division Engineer (see 33 CFR 330.4(e) and with any case specific conditions added by the Corps or by the State or tribe in its section 401 water quality certification.

**7. Wild and Scenic Rivers**. No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a "study river" for possible inclusion in the system, while the river is in an official study status, unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely effect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service.)

**8. Tribal rights**. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

**9. Water quality certification**. In certain states, an individual Section 401 water quality certification must be obtained or waived (see 33 CFR 330.4(c).



**10. Coastal zone management**. In certain states, an individual State coastal zone management consistency concurrence must be obtained or waived (see Section 330.4(d)

**11. Endangered Species**.

(a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act, or which is likely to destroy or adversely modify the critical habitat of such species. Non-federal permittees shall notify the District Engineer if any listed species or critical habitat might be affected or is in the vicinity of the project, and shall not begin work on the activity until notified by the District Engineer that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized.

(b) Authorization of an activity by a nationwide permit does not authorize the "take" of a threatened or endangered species as defined under the Federal Endangered Species Act. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. Fish and Wildlife Service or the National Marine Fisheries Service, both lethal and non-lethal "takes" of protected species are in violation of the Endangered Species Act. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. Fish and Wildlife Service and National Marine Fisheries Service or their world wide web pages at http://www.fws.gov/~r9endspp/endspp.html and http://kingfish.spp.mnfs.gov/tmcintyr/prot_res.html#ES and Recovery, respectively.

**12. Historic properties**. No activity which may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized, until the DE has complied with the provisions of 33 CFR Part 325, Appendix C. The prospective permittee must notify the District Engineer if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reasón to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g).

**13. Notification**.

**(a) Timing**: Where required by the terms of the NWP, the prospective permittee must notify the District Engineer with a Pre-Construction Notification (PCN) as early as possible and shall not begin the activity: (1) Until notified by the District Engineer that the activity may proceed under the NWP with any special conditions imposed by the District or Division

Engineer; or (2) If notified by the District or Division Engineer that an individual permit is required; or (3) Unless 30 days (or 45 days for NWP 26 only) have passed from the District Engineer's receipt of the notification and the prospective permittee has not received notice from the District or Division Engineer Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Notification: The notification must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) Brief description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s) or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity; and

(4) For NWPs S 18, 21, 26, 29, 34, and 38, the PCN must also include a delineation of affected special aquatic sites, including wetlands (see paragraph 13(f);

(5) For NWP 21 - Surface Coal Mining Activities, the PCN must include an OSM or State approved mitigation plan.

(6) For NWP 29-Single-Family Housing, the PCN must also include:

(i) Any past use of this NWP by the individual permittee and/or the permittee's spouse;

(ii) A statement that the single-family housing activity is for a personal residence of the permittee;

(iii) A description cf the entire parcel, including its size, and a delineation of wetlands. For the purpose of this NWP, parcels of land measuring 0.5 acre or less will not require a formal on-site delineation. However, the applicant shall provide an indication of where the wetlands are and the amount of wetlands that exists on the property. For parcels greater than 0.5 acre in size, a formal wetland delineation must be prepared in accordance with the current method required by the Corps. (See paragraph 13(f);

(iv) A written description of all land (including, if available, legal descriptions) owned by the prospective permittee and/or the prospective permittee t s spouse, within a one mile radius of the parcel, in any form of ownership (including any land owned as a partner, corporation, joint tenant, co-tenant, or as a tenant-by-the-entirety) and any land on which a purchase and sale agreement or other contract for sale or purchase has been executed;

(7) For NWP 31 Maintenance of Existing Flood Control Projects, the prospective permittee must either notify the District Engineer with a Pre-Construction Notification (PCN) prior to each maintenance activity or submit a five year (or less) maintenance plan. In addition, the PCN must include all of the following:



(I) Sufficient baseline information so as to identify the approved channel depths and configurations and existing facilities. Minor deviations are authorized, provided that the approved flood control protection or drainage is not increased;

(ii) A delineation of any affected special aquatic sites, including wetlands; and,

(iii) Location of the dredged material disposal site.

(8) For NWP 33-Temporary Construction, Access, and Deterring, the PCN must also include a restoration plan of reasonable measures to avoid and minimize adverse effects to aquatic sources.

**(c) Form of Notification**: The standard individual permit application form (Form ENG 4345) may be used as the notification but must clearly indicate that it is a PCN and must include all of the information required in (b) (1)-(7) of General Condition 13. A letter may also be used.

**(d) District Engineer's Decision**: In reviewing the pre-construction notification for the proposed activity, the District Engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative-adverse environmental effects or may be contrary to the public interest. The prospective permittee may, optionally, submit a proposed mitigation plan with the pre-construction notification to expedite the process and the District Engineer will consider any optional mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed work are minimal. If the District Engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects are minimal, the District Engineer will notify the permittee and include any conditions the DE deems necessary.

Any mitigation proposal must be approved by the District Engineer prior to commencing work. If the prospective permittee elects to submit a mitigation plan, the District Engineer will expeditiously review the proposed mitigation plan, but will not commence a second 30-day (or 45-day for NWP 26) notification procedure. If the net adverse effects of the project (with the mitigation proposal) are determined by the District Engineer to be minimal, the District Engineer will provide a timely written response to the applicant stating that the project can proceed under the terms and conditions of the nationwide permit

If the District Engineer determines that the adverse effects of the proposed work are more than minimal, then he will notify the applicant either: (1) that the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submitting a mitigation proposal that would reduce the adverse effects to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions.

**(e) Agency Coordination**: The District Engineer will consider any comments from Federal and State agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(i) For NWP 14, 21, 26 (between l and 3 acres of impact), 29, 33, 37, and 38. The District Engineer will, upon receipt of a notification, provide immediately, e.g., facsimile transmission, overnight mail or other expeditious manner, a copy to the appropriate offices of the Fish and Wildlife Service, State natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO), and, if appropriate, the National Marine Fisheries Service. With the exception of NWP 37, these agencies will then have S calendar days from the date the material is transmitted to telephone or fax the District Engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the District Engineer will wait an additional 10 calendar days (16 calendar days for NWP 26 PCNs) before making a decision on ,the notification. The District Engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency. The District Engineer will indicate in the administrative record associated with each notification that the resource agencies' concerns were considered. Applicants are encouraged to provide the Corps multiple copies of notifications to expedite agency notification.
(ii) Optional Agency Coordination For NWPs 5, 7, 12, 13, 17, 18, 27, 31, and 34, where a Regional Administrator of EPA, a Regional Director of USFWS, or Regional Director of NMFS has formally requested general notification from the District Engineer for the activities covered by any of these NWPs, the Corps will provide the requesting agency with notification on the particular NWPs. However, where the agencies have a record of not generally submitting substantive comments on activities covered by any of these NWPs, the Corps district may discontinue providing notification to those regional agency offices The District Engineer will coordinate with the resources agencies to identify which activities involving a PCN that the agencies will provide substantive comments to the Corps The District Engineer may also request comments from the agencies on a case by case basis when the District Engineer determines that such comments would assist the Corps in reaching a decision whether effects are more than minimal either individually or cumulatively.
(iii) Optional Agency Coordination, 401 Denial. For NWP 26 only, where the State has denied its 401 water quality certification for activities with less than I acre of wetland impact, the EPA regional administrator may request agency coordination of PCNs between 1/3 and I acre. The request may only include acreage limitations within the 1/3 to 1 acre range for which the state has denied water quality certification. In cases where the EPA has requested coordination of projects as described here, the Corps will forward the PCN to EPA only. The PCN will then be forwarded to the Fish and Wildlife Service and the National Marine Fisheries Service by EPA under agreements among those agencies. Any agency receiving the PCN will be bound by the time frames for providing comments to the Corps.



**(f) Wetlands Delineations**: Wetland delineations must be prepared in accordance with the current method required by the Corps. For NWP 29 see paragraph (b)(6)(iii) for parcels less than 0.5 acres in size. The permittee may ask the Corps to delineate the special aquatic site. There may be some delay if the Corps does the delineation. Furthermore, the 30-day period (45 days for NWP 26) will not start until the wetland delineation has been completed and submitted to the Corps, where appropriate.

**(g) Mitigation**: Factors that the District Engineer will consider when determining the acceptability of appropriate and practicable mitigation include, but are not limited to:
(I) To be practicable, the mitigation must be available and capable of being done considering costs, existing technology, and logistics in light of the overall project purposes;
(ii) To the extent appropriate, permittees should consider mitigation banking and other forms of mitigation including contributions to wetland trust funds, "in lieu fees~ to organizations such as The Nature Conservancy, state or county natural resource management agencies, where such fees contribute to the restoration, creation, replacement, enhancement, or preservation of wetlands. Furthermore, examples of mitigation that may be appropriate and practicable include but are not limited to: reducing the size of the project; establishing wetland or upland buffer zones to protect aquatic resource values; and replacing the loss of aquatic resource values by creating, restoring, and enhancing similar functions and values. In addition, mitigation must address wetland impacts, such as functions and values, and cannot be simply used to offset the acreage of wetland losses that would occur in order to meet the acreage limits of some of the NWPs (e.g., for NWP 26, 5 acres of wetlands cannot be created to change a 6-acre loss of wetlands to a I acre loss; however, 2 created acres can be used to reduce the impacts of a 3-acre loss.).

**14. Compliance certification**. Every permittee who has received a Nationwide permit verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include:

a. A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;
b. A statement that any required mitigation was completed in accordance with the permit conditions;
c. The signature of the permittee certifying the completion of the work and mitigation .

**15. Multiple use of Nationwide permits**. In any case where any NWP number 12 through 40 is combined with any other NWP number 12 through 40, as part of a single and complete project, the permittee must notify the District Engineer in accordance with paragraphs a, b, and c on the "Notification General Condition number 13. Any NWP number 1 through 11 may be combined with any other NWP without notification to the Corps, unless notification is otherwise required by the terms of the NWPs. As provided at 33 CFR 330.6(c) two or more different NWPs can be combined to authorize a single and complete project. However, the same NWP cannot be used more than once for a single and complete project.

**SECTION 404 ONLY CONDITIONS:**

In addition to the General Conditions, the following conditions apply only to activities that involve the discharge of dredged or fill material into waters of the U.S., and must be followed in order for authorization by the NWPs to be valid:

**1. Water supply intakes**. No discharge of dredged or fill material may occur in the proximity of a public water supply intake except where the discharge is for repair of the public water supply intake structures or adjacent bank stabilization.

**2. Shellfish production**. No discharge of dredged or fill material may occur in areas of concentrated shellfish production, unless the discharge is directly related to a shellfish harvesting activity authorized by NWP 4.

**3. Suitable material**. No discharge of dredged or fill material may consist of unsuitable material (e.g. trash, debris, car bodies, asphalt, etc.) and material discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

**4. Mitigation**. Discharges of dredged or fill material into waters of the United States must be minimized or avoided to the maximum extent practicable at the project site (i.e. on-site), unless the District Engineer approves a compensation plan that the District Engineer determines is more beneficial to the environment than on-site minimization or avoidance measures.

**5. Spawning areas**. Discharges in spawning areas during spawning seasons must be avoided to the maximum extent practicable.

**6. Obstruction of high flows**. To the maximum extent practicable, discharges must not permanently restrict or impede the passage of normal or expected high flows or cause the relocation of the water (unless the primary purpose of the fill is to impound waters).

**7. Adverse effects from impoundments**. If the discharge creates an impoundment of water, adverse effects on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow shall be minimized to the maximum extent practicable.

**8. Waterfowl breeding areas**. Discharges into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

**9. Removal of temporary Fills**. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

## GEOLOGY OF THE SITE

THE PROJECT SITE LIES ON THE GLACIATED, MODERATELY ROLLING PLAIN ALONG THE ALLEGHENY ESCARPMENT SEPARATING THE ALLEGHENY PLATEAU FROM THE MISSISSIPPI VALLEY PLAIN THE PROJECT SITE LIES AT A HIGH ELEVATION OF 1,114 AT TOP OF THE IR-71 BRIDGE ABUTMENTS AND A LOW ELEVATION OF 1,092 ON SR-18 BENEATH THE IR-71 BRIDGES IN MEDINA COUNTY, OHIO.

THE WISCONSIN ICE SHEET PASSED OVER THE AREA LEAVING VARIABLE DEPOSITS AND THICKNESSES OF GLACIAL DRIFT MATERIAL. INFORMATION OBTAINED FROM MEDINA COUNTY SOIL SURVEY, NOVEMBER, 1977, INDICATES THAT THE SITE CONSISTS MAINLY OF SILTY CLAY AND CLAY. INFORMATION ALSO INDICATES THAT THE SOILS ALONG IR-71 EMBANKMENT UPPER PORTION ARE MAINLY COMPRISED OF CUT-AND-FILL MATERIALS.

THE OHIO GEOLOGICAL SURVEY INDICATES THAT BEDROCK STANDS AT APPROXIMATE ELEVATION OF 1,050 IN THE VICINITY OF THE SITE. AT THIS ELEVATION IT IS EXPECTED THAT BEDROCK IS COMPRISED OF SHALES AND SHALY SANDSTONE OF LOGAN FORMATION

## EXPLORATION

THE SUBSURFACE EXPLORATION PROGRAM FOR THIS PROJECT INCLUDED ADVANCING A TOTAL OF FOUR (4) DRIVE SAMPLE CORE BORINGS WITH A CME-75 TRUCK MOUNTED DRILLING RIG AND A CME-750 ATV MOUNTED DRILLING RIG USING CONVENTIONAL 3 25 OR 4.25 INCH I D HOLLOW STEM AUGERS, PERFORMED DURING JUNE AND JULY, 1992 ALL TEST BORINGS WERE ADVANCED FOR BRIDGE FOUNDATION DESIGN PURPOSE

## INVESTIGATIONAL FINDINGS

TEST BORINGS B1-1 AND B1-4 WERE ADVANCED THROUGH THE EXISTING EMBANKMENT MATERIAL. TEST BORING B1-2 AND B1-3 WERE ADVANCED THROUGH ASPHALT PAVEMENT, WHICH WAS FOUND TO BE 10 INCHES THICK AT BOTH LOCATIONS. THE TEST BORINGS DISCLOSED ALTERNATING LAYERS OF GRAVEL AND SAND CLASSIFIED AS A-1-b, SAND CLASSIFIED AS A-3a, ROCK FRAGMENTS WITH SAND AND SILT CLASSIFIED AS A-2-4, ROCK FRAGMENT WITH SILT AND CLAY CLASSIFIED AS A-2-6, SANDY SILT CLASSIFIED AS A-4a, SILT CLASSIFIED AS A-4b, AND SILT AND CLAY CLASSIFIED AS A-6a. THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "LOOSE" TO "VERY DENSE," BUT PREDOMINANTLY "VERY DENSE " THE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "SOFT" TO "HARD," BUT PREDOMINANTLY "VERY STIFF." SILTSTONE, SHALE AND/OR SANDSTONE WERE ENCOUNTERED AT ALL FOUR TEST BORING LOCATIONS TOP OF THE BEDROCK WAS FOUND TO BE DIPPING SOUTH THE OVERALL ROCK QUALITY DESIGNATION (RQD) FOR THE ROCK CORES WAS FOUND TO RANGE FROM 10 TO 26 PERCENT, WHICH CAN BE TERMED AS "VERY POOR "

FOR SPECIFIC CONDITIONS AT VARIOUS DEPTHS, REFER TO THE INDIVIDUAL TEST BORING LOGS WHICH FORM A PART OF THESE PLANS.

## LEGEND

- AUGER BORING LOCATION- PLAN VIEW
- PRESS AND/OR DRIVE SAMPLE AND/OR CORE BORING LOCATION- PLAN VIEW
- TR — TOP OF ROCK
- CAPPED PILE
- FOOTING
- FOOTING ON PILE
- HORIZONTAL BAR ON BORING LOG INDICATES THE DEPTH THE SAMPLE WAS TAKEN
- X/Y/Z — FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
  - X = NO. OF BLOWS FOR FIRST 6"
  - Y = NO. OF BLOWS FOR SECOND 6"
  - Z = NO. OF BLOWS FOR THIRD 6"
- W —— INDICATES FREE WATER ELEVATION
- INDICATES STATIC WATER ELEVATION

## SYMBOLS OF ROCK TYPES

- COAL
- WEATHERED MUDSTONE
- MUDSTONE
- WEATHERED SHALE
- SHALE
- CLAYSTONE
- SILTSTONE
- WEATHERED SANDSTONE
- SANDSTONE
- LEACHED DOLOMITE
- DOLOMITE
- LEACHED LIMESTONE
- LIMESTONE
- BOULDERS or COBBLES

## GENERAL INFORMATION

### Drive sample / Press sample / Core borings

Drive sample borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O D , 1-3/8" I D split spoon sampler, at 2 5 and/or 5-foot depth intervals, driven by means of a 140 lb drop hammer with a free fall of 30" The number of blows required to drive the sampler 18" is considered the standard penetration test

Drive/press borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O D , 1-3/8" I D split spoon sampler, and 3" O D thin wall press sampler The press sampler is advanced by continuous uniform pressure, applied by the drilling machine

Core borings are made by means of a mechanically-powered rotary-type drilling machine, employing a NXM core barrel with industrial diamond cutting head

The boring log sheets display a graphic plot of the information obtained including depth and elevation of the sample, type of sample, the standard penetration test readings in three 6-inch increments, depth and elevation of press samples, field number assigned to sample, sample description - based on laboratory tests utilizing the Casagrande AC classification system - and gradation, plasticity and moisture determinations Results of strength and consolidation testing, if performed on undisturbed samples, will appear graphically on separate enclosures Rock samples are displayed on the log sheets including depth and elevation of the sample, amount of recovery and a visual classification based on type, color, degree of hardness, grain size, deterioration, bedding, acid reaction and other qualifying factors

At depths where materials are bouldery or gravelly to the extent that the sampler can not be utilized, a wash sample is procured and visually classified, in order to determine the general characteristics of the material These samples are not considered sufficiently representative to warrant laboratory testing

## PARTICLE SIZE DEFINITIONS

| 12" | 3" | 2.0mm | | 0.42mm | 0.074mm | 0.005mm |
|---|---|---|---|---|---|---|
| Boulders | Cobbles | Gravel | Coarse Sand | Fine Sand | Silt | Clay |
| | | No. 10 sieve | | No. 40 sieve | No. 200 sieve | |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1685 (L&R)

1/4

MED - 71 - 15.78

1
36

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No MED-71-1685 (L&R)*
*WIDENING*
*MEDINA COUNTY, OHIO*

R&R INTERNATIONAL INC
Geotechnical Engineers • Geologists
1234 S CLEVELAND MASSILLON ROAD
PO BOX 4383
AKRON OH 44321

| CHECKED BY | REVIEWED | DATE |
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DESIGN FILE : i:\pd_med_ir71\dgn\soils\soils01.dgn
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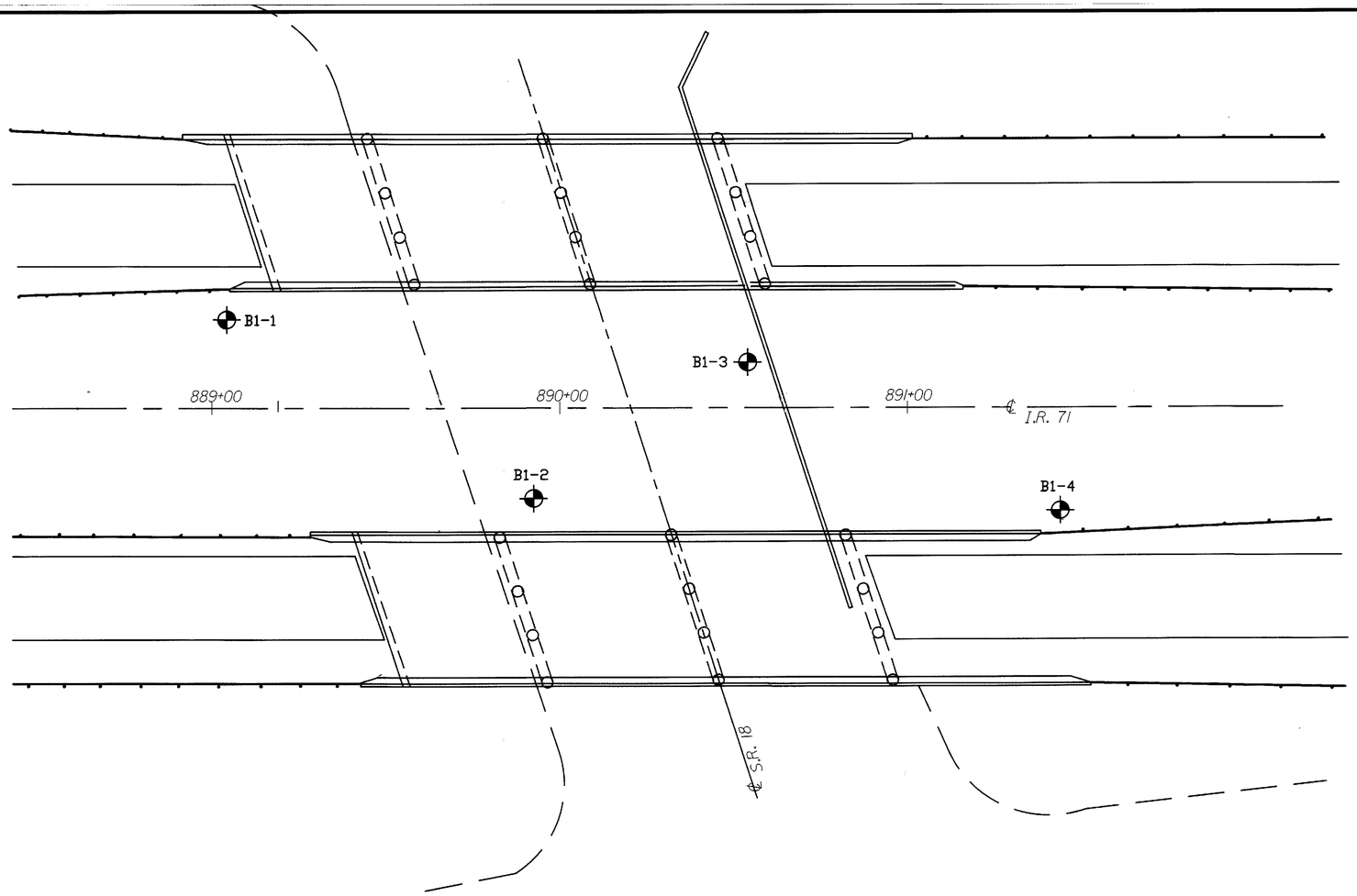
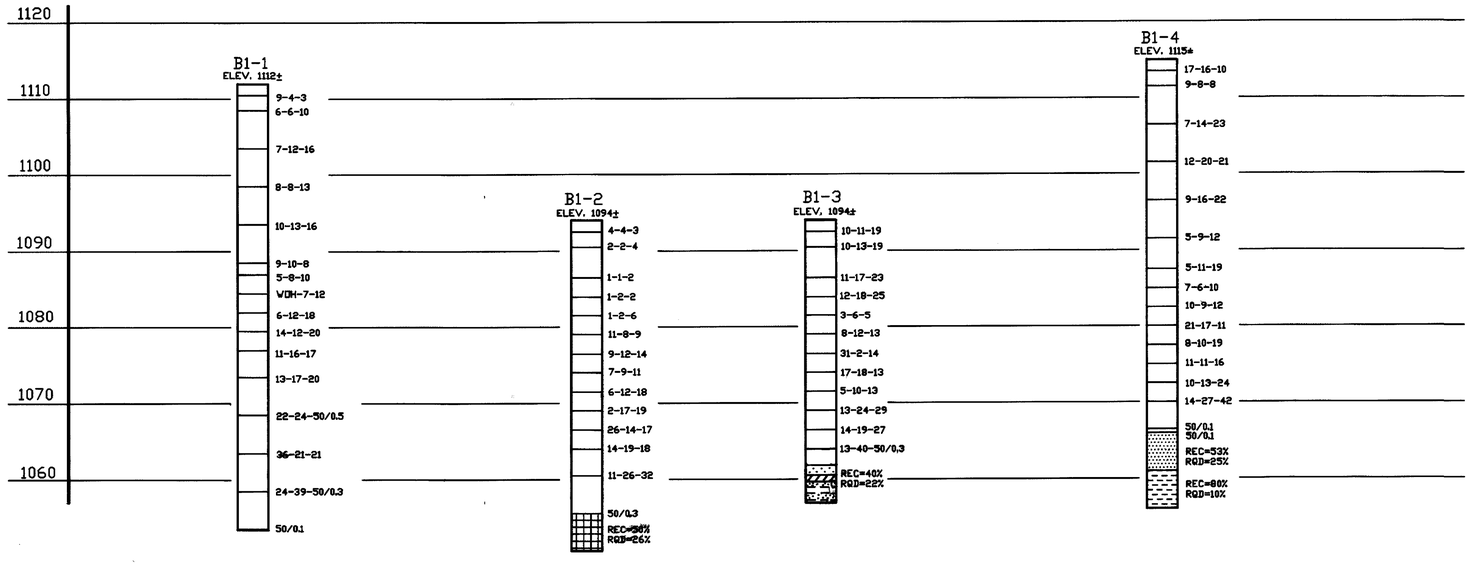



SCALE: HORIZ. 1"=20'
VERT. 1"=10'




**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-1685 (L&R)*
*WIDENING*
*MEDINA COUNTY, OHIO*

R&R INTERNATIONAL, INC.

Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321

| DRAWN BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| V. K. | J.X. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1685 (L&R)

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MED - 71 - 15.78

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36

DESIGN FILE : i:\pd_med_ir71\dgn\soils\soils02.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:48

## LOG OF BORING

Date Started 6-19-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1059 ±
Date Completed 6-19-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B1-1 | Station & Offset STA 889+05.07 | Surface Elev. 1112 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | % COAR. SAND | % FINE SAND | % SILT | % CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1112.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 9-4-3 | 0.7 | | Medium stiff, brown SANDY SILT, trace to little gravel, moist. | 1 | SS | | | | | | | | | | |
| 1108.5 | 3.5 | 6-6-10 | 0.7 | | | 2 | SS | | | | | | | | | | |
| | 8.5 | 7-12-16 | 0.8 | | | 3 | SS | 4.2 | 6.8 | 11.3 | * | 77.7 | 30.4 | 19.2 | 11.2 | 15.6 | A-6a |
| | 13.5 | 8-8-13 | 1.0 | | | 4 | SS | | | | | | | | | | |
| | | | | | Medium stiff to hard, brown and gray molted SILT AND CLAY, little to some gravel, dry to moist. | | | | | | | | | | | | |
| | 18.5 | 10-13-16 | 1.2 | | | 5 | SS | | | | | | | | | | |
| | 23.5 | 9-10-8 | 0.8 | | | 6 | SS | | | | | | | | | | |
| | 25.0 | 5-8-10 | 1.2 | | | 7 | SS | | | | | | | | | | |
| 1085.0 | 27.0 27.5 | WOH-7-12 | 1.5 | | | 8 | SS | 21.9 | 16.1 | 20.4 | * | 41.6 | — | — | — | 19.1 | A-4a |
| | 30.0 | 6-12-18 | 1.5 | | | 9 | SS | | | | | | | | | | |
| | 32.5 | 14-12-20 | 1.2 | | | 10 | SS | 33.5 | 9.2 | 16.5 | * | 40.8 | — | — | — | 9.7 | A-4a |
| | 35.0 | 11-16-17 | 1.5 | | Very stiff to hard, brown SANDY SILT, some gravel, moist. | 11 | SS | | | | | | | | | | |
| | 38.5 | 13-17-20 | 0.8 | | | 12 | SS | | | | | | | | | | |
| 1069.0 | 43.0 43.5 | 22-24-50/0.5 | 1.2 | | | 13 | SS | 31.0 | 10.3 | 25.5 | * | 33.2 | — | — | — | 9.2 | A-2-4 |
| | | | | | Very dense to dense, gray ROCK FRAGMENTS W/ SAND AND SILT, wet to saturated. | | | | | | | | | | | | |
| | 48.5 | 36-21-21 | 1.0 | | | 14 | SS | | | | | | | | | | |
| 1062.0 | 50.0 | | | | | | | | | | | | | | | | |
| | 53.5 | 24-39-50/0.3 | 0.6 | | Gray SHALE, highly weathered. Note: -auger refusal encountered at 58.6 ft. | 15 | SS | | | | | | | | | | |
| 1053.4 | 58.6 | 50/0.1 | 0.1 | | | 16 | SS | 58.0 | 10.7 | 5.6 | * | 25.7 | — | — | — | 10.8 | A-2-4 |
| | | | | | TERMINATION DEPTH 58.6 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

## LOG OF BORING

Date Started 7-2-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1087 ±
Date Completed 7-2-92 | Casing: length -- | Dia. 4.25 inch.
Boring No. B1-2 | Station & Offset STA 889+92.07 | Surface Elev. 1094 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | % COAR. SAND | % FINE SAND | % SILT | % CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1094.0 | 0 | | | | | | | | | | | | | | | | |
| 1093.2 | 0.8 | | | | ASPHALT | | | | | | | | | | | | |
| | 1.5 | 4-4-3 | 1.2 | | Medium, brown SANDY SILT, trace clay, moist. | 1 | SS | | | | | | | | | | |
| 1091.0 | 3.0 3.5 | 2-2-4 | 0.4 | | Loose, brown SAND, trace to little silt, moist. | 2 | SS | 26.0 | 32.1 | 27.5 | * | 14.4 | -- | -- | -- | 5.9 | A-3a |
| 1089.0 | 5.0 | | | | | | | | | | | | | | | | |
| | 7.5 | 1-1-2 | 1.3 | | Soft brown SILT, trace to little sand, trace to little gravel, moist to wet. | 3 | SS | 4.7 | 5.5 | 13.6 | * | 76.2 | -- | -- | -- | 19.3 | A-4b |
| | 10.0 | 1-2-2 | 0.7 | | | 4 | SS | | | | | | | | | | |
| 1082.0 | 12.0 12.5 | 1-2-6 | 1.5 | | | 5 | SS | 17.1 | 10.1 | 15.0 | * | 57.8 | 23.9 | 15.7 | 8.2 | 17.7 | A-4a |
| | 15.0 | 11-8-9 | 1.5 | | | 6 | SS | 17.3 | 11.4 | 20.2 | * | 51.1 | -- | -- | -- | 10.7 | A-4a |
| | 17.5 | 9-12-14 | 1.3 | | Medium stiff to very stiff, brown to grayish brown SANDY SILT, little gravel, saturated. | 7 | SS | | | | | | | | | | |
| | 20.0 | 7-9-11 | 1.4 | | | 8 | SS | | | | | | | | | | |
| | 22.5 | 6-12-18 | 1.2 | | | 9 | SS | | | | | | | | | | |
| 1070.0 | 24.0 | | | | | | | | | | | | | | | | |
| | 25.0 | 2-17-19 | 1.5 | | | 10 | SS | | | | | | | | | | |
| | 27.5 | 26-14-17 | 1.5 | | | 11 | SS | | | | | | | | | | |
| | 30.0 | 14-19-18 | 1.4 | | Dense to very dense, gray SHALE FRAGMENTS W/ SILT AND CLAY, saturated. | 12 | SS | | | | | | | | | | |
| | 33.5 | 11-26-32 | 0.9 | | | 13 | SS | | | | | | | | | | |
| 1055.5 | 38.5 | 50/0.3 | 0.3 | | | 14 | SS | | | | | | | | | | |
| | | REC = 50% RQD = 26% | | | Gray SHALE, highly weathered and fractured. Note: gray clay seam from approx. depth of 40.0 to 40.5 ft. | RUN 1 38.5 to 43.5 | NXW | | | | | | | | | | |
| 1050.5 | 43.5 | | | | TERMINATION DEPTH 43.5 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1685 (L&R)

CALCULATED | CHECKED

3/4

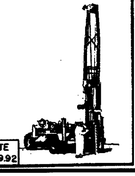
MED - 71 - 15.78

3 / 36

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE No. MED-71-1685 (L&R)
WIDENING
MEDINA COUNTY, OHIO

R&R INTERNATIONAL, INC.
Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321

| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.X. | G.M.R. | 10.29.92 |



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USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:48

## LOG OF BORING

Date Started 6-18-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1084 ±
Date Completed 6-18-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B1-4 | Station & Offset STA. 891+42.0T, 29'R | Surface Elev. 1115 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | % COAR. SAND | % FINE SAND | % SILT | % CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1115.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 17-16-10 | 0.8 | | Very stiff, brown and gray SANDY SILT, little to some gravel, dry to moist. | 1 | SS | | | | | | | | | | |
| 1112.5 | 2.5 | | | | | | | | | | | | | | | | |
| | 3.5 | 9-8-8 | 1.2 | | | 2 | SS | | | | | | | | | | |
| | 8.5 | 7-14-23 | 1.5 | | | 3 | SS | | | | | | | | | | |
| | 13.5 | 12-20-21 | 1.5 | | Very stiff to hard, brown and gray mottled SILT AND CLAY, little gravel, trace sand, moist. Note: -color changes brown at an approx. depth of 13.0 ft. -color changes gray at an approx. depth of 22.0 ft. | 4 | SS | 7.1 | 7.4 | 11.8 | * | 73.7 | -- | -- | -- | 14.8 | A-6a |
| | 18.5 | 9-16-22 | 1.5 | | | 5 | SS | | | | | | | | | | |
| | 23.5 | 5-9-12 | 1.5 | | | 6 | SS | | | | | | | | | | |
| | 27.5 | 5-11-19 | 1.5 | | | 7 | SS | | | | | | | | | | |
| | 30.0 | 7-6-10 | 1.5 | | | 8 | SS | | | | | | | | | | |
| 1084.0 | 31.0 | | | | | | | | | | | | | | | | |
| | 32.5 | 10-9-12 | 1.5 | | | 9 | SS | 19.5 | 14.9 | 17.9 | * | 47.7 | -- | -- | -- | 12.6 | A-4a |
| | 35.0 | 21-17-11 | 1.5 | | Medium dense, gray SAND AND GRAVEL, little to some silt, wet to saturated | 10 | SS | | | | | | | | | | |
| | 37.5 | 8-10-19 | 1.5 | | | 11 | SS | | | | | | | | | | |
| 1077.0 | 38.0 | | | | | | | | | | | | | | | | |
| | 40.0 | 11-11-16 | 1.5 | | Very stiff to hard, gray SILT AND CLAY, little sand, trace to little gravel, saturated. | 12 | SS | | | | | | | | | | |
| | 42.5 | 10-13-24 | 1.5 | | | 13 | SS | 6.1 | 8.2 | 9.5 | * | 76.2 | 23.6 | 16.5 | 7.1 | 15.4 | A-4a |
| 1070.0 | 45.0 | 14-27-42 | 1.2 | | | 14 | SS | | | | | | | | | | |
| | 48.5 | 50/0.1 | 1.0 | | Hard, gray SANDY SILT, some gravel, saturated. Note: auger refusal encountered at 49 ft. | 15 | SS | | | | | | | | | | |
| 1066.0 | 49.0 | 50/0.1 | 1.0 | | | 16 | SS | | | | | | | | | | |
| | | REC = 53% RQD = 25% | | | Gray SANDSTONE, very dense, slightly weathered and fractured Note: - thin gray clay seam encountered at approx. depths of 49.0 ft., 50.0 ft. and 54.0 to 58.0 ft. - gray clay seam from approx. depth of 50.0 to 50.3 ft. | RUN 1 49.0 to 54.0 | NXW | | | | | | | | | | |
| 1061.0 | 54.0 | | | | | | | | | | | | | | | | |
| | | REC = 80% RQD = 10% | | | Gray CLAYEY SHALE, extremely weathered, fractured. Note: - clay seam from approx. depth of 54.0 ft. - clay seam from approx. depth of 56.0 ft. | RUN 2 54.0 to 59.0 | NXW | | | | | | | | | | |
| 1056.0 | 59.0 | | | | TERMINATION DEPTH 59.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

## LOG OF BORING

Date Started 7-2-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1081.5
Date Completed 7-2-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B1-3 | Station & Offset STA. 890+54.0T, 13'L | Surface Elev. 1094 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | % COAR. SAND | % FINE SAND | % SILT | % CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1094.0 | 0.0 | | | | | | | | | | | | | | | | |
| 1093.2 | 0.8 | | | | ASPHALT | | | | | | | | | | | | |
| | 1.5 | 10-11-19 | 0.9 | | | 1 | SS | 10.7 | 9.5 | 13.3 | * | 66.5 | -- | -- | -- | 16.0 | A-6a |
| | 3.5 | 10-13-19 | 0.8 | | | 2 | SS | 14.8 | 14.9 | 13.2 | * | 57.1 | 33.3 | 21.4 | 11.9 | 12.8 | A-6a |
| | 7.5 | 11-17-23 | 0.8 | | Stiff to hard, brown SILT AND CLAY, trace to little sand, moist. | 3 | SS | | | | | | | | | | |
| | 10.0 | 12-18-25 | 0.8 | | | 4 | SS | | | | | | | | | | |
| | 12.5 | 3-6-5 | 1.2 | | | 5 | SS | | | | | | | | | | |
| | 15.0 | 8-12-13 | 1.1 | | | 6 | SS | 14.5 | 9.9 | 15.0 | * | 60.6 | -- | -- | -- | 15.0 | A-6a |
| 1077.0 | 17.0 | | | | | | | | | | | | | | | | |
| | 17.5 | 31-50/0.4 | 1.4 | | | 7 | SS | | | | | | | | | | |
| | 20.0 | 17-18-13 | 0.5 | | Very stiff to hard, grayish brown SANDY SILT, trace to some gravel, moist to wet. | 8 | SS | | | | | | | | | | |
| | 22.5 | 5-10-13 | 1.0 | | | 9 | SS | | | | | | | | | | |
| | 25.0 | 13-24-29 | 1.2 | | | 10 | SS | 21.4 | 8.8 | 21.8 | * | 48.0 | -- | -- | -- | 9.3 | A-4a |
| 1067.5 | 26.5 | | | | | | | | | | | | | | | | |
| | 27.5 | 14-19-27 | 1.5 | | Dense, gray SHALE FRAGMENTS W/ SAND AND SILT, moist. | 11 | SS | | | | | | | | | | |
| | 30.0 | 13-40-50/0.3 | 0.7 | | Note: auger refusal encountered at 32.0 ft. | 12 | SS | 55.5 | 12.5 | 4.9 | * | 27.0 | -- | -- | -- | 6.4 | A-2-4 |
| 1062.0 | 32.0 | | | | Yellow to white SANDSTONE, medium grained. | | | | | | | | | | | | |
| 1060.9 | 33.1 | | REC=40% | | Grayish brown CLAY SEAM, wet. | RUN1 32.0 to 37.0 | NXW | | | | | | | | | | |
| 1060.0 | 34.0 | | RQD=22% | | | | | | | | | | | | | | |
| | | | | | Gray SILTSTONE, slightly fractured. | | | | | | | | | | | | |
| 1057.0 | 37.0 | | | | TERMINATION DEPTH 37.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1685 (L&R)

4/4

MED - 71 - 15.78

4
36

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE No. MED-71-1685 L&R
MEDINA COUNTY, OHIO

R&R INTERNATIONAL INC.
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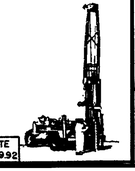

| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.X. | G.M.R. | 10.29.92 |

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USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:48

## GEOLOGY OF THE SITE

THE PROJECT SITE LIES ON THE GLACIATED, MODERATELY ROLLING PLAIN ALONG THE ALLEGHENY ESCARPMENT SEPARATING THE ALLEGHENY PLATEAU FROM THE MISSISSIPPI VALLEY PLAIN. THE PROJECT SITE LIES AT A HIGH ELEVATION OF 1,173 AT TOP OF THE IR-71 BRIDGE ABUTMENTS AND A LOW ELEVATION OF 1,050 ON IR-271 BENEATH THE IR-71 BRIDGES IN MEDINA COUNTY, OHIO.

THE WISCONSIN ICE SHEET PASSED OVER THE AREA LEAVING VARIABLE DEPOSITS AND THICKNESSES OF GLACIAL DRIFT MATERIAL. INFORMATION OBTAINED FROM MEDINA COUNTY SOIL SURVEY, NOVEMBER, 1977, INDICATES THAT THE SITE CONSISTS MAINLY OF SILTY CLAY AND CLAY. INFORMATION ALSO INDICATES THAT THE SOILS ALONG IR-71 EMBANKMENT UPPER PORTION ARE MAINLY COMPRISED OF CUT-AND-FILL MATERIALS.

THE OHIO GEOLOGICAL SURVEY INDICATES THAT BEDROCK STANDS AT APPROXIMATE ELEVATION OF 1,100 IN THE VICINITY OF THE SITE. AT THIS ELEVATION IT IS EXPECTED THAT BEDROCK IS COMPRISED OF SHALES AND SHALY SANDSTONE OF LOGAN FORMATION.

## EXPLORATION

THE SUBSURFACE EXPLORATION PROGRAM FOR THIS PROJECT INCLUDED ADVANCING A TOTAL OF FOUR (4) DRIVE SAMPLE CORE BORINGS WITH A CME-75 TRUCK MOUNTED DRILLING RIG USING CONVENTIONAL 3.25 OR 4.25 INCH I.D. HOLLOW STEM AUGERS, PERFORMED DURING JUNE AND JULY, 1992. ALL TEST BORINGS WERE ADVANCED FOR BRIDGE FOUNDATION DESIGN PURPOSE.

## INVESTIGATIONAL FINDINGS

TEST BORINGS B2-1 AND B2-4 WERE ADVANCED THROUGH THE EXISTING EMBANKMENT MATERIAL. TEST BORING B2-2 AND B2-3 WERE ADVANCED THROUGH ASPHALT PAVEMENT, WHICH WAS FOUND TO BE 7 INCHES THICK AT BOTH LOCATIONS THE TEST BORINGS DISCLOSED ALTERNATING LAYERS OF SAND CLASSIFIED AS A-3a, ROCK FRAGMENT WITH SILT AND CLAY CLASSIFIED AS A-2-6, SANDY SILT CLASSIFIED AS A-4a, SILT CLASSIFIED AS A-4b, AND SILT AND CLAY CLASSIFIED AS A-6a. THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "MEDIUM DENSE" TO "VERY DENSE." THE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "SOFT" TO "HARD," BUT PREDOMINANTLY "VERY STIFF." SANDSTONE AND/OR SHALE WERE ENCOUNTERED WITHIN THE EXPLORED DEPTHS AT THE TEST BORING LOCATIONS B2-1 THROUGH B2-4. TOP OF THE BEDROCK WAS FOUND TO BE SLIGHTLY DIPPING NORTH. THE OVERALL ROCK QUALITY DESIGNATION (RQD) FOR THE ROCK CORES WAS FOUND TO RANGE FROM 0 TO 86 PERCENT, WHICH CAN BE TERMED AS "VERY POOR" TO "GOOD."

FOR SPECIFIC CONDITIONS AT VARIOUS DEPTHS, REFER TO THE INDIVIDUAL TEST BORING LOGS WHICH FORM A PART OF THESE PLANS.

## LEGEND

- AUGER BORING LOCATION - PLAN VIEW
- PRESS AND/OR DRIVE SAMPLE AND/OR CORE BORING LOCATION - PLAN VIEW
- TR — TOP OF ROCK
- CAPPED PILE
- FOOTING
- FOOTING ON PILE
- HORIZONTAL BAR ON BORING LOG INDICATES THE DEPTH THE SAMPLE WAS TAKEN
- X/Y/Z — FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
  - X = NO OF BLOWS FOR FIRST 6"
  - Y = NO OF BLOWS FOR SECOND 6"
  - Z = NO OF BLOWS FOR THIRD 6"
- W — INDICATES FREE WATER ELEVATION
- INDICATES STATIC WATER ELEVATION

## SYMBOLS OF ROCK TYPES

- COAL
- WEATHERED MUDSTONE
- MUDSTONE
- WEATHERED SHALE
- SHALE
- CLAYSTONE
- SILTSTONE
- WEATHERED SANDSTONE
- SANDSTONE
- LEACHED DOLOMITE
- DOLOMITE
- LEACHED LIMESTONE
- LIMESTONE
- BOULDERS or COBBLES

## GENERAL INFORMATION

Drive sample / Press sample / Core borings

Drive sample borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O D , 1-3/8" I D split spoon sampler, at 2 5 and/or 5-foot depth intervals, driven by means of a 140 lb drop hammer with a free fall of 30" The number of blows required to drive the sampler 18" is considered the standard penetration test

Drive/press borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O D , 1-3/8" I D split spoon sampler, and 3" O D thin wall press sampler The press sampler is advanced by continuous uniform pressure, applied by the drilling machine

Core borings are made by means of a mechanically-powered rotary-type drilling machine, employing a NXM core barrel with industrial diamond cutting head

The boring log sheets display a graphic plot of the information obtained including depth and elevation of the sample, type of sample, the standard penetration test readings in three 6-inch increments, depth and elevation of press samples, field number assigned to sample, sample description - based on laboratory tests utilizing the Casagrande AC classification system - and gradation, plasticity and moisture determinations Results of strength and consolidation testing, if performed on undisturbed samples, will appear graphically on separate enclosures Rock samples are displayed on the log sheets including depth and elevation of the sample, amount of recovery and a visual classification based on type, color, degree of hardness, grain size, deterioration, bedding, acid reaction and other qualifying factors

At depths where materials are bouldery or gravelly to the extent that the sampler can not be utilized, a wash sample is procured and visually classified, in order to determine the general characteristics of the material These samples are not considered sufficiently representative to warrant laboratory testing

## PARTICLE SIZE DEFINITIONS

| 12" | 3" | 2 0mm | 0 42mm | 0 074mm | 0 005mm |
|---|---|---|---|---|---|
| Boulders | Cobbles | Gravel | Coarse Sand | Fine Sand | Silt | Clay |
| | | No 10 sieve | No 40 sieve | No 200 sieve | |

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1870 (L&R)

CALCULATED | CHECKED

1/4

MED - 71 - 15.78

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36

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE No. MED-71-1870 L&R
WIDENING
MEDINA COUNTY, OHIO

R&R INTERNATIONAL INC

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PO BOX 4383
AKRON, OH 44321

| CHECKED BY | REVIEWED | DATE |
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USERNAME : jrogers
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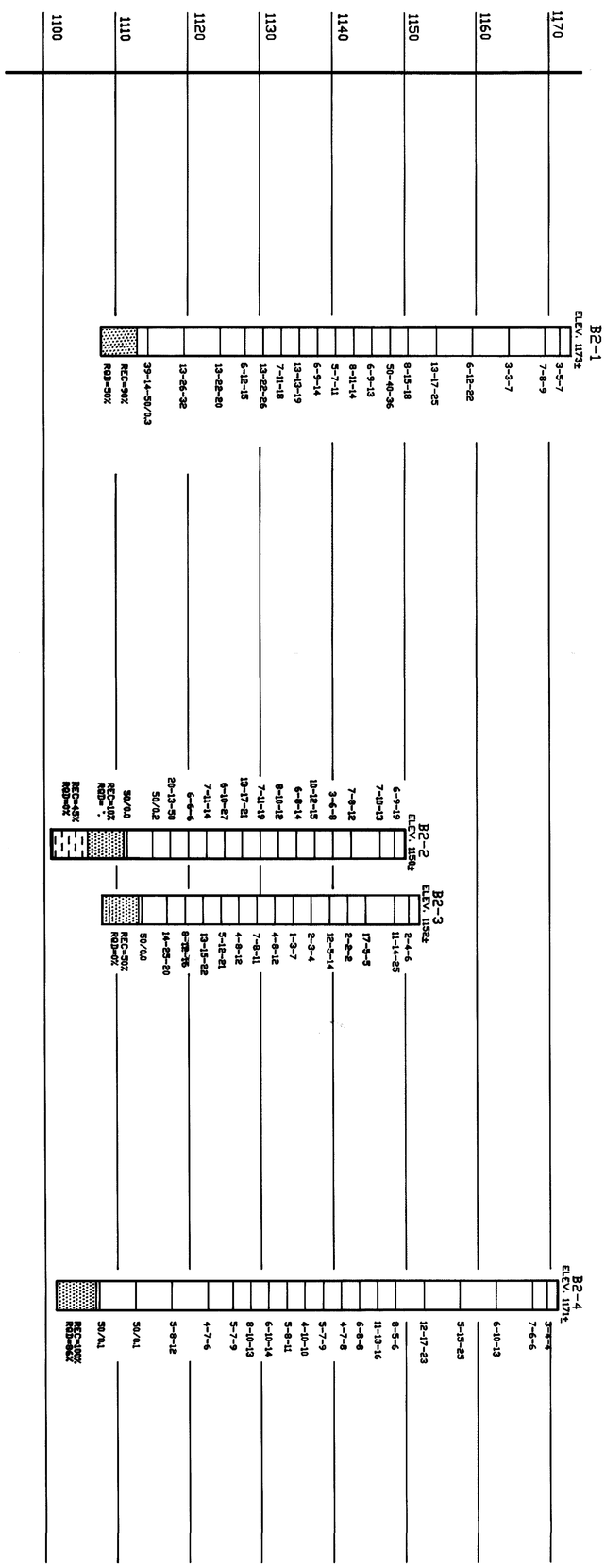


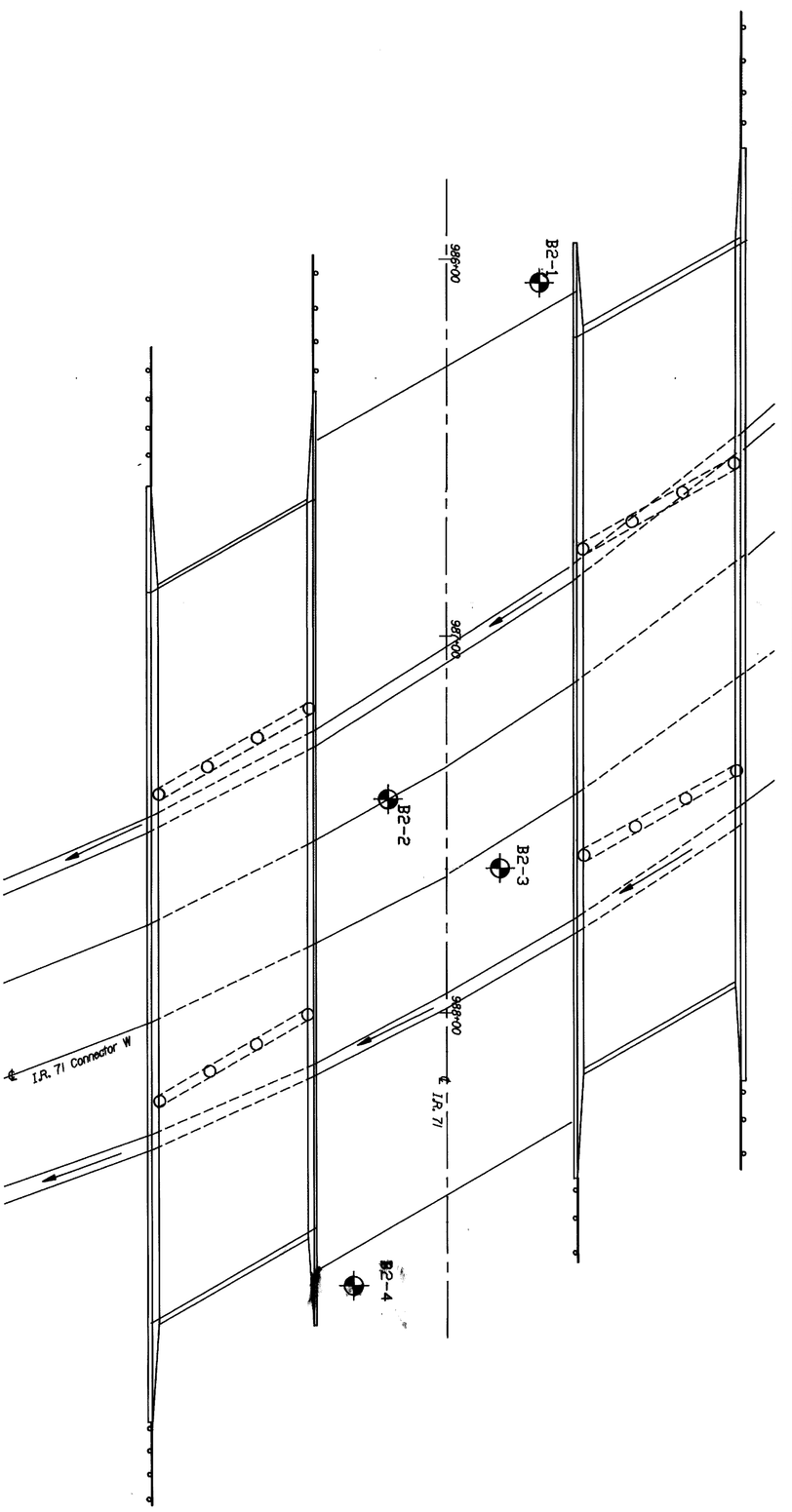


SCALE: HORIZ. 1"=80'
VERT. 1"=10'

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-1870 L&R*
*WIDENING*
*MEDINA COUNTY, OHIO*

R&R INTERNATIONAL INC.

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| DRAWN BY | CHECKED BY | REVIEWED | DATE |
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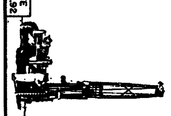
| V.K. | J.K. | G.M.R. | 10/28/99 |



## LOG OF BORING

Date Started 6-23-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1120 ±
Date Completed 6-23-92 | Casing: length -- | Dia. 4.25 inch.
Boring No. B2-1 | Station & Offset STA. 986+14.07 26' L | Surface Elev. 1173 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1173.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 3-5-7 | 0.2 | | | 1 | SS | | | | | | | | | | |
| | 3.5 | 7-8-9 | 0.6 | | | 2 | SS | | | | | | | | | | |
| | 8.5 | 3-3-7 | 1.2 | | Stiff to hard, brown SILT AND CLAY, trace sand, trace gravel, damp to moist. Note: - color darker from 0.0 to 9.0 ft. - shale fragments from 18.5 to 24.0 ft. | 3 | SS | 3.3 | 7.9 | 9.8 | * | 79.0 | — | — | — | 16.4 | A-6a |
| | 13.5 | 6-12-22 | 1.2 | | | 4 | SS | | | | | | | | | | |
| | 18.5 | 13-17-25 | 1.4 | | | 5 | SS | | | | | | | | | | |
| | 22.5 | 8-15-18 | 1.5 | | | 6 | SS | | | | | | | | | | |
| 1149.0 | 24.0 | | | | | | | | | | | | | | | | |
| | 25.0 | 50-40-36 | 1.5 | | Very stiff to hard, brown GRAVEL W/ SAND, SILT AND CLAY, moist to wet. | 7 | SS | | | | | | | | | | |
| | 27.5 | 6-9-13 | 1.5 | | | 8 | SS | | | | | | | | | | |
| 1143.0 | 30.0 | 8-11-14 | 1.5 | | | 9 | SS | | | | | | | | | | |
| | 32.5 | 5-7-11 | 1.2 | | Very stiff, grayish brown SILT, trace gravel, trace sand, wet. | 10 | SS | | | | | | | | | | |
| | 35.0 | 6-9-14 | 1.5 | | | 11 | SS | | | | | | | | | | |
| 1137.0 | 36.0 | | | | | | | | | | | | | | | | |
| | 37.5 | 13-13-19 | 1.5 | | Very stiff to hard, gray SILT AND CLAY, little sand, trace to little gravel, wet. | 12 | SS | 6.0 | 5.8 | 11.4 | * | 76.8 | 25.8 | 15.3 | 10.5 | 18.3 | A-6a |
| | 40.0 | 7-11-18 | 1.5 | | | 13 | SS | | | | | | | | | | |
| | 42.5 | 13-22-26 | 1.5 | | | 14 | SS | | | | | | | | | | |
| | 45.0 | 6-12-15 | 1.2 | | | 15 | SS | | | | | | | | | | |
| | 48.5 | 13-22-20 | 1.2 | | | 16 | SS | | | | | | | | | | |
| 1123.0 | 50.0 | | | | | | | | | | | | | | | | |
| | 53.5 | 13-26-32 | 0.5 | | Hard, grayish brown SANDY SILT, saturated. | 17 | SS | 29.0 | 9.8 | 15.2 | * | 46.0 | — | — | — | 16.4 | A-4a |
| 1118.0 | 55.0 | | | | | | | | | | | | | | | | |
| | 58.5 | 39-14-50/0.3 | 1.5 | | Very dense, yellow to brown to gray SAND, trace silt, saturated. | 18 | SS | | | | | | | | | | |
| 1113.0 | 60.0 | | | | Gray SANDSTONE, very dense. Note: -gray clay seam at approx. depth of 62.0 ft. -gray clay seam at approx. depth of 62.5 ft. -gray clay seam at approx. depth of 63.5 ft. -gray clay seam at approx. depth of 64.5 ft. | | | | | | | | | | | | | |
| | | REC = 90% RQD = 50% | | | | | | | | | | | | | | | |
| 1108.0 | 65.0 | | | | TERMINATION DEPTH 65.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

## LOG OF BORING

Date Started 7-8-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1119 ±
Date Completed 7-8-92 | Casing: length -- | Dia. 4.25 inch.
Boring No. B2-2 | Station & Offset STA. 987+50.07 15' R | Surface Elev. 1150 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1150.0 | 0 | | | | | | | | | | | | | | | | |
| 1149.4 | 0.6 | | | | ASPHALT | | | | | | | | | | | | |
| 1148.9 | 1.1 | | | | ROADBASE | | | | | | | | | | | | |
| | 1.5 | 6-9-19 | 0.8 | | | 1 | SS | 7.1 | 29.6 | 38.2 | * | 25.1 | — | — | — | 16.5 | A-3a |
| | 3.5 | 7-10-13 | 0.1 | | Medium dense, brown to yellow SAND, little to some silt, trace gravel, moist. | 2 | SS | | | | | | | | | | |
| 1145.0 | 5.0 | | | | | | | | | | | | | | | | |
| | 7.5 | 7-9-12 | 1.2 | | | 3 | SS | | | | | | | | | | |
| | 10.0 | 3-6-8 | 1.2 | | | 4 | SS | | | | | | | | | | |
| | 12.5 | 10-12-15 | 1.5 | | | 5 | SS | 11.3 | 5.2 | 10.5 | * | 73.0 | 25.0 | 16.3 | 8.7 | 15.3 | A-4a |
| | 15.0 | 6-8-14 | 1.5 | | | 6 | SS | | | | | | | | | | |
| | 17.5 | 8-10-12 | 1.5 | | Stiff to hard, grayish brown SANDY SILT, trace to little gravel, damp to moist. | 7 | SS | 6.8 | 7.1 | 12.1 | * | 74.0 | — | — | — | 14.9 | A-4a |
| | 20.0 | 7-11-19 | 1.5 | | | 8 | SS | | | | | | | | | | |
| | 22.5 | 13-17-21 | 1.5 | | | 9 | SS | | | | | | | | | | |
| | 25.0 | 6-10-27 | 1.5 | | | 10 | SS | | | | | | | | | | |
| | 27.5 | 7-11-14 | 1.5 | | | 11 | SS | 26.8 | 7.3 | 12.8 | * | 53.1 | — | — | — | 11.5 | A-4a |
| 1120.0 | 30.0 | 6-6-6 | 1.5 | | | 12 | SS | | | | | | | | | | |
| | 32.5 | 20-13-50 | 1.5 | | Stiff to hard, grayish brown to white SAND, little sandstone fragments, staurated. | 13 | SS | | | | | | | | | | |
| 1116.5 | 33.5 | | | | | | | | | | | | | | | | |
| | 35.0 | 50/.02 | 0.2 | | | 14 | SS | | | | | | | | | | |
| | 38.5 | 50/0.0 | 0.0 | | Yellow SANDSTONE, highly weathered, fractured horizontally every 2 to 3 inches. | 15 | SS | | | | | | | | | | |
| | | REC = 10% RQD = 0% | | | | RUN 1 39.0 to 44.0 | NXW | | | | | | | | | | |
| 1104.0 | 46.0 | | | | | | | | | | | | | | | | |
| | | REC = 45% RQD = 0% | | | Gray SHALE, highly weathered, fractured horizontally every 2 to 3 inches. | RUN 2 44.0 to 49.0 | NXW | | | | | | | | | | |
| 1101.0 | 49.0 | | | | TERMINATION DEPTH 49.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-1870 L&R*
*WIDENING*
*MEDINA COUNTY, OHIO*

R&R INTERNATIONAL, INC.
Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321

| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.X. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1870 (L&R)

3/4

MED - 71 - 15.78

7
36

DATE : 18-NOV-1999
TIME : 13:48
DESIGN FILE : i:\pd_med_lr-7\dgn\soils\soils07.dgn
USERNAME : jrogers

## LOG OF BORING

Date Started 6-23-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1148 ±
Date Completed 6-23-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B2-4 | Station & Offset STA. 988+79.07, 24'R | Surface Elev. 1171 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1171.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 3-4-4 | 0.7 | | | 1 | SS | | | | | | | | | | |
| | 3.5 | 7-6-6 | 0.3 | | | 2 | SS | | | | | | | | | | |
| | 8.5 | 6-10-13 | 1.0 | | Stiff to hard, brown SILT AND CLAY, trace gravel, damp to moist. | 3 | SS | | | | | | | | | | |
| | 13.5 | 5-15-25 | 1.5 | | | 4 | SS | 5.3 | 6.0 | 7.7 | * | 81.0 | — | — | — | 17.0 | A-6a |
| | 18.5 | 12-17-23 | 1.5 | | | 5 | SS | | | | | | | | | | |
| 1148.0 | 22.5<br>23.0 | 8-5-6 | 1.5 | | | 6 | SS | | | | | | | | | | |
| | 25.0 | 11-13-16 | 1.5 | | | 7 | SS | 19.9 | 6.8 | 23.9 | * | 49.4 | — | — | — | 18.3 | A-4a |
| | 27.5 | 6-8-8 | 1.5 | | | 8 | SS | | | | | | | | | | |
| | 30.0 | 4-7-8 | 1.5 | | | 9 | SS | | | | | | | | | | |
| | 32.5 | 5-7-9 | 1.5 | | | 10 | SS | | | | | | | | | | |
| | 35.0 | 4-10-10 | 1.5 | | | 11 | SS | | | | | | | | | | |
| | 37.5 | 5-8-11 | 1.5 | | | 12 | SS | | | | | | | | | | |
| | 40.0 | 6-10-14 | 1.5 | | | 13 | SS | | | | | | | | | | |
| | 42.5 | 8-10-13 | 1.5 | | Stiff to hard, brown to grayish brown SANDY SILT, little to trace gravel, moist to wet. | 14 | SS | 9.1 | 8.4 | 13.7 | * | 68.8 | 21.0 | 15.5 | 5.5 | 14.8 | A-4a |
| | 45.0 | 5-7-9 | 1.5 | | Note:<br>– color changes gray at 58.0 ft. | 15 | SS | | | | | | | | | | |
| | 48.5 | 4-7-6 | 1.5 | | | 16 | SS | | | | | | | | | | |
| | 53.5 | 5-8-12 | 1.5 | | | 17 | SS | | | | | | | | | | |
| | 58.5 | 50/0.1 | 0.1 | | | 18 | SS | 13.6 | 4.9 | 44.9 | * | 36.6 | — | — | — | 14.7 | A-4a |
| 1108.0 | 63.0<br>63.5 | 50/0.1 | 0.1 | | Gray SANDSTONE, fine to medium grained, fractured.<br>Note:<br>– thin clay seams encountered at approx. depths of 64.9 ft., 67.8 ft. and 68.8 ft.<br>– rock core sample fractured between approx. depths of 67.5 to 70.0 ft. | 19 | SS | | | | | | | | | | |
| | | REC = 100%<br>RQD = 86% | | | | RUN 1<br>64.0<br>to<br>69.5 | NXW | | | | | | | | | | |
| 1101.5 | 69.5 | | | | TERMINATION DEPTH 69.5 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

## LOG OF BORING

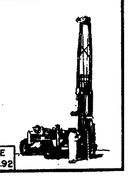
Date Started 7-7-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1122 ±
Date Completed 7-7-92 | Casing: length -- | Dia. 4.25 inch.
Boring No. B2-3 | Station & Offset STA. 987+69.07, 15'L | Surface Elev. 1152 ±

| ELEV. | DEPTH | STD. PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1152.0 | 0 | | | | | | | | | | | | | | | | |
| 1151.4 | 0.6 | | | | ASPHALT | | | | | | | | | | | | |
| | 1.5 | 2-4-6 | 0.8 | | | 1 | SS | | | | | | | | | | |
| | 3.5 | 11-14-25 | 0.8 | | | 2 | SS | 29.3 | 15.5 | 16.7 | * | 38.5 | — | — | — | 10.1 | A-4a |
| | 7.5 | 17-5-5 | 0.0 | | | 3 | SS | | | | | | | | | | |
| | 10.0 | 2-2-2 | 0.0 | | | 4 | SS | | | | | | | | | | |
| | 12.5 | 12-5-14 | 1.5 | | | 5 | SS | 5.0 | 5.7 | 9.7 | * | 79.6 | — | — | — | 17.6 | A-4a |
| | 15.0 | 2-3-4 | 1.3 | | Stiff to hard, grayish brown SANDY SILT, some to little gravel, little some clay, damp to wet. | 6 | SS | | | | | | | | | | |
| | 17.5 | 1-3-7 | 1.5 | | | 7 | SS | 6.8 | 7.1 | 12.1 | * | 74.0 | — | — | — | 14.9 | A-4a |
| | 20.0 | 4-8-12 | 1.5 | | | 8 | SS | | | | | | | | | | |
| | 22.5 | 7-8-11 | 1.5 | | | 9 | SS | 6.7 | 5.7 | 10.8 | * | 76.8 | 26.2 | 16.8 | 9.4 | 16.0 | A-4a |
| | 25.0 | 4-8-12 | 1.5 | | | 10 | SS | | | | | | | | | | |
| | 27.5 | 5-12-21 | 1.5 | | | 11 | SS | 16.6 | 10.0 | 17.8 | * | 55.6 | — | — | — | 14.4 | A-4a |
| | 30.0 | 13-15-22 | 1.3 | | | 12 | SS | | | | | | | | | | |
| 1119.5 | 32.5 | 8-12-16 | 1.5 | | | 13 | SS | | | | | | | | | | |
| | 35.0 | 14-25-20 | 1.5 | | Medium dense to dense, gray SAND, little to trace sandstone fragments, saturated. | 14 | SS | | | | | | | | | | |
| 1113.5 | 38.5 | 50/0.0 | 0.0 | | | 15 | SS | | | | | | | | | | |
| | | REC = 50%<br>RQD = 0% | | | Yellow to white SANDSTONE, highly weathered, fractured.<br>Note:<br>– gray clay seam at approx. depth of 43.5 ft. | RUN 1<br>39.0<br>to<br>44.0 | | | | | | | | | | | |
| 1108.0 | 44.0 | | | | TERMINATION DEPTH 44.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-1870 L&R*
*WIDENING*
*MEDINA COUNTY, OHIO*

R&R INTERNATIONAL INC.
Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321



| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.X. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1870 (L&R)

4/4

MED - 71 - 15.78

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36

DESIGN FILE : i:\pd_med_ir71\dgn\soils\soils08.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:48

## GEOLOGY OF THE SITE

THE PROJECT SITE LIES ON THE GLACIATED, MODERATELY ROLLING PLAIN ALONG THE ALLEGHENY ESCARPMENT SEPARATING THE ALLEGHENY PLATEAU FROM THE MISSISSIPPI VALLEY PLAIN. THE PROJECT SITE LIES AT A HIGH ELEVATION OF 1,152 AT THE TOP OF IR-71 BRIDGE ABUTMENTS AND A LOW ELEVATION OF 1,131 ON CH-66 (WILBUR ROAD) BENEATH THE IR-71 BRIDGES IN MEDINA COUNTY, OHIO.

