MICROFILMED
FEB 2 1994

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
GUE-70-0.00
(UNION) WESTLAND, ADAMS AND CAMBRIDGE TOWNSHIPS
(MUSKINGUM) GUERNSEY COUNTIES

CALC. BY D.M. DATE 9-9-89
CHECK BY J.W.C. DATE 12-12-89

GUE-70-0.00	OHIO	1 / 88
	FHWA REGION 5	
IR-70-7(105) 176	FEDERAL PROJECT	

DESIGN DESIGNATION

Current Year ADT (1989)	=	22,420
Design Year ADT (2009)	=	31,390
D H V (2009)	=	3,370
D (Directional Distribution)	=	Equal
T (Percent B & C Trucks)	=	18%
V (Design Speed)	=	70 M.P.H.
Legal Speed	=	65 M.P.H.
Funcational Classification	=	Interstate

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.

CONVENTIONAL SIGNS

County Line
Township Line
Section Line
Corporation Line
Fence Line (existing) (proposed)
Center Line
Trees, Stumps, (to be removed)
Utility Poles: Telephone, Power, Light

Limited Access (only) LA
Right of Way (only) RW
Limited Access & Right of Way LA&RW
Existing Right of Way
Property Line (in existing fence)
Railroad or
Guardrail (existing) (proposed)

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LINE DATA

BEGIN PROJECT STA. 759 + 07

EQUATION STA. 958 + 66.75 BACK =
STA. 958 + 03.11 AHEAD

EQUATION STA. 1062 + 80.00 BACK =
STA. 28 + 50.00

END PROJECT STA. 48 + 00
NET LENGTH OF PROJECT = 32,386.64 LIN.FT. OR 6.134 MILES

BEGIN WORK STA. 757 + 57

EQUATION: STA. 958 + 66.75 BACK =
STA. 958 + 03.11 AHEAD

EQUATION: STA. 1062 + 80.00 BACK =
STA. 28 + 50.00

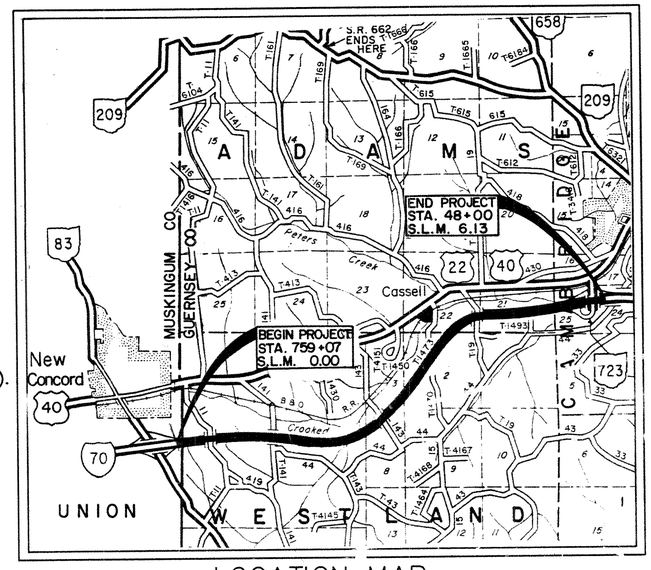
END WORK STA. 51 + 15
NET LENGTH OF WORK = 32,851.64 LIN.FT. OR 6.222 MILES

Plan Prepared By:
DISTRICT NO.5
OHIO DEPARTMENT OF TRANSPORTATION

Project GUE-70-0.00
Date of Letting _____ 19__ Contract No.____

G0700001 8/10/89

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
Call 800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY



LOCATION MAP
SCALE IN MILES
0 1 2 3 4

Portion to be Improved
State & Federal Routes
Other Roads

SCALFS

Plan (Sheets 34 – 38) 0' 100' 200'
Plan (Sheets 39 – 42) 0' 50' 100'
Plan (Sheet 59) 0' 40' 80'
Plan (Sheet 43) 0' 20' 40'
Profile Horizontal 0' 50' 100', Vertical 0' 5' 10'
Cross Section Horzt 0' 5' 10', Vertical 0' 5' 10'

SUPPLEMENTAL SPECIFICATIONS			
836	11-12-85	905	5-2-89
847	10-17-83	803	10-2-89
947	10-17-83		
802	5-4-88	931	6-18-85
952	12-14-88	850	5-31-88
862	12-16-88		
962	1-23-90		

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS							
BP-2	1-11-85	MC-9	1-30-84	MT-99.10	11-14-86	EXJ-4-87	1-5-89
BP-3	12-6-76	MC-9A	1-11-85	MT-99.20	4-29-88	BR-1	5-29-79
BP-4	10-1-87	MC-11	8-1-78	MT-95.30	10-10-88	SD-1-69 Sht. 1-3	6-12-69
BP-5	10-1-87	MC-4	7-26-76	TC-35.10	8-29-84		
BP-10	1-30-84	CB-5	11-10-83	TC-61.10	4-5-82		
BP-13	1-23-90	CB-8	11-10-83	TC-65.10	2-26-82		
GR-1	1-11-85	CB-458A	5-1-79	TC-65.11	4-5-82		
GR-2B	2-5-82	HW-4B	4-1-80	TC-72.20	2-26-82		
GR-3	2-22-90						
GR-4	2-5-82	BP-1	6-1-65				
GR-4A	1-30-84	MH-1	6-1-65				
GR-5	2-5-82						
GR-6	2-5-82						
GR-7	2-5-82						

IR-70-7 (105) 176

1989 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 these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

H-9

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (I) OF THE REVISED CODE OF OHIO, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

Approved Harold E. Hitchcock
Date 12/19/89 District Depuly Director of Transportation

Approved B.D. Frankhouser
Date 1-17-90 Engineer, Bureau of Bridges and Structural Design

Approved Theodore J. Stitt
Date 3/7/90 Chief Engineer, Planning & Design

Approved Gerald B. Hurst
Date 3/7/90 Director, Department of Transportation

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED

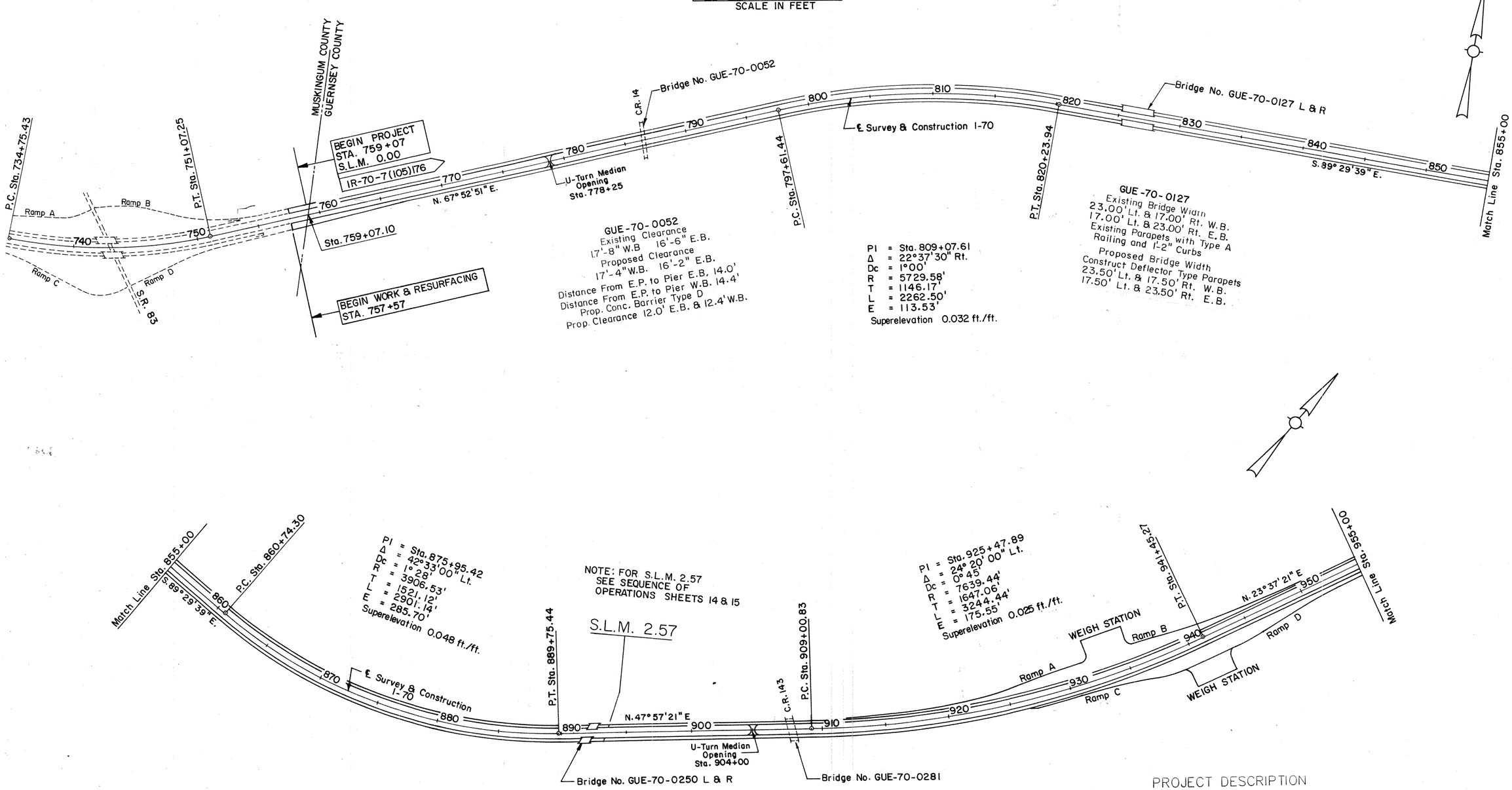
DIVISION ADMINISTRATOR _____ DATE _____

SCHEMATIC PLAN

CALC. BY DA DATE 2-7-89	GUE-70-0.00	OHIO
CHKD. BY JWC DATE 12-12-89		FHWA REGION 5

2
88

0 400 800 1200
SCALE IN FEET



PI = Sta. 809+07.61
Δ = 22° 37' 30" Rt.
Dc = 1° 00'
R = 5729.58'
T = 1146.17'
L = 2262.50'
E = 113.53'
Superelevation 0.032 ft./ft.

PI = Sta. 875+95.42
Δ = 42° 33' 00" Lt.
Dc = 1° 28'
R = 3906.53'
T = 1521.12'
L = 2901.14'
E = 285.70'
Superelevation 0.048 ft./ft.

PI = Sta. 925+47.89
Δ = 24° 20' 00" Lt.
Dc = 0° 45'
R = 7639.44'
T = 1647.06'
L = 3244.44'
E = 175.55'
Superelevation 0.025 ft./ft.

NOTE: FOR S.L.M. 2.57
SEE SEQUENCE OF
OPERATIONS SHEETS 14 & 15

GUE-70-0052
Existing Clearance
17'-8" W.B 16'-6" E.B.
Proposed Clearance
17'-4" W.B. 16'-2" E.B.
Distance From E.P. to Pier E.B. 14.0'
Distance From E.P. to Pier W.B. 14.4'
Prop. Conc. Barrier Type D
Prop. Clearance 12.0' E.B. & 12.4' W.B.

GUE-70-0127
Existing Bridge Width
23.00' Lt. & 17.00' Rt. W.B.
17.00' Lt. & 23.00' Rt. E.B.
Existing Parapets with Type A
Railing and 1'-2" Curbs
Proposed Bridge Width
Construct Deflector Type Parapets
23.50' Lt. & 17.50' Rt. W.B.
17.50' Lt. & 23.50' Rt. E.B.

GUE-70-0250
Existing Bridge Width
21.00' Lt. & 17.00' Rt. W.B.
17.00' Lt. & 21.00' Rt. E.B.
Existing Parapets with Type A
Railing and 1'-2" Curbs
Proposed Bridge Width
Construct Deflector Type Parapets
21.50' Lt. & 17.50' Rt. W.B.
17.50' Lt. & 21.50' Rt. E.B.

GUE-70-0281
Existing Clearance
17'-5" W.B. 16'-6" E.B.
Proposed Clearance
17'-1" W.B. 16'-2" E.B.
Distance From E.P. to Pier E.B. 14.0'
Distance From E.P. to Pier W.B. 14.0'
Prop. Conc. Barrier Type D
Prop. Clearance 12.0' E.B. & 12.0' W.B.

DESIGN EXCEPTION
BRIDGE NO. GUE-70-0250 L & R
BRIDGE WIDTH DEFLECTOR TYPE PARAPETS
21.50' LT. WESTBOUND
21.50' RT. EASTBOUND

PROJECT DESCRIPTION

THIS PROJECT SHALL CONSIST OF REPAIRING THE EXISTING CONCRETE PAVEMENT AND THE PLACEMENT OF 2 3/4" OF ITEM 301 BITUMINOUS AGGREGATE BASE AND 1 1/4" OF ITEM 446 ASPHALT CONCRETE SURFACE COURSE, TYPE 1. THE EXISTING PAVEMENT AT THE OVERPASSES SHALL BE REMOVED AND REPLACED WITH 6" ITEM 304 AGGREGATE BASE, 9" ITEM 451 CONCRETE PAVEMENT, 2 3/4" ITEM 301 BITUMINOUS AGGREGATE BASE AND 1 1/4" ITEM 446 ASPHALT CONCRETE SURFACE COURSE, TYPE 1. EXISTING MEDIAN SHOULDER SHALL BE REMOVED AND REPLACED WITH 8" ITEM 301 BITUMINOUS AGGREGATE BASE AND THE EXISTING OUTSIDE SHOULDER SHALL BE REMOVED AND REPLACED WITH 9" ITEM 305 CONCRETE BASE, AS PER PLAN.

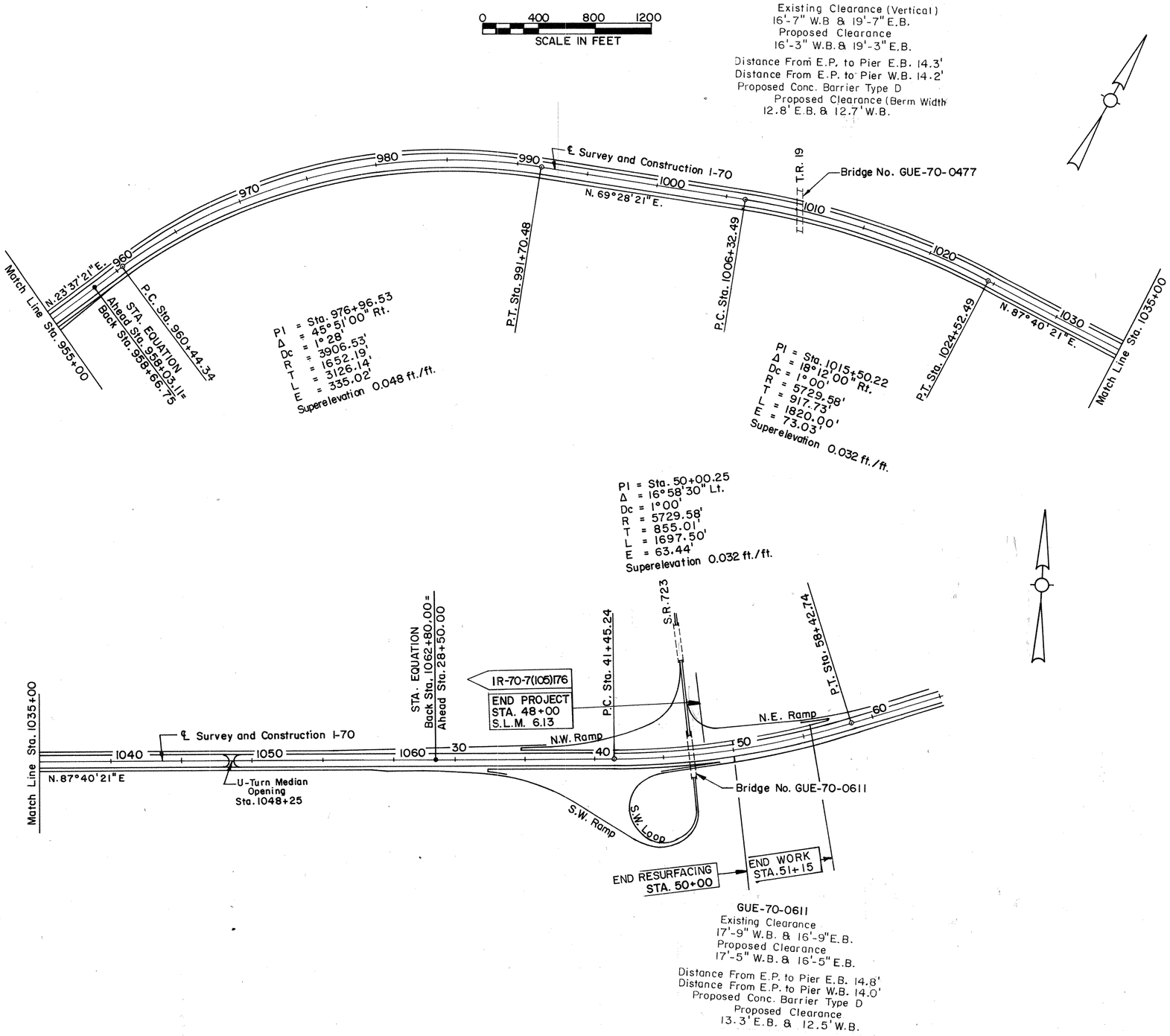
RAMPS TO THE TRUCK WEIGH STATIONS SHALL BE RECONSTRUCTED WITH 15" ITEM 452 PLAIN CONCRETE PAVEMENT, AS PER PLAN ON 4" ITEM 304 AGGREGATE BASE. THIS PROJECT SHALL ALSO INCLUDE THE REMOVAL OF THE EXISTING GUARDRAIL AND INSTALLATION OF NEW TYPE 5 GUARDRAIL WITH ANCHOR ASSEMBLIES. THE SHOULDER SLOPES SHALL BE CONSTRUCTED TO THE GRADES SHOWN AND SEEDED. THE EXISTING PARAPETS AT OVERHEAD STRUCTURES SHALL BE REPLACED AS SHOWN IN THE PLANS.

SCHEMATIC PLAN

SCHEMATIC PLAN

CALC. BY DN DATE 2-9-89	GUE-70-0.00	OHIO
CHKD. BY J.W.C. DATE 2-12-89		FHWA REGION 5

3
88

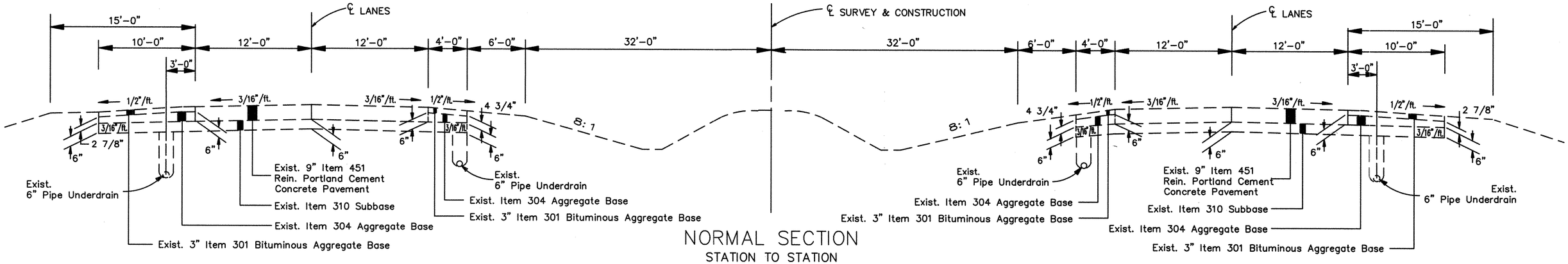


SCHEMATIC PLAN

TYPICAL SECTIONS

CALC. BY DJK DATE 9-7-88 CHKD. BY dwl c. DATE 12-13-88	GUE-70-0.00	OHIO FHWA REGION 5	4 88

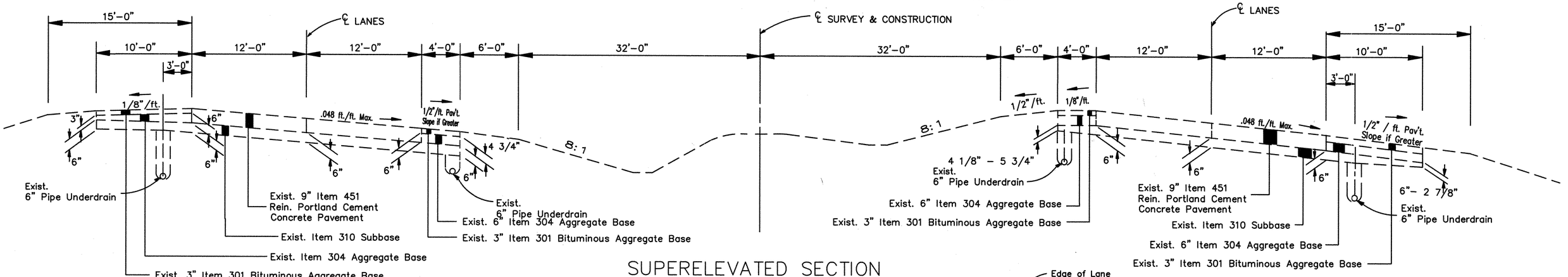
EXISTING PAVEMENT



NORMAL SECTION

STATION TO STATION

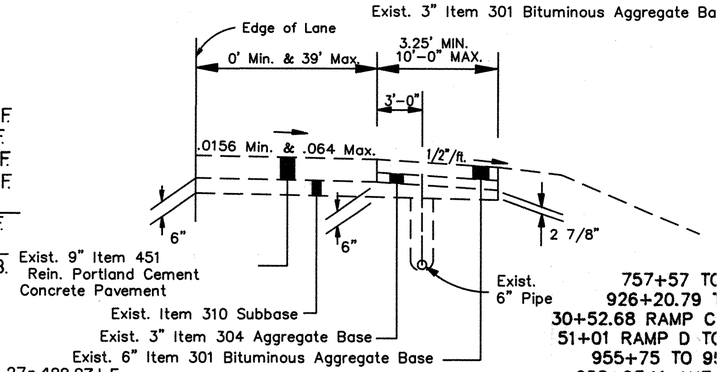
* 757+57 TO 858+75 = 10,118.00 L.F.
* 891+25 TO 907+75 = 1650.00 L.F.
942+50 TO 958+66.75 = 1616.75 L.F.
958+66.75 BACK = 958+03.11 AHEAD
993+50 TO 1004+75 = 1125.00 L.F.
1026+25 TO 1062+80 = 3655.00 L.F.
1062+80 BACK = 28+50 AHEAD
28+50 TO 40+00 = 1150.00 L.F.



SUPERELEVATED SECTION

STATION TO STATION

* 858+75 TO 891+25 = 3250.00 L.F.
907+75 TO 942+50 = 3475.00 L.F.
958+03.11 TO 993+50 = 3546.89 L.F.
1004+75 TO 1026+25 = 2150.00 L.F.
40+00 TO 50+00 = 1000.00 L.F.
SUB-TOTAL 32,736.64 L.F.
*Deduct for Structures 213.75 E.B. & 237.25 W.B.
TOTALS 32,522.89 L.F. E.B. & 32,499.39 L.F. W.B.



ACCELERATION & DECELERATION LANE
STATION TO STATION

WESTBOUND
757+57 TO 762+45.27 = 488.27 L.F.
908+00 TO 920+00 = 1200.00 L.F.
20+00 RAMP A TO 23+14 RAMP A = 314.00 L.F.
42+31 RAMP B TO 46+83.82 RAMP B = 452.82 L.F.
947+14.44 TO 950+59.71 = 345.27 L.F.
1058+26 TO 1062+80 BACK = 454.00 L.F.
28+50 TO 35+00.12 AHEAD = 650.12 L.F.
14+36.09 N.W.RAMP S.R.723 TO I +35 N.W.RAMP S.R.723 = 1301.09 L.F.

EASTBOUND
757+57 TO 767+18.06 = 961.06 L.F.
926+20.79 TO 930+52.68 = 431.89 L.F.
30+52.68 RAMP C TO 34+19 RAMP C = 366.32 L.F.
51+01 RAMP D TO 55+79.30 RAMP D = 478.3 L.F.
955+75 TO 958+66.75 BACK = 291.75 L.F.
958+03.11 AHEAD TO 967+11.36 = 908.25 L.F.
1058+95.62 TO 1062+41.37 = 345.75 L.F.
0+00 S.W.RAMP S.R.723 TO 18+27.5 BACK S.W.RAMP S.R.723 = 1827.5 L.F.
S.W.RAMP 17+21.48 AHEAD TO 23+17 = 595.52 L.F.
S.W.LOOP 17+21.48 TO 23+17 = 595.52 L.F.
S.W.LOOP 0+00 TO 12+48 = 1248.00 L.F.
TOTAL 13,255.43 L.F.

TYPICAL SECTIONS

TYPE 446

PROPOSED PAVEMENT

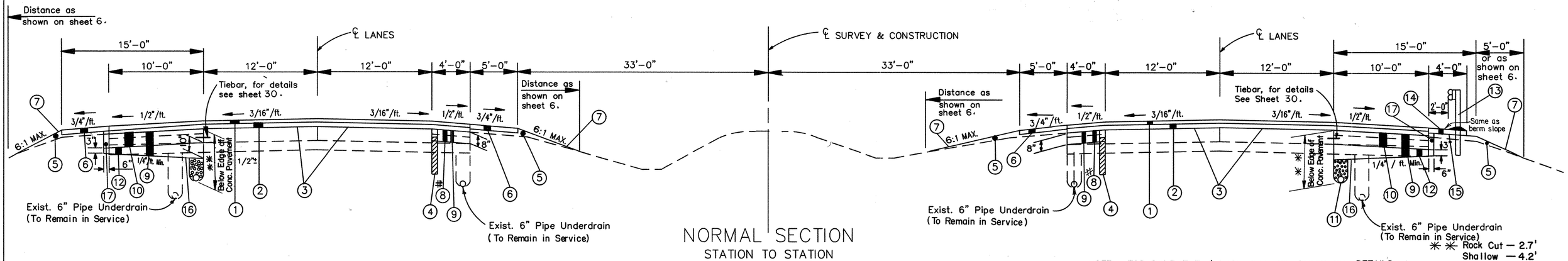
NOTE: Typical Sections with Guardrail and without Guardrail apply to both Eastbound & Westbound Lanes.

CALC. BY DA DATE 9-5-89
CHKD. BY J.W.C. DATE 12-12-87

GUE-70-0.00

OHIO FHWA REGION 5

5 / 88



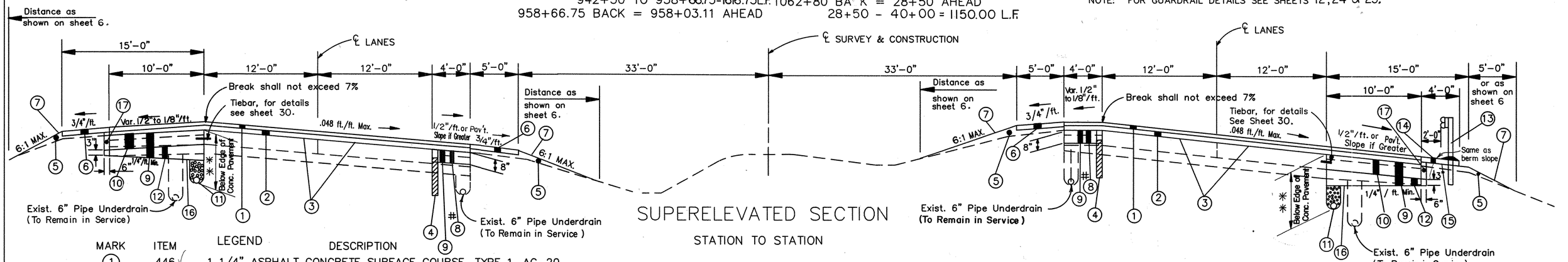
NORMAL SECTION

STATION TO STATION

* 757+57 TO 858+75 = 10,118.00 L.F.
* 891+25 TO 907+75 = 1650.00 L.F.
942+50 TO 958+66.75 = 1616.75 L.F.
958+66.75 BACK = 958+03.11 AHEAD
993+50 TO 1004+75 = 1125.00 L.F.
1026+25 TO 1062+80 = 3655.00 L.F.
1062+80 BACK = 28+50 AHEAD
28+50 - 40+00 = 1150.00 L.F.

NOTE: FOR PAVEMENT / SHOULDER OR APPROACH DETAILS SEE SHEET 30.

NOTE: FOR GUARDRAIL DETAILS SEE SHEETS 12, 24 & 25.



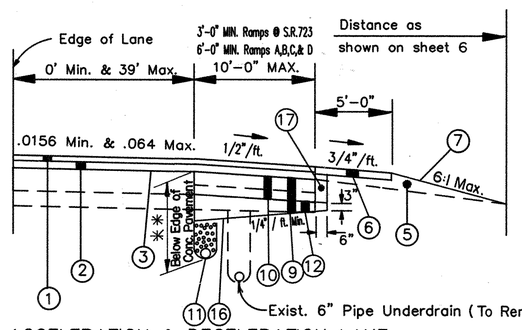
MARK	ITEM	LEGEND DESCRIPTION
(1)	446 ✓	1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20
(2)	301 ✓	2 3/4" BITUMINOUS AGGREGATE BASE: AC-20
(3)	407	TACK COAT
(4)	605	SHALLOW UNDERDRAINS, AS PER PLAN (See Sheet 73).
(5)	203	EMBANKMENT (See Sheet 11).
(6)	617	4" COMPACTED AGGREGATE, TYPE A (See Sheet 13).
(7)	659	SEEDING AND MULCHING
#(8)	301	8" BITUMINOUS AGGREGATE BASE: AC-20
(9)	203	EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION (See Note on sheet 12).
(10)	305	9" CONCRETE BASE, AS PER PLAN (See Sheet 12).
(11)	605	6" PIPE UNDERDRAIN
(12)	304	AGGREGATE BASE, AS PER PLAN (See sheet 13).
(13)	606	GUARDRAIL TYPE 5, AS PER PLAN (See Note Sheet 12).
(14)	404	2" ASPHALT CONCRETE, AC-20
(15)	408	BITUMINOUS PRIME COAT, AS PER PLAN (See Note Sheet 12).
(16)	203	SUBGRADE COMPACTION
(17)	203	EMBANKMENT

SUPERELEVATED SECTION

STATION TO STATION

* 858+75 TO 891+25 = 3250.00 L.F.
907+75 TO 942+50 = 3475.00 L.F.
958+03.11 TO 993+50 = 3546.89 L.F.
1004+75 TO 1026+25 = 2150.00 L.F.
40+00 TO 50+00 = 1000.00 L.F.
SUB-TOTAL 32,736.64 L.F.
*Deduct for Structures 813.75 E.B. & 837.25 W.B.
Totals 31,922.89 L.F E.B. & 31,899.39 L.F W.B.

(See sheets 8 & 9 for structures)



ACCELERATION & DECELERATION LANE

STATION TO STATION

WESTBOUND	EASTBOUND
757+57 TO 762+45.27 = 488.27 L.F.	757+57 TO 767+18.06 = 961.06 L.F.
908+00 TO 920+00 = 1200.00 L.F.	926+20.79 TO 930+52.68 = 431.89 L.F.
20+00 RAMP A TO 23+14 RAMP A = 314.00 L.F.	30+52.68 RAMP C TO 34+19 RAMP C = 366.32 L.F.
42+31 RAMP B TO 46+83.82 RAMP B = 452.82 L.F.	51+01 RAMP D TO 55+79.30 RAMP D = 478.3 L.F.
947+14.44 TO 950+59.71 = 345.27 L.F.	955+75 TO 958+66.75 BACK = 291.75 L.F.
1058+26 TO 1062+80 BACK = 454.00 L.F.	958+03.11 AHEAD TO 967+11.36 = 908.25 L.F.
28+50 AHEAD TO 35+00.12 = 650.12 L.F.	1058+95.62 TO 1062+41.37 = 345.75 L.F.
14+36.09 N.W.RAMP S.R.723 TO 8+46 N.W.RAMP S.R.723 = 590.09 L.F.	0+00 S.W.RAMP S.R.723 TO 5+78.5 S.W.RAMP S.R.723 = 578.5 L.F.
	TOTAL 8856.39 L.F.

#NOTE: DURING PHASES 3 & 7 AS SHOWN ON SHEET 14 & 15 THE EXISTING BERM IN THE AREA OF THE OVERPASSES, AS SHOWN ON SHEET 9, SHALL BE CONSTRUCTED WITH 8" ITEM 301 BITUMINOUS AGGREGATE BASE: AC-20.

NOTE: Guardrail to be placed as shown above.

G07000A3 4/24/89

TYPICAL PLACEMENT OF EMBANKMENT MEDIAN SIDE & OUTSIDE EDGE OF PAVEMENT (SEE SHEET 5).

CALC. BY DH DATE 3-88
CHKD. BY J.W.L. DATE 11-15-87

GUE-70-0.00

OHIO
FHWA REGION 5

6
88

DISTANCE LEFT	DISTANCE LEFT	STATION ℄ SURVEY	DISTANCE RIGHT	DISTANCE RIGHT
88	30	760+00	27	96
83		762+50		94
82	27	765+00	26	89
86		767+50		88
82	26	770+00	30	83
83		772+50		84
86	28	775+00	32	84
82		777+50		82
87	28	780+00	30	82
90		782+50		85
87	27	785+00	29	88
83		787+50		85
83	31	790+00	30	84
83		792+50		92
83	31	795+00	31	86
82		797+50		90
85	31	800+00	31	88
90		802+50		88
92	30	805+00	31	86
84		807+50		86
86	31	810+00	30	86
87		812+50		86
88	22	815+00	31	94
* 90		817+50		86
* 84	31	820+00	31	86
86		822+50		85
85	27	825+00	30	83
83		827+50		87
90	31	830+00	29	92
92		832+50		87
84	31	835+00	31	86
84		837+50		81
84	30	840+00	31	85
84		842+50		92
89	30	845+00	30	83
83		847+50		86
86	31	850+00	25	83
84		852+50		86
86	30	855+00	31	90
84		857+50		89
83	30	860+00	31	84
83		862+50		83
82	31	865+00	23	86
83		867+50		84
84	31	870+00	29	83
86		872+50		84
86	31	875+00	30	86
86		877+50		86
86	26	880+00	28	86
103		882+50		83
99	31	885+00	27	84
97		887+50		84
107	31	890+00	30	83
85		892+50		82
85	25	895+00	28	81
85		897+50		100
85	25	900+00	28	98
84		902+50		100
84	22	905+00	25	84
83		907+50		84
94	31	910+00	25	110
116		912+50		104
101	31	915+00	29	84
103		917+50		90
110	31	920+00	25	86

DISTANCE LEFT	DISTANCE LEFT	STATION ℄ SURVEY	DISTANCE RIGHT	DISTANCE RIGHT
117		922+50		86
82	31	925+00	25	86
90		927+50		95
87	31	930+00	25	97
84		932+50		99
86	31	935+00	29	88
85		937+50		83
90	25	940+00	25	83
		942+50		82
97	27	945+00	25	93
114		947+50		95
92	25	950+00	25	82
88		952+50		
88	25	955+00	25	103
88		957+50		102
82	24	960+00	31	94
83		962+50		93
82	25	965+00	31	83
82		967+50		90
85	27	970+00	28	85
85		972+50		88
83	25	975+00	31	83
82		977+50		90
81	25	980+00	31	88
81		982+50		88
81	25	985+00	31	86
83		987+50		88
81	25	990+00	31	83
83		992+50		84
83	30	995+00	27	85
83		997+50		85
83	28	1000+00	28	85
82		1002+50		88
82	25	1005+00	30	83
88		1007+50		88
86	31	1010+00	30	88
82		1012+50		88
82	31	1015+00	31	88
88		1017+50		87
87	30	1020+00	25	86
83		1022+50		87
83	29	1025+00	30	85
85		1027+50		83
85	25	1030+00	27	100
85		1032+50		103
95	25	1035+00	25	86
99		1037+50		83
84	31	1040+00	31	83
98		1042+50		89
94	30	1045+00	30	86
95		1047+50		86
84	25	1050+00	31	95
83		1052+50		113
83	31	1055+00	29	110
83		1057+50		93
110	29	1060+00	25	104
91		1062+50		101
110	23	30+00	25	105
100		32+50		122
107	23	35+00	24	90
110		37+50		96
83	26	40+00	24	84
82		42+50		84
85	30	45+00	24	83
90		47+50		

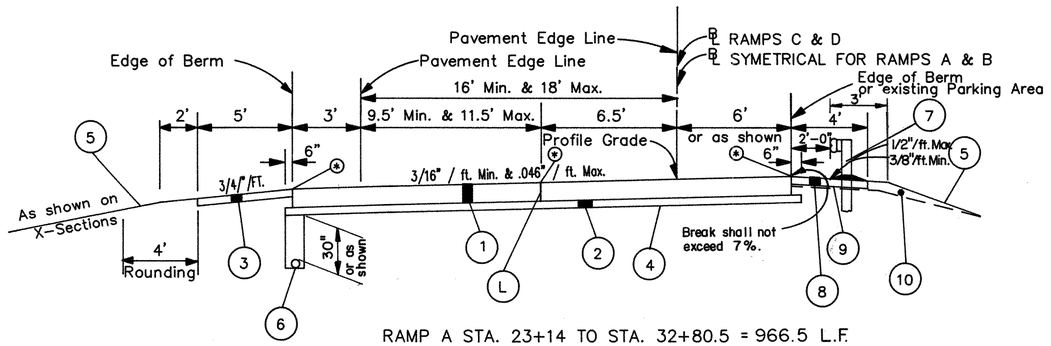
NOTE: THE FOLLOWING DIMENSIONS ARE APPROXIMATE AND THE PROJECT ENGINEER RESERVES THE RIGHT TO MAKE ADJUSTMENTS AT THE TIME OF CONSTRUCTION.

* FOR STATION 818+75 TO STATION 821+00 W.B. SEE SHEETS 76-78.

GUE70000 6/9/89

TYPICAL PLACEMENT OF EMBANKMENT

TYPICAL SECTION RAMPS
TRUCK WEIGH STATION



RAMP A STA. 23+14 TO STA. 32+80.5 = 966.5 L.F.
TRUCK WEIGH STATION W.B. STA. 32+80.5 TO STA. 37+50.5 = 470.0 L.F.
RAMP B STA. 37+50.5 TO STA. 42+31 = 480.5 L.F.
RAMP C STA. 34+19 TO STA. 38+93.19 = 474.19 L.F.
TRUCK WEIGH STATION E.B. STA. 0+00 TO STA. 4+85.05 = 485.05 L.F.
RAMP D STA. 43+50 TO STA. 51+01 = 751.00 L.F.
TOTAL 3627.24 L.F.

(*) Pavement Elevations Shown on sheets 39 to 58.

(L) Longitudinal Joint As Per BP-3.

NOTE:
FOR GUARDRAIL QUANTITIES AND DETAILS SEE SHEETS 12, 24 & 25.

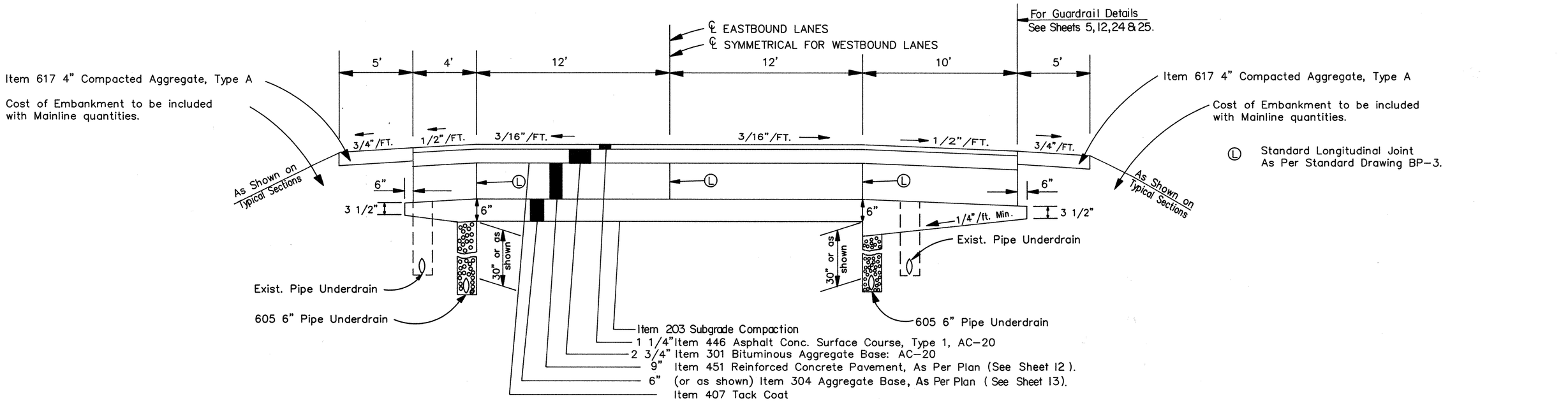
NOTE:
THE PAVEMENT SHALL BE FINISHED IN ACCORDANCE WITH SECTION 451.09 OF THE SPECIFICATIONS.

LEGEND

MARK	ITEM	DESCRIPTION
1	452	15" PLAIN CONCRETE PAVEMENT, AS PER PLAN (Joints to be at 17' spacings) See Note Sheet 12.
2	304	4" AGGREGATE BASE, AS PER PLAN (See Sheet 13).
3	617	4" COMPACTED AGGREGATE, TYPE A WITH ITEM 617 WATER (See Note Sheet 12).
4	203	SUBGRADE COMPACTION
5	659	SEEDING AND MULCHING
6	605	6" PIPE UNDERDRAINS
7	606	GUARDRAIL TYPE 5, AS PER PLAN (See Note Sheet 12).
8	404	2" ASPHALT CONCRETE, AC-20
9	408	BITUMINOUS PRIME COAT, AS PER PLAN (See Note Sheet 12).
10	203	EMBANKMENT (See Sheet 11).

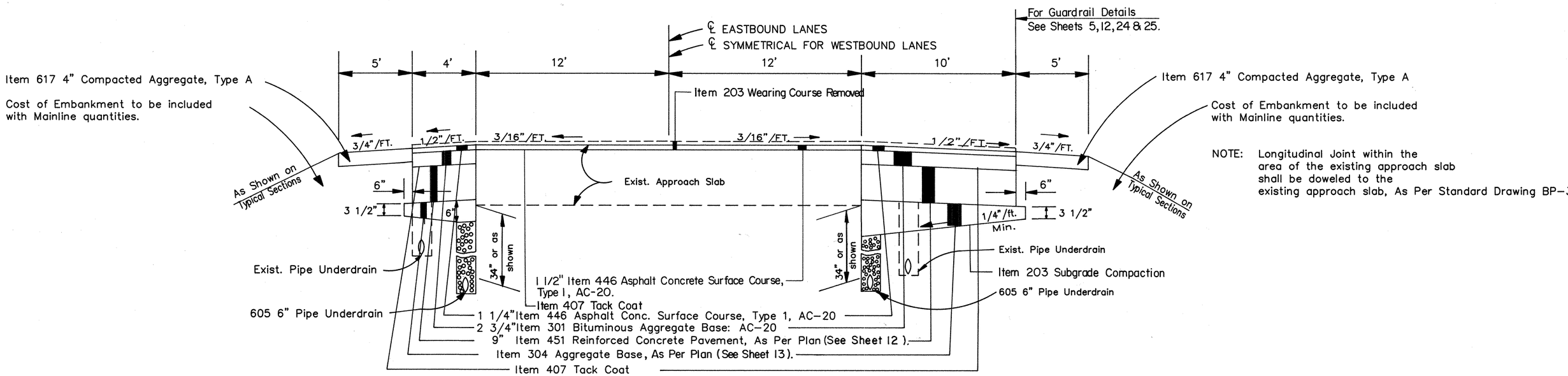
OVERPASS DETAILS

CALC. BY D.M. DATE 9-7-89	GUE-70-0.00	OHIO	8
CHKD. BY J.W.C. DATE 11-8-89		FHWA REGION 5	88



⊛ SECTION A-A TRANSVERSE SECTION FOR OVERPASS

⊛ See Sheet 9.



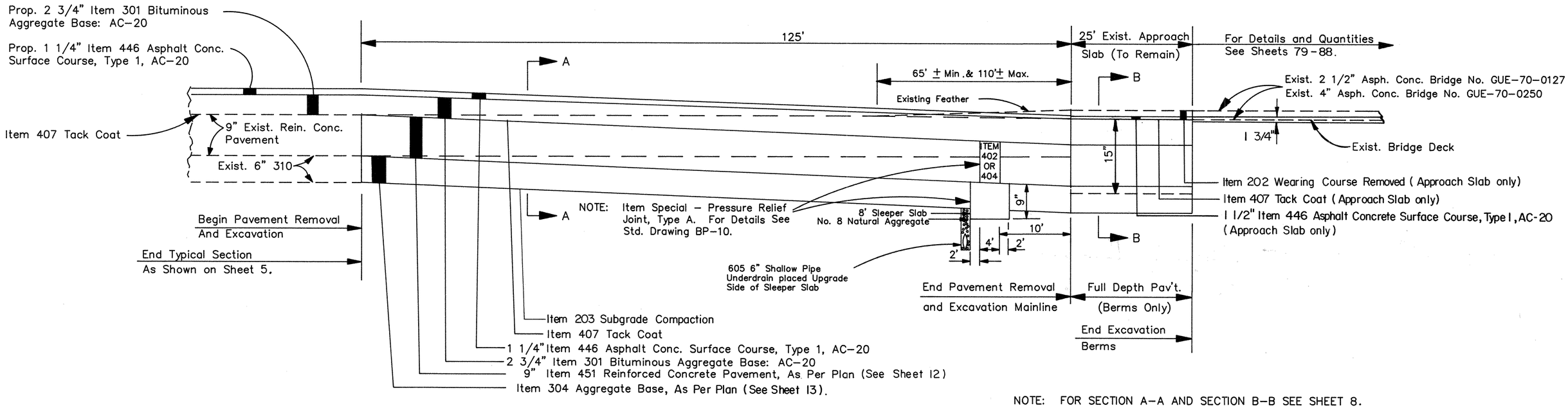
NOTE: Longitudinal Joint within the area of the existing approach slab shall be doweled to the existing approach slab, As Per Standard Drawing BP-3.

⊛ SECTION B-B TRANSVERSE SECTION FOR OVERPASS

TRANSVERSE SECTIONS OVERPASS DETAILS

CALC. BY D.M. DATE 9-9-89
CHKD. BY H.W.C. DATE 12-15-89
GUE-70-0.00
OHIO
FHWA REGION 5
9/88

OVERPASS DETAIL



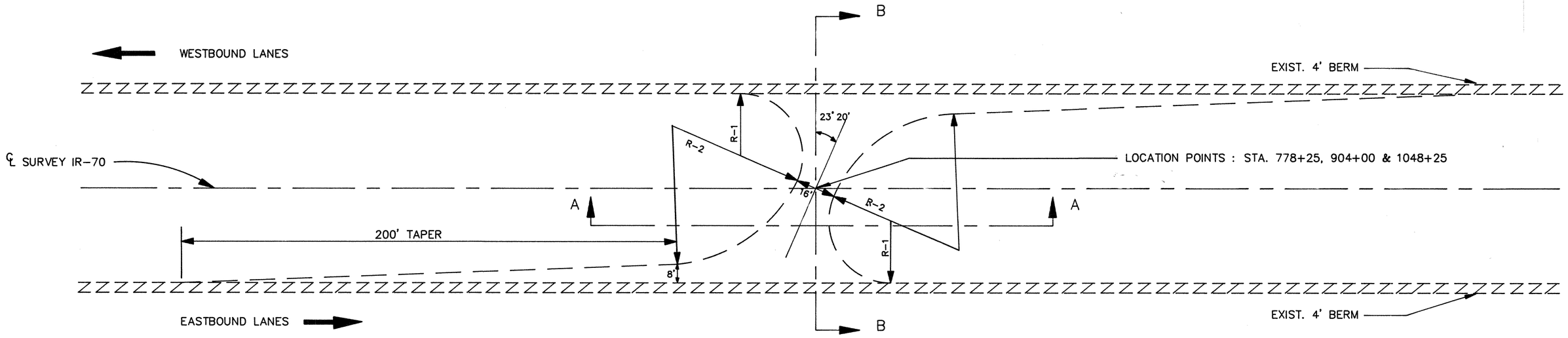
NOTE: FOR SECTION A-A AND SECTION B-B SEE SHEET 8.

OVERPASS - LONGITUDINAL SECTION

STATION TO STATION

WESTBOUND	EASTBOUND
824+27.67 - 825+77.67=150L.F.	824+53.32 - 826+03.32 = 150 L.F.
827+02.69 - 828+52.69=150L.F.	827+04.84 - 828+54.84 = 150 L.F.
890+44.45 - 891+94.45=150L.F.	889+82.09 - 891+32.09 = 150 L.F.
893+06.68 - 894+56.68=150L.F.	892+44.32 - 893+94.32 = 150 L.F.
	TOTAL 1200 L.F.

U-TURN MEDIAN OPENINGS

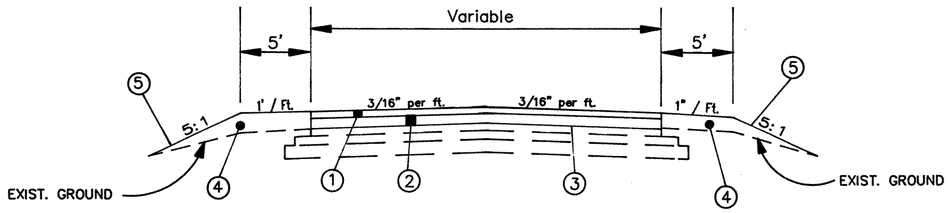


TYPICAL U - TURN MEDIAN OPENING

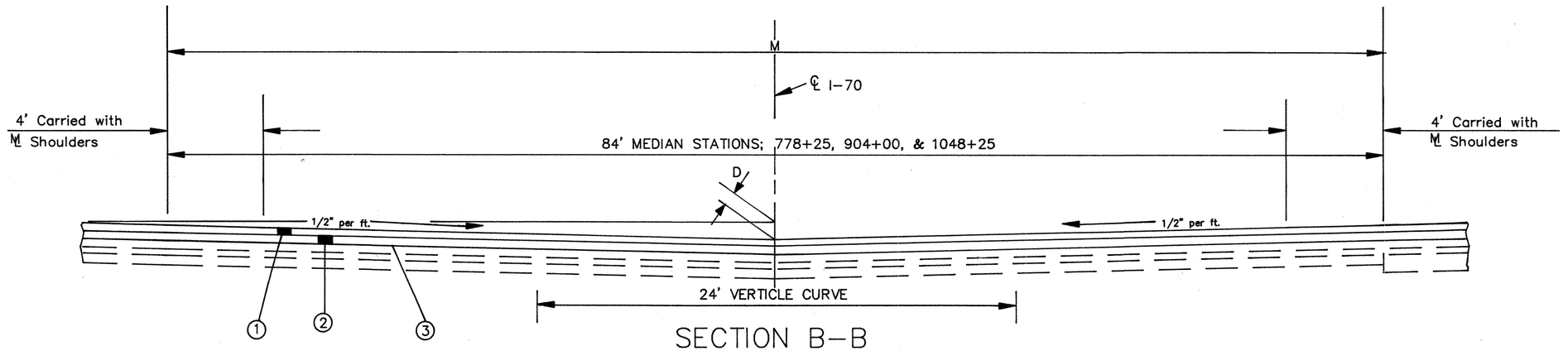
LEGEND

MARK	ITEM	DESCRIPTION
①	446	1 1/4" Asphalt Concrete Surface Course, Type 1, AC-20
②	301	2 3/4" Bituminous Aggregate Base: AC-20
③	407	Tack Coat
④	203	Embankment
⑤	659	Seeding and Mulching

DIMENSIONS APPLICABLE TO VARYING MEDIAN WIDTHS				
M (ft)	D (in)	R-1 (ft)	R-2 (ft)	AREA (yd²)
84	18	25.0	55.0	510.2



SECTION A-A



SECTION B-B

60700025 8/7/89

CALC. DJM BY — DATE 9-21-87
CHKD. BY — DWC DATE 10-12-87

GUE-70-0.00

OHIO
FHWA REGION 5

11
88

GENERAL NOTES

PROJECT DESCRIPTION

THIS PROJECT SHALL CONSIST OF REPAIRING THE EXISTING CONCRETE PAVEMENT AND THE PLACEMENT OF 2 3/4" OF ITEM 301 BITUMINOUS AGGREGATE BASE AND 1 1/4" OF ITEM 446 ASPHALT CONCRETE SURFACE COURSE, TYPE 1.
THE EXISTING PAVEMENT AT THE OVERPASSES SHALL BE REMOVED AND REPLACED WITH 6" ITEM 304 AGGREGATE BASE, 9" ITEM 451 CONCRETE PAVEMENT, 2 3/4" ITEM 301 BITUMINOUS AGGREGATE BASE AND 1 1/4" ITEM 446 ASPHALT CONCRETE SURFACE COURSE, TYPE 1. EXISTING MEDIAN SHOULDER SHALL BE REMOVED AND REPLACED WITH 8" ITEM 301 BITUMINOUS AGGREGATE BASE AND THE EXISTING OUTSIDE SHOULDER SHALL BE REMOVED AND REPLACED WITH 9" ITEM 305 CONCRETE BASE, AS PER PLAN.
RAMPS TO THE TRUCK WEIGH STATIONS SHALL BE RECONSTRUCTED WITH 15" ITEM 452 PLAIN CONCRETE PAVEMENT, AS PER PLAN ON 4" ITEM 304 AGGREGATE BASE.
THIS PROJECT SHALL ALSO INCLUDE THE REMOVAL OF THE EXISTING GUARDRAIL AND INSTALLTATION OF NEW TYPE 5 GUARDRAIL WITH ANCHOR ASSEMBLIES. THE SHOULDER SLOPES SHALL BE CONSTRUCTED TO THE GRADES SHOWN AND SEEDED. THE EXISTING PARAPETS AT OVERHEAD STRUCTURES SHALL BE REPLACED AS SHOWN IN THE PLANS.

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 800 SQ. FT. OF FLOOR SPACE. PAYMENT SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY 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 AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING COURSE SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PREVIOUS CONSTRUCTION PLANS SHOWING THE ORIGINAL ALIGNMENT AND PROFILE GRADE ARE ON FILE FOR INSPECTION IF NECESSARY AT THE O.D.O.T DISTRICT 5 OFFICE AS PROJECTS SHOWN ON THIS SHEET.
THE PROPOSED ASPHALT CONCRETE OVERLAYS SHALL HAVE A UNIFORM THICKNESS OF APPROXIMATELY 4 INCHES. EXISTING CROSS-SECTIONS FOR EARTHWORK AVAILABLE AT THE DISTRICT 5 OFFICE.

CONSTRUCTION PLAN

REFERENCE IS HEREBY MADE TO THE FOLLOWING DESIGNATED PLAN FOR FORMER CONSTRUCTION PROJECTS, PORTIONS OF WHICH COVER AREAS INCLUDED IN THIS PROPOSED IMPROVEMENT.

GUE-70-0.00
PROJ. 275(85)

MUS-70-26.86
GUE-70-0.00
PROJ. 276(65)

COPIES OF THESE PLANS ARE ON FILE EITHER AT THE DISTRICT 5 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION OR AT THE OFFICE OF THE ADMINISTRATOR OF CONTRACT SALES COLUMBUS, OHIO.

LOCATION OF GUARDRAIL

STATIONS AS SHOWN ON THESE PLANS WERE TAKEN FROM PREVIOUS CONSTRUCTION PLANS, AND ARE ASSUMED TO BE CORRECT. THE STATIONS, AS SHOWN IN THESE PLANS ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE.
THE ENGINEER SHALL BE SATISIFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDED CORNERS SHOWN ON THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

ITEM 404 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.

A QUANTITY OF ITEM 404 BITUMINOUS CONCRETE, AC-20 HAS BEEN INCLUDED IN THE PLANS TO REPAIR PAVEMENT OR BERMS DAMAGED WHEN MAINTAINING TRAFFIC AS DESCRIBED AS PER ITEM 614 MAINTAINING TRAFFIC.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE PURPOSE.

ITEM 404 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC. 50 CU.YD.

UNDERGROUND UTILITIES

THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

UTILITY NOTIFICATION

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN IN THE PLANS. THE OWNER OF THE UNDERGROUND UTILITY FACITLITY SHALL, WITHIN FORTY-EIGHT HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, AFTER NOTICE IS RECEIVED, STAKE, MARK OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

UTILITY OWNERSHIP

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT.

OHIO DEPARTMENT OF TRANSPORTATION
9600 JACKSONTOWN ROAD
P.O. BOX 306
JACKSONTOWN, OHIO 43030
PHONE (614) 323-4400

OR

STATE HIGHWAY PATROL
7051 GLENN HIGHWAY ROAD
CAMBRIDGE, OHIO 43725
PHONE (614) 439-1388

GENERAL TELEPHONE
P.O. BOX 399
DOVER, OHIO 44622
PHONE (216) 364-0363

GUERNSEY MUSKINGUM ELECTRIC CORP.
17 S. LIBERTY ST.
NEW CONCORD, OHIO 43762
PHONE (614) 826-7661

ITEM 407 TACK COAT

THE RATE OF APPLICATION OF 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT, AS DIRECTED BY THE ENGINEER.
PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.10 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

ADDITIONAL TACK COAT

IN ADDITION TO THE REQUIREMENTS OF 407.05, A TACK COAT SHALL BE APPLIED, AS DESCRIBED ABOVE ON ITEM 301 BITUMINOUS AGGREGATE BASE COURSE IMMEDIATELY AHEAD OF THE PAVING OPERATION FOR THE ITEM 446 SURFACE COURSE.
THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE.

ITEM 407 TACK COAT 16,000 GALLONS

NOTE: THE QUANTITY SHOWN IS FOR THE DRIVING LANE ONLY. WHEN THE PASSING LANE REQUIRES ITEM 407 TACK COAT IT SHALL BE APPLIED AS REQUIRED BY SECTION 401.12.

UNSUITABLE SUBGRADE

DUE TO POOR SOILS IN THE AREA OF THE OVERPASSES AN ESTIMATED QUANTITY OF ITEM 203 EXCAVATION AND ITEM 203 EMBANKMENT USING GRANULAR MATERIAL AS PER 203.02 HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

THE STATE OF OHIO RESERVES THE RIGHT TO NONPERFORM UP TO 100% OF THIS ESTIMATE.

ITEM 203 EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION 400 C.Y.
ITEM 203 EMBANKMENT USING GRANULAR MATERIAL 400 C.Y.

