DESIGN DESIGNATION

CURRENT ADT (1992) = 14,410
DESIGN YEAR ADT (2012) = 21,620
DHV = 2,162
D = 50%
T = 22%
DESIGN SPEED = 60 MPH
LEGAL SPEED = 55 MPH
FUNCTIONAL CLASSIFICATION = FREEWAY/EXPRESSWAY (URBAN)

DESIGN EXCEPTION APPROVAL DATE 01-03-92
OUTSIDE HORIZONTAL CLEARANCE (REGULATION 10', PROVIDED 9'-8")
GRADED SHOULDER WIDTH (REGULATION 15', PROVIDED 12')

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
ERI-2-30.51/VARIOUS SECTIONS
LOR-2-0.00/VARIOUS SECTIONS

CITY OF VERMILION
VERMILION TOWNSHIP
BROWNHELM TOWNSHIP
ERIE AND LORAIN COUNTIES

NH-73(78)

NOTE: ALL REFERENCES TO FEDERAL PROJECT NUMBER F-73 (78) ON THE PLANS SHALL BE CONSIDERED TO READ NH-73 (78)

CONVENTIONAL SIGNS

County Line
Township Line
Corporation Line
Fence Line (existing) —x—x— (proposed) —x—x—
Center Line 200 201
Trees, Stumps, (to be removed)
Utility Poles: Telephone, Power, Light
Limited Access (only) L/A
Right of Way (only) RW
Limited Access & Right of Way LA & RW
Existing Right of Way
Property Line ℄ (in existing fence) —x—℄—x—
Railroad or
Guardrail (existing) (proposed)

INDEX OF SHEETS

LINE DATA

STATION				LENGTH
Begin Project	Resume Project	Suspend Project	End Project	Lin. Ft.
1835+10.00		14+60.00		1779.49
	51+03.25	90+23.00		3919.75
	98+00.00	99+82.00		182.00
	114+82.00	126+16.00		1134.00
	138+92.00	141+13.00		221.00
	153+12.00	167+20.00		1408.00
	174+73.00	177+60.21		287.21
	180+00.00		181+46.00	146.00
Total Net Length of Project = 9,077.45 Lin Ft or 1.719 Mile				

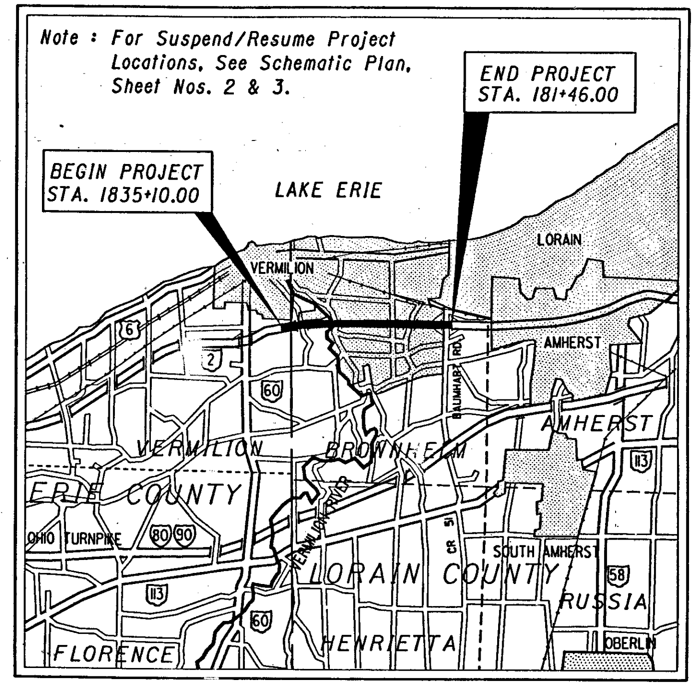
Begin Work = Station 1816+60.00
End Work = Station 216+80.00
S.R. 2 Net Length of Work = 23,855.45 Lin Ft. or 4.518 Miles

STATION EQUATION=STA. 1838+29.49 BK = STA. 0+00.00 AH
STATION EQUATION=STA. 185+05.96 BK = STA. 185+00.00 AH

SIDE ROADS	Begin Work	End Work	Length
West River Rd.	19+75.00	30+25.00	1050.00
Vermilion Rd.	18+09.42	31+43.63	1334.21
Vermilion Interchange Rd.	21+43.14	28+14.06	670.92
Sunnyside Rd.	19+28.77	30+80.88	1152.11
Claus Road	20+13.78	32+65.46	1251.68
Baumhart Rd.	193+00.00	220+33.00	2733.00

Side Road Length of Work = 8,191.92 Lin Ft. or 1.552 Miles
Total Net Length of Work = 32,047.37 L.F. or 6.070 Miles

Project ERI/LOR-2-30.51/0.00
Date of Letting , 19 , Contract No.



LOCATION MAP

SCALE IN MILES

Portion to be Improved
State & Federal Routes
Other Roads

UNDERGROUND UTILITIES

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

SCALES

Plan 0 50 100
Profiles: Horizontal 0 50 100, Vertical 0 5 10
Cross Section: Horizontal 0 10 20, Vertical 0 10 20

Plan Prepared By :
OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION SECTION

SEAL

SUPPLEMENTAL SPECIFICATIONS			
801	1-22-90	945	5-17-83
802	4-13-90	952	12-14-88
836	11-12-85	962	1-23-90
852	6-10-87	910	5-20-91
862	12-16-88	820	3-18-92
931	3-18-92		
933	2-10-87		
942	3-18-92		
944	3-18-92		

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS											
BP-7	10-1-87	AS-1-81	11-27-81	GR-1.2	5-06-91	HL-30.11	5-01-87	MT-96.25	9-09-88	TC-41.20	3-26-79
CB-2-2A & B	5-1-79	BP-2	1-11-85	GR-1.3	2-21-92	HL-30.21	5-01-87	MT-98.12	8-25-89	TC-41.40	6-18-79
CB-3A	5-1-79	BP-3	12-06-76	GR-2.1	5-06-91	HL-30.31	5-01-87	MT-98.13	8-25-89	TC-41.50	3-26-79
CB-5	11-10-83	BP-4	10-01-87	GR-3.1	5-06-91	HL-30.32	5-01-87	MT-98.14	8-25-89	TC-42.10	8-19-77
SD-1-69	6-12-69	BP-5	10-01-87	GR-3.2	5-06-91	HL-40.10	5-01-87	MT-98.15	8-25-89	TC-42.20	3-26-79
RB-1-55	2-2-59	BP-8	10-01-87	GR-4.1	5-06-91	MC-4	7-26-76	MT-99.10	11-14-86	TC-51.10	1-20-84
HW-4A	4-1-80	BP-9	12-6-76	GR-4.2	5-06-91	MC-7	10-15-76	MT-99.20	4-29-88	TC-51.11	1-20-84
		BP-10	1-30-84	GR-4.3	2-21-92	MC-9	1-30-84	MT-101.60	4-1-90	TC-52.10	4-03-79
		BP-13	1-23-90	GR-4.4	2-21-92	MC-9.2	5-06-91	MT-97.10	4-29-88	TC-52.20	4-03-79
		BR-1	5-29-79	GR-5	2-05-82	MC-11	8-01-78			TC-65.10	2-01-90
		CB-4	11-10-83	GR-6	2-05-82	MT-95.30	10-10-88	TC-18.24	4-25-79	TC-65.11	2-01-90
		EXJ-2-81	4-02-84	GR-8	10-25-90	MT-95.31	10-10-88	TC-22.20	3-01-79	TC-65.13	2-01-90
		EXJ-4-87	1-05-89	HL-10.13	5-01-87	MT-96.11	9-09-88	TC-35.10	8-29-84	TC-72.20	2-26-82
		GR-1.1	5-06-91	HL-20.14	5-01-87	MT-96.20	9-09-88	TC-41.10	8-29-84	TC-82.10	8-29-84

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.

1991 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, except for the ramps and side roads as described on sheets 16&17 and as shown on sheet 21-22, and that provisions for the maintenance and safety of traffic will be set forth on the plans and estimates.

Approved Phillip A. Harwood
Date 3/11/92 District Deputy Director of Transportation

Approved B. D. Hakelonnie/[illegible]
Date 9-10-92 Engineer, Bureau of Bridges and Structural Design

Approved [illegible]
Date 4/28/92 Deputy Director, Planning and Design

Under authority of section 4511.21, Division (H) 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 [illegible]
Date 4-28-92 Director, Department of Transportation

REVISED 5-29-92

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR DATE

SCHEMATIC PLAN

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	2
CHKD BY / DATE	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE & LORAIN COUNTIES		

0 1000 2000
SCALE IN FEET

CITY OF VERMILION

NORFOLK AND SOUTHERN

CORPORATION LINE

EDSON

S.R. 60

KNEISEL ROAD

1750 1760 1770 1780 1790 1800 1810 1820 1830

ERIE CO. / LORAIN CO.

BEGIN PROJECT
STA. 1835+10
S.L.M. 30.51

NH-73(78)

SUSPEND PROJECT
STA. 14+60
S.L.M. 0.28

BRIDGE No. LOR-2-0030

WEST RIVER ROAD

N 84° 15' 48" E

STA. 0+00 AH
STA. 1838+29.49 BK

STA 25+00 WEST RIVER ROAD =
STA 15+99.40 S.R. 2

BEGIN WORK
STA. 1816+60

CREEK

BRIDGE No. ERI-2-2956 L&R

VERMILION TWP.

DARROW ROAD

BROWNHELM TWP.

BROWNHELM ROAD

CORP. LINE

VERMILION RIVER

END WORK
STA. 30+25

REST AREA

RAMP "Q"
RAMP "S"
RAMP "R"
RAMP "U"
RAMP "V"
RAMP "T"

10 20 30 40 50 60

STA 25+00 RELOCATED VERMILION ROAD =
STA 56+39.39 S.R. 2

RESUME PROJECT
STA. 51+03.25
S.L.M. 0.96

END WORK
STA. 31+43.63

PC 59+38.68

BRIDGE No. LOR-2-0097 L&R

BRIDGE No. LOR-2-0107

BEGIN WORK
STA. 18+09.42

MATCH LINE STA 65+00 S.R. 2

BEGIN WORK
STA. 19+75

S.R. 2 CURVE DATA
P.I. Sta. 66+35.86
Δ =6° 30' 00" RT
Dc=0° 28' 00"
L=1392.86'
T=697.18'
E=19.78'
R=12,277.67'

VERMILION TWP.

NOTE : FOR VARIOUS SECTIONS GENERAL NOTE SEE SHEET 10.

SCHEMATIC PLAN

CALC BY / DATE	ERIE/LOR-2-30.51/0.00	OHIO	3
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

CITY OF VERMILION

CONRAIL

BROWNHELM ROAD

0 1000 2000
SCALE IN FEET

VERMILION LORAIN
CORP. LINE

CITY OF LORAIN

MATCH LINE STA 65+00 S.R. 2

RESUME PROJECT
STA. 98+00
S.L.M. 1.86

SUSPEND PROJECT
STA. 90+23
S.L.M. 1.71

SUSPEND PROJECT
STA. 99+82
S.L.M. 1.89

RESUME PROJECT
STA. 114+82
S.L.M. 2.18

SUSPEND PROJECT
STA. 126+16
S.L.M. 2.39

END WORK
STA. 28+14.06

END WORK
STA. 30+80.88

END WORK
STA. 32+65.46

ROAD

S.R. 2 CURVE DATA
P.I. Sta. 150+59.03
Δ = 2° 01' 10" LT
Dc=0° 15'
L=807.78'
T=403.93'
E=3.56'
R=22,918.31'

RESUME PROJECT
STA. 174+73
S.L.M. 3.31

SUSPEND PROJECT
STA. 177+60.21
S.L.M. 3.36

END WORK
STA. 220+33

ROAD

STA 25+00 VERMILION INTERCHANGE ROAD = STA 80+00 S.R. 2

STA 25+00 SUNNYSIDE RD = STA 117+71.69 S.R. 2

BRIDGE No. LOR-2-0262

PC 146+55.10

PT 154+62.88

BRIDGE No. LOR-2-0333 L&R

STA. 185+05.96 BK
STA. 185+00 AH

CORP. LINE

RAMP "Z"

RAMP "W"

RAMP "G"

70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220

S 89° 14' 12" E

N 88° 44' 38" E

RAMP "X"

RAMP "Y"

RAMP "H"

JERUSALEM ROAD

PT 73+31.54

BRIDGE No. LOR-2-0151

BRIDGE No. LOR-2-0223

STA 25+00 CLAUS RD. = STA 138+67 S.R. 2

STA 207+77.56 BAUMHART RD. = STA 176+55.96 S.R. 2

BEGIN WORK
STA. 21+43.14

BEGIN WORK
STA. 20+13.78

BEGIN WORK
STA. 193+00

PARK

S.R. 2 CURVE DATA
P.I. Sta. 66+35.86
Δ = 6° 30' 00" RT
Dc=0° 28' 00"
L=1392.86'
T=697.18'
E=19.78'
R=12,277.67'

BEGIN WORK
STA. 19+28.77

CLAUS

FOSTER

BROWNHELM TWP.

SUNNYSIDE

COOPER

SUSPEND PROJECT
STA. 167+20
S.L.M. 3.17

END WORK
STA. 216+80

RESUME PROJECT
STA. 138+92
S.L.M. 2.63

SUSPEND PROJECT
STA. 141+13
S.L.M. 2.67

RESUME PROJECT
STA. 153+12
S.L.M. 2.90

CORP. LINE

BAUMHART

END PROJECT
STA. 181+46
S.L.M. 3.44

NH-73(78)

RESUME PROJECT
STA. 180+00
S.L.M. 3.41

CITY OF VERMILION

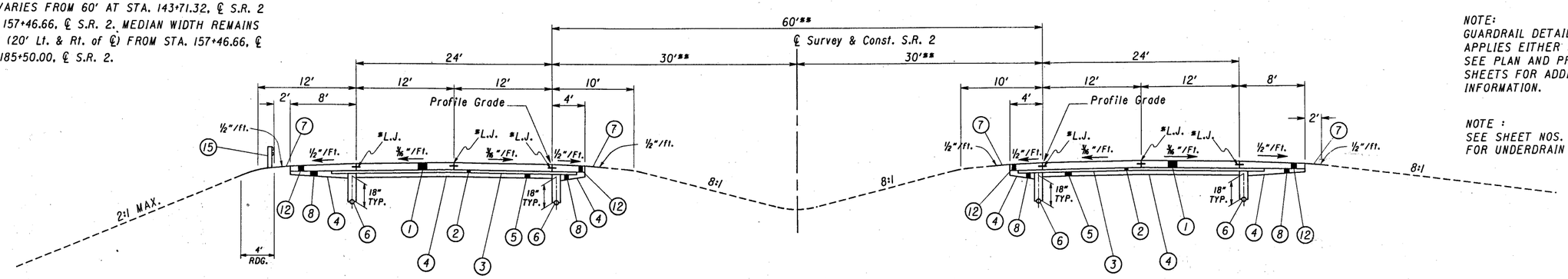
NOTE : FOR VARIOUS SECTIONS GENERAL NOTE SEE SHEET 10.