THE WISCONSIN ICE SHEET PASSED OVER THE AREA LEAVING VARIABLE DEPOSITS AND THICKNESSES OF GLACIAL DRIFT MATERIAL. INFORMATION OBTAINED FROM MEDINA COUNTY SOIL SURVEY, NOVEMBER, 1977, INDICATES THAT THE SITE CONSISTS MAINLY OF SILT AND SAND. INFORMATION ALSO INDICATES THAT THE SOILS ALONG IR-71 EMBANKMENT UPPER PORTION ARE MAINLY COMPRISED OF CUT-AND-FILL MATERIALS.

THE OHIO GEOLOGICAL SURVEY INDICATES THAT BEDROCK STANDS AT APPROXIMATE ELEVATION OF 1,100 IN THE VICINITY OF THE SITE. AT THIS ELEVATION IT IS EXPECTED THAT BEDROCK IS COMPRISED OF SHALES AND SHALY SANDSTONE OF LOGAN FORMATION.

## EXPLORATION

THE SUBSURFACE EXPLORATION PROGRAM FOR THIS PROJECT INCLUDED ADVANCING A TOTAL OF FOUR (4) DRIVE SAMPLE CORE BORINGS WITH A CME-75 TRUCK MOUNTED DRILLING RIG AND A CME-750 ATV MOUNTED DRILLING RIG USING CONVENTIONAL 3.25 OR 4.25 INCH I.D. HOLLOW STEM AUGERS; PERFORMED DURING JUNE, 1992. ALL TEST BORINGS WERE ADVANCED FOR BRIDGE FOUNDATION DESIGN PURPOSE.

## INVESTIGATIONAL FINDINGS

TEST BORINGS B3-1 AND B3-4 WERE ADVANCED THROUGH THE EXISTING EMBANKMENT MATERIAL. TEST BORING B3-2 AND B3-3 WERE ADVANCED THROUGH ASPHALT PAVEMENT ON CH-66, WHICH WAS FOUND TO BE 3 INCHES THICK AT BOTH LOCATIONS. THE TEST BORINGS DISCLOSED ALTERNATING LAYERS OF GRAVEL AND SAND CLASSIFIED AS A-1-b, SILT CLASSIFIED AS A-4b, AND SILT AND CLAY CLASSIFIED AS A-6a. THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "MEDIUM DENSE" TO "VERY DENSE." THE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "STIFF" TO "HARD," BUT PREDOMINANTLY "HARD." SANDSTONE WAS ENCOUNTERED AT ALL FOUR TEST BORING LOCATIONS. TOP OF THE BEDROCK WAS FOUND TO BE DIPPING SOUTH. THE OVERALL ROCK QUALITY DESIGNATION (RQD) FOR THE ROCK CORES WAS FOUND TO RANGE FROM 10 TO 96 PERCENT, WHICH CAN BE TERMED AS "VERY POOR" TO "EXCELLENT," BUT PREDOMINANTLY "GOOD."

FOR SPECIFIC CONDITIONS AT VARIOUS DEPTHS, REFER TO THE INDIVIDUAL TEST BORING LOGS WHICH FORM A PART OF THESE PLANS.

## LEGEND

- AUGER BORING LOCATION - PLAN VIEW
- PRESS AND/OR DRIVE SAMPLE AND/OR CORE BORING LOCATION - PLAN VIEW
- TR — TOP OF ROCK
- CAPPED PILE
- FOOTING
- FOOTING ON PILE
- HORIZONTAL BAR ON BORING LOG INDICATES THE DEPTH THE SAMPLE WAS TAKEN
- X/Y/Z — FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
  - X = NO. OF BLOWS FOR FIRST 6"
  - Y = NO. OF BLOWS FOR SECOND 6"
  - Z = NO. OF BLOWS FOR THIRD 6"
- W — INDICATES FREE WATER ELEVATION
- INDICATES STATIC WATER ELEVATION

## SYMBOLS OF ROCK TYPES

- COAL
- WEATHERED MUDSTONE
- MUDSTONE
- WEATHERED SHALE
- SHALE
- CLAYSTONE
- SILTSTONE
- WEATHERED SANDSTONE
- SANDSTONE
- LEACHED DOLOMITE
- DOLOMITE
- LEACHED LIMESTONE
- LIMESTONE
- BOULDERS or COBBLES

## GENERAL INFORMATION

Drive sample / Press sample / Core borings

Drive sample borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, at 2.5 and/or 5-foot depth intervals, driven by means of a 140 lb. drop hammer with a free fall of 30". The number of blows required to drive the sampler 18" is considered the standard penetration test.

Drive/press borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, and 3" O.D. thin wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drilling machine.

Core borings are made by means of a mechanically-powered rotary-type drilling machine, employing a NXM core barrel with industrial diamond cutting head.

The boring log sheets display a graphic plot of the information obtained including depth and elevation of the sample, type of sample, the standard penetration test readings in three 6-inch increments, depth and elevation of press samples, field number assigned to sample, sample description - based on laboratory tests utilizing the Casagrande AC classification system - and gradation, plasticity and moisture determinations. Results of strength and consolidation testing, if performed on undisturbed samples, will appear graphically on separate enclosures. Rock samples are displayed on the log sheets including depth and elevation of the sample, amount of recovery and a visual classification based on type, color, degree of hardness, grain size, deterioration, bedding, acid reaction and other qualifying factors.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be utilized, a wash sample is procured and visually classified, in order to determine the general characteristics of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

## PARTICLE SIZE DEFINITIONS

| 12" | 3" | 2.0mm | | 0.42mm | 0.074mm | 0.005mm |
|---|---|---|---|---|---|---|
| Boulders | Cobbles | Gravel | Coarse Sand | | Fine Sand | Silt | Clay |
| | | | No. 10 sieve | No. 40 sieve | No. 200 sieve | | |

**STRUCTURE FOUNDATION INVESTIGATION**
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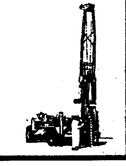

| CHECKED BY | REVIEWED | DATE |
|---|---|---|
| J.K. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1918 (L&R)

1/3

MED - 71 - 15.78

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36

DESIGN FILE : i:\pd_med_ir71\dgn\soils\soils09.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:48

DATE : 18-NOV-1999 DESIGN FILE : i:\pd_med_ir71\dgn\soils\soilsl0.dgn
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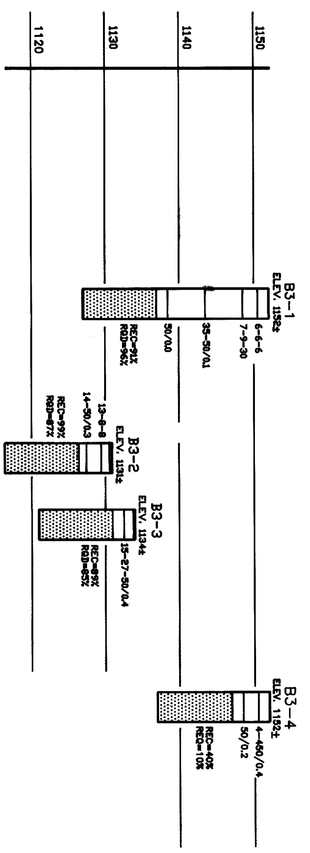


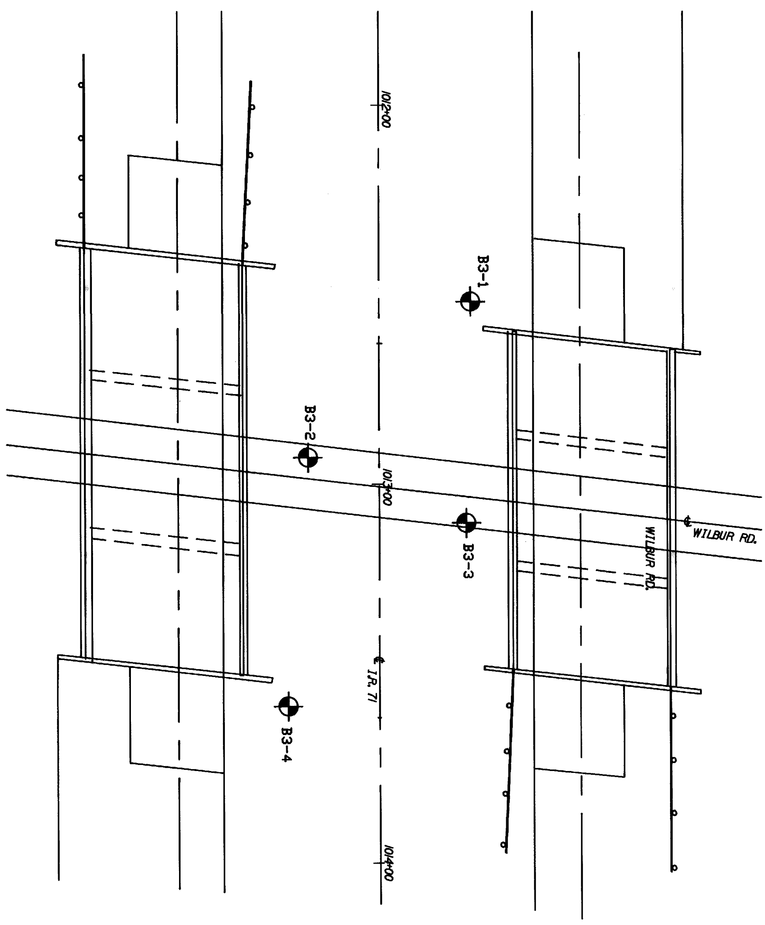


SCALE: HORIZ. 1"=20'
VERT. 1"=10'

N

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-1918 L&R*
*WIDENING*
*MEDINA COUNTY, OHIO*

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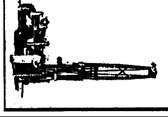
3366 CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321

| DRAWN BY | CHECKED BY/REVIEWED | DATE |
|---|---|---|
| V.K. | J.K. G.S.R. | 12/23/2 |



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|---|---|---|---|---|
| 10 / 36 | MED - 71 - 15.78 | 2/3 | STRUCTURE FOUNDATION INVESTIGATION<br>MED - 71 - 1918 (L&R) | CALCULATED<br>CHECKED |

## LOG OF BORING

Date Started 6-23-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. (DRY)
Date Completed 6-23-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B3-1 | Station & Offset STA. 1012+52.07, 25'L | Surface Elev. 1152 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1152.0 | 0.0 | | | | | | | | | | | | | | | | |
| | 1.5 | 6-6-6 | 1.0 | | Stiff, brown SILT AND CLAY, trace gravel, trace sand, moist. | 1 | SS | | | | | | | | | | |
| 1148.0 | 3.5 4.0 | 7-9-30 | 1.2 | | | 2 | SS | | | | | | | | | | |
| | 8.5 | 35-50/0.1 | 0.6 | | Yellow to brown SANDSTONE extremely weathered and fractured. | 3 | SS | | | | | | | | | | |
| 1138.5 | 13.5 | 50/0.0 | 0.0 | | | 4 | SS | | | | | | | | | | |
| | | REC = 91% RQD = 96% | | | Yellow to brown SANDSTONE, slightly fractured, fine to medium grained. | RUN 1 15.0 to 25.0 | NXW | | | | | | | | | | |
| 1127.0 | 25.0 | | | | TERMINATION DEPTH 25.0 FEET | | | | | | | | | | | | |

*: SILT AND CLAY COMBINED

## LOG OF BORING

Date Started 6-25-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. (DRY)
Date Completed 6-25-92 | Casing: length -- | Dia. 4.25 inch.
Boring No. B3-2 | Station & Offset STA. 1012+93.07, 19'R | Surface Elev. 1131 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1131.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 13-8-8 | 0.4 | | Medium dense to very dense, brown SANDSTONE FRAGMENTS, trace silt, dry. | 1 | SS | 68.1 | 17.9 | 8.7 | * | 5.3 | — | — | — | 16.7 | A-1-b |
| | 3.5 | 14-50/0.3 | 0.7 | | | 2 | SS | | | | | | | | | | |
| 1126.5 | 4.5 | | | | | | | | | | | | | | | | |
| | | REC = 99% RQD = 87% | | | Yellow to white SANDSTONE, slightly fractured, fine to medium grained. Note: - thin silt seams encountered at approx. depths of 3.0, 3.5, and 6.5 ft. | RUN 1 4.5 to 14.5 | NXW | | | | | | | | | | |
| 1116.5 | 14.5 | | | | TERMINATION DEPTH 14.5 FEET | | | | | | | | | | | | |

*: SILT AND CLAY COMBINED

## LOG OF BORING

Date Started 6-25-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. (DRY)
Date Completed 6-25-92 | Casing: length -- | Dia. 4.25 inch.
Boring No. B3-3 | Station & Offset STA. 1013+11.07, 24'L | Surface Elev. 1134 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1134.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 15-27-50/0.4 | 0.8 | | Very dense, brown SAND AND GRAVEL, trace silt and clay, dry. | 1 | SS | | | | | | | | | | |
| 1131.0 | 3.0 | | | | | | | | | | | | | | | | |
| | | REC = 89% RQD = 85% | | | Yellow to white SANDSTONE, fine to medium grained, slightly fractured Note: - thin silt seam was encountered at approx. depths of 5.5 ft. | RUN 1 3.0 to 13.0 | NXW | | | | | | | | | | |
| 1121.0 | 13.0 | | | | TERMINATION DEPTH 13.0 FEET | | | | | | | | | | | | |

*: SILT AND CLAY COMBINED

## LOG OF BORING

Date Started 6-24-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. (DRY)
Date Completed 6-24-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B3-4 | Station & Offset STA. 1013+60.07, 25'R | Surface Elev. 1152 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1152.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 4-4-50/0.4 | 0.5 | | Medium stiff, brown SILT, trace to little clay, moist. | 1 | SS | 6.6 | 5.3 | 13.2 | * | 74.9 | — | — | — | 18.3 | A-4b |
| 1149.5 | 2.5 | | | | | | | | | | | | | | | | |
| | 3.5 | 50/0.2 | 0.0 | | | 2 | SS | | | | | | | | | | |
| | | REC = 40% RQD = 10% | | | Yellow to white SANDSTONE, fine to medium grained, slightly fractured. Note: - thin silt seam was encountered at approx. depths of 5.5 ft. - lost circulation at approx. depth of 12.0 ft. | RUN 1 5.0 to 15.0 | NXW | | | | | | | | | | |
| 1137.0 | 15.0 | | | | TERMINATION DEPTH 15.0 FEET | | | | | | | | | | | | |

*: SILT AND CLAY COMBINED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1918 (L&R)

CALCULATED | CHECKED

3/3

MED - 71 - 15.78

11
36

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE No. MED-71-1918 (L&R)
WIDENING
MEDINA COUNTY, OHIO

R&R INTERNATIONAL INC.
Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321

| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.K. | G.M.R. | 10.29.92 |

DESIGN FILE : i:\pd_med_ir71\dgn\soils\soillil.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:48

## GEOLOGY OF THE SITE

THE PROJECT SITE LIES ON THE GLACIATED, MODERATELY ROLLING PLAIN ALONG THE ALLEGHENY ESCARPMENT SEPARATING THE ALLEGHENY PLATEAU FROM THE MISSISSIPPI VALLEY PLAIN. THE PROJECT SITE LIES AT A HIGH ELEVATION OF 1,060 AT TOP OF THE IR-71 BRIDGE ABUTMENTS AND A LOW ELEVATION OF 1,007 AT THE BOTTOM OF ROCKY RIVER BENEATH THE IR-71 BRIDGES IN MEDINA COUNTY, OHIO.

THE WISCONSIN ICE SHEET PASSED OVER THE AREA LEAVING VARIABLE DEPOSITS AND THICKNESSES OF GLACIAL DRIFT MATERIAL. INFORMATION OBTAINED FROM MEDINA COUNTY SOIL SURVEY, NOVEMBER, 1977, INDICATES THAT THE SITE CONSISTS MAINLY OF SANDY SILT, SAND AND SILTY CLAY. INFORMATION ALSO INDICATES THAT THE SOILS ALONG IR-71 EMBANKMENT UPPER PORTION ARE MAINLY COMPRISED OF CUT-AND-FILL MATERIALS.

THE OHIO GEOLOGICAL SURVEY INDICATES THAT BEDROCK STANDS AT APPROXIMATE ELEVATIONS 900 TO 1,000 IN THE VICINITY OF THE SITE. AT THIS ELEVATION IT IS EXPECTED THAT BEDROCK IS COMPRISED OF SHALES AND SHALY SANDSTONE OF LOGAN FORMATION.

## EXPLORATION

THE SUBSURFACE EXPLORATION PROGRAM FOR THIS PROJECT INCLUDED ADVANCING A TOTAL OF FOUR (4) DRIVE SAMPLE CORE BORINGS WITH A CME-75 TRUCK MOUNTED DRILLING RIG AND A SIMCO 4000TR-2 TRACK MOUNTED DRILLING RIG USING CONVENTIONAL 3.25 OR 4.24 INCH I.D. HOLLOW STEM AUGERS, PERFORMED DURING JUNE AND AUGUST, 1992. ALL TEST BORINGS WERE ADVANCED FOR BRIDGE FOUNDATION DESIGN PURPOSE. TEST BORING B4-3 WAS ALSO ADVANCED FOR RIVER SCOUR STUDY.

## INVESTIGATIONAL FINDINGS

TEST BORINGS B4-1 THROUGH B4-4 WERE ADVANCED THROUGH THE EXISTING EMBANKMENT MATERIAL. TEST BORINGS DISCLOSED ALTERNATING LAYERS OF GRAVEL AND SAND CLASSIFIED AS A-1-b, SAND CLASSIFIED AS A-3a, SANDY SILT CLASSIFIED AS A-4a, SILT CLASSIFIED AS A-4b, AND SILT AND CLAY CLASSIFIED AS A-6a. THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED WAS FOUND TO BE "VERY DENSE." THE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "SOFT" TO "HARD," BUT PREDOMINANTLY "HARD." SANDSTONE WAS ENCOUNTERED AT TEST BORING LOCATION B4-4. THE ROCK QUALITY DESIGNATION (RQD) FOR THE ROCK CORES WAS FOUND TO BE 10 PERCENT, WHICH CAN BE TERMED AS "VERY POOR."

FOR SPECIFIC CONDITIONS AT VARIOUS DEPTHS, REFER TO THE INDIVIDUAL TEST BORING LOGS WHICH FORM A PART OF THESE PLANS.

## LEGEND

- AUGER BORING LOCATION - PLAN VIEW
- PRESS AND/OR DRIVE SAMPLE AND/OR CORE BORING LOCATION - PLAN VIEW
- TR — TOP OF ROCK
- CAPPED PILE
- FOOTING
- FOOTING ON PILE
- HORIZONTAL BAR ON BORING LOG INDICATES THE DEPTH THE SAMPLE WAS TAKEN
- X/Y/Z — FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
  - X = NO. OF BLOWS FOR FIRST 6"
  - Y = NO. OF BLOWS FOR SECOND 6"
  - Z = NO. OF BLOWS FOR THIRD 6"
- W — INDICATES FREE WATER ELEVATION
- INDICATES STATIC WATER ELEVATION

## SYMBOLS OF ROCK TYPES

- COAL
- WEATHERED MUDSTONE
- MUDSTONE
- WEATHERED SHALE
- SHALE
- CLAYSTONE
- SILTSTONE
- WEATHERED SANDSTONE
- SANDSTONE
- LEACHED DOLOMITE
- DOLOMITE
- LEACHED LIMESTONE
- LIMESTONE
- BOULDERS or COBBLES

## GENERAL INFORMATION

Drive sample / Press sample / Core borings

Drive sample borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, at 2.5 and/or 5-foot depth intervals, driven by means of a 140 lb. drop hammer with a free fall of 30". The number of blows required to drive the sampler 18" is considered the standard penetration test.

Drive/press borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, and 3" O.D. thin wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drilling machine.

Core borings are made by means of a mechanically-powered rotary-type drilling machine, employing a NXM core barrel with industrial diamond cutting head.

The boring log sheets display a graphic plot of the information obtained including depth and elevation of the sample, type of sample, the standard penetration test readings in three 6-inch increments, depth and elevation of press samples, field number assigned to sample, sample description - based on laboratory tests utilizing the Casagrande AC classification system - and gradation, plasticity and moisture determinations. Results of strength and consolidation testing, if performed on undisturbed samples, will appear graphically on separate enclosures. Rock samples are displayed on the log sheets including depth and elevation of the sample, amount of recovery and a visual classification based on type, color, degree of hardness, grain size, deterioration, bedding, acid reaction and other qualifying factors.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be utilized, a wash sample is procured and visually classified, in order to determine the general characteristics of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

## PARTICLE SIZE DEFINITIONS

| 12" | 3" | 2.0mm | | 0.42mm | 0.074mm | 0.005mm | |
|---|---|---|---|---|---|---|---|
| Boulders | Cobbles | Gravel | Coarse Sand | Fine Sand | Silt | | Clay |
| | | No. 10 sieve | | No. 40 sieve | No. 200 sieve | | |

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-1992 L&R*
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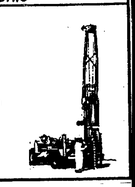
|---|---|---|
| J.X. | G.M.R. | 10-29-92 |



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STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1992 (L&R)

1/4

MED - 71 - 15.78

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DATE : 18-NOV-1999
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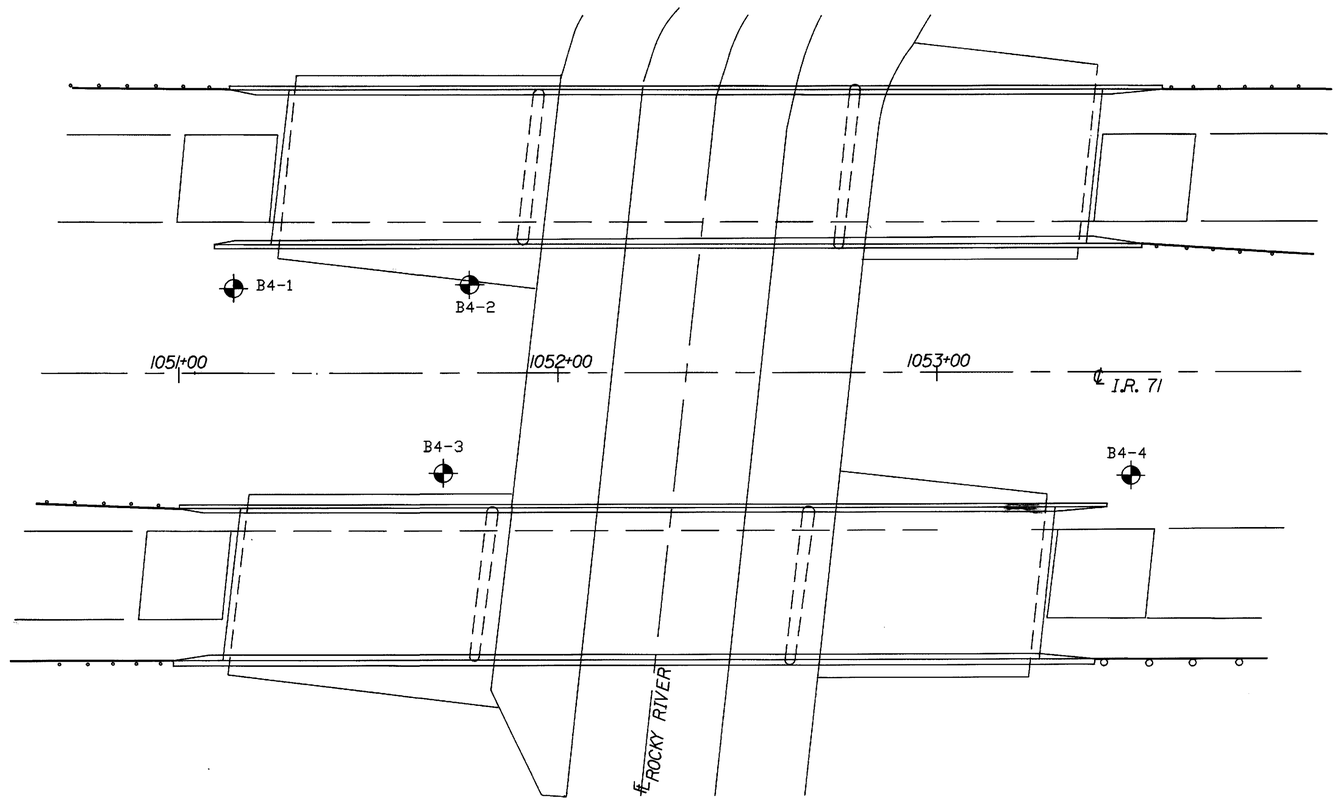


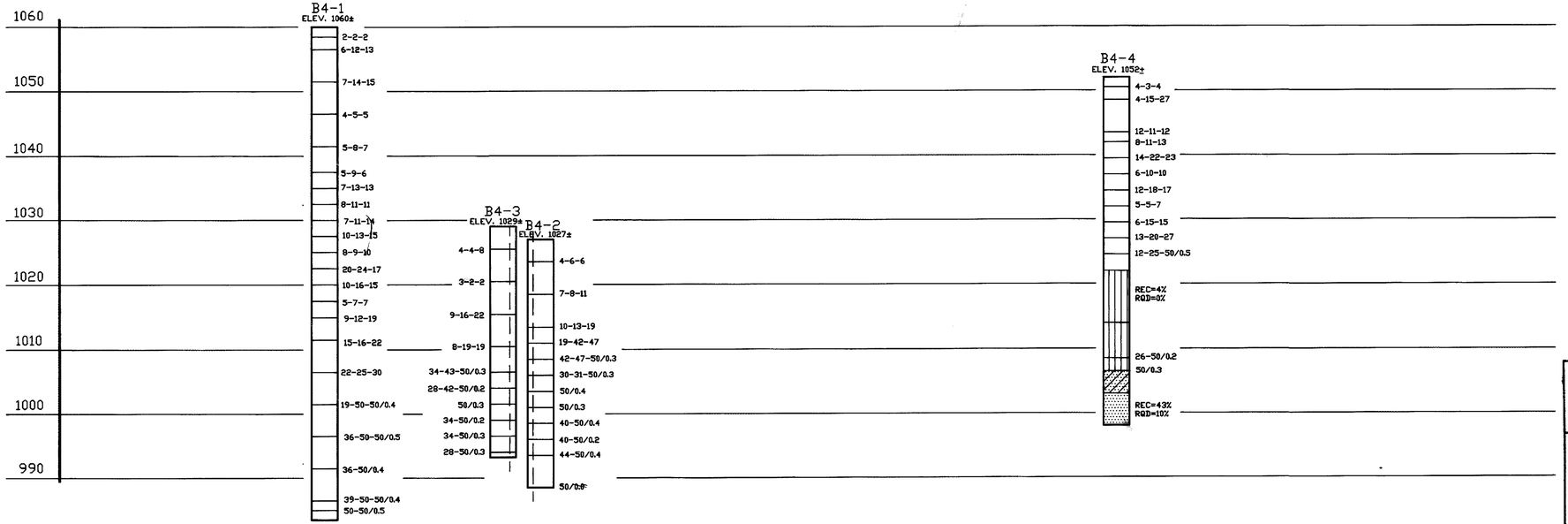


SCALE: HORIZ. 1"=20'
VERT. 1"=10'

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-1992 L&R*
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|---|---|---|---|
| V. K. | J. X. | G. M. R. | 10.29.92 |

CALCULATED | CHECKED

**STRUCTURE FOUNDATION INVESTIGATION**
**MED - 71 - 1992 (L&R)**

2/4

MED - 71 - 15.78

13
36

DESIGN FILE : i:\pd_med_lr71\dgn\soils\soils13.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:48

## LOG OF BORING

Date Started 8-7-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1007 ±
Date Completed 8-7-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B4-3 | Station & Offset STA. 105+87.99, 27'R | Surface Elev. 1029 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | % COAR. SAND | % FINE SAND | % SILT | % CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1029.0 | 0.0 | | | | | | | | | | | | | | | | |
| | 3.5 | 4-4-8 | 0.7 | | Medium stiff to hard, brown SANDY SILT, trace gravel, little to some clay, damp. | 1 | SS | 11.0 | 11.7 | 20.4 | * | 56.9 | 28.6 | 21.0 | 7.6 | 21.3 | A-4a |
| | 8.5 | 3-2-2 | 1.2 | | | 2 | SS | | | | | | | | | | |
| | 13.5 | 9-16-22 | 1.5 | | | 3 | SS | 24.9 | 24.7 | 10.6 | * | 39.8 | — | — | — | 10.5 | A-4a |
| 1014.0 | 15.0 | | | | | | | | | | | | | | | | |
| | 18.5 | 8-19-19 | 1.4 | | Hard, brown SILT, trace gravel, some sand, moist. | 4 | SS | 7.5 | 1.3 | 26.0 | 51.2 | 14.0 | — | — | — | 20.1 | A-4b |
| 1007.0 | 22.0 | | | | | | | | | | | | | | | | |
| | 22.5 | 34-43-50/0.3 | 1.5 | | Hard, brown SILTY SAND, trace gravel, saturated. | 5 | SS | 0.1 | 0.1 | 59.7 | * | 40.1 | — | — | — | 22.0 | A-4a |
| 1004.0 | 25.0 | 28-42-50/0.2 | 1.5 | | Very dense, brown SAND, trace gravel, some silt, saturated. | 6 | SS | 0.1 | 0.6 | 67.4 | * | 31.9 | — | — | — | 18.5 | A-3a |
| 1002.0 | 27.0 | | | | | | | | | | | | | | | | |
| | 27.5 | 50/0.3 | 0.3 | | Hard, brown SILT AND CLAY, trace gravel, little sand, moist. | 7 | SS | 0.3 | 0.5 | 15.4 | 47.5 | 36.3 | — | — | — | 18.8 | A-6a |
| 999.0 | 30.0 | 34-50/0.2 | 0.7 | | Hard, brown SILT, trace gravel, little sand, moist. | 8 | SS | 8.5 | 5.7 | 24.0 | 51.1 | 10.7 | — | — | — | 12.2 | A-4b |
| | 32.5 | 34-50/0.3 | 0.0 | | Note: - sandstone fragments encountered at 32.5 ft. - auger refusal encountered at 35.8 ft. | 9 | SS | | | | | | | | | | |
| | 35.0 | 28-50/0.3 | 0.0 | | | 10 | SS | | | | | | | | | | |
| 993.2 | 35.8 | | | | TERMINATION DEPTH 35.8 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

## LOG OF BORING

Date Started 6-24-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. (DRY)
Date Completed 6-24-92 | Casing: length -- | Dia. 4.25 inch.
Boring No. B4-4 | Station & Offset STA. 105+73.99, 27'R | Surface Elev. 1052 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | % COAR. SAND | % FINE SAND | % SILT | % CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1052.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 4-3-4 | 0.3 | | | 1 | SS | | | | | | | | | | |
| | 3.5 | 4-15-27 | 0.6 | | | 2 | SS | | | | | | | | | | |
| | 6.5 | 12-11-12 | 0.6 | | Medium stiff to hard, brown SANDY SILT, trace gravel, little to some clay, damp. | 3 | SS | | | | | | | | | | |
| | 10.0 | 8-11-13 | 0.7 | | Note: - trace organics in sample at approx. depth of 9.0 ft. | 4 | SS | 11.5 | 8.0 | 13.5 | * | 67.0 | — | — | — | 15.0 | A-4a |
| | 12.5 | 14-22-23 | 1.0 | | | 5 | SS | | | | | | | | | | |
| | 15.0 | 6-10-10 | 1.5 | | | 6 | SS | | | | | | | | | | |
| | 17.5 | 12-18-17 | 0.7 | | | 7 | SS | | | | | | | | | | |
| 1032.0 | 20.0 | 5-5-7 | 1.0 | | | 8 | SS | 6.6 | 7.8 | 14.3 | * | 71.3 | 27.7 | 17.5 | 10.2 | 16.4 | A-6a |
| | 22.5 | 6-15-15 | 1.5 | | Stiff to hard, brown to gray SILT AND CLAY, trace sand, damp. | 9 | SS | | | | | | | | | | |
| 1027.0 | 25.0 | 13-20-27 | 1.2 | | | 10 | SS | 10.5 | 9.1 | 15.7 | * | 64.7 | — | — | — | 12.2 | A-4a |
| | 27.5 | 12-25-50/0.5 | 1.4 | | Hard, gray SANDY SILT, little gravel, moist. Note: - auger refusal encountered at 30.0 ft. | 11 | SS | | | | | | | | | | |
| 1022.0 | 30.0 | | | | | | | | | | | | | | | | |
| 1021.6 | 30.4 | | | | Gray LIMESTONE BOULDER, very dense. | | | | | | | | | | | | |
| | | REC = 4% RQD = 0% | | | Hard, gray SANDY SILT, little gravel, moist. | RUN 1 30.0 to 38.0 | NXW | | | | | | | | | | |
| | 43.5 | 26-50/0.2 | 0.3 | | | 12 | SS | 17.1 | 7.6 | 39.3 | * | 36.0 | — | — | — | 10.6 | A-4a |
| 1007.0 | 45.0 | | | | | | | | | | | | | | | | |
| | 45.5 | 50/0.3 | 0.3 | | Brown SANDSTONE FRAGMENTS, extremely weathered and decomposed. | 13 | SS | | | | | | | | | | |
| 1003.0 | 49.0 | | | | | | | | | | | | | | | | |
| | | REC = 43% RQD = 10% | | | Brown to yellow SANDSTONE, medium to coarse grained, highly weathered. | RUN 2 49.0 to 54.0 | NXW | | | | | | | | | | |
| 998.0 | 54.0 | | | | TERMINATION DEPTH 54.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

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| T.S. | J.K. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 1992 (L&R)

1/4

MED - 71 - 15.78

14
36

DESIGN FILE : I:\pd_med_ir71\dgn\soils\soilsl4.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:48

## LOG OF BORING

Date Started 6-24-92
Date Completed 6-24-92
Boring No. B4-1

Sampler Type SS Dia. 2.00 inch.
Casing: length -- Dia. 3.25 inch.
Station & Offset STA. 1051+20.99 24' L

Water Elev. 1125.5
Surface Elev. 1160 ±

| ELEV. | DEPTH | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERISTICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. | REC. LOSS Ft. | STD.PEN. (N) | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1160.0 | 0 | | | | | | | | | | | | | | | |
| | 1.5 | 1 | SS | 12.8 | 10.4 | 12.8 | * | 64.0 | — | — | — | 12.1 | A-4a | 1.2 | 2-2-2 | Medium stiff to very stiff, brown to gray SILT AND CLAY, trace gravel, trace to little sand, damp. Note: -dead tree roots in sample at approx. depth of 2.0 ft. |
| | 3.5 | 2 | SS | | | | | | | | | | | 0.4 | 6-12-13 | |
| | 8.5 | 3 | SS | | | | | | | | | | | 1.3 | 7-14-15 | |
| | 13.5 | 4 | SS | | | | | | | | | | | 0.7 | 4-5-5 | |
| | 18.5 | 5 | SS | | | | | | | | | | | 1.5 | 5-6-7 | |
| | 22.5 | 6 | SS | | | | | | | | | | | 1.5 | 5-6-6 | |
| 1136.0 | 26.0 | 7 | SS | | | | | | | | | | | 1.3 | 7-13-13 | |
| 1135.5 | 28.5 | 8 | SS | | | | | | | | | | | 1.4 | 8-11-11 | Very stiff, gray SANDY SILT, little gravel, damp. |
| 1132.0 | 28.0 | | | | | | | | | | | | | | | Very stiff, gray to black, ORGANIC SANDY SILT, trace gravel, moist. |
| | 30.0 | 9 | SS | 10.3 | 7.2 | 9.5 | * | 73.0 | — | — | — | 15.4 | A-8a | 1.2 | 7-11-14 | Very stiff, grey to brown, SILT AND CLAY, trace gravel, trace sand, moist. |
| | 32.5 | 10 | SS | | | | | | | | | | | 1.5 | 10-13-15 | |
| | 35.0 | 11 | SS | | | | | | | | | | | 1.5 | 8-9-10 | |
| 1123.0 | 37.0 | 12 | SS | 9.2 | 11.1 | 23.6 | * | 56.1 | 20.4 | 13.8 | 6.6 | 11.7 | A-4a | 1.4 | 20-24-17 | Hard to medium stiff, SANDY SILT, little to some gravel, wet. |
| | 37.5 | | | | | | | | | | | | | | | |
| | 40.0 | 13 | SS | | | | | | | | | | | 0.9 | 10-16-16 | |
| | 42.5 | 14 | SS | | | | | | | | | | | 0.3 | 5-7-7 | |
| | 45.0 | 15 | SS | | | | | | | | | | | 1.5 | 9-12-19 | |
| | 48.5 | 16 | SS | | | | | | | | | | | 1.5 | 15-16-22 | |
| | 53.5 | 17 | SS | 7.5 | 9.2 | 29.4 | * | 53.9 | — | — | — | 9.7 | A-4a | 1.3 | 22-25-30 | |
| | 58.5 | 18 | SS | | | | | | | | | | | 1.3 | 19-50-500/.4 | |
| | 63.5 | 19 | SS | | | | | | | | | | | 1.4 | 36-50-500/.5 | |
| | 68.5 | 20 | SS | | | | | | | | | | | 0.8 | 36-500/.4 | |
| 1087.0 | 73.0 | 21 | SS | 49.1 | 27.8 | 15.8 | * | 7.3 | — | — | — | 12.5 | A-1-b | 1.3 | 39-50-500/.4 | Very dense, brown, GRAVEL AND SAND, trace silt, saturated. Note: -augered from 76.0 to 76.5 ft. |
| 1083.5 | 73.5 | 22 | SS | | | | | | | | | | | 0.7 | 50-500/.5 | |
| | 76.5 | | | | | | | | | | | | | | | TERMINATION DEPTH: 76.5 FEET |

* SILT AND SAND COMBINED

## LOG OF BORING

Date Started 8-6-92
Date Completed 8-6-92
Boring No. B4-2

Sampler Type SS Dia. 2.00 inch.
Casing: length -- Dia. 3.25 inch.
Station & Offset STA. 1051+96.99 25' L

Water Elev. 1008 ±
Surface Elev. 1027 ±

| ELEV. | DEPTH | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERISTICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. | REC. LOSS Ft. | STD.PEN. (N) | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1027.0 | 0 | | | | | | | | | | | | | | | |
| | 3.5 | 1 | SS | 14.6 | 7.8 | 11.4 | * | 66.2 | — | — | — | 14.5 | A-4a | 0.6 | 4-6-6 | Stiff to hard, brown, SANDY SILT, little gravel, moist. |
| | 8.5 | 2 | SS | | | | | | | | | | | 1.1 | 7-9-11 | |
| | 13.5 | 3 | SS | 12.4 | 8.3 | 22.7 | * | 56.6 | — | — | — | 13.4 | A-4a | 1.2 | 10-13-19 | |
| | 18.5 | 4 | SS | | | | | | | | | | | 1.3 | 19-42-47 | |
| 1007.0 | 20.0 | 5 | SS | 2.0 | 9.2 | 57.5 | * | 31.3 | — | — | — | 16.8 | A-3a | 1.3 | 42-47-500/.3 | |
| | 21.0 | 6 | SS | | | | | | | | | | | 0.9 | 30-31-500/.3 | Very dense, brown, SAND, trace gravel, some silt, wet. |
| | 23.5 | 7 | SS | | | | | | | | | | | 1.3 | 500/.4 | |
| 1002.0 | 25.0 | 8 | SS | 10.7 | 7.5 | 22.4 | * | 59.4 | — | — | — | 12.2 | A-4a | 0.7 | 500/.3 | Hard, brown, SANDY SILT, trace gravel wet. |
| | 26.0 | 9 | SS | | | | | | | | | | | 0.8 | 40-500/.4 | |
| 995.0 | 28.5 | 10 | SS | 6.6 | 3.5 | 27.1 | * | 62.8 | — | — | — | 14.1 | A-4a | 0.8 | 40-500/.4 | |
| | 31.0 | 11 | SS | 3.6 | 3.0 | 13.7 | * | 57.9 | 21.8 | — | -- | 12.9 | A-4b | 0.7 | 44-500/.4 | Hard, brown, SILT, trace gravel, little sand, wet. Note: -auger refusal encountered at 38.5 feet. |
| 988.5 | 32.0 | 12 | SS | | | | | | | | | | | 0.0 | 500/.0 | |
| | 38.5 | | | | | | | | | | | | | | | TERMINATION DEPTH: 38.5 FEET |

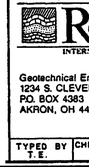
* SILT AND CLAY COMBINED

**STRUCTURE FOUNDATION INVESTIGATION**
***BRIDGE No. MED-71-1992 (L&R)***
***WIDENING***
***MEDINA COUNTY, OHIO***

R&R INTERNATIONAL INC

Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321

| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.K. | G.M.R. | 10.29.92 |



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**STRUCTURE FOUNDATION INVESTIGATION**
**MED - 71 - 1992 (L&R)**

4/4

**MED - 71 - 15.78**

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## GEOLOGY OF THE SITE

THE PROJECT SITE LIES ON THE GLACIATED, MODERATELY ROLLING PLAIN ALONG THE ALLEGHENY ESCARPMENT SEPARATING THE ALLEGHENY PLATEAU FROM THE MISSISSIPPI VALLEY PLAIN. THE PROJECT SITE LIES AT A HIGH ELEVATION OF 1,074 AT TOP OF THE WEST ABUTMENT AND A LOW ELEVATION OF 1,071 AT TOP OF THE EAST ABUTMENT OF BRIDGE No. MED-71-2034 OVER IR-71 IN MEDINA COUNTY, OHIO.

THE WISCONSIN ICE SHEET PASSED OVER THE AREA LEAVING VARIABLE DEPOSITS AND THICKNESSES OF GLACIAL DRIFT MATERIAL. INFORMATION OBTAINED FROM MEDINA COUNTY SOIL SURVEY, NOVEMBER, 1977, INDICATES THAT THE SITE CONSISTS MAINLY OF SILTY CLAY AND CLAY. INFORMATION ALSO INDICATES THAT THE SOILS ALONG IR-71 EMBANKMENT UPPER PORTION ARE MAINLY COMPRISED OF CUT-AND-FILL MATERIALS.

THE OHIO GEOLOGICAL SURVEY INDICATES THAT BEDROCK STANDS AT APPROXIMATE ELEVATION OF 900 IN THE VICINITY OF THE SITE. AT THIS ELEVATION IT IS EXPECTED THAT BEDROCK IS COMPRISED OF SHALES AND SHALY SANDSTONE OF LOGAN FORMATION.

## EXPLORATION

THE SUBSURFACE EXPLORATION PROGRAM FOR THIS PROJECT INCLUDED ADVANCING A TOTAL OF TWO (2) DRIVE SAMPLE CORE BORINGS WITH A CME-75 TRUCK MOUNTED DRILLING RIG USING CONVENTIONAL 4.25 INCH I.D. HOLLOW STEM AUGERS, PERFORMED DURING JUNE AND AUGUST, 1992. ALL TEST BORINGS WERE ADVANCED FOR BRIDGE FOUNDATION DESIGN PURPOSE.

## INVESTIGATIONAL FINDINGS

TEST BORINGS B5-1 WAS ADVANCED THROUGH THE EXISTING EMBANKMENT MATERIAL. TEST BORING B5-2 WAS ADVANCED THROUGH ASPHALT PAVEMENT, WHICH WAS FOUND TO BE 8 INCHES THICK. THE TEST BORINGS DISCLOSED ALTERNATING LAYERS OF GRAVEL AND SAND CLASSIFIED AS A-1-b, SANDY SILT CLASSIFIED AS A-4a, AND SILT AND CLAY CLASSIFIED AS A-6a. THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "MEDIUM DENSE" TO "DENSE." THE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "STIFF" TO "HARD," BUT PREDOMINANTLY "HARD." BEDROCK WAS NOT ENCOUNTERED WITHIN THE EXPLORED DEPTHS AT EITHER TEST BORING LOCATIONS.

FOR SPECIFIC CONDITIONS AT VARIOUS DEPTHS, REFER TO THE INDIVIDUAL TEST BORING LOGS WHICH FORM A PART OF THESE PLANS.

## LEGEND

- AUGER BORING LOCATION - PLAN VIEW
- PRESS AND/OR DRIVE SAMPLE AND/OR CORE BORING LOCATION - PLAN VIEW
- TR — TOP OF ROCK
- CAPPED PILE
- FOOTING
- FOOTING ON PILE
- HORIZONTAL BAR ON BORING LOG INDICATES THE DEPTH THE SAMPLE WAS TAKEN
- X/Y/Z — FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
  - X = NO. OF BLOWS FOR FIRST 6"
  - Y = NO. OF BLOWS FOR SECOND 6"
  - Z = NO. OF BLOWS FOR THIRD 6"
- W — INDICATES FREE WATER ELEVATION
- INDICATES STATIC WATER ELEVATION

## SYMBOLS OF ROCK TYPES

- COAL
- WEATHERED MUDSTONE
- MUDSTONE
- WEATHERED SHALE
- SHALE
- CLAYSTONE
- SILTSTONE
- WEATHERED SANDSTONE
- SANDSTONE
- LEACHED DOLOMITE
- DOLOMITE
- LEACHED LIMESTONE
- LIMESTONE
- BOULDERS or COBBLES

## GENERAL INFORMATION

Drive sample / Press sample / Core borings

Drive sample borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, at 2.5 and/or 5-foot depth intervals, driven by means of a 140 lb. drop hammer with a free fall of 30". The number of blows required to drive the sampler 18" is considered the standard penetration test.

Drive/press borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, and 3" O.D. thin wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drilling machine.

Core borings are made by means of a mechanically-powered rotary-type drilling machine, employing a NXM core barrel with industrial diamond cutting head.

The boring log sheets display a graphic plot of the information obtained including depth and elevation of the sample, type of sample, the standard penetration test readings in three 6-inch increments, depth and elevation of press samples, field number assigned to sample, sample description - based on laboratory tests utilizing the Casagrande AC classification system - and gradation, plasticity and moisture determinations. Results of strength and consolidation testing, if performed on undisturbed samples, will appear graphically on separate enclosures. Rock samples are displayed on the log sheets including depth and elevation of the sample, amount of recovery and a visual classification based on type, color, degree of hardness, grain size, deterioration, bedding, acid reaction and other qualifying factors.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be utilized, a wash sample is procured and visually classified, in order to determine the general characteristics of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

## PARTICLE SIZE DEFINITIONS

| Boulders | Cobbles | Gravel | Coarse Sand | Fine Sand | Silt | Clay |
|---|---|---|---|---|---|---|
| 12" | 3" | 2.0mm (No. 10 sieve) | 0.42mm (No. 40 sieve) | 0.074mm (No. 200 sieve) | 0.005mm | |

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STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2034 (L&R)

1/3

MED - 71 - 15.78

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STRUCTURE FOUNDATION INVESTIGATION
*BRIDGE No. MED-71-2034 WIDENING*
*MEDINA COUNTY, OHIO*

R&R INTERNATIONAL INC.
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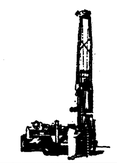

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|---|---|---|
| J.X. | G.M.R. | 10.29.92 |

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**STRUCTURE FOUNDATION INVESTIGATION**
***BRIDGE No. MED-71-2034***
***WIDENING***
***MEDINA COUNTY, OHIO***

R&R INTERNATIONAL,INC.
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**STRUCTURE FOUNDATION INVESTIGATION**
**MED - 71 - 2034 (L&R)**

2/3

**MED - 71 - 15.78**

## LOG OF BORING

Date Started 6-25-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1057 ±
Date Completed 6-25-92 | Casing: length -- | Dia. 4.25 inch.
Boring No. B5-1 | Station & Offset STA 48+31 5' R | Surface Elev. 1074 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1074.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 11-7-7 | 0.4 | | | 1 | SS | 34.9 | 15.2 | 9.6 | * | 40.3 | — | — | — | 12.2 | A-4a |
| | 3.5 | 3-8-17 | 1.1 | | | 2 | SS | | | | | | | | | | |
| | 8.5 | 7-16-22 | 1.0 | | | 3 | SS | | | | | | | | | | |
| | 13.5 | 7-26-36 | 1.2 | | | 4 | SS | 10.8 | 9.2 | 13.8 | * | 66.2 | — | — | — | 14.6 | A-4a |
| | 18.5 | 15-20-25 | 1.4 | | | 5 | SS | | | | | | | | | | |
| | 22.5 | 8-12-19 | 1.3 | | Hard, brown to gray SANDY SILT, some to trace gravel, damp to wet. | 6 | SS | | | | | | | | | | |
| | 25.0 | 13-17-24 | 1.2 | | | 7 | SS | 11.3 | 8.2 | 11.4 | * | 69.1 | — | — | — | 13.6 | A-4a |
| | 27.5 | 8-12-19 | 1.3 | | | 8 | SS | | | | | | | | | | |
| | 30.0 | 9-14-16 | 1.3 | | | 9 | SS | 7.2 | 8.7 | 12.3 | * | 71.8 | 23.3 | 15.2 | 8.1 | 14.1 | A-4a |
| | 32.5 | 10-17-22 | 1.3 | | | 10 | SS | | | | | | | | | | |
| | 35.0 | 24-50/0.3 | 0.5 | | | 11 | SS | | | | | | | | | | |
| | 37.5 | 11-19-26 | 1.3 | | | 12 | SS | | | | | | | | | | |
| | 40.0 | 13-15-20 | 1.5 | | | 13 | SS | 7.9 | 6.8 | 11.2 | * | 74.1 | — | — | — | 16.1 | A-4a |
| | 42.5 | 14-16-25 | 1.5 | | | 14 | SS | | | | | | | | | | |
| | 45.0 | 13-16-24 | 1.5 | | | 15 | SS | | | | | | | | | | |
| | 48.5 | 10-17-24 | 1.5 | | | 16 | SS | | | | | | | | | | |
| | 53.5 | 14-17-25 | 1.5 | | | 17 | SS | 6.8 | 7.2 | 11.2 | * | 74.8 | 25.4 | 15.8 | 9.6 | 16.2 | A-4a |
| 1019.0 | 55.0 | | | | TERMINATION DEPTH 55.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

## LOG OF BORING

Date Started 6-26-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1038.5
Date Completed 6-26-92 | Casing: length -- | Dia. 4.25 inch.
Boring No. B5-2 | Station & Offset STA 51+70 7' L | Surface Elev. 1071 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1071.0 | 0 | | | | | | | | | | | | | | | | |
| 1070.3 | 0.7 | | | | ASPHALT | | | | | | | | | | | | |
| | 1.5 | 22-15-23 | 0.7 | | | 1 | SS | 14.4 | 9.7 | 11.4 | 29.8 | 34.7 | — | — | — | 12.0 | A-4a |
| | 3.5 | 12-16-17 | 0.5 | | | 2 | SS | | | | | | | | | | |
| | 8.5 | 6-7-50/0.5 | 0.4 | | Hard to very stiff, brown SANDY SILT, trace to little gravel, damp. | 3 | SS | 39.1 | 9.3 | 9.9 | * | 41.7 | — | — | — | 10.2 | A-4a |
| | 13.5 | 8-14-16 | 0.5 | | | 4 | SS | | | | | | | | | | |
| 1056.0 | 15.0 | | | | | | | | | | | | | | | | |
| | 18.5 | 30-30-33 | 1.2 | | Hard, brown to dark brown SILT AND CLAY, trace to little sand, trace gravel, damp. | 5 | SS | 11.6 | 6.3 | 9.8 | * | 72.3 | 31.7 | 20.8 | 10.9 | 15.0 | A-6a |
| 1051.0 | 20.0 | | | | | | | | | | | | | | | | |
| | 22.5 | 14-27-30 | 1.2 | | | 6 | SS | | | | | | | | | | |
| | 25.0 | 18-30-34 | 1.0 | | Hard, brown to dark brown SANDY SILT, little gravel, damp. | 7 | SS | 19.6 | 9.6 | 13.1 | * | 57.7 | — | — | — | 11.1 | A-4a |
| | 27.5 | 20-22-41 | 0.8 | | | 8 | SS | 10.4 | 13.0 | 27.5 | * | 49.1 | — | — | — | 14.9 | A-4a |
| | 30.0 | 38-50/0.3 | 0.4 | | | 9 | SS | 0.7 | 5.2 | 36.2 | * | 57.9 | — | — | — | 14.8 | A-4a |
| 1039.0 | 32.0 | | | | | | | | | | | | | | | | |
| | 32.5 | 14-15-18 | 1.5 | | Dense, brown SAND AND GRAVEL, little to some gravel, little clay, saturated. | 10 | SS | 23.0 | 30.8 | 23.3 | * | 22.9 | — | — | — | 10.6 | A-1-b |
| | 35.0 | 7-11-19 | 1.5 | | | 11 | SS | | | | | | | | | | |
| 1034.5 | 36.5 | | | | | | | | | | | | | | | | |
| | 37.5 | 7-13-18 | 1.5 | | Very stiff to hard, brownish gray SANDY SILT, trace gravel, moist. | 12 | SS | 4.3 | 7.2 | 12.0 | * | 76.5 | 25.6 | 18.0 | 7.8 | 16.1 | A-4a |
| | 40.0 | 4-8-15 | 1.5 | | | 13 | SS | | | | | | | | | | |
| | 42.5 | 7-10-20 | 1.5 | | | 14 | SS | 5.4 | 7.1 | 11.6 | * | 75.9 | — | — | — | 16.5 | A-4a |
| | 45.0 | 7-11-19 | 1.5 | | | 15 | SS | | | | | | | | | | |
| | 48.5 | 20-50/0.5 | 0.8 | | | 16 | SS | | | | | | | | | | |
| | 53.5 | 11-15-19 | 1.5 | | | 17 | SS | 7.2 | 7.8 | 11.0 | * | 74 | — | — | — | 15.4 | A-4a |
| 1016.0 | 55.0 | | | | TERMINATION DEPTH 55.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

**STRUCTURE FOUNDATION INVESTIGATION**
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STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2034 (L&R)

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MED - 71 - 15.78

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USERNAME : jrogers
DATE : 18-NOV-1999
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## GEOLOGY OF THE SITE

THE PROJECT SITE LIES ON THE GLACIATED, MODERATELY ROLLING PLAIN ALONG THE ALLEGHENY ESCARPMENT SEPARATING THE ALLEGHENY PLATEAU FROM THE MISSISSIPPI VALLEY PLAIN. THE PROJECT SITE LIES AT A HIGH ELEVATION OF 1,068 AT TOP OF THE IR-71 BRIDGE ABUTMENTS AND A LOW ELEVATION OF 1,047 ON SR-3 BENEATH THE IR-71 BRIDGES IN MEDINA COUNTY, OHIO.

THE WISCONSIN ICE SHEET PASSED OVER THE AREA LEAVING VARIABLE DEPOSITS AND THICKNESSES OF GLACIAL DRIFT MATERIAL. INFORMATION OBTAINED FROM MEDINA COUNTY SOIL SURVEY, NOVEMBER, 1977, INDICATES THAT THE SITE CONSISTS MAINLY OF SILTY CLAY, CLAY, SILTY SAND, SAND AND GRAVEL. INFORMATION ALSO INDICATES THAT THE SOILS ALONG IR-71 EMBANKMENT UPPER PORTION ARE MAINLY COMPRISED OF CUT-AND-FILL MATERIALS.

THE OHIO GEOLOGICAL SURVEY INDICATES THAT BEDROCK STANDS AT APPROXIMATE ELEVATION OF 950 IN THE VICINITY OF THE SITE. AT THIS ELEVATION IT IS EXPECTED THAT BEDROCK IS COMPRISED OF SHALES AND SHALY SANDSTONE OF LOGAN FORMATION.