REMOVAL OF TREES OR STUMPS

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

ITEM 201 CLEARING AND GRUBBING, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 201, THE FOLLOWING REQUIREMENTS SHALL APPLY. THE EXISTING SLOPE AREAS WHERE EMBANKMENT IS TO BE MADE SHALL REQUIRE DISKING, OR A METHOD APPROVED BY THE ENGINEER, PRIOR TO PLACEMENT OF THE EMBANKMENT.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 201 CLEARING AND GRUBBING, AS PER PLAN LUMP

ITEM 203 EMBANKMENT, AS PER PLAN

ITEM 203 EMBANKMENT SHALL CONSIST OF PLACING EMBANKMENT AT THE OUTSIDE EDGES OF THE PAVEMENT AS SHOWN ON SHEETS 5, 7 & 10.
THE EXISTING BERM SHALL BE PREPARED AS REQUIRED IN SPEC. 201.04.
ALL EMBANKMENT SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SPEC. 203.09, EXCEPT THAT REQUIREMENTS FOR MOISTURE, DENSITY CONTROL, AND BENCHING ARE HEREBY WAIVED FOR WIDENED SHOULDERS WHICH DO NOT SUPPORT ANY PORTION OF THE NEW PAVEMENT OR SHOULDER.
CARE SHALL BE EXERCISED WHEN PLACING EMBANKMENT AROUND EXISTING DELINEATORS AND DRAINAGE SYSTEMS. EMBANKMENT AROUND EXISTING DRAINAGE SYSTEMS SHALL BE PLACED AT THE DIRECTION OF THE PROJECT ENGINEER.
THE CONTRACTOR WILL PROVIDE STAKES AT 250' INTERVALS AT THE OUTSIDE EDGE OF PAVEMENT AND 500' INTERVALS AT THE MEDIAN EDGE OF PAVEMENT TO INSURE THAT SLOPES ARE CONSTRUCTED TO PLAN. (SEE SHEET 6.).
COST OF THE STAKES TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 623 CONSTRUCTION LAYOUT STAKES.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY, AND IS AN ESTIMATED QUANTITY TO PERFORM THE WORK AS SHOWN ON SHEETS 5, 7 & 10.

ITEM 203 EMBANKMENT, AS PER PLAN 8,008 CU.YD.

ITEM 659 SEEDING AND MULCHING

THE FOLLOWING QUANTITY WAS USED TO ESTIMATE THE AREAS FOR SEEDING AND MULCHING. THE FINAL AREA SHALL BE DETERMINED BY THE PROJECT ENGINEER.

149,331 SQ.YD.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 659 SEEDING AND MULCHING 149,331 SQ.YD.
ITEM 659 COMMERCIAL FERTILIZER * 5.28+14.08 = 19.36 TON
ITEM 659 AGRICULTURAL LIMING 70.42 TON

CALCULATED FROM THE TOTAL SEEDING AND MULCHING ON THE GENERAL SUMMARY.
* ADD 5.28 TONS FOR SECOND APPLICATION FOR TWO CONSTRUCTION SEASONS, AS PER 659.08.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS FIVE (5) FEET OUTSIDE THE WORK LIMITS, AS SHOWN ON SHEET 6.

GENERAL NOTES

ITEM 617 WATER

AN ESTIMATED QUANTITY OF 50 M.GAL. HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED IN SECTION 617.05 OF THE SPECIFICATIONS.

WATERING AND MOWING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE THE GROWTH AND TO CARE FOR THE PERMANENT SEEDED AREA, AS PER 659.09.

659	WATER	169 M. GAL.
659	MOWING	353 M SQ. FT.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER, FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

207	TEMPORARY SEEDING AND MULCHING	31,300 SQ. YD.
207	STRAW OR HAY BALES	600 EACH
659	COMMERCIAL FERTILIZER (AS PER ITEM 207.03)	1.4 TON
659	WATER	68 M. GAL.

ITEM 203 EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION

(FINAL MEASUREMENT FOR EXCAVATION AS SHOWN MARK ⑨ ON TYPICAL SECTION SHEET 5.)

PAYMENT FOR "ITEM 203 EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION" SHALL BE BASED ON CUBIC YARDS OF MATERIAL EXCAVATED WITHIN THOSE LIMITS AS ESTABLISHED BY THE ELEVATIONS FOR FINISHED PAVEMENT. PAVEMENT ELEVATION FOR THE UPPER LIMITS AND ACTUAL FIELD CHECK MEASUREMENTS RELATIVE TO THE REQUIREMENTS FOR DEVELOPEMENT OF THE NEW PAVEMENT STRUCTURE SHALL BE USED FOR BOTH THE HORIZONTAL AND LOWER LIMITS.
PAYMENT FOR ANY ADDITIONAL MATERIAL TO BE EXCAVATED FROM THE SHOULDER AREA BECAUSE OF DIFFERENCES IN EXISTING AREAS AND THE AREAS DESCRIBED BY THE TYPICAL SECTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION.

REPLACEMENT DRUMS

DRUMS FURNISHED BY THE CONCTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, 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 SHALL BE PAID FOR UNDER ITEM SPECIAL REPLACEMENT DRUMS.
PAYMENT FOR EACH DRUM SHALL INCLUDE: (1) THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM AND (2) PROVIDING; MAINTAINING AND REMOVING THE REPLACEMENT DRUMS IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS OF THE ORIGINAL DRUMS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE.

ITEM SPECIAL REPLACEMENT DRUMS 100 EACH

ITEM 622 TEMPORARY CONCRETE BARRIER, AS PER PLAN

THE CONTRACTOR SHALL INSTALL A TEMPORARY CONCRETE BARRIER, AS PER STANDARD DRAWING MC-9A, AS SHOWN ON SHEET 16.
ITEM 622 TEMPORARY CONCRETE BARRIER, AS PER PLAN HAS BEEN PROVIDED FOR MAINTAINING TRAFFIC AS SHOWN ON SHEET 16. THE QUANTITIES SHOWN ARE FOR ONE PHASE OF MAINTAINING TRAFFIC ONLY. THE CONTRACTOR SHALL UTILIZE THE SAME BARRIERS IN ALL PHASES OF CONSTRUCTION. MOVEMENT OF THE BARRIERS BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY.
FLAGMEN SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIERS IS COMPLETE AND TRAFFIC IS MAINTAINED. ALL COSTS INVOLVED IN REMOVING AND RE-ERECTING THE BARRIERS FOR MAINTAINING TRAFFIC SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 622 TEMPORARY CONCRETE BARRRIER, AS PER PLAN.
AFTER THE PROJECT HAS BEEN COMPLETED THE TEMPORARY CONCRETE BARRIER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED BY HIM.
THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE PURPOSE.

(SEE SHEET 81 FOR ITEM 622 TEMPORARY CONCRETE BARRIER, BRIDGE MOUNTED, AS PER PLAN.)

ITEM 622 TEMPORARY CONCRETE BARRIER, AS PER PLAN 1,720 LIN.FT.

ITEM 802 BARRIER REFLECTORS

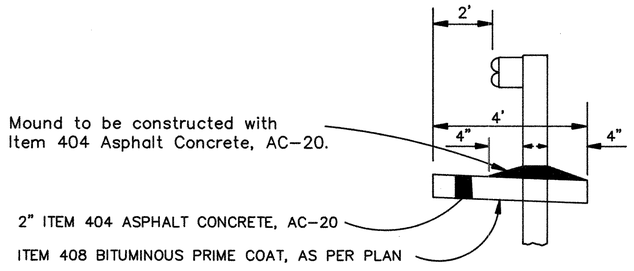
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED IN SUPPLEMENTAL SPECIFICATION 802.

LOCATIONS	TYPE A W	TYPE A Y	TYPE B W	TYPE B Y
CONCRETE BARRIER, BRIDGE PARAPETS & GUARDRAIL	287	12	16	8
SUB-TOTALS	287	12	16	8
TOTALS	299		24	

ITEM 802 BARRIER REFLECTORS, TYPE A	299	EACH
ITEM 802 BARRIER REFLECTORS, TYPE B	24	EACH

ITEM 606 GUARDRAIL TYPE 5, AS PER PLAN

THIS WORK SHALL CONSIST OF CONSTRUCTING THE TYPE 5 GUARDRAIL AS PER STANDARD CONSTRUCTION DRAWING GR-2B AND SHALL INCLUDE BORING THRU THE 404 BERM TREATMENT TO A DEPTH OF 6" AT EACH POST LOCATION AS SHOWN ON SHEETS 24 & 25. AFTER THE POST HAS BEEN PLACED THE CONTRACTOR SHALL CONSTRUCT A MOUND AROUND THE BASE OF THE POST. THE MOUND SHALL BE AS SHOWN ON THIS SHEET AND HAND TAMPED FOR COMPACTION.
ALL THE WORK AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 606 GUARDRAIL TYPE 5, AS PER PLAN.
ANY DAMAGE TO THE ASPHALT CAUSED BY THE INSTALLATION OF THE GUARDRAIL OR OTHER ITEMS OF WORK SHALL BE REPAIRED, AT NO ADDITIONAL COST TO THE STATE.



ITEM 408 BITUMINOUS PRIME COAT, AS PER PLAN

PRIOR TO PLACING THE 4' WIDTH OF ITEM 404 MATERIAL A SOIL STERILIZER USING ONE OF THE FOLLOWING BRANDS, SHALL BE APPLIED AT THE RATE RECOMMENDED BY THE MANUFACTURER.

1. PRAMITEL 25 E BY CIBA-GEIGY
2. KROVER BY DIAMOND SHAMROCK OR AN APPROVED EQUAL.

AFTER THE STERILIZER HAS BEEN PLACED THE 408 BITUMINOUS PRIME COAT SHALL BE APPLIED AT THE RATE OF 0.4 GAL. PER SQ.YD. PRIOR TO PLACING THE 404 ASPHALT CONCRETE.

PAYMENT FOR ALL THE ABOVE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 408 BITUMINOUS PRIME COAT, AS PER PLAN.

ITEM 452 PLAIN CONCRETE PAVEMENT, AS PER PLAN

IN LIEU OF THE REQUIREMENTS OF 451.08 (d) AND STANDARD DRAWING BP-4 WIDTH OF THE CONTRACTION JOINTS SHALL BE 1/2"± 1/16" AND THE DEPTH OF THE JOINT SHALL BE A MINIMUM OF 2 1/4".
PREFORMED ELASTIC JOINT SEALER SHALL BE USED AND SHALL MEET THE REQUIREMENTS OF 705.11 AND HAVE A MIMIMUM WIDTH OF 1 1/4". DRAWINGS AND SPECIFICATIONS OF THE MATERIAL PROPOSED FOR USE SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL.
IN LIEU OF 452.01 OF THE SPECIFICATIONS, CON TRACTION JOINTS SHALL BE CONSTRUCTED WITH DOWELS AS SHOWN FOR ITEM 451 PAVEMENT ON STANDARD DRAWING BP-4 DATED 1-11-85. DOWELS SHALL BE COATED IN ACCORDANCE WITH 709.13.
DOWEL ASSEMBLIES SHALL BE EPOXY COATED AS PER 709.00.
DOWEL INSTALLING MACHINES WILL NOT BE PERMITTED ON THIS PROJECT.
THE COST OF ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR: ITEM 452 PLAIN CONCRETE PAVEMENT, AS PER PLAN.

ITEM 305 9" CONCRETE BASE, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING CONCRETE BERMS AT LOCATIONS SHOWN IN THE PLANS. THE CONTRACTION JOINTS AS SHOWN ON SHEET 30 SHALL BE CONSTRUCTED WITHOUT DOWELS.
THE LONGITUDINAL JOINT SHALL BE SEALED AND TIEBARS PLACED AS SHOWN ON SHEET 30 IN LIEU OF STANDARD DRAWING BP-4 THE TRANSVERSE JOINTS SHALL BE SEALED USING MATERIAL REQUIREMENTS OF 705.04.
THE COST OF ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 305 9" CONCRETE BASE, AS PER PLAN.

ITEM 451 9" REINFORCED CONCRETE PAVEMENT, AS PER PLAN

IN LIEU OF THE REQUIREMENTS OF ITEM 451 REINFORCED CONCRETE PAVEMENT AND STANDARD DRAWING BP-4 THE MAXIMUM JOINT SPACING SHALL BE 21' AND THE TEXTURING, CURING, JOINT SEALING AND SMOOTHNESS REQUIREMENTS SHALL BE AS PER ITEM 305.

GENERAL NOTES

ITEM SPECIAL SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, 705.04

AN ESTIMATED QUANTITY OF 56,000 LIN.FT. HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED IN THE PROPOSAL NOTE FOR ITEM SPECIAL SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, 705.04 AND AS DETAILED ON SHEET 30. ALSO SEE DETAIL ON SHEET 15.

NOTE: AS PER SEQUENCE OF OPERATIONS THE CONTRACTOR WILL BE REQUIRED TO SAW ITEM 301 BITUMINOUS AGGREGATE BASE COURSE IN THE DRIVING LANE.

ITEM 803 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED IN SUPPLEMENTAL SPECIFICATION 803, 905, AS PER STANDARD DRAWING BP-13 AND AS SHOWN ON SHEET 30.

ITEM 803 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT CLASS "C"	4,500 SQ.YD.
ITEM 803 FULL DEPTH PAVEMENT SAWING	12,200 LIN.FT.

SUBBASE/SUBGRADE FAILURES

IF, AFTER REMOVAL OF THE RIGID PAVEMENT, THE ENGINEER DETERMINES THAT THE SUBBASE OR SUBGRADE HAS FAILED OR IS PUMPING, HE SHALL DIRECT THE CONTRACTOR TO EXCAVATE THE UNSUITABLE MATERIAL AND REPLACE IT WITH ITEM 304 AGGREGATE BASE, AS PER PLAN.

ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	50 CU.YD.
ITEM 304 AGGREGATE BASE, AS PER PLAN	50 CU.YD.

JOINT SEALERS

ALL REFERENCES TO 705.01 OR 705.02, APPEARING ON STANDARD DRAWINGS OR ON THE PLANS, SHALL BE CONSIDERED TO READ 705.04.

COOPERATION BETWEEN CONTRACTORS

THE STATE MAY HAVE CONTRACTS TO IMPROVE THE ROADWAY AT THE EAST END OF THIS PROJECT AND TO REPAIR THE PARKING AREA WITHIN THE TRUCK WEIGH STATIONS. IT IS PERTINENT THAT THIS CONTRACTOR COOPERATE FULLY WITH THESE CONTRACTORS AS OUTLINED IN SECTION 105.07 OF THE SPECIFICATIONS.

ITEM SPECIAL, LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF ITEM 614, A UNIFORMED OFF DUTY STATE HIGHWAY PATROLMAN AND OFFICIAL PATROL CAR WITH EMERGENCY FLASHERS OPERATING, SHALL BE PROVIDED DURING ANY INTERMITTENT FIRST DAY SET-UP PERIOD AND LAST DAY TEARDOWN PERIOD. THIS REQUIREMENT DOES NOT PRECLUDE THE CONTRACTORS USE OF STATE HIGHWAY PATROLMAN FOR OTHER PURPOSES IN THE PROJECT AREA. HOWEVER WHERE SUCH USAGE IS AT THE OPTION OF THE CONTRACTOR, PAYMENT FOR THE STATE HIGHWAY PATROLMAN'S SERVICES INVOLVED SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC. INFORMATION REGARDING ARRANGEMENTS AND PAYMENTS BY THE CONTRACTORS FOR SPECIAL DUTY PATROL SERVICES MAY BE OBTAINED BY CONTACTING THE OHIO HIGHWAY PATROL, 660 EAST MAIN STREET, COLUMBUS, OHIO, TELEPHONE 466-2660. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM SPECIAL LAW ENFORCEMENT OFFICER WITH PATROL CAR 400 HOURS

ITEM 202 CURB REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE REMOVING EXISTING TYPE 8 CURB AND BACKFILLING THE HOLE WITH ITEM 301 BITUMINOUS AGGREGATE BASE, AC-20.
THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE PURPOSE.

ITEM 301 BITUMINOUS AGGREGATE BASE, AC-20 13 CU.YD.

NOTE: ITEM 446 ASPHALT CONCRETE SURFACE COURSE, TYPE I MAY BE USED IN LIEU OF ITEM 301 BITUMINOUS AGGREGATE BASE, AC-20

ITEM 617 COMPACTED AGGREGATE, TYPE A

ALL EXCAVATION NECESSARY TO CONSTRUCT ITEM 617 COMPACTED AGGREGATE, TYPE A, AS PER TYPICAL SECTION SHEET 5, SHALL BE INCIDENTAL TO THIS ITEM AND INCLUDED IN THE CUBIC YARD BID FOR ITEM 617 COMPACTED AGGREGATE, TYPE A.

CATCH BASINS, AS PER PLAN

THE REQUIREMENTS OF ITEM 604 SHALL GOVERN THE FURNISHING AND INSTALLATION OF THE CATCH BASINS EXCEPT AS HEREIN AFTER MODIFIED. THE CONCRETE APRON SHALL BE CONSTRUCTED AS SHOWN ON SHEET 75 CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN AND IN THE STANDARD DRAWINGS FOR THE PERTINENT CATCH BASIN.

CONNECTION TO EXISTING PIPE

WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT.

PAYMENT FOR ALL OPERA TIONS AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS.

CONDUIT END TREATMENT

IMMEDIATELY AFTER PLACEMENT OF ANY CONDUITS, THE CONTRACTOR SHALL CONSTRUCT THE END TREATMENTS REQUIRED BY THE PLANS AT BOTH THE OUTLET AND INLET ENDS. THIS SHALL INCLUDE HEADWALLS, CONCRETE RIPRAP, ROCK CHANNEL PROTECTION, SODDING, ECT.

EROSION CONTROL

ITEM 601 IS PROVIDED IN THE PLANS FOR EROSION CONTROL
ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE THIS ITEM.
THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THIS ITEM WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

ITEM 304 AGGREGATE BASE, AS PER PLAN

MATERIALS FURNISHED FOR THIS ITEM SHALL EXCLUDE ALL SLAG EXCEPT GRANULATED SLAG OR CRUSHED AIR-COOLED BLAST FURNACE SLAG.

ITEM 622 TEMPORARY CONCRETE BARRIER, TYPE A, AS PER PLAN.

STATION 46+63 TO STATION 46+77:

IN LIEU OF THE BRIDGE PIER TRANSITION AS SHOWN ON STANDARD DRAWING MC-9, THE "PARAPET TRANSITION" AS SHOWN ON SHEETS 29 & 29-A SHALL BE USED.
THE COST PER LINEAR FOOT OF ITEM 622 TEMPORARY CONCRETE BARRIER, TYPE A, AS PER PLAN SHALL INCLUDE BOTH TRANSITIONS FOR RIGHT AND LEFT APPROACHES.
THE COST OF THE PARAPET TRANSITION AND REINFORCING STEEL SHALL BE INCLUDED IN THE COST OF THE ITEM 622 TEMPORARY CONCRETE BARRIER, TYPE A, AS PER PLAN.

STATION 46+77 TO STATION 47+29:

SHALL BE CONSTRUCTED AS PER STANDARD DRAWING MC-9 (SECTION A-A, FOR PIER COLUMNS).
THE COST OF ALL OF THE ABOVE SHALL BE INCLUDED IN THE LINEAR FOOT PRICE BID FOR ITEM 622 TEMPORARY CONCRETE BARRIER, TYPE A, AS PER PLAN.

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GENERAL NOTES

ITEM 614 MAINTAINING TRAFFIC:

TRAFFIC SHALL BE MAINTAINED AS PER THE DETAIL SHEETS AND SPECIFICATIONS AND AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE OPERATIONS SECTIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST REVISION. IN ADDITION, THE FOLLOWING REQUIREMENTS SHALL APPLY:

THE CONTRACTOR SHALL SUBMIT, IN WRITING A SCHEDULE OF OPERATIONS TO THE DISTRICT DEPUTY DIRECTOR AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT.

THE CONTRACTOR SHALL ARRANGE HIS OPERATIONS SO THAT NO WORK WHICH COULD DISRUPT THE NORMAL FLOW OF TRAFFIC SHALL BE PERFORMED ON THE PROJECT FROM NOVEMBER 15 TO APRIL 15. DURING THIS TIME TRAFFIC SHALL BE RETURNED TO BOTH EASTBOUND AND WESTBOUND LANES AND ALL TEMPORARY TRAFFIC CONTROL SHALL BE REMOVED. PERMANENT MARKINGS SHALL BE PUT IN PLACE. A QUANTITY HAS BEEN INCLUDED ON SHEET 67 FOR PLACING PERMANENT PAVEMENT MARKINGS.

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

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF A PERSON OR PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IMMEDIATELY.

DRUMS FOR CLOSING ANY LANES TO TRAFFIC SHALL BE PROPERLY REFLECTORIZED PLASTIC DRUMS AND WEIGHTED.

THE CONTRACTOR SHALL ARRANGE HIS OPERATIONS SO AS TO PREVENT ANY INTERFERENCE TO THE CONTINOUS FLOW OF TRAFFIC. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE APPROVED BY THE ENGINEER. EXISTING SPEED LIMIT SIGN LEGENDS IN AREAS WHERE TRAFFIC IS RESTRICTED SHALL BE COVERED AND REVISED 55 M.P.H. SPEED LIMIT SIGNS SHALL BE INSTALLED APPROPRIATELY. EXACT DATE OF INSTALLATION SHALL BE RELATED TO THE DISTRICT TRAFFIC ENGINEER AS SOON AS POSSIBLE.

ANY CONFLICTING SIGNS WHETHER INSIDE OR OUTSIDE THE WORK LIMITS SHALL BE COVERED OR REMOVED AMD TEMPORARY SIGNS ERECTED WHEN APPLICABLE. THE ENGINEER SHALL RECORD COVERED OR REMOVED AND UNCOVERED OR REERECTED SIGNS IN THE PROJECT DIARY. EXISTING SIGNS ON THE MAINLINE THAT ARE NOT APPLICABLE SHALL BE COVERED OR REMOVED BY THE CONTRACTOR.

FOR SAFETY PURPOSES NO EQUIPMENT OR MATERIAL SHALL BE PARKED OR STORED WITHIN THIRTY (30) FEET FROM THE EDGE OF THE PAVEMENT OF THE TRAVELING LANES UNLESS BEHIND GUARDRAIL OR CONCRETE BARRIER.

ALL WORK SHALL BE COMPLETED ON THE CLOSED LANE, AS DESCRIBED IN THE SEQUENCE OF OPERATIONS, BEFORE IT IS OPENED TO TRAFFIC UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES. THE LENGTH AND DURATION OF RESTRICTED TRAFFIC ZONES SHALL BE KEPT TO A MINIMUM CONSISTENT WITH THE SPECIFICATION REQUIREMENTS FOR PROTECTION OF COMPLETED COURSES AND AS OUTLINED IN THE SEQUENCE OF OPERATIONS.

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON RAMPS AT S.R.723 & S.R.83.

TEMPORARY FEATHERS, USING ITEM 404 WILL BE REQUIRED AT INTERSECTIONS, BRIDGES, RAMPS, END OF RUNS OR AT OTHER POINTS DESIGNATED BY THE ENGINEER. THEY SHALL BE INSTALLED ACCORDING TO BP-5 AND REMOVED WHEN NO LONGER REQUIRED. THE COST OF THESE SHALL BE INCLUDED IN ITEM 404 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC, SEE SHEET 11.

TRAFFIC SHALL NOT BE EXPOSED TO PAVEMENT DROP OFFS WITHOUT APPROPRIATE CHANNELIZING DEVICES.

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 15. NOVEMBER 15 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH SECTION 108.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR EACH CALENDAR DAY THAT ALL LANES ARE NOT OPEN AND AVAILABLE TO TRAFFIC.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC.

SEQUENCE OF OPERATIONS:

PHASE 1:
BEGIN PROJECT TO S.L.M. 2.57, EASTBOUND & S.L.M. 2.57 TO S.L.M. 6.13, WESTBOUND

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE PASSING LANE AND MAINTAIN TRAFFIC IN THE DRIVING LANE.

(2) EXCAVATE MEDIAN BERM AND REPLACE WITH ITEM 301 BITUMINOUS AGGREGATE BASE AS SHOWN ON SHEET 5, AS MARK ⑧ & ⑨

(3) ADJUST TRAFFIC CONTROL DEVICES FOR NEXT PHASE OF WORK.

PHASE 2:
BEGIN PROJECT TO S.L.M. 2.57, EASTBOUND & S.L.M. 2.57 TO S.L.M. 6.13, WESTBOUND

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE DRIVING LANE, AND MAINTAIN TRAFFIC IN THE PASSING LANE.

(2) REPAIR EXISTING PAVEMENT AS PER ITEM 803 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT AND WESTBOUND WEIGH STATION RAMPS.

(3) INSTALL ITEM 605 6" PIPE UNDERDRAINS AND CONSTRUCT PROPOSED BERM AS SHOWN ON TYPICAL SECTION SHEET

(4) CONSTRUCT ITEM 301 COURSES FOR DRIVING LANE AND OUTSIDE BERM AND CONSTRUCT SHOULDER EMBANKMENT. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION AND OTHER DETAILS.
WORK IN THE DRIVING LANE SHALL BE SUSPENDED AT THE DIRECTION OF THE PROJECT ENGINEER IN ORDER TO MAINTAIN TRAFFIC FROM S.R.723.

(5) ADJUST TRAFFIC CONTROL DEVICES FOR NEXT PHASE OF WORK.

NOTE: AFTER ALL NECESSARY TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED AND TRAFFIC MOVED TO THE PASSING LANE, WORK ON THE STRUCTURES AND THE APPROACH WORK TO THE STRUCTURES IN THE DRIVING LANE MAY BE CONSTRUCTED AT THE OPTION OF THE CONTRACTOR. FOR CLOSURE DETAILS SEE SHEET 16.

PHASE 3:
BEGIN PROJECT TO S.L.M. 2.57, EASTBOUND & S.L.M. 2.57 TO S.L.M. 6.13, WESTBOUND

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE PASSING LANE AND MAINTAIN TRAFFIC IN THE DRIVING LANE.

(2) REPAIR EXISTING PAVEMENT AS PER ITEM 803 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT.

(3) INSTALL ITEM 605 SHALLOW UNDERDRAINS, AS PER PLAN

(4) CONSTRUCT ITEM 301 AND ITEM 446 SURFACE COURSE FOR PASSING LANES AND INSIDE BERM AND CONSTRUCT SHOULDER EMBANKMENT. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION AND OTHER DETAILS.

(5) ADJUST TRAFFIC CONTROL DEVICES FOR NEXT PHASE OF WORK.

NOTE: AFTER ALL NECESSARY TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED AND TRAFFIC MOVED TO THE DRIVING LANE, WORK ON THE STRUCTURES AND THE APPROACH WORK TO THE STRUCTURES IN THE PASSING LANE MAY BE CONSTRUCTED AT THE OPTION OF THE CONTRACTOR. FOR CLOSURE DETAILS SEE SHEET 16.

PHASE 4:
BEGIN PROJECT TO S.L.M. 2.57, EASTBOUND & S.L.M. 2.57 TO S.L.M. 6.13, WESTBOUND

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE DRIVING LANE, AND MAINTAIN TRAFFIC IN THE PASSING LANE.

(2) CONSTRUCT ITEM 446 SURFACE COURSE FOR DRIVING LANE. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION AND OTHER DETAILS.

(3) ADJUST TRAFFIC CONTROL DEVICES FOR NEXT PHASE OF WORK.

PHASE 5:
S.L.M. 2.57 TO S.L.M. 6.13, EASTBOUND & BEGIN PROJECT TO S.L.M. 2.57, WESTBOUND

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE PASSING LANE AND MAINTAIN TRAFFIC IN THE DRIVING LANE.

(2) EXCAVATE MEDIAN BERM AND REPLACE WITH ITEM 301 BITUMINOUS AGGREGATE BASE AS SHOWN ON SHEET 5, AS MARK ⑧ & ⑨

(3) ADJUST TRAFFIC CONTROL DEVICES FOR NEXT PHASE OF WORK.

PHASE 6:
S.L.M. 2.57 TO S.L.M. 6.13, EASTBOUND & BEGIN PROJECT TO S.L.M. 2.57, WESTBOUND

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE DRIVING LANE, AND MAINTAIN TRAFFIC IN THE PASSING LANE.

(2) REPAIR EXISTING PAVEMENT AS PER ITEM 803 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT AND EASTBOUND WEIGH STATION RAMPS.

(3) INSTALL ITEM 605 6" PIPE UNDERDRAINS AND CONSTRUCT PROPOSED BERM AS SHOWN ON TYPICAL SECTION SHEET 5.

(4) CONSTRUCT ITEM 301 COURSES FOR DRIVING LANE AND OUTSIDE BERM AND CONSTRUCT SHOULDER EMBANKMENT. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION AND OTHER DETAILS.
WORK IN THE DRIVING LANE SHALL BE SUSPENDED AT THE DIRECTION OF THE PROJECT ENGINEER IN ORDER TO MAINTAIN TRAFFIC TO S.R.723.

(5) ADJUST TRAFFIC CONTROL DEVICES FOR NEXT PHASE OF WORK.

NOTE: AFTER ALL NECESSARY TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED AND TRAFFIC MOVED TO THE PASSING LANE, WORK ON THE STRUCTURES AND THE APPROACH WORK TO THE STRUCTURES IN THE DRIVING LANE MAY BE CONSTRUCTED AT THE OPTION OF THE CONTRACTOR. FOR CLOSURE DETAILS SEE SHEET 16.

614 WORK ZONE SPEED LIMIT SIGNS

PROJECT LENGTH = 6.134 MILES
6.134 ÷ 0.5 = 12.27 or 14 SIGNS
BOTH SIDES (2) + BOTH DIRECTIONS (2) x 14 = 56 SIGNS
RAMPS = 2 + 56 = 58 EACH WORK ZONE SPEED LIMIT SIGNS

GENERAL NOTES

PHASE 7:
S.L.M. 2.57 TO S.L.M. 6.13, EASTBOUND &
BEGIN PROJECT TO S.L.M. 2.57, WESTBOUND

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE PASSING LANE AND MAINTAIN TRAFFIC IN THE DRIVING LANE.

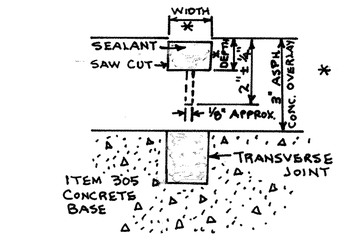
(2) REPAIR EXISTING PAVEMENT AS PER ITEM 803 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT.

(3) INSTALL ITEM 605 SHALLOW UNDERDRAINS, AS PER PLAN

(4) CONSTRUCT ITEM 301 AND ITEM 446 SURFACE COURSE FOR PASSING LANES AND INSIDE BERM AND CONSTRUCT SHOULDER EMBANKMENT. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION AND OTHER DETAILS.

(5) ADJUST TRAFFIC CONTROL DEVICES FOR NEXT PHASE OF WORK.

NOTE: AFTER ALL NECESSARY TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED AND TRAFFIC MOVED TO THE DRIVING LANE, WORK ON THE STRUCTURES AND THE APPROACH WORK TO THE STRUCTURES IN THE PASSING LANE MAY BE CONSTRUCTED AT THE OPTION OF THE CONTRACTOR. FOR CLOSURE DETAILS SEE SHEET 16.



* SEE PROPOSAL NOTE

DETAIL FOR TRANSVERSE JOINT IN A BITUMINOUS OVERLAY

PHASE 8:
S.L.M. 2.57 TO S.L.M. 6.13, EASTBOUND &
BEGIN PROJECT TO S.L.M. 2.57, WESTBOUND

(1) INSTALL NECESSARY TRAFFIC CONTROL DEVICES, CLOSE DRIVING LANE, AND MAINTAIN TRAFFIC IN THE PASSING LANE.

(2) CONSTRUCT ITEM 446 SURFACE COURSE FOR DRIVING LANE. COMPLETE ALL OTHER RELATED WORK AS PER TYPICAL SECTION AND OTHER DETAILS.

(3) ADJUST TRAFFIC CONTROL DEVICES FOR NEXT PHASE OF WORK.

GENERAL:

IT IS THE INTENT OF THIS SEQUENCE OF OPERATIONS TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC;

ALTERNATE METHODS:

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT AN ALTERNATE METHOD OR METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS ARE FOLLOWED AND NO ADDITIONAL INCONVIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. HOWEVER, ONE TRUCK WEIGH STATION, EITHER WESTBOUND OR EASTBOUND SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES.

ALSO, ALL TEMPORARY AND PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE ANY PAVEMENT IS OPENED TO TRAFFIC.

NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR.

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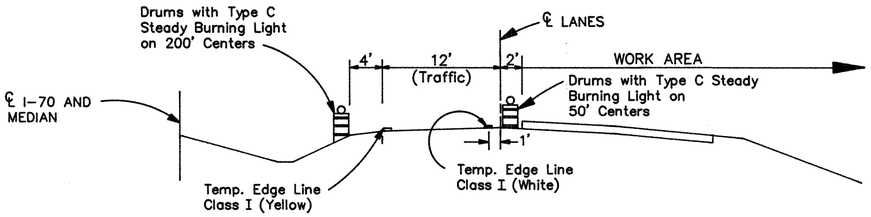
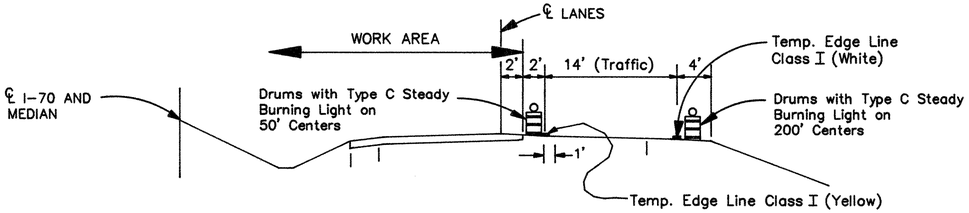
TEMPORARY TRAFFIC CONTROL

CALC. BY DATE	GUE-70-0.00	OHIO
CHKD. BY DATE		FHWA REGION 5

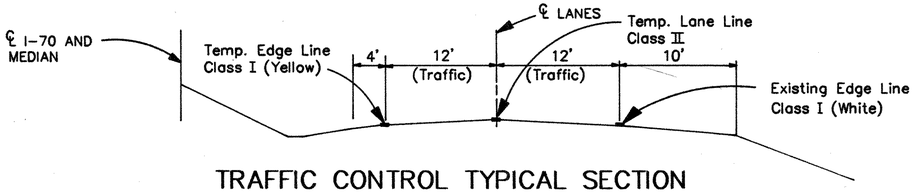
16/88



TRAFFIC CONTROL TYPICAL SECTION
(DRIVING LANE CLOSURE)

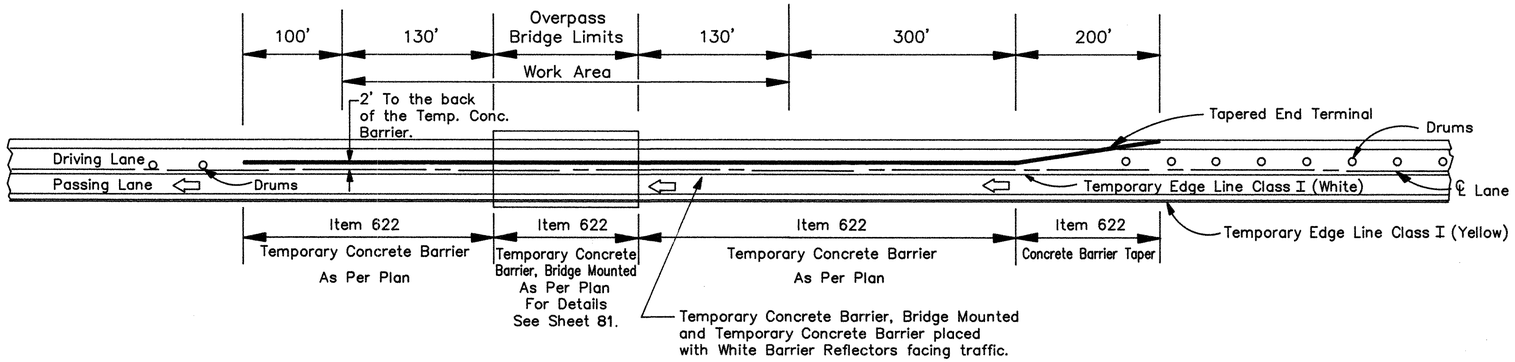


TRAFFIC CONTROL TYPICAL SECTION
(PASSING LANE CLOSURE)

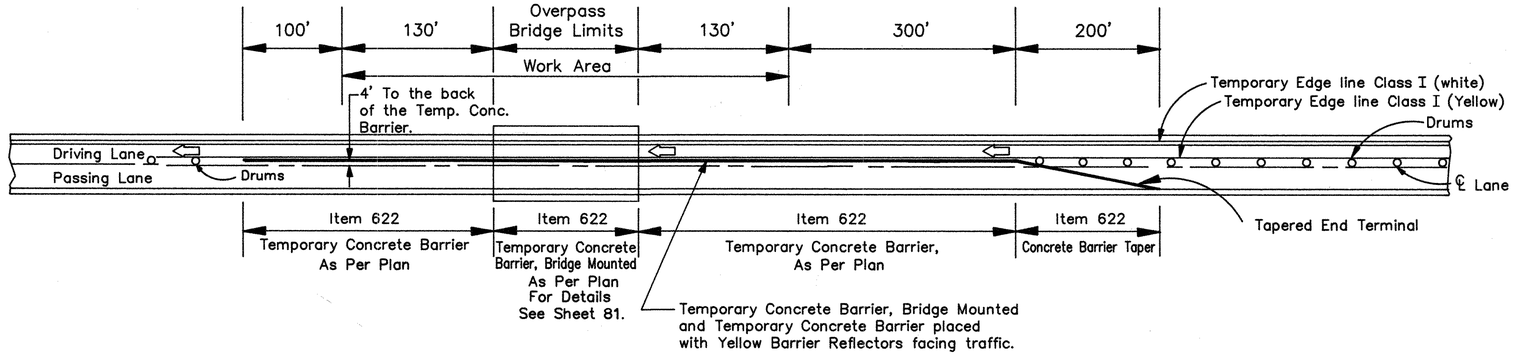


TRAFFIC CONTROL TYPICAL SECTION
(BOTH LANES MAINTAINED ON 446 SURFACE COURSE)

TRAFFIC CONTROL TYPICAL SECTIONS
WITHOUT TEMPORARY CONCRETE BARRIER



DETAILS CLOSING DRIVING LANE
WITH TEMPORARY CONCRETE BARRIER



DETAILS CLOSING PASSING LANE
WITH TEMPORARY CONCRETE BARRIER

Ck. D.M. 9-9-89
Chek. J.W.C. 12-12-89

GUE-70-0.00

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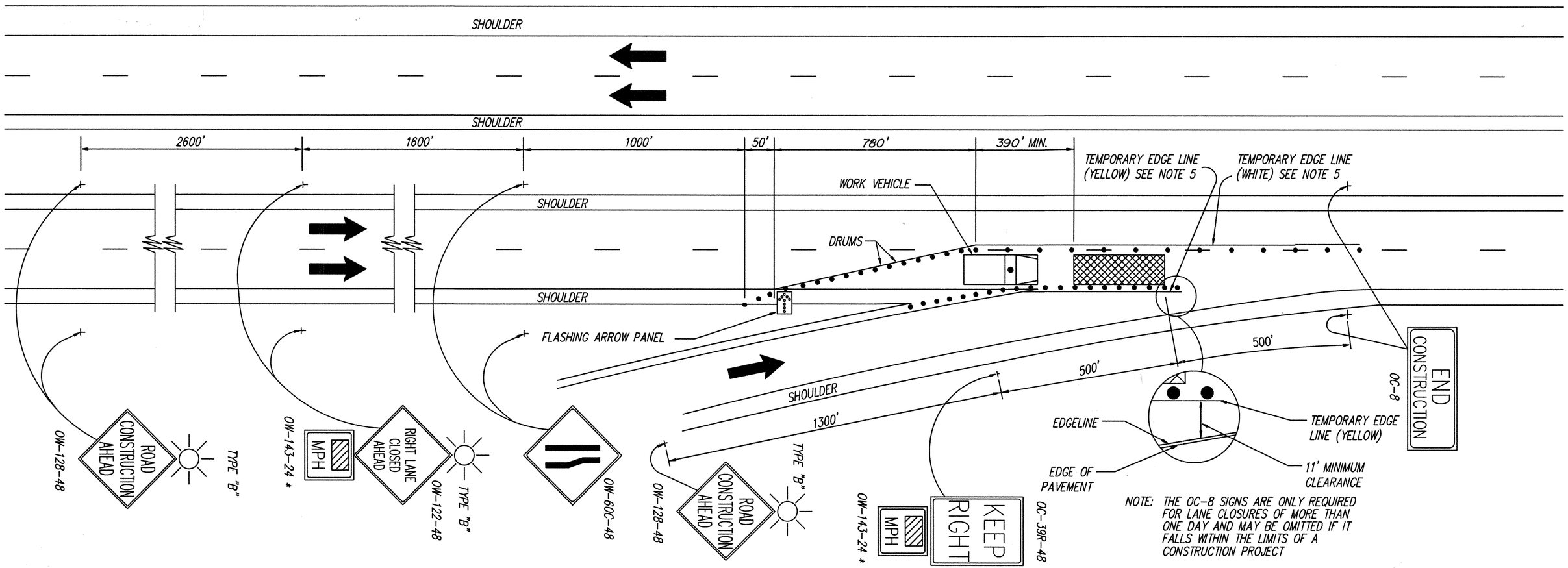


NOTE: THE OC-8 SIGNS ARE ONLY REQUIRED FOR LANE CLOSURES OF MORE THAN ONE DAY AND MAY BE OMITTED IF IT FALLS WITHIN THE LIMITS OF A CONSTRUCTION PROJECT

① THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL BE EMPLOYED WHEN THE LATERAL CLEARANCE BETWEEN THE CHANNELIZING DEVICES AT THE RIGHT EDGE OF THE WORK AREA AND THE EDGE OF THE RAMP PAVEMENT IS 11 FEET OR MORE.

② THE LOCATION OF THE ADVANCE WARNING SIGNS SHOULD BE ADJUSTED TO PROVIDE FOR ADEQUATE SIGHT DISTANCE FOR THE EXISTING VERTICAL AND HORIZONTAL ROADWAY ALIGNMENT. IN ORDER TO DETERMINE THE MINIMUM NUMBER OF CHANNELIZING DEVICES FOR THE TRANSITION TAPER SEE TABLE 7-5 OMUTCD. FOR A 55 MPH PREVAILING SPEED AND A 12 FOOT LANE, NOT LESS THAN SIXTEEN (16) DRUMS SHALL BE USED TO FORM THE LANE TRANSITION TAPER IN ADVANCE OF THE WORK AREA. NOT LESS THAN FIVE (5) DRUMS SHALL BE USED TO FORM THE TAPER IN THE SHOULDER AREA . DRUMS SHALL BE LOCATED AS SHOWN TO SEPARATE THE RAMP TRAFFIC FROM THE WORK AREA. DRUMS SHALL BE SPACED 50' CENTER TO CENTER. CONES HAVING A MINIMUM HEIGHT OF 28 INCES MAY BE SUBSTITUTED FOR DRUMS FOR DAY-TIME LANE CLOSURES. PROVISIONS SHALL BE MADE TO STABILIZE THE CONES TO PREVENT THEM FROM BLOWING OVER. IF THIS CANNOT BE ACHIEVED, DRUMS SHALL BE USED.

③ THE SPACING BETWEEN CONSTRUCTION SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS OR AS DETERMINED BY THE ENGINEER.

④ RAMP SIGNS SHALL BE DUAL MOUNTED ON MULTILANE RAMPS.

⑤ IF THE CONSTRUCTION OPERATION REQUIRES THE LANE CLOSURE FOR MORE THAN ONE DAY, THEN THE EXISTING CONFLICTING PAVEMENT MARKINGS AND REFLECTORS FROM THE RAISED PAVEMENT MARKERS SHALL BE REMOVED AND THE APPROPRIATE COLOR TEMPORARY EDGE LINES SHALL BE APPLIED. PAVEMENT MARKING TAPE MAY BE USED. AFTER COMPLETION OF THE WORK, TEMPORARY MARKINGS SHALL BE REMOVED IN ACCORDANCE WITH 621.134 AND THE ORIGINAL MARKINGS AND RAISED PAVEMENT MARKER REFLECTORS SHALL BE RESTORED.

⑥ THE WORK VEHICLE SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE AND UNOCCUPIED WHENEVER WORKERS ARE IN THE WORK AREA. THIS WORK VEHICLE SHALL BE MOVED FROM THE PAVEMENT WHENEVER WORKERS ARE NOT IN THE WORK AREA. OTHER PROTECTIVE DEVICES MAY BE USED IN LIEU OF THE WORK VEHICLE SHOWN WHEN APPROVED BY THE ENGINEER. THE VEHICLE SHALL BE EQUIPPED WITH A 360° ROTATING OR FLASHING AMBER BEACON CLEARLY VISIBLE FOR A MINIMUM OF ONE-QUARTER (1/4) MILE. A TRUCK MOUNTED IMPACT ATTENUATOR MAY BE EMPLOYED.

⑦ THE FLASHING ARROW PANEL SHALL MEET THE REQUIREMENTS OF STANDARD DRAWING TC-35.10.

⑧ TYPE "C" STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE ERECTED ON DRUMS FOR NIGHT LANE CLOSURES. THE MAXIMUM SPACING SHALL BE IDENTICAL TO THE CHANNELIZING DEVICE SPACING REQUIREMENTS DESCRIBED IN NOTE 2.

⑨ TYPE "B" FLASHING BARRICADE WARNING LIGHTS SHOWN ON THE "ROAD CONSTRUCTION AHEAD" AND THE "RIGHT LANE CLOSED AHEAD" SIGNS ARE REQUIRED WHENEVER A NIGHT LANE CLOSURE IS NECESSARY.

⑩ SOME WORK AREA LOCATIONS MAY REQUIRE MORE THAN JUST STATIC OR CONVENTIONAL SIGNS TO ENHANCE COMMUNICATION WITH THE DRIVER. AT THESE LOCATIONS PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) UNITS ARE RECOMMENDED. THESE DEVICES SHOULD BE LOCATED APPROXIMATELY 2000 FEET IN ADVANCE OF A LANE CLOSURE OR OTHER POINT OF REQUIRED ACTION. SEE SECTION 7G-8.1, OMUTCD FOR FURTHER GUIDANCE ON USE OF PCMS UNITS. THESE UNITS, IF REQUIRED, WILL BE SPECIFICALLY CALLED FOR IN THE PLANS AND PAID FOR SEPARATELY.

⑪ PAYMENT FOR ALL OF THE ABOVE, UNLESS ITEMIZED SEPARATELY, SHALL BE INCLUDED IN "ITEM 614 – MAINTAINING TRAFFIC".

* OPTIONAL – AS DIRECTED BY THE ENGINEER

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT FIVE

LANE CLOSURE AT ENTRANCE RAMP: PLAN A

REV.	DRAWN	DATE 7/86
6/87		STANDARD DRAWING D3-7

CALC. BY [illegible]
DATE 9-9-89
CHECK. BY RM
DATE 12-12-89

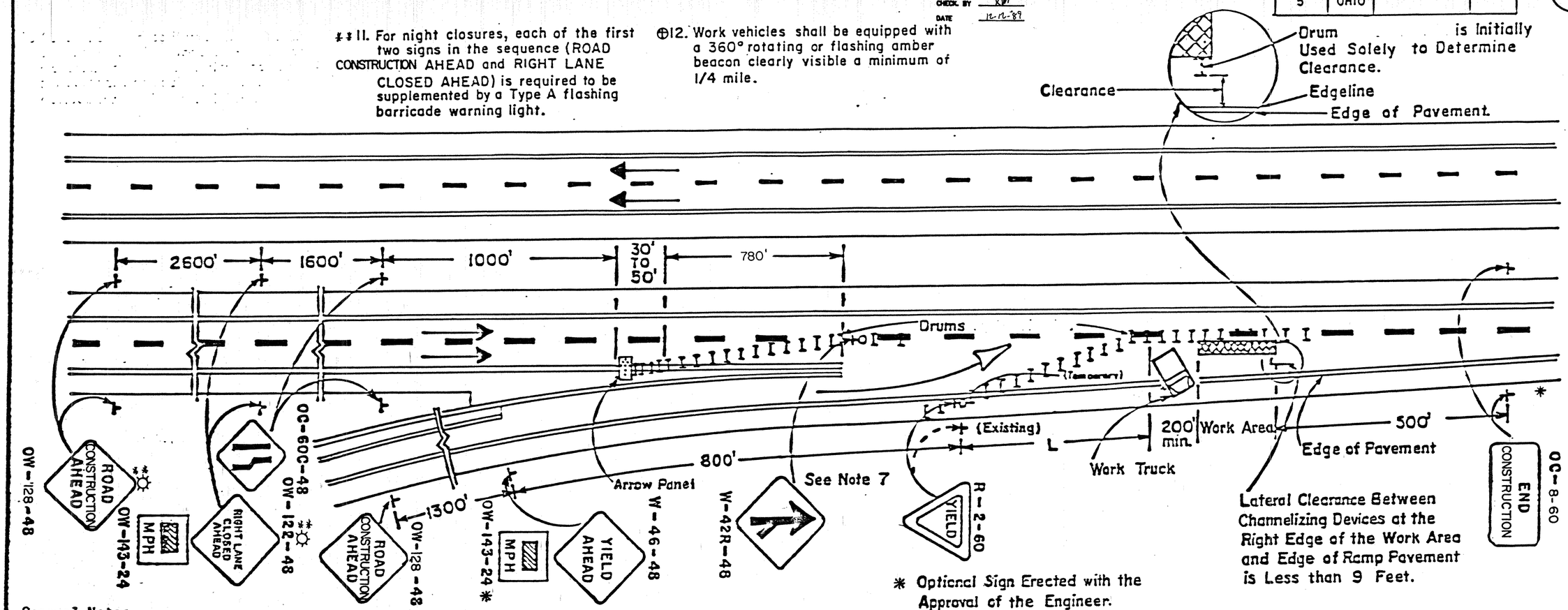
GUE-70-0.00

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

19/88

**11. For night closures, each of the first two signs in the sequence (ROAD CONSTRUCTION AHEAD and RIGHT LANE CLOSED AHEAD) is required to be supplemented by a Type A flashing barricade warning light.

⊕12. Work vehicles shall be equipped with a 360° rotating or flashing amber beacon clearly visible a minimum of 1/4 mile.



* Optional Sign Erected with the Approval of the Engineer.

General Notes

1. This work area traffic control application shall be employed when the lateral clearance between channelizing devices at the right edge of the work area and the edge of the ramp pavement is less than 9 feet. When the clearance is more than 9 feet, the traffic control on "Lane Closure at Entrance Ramp: Plan A" should be used, or the ramp should be closed. When the ramp is closed, appropriate detour signs shall be provided.

2. Sixteen (16) drums shall be used to form the lane transition taper in advance of the work area. Five (5) channelizing devices shall be used to form the taper on the shoulder. Drums shall be spaced at 50 foot centers.

3. Ramp signs shall be dual mounted on multi-lane ramps. When the ramp is not long enough to allow placement as specified above, the signs may be spaced proportionately within the space available as determined by the Engineer (a 200' minimum spacing must be maintained).

4. The flashing arrow panel shall be in accordance with Std. Drwg. TC-35.10

5. The work truck shown at the beginning of the work area shall be in place and unoccupied whenever men are working within the work area. This truck shall be moved from the pavement whenever workmen are not in the work area. Other protective devices may be used in lieu of work truck shown when approved by the Engineer. ⊕

6. Type C steady burning barricade warning lights shall be erected on ALL DRUMS for night lane closures.

7. It may be necessary to move the location of an existing Yield condition In these cases, the permanent R-2 sign installation shall be covered and the temporary installation shall be mounted upon a drive post which shall be banded to a drum with stainless steel strapping material or other techniques subject to the approval of the Engineer.

8. Taper Formulae:

   $L = S \times W$ for Speeds of 45 or more.
   $L = WS^2/60$ for Speeds 40 or less.

   Where:

   L = Minimum length of taper.
   S = Numerical value of posted speed limit prior to work or 85 percentile speed.
   W = Width of offset.

9. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

OHIO DEPARTMENT OF TRANSPORTATION

LANE CLOSURE AT ENTRANCE RAMP PLAN B

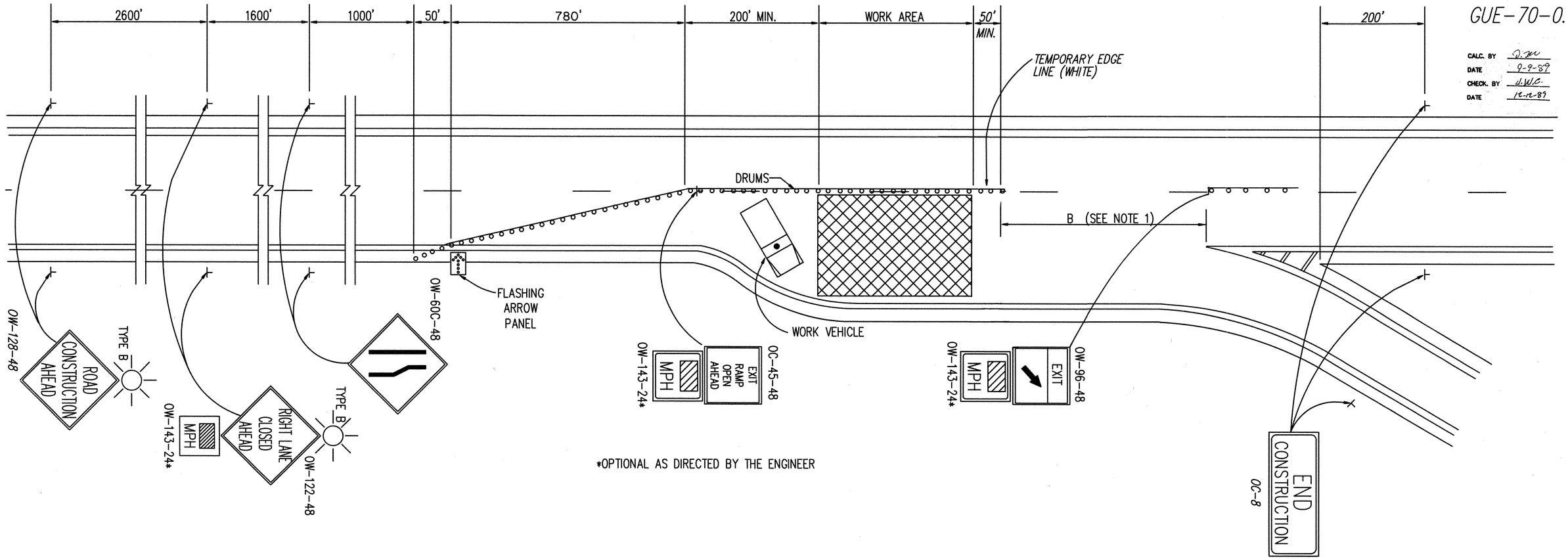
DATE 3-3-79

7K-6

Rev. EEF 9/84

GUE-70-0.00

CALC. BY D.W.C.
DATE 9-9-89
CHECK. BY J.W.C.
DATE 12-12-89



*OPTIONAL AS DIRECTED BY THE ENGINEER

1) THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL BE USED WHEN THE DISTANCE "B" IS 100 FEET OR GREATER.

2) THE LOCATION OF THE ADVANCE WARNING SIGNS SHOULD BE ADJUSTED TO PROVIDE FOR ADEQUATE SIGHT DISTANCE FOR THE EXISTING VERTICAL AND HORIZONTAL ROADWAY ALIGNMENT. IN ORDER TO DETERMINE THE MINIMUM NUMBER OF CHANNELIZING DEVICES FOR THE TRANSITION TAPER SEE TABLE 7-5 OMUTCD. FOR A 55 MPH PREVAILING SPEED AND A 12 FOOT LANE, NOT LESS THAN THIRTEEN (13) DRUMS SHALL BE USED TO FORM THE LANE TRANSITION TAPER IN ADVANCE OF THE WORK AREA. NOT LESS THAN FIVE (5) DRUMS SHALL BE USED TO FORM THE TAPER IN THE SHOULDER AREA. DRUMS SHALL BE SPACED 50' CENTER TO CENTER. CONES HAVING A MINIMUM HEIGHT OF 28 INCHES MAY BE SUBSTITUTED FOR DRUMS FOR DAYTIME LANE CLOSURES. PROVISIONS SHALL BE MADE TO STABILIZE THE CONES TO PREVENT THEM FROM BLOWING OVER. IF THIS CANNOT BE ACHIEVED, DRUMS SHALL BE USED.

3) THE SPACINGS BETWEEN CONSTRUCTION SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS OR AS DETERMINED BY THE ENGINEER.

4) IF THE CONSTRUCTION OPERATION REQUIRES THE LANE CLOSURE FOR MORE THAN ONE DAY, THEN THE EXISTING CONFLICTING PAVEMENT MARKINGS AND REFLECTORS FROM THE RAISED PAVEMENT MARKERS SHALL BE REMOVED AND THE APPROPRIATE COLOR TEMPORARY EDGE LINES LINES SHALL BE APPLIED. PAVEMENT MARKING TAPE MAY BE USED. AFTER COMPLETION OF THE WORK, TEMPORARY MARKINGS SHALL BE REMOVED IN ACCORDANCE WITH 621.134 AND THE ORIGINAL MARKINGS AND RAISED PAVEMENT MARKER REFLECTORS SHALL BE RESTORED.

5) THE WORK VEHICLE SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE AND UNOCCUPIED WHENEVER MEN ARE WORKING WITHIN THE WORK AREA. THIS VEHICLE SHALL BE MOVED FROM THE PAVEMENT WHENEVER WORKMEN ARE NOT IN THE WORK AREA. OTHER PROTECTIVE DEVICES MAY BE USED IN LIEU OF THE WORK VEHICLE SHOWN WHEN APPROVED BY THE ENGINEER. THE VEHICLE SHALL BE EQUIPPED WITH A 360° ROTATING OR FLASHING AMBER BEACON CLEARLY VISIBLE FOR A MINIMUM OF ONE-QUARTER (1/4) MILE. A TRUCK MOUNTED IMPACT ATTENUATOR MAY BE EMPLOYED.

6) THE FLASHING ARROW PANEL SHALL MEET THE REQUIREMENTS OF STANDARD DRAWING TC-35.10.

7) TYPE C STEADY BURN BARRICADE WARNING LIGHTS SHALL BE ERECTED ON THE DRUMS FOR NIGHT LANE CLOSURES. THE MAXIMUM SPACING SHALL BE IDENTICAL TO THE CHANNELIZING DEVICE SPACING REQUIREMENTS DESCRIBED IN NOTE NO. 2.

8) THE TYPE B FLASHING BARRICADE WARNING LIGHTS SHOWN ON THE "ROAD CONSTRUCTION AHEAD" AND THE "ONE LANE ROAD AHEAD" SIGNS ARE REQUIRED WHENEVER A NIGHT LANE CLOSURE IS NECESSARY.