CALC BY R.L.S. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	4
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	FHWA REGION 5	267

TYPICAL SECTIONS

TYPE 451 ON 304

** MEDIAN WIDTH VARIES FROM 60' AT STA. 143+71.32, ℄ S.R. 2 TO 40' AT STA. 157+46.66, ℄ S.R. 2. MEDIAN WIDTH REMAINS A CONSTANT 40' (20' Lt. & Rt. of ℄) FROM STA. 157+46.66, ℄ S.R. 2 TO STA. 185+50.00, ℄ S.R. 2.



*Std. Long. Joint as per BP-3.

NOTE:
GUARDRAIL DETAIL APPLIES EITHER SIDE. SEE PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION.

NOTE :
SEE SHEET NOS. 117 THROUGH 135A FOR UNDERDRAIN LOCATIONS.

LEGEND

(1) ITEM 451 - 10" Reinforced Concrete Pavement, As Per Plan (See Sheet No. 12)
(2) 4" Base (See Chart Below)
(3) ITEM 408 - Bituminous Prime Coat, Applied at a Rate of 0.40 Gal/S.Y. Where Indicated Below
(4) ITEM 203 - Subgrade Compaction
(5) ITEM 304 - 6" Aggregate Base, As Per Plan (See Sheet No. 11)
(6) ITEM 605 - 4" Shallow Pipe Underdrain 707.15, As Per Plan (See Sheet No. 116)
(7) ITEM 659 - Seeding And Mulching (See General Notes Sheet No. 10)
(8) ITEM 304 - Aggregate Base, As Per Plan (Variable Depth as Shown) (See ITEM 304 Above)
(9) ITEM 451 - 9" Reinforced Concrete Pavement, As Per Plan (See ITEM 451 Above)
(10) Not Used
(11) ITEM 304 - 10" Aggregate Base, As Per Plan (See ITEM 304 Above)
(12) ITEM 452 - Plain Concrete Pavement (Variable Depth as Shown), As Per Plan (See Sheet No. 12)
(13) ITEM 452 - 9" Plain Concrete Pavement, As Per Plan (See ITEM 452 Above)
(14) ITEM 605 - 4" Shallow Pipe Underdrain, 707.17, ASTM 3034 SDR 35, SS931 or SS944, Perforated as per 707.15
(15) ITEM 606 - Guardrail, Type 5
(A) Existing Pavement, See Table Sheet No. 115
(B) Existing Base or Subbase, See Table Sheet No. 115
(C) Existing Shoulder, See Table Sheet No. 115

NORMAL SECTION

SECTION APPLIES

WESTBOUND LANES :

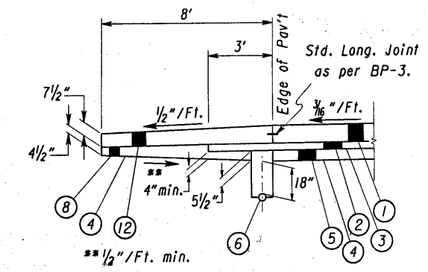
⊛ STA. 1835+10.00 TO STA. 14+60.00 = 1779.49 L.F.
(STA. EQ. 1838+29.49 BK. = STA. 0+00.00 AHD.)
⊛ STA. 56+06.25 TO STA. 90+23.00 = 3416.75 L.F.
⊛⊛ STA. 98+00.00 TO STA. 99+82.00 = 182 L.F.
⊛⊛ STA. 114+82.00 TO STA. 123+26.00 = 844 L.F.
⊛⊛ STA. 138+92.00 TO STA. 141+13.00 = 221 L.F.
⊛⊛ STA. 174+73.00 TO STA. 175+51.71 = 78.71 L.F.

EASTBOUND LANES

⊛⊛ STA. 119+21.00 TO STA. 126+16.00 = 695 L.F.
⊛ STA. 153+12.00 TO STA. 167+20.00 = 1408 L.F.
⊛⊛ STA. 180+00.00 TO STA 181+46.00 = 146 L.F.
TOTAL = 8770.95 L.F.

⊛ For Outside Berm, See Detail A; For Inside Berm, See Detail B.
⊛⊛ For Outside Berm, See Detail A; For Inside Berm, See Detail C.

EXPANSION ANCHORS :
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. Self Drilling Anchors will not be permitted.

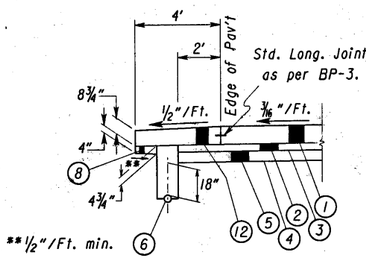


DETAIL A

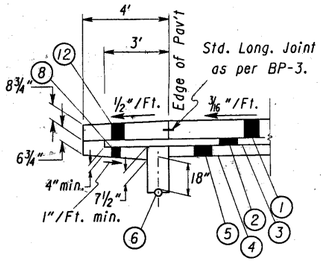
STATION FROM	STATION TO	SIDE	LENGTH	(2) 4" Base	ITEM 408 Bituminous Prime Coat to be Applied
1835+10.00	5+00.00	W.B.	819.49	ITEM 310 - Subbase, As Per Plan	
5+00.00	14+60.00	W.B.	960.00	ITEM SPECIAL - Non-Stabilized Drainage Base Type 'IA'	X
56+06.25	64+60.00	W.B.	853.75	ITEM 304 - Aggregate Base, As Per Plan	
64+60.00	73+14.00	W.B.	854.00	ITEM SPECIAL - Non-Stabilized Drainage Base Type 'NJ'	X
73+14.00	81+68.00	W.B.	854.00	ITEM SPECIAL - Asphalt Treated Free Draining Base	X
81+68.00	90+23.00	W.B.	855.00	ITEM SPECIAL - Cement Treated Free Draining Base	X
98+00.00	99+82.00	W.B.	182.00	ITEM 304 - Aggregate Base, As Per Plan	
114+82.00	123+26.00	W.B.	844.00	ITEM 304 - Aggregate Base, As Per Plan	
138+92.00	141+13.00	W.B.	221.00	ITEM 304 - Aggregate Base, As Per Plan	
174+73.00	175+51.71	W.B.	78.71	ITEM 304 - Aggregate Base, As Per Plan	
119+21.00	126+16.00	E.B.	695.00	ITEM 304 - Aggregate Base, As Per Plan	
153+12.00	167+20.00	E.B.	1408.00	ITEM 304 - Aggregate Base, As Per Plan	
180+00.00	181+46.00	E.B.	146.00	ITEM 304 - Aggregate Base, As Per Plan	

Sta. Equation - 1838+29.49 BK = 0+00 AH

NOTE :
Where ITEM 408 - Bituminous Prime Coat is to be applied, the contractor shall exercise care to insure that the prime coat is not placed over the width of the underdrain trench.



DETAIL B



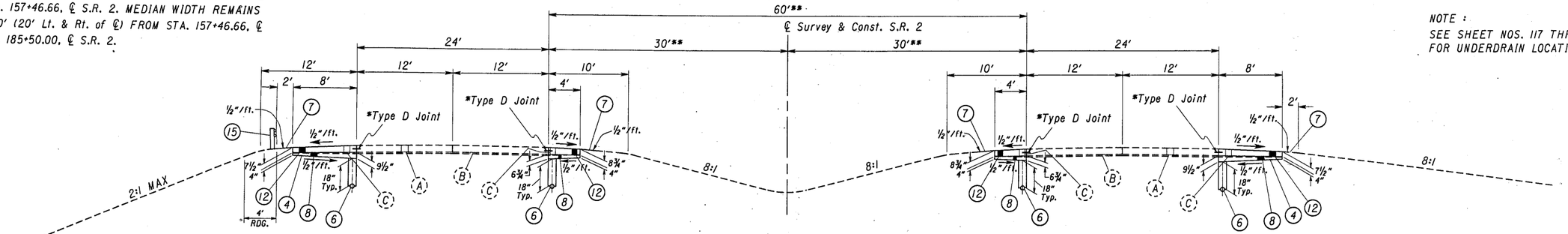
DETAIL C

CALC BY R.L.S. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	5
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	FHWA REGION 5	267

TYPICAL SECTIONS

TYPE 451 ON 304

** MEDIAN WIDTH VARIES FROM 60' AT STA. 143+71.32, ℄ S.R. 2 TO 40' AT STA. 157+46.66, ℄ S.R. 2. MEDIAN WIDTH REMAINS A CONSTANT 40' (20' Lt. & Rt. of ℄) FROM STA. 157+46.66, ℄ S.R. 2 TO STA. 185+50.00, ℄ S.R. 2.



*For Type D Joint Detail See Sheet No. 103

NOTE: GUARDRAIL DETAIL APPLIES EITHER SIDE. SEE PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION.

NOTE : SEE SHEET NOS. 117 THROUGH 135A FOR UNDERDRAIN LOCATIONS.

NORMAL SECTION

SECTION APPLIES

WESTBOUND LANES :

STA. 1827+50.00 TO STA. 1835+10.00 = 760.00 L.F.
(Deduct for conc. shoulder left in place Sta. 1827+96 to Sta. 1835+10) = -714.00 L.F.
STA. 14+60.00 TO STA. 51+03.25 = 3643.25 L.F.
STA. 90+23.00 TO STA. 98+00.00 = 777.00 L.F.
STA. 99+82.00 TO STA. 114+82.00 = 1500.00 L.F.
STA. 123+26.00 TO STA. 138+92.00 = 1566.00 L.F.
STA. 141+13.00 TO STA. 174+73.00 = 3360.00 L.F.
STA. 177+60.21 TO STA. 185+50.00 = 795.75 L.F.
(STA EQ 185+05.96 BK = STA 185+00.00 AHD)

EASTBOUND LANES :

STA. 1827+50.00 TO STA. 51+03.25 = 6182.74 L.F.
(STA. EQ. 1838+29.49 BK = STA 0+00.00 AHD)
STA. 56+06.25 TO STA. 119+21.00 = 6314.75 L.F.
STA. 126+16.00 TO STA. 153+12.00 = 2696.00 L.F.
STA. 167+20.00 TO STA. 175+51.71 = 831.71 L.F.
STA. 177+60.21 TO STA. 180+00.00 = 239.79 L.F.
STA. 181+46.00 TO STA. 185+50.00 = 409.96 L.F.
(STA EQ 185+05.96 BK = STA 185+00.00 AHD)

TOTAL = 28,362.95 L.F.

NOTE:
(STA. 51+28.25 TO STA. 55+81.25 - LOR-2-0097 L & R)
(STA. 175+76.71 TO STA. 177+35.21 - LOR-2-0333 L & R)

NOTE : Use Item 605 - 6" Shallow Pipe Underdrain, 707.17 or SS944 or SS931 or ASTM 3034 SDR 35, Perforated as per 717.15, 12" Deep in Rock Cut Areas. See Sheets 119 Through 122 For Locations.

LEGEND

(1) ITEM 451 - 10" Reinforced Concrete Pavement, As Per Plan (See Sheet No. 12)
(2) 4" Base (See Sheet No. 3)
(3) ITEM 408 - Bituminous Prime Coat, Applied at a Rate of 0.40 Gal/S.Y. Where Indicated Below
(4) ITEM 203 - Subgrade Compaction
(5) ITEM 304 - 6" Aggregate Base, As Per Plan (See Sheet No. 11)
(6) ITEM 605 - 4" Shallow Pipe Underdrain 707.15, As Per Plan (See Sheet No. 116)
(7) ITEM 659 - Seeding And Mulching (See General Notes Sheet No. 10)
(8) ITEM 304 - Aggregate Base, As Per Plan (Variable Depth as Shown) (See ITEM 304 Above)
(9) ITEM 451 - 9" Reinforced Concrete Pavement, As Per Plan (See ITEM 451 Above)
(10) Not Used
(11) ITEM 304 - 10" Aggregate Base, As Per Plan (See ITEM 304 Above)
(12) ITEM 452 - Plain Concrete Pavement (Variable Depth as Shown), As Per Plan (See Sheet No. 12)
(13) ITEM 452 - 9" Plain Concrete Pavement, As Per Plan (See ITEM 452 Above)
(14) ITEM 605 - 4" Shallow Pipe Underdrain, 707.17, ASTM 3034 SDR 35, SS931, or SS944, Perforated as per 707.15
(15) ITEM 606 - Guardrail, Type 5
(A) Existing Pavement, See Table Sheet No. 115
(B) Existing Base or Subbase, See Table Sheet No. 115
(C) Existing Shoulder, See Table Sheet No. 115

EXPANSION ANCHORS :

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. Self Drilling Anchors will not be permitted.

CALC BY R.L.S. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	6
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	FHWA REGION 5	267

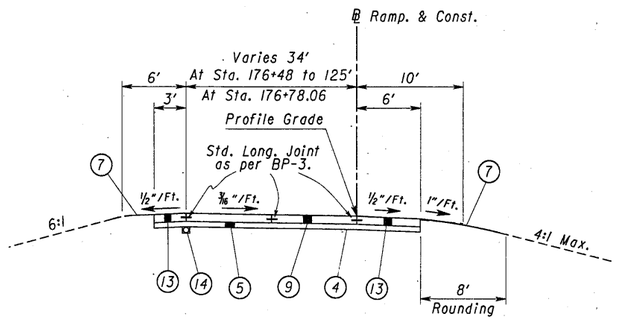
TYPICAL SECTIONS

LEGEND

(1) ITEM 451 - 10" Reinforced Concrete Pavement, As Per Plan (See Sheet No. 12)
(2) 4" Base (See Sheet No. 3)
(3) ITEM 408 - Bituminous Prime Coat, Applied at a Rate of 0.40 Gal/S.Y. Where Indicated Below
(4) ITEM 203 - Subgrade Compaction
(5) ITEM 304 - 6" Aggregate Base, As Per Plan (See Sheet No. 11)
(6) ITEM 605 - 4" Shallow Pipe Underdrain 707.15, As Per Plan (See Sheet No. 116)
(7) ITEM 659 - Seeding And Mulching (See General Notes Sheet No. 10)
(8) ITEM 304 - Aggregate Base, As Per Plan (Variable Depth as Shown) (See ITEM 304 Above)
(9) ITEM 451 - 9" Reinforced Concrete Pavement, As Per Plan (See ITEM 451 Above)
(10) Not Used
(11) ITEM 304 - 10" Aggregate Base, As Per Plan (See ITEM 304 Above)
(12) ITEM 452 - Plain Concrete Pavement (Variable Depth as Shown), As Per Plan (See Sheet No. 12)
(13) ITEM 452 - 9" Plain Concrete Pavement, As Per Plan (See ITEM 452 Above)
(14) ITEM 605 - 4" Shallow Pipe Underdrain, 707.17, ASTM 3034 SDR 35, SS931, or SS944, Perforated as per 707.15 (See Details this sheet)
(15) ITEM 606 - Guardrail, Type 5
(A) Existing Pavement, See Table Sheet No. 115
(B) Existing Base or Subbase, See Table Sheet No. 115
(C) Existing Shoulder, See Table Sheet No. 115

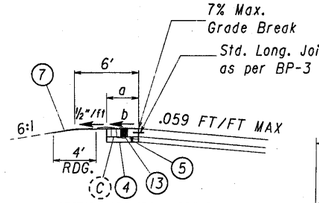
a - Varies 0' to 3'
b - Varies ½"/ft. to ⅛"/ft.
c - ⅛"/Ft. Slope
d - Pavement Slope
e - Varies 3/16"/ft. to 1"/ft.
f - ½"/ft. or Pavement Slope if Greater
g - Varies 0' to 3' (see plan sheet for actual shoulder width)
h - Varies 0' to 8' (see plan sheet for actual shoulder width)

TYPE 451 ON 304

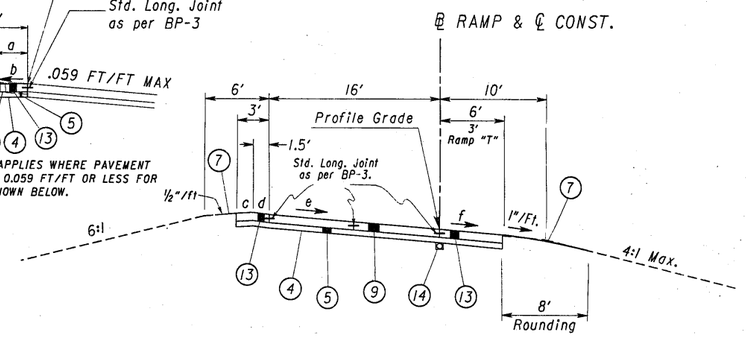


NORMAL SECTION

STA. 176+48.00 TO STA. 176+78.06 RAMP "G" = 30.06 L.F.