## EXPLORATION

THE SUBSURFACE EXPLORATION PROGRAM FOR THIS PROJECT INCLUDED ADVANCING A TOTAL OF SEVEN (7) DRIVE SAMPLE CORE BORINGS WITH A CME-75 TRUCK MOUNTED DRILLING RIG AND A CME-750 ATV MOUNTED DRILLING RIG USING CONVENTIONAL 3.25 INCH I.D. HOLLOW STEM AUGERS, PERFORMED DURING JUNE AND JULY, 1992. TEST BORINGS B6-1, B6-2, B6-3 AND B6-4 WERE ADVANCED FOR BRIDGE (MED-71-2090L&R) FOUNDATION DESIGN PURPOSE. TEST BORINGS B6-5 AND B6-6 WERE ADVANCED FOR BRIDGE (MED-71-2092W) FOUNDATION DESIGN PURPOSE. AT TEST BORING LOCATIONS B6-5 AND B6-7, SOIL SAMPLES WERE OBTAINED FOR THE BRIDGE SCOUR STUDY PURPOSE.

## INVESTIGATIONAL FINDINGS

TEST BORINGS B6-1 AND B6-4 WERE ADVANCED THROUGH THE EXISTING EMBANKMENT MATERIAL. TEST BORING B6-3 AND B6-5 WERE ADVANCED THROUGH ASPHALT PAVEMENT, WHICH WAS FOUND TO BE 10 AND 8 INCHES THICK, RESPECTIVELY. TEST BORING B6-2 AND B6-6 WERE ADVANCED THROUGH THE EXISTING ROADWAY SHOULDER AREAS. TEST BORING B6-7 WAS ADVANCED THROUGH THE SOUTH BANK OF THE PLUM CREEK NEAR BRIDGE No. MED-71-2088E. THE TEST BORINGS DISCLOSED ALTERNATING LAYERS OF GRAVEL AND SAND CLASSIFIED AS A-1-b, SAND CLASSIFIED AS A-3/A-3a, ROCK FRAGMENTS WITH SAND AND SILT CLASSIFIED AS A-2-4, SANDY SILT CLASSIFIED AS A-4a, SILT CLASSIFIED AS A-4b, AND SILT AND CLAY CLASSIFIED AS A-6a.

AT TEST BORING LOCATIONS B6-1 THROUGH B6-4, THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "LOOSE" TO "VERY DENSE," BUT PREDOMINANTLY "MEDIUM DENSE." THE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "MEDIUM STIFF" TO "HARD," BUT PREDOMINANTLY "VERY STIFF."

AT TEST BORING LOCATIONS B6-5 AND B6-6, THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "LOOSE" TO "VERY DENSE," BUT PREDOMINANTLY "MEDIUM DENSE." THE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "MEDIUM STIFF" TO "HARD," BUT PREDOMINANTLY "VERY STIFF."

AT TEST BORING LOCATION B6-7, THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED WAS FOUND TO BE "MEDIUM DENSE." THE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "MEDIUM STIFF" TO "HARD," BUT PREDOMINANTLY "VERY STIFF."

BEDROCK WAS NOT ENCOUNTERED WITHIN THE EXPLORED DEPTHS AT ANY OF THE TEST BORING LOCATIONS. FOR SPECIFIC CONDITIONS AT VARIOUS DEPTHS, REFER TO THE INDIVIDUAL TEST BORING LOGS WHICH FORM A PART OF THESE PLANS.

## LEGEND

- AUGER BORING LOCATION - PLAN VIEW
- PRESS AND/OR DRIVE SAMPLE AND/OR CORE BORING LOCATION - PLAN VIEW
- TR — TOP OF ROCK
- CAPPED PILE
- FOOTING
- FOOTING ON PILE
- HORIZONTAL BAR ON BORING LOG INDICATES THE DEPTH THE SAMPLE WAS TAKEN
- X/Y/Z — FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
  - X = NO. OF BLOWS FOR FIRST 6"
  - Y = NO. OF BLOWS FOR SECOND 6"
  - Z = NO. OF BLOWS FOR THIRD 6"
- W — INDICATES FREE WATER ELEVATION
- INDICATES STATIC WATER ELEVATION

## SYMBOLS OF ROCK TYPES

- COAL
- WEATHERED MUDSTONE
- MUDSTONE
- WEATHERED SHALE
- SHALE
- CLAYSTONE
- SILTSTONE
- WEATHERED SANDSTONE
- SANDSTONE
- LEACHED DOLOMITE
- DOLOMITE
- LEACHED LIMESTONE
- LIMESTONE
- BOULDERS or COBBLES

## GENERAL INFORMATION

**Drive sample / Press sample / Core borings**

Drive sample borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, at 2.5 and/or 5-foot depth intervals, driven by means of a 140 lb. drop hammer with a free fall of 30". The number of blows required to drive the sampler 18" is considered the standard penetration test.

Drive/press borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, and 3" O.D. thin wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drilling machine.

Core borings are made by means of a mechanically-powered rotary-type drilling machine, employing a NXM core barrel with industrial diamond cutting head.

The boring log sheets display a graphic plot of the information obtained including depth and elevation of the sample, type of sample, the standard penetration test readings in three 6-inch increments, depth and elevation of press samples, field number assigned to sample, sample description - based on laboratory tests utilizing the Casagrande AC classification system - and gradation, plasticity and moisture determinations. Results of strength and consolidation testing, if performed on undisturbed samples, will appear graphically on separate enclosures. Rock samples are displayed on the log sheets including depth and elevation of the sample, amount of recovery and a visual classification based on type, color, degree of hardness, grain size, deterioration, bedding, acid reaction and other qualifying factors.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be utilized, a wash sample is procured and visually classified, in order to determine the general characteristics of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

## PARTICLE SIZE DEFINITIONS

| 12" | 3" | 2.0mm | | 0.42mm | | 0.074mm | 0.005mm |
|---|---|---|---|---|---|---|---|
| Boulders | Cobbles | Gravel | Coarse Sand | | Fine Sand | Silt | Clay |
| | | No. 10 sieve | | No. 40 sieve | | No. 200 sieve | |

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-2090 (L&R)*
*BRIDGE No. MED-71-2092W*
*BRIDGE No. MED-71-2088E*
*MEDINA COUNTY, OHIO*

R&R INTERNATIONAL, INC.
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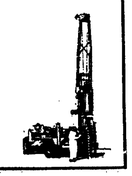
P.O. BOX 4383
AKRON, OH 44321



| CHECKED BY | REVIEWED | DATE |
|---|---|---|
| J.K. | G.M.R. | 10-29-92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2090 (L&R) MED - 71 - 2092W MED - 71 - 2088E

1/11

MED - 71 - 15.78

19
36

DESIGN FILE : i:\pd_med_ir71\dgn\soils\soils19.dgn
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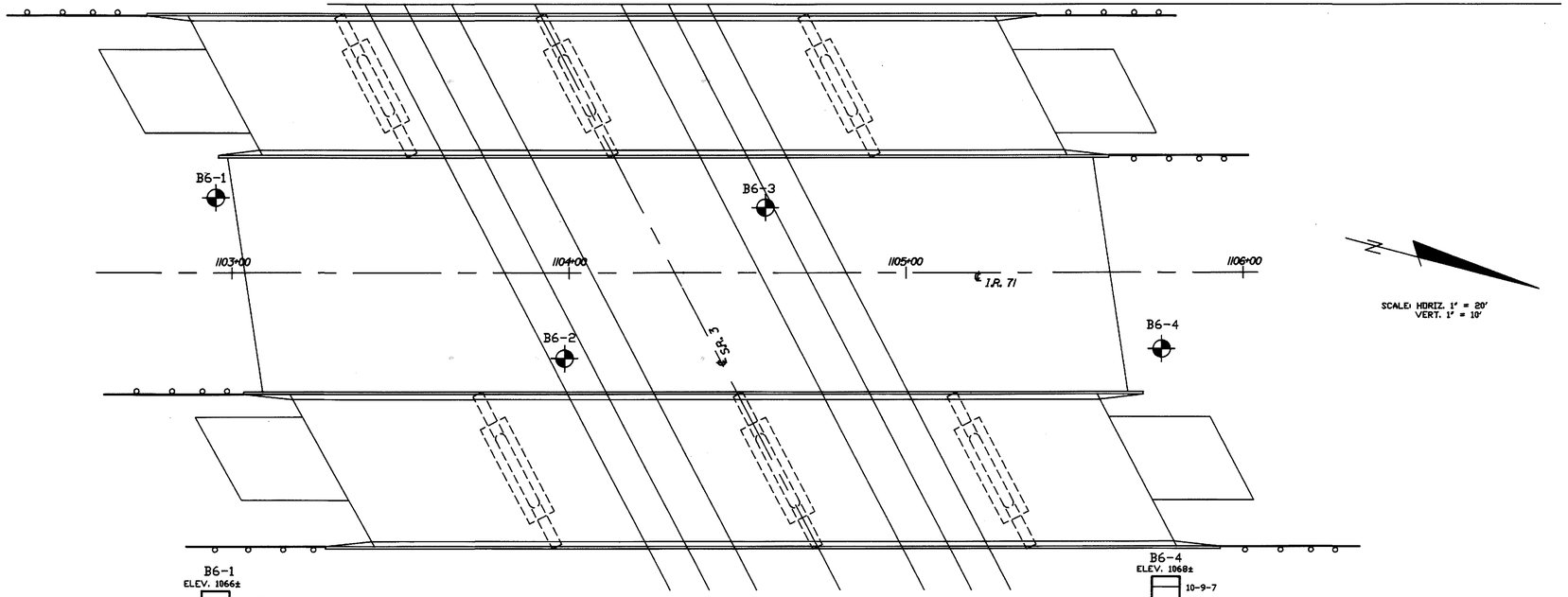
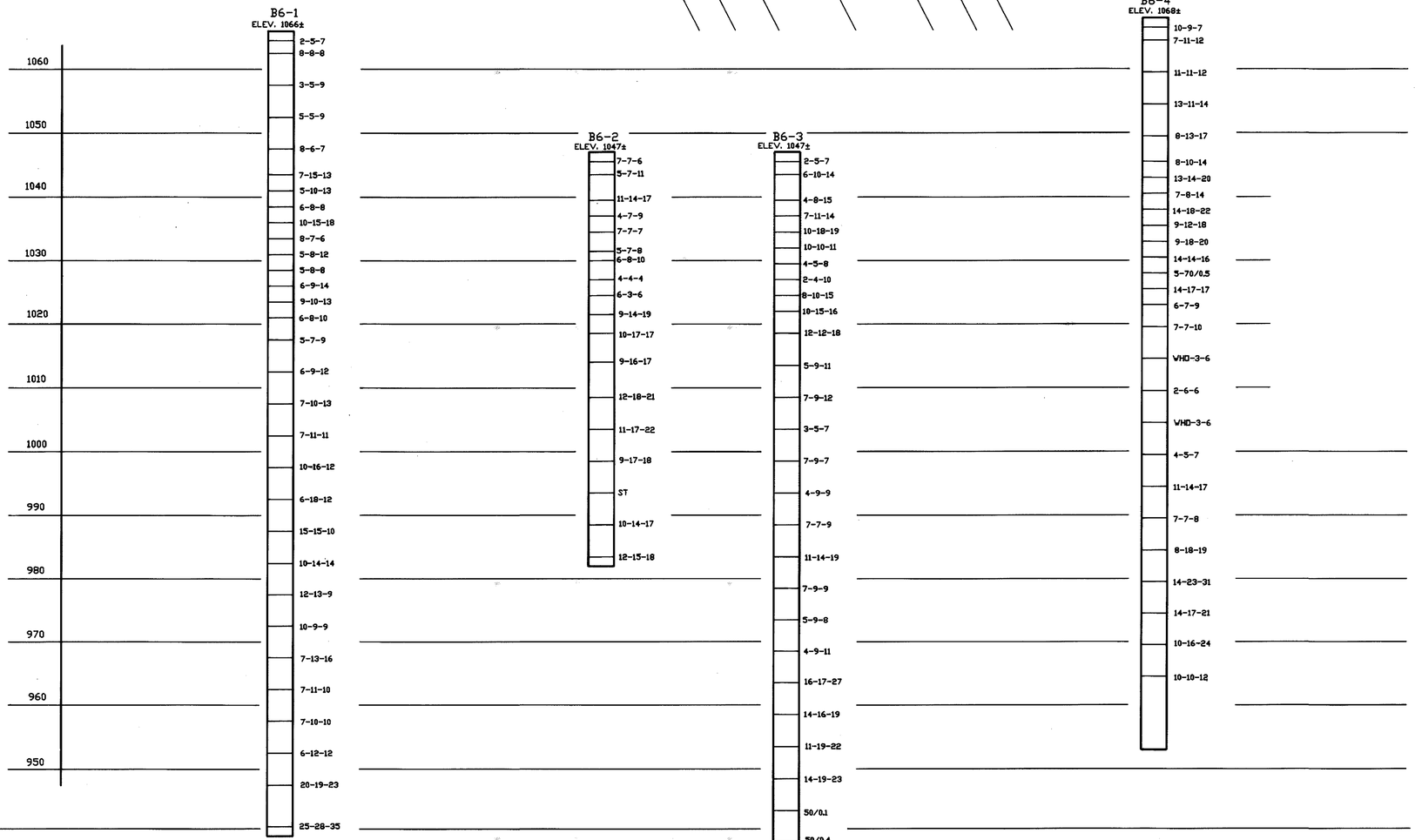
DATE : 18-NOV-1999
TIME : 13:49

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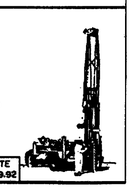
| DRAWN BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| V. K. | J.K. | G. M. R. | 10-29-92 |



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DATE : 18-NOV-1999
TIME : 13:49

CALCULATED | CHECKED

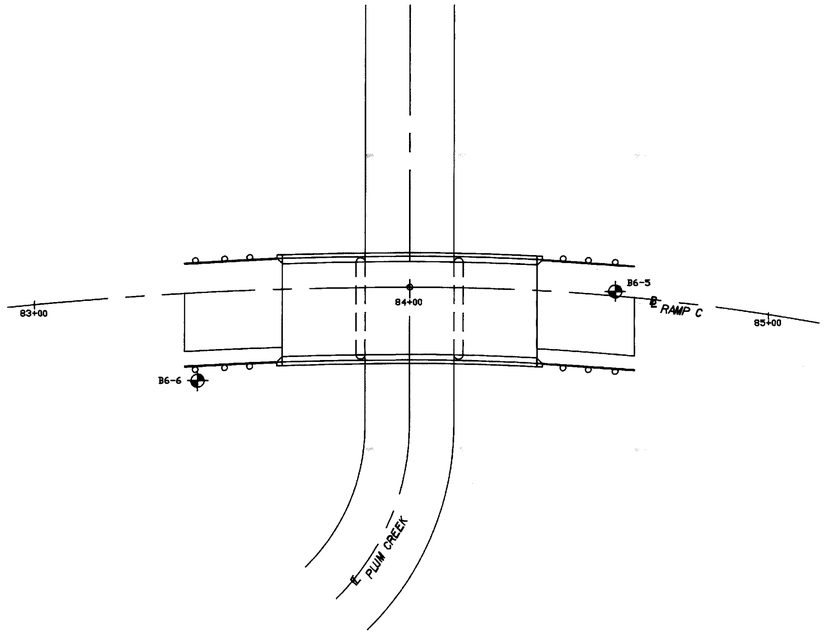
STRUCTURE
MED - 71 - 2090 (L&R)

2/11

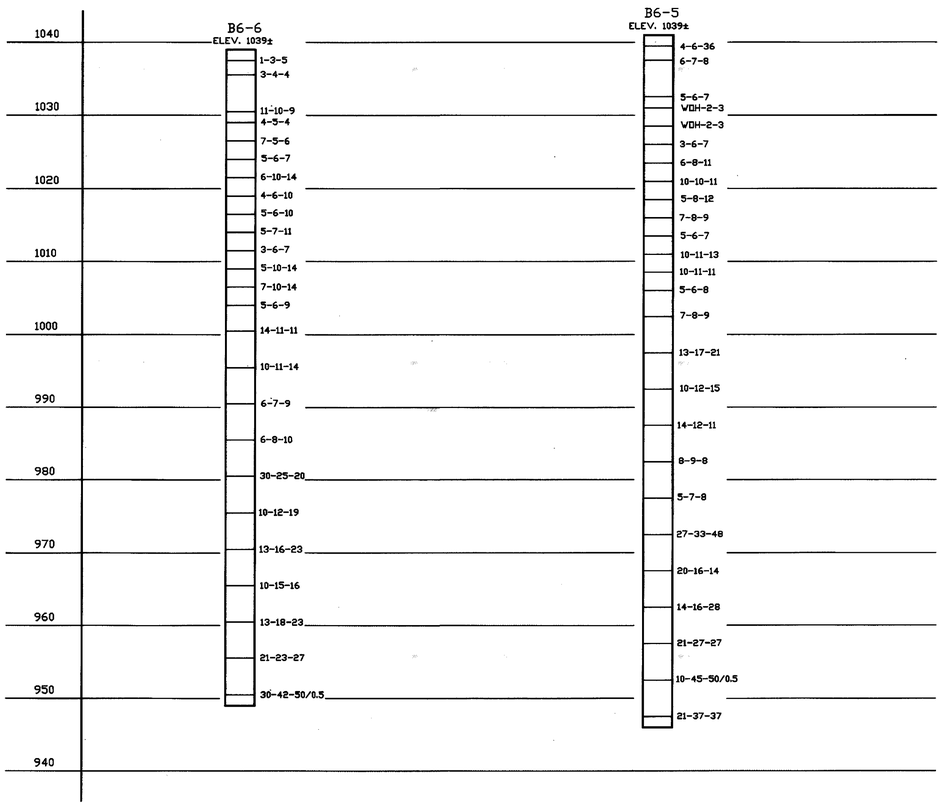
MED - 71 - 15.78

20/36

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2092W MED - 71 - 2088E



SCALE: HORIZ. 1"=20'
VERT. 1"=10'




**STRUCTURE FOUNDATION INVESTIGATION**
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|---|---|---|---|
| V. K. | J.X. | G. M. R. | 10-29-92 |

CALCULATED | CHECKED

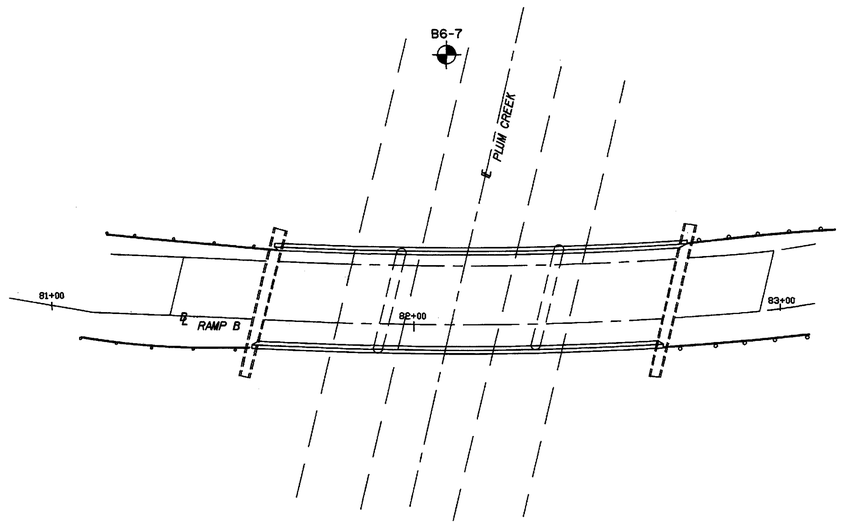
STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2090 (L&R) MED - 71 - 2088E
MED - 71 - 2092W

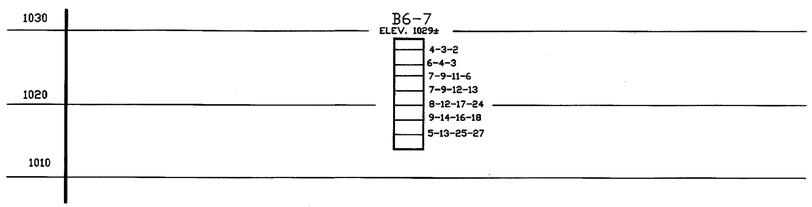
3/11

MED - 71 - 15.78

21
36

DESIGN FILE : i:\pd_med_ir71\dgn\soils\soils21.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:49






**STRUCTURE FOUNDATION INVESTIGATION**

*BRIDGE No. MED-71-2088E*
*MEDINA COUNTY, OHIO*

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|---|---|---|---|
| V. K. | J. X. | G. M. R. | 10.29.92 |

CALCULATED | CHECKED

**STRUCTURE FOUNDATION INVESTIGATION**
**MED - 71 - 2090 (L&R) MED - 71 - 2092W MED - 71 - 2088E**

4/11

**MED - 71 - 15.78**

22
36

DESIGN FILE : I:\pd_med_ir71\dgn\soils\soils22.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:49

# LOG OF BORING

Date Started 6-25-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1033.5

Date Completed 6-25-92 | Casing: length -- | Dia. 3.25 inch.

Boring No. B6-1 | Station & Offset STA. 1102+96.99 26' L. | Surface Elev. 1066 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | % COAR. SAND | % FINE SAND | % SILT | % CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1066.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 2-5-7 | 0.7 | | | 1 | SS | | | | | | | | | | |
| | 3.5 | 8-8-8 | 0.8 | | | 2 | SS | | | | | | | | | | |
| | 8.5 | 3-5-9 | 1.0 | | | 3 | SS | | | | | | | | | | |
| | 13.5 | 5-5-9 | 1.0 | | Stiff to hard, brown to brown and gray mottled SILT AND CLAY, trace to little gravel, trace to little sand, damp to moist. | 4 | SS | 6.9 | 7.2 | 10.9 | * | 75.0 | — | — | — | 15.0 | A-6a |
| | 18.5 | 8-6-7 | 1.5 | | | 5 | SS | | | | | | | | | | |
| | 22.5 | 7-15-13 | 1.2 | | | 6 | SS | | | | | | | | | | |
| | 25.0 | 5-10-13 | 1.5 | | | 7 | SS | 13.3 | 6.8 | 9.5 | * | 70.4 | 29.6 | 15.8 | 13.8 | 14.0 | A-6a |
| | 27.5 | 6-8-8 | 1.3 | | | 8 | SS | 3.5 | 6.1 | 8.9 | * | 81.5 | — | — | — | 19.8 | A-6a |
| | 30.0 | 10-15-18 | 1.5 | | | 9 | SS | | | | | | | | | | |
| 1034.0 | 32.0 | | | | | | | | | | | | | | | | |
| | 32.5 | 8-7-6 | 1.5 | | Medium dense, brown SAND, little to some silt and clay, moist to saturated | 10 | SS | | | | | | | | | | |
| 1032.0 | 34.0 | | | | | | | | | | | | | | | | |
| | 35.0 | 5-8-12 | 1.3 | | | 11 | SS | 7.0 | 8.0 | 12.9 | * | 72.1 | 23.6 | 16.0 | 7.6 | 15.1 | A-4a |
| | 37.5 | 5-8-8 | 1.5 | | | 12 | SS | | | | | | | | | | |
| | 40.0 | 6-9-14 | 1.5 | | | 13 | SS | | | | | | | | | | |
| | 42.5 | 9-10-13 | 1.5 | | | 14 | SS | | | | | | | | | | |
| | 45.0 | 6-8-10 | 1.5 | | | 15 | SS | | | | | | | | | | |
| | 48.5 | 5-7-9 | 1.2 | | | 16 | SS | | | | | | | | | | |
| | 53.5 | 6-9-12 | 1.5 | | Very stiff to hard, gray SANDY SILT, trace to little gravel, wet. Note: - gravel decreases at 45.0 ft. - sand increases from 68.5 to 70.0 ft. | 17 | SS | | | | | | | | | | |
| | 58.5 | 7-10-13 | 1.5 | | | 18 | SS | | | | | | | | | | |
| | 63.5 | 7-11-11 | 1.5 | | | 19 | SS | | | | | | | | | | |
| | 68.5 | 10-16-12 | 1.5 | | | 20 | SS | | | | | | | | | | |
| | 73.5 | 6-18-12 | 1.5 | | (cont.) | 21 | SS | | | | | | | | | | |
| 988.0 | 78.0 | | | | | | | | | | | | | | | | |
| | 78.5 | 15-15-10 | 1.5 | | Medium dense, gray and brown GRAVEL W/ SAND AND SILT, little to some clay, saturated. | 22 | SS | 38.4 | 22.3 | 10.8 | * | 28.5 | — | — | — | 14.0 | A-2-4 |
| 986.0 | 80.0 | | | | | | | | | | | | | | | | |
| | 83.5 | 10-14-14 | 1.5 | | | 23 | SS | | | | | | | | | | |
| | 88.5 | 12-13-9 | 1.5 | | | 24 | SS | | | | | | | | | | |
| | | | | | Very stiff, gray and brown SANDY SILT, some gravel, saturated. | | | | | | | | | | | | |
| | 93.5 | 10-9-9 | 1.5 | | | 25 | SS | | | | | | | | | | |
| | 98.5 | 7-13-16 | 1.5 | | | 26 | SS | | | | | | | | | | |
| | 103.5 | 7-11-10 | 0.5 | | | 27 | SS | | | | | | | | | | |
| | 108.5 | 7-10-10 | 1.0 | | | 28 | SS | 22.9 | 9.4 | 11.9 | * | 55.8 | — | — | — | 19.4 | A-4a |
| 956.0 | 110.0 | | | | | | | | | | | | | | | | |
| | 113.5 | 6-12-12 | 1.0 | | | 29 | SS | | | | | | | | | | |
| | 118.5 | 20-19-23 | 1.0 | | Medium dense to very dense, gray SANDSTONE FRAGMENTS W/ SILT AND CLAY, saturated. | 30 | SS | 38.6 | 18.8 | 11.2 | * | 31.4 | — | — | — | 11.0 | A-2-4 |
| | 125.0 | 25-28-35 | 1.0 | | | 31 | SS | | | | | | | | | | |
| 939.5 | 126.5 | | | | TERMINATION DEPTH 126.5 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

**STRUCTURE FOUNDATION INVESTIGATION**

*BRIDGE No. MED-71-2090 (L&R)*
*MEDINA COUNTY, OHIO*

R&R INTERNATIONAL, INC.

Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321

| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.X. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2090 (L&R) MED - 71 - 2088E
MED - 71 - 15.78

5/11

23
36

DESIGN FILE : I:\pd_med_ir71\dgn\soils\soils23.dgn
USERNAME : jrogers

DATE : 18-NOV-1999
TIME : 13:49

# LOG OF BORING

Date Started 7-6-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1027 ±

Date Completed 7-6-92 | Casing: length -- | Dia. 3.25 inch.

Boring No. B6-2 | Station & Offset STA. 1103+97.99 25' R. | Surface Elev. 1047 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | % COAR. SAND | % FINE SAND | % SILT | % CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1047.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 7-7-6 | 0.6 | | | 1 | SS | 5.3 | 8.4 | 12.3 | * | 74.0 | --- | --- | --- | 15.6 | A-6a |
| | 3.5 | 5-7-11 | 0.9 | | | 2 | SS | | | | | | | | | | |
| | 7.5 | 11-14-17 | 1.5 | | Stiff to hard, brown SILT AND CLAY, trace gravel, trace sand, damp. | 3 | SS | | | | | | | | | | |
| | 10.0 | 4-7-9 | 1.2 | | | 4 | SS | 7.0 | 9.2 | 11.4 | * | 72.4 | --- | --- | --- | 15.5 | A-6a |
| | 12.5 | 7-7-7 | 0.9 | | | 5 | SS | | | | | | | | | | |
| | 15.5 | 5-7-8 | 1.5 | | | 6 | SS | | | | | | | | | | |
| | 17.5 | 6-8-10 | 0.8 | | | 7 | SS | | | | | | | | | | |
| 1027.0 | 20.0 | 4-4-4 | 0.8 | | | 8 | SS | | | | | | | | | | |
| | 22.5 | 6-3-6 | 1.5 | | | 9 | SS | 27.1 | 11.1 | 13.0 | * | 48.8 | --- | --- | --- | 14.6 | A-4a |
| | 25.5 | 9-14-19 | 1.5 | | | 10 | SS | | | | | | | | | | |
| | 28.5 | 10-17-17 | 1.5 | | | 11 | SS | | | | | | | | | | |
| | 33.0 | 9-16-17 | 1.5 | | Stiff to hard, brown SANDY SILT, some gravel, saturated. | 12 | SS | | | | | | | | | | |
| | 38.5 | 12-18-21 | 1.5 | | | 13 | SS | | | | | | | | | | |
| | 43.5 | 11-17-22 | 1.5 | | | 14 | SS | | | | | | | | | | |
| 999.0 | 48.0 | | | | | | | | | | | | | | | | |
| | 48.5 | 9-17-18 | 1.5 | | Hard, brownish gray SILT, trace sand, wet. Note: - shale fragments in sample. | 15 | SS | | | | | | | | | | |
| 993.5 | 53.5 | Shelby Tube | | | Medium dense, brown SAND, trace gravel, some silt, wet to saturated. | 16 | SS | 16.6 | 37.9 | 21.8 | * | 23.7 | --- | --- | --- | 11.6 | A-3a |
| 991.0 | 56.0 | | | | | | | | | | | | | | | | |
| | 58.5 | 10-14-17 | 1.5 | | Hard, brownish gray SILT, wet. | 17 | SS | | | | | | | | | | |
| | 63.5 | 12-15-18 | 1.5 | | | 18 | SS | 0.9 | 1.0 | 1.6 | * | 96.5 | --- | --- | --- | 22.1 | A-4b |
| 982.0 | 65.0 | | | | TERMINATION DEPTH 65.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE No. MED-71-2090 (L&R)
MEDINA COUNTY, OHIO

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P.O. BOX 4383
AKRON, OH 44321

| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.X. | G.M.R. | 10.29.92 |

DESIGN FILE : I:\pd_med_ir71\dgn\soils\soils24.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:49

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STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2090 (L&R)
MED - 71 - 2092W
MED - 71 - 2088E

6/11

MED - 71 - 15.78

24/36

## LOG OF BORING

Date Started 7-1-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1024 ±
Date Completed 7-1-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B6-3 | Station & Offset STA. 1104+58.89 19' L. | Surface Elev. 1047 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1047.0 | 0 | | | | | | | | | | | | | | | | |
| 1046.2 | 0.8 | | | | ASPHALT | | | | | | | | | | | | |
| 1045.7 | 1.3 | | | | ROADBASE MATERIAL | | | | | | | | | | | | |
| | 1.5 | 2-5-7 | 1.2 | | | 1 | SS | | | | | | | | | | |
| | 3.5 | 6-10-14 | 1.3 | | | 2 | SS | | | | | | | | | | |
| | 7.5 | 4-8-15 | 1.2 | | Hard to very stiff to hard, brown to brownish gray SANDY SILT, little t trace gravel, moist to wet. | 3 | SS | 15.9 | 14.4 | 14.9 | * | 54.8 | — | — | — | 14.3 | A-4a |
| | 10.0 | 7-11-14 | 1.3 | | Note: – trace organics in sample at 11.0 ft. – trace organics in sample at 17.0 ft. | 4 | SS | | | | | | | | | | |
| | 12.5 | 10-18-19 | 1.5 | | | 5 | SS | | | | | | | | | | |
| | 15.0 | 10-10-11 | 1.5 | | | 6 | SS | | | | | | | | | | |
| | 17.5 | 4-5-8 | 1.5 | | | 7 | SS | 10.0 | 10.9 | 33.3 | * | 45.8 | — | — | — | 17.2 | A-4a |
| | 20.0 | 2-4-10 | 1.5 | | | 8 | SS | | | | | | | | | | |
| | 22.5 | 8-10-15 | 1.4 | | | 9 | SS | | | | | | | | | | |
| | 25.0 | 10-15-16 | 1.5 | | | 10 | SS | 10.3 | 11.1 | 22.9 | * | 55.7 | — | — | — | 13.2 | A-4a |
| 1020.0 | 27.0 | | | | | | | | | | | | | | | | |
| | 28.5 | 12-12-18 | 1.5 | | Hard, brownish gray SILT AND CLAY, trace gravel trace sand, wet. | 11 | SS | | | | | | | | | | |
| 1017.0 | 30.0 | | | | | | | | | | | | | | | | |
| | 33.5 | 5-9-11 | 1.5 | | Medium dense, brownish gray SAND, trace gravel, saturated. | 12 | SS | | | | | | | | | | |
| 1012.0 | 35.0 | | | | | | | | | | | | | | | | |
| | 38.5 | 7-9-12 | 1.5 | | Very stiff to stiff, gray SILT AND CLAY, trace silt, wet to moist. | 13 | SS | | | | | | | | | | |
| | 43.5 | 3-5-7 | 1.5 | | | 14 | SS | | | | | | | | | | |
| 1001.0 | 46.0 | | | | | | | | | | | | | | | | |
| | 48.5 | 7-9-7 | 1.5 | | | 15 | SS | | | | | | | | | | |
| | 53.5 | 4-9-9 | 1.5 | | | 16 | SS | 3.8 | 11.7 | 18.8 | * | 65.7 | 27.2 | 18.5 | 8.7 | 16.4 | A-4b |
| | 58.5 | 7-7-9 | 1.5 | | | 17 | SS | | | | | | | | | | |
| | 63.5 | 11-14-19 | 1.5 | | | 18 | SS | | | | | | | | | | |
| | 68.5 | 7-9-9 | 1.5 | | Very stiff to hard, gray SILT, trace sand, moist. | 19 | SS | | | | | | | | | | |
| | 73.5 | 5-9-8 | 1.5 | | | 20 | SS | | | | | | | | | | |
| | 78.5 | 4-9-11 | 1.5 | | | 21 | SS | | | | | | | | | | |
| | 83.5 | 16-17-27 | 1.5 | | | 22 | SS | 22.5 | 7.4 | 8.8 | * | 61.3 | — | — | — | 12.8 | A-4b |
| | 88.5 | 14-16-19 | 1.5 | | | 23 | SS | | | | | | | | | | |
| | 93.5 | 11-19-22 | 1.5 | | | 24 | SS | | | | | | | | | | |
| 949.0 | 98.0 | | | | | | | | | | | | | | | | |
| | 98.5 | 14-19-23 | 1.5 | | Dense to very dense, gray GRAVEL W/ SAND AND SILT, saturated. | 25 | SS | | | | | | | | | | |
| | 103.5 | 50/0.1 | 0.2 | | | 26 | SS | 40.8 | 16.9 | 13.5 | * | 28.8 | — | — | — | 10.5 | A-2-4 |
| 938.1 | 108.9 | 50/0.4 | 0.4 | | | 27 | SS | | | | | | | | | | |
| | | | | | TERMINATION DEPTH 108.9 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

R&R INTERNATIONAL, INC.
Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4363
AKRON, OH 44321

| TYPED BY | CHECKED BY | REVIEWED BY | DATE |
|---|---|---|---|
| T.E. | J.K. | G.M.R. | 10/29/99 |

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE No. MED-71-2090 (L&R)
MEDINA COUNTY, OHIO

## LOG OF BORING

Date Started 7-1-91 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1025.5

Date Completed 7-1-91 | Casing: length -- | Dia. 3.25 inch.

Boring No. B6-4 | Station & Offset STA. 1105+69.99 22' R. | Surface Elev. 1068 ±

* SILT AND CLAY COMBINED

| SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERTICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY* | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. | REC. Ft. | LOSS Ft. | STD.PEN. (N) | DEPTH | ELEV. | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SS | 8.8 | 8.4 | 13.0 | * | 69.8 | — | — | — | 14.2 | A-6a | 0.3 | | 10-9-7 | 1.5 | 1068.0 | Very stiff, brown SILT AND CLAY trace gravel, trace sand, damp to moist. |
| 2 | SS | | | | | | | | | | | 1.5 | | 7-11-12 | 3.5 | | |
| 3 | SS | 7.5 | 6.1 | 9.5 | * | 76.9 | — | — | — | 14.3 | A-6a | 1.2 | | 11-11-12 | 8.5 | | |
| 4 | SS | | | | | | | | | | | 1.2 | | 13-11-14 | 13.5 | | |
| 5 | SS | | | | | | | | | | | 1.5 | | 8-13-17 | 18.5 | | |
| 6 | SS | | | | | | | | | | | 1.5 | | 8-10-14 | 22.5 | | |
| 7 | SS | | | | | | | | | | | 1.3 | | 13-14-20 | 25.0 | | |
| 8 | SS | | | | | | | | | | | 1.2 | | 7-8-14 | 27.5 | | |
| 9 | SS | | | | | | | | | | | 1.5 | | 14-18-22 | 30.0 | | |
| 10 | SS | | | | | | | | | | | 1.2 | | 9-12-18 | 32.5 | | |
| 11 | SS | | | | | | | | | | | 1.5 | | 9-18-20 | 35.0 | | |
| 12 | SS | | | | | | | | | | | 1.3 | | 14-14-16 | 37.5 | | |
| 13 | SS | 2.7 | 2.5 | 3.9 | * | 90.9 | 38.9 | 21.4 | 15.5 | 25.5 | A-6a | 0.5 | | 5-70/0.5 | 40.0<br>40.5 | 1027.5 | Very dense, grayish brown SAND AND GRAVEL, little silt, moist to wet.<br>Note:<br>– brownish yellow sandstone fragments in sample at 41.0 ft.<br>– trace organics in sample at 40.5 ft. |
| 14 | SS | | | | | | | | | | | 1.5 | | 14-17-17 | 42.5 | | |
| 15 | SS | | | | | | | | | | | 1.5 | | 6-7-9 | 44.0<br>45.0 | 1024.0 | |
| 16 | SS | | | | | | | | | | | 1.5 | | 7-7-10 | 47.0<br>48.5 | 1021.0 | Hard to very stiff, brownish gray SILT AND CLAY, little gravel, little sand, wet. |
| 17 | SS | 1.0 | 1.2 | 4.0 | * | 93.8 | — | — | — | 19.8 | A-4b | 1.5 | | woh-3-6 | 53.5<br>54.0 | 1014.0 | Medium dense to loose, brownish gray SAND, little to some clay, wet. |
| 18 | SS | | | | | | | | | | | 1.5 | | 2-6-8 | 58.5 | | Stiff to hard, brownish gray SILT, trace sand, wet. |
| 19 | SS | | | | | | | | | | | 1.0 | | woh-3-6 | 63.5 | | |
| 20 | SS | | | | | | | | | | | 1.5 | | 4-5-7 | 68.5 | | |
| 21 | SS | | | | | | | | | | | 1.5 | | 11-14-17 | 73.5 | | |
| 22 | SS | 12.8 | 7.8 | 10.1 | * | 69.3 | — | — | — | 15.5 | A-4b | 1.2 | | 7-7-8 | 78.5<br>79.0 | 989.0 | Very stiff to hard, brownish gray SILT AND CLAY, trace sand, wet. |
| 23 | SS | | | | | | | | | | | 1.5 | | 8-18-19 | 83.5 | | |
| 24 | SS | | | | | | | | | | | 1.5 | | 14-23-31 | 88.5<br>89.0 | 979.0 | |
| 25 | SS | | | | | | | | | | | 1.5 | | 14-17-21 | 93.5 | | Hard, brownish gray SILT, trace to little gravel, trace sand, wet. |
| 26 | SS | | | | | | | | | | | 1.5 | | 10-16-24 | 98.5 | | |
| 27 | SS | | | | | | | | | | | 1.5 | | 10-10-12 | 103.5 | | Dense to medium dense, brownish gray SAND, little to some gravel, saturated.<br>Note: quick sand condition encountered at 105.0 ft.<br>– sampling could not be performed below 105.0 ft.<br>– augered from 105.0 to 115.0 ft., bedrock was not encountered |
| | | | | | | | | | | | | | | | 115.0 | 953.0 | TERMINATION DEPTH: 115.0 FEET |

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-2090 (L&R)*
*MEDINA COUNTY, OHIO*

R&R INTERNATIONAL INC.
Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321

| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.X. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2090 (L&R) MED - 71 - 2088E
MED - 71 - 2092W

8/11

MED - 71 - 15.78

26
36

DESIGN FILE : i:\pd_med_lr71\dgn\soils\soils26.dgn
USERNAME : jrogers

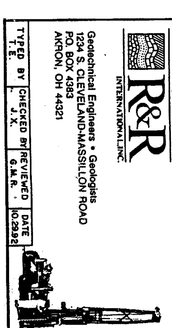
DATE : 18-NOV-1999
TIME : 13:49

## LOG OF BORING

Date Started 7-6-92 Sampler Type SS Dia. 2.00 inch. Water E av. 1014 ±
Date Completed 7-6-92 Casing: length -- Dia. 3.25 inch.
Boring No. B6-5 Station & Offset STA 84+58 2' L. Surface Elev. 1041 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1041.0 | 0 | | | | | | | | | | | | | | | | |
| 1040.3 | 0.7 | | | | | | | | | | | | | | | | |
| | 1.5 | 4-6-36 | 0.7 | | ASPHALT | 1 | SS | 35.2 | 11.1 | 12.2 | * | 41.5 | -- | -- | -- | 10.2 | A-4a |
| | 3.5 | 6-7-8 | 1.3 | | Hard, brown SANDY SILT, some gravel, damp. (Roadbase) | 2 | SS | | | | | | | | | | |
| 1036.0 | 5.0 | | | | | | | | | | | | | | | | |
| | 8.5 | 5-6-7 | 1.5 | | | 3 | SS | | | | | | | | | | |
| | 10.0 | woh-2-3 | 1.5 | | Medium dense to loose, brownish gray SILTY SAND, moist. | 4 | SS | 0.0 | 0.5 | 51.3 | * | 48.2 | -- | -- | -- | 19.0 | A-4a |
| | 12.5 | woh-2-3 | 1.5 | | | 5 | SS | | | | | | | | | | |
| 1026.0 | 15.0 | 3-6-7 | 1.5 | | | 6 | SS | | | | | | | | | | |
| | 17.5 | 6-8-11 | 1.5 | | | 7 | SS | 4.2 | 3.0 | 4.6 | * | 88.2 | -- | -- | -- | 18.8 | A-4b |
| | 20.0 | 10-10-11 | 1.5 | | Stiff to very stiff, brownish gray SILT, trace sand, trace gravel, moist. | 8 | SS | | | | | | | | | | |
| | 22.5 | 5-8-12 | 1.5 | | | 9 | SS | | | | | | | | | | |
| | 25.0 | 7-8-9 | 0.0 | | | 10 | SS | | | | | | | | | | |
| | 27.5 | 5-6-7 | 1.5 | | | 11 | SS | 0.1 | 0.1 | 0.1 | 50.4 | 49.3 | -- | -- | -- | 26.3 | A-4b |
| 1012.0 | 29.0 | | | | | | | | | | | | | | | | |
| | 30.0 | 10-11-13 | 1.5 | | Medium dense to dense, brownish gray SAND, some silt, saturated. | 12 | SS | 0.2 | 2.0 | 65.8 | * | 32.0 | -- | -- | -- | 21.3 | A-3a |
| 1008.5 | 32.5 | 10-11-11 | 1.5 | | Very stiff, brownish gray SANDY SILT, trace gravel saturated. | 13 | SS | 0.3 | 1.0 | 61.2 | * | 37.5 | -- | -- | -- | 20.6 | A-4a |
| 1006.0 | 35.0 | 5-6-8 | 1.5 | | Stiff, brownish gray SILT, some sand, trace gravel, satyurated. | 14 | SS | 0.1 | 0.8 | 21.8 | 57.6 | 19.7 | -- | -- | -- | 20.0 | A-4b |
| 1003.0 | 38.0 | | | | | 12 | SS | | | | | | | | | | |
| | 38.5 | 7-8-9 | 1.5 | | | 13 | SS | | | | | | | | | | |
| | | | | | | 14 | SS | | | | | | | | | | |
| | 43.5 | 13-17-21 | 1.5 | | Medium dense to dense, brownish gray SAND, little silt, saturated. | | | | | | | | | | | | |
| | 48.5 | 10-12-15 | 1.5 | | | 17 | SS | | | | | | | | | | |
| | 53.5 | 14-12-11 | 1.5 | | | 18 | SS | | | | | | | | | | |
| 986.0 | 55.0 | | | | | | | | | | | | | | | | |
| | 58.5 | 8-9-8 | 1.5 | | Very stiff, grayish brown SILT AND CLAY, little gravel, little sand, wet. | 19 | SS | 19.6 | 10.0 | 3.4 | * | 67.0 | -- | -- | -- | 21.1 | A-6a |
| 978.0 | 63.0 | | | | | | | | | | | | | | | | |
| | 63.5 | 5-7-8 | 1.5 | | Medium dense, brownish gray SAND, little silt, saturated. | 20 | SS | | | | | | | | | | |
| 973.0 | 68.0 | | | | | | | | | | | | | | | | |
| | 68.5 | 27-33-48 | 1.5 | | Hard, brownish gray SANDY SILT, little gravel, wet. | 21 | SS | | | | | | | | | | |
| | 73.5 | 20-16-14 | 1.0 | | Note: - rock fragments in sample from 73.5 to 84.0 ft. | 22 | SS | 18.0 | 9.1 | 13.0 | * | 59.9 | -- | -- | -- | 14.0 | A-4a |
| 963.0 | 78.0 | | | | | | | | | | | | | | | | |
| | 78.5 | 14-16-28 | 1.0 | | | 23 | SS | | | | | | | | | | |
| | 83.5 | 21-27-27 | 1.5 | | Dense to very dense, brownish gray SAND, little clay, saturated. | 24 | SS | | | | | | | | | | |
| | 88.5 | 10-45-50/0.5 | 1.5 | | | 25 | SS | | | | | | | | | | |
| | 93.5 | 21-37-37 | 1.0 | | | 26 | SS | | | | | | | | | | |
| 946.0 | 95.0 | | | | TERMINATION DEPTH 95.0 FEET | | | | | | | | | | | | |

* SILT AND SAND COMBINED



R&R INTERNATIONAL, INC.
Geotechnical Engineers • Geologists
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P.O. BOX 4393
AKRON, OH 44321

TYPED BY T.E. | CHECKED BY J.K. | REVIEWED BY G.M.R. | DATE 10.2892

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-2092W*
*MEDINA COUNTY, OHIO*

## LOG OF BORING

Date Started 7-7-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1013 ±
Date Completed 7-7-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B6-6 | Station & Offset STA 83+43 24' R. | Surface Elev. 1039 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1039.0 | 0 | | | | | | | | | | | | | | | | |
| | 1.5 | 1-3-5 | 0.3 | | Medium stiff, brown and gray SANDY SILT, some gravel, damp. | 1 | SS | | | | | | | | | | |
| | 3.5 | 3-4-4 | 0.8 | | | 2 | SS | 23.3 | 20.8 | 19.9 | * | 36.0 | -- | -- | -- | 21.1 | A-4a |
| 1034.0 | 5.0 | | | | | | | | | | | | | | | | |
| | 8.5 | 11-10-9 | 1.5 | | Medium dense to loose, brownish gray SAND SILT, trace gravel, moist. | 3 | SS | | | | | | | | | | |
| | 10.0 | 4-5-4 | 1.0 | | | 4 | SS | | | | | | | | | | |
| 1026.5 | 12.5 | 7-5-6- | 1.0 | | | 5 | SS | 8.8 | 8.7 | 13.3 | * | 69.2 | -- | -- | -- | 15.0 | A-4a |
| | 15.0 | 5-6-7 | 1.3 | | Stiff to very stiff, brownish gray SANDY SILT, trace gravel, moist. | 6 | SS | | | | | | | | | | |
| | 17.5 | 6-10-14 | 1.3 | | | 7 | SS | | | | | | | | | | |
| 1019.0 | 20.0 | 4-6-10 | 1.5 | | | 8 | SS | | | | | | | | | | |
| | 22.5 | 5-6-10 | 1.5 | | Very stiff, brownish gray SILT, trace gravel, little sand, moist. | 9 | SS | 0.0 | 0.1 | 0.2 | * | 99.7 | -- | -- | -- | 23.0 | A-4b |
| 1014.0 | 25.0 | 5-7-11 | 1.5 | | | 10 | SS | | | | | | | | | | |
| | 27.5 | 3-6-7 | 1.5 | | Medium dense, brownish gray SAND, trace gravel, little to some silt, wet to saturated. | 11 | SS | | | | | | | | | | |
| | 30.0 | 5-10-14 | 1.5 | | | 12 | SS | | | | | | | | | | |
| 1008.0 | 31.0 | | | | | | | | | | | | | | | | |
| | 32.5 | 7-10-14 | 1.5 | | | 13 | SS | | | | | | | | | | |
| | 35.0 | 5-6-9 | 1.5 | | | 14 | SS | 0.1 | 0.3 | 3.1 | * | 96.5 | 24.5 | 17.4 | 7.1 | 22.1 | A-4b |
| | 38.5 | 14-11-11 | 1.5 | | | 15 | SS | | | | | | | | | | |
| | 43.5 | 10-11-14 | 1.5 | | | 16 | SS | | | | | | | | | | |
| | 48.5 | 6-7-9 | 1.5 | | | 17 | SS | | | | | | | | | | |
| | 53.5 | 6-8-10 | 1.5 | | Very stiff to hard, brownish gray SILT, trace gravel, trace sand, moist to wet. | 18 | SS | | | | | | | | | | |
| | 58.5 | 30-25-20 | 1.5 | | | 19 | SS | | | | | | | | | | |
| 979.0 | 60.0 | | | | | | | | | | | | | | | | |
| | 63.5 | 10-12-19 | 1.5 | | | 20 | SS | | | | | | | | | | |
| | 68.5 | 13-16-23 | 1.5 | | | 21 | SS | | | | | | | | | | |
| | 73.5 | 10-15-16 | 1.5 | | Hard, brownish gray SANDY SILT, some gravel, saturated. | 22 | SS | | | | | | | | | | |
| | 78.5 | 13-18-23 | 1.5 | | | 23 | SS | 23.6 | 11.9 | 15.5 | * | 49.0 | -- | -- | -- | 11.5 | A-4a |
| | 83.5 | 21-23-27 | 1.5 | | | 24 | SS | | | | | | | | | | |
| | 88.5 | 30-42-50/0.5 | 1.5 | | | 25 | SS | | | | | | | | | | |
| 949.0 | 90.0 | | | | TERMINATION DEPTH 90.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

R&R INTERNATIONAL INC.
Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321

TYPED BY T.S. | CHECKED BY/REVIEWED A.K. | DATE 6-24-96

STRUCTURE FOUNDATION INVESTIGATION
*BRIDGE No. MED-71-2092W*
*MEDINA COUNTY, OHIO*

## LOG OF BORING

Date Started 8-17-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1024 ±

Date Completed 8-17-92 | Casing: length -- | Dia. 3.25 inch. |

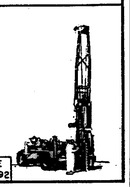
Boring No. B6-7 | Station & Offset STA 82+08 74 L. | Surface Elev. 1029 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | % COAR. SAND | % FINE SAND | % SILT | % CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1029.0 | 0.0 | | | | | | | | | | | | | | | | |
| | 1.5 | 4-3-2 | 1.5 | | Medium stiff, brown SANDY SILT, trace gravel, moist to wet. | 1 | SS | | | | | | | | | | |
| | 3.5 | 6-4-3 | 1.5 | | | 2 | SS | 22.9 | 5.1 | 38.2 | * | 33.8 | --- | --- | --- | 19.4 | A-4a |
| 1024.0 | 5.0 | 7-9-11-6 | 1.5 | | | 3 | SS | 58.8 | 16.2 | 10.4 | * | 14.6 | --- | --- | --- | 16.4 | A-1-b |
| | | | | | Medium dense, brown SAND AND GRAVEL, | | | | | | | | | | | | |
| 1022.0 | 7.0 | 7-9-12-13 | 1.5 | | saturated. | 4 | SS | 8.2 | 6.1 | 14.6 | 29.9 | 41.2 | --- | --- | --- | 15.0 | A-4a |
| | 9.0 | 8-12-17-24 | 0.5 | | | 5 | SS | 11.3 | 6.7 | 14.3 | 33.2 | 34.5 | --- | --- | --- | 16.1 | A-4a |
| | 11.0 | 9-14-16-18 | 1.5 | | Very stiff to hard, brown SANDY SILT, trace gravel, wet. | 6 | SS | 4.5 | 6.8 | 13.4 | 39.0 | 36.3 | --- | --- | --- | 14.5 | A-4a |
| | 13.0 | 5-13-25-27 | 1.5 | | | 7 | SS | 0.0 | 0.3 | 14.2 | 43.2 | 42.3 | --- | --- | --- | 20.9 | A-4a |
| 1014.0 | 15.0 | | | | TERMINATION DEPTH 15.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE No. MED-71-2088E
MEDINA COUNTY, OHIO

R&R INTERNATIONAL INC.
Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321



| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.X. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE
MED - 71 - 2090 (L&R)
MED - 71 - 2092W MED - 71 - 2088E

11/11

MED - 71 - 15.78

29
36

DESIGN FILE : I:\pd_med_lr71\dgn\solls\solls29.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:49

## GEOLOGY OF THE SITE

THE PROJECT SITE LIES ON THE GLACIATED, MODERATELY ROLLING PLAIN ALONG THE ALLEGHENY ESCARPMENT SEPARATING THE ALLEGHENY PLATEAU FROM THE MISSISSIPPI VALLEY PLAIN. THE PROJECT SITE LIES AT A HIGH ELEVATION OF 1,153 AT TOP OF THE EAST ABUTMENT AND A LOW ELEVATION OF 1,145 AT TOP OF THE WEST ABUTMENT OF BRIDGE No. MED-71-2242 OVER IR-71 IN MEDINA COUNTY, OHIO.

THE WISCONSIN ICE SHEET PASSED OVER THE AREA LEAVING VARIABLE DEPOSITS AND THICKNESSES OF GLACIAL DRIFT MATERIAL. INFORMATION OBTAINED FROM MEDINA COUNTY SOIL SURVEY, NOVEMBER, 1977, INDICATES THAT THE SITE CONSISTS MAINLY OF SILTY CLAY AND CLAY. INFORMATION ALSO INDICATES THAT THE SOILS ALONG IR-71 EMBANKMENT UPPER PORTION ARE MAINLY COMPRISED OF CUT-AND-FILL MATERIALS.

THE OHIO GEOLOGICAL SURVEY INDICATES THAT BEDROCK STANDS AT APPROXIMATE ELEVATION OF 1,080 IN THE VICINITY OF THE SITE. AT THIS ELEVATION IT IS EXPECTED THAT BEDROCK IS COMPRISED OF SHALES AND SHALY SANDSTONE OF LOGAN FORMATION.

## EXPLORATION

THE SUBSURFACE EXPLORATION PROGRAM FOR THIS PROJECT INCLUDED ADVANCING A TOTAL OF TWO (2) DRIVE SAMPLE CORE BORINGS WITH A CME-75 TRUCK MOUNTED DRILLING RIG USING CONVENTIONAL 3.25 INCH I.D. HOLLOW STEM AUGERS, PERFORMED DURING JULY, 1992. ALL TEST BORINGS WERE ADVANCED FOR BRIDGE FOUNDATION DESIGN PURPOSE.

## INVESTIGATIONAL FINDINGS

TEST BORINGS B7-1 AND B7-2 WERE ADVANCED THROUGH THE EXISTING ASPHALT PAVEMENT, WHICH WAS FOUND TO BE 4 AND 5 INCHES THICK, RESPECTIVELY. THE TEST BORINGS DISCLOSED ALTERNATING LAYERS OF SAND CLASSIFIED AS A-3a, SANDY SILT CLASSIFIED AS A-4a, AND SILT AND CLAY CLASSIFIED AS A-6a. THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED WAS FOUND TO BE "MEDIUM DENSE." THE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "STIFF" TO "HARD," BUT PREDOMINANTLY "HARD." BEDROCK WAS NOT ENCOUNTERED WITHIN THE EXPLORED DEPTHS AT EITHER TEST BORING LOCATIONS.

FOR SPECIFIC CONDITIONS AT VARIOUS DEPTHS, REFER TO THE INDIVIDUAL TEST BORING LOGS WHICH FORM A PART OF THESE PLANS.

## LEGEND

- AUGER BORING LOCATION - PLAN VIEW
- PRESS AND/OR DRIVE SAMPLE AND/OR CORE BORING LOCATION - PLAN VIEW
- TR — TOP OF ROCK
- CAPPED PILE
- FOOTING
- FOOTING ON PILE
- HORIZONTAL BAR ON BORING LOG INDICATES THE DEPTH THE SAMPLE WAS TAKEN
- X/Y/Z — FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
  - X = NO. OF BLOWS FOR FIRST 6"
  - Y = NO. OF BLOWS FOR SECOND 6"
  - Z = NO. OF BLOWS FOR THIRD 6"
- W —— INDICATES FREE WATER ELEVATION
- INDICATES STATIC WATER ELEVATION

## SYMBOLS OF ROCK TYPES

- COAL
- WEATHERED MUDSTONE
- MUDSTONE
- WEATHERED SHALE
- SHALE
- CLAYSTONE
- SILTSTONE
- WEATHERED SANDSTONE
- SANDSTONE
- LEACHED DOLOMITE
- DOLOMITE
- LEACHED LIMESTONE
- LIMESTONE
- BOULDERS or COBBLES

## GENERAL INFORMATION

**Drive sample / Press sample / Core borings**

Drive sample borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, at 2.5 and/or 5-foot depth intervals, driven by means of a 140 lb. drop hammer with a free fall of 30". The number of blows required to drive the sampler 18" is considered the standard penetration test.

Drive/press borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, and 3" O.D. thin wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drilling machine.

Core borings are made by means of a mechanically-powered rotary-type drilling machine, employing a NXM core barrel with industrial diamond cutting head.

The boring log sheets display a graphic plot of the information obtained including depth and elevation of the sample, type of sample, the standard penetration test readings in three 6-inch increments, depth and elevation of press samples, field number assigned to sample, sample description - based on laboratory tests utilizing the Casagrande AC classification system - and gradation, plasticity and moisture determinations. Results of strength and consolidation testing, if performed on undisturbed samples, will appear graphically on separate enclosures. Rock samples are displayed on the log sheets including depth and elevation of the sample, amount of recovery and a visual classification based on type, color, degree of hardness, grain size, deterioration, bedding, acid reaction and other qualifying factors.