9) THE OC-8 SIGNS ARE ONLY REQUIRED FOR LANE CLOSURES OF MORE THAN ONE DAY AND MAY BE OMITTED IF THEY FALL WITHIN THE LIMITS OF A CONSTRUCTION PROJECT.

10) SOME WORK AREA LOCATIONS MAY REQUIRE MORE THAN JUST STATIC OR CONVENTIONAL SIGNS TO ENHANCE COMMUNICATION WITH THE DRIVER. AT THESE LOCATIONS PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) UNITS ARE RECOMMENDED. THESE DEVICES SHOULD BE LOCATED APPROXIMATELY 2,000 FEET IN ADVANCE OF A LANE CLOSURE OR OTHER POINT OF REQUIRED ACTION. SEE SECTION 7G-8.1, OMUTCD FOR FURTHER GUIDANCE ON USE OF PCMS UNITS. THSE UNITS, IF REQUIRED, WILL BE SPECIFICALLY CALLED FOR IN THE PLANS AND PAID FOR SEPARATELY.

11) PAYMENT FOR ALL OF THE ABOVE, UNLESS ITEMIZED SEPARATELY, SHALL BE INCLUDED IN ITEM 614, MAINTAINING TRAFFIC.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT FIVE

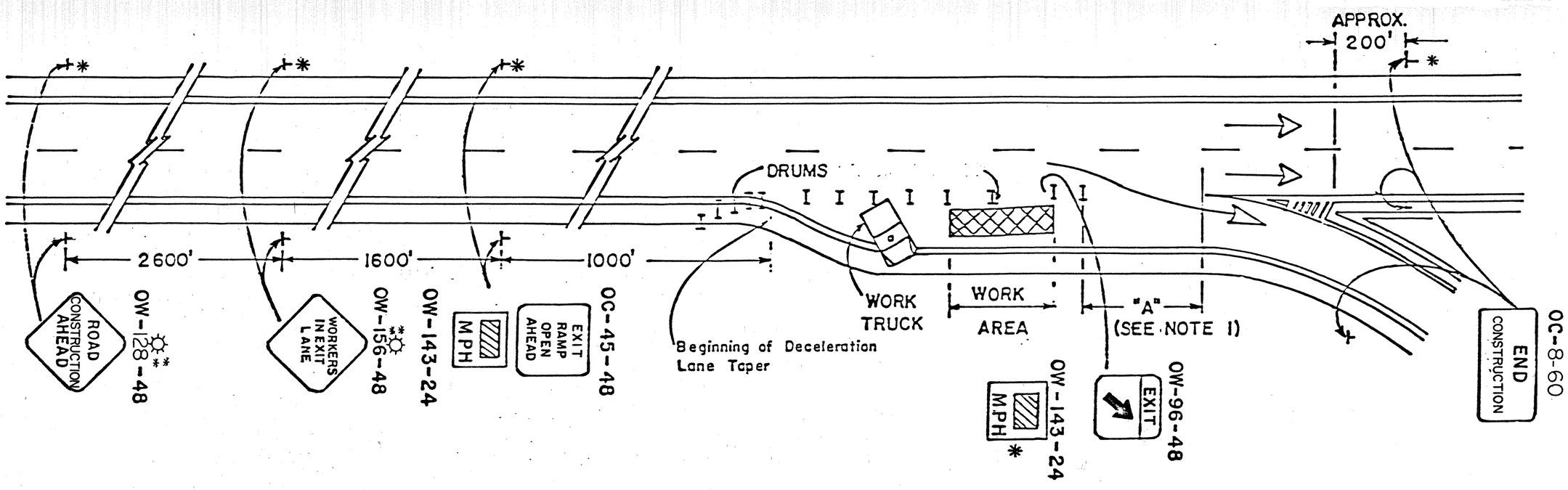
LANE CLOSURE BEFORE EXIT GORE

REV.	DRAWN	
6/87		STANDARD NO. D3-8

CALC. BY D.M
DATE 12-2-89
CHECK. BY RM
DATE 12-12-89

FED. RD DIVISION	STATE	PROJECT	
5	OHIO		

GUE-70-0.00



* OPTIONAL SIGN ERECTED WITH THE APPROVAL OF THE ENGINEER.

GENERAL NOTES.

1. THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL ONLY APPLY WHEN THE DISTANCE "A" IS GREATER THAN 100'. WHEN DISTANCE "A" IS LESS THAN 100', THE RAMP SHALL BE CLOSED. WHEN THE RAMP IS CLOSED, THE TRAFFIC CONTROL SHALL INCLUDE DETOUR SIGNING FOR EXIT RAMP CLOSURES IN ACCORDANCE WITH OMUTCD.

2. DRUMS SHALL BE SPACED AT 50 FOOT CENTERS.

3. TYPE C STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE ERECTED ON ALL DRUMS FOR NIGHT LANE CLOSURES.

4. THE WORK TRUCK SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE AND UNOCCUPIED WHENEVER MEN ARE WORKING WITHIN THE WORK AREA. THIS TRUCK SHALL BE MOVED FROM THE PAVEMENT WHENEVER WORKMEN ARE NOT IN THE WORK AREA. OTHER PROTECTIVE DEVICES MAY BE USED IN LIEU OF THE WORK TRUCK SHOWN WHEN APPROVED BY THE ENGINEER.⊕

5. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

*6. FOR NIGHT CLOSURES, EACH OF THE FIRST TWO SIGNS IN THE SEQUENCE (ROAD CONST. AHEAD AND WORKERS IN EXIT LANE) IS REQUIRED TO BE SUPPLEMENTED BY A TYPE A FLASHING BARRICADE WARNING LIGHT.

⊕ 7. WORK VEHICLES SHALL BE EQUIPPED WITH A 360° ROTATING OR FLASHING AMBER BEACON CLEARLY VISIBLE A MINIMUM OF ¼ MILE.

OHIO DEPARTMENT OF TRANSPORTATION

LANE CLOSURE IN DECELERATION LANE

DATE 8-3-79

7K-2

Rev. EEF 9/84

PAVEMENT MARKING TYPICAL DETAILS

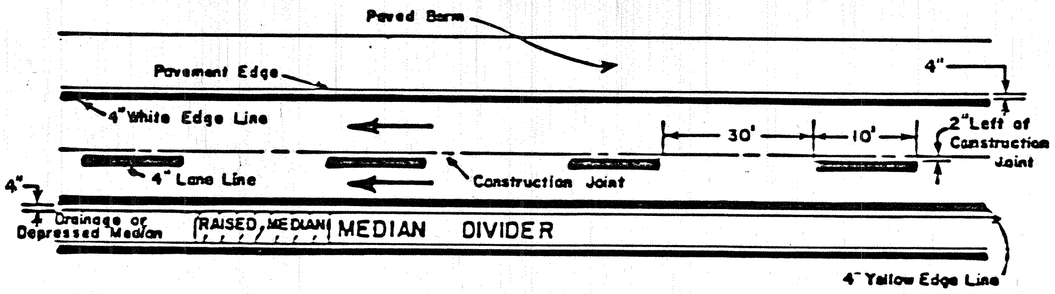
FED.RD DIV.	STATE	PROJECT	
5	OHIO	.	

GUE-70-0.00

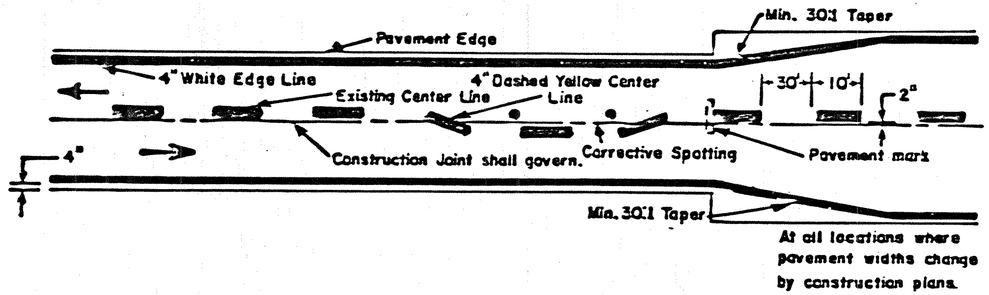
22
88

CALC. BY D.M.
DATE 9-9-89
CHECK BY RM
DATE 12-12-89

FREEWAY & EXPRESSWAY MAINLINE MARKINGS

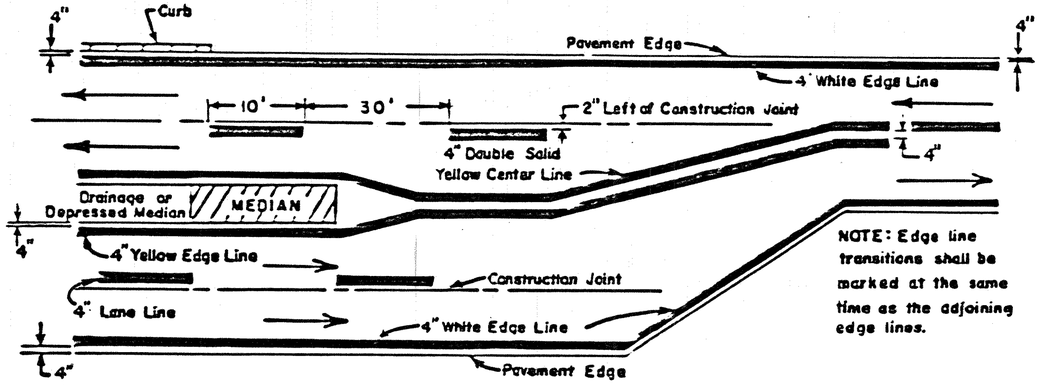


TWO LANE MARKINGS



At all locations where pavement widths change by construction plans.

MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



NOTE: Edge line transitions shall be marked at the same time as the adjoining edge lines.

NOTES:

1. THE DISTANCE FROM THE PAVEMENT EDGE TO THE NEARSIDE EDGE OF THE EDGELINE MAY BE INCREASED WITH THE APPROVAL OF THE ENGINEER IN ORDER TO MAINTAIN UNIFORM LANE WIDTH.
2. SEE TC 72.20 FOR PAVEMENT ENTRANCE AND EXIT RAMP TERMINALS.

OHIO DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING TYPICAL DETAILS

DATE 11/80

JDL. - CDR. 12/81

38-2

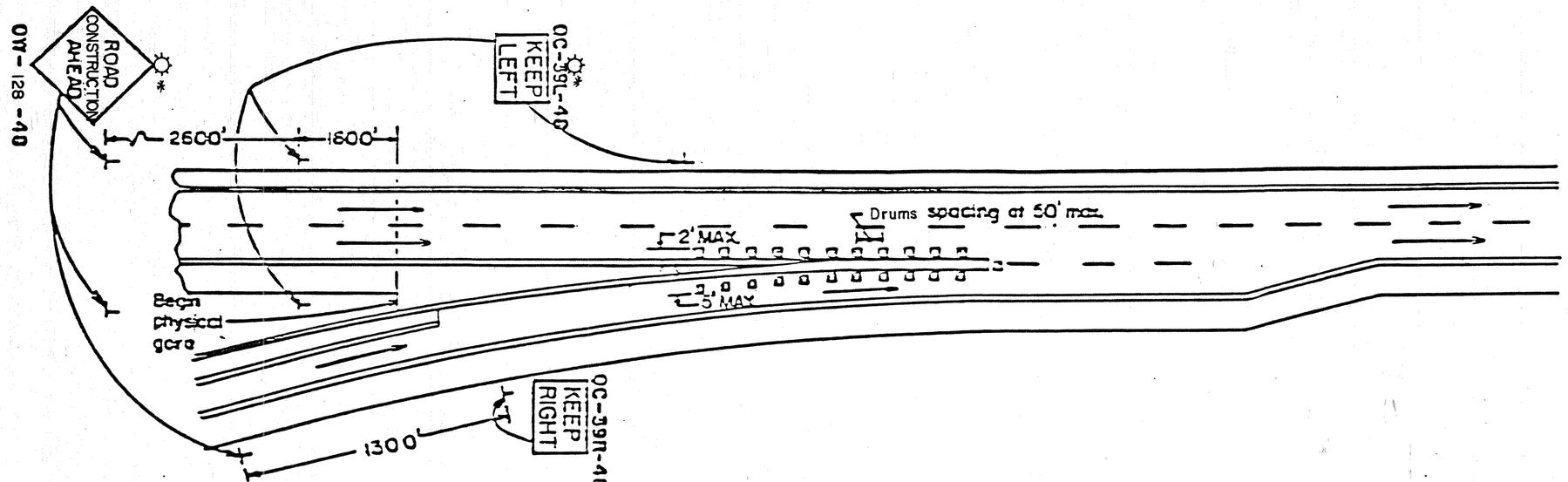
CALC. BY J.W
DATE 2-9-89
CHECK BY RM
DATE 12-12-89

FED. ROI DIVISION	STATE	PROJECT	
5	OHIO		

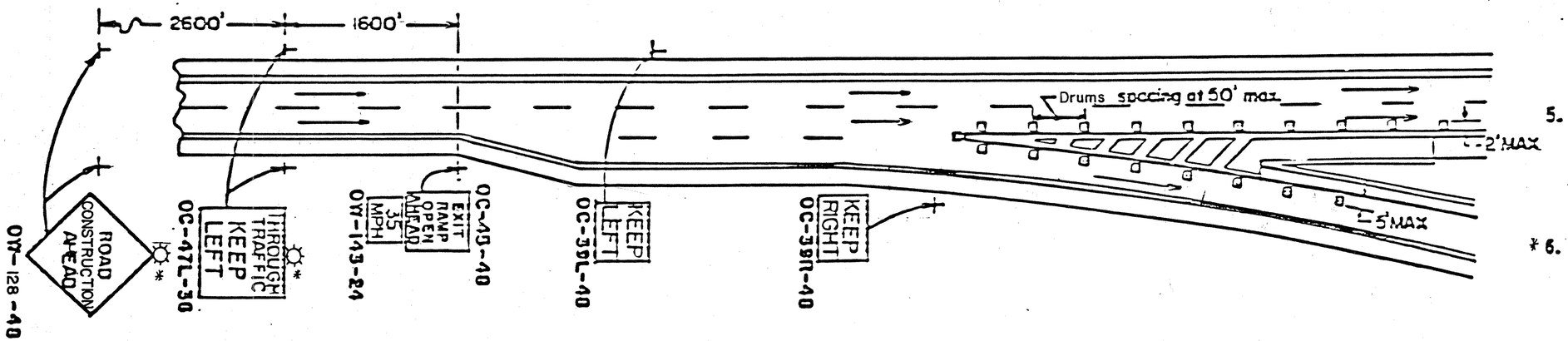
23
88

GUE-70-0.00

ENTRANCE GORE TRAFFIC CONTROL



EXIT GORE TRAFFIC CONTROL



GENERAL NOTE

1. THE REQUIREMENTS OF THE "TRAFFIC CONTROL FOR LONG LINE PAVEMENT MARKING OPERATIONS" Std. Drwg. MT-99.20 SHALL APPLY IN LIEU OF THIS DETAIL WHERE EDGE LINES AND/OR CHANNELIZING LINES ARE SPRAYED IN MOVING OPERATIONS SEPARATE FROM ANY OTHER WORK.
2. WHERE THE WORK IN THE GORE AREA REQUIRES MORE POSITIVE TRAFFIC CONTROL OR OVERNIGHT WORK AREA PROTECTION, THE TRAFFIC CONTROL FOR "LANE CLOSURE AT THE ENTRANCE RAMP" OR "LANE CLOSURE AT EXIT GORE" SHOULD BE EMPLOYED. ~~SEE SHEETS~~ SEE 18 & 19.
3. THE SPACING BETWEEN SIGNS SHOWN ON THIS DETAIL MAY BE ADJUSTED (INCREASED OR DECREASED) WITH THE APPROVAL OF THE ENGINEER TO POSITION THEM NO CLOSER THAN 200 FEET TO EXISTING SIGNS WHICH MUST REMAIN IN USE.
4. AT AN ISOLATED ENTRANCE GORE AREA, A FLASHING ARROW PANEL CONFORMING TO REQUIREMENTS IN STD. DRWG. TC-35.10 MAY BE SUBSTITUTED FOR THE ADVANCE OC-39-48 SIGNS.
5. AT AN INTERCHANGE WHERE BOTH EXITS AND ENTRANCES ARE MARKED WITH TRAFFIC CONTROL IN PLACE AT THE SAME TIME, THE OW-128-48 SIGN ON THE ENTRANCE RAMP IS NOT REQUIRED.
6. FOR NIGHT CLOSURES, SIGNS SHALL BE LIGHTED USING TYPE A FLASHING BARRICADE WARNING LIGHT.

7. Cones may be substituted for drums during daylight hours only.

OHIO DEPARTMENT OF TRANSPORTATION	
TRAFFIC CONTROL FOR WORK IN GORE AREAS	DATE 1/81
DR JDL CK CDR	

7I-2

Rev. EEF PM 10/85

GUARDRAIL DETAILS

CALC. BY GLW DATE 2-2-89
CHKD. BY J.W.C. DATE 2-13-89

GUE-70-0.00

OHIO | FHWA REGION 5 | 24 / 88

ITEM 606 ANCHOR ASSEMBLY, TYPE A:
CARE SHALL BE EXERCISED WHEN REMOVING EXISTING GUARDRAIL FROM EXISTING ANCHOR ASSEMBLIES. ANY ANCHOR ASSEMBLIES CONSIDERED SALVAGEABLE BY THE PROJECT ENGINEER MAY BE REUSED.

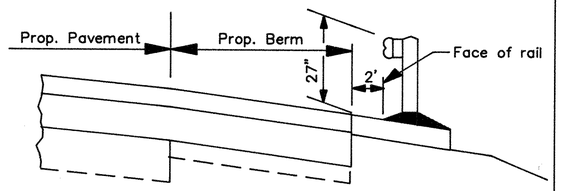
TAPER TO EXISTING BRIDGES:
PROPOSED GUARDRAIL THAT HAS TO BE ADJUSTED TO MEET AN EXISTING BRIDGE SHALL BE TAPERED AT THE RATE OF 25 TO 1 (25:1)

BRIDGE APPROACH GUARDRAIL:
BRIDGE APPROACH GUARDRAIL STATION AS SHOWN SHALL BE ADJUSTED BY THE PROJECT ENGINEER TO CONFORM TO STD. DRWG. GR-3, TYPE A.

GUARDRAIL POST HOLES:
ALL HOLES REMAINING AFTER REMOVAL OF GUARDRAIL POSTS SHALL BE FILLED WITH GRANULAR MATERIAL, EXCESS MATERIAL RESULTING FROM GUARDRAIL RECONSTRUCTION. FILL MATERIAL CONTAINING SOD SHALL NOT BE USED.
ALL FILL MATERIAL SHALL BE APPROVED BY THE ENGINEER.
MATERIAL PLACED IN THE HOLES SHALL BE THOROUGHLY COMPACTED AND LEVELED OFF AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPLICABLE GUARDRAIL ITEM.

MEDIAN GUARDRAIL:
ALL EXCAVATION AND EMBANKMENT NECESSARY TO CONSTRUCT THE MEDIAN GUARDRAIL AS PER STANDARD DRAWING GR-6 SHALL BE CONSIDERED INCIDENTIAL TO THE VARIOUS GUARDRAIL ITEMS.

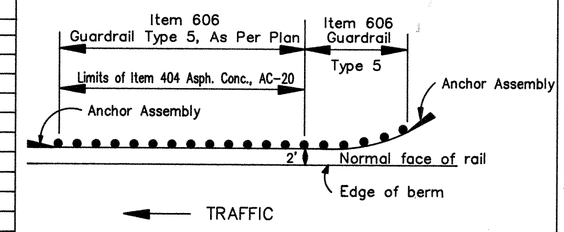
NOTE: RAIL LENGTHS FOR EXISTING 84' MEDIAN WIDTH HAVE BEEN EXTENDED FROM 225' FLARE TO 275' FLARE AS PER STD. DRWG. GR-6.



TYPICAL PLACEMENT OF GUARDRAIL

EXISTING STATION TO STATION EASTBOUND FROM	EXISTING STATION TO STATION EASTBOUND TO	MARK	202 GUARDRAIL REMOVED FOR STORAGE. LIN.FT.	606 GUARDRAIL TYPE 5, AS PER PLAN SEE GENERAL NOTE. LIN.FT.	606 ANCHOR ASSEM. TYPE A. SEE STAND. DRWG.GR-4. EACH Single	EACH Barr.	606 GUARDRAIL TYPE 5. SEE STAND. DRWG.GR-2B. LIN.FT.	606 BRIDGE TERMINAL ASSEMBLY TYPE AA SEE SHEET 25-A EACH	606 GUARDRAIL BARRIER DESIGN TYPE 5 SEE STAND. DRWG.GR-6. LIN.FT.	606 ANCHOR ASSEM. TYPE T. SEE STAND DRWG.GR-4A EACH			408 BITUMINOUS PRIME COAT, AS PER PLAN. SEE GENERAL NOTE. GAL.	404 ASPHALT CONCRETE AC-20 CU.YD.	GUARDRAIL FLARE OFFSET DISTANCE SEE STAND. DRWGS.GR-5 OR GR-6			PROPOSED STATION TO STATION (Same as existing except as noted) FROM	TO
768+75	778+25	1-G	950.0	912.5	1					1			162.2	22.5					
785+12.5	787+12.5	2-G	200.0		1		112.5	1							8.31'			784+79.9	786+17.4
793+25	797+00	3-G	375.0	237.5	1		100.0			1			42.2	5.9	8.31'				
806+62.5	814+75	4-G	812.5	675.0	1		100.0			1			120.0	16.7	8.31'			824+31	826+06
824+33.5	826+08.5	5-G	177.0	150.0	1			1					26.7	3.7					
834+00	838+25	6-G	425.0	387.5	1					1			68.9	9.6					
846+99	853+74	7-G	675.0	512.5	1		125.0			1			91.1	12.7	18.0'			857+68.8	891+18.8
857+71.6	891+21.6	8-G	3351.8	3325.0	1			1					591.1	82.1				892+39.2	896+14.2
892+28.9	896+03.9	9-G	376.8	362.5				1		1			64.4	9.0				906+06.3	907+43.8
906+25	908+37.5	10-G	212.5		1		112.5	1							8.31'				
31+25 RMP.C WEIGH STATION	39+00 RMP.C WEIGH STATION	11-G	775.0	737.5	1					1			131.1	18.2					
43+09 RMP.D WEIGH STATION	965+75	12-G	2387.5	2350.0	1					1			417.8	58.0					
1008+75	1011+25	13-G	250.0		1		112.5	1										1008+81.0	1010+18.5
1032+75	1040+25	14-G	750.0	712.5	1					1			126.7	17.6					
	See sheet 59	15-G																	
MEDIAN																			
823+28.3	826+03.3	16-G	239.5			1	175.0	1	75.0									823+26	826+01
889+70.0	891+45.0	17-G	239.8			1	175.0	1	75.0									888+68.3	891+43.3
TOTALS (EASTBOUND LANES)			12,197.4	10,362.5	13	2	1012.5	8	150.0	9			1842.2	256.0					

TOTALS CARRIED TO SHEET 25.



TYPICAL PLACEMENT OF ITEM 404 FOR GUARDRAIL SECTIONS

G0700053 6/22/89

GUARDRAIL DETAILS

CALC. BY DM DATE 6-13-89	GUE-70-0.00	OHIO	25/88
CHKD. BY MWC DATE 6-13-89		FHWA REGION 5	

ITEM 606 ANCHOR ASSEMBLY, TYPE A:
CARE SHALL BE EXERCISED WHEN REMOVING EXISTING GUARDRAIL FROM EXISTING ANCHOR ASSEMBLIES. ANY ANCHOR ASSEMBLIES CONSIDERED SALVAGEABLE BY THE PROJECT ENGINEER MAY BE REUSED.

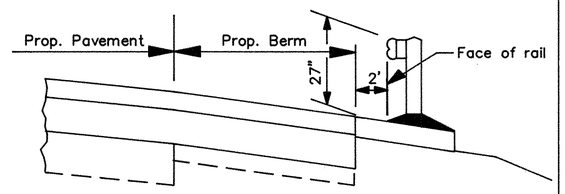
TAPER TO EXISTING BRIDGES:
PROPOSED GUARDRAIL THAT HAS TO BE ADJUSTED TO MEET AN EXISTING BRIDGE SHALL BE TAPERED AT THE RATE OF 25 TO 1 (1/25)

BRIDGE APPROACH GUARDRAIL:
BRIDGE APPROACH GUARDRAIL STATION AS SHOWN SHALL BE ADJUSTED BY THE PROJECT ENGINEER TO CONFORM TO STD. DRWG. GR-3, TYPE A.

GUARDRAIL POST HOLES:
ALL HOLES REMAINING AFTER REMOVAL OF GUARDRAIL POSTS SHALL BE FILLED WITH GRANULAR MATERIAL, EXCESS MATERIAL RESULTING FROM GUARDRAIL RECONSTRUCTION. FILL MATERIAL CONTAINING SOD SHALL NOT BE USED.
ALL FILL MATERIAL SHALL BE APPROVED BY THE ENGINEER.
MATERIAL PLACED IN THE HOLES SHALL BE THOROUGHLY COMPACTED AND LEVELED OFF AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPLICABLE GUARDRAIL ITEM.

MEDIAN GUARDRAIL:
ALL EXCAVATION AND EMBANKMENT NECESSARY TO CONSTRUCT THE MEDIAN GUARDRAIL AS PER STANDARD DRAWING GR-6 SHALL BE CONSIDERED INCIDENTIAL TO THE VARIOUS GUARDRAIL ITEMS.

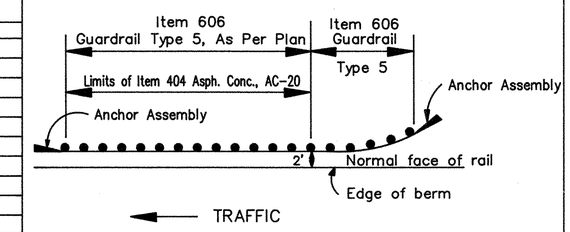
NOTE: RAIL LENGTHS FOR EXISTING 84' MEDIAN WIDTH HAVE BEEN EXTENDED FROM 225' FLARE TO 275' FLARE AS PER STD. DRWG. GR-6.



TYPICAL PLACEMENT OF GUARDRAIL

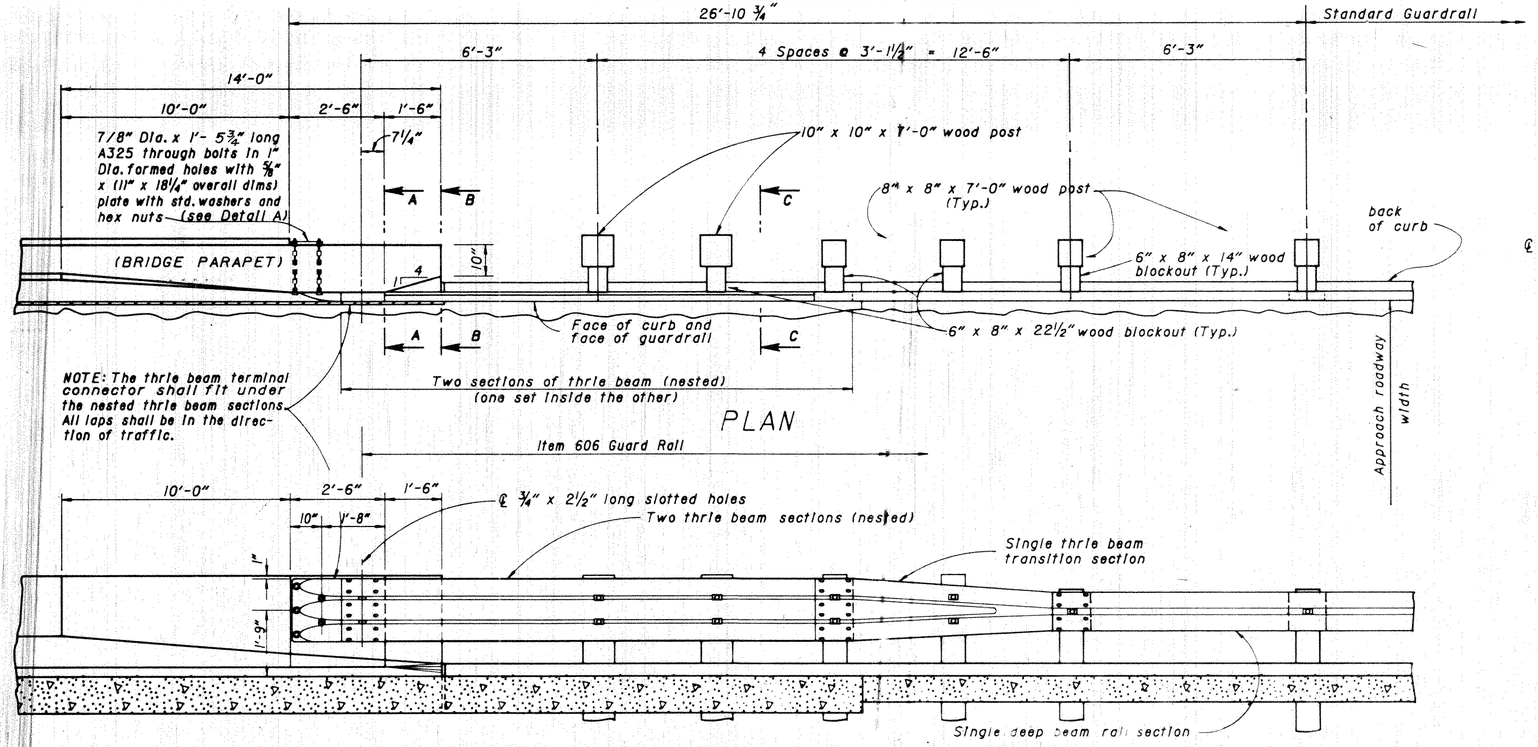
EXISTING STATION TO STATION WESTBOUND FROM	TO	MARK	202 GUARDRAIL REMOVED FOR STORAGE LIN.FT.	606 GUARDRAIL TYPE 5, AS PER PLAN, SEE GENERAL NOTE. LIN.FT.	606 ANCHOR ASSEM. TYPE A, SEE STAND. DRWG.GR-4. EACH Single	Barr.	606 GUARDRAIL TYPE 5, SEE STAND. DRWG.GR-2B LIN.FT.	606 BRIDGE TERMINAL ASSEMBLY TYPE AA SEE SHEET 25-A EACH	606 GUARDRAIL BARRIER DESIGN, TYPE 5, SEE STAND. DRWG.GR-6. LIN.FT.	606 ANCHOR ASSEM. TYPE T, SEE STAND DRWG.GR-4A EACH			408 BITUMINOUS PRIME COAT, AS PER PLAN, SEE GENERAL NOTE. GAL.	404 ASPHALT CONCRETE AC-20 CU.YD.	GUARDRAIL FLARE OFFSET DISTANCE SEE STAND. DRWGS.GR-5 OR GR-6			PROPOSED STATION TO STATION (Same as existing except as noted) FROM	TO
768+50	776+00	18-G	750.0	712.5	1					1			126.7	17.6					
786+00	799+00	19-G	1300.0	1075.0	1		100.0	1					191.1	26.5	8.31'			786+82.6	798+82.6
807+50	810+25	20-G	275.0	237.5	1					1			42.2	5.9					
818+89.7	825+77.2	21-G	689.5	675.0				1		1			120.0	16.7				818+87	825+74.5
826+97.5	829+85.0	22-G	289.5	162.5	1		100.0	1					28.9	4.0	8.31'			827+00	829+87.5
834+00	844+25	23-G	1025.0	987.5	1					1			175.6	24.4					
847+25	880+25	24-G	3300.0	3262.5	1					1			580.0	80.6					
890+84.6	892+09.6	25-G	126.8	112.5				1		1			20.0	2.8				890+82.8	892+07.8
893+11.0	894+42.0	26-G	126.8		1		100.0	1							8.31'			893+18.2	894+43.2
906+70	908+82.5	27-G	212.5		1		112.5	1							8.31'			907+56.2	908+93.7
28+75 RMP.A WEIGH STATION	33+00 RMP.A WEIGH STATION	28-G	425.0	387.5	1					1			68.9	9.6					
37+50 RMP.B WEIGH STATION	46+25 RMP.B WEIGH STATION	29-G	875.0	837.5	1					1			148.9	20.7					
959+75	968+00	30-G	825.0	787.5	1					1			140.0	19.4					
974+00	1005+25	31-G	3125.0	2987.5	1		100.0			1			531.1	73.8	8.31'				
1009+40	1011+52.5	32-G	212.5		1		112.5	1							8.31'			1010+31.9	1011+69.4
8+56.8 N.W.RAMP	14+31.8 N.W.RAMP	33-G	575.0	562.5						1			100.0	13.9				To meet existing	G.R. @ Sta.8+56.8
46+25	47+90	34-G	165.0		1		112.5	1							8.31'			47+34.9	48+72.4
MEDIAN																			
827+02.7	829+77.7	35-G	239.5			1	175.0	1	75.0									827+05	829+80
892+94.5	895+69.5	36-G	239.8			1	175.0	1	75.0									892+94.7	895+69.7
SUB-TOTALS WESTBOUND LANES			14,776.9	12,787.5	14	2	1087.5	10	150.0	11			2273.4	315.9					
SUB-TOTALS EASTBOUND LANES (FROM SHEET 24)			12,197.4	10,362.5	13	2	1012.5	8	150.0	9			1842.2	256.0					
TOTALS EASTBOUND & WESTBOUND LANES			26,974.3	23,150.0	27	4	2100.0	18	300.0	20			4115.6	571.9					

TOTALS CARRIED TO THE GENERAL SUMMARY

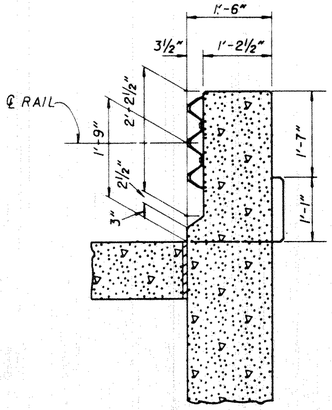


TYPICAL PLACEMENT OF ITEM 404 FOR GUARDRAIL SECTIONS

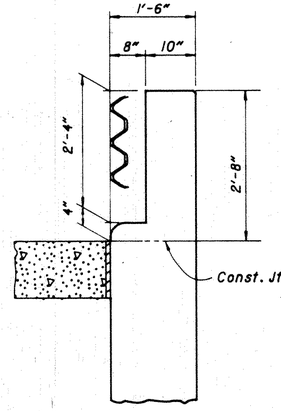
6/21/89
G0700A53



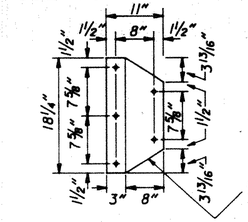
TYPE AA



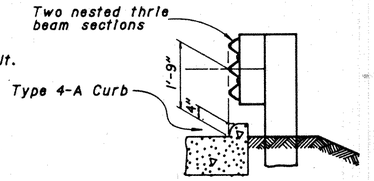
SECTION A - A



SECTION B - B



DETAIL A



SECTION C - C

CALC. BY	D.M.
DATE	9-9-89
CHECK. BY	J.W.C.
DATE	12-12-89

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

25-A 88

GUE-70-0.00

GENERAL:

FOR ADDITIONAL DETAILS, SEE STANDARD DRAWING GR-1 AND OTHER STANDARD DRAWINGS PERTAINING TO DESIGN OF SPECIFIC GUARDRAIL TYPES.

APPLICATION:

GENERAL — TYPE AA TERMINAL ASSEMBLIES SHALL BE USED TO CONNECT GUARDRAIL RUNS TO BRIDGES HAVING CONCRETE DEFLECTOR PARAPET RAILING AND ITEM 622 CONCRETE BARRIER TYPE D, AS PER PLAN.

DETAIL INFORMATION

POSTS:

GENERAL – POSTS MAY BE SET IN DRILLED HOLES OR DRIVEN TO GRADE.

WOOD POSTS – SHALL BE SQUARE-SAWED PRESSURE TREATED WOOD AS PER 710.14 AND FABRICATED WITH SQUARE ENDS. BOLT HOLES SHALL BE BORED AND TOPS OF POSTS TRIMMED, IF REQUIRED , AFTER POSTS ARE SET.

STEEL POSTS – AND BLOCKOUTS FOR TYPE AA BRIDGE TERMINAL ASSEMBLIES MAY BE FURNISHED AS AN ALTERNATE. THE STEEL ALTERNATES FOR THE WOOD POSTS ARE AS LISTED BELOW.

WOOD	10"x10"	8"x8"	6"x8"
STEEL	W8x24	W6x25	W6x15.5

PAYMENT:

TYPE AA – PAYMENT FOR ITEM 606 – EACH, BRIDGE TERMINAL ASSEMBLY, TYPE AA, SHALL INCLUDE THE EXTRA COST, IN EXCESS OF NORMAL GUARDRAIL COST, FOR ADDITIONAL AND DIFFERENT TYPE POSTS, NESTED THRIE BEAM SECTIONS, TERMINAL CONNECTOR, THRIE BEAM TRANSITION SECTION, STEEL PLATE, BOLTS, HEX NUTS, WASHERS, AND OTHER HARDWARE.

BRIDGE TERMINAL ASSEMBLY
TYPE AA

ITEM 862 RAISED PAVEMENT MARKERS

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED IN SUPPLEMENTAL SPECIFICATION 862.

ITEM 862 RAISED PAVEMENT MARKERS 1017 EACH

ONE-WAY WHITE

EASTBOUND		369 EACH
WESTBOUND		373 EACH
RAMP C	2 + 9 + 8 =	19 EACH
RAMP D	9 + 22 + 2 =	33 EACH
S.W. RAMP S.R.723	2 + 11 + 10 =	23 EACH
RAMP A	6 + 15 + 2 =	23 EACH
RAMP B	2 + 10 + 9 =	21 EACH
N.W. RAMP S.R.723	9 + 22 + 2 =	33 EACH
	SUB-TOTAL	894 EACH

* 2-WAY WHITE & RED

RAMP C	20 EACH
S.W. RAMP S.R.723	20 EACH
N.E. RAMP S.R.83	16 EACH
RAMP B	20 EACH
SUB-TOTAL	76 EACH
TOTAL	1017 EACH

ONE-WAY YELLOW

RAMP C	2	= 2 EACH
RAMP D	13 + 2	= 15 EACH
S.W. RAMP S.R.723	2	= 2 EACH
RAMP A	2 + 9	= 11 EACH
RAMP B	2	= 2 EACH
N.W. RAMP S.R.723	2 + 13	= 15 EACH
	SUB-TOTAL	47 EACH

NOTE: FOR DETAILS NOT SHOWN SEE STANDARD DRAWING TC-65.10 & TC-65.11.

* AT FREEWAY AND EXPRESSWAY INTERCHANGES TWO-WAY PRISMATIC RETRO-REFLECTORS, WHITE FACING TRAFFIC AND RED FACING THE OPPOSITE DIRECTION, SHALL BE PLACED FOR 1600 FEET UPSTREAM MEASURED FROM THE PHYSICAL GORE OF THE FIRST DECELERATION LANE IN THE INTERCHANGE.

614 BARRIER REFLECTORS

614 BARRIER REFLECTORS:

THESE REFLECTORS AND THEIR MOUNTING SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 802, EXCEPT THAT SPACING SHALL BE AS SHOWN IN THE SUB-SUMMARY TABLE.

W = WHITE

Y = YELLOW

* TO BE PLACED AT 100' SPACINGS. THE REFLECTORS SHALL BE PLACED BETWEEN PERMANENT REFLECTORS AS SHOWN ON SHEET 12 .

LOCATION	SPACING	TYPE A		TYPE B		TYPE B		TYPE A		SPACING	LOCATION
		W	Y	W	Y	W	Y	W	Y		
TEMPORARY CONCRETE BARRIER											TEMPORARY CONCRETE BARRIER
E.B.CLOSING DRIVING LANE											E.B.CLOSING DRIVING LANE
GUE-70-0127R	50			21			21			50	GUE-70-0127R
GUE-70-0250R	50			22			22			50	GUE-70-0250R
W.B.CLOSING DRIVING LANE											W.B.CLOSING DRIVING LANE
GUE-70-0127L	50			22			22			50	GUE-70-0127L
GUE-70-0250L	50			22			22			50	GUE-70-0250L
GUARDRAIL											BRIDGE PARAPETS
E.B.PASSING LANE											E.B.PASSING LANE
GUE-70-0127	50		5				3			50	GUE-70-0127
GUE-70-0250	50		5				3			50	GUE-70-0250
GUARDRAIL											BRIDGE PARAPETS
W.B.PASSING LANE											W.B.PASSING LANE
GUE-70-0127	50		6				3			50	GUE-70-0127
GUE-70-0250	50		6				3			50	GUE-70-0250
* E.B. GUARDRAIL DRIVING LANE											* W.B. GUARDRAIL DRIVING LANE
1-G	100'	9						7		100'	18-G
2-G	100'	1						12		100'	19-G
3-G	100'	3						2		100'	20-G
4-G	100'	8						10		100'	21&22-G
5-G	100'	2		1				10		100'	23-G
6-G	100'	4						33		100'	24-G
7-G	100'	6						2		100'	25&26-G
8&9-G	100'	36		1				1		100'	27-G
10-G	100'	1						4		100'	28-G
11-G	100'	7						8		100'	29-G
12-G	100'	23						8		100'	30-G
13-G	100'	1						31		100'	31-G
14-G	100'	7						1		100'	32-G
15-G	100'	1		1				5		100'	33-G
								1		100'	34-G
TOTALS		109	22	90			99	135			
		266		189							

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 BARRIER REFLECTORS, TYPE A 266 EACH

ITEM 614 BARRIER REFLECTORS, TYPE B 189 EACH

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT FIVE

614 BARRIER REFLECTORS

STANDARD NO. D3-2E (E)

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE	REVISED
	Autocad				9/19/88

GD/00030 8/7/89

CALC. BY GJK DATE 2-9-99
CHKD. BY JWL DATE 12-12-99

GUE-70-0.00 | OHIO | FHWA REGION 5 | 28/88

620 DELINEATOR BY TYPE, FLEXIBLE POST MOUNTED

THE CONTRACTOR SHALL FURNISH AND INSTALL FLEXIBLE POST MOUNTED DELINEATORS MANUFACTURED BY:

SAFE HIT CORPORATION
1930 WEST WINTON BLDG. II
HAYWARD CA. 94545
415-783-6550

CARSONITE INTERNATIONAL
30 E. COLUMBUS ST.
OH SALES OFFICE
COLUMBUS, OHIO 43206
614-221-5987

OR APPROVED EQUAL

OF THE DESIGNS HEREIN.

DESIGN 2 FLEXIBLE POST MOUNTED DELINEATORS SHALL BE MANUFACTURED FROM FIBERGLASS WITH A T CROSS-SECTION. THE POST SHALL BE 72 INCHES LONG AND SHALL BE DRIVEN TO AN INSTALLATION DEPTH OF 18 INCHES INTO THE GROUND.

DESIGN 4 FLEXIBLE POST MOUNTED DELINEATORS SHALL BE BOOSTER POSTS 27 INCHES IN LENGTH, MANUFACTURED OF FIBERGLASS, WITH A T CROSS-SECTION. DESIGN 4 FLEXIBLE POST MOUNTED DELINEATORS SHALL BE INSTALLED ON THE FRONT OF WOODEN GUARDRAIL BLOCKOUTS FACING APPROACHING TRAFFIC. THE DESIGN 4 FLEXIBLE POST MOUNTED DELINEATOR SHALL BE ATTACHED BY HAMMERING INTO THE BLOCKOUT EITHER TWO 1/8 INCH DIAMETER BY 1.25 INCH LONG, ZINC COATED LAG SCREWS WITH ZINC COATED 3/16 INCH FLAT WASHER OR TWO 1/8 INCH DIAMETER BY 1.25 INCH LONG, ZINC COATED INDENTED HEX WASHER-HEAD LAG SCREWS. ZINC COATED INDENTED HEX WASHER-HEAD LAG SCREWS MAY BE OBTAINED FROM:

TENNESSEE BOLT AND SCREW COMPANY
MEMPHIS TENN.
901-452-7491

-OR-

MID STATE BOLT AND NUT COMPANY
COLUMBUS OH
614-253-8631

EIGHT WEEKS SHOULD BE ALLOWED FOR DELIVERY FROM THESE FASTNER SUPPLIERS. THE LAG SCREWS AND WASHERS SHALL BE FURNISHED BY THE CONTRACTOR.

THE FLEXIBLE POST MOUNTED DELINEATORS SHALL BE FURNISHED WITH REFLECTORS ATTACHED. THE REFLECTORS SHALL CONSIST OF 3 INCH WIDE BY 6 INCH LONG REFLECTIVE SHEETING CONFORMING TO 730.19 ADHERED TO THE FLEXIBLE POST. THE REFLECTOR COLORS SHALL BE COLORLESS OR YELLOW AS SPECIFIED BY TYPE IN CONFORMANCE WITH 620.01.

INSTALLATION: DELINEATORS SHALL BE INSTALLED FACING TRAFFIC.
THE PROTECTIVE PAPER COVERING THE FACE OF THE FLEXIBLE POST MOUNTED REFLECTORS SHALL NOT BE REMOVED UNTIL AFTER INSTALLATION. POSTS SHALL BE INSTALLED SO THAT THE FACE OF THE REFLECTOR IS 90 DEGREES TO THE CENTERLINE FACING APPROACHING TRAFFIC AND TO SUCH A DEPTH THAT THE TOPS OF THE INSTALLED REFLECTORS SHALL BE 48 INCHES PLUS OR MINUS 1 INCH ABOVE THE ELEVATION OF THE ADJACENT EDGE OF PAVEMENT. POSTS SHALL BE ERECTED VERTICALLY AND SHALL NOT BE MORE THAN 1/4 INCH PER FOOT OUT OF PLUMB POSITION IN ANY DIRECTION. DELINEATOR POSTS SHALL BE INSTALLED BY DRIVING USING ONLY MANUAL TECHNIQUES.

IF SOIL CONDITIONS WOULD CAUSE THE POST TO BE OUT OF PLUMB, THE CONTRACTOR MAY DRIVE A PILOT SHAFT BEFORE INSTALLATION.

FLEXIBLE POSTS INSTALLATION METHODS AND EQUIPMENT SHALL COMPLY WITH THE POST MANUFACTURE'S RECOMMENDATIONS ON FILE WITH THE DIRECTOR UNLESS PRIOR WRITTEN APPROVAL OF ALTERNATE TECHNIQUES ARE OBTAINED FROM THE DIRECTOR.

FLEXIBLE DELINEATORS TO BE MOUNTED AS BOOSTER POSTS ON THE FRONT OF WOODEN GUARDRAIL BLOCKOUTS SHALL BE ATTACHED BY HAMMERING INTO THE BLOCKOUT EITHER TWO 1/8 INCH DIAMETER BY 1 1/4 INCH LONG, ZINC COATED LAG SCREWS WITH ZINC COATED 3/16 INCH FLAT WASHERS OR TWO 1/8 INCH DIAMETER BY 1 1/4 INCH LONG, ZINC COATED INDENTED HEX WASHER-HEAD LAG SCREWS.

DELINEATOR POSTS PLACED IN CONCRETE MEDIANS MAY BE INSTALLED BY PLACING THEM IN 4 INCH SLEEVES OR CORE DRILLED HOLES. THE HOLES SHALL BE FILLED WITH ASPHALTIC CONCRETE AFTER THE POST IS IN PROPER POSITION.

LAYOUT: THE CONTRACTOR SHALL LAYOUT ALL DELINEATOR LOCATIONS TO ASSURE THEIR PROPER PLACEMENT. THE LAYOUT SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATION OPERATIONS ARE STARTED. THE LAYOUT SHALL BE INCIDENTAL TO THE INSTALLATION OPERATIONS.

THIS WORK SHALL CONSIST OF LOCATING AND MARKING ON THE ROADWAY THE FOLLOWING DELINEATOR FEATURES AS DETERMINED FROM THE LOCATION INFORMATION IN THE PLANS OR FROM SCHEMATICS OF HORIZONTAL CURVES AND RAMPS PROVIDED IN THE PLANS.

1) BEGINNING OF EACH RUN WITH CONSTANT SPACING OF DELINEATORS SPECIFYING DELINEATOR TYPE, COLOR, SIDE OF ROAD AND SPACING.
2) END OF EACH RUN WITH CONSTANT SPACING.
3) BEGINNING OF EACH RUN WITH VARIABLE SPACING SPECIFYING DELINEATOR TYPE, COLOR, SIDE OF ROAD AND SPACING.
4) END OF EACH RUN WITH VARIABLE SPACING.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE PURPOSE.

ITEM 620 DELINEATOR REMOVED FOR STORAGE	200 EACH
ITEM 620 DELINEATOR, TYPE C, DESIGN 2, FLEXIBLE POST MOUNTED	113 EACH
ITEM 620 DELINEATOR, TYPE C, DESIGN 4, FLEXIBLE POST MOUNTED	77 EACH
ITEM 620 DELINEATOR, TYPE D, DESIGN 2, FLEXIBLE POST MOUNTED	18 EACH

NOTE: EXISTING DELINEATORS REMOVED ON THIS PROJECT SHALL BE STORED AT THE PROJECT SITE AS DIRECTED BY THE ENGINEER AND REMOVED BY STATE FORCES.

* ON EXISTING GUARDRAIL

SEE STANDARD DRAWING TC-61.10

	ITEM 620			
LOCATION	DELINEATOR REMOVED FOR STORAGE EACH	DELINEATOR, TYPE C DESIGN 2, FLEXIBLE POST MOUNTED EACH	DELINEATOR, TYPE C DESIGN 4, FLEXIBLE POST MOUNTED EACH	DELINEATOR, TYPE D DESIGN 2, FLEXIBLE POST MOUNTED EACH
EASTBOUND	72 + *35 = 107	56	27	
WESTBOUND	55 + *38 = 93	52	32	
RAMP A		3		6
RAMP B			6	2
RAMP C			6	2
RAMP D			6	4
S.W.LOOP S.R.723		2		2
N.W.RAMP S.R.723				2
TOTALS	200	113	77	18

ITEM 622 CONCRETE BARRIER TYPE D, AS PER PLAN

CALC. BY / DATE	GUE–70–0.00	OHIO
CHKD. BY / DATE		FHWA REGION 5

29/88

LOCATION	Ⓐ	LOCATION STATION	LOCATION STATION
GUE–70–0052 E.B.	2.3'	786+15.3	786+57.5
GUE–70–0052 W.B.	2.7'	786+42.6	786+84.7
GUE–70–0281 E.B.	2.3'	907+41.7	907+84.4
GUE–70–0281 W.B.	2.3'	907+15.6	907+58.3
GUE–70–0477 E.B.	2.6'	1010+16.4	1010+59.0
GUE–70–0477 W.B.	2.5'	1009+91.4	1010+34.0
GUE–70–0611 W.B.	2.3'	46+76.1	47+37.0

CALCULATION (CARRIED TO THE GENERAL SUMMARY)

ITEM 622 CONCRETE BARRIER TYPE D, AS PER PLAN

GUE–70–0052 E.B.	42.2	LIN.FT.
GUE–70–0052 W.B.	42.1	LIN.FT.
GUE–70–0281 E.B.	42.7	LIN.FT.
GUE–70–0281 W.B.	42.7	LIN.FT.
GUE–70–0477 E.B.	42.6	LIN.FT.
GUE–70–0477 W.B.	42.6	LIN.FT.
GUE–70–0611 W.B.	60.9	LIN.FT.
TOTAL	315.8	LIN.FT.

ITEM 305 9" CONCRETE BASE

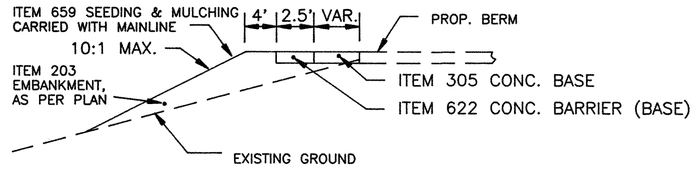
GUE–70–0052 E.B.	42.2' x 2.3' ÷ 9 =	10.8 S.Y.
GUE–70–0052 W.B.	42.1' x 2.7' ÷ 9 =	12.6 S.Y.
GUE–70–0281 E.B.	42.7' x 2.3' ÷ 9 =	10.9 S.Y.
GUE–70–0281 W.B.	42.7' x 2.3' ÷ 9 =	10.9 S.Y.
GUE–70–0477 E.B.	42.6' x 2.6' ÷ 9 =	12.3 S.Y.
GUE–70–0477 W.B.	42.6' x 2.5' ÷ 9 =	11.8 S.Y.
GUE–70–0611 W.B.	60.9' x 2.3' ÷ 9 =	15.6 S.Y.
TOTAL		84.9 S.Y

ITEM 203 EMBANKMENT, AS PER PLAN

GUE–70–0052 E.B.	[7 S.F. x 42.2' + 8 S.F. x 138'] ÷ 27 = 51.8 C.Y.
GUE–70–0052 W.B.	7 S.F. x 42.1' ÷ 27 = 10.9 C.Y.
GUE–70–0281 E.B.	[7 S.F. x 42.7' + 8 S.F. x 138'] ÷ 27 = 52.0 C.Y.
GUE–70–0281 W.B.	[7 S.F. x 42.7' + 8 S.F. x 138'] ÷ 27 = 52.0 C.Y.
GUE–70–0477 E.B.	[7 S.F. x 42.6' + 8 S.F. x 138'] ÷ 27 = 51.9 C.Y.
GUE–70–0477 W.B.	[7 S.F. x 42.6' + 8 S.F. x 138'] ÷ 27 = 51.9 C.Y.
GUE–70–0611 W.B.	[7 S.F. x 60.9' + 8 S.F. x 138'] ÷ 27 = 56.7 C.Y.
TOTAL	327.2 C.Y.

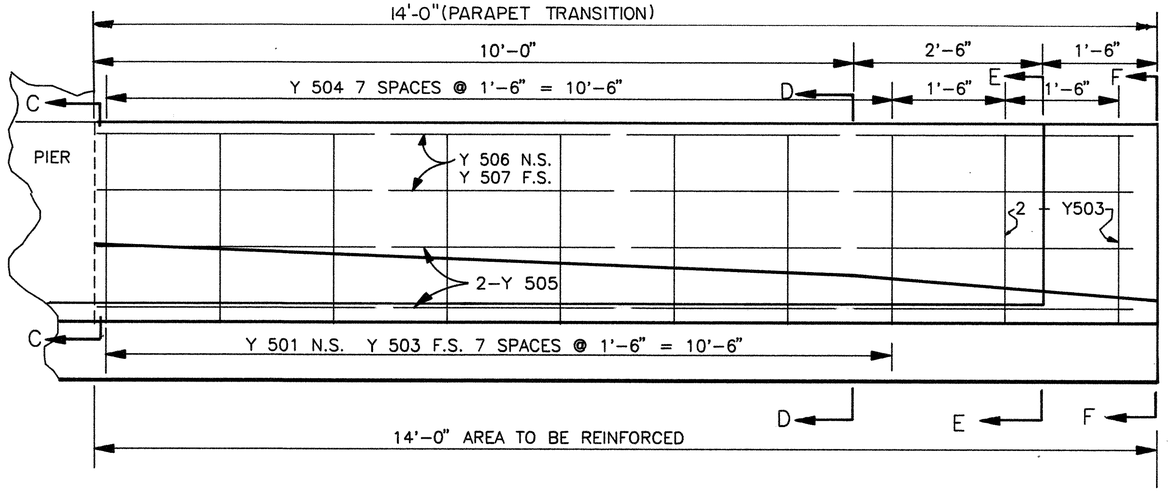
ITEM 203 EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION

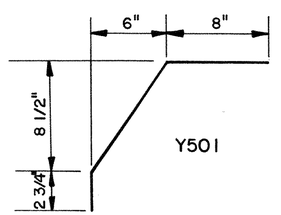
GUE–70–0052 E.B.	.42' x 4.8' x 42.2' ÷ 27 = 3.2 C.Y.
GUE–70–0052 W.B.	.42' x 5.2' x 42.1 ÷ 27 = 3.4 C.Y.
GUE–70–0281 E.B.	.42' x 4.8' x 42.7' ÷ 27 = 3.2 C.Y.
GUE–70–0281 W.B.	.42' x 4.8' x 42.7' ÷ 27 = 3.2 C.Y.
GUE–70–0477 E.B.	.42 'x 5.1 x 42.6' ÷ 27 = 3.4 C.Y.
GUE–70–0477 W.B.	.42' x 5.0' x 42.6. ÷ 27 = 3.3 C.Y.
GUE–70–0611 W.B.	.42' x 4.8' x 60.9' ÷ 27 = 4.5 C.Y.
TOTAL	24.2 C.Y.



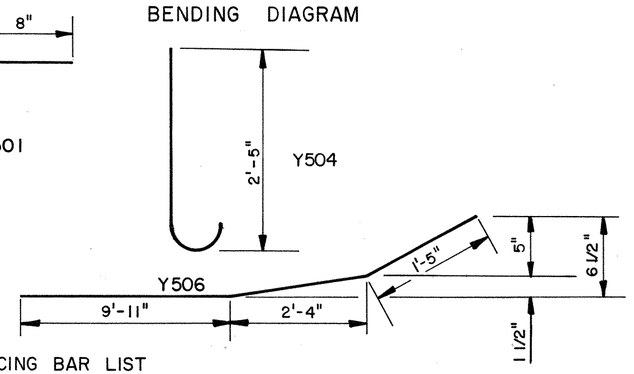
NOTE: FOR DETAILS NOT SHOWN SEE SHEET 29–A.

TYPICAL PLACEMENT OF ITEM 203 EMBANKMENT





BENDING DIAGRAM



REINFORCING BAR LIST

MARK	LENGTH	SHAPE	NO.
Y501	1'–8"	BENT	8
Y503	2'–6"	STRAIGHT	12
Y504	3'–0"	BENT	8
Y505	13'–8"	STRAIGHT	4
Y506	13'–8"	BENT	2
Y507	13'–8"	STRAIGHT	2

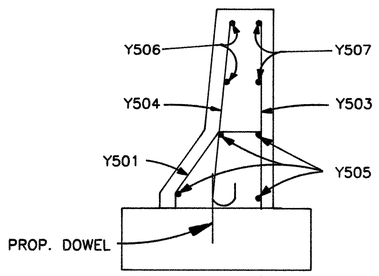
N.S. = NEAR SIDE
F.S. = FAR SIDE

ALL REINFORCING BARS SHALL BE EPOXY COATED.

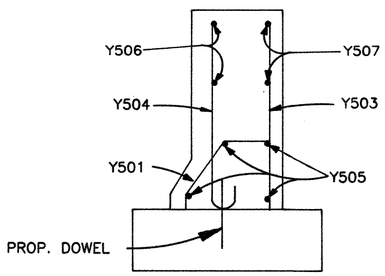
NOTE: STEEL LIST FOR ONE END TREATMENT OF CONCRETE BARRIER PIER PROTECTION.