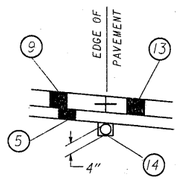


SECTION APPLIES WHERE PAVEMENT SLOPE IS 0.059 FT/FT OR LESS FOR RAMPS SHOWN BELOW.



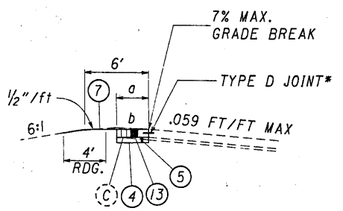
SUPERELEVATED SECTION

STA. 27+08.00 TO STA. 27+59.00 RAMP "T" = 51.00 L.F.
STA. 168+04.00 TO STA. 171+84.00 RAMP "H" = 380.00 L.F.
TOTAL = 431.00 L.F.

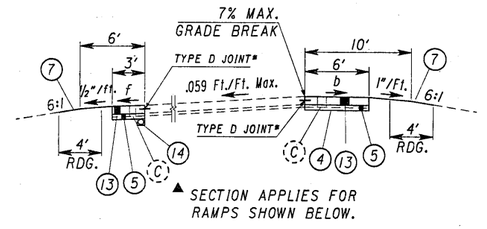


RAMP UNDERDRAIN DETAIL FOR FULL-DEPTH REPLACEMENT

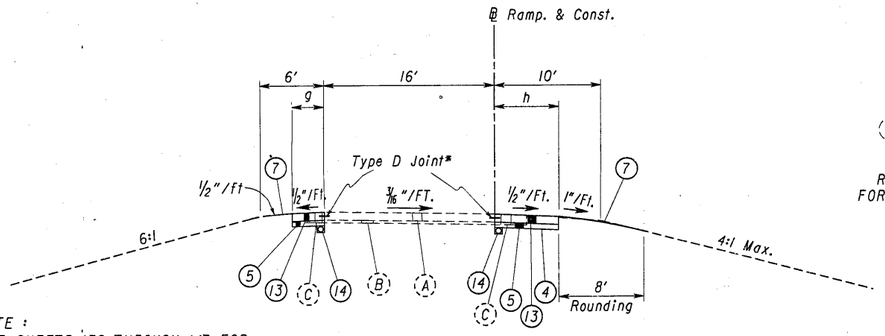
EXPANSION ANCHORS :
The contractor may use "Drop-In" Anchors, Flush type which conform to Federal Specifications FF-S-325, Group VIII, type I or externally threaded, Stud type Expansion Bolt Anchors which conform to Federal Specification FF-S-325, Group II. Spacing Shall be 30" Maximum, center to center. Self Drilling Anchors will not be permitted.



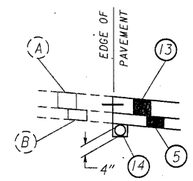
SECTION APPLIES WHERE PAVEMENT SLOPE IS 0.059 FT/FT OR LESS FOR RAMPS SHOWN BELOW.



▲ SECTION APPLIES FOR RAMPS SHOWN BELOW.



NOTE :
SEE SHEETS 136 THROUGH 147 FOR EXACT UNDERDRAIN LOCATIONS



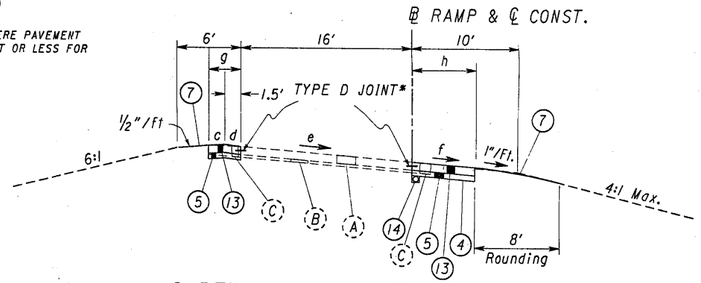
RAMP UNDERDRAIN DETAIL FOR SHOULDER REPLACEMENT ONLY

* FOR TYPE D JOINT DETAIL SEE SHEET NO. 103

NORMAL SECTION

STA. 17+35.96 TO STA. 19+87.50 RAMP "R"	= 251.54 L.F.	STA. 75+75.00 TO STA. 80+21.38 RAMP "Z"	= 446.38 L.F.
STA. 23+72.50 TO STA. 26+20.00 RAMP "R"	= 247.50 L.F.	STA. 76+00.00 TO STA. 80+12.56 RAMP "X"	= 412.56 L.F.
STA. 20+53.48 TO STA. 25+70.00 RAMP "U"	= 516.52 L.F.	STA. 79+81.03 TO STA. 84+25.00 RAMP "W"	= 443.97 L.F.
STA. 22+25.00 TO STA. 23+02.62 RAMP "Q"	= 77.62 L.F.	STA. 79+82.11 TO STA. 86+25.00 RAMP "Y"	= 642.89 L.F.
STA. 33+69.00 TO STA. 39+00.00 RAMP "S"	= 531.00 L.F.	STA. 90+25.00 TO STA. 92+00.00 RAMP "Y"	= 175.00 L.F.
STA. 33+85.00 TO STA. 34+86.75 RAMP "V"	= 101.75 L.F.	STA. 164+50.00 TO STA. 166+50.00 RAMP "G"	= 200.00 L.F.
STA. 39+17.00 TO STA. 41+53.22 RAMP "V"	= 236.22 L.F.	STA. 171+92.30 TO STA. 172+57.70 RAMP "G"	= 65.40 L.F.
STA. 36+01.65 TO STA. 36+50.00 RAMP "T"	= 48.35 L.F.	STA. 176+25.00 TO STA. 176+48.00 RAMP "G"	= 23.00 L.F.
STA. 69+00.00 TO STA. 70+87.50 RAMP "Z"	= 187.50 L.F.	STA. 171+92.30 TO STA. 172+57.70 RAMP "H"	= 65.40 L.F.

TOTAL = 4,672.60 L.F.



SUPERELEVATED SECTION
IN THE DIRECTION OF TRAFFIC

STA. 18+66.46 TO STA. 22+25.00 RAMP "Q"	= 358.54 L.F.	STA. 71+98.83 TO STA. 76+00.00 RAMP "X"	= 401.17 L.F.
STA. 31+64.11 TO STA. 34+52.78 RAMP "Q"	= 288.67 L.F.	STA. 84+25.00 TO STA. 88+21.52 RAMP "W"	= 396.52 L.F.
STA. 19+87.50 TO STA. 23+72.50 RAMP "R"	= 385.00 L.F.	STA. 86+25.00 TO STA. 90+25.00 RAMP "Y"	= 400.00 L.F.
STA. 24+55.14 TO STA. 27+08.00 RAMP "T"	= 252.86 L.F.	STA. 166+50.00 TO STA. 171+92.30 RAMP "G"	= 542.30 L.F.
STA. 36+50.00 TO STA. 40+03.56 RAMP "T"	= 353.56 L.F.	STA. 172+57.70 TO STA. 176+25.00 RAMP "G"▲	= 367.30 L.F.
STA. 34+86.75 TO STA. 39+17.00 RAMP "V"	= 430.25 L.F.	STA. 167+65.48 TO STA. 168+04.00 RAMP "H"	= 38.52 L.F.
STA. 39+00.00 TO STA. 40+46.51 RAMP "S"	= 146.51 L.F.	STA. 171+84.00 TO STA. 171+92.30 RAMP "H"	= 8.30 L.F.
STA. 70+87.50 TO STA. 75+75.00 RAMP "Z"	= 487.50 L.F.	STA. 172+57.70 TO STA. 176+74.89 RAMP "H"▲	= 417.19 L.F.

TOTAL = 5,274.19 L.F.

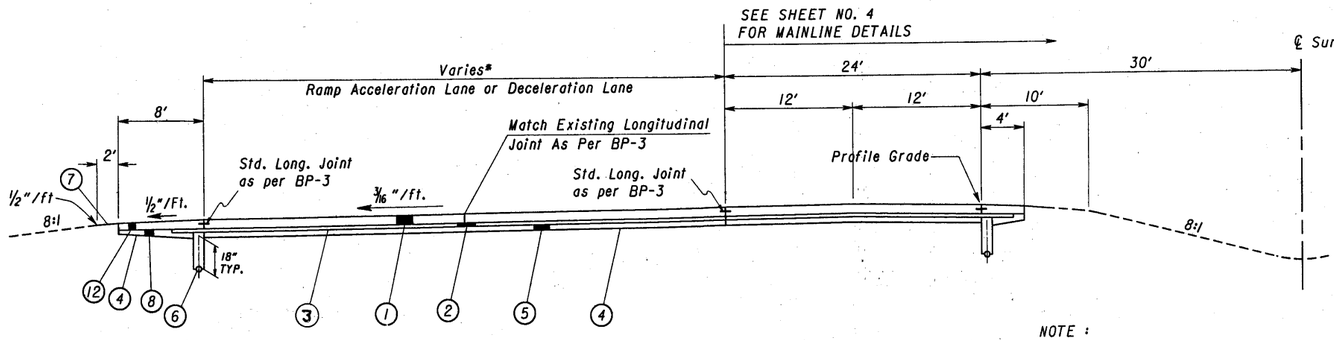
CALC BY R.L.S. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	7
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	FHWA REGION 5	267

TYPICAL SECTIONS

TYPE 451 ON 304

LEGEND

(1) ITEM 451 - 10" Reinforced Concrete Pavement, As Per Plan (See Sheet No. 12)
(2) 4" Base (See Chart Below)
(3) ITEM 408 - Bituminous Prime Coat, Applied at a Rate of 0.40 Gal/S.Y. Where Indicated Below
(4) ITEM 203 - Subgrade Compaction
(5) ITEM 304 - 6" Aggregate Base, As Per Plan (See Sheet No. 11)
(6) ITEM 605 - 4" Shallow Pipe Underdrain 707.15, As Per Plan (See Sheet No. 116)
(7) ITEM 659 - Seeding And Mulching (See General Notes Sheet No. 10)
(8) ITEM 304 - Aggregate Base, As Per Plan (Variable Depth as Shown) (See ITEM 304 Above)
(9) ITEM 451 - 9" Reinforced Concrete Pavement, As Per Plan (See ITEM 451 Above)
(10) Not Used
(11) ITEM 304 - 10" Aggregate Base, As Per Plan (See ITEM 304 Above)
(12) ITEM 452 - Plain Concrete Pavement (Variable Depth as Shown), As Per Plan (See Sheet No. 12)
(13) ITEM 452 - 9" Plain Concrete Pavement, As Per Plan (See ITEM 452 Above)
(14) ITEM 605 - 4" Shallow Pipe Underdrain, 707.17, ASTM 3034 SDR 35, SS931, or SS944, Perforated As Per 707.15
(15) ITEM 606 - Guardrail, Type 5
(A) Existing Pavement, See Table Sheet No. 115
(B) Existing Base or Subbase, See Table Sheet No. 115
(C) Existing Shoulder, See Table Sheet No. 115



NOTE :
SEE SHEET NOS. 117 THROUGH 135A FOR UNDERDRAIN LOCATIONS.

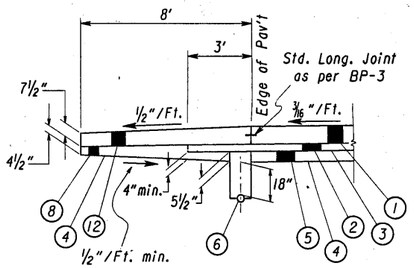
SECTION APPLIES:

WESTBOUND :

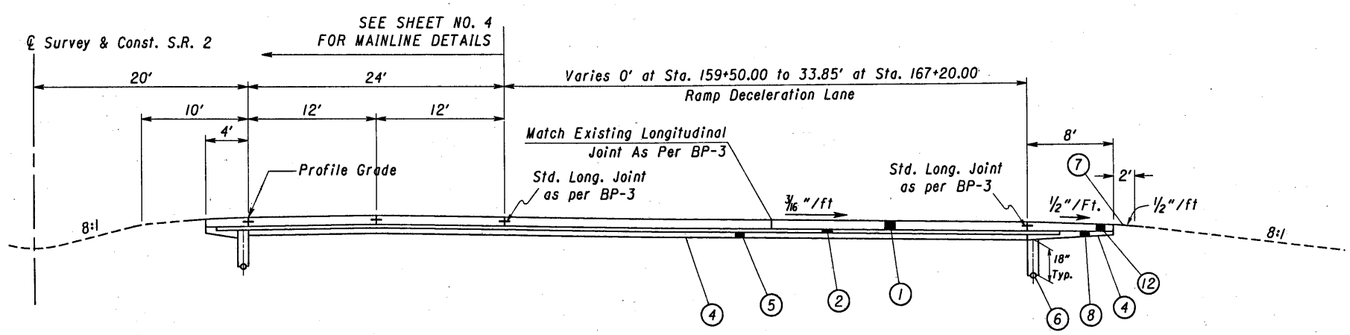
STA. 5+50.00 ℄ S.R. 2 TO STA. 14+60.00 ℄ S.R. 2 = 910.00 L. F. * VARIES FROM 0' AT STA. 5+50.00 TO 18.96' AT STA. 14+60.00
STA. 57+00.00 ℄ S.R. 2 TO STA. 69+00.00 ℄ S.R. 2 = 1200.00 L.F. * VARIES FROM 0' AT STA. 57+00.00 TO 25.00' AT STA. 69+00.00
STA. 88+20.69 ℄ S.R. 2 TO STA. 90+23.00 ℄ S.R. 2 = 202.31 L.F. * VARIES FROM 39' AT STA. 88+20.69 TO 20.32' AT STA. 90+23.00

FOR OUTSIDE BERM, SEE DETAIL A

STATION FROM	STATION TO	SIDE	LENGTH	(2) 4" Base	ITEM 408 Bituminous Prime Coat to be Applied
5+50.00	14+60.00	W.B.	910.00	ITEM SPECIAL - Non-Stabilized Drainage Base, Type "1A"	X
57+00.00	64+60.00	W.B.	760.00	ITEM 304 - Aggregate Base, As Per Plan	
64+60.00	69+00.00	W.B.	440.00	ITEM SPECIAL - Non Stabilized Drainage Base Type "NJ"	X
88+20.69	90+23.00	W.B.	202.31	ITEM SPECIAL - Cement Treated Free Drainage Base	X
159+50.00	167+20.00	E.B.	770.00	ITEM 304 - Aggregate Base, As Per Plan	



DETAIL A



SECTION APPLIES:

EASTBOUND :

STA. 159+50.00 ℄ S.R. 2 TO STA. 167+20.00 ℄ S.R. 2 = 770.00 L.F.