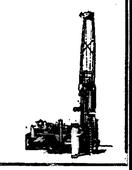
At depths where materials are bouldery or gravelly to the extent that the sampler can not be utilized, a wash sample is procured and visually classified, in order to determine the general characteristics of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

## PARTICLE SIZE DEFINITIONS

| 12" | 3" | 2.0mm | | 0.42mm | 0.074mm | 0.005mm |
|---|---|---|---|---|---|---|
| Boulders | Cobbles | Gravel | Coarse Sand | Fine Sand | Silt | Clay |
| | | No. 10 sieve | | No. 40 sieve | No. 200 sieve | |

**STRUCTURE FOUNDATION INVESTIGATION**
*BRIDGE No. MED-71-2242*
*WIDENING*
*MEDINA COUNTY, OHIO*

R&R INTERNATIONAL, INC.
Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321



| CHECKED BY | REVIEWED | DATE |
|---|---|---|
| J.X. | G.M.R. | 10-29-92 |

CALCULATED | CHECKED

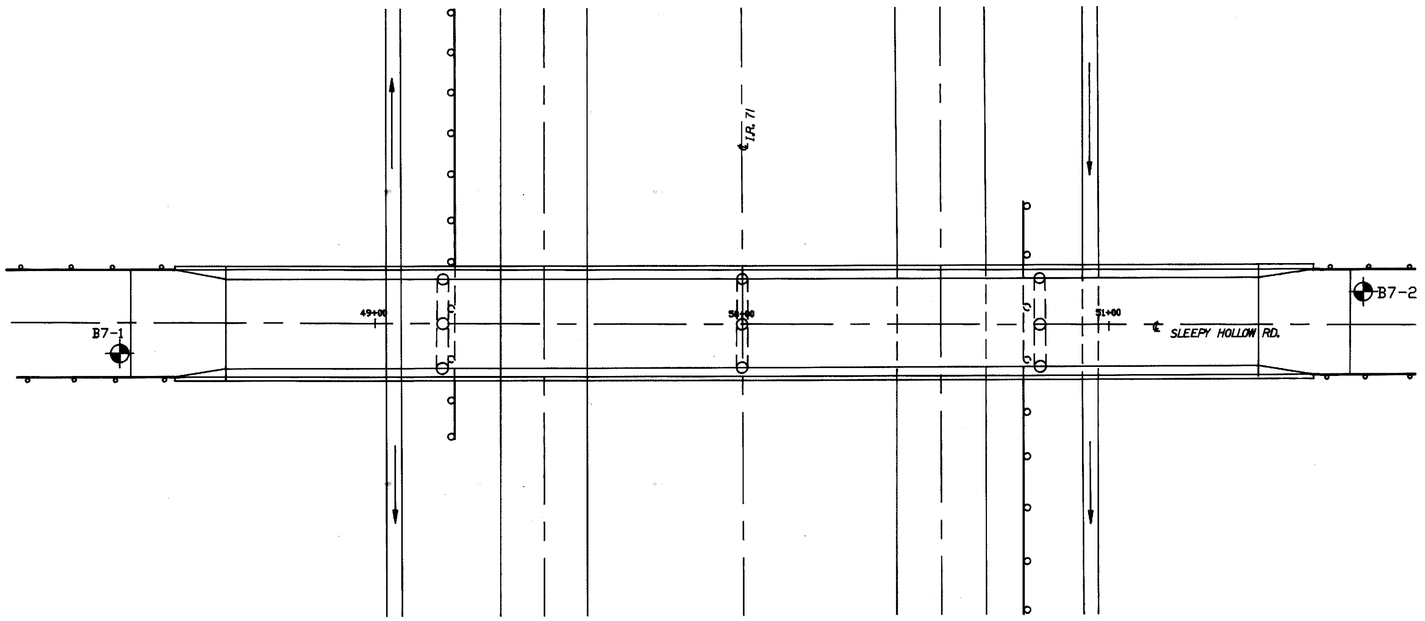
STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2242

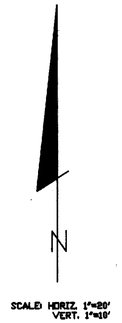
1/3

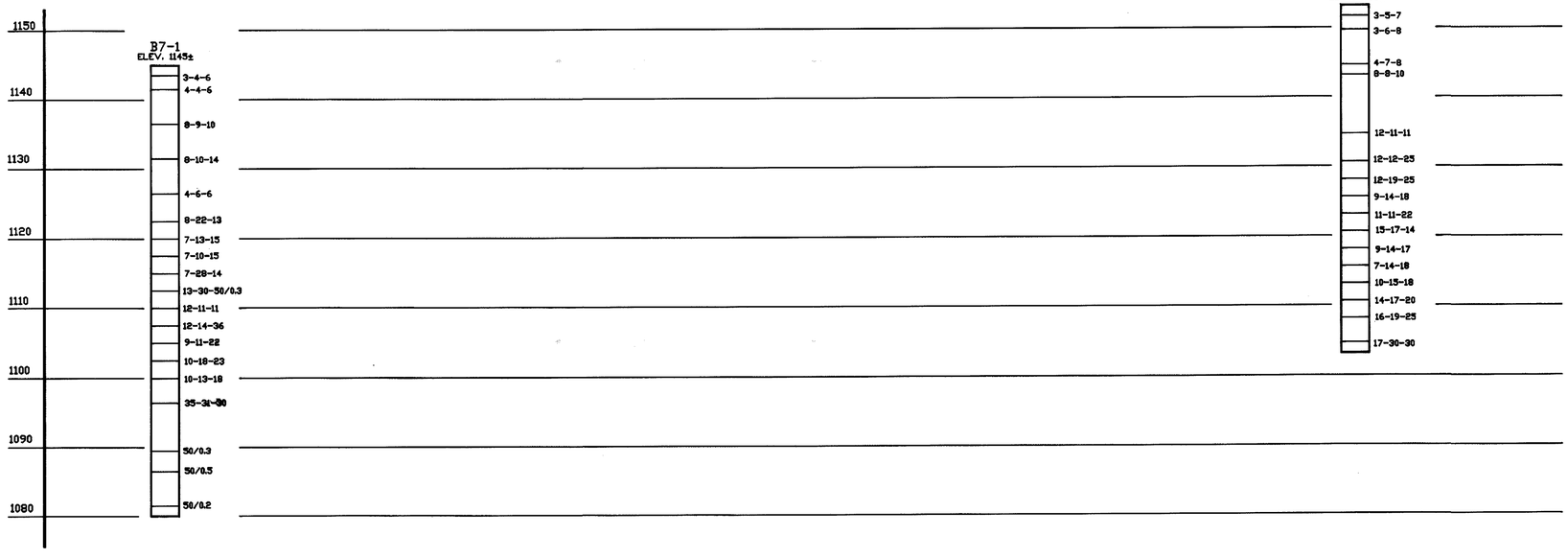
MED - 71 - 15.78

30
36

DESIGN FILE : i:\pd_med_ir71\dgn\soils\soils30.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:49

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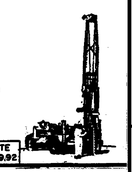

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| V.K. | J.K. | G.M.R. | 10.29.92 |

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**STRUCTURE FOUNDATION INVESTIGATION**
**MED - 71 - 2242**

2/3

**MED - 71 - 15.78**

31
36

DESIGN FILE : I:\pd_med_lr71\dgn\soils\soils31.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:49

## LOG OF BORING

Date Started 7-8-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1118 ±
Date Completed 7-8-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B7-1 | Station & Offset STA 48+31 8'L | Surface Elev. 1145 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1145.0 | 0 | | | | | | | | | | | | | | | | |
| 1144.7 | 0.3 | | | | ASPHALT | | | | | | | | | | | | |
| | 1.5 | 3-4-6 | 0.8 | | | 1 | SS | 8.0 | 7.6 | 11.2 | * | 73.2 | — | — | — | 18.7 | A-4a |
| | 3.5 | 4-4-6 | 0.5 | | | 2 | SS | | | | | | | | | | |
| | | | | | Stiff to very stiff, brown SANDY SILT, trace gravel, damp. | | | | | | | | | | | | |
| | 8.5 | 8-9-10 | 1.1 | | | 3 | SS | | | | | | | | | | |
| 1135.0 | 10.0 | | | | | | | | | | | | | | | | |
| | | | | | Medium dense, brown SAND, trace gravel, little silt, moist. | | | | | | | | | | | | |
| | 13.5 | 8-10-14 | 1.3 | | | 4 | SS | | | | | | | | | | |
| 1130.0 | 15.0 | | | | | | | | | | | | | | | | |
| | 18.5 | 4-6-6 | 1.1 | | | 5 | SS | | | | | | | | | | |
| | 22.5 | 8-22-13 | 1.5 | | | 6 | SS | 25.1 | 13.1 | 14.8 | * | 47.2 | — | — | — | 12.9 | A-4a |
| | 25.0 | 7-13-15 | 1.0 | | | 7 | SS | | | | | | | | | | |
| | 27.5 | 7-10-15 | 1.1 | | | 8 | SS | | | | | | | | | | |
| | 30.0 | 7-28-14 | 1.3 | | | 9 | SS | 14.8 | 6.7 | 8.2 | * | 70.3 | 27.3 | 17.6 | 9.7 | 13.8 | A-4a |
| | 32.5 | 13-30-50/0.3 | 1.5 | | | 10 | SS | | | | | | | | | | |
| | 35.0 | 12-11-11 | 0.8 | | | 11 | SS | | | | | | | | | | |
| | 37.5 | 12-14-36 | 1.0 | | | 12 | SS | | | | | | | | | | |
| | 40.0 | 9-11-22 | 0.8 | | | 13 | SS | | | | | | | | | | |
| | 42.5 | 10-18-23 | 1.2 | | | 14 | SS | 29.5 | 8.5 | 8.4 | * | 53.6 | — | — | — | 13.0 | A-4a |
| | 45.0 | 10-13-18 | 0.3 | | Stiff to hard, brownish gray SANDY SILT, trace gravel, saturated. | 15 | SS | | | | | | | | | | |
| | 48.5 | 35-31-30 | 0.8 | | | 16 | SS | | | | | | | | | | |
| | 55.6 | 50/0.3 | 0.2 | | | 17 | SS | 28.1 | 11.0 | 4.3 | * | 56.6 | — | — | — | 15.6 | A-4a |
| | 58.5 | 50/0.5 | 0.3 | | | 18 | SS | | | | | | | | | | |
| | 63.5 | 50/0.2 | 0.2 | | | 19 | SS | | | | | | | | | | |
| 1080.0 | 65.0 | | | | TERMINATION DEPTH 65.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

## LOG OF BORING

Date Started 7-10-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1118 ±
Date Completed 7-10-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B7-2 | Station & Offset STA 51 + 70 8' L | Surface Elev. 1153 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1153.0 | 0 | | | | | | | | | | | | | | | | |
| 1152.6 | 0.4 | | | | ASPHALT | | | | | | | | | | | | |
| | 1.5 | 3-5-7 | 0.9 | | | 1 | SS | 9.6 | 11.1 | 15.5 | * | 63.8 | — | — | — | 1.5 | A-4a |
| | 3.5 | 3-6-8 | 0.8 | | | 2 | SS | | | | | | | | | | |
| | 8.5 | 4-7-8 | 0.9 | | | 3 | SS | | | | | | | | | | |
| | | | | | Stiff to hard, brown SANDY SILT, trace to little gravel, damp. Note: – trace organics encountered at 8.5 ft. | | | | | | | | | | | | |
| | 13.5 | 8-8-10 | 1.1 | | | 4 | SS | 26.7 | 14.9 | 12.7 | * | 45.7 | — | — | — | 14.6 | A-4a |
| | 18.5 | 12-11-11 | 0.1 | | | 5 | SS | | | | | | | | | | |
| | 22.5 | 12-12-25 | 0.8 | | | 6 | SS | | | | | | | | | | |
| | 25.0 | 12-19-25 | 1.5 | | | 7 | SS | | | | | | | | | | |
| | 27.5 | 9-14-18 | 1.5 | | | 8 | SS | | | | | | | | | | |
| 1123.0 | 30.0 | 11-11-22 | 0.7 | | | 9 | SS | | | | | | | | | | |
| | 32.5 | 15-17-14 | 1.0 | | Hard, brownish gray SILT AND CLAY, trace gravel, trace to little sand, moist. | 10 | SS | 4.3 | 5.2 | 7.7 | * | 82.8 | 28.8 | 17.6 | 11.2 | 18.2 | A-6a |
| | 35.0 | 9-14-17 | 1.2 | | | 11 | SS | | | | | | | | | | |
| 1117.0 | 36.0 | | | | | | | | | | | | | | | | |
| | 37.5 | 7-14-18 | 1.5 | | | 12 | SS | | | | | | | | | | |
| | 40.0 | 10-15-18 | 1.5 | | | 13 | SS | 37.4 | 9.2 | 6.6 | * | 46.8 | — | — | — | 16.0 | A-4a |
| | 42.5 | 14-17-20 | 1.5 | | Hard, brownish gray SANDY SILT, some gravel, saturated. | 14 | SS | | | | | | | | | | |
| | 45.0 | 16-19-25 | 0.3 | | | 15 | SS | | | | | | | | | | |
| | 48.5 | 17-30-30 | 0.6 | | | 16 | SS | 41.3 | 8.5 | 4.8 | * | 45.4 | — | — | — | 15.1 | A-4a |
| 1103.0 | 50.0 | | | | TERMINATION DEPTH 50.0 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

**STRUCTURE FOUNDATION INVESTIGATION**
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| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.X. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2242

3/3

MED - 71 - 15.78

32/36

DATE : 18-NOV-1999 TIME : 13:49
DESIGN FILE : i:\pd_med_ir7\dgn\soils\soils32.dgn
USERNAME : jrogers

## GEOLOGY OF THE SITE

THE PROJECT SITE LIES ON THE GLACIATED, MODERATELY ROLLING PLAIN ALONG THE ALLEGHENY ESCARPMENT SEPARATING THE ALLEGHENY PLATEAU FROM THE MISSISSIPPI VALLEY PLAIN. THE PROJECT SITE LIES AT A HIGH ELEVATION OF 1,170 AT TOP OF THE IR-71 BRIDGE ABUTMENTS AND A LOW ELEVATION OF 1,145 ON SR-303 BENEATH THE IR-71 BRIDGES IN MEDINA COUNTY, OHIO.

THE WISCONSIN ICE SHEET PASSED OVER THE AREA LEAVING VARIABLE DEPOSITS AND THICKNESSES OF GLACIAL DRIFT MATERIAL. INFORMATION OBTAINED FROM MEDINA COUNTY SOIL SURVEY, NOVEMBER, 1977, INDICATES THAT THE SITE CONSISTS MAINLY OF SILTY CLAY AND CLAY. INFORMATION ALSO INDICATES THAT THE SOILS ALONG IR-71 EMBANKMENT UPPER PORTION ARE MAINLY COMPRISED OF CUT-AND-FILL MATERIALS.

THE OHIO GEOLOGICAL SURVEY INDICATES THAT BEDROCK STANDS AT APPROXIMATE ELEVATION OF 1,100 IN THE VICINITY OF THE SITE. AT THIS ELEVATION IT IS EXPECTED THAT BEDROCK IS COMPRISED OF SHALES AND SHALY SANDSTONE OF LOGAN FORMATION.

## EXPLORATION

THE SUBSURFACE EXPLORATION PROGRAM FOR THIS PROJECT INCLUDED ADVANCING A TOTAL OF FOUR (4) DRIVE SAMPLE CORE BORINGS WITH A CME-75 TRUCK MOUNTED DRILLING RIG USING CONVENTIONAL 3.25 INCH I.D. HOLLOW STEM AUGERS, PERFORMED DURING JUNE, 1992. ALL TEST BORINGS WERE ADVANCED FOR BRIDGE FOUNDATION DESIGN PURPOSE.

## INVESTIGATIONAL FINDINGS

TEST BORINGS B8-1 AND B8-4 WERE ADVANCED THROUGH THE EXISTING EMBANKMENT MATERIAL. TEST BORING B8-2 AND B8-3 WERE ADVANCED THROUGH THE EXISTING MEDIAN LOCATED BETWEEN EASTBOUND AND WESTBOUND LANES OF SR-303. THE TEST BORINGS DISCLOSED ALTERNATING LAYERS OF GRAVEL AND SAND CLASSIFIED AS A-1-b, ROCK FRAGMENTS WITH SAND AND SILT CLASSIFIED AS A-2-4, SANDY SILT CLASSIFIED AS A-4a, SILT CLASSIFIED AS A-4b, AND SILT AND CLAY CLASSIFIED AS A-6a. THE RELATIVE DENSITY OF THE NON-COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "MEDIUM DENSE" TO "VERY DENSE," BUT PREDOMINANTLY "DENSE." THE CONSISTENCY OF THE COHESIVE SOILS ENCOUNTERED WAS FOUND TO RANGE FROM "STIFF" TO "HARD," BUT PREDOMINANTLY "HARD." SILTSTONE, SHALE AND/OR SANDSTONE WERE ENCOUNTERED AT TEST BORING LOCATIONS B8-1, B8-2 AND B8-3. THE OVERALL ROCK QUALITY DESIGNATION (RQD) FOR THE ROCK CORES WAS FOUND TO RANGE FROM 0 TO 60 PERCENT, WHICH CAN BE TERMED AS "VERY POOR" TO "FAIR."

FOR SPECIFIC CONDITIONS AT VARIOUS DEPTHS, REFER TO THE INDIVIDUAL TEST BORING LOGS WHICH FORM A PART OF THESE PLANS.

## LEGEND

- AUGER BORING LOCATION - PLAN VIEW
- PRESS AND/OR DRIVE SAMPLE AND/OR CORE BORING LOCATION - PLAN VIEW
- TR — TOP OF ROCK
- CAPPED PILE
- FOOTING
- FOOTING ON PILE
- HORIZONTAL BAR ON BORING LOG INDICATES THE DEPTH THE SAMPLE WAS TAKEN
- X/Y/Z — FIGURES BESIDE THE BORING LOG IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
  - X = NO. OF BLOWS FOR FIRST 6"
  - Y = NO. OF BLOWS FOR SECOND 6"
  - Z = NO. OF BLOWS FOR THIRD 6"
- W — INDICATES FREE WATER ELEVATION
- INDICATES STATIC WATER ELEVATION

## SYMBOLS OF ROCK TYPES

- COAL
- WEATHERED MUDSTONE
- MUDSTONE
- WEATHERED SHALE
- SHALE
- CLAYSTONE
- SILTSTONE
- WEATHERED SANDSTONE
- SANDSTONE
- LEACHED DOLOMITE
- DOLOMITE
- LEACHED LIMESTONE
- LIMESTONE
- BOULDERS or COBBLES

## GENERAL INFORMATION

Drive sample / Press sample / Core borings

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Drive/press borings are made by means of a mechanically-powered rotary-type drilling machine, employing a 2" O.D., 1-3/8" I.D. split spoon sampler, and 3" O.D. thin wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drilling machine.

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## PARTICLE SIZE DEFINITIONS

| 12" | 3" | 2.0mm | | 0.42mm | 0.074mm | 0.005mm |
|---|---|---|---|---|---|---|
| Boulders | Cobbles | Gravel | Coarse Sand | Fine Sand | Silt | Clay |
| | | No. 10 sieve | | No. 40 sieve | No. 200 sieve | |

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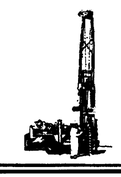

| CHECKED BY | REVIEWED | DATE |
|---|---|---|
| J.X. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2402

1/4

MED - 71 - 15.78

33
36

DESIGN FILE : I:\pd_med_ir71\dgn\soils\soils33.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:49

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SCALE: HORIZ 1"=20
VERT 1"=10




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| V.K. | J.K. | G.M.R. | 10.29.92 |



CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2402

2/4

MED - 71 - 15.78

34
36

DESIGN FILE : I:\pd_med_ir71\dgn\soils\soils34.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:49

## LOG OF BORING

Date Started 6-28-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1128 ±
Date Completed 6-28-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B8-1 | Station & Offset STA. 1267+70.99 19' L | Surface Elev. 1167 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1167.0 | 0 | | | | | | | | | | | | | | | | |
| 1166.8 | 0.2 | | | | TOPSOIL | | | | | | | | | | | | |
| | 1.5 | 4–5–6 | 0.8 | | | 1 | SS | | | | | | | | | | |
| | 3.5 | 5–6–5 | 0.7 | | | 2 | SS | | | | | | | | | | |
| | 8.5 | 5–6–6 | 1.5 | | | 3 | SS | | | | | | | | | | |
| | 13.5 | 4–6–10 | 1.5 | | | 4 | SS | | | | | | | | | | |
| | | | | | Stiff to hard, brown to brownish gray SILT AND CLAY trace gravel, little sand, moist. Note: – trace organics in sample from 13.5 to 15.0 ft. | | | | | | | | | | | | |
| | 18.5 | 5–14–15 | 1.1 | | | 5 | SS | | | | | | | | | | |
| | 22.5 | 14–30–50/0.2 | 1.0 | | | 6 | SS | | | | | | | | | | |
| | 25.0 | 10–12–22 | 1.5 | | | 7 | SS | 7.0 | 6.5 | 8.4 | * | 78.1 | — | — | — | 15.1 | A–6a |
| | 27.5 | 6–8–13 | 1.5 | | | 8 | SS | | | | | | | | | | |
| | 30.0 | 5–6–8 | 1.5 | | | 9 | SS | | | | | | | | | | |
| | 32.5 | 5–8–10 | 1.5 | | | 10 | SS | | | | | | | | | | |
| | 35.0 | 4–6–9 | 1.5 | | | 11 | SS | 9.9 | 7.6 | 9.3 | * | 73.2 | — | — | — | 17.0 | A–6a |
| 1130.0 | 37.0 | | | | | | | | | | | | | | | | |
| | 37.5 | 9–13–17 | 1.0 | | | 12 | SS | | | | | | | | | | |
| | | | | | Dense, gray SAND AND GRAVEL, little silt, moist to saturated. | | | | | | | | | | | | |
| | 40.0 | 10–14–20 | 1.1 | | | 13 | SS | 46.7 | 27.0 | 10.2 | * | 16.1 | — | — | — | 16.3 | A–1–b |
| | 42.5 | 13–19–23 | 1 | | | 14 | SS | | | | | | | | | | |
| 1122.0 | 45.0 | 9–15–25 | 1.5 | | | 15 | SS | | | | | | | | | | |
| | | | | | Hard, gray SANDY SILT, little gravel, wet. | | | | | | | | | | | | |
| | 48.5 | 16–20–25 | 0.9 | | | 16 | SS | 25.2 | 6.8 | 7.3 | * | 60.7 | — | — | — | 14.6 | A–4a |
| 1113.5 | 53.5 | 35–50/0.2 | 0.6 | | | 17 | SS | | | | | | | | | | |
| | 55.0 | 50/0.3 | 0.3 | | | 18 | SS | | | | | | | | | | |
| | | REC = 90% RQD = 40% | | | Gray SILTSTONE, clayey shale interbedded. Note: – fractured, gray clayey shale interbedded from 55.8 to 56.8 ft. | RUN 1 55.0 TO 60.0 | NXW | | | | | | | | | | |
| 1107.0 | 60.0 | | | | TERMINATION DEPTH 60.0 FEET | | | | | | | | | | | | |

* Silt and Clay Combined

## LOG OF BORING

Date Started 6-29-92 | Sampler Type SS | Dia. 2.00 inch. | Water Elev. 1136 ±
Date Completed 6-29-92 | Casing: length -- | Dia. 3.25 inch.
Boring No. B8-2 | Station & Offset STA. 1268+88.99 25'L | Surface Elev. 1146 ±

| ELEV. | DEPTH | STD.PEN. (N) | REC. Ft. | LOSS Ft. | DESCRIPTION | SAMPLE NO. | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG. | COAR. SAND | FINE SAND | SILT | CLAY | L.L. | P.L. | P.I. | W.C. % | SHTL CLASS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1146.0 | 0.0 | | | | | | | | | | | | | | | | |
| 1145.7 | 0.3 | | | | TOPSOIL | | | | | | | | | | | | |
| | 1.5 | 5–6–7 | 1.1 | | | 1 | SS | 10.8 | 6.8 | 9.0 | * | 73.4 | — | — | — | 15.2 | A–6a |
| | 3.5 | 9–13–21 | 1.3 | | Stiff to hard, brown SILT AND CLAY, little gravel, little sand, damp. | 2 | SS | | | | | | | | | | |
| 1140.0 | 6.0 | | | | | | | | | | | | | | | | |
| | 7.5 | 10–18–24 | 1.2 | | Dense, brown GRAVEL W/ SAND AND SILT, moist. | 3 | SS | 50.9 | 13.4 | 10.3 | * | 25.4 | — | — | — | 8.0 | A–2–4 |
| 1137.0 | 9.0 | | | | | | | | | | | | | | | | |
| | 10.0 | 8–8–10 | 1.0 | | Very stiff, brownish gray SILT, little sand, moist. | 4 | SS | | | | | | | | | | |
| 1134.5 | 11.5 | | | | | | | | | | | | | | | | |
| | 12.5 | 5–7–12 | 1.5 | | | 5 | SS | | | | | | | | | | |
| | 15.0 | 3–6–9 | 1.5 | | | 6 | SS | 7.0 | 6.2 | 8.3 | * | 78.5 | 28.8 | 19.3 | 9.5 | 17.7 | A–4a |
| | 17.5 | 3–6–8 | 1.5 | | Stiff to hard, brownish gray SANDY SILT, trace gravel, wet. Note: – sample very silty at 23.0 ft. | 7 | SS | | | | | | | | | | |
| | 20.0 | 6–11–35 | 1.5 | | | 8 | SS | | | | | | | | | | |
| | 22.5 | 11–11–15 | 1.1 | | | 9 | SS | | | | | | | | | | |
| 1121.0 | 25.0 | 6–12–15 | 1.2 | | | 10 | SS | 32.0 | 15.1 | 17.5 | * | 35.4 | — | — | — | 12.3 | A–2–4 |
| | | | | | Medium dense, brownish gray to gray GRAVEL W/ SAND AND SILT, wet. | | | | | | | | | | | | |
| | 27.5 | 5–6–24 | 1.2 | | | | | | | | | | | | | | |
| 1117.5 | 28.5 | | | | | | | | | | | | | | | | |
| | 30.0 | 50/0.3 | 0.3 | | | 12 | SS | | | | | | | | | | |
| | | REC = 40% RQD = 0% | | | Gray SANDSTONE, fine grained. Note: – rock core extremely weathered from 30.3 to 35.0 ft | RUN 1 30.3 to 35.3 | NXW | | | | | | | | | | |
| | | REC = 82% RQD = 60% | | | | RUN 2 35.3 to 40.3 | NXW | | | | | | | | | | |
| 1105.7 | 40.3 | | | | TERMINATION DEPTH 40.3 FEET | | | | | | | | | | | | |

* SILT AND CLAY COMBINED

**STRUCTURE FOUNDATION INVESTIGATION**
***BRIDGE No. MED–71–2402 (L&R)***
***WIDENING***
***MEDINA COUNTY, OHIO***

R&R INTERNATIONAL, INC.
Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321

| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T. E. | J. K. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

**STRUCTURE FOUNDATION INVESTIGATION**
**MED – 71 – 2402**

3/4

**MED – 71 – 15.78**

35
36

DESIGN FILE : i:\pd_med_lr_71\dgn\soils\soils35.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:49

## LOG OF BORING

Date Started 6-29-92 | Sampler Type SS | Dia 2 00 inch | Water Elev 1136 ±
Date Completed 6-29-92 | Casing length -- | Dia 3 25 inch
Boring No B8-3 | Station & Offset STA. 1268+75.99 24 R | Surface Elev 1148 ±

| ELEV | DEPTH | STD PEN (N) | REC Ft | LOSS Ft | DESCRIPTION | SAMPLE NO | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG | % COAR SAND | % FINE SAND | % SILT | % CLAY | LL | PL | PI | WC % | SHTL CLASS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1148 0 | 0 0 | | | | | | | | | | | | | | | | |
| 1147 6 | 0 4 | | | | TOPSOIL | | | | | | | | | | | | |
| | 1 5 | 6-8-10 | 1 2 | | | 1 | SS | | | | | | | | | | |
| | 3 5 | 15-13-16 | 1 0 | | | 2 | SS | 7 4 | 5 8 | 7 1 | | 79 7 | -- | -- | -- | 17 0 | A-6a |
| | 7 5 | 10-10-12 | 1 5 | | Stiff to very stiff brown to brownish gray | 3 | SS | | | | | | | | | | |
| | 10 0 | 5-6-8 | 0 9 | | SILT AND CLAY trace gravel little sand damp to moist | 4 | SS | 9 0 | 6 0 | 7 3 | | 77 7 | 28 9 | 17 3 | 11 6 | 16 3 | A-6a |
| | 12 5 | 5-6-9 | 1 3 | | | 5 | SS | | | | | | | | | | |
| | 15 0 | 3-4-6 | 1 5 | | | 6 | SS | | | | | | | | | | |
| | 17 5 | 3-5-10 | 1 5 | | | 7 | SS | 5 2 | 6 4 | 8 4 | | 80 0 | -- | -- | -- | 17 9 | A-6a |
| 1128 0 | 20 0 | 9-23-20 | 0 5 | | | 8 | SS | | | | | | | | | | |
| | 22 5 | 13-14-14 | 0 6 | | Dense to medium dense brownish gray ROCK FRAGMENTS AND SAND trace silt and clay saturated | 9 | SS | 60 6 | 19 0 | 9 1 | | 11 3 | -- | -- | -- | 13 8 | A-1-b |
| 1124 0 | 24 0 | | | | | | | | | | | | | | | | |
| | 25 0 | 8-9-12 | 1 0 | | | 10 | SS | | | | | | | | | | |
| | 27 5 | 2-6-85 | 1 5 | | Very stiff to hard grayish brown SANDY SILT some gravel saturated | 11 | SS | | | | | | | | | | |
| | 30 0 | 38-18-25 | 0 8 | | | 12 | SS | 33 1 | 9 5 | 18 9 | | 38 5 | -- | -- | -- | 12 4 | A-4a |
| 1118 0 | 32 0 | | | | | | | | | | | | | | | | |
| | 32 5 | 50/0 2 | 0 2 | | Gray SANDSTONE fine grained | 13 | SS | | | | | | | | | | |
| 1114 0 | 34 0 | | | | Note - a clay seam encountered at 39 0 ft | | | | | | | | | | | | |
| | | REC = 86% RQD = 55% | | | Gray CLAYEY SHALE extremely weathered and fractured | RUN 1 34 0 to 44 0 | NXW | | | | | | | | | | |
| 1104 0 | 44 0 | | | | TERMINATION DEPTH 44 0 FEET | | | | | | | | | | | | |

SILT AND CLAY COMBINED

## LOG OF BORING

Date Started 6-27-92 | Sampler Type SS | Dia 2 00 inch | Water Elev 1130 ±
Date Completed 6-27-92 | Casing length -- | Dia 3 25 inch
Boring No B8-4 | Station & Offset STA. 1269+94.99 23 R | Surface Elev 1165 ±

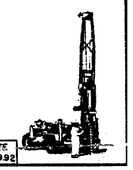
| ELEV | DEPTH | STD PEN (N) | REC Ft | LOSS Ft | DESCRIPTION | SAMPLE NO | SAMPLE TYPE | PHYSICAL CHARACTERITICS % AGG | % COAR SAND | % FINE SAND | % SILT | % CLAY | LL | PL | PI | WC % | SHTL CLASS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1165 0 | 0 | | | | | | | | | | | | | | | | |
| 1164 8 | 0 2 | | | | TOPSOIL | | | | | | | | | | | | |
| | 1 5 | 8-9-10 | 1 1 | | | 1 | SS | | | | | | | | | | |
| | 3 5 | 11-8-15 | 0 0 | | | 2 | SS | | | | | | | | | | |
| | 8 5 | 16-14-20 | 1 5 | | | 3 | SS | | | | | | | | | | |
| | 13 5 | 8-11-16 | 1 2 | | Very stiff to hard brown to brownish gray SILT AND CLAY little gravel little sand damp | 4 | SS | 10 8 | 6 4 | 9 1 | | 73 7 | -- | -- | -- | 15 1 | A-6a |
| | 18 5 | 17-16-18 | 1 2 | | | 5 | SS | | | | | | | | | | |
| | 22 5 | 14-17-50/0 2 | 1 3 | | | 6 | SS | | | | | | | | | | |
| | 25 0 | 5-12-25 | 1 1 | | | 7 | SS | | | | | | | | | | |
| | 27 5 | 18-20-40 | 1 5 | | | 8 | SS | 13 8 | 10 6 | 9 3 | | 66 3 | -- | -- | -- | 13 6 | A-6a |
| | 30 0 | 7-11-19 | 1 5 | | | 9 | SS | | | | | | | | | | |
| | 32 5 | 8-18-18 | 1 5 | | | 10 | SS | 7 7 | 6 4 | 7 9 | | 78 0 | 30 0 | 18 9 | 11 1 | 16 5 | A-6a |
| 1130 0 | 35 0 | 8-8-50/0 3 | 1 0 | | | 11 | SS | | | | | | | | | | |
| | 37 5 | 28-50/0 3 | 0 9 | | | 12 | SS | | | | | | | | | | |
| | 40 0 | 8-14-20 | 1 1 | | Hard brownish gray SANDY SILT some gravel moist | 13 | SS | 28 0 | 14 4 | 9 6 | | 48 0 | -- | -- | -- | 14 2 | A-4a |
| | 42 5 | 17-25-27 | 1 2 | | | 14 | SS | | | | | | | | | | |
| 1120 0 | 45 0 | 8-15-17 | 1 5 | | | 15 | SS | | | | | | | | | | |
| | 48 5 | 50/0 3 | 0 3 | | Very dense brownish gray ROCK FRAGMENTS W/ SAND AND SILT moist to saturated | 16 | SS | 54 2 | 8 9 | 9 6 | | 27 3 | -- | -- | -- | 12 2 | A-2-4 |
| 1111 0 | 53 5 54 0 | 50/0 5 | 0 5 | | | 17 | SS | | | | | | | | | | |
| | | | | | TERMINATION DEPTH 54 0 FEET | | | | | | | | | | | | |

SILT AND CLAY COMBINED

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE No MED-71-2402 (L&R)
WIDENING
MEDINA COUNTY, OHIO

R&R INTERNATIONAL INC

Geotechnical Engineers • Geologists
1234 S. CLEVELAND-MASSILLON ROAD
P.O. BOX 4383
AKRON, OH 44321



| TYPED BY | CHECKED BY | REVIEWED | DATE |
|---|---|---|---|
| T.E. | J.K. | G.M.R. | 10.29.92 |

CALCULATED | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
MED - 71 - 2402

4/4

MED - 71 - 15.78

36
36

DESIGN FILE : i:\pd_med_lr71\dgn\solls\solls36.dgn
USERNAME : jrogers
DATE : 18-NOV-1999
TIME : 13:49

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-1 | 1 | 1.0 | 0.30 | 15 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 16 | 98 | 95 | 89 | 83 | 77 | 5 | 6 | 12 | 28 | 49 | | 25 | 17 | 8 | A-4a |
| | 3 | 6.0 | 1.83 | 15 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-2 | 1 | 1.0 | 0.30 | 13 | 98 | 95 | 89 | 82 | 76 | 5 | 6 | 12 | 37 | 39 | | 26 | 17 | 9 | A-4a |
| | 2 | 3.5 | 1.07 | 15 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 16 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-3 | 1 | 1.0 | 0.30 | 12 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 17 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 19 | 78 | 77 | 75 | 74 | 72 | 23 | 2 | 3 | | 72 | * | 38 | 23 | 15 | A-6a |
| | 4 | 8.5 | 2.59 | 21 | Gray SILT AND CLAY, some gravel and rock fragments, trace sand with occasional silt seams | | | | | | | | | | | | | | (Visual) |
| B-4 | 1 | 1.0 | 0.30 | 13 | Brown and gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 14 | 95 | 92 | 85 | 77 | 71 | 8 | 7 | 14 | | 71 | * | 29 | 17 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 14 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-5 | 1 | 1.0 | 0.30 | 11 | 65 | 60 | 53 | 47 | 43 | 40 | 7 | 10 | | 43 | * | 29 | 19 | 10 | A-4a |
| | 2 | 3.5 | 1.07 | 7 | Gray highly weathered CLAY SHALE | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 5 | Gray highly weathered CLAY SHALE | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 3 | Gray highly weathered CLAY SHALE | | | | | | | | | | | | | | (Visual) |
| B-6 | 1A | 1.0 | 0.30 | 13 | 91 | 77 | 54 | 41 | 36 | 23 | 23 | 18 | | 36 | * | 25 | 17 | 8 | A-4a |
| | 1B | 2.3 | 0.70 | 13 | Gray decomposed CLAY SHALE | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 6 | Gray highly weathered CLAY SHALE | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 6 | Gray highly weathered CLAY SHALE | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 6 | Gray highly weathered CLAY SHALE | | | | | | | | | | | | | | (Visual) |
| B-7 | 1 | 1.0 | 0.30 | 14 | Brown SANDY SILT, little clay, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 7 | Gray highly weathered CLAY SHALE | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 6 | Gray highly weathered CLAY SHALE | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 5 | Gray highly weathered CLAY SHALE | | | | | | | | | | | | | | (Visual) |
| B-8 | 1 | 1.0 | 0.30 | 11 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 18 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 17 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

* Silt and Clay Combined



DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER
DRAWN | REVISED
DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78

1
78

TBI-TB6.DGN PDH 11/2/99

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-9 | 1 | 1.0 | 0.30 | 13 | Brown SANDY SILT, little clay, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 16 | 97 | 94 | 86 | 77 | 70 | 6 | 8 | 16 | | 70 | * | 30 | 19 | 11 | A-6a |
| | 3 | 6.0 | 1.83 | 19 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4A | 8.5 | 2.59 | 23 | Brown SILT AND CLAY, some sand, trace gravel with occasional silt seams | | | | | | | | | | | | | | (Visual) |
| | 4B | 9.5 | 2.90 | 15 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-10 | 1 | 1.0 | 0.30 | 15 | 99 | 97 | 91 | 84 | 78 | 3 | 6 | 13 | | 78 | * | 33 | 20 | 13 | A-6a |
| | 2 | 3.5 | 1.07 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 12 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-11 | 1 | 1.0 | 0.30 | 19 | 99 | 98 | 94 | 87 | 81 | 2 | 4 | 13 | | 81 | * | 31 | 20 | 11 | A-6a |
| | 2 | 3.5 | 1.07 | 28 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments with layer of topsoil | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 22 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-12 | 1 | 1.0 | 0.30 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.0 | 2.44 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-13 | 1 | 1.0 | 0.30 | 15 | 93 | 90 | 83 | 75 | 70 | 10 | 7 | 13 | | 70 | * | 31 | 19 | 12 | A-6a |
| | 2 | 3.5 | 1.07 | 12 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-14 | 1 | 1.0 | 0.30 | 15 | 96 | 92 | 85 | 78 | 73 | 8 | 7 | 12 | | 73 | * | 30 | 19 | 11 | A-6a |
| | 2 | 3.5 | 1.07 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 25 | Brown SILT AND CLAY, little sand, trace gravel, trace organic | | | | | | | | | | | | | | (Visual) |
| B-15 | 1 | 1.0 | 0.30 | 17 | 94 | 91 | 84 | 75 | 69 | 9 | 7 | 15 | 35 | 34 | | 29 | 20 | 9 | A-4a |
| | 2 | 3.5 | 1.07 | 14 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 14 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-16 | 1A | 1.0 | 0.30 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 1B | 2.0 | 0.61 | 13 | Brown and gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 11 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 16 | Brown and gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

* Silt and Clay Combined



DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED DATE
STRUCTURE FILE NUMBER
DRAWN REVISED
DESIGNED CHECKED

SOIL PROFILE

MED-71-15.78

2
78

TBI-TB6.DGN PDH 11/2/99

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-17 | 1 | 1.0 | 0.30 | 16 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 16 | 99 | 96 | 88 | 80 | 74 | 4 | 8 | 14 | | 74 | * | 32 | 19 | 13 | A-6a |
| | 3 | 6.0 | 1.83 | 15 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 13 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-18 | 1 | 1.0 | 0.30 | 14 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 13 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3A | 6.0 | 1.83 | 17 | 97 | 94 | 88 | 81 | 75 | 6 | 6 | 12 | | 75 | * | 30 | 19 | 11 | A-6a |
| | 3B | 7.0 | 2.13 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments with topsoil seam | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 22 | Brown, mottled gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-19 | 1 | 1.0 | 0.30 | 13 | Brown and gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 15 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 21 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments with topsoil seam | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Brown SANDY SILT, little clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-20 | 1 | 1.0 | 0.30 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 20 | 99 | 98 | 95 | 90 | 85 | 2 | 3 | 9 | | 85 | * | 34 | 21 | 13 | A-6a |
| | 3 | 6.0 | 1.83 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-21 | 1 | 1.0 | 0.30 | 16 | 87 | 85 | 81 | 76 | 72 | 15 | 4 | 9 | | 72 | * | 34 | 21 | 13 | A-6a |
| | 2 | 3.5 | 1.07 | 16 | Brown SILT AND CLAY, little gravel and rock fragments, little sand | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Brown SILT AND CLAY, little gravel and rock fragments, little sand | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 10 | Gray SANDY SILT, little clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-22 | 1 | 1.0 | 0.30 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 18 | 98 | 96 | 91 | 85 | 81 | 4 | 5 | 9 | | 81 | * | 32 | 20 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 18 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments with occasional silt seams | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 18 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments with occasional silt seams | | | | | | | | | | | | | | (Visual) |
| B-23 | 1 | 1.0 | 0.30 | 12 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 15 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-24 | 1 | 1.0 | 0.30 | 12 | 98 | 96 | 90 | 84 | 80 | 4 | 6 | 10 | | 80 | * | 32 | 20 | 12 | A-6a |
| | 2 | 3.5 | 1.07 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 19 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

* Silt and Clay Combined



DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | REVIEWED | DATE
CHECKED | REVISED | STRUCTURE FILE NUMBER

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TBI-TB6.DGN PDH 11/2/99

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-25 | 1 | 1.0 | 0.30 | 15 | 99 | 96 | 88 | 82 | 77 | 4 | 8 | 11 | | 77 | * | 32 | 20 | 12 | A-6a |
| | 2 | 3.5 | 1.07 | 17 | Brown SILT AND CLAY, some sand, trace gravel. trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 13 | Gray SILT AND CLAY, little sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 12 | Gray SILT AND CLAY, little sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| B-26 | 1 | 1.0 | 0.30 | 18 | 94 | 91 | 84 | 77 | 72 | 9 | 7 | 12 | 38 | 34 | | 30 | 20 | 10 | A-4a |
| | 2 | 3.5 | 1.07 | 15 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 7.0 | 2.13 | 16 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-27 | 1 | 1.0 | 0.30 | 13 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 17 | 96 | 91 | 83 | 78 | 73 | 9 | 8 | 10 | 36 | 37 | | 31 | 21 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 18 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 19 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-28 | 1 | 1.0 | 0.30 | 12 | Brown SILT AND CLAY, little sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 18 | 90 | 88 | 83 | 77 | 72 | 12 | 5 | 11 | | 72 | * | 31 | 19 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 24 | Brown SILT AND CLAY, little sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 18 | Brown SILT AND CLAY, little sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| B-29 | 1 | 1.0 | 0.30 | 13 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 14 | 98 | 94 | 86 | 78 | 72 | 6 | 8 | 13 | 38 | 34 | | 26 | 18 | 8 | A-4a |
| | 3 | 6.0 | 1.83 | 17 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 18 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-30 | 1 | 1.0 | 0.30 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 16 | 98 | 95 | 89 | 84 | 80 | 5 | 6 | 10 | | 80 | * | 32 | 20 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-31 | 1 | 1.0 | 0.30 | 11 | 84 | 76 | 59 | 46 | 38 | 24 | 17 | 21 | | 38 | * | 24 | 14 | 10 | A-4a |
| | 2A | 3.5 | 1.07 | 17 | Brown SANDY SILT, little clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2B | 4.0 | 1.22 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 16 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-32 | 1 | 1.0 | 0.30 | 14 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 15 | 92 | 89 | 82 | 76 | 72 | 11 | 7 | 11 | 38 | 34 | | 26 | 16 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 16 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

* Silt and Clay Combined



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TBI-TB6.DGN PDH 11/2/99

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-33 | 1 | 1.0 | 0.30 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 17 | 99 | 95 | 87 | 79 | 73 | 5 | 8 | 13 | 39 | 34 | | 25 | 17 | 8 | A-4a |
| | 3 | 6.0 | 1.83 | 12 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 20 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-34 | 1 | 0.0 | 0.00 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 14 | 96 | 93 | 86 | 81 | 76 | 7 | 7 | 10 | | 76 | * | 30 | 19 | 11 | A-6a |
| | 3 | 6.0 | 1.83 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 20 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-35 | 1 | 0.0 | 0.00 | 16 | 97 | 94 | 87 | 81 | 76 | 6 | 7 | 12 | | 76 | * | 30 | 19 | 11 | A-6a |
| | 2 | 3.0 | 0.91 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-36 | 1 | 1.0 | 0.30 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 23 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-37 | 1 | 0.0 | 0.00 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 12 | 98 | 95 | 88 | 81 | 76 | 5 | 7 | 12 | | 76 | * | 28 | 17 | 11 | A-6a |
| | 3 | 6.0 | 1.83 | 13 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-38 | 1 | 0.0 | 0.00 | 15 | 98 | 95 | 89 | 83 | 79 | 5 | 6 | 10 | | 79 | * | 31 | 19 | 12 | A-6a |
| | 2 | 3.0 | 0.91 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-39 | 1 | 1.0 | 0.30 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-40 | 1 | 0.0 | 0.00 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 13 | 98 | 94 | 86 | 79 | 74 | 6 | 8 | 12 | | 74 | * | 31 | 19 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-41 | 1 | 1.0 | 0.30 | 15 | Brown SILT AND CLAY, little sand, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 13 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

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# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 6.0 | 1.83 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-42 | 1 | 0.0 | 0.00 | 17 | 98 | 94 | 87 | 80 | 75 | 6 | 7 | 12 | | 75 | * | 30 | 19 | 11 | A-6a |
| | 2 | 3.0 | 0.91 | 13 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-43 | 1 | 1.0 | 0.30 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 9 | Brown FINE SANDSTONE FRAGMENTS | | | | | | | | | | | | | | |
| | 3 | 6.0 | 1.83 | 9 | Brown FINE SANDSTONE FRAGMENTS | | | | | | | | | | | | | | (Visual) |
| B-44 | 1 | 0.0 | 0.00 | 22 | Brown SILT AND CLAY, little sand, trace gravel, trace roots. | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 99 | 97 | 91 | 86 | 81 | 3 | 6 | 10 | 39 | 42 | | 30 | 20 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 16 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 8 | Brown SANDSTONE FRAGMENTS | | | | | | | | | | | | | | (Visual) |
| B-45 | 1 | 1.0 | 0.30 | 12 | Brown and gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 11 | 97 | 94 | 87 | 80 | 71 | 6 | 7 | 16 | 34 | 37 | | 24 | 17 | 7 | A-4a |
| | 3 | 6.0 | 1.83 | 14 | Brown and gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-46 | 1 | 0.0 | 0.00 | 13 | Brown and gray SANDY SILT, little clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 10 | 99 | 95 | 86 | 78 | 71 | 5 | 9 | 16 | 42 | 29 | | 21 | 15 | 6 | A-4a |
| | 3 | 6.0 | 1.83 | 19 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments with occasional silt seams | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 18 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments with occasional silt seams | | | | | | | | | | | | | | (Visual) |
| B-47 | 1 | 1.0 | 0.30 | 14 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 20 | 96 | 93 | 87 | 77 | 72 | 7 | 6 | 15 | | 72 | * | 32 | 21 | 11 | A-6a |
| | 3 | 6.0 | 1.83 | 13 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 13 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-48 | 1 | 0.0 | 0.00 | 14 | 98 | 95 | 87 | 80 | 74 | 5 | 8 | 13 | 36 | 38 | | 28 | 19 | 9 | A-4a |
| | 2 | 3.0 | 0.91 | 11 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 12 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-49 | 1 | 1.0 | 0.30 | 12 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 10 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 13 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments with silt and clay layer | | | | | | | | | | | | | | (Visual) |

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# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-50 | 1 | 0.0 | 0.00 | 13 | 95 | 91 | 83 | 74 | 68 | 9 | 8 | 15 | 26 | 42 | 28 | 18 | 10 | A-4a |
| | 2 | 3.0 | 0.91 | 19 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 19 | Brown SANDY SILT, some clay, trace gravel, trace rock fagments | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Brown to gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| B-51 | 1 | 0.0 | 0.00 | 13 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 92 | 89 | 83 | 77 | 72 | 11 | 6 | 11 | 29 | 43 | 26 | 17 | 9 | A-4a |
| | 3 | 6.0 | 1.83 | 15 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| B-52 | 1 | 0.0 | 0.00 | 13 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 97 | 94 | 87 | 81 | 76 | 6 | 7 | 11 | 32 | 44 | 26 | 16 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 17 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| B-53 | 1 | 0.0 | 0.00 | 18 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 21 | 96 | 95 | 93 | 90 | 88 | 5 | 2 | 4 | 88 * | | 37 | 22 | 15 | A-6a |
| | 3 | 6.0 | 1.83 | 15 | Gray SILT AND CLAY, trace sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SILT AND CLAY, trace sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| B-54 | 1 | 0.0 | 0.00 | 14 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 16 | 93 | 88 | 78 | 70 | 64 | 12 | 10 | 14 | 64 * | | 33 | 20 | 13 | A-6a |
| | 3 | 6.0 | 1.83 | 17 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| B-55 | 1 | 0.0 | 0.00 | 13 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 14 | 96 | 93 | 87 | 81 | 76 | 7 | 6 | 11 | 76 * | | 33 | 19 | 14 | A-6a |
| | 3 | 6.0 | 1.83 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | (Visual) |
| B-56 | 1 | 0.0 | 0.00 | 21 | 98 | 95 | 88 | 81 | 75 | 5 | 7 | 13 | 75 * | | 35 | 21 | 14 | A-6a |
| | 2 | 3.0 | 0.91 | 14 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 14 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 25 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| B-57 | 1 | 0.0 | 0.00 | 15 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 17 | 99 | 96 | 90 | 85 | 80 | 4 | 6 | 10 | 39 | 41 | 30 | 20 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 14 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 18 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| B-58 | 1 | 0.0 | 0.00 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace roots | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 23 | 100 | 100 | 99 | 97 | 93 | 0 | 1 | 6 | 93 * | | 35 | 20 | 15 | A-6a |

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TB7-TBI2.DGN PDH 11/2/99

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 6.0 | 1.83 | 22 | Brown SILT AND CLAY, trace sand | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, little sand, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-59 | 1 | 0.0 | 0.00 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 17 | 98 | 95 | 88 | 83 | 78 | | 5 | 7 | 11 | 78 | * | 32 | 20 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 12 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-60 | 1 | 0.0 | 0.00 | 16 | 96 | 92 | 83 | 76 | 71 | | 8 | 9 | 12 | 71 | * | 31 | 19 | 12 | A-6a |
| | 2 | 3.0 | 0.91 | 16 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-61 | 1 | 0.0 | 0.00 | 15 | 96 | 92 | 84 | 75 | 69 | | 8 | 8 | 15 | 35 | 34 | | 30 | 20 | 10 | A-4a |
| | 2 | 3.0 | 0.91 | 10 | Brown and gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 13 | Brown and gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 18 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-62 | 1 | 0.0 | 0.00 | 14 | Brown SILT AND CLAY, some sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 93 | 88 | 80 | 72 | 67 | | 12 | 8 | 13 | 67 | * | 32 | 19 | 13 | A-6a |
| | 3 | 6.0 | 1.83 | 16 | Brown SILT AND CLAY, some sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Brown SILT AND CLAY, some sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| B-63 | 1 | 0.0 | 0.00 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 14 | Brown SANDY SILT, trace clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 24 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-64 | 1 | 0.0 | 0.00 | 17 | 97 | 94 | 88 | 81 | 77 | | 6 | 6 | 11 | 77 | * | 33 | 20 | 13 | A-6a |
| | 2 | 3.0 | 0.91 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 13 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-65 | 1 | 0.0 | 0.00 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace topsoil | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 20 | 100 | 100 | 100 | 100 | 99 | | 0 | 0 | 0 | 40 | 59 | | 31 | 22 | 9 | A-4a |
| | 3 | 6.0 | 1.83 | 20 | Gray SANDY SILT, some clay | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 19 | Gray SANDY SILT, some clay | | | | | | | | | | | | | | (Visual) |
| B-66 | 1 | 0.0 | 0.00 | 22 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 23 | 100 | 100 | 100 | 99 | 98 | | 0 | 0 | 2 | 98 | * | 32 | 21 | 11 | A-6a |
| | 3 | 6.0 | 1.83 | 23 | Gray SANDY SILT, some clay with occasional sand and silt seams | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 21 | Gray SANDY SILT, some clay with occasional sand and silt seams | | | | | | | | | | | | | | (Visual) |

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# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-67 | 1 | 0.0 | 0.00 | 17 | 94 | 91 | 83 | 73 | 66 | 9 | 8 | 16 | | 66 | * | 32 | 21 | 11 | A-6a |
| | 2 | 3.0 | 0.91 | 11 | 95 | 90 | 79 | 70 | 64 | 10 | 11 | 15 | 33 | 31 | | 24 | 16 | 8 | A-4a |
| | 3 | 6.0 | 1.83 | 14 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-68 | 1 | 0.0 | 0.00 | 19 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 11 | 99 | 94 | 80 | 69 | 62 | 6 | 14 | 18 | 33 | 29 | | 22 | 16 | 6 | A-4a |
| | 3 | 6.0 | 1.83 | 14 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-69 | 1 | 0.0 | 0.00 | 17 | Brown SANDY SILT, little clay, trace gravel, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 19 | 98 | 96 | 92 | 89 | 86 | 4 | 4 | 6 | 47 | 39 | | 27 | 18 | 9 | A-4a |
| | 3 | 6.0 | 1.83 | 19 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 18 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-70 | 1 | 0.0 | 0.00 | 18 | Brown SILT, some clay, trace sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 14 | 99 | 98 | 96 | 94 | 92 | 2 | 2 | 4 | 50 | 42 | | 26 | 17 | 9 | A-4b |
| | 3 | 6.0 | 1.83 | 22 | Gray SILT, some clay, trace sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Gray SILT, some clay, trace sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-71 | 1 | 0.0 | 0.00 | 17 | Brown SANDY SILT, trace clay, trace gravel, trace rockfragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 13 | 91 | 84 | 71 | 64 | 59 | 16 | 13 | 12 | 28 | 31 | | 24 | 16 | 8 | A-4a |
| | 3 | 6.0 | 1.83 | 14 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 22 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-72 | 1 | 0.0 | 0.00 | 16 | 96 | 93 | 86 | 79 | 74 | 7 | 7 | 12 | | 74 | * | 32 | 20 | 12 | A-6a |
| | 2 | 3.0 | 0.91 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 20 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-73 | 1 | 0.0 | 0.00 | 25 | 100 | 100 | 96 | 89 | 83 | 0 | 4 | 13 | | 83 | * | 37 | 26 | 11 | A-6a |
| | 2 | 3.0 | 0.91 | 16 | Brown SILT AND CLAY, little sand, trace gravel | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | 91 | 73 | 47 | 31 | 21 | 27 | 26 | 26 | | 21 | * | | | | A-1-b |
| | 4 | 8.5 | 2.59 | 22 | Gray SILT, little clay, trace sand | | | | | | | | | | | | | | (Visual) |
| B-74 | 1 | 0.0 | 0.00 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 17 | 99 | 96 | 87 | 76 | 71 | 4 | 9 | 16 | | 71 | * | 31 | 19 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 12 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 13 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

* Silt and Clay Combined



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# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-75 | 1 | 0.0 | 0.00 | 15 | 96 | 92 | 85 | 77 | 71 | 8 | 7 | 13 | | 71 | * | 32 | 20 | 12 | A-6a |
| | 2 | 3.0 | 0.91 | 17 | Brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments with occasional silt seams | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 22 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 20 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments with occasional silt seams | | | | | | | | | | | | | | (Visual) |
| B-76 | 1 | 0.0 | 0.00 | 14 | Brown, mottled gray SILT AND CLAY, little sand, trace gravel, trace rock frag | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 14 | 94 | 91 | 84 | 79 | 74 | 9 | 7 | 9 | | 74 | * | 34 | 21 | 13 | A-6a |
| | 3 | 6.0 | 0.00 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 13 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-77 | 1 | 0.0 | 0.00 | 17 | Brown SANDY SILT, little clay, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 25 | 100 | 100 | 100 | 100 | 99 | 0 | 0 | 1 | 39 | 60 | | 30 | 20 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 24 | Gray SILTAND CLAY, trace sand with occasional silt layer | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 21 | Gray SILT AND CLAY, trace sand | | | | | | | | | | | | | | (Visual) |
| B-78 | 1 | 0.0 | 0.00 | 14 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 97 | 93 | 85 | 80 | 75 | 7 | 8 | 10 | 34 | 41 | | 29 | 19 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 15 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-79 | 1 | 0.0 | 0.00 | 18 | 97 | 94 | 86 | 77 | 72 | 6 | 8 | 14 | | 72 | * | 32 | 20 | 12 | A-6a |
| | 2 | 3.0 | 0.91 | 17 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 16 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-80 | 1 | 0.0 | 0.00 | 15 | 94 | 91 | 85 | 80 | 76 | 9 | 6 | 9 | | 76 | * | 34 | 20 | 14 | A-6a |
| | 2 | 3.0 | 0.91 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 13 | Brown SILT AND CLAY, little sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 12 | Brown SILT AND CLAY, little sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| B-81 | 1 | 0.0 | 0.00 | 17 | 96 | 93 | 87 | 80 | 76 | 7 | 6 | 11 | 39 | 37 | | 31 | 21 | 10 | A-4a |
| | 2 | 3.0 | 0.91 | 16 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-82 | 1 | 0.0 | 0.00 | 17 | 98 | 95 | 87 | 81 | 76 | 5 | 8 | 11 | | 76 | * | 33 | 20 | 13 | A-6a |
| | 2 | 3.0 | 0.91 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-83 | 1 | 0.0 | 0.00 | 15 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 17 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

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# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4 | 8.5 | 2.59 | 16 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-84 | 1 | 0.0 | 0.00 | 14 | Brown SANDY SILT, little clay, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 10 | 92 | 86 | 75 | 66 | 60 | | 14 | 11 | 15 | 31 | 29 | 24 | 16 | 8 | A-4a |
| | 3 | 6.0 | 1.83 | 18 | Gray SILT AND CLAY, some sand, trace gravel trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Gray SILT AND CLAY, some sand, trace gravel trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-85 | 1 | 0.0 | 0.00 | 14 | 96 | 91 | 82 | 74 | 69 | | 9 | 9 | 13 | 34 | 35 | 29 | 19 | 10 | A-4a |
| | 2 | 3.0 | 0.91 | 13 | Gray SANDY SILT, some clay, trace gravel, trace rock fagments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 14 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-86 | 1 | 0.0 | 0.00 | 12 | Brown SANDY SILT, some clay, little gravel and rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 13 | 93 | 89 | 80 | 74 | 70 | | 11 | 9 | 10 | 37 | 33 | 28 | 18 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 14 | Gray SANDY SILT, some clay, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 13 | Gray SANDY SILT, some clay, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| B-87 | 1 | 0.0 | 0.00 | 15 | Brown SANDY SILT, some clay, trace gravel, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 12 | 78 | 66 | 49 | 30 | 23 | | 34 | 17 | 26 | | 23 | * | | | A-1-b |
| | 3 | 6.0 | 1.83 | 14 | Gray SANDY SILT, some clay, trace gravel, trace rock fagments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-88 | 1 | 0.0 | 0.00 | 12 | 96 | 91 | 84 | 78 | 74 | | 9 | 7 | 10 | 39 | 35 | 26 | 19 | 7 | A-4a |
| | 2 | 3.0 | 0.91 | 14 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-89 | 1 | 0.0 | 0.00 | 16 | Gray SANDY SILT, some clay, trace gravel, trace rock fagments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 98 | 94 | 85 | 80 | 76 | | 6 | 9 | 9 | 36 | 40 | 25 | 18 | 7 | A-4a |
| | 3 | 6.0 | 1.83 | 14 | Gray SANDY SILT, some clay, trace gravel, trace rock fagments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Gray SANDY SILT, some clay, trace gravel, trace rock fagments | | | | | | | | | | | | | | (Visual) |
| B-90 | 1 | 0.0 | 0.00 | 15 | Brown SILTY CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 17 | 94 | 93 | 89 | 85 | 81 | | 7 | 4 | 8 | | 81 | * | 37 | 20 | 17 | A-6b |
| | 3 | 6.0 | 1.83 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-91 | 1 | 0.0 | 0.00 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 18 | 98 | 95 | 88 | 84 | 80 | | 5 | 7 | 8 | | 80 | * | 38 | 23 | 15 | A-6a |
| | 3 | 6.0 | 1.83 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

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DESIGNED | CHECKED

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TB7-TBI2.DGN PDH 11/2/99

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-92 | 1 | 0.0 | 0.00 | 14 | Brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 97 | 94 | 86 | 81 | 76 | 6 | 8 | 10 | | 76 | * | 31 | 20 | 11 | A-6a |
| | 3 | 6.0 | 1.83 | 13 | Brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 12 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-93 | 1 | 0.0 | 0.00 | 21 | 91 | 90 | 87 | 83 | 80 | 10 | 3 | 7 | | 80 | * | 44 | 22 | 22 | A-7-6 |
| | 2 | 3.0 | 0.91 | 15 | Brown SANDY SILT, some clay, trace gravel, trace rock fagments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Brown SANDY SILT, some clay, trace gravel, trace rock fagments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Brown SANDY SILT, some clay, trace gravel, trace rock fagments | | | | | | | | | | | | | | (Visual) |
| B-94 | 1 | 0.0 | 0.00 | 20 | Brown SILT AND CLAY, little sand, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 18 | 99 | 96 | 90 | 86 | 82 | 4 | 6 | 8 | | 82 | * | 35 | 20 | 15 | A-6a |
| | 3 | 6.0 | 1.83 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-95 | 1 | 0.0 | 0.00 | 12 | Brown SILT AND CLAY, little sand, trace rock fragments, trace gravel, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 14 | 97 | 94 | 86 | 79 | 74 | 6 | 8 | 12 | | 74 | * | 29 | 18 | 11 | A-6a |
| | 3 | 6.0 | 1.83 | 13 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 13 | Brown and gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-96 | 1 | 0.0 | 0.00 | 13 | Brown SANDY SILT, little clay, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 11 | 91 | 85 | 73 | 65 | 59 | 15 | 12 | 14 | 31 | 28 | | 26 | 17 | 9 | A-4a |
| | 3 | 6.0 | 1.83 | 17 | Brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 22 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace organic | | | | | | | | | | | | | | (Visual) |
| B-97 | 1 | 0.0 | 0.00 | 15 | Brown and gray SILT AND CLAY, some sand, trace gravel, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 17 | 95 | 91 | 82 | 76 | 71 | 9 | 9 | 12 | | 71 | * | 33 | 21 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 15 | Brown and gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 13 | Brown and gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-98 | 1 | 0.0 | 0.00 | 17 | 98 | 95 | 89 | 82 | 77 | 5 | 6 | 12 | | 77 | * | 34 | 20 | 14 | A-6a |
| | 2 | 3.0 | 0.91 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-99 | 1 | 0.0 | 0.00 | 17 | 99 | 96 | 90 | 83 | 78 | 4 | 6 | 12 | | 78 | * | 33 | 21 | 12 | A-6a |
| | 2 | 3.0 | 0.91 | 14 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 13 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 13 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-100 | 1 | 0.0 | 0.00 | 22 | 99 | 97 | 94 | 88 | 84 | 3 | 3 | 10 | | 84 | * | 42 | 23 | 19 | A-7-6 |
| | 2 | 3.0 | 0.91 | 18 | Brown CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

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TB7-TB12.DGN PDH 11/2/99

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 6.0 | 1.83 | 17 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown and gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-101 | 1 | 0.0 | 0.00 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 97 | 93 | 86 | 80 | 75 | | 7 | 7 | 10 | 75 | * | 32 | 20 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-102 | 1 | 0.0 | 0.00 | 16 | Brown CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 22 | 100 | 100 | 96 | 91 | 88 | | 0 | 4 | 8 | 88 | * | 44 | 22 | 22 | A-7-6 |
| | 3 | 6.0 | 1.83 | 21 | Brown CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-103 | 1 | 0.0 | 0.00 | 15 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 18 | 99 | 97 | 92 | 81 | 73 | | 3 | 5 | 19 | 39 | 34 | 31 | 21 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 28 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace organic | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 19 | Brown, SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-104 | 1 | 0.0 | 0.00 | 21 | 72 | 46 | 18 | 4 | 1 | | 54 | 28 | 17 | | 1 | * | | | A-1-a |
| | 2 | 3.0 | 0.91 | 18 | 97 | 94 | 87 | 80 | 75 | | 6 | 7 | 12 | | 75 | * | 31 | 18 | 13 | A-6a |
| | 3 | 6.0 | 1.83 | 19 | Brown, mottled gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Brown, mottled gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-105 | 1 | 0.0 | 0.00 | 17 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 14 | 98 | 94 | 86 | 80 | 75 | | 6 | 8 | 11 | 33 | 42 | 30 | 20 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 18 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-106 | 1 | 0.0 | 0.00 | 13 | 94 | 91 | 84 | 76 | 71 | | 9 | 7 | 13 | 32 | 39 | 29 | 19 | 10 | A-4a |
| | 2 | 3.0 | 0.91 | 19 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-107 | 1 | 0.0 | 0.00 | 15 | Brown SILT AND CLAY, some sand, trace gravel, trace rock frragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 14 | 98 | 93 | 85 | 78 | 74 | | 7 | 8 | 11 | | 74 | * | 31 | 19 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 15 | Brown SILT AND CLAY, some sand, trace gravel, trace rock frragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 21 | Brown SILT AND CLAY, some sand, trace gravel, trace rock frragments | | | | | | | | | | | | | | (Visual) |
| B-108 | 1 | 0.0 | 0.00 | 16 | Brown SILT AND CLAY, some sand, trace gravel, trace rock frragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 16 | Brown SILT AND CLAY, some sand, trace gravel, trace rock frragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