NOTE: THERE SHALL BE A MINIMUM 2" CLEARANCE BETWEEN REINFORCING STEEL AND THE SURFACE OF THE CONCRETE.

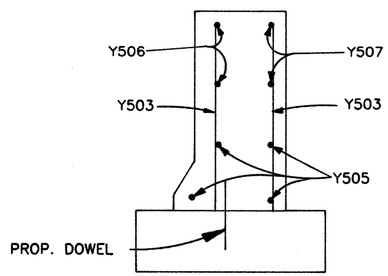
NOTE: FOR DETAILS NOT SHOWN SEE SHEET 29–A.



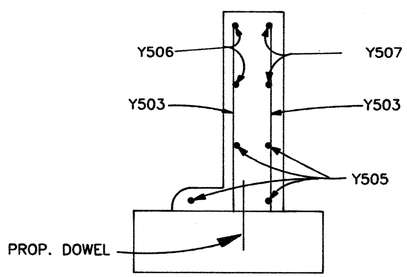
SECTION C – C



SECTION D – D



SECTION E – E

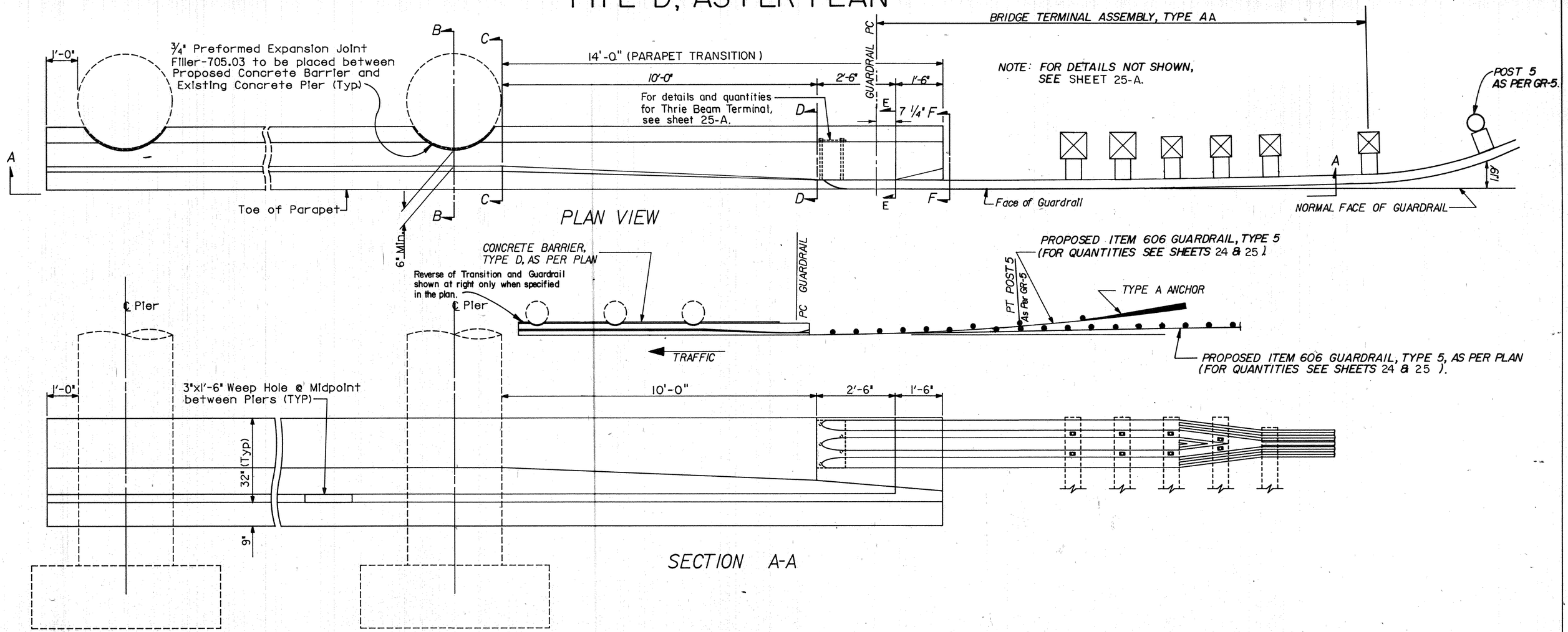


SECTION F – F

Q070013 6/27/89

CALC BY J.M. DATE 9-9-87	GUE-70-0.00	OHIO	29-A
CHKD BY J.W.C. DATE 12-12-87		FHWA REGION 5	88

ITEM 622 CONCRETE BARRIER TYPE D, AS PER PLAN

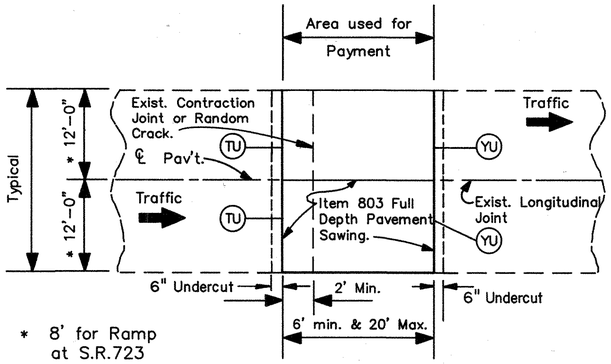


NOTES:
SEE STANDARD DRAWING MC-9 & SHT. 29 FOR ADDITIONAL NOTES AND DETAILS.

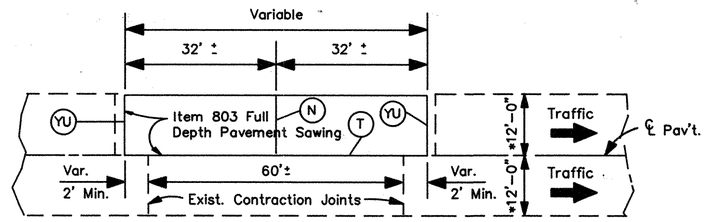
THE CONCRETE BARRIER SHALL NOT BE PLACED PRIOR TO THE PLACEMENT OF THE 203 EMBANKMENT.

THE COST OF THE PARAPET TRANSITION AND REINFORCING STEEL AS SHOWN, SHT. 29, WILL BE INCLUDED IN THE COST OF THE ITEM 622 - CONCRETE BARRIER TYPE D, AS PER PLAN.

SPECIAL DETAILS
ITEM 803 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C



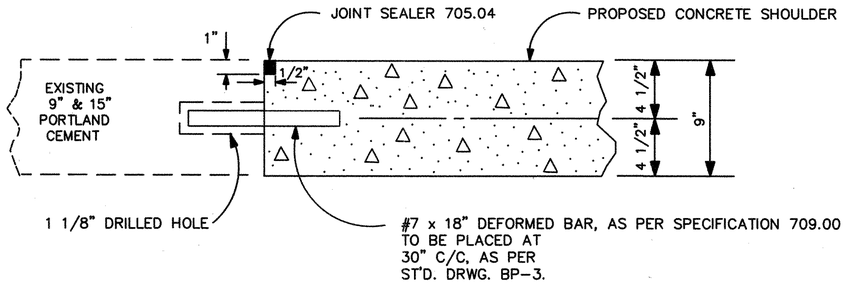
TYPICAL REPLACEMENT



DETAILS FOR REPAIRS 20' AND GREATER

NOTE:
FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-13 & SUPPLEMENTAL SPECIFICATIONS 803 & 905.

STANDARD DRAWING BP-13
TU & YU D= 9" Existing & D Repair = 15"

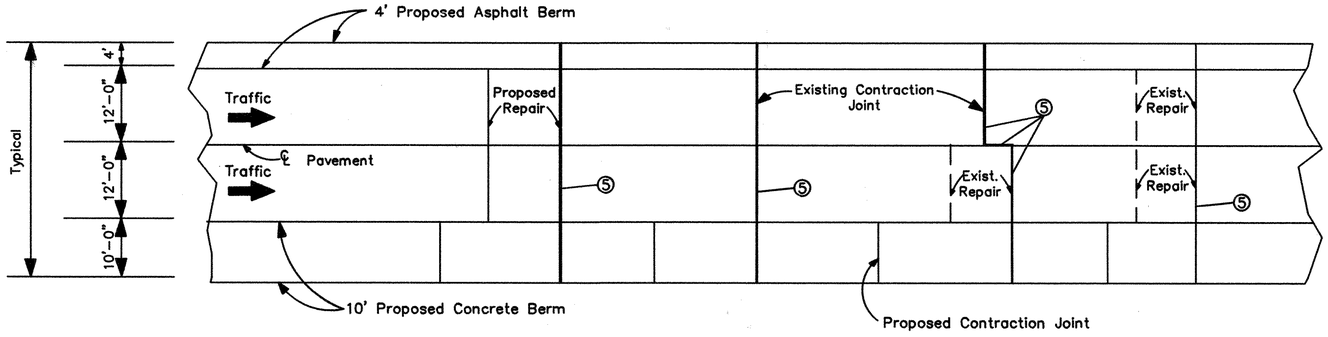


PAVEMENT / SHOULDER DETAIL
FOR ITEM 305 9" CONCRETE BASE, AS PER PLAN

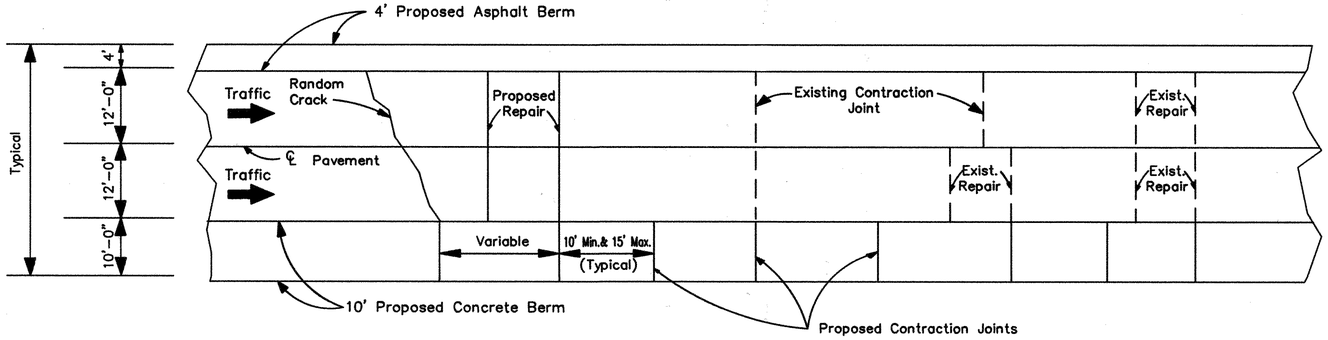
NOTE: GROUT SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 952. THE MANUFACTURES OF THE GROUT SHALL FURNISH CERTIFIED TEST DATA ANNUALLY TO THE LABORATORY, OR AT THE REQUEST OF THE LABORATORY. A LETTER OF CERTIFICATION STATING THAT THE MATERIAL COMPLIES WITH SPECIFICATION REQUIREMENTS SHALL BE FURNISHED WITH EACH SHIPMENT. THE GROUT SHALL BE PNEUMATICALLY INJECTED INTO THE REAR PORTION OF THE HOLE. ENOUGH MATERIAL SHALL BE INJECTED TO PROVIDE COMPLETE COVERAGE AROUND THE TIEBARS TO ENSURE THEY ARE PERMANETLY ANCHORED INTO THE EXISTING PAVEMENT. TIEBARS SHALL BE PLACED AT LEAST 12" FROM A TRANSVERSE SHOULDER JOINT. A CAPSULE ANCHOR SYSTEM WILL ALSO BE PERMITTED. TIEBARS SHALL BE PLACED PERPENDICULAR TO PAVEMENT/SHOULDER JOINT.

EXPANSION ANCHORS

IN LIEU OF THE ABOVE PAVEMENT/SHOULDER DETAIL, THE CONTRACTOR MAY USE "DROP-IN" ANCHORS, FLUSH TYPE WHICH CONFORM TO FEDERAL SPECIFICATIONS FF-S-325, GROUP VIII, TYPE I OR EXTERNALLY THREADED, STUD-TYPE EXPANSION BOLT ANCHORS WHICH CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II. SPACING SHALL BE 30" MAXIMUM, CENTER TO CENTER.



⑤ TYPICAL PLACEMENT OF ITEM SPECIAL SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, 705.04 (SEE SHEET 13 & PROPOSAL NOTE).



TYPICAL PLACEMENT OF CONTRACTION JOINTS
IN PROPOSED ITEM 305 9" CONCRETE BASE, AS PER PLAN

GENERAL SUMMARY

CALC. BY [illegible] DATE 12-87
CHKD. BY J.W.C. DATE 12-87

GUE-70-0.00

OHIO FHWA REGION 5

31 / 88

SHEET NUMBER																		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
11	12	25	29	58	59	60	61	62	65	66	41	68	13	72	76	42	50					
																						ROADWAY
LUMP																		201	11001	LUMP		CLEARING AND GRUBBING, AS PER PLAN (SEE SHEET 11)
		26,974			450													202	38100	27,424	LIN.FT.	GUARDRAIL REMOVED FOR STORAGE
												22						202	32700	22	SQ.YD	GUTTER REMOVED
					267					201								202	32000	468	LIN.FT.	CURB REMOVED
										479								202	32001	479	LIN.FT.	CURB REMOVED , AS PER PLAN (SEE SHEET 13)
											21	12				21		202	35100	54	LIN.FT.	PIPE REMOVED 24" AND UNDER
												1						202	58500	1	EACH	CATCH BASIN ABANDONED
							1508	1401	312									202	23500	3221	SQ.YD.	WEARING COURSE REMOVED
							1334	1334		6458								202	23000	9126	SQ.YD.	PAVEMENT REMOVED
							1334	1334	71,468	9490								203	50000	83,626	SQ.YD.	SUBGRADE COMPACTION
400																		203	21000	400	CU.YD.	EMBANKMENT, USING GRANULAR MATERIAL
8008			328	111					887					4	317		120	203	20001	9775	CU.YD.	EMBANKMENT, AS PER PLAN (SEE SHEET 11)
400			25	1597		72	296	296	38,030				50		228		1799	203	12000	42,793	CU.YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
		23,150																606	13001	23,150	LIN.FT.	GUARDRAIL, TYPE 5, AS PER PLAN (SEE SHEET 12)
		2100			200													606	13000	2300	LIN.FT.	GUARDRAIL, TYPE 5
		27																606	25000	27	EACH	ANCHOR ASSEMBLY, TYPE A
		4			1													606	25500	5	EACH	ANCHOR ASSEMBLY, BARRIER DESIGN, TYPE A
		18			2													606	35000	20	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE AA (SEE SHEET 25-A)
		300																606	15500	300	LIN.FT.	GUARDRAIL, BARRIER DESIGN, TYPE 5
		20																606	26500	20	EACH	ANCHOR ASSEMBLY, TYPE T
																						EROSION CONTROL
	600																	207	70000	600	EACH	STRAW OR HAY BALES
	31,300																	207	10000	31,300	SQ.YD.	TEMPORARY SEEDING AND MULCHING
	169+68																	659	35000	237	M.GAL.	WATER
	353																	659	40000	353	M.SQ.FT.	MOWING
149,331				3133		222											3808	659	10000	156,494	SQ.YD.	SEEDING AND MULCHING
19.36	1.4																	659	20000	20.76	TON	COMMERCIAL FERTILIZER
70.42																		659	30000	70.42	TON	AGRICULTURAL LIMING
												33						601	11000	33	SQ.YD.	RIPRAP USING 6" REINFORCED CONCRETE SLAB
												216						601	32100	216	CU. YD.	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
												17						601	32200	17	CU. YD.	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER

8/16/89

G0700AA6

GENERAL SUMMARY

CALC. BY [illegible] DATE 7-2-87
CHKD. BY [illegible] DATE 7-28-87

GUE-70-0.00

OHIO FHWA REGION 5

SHEET NUMBER																		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
11	12	13	25	29	59	61	62	65	66		39	40	41	42		68						
																						PAVEMENT
		13				7175	7354	14,389										301	10002	28,931	CU.YD.	BITUMINOUS AGGREGATE BASE, AC-20
		50				208	208	12,768	1096									304	20001	14,330	CU.YD.	AGGREGATE BASE, AS PER PLAN (SEE SHEET 13)
				85	21													305	13000	106	SQ.YD.	9" CONCRETE BASE
								69,854										305	13001	69,854	SQ.YD.	9" CONCRETE BASE, AS PER PLAN (SEE SHEET 12)
			572															404	20000	572	CU.YD.	ASPHALT CONCRETE, AC-20
	16,000					9399	9636	10,028										407	10000	45,063	GAL.	TACK COAT
			4116															408	10001	4,116	GAL.	BITUMINOUS PRIME COAT, AS PER PLAN (SEE SHEET 12)
						3266	3348	3482										446	01400	10,096	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20
						1291	1291	1818										451	14001	4,400	SQ.YD.	9" REINFORCED CONCRETE PAVEMENT, AS PER PLAN (SEE SHEET 12)
									9499									452	16001	9,499	SQ.YD.	15" PLAIN CONCRETE PAVEMENT, AS PER PLAN (SEE SHEET 12)
		56,000																SPECIAL	450 14000	56,000	LIN.FT.	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, 705.04 (SEE SHEET 13 & PROPOSAL NOTE)
	50																	617	25000	50	M.GAL.	WATER
								6611	276													
																		617	10100	6,887	CU.YD.	COMPACTED AGGREGATE, TYPE A (SEE SHEET 13)
				316																		
					66													622	24001	316	LIN.FT.	CONCRETE BARRIER, TYPE D, AS PER PLAN (SEE SHEET 29 & 29-A)
		4500																622	23301	66	LIN.FT.	CONCRETE BARRIER, TYPE A, AS PER PLAN (SEE SHEET 13)
																		803	00100	4,500	SQ.YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C
		12,000																803	10000	12,000	LIN.FT.	FULL DEPTH PAVEMENT SAWING
						96	96	112										SPECIAL	451 30000	304	LIN.FT.	PRESSURE RELIEF JOINT, TYPE A (SEE STANDARD DRAWING BP-10)
																						DRAINAGE
																	1	604	09000	1	EACH	CATCH BASIN ADJUSTED TO GRADE
																	0.5	602	20000	0.5	CU.YD.	CONCRETE MASONRY
											14	64	13	68			3529	603	01500	3,688	LIN.FT.	6" CONDUIT, TYPE F, 707.17 NON-PERFORATED, ASTM 3034 SDR 35 OR S.S.931
																	10	603	05900	10	LIN.FT.	15" CONDUIT, TYPE B, 706.02
																	2	604	02907	2	EACH	CATCH BASIN, NO.8A AS PER PLAN (SEE SHEET 13)
																	7	604	01601	7	EACH	CATCH BASIN, NO.5 AS PER PLAN (SEE SHEET 13)
																	58	604	02801	58	EACH	CATCH BASIN, NO.8 AS PER PLAN (SEE SHEET 13)
																	8	604	09501	8	EACH	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN (SEE SHEET 75)
																	4000	605	30001	4000	LIN.FT.	SHALLOW UNDERDRAIN, AS PER PLAN (ROCK CUT) (SEE SHEET 73)
																	59,624	605	30001	59,624	LIN.FT.	SHALLOW UNDERDRAIN, AS PER PLAN (SEE SHEET 73)
												97	306				39,428	605	11100	39,831	LIN.FT.	6" SHALLOW PIPE UNDERDRAIN
											951	645	684	780			12,438	605	13300	15,498	LIN.FT.	6" UNCLASSIFIED PIPE UNDERDRAIN
																	12,554	605	98000	12,554	LIN.FT.	6" PIPE UNDERDRAIN 707.17 ASTM 3034, SDR 35 OR S.S.931 PERFORATED AS PER 707.17 (ROCK CUT)
																	383	605	11100	383	LIN.FT.	6" SHALLOW PIPE UNDERDRAIN 707.01 III, 707.21 III, OR 707.17
											1	2	1	1			68	SPECIAL	604 36600	73	EACH	PRECAST REINFORCED CONCRETE OUTLET

GENERAL SUMMARY

CALC. BY	DATE 7-9-89
CHKD. BY	DATE 7/11/89

GUE-70-0.00 | OHIO | FHWA REGION 5 | 33/88

SHEET NUMBER																			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
11	12	13	14	26	27	28	67			81													TRAFFIC CONTROL
	299																		802	00100	299	EACH	BARRIER REFLECTOR, TYPE A
	24																		802	00200	24	EACH	BARRIER REFLECTOR, TYPE B
						200													620	31000	200	EACH	DELINEATOR REMOVED FOR STORAGE
						113													620	10500	113	EACH	DELINEATOR, TYPE C, DESIGN 2, FLEXIBLE POST MOUNTED
						77													620	10700	77	EACH	DELINEATOR, TYPE C, DESIGN 4, FLEXIBLE POST MOUNTED
						18													620	15500	18	EACH	DELINEATOR, TYPE D, DESIGN 2, FLEXIBLE POST MOUNTED
							25.17												621	10008	25.17	MILE	LANE LINE
							53.54												621	00100	53.54	MILE	EDGE LINE
							400												847	47600	400	LIN.FT.	TRANSVERSE LINES 947.02
							1894												847	19000	1894	LIN.FT.	CHANNELIZING LINES 947.02
				1017															862	00100	1017	EACH	RAISED PAVEMENT MARKERS
																							MAINTAINING TRAFFIC
50																			404	35000	50	CU.YD.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
					266														614	13200	266	EACH	BARRIER REFLECTORS, TYPE A
					189														614	13300	189	EACH	BARRIER REFLECTORS, TYPE B
							76.44												614	22000	76.44	MILE	TEMPORARY EDGE LINES, CLASS I
							12.4												614	20400	12.4	MILE	TEMPORARY LANE LINES, CLASS II
							1778												614	23000	1778	LIN.FT.	TEMPORARY CHANNELIZING LINES, CLASS I
							2010												614	28000	2010	LIN.FT.	TEMPORARY GORE MARKINGS, CLASS II
	100																		SPECIAL	614 12600	100	EACH	REPLACEMENT DRUMS (SEE SHEET 12)
	1720																		622	40001	1720	LIN.FT.	TEMPORARY CONCRETE BARRIER, AS PER PLAN (SEE SHEET 12)
										250									622	40003	250	LIN.FT.	TEMPORARY CONCRETE BARRIER, BRIDGE MOUNTED, AS PER PLAN (SEE SHEET 81)
			58																614	12470	58	EACH	WORK ZONE SPEED LIMIT SIGNS (SEE PROPOSAL NOTE)
																							FOR STRUCTURES 20' AND OVER (SEE SHEET 80)
		400																	SPECIAL	614 11100	400	HOURS	LAW ENFORCEMENT OFFICER WITH PATROL CAR (SEE SHEET 13)
			LUMP																614	11000	LUMP		MAINTAINING TRAFFIC
LUMP																			619	10000	LUMP		FIELD OFFICE
																			623	10000	LUMP		CONSTRUCTION LAYOUT STAKES (SEE SHEET 11)
																			624	10000	LUMP		MOBILIZATION

G0700CC6 8/16/89

CALC. BY DATE 12-9-81
CHKD. BY J.W.L. DATE 12-10-81

GUE-70-0.00

OHIO | FHWA REGION 5

End Exist. 5 1/2" Asphalt Concrete | Exist. 150' Feather | End Exist. Asph. Conc.

+57 | +07 | ±45.3 | ±45.3

Ramp B S.R. 83

Exist. 8' Berm

Berm Tapers From 8' to 10' Sta. 761+45.3 to Sta. 762+45.3

Existing 10' Berm

18-G

MATCH LINE STA. 770+00

WESTBOUND LANES

Existing 4' Berm

752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769

N 67°52'51"E

℄ Survey and Construction I-70

Existing 4' Berm

EASTBOUND LANES

Ramp D S.R. 83

20.02' | 16.90'

Existing 8' Berm

+22.0 | +18.0

Existing 10' Berm

MUSKINGUM CO. GUERNSEY CO.

IR-70-7(105)176

BEGIN PROJECT STA. 759+07 S.L.M. 0.00

Berm Tapers From 8' to 10' Sta. 766+22.0 to Sta. 767+18.0

1-G

Begin Work & RESURFACING Sta. 757+57

NOTE: For Guardrail Quantities See Sheets 24 & 25.

Existing 5 1/2" Asphalt Concrete

Existing Concrete Pavement

Butt Joint

Item 301 to be Feathered from 4 1/4" to 2 3/4" in 150'

M

Item 202 Wearing Course Removed (Exist. Feather)

Prop. 1 1/4" Item 446 Asph. Conc. Surface Course, Type I, AC-20.

Prop. 2 3/4" Item 301 Bituminous Aggregate Base

Item 407 Tack Coat

C.R. 14

Bridge No. GUE-70-0052

19-G

18-G

MATCH LINE STA. 770+00

Existing 10' Berm

Existing 4' Berm

770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799

℄ Survey and Construction I-70

N 67°52'51"E

WESTBOUND LANES

Existing 4' Berm

Existing 10' Berm

EASTBOUND LANES

MATCH LINE STA. 800+00

1-G

NOTE: For Details of U-Turn Median Opening See Sheet 10.

2-G

NOTE: For Item 622 Concrete Barrier, Type D, As Per Plan See Sheet 29 & 29-A.

3-G

P.C. STA. 797+61.44

20-G

WESTBOUND LANES

Existing 10' Berm

Existing 4' Berm

800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829

℄ Survey and Construction I-70

Existing 4' Berm

EASTBOUND LANES

Existing 4' Berm

MATCH LINE STA. 800+00

4-G

P.T. STA. 820+23.94

S 89°29'39"E

21-G

NOTE: For Bridge Details & Quantities See Sheets 79-88.

+27.67 | +52.67 | +77.67 | C.R. 41 | +02.69 | +27.69 | +52.69

Begin Exist. Asph. Conc.

Bridge No. GUE-70-0127 L

End Exist. Asph. Conc.

22-G

16-G

Begin Exist. Asph. Conc.

+53.32 | +78.32 | +03.32 | +04.84 | +29.84 | +54.84

End Exist. Asph. Conc.

Bridge No. GUE-70-0127 R

5-G

35-G

MATCH LINE STA. 830+00

NOTE: For Overpass Details See Sheets 8 & 9.

STA. 752+00 - STA. 830+00

CALC. BY DW DATE 9-29-89
CHKD. BY H.W.C. DATE 11-16-89

GUE-70-0.00

OHIO
FHWA REGION 5

35
88

MATCH LINE STA. 830+00

23-G

24-G

Existing 10' Berm
WESTBOUND LANES
Existing 4' Berm
830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859
S 89° 29' 39" E
Existing 4' Berm
℄ Survey and Construction I-70
EASTBOUND LANES
Existing 10' Berm

MATCH LINE STA. 860+00

6-G

7-G

8-G

MATCH LINE STA. 860+00
P.C. STA. 860+74.30
861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889
P.T. STA. 888+75.44
MATCH LINE STA. 890+00
+88.09

24-G

Existing 10' Berm
WESTBOUND LANES
Existing 4' Berm
Existing 4' Berm
℄ Survey and Construction I-70
EASTBOUND LANES
Existing 10' Berm

17-G

8-G

MATCH LINE STA. 890+00
+44.45
25-G
+69.45
+94.45
Begin Exist. Asph. Conc.
+06.68
+31.68
CROOKED CREEK
26-G
+56.68
36-G
Bridge No. GUE-70-0250 L
End Exist. Asph. Conc.
890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919
Existing 10' Berm
WESTBOUND LANES
Existing 4' Berm
Existing 4' Berm
EASTBOUND LANES
Existing 10' Berm
N 47° 57' 21" E
℄ Survey and Construction I-70
MATCH LINE STA. 920+00
RAMP A WEIGH STATION
Begin Exist. Asph. Conc.
17-G
Bridge No. GUE-70-0250 R
End Exist. Asph. Conc.
+07.09
+32.09
+44.32
+69.32
+94.32
8-G
9-G

C.R. 143
27-G
Bridge No. GUE-70-0281
80.00
80.00
+96
P.C. STA. 909+00.83
Berm Tapers from 10' to 8' Sta. 908+00 to Sta. 908+96
Existing 8' Berm
10-G

NOTE: For Bridge Details and quantities See Sheets 79-88.

NOTE: For Overpass Details See Sheets 8 & 9.

NOTE: For Details of U-Turn Median Opening, See Sheet 10.

NOTE: For Item 622 Concrete Barrier Type D, As Per Plan See Sheets 29 & 29-A.

STA. 830+00 - STA. 920+00

CALC. BY DW DATE 9-4-87
CHKD. BY d.W.C. DATE 12-18-87

GUE-70-0.00

OHIO FHWA REGION 5

M.L. STA. 920+00.00 = RAMP A STA. 20+00

P.C. STA. 20+10.98

NOTE: Berm Tapers from 8' to 7.65' from Sta. 23+00 to Sta. 23+14.

NOTE: For Details Ramp A Sta. 23+14 to Sta. 32+80.5 See Sheets 39 & 44-46.

STA. 32+80.5 RAMP A = STA. 32+80.5 TRUCK WEIGH STATION

NOTE: For details Truck Weigh Station Sta. 32+80.5 to Sta. 37+50.5 see sheets 43, 47 & 48.

TRUCK WEIGH STATION

TRUCK WEIGH STATION P.C. STA. 37+50.50 = STA. 37+50.5 RAMP B

P.R.C. STA. 38+36.12

NOTE: For Details Ramp B Sta. 37+80.5 to Sta. 42+31 See Sheets 40, 49 & 50.

RAMP B P.T. STA. 46+83.82 = M.L. STA. 947+14.44

NOTE: Berm Taper from 8' to 10' Sta. 949+59.7 to Sta. 950+59.7

MATCH LINE STA. 920+00

Existing 8' Berm

+00 +14 Curb

P.T. STA. 27+01.42

NOTE: Guardrail quantities and Details carried on sheets 24 & 25.

28-G

RAMP A

NOTE: Guardrail quantities and Details carried on sheets 24 & 25.

29-G

NOTE: Berm Tapers from 6' to 8' from Sta. 42+31 to Sta. 46+83.82

+31.0

+59.7

Existing 8' Berm

MATCH LINE STA. 950+00

RAMP B

Existing 10' Berm

Existing 4' Berm

WESTBOUND LANES

℄ Survey and Construction I-70

+18

P.T. STA. 941+45.27

N 23° 37' 21" E

EASTBOUND LANES

Existing 10' Berm

Existing 4' Berm

Existing 8' Berm

+20.8

NOTE: Berm Tapers from 10' to 8' Sta. 926+20.8 to Sta. 927+20.8

M.L. STA. 930+52.68 = P.C. STA. 30+52.68 Ramp C

NOTE: Berm Tapers from 8' to 6' from Sta. 30+52.68 to Sta. 32+40.8.

+19.0

11-G

P.R.C. STA. 37+04.92

RAMP C P.T. STA. 38+93.19 = STA. 0+00 TRUCK WEIGH STATION

NOTE: For Details Ramp C Sta. 34+19.0 to Sta. 38+93.19 See Sheets 41, 51 & 52.

NOTE: Guardrail quantities and Details carried on sheets 24 & 25.

TRUCK WEIGH STATION

RAMP D

Exist. Type 7 Curb

TRUCK WEIGH STATION STA. 4+86.5 = P.C. STA. 43+50 RAMP D

P.T. STA. 45+78.69

12-G

P.C. STA. 49+01.5

NOTE: For Details Ramp D Sta. 43+50 to Sta. 51+01 See Sheets 42 & 55-57.

NOTE: Guardrail quantities and Details carried on sheets 24 & 25.

NOTE: For details Truck Weigh Station Sta. 0+00 to Sta. 4+86.5 see sheets 43 & 53-55.

End Typical As Per Sheet 5.

Sta. 23+14 Ramp A, 42+31 Ramp B, 34+19 Ramp C and 51+01 Ramp D

Begin Typical As Per Sheet 7.

50' Feather As Per Std. Drwg. BP-5

Taper Edge Type

1¼"

Prop. 4" Asph. Conc.

Exist. 9" Conc.

Proposed 15" Item 452 Plain Conc. Pavement, As Per Plan

30-G

Existing 4' Berm

Existing 10' Berm

WESTBOUND LANES

℄ Survey and Construction I-70

N 23° 37' 21" E

Existing 8' Berm

+15.4

+11.4

NOTE: Berm Tapers from 8' to 10' from Sta. 966+15.4 to Sta. 967+11.4

31-G

Existing 4' Berm

Existing 10' Berm

EASTBOUND LANES

MATCH LINE STA. 950+00

MATCH LINE STA. 980+00

+59.7

+96.3

Exist. Type 8 Curb

RAMP D

51+01

P.T. STA. 52+79.30

Exist. Curb to be removed. For Quantities See Sheet 66.

NOTE: Berm Tapers from 6' to 8' Sta. 51+99.3 to Sta. 52+79.30

STA. 55+79.30 RAMP D = STA. 955+75 M.L.

12-G

EQUATION STA. 958+66.75 BK = STA. 958+03.11 AH

P.C. STA. 960+44.34

MATCH LINE STA. 980+00

WESTBOUND LANES

℄ Survey and Construction I-70

Existing 4' Berm

Existing 10' Berm

EASTBOUND LANES

Existing 4' Berm

Existing 10' Berm

N 69° 28' 21" E

P.T. STA. 991+70.48

P.C. STA. 1006+32.49

32-G

MATCH LINE STA. 1010+00

13-G

STA. 920+00 – STA. 1010+00

CALC BY DATE 9-9-87	GUE-70-0.00	OHIO
CHKD. BY DATE 12-11-87		FHWA REGION 5

37
88

Bridge No. GUE-70-0477

32-G

MATCH LINE STA. 1010+00

1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039

MATCH LINE STA. 1040+00

WESTBOUND LANES

EASTBOUND LANES

N 87° 40' 21" E

P.T. STA. 1024+52.49

℄ Survey and Construction I-70

Existing 10' Berm

Existing 4' Berm

Existing 4' Berm

Existing 10' Berm

NOTE: For Item 622 Concrete Barrier Type D, As Per Plan See Sheet 29 & 29-A.

13-G

T. R. 19

14-G

Berm Tapers from 10' to 8' from Sta. 1057+30.1 to Sta. 1058+26.1

33-G

+30.1

+26.1

Existing 8' Berm

N.W. RAMP

MATCH LINE STA. 35+00

1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 29 30 31 32 33 34

+65.6

+65.6

Existing 10' Berm

Existing 4' Berm

Existing 4' Berm

Existing 10' Berm

+95.6

+95.6

Existing 8' Berm

Berm Tapers from 10' to 8' Sta. 1058+95.6 to Sta. 1059+95.6

EQUATION
STA. 1062+80.00 BK =
STA. 28+50.00 AH. &
STA. 0+38.63 S.W. RAMP
S.R. 723

Berm Tapers from 8' to 3' Sta. 0+00 to Sta. 5+53.5

+53.5

Taper Edge Type

Exist. 10' Berm

Exist. 3' Berm

S.W. RAMP S.R. 723

+78.5

End Resurfacing S.W. Ramp S.R. 723

125' Feather As Per Std. Drwg. BP-5

Existing 3' Berm

NOTE: For Details of U-Turn Median Opening See Sheet 10.

Begin Resurfacing N.W. Ramp S.R. 723

125' Feather As Per Std. Drwg. BP-5

STA. 35+00.12 M.L. = STA. 14+36.09 N.W. RAMP

33-G

Berm Tapers from 8' to 3' Sta. 11+35.88 to Sta. 8+85.88

S.T. STA. 11+35.88

Berm Tapers from 2' to 3' Sta. 8+85.88 to Sta. 9+35.88

Taper End Type

Existing 3' Berm

C.S. STA. 8+85.88

8+46

10

+71

N.W. RAMP S.R. 723

Existing 8' Berm

Existing 3' Berm

MATCH LINE STA. 35+00

35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

N 87° 40' 21" E

+66

P.C. STA. 41+45.24

WESTBOUND LANES

EASTBOUND LANES

Existing 10' Berm

Existing 4' Berm

Existing 4' Berm

Existing 10' Berm

℄ Survey and Construction I-70

NOTE: For Plan View and Work Required S.R. 723 Interchange see sheet 38.

END PROJECT
STA. 48+00
S.L.M. 6.13
1R-70-7(105)176

S.R. 723

END RESURFACING
Sta. 50+00

END WORK
STA. 51+15
(See sht. 72)

NOTE: For Item 622 Concrete Barrier Type D, As Per Plan See Sheet 29 & 29-A.

34-G

Exist. 200' Feather

Bridge No. GUE-70-0611

Begin Exist. Asph. Conc.

Begin Exist. 5 1/4" Asph. Conc.

Existing Catch Basin

Existing Type 7 Curb

10

S.W. LOOP S.R. 723

NOTE: 10' Berm to be feathered to meet existing asphalt.

STA. 15+21.16 SW. LOOP = STA. 50+73.33 M.L.

NOTE: For details and quantities of pier protection S.R. 723 Eastbound see sheets 59 & 60.

15-G

15-G see sheet 59.

Item 301 to be Feathered from 2 3/4" to 4" in 200'

Item 202 Wearing Course Removed

Prop. 1 1/4" Item 446 Asph. Conc. Surface Course, Type 1, AC-20

Existing 5 1/4" Asph. Conc.

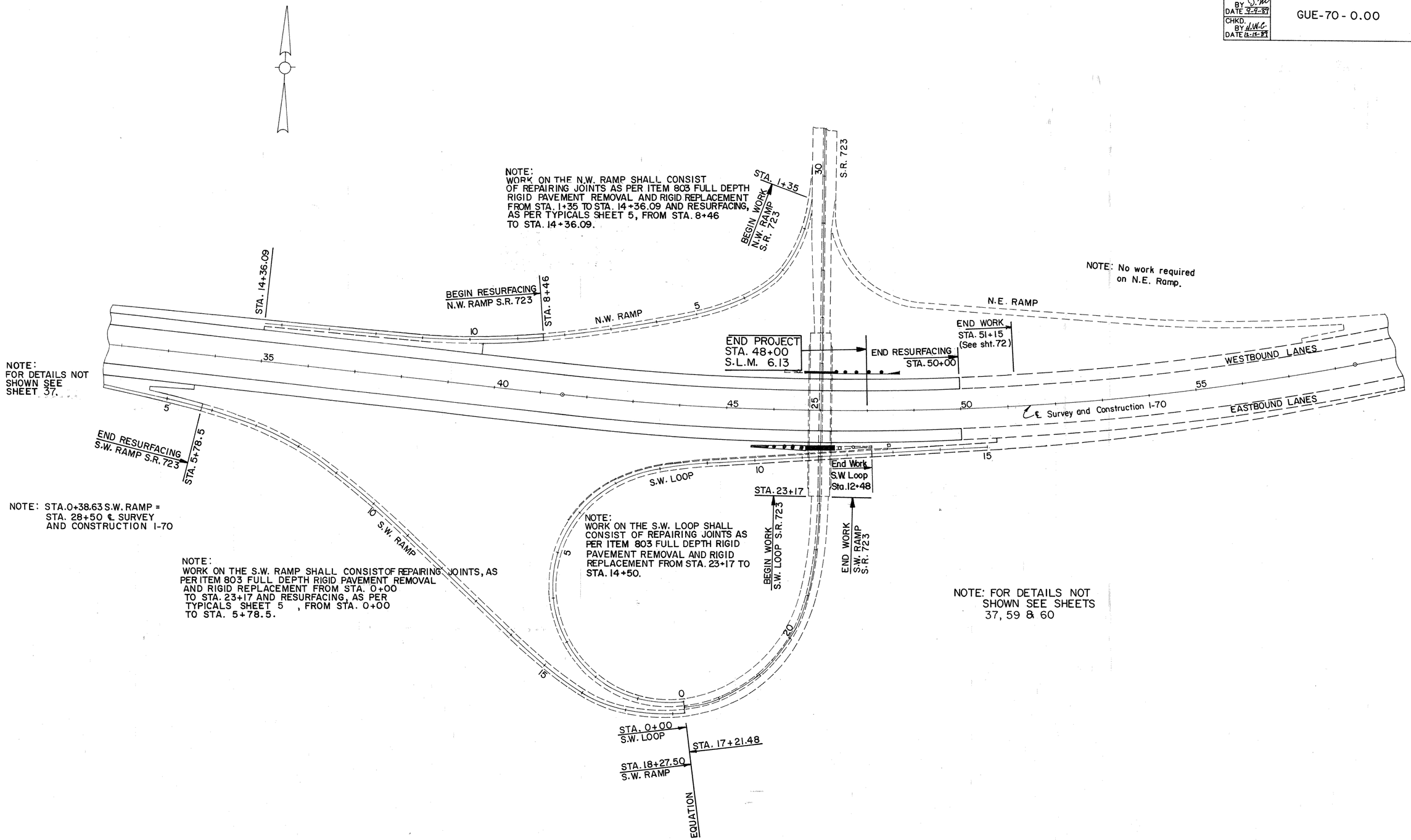
Prop. 2 3/4" Item 301 Bit. Aggr. Base

Item 407 Tack Coat

Existing Concrete Pavement

STA. 1010+00 - STA. 52+00

CALC. BY Q.M DATE 7-7-89	GUE-70-0.00	OHIO	38
CHKD. BY M.W.C. DATE 8-15-89		FHWA REGION 5	88



CALC. BY Q.M. DATE 9-9-89
CHECK BY J.W.C. DATE 12-12-89

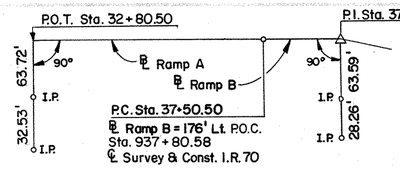
PI STA. 23+57.15
Δ = 10°21'24" LT.
D = 1°30'
R = 3819.72'
T = 346.17'
L = 690.44'
E = 15.65'

Proposed Berm Tapers from 7.65' to 6' from Sta. 23+14 to 23+80

NOTE: For guardrail quantities and details see sheet 25.

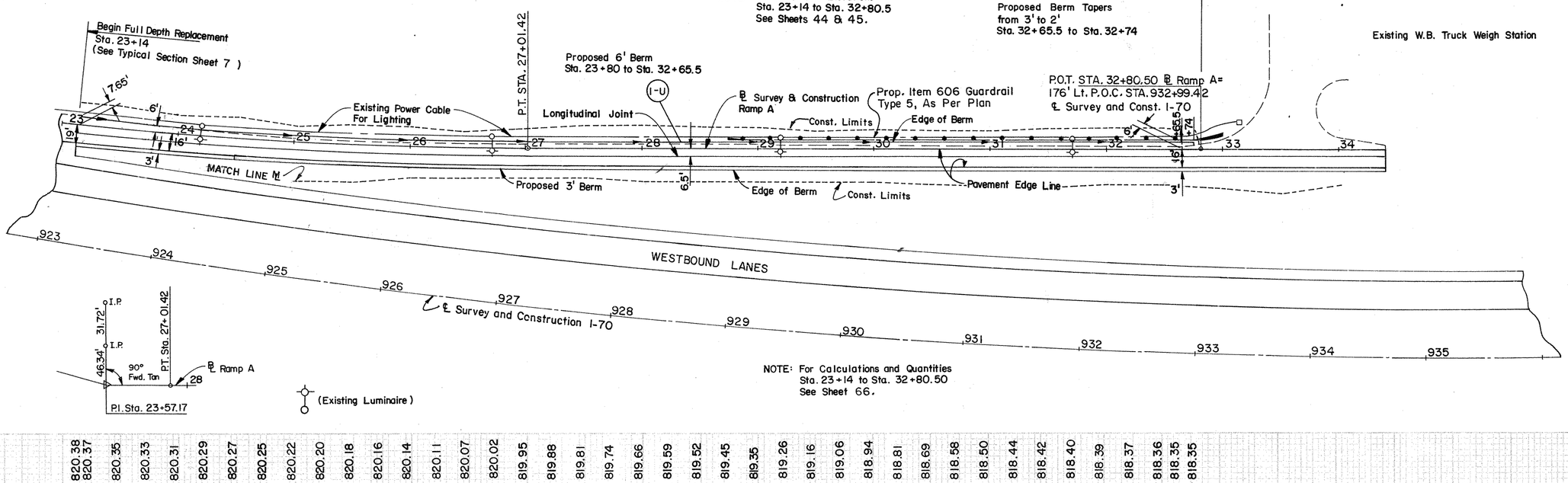
NOTE: For Pavement Elevations Sta. 23+14 to Sta. 32+80.5 See Sheets 44 & 45.

Proposed Berm Tapers from 3' to 2' Sta. 32+65.5 to Sta. 32+74

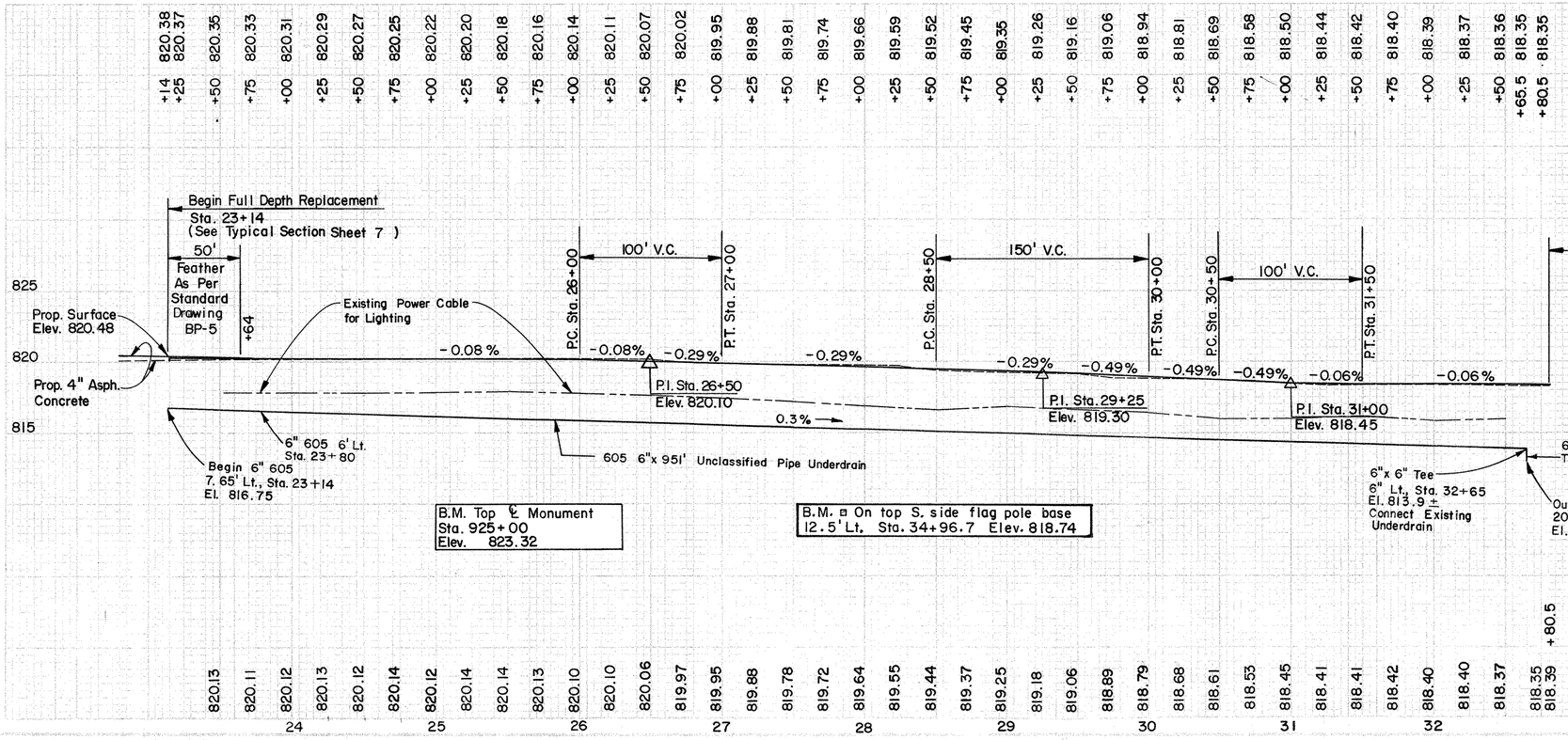


For Details Truck Weigh Station Sta. 32+80.50 to Sta. 37+50.50 See Sheet 43.

Existing W.B. Truck Weigh Station



NOTE: For Calculations and Quantities Sta. 23+14 to Sta. 32+80.50 See Sheet 66.



B.M. Top ℄ Monument Sta. 925+00 Elev. 823.32

B.M. ⊡ On top S. side flag pole base 12.5' Lt. Sta. 34+96.7 Elev. 818.74

UNDERDRAINS

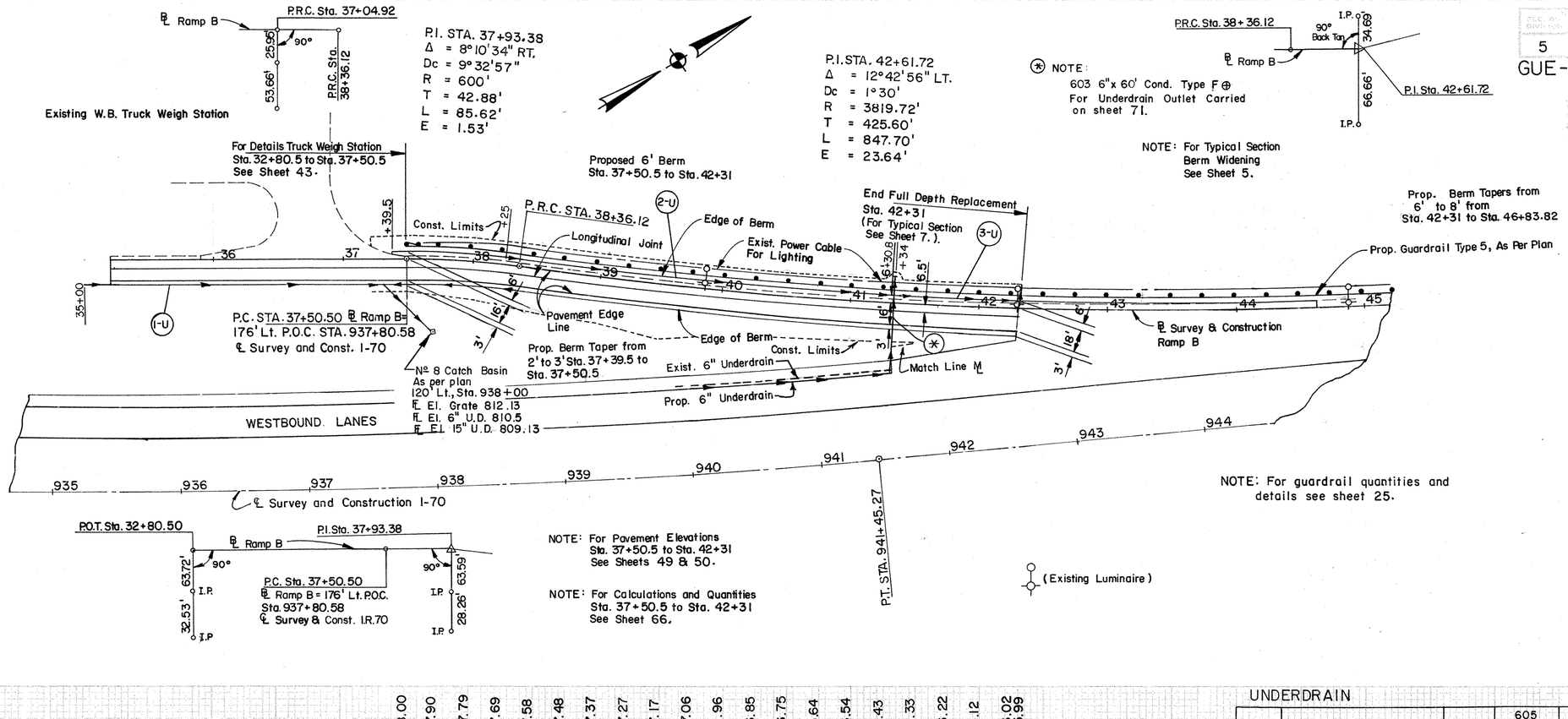
MARK	STATION FROM	STATION TO	SIDE	605 6" Unclass. Pipe Underdrain Lin. Ft.	603 6" Conduit Type F ⊕ Lin. Ft.	Special Precast Reinforced Concrete Outlet Each	Bends & Branches 6"x6" Tee
I-U	23+14	32+65	Lt	951	14	1	1
TOTAL				951	14	1	

Quantities carried to General Summary sheet 32

⊕ 707.17 Non-perforated ASTM 3034, SDR 35 or Supplemental Spec. 931

RAMP A TRUCK WEIGH STATION

CALC. BY D. Jm
DATE 9-9-89
CHECK BY J.W.C.
DATE 12-12-89

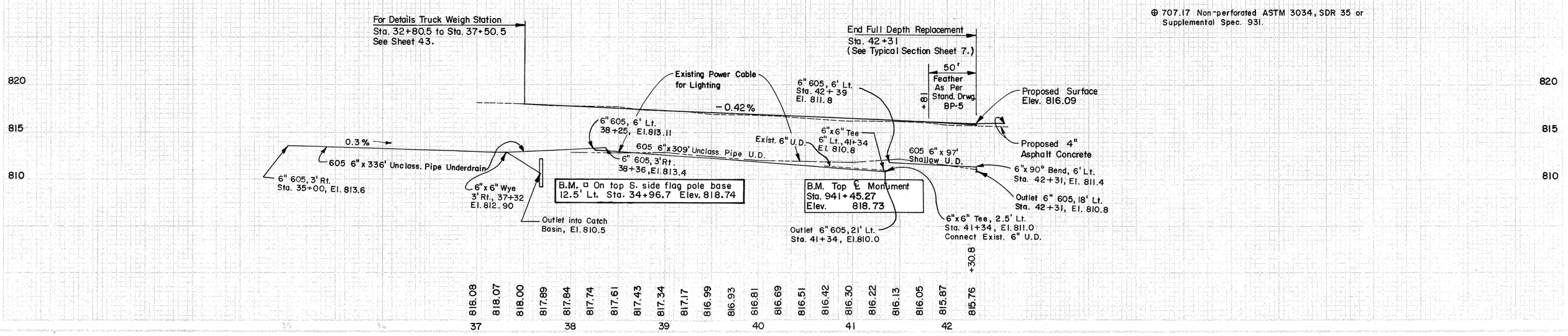


UNDERDRAIN

MARK	STATION FROM	STATION TO	SIDE	605 6" Unclass. Pipe Underdrain Lin. Ft	605 6" Shallow Pipe Underdrain Lin. Ft	603 6" Conduit Type F⊕ Lin. Ft.	Special Precast Reinforced Concrete Outlet Each	Bends & Branches Each 6"x90° Bend	6" Tee	6" Wye
1-U	35+00	38+36	Rt	336		52				1
2-U	38+25	41+34	Lt	309			1		1	
3-U	41+39	42+32	Lt		97	12	1	1		
TOTAL				645	97	64	2			

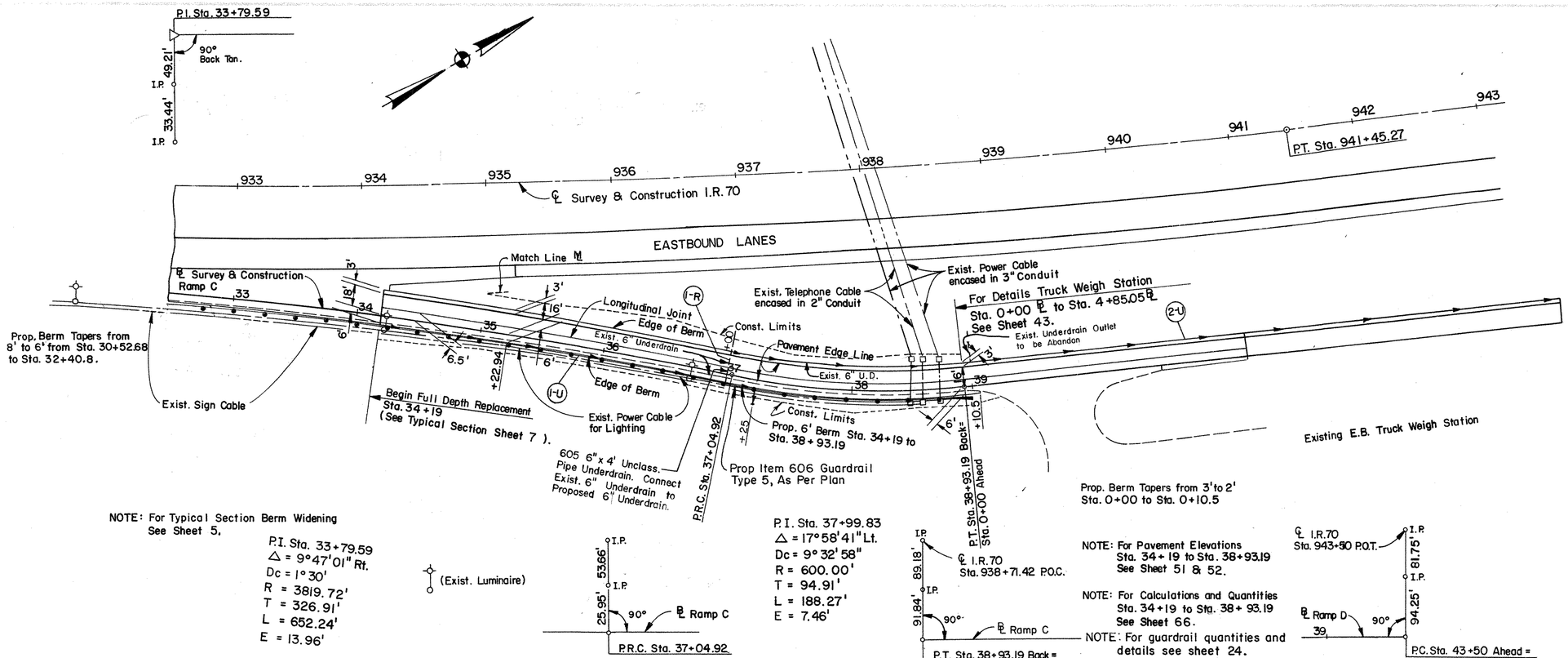
Quantities carried to General Summary sheet 32

⊕ 707.17 Non-perforated ASTM 3034, SDR 35 or Supplemental Spec. 931.



RAMP B TRUCK WEIGH STATION

CALC. BY D.Jw
DATE 9-9-87
CHECK. BY A.W.C.
DATE 12-12-89



NOTE: For Typical Section Berm Widening See Sheet 5.

P.I. Sta. 33+79.59
△ = 9°47'01" Rt.
Dc = 1°30'
R = 3819.72'
T = 326.91'
L = 652.24'
E = 13.96'

(Exist. Luminaire)

P.I. Sta. 37+99.83
△ = 17°58'41" Lt.
Dc = 9°32'58"
R = 600.00'
T = 94.91'
L = 188.27'
E = 7.46'

NOTE: For Pavement Elevations Sta. 34+19 to Sta. 38+93.19 See Sheet 51 & 52.