FOR OUTSIDE BERM, SEE DETAIL A

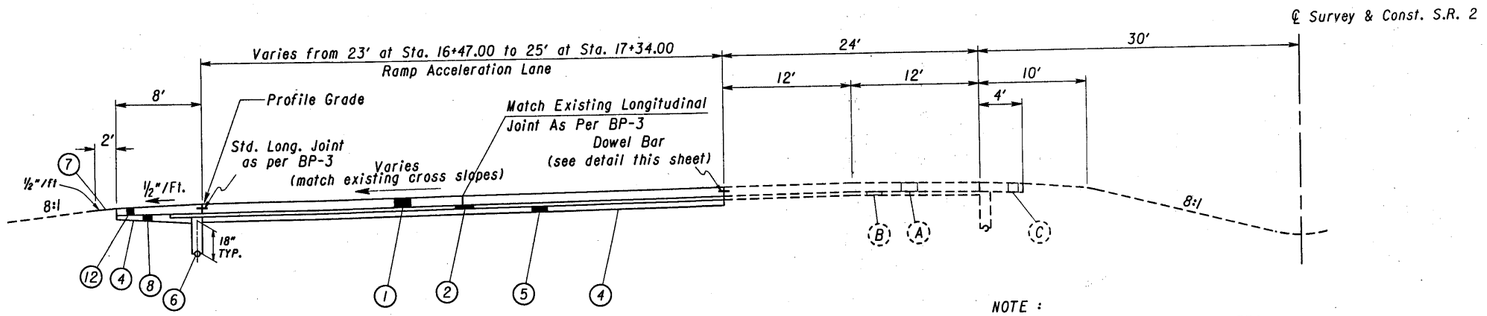
CALC BY R.L.S. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	8
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	FHWA REGION 5	267

TYPICAL SECTIONS

TYPE 451 ON 304

LEGEND

(1) ITEM 451 - 10" Reinforced Concrete Pavement, As Per Plan (See Sheet No. 12)
(2) 4" Base (See Chart Below)
(3) ITEM 408 - Bituminous Prime Coat, Applied at a Rate of 0.40 Gal/S.Y. Where Indicated Below
(4) ITEM 203 - Subgrade Compaction
(5) ITEM 304 - 6" Aggregate Base, As Per Plan (See Sheet No. 11)
(6) ITEM 605 - 4" Shallow Pipe Underdrain 707.15, As Per Plan (See Sheet No. 116)
(7) ITEM 659 - Seeding And Mulching (See General Notes Sheet No. 10)
(8) ITEM 304 - Aggregate Base, As Per Plan (Variable Depth as Shown) (See ITEM 304 Above)
(9) ITEM 451 - 9" Reinforced Concrete Pavement, As Per Plan (See ITEM 451 Above)
(10) Not Used
(11) ITEM 304 - 10" Aggregate Base, As Per Plan (See ITEM 304 Above)
(12) ITEM 452 - Plain Concrete Pavement (Variable Depth as Shown), As Per Plan (See Sheet No. 12)
(13) ITEM 452 - 9" Plain Concrete Pavement, As Per Plan (See ITEM 452 Above)
(14) ITEM 605 - 4" Shallow Pipe Underdrain, 707.17, ASTM 3034 SDR 35, SS931, or SS944, Perforated As Per 707.15
(15) ITEM 606 - Guardrail, Type 5
(A) Existing Pavement, See Table Sheet No. 115
(B) Existing Base or Subbase, See Table Sheet No. 115
(C) Existing Shoulder, See Table Sheet No. 115

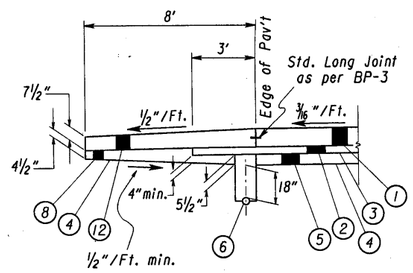


NOTE :
SEE SHEET NOS. 117 THROUGH 135A FOR UNDERDRAIN LOCATIONS.

SECTION APPLIES:

STA. 16+47.00 TO STA. 17+34.00 RAMP "R" = 87.00 L.F.
FOR OUTSIDE BERM, SEE DETAIL A

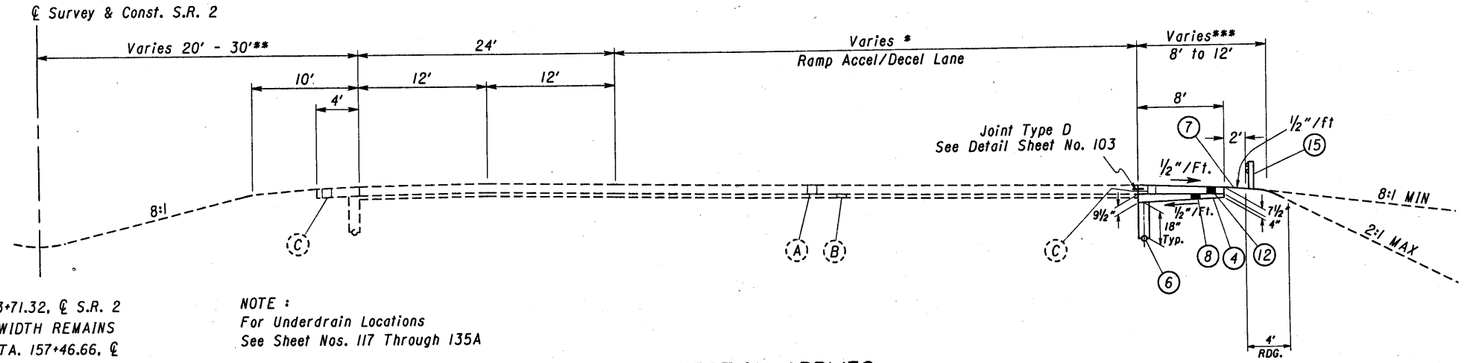
STATION FROM	STATION TO	SIDE	(2) 4" Base
16+47.00	17+34.00	W.B.	ITEM 304 Aggregate Base, As Per Plan



DETAIL A

EXPANSION ANCHORS :
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. Self Drilling Anchors will not be permitted.

***12' GRADED SHOULDER APPLIES ONLY WHERE GUARDRAIL IS LOCATED. SEE PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION.



** MEDIAN WIDTH VARIES FROM 60' AT STA. 143+71.32, ℄ S.R. 2 TO 40' AT STA. 157+46.66, ℄ S.R. 2. MEDIAN WIDTH REMAINS A CONSTANT 40' (20' Lt. & Rt. of ℄) FROM STA. 157+46.66, ℄ S.R. 2 TO STA. 185+50.00, ℄ S.R. 2.

NOTE :
For Underdrain Locations
See Sheet Nos. 117 Through 135A

SECTION APPLIES:

WESTBOUND (In The Direction of Traffic) :

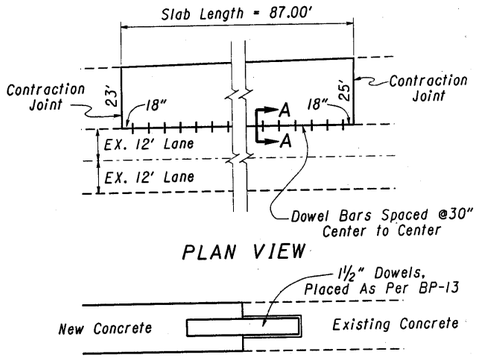
STA. 5+50.00 ℄ S.R. 2 TO STA. 16+47.00 ℄ S.R. 2	= 1097.00 L.F.	* VARIES FROM 0' AT STA. 5+50.00 TO 23' AT STA. 16+47.00
STA. 17+34.00 ℄ S.R. 2 TO STA. 17+50.00 ℄ S.R. 2	= 16.00 L.F.	* VARIES FROM 25' AT STA. 17+34.00 TO 25' AT STA. 17+50.00
STA. 40+45.69 ℄ S.R. 2 TO STA. 45+00.00 ℄ S.R. 2	= 454.31 L.F.	* VARIES FROM 39' AT STA. 40+45.69 TO 12' AT STA. 45+00.00
STA. 47+50.00 ℄ S.R. 2 TO STA. 48+50.00 ℄ S.R. 2	= 100.00 L.F.	* VARIES FROM 12' AT STA. 47+50.00 TO 0' AT STA. 48+50.00
STA. 57+00.00 ℄ S.R. 2 TO STA. 69+00.00 ℄ S.R. 2	= 1200.00 L.F.	* VARIES FROM 0' AT STA. 57+00.00 TO 25' AT STA. 69+00.00
STA. 88+20.69 ℄ S.R. 2 TO STA. 92+75.00 ℄ S.R. 2	= 454.31 L.F.	* VARIES FROM 39' AT STA. 88+20.69 TO STA. 12' AT STA. 92+75.00
STA. 95+25.00 ℄ S.R. 2 TO STA. 96+25.00 ℄ S.R. 2	= 100.00 L.F.	* VARIES FROM 12' AT STA. 95+25.00 TO 0' AT STA. 96+25.00
STA. 152+50.00 ℄ S.R. 2 TO STA. 164+50.00 ℄ S.R. 2	= 1200.00 L.F.	* VARIES FROM 0' AT STA. 152+50.00 TO 25' AT STA. 164+50.00

EASTBOUND :

STA. 12+50.00 ℄ S.R. 2 TO STA. 13+50.00 ℄ S.R. 2	= 100.00 L.F.	* VARIES FROM 0' AT STA. 12+50.00 TO 12' AT STA. 13+50.00
STA. 16+00.00 ℄ S.R. 2 TO STA. 20+54.81 ℄ S.R. 2	= 454.81 L.F.	* VARIES FROM 12' AT STA. 16+00.00 TO 39' AT STA. 20+54.81
STA. 41+25.00 ℄ S.R. 2 TO STA. 51+27.75 ℄ S.R. 2	= 1002.75 L.F.	* VARIES FROM 49' AT STA. 41+25.00 TO 41' AT STA. 51+27.75
STA. 64+00.00 ℄ S.R. 2 TO STA. 65+00.00 ℄ S.R. 2	= 100.00 L.F.	* VARIES FROM 0' AT STA. 64+00.00 TO 12' AT STA. 65+00.00
STA. 67+50.00 ℄ S.R. 2 TO STA. 72+02.43 ℄ S.R. 2	= 452.43 L.F.	* VARIES FROM 0' AT STA. 67+50.00 TO 39' AT STA. 72+02.43
STA. 92+00.00 ℄ S.R. 2 TO STA. 104+00.00 ℄ S.R. 2	= 1200.00 L.F.	* VARIES FROM 25' AT STA. 92+00.00 TO 0' AT STA. 104+00.00
STA. 159+50.00 ℄ S.R. 2 TO STA. 160+50.00 ℄ S.R. 2	= 100.00 L.F.	* VARIES FROM 0' AT STA. 159+50.00 TO 12' AT STA. 160+50.00
STA. 163+12.00 ℄ S.R. 2 TO STA. 167+66.31 ℄ S.R. 2	= 454.31 L.F.	* VARIES FROM 12' AT STA. 163+12.00 TO 39' AT STA. 167+66.31

TOTAL = 8,485.92 L.F.

DOWEL BAR DETAIL



RAMP TYPICAL SECTION

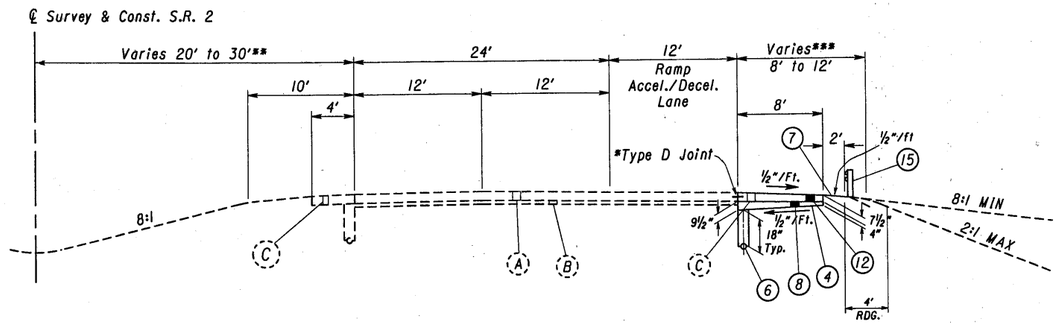
CALC BY R.L.S. DATE 2-27-92 CHKD BY J.S.B. DATE 2-28-92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	OHIO FHWA REGION 5

TYPICAL SECTIONS

TYPE 451 ON 304

LEGEND

(1) ITEM 451 - 10" Reinforced Concrete Pavement, As Per Plan (See Sheet No. 12)
(2) 4" Base (See Sheet No. 3)
(3) ITEM 408 - Bituminous Prime Coat, Applied at a Rate of 0.40 Gal/S.Y. Where Indicated Below
(4) ITEM 203 - Subgrade Compaction
(5) ITEM 304 - 6" Aggregate Base, As Per Plan (See Sheet No. 11)
(6) ITEM 605 - 4" Shallow Pipe Underdrain 707.15, As Per Plan (See Sheet No. 116)
(7) ITEM 659 - Seeding And Mulching (See General Notes Sheet No. 10)
(8) ITEM 304 - Aggregate Base, As Per Plan (Variable Depth as Shown) (See ITEM 304 Above)
(9) ITEM 451 - 9" Reinforced Concrete Pavement, As Per Plan (See ITEM 451 Above)
(10) Not Used
(11) ITEM 304 - 10" Aggregate Base, As Per Plan (See ITEM 304 Above)
(12) ITEM 452 - Plain Concrete Pavement (Variable Depth as Shown), As Per Plan (See Sheet No. 12)
(13) ITEM 452 - 9" Plain Concrete Pavement, As Per Plan (See ITEM 452 Above)
(14) ITEM 605 - 4" Shallow Pipe Underdrain, 707.17, ASTM 3034 SDR 35, SS931, or SS944, Perforated as per 707.15
(15) ITEM 606 - Guardrail, Type 5
(A) Existing Pavement, See Table Sheet No. 115
(B) Existing Base or Subbase, See Table Sheet No. 115
(C) Existing Shoulder See Table Sheet No. 115



SECTION APPLIES:

WESTBOUND (In the Direction of Traffic) :

STA. 45+00.00 ℄ S.R. 2 TO STA. 47+50.00 ℄ S.R. 2 - 250.00 L.F.
STA. 92+75.00 ℄ S.R. 2 TO STA. 95+25.00 ℄ S.R. 2 - 250.00 L.F.