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TBI3-TBI7.DGN PDH 11/2/99

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-109 | 1 | 0.0 | 0.00 | 13 | Brown and gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 98 | 95 | 87 | 81 | 75 | 5 | 8 | 12 | 35 | 40 | | 25 | 16 | 9 | A-4a |
| | 3 | 6.0 | 1.83 | 19 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-110 | 1 | 0.0 | 0.00 | 16 | 99 | 96 | 89 | 80 | 74 | 4 | 7 | 15 | | 74 | | 30 | 18 | 12 | A-6a |
| | 2 | 3.0 | 0.91 | 14 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 18 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-111 | 1 | 0.0 | 0.00 | 13 | 96 | 92 | 83 | 77 | 71 | 8 | 9 | 12 | | 71 | * | 28 | 17 | 11 | A-6a |
| | 2 | 3.0 | 0.91 | 14 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 16 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-112 | 1 | 0.0 | 0.00 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 17 | 98 | 95 | 87 | 81 | 76 | 5 | 8 | 11 | | 76 | * | 33 | 19 | 14 | A-6a |
| | 3 | 6.0 | 1.83 | 15 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-113 | 1 | 0.0 | 0.00 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 17 | 97 | 94 | 87 | 81 | 76 | 6 | 7 | 10 | | 76 | * | 36 | 21 | 15 | A-6a |
| | 3 | 6.0 | 1.83 | 16 | Brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-114 | 1 | 0.0 | 0.00 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 17 | 97 | 94 | 86 | 80 | 76 | 6 | 8 | 10 | | 76 | * | 34 | 22 | 12 | A-6a |
| | 3 | 6.0 | 1.83 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 20 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-115 | 1 | 0.0 | 0.00 | 16 | 98 | 95 | 89 | 82 | 77 | 5 | 6 | 12 | | 77 | * | 35 | 20 | 15 | A-6a |
| | 2 | 3.0 | 0.91 | 27 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments with peat layer | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-116 | 1 | 0.0 | 0.00 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

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# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B-117 | 1 | 0.0 | 0.00 | 16 | Brown CLAY, trace sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 23 | 100 | 99 | 96 | 92 | 89 | | 1 | 3 | 7 | 89 | * | 42 | 24 | 18 | A-7-6 |
| | 3 | 6.0 | 1.83 | 18 | Brown CLAY, trace sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown CLAY, trace sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-118 | 1 | 0.0 | 0.00 | 18 | Brown SILTY CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 23 | 98 | 97 | 91 | 83 | 76 | | 3 | 6 | 15 | 76 | * | 38 | 22 | 16 | A-6b |
| | 3 | 6.0 | 1.83 | 21 | Brown SILTY CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 23 | Brown SILTY CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-119 | 1 | 0.0 | 0.00 | 16 | Brown SILTY CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 16 | 99 | 97 | 92 | 86 | 81 | | 3 | 5 | 11 | 81 | * | 34 | 18 | 16 | A-6b |
| | 3 | 6.0 | 1.83 | 18 | Brown SILTY CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 20 | Brown SILTY CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-120 | 1 | 0.0 | 0.00 | 23 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 98 | 94 | 87 | 81 | 76 | | 6 | 7 | 11 | 76 | * | 31 | 18 | 13 | A-6a |
| | 3 | 6.0 | 1.83 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 19 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-121 | 1 | 0.0 | 0.00 | 16 | 96 | 94 | 88 | 81 | 77 | | 6 | 6 | 11 | 77 | * | 30 | 18 | 12 | A-6a |
| | 2 | 3.0 | 0.91 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 21 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 19 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace organic | | | | | | | | | | | | | | (Visual) |
| B-122 | 1 | 0.0 | 0.00 | 17 | 99 | 96 | 89 | 82 | 76 | | 4 | 7 | 13 | 76 | * | 35 | 19 | 16 | A-6b |
| | 2 | 3.0 | 0.91 | 14 | Brown SILTY CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 23 | Brown SILTY CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 16 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-123 | 1 | 0.0 | 0.00 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 12 | 97 | 92 | 83 | 77 | 72 | | 8 | 9 | 11 | 36 | 36 | 29 | 19 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 14 | Gray SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 19 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-124 | 1 | 0.0 | 0.00 | 16 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments, trace root | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 14 | 98 | 94 | 88 | 81 | 76 | | 6 | 6 | 12 | 32 | 44 | 28 | 18 | 10 | A-4a |
| | 3 | 6.0 | 1.83 | 17 | Brown SANDY SILT, some clay, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 21 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-125 | 1 | 0.0 | 0.00 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 20 | 100 | 99 | 97 | 92 | 89 | | 1 | 2 | 8 | 89 | * | 46 | 22 | 24 | A-7-6 |

* Silt and Clay Combined



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TBI3-TBI7.DGN PDH 11/2/99

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 6.0 | 1.83 | 16 | Brown CLAY, trace sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 20 | Gray COARSE AND FINE SAND, little silt | | | | | | | | | | | | | | (Visual) |
| B-126 | 1 | 0.0 | 0.00 | 16 | Brown SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 15 | 99 | 95 | 85 | 78 | 73 | 5 | 10 | 12 | | 73 | * | 29 | 18 | 11 | A-6a |
| | 3 | 6.0 | 1.83 | 14 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 13 | Gray SILT AND CLAY, some sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-127 | 1 | 0.0 | 0.00 | 15 | 99 | 97 | 91 | 86 | 83 | 3 | 6 | 8 | | 83 | * | 32 | 20 | 12 | A-6a |
| | 2 | 3.0 | 0.91 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-128 | 1 | 0.0 | 0.00 | 12 | 93 | 89 | 81 | 75 | 71 | 11 | 8 | 10 | | 71 | * | 30 | 19 | 11 | A-6a |
| | 2 | 3.0 | 0.91 | 13 | Gray SILT AND CLAY, little sand, trace gravel, little rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 6.0 | 1.83 | 14 | Gray SILT AND CLAY, little sand, trace gravel, little rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 14 | Gray SILT AND CLAY, little sand, trace gravel, little rock fragments | | | | | | | | | | | | | | (Visual) |
| B-129 | 1 | 0.0 | 0.00 | 15 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 16 | 97 | 93 | 85 | 79 | 76 | 7 | 8 | 9 | | 76 | * | 34 | 21 | 13 | A-6a |
| | 3 | 6.0 | 1.83 | 16 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Brown to gray SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-130 | 1 | 0.0 | 0.00 | 23 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 25 | 99 | 98 | 95 | 89 | 84 | 2 | 3 | 12 | | 84 | * | 36 | 23 | 13 | A-6a |
| | 3 | 6.0 | 1.83 | 29 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-131 | 1 | 0.0 | 0.00 | 21 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.0 | 0.91 | 17 | 97 | 93 | 83 | 77 | 73 | 7 | 10 | 10 | | 73 | * | 34 | 21 | 13 | A-6a |
| | 3 | 6.0 | 1.83 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 15 | Gray SILT AND CLAY, little sand, trace gravel, little rock fragments | | | | | | | | | | | | | | (Visual) |
| B-132 | 1 | 1 | 0.30 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 3.5 | 1.07 | 21 | 95 | 86 | 77 | 72 | 68 | 14 | 9 | 9 | | 68 | * | 38 | 22 | 16 | A-6b |
| | 3 | 6 | 1.83 | 16 | Gray SILTY CLAY, little sand, little gravel and rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 8.5 | 2.59 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| B-115S | 1 | 0.0 | 0.00 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 2 | 2.0 | 0.61 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 3 | 4.0 | 1.22 | 14 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |
| | 4 | 6.0 | 1.83 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | | (Visual) |

* Silt and Clay Combined



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PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

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SOIL PROFILE

MED-71-15.78

16
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TBI3-TBI7.DGN PDH 11/2/99

# MOISTURE (ASTM D-2216-80), GRADATION (ASTM D-422-63) AND ATTERBERG LIMITS (ASTM D-4318-64)

| BORING NUMBER | SAMPLE NUMBER | DEPTH (ft) | DEPTH (m) | MOISTURE CONTENT(%) | PARTICLE SIZE ANALYSIS (by weight) (% Passing US. Standard sieve) #4 | #10 | #40 | #100 | #200 | C. AGG. | C. SAND | F. SAND | SILT | CLAY | ATTERBURG LIMITS L.L. | P.L. | P.I. | ODOT CLASSIFICATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 8.0 | 2.44 | 13 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| B-115E | 1 | 0.0 | 0.00 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 2 | 2.0 | 0.61 | 19 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 3 | 4.0 | 1.22 | 22 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 4 | 6.0 | 1.83 | 10 | Brown COARSE AND FINE SAND, little silt | | | | | | | | | | | | | (Visual) |
| | 5 | 8.0 | 2.44 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| B-115N | 1 | 0.0 | 0.00 | 21 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots | | | | | | | | | | | | | (Visual) |
| | 2 | 2.0 | 0.61 | 18 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 3 | 4.0 | 1.22 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 4 | 6.0 | 1.83 | 19 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |
| | 5 | 8.0 | 2.44 | 17 | Brown SILT AND CLAY, little sand, trace gravel, trace rock fragments | | | | | | | | | | | | | (Visual) |

* Silt and Clay Combined



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PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-1**

STATION & OFFSET: 840+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1026.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/2/99 DATE COMPLETED: 2/2/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TOPSOIL | | | | | | | | | | | | |
| 1025.2 | 1.0 | | Very stiff to stiff, gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist (possible fill). | 1 | 1.0 | 16 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.5 | 11 | | 16 | 25 | 17 | 8 | | | 77 | A-4a |
| | | | | 3 | 6.0 | 12 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 11 | | 16 | | | | | | | Visual |
| 1016.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-2**

STATION & OFFSET: 844+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1035.6ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/3/99 DATE COMPLETED: 2/3/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TOPSOIL | | | | | | | | | | | | |
| 1034.2 | 1.4 | | Very stiff to stiff, brown to gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist (possible fill). Note: Trace of roots found to 2 feet. | 1 | 1.0 | 22 | | 13 | 26 | 17 | 9 | | | 76 | A-4a |
| | | | | 2 | 3.5 | 11 | | 15 | | | | | | | Visual |
| | | | | 3 | 6.0 | 11 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 10 | | 15 | | | | | | | Visual |
| 1025.6 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-3**

STATION & OFFSET: 848+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1031.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/2/99 DATE COMPLETED: 2/2/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TOPSOIL | | | | | | | | | | | | |
| 1030.9 | 1.0 | | Very stiff to stiff, gray to brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 24 | | 12 | | | | | | | Visual |
| | | | Note: Trace of organics found at 3.5 feet. | 2 | 3.5 | 10 | | 17 | | | | | | | Visual |
| 1027.9 | 4.0 | | Stiff, brown SILT AND CLAY, some gravel and rock fragments, trace sand, moist. | 3 | 6.0 | 10 | | 19 | 38 | 23 | 15 | | | 72 | A-6a |
| | | | Note: Color change to gray at 8.5 feet. Note: Silt seam found at 9.3 feet. | 4 | 8.5 | 12 | | 21 | | | | | | | Visual |
| 1021.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 CHENT RD, AKRON, OHIO 44333

DATE | REVIEWED | STRUCTURE FILE NUMBER

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DESIGNED | CHECKED

SOIL PROFILE

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SBI-SBI2.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-4**

STATION & OFFSET: 852+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1041.0ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/3/99 DATE COMPLETED: 2/3/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | ATTERBERG LIMITS (%) PL | ATTERBERG LIMITS (%) PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TOPSOIL | | | | | | | | | | | | |
| 1039.7 | 1.3 | | Very stiff to stiff, brown and gray SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 25 | | 13 | | | | | | | Visual |
| | | | | 2 | 3.5 | 18 | | 14 | 29 | 17 | 12 | | | 71 | A-6a |
| | | | | 3 | 6.0 | 16 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 12 | | 15 | | | | | | | Visual |
| 1031.0 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-5**

STATION & OFFSET: 856+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1039.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/2/99 DATE COMPLETED: 2/2/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB - Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | ATTERBERG LIMITS (%) PL | ATTERBERG LIMITS (%) PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TOPSOIL | | | | | | | | | | | | |
| 1037.8 | 1.5 | | Hard, brown, mottled gray SANDY SILT, some gravel and rock fragments, little clay, trace roots, moist. | 1 | 1.0 | 36 | | 11 | 29 | 19 | 10 | | | 43 | A-4a |
| 1035.8 | 3.5 | | Gray, highly weathered CLAY SHALE, moist. | 2 | 3.5 | 58 | | 7 | | | | | | | Visual |
| | | | | 3 | 6.0 | 50+ | | 5 | | | | | | | Visual |
| | | | | 4 | 8.5 | 50+ | | 3 | | | | | | | Visual |
| 1029.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-6**

STATION & OFFSET: 860+00, 30.0 ft. Rt (North Bound)

ELEVATION: 1048.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/3/99 DATE COMPLETED: 2/3/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | ATTERBERG LIMITS (%) PL | ATTERBERG LIMITS (%) PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TOPSOIL | | | | | | | | | | | | |
| 1047.6 | 1.1 | | Very stiff, brown SANDY SILT, some gravel and rock fragments, little clay, moist. | 1 | 1.0 | 22 | | 13 | 25 | 17 | 8 | | | 36 | A-4a |
| 1046.4 | 2.3 | | Gray, decomposed to highly weathered CLAY SHALE, moist. | 2 | 3.5 | 50+ | | 6 | | | | | | | Visual |
| | | | | 3 | 6.0 | 50+ | | 6 | | | | | | | Visual |
| | | | | 4 | 8.5 | 50+ | | 6 | | | | | | | Visual |
| 1038.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER

DRAWN | REVISED

DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78

19
78

SBI-SBI2.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-7**

STATION & OFFSET: 864+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1055.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/2/99 DATE COMPLETED: 2/2/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TOPSOIL | | | | | | | | | | | | |
| 1054.9 | 1.0 | | Medium stiff, brown SANDY SILT, little clay, trace rock fragments, trace roots, moist (fill). | 1 | 1.0 | 8 | | 14 | | | | | | | Visual |
| 1052.4 | 3.5 | | Gray, highly weathered CLAY SHALE, moist. | 2 | 3.5 | 50+ | | 7 | | | | | | | Visual |
| | | | | 3 | 6.0 | 50+ | | 6 | | | | | | | Visual |
| | | | | 4 | 8.5 | 50+ | | 5 | | | | | | | Visual |
| 1045.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-8**

STATION & OFFSET: 868+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1064.8ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/3/99 DATE COMPLETED: 2/3/09

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1064.6 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff to stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 19 | | 11 | | | | | | | Visual |
| | | | | 2 | 3.5 | 15 | | 18 | | | | | | | Visual |
| | | | | 3 | 6.0 | 9 | | 17 | | | | | | | Visual |
| | | | | 4 | 8.5 | 16 | | 15 | | | | | | | Visual |
| 1054.8 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-9**

STATION & OFFSET: 872+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1073.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/2/99 DATE COMPLETED: 2/2/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TOPSOIL | | | | | | | | | | | | |
| 1072.9 | 1.0 | | Very stiff, brown SANDY SILT, little clay, trace rock fragments, trace roots, moist (possible fill). | 1 | 1.0 | 19 | | 13 | | | | | | | Visual |
| 1070.4 | 3.5 | | Very stiff to stiff, brown to gray SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist. | 2 | 3.5 | 26 | | 16 | 30 | 19 | 11 | | | 70 | A-6a |
| | | | | 3 | 6.0 | 23 | | 19 | | | | | | | Visual |
| | | | Note: Silt seams found at 9.0 feet. | 4A | 8.5 | 9 | | 23 | | | | | | | Visual |
| | | | | 4B | 9.5 | | | 15 | | | | | | | Visual |
| 1063.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | REVIEWED | DATE | STRUCTURE FILE NUMBER
CHECKED | REVISED

SOIL PROFILE

MED-71-15.78

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SBI-SBI2.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-10**

STATION & OFFSET: 876+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1082.6ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/3/99 DATE COMPLETED: 2/3/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1082.4 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 19 | | 15 | 33 | 20 | 13 | | | 78 | A-6a |
| | | | | 2 | 3.5 | 25 | | 16 | | | | | | | Visual |
| | | | | 3 | 6.0 | 22 | | 14 | | | | | | | Visual |
| 1075.6 | 7.0 | | Very stiff to hard, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 4 | 8.5 | 41 | | 12 | | | | | | | Visual |
| 1072.6 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/10/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-11**

STATION & OFFSET: 878+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1091.6ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/2/99 DATE COMPLETED: 2/2/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
Water encountered at 6.0 feet during the drilling and dry at completion.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ▼ GROUNDWATER DURING DRILLING | | | | | | | | | | | | |
| 1090.5 | 1.1 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 12 | | 19 | 31 | 20 | 11 | | | 81 | A-6a |
| | | | Note: Layer of topsoil found at 3.5 feet. | 2 | 3.5 | 13 | | 28 | | | | | | | Visual |
| 1087.6 | 4.0 | | Stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist | 3 | 6.0 | 10 | | 22 | | | | | | | Visual |
| | | | | 4 | 8.5 | 14 | | 18 | | | | | | | Visual |
| 1081.6 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/10/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-12**

STATION & OFFSET: 884+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1100.6ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 3/8/99 DATE COMPLETED: 3/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAR / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1100.3 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.0 | 18 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.5 | 21 | | 17 | | | | | | | Visual |
| | | | | 3 | 6.0 | 26 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 27 | | 18 | | | | | | | Visual |
| 1090.6 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/10/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DRAWN | DATE | REVIEWED | STRUCTURE FILE NUMBER

DESIGNED | CHECKED | REVISED

SOIL PROFILE

MED-71-15.78

21
78

SBI-SBI2.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-13**

STATION & OFFSET: 888+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1108.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/2/99 DATE COMPLETED: 2/2/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1108.2 | 0.3 | | TOPSOIL<br>Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 16 | | 15 | 31 | 19 | 12 | | | 70 | A-6a |
| | | | | 2 | 3.5 | 21 | | 12 | | | | | | | Visual |
| | | | | 3 | 6.0 | 50+ | | 17 | | | | | | | Visual |
| | | | Note: Boulder encountered at 6.8 feet. | 4 | 8.5 | 15 | | 15 | | | | | | | Visual |
| 1098.4 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-14**

STATION & OFFSET: 892+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1114.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1114.7 | 0.3 | | TOPSOIL<br>Stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 11 | | 15 | 30 | 19 | 11 | | | 73 | A-6a |
| | | | | 2 | 3.5 | 11 | | 16 | | | | | | | Visual |
| | | | | 3 | 6.0 | 13 | | 17 | | | | | | | Visual |
| | | | Note: Trace of organics found at 9.0 feet. | 4 | 8.5 | 11 | | 25 | | | | | | | Visual |
| 1104.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-15**

STATION & OFFSET: 896+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1119.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1118.9 | 0.4 | | TOPSOIL<br>Medium stiff to very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 7 | | 17 | 29 | 20 | 9 | | | 69 | A-4a |
| | | | | 2 | 3.5 | 17 | | 14 | | | | | | | Visual |
| | | | | 3 | 6.0 | 20 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 16 | | 17 | | | | | | | Visual |
| 1109.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/17/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

| DESIGNED | DRAWN | REVIEWED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|---|---|
| CHECKED | REVISED | | | |

SOIL PROFILE

MED-71-15.78

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78

SB13-SB24.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-16**

STATION & OFFSET: 900+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1121.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1121.6 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff to very stiff, brown and gray SILT AND CLAY, little to some sand, trace gravel, trace rock fragments, moist (fill). | 1A | 1.0 | 14 | | 16 | | | | | | | Visual |
| | | | | 1B | 2.0 | | | 13 | | | | | | | Visual |
| | | | | 2 | 3.5 | 20 | | 11 | | | | | | | Visual |
| | | | | 3 | 6.0 | 27 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 16 | | 15 | | | | | | | Visual |
| 1111.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/17/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-17**

STATION & OFFSET: 904+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1125.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1124.6 | 0.7 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff to very stiff, brown SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 13 | | 16 | | | | | | | Visual |
| | | | | 2 | 3.5 | 12 | | 16 | 32 | 19 | 13 | | | 74 | A-6a |
| | | | | 3 | 6.0 | 26 | | 15 | | | | | | | Visual |
| | | | Note: Gray color present below 8.0 feet. | 4 | 8.5 | 12 | | 13 | | | | | | | Visual |
| 1115.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-18**

STATION & OFFSET: 908+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1128.0ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1127.5 | 0.5 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 14 | | 14 | | | | | | | Visual |
| | | | | 2 | 3.5 | 15 | | 13 | | | | | | | Visual |
| 1123.0 | 5.0 | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 3A | 6.0 | 17 | | 17 | 30 | 19 | 11 | | | 75 | A-6a |
| | | | | 3B | 7.0 | | | 18 | | | | | | | Visual |
| 1120.5 | 7.5 | | Note: Topsoil seam found at 7.5 feet. Stiff, brown, mottled gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 4 | 8.5 | 12 | | 22 | | | | | | | Visual |
| 1118.0 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/17/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED DATE STRUCTURE FILE NUMBER

DRAWN REVISED

DESIGNED CHECKED

SOIL PROFILE

MED-71-15.78

23
78

SB13-SB24.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-19**

STATION & OFFSET: 912+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1131.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1130.7 | 0.6 | | TOPSOIL<br>Very stiff to stiff, brown and gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 19 | | 13 | | | | | | | Visual |
| | | | | 2 | 3.5 | 19 | | 15 | | | | | | | Visual |
| 1124.7 | 6.6 | | Note: Topsoil seams encountered from 6.2 to 6.6 feet.<br>Very stiff, brown SANDY SILT little clay, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 11 | | 21 | | | | | | | Visual |
| | | | | 4 | 8.5 | 19 | | 16 | | | | | | | Visual |
| 1121.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-20**

STATION & OFFSET: 916+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1134.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1133.8 | 0.4 | | TOPSOIL<br>Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (possible fill). | 1 | 1.0 | 21 | | 14 | | | | | | | Visual |
| | | | | 2 | 3.5 | 23 | | 20 | 34 | 21 | 13 | | | 85 | A-6a |
| | | | | 3 | 6.0 | 22 | | 18 | | | | | | | Visual |
| | | | | 4 | 8.5 | 25 | | 17 | | | | | | | Visual |
| 1124.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-21**

STATION & OFFSET: 920+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1137.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1137.0 | 0.5 | | TOPSOIL<br>Stiff to very stiff, brown, SILT AND CLAY, little gravel and rock fragments, little sand, moist (possible fill) | 1 | 1.0 | 10 | | 16 | 34 | 21 | 13 | | | 72 | A-6a |
| | | | | 2 | 3.5 | 25 | | 16 | | | | | | | Visual |
| | | | | 3 | 6.0 | 24 | | 15 | | | | | | | Visual |
| 1130.2 | 7.3 | | Stiff, gray SANDY SILT, little clay, trace gravel, trace rock fragments, moist. | 4 | 8.5 | 13 | | 10 | | | | | | | Visual |
| 1127.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | DATE | REVIEWED | REVISED | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

24
78

SBI3-SB24.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-22**

STATION & OFFSET: 924+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1140.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1140.1 | 0.3 | | TOPSOIL<br>Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (possible fill). | 1 | 1.0 | 18 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.5 | 26 | | 18 | 32 | 20 | 12 | | | 81 | A-6a |
| | | | | 3 | 6.0 | 22 | | 18 | | | | | | | Visual |
| 1133.1 | 7.2 | | Very stiff to stiff, gray SILT AND CLAY, little sand, trace rock fragments, trace gravel, moist with occasional silt seams. | 4 | 8.5 | 12 | | 18 | | | | | | | Visual |
| 1130.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/10/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-23**

STATION & OFFSET: 928+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1143.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1142.9 | 0.3 | | TOPSOIL<br>Very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist (possible fill). | 1 | 1.0 | 17 | | 12 | | | | | | | Visual |
| 1141.1 | 2.1 | | Medium stiff to stiff, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.5 | 6 | | 15 | | | | | | | Visual |
| | | | | 3 | 6.0 | 9 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 9 | | 14 | | | | | | | Visual |
| 1133.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/10/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-24**

STATION & OFFSET: 932+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1146.0ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1145.8 | 0.3 | | TOPSOIL<br>Very stiff to stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (possible fill). | 1 | 1.0 | 20 | | 12 | 32 | 20 | 12 | | | 80 | A-6a |
| | | | | 2 | 3.5 | 21 | | 15 | | | | | | | Visual |
| | | | | 3 | 6.0 | 14 | | 19 | | | | | | | Visual |
| | | | | 4 | 8.5 | 13 | | 18 | | | | | | | Visual |
| 1136.0 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/10/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED DATE | STRUCTURE FILE NUMBER
DRAWN | REVISED
DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78

25
78

SB13-SB24.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-25**

STATION & OFFSET: 936+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1149.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1149.0 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (possible fill). | 1 | 1.0 | 22 | | 15 | 32 | 20 | 12 | | | 77 | A-6a |
| | | | | 2 | 3.5 | 22 | | 17 | | | | | | | Visual |
| 1143.8 | 5.5 | | Very stiff to stiff, gray SILT AND CLAY, little sand, little gravel and rock fragments, moist. | 3 | 6.0 | 22 | | 13 | | | | | | | Visual |
| | | | | 4 | 8.5 | 13 | | 12 | | | | | | | Visual |
| 1139.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG_98113.GPJ_PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-26**

STATION & OFFSET: 940+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1152.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
Water encountered at 9.0 feet upon completion.

▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1151.9 | 0.2 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff to medium stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 1.0 | 66 | | 18 | 30 | 20 | 10 | | | 72 | A-4a |
| | | | Note: Boulder encountered at 2.0 feet. | | | | | | | | | | | | |
| | | | Note: Color change to gray at 3.5 feet. | 2 | 3.5 | 9 | | 15 | | | | | | | Visual |
| | | | | 3 | 7.0 | 7 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 6 | | 16 | | | | | | | Visual |
| 1142.1 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-26: PAGE 1 OF 1

TEST_BORING_LOG_98113.GPJ_PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-27**

STATION & OFFSET: 944+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1155.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1155.2 | 0.2 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff to stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 1.0 | 18 | | 13 | | | | | | | Visual |
| | | | | 2 | 3.5 | 13 | | 17 | 31 | 21 | 10 | | | 73 | A-4a |
| | | | | 3 | 6.0 | 9 | | 18 | | | | | | | Visual |
| | | | | 4 | 8.5 | 9 | | 19 | | | | | | | Visual |
| 1145.4 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG_98113.GPJ_PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

26
78

SB25-SB36.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-28**

STATION & OFFSET: 948+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1158.0ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TOPSOIL | | | | | | | | | | | | |
| 1157.0 | 1.0 | | Very stiff to soft, brown SILT AND CLAY, little sand, little gravel and rock fragments, moist. | 1 | 1.0 | 22 | | 12 | | | | | | | Visual |
| | | | | 2 | 3.5 | 8 | | 18 | 31 | 19 | 12 | | | 72 | A-6a |
| | | | | 3 | 6.0 | 4 | | 24 | | | | | | | Visual |
| | | | | 4 | 8.5 | 10 | | 18 | | | | | | | Visual |
| 1148.0 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-29**

STATION & OFFSET: 952+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1160.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1160.3 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff to very stiff, brown SANDY SILT, some clay, trace rock fragments, moist (possible fill). | 1 | 1.0 | 14 | | 13 | | | | | | | Visual |
| | | | | 2 | 3.5 | 28 | | 14 | 26 | 18 | 8 | | | 72 | A-4a |
| | | | | 3 | 6.0 | 12 | | 17 | | | | | | | Visual |
| | | | | 4 | 8.5 | 11 | | 18 | | | | | | | Visual |
| 1150.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-30**

STATION & OFFSET: 956+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1162.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1161.9 | 0.4 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.0 | 13 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.5 | 23 | | 16 | 32 | 20 | 12 | | | 80 | A-6a |
| | | | | 3 | 6.0 | 24 | | 17 | | | | | | | Visual |
| | | | | 4 | 8.5 | 15 | | 15 | | | | | | | Visual |
| 1152.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER

DRAWN | REVISED

DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78



SB25-SB36.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-31**

STATION & OFFSET: 960+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1165.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1165.0 | 0.1 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff, brown SANDY SILT, little clay, trace gravel, trace rock fragments, moist (fill). | 1 | 1.0 | 18 | | 11 | 24 | 14 | 10 | | | 38 | A-4a |
| | | | | 2A | 3.5 | 19 | | 17 | | | | | | | Visual |
| 1161.1 | 4.0 | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (possible fill). | 2B | 4.0 | | | 17 | | | | | | | Visual |
| 1159.6 | 5.5 | | Stiff to medium stiff, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 9 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 7 | | 16 | | | | | | | Visual |
| 1155.1 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ_PRIMENG.GDT 3/17/99

B-31: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-32**

STATION & OFFSET: 964+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1166.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
OTB / Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1166.4 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Medium stiff to stiff, brown to gray SANDY SILT, some clay, trace gravel, trace rockfragments, moist. | 1 | 1.0 | 12 | | 14 | | | | | | | Visual |
| | | | Note: Color change to gray at 3.5 feet. | 2 | 3.5 | 7 | | 15 | 26 | 16 | 10 | | | 72 | A-4a |
| | | | | 3 | 6.0 | 10 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 8 | | 15 | | | | | | | Visual |
| 1156.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ_PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-33**

STATION & OFFSET: 968+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1168.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1168.7 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots, moist. | 1 | 1.0 | 15 | | 15 | | | | | | | Visual |
| 1165.9 | 3.0 | | Very stiff to stiff, gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 2 | 3.5 | 17 | | 17 | 25 | 17 | 8 | | | 73 | A-4a |
| | | | | 3 | 6.0 | 12 | | 12 | | | | | | | Visual |
| | | | | 4 | 8.5 | 20 | | 20 | | | | | | | Visual |
| 1158.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ_PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DATE | REVIEWED | STRUCTURE FILE NUMBER
DRAWN | REVISED
CHECKED

SOIL PROFILE

MED-71-15.78

28
78

SB25-SB36.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-34**

STATION & OFFSET: 972+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1170.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1170.7 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 9 | | 14 | | | | | | | Visual |
| | | | | 2 | 3.0 | 40 | | 14 | 30 | 19 | 11 | | | 76 | A-6a |
| | | | | 3 | 6.0 | 26 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 23 | | 20 | | | | | | | Visual |
| 1160.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/15/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-35**

STATION & OFFSET: 976+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1173.0ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1172.8 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 15 | | 16 | 30 | 19 | 11 | | | 78 | A-6a |
| | | | | 2 | 3.0 | 37 | | 14 | | | | | | | Visual |
| | | | | 3 | 6.0 | 29 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 38 | | 17 | | | | | | | Visual |
| 1163.0 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/15/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-36**

STATION & OFFSET: 980+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1173.8ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 3/8/99 DATE COMPLETED: 3/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAR / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1173.4 | 0.4 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff to very stiff, brown, SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.0 | 17 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.5 | 13 | | 16 | | | | | | | Visual |
| | | | | 3 | 6.0 | 30 | | 23 | | | | | | | Visual |
| | | | | 4 | 8.5 | 24 | | 16 | | | | | | | Visual |
| 1163.8 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/15/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |

SOIL PROFILE

MED-71-15.78

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78

SB25-SB36.DGN PDH 11/2/99

PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-37**

STATION & OFFSET: 984+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1173.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR RECN/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1173.1 | 0.3 | | TOPSOIL. | | | | | | | | | | | | |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 9 | | 14 | | | | | | | Visual |
| | | | | 2 | 3.0 | 39 | | 12 | 28 | 17 | 11 | | | 76 | A-6a |
| | | | | 3 | 6.0 | 32 | | 13 | | | | | | | Visual |
| | | | | 4 | 8.5 | 41 | | 16 | | | | | | | Visual |
| 1163.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-38**

STATION & OFFSET: 992+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1167.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR RECN/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1167.3 | 0.3 | | TOPSOIL. | | | | | | | | | | | | |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 9 | | 15 | 31 | 19 | 12 | | | 79 | A-6a |
| | | | | 2 | 3.0 | 39 | | 14 | | | | | | | Visual |
| | | | | 3 | 6.0 | 32 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 37 | | 14 | | | | | | | Visual |
| 1157.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-39**

STATION & OFFSET: 996+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1164.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAR / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR RECN/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1164.1 | 0.3 | | TOPSOIL. | | | | | | | | | | | | |
| | | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.0 | 24 | | 17 | | | | | | | Visual |
| | | | | 2 | 3.5 | 22 | | 16 | | | | | | | Visual |
| | | | | 3 | 6.0 | 25 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 50+ | | 14 | | | | | | | Visual |
| 1155.3 | 9.1 | | Note: Cobble encountered at 9.0 feet. TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT JK 6/6/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

30
78

SB37-SB48.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-40**

STATION & OFFSET: 1000+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1161.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR RECS%(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) F LIQUID LIMIT | ATTERBERG LIMITS (%) P PLASTIC LIMIT | ATTERBERG LIMITS (%) PI PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1161.1 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 11 | | 16 | | | | | | | Visual |
| | | | | 2 | 3.0 | 30 | | 13 | 31 | 19 | 12 | | | 74 | A-6a |
| | | | | 3 | 6.0 | 22 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 35 | | 15 | | | | | | | Visual |
| 1151.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-41**

STATION & OFFSET: 1004+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1158.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAR / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR RECS%(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) F LIQUID LIMIT | ATTERBERG LIMITS (%) P PLASTIC LIMIT | ATTERBERG LIMITS (%) PI PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1158.3 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.0 | 19 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.5 | 30 | | 13 | | | | | | | Visual |
| | | | | 3 | 6.0 | 27 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 31 | | 14 | | | | | | | Visual |
| 1148.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-42**

STATION & OFFSET: 1008+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1154.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR RECS%(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) F LIQUID LIMIT | ATTERBERG LIMITS (%) P PLASTIC LIMIT | ATTERBERG LIMITS (%) PI PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1154.6 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 11 | | 17 | 30 | 19 | 11 | | | 75 | A-6a |
| | | | | 2 | 3.0 | 33 | | 13 | | | | | | | Visual |
| | | | | 3 | 6.0 | 20 | | 18 | | | | | | | Visual |
| | | | | 4 | 8.5 | 39 | | 15 | | | | | | | Visual |
| 1144.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |

SOIL PROFILE

MED-71-15.78

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78

SB37-SB48.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-43**

STATION & OFFSET: 1020+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1145.0ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAR / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
Water encountered at 5.0 feet upon completions of drilling operations.

GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1144.6 | 0.4 | | TOPSOIL<br>Stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots, moist | 1 | 1.0 | 13 | | 17 | | | | | | | Visual |
| 1141.5 | 3.5 | | Brown FINE SANDSTONE FRAGMENTS | 2 | 3.5 | 50+ | | 9 | | | | | | | Visual |
| 1138.8 | 6.2 | | Note: Auger refusal at 6.17 feet (possible bedrock).<br>TERMINATION DEPTH = 6.17 FEET | 3 | 6.0 | 50+ | | 9 | | | | | | | Visual |

NOTES/REMARKS:

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/17/99

B-43: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-44**

STATION & OFFSET: 1024+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1138.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1138.6 | 0.3 | | TOPSOIL<br>Very stiff, brown, SILT AND CLAY, little sand, trace gravel, trace roots, moist (fill). | 1 | 0.0 | 16 | | 22 | | | | | | | Visual |
| 1135.9 | 3.0 | | Hard, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 2 | 3.0 | 30 | | 15 | 30 | 20 | 10 | | | 81 | A-4a |
| | | | | 3 | 6.0 | 35 | | 16 | | | | | | | Visual |
| 1130.2 | 8.7 | | Note: Sandstone boulder encountered at 8.5 feet.<br>TERMINATION DEPTH = 8.7 FEET | 4 | 8.5 | 50/0.17 | | 8 | | | | | | | Visual |

NOTES/REMARKS:

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-45**

STATION & OFFSET: 1028+00, 30.0 ft. RT. (North Bound)

ELEVATION: 1128.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 3/8/99 DATE COMPLETED: 3/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAR / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1128.6 | 0.3 | | TOPSOIL<br>Very stiff to stiff, brown and gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist | 1 | 1.0 | 22 | | 12 | | | | | | | Visual |
| | | | | 2 | 3.5 | 22 | | 11 | 24 | 17 | 7 | | | 71 | A-4a |
| | | | | 3 | 6.0 | 11 | | 14 | | | | | | | Visual |
| | | | Note: Color change to gray at 8.5 feet. | 4 | 8.5 | 15 | | 15 | | | | | | | Visual |
| 1118.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |

SOIL PROFILE

MED-71-15.78



SB37-SB48.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-46**

STATION & OFFSET: 1032+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1116.8ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (ton/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1116.5 | 0.3 | | TOPSOIL<br>Medium stiff, brown and gray SANDY SILT, little clay, trace gravel, trace rock fragments, moist (fill). | 1 | 0.0 | 5 | | 13 | | | | | | | Visual |
| | | | | 2 | 3.0 | 29 | | 10 | 21 | 15 | 6 | | | 71 | A-4a |
| 1113.4 | 3.4 | | Note: Trace of organics encountered from 3.1 to 3.4 feet<br>Very stiff, gray SANDY SILT, little clay, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | |
| | | | | 3 | 6.0 | 18 | | 19 | | | | | | | Visual |
| 1110.8 | 6.0 | | Very stiff to stiff, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist with occasional silt seams. | | | | | | | | | | | | |
| | | | | 4 | 8.5 | 13 | | 18 | | | | | | | Visual |
| 1106.8 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/18/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-47**

STATION & OFFSET: 1036+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1104.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 3/8/99 DATE COMPLETED: 3/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAR / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
Water encountered at 9.0 feet upon completion of the drilling operations.

▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (ton/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1104.4 | 0.3 | | TOPSOIL<br>Very stiff to stiff, brown SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist. | 1 | 1.0 | 18 | | 14 | | | | | | | Visual |
| | | | | 2 | 3.5 | 15 | | 20 | 32 | 21 | 11 | | | 72 | A-6a |
| | | | Note: Color change to gray at 6.0 feet | | | | | | | | | | | | |
| | | | | 3 | 6.0 | 9 | | 13 | | | | | | | Visual |
| | | | | 4 | 8.5 | 11 | | 13 | | | | | | | Visual |
| 1094.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/18/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-48**

STATION & OFFSET: 1040+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1092.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (ton/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1092.7 | 0.3 | | TOPSOIL<br>Stiff to very stiff, brown and gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 10 | | 14 | 28 | 19 | 9 | | | 74 | A-4a |
| | | | | 2 | 3.0 | 29 | | 11 | | | | | | | Visual |
| | | | Note: Color change to gray at 3.5 feet | | | | | | | | | | | | |
| | | | | 3 | 6.0 | 12 | | 12 | | | | | | | Visual |
| | | | | 4 | 8.5 | 13 | | 14 | | | | | | | Visual |
| 1082.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/18/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

| DESIGNED | DATE | REVIEWED | STRUCTURE FILE NUMBER |
|---|---|---|---|
| DRAWN | | REVISED | |
| CHECKED | | | |

SOIL PROFILE

MED-71-15.78

33
78

SB37-SB48.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-49**

STATION & OFFSET: 1044+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1080.6ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 3/5/99 DATE COMPLETED: 3/5/09

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(ROD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1080.3 | 0.3 | | TOPSOIL<br>Very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 1.0 | 25 | | 12 | | | | | | | Visual |
| | | | Note: Color change to gray at 3.5 feet. | 2 | 3.5 | 27 | | 10 | | | | | | | Visual |
| | | | | 3 | 6.0 | 20 | | 13 | | | | | | | Visual |
| | | | | 4 | 8.5 | 15 | | 14 | | | | | | | Visual |
| 1070.6 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING_LOG 98113.GPJ PRIMENG.GDT 3/15/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-50**

STATION & OFFSET: 1060+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1042.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(ROD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1042.4 | 0.6 | | TOPSOIL<br>Stiff to very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 9 | | 13 | 28 | 18 | 10 | | | 68 | A-4a |
| | | | | 2 | 3.0 | 12 | | 19 | | | | | | | Visual |
| | | | Note: Color change to gray at 9.0 feet. | 3 | 6.0 | 15 | | 19 | | | | | | | Visual |
| | | | | 4 | 8.5 | 17 | | 16 | | | | | | | Visual |
| 1032.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING_LOG 98113.GPJ PRIMENG.GDT 3/15/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-51**

STATION & OFFSET: 1064+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1044.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(ROD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1044.2 | 0.3 | | TOPSOIL<br>Medium stiff to stiff, gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 7 | | 13 | | | | | | | Visual |
| | | | | 2 | 3.0 | 15 | | 15 | 26 | 17 | 9 | | | 72 | A-4a |
| | | | | 3 | 6.0 | 11 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 12 | | 17 | | | | | | | Visual |
| 1034.4 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING_LOG 98113.GPJ PRIMENG.GDT 3/15/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER
DRAWN | REVISED
DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78

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78

SB49-SB60.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-52**

STATION & OFFSET: 1068+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1046.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(ROD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1046.2 | 0.3 | | TOPSOIL. | 1 | 0.0 | 8 | | 13 | | | | | | | |
| | | | Stiff, brown to gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | Visual |
| | | | | 2 | 3.0 | 15 | | 15 | 26 | 16 | 10 | | | 76 | A-4a |
| 1040.4 | 6.0 | | Very stiff to stiff, gray SILT AND CLAY, little sand, trace rock fragments, moist. | 3 | 6.0 | 17 | | 17 | | | | | | | Visual |
| | | | | 4 | 8.5 | 9 | | 16 | | | | | | | Visual |
| 1036.4 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-53**

STATION & OFFSET: 1072+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1048.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(ROD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1048.6 | 0.3 | | TOPSOIL. | 1 | 0.0 | 4 | | 18 | | | | | | | |
| | | | Soft to very stiff, gray SILT AND CLAY, little to trace sand, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | Visual |
| | | | | 2 | 3.0 | 11 | | 21 | 37 | 22 | 15 | | | 88 | A-6a |
| | | | | 3 | 6.0 | 16 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 17 | | 15 | | | | | | | Visual |
| 1038.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-54**

STATION & OFFSET: 1076+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1051.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(ROD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1050.9 | 0.3 | | TOPSOIL. | 1 | 0.0 | 7 | | 14 | | | | | | | |
| | | | Medium stiff to very stiff, brown to gray SILT AND CLAY, some to little sand, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | Visual |
| | | | | 2 | 3.0 | 19 | | 16 | 33 | 20 | 13 | | | 64 | A-6a |
| | | | | 3 | 6.0 | 11 | | 17 | | | | | | | Visual |
| | | | | 4 | 8.5 | 9 | | 15 | | | | | | | Visual |
| 1041.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

| DESIGNED | DRAWN | REVIEWED | DATE | STRUCTURE FILE NUMBER |
|---|---|---|---|---|
| CHECKED | REVISED | | | |

SOIL PROFILE

MED-71-15.78

35
78

SB49-SB60.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-55**

STATION & OFFSET: 1080+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1053.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/17/99 DATE COMPLETED: 2/17/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1053.1 | 0.3 | | TOPSOIL. | | | | | | | | | | | | |
| | | | Medium stiff to hard, brown SILT AND CLAY, little to some sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 7 | | 13 | | | | | | | Visual |
| | | | | 2 | 3.0 | 34 | | 14 | 33 | 19 | 14 | | | 76 | A-6a |
| | | | | 3 | 6.0 | 20 | | 16 | | | | | | | Visual |
| | | | Note: Roots found at 8.5 feet | 4 | 8.5 | 10 | | 14 | | | | | | | Visual |
| 1043.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ_PRIMENG.GDT 3/16/99

B-55: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-56**

STATION & OFFSET: 1084+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1055.0ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1054.8 | 0.3 | | TOPSOIL. | | | | | | | | | | | | |
| | | | Soft, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots, moist (fill). | 1 | 0.0 | 4 | | 21 | 35 | 21 | 14 | | | 75 | A-6a |
| 1053.0 | 2.0 | | Very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 27 | | 14 | | | | | | | Visual |
| | | | | 3 | 6.0 | 21 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 11 | | 25 | | | | | | | Visual |
| 1046.0 | 9.0 | | Stiff, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | |
| 1045.0 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ_PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-57**

STATION & OFFSET: 1088+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1057.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1057.0 | 0.3 | | TOPSOIL. | | | | | | | | | | | | |
| | | | Stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 10 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.0 | 15 | | 17 | 30 | 20 | 10 | | | 80 | A-4a |
| | | | | 3 | 6.0 | 12 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 11 | | 18 | | | | | | | Visual |
| 1047.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ_PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |

SOIL PROFILE

MED-71-15.78



SB49-SB60.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-58**

STATION & OFFSET: 1092+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1059.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR RECS/RQD(%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1059.1 | 0.3 | | TOPSOIL<br>Medium stiff, brown SILT AND CLAY, little sand, trace gravel, trace roots (fill). | 1 | 0.0 | 6 | | 15 | | | | | | | Visual |
| 1056.3 | 3.0 | | Stiff, brown and gray SILT AND CLAY, trace sand, moist. | 2 | 3.0 | 12 | | 23 | 35 | 20 | 15 | | | 93 | A-6a |
| | | | | 3 | 6.0 | 14 | | 22 | | | | | | | Visual |
| 1050.8 | 8.5 | | Very stiff, brown SILT AND CLAY, little sand, trace rock fragments, moist. | 4 | 8.5 | 19 | | 15 | | | | | | | Visual |
| 1049.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-59**

STATION & OFFSET: 1096+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1061.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR RECS/RQD(%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1061.3 | 0.3 | | TOPSOIL<br>Stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 1 | 0.0 | 11 | | 15 | | | | | | | Visual |
| 1058.2 | 3.3 | | Note: Trace organic from 3.0 to 3.3 feet.<br>Very stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 27 | | 17 | 32 | 20 | 12 | | | 78 | A-6a |
| | | | | 3 | 6.0 | 28 | | 14 | | | | | | | Visual |
| | | | Note: Color change to gray at 9.0 feet. | 4 | 8.5 | 34 | | 12 | | | | | | | Visual |
| 1051.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-60**

STATION & OFFSET: 1112+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1070.0ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR RECS/RQD(%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1069.8 | 0.2 | | TOPSOIL<br>Stiff to very stiff, brown SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 12 | | 16 | 31 | 19 | 12 | | | 71 | A-6a |
| | | | | 2 | 3.0 | 13 | | 16 | | | | | | | Visual |
| | | | | 3 | 6.0 | 13 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 27 | | 15 | | | | | | | Visual |
| 1060.0 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER
DRAWN | REVISED
DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78

37
78

SB49-SB60.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-61**

STATION & OFFSET: 1116+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1072.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 — DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Solid Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LIQUID LIMIT (LL) | PLASTIC LIMIT (PL) | PLASTICITY INDEX (PI) | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1072.2 | 0.3 | | TOPSOIL | 1 | 0.0 | 9 | | 15 | 30 | 20 | 10 | | | 69 | A-4a |
| | | | Stiff to very stiff, brown and gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 2 | 3.0 | 27 | | 10 | | | | | | | Visual |
| | | | | 3 | 6.0 | 20 | | 13 | | | | | | | Visual |
| 1063.9 | 8.5 | | Stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 4 | 8.5 | 23 | | 18 | | | | | | | Visual |
| 1062.4 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-61: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-62**

STATION & OFFSET: 1120+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1074.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 — DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Solid Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LIQUID LIMIT (LL) | PLASTIC LIMIT (PL) | PLASTICITY INDEX (PI) | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1074.5 | 0.5 | | TOPSOIL | 1 | 0.0 | 9 | | 14 | | | | | | | Visual |
| | | | Stiff to hard, brown SILT AND CLAY, some sand, little gravel and rock fragments, moist. | 2 | 3.0 | 27 | | 15 | 32 | 19 | 13 | | | 67 | A-6a |
| | | | | 3 | 6.0 | 27 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 40 | | 16 | | | | | | | Visual |
| 1064.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-63**

STATION & OFFSET: 1124+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1076.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 — DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Solid Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LIQUID LIMIT (LL) | PLASTIC LIMIT (PL) | PLASTICITY INDEX (PI) | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1076.7 | 0.3 | | TOPSOIL | 1 | 0.0 | 10 | | 15 | | | | | | | Visual |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots, moist (fill). | 2 | 3.0 | 35 | | 18 | | | | | | | Visual |
| 1070.4 | 6.5 | | Stiff, brown SANDY SILT, trace clay, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 13 | | 14 | | | | | | | Visual |
| 1068.4 | 8.5 | | Stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 4 | 8.5 | 14 | | 24 | | | | | | | Visual |
| 1066.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER

DRAWN | REVISED

DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78

38
78

SB6I-SB72.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-64**

STATION & OFFSET: 1128+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1079.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (ton/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1079.5 | 0.3 | | TOPSOIL | 1 | 0.0 | 8 | | 17 | 33 | 20 | 13 | | | 77 | A-6a |
| | | | Medium stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 41 | | 15 | | | | | | | Visual |
| | | | | 3 | 6.0 | 36 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 50+ | | 13 | | | | | | | Visual |
| 1069.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-65**

STATION & OFFSET: 1132+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1083.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (ton/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1082.8 | 0.4 | | TOPSOIL | 1 | 0.0 | 9 | | 17 | | | | | | | Visual |
| | | | Medium stiff, brown SILT AND CLAY, little sand, trace topsoil, moist (fill). | | | | | | | | | | | | |
| 1080.2 | 3.0 | | Stiff to very stiff, gray SANDY SILT, some clay, moist. | 2 | 3.0 | 16 | | 20 | 31 | 22 | 9 | | | 99 | A-4a |
| | | | | 3 | 6.0 | 13 | | 20 | | | | | | | Visual |
| | | | | 4 | 8.5 | 15 | | 19 | | | | | | | Visual |
| 1073.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-66**

STATION & OFFSET: 1136+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1086.8ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
Water encountered at 8.8 feet during the drilling and dry at completion

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (ton/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1086.6 | 0.3 | | TOPSOIL | 1 | 0.0 | 6 | | 22 | | | | | | | Visual |
| | | | Medium stiff, brown to gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots, moist. | 2 | 3.0 | 11 | | 23 | 32 | 21 | 11 | | | 98 | A-6a |
| 1080.8 | 6.0 | | Stiff, gray SANDY SILT, some clay, moist with occasional sand and silt seams. | 3 | 6.0 | 9 | | 23 | | | | | | | Visual |
| | | | | 4 | 8.5 | 9 | | 21 | | | | | | | Visual |
| 1076.8 | 10.0 | | TERMINATION DEPTH 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING LOG 98113.GPJ PRIMENG.GDT 3/17/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER
DRAWN | REVISED
DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78

39
78

SB61-SB72.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-67**

STATION & OFFSET: 1140+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1090.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1090.0 | 0.3 | | TOPSOIL<br>Stiff, brown SILT AND CLAY, little sand, trace gravel, trace roots, moist (fill). | 1 | 0.0 | 10 | | 17 | 32 | 21 | 11 | | | 66 | A-6a |
| 1087.3 | 3.0 | | Very stiff to stiff, gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 22 | | 11 | 24 | 16 | 8 | | | 64 | A-4a |
| | | | | 3 | 6.0 | 11 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 10 | | 14 | | | | | | | Visual |
| 1080.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:



TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-68**

STATION & OFFSET: 1144+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1093.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1093.5 | 0.3 | | TOPSOIL<br>Medium stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots, moist (fill). | 1 | 0.0 | 8 | | 19 | | | | | | | Visual |
| 1090.7 | 3.0 | | Stiff, gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 14 | | 11 | 22 | 16 | 6 | | | 62 | A-4a |
| | | | | 3 | 6.0 | 12 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 10 | | 15 | | | | | | | Visual |
| 1083.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:



TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-69**

STATION & OFFSET: 1148+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1096.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1096.5 | 0.3 | | TOPSOIL<br>Medium stiff, brown SANDY SILT, little clay, trace gravel, trace roots, moist (fill). | 1 | 0.0 | 5 | | 17 | | | | | | | Visual |
| 1093.7 | 3.0 | | Stiff, gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 9 | | 19 | 27 | 18 | 9 | | | 86 | A-4a |
| | | | | 3 | 6.0 | 9 | | 19 | | | | | | | Visual |
| | | | | 4 | 8.5 | 11 | | 18 | | | | | | | Visual |
| 1086.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:



TEST_BORING_LOG_98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DRAWN | DESIGNED | REVIEWED | CHECKED | DATE | REVISED | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78



SB6I-SB72.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-70**

STATION & OFFSET: 1152+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1100.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1100.1 | 0.3 | | TOPSOIL | 1 | 0.0 | 8 | | 18 | | | | | | | Visual |
| | | | Medium stiff to very stiff, brown SILT, some clay, trace sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 17 | | 14 | 26 | 17 | 9 | | | 92 | A-4b |
| | | | Note: Color change to gray at 3.5 feet. | 3 | 6.0 | 11 | | 22 | | | | | | | Visual |
| | | | | 4 | 8.5 | 13 | | 17 | | | | | | | Visual |
| 1090.4 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/17/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-71**

STATION & OFFSET: 1156+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1104.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1103.8 | 0.4 | | TOPSOIL | 1 | 0.0 | 9 | | 17 | | | | | | | Visual |
| | | | Stiff to very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 10 | | 13 | 24 | 16 | 8 | | | 59 | A-4a |
| | | | Note: Color change to gray at 4.0 feet. | 3 | 6.0 | 10 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 14 | | 22 | | | | | | | Visual |
| 1094.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-72**

STATION & OFFSET: 1160+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1107.6ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1107.4 | 0.5 | | TOPSOIL | 1 | 0.0 | 5 | | 16 | 32 | 20 | 12 | | | 74 | A-6a |
| | | | Medium stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 2 | 3.0 | 15 | | 18 | | | | | | | Visual |
| | | | | 3 | 6.0 | 13 | | 20 | | | | | | | Visual |
| | | | | 4 | 8.5 | 50 | | 14 | | | | | | | Visual |
| 1097.6 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DRAWN | DATE | REVIEWED | STRUCTURE FILE NUMBER
DESIGNED | | CHECKED | REVISED

SOIL PROFILE

MED-71-15.78

41
78

SB61-SB72.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-73**

STATION & OFFSET: 1164+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1110.8ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1110.5 | 0.3 | | TOPSOIL<br>Stiff to very stiff, brown SILT AND CLAY, little sand, no to trace gravel, moist. | 1 | 0.0 | 8 | | 25 | 37 | 26 | 11 | | | 83 | A-6a |
| | | | | 2 | 3.0 | 16 | | 16 | | | | | | | Visual |
| 1104.8 | 6.0 | | Medium dense, brown GRAVEL WITH SAND, little silt, trace clay, moist. | 3 | 6.0 | 15 | | 15 | | | | | | 21 | A-1-b |
| 1102.3 | 8.5 | | Medium dense, gray SILT, little clay, trace sand, moist. | 4 | 8.5 | 12 | | 22 | | | | | | | Visual |
| 1100.8 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-74**

STATION & OFFSET: 1168+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1114.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1114.3 | 0.3 | | TOPSOIL<br>Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 10 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.0 | 39 | | 17 | 31 | 19 | 12 | | | 71 | A-6a |
| | | | | 3 | 6.0 | 34 | | 12 | | | | | | | Visual |
| | | | | 4 | 8.5 | 30 | | 13 | | | | | | | Visual |
| 1104.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/17/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-75**

STATION & OFFSET: 1172+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1117.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/8/99 DATE COMPLETED: 2/8/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1117.4 | 0.3 | | TOPSOIL<br>Stiff to very stiff, brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist with occasional silt seams. | 1 | 0.0 | 15 | | 15 | 32 | 20 | 12 | | | 71 | A-6a |
| | | | | 2 | 3.0 | 12 | | 17 | | | | | | | Visual |
| | | | | 3 | 6.0 | 22 | | 22 | | | | | | | Visual |
| | | | Note: Color change to gray at 9.0 feet. | 4 | 8.5 | 15 | | 20 | | | | | | | Visual |
| 1107.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |

SOIL PROFILE

MED-71-15.78

42
78

SB73-SB84.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-76**

STATION & OFFSET: 1176+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1121.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1121.1 | 0.3 | | TOPSOIL | | | | | | | | | | | | Visual |
| | | | Stiff to very stiff, brown mottled gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 10 | | 14 | | | | | | | |
| | | | | 2 | 3.0 | 23 | | 14 | 34 | 21 | 13 | | | 74 | A-6a |
| | | | Note: Color change to brown at 3.5 feet. | | | | | | | | | | | | |
| | | | | 3 | 6.0 | 28 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 25 | | 13 | | | | | | | Visual |
| 1111.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-77**

STATION & OFFSET: 1180+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1124.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1123.9 | 0.5 | | TOPSOIL | | | | | | | | | | | | Visual |
| | | | Stiff, brown SANDY SILT, little clay, trace gravel, trace rock fragments, trace roots, moist (fill). | 1 | 0.0 | 9 | | 17 | | | | | | | |
| 1121.4 | 3.0 | | Stiff, gray SANDY SILT, some clay, moist. | 2 | 3.0 | 11 | | 25 | 30 | 20 | 10 | | | 99 | A-4a |
| 1118.4 | 6.0 | | Stiff to very stiff, gray SILT AND CLAY, trace sand, moist with occasional silt layers. | 3 | 6.0 | 13 | | 24 | | | | | | | Visual |
| | | | | 4 | 8.5 | 19 | | 21 | | | | | | | Visual |
| 1114.4 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/17/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-78**

STATION & OFFSET: 1184+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1127.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1127.0 | 0.4 | | TOPSOIL | | | | | | | | | | | | Visual |
| | | | Stiff to very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 10 | | 14 | | | | | | | |
| | | | | 2 | 3.0 | 17 | | 15 | 29 | 19 | 10 | | | 75 | A-4a |
| | | | Note: Color change to gray at 3.5 feet. | | | | | | | | | | | | |
| | | | | 3 | 6.0 | 12 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 14 | | 16 | | | | | | | Visual |
| 1117.4 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-78: PAGE 1 OF 1

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER

DRAWN | REVISED

DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78



SB73-SB84.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-79**

STATION & OFFSET: 1188+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1130.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | FIELD DATA: N-VALUE (BLOWS/FT) OR REC%/(RQD%) | FIELD DATA: PENETROMETER (tons/ft²) | LAB: MOISTURE CONTENT (%) | LAB: ATTERBERG LIMITS (%) LL | LAB: ATTERBERG LIMITS (%) PL | LAB: PLASTICITY INDEX | LAB: DRY DENSITY (pcf) | LAB: UNCONFINED COMPRESSIVE STRENGTH (psf) | LAB: MINUS No. 200 SIEVE (%) | LAB: CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1129.8 | 0.3 | | TOPSOIL<br>Stiff to very stiff, brown SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist (possible fill). | 1 | 0.0 | 13 | | 18 | 32 | 20 | 12 | | | 72 | A-6a |
| | | | | 2 | 3.0 | 16 | | 17 | | | | | | | Visual |
| | | | Note: Color change to gray at 5.0 feet. | 3 | 6.0 | 9 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 8 | | 14 | | | | | | | Visual |
| 1120.1 | 10.0 | | TERMINATION DEPTH 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-80**

STATION & OFFSET: 1192+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1132.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/16/99 DATE COMPLETED: 2/16/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | FIELD DATA: N-VALUE (BLOWS/FT) OR REC%/(RQD%) | FIELD DATA: PENETROMETER (tons/ft²) | LAB: MOISTURE CONTENT (%) | LAB: ATTERBERG LIMITS (%) LL | LAB: ATTERBERG LIMITS (%) PL | LAB: PLASTICITY INDEX | LAB: DRY DENSITY (pcf) | LAB: UNCONFINED COMPRESSIVE STRENGTH (psf) | LAB: MINUS No. 200 SIEVE (%) | LAB: CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1132.7 | 0.3 | | TOPSOIL<br>Stiff to hard, brown SILT AND CLAY, little sand, trace to little gravel and rock fragments, moist. | 1 | 0.0 | 10 | | 15 | 34 | 20 | 14 | | | 76 | A-6a |
| | | | | 2 | 3.0 | 27 | | 16 | | | | | | | Visual |
| | | | | 3 | 6.0 | 38 | | 13 | | | | | | | Visual |
| | | | | 4 | 8.5 | 50+ | | 12 | | | | | | | Visual |
| 1122.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-81**

STATION & OFFSET: 1196+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1135.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | FIELD DATA: N-VALUE (BLOWS/FT) OR REC%/(RQD%) | FIELD DATA: PENETROMETER (tons/ft²) | LAB: MOISTURE CONTENT (%) | LAB: ATTERBERG LIMITS (%) LL | LAB: ATTERBERG LIMITS (%) PL | LAB: PLASTICITY INDEX | LAB: DRY DENSITY (pcf) | LAB: UNCONFINED COMPRESSIVE STRENGTH (psf) | LAB: MINUS No. 200 SIEVE (%) | LAB: CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1135.2 | 0.3 | | TOPSOIL<br>Stiff to very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 9 | | 17 | 31 | 21 | 10 | | | 76 | A-4a |
| | | | | 2 | 3.0 | 22 | | 16 | | | | | | | Visual |
| | | | Note: Auger refusal at 7.3 feet. | 3 | 6.0 | 50+ | | 15 | | | | | | | Visual |
| 1128.2 | 7.3 | | TERMINATION DEPTH = 7.3 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-81: PAGE 1 OF 1

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

44
78

SB73-SB84.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-82**

STATION & OFFSET: 1200+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1138.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 — DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1137.9 | 0.3 | | TOPSOIL. | 1 | 0.0 | 10 | | 17 | 33 | 20 | 13 | | | 76 | A-6a |
| | | | Stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 23 | | 16 | | | | | | | Visual |
| | | | | 3 | 6.0 | 15 | | 18 | | | | | | | Visual |
| | | | | 4 | 8.5 | 24 | | 15 | | | | | | | Visual |
| 1128.1 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-82: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-83**

STATION & OFFSET: 1204+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1140.8ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 — DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1140.5 | 0.3 | | TOPSOIL. | 1 | 0.0 | 11 | | 15 | | | | | | | Visual |
| | | | Stiff to very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 27 | | 15 | | | | | | | Visual |
| | | | | 3 | 6.0 | 27 | | 17 | | | | | | | Visual |
| | | | | 4 | 8.5 | 17 | | 16 | | | | | | | Visual |
| 1130.8 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-83: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-84**

STATION & OFFSET: 1208+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1143.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 — DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1143.3 | 0.5 | | TOPSOIL. | 1 | 0.0 | 9 | | 14 | | | | | | | Visual |
| | | | Stiff to hard, brown, SANDY SILT, little clay, little gravel and rock fragments, moist (fill).. | 2 | 3.0 | 40 | | 10 | 24 | 16 | 8 | | | 60 | A-4a |
| 1139.5 | 4.0 | | Very stiff, gray SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 27 | | 18 | | | | | | | Visual |
| | | | | 4 | 8.5 | 23 | | 14 | | | | | | | Visual |
| 1133.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-84: PAGE 1 OF 1

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE

STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

45
78

SB73-SB84.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-85**

STATION & OFFSET: 1212+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1146.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1145.9 | 0.3 | | TOPSOIL<br>Stiff, brown to gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 1 | 0.0 | 8 | | 14 | 29 | 19 | 10 | | | 69 | A-4a |
| | | | | 2 | 3.0 | 14 | | 13 | | | | | | | Visual |
| 1140.2 | 6.0 | | Stiff, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 8 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 9 | | 17 | | | | | | | Visual |
| 1136.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-86**

STATION & OFFSET: 1216+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1148.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1148.6 | 0.3 | | TOPSOIL<br>Medium stiff, brown, SANDY SILT, some clay, little gravel and rock fragments, trace roots, moist (fill). | 1 | 0.0 | 9 | | 12 | | | | | | | Visual |
| 1145.9 | 3.0 | | Hard to very stiff, gray SANDY SILT, some clay, little gravel and rock fragments, moist. | 2 | 3.0 | 47 | | 13 | 28 | 18 | 10 | | | 70 | A-4a |
| | | | | 3 | 6.0 | 24 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 15 | | 13 | | | | | | | Visual |
| 1138.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-87**

STATION & OFFSET: 1220+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1151.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1151.3 | 0.3 | | TOPSOIL<br>Stiff, brown SANDY SILT, some clay, trace gravel, trace roots, moist (fill). | 1 | 0.0 | 9 | | 15 | | | | | | | Visual |
| 1148.5 | 3.0 | | Medium dense, gray GRAVEL WITH SAND, little silt, trace clay, moist (fill). | 2 | 3.0 | 25 | | 12 | | | | | | 23 | A-1-b |
| 1145.5 | 6.0 | | Stiff, gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 15 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 9 | | 14 | | | | | | | Visual |
| 1141.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG 98113.GPJ PRMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

46
78

SB85-SB96.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-88**

STATION & OFFSET: 1224+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1154.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1154.0 | 0.3 | | TOPSOIL<br>Stiff, gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 1 | 0.0 | 13 | | 12 | 26 | 19 | 7 | | | 74 | A-4a |
| 1151.2 | 3.0 | | Stiff to very stiff, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 14 | | 14 | | | | | | | Visual |
| | | | | 3 | 6.0 | 13 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 25 | | 14 | | | | | | | Visual |
| 1144.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-89**

STATION & OFFSET: 1228+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1156.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1156.6 | 0.3 | | TOPSOIL<br>Stiff to very stiff, gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 9 | | 16 | | | | | | | Visual |
| | | | | 2 | 3.0 | 16 | | 15 | 25 | 18 | 7 | | | 76 | A-4a |
| | | | | 3 | 6.0 | 10 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 11 | | 16 | | | | | | | Visual |
| 1146.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-89: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-90**

STATION & OFFSET: 1232+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1159.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1159.3 | 0.2 | | TOPSOIL<br>Stiff to very stiff, brown SILTY CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 11 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.0 | 27 | | 17 | 37 | 20 | 17 | | | 81 | A-6b |
| | | | | 3 | 6.0 | 30 | | 16 | | | | | | | Visual |
| 1153.5 | 6.0 | | Hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist.<br>Note: Auger refusal at 7.5 feet due to boulder. | | | | | | | | | | | | |
| 1151.5 | 8.0 | | TERMINATION DEPTH = 8.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER

DRAWN | REVISED

DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78

47
78

SB85-SB96.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECT INC.