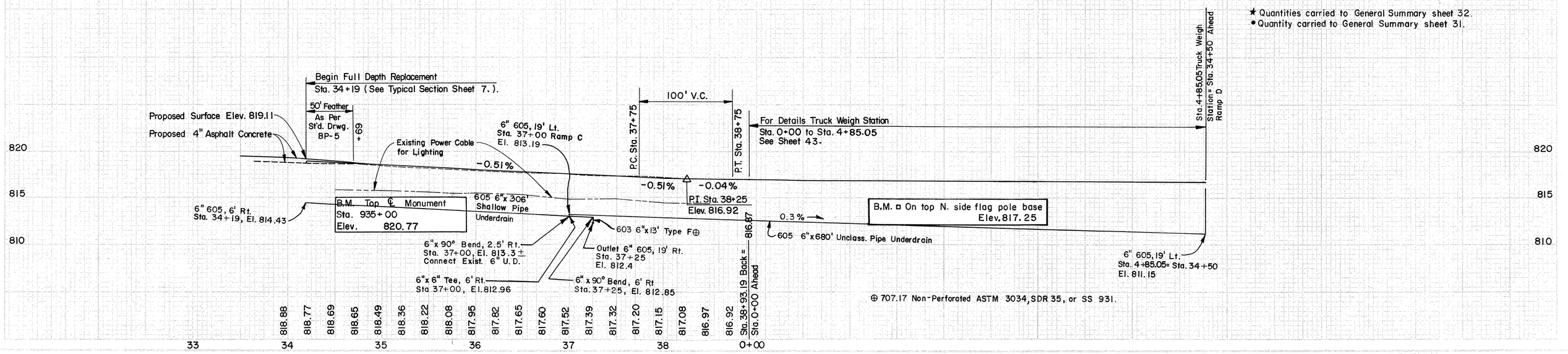
NOTE: For Calculations and Quantities Sta. 34+19 to Sta. 38+93.19 See Sheet 66.

NOTE: For guardrail quantities and details see sheet 24.

UNDERDRAIN

MARK	STATION FROM	STATION TO	SIDE	605 6" Shallow Pipe Underdrain Lin. Ft.	605 6" Unclass. Pipe Underdrain Lin. Ft.	603 6" Conduit Type F⊕ Lin. Ft.	202 Pipe Removed 24"& Under Lin. Ft.	Special Precast Reinforced Conc. Outlet Each	Bends & Branches 6"x 90° Bend	Bends & Branches 6" Tee
1-U	34+19	37+25	Rt	306	4	13		1	2	1
2-U	37+00 Ramp C	4+85.05 Truck Weigh Sta. = 43+50 Ramp D	Lt		680					
1-R	37+00		Lt & Rt				21			
TOTAL				306 ★	684 ★	13 ★	21 •	1 ★		

★ Quantities carried to General Summary sheet 32.
• Quantity carried to General Summary sheet 31.

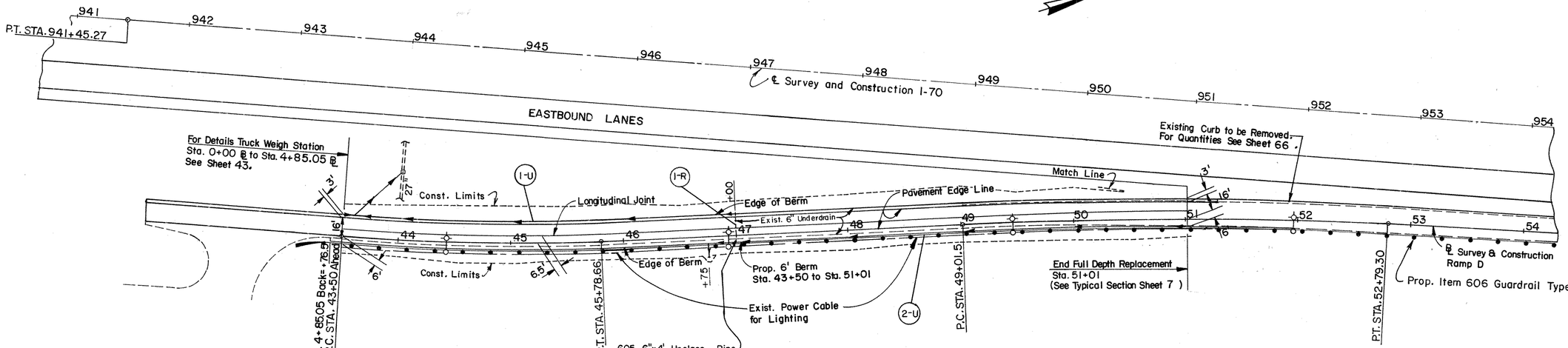


⊕ 707.17 Non-Perforated ASTM 3034, SDR 35, or SS 931.

RAMP C TRUCK WEIGH STATION

GUE-70-0.00

CALC. BY D.M.
DATE 9-9-87
CHECK. BY J.W.C.
DATE 12-12-87



NOTE: See Note on Sheet 13 for Work Required to Remove Existing Curb From Sta. 51+01 To Sta. 55+79.3.

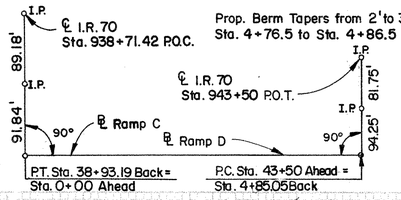
NOTE: For Pavement Elevations Sta. 43+50 to Sta. 51+01 See Sheets 55 - 58.

NOTE: For guardrail quantities and details see sheet 24.

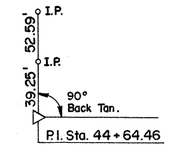
NOTE: For Calculations and Quantities See Sheet 66.

NOTE: For Typical Section Berm Widening See Sheet 5.

NOTE: Prop. Berm Tapers from 6' to 8' Sta. 51+99.3 to Sta. 52+79.3.

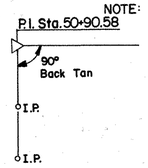


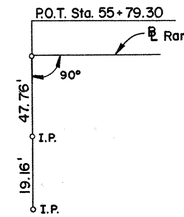
P.I. STA. 44+64.46
Δ = 6°51' 35" LT.
Dc = 3°00'
R = 1909.86'
T = 114.46'
L = 228.66'
E = 3.43'



(Exist. Luminaire)

P.I. STA. 50+90.58
Δ = 5°39'58" RT.
Dc = 1°30'
R = 3819.72'
T = 189.02'
L = 377.74'
E = 4.67'



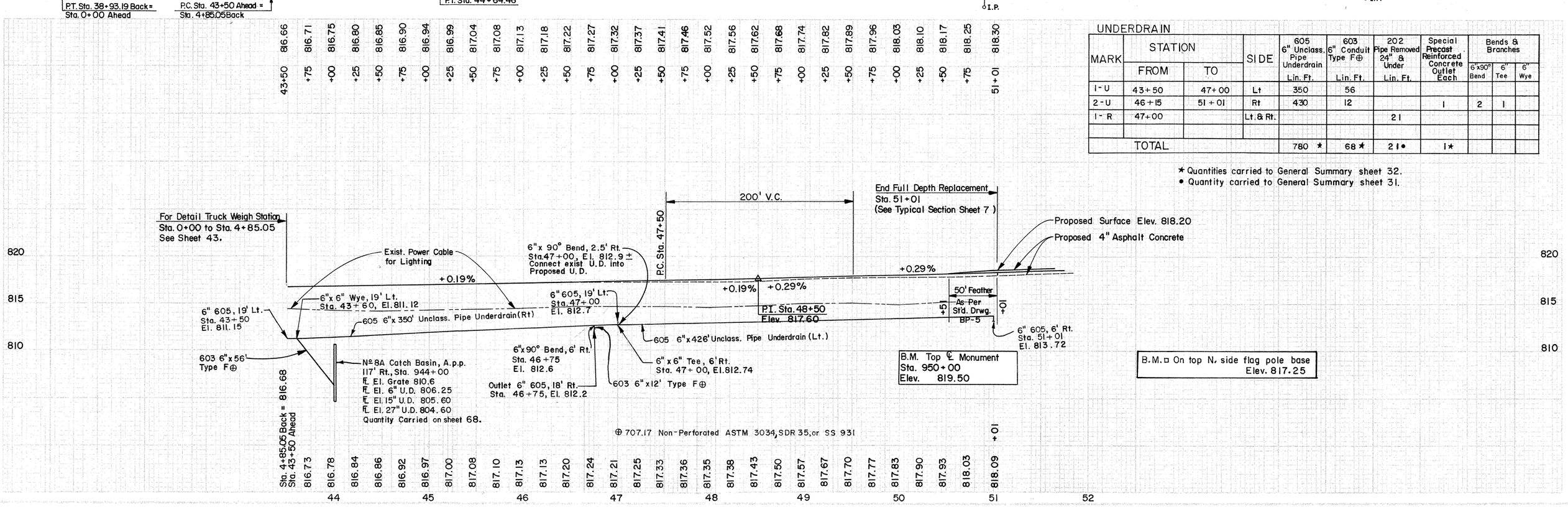


86.66	86.71	86.75	86.80	86.85	86.90	86.94	86.99	87.04	87.08	87.13	87.18	87.22	87.27	87.32	87.37	87.41	87.46	87.52	87.56	87.62	87.68	87.74	87.82	87.89	87.96	88.03	88.10	88.17	88.25	88.30
43+50	+75	+00	+25	+50	+75	+00	+25	+50	+75	+00	+25	+50	+75	+00	+25	+50	+75	+00	+25	+50	+75	+00	+25	+50	+75	+00	+25	+50	+75	51+01

UNDERDRAIN

MARK	STATION FROM	STATION TO	SIDE	605 6" Unclass. Pipe Underdrain Lin. Ft.	603 6" Conduit Type F⊕ Lin. Ft.	202 Pipe Removed 24" & Under Lin. Ft.	Special Precast Reinforced Concrete Outlet Each	Bends & Branches 6"x90° Bend	6" Tee	6" Wye
1-U	43+50	47+00	Lt	350	56					
2-U	46+15	51+01	Rt	430	12		1	2	1	
1-R	47+00		Lt. & Rt.			21				
TOTAL				780 ★	68 ★	21 •	1★			

★ Quantities carried to General Summary sheet 32.
• Quantity carried to General Summary sheet 31.



Sta. 4+85.05 Back = Sta. 43+50 Ahead	816.73	816.78	816.84	816.86	816.92	816.97	817.00	817.08	817.10	817.13	817.13	817.20	817.24	817.21	817.25	817.33	817.36	817.35	817.38	817.43	817.50	817.57	817.67	817.70	817.77	817.83	817.90	817.93	818.03	818.09
	43				44				45				46				47				48				49				50			51 + 01

RAMP D TRUCK WEIGH STATION

CALC. BY [illegible] DATE 9-9-81
CHKD. BY W.W.C. DATE 11-12-81

GUE-70-0.00

OHIO FHWA REGION 5

Existing Westbound Truck Weigh Station

Exist. Power Cable For Luminaires.

Anchor to exist approach.

Prop. Conc. Elevations meet exist. conc.

Prop. 3' Conc. Berm

Const. Limits

Exist. Conc.

Exist. Bldg.

Exist. Truck Weigh Scales

Exist. Power Cable Location Unknown

Exist. Guardrail

Prop. 3' Conc. Berm

Const. Limits

Anchor to exist approach.

Prop. Concrete Elevations to meet exist. concrete

Electric Service Pole

Electric Service

Telephone Service

Exist. Electric & Telephone Service Lines For the Eastbound Weigh Station

Exist. Power Cable For Luminaires.

℄ RAMP A

℄ RAMP B

SIGNAL

SPEAKERS

LIGHT POLE

ELECTRIC BOX

ELEC. BOX

TELE. BOX

P.O.T. STA. 32+80.5 ℄ RAMP A = 176.00' LT. P.O.C. STA. 932+99.42 ℄ SURVEY & CONST. I-70

P.O.T. STA. 35+15.50 ℄ RMP. A&B = 179.70' LT. P.O.C. STA. 935+40.00 ℄ SURVEY & CONST. I-70

P.C. STA. 37+50.50 ℄ RAMP B = 176.00' LT. P.O.C. STA. 937+80.58 ℄ SURVEY & CONST. I-70

NOTE: No Work to be performed on existing Truck Weigh Scales.

(L) Longitudinal Joint

NOTE: Item 617 and 203 to be placed around existing light poles, speakers, signals, utility boxes and guardrail so as not to damage the existing structure.

Exist. Electric & Telephone Service Lines From Westbound Weigh Station

P.T. STA. 38+93.19 ℄ RAMP C & STA. 0+00 ℄ AHEAD = 181.02 RT. P.O.C. STA. 938+71.42 ℄ SURVEY & CONST. I-70

℄ RAMP C

℄ RAMP D

4" PLASTIC PIPE

NOTE: No Work to be performed on existing Truck Weigh Scales

Const. Limits

Prop. Concrete Elevations to meet exist. concrete

Prop. 3' Conc. Berm

Exist. Truck Weigh Scales

Exist. Guardrail

Exist. Bldg.

Const. Limits

Prop 3' Conc. Berm

Prop. Concrete Elevations to meet exist. concrete

Anchor to exist approach.

Exist. Power Cable For Luminaires

Exist. Power Cable For Luminaires

2-ELEC. BOXES

Exist. Conc.

TRAFFIC SIGNAL

P.C. STA. 4+85.05 ℄ BACK & STA. 43+50.0 ℄ RAMP D AHEAD = 176' RT. P.O.T. STA. 943+50 ℄ SURVEY & CONST. I-70

Existing Eastbound Truck Weigh Station

* Anchor to the existing approach to be the same as shown on sheet 30 , Pavement Shoulder Detail For Item 305 9" Concrete Base, As Per Plan.

TRUCK WEIGH STATION DETAILS (E.B. & W.B.)

CALC BY DW DATE 7-9-89
CHKD. BY HWL DATE 12-12-89

GUE - 70 - 0.00

OHIO FHWA REGION 5

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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		28	1	50	2
		26	1	49	2
		27	1	48	2
		27	1	38	1
		27	1		
18	106	20		108	
20		19		104	
20	84				

Begin Full Depth Replacement
Sta. 23+14
(See Typical Section Sheet 7)

Sta. 23+14

820.61 — 33' Rt. Var. — C-2 — E B — 19.00' — C-25 — 820.36 — 6.50' — 6.00' — 820.10 — F-1 — C-1 — B — Exist. Power Cable for Lighting — 820.22 — 25+00 — 820.12

820.64 — B — 19.00' — 820.39 — 6.50' — 6.00' — 820.13 — B — 820.25 — 24+75 — 820.14

820.66 — 30' Rt. Var. — C-2 — E B — B — 19.00' — C-24 — 820.41 — 6.50 — 6.00' — 820.15 — B — F-1 — 5:1 — 820.27 — 24+50 — 820.12

820.68 — B — 19.00' — 820.43 — 6.50' — 6.00' — 820.17 — B — 820.29 — 24+25 — 820.13

820.70 — 30' Rt. Var. — C-2 — E B — 19.00' — C-24 — 820.45 — 6.50' — 6.00' — 820.19 — F-1 — C-1 — B — 5:1 — 820.31 — 24+00 — 820.12

820.72 — B — 19.00' — 820.47 — 6.50' — 6.13' — 820.21 — B — 820.33 — 23+75 — 820.11

820.73 — 29' Rt. Var. — C-2 — E B — 19.00' — C-24 — 820.48 — 6.50' — 6.70' — 820.23 — F-1 — C-1 — B — 4:1 — Exist. Power Cable for Lighting — 820.35 — 23+52 — 820.13

W. B. WEIGH STATION RAMP A STA. 23+52 — STA. 25+00

CALC. BY Q.M. DATE 9-8-89
CHKD. BY A.W.L. DATE 10-18-89

GUE-70.-0.00

OHIO
FHWA REGION 5

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88

SEEDING	
END WIDTH	SQ. YDS.
20	114
21	103
16	86
15	83
15	94
19	114
22	111

VOLUME	
CUT	FILL
52	4
53	3
55	2
55	3
52	3
51	1
29	0
53	1

END AREA	
CUT	FILL
29	2
27	2
30	1
29	1
30	2
26	1

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Sta.	Elev.	Offset	Elev.	Offset	Elev.
28+75	819.45	6.00'	819.36	6.50'	819.56
28+50	819.52	6.00'	819.43	6.50'	819.63
28+25	819.59	6.00'	819.50	6.50'	819.70
28+00	819.66	6.00'	819.57	6.50'	819.77
27+75	819.24	6.00'	819.65	6.50'	819.85
27+50	819.81	6.00'	819.70	6.50'	819.92
27+25	819.88	6.00'	819.76	6.50'	820.01
27+00	819.95	6.00'	819.83	6.50'	820.09
26+75	820.02	6.00'	819.90	6.50'	820.16
26+50	820.07	6.00'	819.95	6.50'	820.21
26+25	820.11	6.00'	819.99	6.50'	820.25
26+00	820.14	6.00'	820.02	6.50'	820.28
25+75	820.16	6.00'	820.04	6.50'	820.30
25+50	820.18	6.00'	820.06	6.50'	820.32
25+25	820.20	6.00'	820.08	6.50'	820.34

W.B. WEIGH STATION RAMP A STA. 25+25 — STA. 28+75

CALC BY [illegible] DATE 9-9-89
CHKD. BY D.W.C. DATE 12-12-89

GUE-70-0.00

OHIO
FHWA REGION 5

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88

SEEDING	
END WIDTH	SQ. YDS.
21	122
23	133
25	125
20	108
19	106
19	97
16	97
19	108

END AREA		VOLUME	
CUT	FILL	CUT	FILL
29	2	54	4
29	2	55	4
30	2	55	4
29	2	51	4
26	2	49	4
27	2	51	4
28	2	53	4
28	2	52	4

	1	2	3	4	5	6	7	8
Sta.	29+00	29+25	29+50	29+75	30+00	30+25	30+50	30+75
Ground Elev.	819.26	819.16	819.06	818.94	818.81	818.69	818.58	818.50
Grade Elev.	819.25	819.37	819.46	819.56	819.65	819.65	819.65	819.65
Cut	0.00	0.21	0.40	0.62	0.84	0.96	1.07	1.15
Fill	0.01							
Offset	16.0' Lt.	16.0' Lt.	16.0' Lt.	13.0' Lt.	15.0' Lt.	14.0' Lt.	14.0' Lt.	16.0' Lt.
Slope	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1
Ditch	6.00'	6.00'	6.00'	6.00'	6.00'	6.00'	6.00'	6.00'
Ditch Elev.	819.26	819.17	819.06	819.07	818.85	818.72	818.60	818.49
Ditch Grade	0.00	0.20	0.40	0.49	0.68	0.93	1.05	1.01
Ditch Slope	6.50'	6.50'	6.50'	6.50'	6.50'	6.50'	6.50'	6.50'
Ditch Elev.	819.26	819.37	819.46	819.56	819.65	819.65	819.65	819.65
Ditch Grade	0.00	0.21	0.40	0.49	0.84	0.96	1.07	1.15
Ditch	6.00'	6.00'	6.00'	6.00'	6.00'	6.00'	6.00'	6.00'
Slope	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1
Offset	16.0' Lt.	16.0' Lt.	16.0' Lt.	13.0' Lt.	15.0' Lt.	14.0' Lt.	14.0' Lt.	16.0' Lt.
Fill								
Cut	0.00	0.21	0.40	0.62	0.84	0.96	1.07	1.15
Grade Elev.	819.25	819.37	819.46	819.56	819.65	819.65	819.65	819.65
Ground Elev.	819.26	819.16	819.06	818.94	818.81	818.69	818.58	818.50
Sta.	29+00	29+25	29+50	29+75	30+00	30+25	30+50	30+75
	1	2	3	4	5	6	7	8

Exist. Power Cable for Lighting

W.B. WEIGH STATION RAMP A STA. 29+00 — STA. 32+50

CALC BY O.M. DATE 9-9-88
CHKD. BY H.W.C. DATE 12-12-88

GUE-70-0.00

OHIO
FHWA REGION 5

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88

SEEDING	
END WIDTH	SQ. YDS.
8	7
9	
9	10
10	
9	45
10	
10	61
12	
12	72
14	
14	40
21	56

VOLUME	
CUT	FILL
4	1
6	1
23	2
31	2
34	3
19	2
20	2
20	2
29	2
26	2

END AREA	
CUT	FILL
18	1
18	1
18	1
15	1
17	1
20	2
20	2
15	1
18	1
18	1
18	1

Ahead Sta. 34+56.5 Back

Ahead Sta. 34+40.5 Back

Ahead Sta. 32+74 Back

818.31 — 818.29 — 818.30 — 818.28 — 818.38 — 818.42 — 818.51 — 818.59 — 818.65 — 818.68 — 818.68 — 818.68 — 818.68

818.30 34+87 818.30 — 818.28 34+74 818.28 — 818.30 34+50 818.30 — 818.34 34+25 818.34 — 818.31 34+00 818.31 — 818.34 33+75 818.34 — 818.37 33+50 818.37 — 818.35 33+25 818.35 — 818.39 33+00 818.39 — 818.35 32+75 818.35

Face Building — Existing Curb — Back Only — Scale — Ahead Only — Existing Joint — Edge Turnout — Conc. Joint — F.G. — Exist. Power Cable for Lighting

F-1 4:1 — F-2 4:1 — C-1 — C-17 — C-14 — C-16 — C-19

19.00' — 6.50'

W.B. WEIGH STATION — STA. 32+75 — STA. 34+86.2

SEEDING	
END WIDTH	SQ. YDS.

VOLUME		
	CUT	FILL
END WIDTH CUT	40	0
END WIDTH FILL	0	21
	44	0
	0	22
	9	0
	0	25
	36	0
	0	24
	40	1
	1	26

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1			
3			
1			
19			
19			
18			

CALC BY D.M. DATE 9-9-89
CHKD BY H.W.E. DATE 10-11-89

GUE-70 - 0.00

OHIO
FHWA REGION 5

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820

Ahead Sta. 35+90.5 Back

Ahead Sta. 34+96.2 Back

817.87 | 817.98 | 818.08 | 818 .08 37+00 818 .08 | 19.00' | 6.50' | C-1 | C-20 | Existing Joint | Conc. Joint | Edge Turnout

817.85 | 817.95 | 818.15 | 818 .15 36+75 818 .15 | 19.00' | 6.50' | C-1 | C-21 | Conc. Joint

817.79 | 817.91 | 818.09 | 818 .09 36+50 818 .09 | 19.00' | 6.50' | C-1 | C-21 | Conc. Joint | Exist. Telephone Cable

817.72 | 817.88 | 817.97 | 817 .97 36+25 817 .97 | 19.00' | 6.50' | C-1 | C-24 | Edge Turnout

817.70 | 817.87 | 817.97 | 817 .97 36+00 817 .97 | 19.00' | 6.50' | 3/4"/Ft. | C-1 | C-24 | Edge Turnout | Exist. Telephone Cable | Exist. Power Cable

817.73 | 817.93 | 818.03 | 818 .03 35+75 818 .03 | 19.00' | 6.50' | C-1 | C-22 | Existing Joint | B

817.83 | 818.01 | 818.11 | 818 .11 35+50 818 .11 | 19.00' | 6.00' | 6.50' | 3/4"/Ft. | C-2 | C-22 | B | Exist. Telephone Cable | Exist. Power Cable

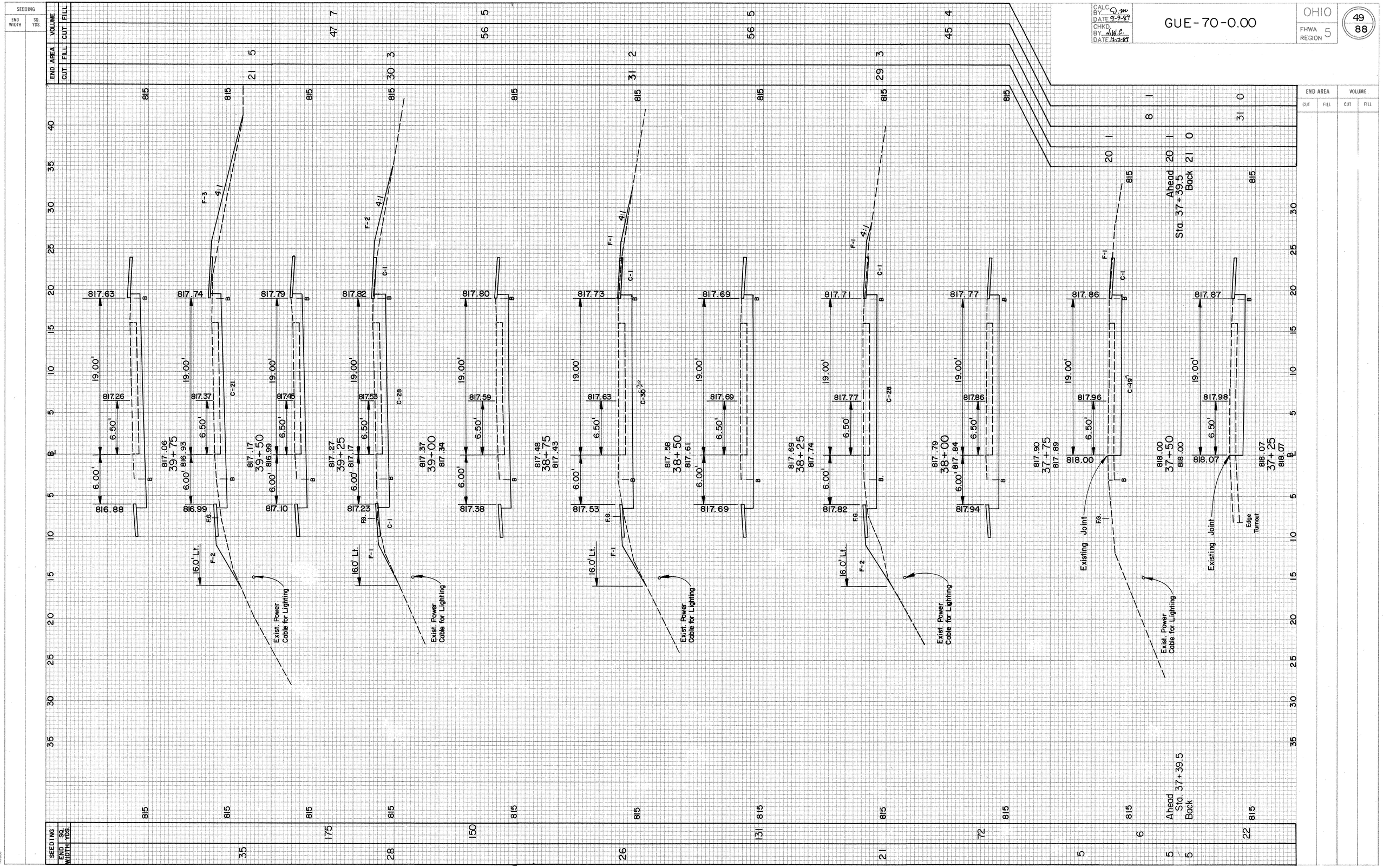
817.98 | 818.09 | 818.18 | 818 .18 35+25 818 .21 | 19.00' | 6.00' | 6.50' | C-1 | C-22 | B

818.18 | 818.21 | 818.26 | 818 .26 35+00 818 .25 | 19.00' | 6.00' | 6.50' | 4:1 | F-1 | C-1 | C-18 | B | Top C.B

SEEDING	
END WIDTH	SQ. YDS.
5	39
9	53
10	11
10	45
10	50
8	3
8	35

W.B. WEIGH STATION

STA. 35+00 — STA. 37+00



W.B. WEIGH STATION RAMP B STA. 37+25 — STA. 39+75

CALC. BY	DATE 9-9-87
CHKD. BY	DATE 11-12-87

GUE - 70 - 0.00

OHIO

FHWA REGION 5

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SEEDING	
END WIDTH	SQ. YDS.
3808	Total

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1,799	120
Totals			

Carried to the General Summary.

Carried to the General Summary

End Full Depth Replacement
Sta. 42+31
(For Typical Section See Sheet 7)

816.67 | 816.20 | 815.80 | 815.99 42+31 815.76 | 816.12 42+00 815.87 | 816.03
816.76 | 816.33 | 815.93 | 816.22 41+75 816.05 | 816.33 41+50 816.13 | 816.25
816.84 | 816.42 | 816.03 | 816.43 41+25 816.22 | 816.54 41+00 816.30 | 816.46
816.92 | 816.53 | 816.15 | 816.64 40+75 816.42 | 816.75 40+50 816.51 | 816.67
817.00 | 816.63 | 816.25 | 816.85 40+25 816.69 | 816.96 40+00 816.81
817.11 | 816.74 | 816.36 | 816.57
817.21 | 816.84 | 816.46 | 816.67
817.32 | 816.95 | 816.57 | 816.78
817.42 | 817.05 | 816.67 | 816.88
817.53 | 817.16 | 816.78 | 816.96

21.00' | 20.39' | 19.89' | 19.39' | 19.00' | 19.00' | 19.00' | 19.00' | 19.00' | 19.00' | 19.00'

6.50' | 6.00' | 815.80 | 815.93 | 816.03 | 816.15 | 816.25 | 816.36 | 816.46 | 816.57 | 816.67 | 816.78

F.G. | F-1 | F-2 | C-1 | C-21 | C-22 | C-23 | C-25 | C-26 | B | Conc. | 4:1 | 16.0' Lt. | 14.0' Lt. | 15.0' Lt.

Exist. Power Cable for Lighting

| | | |

CALC. BY D.M. DATE 9-9-89
CHKD. BY H.W.C. DATE 12-12-89
GUE-70-0.00
OHIO
FHWA REGION 5
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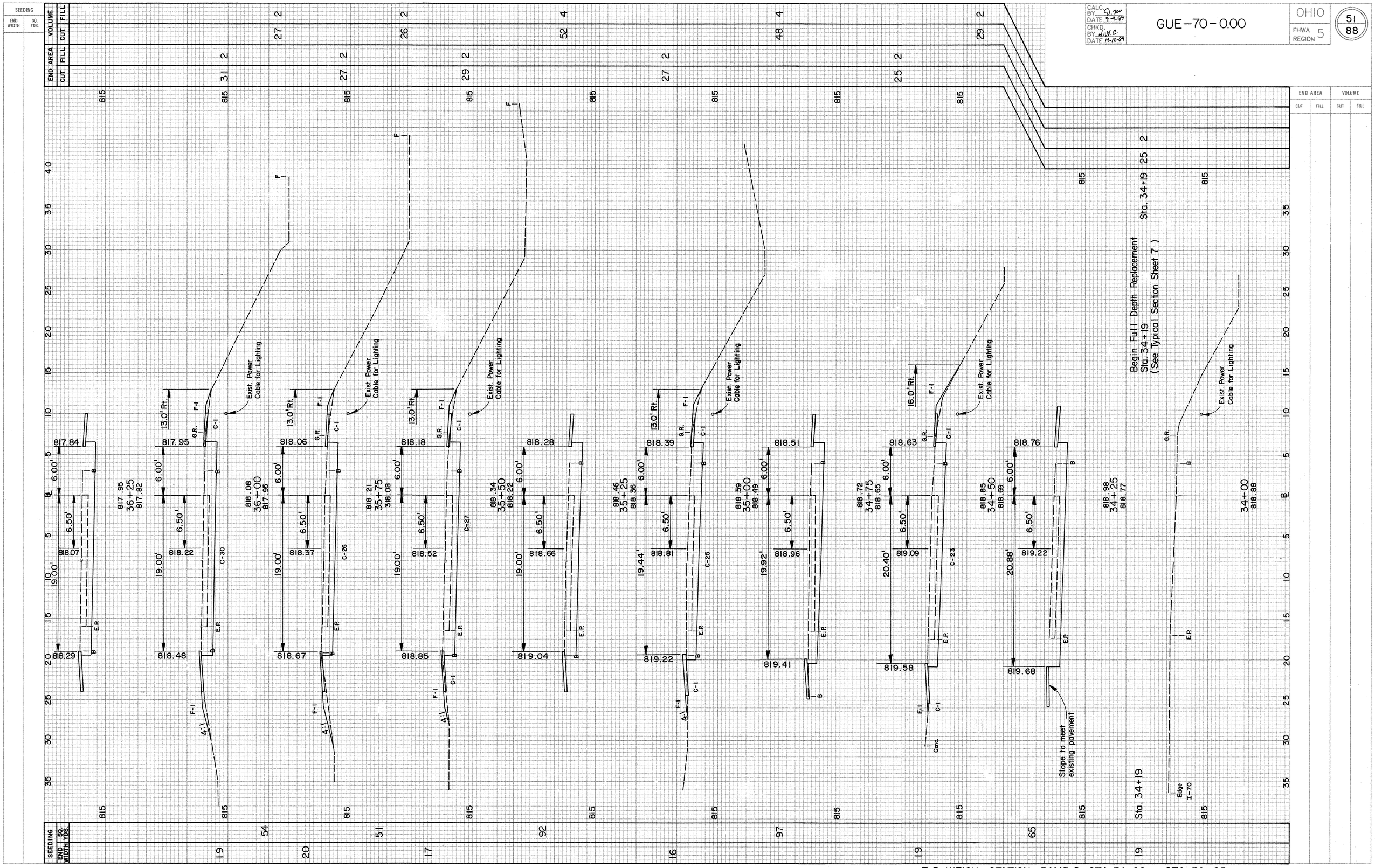
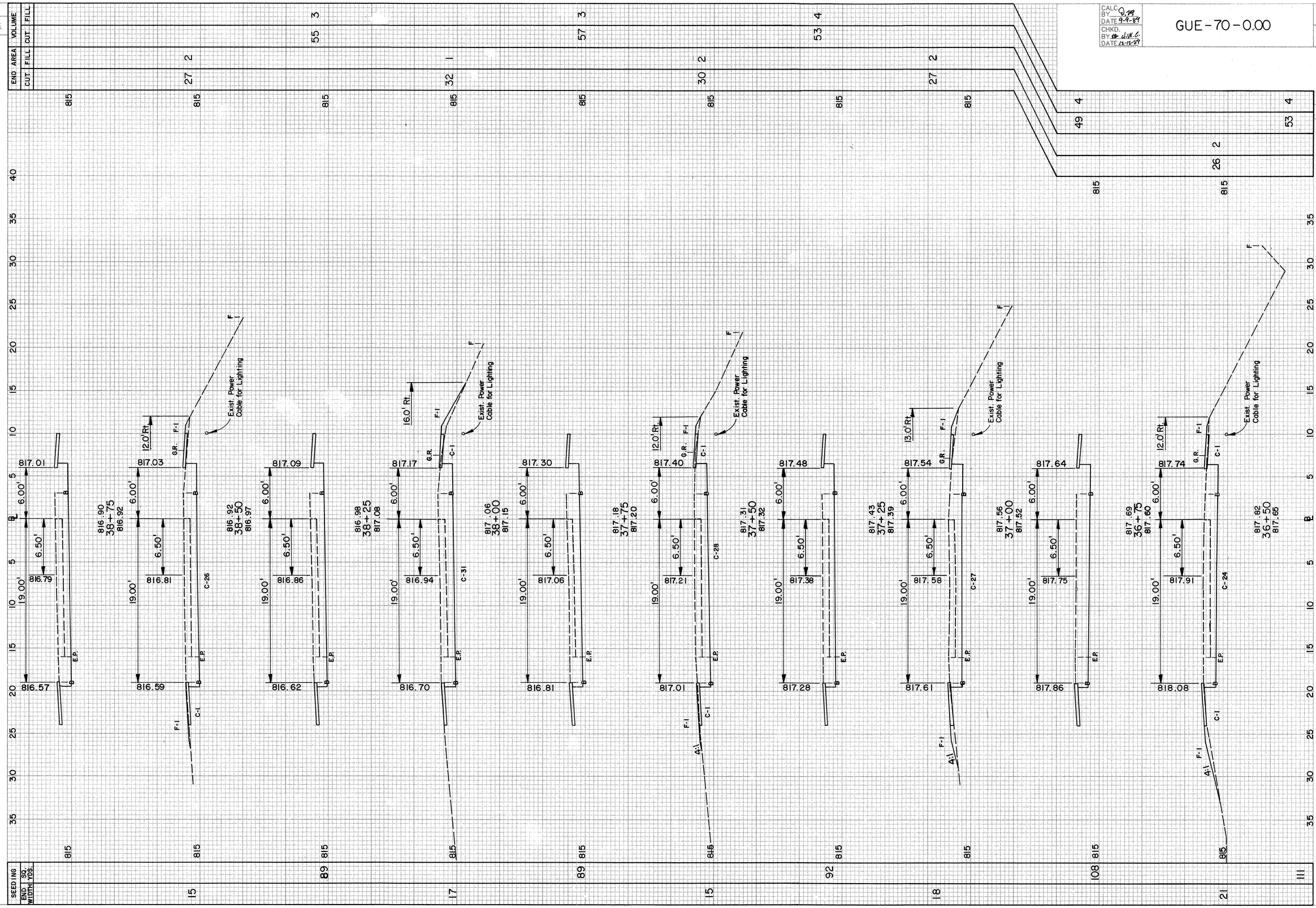
88



E.B. WEIGH STATION RAMP C STA. 34+00 — STA. 36+25



E.B. WEIGH STATION RAMP C STA. 36+50 — STA. 38+75

CALC. BY DJM DATE 9-9-89
CHKD. BY H.W.C. DATE 11-12-89

GUE-70-0.00

OHIO
FHWA REGION 5

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	0		
20	0	7	0
18	1	37	1
20	1	35	2
18	1		
26	2		
28	1	11	1
28	1	44	2

Ahead Sta. 1+60 Back

Ahead Sta. 0+10.5 Back

Exist. Power Cable for Lighting
Exist. Telephone Cable
Exist. Power Cable
Edge Conc.
Joint
Turnout
Exist. Power Cable

2+25 816.80
816.79 | 6.50' | 816.72 | 19.00' | C-17 | E.P. | 816.64

2+00 816.80
816.79 | 6.50' | 816.70 | 19.00' | C-17 | E.P. | 816.60

816.79 | 6.50' | 816.69 | 19.00' | E.P. | 816.57

1+75 816.79
816.79 | 6.50' | 816.70 | 19.00' | C-19 | E.P. | 816.54

1+50 816.79
816.82 | 6.50' | 816.72 | 19.00' | E.P. | 816.52

1+25 816.82
816.83 | 6.50' | 816.73 | 19.00' | C-20 | E.P. | 816.53

1+00 816.83
816.85 | 6.50' | 816.75 | 19.00' | E.P. | 816.55

0+75 816.85
816.85 | 6.50' | 816.76 | 19.00' | C-17 | E.P. | 816.55

0+50 816.85
816.85 | 6.50' | 816.78 | 19.00' | E.P. | 816.55

0+25 816.85
816.85 | 6.50' | 816.79 | 19.00' | C-27 | E.P. | 816.59

13.0' Rt. | 816.98 | 6.00' | Ahead Only

816.89
38+93.19 Back = 0+00 Ahead
816.89

| SEEDING | | |

CALC. BY DW DATE 9-8-89
CHKD. BY WLL DATE 11-12-89

GUE-70-0.00

OHIO
FHWA REGION 5

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	53	25	1	47	2
10	43	26	1	37	1
10	14	26	21	9	1
11	8	21	1	5	1
11	11	21	18	27	1
11	49	18	1	2	1
11	4	18	1	33	1
12	50	18	1	18	1

Ahead Sta. 3+11.5 Back

Ahead Sta. 2+93.5 Back

Ahead Sta. 2+53.2 Back

Exist. Power Cable for Lighting

Existing Power Cable for Lighting

Exist. Power Cable for Lighting

Exist. Power Cable for Lighting

Exist. Power Cable

Exist Telephone Cable

Joint

Joint

Turnout

Turnout

Face Building

Face Building

Face Building

Saddle

Saddle

Saddle

Saddle

E.P.

G.R.

B

F-1

C-1

C-24

C-25

C-20

C-17

4:1

815

816.72 4+00 816.72 — 19.00' — 6.50' — 816.64 — 816.42

816.73 — 19.00' — 6.50' — 816.65 — 816.47

816.73 3+75 816.73 — 19.00' — 6.50' — 816.67 — 816.53

816.77 — 19.00' — 6.50' — 816.69 — 816.60

816.77 3+50 816.77 — 19.00' — 6.50' — 816.72 — 816.68

816.80 3+25 816.80 — 19.00' — 6.50' — 816.79± — 816.79

816.76 3+00 816.76 — 19.00' — 6.50' — 816.79± — 816.76

816.71 2+75 816.71 — 19.00' — 6.50' — 816.76 — 816.70

816.79 2+65 816.79 — 19.00' — 6.50' — 816.76

816.79 2+50 816.79

E.B. WEIGH STATION STA. 2+48 — STA. 4+00

CALC. BY DJW DATE 9-8-89
CHKD. BY J.W.C. DATE 11-1-89

GUE-70-0.00

OHIO FHWA REGION 5

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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
24	131	23	3	46	5
23	114	27	2	52	4
18	94	29	2	56	4
16	18	31	2	11	1
9	17	31	2	12	1
9	50	20	1	42	2
		20	1		

Ahead Sta. 4+76.5 Back

Back = Sta. 4+76.5 Ahead

Ahead = Sta. 4+86.5 Back

Back = Sta. 43+50 Ahead

815 | 816.94 45+00 816.97 | 816.90 44+75 816.92 | 816.85 44+50 816.86 | 816.90 44+25 816.84 | 816.75 44+00 816.78 | 816.71 43+75 816.73 | 816.66 4+86.5 Back = 43+50 Ahead 816.66 | 816.63 4+75 816.63 | 816.66 4+50 816.66 | 816.71 4+25 816.71

817.02 | 816.98 | 816.93 | 816.88 | 816.83 | 816.79 | 816.74± | 816.63 | 816.66 | 816.71

16.0' Rt. | 16.0' Rt. | 13.0' Rt. | 13.0' Rt.

F-1 | F-1 | F-1 | F-1

F.G. | F.G. | F.G. | F.G.

C-1 | C-1 | C-1 | C-1

Exist. Power Cable for Lighting

6.00' | 6.00' | 6.00' | 6.00' | 6.00' | 6.00' | 6.00' | 6.50' | 6.50' | 6.50'

19.00'

6.50' | 6.50' | 6.50' | 6.50' | 6.50' | 6.50' | 6.50' | 6.50' | 6.50' | 6.50'

816.85 | 816.81 | 816.76 | 816.71 | 816.66 | 816.62 | 816.58 | 816.59 | 816.60 | 816.62

816.68 | 816.64 | 816.59 | 816.54 | 816.49 | 816.45 | 816.41 | 816.41 | 816.42 | 816.42

C-22 | C-26 | C-28 | C-29 | C-19

F-2 | F-1 | F-1 | C-1 | E.P. | E.P. | E.P.

4:1 | 4:1 | 4:1 | F-1 | C-1 | F-1

B | B | B | B | B | B | B

G.R. | Turnout | Joint

Exist. Power Cable for Lighting

E.B. WEIGH STATION STA. 4+25 - STA. 4+86.5 & E.B. WEIGH STATION RAMP D STA. 43+50 - STA. 45+00

CALC BY	DM
DATE	9-9-89
CHKD. BY	J.W.C.
DATE	12-12-89

GUE-70-0.00

OHIO

FHWA REGION 5

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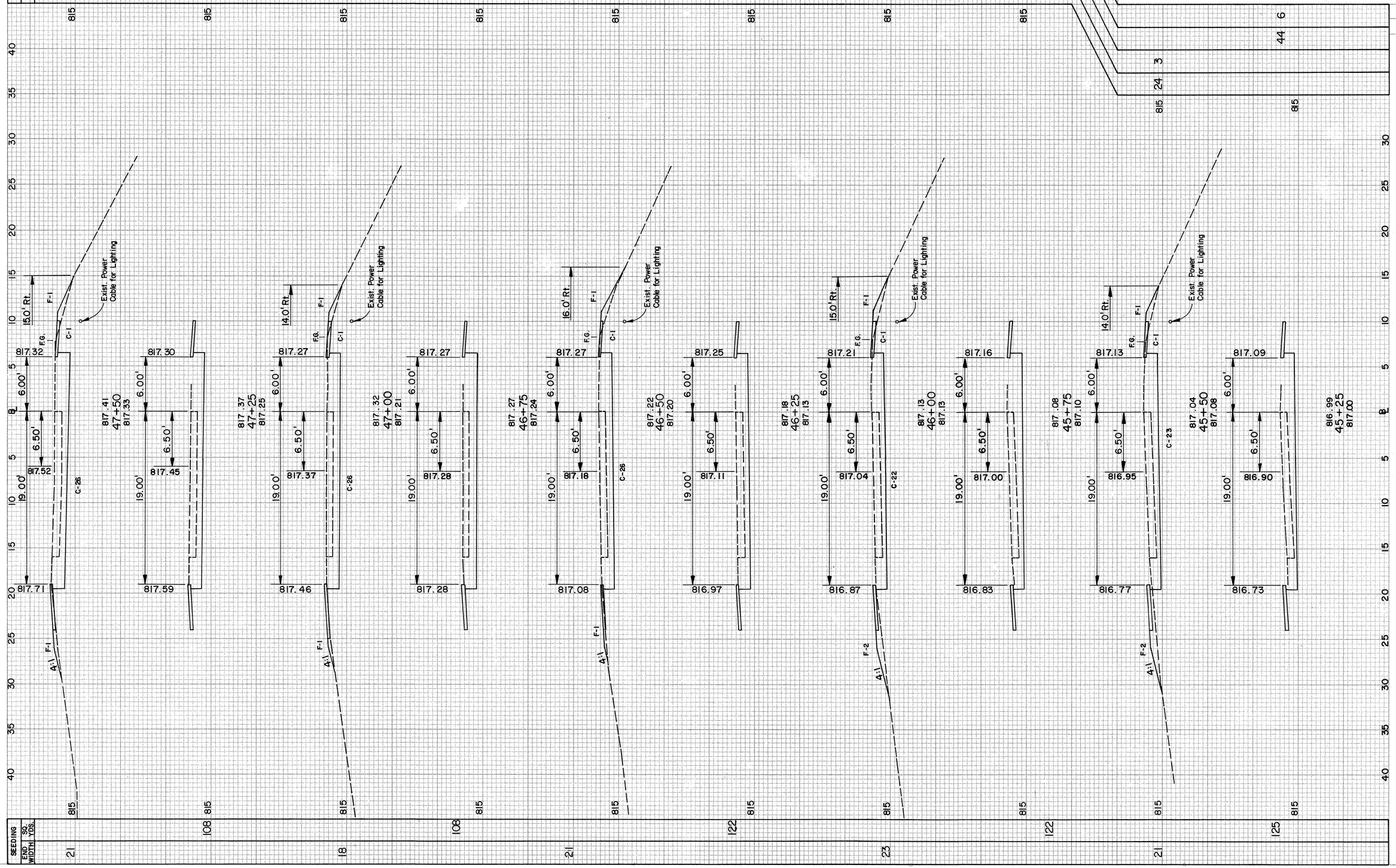
SEEDING	
END WIDTH	SQ. YDS.
21	108
18	108
21	122
23	122
21	125

END AREA		VOLUME	
CUT	FILL	CUT	FILL
27	2	50	4
27	2	50	4
27	2	46	5
23	3	44	6
24	3	44	6



E.B. WEIGH STATION RAMP D STA. 45+25 — STA. 47+50

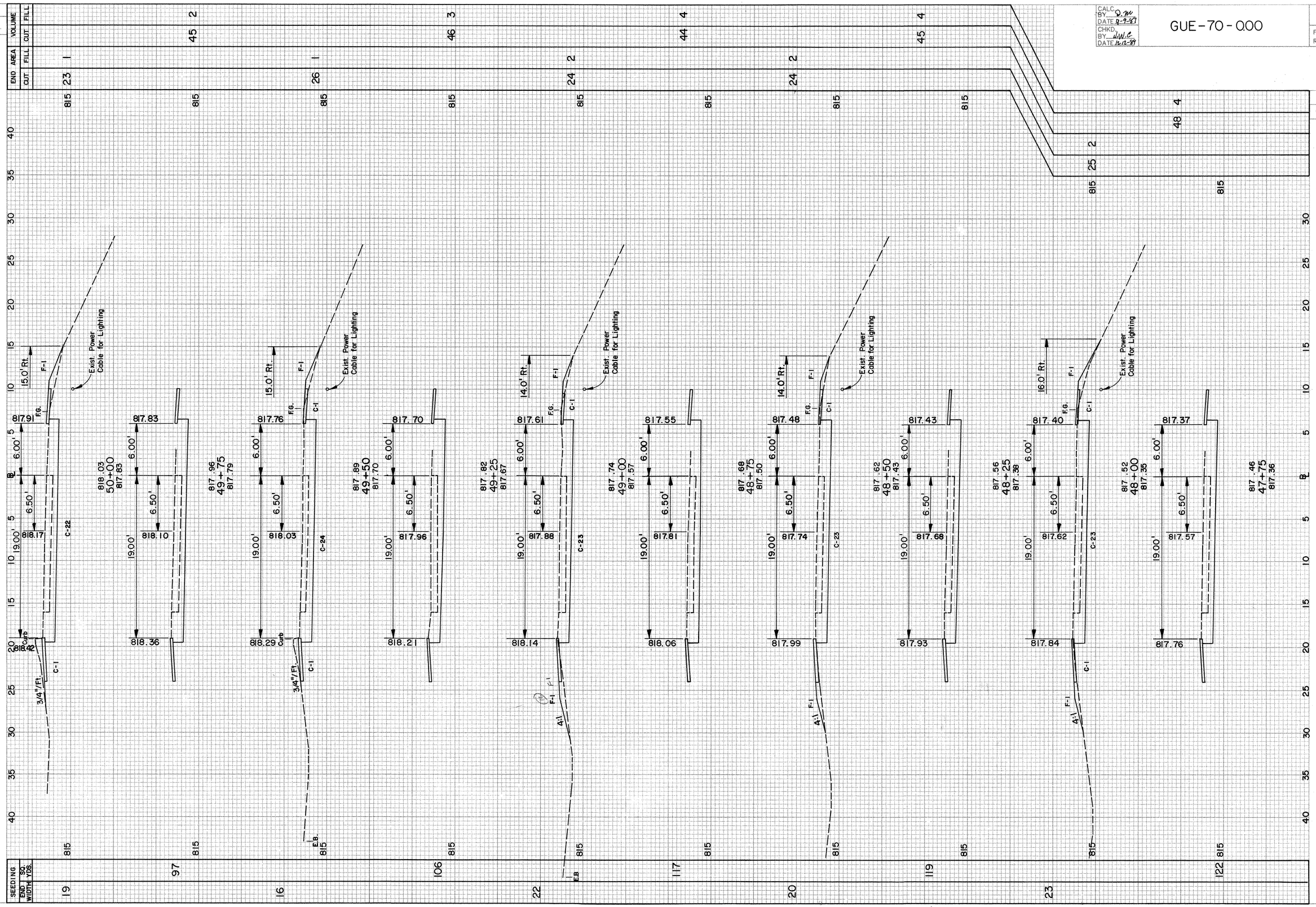
CALC BY	
DATE	9-9-87
CHKD BY	
DATE	11-12-87

GUE-70-000

OHIO | FHWA REGION 5

SEEDING	
END WIDTH	SQ. YDS.
19	97
16	106
22	117
20	119
23	122

END AREA		VOLUME	
CUT	FILL	CUT	FILL
23	1	45	2
26	1	46	3
24	2	44	4
24	2	45	4
25	2	48	4



E.B. WEIGH STATION RAMP D STA. 47+75 — STA. 50+00

CALC BY QW DATE 9-4-89
CHKD. BY W.W.C. DATE 12-11-89

GUE-70-0.00

OHIO
FHWA REGION 5

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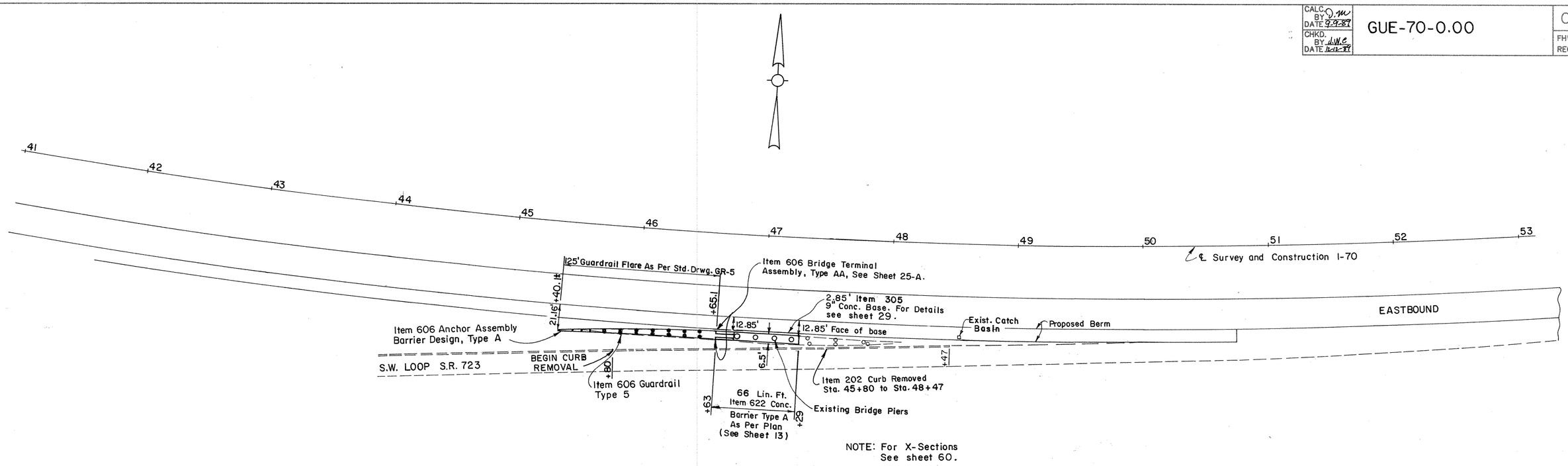
SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



NOTE: For X-Sections See sheet 60.

QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM	QUANTITY	DESCRIPTION
606	1 EACH	ANCHOR ASSEMBLY, BARRIER DESIGN, TYPE A
606	200 LIN. FT.	GUARDRAIL, TYPE 5.
606	2 EACH	BRIDGE TERMINAL ASSEMBLY, TYPE AA. (SEE SHEET 25-A)
202	450 LIN. FT.	GUARDRAIL REMOVED. FOR STORAGE
622	66 LIN. FT.	CONCRETE BARRIER, TYPE A, AS PER PLAN. (SEE SHEET 13)
*305	20.9 SQ. YD.	9" CONCRETE BASE
202	267 LIN. FT.	CURB REMOVED

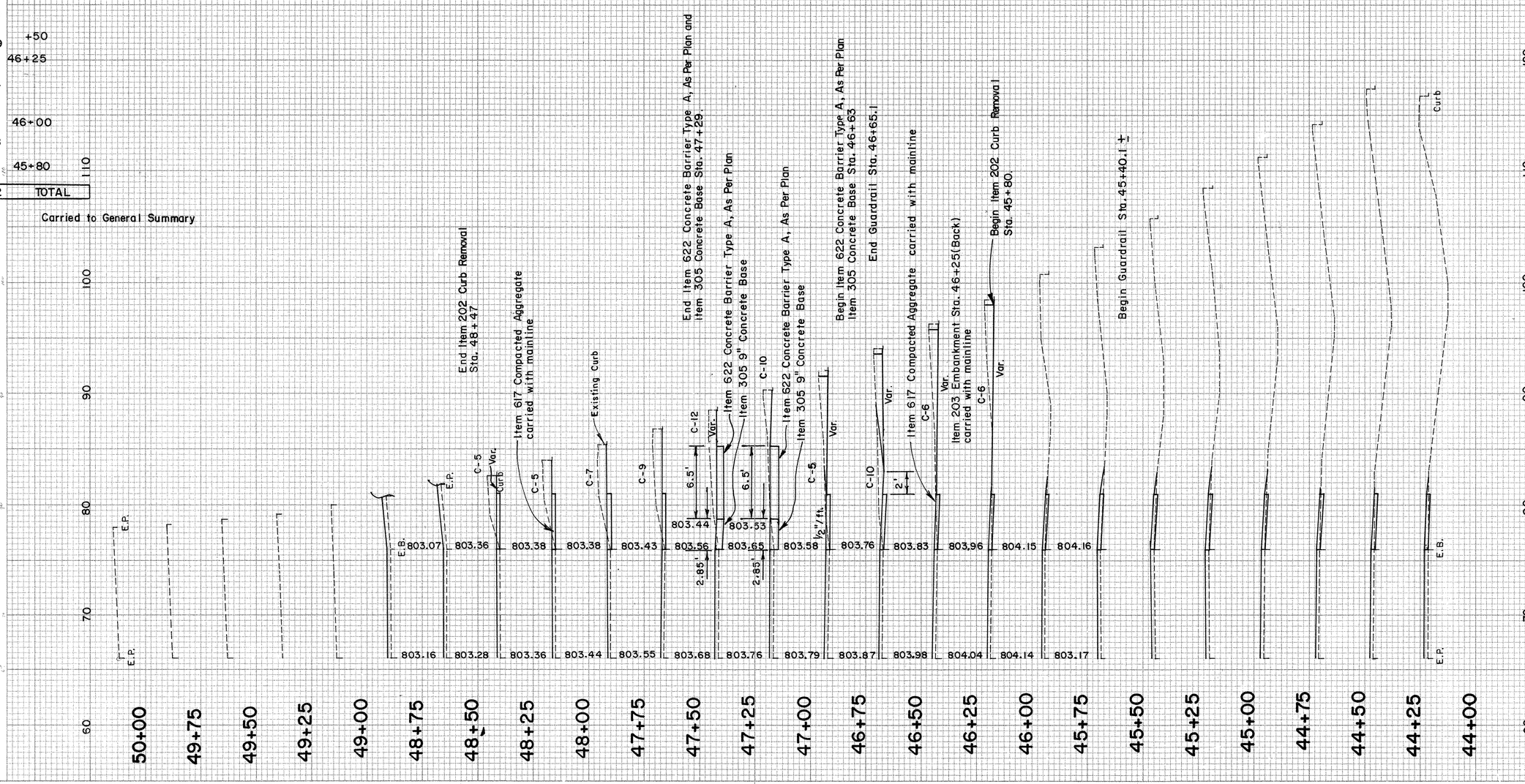
* 66' x 2.85' ÷ 9 = 20.9 S.Y.