EASTBOUND :

STA. 13+50.00 ℄ S.R. 2 TO STA. 16+00.00 ℄ S.R. 2 - 250.00 L.F.
STA. 65+00.00 ℄ S.R. 2 TO STA. 67+50.00 ℄ S.R. 2 - 250.00 L.F.
STA. 160+50.00 ℄ S.R. 2 TO STA. 163+12.00 ℄ S.R. 2 - 262.00 L.F.

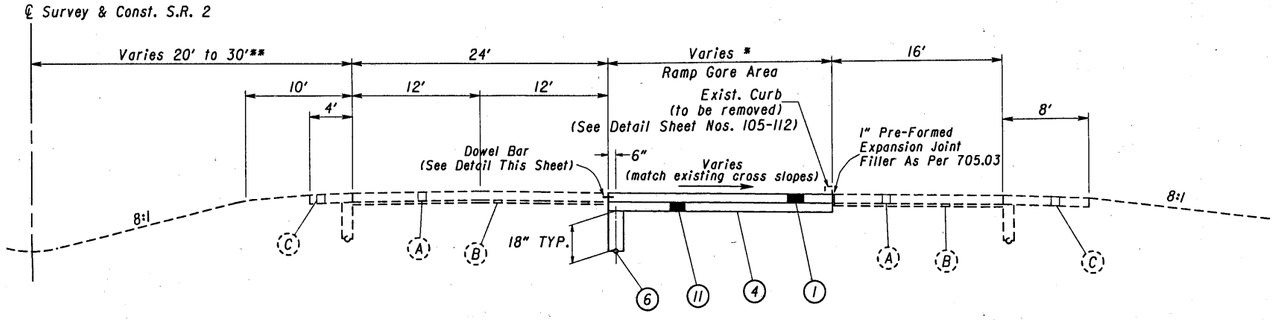
TOTAL - 1262 L.F.

* FOR TYPE D JOINT DETAIL SEE SHEET NO. 103

*** 12' GRADED SHOULDER APPLIES ONLY WHERE GUARDRAIL IS LOCATED. SEE PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION.

NOTE: SEE SHEET NOS. 117 THROUGH 135A FOR UNDERDRAIN LOCATIONS.

** MEDIAN WIDTH VARIES FROM 60' AT STA. 143+71.32, ℄ S.R. 2 TO 40' AT STA. 157+46.66, ℄ S.R. 2. MEDIAN WIDTH REMAINS A CONSTANT 40' (20' Lt. & Rt. of ℄) FROM STA. 157+46.66, ℄ S.R. 2 TO STA. 185+50.00, ℄ S.R. 2.



SECTION APPLIES:

WESTBOUND (In the Direction of Traffic) :

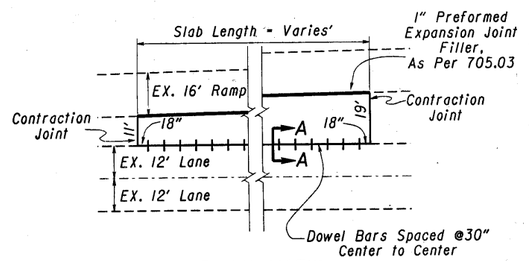
STA. 17+50.00 ℄ S.R. 2 TO STA. 21+82.00 ℄ S.R. 2 - 432.00 L.F. * VARIES FROM 11' AT STA. 17+50.00 TO 19' AT STA. 21+82.00
STA. 69+00.00 ℄ S.R. 2 TO STA. 72+81.00 ℄ S.R. 2 - 381.00 L.F. * VARIES FROM 11' AT STA. 69+00.00 TO 19' AT STA. 72+81.00
STA. 164+50.00 ℄ S.R. 2 TO STA. 168+16.00 ℄ S.R. 2 - 366.00 L.F. * VARIES FROM 11' AT STA. 164+50.00 TO 19' AT STA. 168+16.00

EASTBOUND :

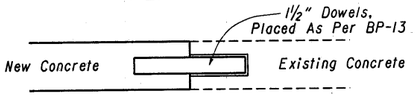
STA. 37+33.00 ℄ S.R. 2 TO STA. 41+25.00 ℄ S.R. 2 - 392.00 L.F. * VARIES FROM 19' AT STA. 37+33.00 TO 11' AT STA. 41+25.00
STA. 88+18.00 ℄ S.R. 2 TO STA. 92+00.00 ℄ S.R. 2 - 382.00 L.F. * VARIES FROM 19' AT STA. 88+18.00 TO 11' AT STA. 92+00.00

TOTAL - 1953.00 L.F.

DOWEL BAR DETAIL



PLAN VIEW



SECTION A-A

GENERAL NOTES

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.

UNDERGROUND UTILITIES

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

UTILITIES OWNERSHIP

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

ELECTRIC: OHIO EDISON COMPANY
76 SOUTH MAIN STREET
AKRON, OHIO 44308
PHONE: 216-384-4631

NATURAL GAS: NONE

TELEPHONE: CENTRAL TELEPHONE COMPANY OF OHIO
1730 WEST 19th STREET
LORAIN, OHIO 44052
PHONE: 216-244-8227

SANITARY SEWERS & WATER LINES: VERMILION CITY ENGINEER
5511 LIBERTY AVENUE
VERMILION, OHIO 44089
PHONE: 216-967-0123

WATER LINE & LIGHTING: OHIO DEPARTMENT OF TRANSPORTATION
906 NORTH CLARK STREET
ASHLAND, OHIO 44805
PHONE: 419-281-0513

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.

VARIOUS SECTIONS

BECAUSE OF THE SPORADIC FULL DEPTH PAVEMENT REPLACEMENT ON THIS PROJECT, IT WAS DEEMED MORE APPROPRIATE TO USE THE PHRASE "VARIOUS SECTIONS" RATHER THAN CITING SPECIFIC MILEAGE SECTION NUMBERS FOR THE PROJECT DEVELOPMENT DESIGNATION. THE TABLE SHOWN BELOW INDICATES THE EXACT MILEAGE SECTION NUMBERS WHERE FULL DEPTH PAVEMENT IS BEING REPLACED. SEE TITLE SHEET FOR STATION EQUATIONS.

STATION				LENGTH
BEGIN PROJECT	RESUME PROJECT	SUSPEND PROJECT	END PROJECT	LIN. FT.
1835+10.00		14+60.00		1779.49
	51+03.25	90+23.00		3919.75
	98+00.00	99+82.00		182.00
	114+82.00	126+16.00		1134.00
	138+92.00	141+13.00		221.00
	153+12.00	167+20.00		1408.00
	174+73.00	177+60.21		287.21
	180+00.00		181+46.00	146.00

PLAN ELEVATIONS

THE ELEVATIONS SHOWN ON THESE PLANS WERE ESTABLISHED FROM THE ORIGINAL PROJECT CONSTRUCTION PLANS AVAILABLE AT THE ODOT DISTRICT OFFICE. THESE ELEVATIONS ARE BELIEVED TO BE ACCURATE BUT THE CONTRACTOR SHALL FIELD VERIFY ELEVATIONS AND/OR FLOWLINES AS NECESSARY PRIOR TO PERFORMING WORK OR ORDERING MATERIAL SUCH AS CATCH BASINS. THE ENGINEER SHALL BE INFORMED OF AND APPROVE ANY ADJUSTMENTS.

CLEARING AND GRUBBING

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. 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.

ITEM 203 LINEAR GRADING, AS PER PLAN

THIS WORK SHALL CONSIST OF REGRADING THE AREAS BEYOND BOTH THE INSIDE AND OUTSIDE PAVED SHOULDERS TO CONFORM WITH THE CROSS SLOPES SHOWN ON THE TYPICAL SECTIONS TO INCLUDE FORESLOPES AND TO INSURE A SMOOTH SURFACE FREE OF ALL IRREGULARITIES. ANY MATERIAL REQUIRED TO FILL EXISTING RUTS SHALL BE APPROVED BY THE ENGINEER AND ANY EXCESS EXCAVATION RESULTING FROM REGRADING SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER.

THE UNIT OF MEASUREMENT SHALL BE STATIONS AND SHALL INCLUDE BOTH INSIDE AND BOTH OUTSIDE UNPAVED AREAS OUTLINED ABOVE FOR A DISTANCE OF 100.00 FEET.

LINEAR GRADING SHALL BE PERFORMED BETWEEN THE FOLLOWING STATIONS:

MAINLINE S.R. 2
STA. 1827+50.00 TO STA. 185+50.00 = 196.29 STATIONS
ADD FOR STATION EQUATION = 0.06 STATIONS
DEDUCT FOR BRIDGES = <7.12 STATIONS>
189.23 STATIONS
(TOTAL CARRIED TO GENERAL SUMMARY)

ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO PERFORM THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 LINEAR GRADING, AS PER PLAN.

LOCATION OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

GUARDRAIL REPLACEMENT

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

CONNECTIONS BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "BEAM RAIL SPLICE" AS SHOWN ON STANDARD DRAWING GR-1.1. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE RESPECTIVE GUARDRAIL RUNS.

ITEM 606 ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING AN ET-2000, OPTION "C", GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO STEEL COMPANY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 216-545-4373).

THE ANCHOR ASSEMBLY SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATIONS SHOWN IN THE PLANS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 606, EACH, ANCHOR ASSEMBLY, TYPE E. PAYMENT SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT THE 25' LONG ANCHOR ASSEMBLY, INCLUDING ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY. THIS ITEM SHALL ALSO INCLUDE PAYMENT OVER AND ABOVE THE COST OF STANDARD TYPE 5 GUARDRAIL FOR INSTALLING TYPE I BREAKAWAY POSTS (AS PER STANDARD CONSTRUCTION DRAWING GR-1.3) AT THE FOLLOWING LOCATIONS: 1) AT THE POINT WHERE THE ANCHOR ASSEMBLY AND THE GUARDRAIL RUN MEET; AND 2) AT THE NEXT THREE (3) POST LOCATIONS INTO THE GUARDRAIL RUN.

ITEM SPECIAL IMPACT ATTENUATOR, TYPE I, BIDIRECTIONAL

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING AN IMPACT ATTENUATOR SYSTEM. THE IMPACT ATTENUATOR SHALL BE ONE OF THE FOLLOWING:

1. THE BRAKEMASTER IMPACT ATTENUATING SYSTEM MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, ILLINOIS 60601 (TELEPHONE 312-467-6750).

2. THE C.A.T. IMPACT ATTENUATING SYSTEM MANUFACTURED BY SYRO STEEL COMPANY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE 216-545-4373).

THE ATTENUATOR SHALL BE DESIGNED FOR BIDIRECTIONAL IMPACTS AND SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATIONS SHOWN ON THE PLANS.

THE NOSE OF THE ATTENUATOR SHALL BE MARKED WITH THREE, EVENLY SPACED, FOUR (4) INCH WIDE HORIZONTAL STRIPES OF WHITE REFLECTIVE MATERIAL MEETING THE REQUIREMENTS OF CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM SPECIAL, EACH, IMPACT ATTENUATOR, TYPE I. THIS PRICE SHALL INCLUDE FULL PAYMENT FOR ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS ITEM IN PLACE, INCLUDING ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM.

DUCT-CABLE PROTECTION

ODOT'S RECORDS INDICATE THAT A 1-1/2" LIGHTING DUCT-CABLE WAS INSTALLED IN A 24" DEEP TRENCH. A 10 FT. SECTION OF 3" CONDUIT WAS INSTALLED AS A CABLE RACE-WAY IN AREAS WHERE THE LIGHTING DUCT-CABLE RUNS UNDERNEATH THE GUARDRAIL. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO THE EXISTING UNDERGROUND DUCT-CABLE IN ALL AREAS INCLUDING WHERE NEW GUARDRAIL AND UNDERDRAIN OUTLETS ARE TO BE INSTALLED.

ITEM SPECIAL RESHAPING BERM

EARTH BERMS ALONG OVERHEAD APPROACH ROADS WHERE THE EXISTING GUARDRAIL IS TO BE REPLACED WITH NEW GUARDRAIL SHALL BE RESHAPED ACCORDING TO PLAN DETAIL AND/OR AS DIRECTED BY THE ENGINEER TO INSURE A SMOOTH SURFACE FREE OF ALL IRREGULARITIES AND TO PROVIDE POSITIVE SURFACE DRAINAGE. SURPLUS EXCAVATION MATERIAL FROM BERM RESHAPING OPERATIONS (IF SUCH MATERIAL EXISTS) SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER.

RESHAPED EARTH BERMS ON THE OVERHEAD APPROACH ROADS SHALL BE RESEEDED AS PER C.M.S. 659 AND THE TYPICAL BERM RESHAPING DETAIL AS SHOWN ON SHEET NO. 105.

THE METHOD OF MEASUREMENT WILL BE ON A LIN. FT. BASIS AND SHALL BE THE ACTUAL LENGTH OF BERM RESHAPED ACCORDING TO PLAN DETAIL AND ACCEPTED.

PAYMENT FOR ACCEPTED QUANTITES WILL BE MADE AT THE CONTRACT PRICE FOR ITEM SPECIAL **BERM RESHAPING**.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE EDGE OF SHOULDER AND 10' BEYOND THE EDGE OF SHOULDER ON THE MAINLINE AND FOR SOIL AREAS BETWEEN THE EDGE OF SHOULDER AND EITHER 10' OR 12' BEYOND THE EDGE OF PAVEMENT ON THE OVERPASSES DEPENDING ON LOCATION (SEE SHEET 105 FOR FURTHER DETAILS).

WATERING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITY IS TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR THE PERMANENT SEEDED AREAS, AS PER 659.09:

659	WATER	240 M. GAL.

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 AND HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

207	TEMPORARY SEEDING AND MULCHING	22,942 SQ. YD.
207	STRAW OR HAY BALES	100 EACH
659	COMMERCIAL FERTILIZER	2 TON
659	WATER	50 M. GAL.
659	REPAIR SEEDING AND MULCHING	6000 SQ. YD.