**TEST BORING No.: B-91**

STATION & OFFSET: 1236+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1161.8ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(ROD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT | ATTERBERG LIMITS (%) PL | ATTERBERG LIMITS (%) PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1161.5 | 0.3 | | TOPSOIL | 1 | 0.0 | 10 | | 15 | | | | | | | Visual |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 25 | | 18 | 38 | 23 | 15 | | | 80 | A-6a |
| | | | | 3 | 6.0 | 25 | | 18 | | | | | | | Visual |
| | | | | 4 | 8.5 | 36 | | 15 | | | | | | | Visual |
| 1151.8 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-91: PAGE 1 OF 1

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECT INC.

**TEST BORING No.: B-92**

STATION & OFFSET: 1240+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1164.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(ROD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT | ATTERBERG LIMITS (%) PL | ATTERBERG LIMITS (%) PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1164.2 | 0.5 | | TOPSOIL | 1 | 0.0 | 13 | | 14 | | | | | | | Visual |
| | | | Stiff to hard, brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 20 | | 15 | 31 | 20 | 11 | | | 76 | A-6a |
| | | | | 3 | 6.0 | 29 | | 13 | | | | | | | Visual |
| | | | | 4 | 8.5 | 75 | | 12 | | | | | | | Visual |
| 1154.8 | 9.9 | | TERMINATION DEPTH = 9.9 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECT INC.

**TEST BORING No.: B-93**

STATION & OFFSET: 1244+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1167.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(ROD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT | ATTERBERG LIMITS (%) PL | ATTERBERG LIMITS (%) PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1167.0 | 0.5 | | TOPSOIL | 1 | 0.0 | 9 | | 21 | 44 | 22 | 22 | | | 80 | A-7-6 |
| | | | Stiff, brown CLAY, trace sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 28 | | 15 | | | | | | | Visual |
| 1164.5 | 3.0 | | Hard, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 34 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 33 | | 16 | | | | | | | Visual |
| 1157.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

48
78

SB85-SB96.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-94**

STATION & OFFSET: 1248+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1169.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

**DRILLING INFORMATION:**
STL / Diedrich D-50 Truck Mounted Drilling Rig

**GROUNDWATER INFORMATION:**
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LIQUID LIMIT LL | PLASTIC LIMIT PL | PLASTICITY INDEX PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1169.3 | 0.4 | | TOPSOIL<br>Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 14 | | 20 | | | | | | | Visual |
| | | | | 2 | 3.0 | 30 | | 18 | 35 | 20 | 15 | | | 82 | A-6a |
| | | | | 3 | 6.0 | 23 | | 18 | | | | | | | Visual |
| | | | | 4 | 8.5 | 26 | | 15 | | | | | | | Visual |
| 1159.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/18/99

B-94: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-95**

STATION & OFFSET: 1252+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1170.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

**DRILLING INFORMATION:**
STL / Diedrich D-50 Truck Mounted Drilling Rig

**GROUNDWATER INFORMATION:**
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LIQUID LIMIT LL | PLASTIC LIMIT PL | PLASTICITY INDEX PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1170.8 | 0.3 | | TOPSOIL<br>Stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots, moist (fill). | 1 | 0.0 | 12 | | 12 | | | | | | | Visual |
| 1167.9 | 3.0 | | Note: Two inch thick topsoil layer encountered at 3.3 feet.<br>Stiff, brown SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 24 | | 14 | 29 | 18 | 11 | | | 74 | A-6a |
| | | | | 3 | 6.0 | 28 | | 13 | | | | | | | Visual |
| | | | | 4 | 8.5 | 24 | | 13 | | | | | | | Visual |
| 1160.9 | 10.0 | | Note: Gray color present at 9.0 feet.<br>TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/18/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-96**

STATION & OFFSET: 1256+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1171.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

**DRILLING INFORMATION:**
STL / Diedrich D-50 Truck Mounted Drilling Rig

**GROUNDWATER INFORMATION:**
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LIQUID LIMIT LL | PLASTIC LIMIT PL | PLASTICITY INDEX PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1171.3 | 0.3 | | TOPSOIL<br>Stiff to hard, brown, SANDY SILT, little clay, little gravel and rock fragments, moist (fill). | 1 | 0.0 | 11 | | 13 | | | | | | | Visual |
| 1167.5 | 4.0 | | Very stiff, brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 2 | 3.0 | 39 | | 11 | 26 | 17 | 9 | | | 63 | A-4a |
| | | | | 3 | 6.0 | 22 | | 17 | | | | | | | Visual |
| | | | | 4 | 8.5 | 26 | | 22 | | | | | | | Visual |
| 1161.5 | 10.0 | | Note: Trace organics at 9.0 feet<br>TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/18/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |

SOIL PROFILE

MED-71-15.78

49
78

SB85-SB96.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-97**

STATION & OFFSET: 1260+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1171.0ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/9/99 DATE COMPLETED: 2/9/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT (LL) | ATTERBERG LIMITS (%) PLASTIC LIMIT (PL) | ATTERBERG LIMITS (%) PLASTICITY INDEX (PI) | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1170.7 | 0.3 | | TOPSOIL | 1 | 0.0 | 6 | | 15 | | | | | | | Visual |
| | | | Stiff to hard, brown and gray SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist (possible fill). | 2 | 3.0 | 12 | | 17 | 33 | 21 | 12 | | | 71 | A-6a |
| | | | | 3 | 6.0 | 27 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 24 | | 13 | | | | | | | Visual |
| 1161.0 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/15/99



## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-98**

STATION & OFFSET: 1276+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1157.8ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT (LL) | ATTERBERG LIMITS (%) PLASTIC LIMIT (PL) | ATTERBERG LIMITS (%) PLASTICITY INDEX (PI) | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1157.5 | 0.3 | | TOPSOIL | 1 | 0.0 | 9 | | 17 | 34 | 20 | 14 | | | 77 | A-6a |
| | | | Stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 19 | | 16 | | | | | | | Visual |
| | | | | 3 | 6.0 | 15 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 18 | | 15 | | | | | | | Visual |
| 1147.8 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/15/99



## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-99**

STATION & OFFSET: 1280+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1154.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT (LL) | ATTERBERG LIMITS (%) PLASTIC LIMIT (PL) | ATTERBERG LIMITS (%) PLASTICITY INDEX (PI) | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1153.9 | 0.3 | | TOPSOIL | 1 | 0.0 | 7 | | 17 | 33 | 21 | 12 | | | 78 | A-6a |
| | | | Medium stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 2 | 3.0 | 33 | | 14 | | | | | | | Visual |
| 1151.2 | 3.0 | | Hard to very stiff, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 25 | | 13 | | | | | | | Visual |
| | | | | 4 | 8.5 | 21 | | 13 | | | | | | | Visual |
| 1144.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/15/99



DESIGN AGENCY: PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | REVIEWED | DATE | CHECKED | REVISED | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78



SB97-SB108.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-100**

STATION & OFFSET: 1284+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1150.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 — DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1150.0 | 0.3 | | TOPSOIL<br>Medium stiff to stiff, brown CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 1 | 0.0 | 6 | | 22 | 42 | 23 | 19 | | | 84 | A-7-6 |
| | | | | 2 | 3.0 | 15 | | 18 | | | | | | | Visual |
| 1144.3 | 6.0 | | Very stiff to hard, brown to gray SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 16 | | 17 | | | | | | | Visual |
| | | | | 4 | 8.5 | 48 | | 15 | | | | | | | Visual |
| 1140.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-101**

STATION & OFFSET: 1288+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1146.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 — DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1146.4 | 0.3 | | TOPSOIL<br>Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 11 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.0 | 27 | | 15 | 32 | 20 | 12 | | | 75 | A-6a |
| | | | | 3 | 6.0 | 37 | | 14 | | | | | | | Visual |
| | | | Note: Color change to gray at 8.5 feet | 4 | 8.5 | 21 | | 14 | | | | | | | Visual |
| 1136.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-102**

STATION & OFFSET: 1292+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1142.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 — DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1142.5 | 0.4 | | TOPSOIL<br>Medium stiff to stiff, brown CLAY, little sand, trace to no rock fragments, moist. | 1 | 0.0 | 5 | | 16 | | | | | | | Visual |
| | | | | 2 | 3.0 | 10 | | 22 | 44 | 22 | 22 | | | 88 | A-7-6 |
| | | | | 3 | 6.0 | 13 | | 21 | | | | | | | Visual |
| 1134.4 | 8.5 | | Very stiff, brown and gray SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist. | 4 | 8.5 | 17 | | 15 | | | | | | | Visual |
| 1132.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-102: PAGE 1 OF 1

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY: PRIME ENGINEERING & ARCHITECT, INC. 1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

51 / 78

SB97-SB108.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-103**

STATION & OFFSET: 1296+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1142.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1142.4 | 0.3 | | TOPSOIL<br>Medium stiff to very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 6 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.0 | 20 | | 18 | 31 | 21 | 10 | | | 73 | A-4a |
| 1138.7 | 6.0 | | Note: Trace organics at 6.0 feet<br>Stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 11 | | 28 | | | | | | | Visual |
| | | | | 4 | 8.5 | 18 | | 19 | | | | | | | Visual |
| 1132.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-103: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-104**

STATION & OFFSET: 1300+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1145.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1145.3 | 0.2 | | TOPSOIL | 1 | 0.0 | 33 | | 21 | | | | | | | A-1-a |
| 1144.8 | 0.7 | | ASPHALT<br>SANDSTONE FRAGMENTS (possible base) | | | | | | | | | | | | |
| 1142.5 | 3.0 | | Very stiff, brown, mottled gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 8 | | 18 | 31 | 18 | 13 | | | 75 | A-6a |
| | | | | 3 | 6.0 | 10 | | 19 | | | | | | | Visual |
| | | | | 4 | 8.5 | 24 | | 16 | | | | | | | Visual |
| 1135.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/17/99

B-104: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-105**

STATION & OFFSET: 1304+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1147.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1146.7 | 0.4 | | TOPSOIL<br>Medium stiff to very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 9 | | 17 | | | | | | | Visual |
| | | | | 2 | 3.0 | 23 | | 14 | 30 | 20 | 10 | | | 75 | A-4a |
| | | | | 3 | 6.0 | 13 | | 18 | | | | | | | Visual |
| | | | | 4 | 8.5 | 24 | | 17 | | | | | | | Visual |
| 1137.1 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

52
78

SB97-SB108.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-106**

STATION & OFFSET: 1308+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1148.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1148.4 | 0.5 | | TOPSOIL<br>Medium stiff to stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 10 | | 13 | 29 | 19 | 10 | | | 71 | A-4a |
| | | | | 2 | 3.0 | 6 | | 19 | | | | | | | Visual |
| 1142.9 | 6.0 | | Very stiff, brown and gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 3 | 6.0 | 16 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 23 | | 17 | | | | | | | Visual |
| 1138.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 2/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-107**

STATION & OFFSET: 1312+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1151.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1150.8 | 0.4 | | TOPSOIL<br>Very stiff to hard, brown SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 15 | | 15 | | | | | | | Visual |
| | | | | 2 | 3.0 | 23 | | 14 | 31 | 19 | 12 | | | 74 | A-6a |
| | | | | 3 | 6.0 | 32 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 19 | | 21 | | | | | | | Visual |
| 1141.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-107: PAGE 1 OF 1

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-108**

STATION & OFFSET: 1316+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1153.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1153.2 | 0.3 | | TOPSOIL<br>Medium stiff to very stiff, brown SILT AND CLAY, some to little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 9 | | 16 | | | | | | | Visual |
| | | | | 2 | 3.0 | 25 | | 16 | | | | | | | Visual |
| | | | Note: Color change to gray at 6.0 feet. | 3 | 6.0 | 12 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 16 | | 15 | | | | | | | Visual |
| 1143.4 | 10.0 | | TERMINATION DEPTH = 10 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/17/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

53
78

SB97-SB108.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-109**

STATION & OFFSET: 1320+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1155.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 — DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1155.2 | 0.3 | | TOPSOIL | 1 | 0.0 | 8 | | 13 | | | | | | | Visual |
| | | | Stiff to very stiff, brown to gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | |
| | | | Note: Color change to gray at 1.5 feet. | 2 | 3.0 | 11 | | 15 | 25 | 16 | 9 | | | 75 | A-4a |
| | | | | 3 | 6.0 | 12 | | 19 | | | | | | | Visual |
| | | | | 4 | 8.5 | 16 | | 16 | | | | | | | Visual |
| 1145.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-109: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-110**

STATION & OFFSET: 1324+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1156.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 — DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1156.2 | 0.3 | | TOPSOIL | 1 | 0.0 | 9 | | 16 | 30 | 18 | 12 | | | 74 | A-6a |
| | | | Stiff to very stiff, gray SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | |
| | | | | 2 | 3.0 | 16 | | 14 | | | | | | | Visual |
| | | | | 3 | 6.0 | 13 | | 18 | | | | | | | Visual |
| | | | | 4 | 8.5 | 15 | | 15 | | | | | | | Visual |
| 1146.4 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-110: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-111**

STATION & OFFSET: 1328+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1155.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/15/99 — DATE COMPLETED: 2/15/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1155.0 | 0.3 | | TOPSOIL | 1 | 0.0 | 11 | | 13 | 28 | 17 | 11 | | | 71 | A-6a |
| | | | Stiff to very stiff, brown to gray SILT AND CLAY, some to little sand, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | |
| | | | | 2 | 3.0 | 27 | | 14 | | | | | | | Visual |
| | | | Note: Color change to gray at 6.0 feet. | 3 | 6.0 | 15 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 21 | | 15 | | | | | | | Visual |
| 1145.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER
DRAWN | REVISED
DESIGNED | CHECKED

SOIL PROFILE

MED-71-15.78

54
78

SBI09-SBI20.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-112**

STATION & OFFSET: 1332+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1151.8ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 — DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1151.8 | 0.0 | | | 1 | 0.0 | 6 | | 17 | | | | | | | Visual |
| 1151.5 | 0.3 | | TOPSOIL<br>Medium stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 28 | | 17 | 33 | 19 | 14 | | | 76 | A-6a |
| | | | Note: Color change to gray at 6.0 feet. | 3 | 6.0 | 21 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 22 | | 15 | | | | | | | Visual |
| 1141.8 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG_98113.GPJ PRMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-113**

STATION & OFFSET: 1336+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1147.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 — DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
Water encountered at 4.0 feet during and dry upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GROUNDWATER DURING DRILLING | | | | | | | | | | | | | | | |
| 1147.8 | 0.0 | | | 1 | 0.0 | 10 | | 18 | | | | | | | Visual |
| 1147.5 | 0.3 | | TOPSOIL<br>Stiff to very stiff, brown to gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 29 | | 17 | 36 | 21 | 15 | | | 76 | A-6a |
| | | | Note: Color change to gray at 7.0 feet | 3 | 6.0 | 22 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 15 | | 16 | | | | | | | Visual |
| 1137.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST_BORING_LOG_98113.GPJ PRMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-114**

STATION & OFFSET: 1340+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1142.8ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 — DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1142.4 | 0.0 | | | 1 | 0.0 | 6 | | 15 | | | | | | | Visual |
| 1142.0 | 0.4 | | TOPSOIL<br>Medium stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 25 | | 17 | 34 | 22 | 12 | | | 76 | A-6a |
| | | | | 3 | 6.0 | 26 | | 17 | | | | | | | Visual |
| | | | | 4 | 8.5 | 21 | | 20 | | | | | | | Visual |
| 1132.8 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-114: PAGE 1 OF 1

TEST_BORING_LOG_98113.GPJ PRMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | DATE | STRUCTURE FILE NUMBER | REVISED

SOIL PROFILE

MED-71-15.78

55
78

SBI09-SBI20.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-115**

STATION & OFFSET: 1344+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1139.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 — DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1139.2 | 0.3 | | TOPSOIL | 1 | 0.0 | 8 | | 16 | 35 | 20 | 15 | | | 77 | A-6a |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | |
| | | | Note: Two inch thick peat layer encountered at 4.0 feet | 2 | 3.0 | 18 | | 27 | | | | | | | Visual |
| | | | | 3 | 6.0 | 41 | | 15 | | | | | | | Visual |
| | | | | 4 | 8.5 | 40 | | 16 | | | | | | | Visual |
| 1129.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-115: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-116**

STATION & OFFSET: 1348+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1135.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 — DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1134.7 | 0.4 | | TOPSOIL | 1 | 0.0 | 11 | | 16 | | | | | | | Visual |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | |
| | | | | 2 | 3.0 | 34 | | 16 | | | | | | | Visual |
| | | | | 3 | 6.0 | 32 | | 16 | | | | | | | Visual |
| | | | | 4 | 8.5 | 30 | | 17 | | | | | | | Visual |
| 1125.1 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-116: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-117**

STATION & OFFSET: 1352+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1131.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 — DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1131.2 | 0.3 | | TOPSOIL | 1 | 0.0 | 9 | | 16 | | | | | | | Visual |
| | | | Medium stiff to hard, brown CLAY, trace sand, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | |
| | | | | 2 | 3.0 | 13 | | 23 | 42 | 24 | 18 | | | 89 | A-7-6 |
| | | | | 3 | 6.0 | 22 | | 18 | | | | | | | Visual |
| | | | | 4 | 8.5 | 35 | | 15 | | | | | | | Visual |
| 1121.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-117: PAGE 1 OF 1

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE

STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

56
78

SBI09-SBI20.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-118**

STATION & OFFSET: 1356+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1127.6ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | FIELD DATA: N-VALUE (BLOWS/FT) OR REC%/(RQD%) | FIELD DATA: PENETROMETER (tons/ft²) | LAB: MOISTURE CONTENT (%) | LAB: ATTERBERG LIMITS (%) LL | PL | PI | LAB: PLASTICITY INDEX | LAB: DRY DENSITY (pcf) | LAB: UNCONFINED COMPRESSIVE STRENGTH (psf) | LAB: MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1127.3 | 0.3 | | TOPSOIL | 1 | 0.0 | 6 | | 18 | | | | | | | | Visual |
| | | | Medium stiff to very stiff, brown SILTY CLAY, some sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 17 | | 23 | 38 | 22 | 16 | | | | 76 | A-6b |
| | | | | 3 | 6.0 | 13 | | 21 | | | | | | | | Visual |
| | | | | 4 | 8.5 | 30 | | 23 | | | | | | | | Visual |
| 1117.6 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | | |

NOTES/REMARKS:

B-118: PAGE 1 OF 1

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-119**

STATION & OFFSET: 1360+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1123.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | FIELD DATA: N-VALUE (BLOWS/FT) OR REC%/(RQD%) | FIELD DATA: PENETROMETER (tons/ft²) | LAB: MOISTURE CONTENT (%) | LAB: ATTERBERG LIMITS (%) LL | PL | PI | LAB: PLASTICITY INDEX | LAB: DRY DENSITY (pcf) | LAB: UNCONFINED COMPRESSIVE STRENGTH (psf) | LAB: MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1123.0 | 0.3 | | TOPSOIL | 1 | 0.0 | 8 | | 16 | | | | | | | | Visual |
| | | | Stiff to very stiff, brown SILTY CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 16 | | 16 | 34 | 18 | 16 | | | | 81 | A-6b |
| | | | | 3 | 6.0 | 14 | | 18 | | | | | | | | Visual |
| | | | | 4 | 8.5 | 14 | | 20 | | | | | | | | Visual |
| 1113.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | | |

NOTES/REMARKS:

B-119: PAGE 1 OF 1

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-120**

STATION & OFFSET: 1364+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1119.0ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | FIELD DATA: N-VALUE (BLOWS/FT) OR REC%/(RQD%) | FIELD DATA: PENETROMETER (tons/ft²) | LAB: MOISTURE CONTENT (%) | LAB: ATTERBERG LIMITS (%) LL | PL | PI | LAB: PLASTICITY INDEX | LAB: DRY DENSITY (pcf) | LAB: UNCONFINED COMPRESSIVE STRENGTH (psf) | LAB: MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1118.8 | 0.3 | | TOPSOIL | 1 | 0.0 | 9 | | 23 | | | | | | | | Visual |
| | | | Stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 31 | | 15 | 31 | 18 | 13 | | | | 76 | A-6a |
| | | | | 3 | 6.0 | 22 | | 16 | | | | | | | | Visual |
| | | | | 4 | 8.5 | 12 | | 19 | | | | | | | | Visual |
| 1109.0 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | | |

NOTES/REMARKS:

B-120: PAGE 1 OF 1

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DRAWN | DESIGNED | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

57
78

SB109-SB120.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-121**

STATION & OFFSET: 1368+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1115.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1114.7 | 0.4 | | TOPSOIL | 1 | 0.0 | 12 | | 16 | 30 | 18 | 12 | | | 77 | A-6a |
| | | | Stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 2 | 3.0 | 15 | | 17 | | | | | | | Visual |
| | | | | 3 | 6.0 | 15 | | 21 | | | | | | | Visual |
| | | | | 4 | 8.5 | 31 | | 19 | | | | | | | Visual |
| 1105.1 | 10.0 | | Note: Trace of organic at 9.0 feet<br>TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-121: PAGE 1 OF 1

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-122**

STATION & OFFSET: 1372+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1111.2ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1110.9 | 0.3 | | TOPSOIL | 1 | 0.0 | 6 | | 17 | 35 | 19 | 16 | | | 76 | A-6b |
| | | | Medium stiff to very stiff, brown SILTY CLAY, some sand, trace gravel, trace rock fragments, moist (fill). | 2 | 3.0 | 27 | | 14 | | | | | | | Visual |
| | | | | 3 | 6.0 | 13 | | 23 | | | | | | | Visual |
| 1103.2 | 8.0 | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 4 | 8.5 | 31 | | 16 | | | | | | | Visual |
| 1101.2 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-122: PAGE 1 OF 1

TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-123**

STATION & OFFSET: 1376+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1106.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | FIELD DATA: SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1106.6 | 0.3 | | TOPSOIL | 1 | 0.0 | 10 | | 16 | | | | | | | Visual |
| | | | Stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots, moist (fill). | 2 | 3.0 | 23 | | 12 | 29 | 19 | 10 | | | 72 | A-4a |
| 1103.9 | 3.0 | | Very stiff, gray SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 3 | 6.0 | 20 | | 14 | | | | | | | Visual |
| 1098.4 | 8.5 | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 4 | 8.5 | 18 | | 19 | | | | | | | Visual |
| 1096.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

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TEST BORING LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | DATE | STRUCTURE FILE NUMBER | REVISED

SOIL PROFILE

MED-71-15.78

58
78

SB121-SB132.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-124**

STATION & OFFSET: 1380+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1102.9ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 — DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1102.7 | 0.3 | | TOPSOIL | 1 | 0.0 | 7 | | 16 | | | | | | | Visual |
| | | | Medium stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | | | | | | | | | | | | |
| 1099.9 | 3.0 | | Stiff to very stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 2 | 3.0 | 18 | | 14 | 28 | 18 | 10 | | | 76 | A-4a |
| | | | | 3 | 6.0 | 9 | | 17 | | | | | | | Visual |
| 1094.4 | 8.5 | | Very stiff, gray SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist (fill). | 4 | 8.5 | 8 | | 21 | | | | | | | Visual |
| 1092.9 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-125**

STATION & OFFSET: 1384+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1098.5ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 — DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
Water encountered at 9.0 feet at completion.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ▽ GROUNDWATER UPON COMPLETION | | | | | | | | | | | | |
| 1098.2 | 0.3 | | TOPSOIL | 1 | 0.0 | 7 | | 14 | | | | | | | Visual |
| | | | Medium stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots, moist (fill). | | | | | | | | | | | | |
| 1095.5 | 3.0 | | Very stiff, brown CLAY, trace sand, trace gravel, trace rock fragments, moist (fill). | 2 | 3.0 | 22 | | 20 | 46 | 22 | 24 | | | 89 | A-7-6 |
| | | | | 3 | 6.0 | 26 | | 16 | | | | | | | Visual |
| 1090.0 | 8.5 | | Medium dense, gray COARSE AND FINE SAND, little silt, moist (fill). ▽ | 4 | 8.5 | 13 | | 20 | | | | | | | Visual |
| 1088.5 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

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## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-126**

STATION & OFFSET: 1388+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1094.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/10/99 — DATE COMPLETED: 2/10/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1093.7 | 0.4 | | TOPSOIL | 1 | 0.0 | 11 | | 16 | | | | | | | Visual |
| | | | Stiff to very stiff, brown to gray SILT AND CLAY, some sand, trace gravel, trace rock fragments, moist. | | | | | | | | | | | | |
| | | | Note: Color change to gray at 3.0 feet. | 2 | 3.0 | 18 | | 15 | 29 | 18 | 11 | | | 73 | A-6a |
| | | | | 3 | 6.0 | 15 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 10 | | 13 | | | | | | | Visual |
| 1084.1 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-126: PAGE 1 OF 1

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

59
78

SB121-SB132.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-127**

STATION & OFFSET: 1392+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1090.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | ATTERBERG LIMITS (%) PL | ATTERBERG LIMITS (%) PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1089.8 | 0.3 | | TOPSOIL | 1 | 0.0 | 12 | | 15 | 32 | 20 | 12 | | | 83 | A-6a |
| | | | Stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 20 | | 15 | | | | | | | Visual |
| | | | | 3 | 6.0 | 24 | | 15 | | | | | | | Visual |
| | | | Note: Gray color present at 8.5 feet | 4 | 8.5 | 16 | | 14 | | | | | | | Visual |
| 1080.1 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-127: PAGE 1 OF 1

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-128**

STATION & OFFSET: 1396+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1085.3ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | ATTERBERG LIMITS (%) PL | ATTERBERG LIMITS (%) PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1085.1 | 0.3 | | TOPSOIL | 1 | 0.0 | 17 | | 12 | 30 | 19 | 11 | | | 71 | A-6a |
| | | | Stiff to very stiff, gray SILT AND CLAY, little sand, little gravel and rock fragments, moist. | 2 | 3.0 | 16 | | 13 | | | | | | | Visual |
| | | | | 3 | 6.0 | 13 | | 14 | | | | | | | Visual |
| | | | | 4 | 8.5 | 19 | | 14 | | | | | | | Visual |
| 1075.3 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-128: PAGE 1 OF 1

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-129**

STATION & OFFSET: 1400+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1081.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 2.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | ATTERBERG LIMITS (%) PL | ATTERBERG LIMITS (%) PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1080.8 | 0.3 | | TOPSOIL | 1 | 0.0 | 15 | | 15 | | | | | | | Visual |
| | | | Very stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 3.0 | 23 | | 16 | 34 | 21 | 13 | | | 76 | A-6a |
| | | | | 3 | 6.0 | 25 | | 16 | | | | | | | Visual |
| | | | Note: Color change to gray at 9.0 feet | 4 | 8.5 | 30 | | 15 | | | | | | | Visual |
| 1071.1 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-129: PAGE 1 OF 1

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DRAWN | DATE | REVIEWED | STRUCTURE FILE NUMBER
DESIGNED | CHECKED | REVISED

SOIL PROFILE

MED-71-15.78

60
78

SB121-SB132.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-130**

STATION & OFFSET: 1404+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1076.4ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 — DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1076.1 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Medium stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 7 | | 23 | | | | | | | Visual |
| | | | | 2 | 3.0 | 13 | | 25 | 36 | 23 | 13 | | | 84 | A-6a |
| | | | Note: Trace of roots found to 2.0 feet | | | | | | | | | | | | |
| | | | | 3 | 6.0 | 7 | | 29 | | | | | | | Visual |
| | | | | 4 | 8.5 | 37 | | 17 | | | | | | | Visual |
| 1066.4 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-130: PAGE 1 OF 1

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-131**

STATION & OFFSET: 1408+00, 30.0 ft. Lt. (South Bound)

ELEVATION: 1072.1ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 2/11/99 — DATE COMPLETED: 2/11/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1071.7 | 0.4 | | TOPSOIL | | | | | | | | | | | | |
| | | | Stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 0.0 | 12 | | 21 | | | | | | | Visual |
| | | | | 2 | 3.0 | 16 | | 17 | 34 | 21 | 13 | | | 73 | A-6a |
| | | | | 3 | 6.0 | 31 | | 17 | | | | | | | Visual |
| | | | Note: Color change to gray at 8.5 feet. | 4 | 8.5 | 19 | | 15 | | | | | | | Visual |
| 1062.1 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-131: PAGE 1 OF 1

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-132**

STATION & OFFSET: 1412+00, 30.0 ft. Rt. (North Bound)

ELEVATION: 1067.7ft

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 3/8/99 — DATE COMPLETED: 3/8/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 2.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
STL / Diedrich D-50 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1067.4 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.0 | 22 | | 18 | | | | | | | Visual |
| 1064.7 | 3.0 | | Stiff, gray SILTY CLAY, little sand, little gravel and rock fragments, moist. | 2 | 3.5 | 13 | | 21 | 38 | 22 | 16 | | | 68 | A-6b |
| | | | | 3 | 6.0 | 13 | | 16 | | | | | | | Visual |
| 1059.2 | 8.5 | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 4 | 8.5 | 26 | | 17 | | | | | | | Visual |
| 1057.7 | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

B-132: PAGE 1 OF 1

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | REVIEWED | DATE | CHECKED | REVISED | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

61
78

SB121-SB132.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-115S**

STATION & OFFSET: 1343+00, 30.0 ft. Lt. (South Bound)

ELEVATION:

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 3/8/99 — DATE COMPLETED: 3/8/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 3.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
NAR / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.3 | | TOPSOIL | 1 | 0.0 | 13 | | 18 | | | | | | | Visual |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 2.0 | 23 | | 18 | | | | | | | Visual |
| | | | | 3 | 4.0 | 26 | | 14 | | | | | | | Visual |
| | | | | 4 | 6.0 | 66 | | 17 | | | | | | | Visual |
| | | | | 5 | 8.0 | 30 | | 13 | | | | | | | Visual |
| | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-115S: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-115E**

STATION & OFFSET: 1344+00, 30.0 ft. Rt. (North Bound)

ELEVATION:

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 3/8/99 — DATE COMPLETED: 3/8/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 3.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
NAR / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
Water encountered at 6.0 feet during and at 9.0 feet upon completion of the drilling operations

▽ GROUNDWATER DURING DRILLING ▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.4 | | TOPSOIL | 1 | 0.0 | 12 | | 18 | | | | | | | Visual |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 2.0 | 33 | | 19 | | | | | | | Visual |
| | | | | 3 | 4.0 | 22 | | 22 | | | | | | | Visual |
| | 6.0 | | Medium dense, brown COARSE AND FINE SAND, little silt, moist. | 4 | 6.0 | 30 | | 10 | | | | | | | Visual |
| | 8.0 | | Hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 5 | 8.0 | 36 | | 17 | | | | | | | Visual |
| | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-115E: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: B-115N**

STATION & OFFSET: 1345+00, 30.0 ft. Lt. (South Bound)

ELEVATION:

CLIENT: Richland Engineering Limited

PROJECT: Subsurface Exploration for MED-IR71-15.94 — PROJECT No.: 98113

LOCATION: Medina County, Ohio

DATE STARTED: 3/8/99 — DATE COMPLETED: 3/8/99

SAMPLER DIAM: 2.0" — TYPE: SS — HAMMER WT.: 140lb — FALL: 30.0"

CASING DIAM: 3.25" — TYPE: HSA — OTHER:

DRILLING INFORMATION:
NAR / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.3 | | TOPSOIL | 1 | 0.0 | 10 | | 21 | | | | | | | Visual |
| | | | Stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 2.0 | 25 | | 18 | | | | | | | Visual |
| | | | | 3 | 4.0 | 22 | | 17 | | | | | | | Visual |
| | | | | 4 | 6.0 | 25 | | 19 | | | | | | | Visual |
| | | | | 5 | 8.0 | 16 | | 17 | | | | | | | Visual |
| | 10.0 | | TERMINATION DEPTH = 10.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 98113.GPJ PRIMENG.GDT 3/16/99

B-115N: PAGE 1 OF 1

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | DATE | REVIEWED | REVISED | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

62
78

SBI15S-SBI15N.DGN PDH 11/2/99

## I-71 Southbound Lane Pavement Cores

| Core Number | Station | Offset | Asphalt Thickness | Length of Recovered Core | Type of RoadBase |
|---|---|---|---|---|---|
| PS-1 | 1399+48 | 75' Lt. | 5.0" | 4.0" | Crushed Limestone |
| PS-2 | 1374+02 | 75' Lt. | 6.0" | 3.5" | Washed Sand & Gravel |
| PS-3 | 1347+39 | 75' Lt. | 5.5" | 5.5" | Washed Sand & Gravel |
| PS-4 | 1324+91 | 75' Lt. | 6.0" | 6.0" | Washed Sand & Gravel |
| PS-5 | 1299+67 | 75' Lt. | 5.5" | 5.5" | Washed Sand & Gravel |
| PS-6 | 1273+53 | 75' Lt. | 6.0" | 6.0" | Washed Sand & Gravel |
| PS-7 | 1247+64 | 75' Lt. | 8.0" | 7.0" | Washed Sand & Gravel |
| PS-8 | 1221+64 | 75' Lt. | 7.0" | 7.0" | Washed Sand & Gravel |
| PS-9 | 1197+45 | 75' Lt. | 5.5" | 5.0" | Washed Sand & Gravel |
| PS-10 | 1170+99 | 75' Lt. | 6.5" | 6.5" | Washed Sand & Gravel |
| PS-11 | 1146+70 | 75' Lt. | 6.5" | 6.25" | Washed Sand & Gravel |
| PS-11A | 1133+88 | 75' Lt. | 7.0" | 7.0" | Washed Sand & Gravel |
| PS-12 | 1115+84 | 75' Lt. | 2.0" | 11.0" * | Washed Sand & Gravel |
| PS-12A | 1108+38 | 75' Lt. | 5.5" | 5.5" | Washed Sand & Gravel |
| PS-13 | 1087+07 | 75' Lt. | 7.5" | 5.5" | Washed Sand & Gravel |
| PS-14 | 1061+41 | 75' Lt. | 6.5" | 6.5" | Washed Sand & Gravel |
| PS-15 | 1035+59 | 75' Lt. | 6.0" | 6.0" | Washed Sand & Gravel |
| PS-16 | 1008+97 | 75' Lt. | 5.75" | 5.75" | Washed Sand & Gravel |
| PS-17 | 982+77 | 75' Lt. | 6.0" | 6.0" | Washed Sand & Gravel |
| PS-18 | 957+04 | 75' Lt. | 6.25" | 6.25" | Washed Sand & Gravel |
| PS-19 | 930+11 | 75' Lt. | 6.5" | 6.25" | Washed Sand & Gravel |
| PS-20 | 881+99 | 75' Lt. | 6.0" | 5.75" | Washed Sand & Gravel |
| PS-21 | 859+58 | 75' Lt. | 8.0" | 7.25" | Crushed Limestone |
| PS-22 | 836+17 | 75' Lt. | 8.0" | 7.0" | Crushed Limestone |

PS = Pavement South

* Concrete was encountered in PS-12. Pavement measurements = Asphalt 0-2", Concrete 2-11"

## I-71 Northbound Lane Pavement Cores

| Core Number | Station | Offset | Asphalt Thickness | Length of Recovered Core | Type of RoadBase |
|---|---|---|---|---|---|
| PN-1 | 840+26 | 75' Rt. | 9.0" | 6.5" | Crushed Limestone |
| PN-2 | 864+21 | 75' Rt. | 10.0" | 6.0" | Crushed Limestone |
| PN-3 | 906+77 | 75' Rt. | 9.0" | 9.0" | Crushed Limestone |
| PN-4 | 911+03 | 75' Rt. | 9.5" | 9.5" | Crushed Limestone |
| PN-4A | 923+00 | 75' Rt. | 7.5" | 7.5" | Washed Sand & Gravel |
| PN-5 | 934+95 | 75' Rt. | 5.0" | 3.5" | Washed Sand & Gravel |
| PN-6 | 959+97 | 75' Rt. | 6.0" | 5.75" | Washed Sand & Gravel |
| PN-7 | 995+06 | 75' Rt. | 6.0" | 5.0" | Washed Sand & Gravel |
| PN-8 | 1010+62 | 75' Rt. | 6.0" | 5.0" | Washed Sand & Gravel |
| PN-9 | 1037+25 | 75' Rt. | 5.5" | 5.5" | Washed Sand & Gravel |
| PN-10 | 1062+16 | 75' Rt. | 5.5" | 5.5" | Washed Sand & Gravel |
| PN-11 | 1087+90 | 75' Rt. | 4.5" | 3.0" | Washed Sand & Gravel |
| PN-12 | 1112+30 | 75' Rt. | 5.5" | 5.5" | Washed Sand & Gravel |
| PN-13 | 1136+60 | 75' Rt. | 5.5" | 5.5" | Washed Sand & Gravel |
| PN-14 | 1161+86 | 75' Rt. | 6.0" | 6.0" | Washed Sand & Gravel |
| PN-15 | 1187+06 | 75' Rt. | 8.0" | 7.0" | Washed Sand & Gravel |
| PN-16 | 1211+53 | 75' Rt. | 6.0" | 5.0" | Washed Sand & Gravel |
| PN-17 | 1235+37 | 75' Rt. | 6.0" | 6.0" | Washed Sand & Gravel |
| PN-18 | 1264+09 | 75' Rt. | 7.0" | 7.0" | Washed Sand & Gravel |
| PN-19 | 1288+45 | 75' Rt. | 6.5" | 6.5" | Washed Sand & Gravel |
| PN-20 | 1313+60 | 75' Rt. | 6.25" | 6.25" | Washed Sand & Gravel |
| PN-21 | 1341+12 | 75' Rt. | 6.0" | 6.0" | Washed Sand & Gravel |
| PN-22 | 1367+53 | 75' Rt. | 6.0" | 6.0" | Washed Sand & Gravel |

PN = Pavement North

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | REVIEWED | DATE
CHECKED | REVISED | STRUCTURE FILE NUMBER

SOIL PROFILE

MED-71-15.78

63
78

PCI-PC2.DGN PDH 11/2/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: S-1**

STATION & OFFSET: 964+27.59, 181.42 LT.

ELEVATION: 1,187.81

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurfce Investigation for Granger Road Bridge over IR-71 PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 2/21/99 DATE COMPLETED: 2/21/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: OTHER:

DRILLING INFORMATION: Ohio Test Bor, Inc., Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION: Spoon was wet at 74.5 feet.

▼ GROUNDWATER DURING DRILLING ▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | FIELD DATA: N-VALUE (BLOWS/FT) OR REC%/(RQD%) | FIELD DATA: PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LIQUID LIMIT LL | ATTERBERG LIMITS (%): PLASTIC LIMIT PL | ATTERBERG LIMITS (%): PLASTICITY INDEX PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.5 | | ASPHALT | | | | | | | | | | | | |
| | 1.3 | | APPROACH SLAB | | | | | | | | | | | | |
| | | | Very stiff to hard, brown SILT AND CLAY, little sand, trace gravel, moist. | 1 | 1.5 | 23 | 4.0+ | | | | | | | | |
| | | | | 2 | 3.5 | 52 | 4.0+ | | | | | | | | |
| | | | | 3 | 6.0 | 46 | 4.0+ | | | | | | | | |
| | 8.5 | | Layer of coarse and fine sand | 4 | 8.5 | 32 | | | | | | | | | |
| | 8.0 | | | | | | | | | | | | | | |
| | | | Note: Trace of rock fragments encountered below 11.0 feet. | 5 | 11.0 | 41 | 4.0+ | | | | | | | | |
| | | | | 6 | 13.5 | 32 | 4.0+ | | | | | | | | |
| | | | | 7 | 16.0 | 37 | 4.0+ | | | | | | | | |
| | | | | 8 | 18.5 | 55 | 4.0+ | | | | | | | | |
| | 21.0 | | Dense, brown SILT, some clay, little sand, trace gravel, moist. | 9 | 21.0 | 33 | 3.5 | | | | | | | | |
| | 23.7 | | Very stiff, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 10 | 23.5 | 25 | 3.0 | | | | | | | | |
| | | | | 11 | 26.0 | 22 | 2.5 | | | | | | | | |
| | | | | 12 | 28.5 | 18 | 2.5 | | | | | | | | |

NOTES/REMARKS: Boring was located 25.0 feet west of west abutment on west bound lane.

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 2/26/99

S-1: PAGE 1 OF 3

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: S-1**

STATION & OFFSET: 964+27.59, 181.42 LT.

ELEVATION: 1,187.81

PROJECT: Subsurfce Investigation for Granger Road Bridge over IR-71 PROJECT No.: 99017

DRILLING INFORMATION: Ohio Test Bor, Inc., Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION: Spoon was wet at 74.5 feet.

▼ GROUNDWATER DURING DRILLING ▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | FIELD DATA: N-VALUE (BLOWS/FT) OR REC%/(RQD%) | FIELD DATA: PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LIQUID LIMIT LL | ATTERBERG LIMITS (%): PLASTIC LIMIT PL | ATTERBERG LIMITS (%): PLASTICITY INDEX PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Very stiff, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. *(continued)* | 13 | 33.5 | 15 | 1.75 | | | | | | | | |
| | | | | 14 | 38.5 | 22 | 1.75 | | | | | | | | |
| | | | Note: Layer of coarse and fine sand encountered at 44.0 feet | 15 | 43.5 | 25 | 3.5 | | | | | | | | |
| | 44.0 | | Dense, gray SILT, some clay, little sand, trace gravel, trace rock fragments, moist. | 16 | 48.5 | 44 | 3.5 | | | | | | | | |
| | 53.5 | | Very stiff to hard, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 17 | 53.5 | 25 | 3.0 | | | | | | | | |
| | | | | 18 | 58.5 | 49 | 3.5 | | | | | | | | |
| | | | | 19 | 63.5 | 42 | 4.0+ | | | | | | | | |

NOTES/REMARKS: Boring was located 25.0 feet west of west abutment on west bound lane.

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 2/26/99

S-1: PAGE 2 OF 3

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: S-1**

STATION & OFFSET: 964+27.59, 181.42 LT.

ELEVATION: 1,187.81

PROJECT: Subsurfce Investigation for Granger Road Bridge over IR-71 PROJECT No.: 99017

DRILLING INFORMATION: Ohio Test Bor, Inc., Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION: Spoon was wet at 74.5 feet.

▼ GROUNDWATER DURING DRILLING ▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | FIELD DATA: N-VALUE (BLOWS/FT) OR REC%/(RQD%) | FIELD DATA: PENETROMETER (tons/ft²) | LABORATORY DATA: MOISTURE CONTENT (%) | ATTERBERG LIMITS (%): LIQUID LIMIT LL | ATTERBERG LIMITS (%): PLASTIC LIMIT PL | ATTERBERG LIMITS (%): PLASTICITY INDEX PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Very stiff to hard, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. *(continued)* | 20 | 68.5 | 42 | 2.75 | | | | | | | | |
| | 73.5 | | Hard, gray SILTY CLAY, trace sand, trace gravel, trace rock fragments, moist. | 21 | 73.5 | 49 | 1.5 | | | | | | | | |
| | 76.5 | | Very dense, gray, decomposed SANDSTONE, wet. | 22 | 78.5 | 108 | | | | | | | | | |
| | 82.5 | | Gray SANDSTONE FRAGMENTS (Possible Bedrock) | 23 | 83.5 | 50/0.13 | | | | | | | | | |
| | 83.6 | | TERMINATION DEPTH = 83.6 FEET | | | | | | | | | | | | |

NOTES/REMARKS: Boring was located 25.0 feet west of west abutment on west bound lane.

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 2/26/99

S-1: PAGE 3 OF 3

DESIGN AGENCY: PRIME ENGINEERING & ARCHITECT, INC. 1038 GHENT RD, AKRON, OHIO 44333

DRAWN: PH | DESIGNED | CHECKED | REVIEWED | DATE | REVISED

STRUCTURE FILE NUMBER: 5203643

SUBSURFACE INVESTIGATION
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD CH-21

MED-71-15.78

1 / 3

64 / 78

GRBI-GRB4.DGN PDH 11/3/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: S-2**

STATION & OFFSET: 964+53.63, 10.69 LT.

ELEVATION: 1,167.23

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurfce Investigation for Granger Road Bridge over IR-71 PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 2/23/99 DATE COMPLETED: 2/23/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: OTHER:

DRILLING INFORMATION: Ohio Test Bor, Inc., Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION: Spoon was wet at 7.0 feet.

▽ GROUNDWATER DURING DRILLING ▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC/R(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.0 | | TOPSOIL | | | | | | | | | | | | |
| | | | Very stiff, brown and gray SILT AND CLAY, little sand, trace gravel, trace rockfragments, moist. | 1 | 1.0 | 19 | 4.0+ | | | | | | | | |
| | | | | 2 | 3.5 | 17 | 2.25 | | | | | | | | |
| | 6.2 | | Layer of coarse and fine sand | 3 | 6.0 | 5 | | | | | | | | | |
| | 8.6 | | Very stiff, gray SILT AND CLAY, little sand, trace gravel, trace rockfragments, moist. | 4 | 8.5 | 16 | 1.25 | | | | | | | | |
| | | | Note: Boulder encountered at 11.0 feet. | 5 | 11.0 | 50/0.42 | | | | | | | | | |
| | | | | 6 | 13.5 | 19 | 1.5 | | | | | | | | |
| | | | | 7 | 16.0 | 25 | 1.75 | | | | | | | | |
| | | | | 8 | 18.5 | 24 | 1.0 | | | | | | | | |
| | | | | 9 | 21.0 | 18 | 1.75 | | | | | | | | |
| | 24.0 | | Medium dense, gray SILT, little clay, trace sand, moist. | 10 | 23.5 | 20 | | | | | | | | | |
| | 25.5 | | Hard, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 11 | 26.0 | 84 | | | | | | | | | |
| | | | Note: Occasional layer of gravel and rock fragments with sand encountered from 25.5 to 29.4 feet. | 12 | 28.5 | 39 | 4.0 | | | | | | | | |

NOTES/REMARKS: Boring was located along I- 71 median, south to center pier (Approximate Sta. 964+45, 10.0 ft., Lt.)

S-2: PAGE 1 OF 2

TEST BORING LOG 99017.GPJ PRIMENG.GDT 2/26/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: S-2**

STATION & OFFSET: 964+53.63, 10.69 LT.

ELEVATION: 1,167.23

PROJECT: Subsurfce Investigation for Granger Road Bridge over IR-71 PROJECT No.: 99017

DRILLING INFORMATION: Ohio Test Bor, Inc., Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION: Spoon was wet at 7.0 feet.

▽ GROUNDWATER DURING DRILLING ▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC/R(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Hard, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. *(continued)* | | | | | | | | | | | | |
| | | | | 13 | 33.5 | 42 | 4.0 | | | | | | | | |
| | | | | 14 | 38.5 | 46 | 1.75 | | | | | | | | |
| | | | | 15 | 43.5 | 50/0.33 | 3.0 | | | | | | | | |
| | 44.3 | | Very hard, gray SANDSTONE | R-1 | 45.0 | | | | | | | | | | |
| | | | Note: Auger refusal at 45.0 feet due to very hard sandstone. Core through from 45.0 to 50.0 feet. | | | | | | | | | | | | |
| | 46.2 | | Very dense, gray, decomposed SANDSTONE, wet. | | | 30% (15%) | | | | | | | | | |
| | | | | 16 | 50.0 | 62 | | | | | | | | | |
| | | | | 17 | 53.5 | 50/0.33 | | | | | | | | | |
| | 56.5 | | Light gray, medium hard to hard, weathered SANDSTONE, fine grained, very thin to moderately bedded. | | | | | | | | | | | | |
| | | | | R-2 | 58.5 | 100% (13%) | | | | | | | | | |
| | 63.5 | | TERMINATION DEPTH = 63.5 FEET | | | | | | | | | | | | |

NOTES/REMARKS: Boring was located along I- 71 median, south to center pier (Approximate Sta. 964+45, 10.0 ft., Lt.)

S-2: PAGE 2 OF 2

TEST BORING LOG 99017.GPJ PRIMENG.GDT 2/26/99

DESIGN AGENCY: PRIME ENGINEERING & ARCHITECT, INC. 1038 GHENT RD, AKRON, OHIO 44333

REVIEWED | DATE | STRUCTURE FILE NUMBER: 5203643

DRAWN: PH | DESIGNED | CHECKED | REVISED

SUBSURFACE INVESTIGATION
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD CH-21

MED-71-15.78

2 / 3

65 / 78

GRB1-GRB4.DGN PDH 11/3/99

PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: S-3**

STATION & OFFSET: 965+21.76, 153.08 RT.

ELEVATION: 1,189.05

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurfce Investigation for Granger Road Bridge over IR-71 PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 2/20/99 DATE COMPLETED: 2/20/99

SAMPLER DIAM: 2.0" TYPE: SS HAMMER WT.: 140lb FALL: 30.0"

CASING DIAM: 3.25" TYPE: OTHER:

DRILLING INFORMATION: Ohio Test Bor, Inc., Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION: Spoon was wet at 66.5. Couldn't take final reading due to hole caved in at 27.0 feet.

GROUNDWATER DURING DRILLING

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) |
|---|---|---|---|---|---|---|---|
| | 0.2 | | ASPHALT | | | | |
| | 1.1 | | APPROCH SLAB | | | | |
| | | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, moist. | 1 | 1.5 | 13 | 3.0 |
| | | | | 2 | 3.5 | 15 | 2.0 |
| | | | | 3 | 6.0 | 41 | 4.0 |
| | | | | 4 | 8.5 | 34 | 3.0 |
| | | | | 5 | 11.0 | 34 | 4.0 |
| | | | | 6 | 13.5 | 33 | 4.0+ |
| | | | Note: Trace of rock fragments encountered below 13.5 feet | 7 | 16.0 | 46 | 4.0+ |
| | | | | 8 | 18.5 | 36 | 3.5 |
| | 21.3 | | Very stiff to hard, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 9 | 21.0 | 29 | 2.75 |
| | | | | 10 | 23.5 | 22 | 2.5 |
| | | | | 11 | 26.0 | 24 | 2.25 |
| | | | | 12 | 28.5 | 16 | 1.25 |

| MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

NOTES/REMARKS: Boring was located 15.0 feet east of east abutment on east bound lane.

S-3: PAGE 1 OF 3

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 2/25/99

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PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: S-3**

STATION & OFFSET: 965+21.76, 153.08 RT.

ELEVATION: 1,189.05

PROJECT: Subsurface Exploration for Granger Road Bridge over IR-71 PROJECT No.: 99017

DRILLING INFORMATION: Ohio Test Bor, Inc., Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION: Water encountered at 66.5 feet during the drilling operations. Couldn't take final reading because hole caved in at 27.0 feet.

GROUNDWATER DURING DRILLING

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) |
|---|---|---|---|---|---|---|---|
| | | | Very stiff to hard, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. *(continued)* | 13 | 31.0 | 24 | 2.0 |
| | | | | 14 | 33.5 | 21 | 2.25 |
| | | | | 15 | 36.0 | 24 | 2.25 |
| | | | | 16 | 38.5 | 22 | 2.25 |
| | | | | 17 | 41.0 | 21 | 1.75 |
| | | | | 18 | 43.5 | 30 | 2.0 |
| 1143.1 | 46.0 | | Layer of silt encountered | 19 | 46.0 | 16 | 2.0 |
| 1142.2 | 46.9 | | | 20 | 48.5 | 27 | 3.0 |
| | | | | 21 | 51.0 | 38 | 4.0+ |
| | | | | 22 | 53.5 | 31 | 2.5 |
| | | | | 23 | 56.0 | 31 | 2.25 |
| | | | | 24 | 58.5 | 68 | 1.75 |
| 1129.3 | 59.8 | | Hard, gray SANDY SILT, little clay, trace rock fragments, moist. | 25 | 63.5 | 40 | 4.0+ |

| MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX | MINUS No. 10 SIEVE (%) | MINUS No. 40 SIEVE (%) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

NOTES/REMARKS:

S-3: PAGE 2 OF 3

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 3/31/99

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PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: S-3**

STATION & OFFSET: 965+21.76, 153.08 RT.

ELEVATION: 1,189.05

PROJECT: Subsurfce Investigation for Granger Road Bridge over IR-71 PROJECT No.: 99017

DRILLING INFORMATION: Ohio Test Bor, Inc., Mobile B-57 Truck Mounted Drilling Rig

GROUNDWATER INFORMATION: Spoon was wet at 66.5. Couldn't take final reading due to hole caved in at 27.0 feet.

GROUNDWATER DURING DRILLING

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) |
|---|---|---|---|---|---|---|---|
| | 66.5 | | Medium dense, gray, decomposed SANDSTONE, wet. | 26 | 68.5 | 29 | |
| | 71.0 | | Light gray, medium hard to hard, weathered SANDSTONE, fine grained, very thin to moderately bedded. | R-1 | 71.5 | 100% (10%) | |
| | 76.5 | | TERMINATION DEPTH = 76.5 FEET | | | | |

| MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

NOTES/REMARKS: Boring was located 15.0 feet east of east abutment on east bound lane.