PIER PROTECTION AT S.R. 723

CALC BY D.M. DATE 9-9-89	GUE-70-0.00	OHIO	60 / 88
CHKD BY J.W.C. DATE 12-12-89		FHWA REGION 5	

SEEDING END WIDTH	SEEDING SQ. YDS.	
0		48+47
	2	
2		+25
	7	
3		48+00
	11	
5		+75
	15	
6		+50
	14	
6		Ahead +28.7
3		Back
	1	
3		+25
	11	
5		47+00
	21	
5		Ahead +76.5
13		Back
	19	
13		+50
	39	
15		46+25
	44	
17		46+00
	38	
17		45+80
	222	TOTAL

Carried to General Summary



	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
48+47	0	0		
			2	0
+25	5	0		
			5	0
48+00	5	0		
			6	0
+75	7	0		
			7	0
+50	9	0		
			7	0
Ahead +29	9	0		
Back	12	0		
			2	0
+25	12	0		
			10	0
47+00	10	0		
			14	0
Ahead +63	10	0		
Back	5	0		
			4	0
+50	10	0		
			7	0
46+25	6	0		
			6	0
46+00	6	0		
			2	0
45+80	0	0		
TOTALS			72	0

Carried to Gen. Summary

PAVEMENT DATA TABLE

CALC. BY D.M. DATE 9-24-84	GUE-70-0.00	OHIO
CHKD. BY D.H. DATE 10-4-84		FHWA REGION 5

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PAVEMENT DATA

STATION TO STATION EASTBOUND	W.P. FEET	LENGTH LIN. FEET	PAVEMENT AREA SQ. YD.	407 TACK COAT at 0.10 Gal./S.Y. GAL.	202 WEARING COURSE REMOVED SQ.YD.	446 ASPH.CONC. SURFACE COURSE, TYPE I, AC-20 1 1/4" CU.YD.	301 BITUMINOUS AGGREGATE BASE 2 3/4" OR AS SHOWN CU.YD.	202 PAVEMENT REMOVED (INCLUDING ASPH.CONC.) SQ.YD.	451 9" REIN. CONC. PAV'T AS PER PLAN SQ.YD.	304 AGGREGATE BASE AS PER PLAN 6" CU.YD.	SPECIAL PRESSURE RELIEF JOINT TYPE A LIN.FT.	203 EXCAVATION 8" AVE. CU.YD.	203 SUBGRADE COMPACTION SQ.YD.
757+57 – 759+07	24	150.0	400.0	40.0	400.0	13.9	3 1/2" 38.9						
759+07 – 824+53.32	24	6546.32	17456.9	1745.7		606.1	1333.5						
824+53.32 – 825+78.32	24	125.0	333.3	33.3		11.6	25.5	333.3	① 322.6	② 51.9	24	74	333.3
825+78.32 – 826+03.32	24	25.0	66.7	6.7	66.7	③ 2.8							
826+03.32 – 827+04.84	APPROACH SLAB AND BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEETS 79-88												
827+04.84 – 827+29.84	24	25.0	66.7	6.7	66.7	③ 2.8							
827+29.84 – 828+54.84	24	125.0	333.3	33.3		11.6	25.5	333.3	① 322.6	② 51.9	24	74	333.3
828+54.84 – 889+82.09	24	6127.25	16339.3	1633.9		567.3	1248.1						
889+82.09 – 891+07.09	24	125.0	333.3	33.3		11.6	25.5	333.3	① 322.6	② 51.9	24	74	333.3
891+07.09 – 891+32.09	24	25.0	66.7	6.7	66.7	③ 2.8							
891+32.09 – 892+44.32	APPROACH SLAB AND BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEETS 79-88												
892+44.32 – 892+69.32	24	25.0	66.7	6.7	66.7	③ 2.8							
892+69.32 – 893+94.32	24	125.0	333.3	33.3		11.6	25.5	333.3	① 322.6	② 51.9	24	74	333.3
893+94.32 – 958+66.75	24	6472.43	17259.8	1726.0		599.3	1318.5						
958+03.11 – 1062+80.00	24	10476.89	27938.4	2793.8		970.1	2134.2						
28+50 – 48+00	24	1950.0	5200.0	520.0		180.6	397.2						
48+00 – 50+00	24	200.0	533.3	53.3	533.3	18.5	3 3/8 50.0						
RAMP D S.R. 723													
757+57 – 759+07	18.46 Ave.	150.0	307.7	30.8	307.7	10.7	3 1/2 29.9						
759+07 – 767+18.00	8.45 Ave.	811.0	761.4	76.1		26.4	58.2						
RAMP C TRUCK WEIGH STATION													
926+20.8 – 927+20.8	6 Ave.	100.0	66.7	6.7		2.3	5.1						
927+20.8 – 930+52.68	12	331.88	442.5	44.3		15.4	33.8						
30+52.68 – 34+19.0	25.5 Ave.	366.32	1037.9	103.8		36.0	79.3						
EASTBOUND													
934+20.8 – 935+20.8	12 Ave.	100.0	133.3	13.3		4.6	10.2						
RAMP D TRUCK WEIGH STATION													
51+01 – 55+79.30	16 Ave.	478.3	850.3	85.0		29.5	65.0						
955+75 – 958+66.75	21.96 Ave.	291.75	771.87	71.2		24.7	54.4						
958+03.11 – 967+11.4 S.W.RAMP S.R. 723	9.46	908.29	954.7	95.5		33.1	72.9						
1058+95.6 – 1059+95.6	6 Ave.	100.0	66.7	6.7		2.3	5.1						
1059+95.6 – 1062+80.0	12	284.4	379.2	37.9		13.2	29.0						
0+38.63 – 4+53.5	25.5 Ave.	414.87	1175.5	117.6		40.8	89.8						
4+53.5 – 5+78.5	17 Ave.	125.0	236.1	23.6		8.2	1 3/8 9.0						
EASTBOUND													
32+65.6 – 33+65.6	12 Ave.	100.0	133.3	13.3		4.6	10.2						
TOTALS (CARRIED TO GENERAL SUMMARY)				9398.5	1507.8	3265.2	7174.3	1333.2	1290.4	207.6	96.0	296.0	1333.2

① DEDUCT 4' x 24' ÷ 9 = 10.7 S.Y.

② DEDUCT 24' x 8' x .5 ÷ 27 = 3.6 C.Y.

③ 1 1/2" Thick

PAVEMENT DATA TABLE

CALC. BY D.M. DATE 1-9-24	GUE-70-0.00	OHIO
CHKD. BY P.J. DATE 1-11-24		FHWA REGION 5

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PAVEMENT DATA

STATION TO STATION	W.P. FEET	LENGTH LIN. FEET	PAVEMENT AREA SQ. YD.	407 TACK COAT at 0.10 Gal./S.Y. GAL.	202 WEARING COURSE REMOVED SQ.YD.	446 ASPH.CONC. SURFACE COURSE, TYPE 1, AC-20 1 1/4" CU.YD.	301 BITUMINOUS AGGREGATE BASE 2 3/4" OR AS SHOWN CU.YD.	202 PAVEMENT REMOVED (INCLUDING ASPH.CONC.) SQ.YD.	451 9" REIN. CONC. PAV'T. AS PER PLAN SQ.YD.	304 AGGREGATE BASE AS PER PLAN 6" CU.YD.	SPECIAL PRESSURE RELIEF JOINT TYPE A LIN.FT.	203 EXCAVATION 8" AVE. CU.YD.	203 SUBGRADE COMPACTION SQ.YD.
WESTBOUND													
757+57 – 759+07	24	150.0	400.0	40.0	400.0	13.9	3 1/2" 38.9						
759+07 – 824+27.67	24	6520.67	17388.5	1738.9		603.8	1328.3						
824+27.67 – 825+52.67	24	125.0	333.3	33.3		11.6	25.5	333.3	① 322.6	② 51.9	24	74	333.3
825+56.67 – 825+77.67	24	25.0	66.7	6.7	66.7	③ 2.8							
825+77.67 – 827+02.69	APPROACH SLAB AND BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEETS 79-88												
827+02.69 – 827+27.69	24	25.0	66.7	6.7	66.7	③ 2.8							
827+27.69 – 828+52.69	24	125.0	333.3	33.3		11.6	25.5	333.3	① 322.6	② 51.9	24	74	333.3
828+52.69 – 890+44.45	24	6191.76	16511.4	1651.1		573.3	1261.3						
890+44.45 – 891+69.45	24	125.0	333.3	33.3		11.6	25.5	333.3	① 322.6	② 51.9	24	74	333.3
891+69.45 – 891+94.45	24	25.0	66.7	6.7	66.7	③ 2.8							
891+94.45 – 893+06.68	APPROACH SLAB AND BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEETS 79-88												
893+06.68 – 893+31.68	24	25.0	66.7	6.7	66.7	③ 2.8							
893+31.68 – 894+56.68	24	125.0	333.3	33.3		11.6	25.5	333.3	① 322.6	② 51.9	24	74	333.3
894+56.68 – 958+66.75	24	6410.07	17093.5	1709.4		593.5	1305.8						
958+03.11 – 1062+80.0	24	10476.89	27938.4	2793.8		970.1	2134.2						
28+50 – 48+00	24	1950.0	5200.0	520.0		180.6	397.2						
48+00 – 50+00	24	200.0	533.3	53.3	533.3	18.5	3 3/8 50.0						
RAMP B S.R. 83													
757+57 – 759+07	12	150.0	200.0	20.0	200.0	6.9	3 1/2 19.4						
759+07 – 761+45.3	12	238.3	317.7	31.8		11.0	24.3						
761+45.3 – 762+45.3	6 Ave.	100.0	66.7	6.7		2.3	5.1						
RAMP A TRUCK WEIGH STATION													
908+00 – 920+00	12.5 Ave.	1200.0	1666.7	166.7		57.9	127.3						
20+00 – 23+14	16 Ave.	314.0	558.2	55.8		19.4	42.6						
RAMP B TRUCK WEIGH STATION													
941+59.7 – 942+59.7	12 Ave.	100.0	133.3	13.3		4.6	10.2						
42+31 – 46+83.82	25.5 Ave.	452.82	1283.0	128.3		44.5	98.0						
947+14.44 – 949+59.7	12	245.26	327.0	32.7		11.4	25.0						
949+59.7 – 950+59.7	6 Ave.	100.0	66.7	6.7		2.3	5.1						
N.W.RAMP S.R. 723													
1057+30.1 – 1062+80.0													
28+50.0 – 35+00.12	12.5 Ave.	1200.02	1666.7	166.7		57.9	127.3						
14+36.09 – 9+71	32 Ave.	465.09	1653.7	165.4		57.4	126.3						
9+71 – 8+46	16	125.0	222.2	22.2		7.7	13/8 8.5						
U-TURN MEDIAN OPENINGS													
778+25				51.0		17.7	39.0						
904+00				51.0		17.7	39.0						
1048+25				51.0		17.7	39.0						
TOTALS (CARRIED TO GENERAL SUMMARY)				9635.8	1400.1	3347.7	7353.8	1333.2	1290.4	207.6	96.0	296.0	1333.2

① DEDUCT 4' x 24' ÷ 9 = S.Y.

② DEDUCT 24' x 8' x .5' ÷ 27 = 3.6 C.Y.

③ 1 1/2" Thick

SHOULDER DATA TABLE

CALC. BY GW DATE 9-9-24
CHKD. BY D.J. DATE 12-12-24

GUE-70-0.00

OHIO
FHWA REGION 5

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88

* SKEWED FROM THE ℄ EASTBOUND LANES.

SHOULDER DATA

STATION TO STATION	LT. SIDE W.B. FEET	LT. SIDE LIN. FEET	RT. SIDE W.B. FEET	RT. SIDE LIN. FEET	AREA SQ. YDS.	446 ASPH.CONC SURFACE COURSE, TYPE 1 AC-20 1 1/4" CU.YD.	202 WEARING COURSE COURSE, REMOVED SQ.YD.	617 COMPACTED AGGREGATE TYPE A (5"x 4" THICK) CU.YD.	301 BITUMINOUS AGGREGATE BASE 2 3/4" OR AS SHOWN CU.YD.	304 AGGR. BASE AS PER PLAN (9) OR AS SHOWN CU.YD.	203 EXCAVATION 8" OR AS SHOWN CU.YD.	203 SUBGRADE COMPACTION SQ.YD.	407 TACK COAT GAL'S	203 ± EMBANKMENT CU.YD	301 BITUMINOUS AGGREGATE BASE: AC-20 8" CU.YD.	451 9" REIN. CONC. PAVT. AS PER PLAN SQ.YD.	SPECIAL PRESSURE RELIEF JOINT TYPE A LIN.FT.	305 9" CONC. BASE, AS PER PLAN SQ.YD.
EASTBOUND																		
757+57 – 759+07	4	150.0			66.7	2.3		9.3	3 1/2 6.5		14.8		6.7		14.8			
759+07 – *824+53.32	4	6546.32			2909.5	101.0		404.1	222.2		646.6		291.0		646.6			
*824+53.32 – *826+03.32	4	150.0			66.7	2.3		9.3	5.1	(2) 9.4	(3) 48.6	66.7	6.7		14.8	(1) 64.9	4	
*826+03.32 – *827+04.84	4	BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEET 79-88																
*827+04.84 – *828+54.84	4	150.0			66.7	2.3		9.3	5.1	(2) 9.4	(3) 48.6	66.7	6.7		14.8	(1) 64.9	4	
*828+54.84 – *889+82.09	4	6127.25			2723.2	94.6		378.2	208.0		605.2		272.3		605.2			
*889+82.09 – *891+32.09	4	150.0			66.7	2.3		9.3	5.1	(2) 9.4	(4) 50.3	66.7	6.7		14.8	(1) 64.9	4	
*891+32.09 – *892+44.32	4	BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEET 79-88																
*892+44.32 – *893+94.32	4	150.0			66.7	2.3		9.3	5.1	(2) 9.4	(4) 50.3	66.7	6.7		14.8	(1) 64.9	4	
*893+94.32 – 958+66.75	4	6472.43			2876.6	99.9		399.5	219.7		639.2		287.7		639.2			
958+03.11 – 1062+80.00	4	10,476.89			4656.4	161.7		646.7	355.7		1034.8		465.6		1034.8			
28+50 – 48+00	4	1950.0			866.7	30.1		120.4	66.2		192.6		86.7		192.6			
48+00 – 50+00	4	200.0			88.9	3.1	88.9	12.3	3 3/8 8.3		19.8		8.9		19.8			
757+57 – 759+07			8	150.0	133.3	4.6		9.3	3 1/2 13.0	23.6	(10) 59.0	133.3	13.3	2.1				133.3
759+07 – 766+22.0			8	715.0	635.6	22.1		44.1	48.6	112.5	(10) 281.4	635.6	63.6	9.9				635.6
766+22.00 – 767+18.00			9 Ave.	96.0	96.0	3.3		5.9	7.3	16.9	(10) 42.2	96.0	9.6	1.3				96.0
767+18.00 – *824+53.32			10	5735.32	6372.6	221.3		354.0	486.8	1115.2	(10) 2788.0	6372.6	637.3	79.7				6372.6
*824+53.32 – *826+03.32			10	150.0	166.7	5.8		9.3	12.7	(6) 34.2	(7) 92.2	166.7	16.7		37.0	(5) 162.3	10	
*826+03.32 – *827+04.84		BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEET 79-88																
*827+04.84 – *828+54.84			10	150.0	166.7	5.8		9.3	12.7	(6) 34.2	(7) 92.2	166.7	16.7		37.0	(5) 162.3	10	
*828+54.84 – *889+82.09			10	6127.25	6808.1	236.4		378.2	520.1	1191.4	(10) 2978.5	6808.1	680.8	85.1				6808.1
*889+82.09 – *891+32.09			10	150.0	166.7	5.8		9.3	12.7	(6) 34.2	(8) 96.5	166.7	16.7		37.0	(5) 162.3	10	
*891+32.09 – *892+44.32		BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEET 79-88																
*892+44.32 – *893+94.32			10	150	166.7	5.8		9.3	12.7	(6) 34.2	(8) 96.5	166.7	16.7		37.0	(5) 162.3	10	
*893+94.32 – 926+20.80			10	3226.48	3585.0	124.5		199.2	273.9	627.4	(10) 1568.4	3585.0	358.5	44.8				3585.0
RAMP C TRUCK WEIGH STATION																		
926+20.80 – 927+20.80			9 Ave.	100.0	100.0	3.5		6.2	7.6	17.6	(10) 44.0	100.0	10.0	1.4				100.0
927+20.80 – 930+52.68			8	331.88	295.0	10.2		20.5	22.5	52.2	(10) 130.6	295.0	29.5	4.6				295.0
30+52.68 – 32+40.8			7 Ave.	188.12	146.3	5.1		11.6	11.2	26.1	(10) 65.3	146.3	14.6	2.6				146.3
32+40.8 – 34+19.0			6	178.2	118.8	4.1				21.5	(10) 53.7	118.8	11.9	2.5				118.8
EASTBOUND																		
935+20.80 – 950+95.3			10	1574.5	1749.4	60.7		97.2	133.6	306.2	(10) 765.4	1749.4	174.9	21.9				1749.4
950+95.3 – 955+75			16 Ave.	479.7	852.8	29.6				(12) 142.1		852.8	85.3					852.8
RAMP D TRUCK WEIGH STATION																		
51+01 – 51+99.3			6 Ave.	98.3	65.5	2.3		6.1	5.0	11.8	(10) 29.6	65.5	6.6	1.4				65.5
51+99.3 – 52+79.3			7 Ave.	80.0	62.2	2.2		4.9	4.8	11.1	(10) 27.8	62.2		1.1				62.2
52+79.30 – 55+79.30			8	300.0	266.7	9.3		18.5	20.4	47.2	(10) 118.1	266.7	26.7	4.2				266.7
955+75 – 958+66.75			8	291.75	259.3	9.0		18.0	19.8	45.9	(10) 114.8	259.3	25.9	4.1				259.3
958+03.11 – 966+15.4			8	812.29	722.0	25.1		50.1	55.2	127.9	(10) 319.7	722.0	72.2	11.3				722.0
966+15.4 – 967+11.40			9 Ave.	96.0	96.0	3.3		5.9	7.3	16.9	(10) 42.2	96.0	9.6	1.3				96.0
967+11.40 – 1058+95.60			10	9184.2	10,204.7	354.3		566.9	779.5	1785.8	(10) 4464.5	10204.7	1020.5	127.6				10,204.7
S.W.RAMP S.R.723																		
1058+95.60 – 1059+95.60			9 Ave.	100.0	100.0	3.5		6.2	7.6	17.6	(10) 44.0	100.0	10.0	1.4				100.0
1059+95.60 – 1062+80.00			8	284.4	252.8	8.8		17.6	19.3	44.8	(10) 111.9	252.8	25.3	4.0				252.8
@ 33.63																		
0+38.63 – 4+53.50			5.5 Ave.	414.87	253.5	8.8		25.6	19.4	46.1	(10) 115.2		25.4	5.8				253.5
4+53.50 – 5+78.50			3	125.0	41.7	1.4		7.7	1 3/8 1.6				4.2					
4+53.50 – 5+78.50	3	125.0			41.7	1.4		7.7	1 3/8 1.6				4.2					
SUB-TOTALS (CARRIED TO SHEET 65)						1679.9	155.6	3917.3	3698.1	5982.2	18,247.8	33855.7	4838.6	418.1	3360.2	908.8	56.0	33,175.4

(1) DEDUCT 4' x 4' ÷ 9 = 1.8 S.Y.

(2) 142' x 4.5' x .3958 ÷ 27 = 9.4 C.Y.

(3) 150' x 4.5' x 1.3125 ÷ 27 = 32.8 C.Y.
+ 65' x 4' x .1042 ÷ 27 = 1.0 C.Y.
+ 150' x 4.5' x .6666 ÷ 27 = 14.8 C.Y.
48.6 C.Y.

(4) 150' x 4.5' x 1.3125 ÷ 27 = 32.8 C.Y.
+ 110' x 4' x .1667 ÷ 27 = 2.7 C.Y.
+ 150' x 4.5' x .6666 ÷ 27 = 14.8 C.Y.
50.3 C.Y.

(5) DEDUCT 4' x 10' ÷ 9 = 4.4 S.Y.

(6) 142' x 10.5' x .62 ÷ 27 = 34.2 C.Y.

(7) 150' x 10.5' x 1.537 ÷ 27 = 89.7 C.Y.
+ 65' x 10' x .1042 ÷ 27 = 2.5 C.Y.
92.2 C.Y.

(8) 150' x 10.5 x 1.537 ÷ 27 = 89.7 C.Y.
+ 110' x 10' x .1667 ÷ 27 = 6.8 C.Y.
96.5 C.Y.

(9) L x(W.B. + .5')x .5' ÷ 27 =

(10) L x(W.B. + .5')x 1.25' ÷ 27 =

(11) L x .5' x .75' ÷ 27 =

(12) L x W.B. x.5' ÷ 27 =

(13) L x W.B. x 1.25' ÷ 27 =

SHOULDER DATA TABLE

CALC BY QM DATE 9-9-97
CHKD. BY D.H. DATE 12-15-97

GUE-70-0.00

OHIO
FHWA REGION 5

64
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SHOULDER DATA

STATION TO STATION	LT. SIDE W.B. FEET	LT. SIDE LIN. FEET	RT. SIDE W.B. FEET	RT. SIDE LIN. FEET	AREA SQ. YDS.	446 ASPH.CONC SURFACE COURSE, TYPE 1 AC-20 1 1/4" CU.YD.	202 WEARING COURSE COURSE, REMOVED SQ.YD.	617 COMPACTED AGGREGATE TYPE A 5"x 4" THICK CU.YD.	301 BITUMINOUS AGGREGATE BASE 2 3/4" OR AS SHOWN CU.YD.	304 AGGR. BASE AS PER PLAN (9) OR AS SHOWN CU.YD.	203 EXCAVATION 8" OR AS SHOWN CU.YD.	203 SUBGRADE COMPACTION SQ.YD.	407 TACK COAT GAL'S	203 (11) EMBANKMENT CU.YD.	301 BITUMINOUS AGGREGATE BASE: AC-20 8" CU.YD.	451 9" REIN. CONC. PAV'T. AS PER PLAN SQ.YD.	SPECIAL PRESSURE RELIEF JOINT TYPE A LIN.FT.	305 9" CONC. BASE, AS PER PLAN SQ.YD.
EASTBOUND																		
33+65.6 – 48+00			10	1434.4	1593.8	55.3		88.5	121.7	278.9	(10) 697.3	1593.8	159.4	19.9				1593.8
48+00 – 50+00			10	200.0	222.2	7.7		12.3	3 3/8 20.8	38.9	(10) 97.2	222.2	22.2	2.8				222.2
WESTBOUND																		
757+57 – 759+07			4	150.0	66.7	2.3	66.7	9.3	3 1/2 6.5		14.8		6.7		14.8			
759+07 – *824+27.67			4	6520.67	2898.1	100.6		402.5	221.4		644.0		289.8		644.0			
*824+27.67 – *825+77.67			4	150.0	66.7	2.3		9.3	5.1	(2) 9.4	(3) 48.6	66.7	6.7		14.8	(1) 64.9	4	
*825+77.67 – *827+02.69		BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEET 79-88																
*827+02.69 – *828+52.69			4	150.0	66.7	2.3		9.3	5.1	(2) 9.4	(3) 48.6	66.7	6.7		14.8	(1) 64.9	4	
*828+52.69 – *890+44.45			4	6191.76	2751.9	95.6		382.2	210.2		611.5		275.2		611.5			
*890+44.45 – *891+94.45			4	150.0	66.7	2.3		9.3	5.1	(2) 9.4	(4) 50.3	66.7	6.7		14.8	(1) 64.9	4	
*891+94.45 – *893+06.68		BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEET 79-88																
*893+06.68 – *894+56.68			4	150.0	66.7	2.3		9.3	5.1	(2) 9.4	(4) 50.3	66.7	6.7		14.8	(1) 64.9	4	
*894+56.68 – 958+66.75			4	6410.07	2848.9	98.9		395.7	217.6		633.1		284.9		633.1			
958+03.11 – 1062+80			4	10,476.89	4656.4	161.7		646.7	355.7		1034.8		465.6		1034.8			
28+50 – 48+00			4	1950.0	866.7	30.1		120.4	66.2		192.6		86.7		192.6			
48+00 – 50+00			4	200.0	88.8	3.1	88.9	12.3	3 3/8 8.3		19.7		8.9		19.7			
757+57 – 759+07	8	150.0			133.3	4.6		9.3	3 1/2 13.0	23.6	(10) 59.0	133.3	13.3	2.1				133.3
759+07 – 761+45.3	8	238.3			211.8	7.4		14.7	16.2	37.5	(10) 93.8	211.8	21.2	3.3				211.8
761+45.3 – 762+45.3	9 Ave.	100.0			100.0	3.5		6.2	7.6	17.6	(10) 44.0	100.0	10.0	1.4				100.0
762+45.3 – *824+27.67	10	6182.37			6869.3	238.5		381.6	524.7	1202.1	(10) 3005.3	6869.3	686.9	85.9				6869.3
*824+27.67 – *825+77.67	10	150.0			166.7	5.8		9.3	12.7	(6) 34.2	(7) 92.2	166.7	16.7		37.0	(5) 162.3	10	
*825+77.67 – *827+02.69		BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEET 79-88																
*827+02.69 – *828+52.69	10	150.0			166.7	5.8		9.3	12.7	(6) 34.2	(7) 92.2	166.7	16.7		37.0	(5) 162.3	10	
*828+52.69 – *890+44.45	10	6191.76			6879.7	238.9		382.2	525.5	1204.0	(10) 3009.9	6879.7	688.0	86.0				6879.7
*890+44.45 – *891+94.45	10	150.0			166.7	5.8		9.3	12.7	(6) 34.2	(8) 96.5	166.7	16.7		37.0	(5) 162.3	10	
*891+94.45 – *893+06.68		BRIDGE LIMITS FOR DETAILS AND QUANTITIES SEE SHEET 79-88																
*893+06.68 – *894+56.68	10	150.0			166.7	5.8		9.3	12.7	(6) 34.2	(8) 96.5	166.7	16.7		37.0	(5) 162.3	10	
*894+56.68 – 908+00	10	1343.32			1492.6	51.8		82.9	114.0	261.2	(10) 653.0	1492.6	149.3	18.7				1492.6
RAMP A TRUCK WEIGH STATION																		
908+00 – 908+96	9 Ave.	96.0			96.0	3.3		5.9	7.3	16.9	(10) 42.2	96.0	9.6	1.3				96.0
908+96 – 920+00	8	1104.0			981.3	34.1		68.1	75.0	173.8	(10) 434.4	981.3	98.1	15.3				981.3
20+00 – 23+00	8	300.0			266.7	9.3		18.5	20.4	47.2	(10) 118.1	266.7	26.7	4.2				266.7
23+00 – 23+14	7.83 Ave.	14.0			12.2	0.4		0.9	0.9	2.2	(10) 5.4	12.2	1.2	0.2				12.2
WESTBOUND																		
920+00 – 923+18	16 Ave.	318.0			565.3	19.6			43.2	(12) 282.7	(13) 235.6	565.3	56.5					565.3
923+18 – 941+59.7	10	1841.7			2046.3	71.1		113.7	156.3	358.1	(10) 895.3	2046.3	204.6	25.6				2046.3
RAMP B TRUCK WEIGH STATION																		
42+31 – 46+83.82	7 Ave.	452.82			352.2	12.2		28.0	26.9	62.9	(10) 157.2	352.2	35.2	6.3				352.2
947+14.44 – 949+59.7	8	245.26			218.0	7.6		15.1	16.7	38.6	(10) 96.5	218.0	21.8	3.4				218.0
949+59.7 – 950+59.7	9 Ave.	100.0			100.0	3.5		6.2	7.6	17.6	(10) 44.0	100.0	10.0	1.4				100.0
SUB-TOTALS (CARRIED TO SHEET 65)						1293.5	155.6	3277.6	2854.9	4238.2	13413.9	23,074.3	3,725.4	277.8	3357.7	908.8	56.0	22,140.7

* SKEWED FROM THE ℄ EASTBOUND LANES.

(1) DEDUCT 4' x 4' ÷ 9 = 1.8 S.Y.

(2) 142' x 4.5' x .3958 ÷ 27 = 9.4 C.Y.

(3) 150' x 4.5' x 1.3125 ÷ 27 = 32.8 C.Y.
+ 65' x 4' x .1042 ÷ 27 = 1.0 C.Y.
+ 150' x 4.5' x .6666 ÷ 27 = 14.8 C.Y.
48.6 C.Y.

(4) 150' x 4.5' x 1.3125 ÷ 27 = 32.8 C.Y.
+ 110' x 4' x .1667 ÷ 27 = 2.7 C.Y.
+ 150' x 4.5' x .6666 ÷ 27 = 14.8 C.Y.
50.3 C.Y.

(5) DEDUCT 4' x 10' ÷ 9 = 4.4 S.Y.

(6) 142' x 10.5' x .62 ÷ 27 = 34.2 C.Y.

(7) 150' x 10.5' x 1.537 ÷ 27 = 89.7 C.Y.
+ 65' x 10' x .1042 ÷ 27 = 2.5 C.Y.
92.2 C.Y.

(8) 150' x 10.5 x 1.537 ÷ 27 = 89.7 C.Y.
+ 110' x 10' x .1667 ÷ 27 = 6.8 C.Y.
96.5 C.Y.

(9) L x (W.B. + .5') x .5' ÷ 27 =

(10) L x (W.B. + .5') x 1.25' ÷ 27 =

(11) L x .5' x .75' ÷ 27 =

(12) L x W.B. x.5' ÷ 27 =

(13) L x W.B. x 1.25' ÷ 27 =

SHOULDER DATA TABLE

CALC BY QW DATE 9-9-24
CHKD BY D.H. DATE 12-12-24

GUE-70-0.00

OHIO
FHWA REGION 5

65/88

SHOULDER DATA

STATION TO STATION	LT. SIDE W.B. FEET	LT. SIDE LIN. FEET	RT. SIDE W.B. FEET	RT. SIDE LIN. FEET	AREA SQ. YDS.	446 ASPH.CONC SURFACE COURSE, TYPE 1 AC-20 1 1/4" CU.YD.	202 WEARING COURSE, COURSE, REMOVED SQ.YD.	617 COMPACTED AGGREGATE TYPE A 5" x 4" THICK CU.YD.	301 BITUMINOUS AGGREGATE BASE 2 3/4" OR AS SHOWN CU.YD.	304 AGGR. BASE AS PER PLAN ① OR AS SHOWN CU.YD.	203 EXCAVATION 8" OR AS SHOWN CU.YD.	203 SUBGRADE COMPACTION SQ.YD.	407 TACK COAT GAL'S	203 ③ EMBANKMENT CU.YD.	301 BITUMINOUS AGGREGATE BASE: AC-20 8" CU.YD.	451 9" REIN. CONC. PAVT. AS PER PLAN SQ.YD.	SPECIAL PRESSURE RELIEF JOINT TYPE A LIN.FT.	305 9" CONC. BASE, AS PER PLAN SQ.YD.
WESTBOUND																		
950+59.7 – 958+66.75	10	807.05			896.7	31.1		49.8	68.5	156.9	② 392.3	896.7	89.7	11.2				896.7
958+03.11 – 1057+30.1	10	9926.99			11030.0	383.0		612.8	842.6	1930.2	② 4825.6	11030.0	1103.0	137.9				11030.0
N.W.RAMP S.R. 723																		
1057+30.1 – 1058+26.1	9 Ave.	96.0			96.0	3.3		5.9	7.3	16.9	② 42.2	96.0	9.6	1.3				96.0
1058+26.1 – 1062+80.0	8	453.9			403.5	14.0		28.0	30.8	71.4	② 178.6	403.5	40.4	10.5				403.5
28+50 – 35+00.12	8	650.12			577.9	20.1		40.1	44.1	102.3	② 255.8	577.9	57.8	9.0				577.9
14+36.09 – 11+35.88	8	300.21			266.9	9.3		18.5	20.4	47.3	② 181.1	266.9	26.7	4.2				266.9
11+35.88 – 9+71	6.4Ave.	164.88			117.2	4.1		10.2	9.0	21.1	② 25.7	117.2	11.7	2.3				117.2
9+71 – 8+46	3.9	125.0			54.2	1.9		7.7	1 3/8 2.1				5.4					
9+71 – 8+46			3	125.0	41.7	1.4		7.7	1 3/8 1.6				4.2					
WESTBOUND																		
39+66 – 48+00	10	834.0			926.7	32.2		51.5	70.8	162.2	② 405.4	926.7	92.7	11.6				926.7
48+00 – 50+00	10	200.0			222.2	7.7		12.3	3 3/8 20.8	38.9	② 97.2	222.2	22.2	2.8				222.2
SUB-TOTALS (FROM THIS SHEET) CARRIED BELOW						508.1		844.5	1,118.0	2,547.2	6,367.9	14,537.1	1463.4	190.8				14,537.1
SUB TOTALS FROM ABOVE						508.1		844.5	1,118.0	2,547.2	6,3679	14,537.1	1,463.4	190.8				14,537.1
SUB TOTALS FROM SHEET 63						1,679.9	155.6	3917.3	3,698.1	5,982.2	18,247.8	33,855.7	4,838.6	418.1	3360.2	908.8	56.0	33,175.4
SUB TOTALS FROM SHEET 64						1,293.5	155.6	3,277.6	2,854.9	4,238.2	13,413.9	23,074.3	3,725.4	277.8	3,357.7	908.8	56.0	22,140.7
DEDUCT FOR ITEM 404 (UNDER GUARDRAIL) (23,150' x 5' x .3333 ÷ 27=)								– 1429.0										
SUB-TOTALS									7,671.0						6,717.9			
TOTALS (CARRIED TO GENERAL SUMMARY)						3,481.5	311.2	6,610.4	14,388.9	12,767.6	38,029.6	71,467.1	10,027.4	886.7		1,817.6	112.0	69,853.2

① L x W.B. + .5' x .5' ÷ 27 =
② L x W.B. + .5' x 1.25' ÷ 27 =
③ L x .5' x.75' ÷ 27 =

GD700005 6/13/89

SHOULDER DATA TABLE

CALCULATIONS

CALC BY DATE 3/22/24
CHKD BY DATE 4/16/24

GUE-70-0.00

OHIO
FHWA REGION 5

66
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RAMP A TRUCK WEIGH STATION
STA. 23 + 14 TO STA. 32 + 80.50

ITEM 202 PAVEMENT REMOVED
136 x 17.1' AVE. + 830.5 x 16' = 15,613.6 S.F. ÷ 9 = 1,734.8 S.Y.

ITEM 203 SUBGRADE COMPACTION
66' x 25.8' + 885.5' x 25' + 8.5' x 21.5' = 24,023.1 S.F. ÷ 9 = 2,669.2 S.Y.

ITEM 304 AGGREGATE BASE, AS PER PLAN
66' x 26.8' + 885.5' x 26' + 8.5' x 22.5' = 24,983.1 S.F. ÷ 9 x .1111 = 308.4 C.Y.

ITEM 452 15" PLAIN CONCRETE PAVEMENT, AS PER PLAN
66' x 25.8' + 885.5' x 25' + 8.5' x 21.5' = 24,023.1 S.F. ÷ 9 = 2,669.2 S.Y.

ITEM 617 COMPACTED AGGREGATE, TYPE A
966.5' + 579' = 1,545.5' x 5' x .3333 ÷ 27 = 95.4 C.Y.

WESTBOUND TRUCK WEIGH STATION
STA. 32 + 80.5 TO STA. 37 + 50.5

ITEM 202 PAVEMENT REMOVED
470' x 16' – (13' x 10.5') = 7,383.5 S.F. ÷ 9 = 820.4 S.Y.

ITEM 203 SUBGRADE COMPACTION
470' x 19' + 16' x 3' + 94.3' x 3' = 9,260.9 S.F. – 13' x 10.5' = 9,124,4 S.F. ÷ 9 = 1,013.8 S.Y.

ITEM 304 AGGREGATE BASE, AS PER PLAN
470' x 19.5' + 16' x 3.5' + 94.3' x 3.5' + 11'x3'= 9,584.05 S.F. – 13' x 10.5' = 9,447.55 S.F. ÷ 9 x .1111 = 116.6 C.Y.

ITEM 452 15" PLAIN CONCRETE PAVEMENT, AS PER PLAN
470' x 19' + 16' x 3' + 94.3' x 3' + 11' x 2.5' = 9,288.4 S.F. – 13' x 10.5' = 9,151.9 S.F. ÷ 9 = 1,016.9 S.Y.

ITEM 617 COMPACTED AGGREGATE, TYPE A
470' + 16' + 94.3'+ 11' = 591.3' x 5' x .3333 ÷ 27 = 36.5 C.Y.

RAMP B TRUCK WEIGH STATION
STA. 37 + 50.5 TO STA. 42 + 31

ITEM 202 PAVEMENT REMOVED
380.3' x 16' + 100.2' x 17' AVE. = 7,788.2 S.F. ÷ 9 = 865.4 S.Y.

ITEM 203 SUBGRADE COMPACTION
380.3' x 25' + 100.2' x 26' = 12,112.7 S.F. ÷ 9 = 1,345.9 S.Y.

ITEM 304 AGGREGATE BASE, AS PER PLAN
380.3' x 26' + 100.2' x 27 = 12,593.2 S.F. ÷ 9 x .1111 = 155.5 C.Y.

ITEM 452 15" PLAIN CONCRETE PAVEMENT, AS PER PLAN
380.3' x 25' + 100.2 x 26 = 12,112.7 S.F. ÷ 9 = 1,345.9 S.Y.

ITEM 617 COMPACTED AGGREGATE, TYPE A
480.5' x 5' x .3333 ÷ 27 = 29.7 C.Y.

RAMP C TRUCK WEIGH STATION
STA. 34 + 19 TO STA. 38 + 93.19

ITEM 202 PAVEMENT REMOVED
103.94' x 17' + 370.25' x 16' = 7,690.98 S.F. ÷ 9 = 854.6 S.Y.

ITEM 203 SUBGRADE COMPACTION
103.94' x 26' + 370.25' x 25' = 11,958.69 S.F. ÷ 9 = 1,328.7 S.Y.

ITEM 304 AGGREGATE BASE, AS PER PLAN
103.94' x 27' + 370.25' x 26' = 12,432.88 S.F. ÷ 9 x .1111 = 153.5 C.Y.

ITEM 452 15" PLAIN CONCRETE PAVEMENT, AS PER PLAN
103.94' x 26' + 370.25' x 25' = 11,958.69 S.F. ÷ 9 = 1,328.7 S.Y.

ITEM 617 COMPACTED AGGREGATE, TYPE A
474.19' x 5' x .3333 ÷ 27 = 29.2 C.Y.

EASTBOUND TRUCK WEIGH STATION
STA. 0 + 00 TO STA. 4 +85.05

ITEM 202 PAVEMENT REMOVED
485.05' x 16' – (13' x 10.5') = 7,624.3 S.F. ÷ 9 = 847.1 S.Y.

ITEM 203 SUBGRADE COMPACTION
485.05' x 19' + 93.2 x 3' + 18' x 3' = 9,549.6 S.F. – 13' x 10.5' = 9,413.1 S.F. ÷ 9 = 1,045.9 S.Y.

ITEM 304 AGGREGATE BASE, AS PER PLAN
485.05' x 19.5' + 93.2' x 3.5' + 18' x 3.5' +10.5' x 3' + 10' x 3' = 9,909.2 S.F. – 13' x 10.5 = 9,772.7 S.F. ÷ 9 x .1111 = 120.6 C.Y.

ITEM 452 15" PLAIN CONCRETE PAVEMENT, AS PER PLAN
485.05' x 19' + 93.2' x 3' + 18' x 3'+ 10.5' x 2.5'+ 10x2.5'= 9600.8 S.F. – 13' x 10.5' = 9,464.3 S.F. ÷ 9 = 1,051.6 S.Y.

ITEM 617 COMPACTED AGGREGATE, TYPE A
485.05' + 93.2' + 18' + 10.5'+10' =616.75 x 5' x .3333 ÷ 27 = 38.1 C.Y.

RAMP D TRUCK WEIGH STATION
STA. 43 + 50 TO STA. 51 + 01

ITEM 202 PAVEMENT REMOVED
751.0' x 16' = 12,016 S.F. ÷ 9 = 1,335.1 S.Y.

ITEM 202 CURB REMOVED
STA. 49 + 00 TO STA. 51 + 01 = 201.0 L.F.

ITEM 202 CURB REMOVED, AS PER PLAN
STA. 51 + 01 TO STA. 55 + 79.3 = 479 LIN.FT.

ITEM 203 SUBGRADE COMPACTION
751.0' x 25' = 18,775.0 S.F. ÷ 9 = 2,086.1 S.Y.

ITEM 304 AGGREGATE BASE, AS PER PLAN
751.0' x 26' = 19,526.0 S.F. ÷ 9 x .1111 = 241.0 C.Y.

ITEM 452 15" PLAIN CONCRETE PAVEMENT, AS PER PLAN
751.0' x 25' = 18,775.0 S.F. ÷ 9 = 2,086.1 S.Y.

ITEM 617 COMPACTED AGGREGATE BASE, TYPE A
751.0' x 5' x .3333 ÷ 27 = 46.4 C.Y.

	ITEM 202 PAVEMENT REMOVED	ITEM 203 SUBGRADE COMPACTION	ITEM 304 AGGREGATE BASE, AS PER PLAN	ITEM 452 15" PLAIN CONCRETE PAVEMENT, AS PER PLAN	ITEM 617 COMPACTED AGGREGATE, TYPE A	ITEM 202 CURB REMOVED	ITEM 202 CURB REMOVED, AS PER PLAN
RAMP A	1734.8 S.Y.	2,669.2 S.Y.	308.4 C.Y.	2,669.2 S.Y.	95.4 C.Y.		
W.B. TRUCK WEIGH STATION	820.4 S.Y.	1,013.8 S.Y.	116.6 C.Y.	1,016.9 S.Y.	36.5 C.Y.		
RAMP B	865.4 S.Y.	1,345.9 S.Y.	155.5 C.Y.	1,345.9 S.Y.	29.7 C.Y.		
RAMP C	854.6 S.Y.	1,328.7 S.Y.	153.5 C.Y.	1,328.7 S.Y.	29.2 C.Y.		
E.B. TRUCK WEIGH STATION	847.1 S.Y.	1045.9 S.Y.	120.6 C.Y.	1051.6 S.Y.	38.1 C.Y.		
RAMP D	1,335.1 S.Y.	2,086.1 S.Y.	241.0 C.Y.	2,086.1 S.Y.	46.4 C.Y.	201 LIN.FT.	479 LIN.FT.
TOTALS	6457.4 S.Y.	9,489.6 S.Y.	1095.6 C.Y.	9,498.4 S.Y.	275.3 C.Y.	201 LIN.FT.	479 LIN.FT.

TOTALS CARRIED TO THE GENERAL SUMMARY

CALC. BY [illegible] DATE 9-9-87	GUE-70-0.00	OHIO
CHKD. BY D.L. DATE 12-16-87		FHWA REGION 5

LANE LINE SUB-SUMMARY

TABLE (1) — SEE STD.DRAWING TC-72.20

ITEM 847 TRANSVERSE LINES 947.02 (WHITE)	ITEM 847 CHANNELIZING LINES 947.02	ITEM 621 4" LANE LINE	STATION	STATION
LIN.FT.	LIN.FT.	MILE	FROM	TO
		3.81	757+57 E.B.	958+66.75 E.B.
		1.98	958+03.11 E.B.	1062+80 E.B.
		0.41	28+50 E.B.	50+00 E.B.
		0.04	757+57 E.B.	759+75 E.B.
		0.05	929+98 E.B.	932+75 E.B.
117	292		932+75 E.B.	934+20.8 E.B.
	339		955+75 E.B.	958+50.36 E.B.
		0.04	958+50 E.B.	960+40 E.B.
		0.05	1062+50.3 E.B.	30+75 E.B.
151	382		30+75 E.B.	32+65.6 E.B.
		* 6.20		
268	1013	12.58	SUB-TOTALS TABLE (1)	
132	881	12.59	SUB-TOTALS TABLE (2)	
400	1894	25.17	TOTALS (CARRIED TO GENERAL SUMMARY)	

TABLE (2)

ITEM 847 TRANSVERSE LINES 947.02 (WHITE)	ITEM 847 CHANNELIZING LINES 947.02	ITEM 621 4" LANE LINE	STATION	STATION
LIN.FT.	LIN.FT.	MILE	FROM	TO
		3.81	757+57 W.B.	958+66.75 W.B.
		1.98	958+03.11 W.B.	1062+80 W.B.
		0.41	28+50 W.B.	50+00 W.B.
		0.04	575+57 W.B.	759+51 W.B.
		0.06	914+75 W.B.	917+75 W.B.
	225		917+75 W.B.	920+00 W.B.
132	331		942+59.7 W.B.	944+25 W.B.
		0.05	944+25 W.B.	946+92 W.B.
		0.04	29+75 W.B.	31+75 W.B.
	325		31+75 W.B.	35+00 W.B.
		* 6.20		
132	881	12.59	SUB-TOTALS (CARRIED TO TABLE (1))	

* TO BE USED FOR TRAFFIC CONTROL AS DESCRIBED FOR ITEM 614 MAINTAINING TRAFFIC SHEET

EDGE LINE SUB-SUMMARY

TABLE (3)

ITEM 621 EDGE LINES			STATION	STATION
4" WHITE EDGE LINE	4" YELLOW EDGE LINE			
MILE	MILE		FROM	TO
	3.81		757+57 E.B.	958+66.75 E.B.
	1.98		958+03.11 E.B.	1062+80 E.B.
	0.41		28+50 E.B.	50+00 E.B.
3.28			757+57 E.B.	930+52.68 E.B.
0.16			30+52.68 RAMP C	38+93.19 RAMP C
	0.09		34+19 RAMP C	38+93.19 RAMP C
0.02	0.09		0+00 E.B. TRUCK WEIGH STATION	4+86.5 E.B. TRUCK WEIGH STATION
0.47			934+20.8 E.B.	958+50.36 E.B.
	0.23		43+50 RAMP D	55+79.30 RAMP D
0.23			43+50 RAMP D	55+79.30 RAMP D
0.06			955+75 E.B.	958+66.75 E.B.
1.98			958+03.11 E.B.	1062+80 E.B.
0.11			0+00 S.W.RAMP S.R.723	5+78.5 S.W.RMP. S.R.723
	0.02		4+53.5 S.W.RAMP S.R.723	5+78.5 S.W.RMP. S.R.723
0.33			32+65.6 E.B.	50+00 E.B.
* 6.64	* 6.63			
13.28	13.26		SUB-TOTALS TABLE (3)	
13.54	13.46		SUB-TOTALS TABLE (4)	
53.54			TOTALS (CARRIED TO GENERAL SUMMARY)	

TABLE (4)

ITEM 621 EDGE LINES			STATION	STATION
4" WHITE EDGE LINE	4" YELLOW EDGE LINE			
MILE	MILE		FROM	TO
	3.81		757+57 W.B.	958+66.75 W.B.
	1.98		958+03.11 W.B.	1062+80 W.B.
	0.41		28+50 W.B.	50+00 W.B.
3.08			757+57 W.B.	920+00 W.B.
0.24			20+00 RAMP A	32+80.5 RAMP A
	0.24		20+00 RAMP A	32+80.5 RAMP A
0.02	0.09		32+80.5 W.B. TRUCK WEIGH STATION	37+50.5 W.B. TRUCK WEIGH STATION
0.47			917+75 W.B.	942+59.7 W.B.
	0.09		37+50.5 RAMP B	42+31 RAMP B
0.18			37+50.5 RAMP B	46+83.82 RAMP B
0.22			947+14.44 W.B.	958+66.75 W.B.
1.98			958+03.11 W.B.	1062+80 W.B.
0.12			28+50 W.B.	35+00.12 W.B.
0.11			14+36.09 N.W. RAMP S.R.723	8+46 N.W. RAMP S.R.723
	0.11		14+36.09 N.W. RAMP S.R.723	8+46 N.W. RAMP S.R.723
0.35			31+75 W.B.	50+00 W.B.
* 6.77	* 6.73			
13.54	13.46		SUB-TOTALS (CARRIED TO TABLE (3))	

ITEM 614 TEMPORARY PAVEMENT MARKINGS

(TOTALS CARRIED TO GENERAL SUMMARY)

SEE STD.DRAWING MT-99.10

STATION	614 TEMP. EDGE LINE (WHITE) CLASS I MILE	614 TEMP. EDGE LINE (YELLOW) CLASS I MILE	614 TEMP. LANE LINE CLASS II MILE	614 TEMP. CHAN. LINE CLASS I LIN.FT.	614 TEMP. GORE MARKING CLASS II LIN.FT.
DRIVING LANE CLOSURE					
STA. 757+57 E.B. TO STA. 958+66.75 E.B.	3.81	3.81			
STA. 958+03.11 E.B. TO STA. 1062+80.0 E.B.	1.98	1.98			
STA. 28+50 E.B. TO STA. 50+00 E.B.	0.41	0.41			
STA. 757+57 W.B. TO STA. 958+66.75 W.B.	3.81	3.81			
STA. 958+03.11 W.B. TO STA. 1062+80.0 W.B.	1.98	1.98			
STA. 28+50 W.B. TO STA. 50+00 W.B.	0.41	0.41			
PASSING LANE CLOSURE					
STA. 757+57 E.B. TO STA. 958+66.75 E.B.	3.81	3.81			
STA. 958+03.11 E.B. TO STA. 1062+80.0 E.B.	1.98	1.98			
STA. 28+50 E.B. TO STA. 50+00 E.B.	0.41	0.41			
STA. 757+57 W.B. TO STA. 958+66.75 W.B.	3.81	3.81			
STA. 958+03.11 W.B. TO STA. 1062+80.0 W.B.	1.98	1.98			
STA. 28+50 W.B. TO STA. 50+00 W.B.	0.41	0.41			
BOTH LANES MAINTAINED ON 446 SURFACE COURSE					
STA. 757+57 E.B. TO STA. 958+66.75 E.B.	3.81	3.81	3.81		
STA. 958+03.11 E.B. TO STA. 1062+80.0 E.B.	1.98	1.98	1.98		
STA. 28+50 E.B. TO STA. 50+00 E.B.	0.41	0.41	0.41		
STA. 757+57 W.B. TO STA. 958+66.75 W.B.	3.81	3.81	3.81		
STA. 958+03.11 W.B. TO STA. 1062+80.0 W.B.	1.98	1.98	1.98		
STA. 28+50 W.B. TO STA. 50+00 W.B.	0.41	0.41	0.41		
RAMP C TRUCK WEIGH STATION					
ITEM 301 COURSE					292
ITEM 446 SURFACE COURSE					292
STA. 34+19 TO STA. 38+93.19	0.09	0.09			
E.B. TRUCK WEIGH STATION	0.02	0.09			
RAMP D TRUCK WEIGH STATION					
STA. 43+50 TO STA. 51+01	0.14	0.14			
ITEM 301 COURSE		0.09		339	
ITEM 446 SURFACE COURSE		0.09		339	
RAMP A TRUCK WEIGH STATION					
ITEM 301 COURSE		0.06		225	
ITEM 446 SURFACE COURSE		0.06		225	
STA. 23+14 TO STA. 32+80.5	0.18	0.18			
W.B. TRUCK WEIGH STATION	0.02	0.09			
RAMP B TRUCK WEIGH STATION					
STA. 37+50.5 TO STA. 42+31	0.09	0.09			
ITEM 301 COURSE					331
ITEM 446 SURFACE COURSE					331
S.W. RAMP S.R.723					
ITEM 301 COURSE	0.02	0.02			382
ITEM 446 SURFACE COURSE	0.02	0.02			382
N.W. RAMP S.R.723					
ITEM 301 COURSE	0.11	0.11		325	
ITEM 446 SURFACE COURSE	0.11	0.11		325	
SUB-TOTAL	38.00	38.44			
TOTALS	76.44		12.4	1778	2010

★ NOTE: For details see sheet no. 73

* NOTE: For Catch Basin Reconstructed To Grade, As Per Plan, see sheet no. 75

** NOTE: For Catch Basin As Per Plan, see General Note Sheet 13.

DRAINAGE SUB-SUMMARY QUANTITIES

≒ 707.17 ASTM 3034, SDR 35 OR S.S. 931 PERFORATED AS PER 707.17 (ROCK CUT)

CALC. BY [illegible] DATE 12/15/83
CHKD. BY J.W.C DATE 12-15-83

GUE-70-0.00

OHIO FHWA REGION 5

68/88

SHEET NO.	STATIONING	605 ★ SHALLOW UNDERDRAIN, AS PER PLAN LIN. FT.	605 ★ SHALLOW UNDERDRAIN, AS PER PLAN (ROCK CUT) LIN. FT.	605 6" SHALLOW PIPE UNDERDRAIN LIN. FT.	605 6" UNCLASSIFIED PIPE UNDERDRAIN LIN. FT.	605 6" PIPE UNDERDRAIN ≒ LIN. FT.	604 * CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN EACH	605 6" SHALLOW PIPE UNDERDRAIN 707.01 III, 707.21 III, OR 707.17 LIN. FT.	604 ** CATCH BASIN AS PER PLAN EACH NO.5	NO.8	NO.8A	603 6" COND. TYPE F 707.17 NON-PERFORATED ASTM 3034, SDR 35 OR SS 931 LIN. FT.	603 15" CONDUIT TYPE B 706.02 LIN. FT.	602 CONCRETE MASONRY CU. YD.	601 ROCK CHANNEL PROTECTION WITH FILTER CU. YD. TYPE B	TYPE C	601 RIPRAP USING 6" REINF. CONC. SLAB SQ. YD.	202 PIPE REMOVED 24" & UNDER LIN. FT.	202 GUTTER REMOVED SQ. YD.	SPECIAL PRECAST REINFORCED CONCRETE OUTLET EACH	604 CATCH BASIN ADJUSTED TO GRADE EACH	202 CATCH BASIN ABANDONED AND CONNECTED THRU EACH	STD. OUTLET FITTING EACH	STD. TEE FITTING EACH	STD. END CAP EACH	BENDS AND BRANCHES 6"x6" CROSS	6"x6" 45°WYE	6"x6"TEE	6"x90°	6"x45°
69	757+57 to 770+00 W.B. OUTSIDE			96		1138						24			7					1											1	1	
69	757+60 to 770+00 W.B. INSIDE	1240								2		17																					1
69	757+60 to 770+00 E.B. INSIDE	1240										17															1	1					1
69	757+60 to 770+00 E.B. OUTSIDE			96		1132						54								2									2	2	
69	770+00 to 800+00 W.B. OUTSIDE			2039	100	1039						98								3									3	3	
69	770+00 to 800+00 W.B. INSIDE	3000							1	2		60															3					3
69	770+00 to 800+00 E.B. INSIDE	3000								2		84															3					2
69	770+00 to 800+00 E.B. OUTSIDE			1990	100	889						51			15					2									1	2	
69	800+00 to 830+00 W.B. OUTSIDE			114	400	1300		98				83								5													
69	800+00 to 830+00 W.B. INSIDE	2571		146	146					3		73															1	2	1	1	1		2
69	800+00 to 830+00 E.B. INSIDE	2595		145	144					3		73															1	2	1	1	1		2
69	800+00 to 830+00 E.B. OUTSIDE			1492	196	1175		100				77					33		22	4									1	3	1		
69	CO. RD. 41								2																								
70	830+00 to 860+00 W.B. OUTSIDE			2214	320	570						82	6	0.25	16	17		6		3									3	3	
70	830+00 to 860+00 W.B. INSIDE	3000								3		51															3					3
70	830+00 to 860+00 E.B. INSIDE	3000								3		51															3					3
70	830+00 to 860+00 E.B. OUTSIDE			2220	300	450						82			3					3									3	3	
70	860+00 to 890+00 W.B. OUTSIDE			2968								89								3									3	3	
70	860+00 to 890+00 W.B. INSIDE	3000					2			2		118															4					3
70	860+00 to 890+00 E.B. INSIDE	2985			15					4		73															4					3
70	860+00 to 890+00 E.B. OUTSIDE			2969	21							44								2										2		
70	890+00 to 920+00 W.B. OUTSIDE			2625	225			93				175								7									5	4	
70	890+00 to 920+00 W.B. INSIDE	2587			287		1	92	2	2		187								2							3	1		2			3
70	890+00 to 920+00 E.B. INSIDE	2546			256					3		187															5	1	2		1	1	4
70	890+00 to 920+00 E.B. OUTSIDE			1165	1475	200						124								5									1	4	4	
71	920+04 to 923+14 W.B. OUTSIDE RAMP A				310							23								1										2		
71	923+18 to 941+60 W.B. OUTSIDE			1655	182					1		113								1										2	2	
71	42+31 RAMP B to 950+00 W.B. OUTSIDE			739																													
71	920+00 to 950+00 W.B. INSIDE	3000					1			1		34															2						
71	920+00 to 950+00 E.B. INSIDE	3000					3					34															2						3
71	920+00 E.B. OUTSIDE to 34+14 RAMP C			314	100	1000						16								1										1	1	
71	935+00 TO 950+00 E.B. OUTSIDE				1570						1	72																	2				
71	950+00 to 980+00 W.B. OUTSIDE			2279	100	658						122								4										5	3	
71	950+00 to 980+00 W.B. INSIDE	2351	649							4		87															5						3
71	950+00 to 980+00 E.B. INSIDE	2351	649							3		56															3						2
71	950+00 to 980+00 E.B. OUTSIDE				95																												
71	51+05 RAMP D to 980+00 E.B. OUTSIDE			2065	95	757						73								3										1	2	2	1
71	980+00 to 1010+00 W.B. OUTSIDE			2251	725															2													
71	980+00 to 1010+00 W.B. INSIDE	2400	600				1			3		68															4						4
71	980+00 to 1010+00 E.B. INSIDE	2200	800							3	1	47															3						
71	980+00 to 1010+00 E.B. OUTSIDE			1617	468	896						56								2										3	2	
72	1010+00 to 1040+00 W.B. OUTSIDE			2258		700						112								3										1	2	2	1
72	1010+00 to 1040+00 W.B. INSIDE	2356	644							3		51															3						3
72	1010+00 to 1040+00 E.B. INSIDE	2342	658							3		48															3						2
72	1010+00 to 1040+00 E.B. OUTSIDE			2291		650						79								3										1	2	2	1
72	1040+00 to 34+97 W.B. OUTSIDE			1690	1227							73								2									1		2	1	
72	1040+00 to 35+00 W.B. INSIDE	2930							1	3		94															4						2
72	1040+00 to 35+00 E.B. INSIDE	2930								3		102															4						1
72	1040+00 E.B. OUTSIDE to 4+50 SW RAMP			1990	487							110								3										3	3	
72	35+03 E.B. OUTSIDE																				1												
72	33+70 to 35+00 E.B. OUTSIDE				131																									1			1
72	35+03 W.B. OUTSIDE																					1											
72	14+28 to 9+75 N.W. RAMP(RT)				456																									1			1
72	39+70 to 49+95 W.B. OUTSIDE				1026																									1			1
72	51+00 W.B. OUTSIDE								1																								
72	35+00 TO 50+00 W.B. INSIDE	1500								1		22															1						
72	35+00 to 50+00 E.B. INSIDE	1500								1		17															1						1
72	35+00 to 49+95 E.B. OUTSIDE				1481							46								1									1	2			2
68	SLIP REPAIR												4	0.25	175			6															
	TOTAL	59624	4000	39428	12438	12554	8	383	7	58	2	3529	10	0.5	216	17	33	● 12	● 22	68	1	● 1	3	69	6	9	14	55	47	59			

"FOR INFORMATION ONLY"

QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 32

● QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 31.