GENERAL NOTES

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 OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS.

ITEM 603 6" CONDUIT, TYPE B, BORED OR JACKED, AS PER PLAN

6" CONDUIT WILL BE INSTALLED UNDER THE EXISTING PAVEMENT BY THE METHOD OF BORING OR JACKING AT THE FOLLOWING LOCATIONS.

6" CONDUIT

STA. 1827+50 ℄ S.R. 2 RT.	= 35 LIN.FT.
STA. 167+70 RAMP "H"	= 27 LIN.FT.
STA. 32+50 ℄ S.R. 2 RT. & LT.	= 70 LIN.FT.
STA. 40+46 RAMP "S"	= 51 LIN.FT.

NO TRENCH EXCAVATION OR EQUIPMENT SHALL BE CLOSER THAN TEN (10) FEET TO THE EDGE OF PAVEMENT OF ANY LANE MAINTAINING TRAFFIC. TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SPECIFICATION REQUIREMENT FOR CLASS B BEDDING SHALL BE DISREGARDED. SEE PLAN SHEETS FOR QUANTITIES.

ITEM 604 NO. 5 CATCH BASIN, AS PER PLAN

THIS WORK SHALL CONSIST OF REMOVING AND REPLACING THE EXISTING CONCRETE APRON ACCORDING TO STANDARD DRAWING CB-5 AND THE CATCH BASIN NO. 5, AS PER PLAN DETAIL ON SHEET NO. 116A.

IN CONJUNCTION WITH THIS WORK, THE EXISTING ROADSIDE DITCH SHALL BE REGRADED FROM APPROXIMATELY STA. 33+00 ℄ S.R. 2 (RT.) TO THE EXISTING CATCH BASIN.

ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PERFORM THE WORK DESCRIBED ABOVE IS TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 604 NO. 5 CATCH BASIN, AS PER PLAN.

ITEM 604 CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN

THIS WORK SHALL CONSIST OF RECONSTRUCTING THE EXISTING CATCH BASIN TO GRADE AS PER ITEM 604 AND SHALL INCLUDE INSTALLING A NEW GRATE AND FRAME IN ACCORDANCE WITH STANDARD DRAWING 2-2-B. ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO COMPLETE THIS ITEM OF WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 604 CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN.

ITEM 604 CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN

THIS WORK SHALL CONSIST OF ADJUSTING THE EXISTING CATCH BASIN TO GRADE AS PER ITEM 604 AND SHALL INCLUDE ALL REGRADING NECESSARY TO PROVIDE POSITIVE DRAINAGE TO THE EXISTING CATCH BASIN FROM THE SURROUNDING UNPAVED GORE AREA.

AGGREGATE FOR ITEM 451, REINFORCED CONCRETE PAVEMENT, AS PER PLAN

THE FINE AGGREGATE TO BE USED IN THE FULL DEPTH PAVEMENT REPLACEMENT ON THE EASTBOUND MAINLINE SHALL BE MANUFACTURED SAND BETWEEN STATION 153+12.00 TO STATION 160+16.00 AND SHALL BE NATURAL SAND BETWEEN STATION 160+16.00 TO STATION 167+20.00 AND IS TO BE IN ACCORDANCE WITH SPECIFICATION 703.02.

CONTRACTION JOINTS IN PAVEMENT WIDENING

WHERE NEW CONCRETE PAVEMENT IS PLACED ADJACENT TO EXISTING CONCRETE PAVEMENT, CONTRACTION JOINTS SHALL BE PROVIDED IN THE NEW PAVEMENT SO AS TO FORM A CONTINUOUS JOINT WITH THAT IN THE EXISTING PAVEMENT.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN NEW PAVEMENT SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-4. IF NECESSARY, ADDITIONAL JOINTS SHALL BE PROVIDED IN NEW PAVEMENT AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

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.

ITEM SPECIAL BONDED PATCHING OF RIGID PAVEMENTS, TYPE I (SEE PROPOSAL NOTE)

AN ESTIMATED QUANTITY OF 500 SQ. FT. OF ITEM SPECIAL BONDED PATCHING OF RIGID PAVEMENTS, TYPE I, HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED FOR THE REPLACEMENT OF EXISTING ASPHALT PATCHES AND FOR AREAS REQUIRING CENTERLINE REPAIR THROUGHOUT THE PROJECT WHOSE LOCATION SHALL BE DETERMINED BY THE ENGINEER, AND AS NOTED IN THIS PLAN.

ITEM SPECIAL GRINDING PORTLAND CEMENT CONCRETE PAVEMENT

THIS WORK SHALL BE COMPLETED AFTER THE INSTALLATION OF THE FULL DEPTH AND PARTIAL DEPTH REPAIRS AND BEFORE THE INSTALLATION OF ANY JOINT AND CRACK SEALANTS. ANY GRINDING OF THE SHOULDERS TO MAINTAIN CROSS SLOPES SHALL BE CONSIDERED INCIDENTAL TO THIS WORK. SEE PROPOSAL NOTE FOR ADDITIONAL DETAILS.

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "A"

ALL JOINTS REPAIRS SHALL BE CONSTRUCTED AS PER ITEM 255 AND BP-13. THE JOINT REPAIRS SHALL BE TYPE Y-Y, UNLESS OTHERWISE NOTED IN THESE PLANS. THE MAXIMUM DISTANCE BETWEEN ANY TRANSVERSE JOINTS WITHIN THE LIMITS OF THE REPAIRS SHALL BE 30 FEET. JOINT SEALERS SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801 IN LIEU OF THE REQUIREMENTS OF BP-13 AND ITEM 255. THE SEALANT SHALL BE TYPE III AND TYPE V. ALL COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255, FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "A".

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MSI, AS PER PLAN A

THE CONCRETE USED FOR THESE REPAIRS SHALL CONSIST OF THE MATERIALS SPECIFIED IN PROPOSAL NOTE [illegible], "BRIDGE DECK REPAIR AND OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE," UNDER SECTION 4.0, "PROPORTIONING AND MIXING."

THE LOCATIONS WHERE THIS METHOD OF JOINT REPAIR WILL BE UTILIZED ARE SHOWN BELOW:

STATION	SIDE	LANE	SIZE	SQ. YD.
96+90	WB	TRAVELLING	6' X 12'	8
96+96	WB	TRAVELLING	6' X 12'	8
97+40	WB	TRAVELLING	6' X 12'	8
97+77	WB	TRAVELLING	6' X 12'	8
100+19	WB	TRAVELLING	6' X 12'	8
100+67	WB	TRAVELLING	6' X 12'	8
101+00	WB	TRAVELLING	6' X 12'	8
101+43	WB	TRAVELLING	6' X 12'	8
101+83	WB	TRAVELLING	6' X 12'	8
102+23	WB	TRAVELLING	6' X 12'	8
TOTALS CARRIED TO GENERAL SUMMARY				80

JOINT SEALERS SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801 IN LIEU OF THE REQUIREMENTS OF BP-13 AND ITEM 255. THE SEALANT SHALL BE TYPE III AND TYPE V.

PAYMENT FOR ALL EQUIPMENT, LABOR, AND MATERIALS TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MSI, AS PER PLAN A.

CONTINGENCY QUANTITIES FOR FULL DEPTH JOINT REPAIRS

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN ADDED TO THE GENERAL SUMMARY TO BE USED BY THE ENGINEER TO EXTEND THE LIMITS OF THE JOINT REPAIRS SHOWN ON THESE PLANS AND/OR TO REMOVE AND REPLACE ADDITIONAL PAVEMENT SECTIONS FOUND TO BE IN NEED OF REPAIR DURING CONSTRUCTION:

255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A	826 SQ. YD.
255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B	266 SQ. YD.
255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN C	5 SQ. YD.
255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN D	18 SQ. YD.
255	FULL DEPTH PAVEMENT SAWING	3262 LIN. FT.

FULL DEPTH JOINT REPAIRS-STENCIL STATIONING

THE STATIONING OF THE JOINT REPAIRS SHOWN IN THESE PLANS WERE DETERMINED FROM STATIONS IMPRESSED IN THE PAVEMENT DURING ORIGINAL 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. THE MAXIMUM TOTAL PERCENT PASSING THE NO. 200 SIEVE FOR 304 SHALL BE 8 PERCENT AS OPPOSED TO THE 13 PERCENT SHOWN IN 304.02.

ITEM 310 SUBBASE, AS PER PLAN

MATERIALS FURNISHED FOR THIS ITEM SHALL EXCLUDE ALL SLAG EXCEPT GRANULATED SLAG OR CRUSHED AIR-COOLED BLAST FURNACE SLAG. NO BROKEN SALVAGED ROAD METAL (SALVAGED PAVEMENTS AND BASES) SHALL BE ALLOWED ON THIS PROJECT. ALL MATERIALS SUPPLIED FOR THIS ITEM SHALL BE TYPE II AND MEET THE FOLLOWING GRADATION:

SIEVE SIZE	TOTAL PERCENT PASSING
1"	100
3/8"	80-100
No. 4	60-100
No. 8	45-85
No. 40	15-50
No. 200	0-10

EXISTING SOURCES OF COARSE AGGREGATE

THE CONTRACTOR IS ADVISED THAT THE COARSE AGGREGATE SOURCES FOR THE ORIGINAL CONSTRUCTION OF THIS PROJECT ARE AVAILABLE FROM THE REPORT "THE SIGNIFICANCE OF PAVEMENT DESIGN AND MATERIALS IN "D" CRACKING", BY CONSTRUCTION TECHNOLOGY LABORATORIES OF SKOKIE, ILLINOIS. THE MAIN SOURCES IN THE ORIGINAL CONSTRUCTION ARE AS FOLLOWS:

SY-2	WOODVILLE LIME AND CHEMICAL COMPANY
Mn3	NATIONAL LIME AND STONE AT MARION
SK681	CANTON AGGREGATE COMPANY

SUBBASE/SUBGRADE FAILURES

DURING THE FULL DEPTH JOINT REPAIR OPERATIONS, IF THE ENGINEER DETERMINES THE SUBBASE OR SUBGRADE HAS FAILED OR IS PUMPING AFTER THE REMOVAL OF THE RIGID PAVEMENT, HE SHALL DIRECT THE CONTRACTOR TO EXCAVATE THE UNSUITABLE MATERIAL AND REPLACE IT WITH ITEM 304 AGGREGATE BASE, AS PER PLAN. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY AND SHALL INCLUDE PAYMENT FOR ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE OPERATIONS OUTLINED ABOVE:

203	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	185 CU. YD.
304	AGGREGATE BASE, AS PER PLAN	185 CU. YD.

ITEM 407 TACK COAT

THE RATE OF APPLICATION OF THE 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.

ITEM 801 CRACK SEALING, CLASS I, SILICONE

A QUANTITY OF 16600 LIN. FT. HAS BEEN CARRIED TO THE GENERAL SUMMARY TO SEAL CRACKS IN THE EXISTING PAVEMENT TO BE USED AS DIRECTED BY THE ENGINEER.

GENERAL NOTES

ITEM 451 REINFORCED CONCRETE PAVEMENT, AS PER PLAN

THIS ITEM OF WORK WILL MEET THE REQUIREMENTS OF ITEM 451, BP-3 AND BP-4 WITH THE FOLLOWING EXCEPTIONS:

1. THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL BE 21 FT. EXCEPT AS NOTED ON THIS SHEET. THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS, THE TYPE OF COARSE AGGREGATE AND THE TYPE OF FINE AGGREGATE SHALL BE AS SHOWN IN THE TABLE ON THIS SHEET.
2. THE COARSE AGGREGATE AND FINE AGGREGATE SHALL MEET THE REQUIREMENTS SHOWN ON THIS SHEET.
3. TRANSVERSE JOINTS SHALL BE SAWED AND SEALED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 801, TRANSVERSE JOINT SEALING, CLASS III, SILICONE. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 451 REINFORCED CONCRETE PAVEMENT, AS PER PLAN.
4. MESH SHALL BE RECTANGULAR AND CENTERED IN EACH PANEL SO AS TO MAINTAIN A CLEARANCE OF 3" (± 2") FROM THE END OF THE DOWELS. THE MESH SHALL CONSIST OF W8.5 OR D8.5 LONGITUDINAL WIRES SPACED 6" CENTER TO CENTER AND W4 OR D4 TRANSVERSE WIRES SPACED 12" CENTER TO CENTER.
5. DOWEL ASSEMBLIES PLACED ON STABILIZED BASES SHALL BE HELD FIRMLY IN POSITION BY USE OF POWER DRIVEN FASTENERS AND AN APPROPRIATE CLIP AT A MINIMUM OF SIX LOCATIONS ALONG THE ASSEMBLY (THREE EACH SIDE OF THE ASSEMBLY) TO SECURE THE BASKET FROM LATERAL AND VERTICAL DISPLACEMENT DURING CONCRETE PLACEMENT OR AN APPROVED DOWEL BAR INSERTER MAY BE USED.
6. PROPOSAL NOTE "~~451,452 & 453~~ PAVEMENT SURFACE SMOOTHNESS REQUIREMENTS" SHALL APPLY BETWEEN THE FOLLOWING STATIONS:

   STA. 1835+10 TO STA. 14+60 WESTBOUND
   STA. 56+06.25 TO STA. 90+23 WESTBOUND
   *STA. 153+12 TO STA. 167+20 EASTBOUND

   *ALL AREAS FOUND TO BE GREATER THAN 10 INCHES PER MILE PER 0.10 MILE SECTION BETWEEN STA. 153+12 TO STA. 167+20 EASTBOUND SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT. NO GRINDING SHALL BE PERMITTED IN THIS SECTION.
7. STATION NUMBERS AS PER 451.09 SHALL BE WAIVED FOR THIS ITEM.