S-3: PAGE 3 OF 3

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 2/25/99

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DESIGN AGENCY: PRIME ENGINEERING & ARCHITECT, INC. 1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN: PH | REVIEWED | DATE | STRUCTURE FILE NUMBER: 5203643

CHECKED | REVISED

SUBSURFACE INVESTIGATION
BRIDGE NO. MED-71-1828
IR-71 UNDER GRANGER ROAD CH-21

MED-71-15.78

3 / 3

66 / 78

GRB1-GRB4.DGN PDH 11/3/99

LOG OF BORING

Date Started 8/6/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/6/97 Water Elev. -
Boring No. B-1 Station & Offset 865+77, 91' LT. Surface Elev. 1058.1'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1058.1 | 0 | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1057.3 | 2 | | | | | | | | | | | | | | |
| 1055.6 | 4 | 12/11/10 | | | BROWN SANDY CLAY WITH STONE FRAGS. | 149 | 0 | 12 | 27 | 30 | 31 | 28 | 12 | 13 | A-6a |
| 1053.1 | 6 | 8/5/5 | | | GRAY SANDY CLAY WITH STONE FRAGS. | 150 | 0 | 21 | 27 | 28 | 24 | 27 | 11 | 16 | A-6a |
| 1050.6 | 8 | 2/2/3 | | | GRAY SANDY SILT | 151 | 0 | 17 | 24 | 32 | 27 | 28 | 10 | 21 | A-4a |
| 1048.1 | 10 | 4/6/9 | | | TOP OF ROCK — BROWN AND GRAY SANDY SILT | 152 | 0 | 11 | 19 | 39 | 31 | 28 | 8 | 17 | A-4a |
| 1045.6 | 12 | | | | | | | | | | | | | | |
| | 14 | 14/50 | | | OLIVE JOINTED SHALE | 153 | - | - | - | - | - | - | - | 6 | VISUAL |
| 1043.6 | 16 | | | | | | | | | | | | | | |
| | 18 | | 5.0 | 0.0 | SHALE, BLACK, FIRM, CARBONACEOUS, ARENACEOUS, WITH THIN CLAY SEAMS, JOINTED IN PART | | | | | | | | | | |
| 1038.1 | 20 | | | | | | | | | | | | | | |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm
Form TE-GL Revised 5/95

LOG OF BORING

Date Started 7/30/97 Sampler: Type SS Dia. 1 3/8"
Date completed 7/30/97 Water Elev. -
Boring No. B-2 Station & Offset 868+67, 98' LT. Surface Elev. 1066.2'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1066.2 | 0 | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1065.4 | 2 | | | | | | | | | | | | | | |
| 1063.7 | 4 | 5/4/4 | | | BROWN SANDY SILT WITH STONE FRAGS. | 99 | 0 | 23 | 26 | 29 | 22 | 22 | 6 | 12 | A-4a |
| 1061.2 | 6 | 5/8/6 | | | BROWN SANDY SILT WITH STONE FRAGS. | 100 | 0 | 21 | 32 | 26 | 21 | 22 | 7 | 18 | A-4a |
| 1058.7 | 8 | 5/4/5 | | | BROWN SANDY SILT WITH STONE FRAGS. | 101 | 0 | 16 | 34 | 27 | 23 | 22 | 6 | 14 | A-4a |
| 1056.2 | 10 | 1/2/3 | | | BROWN SANDY SILT WITH STONE FRAGS. | 102 | 0 | 23 | 28 | 28 | 21 | 22 | 6 | 17 | A-4a |
| 1053.7 | 12 | | | | TOP OF ROCK — | | | | | | | | | | |
| 1052.2 | 14 | 4/5/20 | | | BROWN SANDY SILT | 103 | 0 | 15 | 12 | 45 | 28 | 29 | 8 | 15 | A-4a |
| | 16 | | 5.0 | 0.0 | SHALE, BLACK, FIRM, CARBONACEOUS, ARENACEOUS, WITH CLAY SEAMS, WITH THE BEDDING PLANES BEING TILTED A SLIGHT ANGEL, MOSTLY HIGHLY BROKEN AND JOINTED, JOINTED IN THE REMAINDER; INTERBEDDED WITH THICK SEAMS OF DARK GRAY TO BLACK, FIRM, SILTSTONE. | | | | | | | | | | |
| 1047.2 | 18 | | | | | | | | | | | | | | |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm
Form TE-GL Revised 5/95

LOG OF BORING

Date Started 7/29/97 Sampler: Type SS Dia. 1 3/8"
Date completed 7/29/97 Water Elev. -
Boring No. B-3 Station & Offset 870+67, 96' LT. Surface Elev. 1071.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1071.0 | 0 | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1070.2 | 2 | | | | | | | | | | | | | | |
| 1068.5 | 4 | 10/11/15 | | | BROWN CLAYEY SILT WITH STONE FRAGS. | 94 | 0 | 4 | 10 | 36 | 50 | 29 | 9 | 15 | A-4a |
| 1066.0 | 6 | 10/20/25 | | | BROWN CLAYEY SILT WITH STONE FRAGS. | 95 | 0 | 5 | 14 | 37 | 44 | 30 | 9 | 15 | A-4a |
| 1063.5 | 8 | 7/9/12 | | | BROWN SANDY SILT WITH STONE FRAGS. | 96 | 0 | 7 | 15 | 42 | 36 | 25 | 7 | 26 | A-4a |
| 1061.0 | 10 | | | | TOP OF ROCK — | | | | | | | | | | |
| | 12 | 6/12/18 | | | GRAY SILTY GRAVEL | 97 | 47 | 9 | 5 | 20 | 19 | 32 | 10 | 17 | A-4a |
| 1058.5 | | 50(0.2) | | | BLACK ARENACEOUS, JOINTED SHALE | 98 | | | | | | | | 4 | VISUAL |
| 1058.3 | | | | | | | | | | | | | | | |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm
Form TE-GL Revised 5/95

LOG OF BORING

Date Started 7/29/97 Sampler: Type SS Dia. 1 3/8"
Date completed 7/29/97 Water Elev. -
Boring No. B-4 Station & Offset 872+67, 100' LT. Surface Elev. 1075.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1075.0 | 0 | | | | | | | | | | | | | | |
| 1072.5 | 2 | | | | | | | | | | | | | | |
| | 4 | 7/9/13 | | | BROWN CLAYEY SILT | 28 | 0 | 5 | 13 | 40 | 42 | 30 | 10 | 16 | A-4a |
| 1070.0 | 6 | 6/9/12 | | | BROWN SANDY SILT | 29 | 0 | 6 | 17 | 38 | 39 | 29 | 10 | 16 | A-4a |
| 1067.5 | 8 | 8/8/13 | | | BROWN SANDY SILT | 30 | 0 | 6 | 15 | 45 | 34 | 26 | 8 | 14 | A-4a |
| 1065.0 | 10 | 7/10/15 | | | BROWN SANDY SILT | 31 | 0 | 7 | 15 | 44 | 34 | 25 | 6 | 15 | A-4a |
| 1062.5 | 12 | | | | TOP OF ROCK — | | | | | | | | | | |
| | 14 | 7/12/15 | | | BROWN CLAYEY SILT | 32 | 0 | 12 | 6 | 45 | 37 | 33 | 10 | 15 | A-4a |
| 1060.0 | 16 | | | | | | | | | | | | | | |
| 1059.0 | | 13/22/10 | | | BLACK SHALE WITH CLAY SEAMS | 33 | - | - | - | - | - | - | - | 9 | VISUAL |
| | 18 | | 5.0 | 0.0 | SHALE, BLACK, FIRM, CARBONACEOUS, ARENACEOUS, WITH SCATTERED CLAY SEAMS, JOINTED; INTERBEDDED WITH NUMEROUS SEAMS OF LIGHT TO DARK GRAY, FIRM, VERY FINE-GRAINED SANDSTONE. | | | | | | | | | | |
| | 20 | | | | | | | | | | | | | | |
| 1053.0 | 22 | | | | | | | | | | | | | | |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm
Form TE-GL Revised 5/95

LOG OF BORING

Date Started 7/22/97 Sampler: Type SS Dia. 1 3/8"
Date completed 7/22/97 Water Elev. -
Boring No. B-5 Station & Offset 874+57, 104' LT. Surface Elev. 1080.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1080.0 | 0 | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1079.2 | 2 | | | | | | | | | | | | | | |
| 1077.5 | 4 | 8/12/14 | | | BROWN SANDY SILT WITH STONE FRAGS. | 28 | 0 | 11 | 24 | 36 | 29 | 26 | 9 | 12 | A-4a |
| 1075.0 | 6 | 8/9/12 | | | BROWN SANDY SILT WITH STONE FRAGS. | 29 | 0 | 10 | 45 | 26 | 19 | NP | NP | 14 | A-4a |
| 1072.5 | 8 | 5/8/12 | | | BROWN SANDY SILT WITH STONE FRAGS. | 30 | 0 | 7 | 18 | 41 | 34 | 28 | 9 | 17 | A-4a |
| 1070.0 | 10 | 5/21/14 | | | BROWN SANDY SILT | 31 | 0 | 9 | 23 | 40 | 28 | 26 | 9 | 20 | A-4a |
| 1067.5 | 12 | 4/9/25 | | | BROWN SANDY SILT WITH STONE FRAGS. | 32 | 0 | 12 | 33 | 42 | 13 | NP | NP | 13 | A-4a |
| 1065.0 | 14 | 25/50 | | | BROWN SANDY SILT WITH STONE FRAGS. | 33 | 0 | 9 | 31 | 46 | 14 | NP | NP | 14 | A-4a |
| 1062.5 | 16 | | | | | | | | | | | | | | |
| | 18 | 6/16/20 | | | GRAY SANDY GRAVELLY SILT | 34 | 38 | 6 | 15 | 27 | 14 | NP | NP | 13 | A-4a |
| 1060.0 | 20 | 50(0.3) | | | GRAY SILTY GRAVEL | 35 | 59 | 6 | 5 | 22 | 8 | NP | NP | 14 | A-2-4 |
| | 22 | | | | | | | | | | | | | | |
| | 24 | | | | | | | | | | | | | | |
| 1055.0 | | 63(0.5) | | | GRAY GRAVELLY SILT | 36 | 45 | 8 | 5 | 26 | 16 | 27 | 8 | 15 | A-4a |
| 1054.5 | | | | | | | | | | | | | | | |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm
Form TE-GL Revised 5/95

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF MATERIALS MANAGEMENT
1600 WEST BROAD ST. COLUMBUS, OH 43223

| REVISED DATE | DATE |
|---|---|
| CHECKED M.R.S. | 10/17/97 |
| REVISED J.B.H. | |
| TYPED J.B.H. | |

SUBSURFACE INVESTIGATION
SITE I NOISE WALL

MED-71-15.78

1 / 12

67
78

NWI-NW5.DGN PH 11/4/99

## LOG OF BORING

Date Started 7/17/97 Sampler: Type SS Dia. 1 3/8"
Date completed 7/21/97 Water Elev. ---
Boring No. B-6 Station & Offset 876+67, 120' LT. Surface Elev. 1081.5'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1081.5 | 0 | AUGERED | | | SOD AND TOPSOIL | | - | - | - | - | - | - | - | - | VISUAL |
| 1080.1 | 2 | | | | | | | | | | | | | | |
| 1079.0 | 4 | 3/6/7 | | | GRAY CLAYEY SILT | 19 | 0 | 4 | 15 | 45 | 36 | 30 | 10 | 23 | A-4a |
| 1076.5 | 6 | 7/9/13 | | | BROWN SILT AND CLAY WITH STONE FRAGS. | 20 | 0 | 5 | 13 | 41 | 41 | 31 | 11 | 15 | A-6a |
| 1074.0 | 8 | 8/12/14 | | | BROWN SILT AND CLAY WITH STONE FRAGS. | 21 | 0 | 5 | 12 | 40 | 43 | 32 | 12 | 16 | A-6a |
| 1071.5 | 10 | 9/14/21 | | | BROWN SANDY SILT WITH STONE FRAGS. | 22 | 0 | 14 | 22 | 38 | 26 | 25 | 8 | 14 | A-4a |
| 1069.0 | 12 | 50(0.5) | | | BROWN SANDY SILT WITH STONE FRAGS. | 23 | 0 | 14 | 29 | 47 | 10 | NP | NP | 12 | A-4a |
| 1066.5 | 14 | | | | | | | | | | | | | | |
| 1064.0 | 16 | 28/20/31 | | | BROWN SANDY SILT WITH STONE FRAGS. | 24 | 0 | 11 | 25 | 50 | 14 | NP | NP | 11 | A-4b |
| 1061.5 | 18 | 19/23/35 | | | GRAY SANDY SILT WITH STONE FRAGS. | 25 | 0 | 15 | 35 | 40 | 10 | NP | NP | 9 | A-4a |
| | 20 | 22/25/30 | | | GRAY SANDY SILT WITH STONE FRAGS. | 26 | 0 | 13 | 25 | 43 | 19 | NP | NP | 11 | A-4a |
| | 22 | | | | TOP OF ROCK | | | | | | | | | | |
| 1056.5 | 24 | 65(0.5) | | | BLACK ARENACEOUS SHALE | 27 | - | - | - | - | - | - | - | 5 | VISUAL |
| 1056.0 | | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-65 Revised 9/95

## LOG OF BORING

Date Started 7/16/97 Sampler: Type SS Dia. 1 3/8"
Date completed 7/16/97 Water Elev. ---
Boring No. B-8 Station & Offset 881+17, 150' LT. Approx. Surface Elev. 1092.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1092.0 | 0 | AUGERED | | | SOD AND TOPSOIL | | - | - | - | - | - | - | - | - | VISUAL |
| 1091.0 | 2 | | | | | | | | | | | | | | |
| 1089.5 | 4 | 3/7/11 | | | BROWN CLAYEY SILT | 1 | 0 | 4 | 12 | 37 | 47 | 28 | 10 | 13 | A-4a |
| 1087.0 | 6 | 10/12/20 | | | BROWN CLAYEY SILT | 2 | 0 | 5 | 11 | 35 | 49 | 26 | 7 | 15 | A-4a |
| 1084.5 | 8 | 14/17/25 | | | BROWN CLAYEY SILT | 3 | 0 | 5 | 11 | 38 | 46 | 29 | 10 | 14 | A-4a |
| 1082.0 | 10 | 11/19/21 | | | BROWN AND GRAY CLAYEY SILT | 4 | 0 | 6 | 12 | 35 | 47 | 27 | 9 | 16 | A-4a |
| 1079.5 | 12 | 11/14/15 | | | GRAY CLAYEY SILT | 5 | 0 | 6 | 14 | 38 | 42 | 25 | 7 | 17 | A-4a |
| 1077.0 | 14 | 13/14/12 | | | GRAY SANDY SILT | 6 | 0 | 10 | 22 | 45 | 23 | NP | NP | 11 | A-4a |
| 1074.5 | 16 | 10/16/16 | | | BROWN SANDY SILT | 7 | 0 | 10 | 24 | 47 | 19 | NP | NP | 10 | A-4a |
| 1072.0 | 18 | 20/21/19 | | | GRAY SILTY SANDY GRAVEL | 8 | 38 | 9 | 14 | 28 | 11 | NP | NP | 10 | A-4a |
| | 20 | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| 1067.0 | 24 | | | | | | | | | | | | | | |
| 1065.5 | 26 | 13/15/22 | | | GRAY SANDY SILT | 9 | 0 | 16 | 13 | 44 | 27 | NP | NP | 8 | A-3a |
| | | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-65 Revised 9/95

## LOG OF BORING

Date Started 7/17/97 Sampler: Type SS Dia. 1 3/8"
Date completed 7/17/97 Water Elev. ---
Boring No. B-7 Station & Offset 878+59, 124' LT. Approx. Surface Elev. 1089.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1089.0 | 0 | AUGERED | | | SOD AND TOPSOIL | | - | - | - | - | - | - | - | - | VISUAL |
| 1088.0 | 2 | | | | | | | | | | | | | | |
| 1086.5 | 4 | 9/14/17 | | | BROWN SANDY SILT | 10 | 0 | 10 | 30 | 40 | 20 | NP | NP | 13 | A-4c |
| 1084.0 | 6 | 11/21/25 | | | BROWN SANDY SILT | 11 | 0 | 7 | 14 | 59 | 20 | NP | NP | 25 | A-4b |
| 1081.5 | 8 | 13/17/24 | | | GRAY SANDY SILT | 12 | 0 | 11 | 14 | 52 | 23 | NP | NP | 23 | A-4b |
| 1079.0 | 10 | 7/10/14 | | | GRAY AND BROWN SANDY SILT | 13 | 0 | 20 | 37 | 28 | 15 | NP | NP | 19 | A-4c |
| 1076.5 | 12 | 6/11/12 | | | BROWN AND GRAY SILTY SANDY GRAVEL | 14 | 45 | 22 | 11 | 15 | 7 | NP | NP | 20 | A-1-b |
| 1074.0 | 14 | 12/20/15 | | | GRAY SILTY GRAVELLY SAND | 15 | 36 | 20 | 16 | 22 | 6 | NP | NP | 18 | A-2-4 |
| 1071.5 | 16 | 10/11/13 | | | GRAY SILTY SANDY GRAVEL | 16 | 48 | 17 | 16 | 14 | 5 | NP | NP | 18 | A-1-b |
| 1069.0 | 18 | 16/10/11 | | | GRAY SILTY SANDY GRAVEL | 17 | 45 | 13 | 16 | 20 | 6 | NP | NP | 18 | A-2-4 |
| | 20 | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| 1064.0 | 24 | | | | | | | | | | | | | | |
| 1062.5 | 26 | 17/30/31 | | | GRAY SILTY SANDY GRAVEL | 18 | 46 | 18 | 11 | 18 | 7 | NP | NP | 15 | A-1-b |
| | | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-65 Revised 9/95

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF MATERIALS MANAGEMENT
1600 WEST BROAD ST. COLUMBUS, OH 43223

| REVISED | DATE |
|---|---|
| | 10/17/97 |

| CHECKED | TYPED |
|---|---|
| M.R.S. | J.B.H. |
| REVISED | |
| J.B.H. | |

SUBSURFACE INVESTIGATION
SITE I NOISE WALL

MED-71-15.78

2 / 12

68
78

NWI-NW5.DGN PH 11/4/99

## LOG OF BORING

Date Started 7/30/97 Sampler: Type SS Dia. 1 3/8"
Date completed 7/30/97 Water Elev. -
Boring No. B-9 Station & Offset 905+67, 104' RT. Surface Elev. 1127.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1127.0 | 0 | AUGERED | | | BERM MATERIAL, SAND AND GRAVEL | - | - | - | - | - | - | - | - | - | VISUAL |
| 1126.0 | 2 | | | | | | | | | | | | | | |
| 1124.5 | 4 | 4/7/9 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 104 | 0 | 8 | 17 | 34 | 41 | 26 | 9 | 14 | A-4a |
| 1122.0 | 6 | 5/7/7 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 105 | 0 | 9 | 17 | 33 | 41 | 25 | 9 | 14 | A-4a |
| 1119.5 | 8 | 5/8/10 | | | BROWN SILT WITH STONE FRAGMENTS | 106 | 0 | 7 | 12 | 34 | 47 | 30 | 4 | 15 | A-4a |
| 1117.0 | 10 | 3/5/11 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 107 | 0 | 3 | 9 | 36 | 52 | 29 | 8 | 15 | A-4a |
| 1114.5 | 12 | 7/10/15 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 108 | 0 | 5 | 11 | 38 | 46 | 30 | 10 | 15 | A-4a |
| 1112.0 | 14 | 7/10/20 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 109 | 0 | 4 | 10 | 35 | 51 | 30 | 10 | 17 | A-4a |
| 1109.5 | 16 | 6/7/8 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 110 | 0 | 7 | 13 | 44 | 36 | 24 | 7 | 13 | A-4a |
| 1107.0 | 18 | 3/6/8 | | | BROWN SANDY SILT WITH STONE FRAGMENTS | 111 | - | - | - | - | - | - | - | 15 | VISUAL |
| | 20 | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| 1102.0 | 24 | | | | | | | | | | | | | | |
| 1100.5 | 26 | 3/5/14 | | | BROWN SILTY SANDY GRAVEL | 112 | 44 | 10 | 18 | 18 | 10 | NP | NP | 15 | A-2-4 |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-124 Revised 9/95

## LOG OF BORING

Date Started 8/4/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/4/97 Water Elev. -
Boring No. B-11 Station & Offset 909+67, 96' RT. Surface Elev. 1130.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1130.0 | 0 | AUGERED | | | BERM MATLERIAL, SAND AND GRAVEL | - | - | - | - | - | - | - | - | - | VISUAL |
| 1129.0 | 2 | | | | | | | | | | | | | | |
| 1127.5 | 4 | 7/10/11 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 122 | 0 | 5 | 12 | 43 | 40 | 33 | 12 | 20 | A-6a |
| 1125.0 | 6 | 7/9/12 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 123 | 0 | 4 | 12 | 41 | 43 | 33 | 12 | 16 | A-6a |
| 1122.5 | 8 | 8/10/14 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 124 | 0 | 7 | 13 | 43 | 37 | 33 | 14 | 11 | A-6a |
| 1120.0 | 10 | 7/11/16 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 125 | 0 | 7 | 10 | 35 | 48 | 32 | 11 | 17 | A-6a |
| 1117.5 | 12 | 5/7/12 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 126 | 0 | 5 | 11 | 41 | 43 | 26 | 8 | 16 | A-4a |
| 1115.0 | 14 | 5/7/8 | | | BROWN AND GRAY SANDY SILT WITH STONE FRAGMENTS | 127 | 0 | 10 | 19 | 47 | 24 | 21 | 5 | 14 | A-4a |
| 1112.5 | 16 | 4/7/11 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 128 | 0 | 8 | 16 | 43 | 33 | 26 | 9 | 13 | A-4a |
| 1110.0 | 18 | 4/7/12 | | | GRAY SANDY SILT | 129 | 0 | 4 | 18 | 52 | 26 | 20 | 5 | 14 | A-4b |
| | 20 | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| 1105.0 | 24 | | | | | | | | | | | | | | |
| 1103.5 | 26 | 7/15/20 | | | GRAY SILTY GRAVELLY SAND WITH STONE FRAGMENTS | 130 | 36 | 5 | 31 | 19 | 9 | NP | NP | 18 | A-2-4 |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-124 Revised 9/95

## LOG OF BORING

Date Started 7/30/97 Sampler: Type SS Dia. 1 3/8"
Date completed 7/30/97 Water Elev. -
Boring No. B-10 Station & Offset 907+67, 100' RT. Surface Elev. 1128.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1128.0 | 0 | AUGERED | | | BERM MATERIAL, SAND AND GRAVEL | - | - | - | - | - | - | - | - | - | VISUAL |
| 1127.0 | 2 | | | | | | | | | | | | | | |
| 1125.5 | 4 | 6/6/10 | | | BROWN SANDY CLAY WITH STONE FRAGMENTS | 113 | 0 | 8 | 13 | 38 | 41 | 30 | 12 | 15 | A-6a |
| 1123.0 | 6 | 6/9/10 | | | BROWN SANDY SILT WITH STONE FRAGMENTS | 114 | 0 | 7 | 14 | 37 | 42 | 26 | 8 | 13 | A-4a |
| 1120.5 | 8 | 3/4/9 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 115 | 0 | 7 | 12 | 35 | 46 | 30 | 11 | 15 | A-6a |
| 1118.0 | 10 | 3/6/9 | | | BROWN AND GRAY SILT AND CLAY WITH STONE FRAGMENTS | 116 | 0 | 4 | 14 | 37 | 45 | 30 | 11 | 17 | A-6a |
| 1115.5 | 12 | 5/9/11 | | | BROWN AND GRAY SANDY CLAY WITH STONE FRAGMENTS | 117 | 0 | 6 | 17 | 41 | 36 | 29 | 11 | 20 | A-6a |
| 1113.0 | 14 | 10/18/20 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 118 | 0 | 4 | 9 | 35 | 52 | 31 | 11 | 13 | A-6a |
| 1110.5 | 16 | 5/12/18 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 119 | 0 | 4 | 11 | 36 | 49 | 30 | 11 | 15 | A-6a |
| 1108.0 | 18 | 10/10/14 | | | BROWN SANDY CLAY WITH STONE FRAGMENTS | 120 | 0 | 7 | 14 | 34 | 45 | 30 | 12 | 15 | A-6a |
| | 20 | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| 1103.0 | 24 | | | | | | | | | | | | | | |
| 1101.5 | 26 | 8/5/8 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 121 | 0 | 5 | 24 | 39 | 32 | 21 | 6 | 18 | A-4a |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-124 Revised 9/95

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF MATERIALS MANAGEMENT
1600 WEST BROAD ST. COLUMBUS, OH 43223

REVISED DATE | DATE: 10/17/97
CHECKED M.R.S.
REVISED J.B.H.
TYPED J.B.H.

SUBSURFACE INVESTIGATION
SITE 2 NOISE WALL

MED-71-15.78

3 / 12

69 / 78

NWI-NW5.DGN PH 11/4/99

## LOG OF BORING

Date Started 8/6/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/6/97 Water Elev. -
Boring No. B-15 Station & Offset 914+67, 81' RT. Approx. Surface Elev. 1134.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1134.0 | 0 | | | | | | | | | | | | | | |
| | 2 | AUGERED | | | 0.5' ASPHALT AND 2.0' FILL MATL. | - | - | - | - | - | - | - | - | - | VISUAL |
| 1131.5 | 4 | 4/5/6 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 18 | 0 | 6 | 13 | 39 | 42 | 30 | 11 | 14 | A-6a |
| 1129.0 | 6 | 4/6/7 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 19 | 0 | 5 | 10 | 40 | 45 | 29 | 10 | 16 | A-4a |
| 1126.5 | 8 | 4/6/7 | | | BROWN SILTY CLAY WITH STONE FRAGMENTS | 20 | 0 | 6 | 12 | 41 | 41 | 30 | 11 | 16 | A-6b |
| 1124.0 | 10 | 5/6/8 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 21 | 0 | 6 | 11 | 41 | 42 | 28 | 9 | 19 | A-4a |
| 1121.5 | 12 | 7/7/8 | | | BROWN SANDY CLAY WITH STONE FRAGMENTS | 22 | 0 | 11 | 12 | 36 | 41 | 31 | 12 | 15 | A-6a |
| 1119.0 | 14 | 4/4/7 | | | BROWN SANDY SILT WITH STONE FRAGMENTS | 23 | 0 | 8 | 16 | 41 | 35 | 28 | 10 | 13 | A-4a |
| 1116.5 | 16 | 3/5/8 | | | GRAY SANDY CLAY | 24 | 0 | 4 | 25 | 41 | 30 | 30 | 11 | 22 | A-6a |
| 1114.0 | 18 | 1/8/12 | | | TOP OF ROCK | 25 | 0 | 6 | 16 | 51 | 27 | 26 | 8 | 14 | A-4b |
| 1111.0 | 20 | | | | BROWN AND GRAY SANDY SILT | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| | 24 | | | | | | | | | | | | | | |
| | 26 | | 4.6 | 0.4 | SANDSTONE, BROWN, FIRM, FELDSPATHIC, MICACEOUS, WITH CARBONACEOUS LAMINAE AT THE BOTTOM MEDIUM TO COARSE-GRAINED, MEDIUM-BEDDED IN THE TOP HALF, THIN-BEDDED IN THE BOTTOM HALF, WITH SCATTERED CLAY SEAMS, JOINTED NEAR THE BOTTOM, WITH A WEATHERED SEAM IN THE MIDDLE. CORE LOSS 8% | | | | | | | | | | |
| 1106.0 | 28 | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-93,Revised 5/95

## LOG OF BORING

Date Started 8/5/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/5/97 Water Elev. -
Boring No. B-17 Station & Offset 918+17, 80' RT. Surface Elev. 1125.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1125.0 | 0 | | | | | | | | | | | | | | |
| | 2 | AUGERED | | | 1.0' BERM MATL. & 1.5' BR. SANDY CLAY | - | - | - | - | - | - | - | - | - | VISUAL |
| 1122.5 | 4 | 5/8/12 | | | BROWN SILT AND CLAY | 1 | 0 | 6 | 12 | 37 | 45 | 31 | 12 | 15 | A-6a |
| 1120.0 | 6 | 13/16/18 | | | BROWN SANDY CLAY WITH STONE FRAGMENTS | 2 | 0 | 8 | 13 | 33 | 46 | 30 | 11 | 15 | A-6a |
| 1117.5 | 8 | 11/16/21 | | | BROWN AND GRAY SILT AND CLAY | 3 | 0 | 7 | 10 | 36 | 47 | 30 | 11 | 16 | A-6a |
| 1115.0 | 10 | 10/15/17 | | | BROWN AND GRAY CLAYEY SILT | 4 | 0 | 7 | 12 | 32 | 49 | 26 | 8 | 13 | A-4a |
| 1112.5 | 12 | 12/13/22 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 5 | 0 | 6 | 11 | 33 | 50 | 26 | 9 | 14 | A-4a |
| 1110.0 | 14 | 11/12/18 | | | BROWN SILTY SAND WITH STONE FRAGMENTS | 6 | 0 | 30 | 34 | 21 | 15 | NP | NP | 7 | A-4a |
| 1107.5 | 16 | 13/17/23 | | | BROWN SANDY SILT | 7 | 0 | 3 | 27 | 49 | 21 | NP | NP | 16 | A-4a |
| 1105.0 | 18 | 9/10/14 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 8 | 0 | 8 | 19 | 43 | 30 | 26 | 8 | 12 | A-4a |
| | 20 | | | | TOP OF ROCK | | | | | | | | | | |
| | 22 | | | | * | | | | | | | | | | VISUAL |
| 1101.0 | 24 | | | | | | | | | | | | | | |
| | 26 | | 5.0 | 0.0 | SANDSTONE, LIGHT BROWN, FIRM, FELDSPATHIC, MICACEOUS, WITH SCATTERED FERRUGINOUS LAMINAE FINE TO MEDIUM-GRAINED, CONGLOMERATIC IN PLACES, THIN TO MEDIUM-BEDDED, WITH SCATTERED THIN CLAY SEAMS, JOINTED IN PLACES, WITH A WEATHERED SEAM IN THE MIDDLE. | | | | | | | | | | |
| | 28 | | | | | | | | | | | | | | |
| 1096.0 | | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-93,Revised 5/95

* LIGHT BROWN SANDSTONE (DRILLER'S DESCRIPTION)

## LOG OF BORING

Date Started 8/5/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/5/97 Water Elev. -
Boring No. B-16 Station & Offset 916+67, 81' RT. Surface Elev. 1135.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1135.0 | 0 | | | | | | | | | | | | | | |
| 1134.0 | | AUGERED | | | BERM MATERIAL, SAND AND GRAVEL | - | - | - | - | - | - | - | - | - | VISUAL |
| 1132.5 | 2 | | | | | | | | | | | | | | |
| | 4 | 2/14/16 | | | GRAY SILT AND CLAY WITH STONE FRAGMENTS | 131 | 0 | 3 | 10 | 46 | 41 | 33 | 13 | 16 | A-6a |
| 1130.0 | 6 | 8/26/26 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 132 | 0 | 3 | 9 | 39 | 49 | 33 | 12 | 15 | A-6a |
| 1127.5 | 8 | 8/19/27 | | | BROWN SILT WITH STONE FRAGMENTS | 133 | 0 | 5 | 11 | 37 | 47 | 24 | 4 | 13 | A-4a |
| 1125.0 | 10 | 1/19/22 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 134 | 0 | 5 | 11 | 39 | 45 | 28 | 9 | 15 | A-4a |
| 1122.5 | 12 | 2/14/20 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 135 | 0 | 6 | 12 | 40 | 42 | 31 | 13 | 14 | A-6a |
| 1120.0 | 14 | 5/8/15 | | | BROWN SANDY CLAY WITH STONE FRAGMENTS | 136 | 0 | 8 | 14 | 40 | 38 | 30 | 11 | 14 | A-6a |
| 1117.5 | 16 | 4/15/17 | | | BROWN SANDY CLAY WITH STONE FRAGMENTS | 137 | 0 | 12 | 17 | 41 | 30 | 32 | 15 | 12 | A-6a |
| 1115.0 | 18 | 6/16/12 | | | BROWN SANDY SILT WITH STONE FRAGMENTS | 138 | 0 | 10 | 17 | 42 | 31 | 28 | 10 | 14 | A-4a |
| | 20 | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| | 24 | | | | | | | | | | | | | | |
| 1110.0 | 26 | 18/50 | | | BROWN SILTY SAND | 139 | 0 | 25 | 41 | 20 | 14 | NP | NP | 7 | A-3a |
| 1109.0 | | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-93,Revised 5/95

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF MATERIALS MANAGEMENT
1600 WEST BROAD ST. COLUMBUS, OH 43223

REVISED DATE | DATE 10/17/97
CHECKED M.R.S.
REVISED J.B.H.
TYPED J.B.H.

SUBSURFACE INVESTIGATION
SITE 2 NOISE WALL

MED-71-15.78

4 / 12

70 / 78

NWI-NW5.DGN PH 11/4/99

LOG OF BORING

Date Started 8/5/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/5/97
Boring No. B-26 Station & Offset 929+88, 80' RT.

Water Elev. -
Surface Elev. 1136.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1136.0 | 0 | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1135.2 | 2 | | | | | | | | | | | | | | |
| 1133.5 | 4 | 7/15/18 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 140 | 0 | 7 | 11 | 39 | 43 | 29 | 10 | 14 | A-4a |
| 1131.0 | 6 | 12/16/19 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 141 | 0 | 7 | 11 | 40 | 42 | 27 | 8 | 17 | A-4a |
| 1128.5 | 8 | 17/17/19 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 142 | 0 | 6 | 12 | 36 | 46 | 28 | 10 | 13 | A-4a |
| 1126.0 | 10 | 12/14/15 | | | BROWN AND GRAY SANDY SILT WITH STONE FRAGMENTS | 143 | 0 | 8 | 13 | 38 | 41 | 26 | 8 | 15 | A-4a |
| 1123.5 | 12 | 9/9/16 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 144 | 0 | 6 | 11 | 39 | 44 | 26 | 9 | 14 | A-4a |
| 1121.0 | 14 | 8/9/12 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 145 | 0 | 5 | 11 | 41 | 43 | 26 | 8 | 15 | A-4a |
| 1118.5 | 16 | 5/8/10 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 146 | 0 | 5 | 10 | 38 | 47 | 26 | 8 | 16 | A-4a |
| 1116.0 | 18 | 6/8/14 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 147 | 0 | 6 | 11 | 38 | 45 | 26 | 8 | 16 | A-4a |
| 1111.0 | 20 | | | | | | | | | | | | | | |
| 1109.5 | 22 | 8/11/14 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 146 | 0 | 8 | 13 | 38 | 41 | 26 | 9 | 12 | A-4a |
| | 24 | | | | BOTTOM OF BORING | | | | | | | | | | |
| | 26 | | | | | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-GL Revised 3/95

LOG OF BORING

Date Started 8/20/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/20/97
Boring No. B-28 Station & Offset 931+88, 74' RT.

Water Elev. -
Approx. Surface Elev. 1147.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1147.0 | 0 | AUGERED | | | 0.5' ASPHALT & 0.5' SAND & GRAVEL | - | - | - | - | - | - | - | - | - | VISUAL |
| 1146.0 | 2 | | | | | | | | | | | | | | |
| 1144.5 | 4 | 5/6/6 | | | BROWN SILTY GRAVELLY SAND | 226 | 23 | 45 | 20 | 7 | 5 | NP | NP | 7 | A-1-b |
| 1142.0 | 6 | 5/4/10 | | | BROWN SILTY SANDY GRAVEL | 227 | 53 | 22 | 11 | 8 | 6 | NP | NP | 6 | A-1-a |
| 1139.5 | 8 | 6/6/8 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 228 | 0 | 6 | 11 | 42 | 41 | 30 | 10 | 17 | A-4a |
| 1137.0 | 10 | 3/6/8 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 229 | 0 | 5 | 11 | 41 | 43 | 30 | 10 | 15 | A-4a |
| 1134.5 | 12 | 5/6/11 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 230 | 0 | 6 | 12 | 40 | 42 | 30 | 10 | 15 | A-4a |
| 1132.0 | 14 | 3/4/5 | | | BROWN AND GRAY SILT AND CLAY WITH STONE FRAGMENTS | 231 | 0 | 5 | 8 | 47 | 40 | 33 | 12 | 17 | A-6a |
| 1129.5 | 16 | 3/7/10 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 232 | 0 | 6 | 12 | 38 | 44 | 30 | 10 | 14 | A-4a |
| 1127.0 | 18 | 3/7/11 | | | GRAY SILT AND CLAY WITH STONE FRAGMENTS | 233 | 0 | 5 | 12 | 44 | 39 | 31 | 11 | 18 | A-6a |
| 1122.0 | 20 | | | | | | | | | | | | | | |
| 1120.5 | 22 | 5/8/14 | | | GRAY CLAYEY SILT | 234 | 0 | 4 | 11 | 44 | 41 | 29 | 8 | 19 | A-4a |
| | 24 | | | | BOTTOM OF BORING | | | | | | | | | | |
| | 26 | | | | | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-GL Revised 3/95

LOG OF BORING

Date Started 8/5/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/5/97
Boring No. B-27 Station & Offset 930+88, 94' RT.

Water Elev. -
Approx. Surface Elev. 1146.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1146.0 | 0 | AUGERED | | | BROWN SANDY CLAY | - | - | - | - | - | - | - | - | - | VISUAL |
| 1143.5 | 2 | | | | | | | | | | | | | | |
| 1141.0 | 4 | 5/4/11 | | | BROWN AND GRAY CLAYEY SILT WITH STONE FRAGMENTS | 9 | 0 | 5 | 11 | 41 | 43 | 30 | 10 | 14 | A-4a |
| 1138.5 | 6 | 9/12/15 | | | BROWN AND GRAY SILT WITH STONE FRAGMENTS | 10 | 0 | 6 | 12 | 40 | 42 | 26 | 6 | 13 | A-4a |
| 1136.0 | 8 | 6/9/13 | | | BROWN AND GRAY CLAYEY SILT WITH STONE FRAGMENTS | 11 | 0 | 6 | 12 | 39 | 43 | 29 | 9 | 15 | A-4a |
| 1133.5 | 10 | 9/11/13 | | | BROWN AND GRAY SILT AND CLAY WITH STONE FRAGMENTS | 12 | 0 | 6 | 12 | 39 | 43 | 30 | 11 | 17 | A-6a |
| 1131.0 | 12 | 5/8/11 | | | GRAY CLAYEY SILT | 13 | 0 | 6 | 12 | 36 | 46 | 26 | 8 | 14 | A-4a |
| 1128.5 | 14 | 3/7/9 | | | GRAY CLAYEY SILT | 14 | 0 | 6 | 11 | 36 | 47 | 26 | 9 | 14 | A-4a |
| 1126.0 | 16 | 5/8/12 | | | GRAY CLAYEY SILT | 15 | 0 | 6 | 10 | 37 | 47 | 26 | 8 | 14 | A-4a |
| | 18 | 6/9/15 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 16 | 0 | 7 | 11 | 37 | 45 | 25 | 7 | 14 | A-4a |
| 1121.0 | 20 | | | | | | | | | | | | | | |
| 1119.6 | 22 | 7/8/13 | | | GRAY SANDY GRAVELLY SILT | 17 | 30 | 5 | 11 | 35 | 49 | 27 | 9 | 15 | A-4a |
| | 24 | | | | BOTTOM OF BORING | | | | | | | | | | |
| | 26 | | | | | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-GL Revised 3/95

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF MATERIALS MANAGEMENT
1600 WEST BROAD ST. COLUMBUS, OH 43223

| REVISED DATE | DATE: 10/17/97 |
|---|---|
| | CHECKED M.R.S. |
| | REVISED J.B.H. |
| | TYPED J.B.H. |

SUBSURFACE INVESTIGATION
SITE 2 NOISE WALL

MED-71-15.78

5/12

71/78

NWI-NW5.DGN PH 11/4/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: NB-1**

STATION & OFFSET: 905+17.6, 92.0 ft. Rt.

ELEVATION: 1126.7ft

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurface Exploration for Noise Barrier along Right Side Shoulder of IR-71 NB

LOCATION: Medina County, Ohio

DATE STARTED: 3/12/99 DATE COMPLETED: 3/12/99

SAMPLER DIAM: 2" TYPE: HAMMER WT.: 140lb FALL: 30"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION: NAD / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION: Water encountered at 25.0 feet during and at 15.3 feet upon completion of the drilling operations

▼ GROUNDWATER DURING DRILLING ▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT LL | PLASTIC LIMIT PL | PLASTICITY INDEX PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1126.4 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Medium stiff to very stiff, brown to gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace roots, moist (fill). | 1 | 1.5 | 7 | 1.0 | | | | | | | | |
| | | | | 2 | 4.0 | 21 | 1.0 | | | | | | | | |
| | | | | 3 | 6.5 | 13 | 1.5 | | | | | | | | |
| 1118.7 | 8.0 | | Stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 4 | 8.5 | 17 | 3.0 | | | | | | | | |
| | | | | 5 | 12.5 | 30 | 4.0+ | | | | | | | | |
| | | | | 6 | 15.0 | 28 | 4.0+ | | | | | | | | |
| | | | | 7 | 17.5 | 32 | 4.0 | | | | | | | | |
| 1106.7 | 20.0 | | Medium dense, brown SILT, little clay, trace sand, moist. | 8 | 20.0 | 11 | 1.0 | | | | | | | | |
| 1104.2 | 22.5 | | Stiff, gray SANDY SILT, little clay, little gravel and rock fragments, moist to wet. | 9 | 22.5 | 15 | 2.0 | | | | | | | | |
| | | | Note: Occasional sand and silt seams encountered from 25.0 to 28.5 feet. | 10 | 25.0 | 9 | | | | | | | | | |
| | | | | 11 | 28.5 | 9 | 1.0 | | | | | | | | |
| 1096.7 | 30.0 | | TERMINATION DEPTH = 30.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 3/31/99

NB-1: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: NB-2**

STATION & OFFSET: 908+17.6, 92.0 ft. Rt.

ELEVATION: 1128.8ft

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurface Exploration for Noise Barrier along Right Side Shoulder of IR-71 NB PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 3/15/99 DATE COMPLETED: 3/15/99

SAMPLER DIAM: 2" TYPE: SS HAMMER WT.: 140lb FALL: 30"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION: NAD / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION: Water encountered at 17.5 feet during and at 15.6 feet upon completion of the drilling operations

▼ GROUNDWATER DURING DRILLING ▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT LL | PLASTIC LIMIT PL | PLASTICITY INDEX PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1128.3 | 0.5 | | GRAVEL WITH SAND (Roadbase). | | | | | | | | | | | | |
| | | | Very stiff to stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 1 | 1.5 | 16 | 4.0+ | | | | | | | | |
| | | | | 2 | 4.0 | 16 | 2.5 | | | | | | | | |
| | | | | 3 | 6.5 | 12 | 2.5 | | | | | | | | |
| | | | Note: Trace roots encountered at 9.0 feet. | 4 | 8.5 | 11 | 4.0+ | | | | | | | | |
| | | | Note: Trace organics at 12.9 feet. | 5 | 12.5 | 13 | 1.75 | | | | | | | | |
| 1114.3 | 14.5 | | Very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 6 | 15.0 | 25 | 4.0+ | | | | | | | | |
| 1111.3 | 17.5 | | Stiff, brown SANDY SILT, little clay, little gravel and rock fragments, moist. Note: Silt layer encountered from 18.2 to 18.5 feet. | 7 | 17.5 | 14 | | | | | | | | | |
| 1106.8 | 22.0 | | Very stiff, brown and gray to gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 8 | 20.0 | 15 | | | | | | | | | |
| | | | | 9 | 22.5 | 22 | 3.0 | | | | | | | | |
| | | | | 10 | 25.0 | 16 | | | | | | | | | |
| 1099.3 | 29.5 | | Medium dense, light gray, decomposed SANDSTONE | 11 | 28.5 | 27 | | | | | | | | | |
| 1098.8 | 30.0 | | TERMINATION DEPTH = 30.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 3/31/99

NB-2: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: NB-3**

STATION & OFFSET: 911+17.6, 92.0 ft. Rt.

ELEVATION: 1131.1ft

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurface Exploration for Noise Barrier along Right Side Shoulder of IR-71 NB PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 3/15/99 DATE COMPLETED: 3/15/99

SAMPLER DIAM: 2" TYPE: SS HAMMER WT.: 140lb FALL: 30"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION: NAD / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION: Water encountered at 17.5 feet during and at 17.0 feet upon completion of the drilling operations

▼ GROUNDWATER DURING DRILLING ▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT LL | PLASTIC LIMIT PL | PLASTICITY INDEX PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1130.8 | 0.3 | | TOPSOIL | | | | | | | | | | | | |
| | | | Hard to stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.5 | 19 | 4.0+ | | | | | | | | |
| | | | | 2 | 4.0 | 36 | | | | | | | | | |
| | | | | 3 | 6.5 | 24 | 4.0+ | | | | | | | | |
| | | | Note: Color change to gray at 8.5 feet. | 4 | 8.5 | 21 | 3.0 | | | | | | | | |
| | | | | 5 | 12.5 | 13 | 1.5 | | | | | | | | |
| | | | | 6 | 15.0 | 12 | 1.5 | | | | | | | | |
| 1115.1 | 16.0 | | Stiff, brown SANDY SILT, little clay, moist to wet with occasional layers of silt and sand. | 7 | 17.5 | 11 | | | | | | | | | |
| 1111.1 | 20.0 | | Very stiff, brown SILT AND CLAY, little sand, little gravel and rock fragments, moist. | 8 | 20.0 | 25 | 4.0 | | | | | | | | |
| 1108.6 | 22.5 | | Very dense, brown, decomposed SANDSTONE | 9 | 22.5 | 50+ | | | | | | | | | |
| | | | Note: Augered to 25.0 feet. | | | | | | | | | | | | |
| 1106.1 | 25.0 | | TERMINATION DEPTH = 25.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 3/31/99

NB-3: PAGE 1 OF 1

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | REVISED | DATE | STRUCTURE FILE NUMBER

SITE 2 NOISE WALL

MED-71-15.78

6 / 12

72 / 78

NBI-NBI0.DGN RRB 9/24/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: NB-4**

STATION & OFFSET: 914+17.6, 92.0 ft. Rt.

APPROX. ELEVATION: 1133.1ft

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurface Exploration for Noise Barrier along Right Side Shoulder of IR-71 NB PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 3/17/99 DATE COMPLETED: 3/17/99

SAMPLER DIAM: 2" TYPE: SS HAMMER WT.: 140lb FALL: 30"

CASING DIAM: 3.25" TYPE: HSA OTHER:

**DRILLING INFORMATION:**
NAD / CME-55 Truck Mounted drilling Rig

**GROUNDWATER INFORMATION:**
Water encountered at 20.0 feet during and at 21.0 feet upon completion of the drilling operations

▼ GROUNDWATER DURING DRILLING ▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1132.1 | 1.0 | | ASPHALT | | | | | | | | | | | | |
| 1131.6 | 1.5 | | GRAVEL WITH SAND (Road base) | | | | | | | | | | | | |
| | | | Stiff, brown and gray SILT AND CLAY, some gravel and rock fragments, little sand, moist (fill). | 1 | 1.5 | 14 | | | | | | | | | |
| 1129.1 | 4.0 | | Medium dense, brown GRAVEL AND ROCK FRAGMENTS WITH SAND, trace silt, moist (fill). | 2 | 4.0 | 11 | | | | | | | | | |
| | | | | 3 | 6.0 | 9 | | | | | | | | | |
| 1126.6 | 6.5 | | Stiff to very stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 4 | 8.5 | 10 | 3.0 | | | | | | | | |
| | | | | 5 | 12.5 | 16 | 3.0 | | | | | | | | |
| | | | | 6 | 15.0 | 15 | 2.5 | | | | | | | | |
| | | | | 7 | 17.5 | 11 | | | | | | | | | |
| | | | Note: Trace organics and wood found at 18.0 feet. | | | | | | | | | | | | |
| | | | | 8 | 20.0 | 8 | | | | | | | | | |
| | | | Note: Trace roots found at 20.5 feet. | | | | | | | | | | | | |
| 1111.8 | 21.3 | | Medium stiff, brown SANDY SILT, little clay, trace gravel, trace rock fragments, moist to wet. | | | | | | | | | | | | |
| 1111.1 | 22.0 | | Very dense, gray, decomposed SANDSTONE. Note: Augered to 25.0 feet and cored from 25.0 to 28.0 feet. | | | | | | | | | | | | |
| 1108.1 | 25.0 | | Brown, medium hard, weathered SANDSTONE, fine grained, very thin to thinly bedded. | R-1 | 25.0 | 92% (11%) | | | | | | | | | |
| 1105.1 | 28.0 | | TERMINATION DEPTH = 28.0 FEET | | 28.0 | | | | | | | | | | |

NOTES/REMARKS: Note: Boring location was moved 12.0 feet west due to inaccessibility.

NB-4: PAGE 1 OF 1

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 3/31/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: NB-5**

STATION & OFFSET: 917+17.7, 92.0 ft. Rt.

ELEVATION: 1133.8ft

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurface Exploration for Noise Barrier along Right Side Shoulder of IR-71 NB PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 3/17/99 DATE COMPLETED: 3/17/99

SAMPLER DIAM: 2" TYPE: SS HAMMER WT.: 140lb FALL: 30"

CASING DIAM: 3.25" TYPE: HSA OTHER:

**DRILLING INFORMATION:**
NAD / CME-55 Truck Mounted drilling Rig

**GROUNDWATER INFORMATION:**
Dry during and wet at 17.0 feet upon completion of the drilling operations

▽ GROUNDWATER UPON COMPLETION

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1133.5 | 0.3 | | TOPSOIL. Very stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.5 | 19 | 3.5 | | | | | | | | |
| | | | | 2 | 4.0 | 36 | 4.0+ | | | | | | | | |
| | | | | 3 | 6.0 | 27 | 4.0+ | | | | | | | | |
| | | | | 4 | 8.5 | 30 | 3.5 | | | | | | | | |
| | | | | 5 | 12.5 | 30 | 3.5 | | | | | | | | |
| 1118.8 | 15.0 | | Very stiff to stiff, brown SANDY SILT, little clay, trace gravel, trace rock fragments, moist. | 6 | 15.0 | 16 | 3.0 | | | | | | | | |
| | | | Note: Sand seams encountered at 18.0 feet. | 7 | 17.5 | 19 | 2.5 | | | | | | | | |
| | | | | 8 | 20.0 | 9 | 1.5 | | | | | | | | |
| 1111.8 | 22.0 | | Very dense, brown, decomposed SANDSTONE Note: Augered to 25.0 feet and cored from 25.0 to 28.0 feet. | 9 | 22.5 | 50+ | | | | | | | | | |
| 1108.8 | 25.0 | | Brown, medium hard, weathered SANDSTONE, fine grained, very thin to thinly bedded. | R-1 | 25.0 | 79% (0%) | | | | | | | | | |
| 1105.8 | 28.0 | | TERMINATION DEPTH = 28.0 FEET | | 28.0 | | | | | | | | | | |

NOTES/REMARKS:

NB-5: PAGE 1 OF 1

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 3/31/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: NB-6**

STATION & OFFSET: 920+17.6, 92.1 ft. Rt.

ELEVATION: 1136.6ft

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurface Exploration for Noise Barrier along Right Side Shoulder of IR-71 NB PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 3/16/99 DATE COMPLETED: 3/16/99

SAMPLER DIAM: 2" TYPE: SS HAMMER WT.: 140lb FALL: 30"

CASING DIAM: 3.25" TYPE: HSA OTHER:

**DRILLING INFORMATION:**
NAD / CME-55 Truck Mounted drilling Rig

**GROUNDWATER INFORMATION:**
Water encountered at 21.4 feet during and dry upon completion of the drilling operations

▼ GROUNDWATER DURING DRILLING

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LIQUID LIMIT | PLASTIC LIMIT | PLASTICITY INDEX | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1136.3 | 0.3 | | TOPSOIL. Very stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.5 | 18 | 3.5 | | | | | | | | |
| | | | | 2 | 4.0 | 28 | 3.5 | | | | | | | | |
| | | | | 3 | 6.0 | 17 | 3.0 | | | | | | | | |
| | | | Note: Color change to gray at 7.0 feet. | | | | | | | | | | | | |
| | | | | 4 | 8.5 | 24 | 4.0 | | | | | | | | |
| | | | | 5 | 12.5 | 30 | | | | | | | | | |
| 1123.6 | 13.0 | | Very stiff, brown SILT, little sand, trace clay, moist. | | | | | | | | | | | | |
| 1121.8 | 15.0 | | Dense to medium dense, brown GRAVEL AND ROCK FRAGMENTS WITH SAND, trace silt, moist. Note: Trace cobble from 15.0 to 17.5 feet. | 6 | 15.0 | 33 | | | | | | | | | |
| | | | | 7 | 17.5 | 36 | | | | | | | | | |
| 1116.3 | 20.3 | | Very stiff to hard, brown SANDY SILT, little clay, trace gravel, trace rock fragments, moist. Note: Occasional gray silt seams encountered from 20.3 to 22.5 feet. | 8 | 20.0 | 26 | 2.0 | | | | | | | | |
| | | | | 9 | 22.5 | 69 | 4.0+ | | | | | | | | |
| 1112.8 | 23.8 | | TERMINATION DEPTH = 23.8 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

NB-6: PAGE 1 OF 1

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 3/31/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | DATE | REVISED | STRUCTURE FILE NUMBER

SITE 2 NOISE WALL

MED-71-15.78

7 / 12

73 / 78

NBI-NB10.DGN RRB 9/24/99

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: NB-7**

STATION & OFFSET: 923+17.9, 92.1 ft. Rt.

ELEVATION: 1138.7ft

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurface Exploration for Noise Barrier along Right Side Shoulder of IR-71 NB PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 3/16/99 DATE COMPLETED: 3/16/99

SAMPLER DIAM: 2" TYPE: SS HAMMER WT.: 140lb FALL: 30"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAD / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1138.4 | 0.3 | | TOPSOIL. | | | | | | | | | | | | |
| | | | Very stiff to hard, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.5 | 26 | 4.0+ | | | | | | | | |
| | | | | 2 | 4.0 | 50+ | 4.0+ | | | | | | | | |
| | | | Note: Boulder encountered at 5.0 feet. | 3 | 6.0 | 50 | 3.5 | | | | | | | | |
| | | | | 4 | 8.5 | 31 | 4.0+ | | | | | | | | |
| 1126.2 | 12.5 | | Very dense to medium dense, brown GRAVEL AND ROCK FRAGMENTS WITH SAND, trace silt, moist. | 5 | 12.5 | 60 | | | | | | | | | |
| 1123.7 | 15.0 | | Medium dense, brown COARSE AND FINE SAND, trace silt, moist. | 6 | 15.0 | 26 | | | | | | | | | |
| | | | | 7 | 17.5 | 15 | | | | | | | | | |
| 1118.4 | 20.3 | | Very stiff to hard, brown SANDY SILT, little clay, little gravel and rock fragments, moist. Note: Occasional silt seams encountered from 20.3 to 22.5 feet. | 8 | 20.0 | 17 | | | | | | | | | |
| 1115.7 | 23.0 | | Very dense, brown, decomposed SANDSTONE | 9 | 22.5 | 50+ | | | | | | | | | |
| 1114.2 | 24.5 | | TERMINATION DEPTH = 24.5 FEET | 10 | 23.0 | 50+ | | | | | | | | | |
| | | | | 11 | 28.5 | | | | | | | | | | |

NOTES/REMARKS:

NB-7: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: NB-8**

STATION & OFFSET: 926+17.8, 92.0 ft. Rt.

ELEVATION: 1141.1ft

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurface Exploration for Noise Barrier along Right Side Shoulder of IR-71 NB PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 3/16/99 DATE COMPLETED: 3/16/99

SAMPLER DIAM: 2" TYPE: SS HAMMER WT.: 140lb FALL: 30"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAD / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1140.8 | 0.3 | | TOPSOIL. | | | | | | | | | | | | |
| | | | Very stiff to stiff, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 1 | 1.5 | 25 | 4.0+ | | | | | | | | |
| | | | | 2 | 4.0 | 19 | 2.5 | | | | | | | | |
| | | | | 3 | 6.0 | 13 | 2.5 | | | | | | | | |
| | | | Note: Occasional sand and silt seams encountered from 9.0 to 19.0 feet. | 4 | 8.5 | 15 | 1.5 | | | | | | | | |
| | | | | 5 | 12.5 | 14 | 1.5 | | | | | | | | |
| | | | | 6 | 15.0 | 10 | 1.0 | | | | | | | | |
| | | | | 7 | 17.5 | 24 | | | | | | | | | |
| 1122.1 | 19.0 | | Medium dense, light gray FINE SAND, moist. | 8 | 20.0 | 18 | | | | | | | | | |
| | | | | 9 | 22.5 | 12 | 2.0 | | | | | | | | |
| 1117.1 | 24.0 | | Stiff, gray SILT, little clay, little sand, trace gravel, trace rock fragments, moist. | 10 | 25.0 | 14 | 1.0 | | | | | | | | |
| 1112.6 | 28.5 | | Stiff, brown SANDY SILT, little clay, trace gravel, trace rock fragments, moist. | 11 | 28.5 | 15 | | | | | | | | | |
| 1111.1 | 30.0 | | TERMINATION DEPTH = 30.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

NB-8: PAGE 1 OF 1

## PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: NB-9**

STATION & OFFSET: 929+17.8, 92.0 ft. Rt.

ELEVATION: 1143.0ft

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurface Exploration for Noise Barrier along Right Side Shoulder of IR-71 NB PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 3/15/99 DATE COMPLETED: 3/15/99

SAMPLER DIAM: 2" TYPE: SS HAMMER WT.: 140lb FALL: 30"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAD / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/ Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/(RQD%) | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1142.6 | 0.4 | | TOPSOIL. | | | | | | | | | | | | |
| | | | Very stiff to stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 1 | 1.5 | 16 | | | | | | | | | |
| 1138.0 | 5.0 | | Medium stiff to hard, gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist. | 2 | 4.0 | 9 | 1.5 | | | | | | | | |
| | | | | 3 | 6.0 | 7 | 1.5 | | | | | | | | |
| | | | | 4 | 8.5 | 18 | 2.5 | | | | | | | | |
| | | | | 5 | 12.5 | 14 | 2.5 | | | | | | | | |
| | | | | 6 | 15.0 | 17 | 2.5 | | | | | | | | |
| | | | | 7 | 17.5 | 18 | 2.5 | | | | | | | | |
| | | | | 8 | 20.0 | 16 | 2.0 | | | | | | | | |
| | | | Note: Trace cobble from 22.5 to 25.0 feet. | 9 | 22.5 | 24 | 3.5 | | | | | | | | |
| | | | | 10 | 25.0 | 25 | 3.5 | | | | | | | | |
| | | | | 11 | 28.5 | 46 | 4.0+ | | | | | | | | |
| 1113.0 | 30.0 | | TERMINATION DEPTH = 30.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS:

NB-9: PAGE 1 OF 1

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 3/31/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | CHECKED | REVIEWED | DATE | STRUCTURE FILE NUMBER | REVISED

SITE 2 NOISE WALL

MED-71-15.78

8 / 12

74 / 78

NBI-NBJO.DGN RRB 9/24/99

PRIME ENGINEERING & ARCHITECTURE INC.

**TEST BORING No.: NB-10**

STATION & OFFSET: 932+17.7, 92.0 ft. Rt.

APPROX. ELEVATION: 1146.2ft

CLIENT: Richland Engineering Ltd.

PROJECT: Subsurface Exploration for Noise Barrier along Right Side Shoulder of IR-71 NB PROJECT No.: 99017

LOCATION: Medina County, Ohio

DATE STARTED: 3/17/99 DATE COMPLETED: 3/17/99

SAMPLER DIAM: 2" TYPE: SS HAMMER WT.: 140lb FALL: 30"

CASING DIAM: 3.25" TYPE: HSA OTHER:

DRILLING INFORMATION:
NAD / CME-55 Truck Mounted drilling Rig

GROUNDWATER INFORMATION:
No groundwater encountered during and upon completion of the drilling operations.

| ELEV (ft.) | DEPTH (ft.) | Soil/Rock Symbol | MATERIAL DESCRIPTION | SAMPLE NUMBER | SAMPLE DEPTH | N-VALUE (BLOWS/FT) OR REC%/RQD% | PENETROMETER (tons/ft²) | MOISTURE CONTENT (%) | ATTERBERG LIMITS (%) LL | PL | PI | DRY DENSITY (pcf) | UNCONFINED COMPRESSIVE STRENGTH (psf) | MINUS No. 200 SIEVE (%) | CLASSIFICATION SYMBOL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1145.9 | 0.3 | | ASPHALT | | | | | | | | | | | | |
| 1145.2 | 1.0 | | GRAVEL WITH SAND (Roadbase) | | | | | | | | | | | | |
| | | | Very stiff to stiff, brown SILT AND CLAY, little sand, trace gravel, trace rock fragments, moist (fill). | 1 | 1.5 | 19 | 4.0+ | | | | | | | | |
| | | | | 2 | 4.0 | 29 | 4.0+ | | | | | | | | |
| | | | | 3 | 6.5 | 20 | 3.5 | | | | | | | | |
| | | | | 4 | 8.5 | 15 | 3.0 | | | | | | | | |
| | | | | 5 | 12.5 | 18 | 4.0 | | | | | | | | |
| 1130.7 | 15.5 | | Very stiff to stiff, brown SANDY SILT, some clay, trace gravel, trace rock fragments, moist (fill). | 6 | 15.0 | 13 | 2.5 | | | | | | | | |
| | | | | 7 | 17.5 | 16 | 3.5 | | | | | | | | |
| | | | | 8 | 20.0 | 14 | 3.0 | | | | | | | | |
| | | | | 9 | 22.5 | 9 | 3.0 | | | | | | | | |
| | | | Note: Trace organic and roots encountered at 25.8 feet. | 10 | 25.0 | 11 | 3.5 | | | | | | | | |
| 1120.2 | 26.0 | | Hard, brown with mottled gray SILT AND CLAY, little sand, trace gravel, trace rock fragments, trace cobbles, moist. | | | | | | | | | | | | |
| | | | Note: Trace cobble from 26.5 to 28.5 feet. | 11 | 28.5 | 34 | 4.0 | | | | | | | | |
| 1116.2 | 30.0 | | TERMINATION DEPTH = 30.0 FEET | | | | | | | | | | | | |

NOTES/REMARKS: Note: Boring location was moved 20.0 feet west due to inaccessibility.