DRAINAGE SUB-SUMMARY QUANTITIES

CALC. BY RSL DATE 12/15/89
CHKD. BY dwc DATE 12-18-89

GUE-70-0.00

OHIO | FHWA REGION 5

NOTE:
For details 'A' & 'B' See sheet 74
For details 'C' & 'D' See sheet 75

NOTE:
For Details & Quantities of Slip Repair, see sheets 76 to 78. Sta. 818+75 to Sta. 821+00

✳ NOTE:
BELOW EXISTING CONCRETE PAVEMENT EDGE

⊕ NOTE:
707.17 NON-PERFORATED ASTM 3034 SDR 35, or Supl. Spec. 931.

⊕ NOTE:
Existing 6" PIPE UNDERDRAIN to REMAIN IN SERVICE.

NOTE: Connect into existing 6" Pipe Underdrain

● NOTE: For details not shown, see Std. Drwg. BP-10

✳ NOTE:
707.17 ASTM 3034 SDR 35 or Supplemental Spec. 931 Perforated As per 707.17

(A) 605 6"x146' Unclass. Pipe U.D.
(B) 605 6"x144' Unclass. Pipe U.D.
(C) 605 6"x 146' Shallow Pipe U.D.
(D) 605 6"x145' Shallow Pipe U.D.
(E) 605 142' Shallow Underdrain, As Per Plan
(F) ● 605 6"x50' Shallow Pipe U.D. 707.01 III, 707.21 III, or 707.17 (For Sleeper Slab)

(R) 601 Riprap using 6" Reinf. Conc. Slab 33' length (Scaled) x 9' Ave. width ÷ 9 = 33 Sq. Yd
Place riprap to conform to existing ditch
202 Gutter Removed 22 Sq. Yd.

DRAINAGE DETIALS STA. 752+00 - STA. 830+00

CALC. BY DSR DATE 12-15-89
CHKD. BY JLW-G DATE 12-18-89

GUE - 70 - 0.00

OHIO FHWA REGION 5

70 / 88

NOTE:
For Details 'A' & 'B'
See sheet 74
For Details 'C' & 'D'
See sheet 75

Work Required:
Remove 6 L.F. exist. 15" Conc. Pipe and exist. Headwall.
Install new 15"x 6' Cond. Type B 706.02. Add HW-4B Headwall.
Place 601 Rock Channel Prot. Type B with Filter at outlet of Conduit 2.5' thick, 21' length, and 8' width.
603 15" Cond Type B 706.02 — 6 L.F.
601 Rock Channel Prot. Type B — 16 C.Y.
202 Pipe Removed 24" & Under — 6 L.F.

601 Rock Channel Prot. Type C with Filter
50' x 6' x 1.5' ÷ 27 = 17 Cu. Yd.
Place Rock to conform to existing ditch

MATCH LINE STA. 830+00 — MATCH LINE STA. 860+00

WESTBOUND LANES

EASTBOUND LANES

605 6"x 800' Shallow Pipe Underdrain (4.20'*)

603 6"x23' Type F ⊕

№ 8 Catch Basin A.P.P. 19' Lt. Sta. 838+00 ℄ El. Grate 893.60 ℄ El. 6" U.D. 891.12 ℄ El. 12" U.D. 891.10

605 6"x195' Shallow Pipe U.D. (4.20'*)

605 6"x200' Unclass. Pipe Underdrain

605 6"x570' Pipe Underdrain Rock Cut ≚ (2.70'*)

605 3000' Shallow Underdrain As per plan

605 6"x 786' Shallow Pipe Underdrain (4.20*)

603 6"x31' Type F ⊕

605 6"x 194' Shallow Pipe U.D. (4.20*)

605 6"x200' Unclass. Pipe Underdrain

605 6"x 450' Pipe Underdrain Rock Cut ≚ (2.70'*)

605 6"x100' Unclass. Pipe Underdrain

605 6"x150' Shallow Pipe Underdrain (4.20'*)

603 6"x36' Type F ⊕

№ 8 Catch Basin A.P.P. 19' Lt. Sta. 847+75 ℄ El. Grate 874.10 ℄ El. 12" U.D. 870.82 ℄ El. 6" U.D. 871.7 ℄ El. 15" U.D. 870.57

№ 8 Catch Basin As Per Plan 19' Rt. Sta. 847+75 ℄ El. Grate 874.10 ℄ El. 6" U.D. 871.7 ℄ El. 12" U.D. 871.60

605 6"x825' Shallow Underdrain(4.20*)

603 6"x 23' Type F ⊕

603 6"x17' Type F ⊕

℄ Survey and Construction I-70

605 6"x 995' Shallow Pipe Underdrain (4.20*)

№ 8 Catch Basin A.P.P. 19' Rt. Sta. 856+00 ℄ El. Grade 857.60 ℄ El. 6" U.D. 855.2 ℄ El. 12" U.D. 855.10

№ 8 Catch Basin A.P.P. 19' Lt. Sta. 856+00 ℄ El. Grade 857.60 ℄ El. 12" U.D. 854.34 ℄ El. 15" U.D. 854.09 ℄ El. 6" U.D. 856.0

605 6"x394' Shallow Pipe U.D.(4.20*)

603 6"x 25' Type F ⊕

605 6"x 95' Shallow Pipe U.D. (4.20'*)

⊕ NOTE:
707.17 Non-Perforated ASTM 3034 SDR 35, OR Supplemental Spec. 931.

№ 8 Catch Basin As Per Plan 19' Rt. Sta. 838+00 ℄ El. Grate 893.6 ℄ El. 6" U.D. 891.2 ℄ El. 12" U.D. 890.34 ℄ El. 15" U.D. 890.09

601 Rock Channel Prot. Type B with Filter 18" thick 9' length x 6" width x 1.5' ÷ 27 = 3 C.Y.

✶ NOTE:
BELOW EXISTING CONCRETE PAVEMENT EDGE.

MATCH LINE STA. 860+00 — P.C. STA. 860+74.30

605 6"x 596' Shallow Pipe Underdrain (4.20'*)

603 6"x21' Type F ⊕

C.B. Reconst. to Grade As Per Plan 19' Lt. Sta. 866+00 ℄ El. Grate 837.73 ℄ El. 12" U.D. 835.2 ℄ El. 15" U.D. 834.28 ℄ El. 15" U.D. 834.03

605 6"x 1100' Shallow Pipe U.D. (4.20'*)

603 6"x17' Ty. F ⊕

603 6"x32' Type F ⊕

6"x6" Wye

605 6"x 889' Shallow Pipe Underdrain (4.20'*)

605 3000' Shallow Underdrain As Per Plan

605 6"x 2985' Shallow Underdrain A.P.P.

6"x90° Bend

603 6"x22' Type F ⊕

№ 8 Catch Basin A.P.P. 19' Rt., Sta. 866+00 ℄ El. Grate 837.54 ℄ El. 6" U.D. 835.2 ℄ El. 12" U.D. 835.0

№ 8 Catch Basin As Per Plan 19' Lt., Sta. 875+00 ℄ El. Grate 823.23 ℄ El. 6" U.D. 820.3 ℄ El. 12" U.D. 819.78 ℄ El. 15" U.D. 819.53

603 6"x24' Type F ⊕

603 6"x17' Type F ⊕

605 6"x 1195' Shallow Pipe Underdrain (4.20'*)

№ 8 Catch Basin As Per Plan 19' Rt., Sta. 875+00 ℄ Grate 823.04 ℄ El. 6" U.D. 820.85 ℄ El. 12" U.D. 820.54

℄ Survey and Construction I-70

603 6"x44' Type F ⊕

Catch Basin Reconst. to Grade As per plan 19' Lt., Sta. 884+00 ℄ El. Grate 820.21 ℄ El. Invert 816.57

№ 8 Catch Basin, A.P.P. 19' Lt., Sta. 888+15 ℄ El. Grate 818.75 ℄ El. 12" U.D. 816.25

605 6"x594' Shallow Pipe U.D.(4.20'*)

603 6"x22' Type F ⊕

Tee Fitting

605 6"x15' Unclass. Pipe Underdrain

605 6"x21' Unclass. Pipe U.D.

№ 8 Catch Basin A.P.P. 19' Rt., Sta. 884+00 ℄ El. Grate 820.08 ℄ El. 6" U.D. 817.8 ℄ El. 12" U.D. 817.58

№ 8 Catch Basin A.P.P. 19' Rt., Sta. 889+40 ℄ El. Grate 818.35 ℄ El. 6" U.D. 816.0 ℄ El. 12" U.D. 814.77

605 6"x674' Shallow Pipe U.D.(4.20'*)

(A) 605 6" x139' Unclass. Pipe U.D.
(B) 603 6" x148' Unclass. Pipe U.D.
(C) 605 6" x 138' Unclass. Pipe U.D.
(D) 605 6" x 118' Unclass. Pipe U.D.

● 605 6"x 46' Shallow Pipe U.D. 707.01 III, 707.21 III, or 707.17 (For Sleeper Slab); Outlet 86' Lt., El. 816.7 ±

● NOTE:
For details not shown, see Std Drwg BP-10

603 6"x 26' Type F ⊕

№ 8 Catch Basin, A.P.P. ℄ Sta. 893+25 ℄ El. Grate 814.62 ℄ El. 15" U.D. 812.12

605 41' Shallow U.D. A.

605 6"x200' Shallow Pipe U.D. (4.20'*)

603 6"x59' Ty. F ⊕

6" 605,+06 ℄ El. 815.4

6" 605,+54 ℄ El. 815.4

6" Wye, 893+67 El. 814.9

● 605 6"x 47' Shallow Pipe U.D. 707.01 III, 707.21 III, or 707.17 (For Sleeper Slab); Outlet 87' Lt., El. 816.0 ±

№ 8 Catch Basin As Per Plan 19' Rt., Sta. 899+00 ℄ El. Grate 815.92 ℄ El. 6" U.D. 813.51 ℄ El. 12" U.D. 812.43 ℄ El. 15" U.D. 812.43

603 6"x34' Type F ⊕

C.R. 143

Bridge No. GUE-70-0281

605 6"x395' Shallow Pipe U.D. (4.20'*)

605 6"x 1040' Shallow Pipe U.D. (4.20'*)

605 6"x 650' Shallow Pipe Underdrain (4.20'*)

605 6"x 515' Shallow Pipe U.D.(4.20'*)

605 6"x 495' Shallow Pipe U.D. (4.20'*)

605 6"x225' Unclass. Pipe Underdrain

603 6"x49' Type F ⊕

6"x6" Tee ℄ El. 812.17

6" 605 Lt. (Outside) ℄ El. 812.78

℄ El. 812.71

605 2546' Shallow Underdrain, A.P.P.

605 2602' Shallow Underdrain, A.P.P.

6" 605 Rt. (Outside) ℄ El. 816.7

605 6"x1375' Unclass. Pipe Underdrain

603 6"x 32' Type F ⊕

RAMP A WEIGH STATION

℄ Survey & Construction I-70

605 6"x 200' Pipe U.D. Rock Cut (2.70'*)

Catch Basin Reconst. to Grade As Per Plan 19' Lt., Sta. 915+00 ℄ El. Grate 817.11 ℄ El. 6" U.D. 814.6 ℄ El. 12" U.D. 812.74 ℄ El. 15" U.D. 812.49

Catch Basin Reconst. To Grade A.P.P. 19' Rt., Sta. 915+00 ℄ El. Grate 817.07 ℄ El. 6" U.D. 814.5 ℄ El. 12" U.D. 813.50

№ 8 Catch Basin A.P.P. 19' Rt. Sta. 914+00 ℄ El. Grate 817.02 ℄ El. 6" U.D. 814.5 ℄ El. 12" U.D. 814.5

603 6"x24' Type F ⊕

6"x6" Tee ℄ El. 815.6

0.34%

0.3%

0.4%

№ 5 Catch Basin A.P.P. 11' Lt., Sta. 903+75 # ℄ El. Grate 813.0 ℄ El. 6" U.D. 811.0 ℄ El. 12" U.D. 808.71 ℄ El. 18" U.D. 808.21

№ 5 Catch Basin, A.P.P. 4' Lt., Sta. 904+40 # ℄ El. Grate 813.7 ℄ El. 6" U.D. 812.7 ℄ El. 12" U.D. 810.03

6"x 90° Bend ℄ El. 815.1

603 6"x 39' Type F ⊕

№ 8 Catch Basin A.P.P. 19' Rt. Sta. 898+00 ℄ El. Grate 815.99 ℄ El. 12" U.D. 813.43

603 6"x20' Type F ⊕

603 6"x 21' Type F ⊕

605 6"x100' Unclass. Pipe U.D.

6"x90° Bend El. 816.0

603 6"x41' Ty. F ⊕

6"x6" Wye El. 816.77

№ 8 Catch Basin A.P.P. ℄ Sta. 891+18 ℄ El. Grate 815.28 ℄ El. 6" U.D. 813.3 ℄ El. 12" U.D. 812.78 ℄ El. 15" U.D. 812.78

Bridge No. GUE-70-0250-L&R

● 605 6"x46' Shallow Pipe U.D. 707.01 III, 707.21 III, or 707.17 (For Sleeper Slab); Outlet 86' Rt., El. 817.0 ±

● 605 6"x 46' Shallow Pipe U.D. 707.01 III, 707.21 III, or 707.17 (For Sleeper Slab); Outlet 86' Rt., El. 813.5 ±

NOTE: Station May be Adjusted to center Catch Basin over existing Conduit. Adjust Concrete Apron to conform with existing ditch.

⊕ NOTE:
Existing 6" Pipe Underdrain To Remain in Service.

✶ NOTE:
707.17 ASTM 3034 SDR 35 or Supplemental Spec. 931 Perforated As per 707.17

DRAINAGE DETAILS STA. 830+00 - STA. 920+00

CALC. BY	DATE 12-15-97
CHKD. BY	DATE 12-18-97

GUE-70-0.00

OHIO	71
FHWA REGION 5	88

NOTE:
For Ramp B Underdrain
See sheet 40.

Catch Basin Reconst.
To Grade As Per Plan
19' Lt., Sta. 935+00
FL El. Grade 817.11
FL El. 12" U.D. 813.92

NOTE:
For Ramp A Underdrain,
See sheet 39

TRUCK WEIGH STATION

P.C. STA. 37+50.50

P.R.C. STA. 38+36.12

№ 8 Catch Basin A.P.P.
120' Lt., Sta. 938+00
FL El. Grade 812. 13
FL El. 6" U.D. 810.50
FL El. 15" U.D. 809.13

Catch Basin Reconst.
to Grade A.P.P.
19' Rt., Sta. 944+00
FL El. Grade 814.97
FL El. 6" U.D. 811.86
FL El. 15" U.D. 811.2

№ 8 Catch Basin, A.P.P.
19' Lt., Sta. 944+00
FL El. Grade 814.29
FL El. 6" U.D.
FL El. 12" U.D. 811.79

RAMP B
P.T. STA. 46+83.82 =
M.L. STA. 947+14.44

MATCH LINE STA. 920+00

M.L. STA. 920+00.00 =
RAMP A STA. 20+00

Sta. 920+04.114' Lt.
FL El. 813.0

603 6"x23' Ty. F ⊕

6"x6" Tee
+04, 91' Lt.
El. 814.32 ±
Connect into exist. U.D.

NOTE:
For Details 'A' & 'B'
See sheet 74
For Details 'C' & 'D'
See sheet 75

+14.7, 65' Lt.
El. 816.75

605 6"x 310' Unclass. Pipe U.D.

El. 817.89

RAMP A

6" 605, El. 816.92

605 6"x 1300' Shallow Pipe U.D. (4.20*)

P.T. STA. 27+01.42

605 6"x 182' Unclass. Pipe U.D.

℄ Survey and Construction I-70

605 6"x1000' Pipe Underdrain
Rock Cut ≠ (2.70'*)

6" 605
El. 819.76

6" 605, +00
El. 817.93

WESTBOUND LANES

603 6"x12' Type F ⊕

603 6"x17' Type F ⊕

6" 605
El. 815.53

EASTBOUND LANES 0.3%

605 6"x1570' Unclass. Pipe U.D.

6"x90° Bend
El. 814.9

6" 605, +00
El. 818.56

605 6"x 314' Shallow Pipe
U.D.(4.20*)

6"x6" Tee
2.5' ± Rt. Sta. 34+14
El. 814.8
Connect existing
6" Underdrain

+14.16' Rt
El. 814.25

M.L. STA. 930+52.68 =
P.C. STA. 30+52.68
Ramp C

603 6"x 100'
Unclass. Pipe
Underdrain

Catch Basin Reconst.
to Grade, As Per Plan
19' Rt., Sta. 935+00
FL El. Grade 816.99
FL El. 12" U.D. 813.54
FL El. 6" U.D. 814.56
FL El. 15" U.D. 813.29

NOTE:
For Ramp C
Underdrain, See
Sheet 41.

P.R.C. STA. 37+04.92

P.T. STA. 38+93.19

TRUCK WEIGH STATION

P.C. STA. 43+50

№ 8A Catch Basin A.P.P.
117' Rt., Sta 944+00
FL El. Grade 810.60
FL El. 15" U.D. 805.60
FL El. 27" U.D. 804.60
FL El. 6" U.D. 806.25

P.T. STA. 45+78.56

P.C. STA. 49+01.5

MATCH LINE STA. 950+00

Ⓐ 6"x6" Tee, 2.5' Lt. Sta. 51+05
El. 814.1 ± Connect exist. 6"
Underdrain. Plug downstream
End of exist. Underdrain

⊕ NOTE:
707.17 Non-Perforated ASTM
3034 SDR 35, or Supplemental
Spec. 931

⊕ NOTE:
Existing 6" Pipe Underdrain
to Remain in Service.

603 6"x36'
Type F ⊕

№ 8 Catch Basin, A.P.P.
19' Lt., Sta. 951+50
FL El. Grade 812.55
FL El. 12" U.D. 810.05
FL El. 6" U.D. 811.0

El. 808.7

El. 809.40

№ 8 Catch Basin, As Per Plan
19' Lt., Sta. 952+50
FL El. Grade 812.42
FL El. 12" U.D. 809.92
FL El. 12" U.D. 809.45
FL El. 6" U.D. 809.4
FL El. 15" U.D. 809.20

№ 8 Catch Basin, A.P.P.
19' Lt. Sta. 961+25
FL El. Grade 814.94
FL El. 6" U.D. 812.2
FL El. 12" U.D. 811.94

№ 8 Catch Basin, As Per Plan
19' Rt, Sta. 965+75
FL El. Grade 821.5
FL El. 6" U.D. 819.0
FL El. 15" U.D. 818.5

+00.89' Lt El. 816.00

605 6"x100'
Unclass. Pipe
Underdrain

603 6"x23'
Type F ⊕

605 6"x658' Pipe U.D.
Rock Cut ≠ (2.70'*)

+34.21' Lt., El. 810.00

+58.96' Lt. El. 812.56

№ 8A Catch Basin, As Per Plan
19' Lt. Sta. 974+63
FL El. Grade 815.78
FL El. 30" (IN) 812.00
FL El. 6" U.D. 813.2
FL El. 30" (OUT) 811.78

605 6"x 245' Shallow
Pipe U.D. (4.20*)

603 6"x 33' Type F ⊕

605 6"x 1504' Shallow Pipe U.D.(4.20*)

WESTBOUND LANES

605 1800' Shallow Underdrain As Per Plan

603 6"x14' Type F ⊕

605 1800' Shallow Underdrain, A.P.P.

603 6"x17' Ty. F ⊕

603 6"x17' Type F ⊕

603 6"x22' Type F ⊕

603 6"x2P Type F ⊕

℄ Survey and Construction I-70

N 23°37'21" E

603 6"x17' Type F ⊕

603 6"x17' Ty. F ⊕

Rock Cut

605 649' Shallow Underdrain, A.P.P. Rock Cut

605 649' Shallow Underdrain, A.P.P. Rock Cut

605 6"x 757' Pipe Underdrain Rock Cut ≠ (2.70'*)

603 6"x17' Type F ⊕

603 6"x 28'
Type F ⊕

6"x 45° Bend
El. 819.7

605 6"x 95'
Unclass. Pipe
Underdrain

El. 820.0

№ 8 Catch Basin, A.P.P.
19' Rt., Sta. 961+25
FL El. Grade 820. 12
FL El. 6" U.D. 817.75
FL El. 12" U.D. 817. 12

+80.98' Rt., El. 817.12

P.C. STA. 960+44.34

EQUATION
STA. 958+66.75 BK
STA. 958+03.11 Ah.

RAMP D

605 6"x 1533' Shallow
Pipe Underdrain (4.20*)

STA. 55+79.30 RAMP D =
STA. 955+75 M.L.

P.T. STA. 52+79.30

603 6"x22'
Ty. F ⊕

6"x 90° Bend
51+05
0.5' ±
El. 814.2

603 6"x18'
Ty. F ⊕

605 6"x95' Unclass
Pipe U.D.

5+05, 18' Rt. El. 813.6

№ 8 Catch Basin, A.P.P.
19' Rt., Sta. 952+50
FL El. Grade 817.26
FL El. 6" U.D. 814.83
FL El. 12" U.D. 814.76

NOTE:
For Ramp D
Underdrain, See
sheet 42.

MATCH LINE STA. 950+00

605 6"x 530' Shallow Pipe Underdrain (4.20*)

605 551' Shallow U.D., As Per Plan

605 551' Shallow U.D., As Per Plan

EASTBOUND LANES

605 532' Shallow Pipe
Underdrain (4.20*)

603 6"x27'
Type F ⊕

MATCH LINE STA. 980+00

+68.93' Rt.

GUARD RAIL

℄ NOTE:
707.17 ASTM 3034 SDR 35 or
Supplemental Spec. 931 Perforated
As per 707.17

№ 8 Catch Basin, A.P.P.
19' Lt. Sta. 995+00
FL El. Grade 813.36
FL El. 6" U.D. 811.0
FL El. 12" U.D. 810.5
FL El. 15" U.D. 810.0

+25.89' Lt., El. 810.0

+39.93' Lt. El. 808.33

+05.93' Lt. El. 809.8

603 6"x27'
Ty. F ⊕

603 6"x27' Type F ⊕

605 6"x556' Shallow Pipe U.D.(4.20*)

605 6"x 770' Shallow Pipe U.D. (4.20*)

605 6"x 925' Shallow Pipe U.D.(4.20*)

603 6"x17' Type F ⊕

603 6"x17' Ty. F ⊕

603 6"x19' Type F ⊕

℄ Survey and Construction I-70

605 2200' Shallow Underdrain, A.P.P.

603 6"x14' Ty. F ⊕

WESTBOUND LANES

605 2400' Shallow Underdrain, As Per Plan

603 6"x14' Ty. F ⊕

605 6"x 725' Pipe Underdrain Rock Cut ≠ (2.70'*)

Rock Cut

605 600' Shallow U.D. Rock Cut, As Per Plan

N 69°28'21" E

605 800' Shallow U.D. Rock Cut, As Per Plan

MATCH LINE STA. 980+00

605 6"x 500' Shallow Pipe Underdrain (4.20*)

603 6"x 28'
Type F ⊕

605 6"x 1117' Shallow Underdrain (4.20'*)

El. 816.6

0.32%

603 6"x28'
Type F ⊕

605 6"x 468' Unclass. Pipe U.D.

EASTBOUND LANES

605 6"x 896' Pipe U.D. Rock Cut ≠ (2.70'*)

MATCH LINE STA. 1010+00

Exist. Catch Basin
Outlet 6" U.D. into
C.B. at same elevation
& Location as existing.

6"x6" Tee
66.5' Rt., +00
El. 815.1' ±
Connect into
exist. U.D.

№ 8 Catch Basin, A.P.P.
19' Rt. Sta. 995+00
FL El. Grade 819. 24
FL El. 6" U.D. 815.08
FL El. 12" U. D. 814. 30

№ 8 Catch Basin, A.P.P.
19' Lt., Sta. 989+35
FL El. Grade 811.34
FL El. 6" U.D. 808.55
FL El. 15" U.D. 807. 50

P.T. STA. 994+70.48

№ 8 Catch Basin, A.P.P.
19' Rt. Sta. 1001+00
FL El. Grade 817.32
FL El. 6" U.D. 814.07
FL El. 15" U.D. 813.50

№ 8A Catch Basin, A.P.P.
19' Rt. Sta. 1009+90
FL El. Grade 814.72
FL El. 27" U.D. 808.01
FL El. 30" U.D. 807.76

P.C. STA. 1006+32.49

Catch Basin Reconst.
to Grade, As Per Plan
95' Lt. Sta. 1009+45
Depth of Reconst. 1'-6" ±
El. Exist. Grade 814.81
El. Exist. Invert 805.90

Catch Basin Reconst.
to Grade As Per Plan
19' Lt. Sta. 1009+75
Depth of Reconst. 1'-6" ±
El. Exist. Grade 814. 60
El. Exist. Invert 806.92

DRAINAGE DETAILS STA. 920+00 – STA. 1010+00

CALC. BY DATE 2-15-89
CHKD. BY J.W.C. DATE 12-15-89

GUE-70-0.00

OHIO
FHWA REGION 5

72
88

⊕ NOTE:
707.17 Non-Perforated ASTM 3034 SDR 35, or Supplemental Spec. 931.

NOTE:
For Details 'A' & 'B' See sheet 74
For Details 'C' & 'D' See sheet 75

Bridge No. GUE-70-0477

MATCH LINE STA. 1010+00

605 6"x700' Pipe Underdrain Rock Cut ✕ (2.70'*)
605 644' Shallow U.D. Rock Cut, A.
605 658' Shallow U.D. Rock Cut, A.
605 6"x650' Pipe Underdrain Rock Cut ✕ (2.70'*)

№ 5 Catch Basin As Per Plan 95' Rt., Sta. 1010+20 ℄ El. Grate 813.48 ℄ El. 24" U.D. 809.88 ℄ El. 27" U.D. 809.63

№ 4 Catch Basin, A.P.P. 155' Rt. Sta. 1010+20 ℄ El. Grate 833.20 ℄ El. 24" U.D. 829.50

603 6"x28' Type F ⊕
Detail 'B'
+00, 102' Lt. El. 810.5
+05

№ 8 Catch Basin, As Per Plan 19' Lt. Sta. 1016+58 ℄ El. Grate 812.42 ℄ El. 12" U.D. 809.41 ℄ El. 6" U.D. 810.4 ℄ El. 15" U.D. 809.41

605 6"x1057' 6" Shallow Pipe Underdrain (4.20'*)

603 6"x17' Ty. F ⊕
Detail 'A'
+46

603 6"x14' Type F ⊕
Detail 'A'
+38

605 2356' Shallow Underdrain, As Per Plan

605 2342' Shallow Underdrain As per Plan

605 6"x1076' Shallow Pipe Underdrain (4.20'*)

№ 8 Catch Basin, A.P.P. 19' Rt., Sta. 1016+58 ℄ El. Grate 812.54 ℄ El. 6" U.D. 810.5 ℄ El. 12" U.D. 810.04

+50, 97' Rt. El. 807.0
+70
Detail 'B'
603 6"x31' Type F ⊕

1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039

WESTBOUND LANES
N 87° 40' 21" E
EASTBOUND LANES
℄ Survey and Construction I-70

P.T. STA. 1024+52.49

603 6"x23' Ty. F ⊕
Detail 'B'
+78, 62' Lt. El. 806.0
+90

№ 8 Catch Basin, A.P.P. 19' Lt., Sta. 1027+65 ℄ El. Grate 808.9 ℄ El. 6" U.D. 806.5 ℄ El. 12" U.D. 806.00 ℄ El. 15" U.D. 805.75

603 6"x17' Type F ⊕
Detail 'A'
+51

603 6"x23' Type F ⊕
Detail 'B'
+46
+63, 94' Rt. El. 804.0
+80

605 6"x1020' Shallow Pipe Underdrain (4.20'*)

№ 8 Catch Basin, A.P.P. 19' Rt., Sta. 1027+65 ℄ El. Grate 808.88 ℄ El. 6" U.D. 806.4 ℄ El. 12" U.D. 806.38

603 6"x61' Type F ⊕
Detail 'B'
Detail 'A'
+96, 127' Lt. El. 795.1
+05

№ 8 Catch Basin, A.P.P. 19' Lt., Sta. 1038+00 ℄ El. Grate 805.57 ℄ El. 6" U.D. 803.2 ℄ El. 12" U.D. 802.69 ℄ El. 15" U.D. 802.44

603 6"x17' Ty. F ⊕
Detail 'A'
+86

603 6"x17' Type F ⊕
Detail 'A'
+86

603 6"x25' Type F ⊕
+00, 91' Rt. El. 802.4
+05

Detail 'B'

MATCH LINE STA. 1040+00

605 6"x195' Shallow Pipe U.D. (4.20'*)

№ 8 Catch Basin, A.P.P. 19' Rt. Sta. 1038+00 ℄ El. Grate 805.57 ℄ El. 6" U.D. 803.2 ℄ El. 12" U.D. 803.07

605 6"x195' Shallow Pipe U.D. (4.20'*)

NOTE:
Existing 6" Pipe Underdrain to Remain in Service.

✕ NOTE:
707.17 ASTM 3034 SDR 35 or Supplemental Spec. 931 Perforated As per 707.17

* NOTE:
BELOW EXISTING CONCRETE PAVEMENT EDGE.

Work Required:
Replace existing № 4 Catch Basin with № 5 Catch Basin. Center proposed Catch Basin over existing 15" Conduit and raised to Elevation as shown. A quantity of 4 Cu. Yd. of Embankment has been provided for regrading of the ditch. Concrete Apron shall be provided on each side of the Catch Basin and contoured to the proposed ditch.
203 Embankment 4 Cu. Yd.
Carried To Sheet 31.

6"x 6" Tee +69' Lt., +00 El. 797.6 ±

6"x 6" Tee +00, 66.5' Lt. El. 797.9

№ 8 Catch Basin, A.P.P. 19' Lt., Sta. 1057+00 ℄ El. Grate 799.94 ℄ El. 6" U.D. 797.57 ℄ El. 12" U.D. 797.06 ℄ El. 15" U.D. 796.81

№ 5 Catch Basin 11' Lt., Sta. 1048+00 # ℄ El. Grate 800.54 Exist. ℄ El. Grate 801.25 New ℄ El. 6" U.D. 798.5 ℄ El. 15" U.D. 797.79

603 6"x41' Type F ⊕
+96, 107' Rt. El. 797.0
+06

605 6"x796' Shallow Pipe Underdrain (4.20'*)

605 6"x894' Shallow Pipe Underdrain (4.20'*)

Detail 'B'
Detail 'A'
603 6"x26' Type F ⊕
+81
15"

WESTBOUND LANES

1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 Ex. 12" 1057 1058 1059 1060 1061 1062 29 30 31 32 33 34

603 6"x 52 Type F ⊕
6"x90° Bend El. 798.3
Detail 'B'
Detail 'A'
+98
+05

℄ Survey and Construction I-70

603 6"x32' Type F ⊕
Ex. 15"
603 6"x14' Type F ⊕
Ex. 12"
603 6"x22' Type F ⊕
603 6"x22' Ty. F ⊕
N 87° 40' 21" E
Detail 'A'
Detail 'C'
Det. 'A'
+00
+00, 98' Lt. El. 797.0
Detail 'B'
603 6"x32' Type F ⊕
+95.6
+95.6
Detail 'B'
+56
+48
6"x90° Bend El. 797.7

EASTBOUND LANES

605 6"x700' Shallow Pipe Underdrain(4.20'*)

605 6"x200' Unclass. Pipe Underdrain

6"x 6" Tee El. 798.2
603 6"x38' Type F ⊕
+00, 104' Rt. El. 797.1

605 6"x1290' Shallow Pipe U.D. (4.20'*)
605 2930' Shallow Underdrain, As Per Plan

№ 8 Catch Basin, A.P.P. 19' Rt., Sta. 1057+00 ℄ El. Grate 799.94 ℄ El. 6" U.D. 797.6 ℄ El. 12" U.D. 797.44

+00, 98' Rt. El. 797.0

№ 8 Catch Basin, A.P.P. 19' Rt., Sta. 1058+00 ℄ El. Grate 799.97 ℄ El. 12" U.D. 797.47

P.C. STA. 1062+41.3
+05, 106' Rt. El. 797.2
EQUATION STA. 1062+80.00 BK = STA. 28+50.00 AH.

6"x 6" Tee El. 797.5 ± Connect into Exist. U.D.
603 6" x 40' Type F ⊕

605 6"x487' Unclass. Pipe U.D.
6" 605 El. 799.16
+50

№ 8 Catch Basin, A.P.P. 19' Rt., Sta. 1062+00 ℄ El. Grate 800.96 ℄ El. 6" U.D. 798.5 ℄ El. 12" U.D. 798.08 ℄ El. 15" U.D. 797.83

Catch Basin Adjust to Grade exist. № 6 Catch Basin, 75' Lt., Sta 35+03 Exist. Grate El. 805.06 ℄ El. Invert 800.92

6" 605 34+97 Lt. Outside El. 801.3

N.W. RAMP

0.5 %

605 6"x1227' Unclass Pipe Underdrain

Detail 'C'

603 6"x41' Type F ⊕

№ 8 Catch Basin, A.P.P. 19' Lt., Sta. 1062+00 ℄ El. Grate 800.96 ℄ El. 6" U.D. ℄ El. 12" U.D. 798.46

MATCH LINE STA. 35+00

0.3%

El. 801.08

S.W. RAMP S.R. 723

6"x45° Bend +73 El. 800.7

6"x6" Wye +70, El. 800.5 ± Connect into exist. 6" Underdrain

Catch Basin Abandoned & Connect thru 75' Lt. Sta. 35+03 ℄ El. Grate 805.06 ℄ El. Invert 800.92

STA. 35+00.12 M.L. = STA. 14+36.09 N.W. RAMP

6" 605 14+28 Rt. El. 801.19

605 6"x456' Unclass. Pipe Underdrain

S.T. STA. 11+35.98

6"x45° Bend 9+72 Rt. El. 799.9

C.S. STA. 9+85.88

6"x 6" Wye 9+75 Rt. El. 799.7 ± Connect into Exist. U.D.

Exist. 6" Pipe Underdrain

N.W. RAMP S.R. 723

6" 605 +70, El. 800.08

605 6"x1026' Unclass. Pipe U.D.

0.3 %

WESTBOUND LANES

P.C. STA. 41+45.24

N 87° 40' 21" E

605 1500' Shallow Underdrain, As Per Plan

EASTBOUND LANES

El. 801.08

El. 801.98

605 1500' Shallow Underdrain, A.P.P.

№ 8 Catch Basin, A.P.P. 19' Rt., Sta. 48+50 ℄ El. Grate 800.15 ℄ El. 6" U.D. 799.04 ℄ El. 15" U.D. 799.04

№ 8 Catch Basin, A.P.P. 19' Lt., Sta. 48+50 ℄ El. Grate 801.36 ℄ El. 6" U.D. 799.1 ℄ El. 15" U.D. 799.08

S.R. 723

Bridge No. GUE-70-0611

6"x45° Bend +92, El. 797.0

6"x 6" Wye +95, El. 796.9 ± Connect into Exist. U.D.

№ 5 Catch Basin, As Per Plan 105' Lt., Sta. 51+00 ℄ El. Grate 797.25 ℄ El. Invert 795.00

Det. 'C'
Det. 'B'
Detail 'A'
603 6"x22 Ty. F ⊕
603 6"x17' Ty. F ⊕
603 6"x9' Type F ⊕
Ex. 15"
+00
+50
+92
+95
+78
+22
+88
+12
+43
+57
+72

℄ Survey and Construction I-70

605 6"x1343' Unclass. Pipe U.D.

El. 801.5

+50, 94' Rt. El. 800.7

6"x6" Tee +50, El. 801.0

603 6"x28' Type F ⊕

6"x45° Bend +43, El. 799.1

6"x6" Wye +45, El. 799.0 ±

6"x45° Bend +57, El. 797.70

6"x6" Wye +55, El. 797.60 ±

6" 605 +95 El. 798.11

S.W. LOOP S.R. 723

STA. 5+21.16 SW LOOP = STA. 50+73.36 M.L.

Connect Proposed 605 Shallow Underdrain to Existing 605 Shallow Underdrain As Per Plan, 42' Lt. & Rt. Sta. 50+00

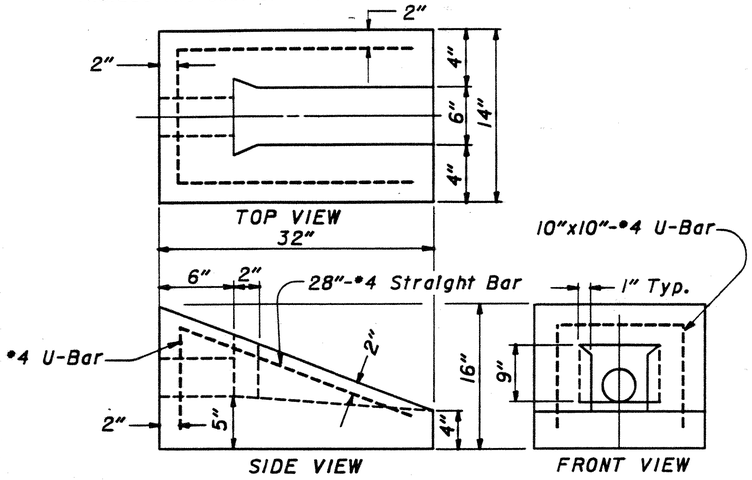
605 6"x138' Unclass. Pipe Underdrain

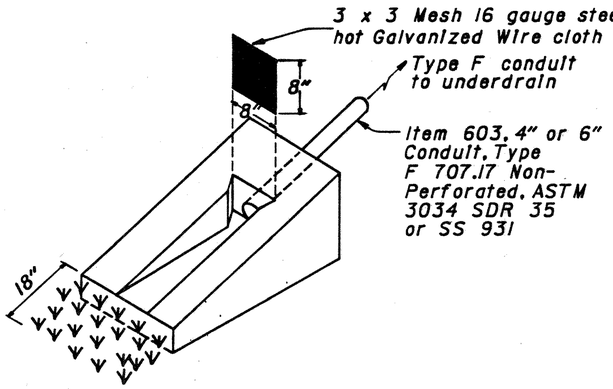
Catch Basin Reconst. to Grade, As Per Plan Exist. № 6 Catch Basin Depth of Reconst. 2.0' ± 74.5' Rt. Sta. 48+50 ℄ El. Exist. Grate 797.50

DRAINAGE DETAILS STA. 1010+00 - STA. 52+00

ITEM SPECIAL - PRECAST REINFORCED CONCRETE OUTLET

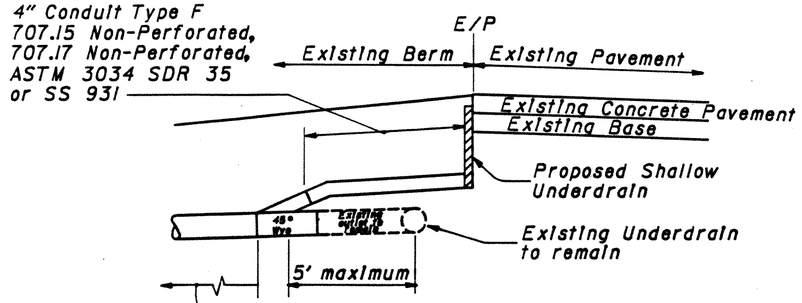
The Concrete outlet shall meet the requirements of Item 604 in the Construction & Materials Specifications. Payment shall be made on an Each basis. Payment shall include the cost of the Sod & Wire Cloth.



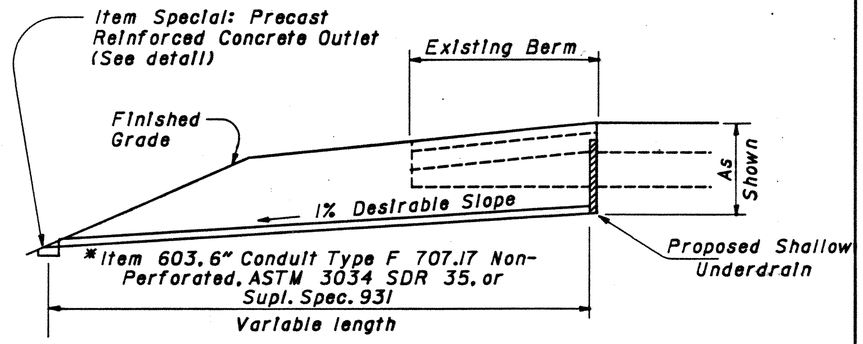


NOTE: The Sod shall be in accordance with Item 660 and staked at each corner approximately 3 inches in from the edge.

OUTLET DETAILS



NOTE: The cost of the 4" conduit Type F and necessary pipe bends and branches needed to connect the existing and proposed underdrains shall be included with the cost of the 6" conduit Type F beyond the existing underdrain.



NOTE: For underdrain outlets into catch basins the above Type F Conduit shall be used entirely between the underdrain & catch basin.

* If prefabricated edge drain is used then 4" Conduit shall be used for the outlet in lieu of 6" Conduit. The 4" Conduit shall be paid at the unit price bid for the 6" Conduit.

CALC. BY RJL DATE 12-15-89
CHECK. BY JWC DATE 12-18-89

GUE - 70 - 0.00

FHWA REGION	STATE	PROJECT		73/88
5	OHIO			

DESCRIPTION: The Item shall consist of furnishing and installing a pipe underdrain system or prefabricated edge drain system in accordance with the specifications, details as shown on the plans, and as directed by the Engineer.

MATERIALS: The underdrain shall be a pipe underdrain system per Item 605 or a prefabricated edge drain system meeting the following requirements. The prefabricated edge drain shall consist of a polymeric core with a minimum thickness of one inch wrapped in fabric meeting 712.09 Type A. The drain shall be flexible, rectangular in shape and of hollow construction. The core material shall be resistant to petroleum based chemicals, natural occuring soil chemicals, and road de-icing agents.

The core shall provide a minimum of 100 square inches unobstructed (one side only) drainage area per foot of width. Side walls of the core shall provide at least 5% open area to permit unobstructed flow through the filter and wall to the core.

The prefabricated edge drain shall have a minimum compressive strength of 6000 pounds per square foot with a maximum 20% compression in a parallel plate compression test (ASTM-D 695). The minimum (single side) core flow capacity shall be 10 gallons per minute per foot of width for a 0.1 gradient at 10 pounds per square inch bladder load per ASTM D 4716

In lieu of the above requirements the following products are acceptable prefabricated edge drains:
Hydraway Drain by Monsanto Company
PDS 30 by Prodrain Sytems
Strip Drain 100 by Contech Construction Products, Inc.

CONSTRUCTION: The prefabricated edge drain shall be installed in a trench as shown on the plans and in accordance with the manufacturer's recommendations. The trench shall be backfilled with the excavated trench material placed in two (2) layers and each layer compacted to a density of not less than 90% of the maximum dry weight density. The first layer of the backfill material shall be placed simultaneously with the trenching operation to hold the edge drain flush against the trench wall.

The prefabricated edge drain shall be spliced as required prior to placement in the trench, using material furnished by the manufacturer and in accordance with the manufacturer's directions. All material required for the splices will be supplied by the manufacturer, but any equipment required shall be furnished by the Contractor.

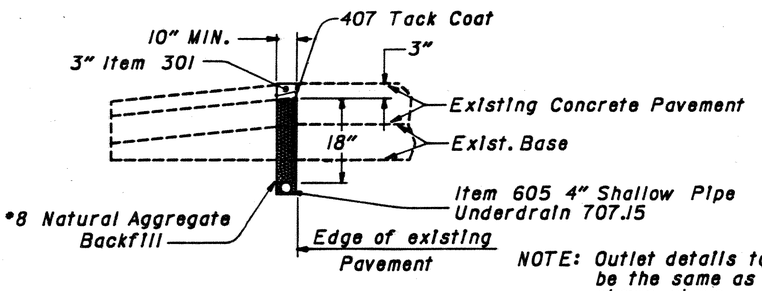
The underdrain outlets shall be placed in accordance with Item 603 as directed by the Engineer, using outlet fittings. The manufacturer shall supply outlet fittings which will make the transition between the prefabricated edge drain and the outlet pipe. Fittings shall be installed as recommended by the manufacturer.

The outlets for the underdrain system shall be constructed as soon as possible after placement of the underdrain. The outlets on crack & seat projects shall be in place and functional prior to cracking and seating the existing pavement.

METHOD OF MEASUREMENT: Completed and accepted underdrains will be measured by the linear foot in place.

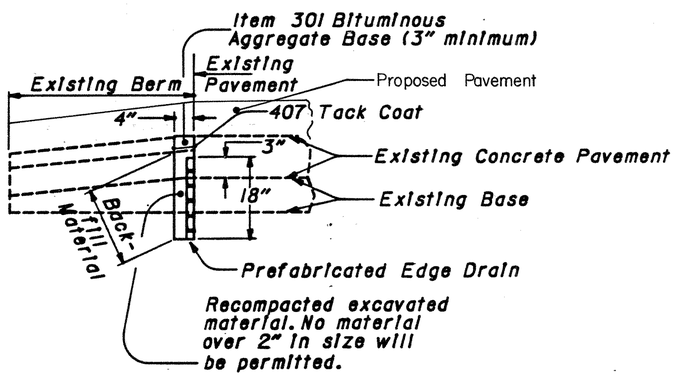
BASIS OF PAYMENT: Work completed and accepted under this item and measured will be paid for at the contract unit price bid per linear foot for Item 605 - Shallow Underdrain, as per plan. Which price shall be full compensation for excavation and backfill; for furnishing materials, including material for splices; outlet fittings and Item 301; for all labor, tools equipment, and incidentals necessary to complete the work.

PIPE UNDERDRAIN SYSTEM



NOTE: Outlet details to be the same as shown above.

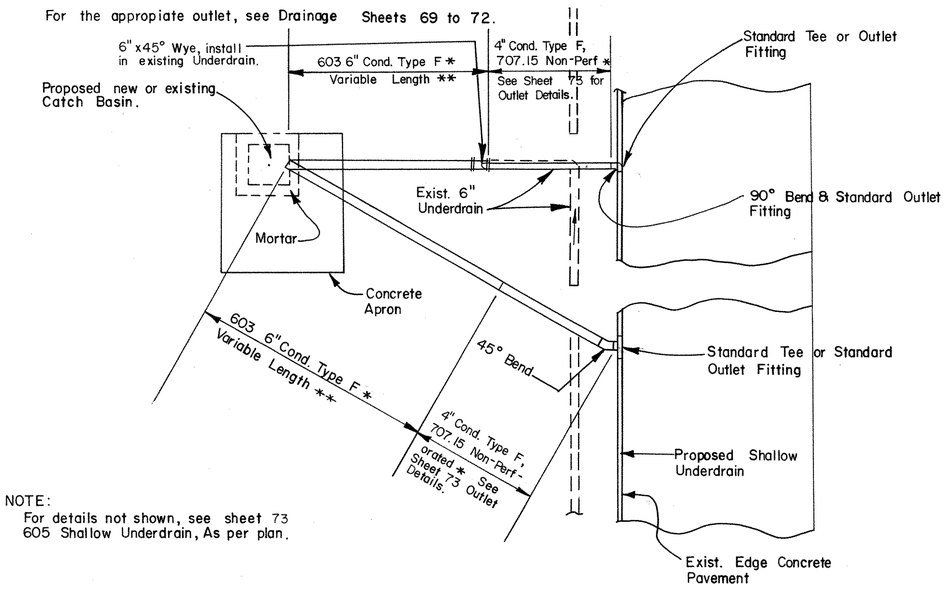
PREFABRICATED EDGE DRAIN SYSTEM



ITEM 605-SHALLOW UNDERDRAIN, AS PER PLAN

DATE 4-7-89

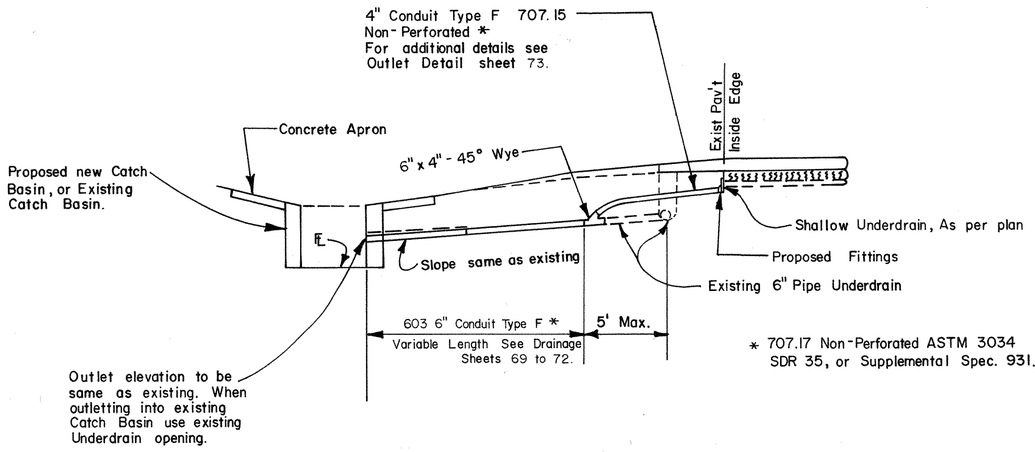
DRAINAGE DETAILS



NOTE:
For details not shown, see sheet 73
605 Shallow Underdrain, As per plan.

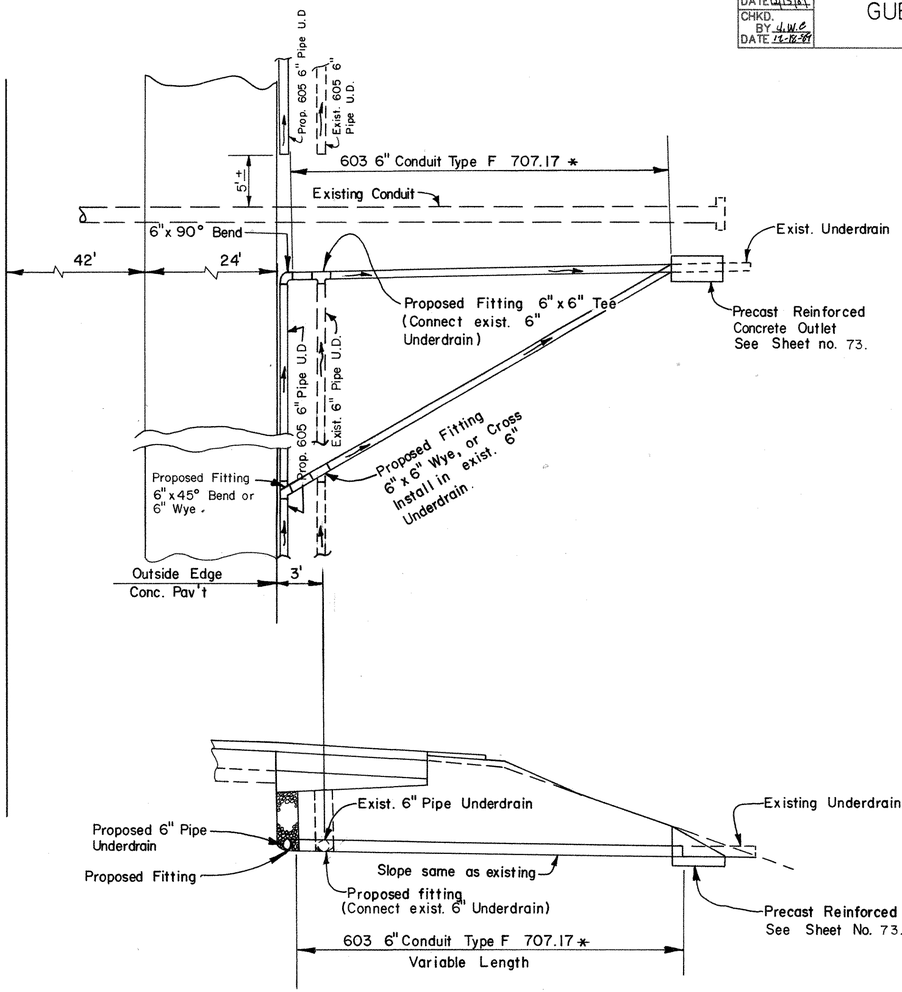
** See Drainage Sheets 69 to 72.

* 707.17 Non-Perforated ASTM 3034 SDR 35, or Supplemental Spec. 931.



* 707.17 Non-Perforated ASTM 3034 SDR 35, or Supplemental Spec. 931.

DETAIL A

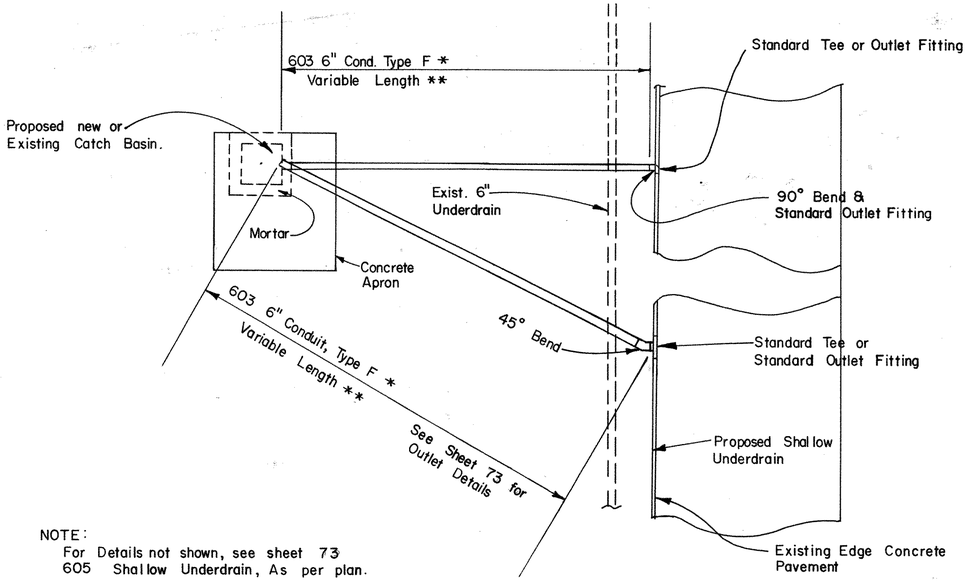


DETAIL B

* Non-Perforated ASTM 3034 SDR 35, or Supplemental Spec. 931.

DRAINAGE DETAILS

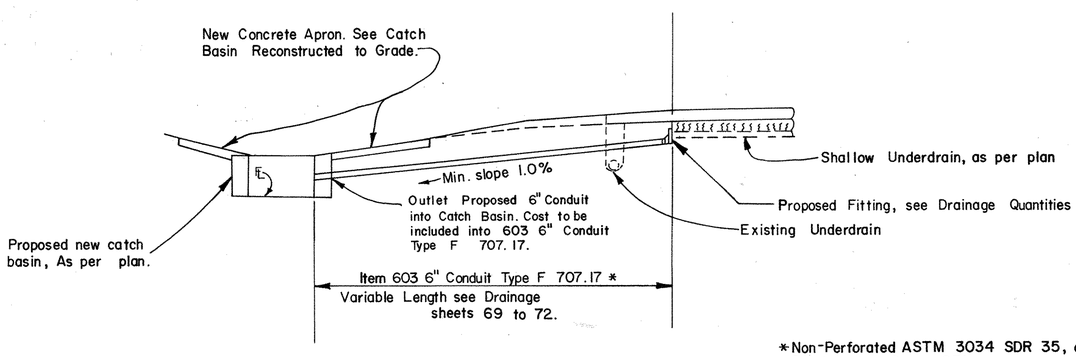
For the appropiate outlet, see Drainage Sheets 69 to 72.



NOTE:
For Details not shown, see sheet 73
605 Shallow Underdrain, As per plan.

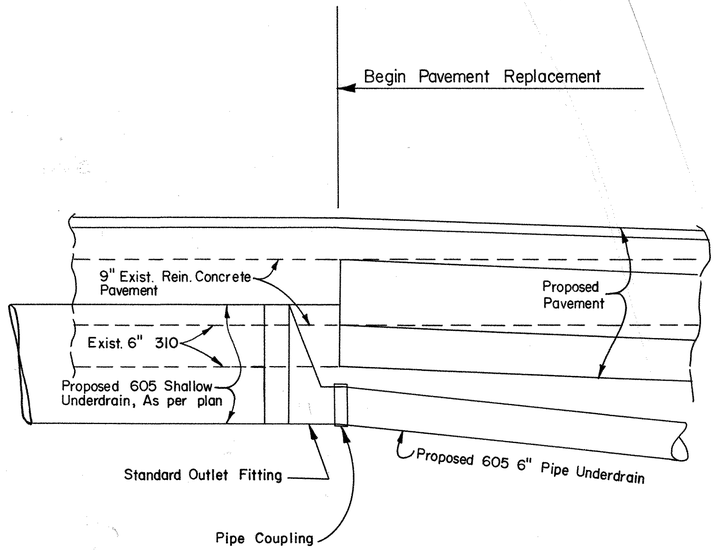
** See Drainage Sheets 69 to 72.

* 707.17 Non-Perforated ASTM 3034 SDR 35, or Supplemental Spec. 931.



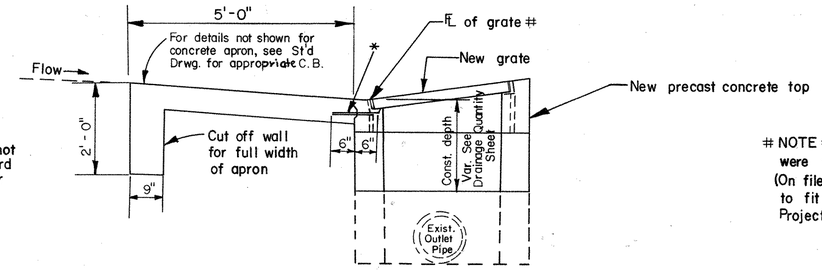
*Non-Perforated ASTM 3034 SDR 35, or Supplemental Spec. 931.

DETAIL C



DETAIL D

* 5/8" ϕ x 12" Dowel bars as per 709.01, 709.03, or 709.05 in inserts or in holes drilled as per item 510. The dowel bars shall be at 18" spacing.



NOTE: For details not shown see Standard Drawing C.B. 5 or C.B. 8

NOTE: The ℄ elevation of the grate as shown were taken from the Original Construction Plans (On file in District Office) and may be adjusted to fit field conditions as determined by the Project Engineer.