ITEM 452 PLAIN CONCRETE PAVEMENT, AS PER PLAN

THIS ITEM OF WORK WILL MEET THE REQUIREMENTS OF ITEM 452, BP-3, AND BP-4 WITH THE FOLLOWING EXCEPTIONS:

1. THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL BE 21 FT. EXCEPT AS NOTED ON THIS SHEET. THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS, THE TYPE OF COARSE AGGREGATE AND THE TYPE OF FINE AGGREGATE SHALL BE AS SHOWN IN THE TABLE ON THIS SHEET.
2. THE COARSE AGGREGATE AND FINE AGGREGATE SHALL MEET THE REQUIREMENTS SHOWN ON THIS SHEET.
3. TRANSVERSE JOINTS SHALL BE SAWED AND SEALED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 801, TRANSVERSE JOINT SEALING, CLASS III, SILICONE. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 452 PLAIN CONCRETE PAVEMENT, AS PER PLAN.
4. DOWEL ASSEMBLIES PLACED ON STABILIZED BASES SHALL BE HELD FIRMLY IN POSITION BY THE USE OF POWER DRIVEN FASTENERS AND AN APPROPRIATE CLIP AT A MINIMUM OF SIX LOCATIONS ALONG THE ASSEMBLY (THREE EACH SIDE OF THE ASSEMBLY) TO SECURE THE BASKET FROM LATERAL AND VERTICAL DISPLACEMENT DURING CONCRETE PLACEMENT OR AN APPROVED DOWEL BAR INSERTER MAY BE USED.
5. ALL SHOULDER TRANSVERSE CONTRACTION/EXPANSION JOINTS SHALL BE DOWELLED AS PER 451.08 (B).
6. PAVEMENT SURFACE VARIATION SHALL NOT EXCEED 1/4" IN A 10' LENGTH OF PAVEMENT. ALL OTHER PROVISIONS OF 451.12 AS CALLED FOR IN 452.01 SHALL APPLY.
7. JOINT SPACING, EXCEPT AS NOTED IN THE TABLE ON THIS SHEET, SHALL CONFORM WITH THE DETAILS SHOWN ON SHEET NO. 103.
8. WHERE NEW CONCRETE SHOULDER IS PLACED ADJACENT TO EXISTING CONCRETE PAVEMENT, CONTRACTION JOINTS SHALL BE PROVIDED IN THE NEW SHOULDER TO FORM A CONTINUOUS JOINT WITH THOSE IN THE EXISTING PAVEMENT.
9. STATION NUMBERS MEETING THE REQUIREMENTS OF 451.09 SHALL BE IMPRESSED INTO THE SHOULDER. THE STATION NUMBERS SHALL BE PLACED PERPENDICULAR TO THE SHOULDER EDGE AND FACING IN THE DIRECTION OF TRAFFIC.

JOINT SPACING, FINE AND COARSE AGGREGATE AND BASE TYPE REQUIREMENTS FOR ITEMS 451 AND 452, AS PER PLAN.

LOCATION FROM	LOCATION TO	SIDE	BASE TYPE	MAXIMUM JOINT SPACING (FT.)	COARSE AGGREGATE TYPE Δ	FINE AGGREGATE TYPE
1835+10.00	1837+05.75	WB	310, AS PER PLAN	13	D	703.02
1837+05.75	0+0.91	WB	310, AS PER PLAN	13	D	703.02
0+0.91	2+95.75	WB	310, AS PER PLAN	25	ND	703.02
2+95.75	5+00.00	WB	310, AS PER PLAN	25	ND	703.02
5+00.00	7+40.00	WB	1A	25	ND	703.02
7+40.00	9+80.00	WB	1A	25	ND	703.02
9+80.00	12+20.00	WB	1A	13	D	703.02
12+20.00	14+60.00	WB	1A	13	D	703.02
56+06.25	58+19.69	WB	304, AS PER PLAN	13	D	703.02
58+19.69	60+33.13	WB	304, AS PER PLAN	13	D	703.02
60+33.13	62+46.56	WB	304, AS PER PLAN	25	ND	703.02
62+46.56	64+60.00	WB	304, AS PER PLAN	25	ND	703.02
64+60.00	66+73.50	WB	NJ	25	ND	703.02
66+73.50	68+87.00	WB	NJ	25	ND	703.02
68+87.00	71+00.50	WB	NJ	13	D	703.02
71+00.50	73+14.00	WB	NJ	13	D	703.02
73+14.00	75+27.50	WB	ASPHALT TREATED FREE DRAINING BASE	13	D	703.02
75+27.50	77+41.00	WB	ASPHALT TREATED FREE DRAINING BASE	13	D	703.02
77+41.00	79+54.50	WB	ASPHALT TREATED FREE DRAINING BASE	25	ND	703.02
79+54.50	81+68.00	WB	ASPHALT TREATED FREE DRAINING BASE	25	ND	703.02
81+68.00	83+81.75	WB	CEMENT TREATED FREE DRAINING BASE	25	ND	703.02
83+81.75	85+95.50	WB	CEMENT TREATED FREE DRAINING BASE	25	ND	703.02
85+95.50	88+09.25	WB	CEMENT TREATED FREE DRAINING BASE	13	D	703.02
88+09.25	90+23.00	WB	CEMENT TREATED FREE DRAINING BASE	13	D	703.02
98+00.00	99+82.00	WB	304, AS PER PLAN	21	ND	703.02
114+82.00	118+42.00	WB	304, AS PER PLAN	60	ND	703.02
118+42.00	121+22.00	WB	304, AS PER PLAN	40	ND	703.02
121+22.00	122+06.00	WB	304, AS PER PLAN	21	ND	703.02
122+06.00	122+63.00	WB	304, AS PER PLAN	57	ND	703.02
122+63.00	123+26.00	WB	304, AS PER PLAN	21	ND	703.02
138+92.00	141+13.00	WB	304, AS PER PLAN	21	ND	703.02
174+73.00	175+51.71	WB	304, AS PER PLAN	21	ND	703.02
119+21.00	126+16.00	EB	304, AS PER PLAN	21	ND	703.02
153+12.00	160+16.00	EB	304, AS PER PLAN	21	ND	703.02 MANUFACTURED SAND
160+16.00	167+20.00	EB	304, AS PER PLAN	21	ND	703.02 NATURAL SAND
180+00.00	181+46.00	EB	304, AS PER PLAN	21	ND	703.02

⊛"PORTLAND CEMENT CONCRETE PAVEMENT"

ΔTHE "ND" AND "D" DESIGNATION SHOWN IN THE COARSE AGGREGATE COLUMN SHALL BE NON-"D" CRACKING AND "D" CRACKING SUSCEPTIBLE AGGREGATES RESPECTIVELY. THE COARSE AGGREGATE FOR THIS ITEM SHALL PASS OR FAIL THE REQUIREMENTS OF PROPOSAL NOTE ⊛ ACCORDINGLY AND SHALL BE LIMITED TO 57 LIMESTONE OR 57 GRAVEL. THE CONTRACTOR MAY CONTACT THE LABORATORY FOR AGGREGATE SOURCES WHICH HAVE PASSED OR FAILED THIS TEST. A LIST OF "D" CRACKING SUSCEPTIBLE AGGREGATES IS SHOWN BELOW. THESE ARE ACCEPTABLE SOURCES OF COARSE AGGREGATES TO BE USED IN LIEU OF THE ABOVE TESTING REQUIREMENTS.

NON-"D" CRACKING SUSCEPTIBLE AGGREGATES
SY-2 WOODVILLE LIME AND CHEMICAL COMPANY

"D" CRACKING SUSCEPTIBLE AGGREGATES
Mn3 NATIONAL LIME AND STONE AT MARION
SK681 CANTON AGGREGATE COMPANY

CALC BY R.L.S. DATE 2-19-92	ERI/LOR-2-30.51/0.00	OHIO	13
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	FHWA REGION 5	267

ITEM SPECIAL
NON-STABILIZED DRAINING BASE

FEBRUARY 14, 1992

DESCRIPTION. THIS WORK SHALL CONSIST OF CONSTRUCTING A NON-STABILIZED DRAINAGE BASE (NSDB) ON A PREPARED SUBGRADE OR BASE COURSE IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, THICKNESS, AND TYPICAL CROSS SECTIONS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER.

ITEM 304, "AGGREGATE BASE," SHALL APPLY; DEVIATIONS ARE AS FOLLOWS.

AGGREGATES. THE AGGREGATES FOR THE NSDB SHALL BE CRUSHED CARBONATE STONE, CRUSHED GRAVEL, AIR-COOLED BLAST FURNACE SLAG OR GRANULATED SLAG MEETING THE REQUIREMENTS OF 703.02 AND MEETING THE FOLLOWING GRADATIONS.

SIEVE SIZE	TOTAL PERCENT PASSING	
	TYPE 'NJ'	TYPE 'IA'
1 ½"	100	
1"	95-100	100
½"	60-80	50-80
No. 4	40-55	
No. 8	5-25	10-35
No. 16	0-8	
No. 50	0-5	0-15
No. 200		0-6

IF GRAVEL IS UTILIZED, 95 PERCENT BY COUNT OF THE AGGREGATE RETAINED ON THE NUMBER 8 SIEVE SHALL HAVE AT LEAST ONE MECHANICALLY FRACTURED FACE.

MATERIAL PASSING THE NO. 40 SIEVE SHALL BE NON-PLASTIC BY AASHTO T-90.

UNDER AASHTO T-96, LOS ANGELES ABRASION TEST, 40 PERCENT WEAR SHALL BE THE MAXIMUM ALLOWABLE FOR ALL AGGREGATES USED UNDER THIS SPECIFICATION.

COMPOSITION OF MIXTURES. CONTRACTOR SHALL SUBMIT FOR APPROVAL A GRADATION FOR THE MATERIAL AND A STATEMENT NAMING THE SOURCE OF EACH COMPONENT.

THE GRADATION SHALL ESTABLISH THE PERCENTAGE BY DRY WEIGHT OF AGGREGATE PASSING EACH REQUIRED SIEVE SIZE. THE VALUES OF PERCENT PASSING EACH SIEVE SIZE SHALL BE WITHIN THE MASTER BAND. THE SUBMITTED GRADATION SHALL BE IN EFFECT UNTIL A MODIFICATION IS APPROVED.

VERIFICATION OF DESIGN. A MINIMUM OF 30 DAYS PRIOR TO THE PRODUCTION OF THE NSDB, THE CONTRACTOR SHALL SUBMIT TO THE LABORATORY FOR APPROVAL, THE MIX DESIGN, GRADATION OF THE MIXTURE AND THE FOLLOWING QUANTITIES OF COMPONENTS FOR MATERIAL VERIFICATION THAT THE MIX DESIGN WILL RESULT IN A MIXTURE HAVING THE REQUIRED GRADATION.

BLENDED AGGREGATE	200 POUNDS
COMPONENT SIZE	100 POUNDS EACH

THE CONTRACTOR SHALL NOTIFY THE LABORATORY PRIOR TO THE DELIVERY OF ANY MATERIAL.

EQUIPMENT. ALL EQUIPMENT NECESSARY TO MIX, TRANSPORT, PLACE, COMPACT AND FINISH THIS LAYER SHALL BE APPROVED BEFORE WORK WILL BE PERMITTED TO START. SUCH EQUIPMENT SHALL INCLUDE A STATIONARY OR PORTABLE CONTINUOUS OR BATCH TYPE PUGMILL MIXER EQUIPPED WITH BATCHING OR METERING DEVICES FOR PROPORTIONING THE BLEND, OR OTHER APPROVED UNITS CAPABLE OF PRODUCING A BLENDED MATERIAL CONSISTENTLY MEETING THE GRADATION REQUIREMENTS. A TRAVELING PLANT SUCH AS A SPREADER BOX OR ASPHALT PAVERS CAPABLE OF MAINTAINING A UNIFORM RATE OF TRAVEL WHILE SPREADING AND/OR LAYING A LIFT OF UNIFORM CONSISTENCY AND THICKNESS WITH PROPER GRADE CONTROL, MOTOR GRADERS, PNEUMATIC-TIRED OR STEEL WHEELED VIBRATORY ROLLERS AND SUCH OTHER EQUIPMENT AND TOOLS AS MAY BE REQUIRED TO PERFORM THE WORK IN A SATISFACTORY MANNER. THE ROLLERS SHALL CONFORM TO THE REQUIREMENTS OF SPECIFICATION 401.11.

MIXING AND PREWETTING. THE AGGREGATE SHALL BE MIXED AND PREWETTED TOGETHER IN THE PROPER PROPORTION AS SPECIFIED IN THE MIX DESIGN BY UTILIZING A PUGMILL MIXER.

THE PUGMILL MIXER SHALL PROVIDE AN ACCURATE CONTROL OF THE PROPORTIONS OF WATER AND AGGREGATE AND SHALL BE SO DESIGNED THAT THE MATERIAL CAN BE RETAINED IN THE MIXING CHAMBER UNDER VIGOROUS ACTION FOR AT LEAST 15 SECONDS. IF THE MIXER IS OF THE CONTINUOUS-FLOW TYPE, IT SHALL HAVE TWIN MIXING SHAFTS AND SHALL BE EQUIPPED WITH A HOPPER OR BIN AT THE DISCHARGE END OF THE MIXER SO DESIGNED AS TO MINIMIZE THE SEGREGATION OF THE MIXED MATERIALS AND OF SUCH A CAPACITY AS TO PREVENT THE NECESSITY OF STOPPING THE MIXER BETWEEN THE SUCCESSIVE TRUCK LOADS, UNDER NORMAL OPERATING CONDITIONS.

THE MIXTURE SHALL BE HANDLED IN SUCH A MANNER AS TO PREVENT CONTAMINATION, DEGRADATION, AND SEGREGATION.

TRANSPORTATION OF MIXTURE. THE BLENDED MATERIAL SHALL BE HAULED TO THE SITE IN VEHICLES THAT WILL PREVENT CONTAMINATION, DEGRADATION, AND SEGREGATION OF THE MIXTURE. THE MATERIAL SHALL CONTAIN AT LEAST 2% MOISTURE CONTENT BY WEIGHT TO MINIMIZE SEGREGATION AND DEGRADATION.

PREPARATION OF SUBBASE OR BASE COURSE. PREPARATION OF THE SUBBASE, SUBGRADE OR BASE COURSE SHALL BE IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS OF SPECIFICATIONS 310, 203, OR 304.

SPREADING. THE BLENDED MIXTURE SHALL BE DELIVERED TO THE PREPARED SUBBASE, SUBGRADE, OR BASE COURSE AND SPREAD UNIFORMLY WITH MINIMUM MANIPULATION TO PREVENT SEGREGATION. THE AGGREGATE SHALL BE IN COMPACTED LIFTS NOT TO EXCEED 4 INCHES. SPREADER BOXES OR ASPHALT PAVERS WITH AUTOMATIC GRADE CONTROL SHALL BE USED.

WHEN THE NSDB IS PLACED IN AREAS INACCESSIBLE TO SPREADERS, THE NSDB SHALL BE SPREAD UTILIZING A METHOD APPROVED BY THE ENGINEER.

COMPACTION. PNEUMATIC-TIRE ROLLERS, OR VIBRATORY ROLLERS CONFORMING TO SPECIFICATION 401.11 SHALL BE USED TO COMPACT THE NSDB. WHEN THE SQUARE YARDAGE OF NSDB EXCEEDS 5,000 ON A PROJECT, ONE OR MORE CONTROL STRIPS SHALL BE CONSTRUCTED AT THE BEGINNING OF THE WORK FOR THE PURPOSE OF DETERMINING PROJECT COMPACTION REQUIREMENTS. AN ADDITIONAL CONTROL STRIP SHALL BE CONSTRUCTED WHEN A CHANGE IS MADE IN THE SOURCE OR TYPE OF MATERIAL FROM THE SAME SOURCE, OR AS DIRECTED BY THE ENGINEER. EACH CONTROL STRIP SHALL CONSIST OF AN AREA AT LEAST 400 SQUARE YARDS, AND SHALL BE OF THE SAME MATERIAL AS THAT SPECIFIED ON THE REMAINDER OF THE PROJECT.