NB-10: PAGE 1 OF 1

TEST_BORING_LOG 99017.GPJ PRIMENG.GDT 3/31/99

NBI-NB10.DGN RRB 9/24/99

DESIGN AGENCY
PRIME ENGINEERING & ARCHITECT, INC.
1038 GHENT RD, AKRON, OHIO 44333

DESIGNED | DRAWN | REVIEWED | DATE | STRUCTURE FILE NUMBER
CHECKED | REVISED

SITE 2 NOISE WALL

MED-71-15.78

9 / 12

75 / 78

LOG OF BORING

Date Started 8/27/97 Sampler: Type SS Dia. 1 3/8" Water Elev. ---
Date completed 8/27/97
Boring No. B-29 Station & Offset 1282+38, 92' LT. Surface Elev. 1153.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1153.0 | 0 | AUGERED | | | BERM MATERIAL, SAND AND GRAVEL | - | - | - | - | - | - | - | - | - | VISUAL |
| 1152.0 | 2 | | | | | | | | | | | | | | |
| 1150.5 | 4 | 7/9/14 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 261 | 0 | 8 | 10 | 42 | 40 | 30 | 11 | 14 | A-6a |
| 1148.0 | 6 | 4/9/12 | | | BROWN AND GRAY CLAYEY SILT WITH STONE FRAGMENTS | 262 | 0 | 6 | 12 | 43 | 39 | 30 | 9 | 21 | A-4a |
| 1145.5 | 8 | 7/10/15 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 263 | 0 | 5 | 10 | 38 | 47 | 35 | 14 | 15 | A-6a |
| 1143.0 | 10 | 9/11/14 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 264 | 0 | 7 | 10 | 36 | 47 | 30 | 9 | 15 | A-4a |
| 1140.5 | 12 | 10/12/16 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 265 | 0 | 5 | 9 | 36 | 50 | 30 | 9 | 16 | A-4a |
| 1138.0 | 14 | 11/12/16 | | | GRAY SILT AND CLAY WITH STONE FRAGMENTS | 266 | 0 | 7 | 10 | 33 | 50 | 30 | 11 | 16 | A-6a |
| 1135.5 | 16 | 6/10/11 | | | GRAY SANDY CLAY | 267 | 0 | 9 | 14 | 31 | 46 | 29 | 11 | 16 | A-6a |
| 1133.0 | 18 | 11/11/18 | | | GRAY SANDY CLAY WITH STONE FRAGMENTS | 268 | 0 | 9 | 15 | 37 | 39 | 30 | 13 | 13 | A-6a |
| | 20 | | | | | | | | | | | | | | |
| 1128.0 | 22 | | | | | | | | | | | | | | |
| 1126.5 | 24 | 9/12/18 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 269 | 0 | 8 | 12 | 41 | 39 | 26 | 9 | 12 | A-4a |
| | 26 | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-GL Revised 9/95

LOG OF BORING

Date Started 8/13/97 Sampler: Type SS Dia. 1 3/8" Water Elev. ---
Date completed 8/13/97
Boring No. B-31 Station & Offset 1284+38, 89' LT. Surface Elev. 1151.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1151.0 | 0 | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1150.2 | 2 | | | | | | | | | | | | | | |
| 1148.5 | 4 | 14/19/21 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 181 | 0 | 8 | 10 | 42 | 40 | 31 | 11 | 14 | A-6a |
| 1146.0 | 6 | 16/24/26 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 182 | 0 | 7 | 11 | 38 | 43 | 30 | 10 | 15 | A-4a |
| 1143.5 | 8 | 14/21/26 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 183 | 0 | 7 | 11 | 38 | 44 | 32 | 12 | 15 | A-6a |
| 1141.0 | 10 | 15/19/21 | | | BROWN AND GRAY CLAYEY SILT WITH STONE FRAGMENTS | 184 | 0 | 7 | 10 | 37 | 46 | 28 | 9 | 13 | A-4a |
| 1138.5 | 12 | 10/11/15 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 185 | 0 | 10 | 10 | 28 | 52 | 27 | 8 | 16 | A-4a |
| 1136.0 | 14 | 6/10/12 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 186 | 0 | 6 | 11 | 33 | 50 | 26 | 8 | 15 | A-4a |
| 1133.5 | 16 | 10/16/17 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 187 | 0 | 7 | 12 | 29 | 52 | 26 | 9 | 17 | A-4a |
| 1131.0 | 18 | 12/21/22 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 188 | 0 | 9 | 12 | 35 | 44 | 28 | 10 | 18 | A-4a |
| | 20 | | | | | | | | | | | | | | |
| 1126.0 | 22 | | | | | | | | | | | | | | |
| 1124.5 | 24 | 12/22/32 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 189 | 0 | 9 | 12 | 39 | 40 | 26 | 8 | 11 | A-4a |
| | 26 | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-GL Revised 9/95

LOG OF BORING

Date Started 8/14/97 Sampler: Type SS Dia. 1 3/8" Water Elev. ---
Date completed 8/14/97
Boring No. B-30 Station & Offset 1283+38, 90' LT. Surface Elev. 1152.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1152.0 | 0 | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1151.2 | 2 | | | | | | | | | | | | | | |
| 1149.5 | 4 | 15/22/31 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 190 | 0 | 6 | 10 | 39 | 45 | 31 | 11 | 13 | A-6a |
| 1147.0 | 6 | 16/24/25 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 191 | 0 | 8 | 10 | 36 | 46 | 32 | 11 | 12 | A-6a |
| 1144.5 | 8 | 15/22/25 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 192 | 0 | 5 | 8 | 32 | 55 | 33 | 12 | 14 | A-6a |
| 1142.0 | 10 | 14/27/32 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 193 | 0 | 6 | 9 | 31 | 54 | 33 | 13 | 14 | A-6a |
| 1139.5 | 12 | 15/21/23 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 194 | 0 | 7 | 10 | 30 | 53 | 33 | 12 | 16 | A-6a |
| 1137.0 | 14 | 12/19/19 | | | BROWN AND GRAY CLAYEY SILT WITH STONE FRAGMENTS | 195 | 0 | 7 | 12 | 32 | 49 | 29 | 10 | 14 | A-4a |
| 1134.5 | 16 | 9/12/16 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 196 | 0 | 11 | 17 | 38 | 34 | 25 | 9 | 12 | A-4a |
| 1132.0 | 18 | 9/12/17 | | | BROWN SANDY GRAVELLY SILT WITH STONE FRAGMENTS | 197 | 26 | 6 | 10 | 26 | 32 | NP | NP | 8 | A-4a |
| | 20 | | | | | | | | | | | | | | |
| 1127.0 | 22 | | | | | | | | | | | | | | |
| 1125.5 | 24 | 12/19/22 | | | GRAY SILT WITH STONE FRAGMENTS | 198 | 0 | 8 | 12 | 38 | 42 | 24 | 6 | 12 | A-4a |
| | 26 | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-GL Revised 9/95

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF MATERIALS MANAGEMENT
1600 WEST BROAD ST. COLUMBUS, OH 43223

REVISED DATE | DATE 10/17/97
CHECKED M.R.S.
REVISED J.B.H.
TYPED J.B.H.

SUBSURFACE INVESTIGATION
SITE 4 NOISE WALL

MED-71-15.78

10/12

76/78

NWIO-NWI2.DGN PH 11/4/99

## LOG OF BORING

Date Started 8/19/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/19/97 Water Elev.
Boring No. B-36 Station & Offset 1292+38, 80' LT. Surface Elev. 1143.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1143.0 | 0 | | | | | | | | | | | | | | |
| | 2 | AUGERED | | | SANDY CLAY, ROCK FRAGMENTS | - | - | - | - | - | - | - | - | - | VISUAL |
| 1140.5 | 4 | 2/5/7 | | | BROWN SILT AND CLAY | 59 | 0 | 3 | 9 | 45 | 43 | 37 | 15 | 21 | A-6a |
| 1138.0 | 6 | 3/5/10 | | | BROWN SILTY CLAY | 60 | 0 | 3 | 13 | 41 | 43 | 39 | 17 | 21 | A-6b |
| 1135.5 | 8 | 4/6/7 | | | BROWN SANDY GRAVELLY CLAY | 61 | 35 | 7 | 10 | 24 | 24 | 30 | 11 | 15 | A-6a |
| 1133.0 | 10 | 10/11/11 | | | BROWN SANDY CLAY | 62 | 0 | 8 | 19 | 36 | 37 | 35 | 17 | 16 | A-6b |
| 1130.5 | 12 | 9/10/13 | | | BROWN SANDY CLAY | 63 | 0 | 10 | 16 | 36 | 38 | 30 | 12 | 13 | A-6a |
| 1128.0 | 14 | 14/15/17 | | | BROWN SANDY GRAVELLY CLAY | 64 | 44 | 6 | 9 | 21 | 20 | 28 | 11 | 12 | A-6a |
| 1125.5 | 16 | 9/13/14 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 65 | 0 | 10 | 12 | 39 | 39 | 26 | 9 | 10 | A-4a |
| 1123.0 | 18 | 7/8/13 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 66 | 0 | 9 | 12 | 37 | 42 | 25 | 7 | 12 | A-4a |
| | 20 | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| 1118.0 | 24 | | | | | | | | | | | | | | |
| 1116.5 | 26 | 8/9/9 | | | GRAY GRAVELLY SILT | 67 | 39 | 6 | 7 | 21 | 27 | 27 | 9 | 14 | A-4a |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-61 Revised 9/95

## LOG OF BORING

Date Started 8/19/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/19/97 Water Elev.
Boring No. B-38 Station & Offset 1296+38, 80' LT. Surface Elev. 1144.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1144.0 | 0 | | | | | | | | | | | | | | |
| 1143.2 | | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1141.5 | 2 | | | | | | | | | | | | | | |
| | 4 | 12/15/14 | | | BROWN SANDY CLAY WITH STONE FRAGMENTS | 208 | 0 | 10 | 32 | 29 | 29 | 28 | 11 | 13 | A-6a |
| 1139.0 | 6 | 9/9/11 | | | BROWN AND GRAY CLAYEY SILT WITH STONE FRAGMENTS | 209 | 0 | 3 | 12 | 45 | 40 | 32 | 10 | 18 | A-4a |
| 1136.5 | 8 | 9/17/18 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 210 | 0 | 4 | 8 | 54 | 34 | 34 | 12 | 15 | A-6a |
| 1134.0 | 10 | 12/20/23 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 211 | 0 | 7 | 10 | 36 | 47 | 32 | 12 | 15 | A-6a |
| 1131.5 | 12 | 12/19/25 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 212 | 0 | 7 | 10 | 37 | 46 | 34 | 13 | 17 | A-6a |
| 1129.0 | 14 | 12/17/18 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 213 | 0 | 6 | 9 | 38 | 47 | 32 | 11 | 15 | A-6a |
| 1126.5 | 16 | 12/18/19 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 214 | 0 | 6 | 9 | 37 | 48 | 34 | 13 | 15 | A-6a |
| 1124.0 | 18 | 12/19/21 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 215 | 0 | 6 | 9 | 37 | 48 | 33 | 12 | 19 | A-6a |
| | 20 | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| 1119.0 | 24 | | | | | | | | | | | | | | |
| 1117.5 | 26 | 6/8/14 | | | GRAY SILT AND CLAY WITH STONE FRAGMENTS | 216 | 0 | 6 | 10 | 34 | 50 | 29 | 11 | 15 | A-6a |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-61 Revised 9/95

## LOG OF BORING

Date Started 8/19/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/19/97 Water Elev.
Boring No. B-37 Station & Offset 1294+38, 80' LT. Surface Elev. 1143.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1143.0 | 0 | | | | | | | | | | | | | | |
| 1142.2 | | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1140.5 | 2 | | | | | | | | | | | | | | |
| | 4 | 10/11/12 | | | BROWN AND GRAY SILT AND CLAY WITH STONE FRAGMENTS | 217 | 0 | 5 | 14 | 45 | 36 | 32 | 11 | 15 | A-6a |
| 1138.0 | 6 | 8/8/14 | | | BROWN AND GRAY SILT AND CLAY WITH STONE FRAGMENTS | 218 | 0 | 3 | 9 | 37 | 51 | 38 | 15 | 27 | A-6a |
| 1135.5 | 8 | 11/14/18 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 219 | 0 | 6 | 11 | 38 | 45 | 30 | 10 | 12 | A-4a |
| 1133.0 | 10 | 8/17/18 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 220 | 0 | 5 | 11 | 32 | 52 | 31 | 10 | 12 | A-4a |
| 1130.5 | 12 | 9/9/10 | | | BROWN SILT | 221 | 0 | 2 | 12 | 61 | 25 | NP | NP | 18 | A-4b |
| 1128.0 | 14 | 10/16/17 | | | BROWN SANDY SILT | 222 | 0 | 7 | 18 | 42 | 33 | NP | NP | 15 | A-4a |
| 1125.5 | 16 | 15/21/23 | | | GRAY CLAYEY SILT | 223 | 0 | 7 | 10 | 36 | 47 | 28 | 10 | 14 | A-4a |
| 1123.0 | 18 | 7/10/17 | | | GRAY SILT AND CLAY WITH STONE FRAGMENTS | 224 | 0 | 5 | 7 | 40 | 48 | 30 | 11 | 17 | A-6a |
| | 20 | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| 1118.0 | 24 | | | | | | | | | | | | | | |
| 1116.5 | 26 | 10/14/16 | | | GRAY SILT AND CLAY WITH STONE FRAGMENTS | 225 | 0 | 6 | 10 | 37 | 47 | 29 | 11 | 15 | A-6a |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-61 Revised 9/95

## LOG OF BORING

Date Started 8/19/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/19/97 Water Elev.
Boring No. B-39 Station & Offset 1298+38, 80' LT. Surface Elev. 1145.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1145.0 | 0 | | | | | | | | | | | | | | |
| 1144.2 | | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1142.5 | 2 | | | | | | | | | | | | | | |
| | 4 | 9/11/14 | | | BROWN SANDY CLAY | 199 | 0 | 4 | 25 | 34 | 37 | 29 | 12 | 9 | A-6a |
| 1140.0 | 6 | 5/10/11 | | | BROWN SANDY SILT | 200 | 0 | 6 | 22 | 35 | 37 | 28 | 10 | 14 | A-4a |
| 1137.5 | 8 | 10/12/18 | | | BROWN SILT AND CLAY | 201 | 0 | 4 | 9 | 36 | 51 | 33 | 11 | 14 | A-6a |
| 1135.0 | 10 | 12/16/18 | | | BROWN SILT AND CLAY | 202 | 0 | 6 | 10 | 37 | 47 | 33 | 12 | 14 | A-6a |
| 1132.5 | 12 | 12/19/23 | | | BROWN SILT AND CLAY | 203 | 0 | 6 | 8 | 32 | 54 | 34 | 13 | 14 | A-6a |
| 1130.0 | 14 | 15/20/28 | | | BROWN SILT AND CLAY | 204 | 0 | 6 | 8 | 32 | 54 | 35 | 14 | 15 | A-6a |
| 1127.5 | 16 | 14/17/20 | | | BROWN AND GRAY SILT AND CLAY | 205 | 0 | 6 | 9 | 31 | 54 | 34 | 13 | 14 | A-6a |
| 1125.0 | 18 | 12/20/20 | | | BROWN AND GRAY SILT AND CLAY | 206 | 0 | 7 | 10 | 31 | 52 | 35 | 13 | 18 | A-6a |
| | 20 | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | |
| 1120.0 | 24 | | | | | | | | | | | | | | |
| 1118.5 | 26 | 8/10/16 | | | GRAY SANDY SILT | 207 | 0 | 10 | 18 | 31 | 41 | 25 | 9 | 14 | A-4a |

BOTTOM OF BORING

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-61 Revised 9/95

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF MATERIALS MANAGEMENT
1600 WEST BROAD ST. COLUMBUS, OH 43223

REVISED DATE | DATE 10/17/97
CHECKED M.R.S.
REVISED J.B.H.
TYPED J.B.H.

SUBSURFACE INVESTIGATION
SITE 4 NOISE WALL

MED-71-15.78

11 / 12

77
78

NMIO-NW12.DGN PH 11/4/99

## LOG OF BORING

Date Started 8/27/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/27/97
Boring No. B-40A Station & Offset 1398+38, 85' LT.

Water Elev. 1067.0'
Surface Elev. 1084.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1084.0 | 0 | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1083.2 | 2 | | | | | | | | | | | | | | |
| 1081.5 | 4 | 11/14/14 | | | BROWN SANDY CLAY WITH STONE FRAGMENTS | 252 | 0 | 12 | 20 | 35 | 33 | 30 | 13 | 14 | A-6a |
| 1079.0 | 6 | 4/6/9 | | | BROWN SANDY CLAY WITH STONE FRAGMENTS | 253 | 0 | 9 | 12 | 34 | 45 | 30 | 11 | 15 | A-6a |
| 1076.5 | 8 | 4/6/9 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 254 | 0 | 7 | 11 | 39 | 43 | 28 | 9 | 15 | A-4a |
| 1074.0 | 10 | 3/6/10 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 255 | 0 | 8 | 11 | 39 | 42 | 27 | 9 | 16 | A-4a |
| 1071.5 | 12 | 5/8/12 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 256 | 0 | 7 | 11 | 36 | 46 | 28 | 10 | 15 | A-4a |
| 1069.0 | 14 | 4/5/10 | | | GRAY SILT AND CLAY WITH STONE FRAGMENTS | 257 | 0 | 7 | 10 | 35 | 48 | 29 | 11 | 15 | A-6a |
| 1066.5 | 16 | 5/7/8 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 258 | 0 | 7 | 10 | 41 | 42 | 26 | 8 | 16 | A-4a |
| 1064.0 | 18 | 4/7/12 | | | GRAY SILTY SANDY GRAVEL WITH STONE FRAGMENTS | 259 | 44 | 10 | 8 | 24 | 14 | NP | NP | 15 | A-4a |
| | 20 | | | | TOP OF ROCK | | | | | | | | | | |
| 1059.0 | 22 | 50(0.3) | | | * | 260 | | | | | | | | 16 | VISUAL |
| 1058.7 | 24 | | | | BOTTOM OF BORING | | | | | | | | | | |

* BLACK ARENACEOUS, JOINTED SHALE W/CLAY SEAMS FROM 25.0' TO 25.3'

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-GLRevised 9/95

## LOG OF BORING

Date Started 8/26/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/26/97
Boring No. B-43 Station & Offset 1406+38, 85' LT.

Water Elev. 1058.0'
Surface Elev. 1076.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1076.0 | 0 | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1075.2 | 2 | | | | | | | | | | | | | | |
| 1073.5 | 4 | 7/10/12 | | | GRAY SILT AND CLAY WITH STONE FRAGMENTS | 235 | 0 | 4 | 10 | 33 | 53 | 35 | 13 | 15 | A-6a |
| 1071.0 | 6 | 5/9/12 | | | GRAY CLAYEY SILT W/ST. FRAGS. AND TRACE OF ORGANIC | 236 | 0 | 2 | 8 | 34 | 56 | 33 | 7 | 26 | A-4a |
| 1068.5 | 8 | 8/14/16 | | | BROWN SANDY CLAY WITH STONE FRAGMENTS | 237 | 0 | 9 | 21 | 35 | 35 | 33 | 14 | 17 | A-6a |
| 1066.0 | 10 | 5/15/23 | | | BROWN AND GRAY SILTY CLAY WITH STONE FRAGMENTS | 238 | 0 | 7 | 11 | 37 | 45 | 35 | 16 | 14 | A-6b |
| 1063.5 | 12 | 8/12/20 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 2339 | 0 | 7 | 22 | 31 | 40 | 22 | 7 | 14 | A-4a |
| 1061.0 | 14 | 8/10/15 | | | GRAY SANDY SILT WITH STONE FRAGMENTS | 240 | 0 | 9 | 18 | 32 | 41 | 26 | 10 | 18 | A-4a |
| 1058.5 | 16 | 8/6/8 | | | GRAY SANDY GRAVELLY SILT WITH STONE FRAGMENTS | 241 | 35 | 9 | 10 | 14 | 32 | 23 | 6 | 25 | A-4a |
| 1056.0 | 18 | | | | | | | | | | | | | | |
| 1054.5 | 20 | 16/30/62 | | | GRAY SILTY SANDY GRAVEL | 242 | 46 | 10 | 13 | 22 | 9 | NP | NP | 17 | A-2-4 |
| | | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-GLRevised 9/95

## LOG OF BORING

Date Started 8/26/97 Sampler: Type SS Dia. 1 3/8"
Date completed 8/26/97
Boring No. B-42 Station & Offset 1404+38, 85' LT.

Water Elev. 1058.0'
Surface Elev. 1078.0'

| Elev. | Depth | Std. Pen. (N) | Rec. ft | Loss ft | Description | Sample No. | Physical Characteristics: % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1078.0 | 0 | AUGERED | | | SOD | - | - | - | - | - | - | - | - | - | VISUAL |
| 1077.2 | 2 | | | | | | | | | | | | | | |
| 1075.5 | 4 | 5/9/14 | | | BROWN SILT AND CLAY WITH STONE FRAGMENTS | 243 | 0 | 5 | 10 | 41 | 44 | 32 | 12 | 15 | A-6a |
| 1073.0 | 6 | 9/12/20 | | | BROWN CLAYEY SILT WITH STONE FRAGMENTS | 244 | 0 | 7 | 11 | 34 | 48 | 30 | 9 | 15 | A-4a |
| 1070.5 | 8 | 7/12/17 | | | DARK BROWN CLAYEY SILT WITH STONE FRAGMENTS | 245 | 0 | 7 | 10 | 37 | 46 | 30 | 10 | 16 | A-4a |
| 1068.0 | 10 | 6/8/12 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 246 | 0 | 7 | 10 | 37 | 46 | 29 | 10 | 14 | A-4a |
| 1065.5 | 12 | 5/8/15 | | | GRAY CLAYEY SILT WITH STONE FRAGMENTS | 247 | 0 | 6 | 10 | 50 | 34 | 27 | 8 | 14 | A-4b |
| 1063.0 | 14 | 5/7/15 | | | GRAY SILT AND CLAY WITH STONE FRAGMENTS | 248 | 0 | 6 | 11 | 35 | 48 | 29 | 11 | 15 | A-6a |
| 1060.5 | 16 | 6/10/17 | | | GRAY SILTY SANDY GRAVEL | 249 | 44 | 11 | 10 | 24 | 11 | NP | NP | 14 | A-2-4 |
| 1058.0 | 18 | 12/12/9 | | | GRAY SILTY SANDY GRAVEL WITH STONE FRAGMENTS | 250 | 42 | 19 | 11 | 20 | 8 | NP | NP | 20 | A-2-4 |
| | 20 | | | | TOP OF ROCK (DRILLER'S DESCRIPTION) | | | | | | | | | | |
| 1053.0 | 22 | 60(0.5) | | | GRAY AND BROWN CLAYEY SAND AND ST. FRAGS. | 251 | - | - | - | - | - | - | - | 14 | VISUAL |
| 1052.5 | 24 | | | | BOTTOM OF BORING | | | | | | | | | | |

Particle Sizes: Agg= >2.00mm, Coarse Sand= 2.00-0.42mm Fine Sand= 0.42-0.074mm, Silt= 0.074-0.005mm, Clay= <0.005mm

Form TE-GLRevised 9/95

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF MATERIALS MANAGEMENT
1600 WEST BROAD ST. COLUMBUS, OH 43223

| REVISED DATE | DATE: 10/17/97 |
|---|---|
| | CHECKED: M.R.S. |
| | REVISED: J.B.H. |
| | TYPED: J.B.H. |

SUBSURFACE INVESTIGATION
SITE 6 NOISE WALL, NEW LOCATION

MED-71-15.78

12/12

78/78

NW10-NW12.DGN PH 11/4/99

**GENERAL:** THIS DRAWING PROVIDES DESIGN AND CONSTRUCTION DETAILS. THE PROJECT PLANS SHALL SHOW THE LOCATION OF SPLICES PLUS A REFERENCE TO THIS DRAWING FOR PERTINENT DETAILS AND NOTES. FOR SPLICING BEAMS OF DIFFERENT SIZES OR WHERE SPLICES ARE LOCATED AT BEAM BEND POINTS. THE PROJECT PLANS SHALL INCLUDE SUFFICIENT DETAILS SUPPLEMENTING THIS DRAWING TO COMPLETELY DESCRIBE THE SPLICE.

**DESIGN SPECIFICATIONS:** THIS DRAWING CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1992, INCLUDING THE 1993 INTERIM SPECIFICATIONS, AND THE OHIO DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, 1993.

**DESIGN METHOD:** LOAD FACTOR DESIGN

**ALLOWABLE STRESSES:**

| | | | |
|---|---|---|---|
| STRUCTURAL STEEL | ASTM | A-36 | YIELD STRESS = 36 KSI |
| | ASTM | A-572, A-588 | YIELD STRESS = 50 KSI |
| HIGH STRENGTH BOLTS | ASTM | A-325 | DESIGN SLIP RESISTANCE = 21 KSI |

(DESIGN SLIP RESISTANCE IS BASED ON THE AASHTO CLASS A MINIMUM SLIP COEFFICIENT OF 0.33)

**DESIGN:** FOR EACH STRUCTURE THE DESIGNER SHALL CHOOSE A SPLICE LOCATION AND DETERMINE THE MAXIMUM TOTAL STRESSES (MOMENT AND SHEAR) AT THAT POINT. IN CONTINUOUS SPANS, SPLICES PREFERABLY SHALL BE MADE NEAR POINTS OF CONTRAFLEXURE. THE SPLICE SHALL BE DESIGNED FOR NOT LESS THAN (1) THE AVERAGE OF THE REQUIRED STRENGTH AT THE POINT OF SPLICE AND THE STRENGTH OF THE MEMBER AT THE SAME POINT. (2) THE MODIFIED MAXIMUM STRESS SPECIFIED IN THE FATIGUE UNIT STRESSES NOTE, OR (3) 75% OF THE STATIC STRENGTH OF THE BEAM. THE SPLICE DESIGNS SHOWN HEREON ARE DESIGNED FOR (3). SEE NOTE FOR DESIGN LOADS. IF STRESSES (1) OR (2) ARE MORE CRITICAL, THIS DESIGN SHALL NOT BE USED AND SUCH SPLICES SHOULD BE DESIGNED TO MEET THE ESTABLISHED REQUIREMENTS. THE STATIC BEAM STRENGTH AT THE SPLICE IS BASED ON THE NET SECTION FOR BENDING AND THE GROSS SECTION FOR SHEAR USING THE BASIC UNIT STRESSES. WHEN SPLICING BEAMS OF DIFFERENT SIZES, THE SPLICE DESIGN SHALL BE BASED ON THE LIGHTER WEIGHT BEAM.

**DESIGN LOADS:** DESIGN MOMENT [KIP-IN] = $0.75 \left( \frac{Fy\ I}{d} \right)$

DESIGN SHEAR [KIP] = 0.75 (0.58 Fy Tw (d - 2 Tf))

WHERE:
- I = MOMENT OF INERTIA BASED ON THE BEAM'S GROSS-SECTION OR ON THE NET-SECTION IF THE FLANGE AREA REMOVED EXCEEDING 15% OF THE GROSS-SECTION IS DEDUCTED [$IN^4$] (SEE AASHTO 10.18.1.1)
- Fy = YIELD STRESS [KSI]
- d = MEMBER DEPTH [IN]
- Tw = WEB THICKNESS [IN]
- Tf = FLANGE THICKNESS [IN]

**FATIGUE STRESSES:** THIS SPLICE STANDARD HAS NOT BEEN EVALUATED FOR FATIGUE STRESSES. THE DESIGNER IS REQUIRED TO CALCULATE THE MAXIMUM MOMENT RANGE AND EVALUATE THE ACTUAL STRESSES AGAINST ALLOWABLES GIVEN IN AASHTO TABLE 10.3.1A.

**FASTENERS:**

| | | | | | |
|---|---|---|---|---|---|
| ASTM | A-36 | 1" DIAMETER HIGH STRENGTH BOLTS | ASTM | A-325 |
| ASTM | A-572, A-588 | 1⅛" DIAMETER HIGH STRENGTH BOLTS | ASTM | A-325 |

**SPLICE MATERIAL WEIGHT** PLUS THE WEIGHT OF FILLS, WHERE REQUIRED, SHALL BE INCLUDED WITH THE STRUCTURAL STEEL QUANTITY FOR PAYMENT.

**FABRICATION AND ASSEMBLY:** BEAM ENDS AT SPLICES SHALL BE CUT AND FIT AS PER PLAN. THE OPENING BETWEEN BEAM ENDS AFTER ASSEMBLY SHALL NOT EXCEED ¼".

**FILLS** SHOWN ON THE PROJECT PLANS AND SHOP DRAWINGS SHALL BE DIMENSIONED TO THE NEAREST 1/16 INCH IN THICKNESS, BUT NOT LESS THAN ⅛ INCH THICK, BASED ON THE DIMENSIONS FOR DETAILING AND INTENDED RELATIVE POSITION OF THE ABUTTING FLANGES AND WEBS TO BE SPLICED. HOWEVER, IN THE FINAL SHOP ASSEMBLY, FILLS SHALL BE FURNISHED WITH THICKNESSES SUFFICIENT TO COMPENSATE FOR ANY MISALIGNMENT OF ABUTTING FLANGES AND WEBS DUE TO STANDARD ROLLING MILL TOLERANCES. THE ACTUAL FILLS USED IN THE SPLICE SHALL BE SUCH AS TO COMPENSATE FOR DIFFERENCES IN TOTAL THICKNESS OR RELATIVE POSITIONS OF MORE THAN 1/16 INCH.

**VERTICAL CLEARANCE:** FOR GRADE SEPARATION STRUCTURES AN ALLOWANCE OF ⅜ INCHES PLUS THE THICKNESS OF THE OUTSIDE FLANGE SPLICE PLATE SHALL BE USED IN COMPUTING THE ACTUAL VERTICAL CLEARANCE UNDER A BEAM SPLICE.

DESIGN AGENCY
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
ENGINEER OF BRIDGES — DATE 12-19-94

REVISIONS

| DESIGNED | DRAWN | CHECKED | REVIEWED |
|---|---|---|---|
| GEA | SAM | SAM | |

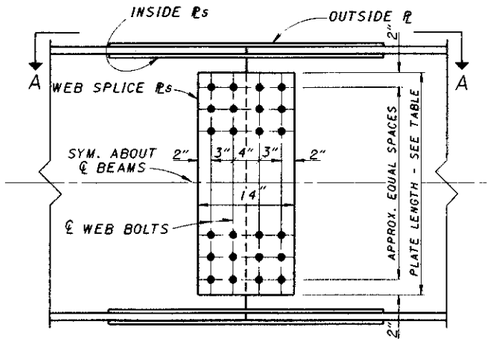
BS-1-93

STANDARD
# BOLTED BEAM SPLICE FOR STEEL BEAM BRIDGES

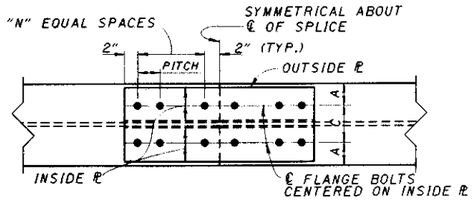
## BEAM SPLICE DETAILS

| BEAM | FLANGE PLATES TYPE | FLANGE PLATES OUTSIDE 2 REQ'D | FLANGE PLATES INSIDE 4 REQ'D | FLANGE BOLTS NUM. | N SPA. | PITCH | A | B | C | WEB SPLICE TYPE | WEB PLATES 2 REQ'D | WEB BOLTS No. | WEIGHT OF SPLICE MAT'RL lbs. * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W40X268 | B | 17½ x ⅝ x 4'-2" | 7 x ⅝ x 4'-2" | 64 | 7 | 3½ | 2⅝ | 3 | 7⅛ | B | 33¼ x ⅞ x 20 | 60 | 960 |
| W40X249 | B | 15½ x ⅝ x 4'-2" | 6 x ⅝ x 4'-2" | 64 | 7 | 3½ | 2⅝ | 2 | 7⅛ | B | 33¼ x ⅞ x 20 | 60 | 890 |
| W40X244 | B | 17½ x ⅞ x 4'-2" | 7 x ⅞ x 4'-2" | 64 | 7 | 3½ | 2⅝ | 3 | 7⅛ | B | 33¼ x ⅞ x 20 | 60 | 910 |
| W40X221 | B | 17½ x ½ x 3'-2" | 7 x ½ x 3'-2" | 48 | 5 | 3½ | 2⅝ | 3 | 7⅛ | B | 33¼ x ⅞ x 20 | 60 | 720 |
| W40X215 | B | 15½ x ⅞ x 4'-2" | 6 x ⅞ x 4'-2" | 64 | 7 | 3½ | 2⅝ | 2 | 7⅛ | B | 33¼ x ½ x 20 | 60 | 820 |
| W40X199 | B | 15½ x ½ x 3'-2" | 6 x ½ x 3'-2" | 48 | 5 | 3½ | 2⅝ | 2 | 7⅛ | B | 33¼ x ½ x 20 | 60 | 650 |
| W40X192 | B | 17½ x ⅝ x 3'-2" | 7 x ⅝ x 3'-2" | 48 | 5 | 3½ | 2⅝ | 3 | 7⅛ | B | 33¼ x ⅞ x 20 | 60 | 630 |
| W40X183 | A | 11½ x ⅝ x 2'-8" | 4 x ⅝ x 2'-8" | 40 | 4 | 3½ | 2⅝ | - | 7⅛ | B | 33¼ x ½ x 20 | 60 | 560 |
| W40X167 | A | 11½ x ½ x 2'-2" | 4 x ½ x 2'-2" | 32 | 3 | 3½ | 2⅝ | - | 7⅛ | B | 33¼ x ½ x 20 | 60 | 470 |
| W40X149 | A | 11½ x 7⁄16 x 2'-2" | 4 x 7⁄16 x 2'-2" | 32 | 3 | 3½ | 2⅜ | - | 7 | B | 33¼ x ½ x 20 | 60 | 460 |
| W36X300 | B | 16 x ¾ x 6'-3½" | 6½ x ¾ x 6'-3½" | 80 | 9 | 3¾ | 2⅝ | 2½ | 7 | C | 31 x 1⅜ x 26 | 80 | 1510 |
| W36X280 | B | 16 x 11⁄16 x 5'-½" | 6½ x 11⁄16 x 5'-½" | 64 | 7 | 3¾ | 2⅝ | 2½ | 7 | B | 31 x 11⁄16 x 20 | 60 | 1120 |
| W36X260 | B | 16 x ⅝ x 5'-½" | 6½ x ⅝ x 5'-½" | 64 | 7 | 3¾ | 2¼ | 2½ | 7 | B | 31 x 11⁄16 x 20 | 60 | 1060 |
| W36X245 | B | 16 x 9⁄16 x 5'-½" | 6½ x 9⁄16 x 5'-½" | 64 | 7 | 3¾ | 2⅝ | 2½ | 6⅞ | B | 31 x ⅝ x 20 | 60 | 970 |
| W36X230 | B | 16 x 9⁄16 x 5'-½" | 6½ x 9⁄16 x 5'-½" | 64 | 7 | 3¾ | 2⅝ | 2½ | 6⅞ | B | 31 x ⅝ x 20 | 60 | 940 |
| W36X210 | A | 12 x ⅝ x 3'-0" | 4½ x ⅝ x 3'-0" | 40 | 4 | 3½ | 2⅝ | - | 7 | B | 31 x 11⁄16 x 20 | 60 | 670 |
| W36X194 | A | 12 x 9⁄16 x 3'-0" | 4½ x 9⁄16 x 3'-0" | 40 | 4 | 3½ | 2⅝ | - | 6⅞ | B | 31 x ⅝ x 20 | 60 | 620 |
| W36X182 | A | 12 x 9⁄16 x 3'-0" | 4½ x 9⁄16 x 3'-0" | 40 | 4 | 3½ | 2⅝ | - | 6⅞ | B | 31 x ⅝ x 20 | 60 | 600 |
| W36X170 | A | 12 x ½ x 2'-5" | 4½ x ½ x 2'-5" | 32 | 3 | 3½ | 2⅝ | - | 6⅞ | B | 31 x 9⁄16 x 20 | 60 | 510 |
| W36X160 | A | 12 x ½ x 2'-5" | 4½ x ½ x 2'-5" | 32 | 3 | 3½ | 2⅝ | - | 6¾ | B | 31 x 9⁄16 x 20 | 60 | 500 |
| W36X150 | A | 11¾ x 7⁄16 x 2'-5" | 4½ x 7⁄16 x 2'-5" | 32 | 3 | 3½ | 2⅝ | - | 6¾ | A | 31 x 1⁄2 x 14 | 40 | 380 |
| W36X135 | A | 11¾ x 7⁄16 x 1'-10" | 4½ x 7⁄16 x 1'-10" | 24 | 2 | 3½ | 2⅝ | - | 6¾ | A | 31 x 7⁄16 x 14 | 40 | 310 |
| W33X263 | B | 15½ x 11⁄16 x 4'-9" | 6½ x 11⁄16 x 4'-9" | 64 | 7 | 3½ | 2⅜ | 2½ | 6⅜ | C | 28 x 1⅜ x 26 | 72 | 1150 |
| W33X241 | B | 15½ x ⅝ x 4'-9" | 6½ x ⅝ x 4'-9" | 64 | 7 | 3½ | 2¼ | 2½ | 6⅜ | C | 28 x 1⅜ x 26 | 72 | 1090 |
| W33X221 | B | 15½ x ⅝ x 4'-9" | 6½ x ⅝ x 4'-9" | 64 | 7 | 3½ | 2⅜ | 2½ | 6⅜ | B | 28 x 11⁄16 x 20 | 54 | 890 |
| W33X201 | B | 15½ x ½ x 3'-7" | 6½ x ½ x 3'-7" | 48 | 5 | 3½ | 2¼ | 2½ | 6¼ | B | 28 x ⅝ x 20 | 54 | 680 |
| W33X169 | A | 11 x 9⁄16 x 3'-0" | 4½ x 9⁄16 x 3'-0" | 40 | 4 | 3½ | 2⅜ | - | 6¾ | B | 28 x ⅝ x 20 | 54 | 570 |
| W33X152 | A | 11 x ½ x 2'-5" | 4½ x ½ x 2'-5" | 32 | 3 | 3½ | 2 1⁄16 | - | 6¾ | B | 28 x 9⁄16 x 20 | 54 | 460 |
| W33X141 | A | 11 x 7⁄16 x 2'-5" | 4½ x 7⁄16 x 2'-5" | 32 | 3 | 3½ | 2 1⁄16 | - | 6⅝ | B | 28 x 9⁄16 x 20 | 54 | 460 |
| W33X130 | A | 11 x 7⁄16 x 1'-10" | 4½ x 7⁄16 x 1'-10" | 24 | 2 | 3½ | 2 1⁄16 | - | 6⅝ | A | 28 x 1⁄2 x 14 | 36 | 300 |
| W33X118 | A | 11 x ⅜ x 1'-10" | 4½ x ⅜ x 1'-10" | 24 | 2 | 3½ | 2 1⁄16 | - | 6⅝ | A | 28 x 7⁄16 x 14 | 36 | 280 |
| W30X211 | B | 15 x 9⁄16 x 5'-½" | 6 x 9⁄16 x 5'-½" | 64 | 7 | 3½ | 2 1⁄16 | 2 | 6¼ | B | 25 x ⅝ x 20 | 48 | 910 |
| W30X191 | A | 15 x ½ x 3'-7" | 6 x ½ x 3'-7" | 48 | 5 | 3½ | 3 1⁄16 | - | 8⅛ | B | 25 x 11⁄16 x 20 | 48 | 670 |
| W30X173 | A | 14⅜ x ½ x 3'-0" | 6 x ½ x 3'-0" | 40 | 4 | 3½ | 3 1⁄16 | - | 8⅛ | B | 25 x ⅝ x 20 | 48 | 570 |
| W30X148 | A | 10 x 9⁄16 x 2'-5" | 4 x 9⁄16 x 2'-5" | 32 | 3 | 3½ | 2¼ | - | 6 | B | 25 x ⅝ x 20 | 48 | 460 |
| W30X132 | A | 10 x ½ x 2'-5" | 4 x ½ x 2'-5" | 32 | 3 | 3½ | 2⅜ | - | 6⅛ | B | 25 x 9⁄16 x 20 | 48 | 420 |
| W30X124 | A | 10 x 7⁄16 x 1'-10" | 4 x 7⁄16 x 1'-10" | 24 | 2 | 3½ | 2¼ | - | 6 | B | 25 x 9⁄16 x 20 | 48 | 370 |
| W30X116 | A | 10 x 7⁄16 x 1'-10" | 4 x 7⁄16 x 1'-10" | 24 | 2 | 3½ | 2¼ | - | 6 | A | 25 x ½ x 14 | 32 | 280 |
| W30X108 | A | 10 x ⅜ x 1'-10" | 4 x ⅜ x 1'-10" | 24 | 2 | 3½ | 2¼ | - | 6 | A | 25 x 7⁄16 x 14 | 32 | 260 |
| W30X99 | A | 10 x ⅜ x 1'-10" | 4 x ⅜ x 1'-10" | 24 | 2 | 3½ | 2¼ | - | 6 | A | 25 x 7⁄16 x 14 | 32 | 260 |
| W30X90 | A | 10 x ⅜ x 1'-10" | 4 x ⅜ x 1'-10" | 24 | 2 | 3½ | 2⅜ | - | 6 | A | 25 x 11⁄16 x 14 | 32 | 260 |
| W27X194 | A | 14 x 9⁄16 x 3'-7" | 5½ x 9⁄16 x 3'-7" | 48 | 5 | 3½ | 3¼ | - | 7½ | C | 22 x 1⅜ x 26 | 56 | 770 |
| W27X178 | A | 14 x ½ x 3'-7" | 5½ x ½ x 3'-7" | 48 | 5 | 3½ | 3¼ | - | 7⅞ | B | 22 x ¾ x 20 | 42 | 630 |
| W27X161 | A | 14 x ½ x 3'-0" | 5½ x ½ x 3'-0" | 40 | 4 | 3½ | 3¼ | - | 7½ | B | 22 x 11⁄16 x 20 | 42 | 540 |
| W27X146 | A | 13¾ x 7⁄16 x 3'-0" | 5½ x 7⁄16 x 3'-0" | 40 | 4 | 3½ | 3¼ | - | 7½ | B | 22 x ⅝ x 20 | 42 | 500 |
| W27X129 | A | 10 x ½ x 2'-5" | 4 x ½ x 2'-5" | 32 | 3 | 3½ | 2 1⁄16 | - | 5⅞ | B | 22 x ⅝ x 20 | 42 | 410 |
| W27X114 | A | 10 x 7⁄16 x 1'-10" | 4 x 7⁄16 x 1'-10" | 24 | 2 | 3½ | 2⅛ | - | 5⅞ | B | 22 x 9⁄16 x 20 | 42 | 330 |
| W27X102 | A | 10 x ⅜ x 1'-10" | 4 x ⅜ x 1'-10" | 24 | 2 | 3½ | 2 1⁄16 | - | 5⅞ | A | 22 x 1⁄2 x 14 | 28 | 250 |
| W27X94 | A | 9¾ x ⅜ x 1'-10" | 4 x ⅜ x 1'-10" | 24 | 2 | 3½ | 2 1⁄16 | - | 5⅞ | A | 22 x 7⁄16 x 14 | 28 | 240 |
| W27X84 | A | 9¾ x ⅜ x 1'-10" | 4 x ⅜ x 1'-10" | 24 | 2 | 3½ | 2 1⁄16 | - | 5⅞ | A | 22 x 7⁄16 x 14 | 28 | 240 |
| W24X162 | A | 12½ x 9⁄16 x 3'-0" | 5 x 9⁄16 x 3'-0" | 40 | 4 | 3½ | 2⅝ | - | 7⅛ | C | 19 x 1⅛ x 26 | 48 | 620 |
| W24X146 | A | 12½ x ½ x 3'-0" | 5 x ½ x 3'-0" | 40 | 4 | 3½ | 2⅛ | - | 7⅛ | B | 19 x ¾ x 20 | 36 | 490 |

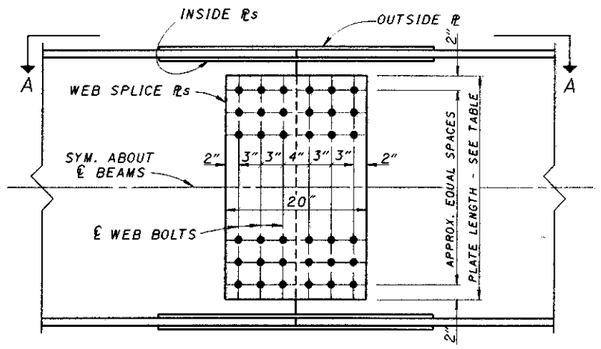
* TABULATED WEIGHTS ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THEY INCLUDE AN ALLOWANCE FOR WEIGHT OF BOLTS AND WASHERS.



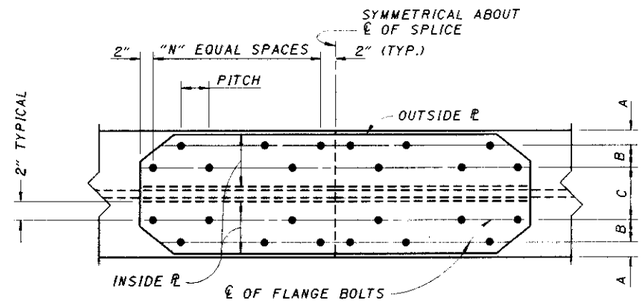

BEAM SPLICE DETAIL
WEB SPLICE - TYPE A



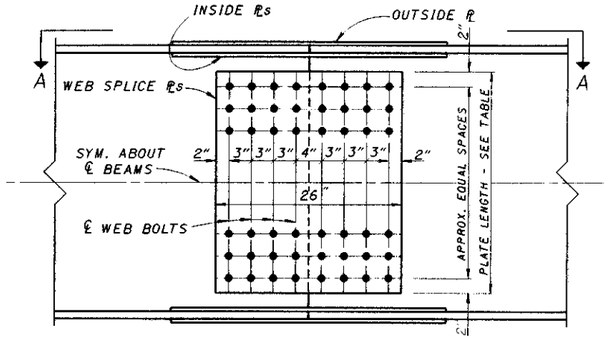

VIEW A-A
FLANGE SPLICE - TYPE A



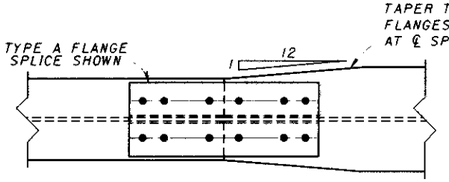

BEAM SPLICE DETAIL
WEB SPLICE - TYPE B



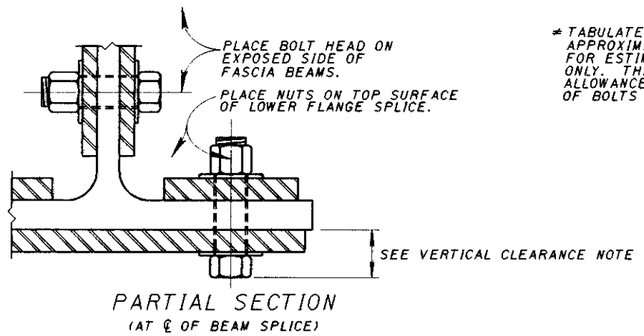

VIEW A-A
FLANGE SPLICE - TYPE B




BEAM SPLICE DETAIL
WEB SPLICE - TYPE C




VIEW A-A
SPLICE DETAIL FOR BEAMS HAVING DIFFERENT FLANGE WIDTHS




PARTIAL SECTION
(AT ℄ OF BEAM SPLICE)

NOTE: ALL SHAPES AND PLATES SHALL BE DESIGNATED (CVN), AND SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF CMS.

NOTE: ALL FASTENERS ARE 1" DIAMETER HIGH STRENGTH BOLTS, ASTM A-325

DESIGN AGENCY
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
ENGINEER OF BRIDGES — DATE 12-19-94

DESIGNED GEA | DRAWN SAM | CHECKED SAM | REVIEWED

REVISIONS

STANDARD
# BOLTED BEAM SPLICE
FOR STEEL BEAM BRIDGES
(FOR 36 KSI STEEL)

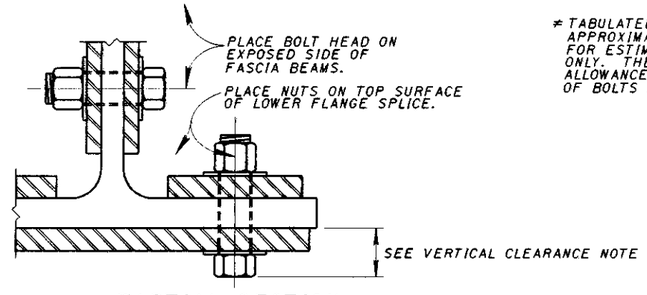
BS-1-93

2 / 3

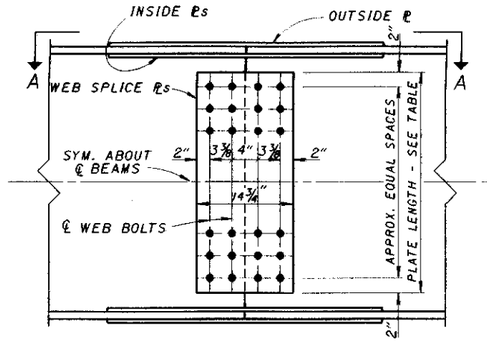
## BEAM SPLICE DETAILS

| BEAM | FLANGE PLATES TYPE | FLANGE PLATES OUTSIDE 2 REQ'D | FLANGE PLATES INSIDE 4 REQ'D | FLANGE BOLTS NUM. | N SPA. | PITCH | A | B | C | WEB SPLICE TYPE | WEB PLATES 2 REQ'D | WEB BOLTS No. | WEIGHT OF SPLICE MAT'RL lbs. * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W40X268 | B | 17½x⅝x5'-11" | 7x⅝x5'-11" | 80 | 9 | 3½ | 2⅝ | 3 | 7⅛ | C | 33x11/16x28¼ | 72 | 1390 |
| W40X249 | B | 15½x⅝x4'-9" | 6x⅝x4'-9" | 64 | 7 | 3½ | 2⅝ | 2 | 7⅛ | C | 33x11/16x28¼ | 72 | 1130 |
| W40X244 | B | 17½x9/16x4'-9" | 7x9/16x4'-9" | 64 | 7 | 3½ | 2⅝ | 3 | 7⅛ | C | 33x11/16x28¼ | 72 | 1150 |
| W40X221 | B | 17½x½x4'-9" | 7x½x4'-9" | 64 | 7 | 3½ | 2⅝ | 3 | 7⅛ | C | 33x11/16x28¼ | 72 | 1080 |
| W40X215 | B | 15½x9/16x4'-9" | 6x9/16x4'-9" | 64 | 7 | 3½ | 2⅝ | 2 | 7⅛ | C | 33x⅝x28¼ | 72 | 1040 |
| W40X199 | B | 15½x½x3'-7" | 6x½x3'-7" | 48 | 5 | 3½ | 2⅝ | 2 | 7⅛ | C | 33x⅝x28¼ | 72 | 850 |
| W40X192 | B | 17½x⅜x3'-7" | 7x⅜x3'-7" | 48 | 5 | 3½ | 2⅝ | 3 | 7⅛ | C | 33x11/16x28¼ | 72 | 840 |
| W40X183 | A | 11½x⅝x3'-0" | 4x⅝x3'-0" | 40 | 4 | 3½ | 2⅝ | - | 7⅛ | B | 33x9/16x21½ | 54 | 620 |
| W40X167 | A | 11½x½x3'-0" | 4x½x3'-0" | 40 | 4 | 3½ | 2⅝ | - | 7⅛ | B | 33x9/16x21½ | 54 | 570 |
| W40X149 | A | 11½x7/16x2'-5" | 4x7/16x2'-5" | 32 | 3 | 3½ | 2⅝ | - | 7 | B | 33x9/16x21½ | 54 | 500 |
| W36X300 | B | 16x¾x6'-3½" | 6½x¾x6'-3½" | 80 | 9 | 3¾ | 2⅝ | 2½ | 7 | C | 31x7/16x28¼ | 72 | 1600 |
| W36X280 | B | 16x¾x6'-3½" | 6½x¾x6'-3½" | 80 | 9 | 3¾ | 2⅝ | 2½ | 7 | C | 31x15/16x28¼ | 72 | 1480 |
| W36X260 | B | 16x⅝x6'-3½" | 6½x⅝x6'-3½" | 80 | 9 | 3¾ | 2¼ | 2½ | 7 | C | 31x⅞x28¼ | 72 | 1380 |
| W36X256 | A | 12x15/16x4'-2" | 4½x15/16x4'-2" | 56 | 6 | 3½ | 2⅝ | - | 7⅛ | C | 31x7/16x28¼ | 72 | 1090 |
| W36X245 | B | 16x⅝x5'-½" | 6½x⅝x5'-½" | 64 | 7 | 3¾ | 2⅝ | 2½ | 6⅞ | C | 31x¾x28¼ | 72 | 1170 |
| W36X232 | A | 12x11/16x4'-2" | 4½x11/16x4'-2" | 56 | 6 | 3½ | 2⅝ | - | 7 | C | 31x15/16x28¼ | 72 | 1010 |
| W36X230 | B | 16x⅝x5'-½" | 6½x⅝x5'-½" | 64 | 7 | 3¾ | 2⅝ | 2½ | 6⅞ | C | 31x11/16x28¼ | 72 | 1100 |
| W36X210 | A | 12x⅝x3'-7" | 4½x⅝x3'-7" | 48 | 5 | 3½ | 2⅝ | - | 7 | C | 31x13/16x28¼ | 72 | 910 |
| W36X194 | A | 12x⅝x3'-0" | 4½x⅝x3'-0" | 40 | 4 | 3½ | 2⅝ | - | 6⅞ | C | 31x¾x28¼ | 72 | 780 |
| W36X182 | A | 12x9/16x3'-0" | 4½x9/16x3'-0" | 40 | 4 | 3½ | 2⅝ | - | 6⅞ | C | 31x11/16x28¼ | 72 | 740 |
| W36X170 | A | 12x½x3'-0" | 4½x½x3'-0" | 40 | 4 | 3½ | 2⅝ | - | 6⅞ | B | 31x9/16x21½ | 54 | 570 |
| W36X160 | A | 12x½x2'-5" | 4½x½x2'-5" | 32 | 3 | 3½ | 2⅝ | - | 6¾ | B | 31x9/16x21½ | 54 | 510 |
| W36X150 | A | 11⅞x½x2'-5" | 4½x½x2'-5" | 32 | 3 | 3½ | 2⅝ | - | 6¾ | B | 31x9/16x21½ | 54 | 510 |
| W36X135 | A | 11⅞x7/16x2'-5" | 4½x7/16x2'-5" | 32 | 3 | 3½ | 2⅝ | - | 6¾ | B | 31x½x21½ | 54 | 460 |
| W33X263 | B | 15½x11/16x5'-11" | 6½x11/16x5'-11" | 80 | 9 | 3½ | 2⅜ | 2½ | 6⅜ | C | 29⅜x15/16x28¼ | 64 | 1350 |
| W33X241 | B | 15½x⅝x4'-9" | 6½x⅝x4'-9" | 64 | 7 | 3½ | 2¼ | 2½ | 6⅜ | C | 29⅜x¾x28¼ | 64 | 1100 |
| W33X221 | B | 15½x9/16x4'-9" | 6½x9/16x4'-9" | 64 | 7 | 3½ | 2⅜ | 2½ | 6⅜ | C | 29⅜x11/16x28¼ | 64 | 1010 |
| W33X201 | B | 15½x½x4'-9" | 6½x½x4'-9" | 64 | 7 | 3½ | 2¼ | 2½ | 6¼ | C | 29⅜x11/16x28¼ | 64 | 980 |
| W33X169 | A | 11x15/16x3'-0" | 4½x15/16x3'-0" | 40 | 4 | 3½ | 2⅜ | - | 6¾ | B | 29⅜x15/16x21½ | 48 | 570 |
| W33X152 | A | 11x½x2'-5" | 4½x½x2'-5" | 32 | 3 | 3½ | 2⅛ | - | 6¾ | B | 29⅜x½x21½ | 48 | 470 |
| W33X141 | A | 11x½x2'-5" | 4½x½x2'-5" | 32 | 3 | 3½ | 2⅛ | - | 6⅝ | B | 29⅜x½x21½ | 48 | 460 |
| W33X130 | A | 11x7/16x2'-5" | 4½x7/16x2'-5" | 32 | 3 | 3½ | 2⅛ | - | 6⅝ | B | 29⅜x½x21½ | 48 | 440 |
| W33X118 | A | 11x⅜x1'-10" | 4½x⅜x1'-10" | 24 | 2 | 3½ | 2⅛ | - | 6⅝ | B | 29⅜x½x21½ | 48 | 380 |
| W30X211 | B | 15x9/16x4'-9" | 6x9/16x4'-9" | 64 | 7 | 3½ | 2 1/16 | 2 | 6¼ | C | 26½x¾x28¼ | 56 | 990 |
| W30X191 | B | 15x½x3'-7" | 6x½x3'-7" | 48 | 5 | 3½ | 2 1/16 | 2 | 6⅛ | C | 26½x11/16x28¼ | 56 | 780 |
| W30X173 | B | 14⅞x½x3'-7" | 6x½x3'-7" | 48 | 5 | 3½ | 2 1/16 | 2 | 6⅛ | C | 26½x⅝x28¼ | 56 | 730 |
| W30X148 | A | 10x⅝x2'-5" | 4x⅝x2'-5" | 32 | 3 | 3½ | 2¼ | - | 6 | B | 26½x9/16x21½ | 42 | 460 |
| W30X132 | A | 10x½x2'-5" | 4x½x2'-5" | 32 | 3 | 3½ | 2⅜ | - | 6⅛ | B | 26½x½x21½ | 42 | 420 |
| W30X124 | A | 10x7/16x2'-5" | 4x7/16x2'-5" | 32 | 3 | 3½ | 2¼ | - | 6 | B | 26½x½x21½ | 42 | 410 |
| W30X116 | A | 10x7/16x1'-10" | 4x7/16x1'-10" | 24 | 2 | 3½ | 2¼ | - | 6 | B | 26½x½x21½ | 42 | 360 |
| W30X108 | A | 10x⅜x1'-10" | 4x⅜x1'-10" | 24 | 2 | 3½ | 2¼ | - | 6 | B | 26½x½x21½ | 42 | 350 |
| W30X99 | A | 10x⅜x1'-10" | 4x⅜x1'-10" | 24 | 2 | 3½ | 2¼ | - | 6 | B | 26½x7/16x21½ | 42 | 330 |
| W30X90 | A | 10x⅜x1'-10" | 4x⅜x1'-10" | 24 | 2 | 3½ | 2 3/16 | - | 6 | A | 26½x⅜x14¾ | 28 | 250 |
| W27X194 | A | 14x9/16x4'-2" | 5½x9/16x4'-2" | 56 | 6 | 3½ | 3¼ | - | 7½ | C | 24x¾x28¼ | 48 | 850 |
| W27X178 | A | 14x9/16x3'-7" | 5½x9/16x3'-7" | 48 | 5 | 3½ | 3¼ | - | 7⅝ | C | 24x11/16x28¼ | 48 | 730 |
| W27X161 | A | 14x½x3'-0" | 5½x½x3'-0" | 40 | 4 | 3½ | 3¼ | - | 7½ | C | 24x⅝x28¼ | 48 | 630 |
| W27X146 | A | 13⅞x7/16x3'-0" | 5½x7/16x3'-0" | 40 | 4 | 3½ | 3¼ | - | 7½ | B | 24x½x21½ | 36 | 490 |
| W27X129 | A | 10x½x2'-5" | 4x½x2'-5" | 32 | 3 | 3½ | 2 1/16 | - | 5⅞ | B | 24x½x21½ | 36 | 400 |
| W27X114 | A | 10x½x1'-10" | 4x½x1'-10" | 24 | 2 | 3½ | 2⅛ | - | 5⅞ | B | 24x½x21½ | 36 | 340 |
| W27X102 | A | 10x⅜x1'-10" | 4x⅜x1'-10" | 24 | 2 | 3½ | 2 1/16 | - | 5⅞ | B | 24x7/16x21½ | 36 | 310 |
| W27X94 | A | 9⅞x⅜x1'-10" | 4x⅜x1'-10" | 24 | 2 | 3½ | 2 1/16 | - | 5⅞ | B | 24x7/16x21½ | 36 | 300 |
| W27X84 | A | 9⅞x⅜x1'-10" | 4x⅜x1'-10" | 24 | 2 | 3½ | 2 1/16 | - | 5⅞ | A | 24x⅜x14¾ | 24 | 230 |
| W24X162 | A | 12½x9/16x3'-7" | 5x9/16x3'-7" | 48 | 5 | 3½ | 2 5/16 | - | 7⅛ | C | 20⅞x¾x28¼ | 48 | 690 |
| W24X146 | A | 12½x½x3'-0" | 5x½x3'-0" | 40 | 4 | 3½ | 2⅞ | - | 7⅛ | B | 20⅞x⅝x21½ | 36 | 510 |

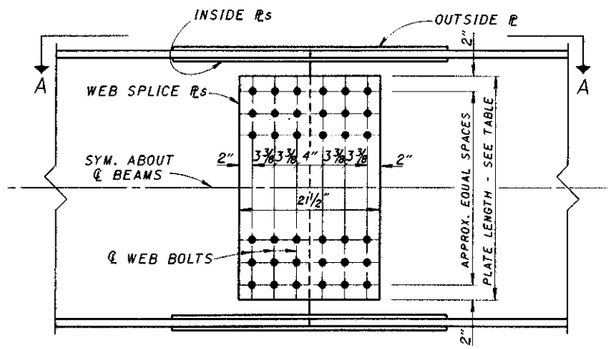
* TABULATED WEIGHTS ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THEY INCLUDE AN ALLOWANCE FOR WEIGHT OF BOLTS AND WASHERS.



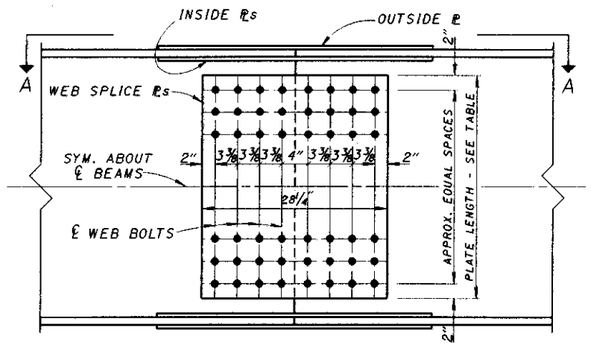

PARTIAL SECTION
(AT ℄ OF BEAM SPLICE)



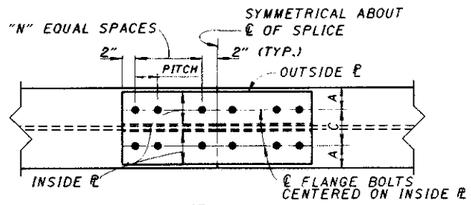

BEAM SPLICE DETAIL
WEB SPLICE - TYPE A



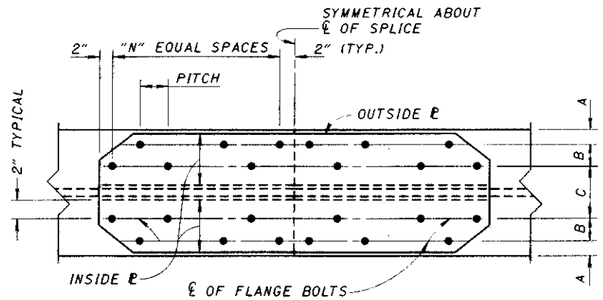

BEAM SPLICE DETAIL
WEB SPLICE - TYPE B



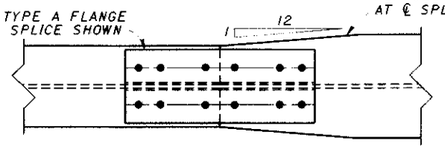

BEAM SPLICE DETAIL
WEB SPLICE - TYPE C




VIEW A-A
FLANGE SPLICE - TYPE A




VIEW A-A
FLANGE SPLICE - TYPE B




VIEW A-A
SPLICE DETAIL FOR BEAMS HAVING DIFFERENT FLANGE WIDTHS

NOTE: ALL SHAPES AND PLATES SHALL BE DESIGNATED (CVN), AND SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF CMS.

NOTE: ALL FASTENERS ARE 1⅛" DIAMETER HIGH STRENGTH BOLTS, ASTM A-325

DESIGN AGENCY
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Richard L. Engel — 12-19-94
ENGINEER OF BRIDGES — DATE

| REVISIONS | DESIGNED GEA | CHECKED SAM | REVIEWED |
|---|---|---|---|
| | DRAWN SAM | | |

STANDARD
BOLTED BEAM SPLICE
FOR STEEL BEAM BRIDGES
(FOR 50 KSI STEEL)

BS-1-93

3 / 3