CATCH BASINS RECONSTRUCTED TO GRADE, AS PER PLAN

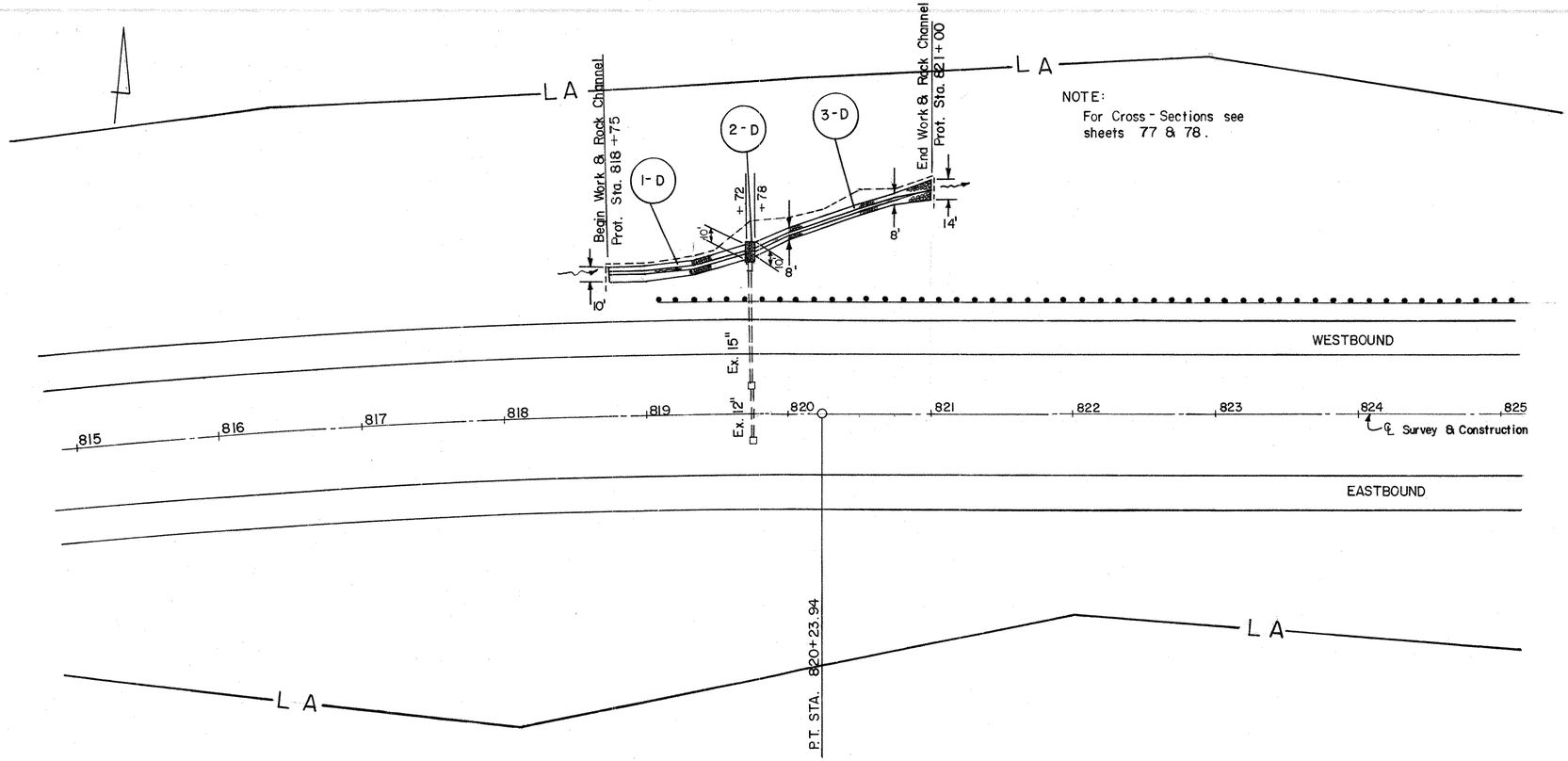
The requirements of item 604 shall govern the reconstruction of the existing catch basin. The work shall include the removal of existing walls down to a depth as shown on the Detail sheets or to a depth of wall failure as determined by the Project Engineer, also, the removal and disposal of the existing concrete apron, existing grate and concrete top and the subsequent replacement of the same using new grates, precast concrete tops and replacement of the concrete apron as shown here and in the Standard Drawing for the pertinent catch basin.

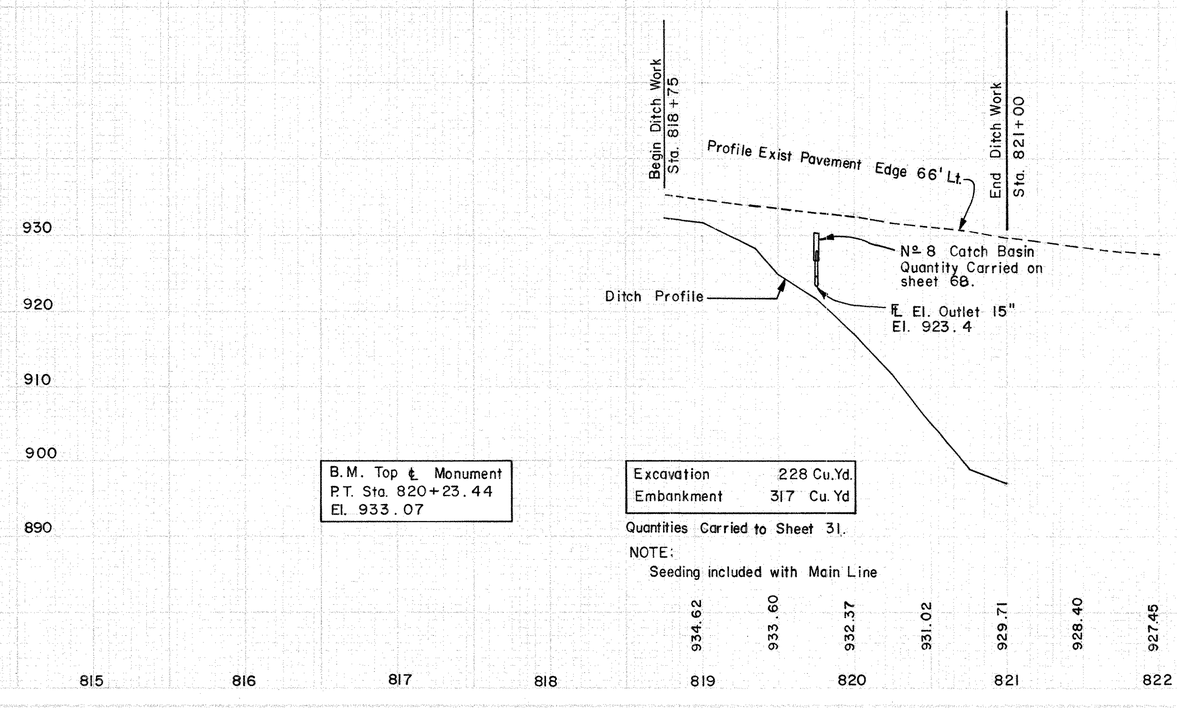
Payment for the above work shall be included in the price bid for each catch basin under item 604 Catch Basin Reconstructed to Grade, as per plan, and shall constitute full Compensation for furnishing all material, labor, tools, equipment, and all incidentals.

CALC. BY [illegible] DATE 12/15/99
CHKD. BY J.W.G DATE 12-16-99

GUE-70-0.00

F.H.W.A. Region	STATE	PROJECT		76 / 88
5	OHIO			





B.M. Top ℄ Monument
P.T. Sta. 820+23.44
El. 933.07

Excavation	228 Cu.Yd.
Embankment	317 Cu. Yd

Quantities Carried to Sheet 31.

NOTE:
Seeding included with Main Line

601 ROCK CHANNEL PROTECTION TYPE B W/FILTER

1-D 818+75 to 819+72 = 98' Scaled x 10.45' Avg. width x 2' ÷ 27 = 75.9 C.Y.

2-D 819+72 to 819+78 = 6' Scaled x 14.65' Avg. width x 2.5' ÷ 27 = 8 C.Y.

3-D 819+78 to 820+00 = 26' Scaled x 9.6' Avg. width x 2' ÷ 27 = 18.5 C.Y.
820+00 to 820+75 = 75' Scaled x 8.7' Avg. width x 2' ÷ 27 = 50.3 C.Y.
820+75 to 821+00 = 26' Scaled x 11.4' Avg. width x 2' ÷ 27 = 22.0 C.Y.
90.8 C.Y.

ESTIMATED QUANTITIES

REF NO	STATION TO STATION	SIDE	601 Rock Channel Protection Type B* Cu. Yd.	603 15" Cond. Type B 706.02 Lin. Ft.	602 Concrete Masonry Cu. Yd.	202 Pipe Removed 24" & Under Lin. Ft.
1-D	818+75 to 819+72	Lt.	76	4	0.25	6
2-D	819+75 to 819+78	Lt	8			
3-D	819+78 to 821+00		91			
TOTALS			175	4	0.25	6

* With Filter

SEE SHEET NO 77 77 77-78

Quantities Carried to sheet 68

SLIP REPAIR Sta. 818+75 – Sta. 821+00

CALC BY [illegible] DATE 12-15-87
CHKD BY J.W.C DATE 12-18-87

GUE - 70 - 0.00

OHIO
FHWA REGION 5

77
88

END AREA		VOLUME	
CUT	FILL	CUT	FILL
TOTAL 228	317	0	0

SEEDING
END WIDTH | SQ. YDS.

VOLUME CUT | FILL

END AREA CUT | FILL

820+23.44
℄ El. 931.70
66' Lt. Edge of Exist. Conc. Pav't
C-22
F-99
1½"/Ft
2:1
911.5
133.0'
8'
12'
2:1
C-14
Rock Channel Prot. Type B with Filter 2.0' Thick

820+00
℄ El. 932.37
66' Lt.
C-44
F-96
1½"/Ft
2:1
917.0
125.0
8'
2'
2:1
Rock Channel Prot. Type B with Filter 2.5' Thick

819+75
℄ El. 932.99
66' Lt.
Conc. Collar See Std. Drwg. MC-4
C-21
Exist. 15" Conc. El. 923.7
15" x 4' Conduit, Type B
HW-4B Headwall
F-16
921.9
113.0
14'
℄ El. 923.4
3:1
F-49
1½"/Ft
Rock Channel Prot. Type B with Filter 2.5' Thick

819+55 Edge of Slip

819+50
℄ El. 933.60
66' Lt.
C-45
3:1
925.0
106.0'
10'
12'
3:1
Rock Channel Prot. Type B with Filter 2.0' Thick

819+35
℄ El. 933.93
66' Lt.
81' Lt.
C-17
4:1
928.3
102.0'
10'
12'
3:1
C-2
Rock Channel Prot. Type B with Filter 2.0' Thick

819+00
℄ El. 934.62
66' Lt. Edge of Exist. Conc. Pav't
90' Lt.
C-7
931.7
100.0'
10'
12'
Begin Rock Channel Prot., Type B with Filter, Sta. 818+75
Rock Channel Prot. Type B with Filter 2.0' Thick

Carried to Sheet 76.

SLIP REPAIR Sta. 819+00 to Sta. 820+23.44

CALC. BY RGL DATE 12/15/89
CHKD. BY W.W.C DATE 12-18-89

GUE - 70 - 0.00

OHIO
FHWA REGION 5

78
88

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
4	10		
8	22		
37	38		
61	71		

821+50
℄ El. 928.40

821+25
℄ El. 929.02

821+00
℄ El. 929.71

66' Lt. Edge of Exist. Conc. Pvmt

Rock Channel Prot. Type B with Filter 2.0' Thick

14'

820+75
℄ El. 930.37

66'

F-22
1½"/Ft
C-8
8'
2'
2:1
899.0
150.0

820+50
℄ El. 931.02

66' Lt. Edge of Exist. Conc. Pvmt

F-53
1½"/Ft
C-8
8'
2'
2:1
905.0
142.0

Rock Channel Prot. Type B with Filter 2.0' Thick

SLIP REPAIR Sta. 820+50 to Sta. 821+25

BRIDGE NOTES

REFERENCE

DETAILED DRAWINGS OF THE EXISTING STRUCTURE MAY BE INSPECTED IN THE DISTRICT 5 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, JACKSONTOWN, OHIO.

REMOVED MATERIALS

ALL REMOVED MATERIALS EXCEPT AS NOTED ELSEWHERE IN THE PLANS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE JOB SITE.

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 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.

AREAS OF WORK

THE GENERAL AREAS OF WORK AS INDICATED ON THE PLAN AND PROFILE AND DETAIL SHEETS ARE:

REMOVALS:

1. REMOVE ASPHALT WEARING COURSE, BRIDGE RAILS, PARAPETS AND PORTIONS OF EXISTING DECK

CONSTRUCTION:

1. INSTALL SAFETY PARAPETS
2. PATCH CONCRETE DECKS
3. OVERLAY BRIDGE DECKS

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 HIS COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ADDITIONAL 600 LBS. IS INCLUDED IN ITEM 509 FOR THIS PURPOSE.

REMOVAL OF CONCRETE PARAPETS AND DECK EDGES

CONCRETE REMOVALS OF CURBS, PARAPETS & EDGES SHALL BE DONE BY THE USE OF 40 TO 65 LB. CLASS JACK HAMMERS ONLY. NO OTHER METHOD SHALL BE USED UNLESS APPROVED BY THE DISTRICT 5 CONSTRUCTION ENGINEER.

ESTIMATED QUANTITIES

AN ESTIMATED AMOUNT OF THE FOLLOWING QUANTITIES HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR BIDDING PURPOSES, BUT FINAL QUANTITIES SHALL BE DETERMINED BY ACTUAL FIELD MEASUREMENTS AT THE COMPLETION OF THE WORK.

BRIDGE NUMBERS

	GUE-70 0127L	GUE-70 0127R	GUE-70 0250L	GUE-70 0250R	TOTAL	UNIT
ITEM 850 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS)	16	14	14	14	58	CU.YD.

STANDARD DRAWINGS & SUPPLEMENTAL SPECIFICATIONS

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

EXJ-4-87	DATED	1-5-89
BR-1	DATED	5-29-79
GR-1	DATED	1-11-85
GR-3	DATED	2-22-90
GR-2B	DATED	2-5-82
SD-1-69, (SHTS. 1-3)	DATED	6-12-69
GR-7	DATED	2-5-82
MC-9A	DATED	1-11-85

AND TO SUPPLEMENTAL SPECIFICATIONS:

836	DATED	11-12-85
850	DATED	5-31-88

BRIDGE DECK CONDITION SURVEY

BRIDGE NO.	DECK AREA SQ.YD.	SURVEY METHOD	SURVEY DATE
GUE-70-0127L	556	CORED	5-89
GUE-70-0127R	451	CORED	5-89
GUE-70-0250L	474	CORED	5-89
GUE-70-0250R	474	CORED	5-89

NOTIFICATION OF DISTRICT BRIDGE ENGINEER

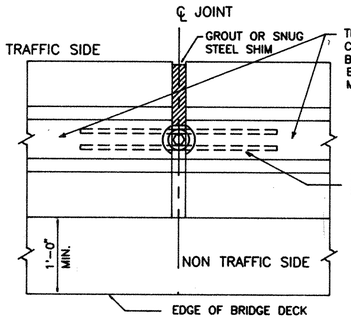
THE CONTRACTOR SHALL NOTIFY THE DISTRICT BRIDGE ENGINEER AT LEAST TWO WORKING DAYS IN ADVANCE OF THE BEGINNING OF THE FIRST CONCRETE BRIDGE DECK SURFACE PREPARATION.

BRIDGE SUMMARY

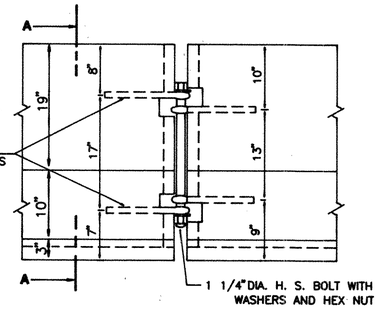
CALC. BY	DATE	CHKD. BY	DATE	GUE-70-0.00	OHIO	FHWA REGION 5	80/88

ITEM	SHEET NUMBER																BRIDGE NUMBER				ITEM	ITEM EXT.	QUANT.	UNIT	DESCRIPTION
			79	81	82	85	87										GUE-70 0127L	GUE-70 0127R	GUE-70 0250L	GUE-70 0250R					
202					118												33	27	29	29	202	11800	118	CU.YD.	PORTIONS OF STRUCTURES REMOVED, SUPERSTRUCTURE
202					1955												556	451	474	474	202	23500	1955	SQ.YD.	WEARING COURSE REMOVED
509							15,681										4337	3548	3898	3898	509	15800	15,681	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60
510						1448											400	328	360	360	510	11100	1448	EACH	DOWEL HOLES
511					93												26	21	23	23	511	34400	93	CU.YD.	CLASS S CONCRETE, SUPERSTRUCTURE
SPEC.						1261											342	291	314	314	SPEC.	512 G7502	1261	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
850					2007												570	463	487	487	850	12000	2007	SQ.YD.	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (1¾" THICK)
850			58														16	14	14	14	850	20000	58	CU.YD.	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS)
850					LUMP												LUMP				850	40000	LUMP		TEST SLAB

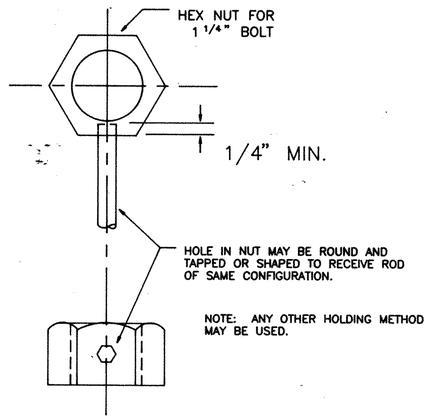
MODIFIED BARRIER



PLAN AT JOINT



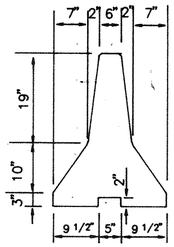
ELEVATION AT JOINT



EXAMPLE OF METHOD FOR HOLDING NUT DURNING THREADED ROD INSTALLATION

ITEM 622 – TEMPORARY CONCRETE BARRIER, BRIDGE MOUNTED, AS PER PLAN

ITEM 622 TEMPORARY CONCRETE BARRIER, BRIDGE MOUNTED, AS PER PLAN HAS BEEN PROVIDED FOR MAINTAINING TRAFFIC AS SHOWN ON SHEET 16. THE QUANTITIES SHOWN ARE FOR ONE PHASE OF MAINTAINING TRAFFIC ONLY. THE CONTRACTOR SHALL UTILIZE THE SAME BARRIERS IN ALL PHASES OF CONSTRUCTION AND INSTALL THE BARRIER AS PER ST'D. DRAWING MC-9A. MOVEMENT OF THE BARRIERS BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. CONNECTIONS OF THE PARAPETS SHALL BE DONE BY USING 1¼" DIA. HIGH STRENGTH BOLTS. FLAGMEN SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIERS IS COMPLETE AND TRAFFIC IS MAINTAINED. ANCHORING OF ALL TEMPORARY CONCRETE BARRIER ON THE BRIDGE SHALL NOT BE REQUIRED. AFTER THE PROJECT HAS BEEN COMPLETED THE BARRIER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE REMOVED BY HIM. ALL COSTS INVOLVED IN REMOVING AND RE-ERECTING THE BARRIERS FOR MAINTAINING TRAFFIC SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 622 TEMPORARY CONCRETE BARRIER, BRIDGE MOUNTED, AS PER PLAN 250 LIN. FT. QUANTITIES SHOWN ARE CARRIED TO SHEET 16.



SECTION A–A

BRIDGE DECK SURFACE PREPARATION:

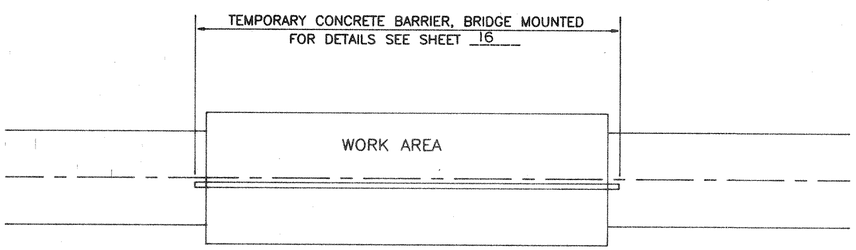
THE PROCEDURE WHICH MUST BE FOLLOWED WHEN INSTALLING ALL TEMPORARY PRECAST CONCRETE BARRIERS, ON OHIO BRIDGE DECKS, ARE GIVEN BELOW.

A. THE BRIDGE DECK SURFACE AREA ON WHICH THE PRECAST CONCRETE BARRIERS WILL REST SHALL BE CLEARED OF ALL LOOSE SAND, GRAVEL, DIRT AND DEBRIS.

B: ANY IRREGULARITIES IN THE BRIDGE DECK AREA, UNLESS JUDGED BY THE ENGINEER TO BE INCONSEQUENTIAL, SHALL BE LEVELED WITH GROUT AND/OR ASPHALT.

C. ASPHALT ROLL ROOFING SHALL BE PLACED ON THOSE BRIDGE DECK AREAS AS JUDGED BY THE ENGINEER, TO HAVE A SURFACE ROUGHNESS WHICH WOULD INHIBIT FRICTION CONTACT BETWEEN BARRIER SEGMENTS AND DECK.

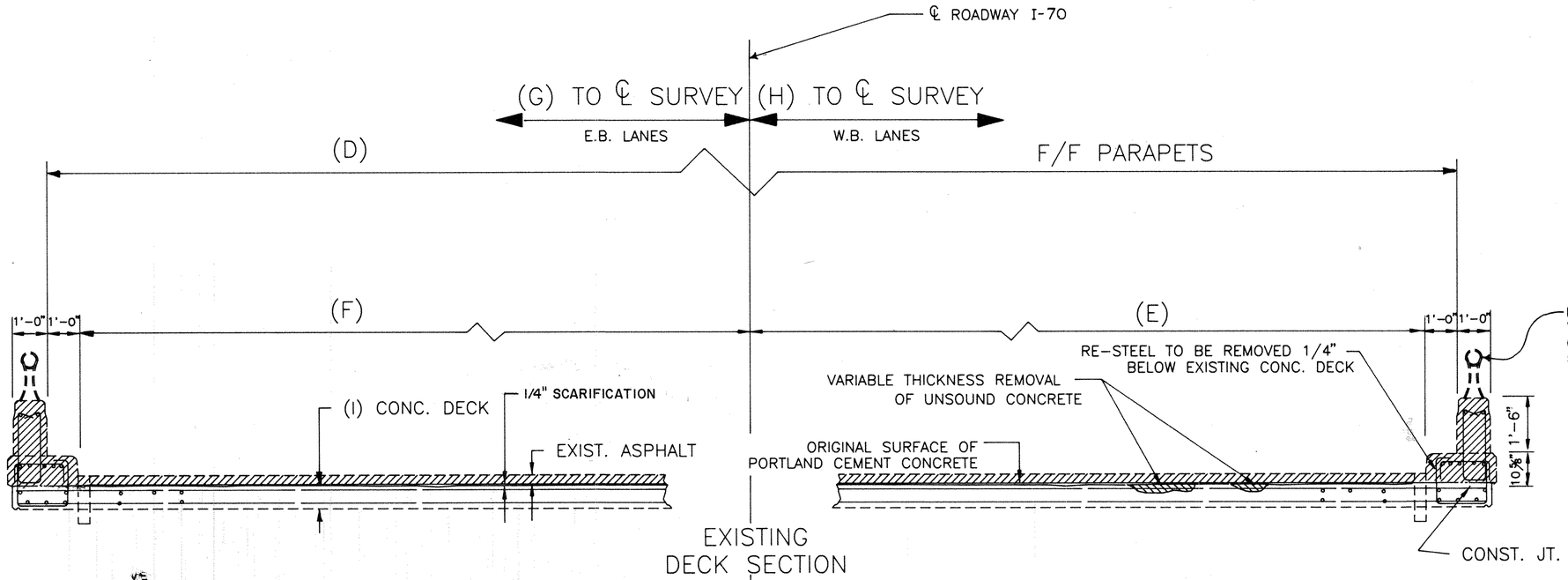
THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT IN ITEM 622 TEMPORARY CONCRETE BARRIER, BRIDGE MOUNTED.



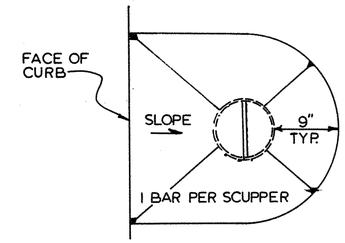
BARRIER DETAIL

TYPICAL DETAILS

CALC. BY BSD DATE 6-5-89	GUE-70-0.00	OHIO	82
CHKD. BY CAN DATE 6-6-89		FHWA REGION 5	88



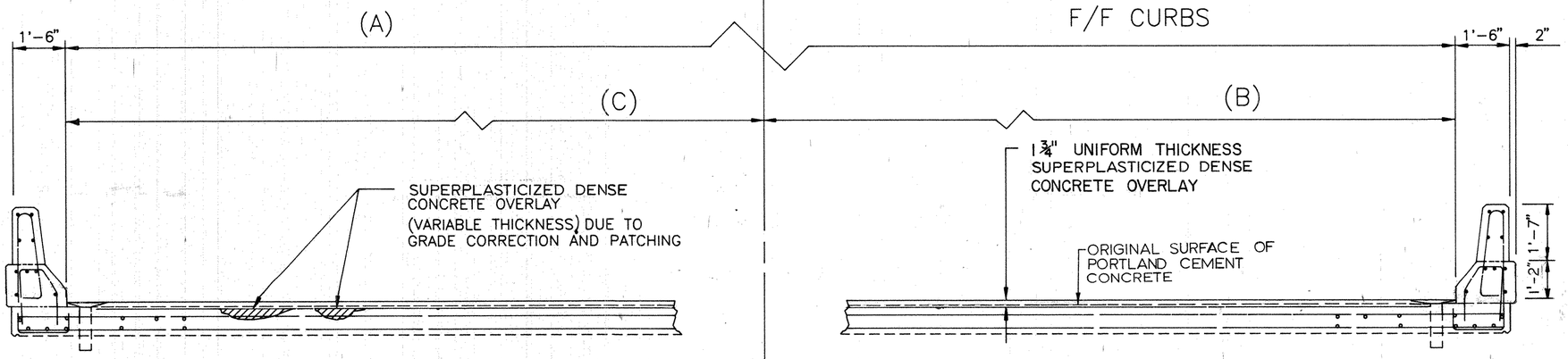
EXISTING DECK SECTION



SLOPING OF CONCRETE AT SCUPPERS

NOTE: DECK RE-STEEL SHALL NOT BE DISTURBED

REMOVALS



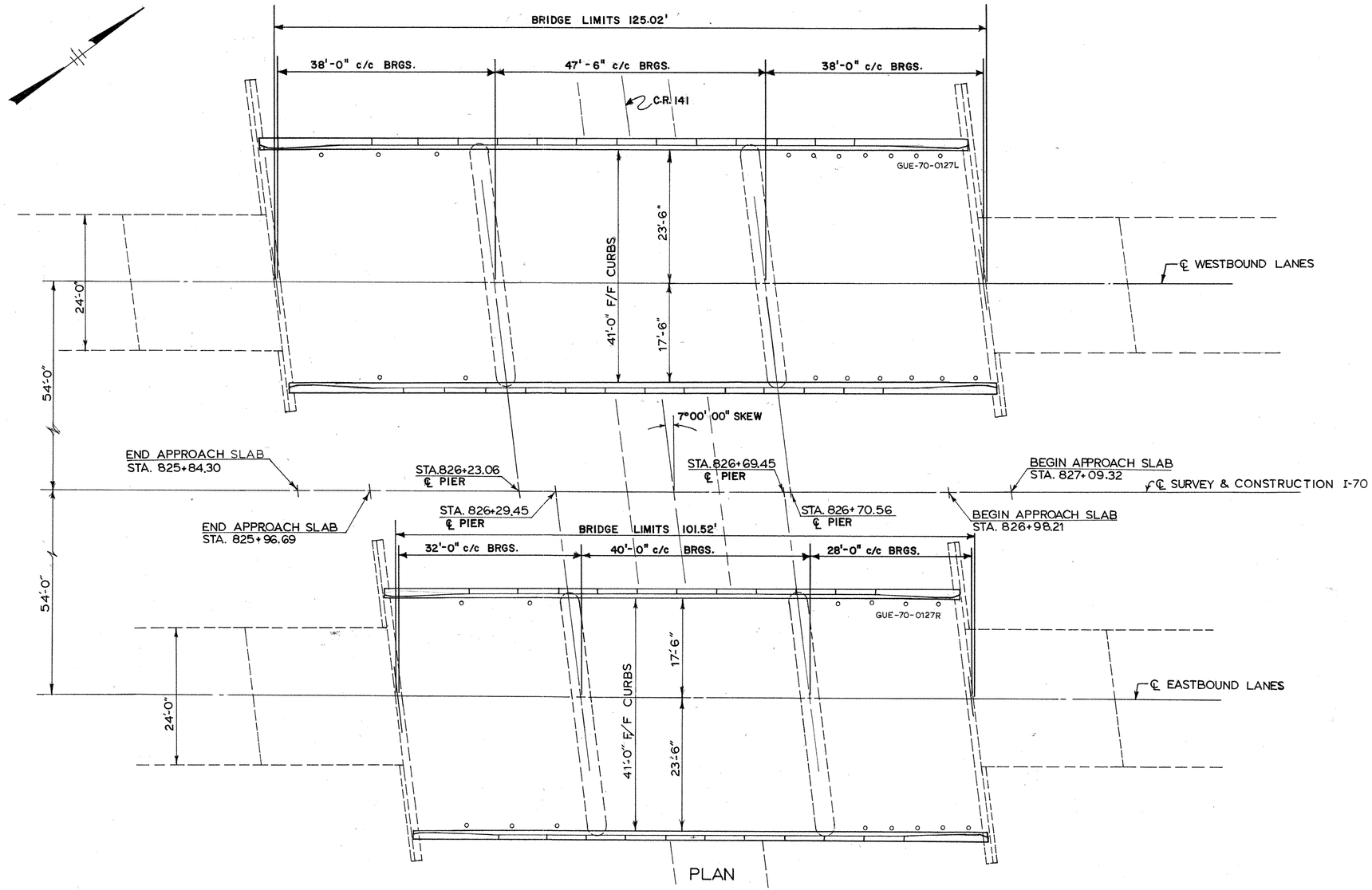
PROPOSED DECK SECTION

(DIM.)	BRIDGE NUMBERS							
	GUE-70 0127 L	GUE-70 0127 R	GUE-70 0250 L	GUE-70 0250 R				
(A)	41'-0"	41'-0"	39'-0"	39'-0"				
(B)	17'-6"	23'-6"	17'-6"	21'-6"				
(C)	23'-6"	17'-6"	21'-6"	17'-6"				
(D)	42'-0"	42'-0"	40'-0"	40'-0"				
(E)	17'-0"	23'-0"	17'-0"	21'-0"				
(F)	23'-0"	17'-0"	21'-0"	17'-0"				
(G)	——	54'-0"	——	54'-0"				
(H)	54'-0"	——	54'-0"	——				
(I)	1'-8½"	1'-8½"	1'-6¾"	1'-6¾"				
℄	125.02'	101.52'	112.23'	112.23'				

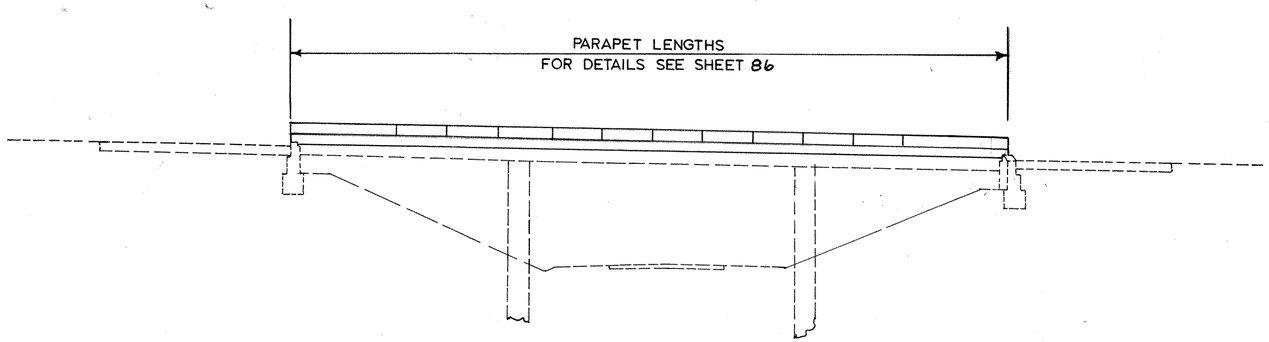
DESCRIPTION	BRIDGE NUMBERS								
BRIDGE NUMBER	GUE 70 0127L	GUE 70 0127R	GUE 70 0250L	GUE 70 0250R					UNIT
ITEM 202-PORTIONS OF STRUCTURES REMOVED, SUPERSTRUCTURE	33	27	29	29					CU.YD.
ITEM 202-WEARING COURSE REMOVED	556	451	474	474					SQ.YD.
ITEM 511-CLASS S CONCRETE, SUPERSTRUCTURE	26	21	23	23					CU.YD.
ITEM 850-SUPERPLASTICIZED DENSE CONCRETE OVERLAY (1¾" THICK)	570	463	487	487					SQ.YD.
ITEM 850 -TEST SLAB	LUMP								LUMP

BGTRASEC STD. 10/11/88

TRANSVERSE SECTIONS



PLAN



ELEVATION

EXISTING STRUCTURES

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE PIERS AND CAPPED PILE ABUTMENTS.

SPANS: GUE-70-0127L: 38'-0", 47'-6", 38'-0", c/c BEARINGS
GUE-70-0127R: 32'-0", 40'-0", 28'-0", c/c BEARINGS

ROADWAY: 40'-0" F/F CURBS

LOAD FREQUENCY: C.F. 2000 (57)

WEARING SURFACE: 1" MONOLITHIC CONCRETE AND 2 ½" ASPHALT

SKEW: 7°00'00" R.F.

APPROACH SLABS: AS-1-54, 25' LONG

ALIGNMENT: TANGENT

REHABILITATED STRUCTURES

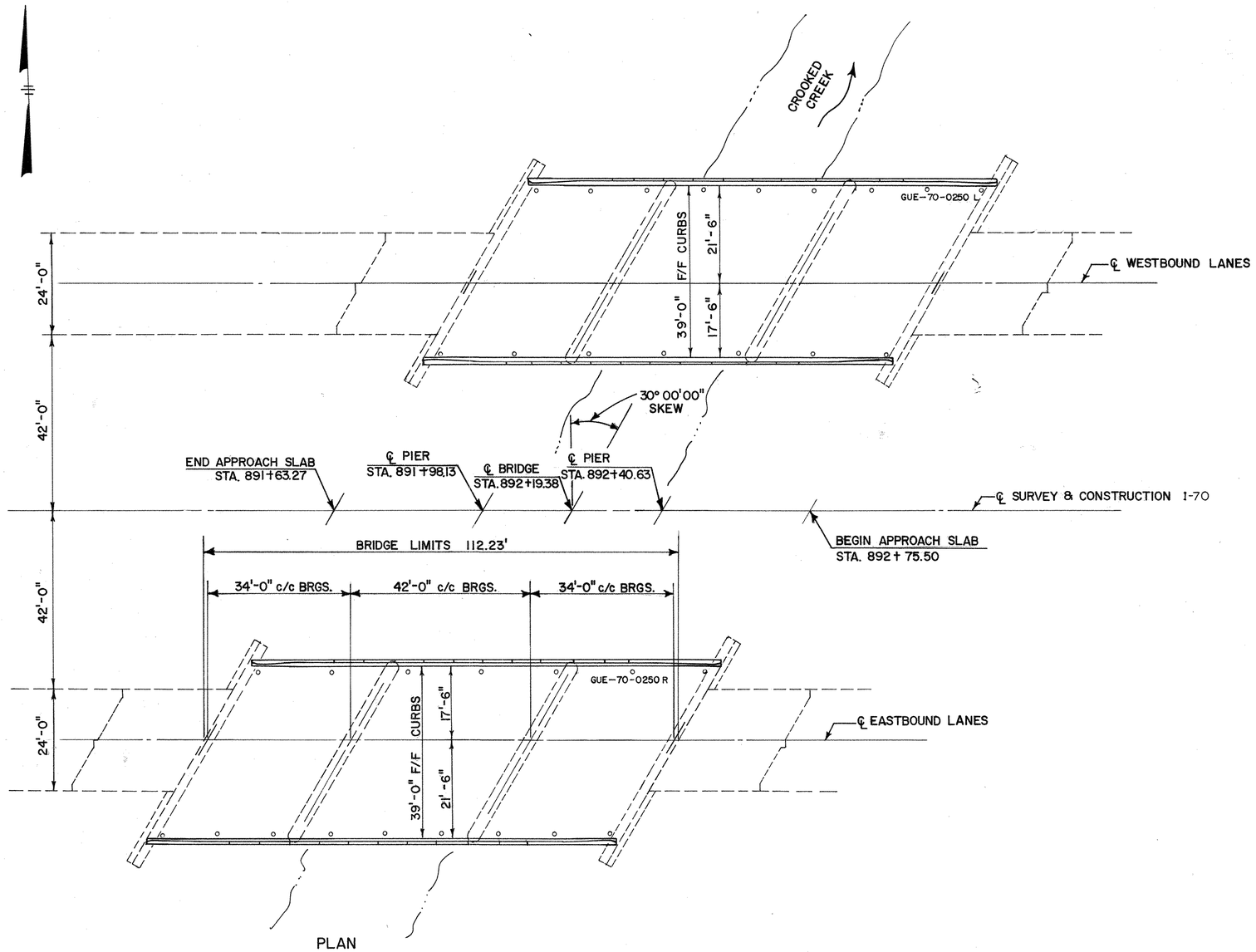
ROADWAY: 41'-0" F/F CURBS

BRIDGE RAILING: DEFLECTOR PARAPET TYPE

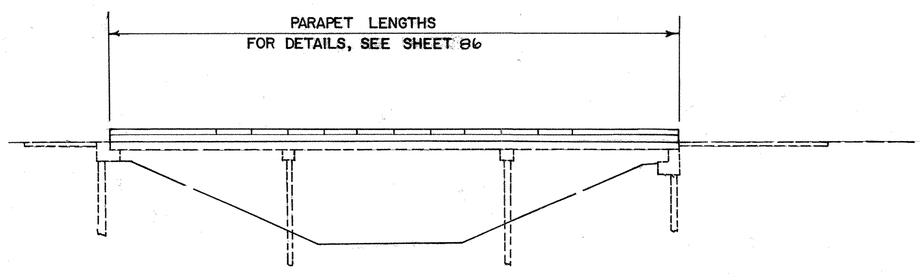
WEARING SURFACE: SUPERPLASTICIZED DENSE CONCRETE OVERLAY, 1¾" THICK

GUE-70-0127 L/R
GENERAL PLAN AND ELEVATION

CALC. BY DATE 9-5-89
CHKD. BY DATE 10-10-89
GUE-70-0.00
OHIO
FHWA REGION 5
84
88



PLAN



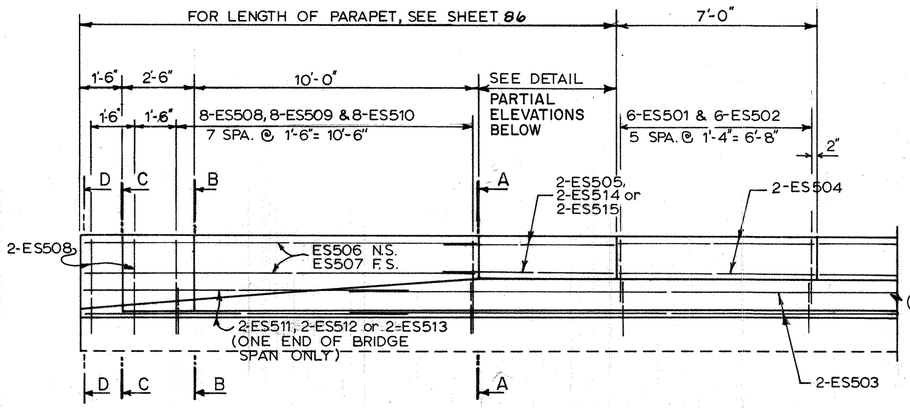
ELEVATION

EXISTING STRUCTURES

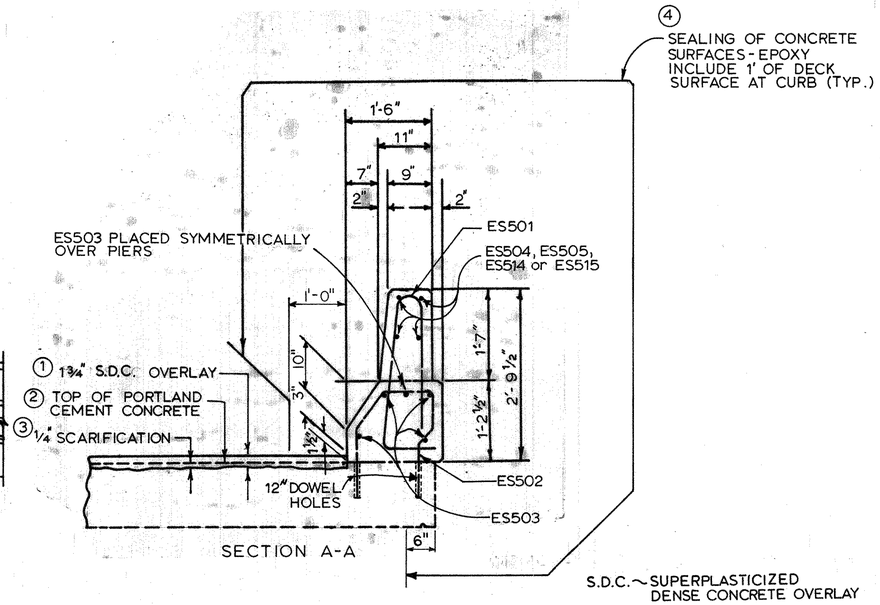
TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH CAPPED PILE SUBSTRUCTURE
SPANS: 34'-0", 42'-6", 34'-0" c/c BEARINGS
ROADWAY: 38'-0" F/F CURBS
LOAD FREQUENCY: C.F. 2000 (57)
WEARING SURFACE: 1" MONOLITHIC CONCRETE AND 4" ASPHALT
SKEW: 30°00'00" L.F.
APPROACH SLABS: AS-1-54, 25' LONG
ALIGNMENT: TANGENT

REHABILITATED STRUCTURES

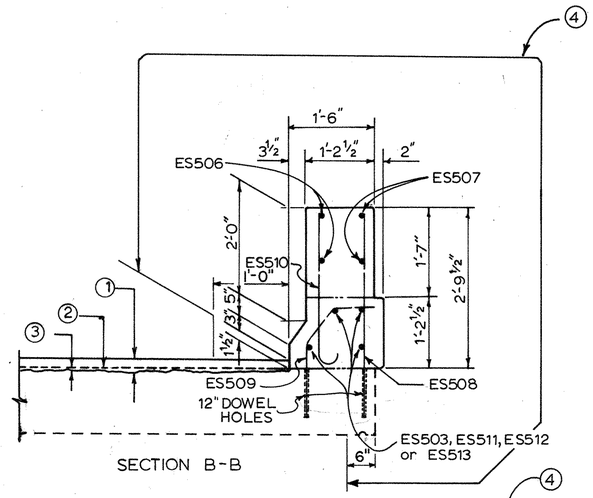
ROADWAY: 39'-0" F/F CURBS
BRIDGE RAILING: DEFLECTOR PARAPET TYPE
WEARING SURFACE: SUPERPLASTICIZED DENSE OVERLAY, 1¾" THICK



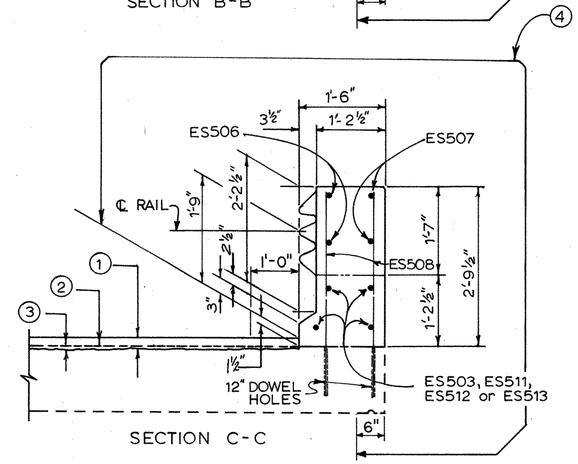
ELEVATION - BRIDGE RAILING TRANSITION



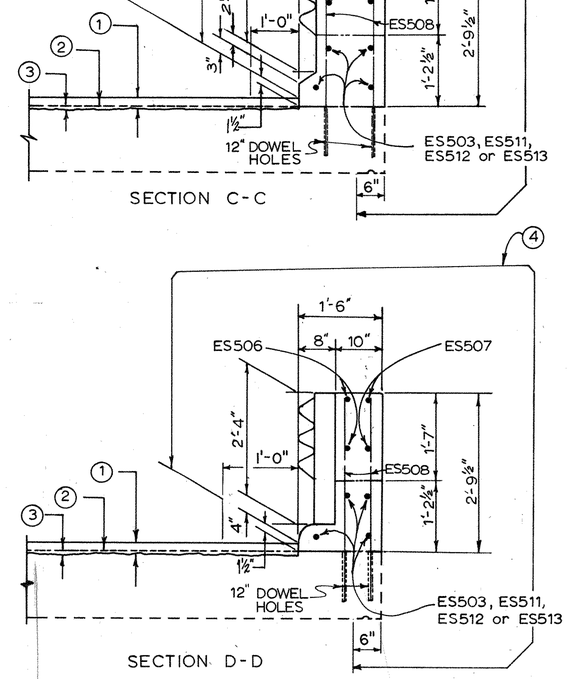
SECTION A-A



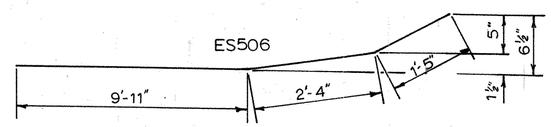
SECTION B-B

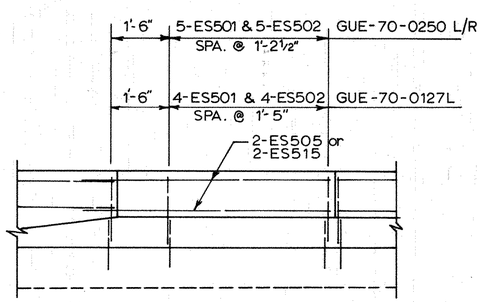


SECTION C-C

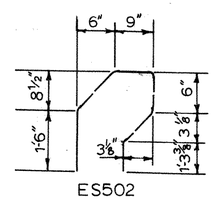


SECTION D-D

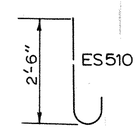


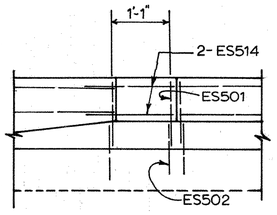


PARTIAL RAILING ELEVATION
GUE-70-0250 L/R & GUE-70-0127 L

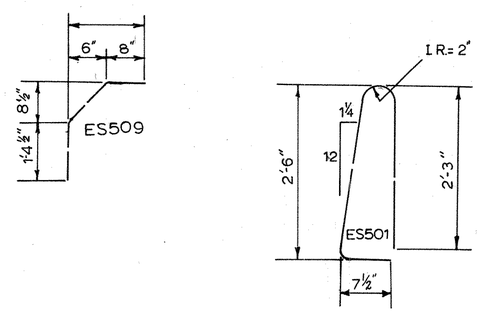


ES502





PARTIAL RAILING ELEVATION
GUE-70-0127 R

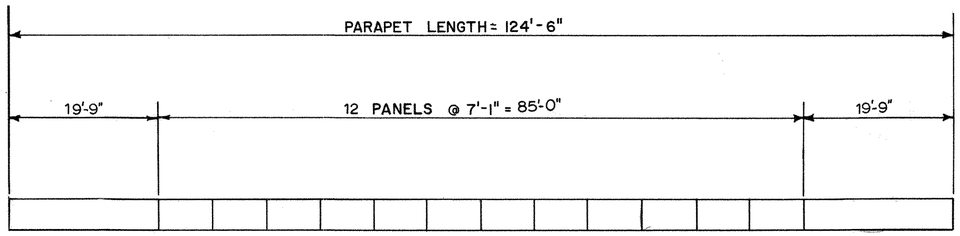


BENDING DIAGRAM

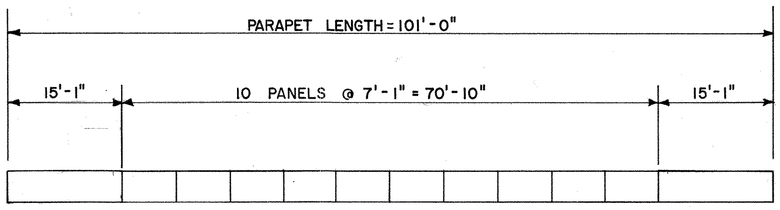
DESCRIPTION	BRIDGE NUMBER GUE 70 0127L	GUE 70 0127R	GUE 70 0250L	GUE 70 0250R	UNIT
ITEM 510 DOWEL HOLES	400	328	360	360	EA.
ITEM SPECIAL SEALING OF CONCRETE SURFACES (EPOXY)	342	291	314	314	SQ. YD.

PARAPET DETAILS

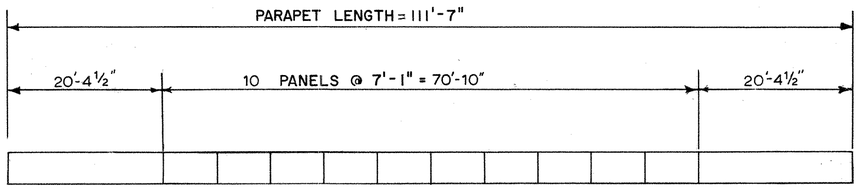
CALC. BY RSD DATE 9-5-89	GUE-70-0.00	OHIO
CHKD. BY CJW DATE 12-20-89		FHWA REGION 5



GUE - 70 - 0127 L



GUE - 70 - 0127 R



GUE - 70 - 0250 L/R

PARAPET DETAILS

CALC. BY CAW DATE 10-10-89
CHKD. BY BSD DATE 9-1-89
GUE-70-0.00
OHIO
FHWA REGION 5
87/88

EPOXY COATED REINFORCING STEEL - PARAPETS

GUE-70-0127L

MARK	No. REQ'D	LENGTH	SHAPE	WEIGHT
ES501	160	5'-5"	BT.	904
ES502	160	5'-0"	BT.	834
ES503	36	30'-0"	ST.	1126
ES504	96	6'-8"	ST.	668
ES505	16	7'-3"	ST.	121
ES506	8	13'-8"	BT.	114
ES507	8	13'-8"	ST.	114
ES508	48	3'-7½"	ST.	181
ES509	32	2'-10½"	BT.	96
ES510	32	3'-1"	BT.	103
ES511	8	9'-1"	ST.	76
TOTALS				4337

GUE-70-0127R

MARK	No. REQ'D	LENGTH	SHAPE	WEIGHT
ES501	124	5'-5"	BT.	701
ES502	124	5'-0"	BT.	647
ES503	28	30'-0"	ST.	876
ES504	80	6'-8"	ST.	556
ES506	8	13'-8"	BT.	114
ES507	8	13'-8"	ST.	114
ES508	48	3'-7½"	ST.	181
ES509	32	2'-10½"	BT.	96
ES510	32	3'-1"	BT.	103
ES512	8	14'-0"	ST.	117
ES514	16	2'-7"	ST.	43
TOTALS				3548

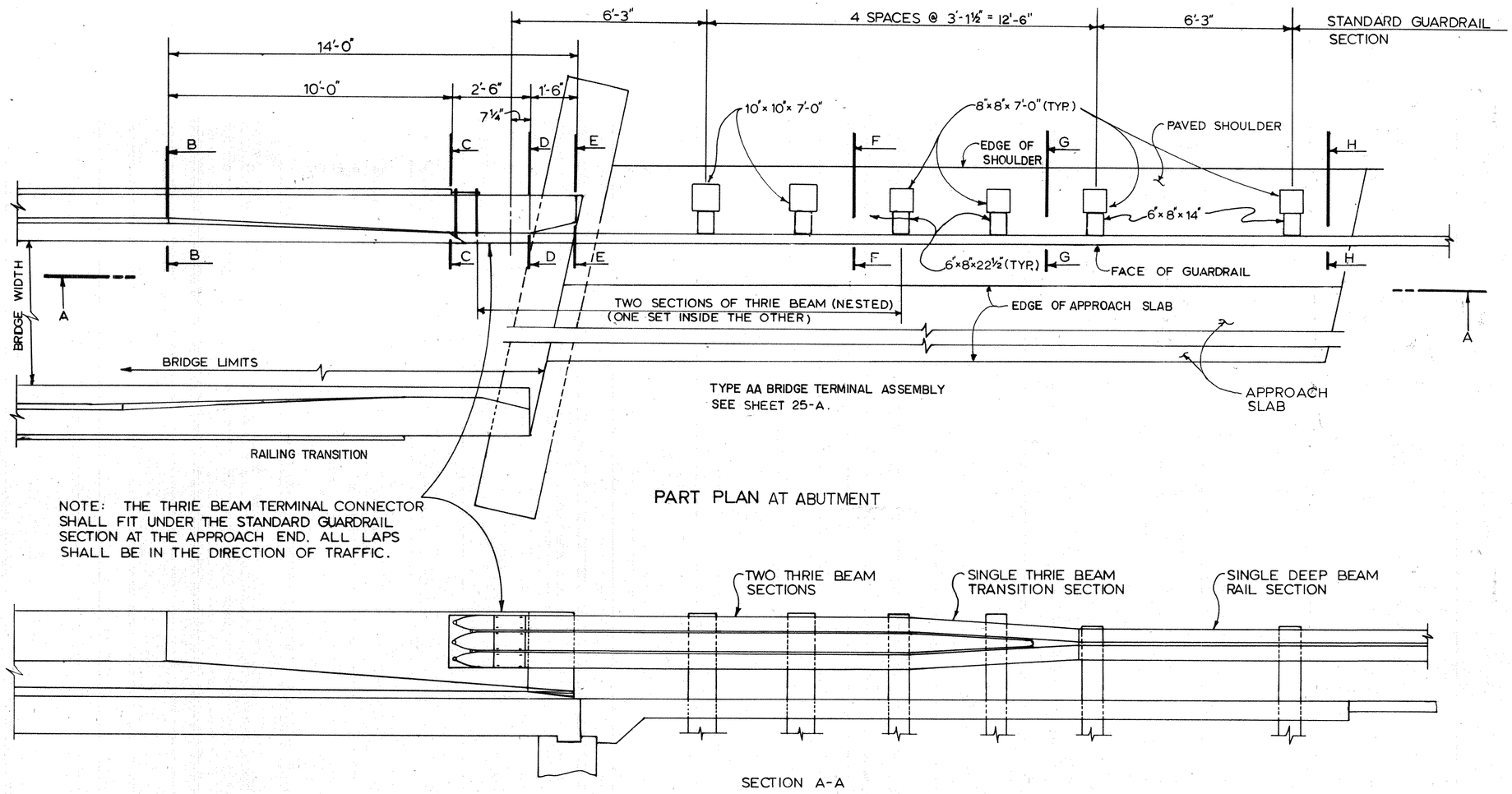
GUE-70-0250L

MARK	No. REQ'D	LENGTH	SHAPE	WEIGHT
ES501	140	5'-5"	BT.	791
ES502	140	5'-0"	BT.	730
ES503	28	30'-0"	ST.	876
ES504	80	6'-8"	ST.	556
ES506	8	13'-8"	BT.	114
ES507	8	13'-8"	ST.	114
ES508	48	3'-7½"	ST.	181
ES509	32	2'-10½"	BT.	96
ES510	32	3'-1"	BT.	103
ES513	8	24'-8"	ST.	206
ES515	16	7'-10½"	ST.	131
TOTALS				3898

GUE-70-0250R

MARK	No. REQ'D	LENGTH	SHAPE	WEIGHT
ES501	140	5'-5"	BT.	791
ES502	140	5'-0"	BT.	730
ES503	28	30'-0"	ST.	876
ES504	80	6'-8"	ST.	556
ES506	8	13'-8"	BT.	114
ES507	8	13'-8"	ST.	114
ES508	48	3'-7½"	ST.	181
ES509	32	2'-10½"	BT.	96
ES510	32	3'-1"	BT.	103
ES513	8	24'-8"	ST.	206
ES515	16	7'-10½"	ST.	131
TOTALS				3898

CALC. BY	GUE-70-0.00	OHIO	88/88
DATE 9-8-89		FHWA REGION 5	
CHKD. BY CAW			
DATE 10-10-89			

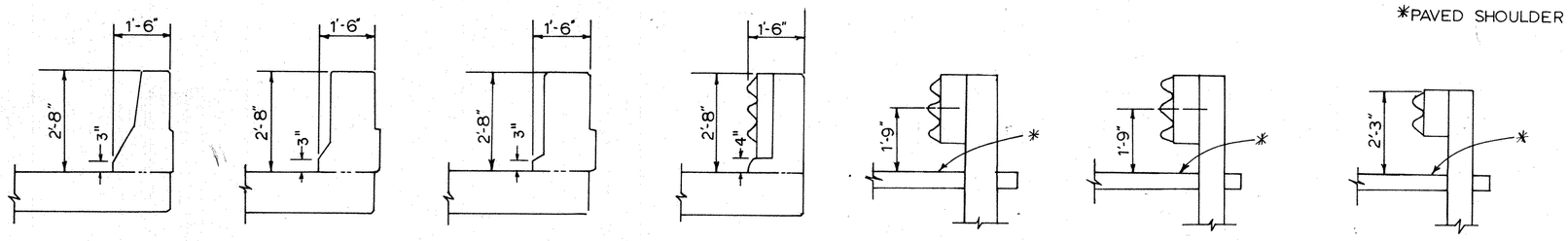


PART PLAN AT ABUTMENT

NOTE: THE THRIE BEAM TERMINAL CONNECTOR SHALL FIT UNDER THE STANDARD GUARDRAIL SECTION AT THE APPROACH END. ALL LAPS SHALL BE IN THE DIRECTION OF TRAFFIC.

SECTION A-A

*PAVED SHOULDER



SECTION B-B SECTION C-C SECTION D-D SECTION E-E SECTION F-F SECTION G-G SECTION H-H

FOR REINFORCING IN RAILING TRANSITION, SEE SHEET 85

REFERENCE:
FOR ADDITIONAL DETAILS AND DETAILS NOT SHOWN, SEE STANDARD DRAWINGS GR-1, GR-2B AND SHEET 25-A.

THRIE BEAM
GUARDRAIL TRANSITION