THE CONTROL STRIP SHALL BE COMPACTED BY A MINIMUM OF TWO PASSES FOR TYPE 'NJ' AND FOUR PASSES FOR TYPE 'IA' WITH THE COMPACTION EQUIPMENT. SURFACE APPLICATION OF WATER MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER. A PASS IS DEFINED AS ONE PASSAGE OF A ONE TIRE, COMPACTING WHEEL, A VIBRATORY UNIT OVER THE ENTIRE SURFACE OR THE LAYER. DENSITY OF THE CONTROL SECTION SHALL BE DETERMINED IN ACCORDANCE WITH THE CURRENT PROVISIONS OF AASHTO T-238 METHOD A.

UPON THE COMPLETION OF THE COMPACTION, A MINIMUM OF TEN TESTS SHALL BE MADE AT RANDOM LOCATIONS, DETERMINED BY THE ENGINEER. THIS SHALL DETERMINE THE AVERAGE IN-PLACE DENSITY OF THE CONTROL STRIP. THE VALUE OF THIS AVERAGE SHALL BE A REFERENCE MAXIMUM DENSITY FOR THE NSDB FROM THE SAME SOURCE USED ELSEWHERE ON THE PROJECT.

FOR THE PURPOSE OF MONITORING CONFORMANCE TO THE COMPACTION REQUIREMENTS, THE NSDB CONSTRUCTED ON THE PROJECT SHALL BE DIVIDED INTO LOTS CONSISTING OF APPROXIMATELY 5,000 SQUARE YARDS OR LESS IN AREA.

THE ENGINEER SHALL DETERMINE THE AVERAGE LOT DENSITY OF FIVE RANDOMLY SELECTED LOCATIONS IN THE LOT. THIS AVERAGE REFERENCE DENSITY SHALL NOT BE LESS THAN 95% OF THE AVERAGE REFERENCE DENSITY IN THE CONTROL STRIP. IF A LOT FAILS TO MEET THIS REQUIREMENT IT SHALL BE RECOMPACTED BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE DEPARTMENT, AND RESUBMITTED FOR ACCEPTANCE. THE ENGINEER SHALL DETERMINE THE NEW AVERAGE LOT DENSITY. IF THIS DENSITY STILL FAILS TO MEET 95% OF THE AVERAGE REFERENCE MAXIMUM DENSITY, A NEW CONTROL STRIP SHALL BE CONSTRUCTED.

WHEN THE NSDB IS PLACED IN AREAS INACCESSIBLE TO ROLLERS, THE NSDB SHALL BE COMPACTED UTILIZING A METHOD APPROVED BY THE ENGINEER.

SHAPING AND FINISHING. AFTER THE NSDB HAS BEEN COMPACTED THE SURFACE SHALL BE SHAPED TO THE REQUIRED CROSS SECTION.

WHEN THE SHAPING REDUCES THE DENSITY, THE SECTION SHALL BE RECOMPACTED TO CONFORM TO THE ORIGINAL TESTED DENSITY.

THE COMPACTION AND SHAPING OF THE NSDB SHALL PRODUCE UNIFORM DENSITY AND CROSS SECTION OF THE NSDB.

LIMITATIONS ON PLACING OPERATIONS. THE NSDB SHALL NOT BE PLACED WHEN RAIN IS FORECAST WITHIN THE INTENDED WORKING PERIOD. IF RAIN OCCURS DURING PLACEMENT OF THE NSDB, ALL OPERATIONS SHALL CEASE.

THE NSDB SHALL NOT BE PLACED DURING ANY WEATHER CONDITIONS THAT WOULD CAUSE ITS DEGRADATION, SEGREGATION, OR CONTAMINATION.

PROTECTION OF THE UNDERDRAINS. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR'S EQUIPMENT BE ALLOWED TO CRUSH THE UNDERDRAIN PIPE OR SYSTEM, AS A RESULT OF THE PLACEMENT OR COMPACTION OF THE NSDB. DAMAGE TO THE UNDERDRAIN PIPE OR SYSTEM SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL ENSURE A POSITIVE CONNECTION BETWEEN THE UNDERDRAIN BACKFILL AND THE NSDB REGARDLESS OF THE SEQUENCE OF CONSTRUCTION CALLED FOR ON THE PLANS, NOTES AND SPECIFICATIONS.

PROTECTION OF THE NSDB. THE CONTRACTOR SHALL NOT USE THE NSDB FOR A HAUL ROAD. HAULING UNITS AND OTHER CONSTRUCTION VEHICLES WILL NOT BE ALLOWED TO OPERATE ON THE NSDB. ONLY THE EQUIPMENT USED TO PLACE THE NEXT LAYER SHALL BE ALLOWED ON THE NSDB. ALL HAULING UNITS CARRYING MATERIAL FOR THE NEXT LAYER OF PAVEMENT MUST SIDE DUMP ONTO THE NSDB.

THE NSDB SHALL BE PROTECTED FROM FINE MATERIAL CONTAMINATION AT ALL TIMES.

ADEQUATE SURFACE AND SUBSURFACE DRAINAGE SHALL BE PROVIDED FOR THE NSDB, SUBBASE, AND SUBGRADE AT ALL TIMES.

WHEN BITUMINOUS CONCRETE PAVEMENT IS CONSTRUCTED ON THE NSDB; THE FIRST COURSE SHALL BE PLACED USING A PAVER MOUNTED ON TRACKS, THE FIRST COURSE SHALL BE ALLOWED TO CURE OVERNIGHT BEFORE PLACING THE SUCCEEDING PAVEMENT COURSES, A MINIMUM OF 8" OF ASPHALT CONCRETE SHALL BE REQUIRED ON THE NSDB BEFORE ANY HAULING EQUIPMENT WILL BE ALLOWED ON THE PAVEMENT.

NSDB THICKNESS TOLERANCES. THE MAXIMUM COMPACTED DEPTH OF THE NSDB SHALL BE 4 INCHES. THE COMPACTED THICKNESS SHALL COMPLY WITH THE PLAN TYPICAL SECTION.

THE THICKNESS TOLERANCE SHALL BE ± ½". THIN AREAS SHALL BE CORRECTED BY ADDING MATERIAL, GRADING AND COMPACTING.

SURFACE TOLERANCE. THE CONTRACTOR SHALL CHECK THE WORK UNDER THIS ITEM WITH TEMPLATES, SLOPE BOARDS OR OTHER DEVICES SATISFACTORY TO THE ENGINEER. THE COMPLETED WORK SHALL CONFORM TO THE PLANS WITHIN THE FOLLOWING TOLERANCE:

THE FINISHED SURFACE SHALL BE UNIFORM AND AT NO PLACE VARY MORE THAN 1/4 INCH FROM A TEN-FOOT STRAIGHT EDGE APPLIED TO THE SURFACE PARALLEL TO THE CENTERLINE OF THE PAVEMENT.

LOW AREAS SHALL BE CORRECTED BY ADDING MATERIAL, GRADING AND COMPACTING, AT NO ADDITIONAL COST TO THE DEPARTMENT.

EXPOSURE TO THE ELEMENTS. ANY NSDB SHALL BE COVERED BY THE NEXT PAVEMENT COURSE WITHIN 40 DAYS OF THE CONSTRUCTION OF THE NSDB.

THE SHOULDER PAVEMENT SHALL BE PLACED WITHIN 75 DAYS OF THE PLACEMENT OF THE NSDB.

THE CONTRACTOR MAY CONSTRUCT THE NSDB AT ANY TIME THAT COMPLIES WITH THE TEMPERATURE RESTRICTIONS OF THIS SPECIFICATION. HOWEVER, THE CONTRACTOR SHALL HAVE THE NSDB COMPLETELY COVERED WITH THE NEXT LAYER OF PAVEMENT WITH THE UNDERDRAINS PLACED AND FUNCTIONING BEFORE THE ATMOSPHERIC TEMPERATURE IS BELOW 35°F FOR ANY LENGTH OF TIME.

ALL DAMAGE CAUSED TO THE OVERLAYING PAVEMENT, NSDB, SUBBASE, SUBGRADE AND UNDERDRAINS BY THE EXPOSURE TO TEMPERATURES BELOW 35°F SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THESE ITEMS SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE NSDB SHALL BE COVERED BY THE NEXT LAYER OF PAVEMENT (MAINLINE AND SHOULDERS) AND HAVE THE UNDERDRAIN FUNCTIONING BY THE END OF THE CONSTRUCTION SEASON IN ANY GIVEN CALENDAR YEAR.

METHOD OF MEASUREMENT. THE YARDAGE UNDER THIS ITEM WILL BE THE NUMBER OF SQUARE YARDS COMPLETED AND ACCEPTED IN PLACE. THE WIDTH FOR MEASUREMENT WILL BE THE WIDTH OF THE PAVEMENT SHOWN ON THE TYPICAL SECTIONS OF THE PLANS AND ADDITIONAL WIDENING WHERE CALLED FOR, OR OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. THE LENGTH WILL BE MEASURED HORIZONTALLY ALONG THE CENTERLINE OF EACH ROADWAY OR RAMP. THE PLAN QUANTITIES AS ADJUSTED FOR CHANGES, ERRORS, AND DEVIATIONS IN EXCESS OF ALLOWABLE TOLERANCES WILL BE THE METHOD OF MEASUREMENT.

PAYMENT. THE CONTRACT PRICE PAID PER SQUARE YARD FOR NON-STABILIZED DRAINAGE BASE SHALL INCLUDE FULL COMPENSTAION FOR FURNISHING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTIALS, AND FOR DOING ALL THE WORK INVOLVED IN CONSTRUCTING THE NON-STABILIZED DRAINAGE BASE, COMPLETE IN PLACE.

ITEM	UNIT	DESCRIPTION
SPECIAL	SQUARE YARD	4" NON-STABILIZED DRAINING BASE TYPE 'NJ'
SPECIAL	SQUARE YARD	4" NON-STABILIZED DRAINING BASE TYPE 'IA'

CALC BY R.L.S. DATE 2-19-92	ERI/LOR-2-30.51/0.00	OHIO	14
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	FHWA REGION 5	267

ITEM SPECIAL

ASPHALT TREATED FREE DRAINING BASE

JANUARY 24, 1992

DESCRIPTION. THIS WORK SHALL CONSIST OF CONSTRUCTING AN ASPHALT TREATED FREE DRAINING BASE (ATFDB) COURSE OF COARSE AGGREGATE AND ASPHALT CEMENT, MIXED IN A CENTRAL PLANT AND SPREAD AND COMPACTED ON A PREPARED SURFACE IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES AND TYPICAL SECTIONS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER.

ITEM 301, "BITUMINOUS AGGREGATE BASE," SHALL APPLY; DEVIATIONS FROM THESE ARE AS FOLLOWS.

MATERIALS. THE COARSE AGGREGATE SHALL BE CRUSHED CARBONATE STONE, CRUSHED GRAVEL, AIR-COOLED BLAST FURNACE SLAG, OR GRANULATED SLAG MEETING THE REQUIREMENTS OF 703.04 AND MEETING THE GRADATION REQUIREMENTS OF 67 OR 57 OF TABLE 703-1. IF CRUSHED GRAVEL IS UTILIZED, 90 PERCENT BY COUNT SHALL HAVE AT LEAST 2 MECHANICALLY FRACTURED FACES. THE ASPHALT CEMENT SHALL BE AC-20 MEETING THE REQUIREMENTS OF 702.01.

UNDER AASHTO T-96, LOS ANGELES ABRASION TEST, 40 PERCENT WEAR SHALL BE THE MAXIMUM ALLOWABLE FOR ALL AGGREGATES USED UNDER THIS SPECIFICATION.

COMPOSITION OF MATERIALS. THE AMOUNT OF ASPHALT CEMENT COMBINED WITH THE AGGREGATE SHALL BE 1.5 TO 2.5 PERCENT BY WEIGHT OF THE MIX. ASPHALT CONTENT SHALL BE BASED ON VISUAL INSPECTION. THE AGGREGATE SHALL BE THOROUGHLY COATED AFTER MIXING.

EQUIPMENT. COMPACTION EQUIPMENT SHALL BE LIMITED TO TANDEM STEEL WHEEL ROLLERS WEIGHING 6 TO 10 TONS.

PREPARATION OF MATERIALS. THE ATFDB MATERIAL SHALL BE MIXED WITHIN A TEMPERATURE RANGE DESIGNATED BY THE LABORATORY. THIS MIX SHALL BE IMMEDIATELY LOADED INTO THE TRUCKS.

VERIFICATION OF DESIGN. A MINIMUM OF 30 DAYS PRIOR TO THE PRODUCTION OF THE ATFDB, THE CONTRACTOR SHALL SUBMIT A COMPUTED BLEND OF AGGREGATES AND ASPHALT CEMENT TO THE LABORATORY TO PERFORM THE TESTING NECESSARY TO DETERMINE THE MIX DESIGN ACCEPTANCE. THE CONTRACTOR SHALL DELIVER TO THE LABORATORY THE NECESSARY ASPHALT CEMENT AND AGGREGATE TO MAKE 15 CUBIC FEET OF THE ATFDB FOR THE DESIGN APPROVAL. THE CONTRACTOR SHALL NOTIFY THE LABORATORY PRIOR TO THE DELIVERY OF ANY MATERIAL.

LIMITATIONS ON PLACING OPERATIONS. THE ATFDB SHALL BE SPREAD ONLY WHEN THE ATMOSPHERIC TEMPERATURE IS ABOVE 45°F AND THE PREDICTED TEMPERATURE IS TO REMAIN ABOVE 45°F FOR FIVE DAYS AFTER PLACEMENT.

THE ATFDB SHALL NOT BE PLACED WHEN RAIN IS FORECAST WITHIN THE INTENDED WORKING PERIOD. IF RAIN OCCURS DURING PLACEMENT OF THE ATFDB, ALL OPERATIONS SHALL CEASE.

THE ATFDB SHALL NOT BE PLACED DURING ANY WEATHER CONDITIONS THAT WOULD CAUSE ITS DEGRADATION, SEGREGATION, OR CONTAMINATION.

SPREADING AND COMPACTING. THE SPREADING OPERATION SHALL PRODUCE A SMOOTH UNIFORM LAYER PRIOR TO THE COMPACTION OPERATION.

UNLESS OTHERWISE DIRECTED, ROLLING SHALL CONSIST OF NOT LESS THAN 2 PASSES OVER ANY GIVEN POINT ON THE SURFACE. THE ATFDB SHALL BE SUFFICIENTLY COMPACTED TO SUPPORT THE WEIGHT OF THE EQUIPMENT THAT WILL PLACE THE NEXT LAYER OF PAVEMENT. OVER COMPACTION OF THE ATFDB TO THE EXTENT THE AGGREGATE PARTICLES ARE CRUSHED OR BROKEN SHALL NOT BE PERMITTED.

ROLLING SHALL BE COMPLETED BEFORE THE MIXTURE TEMPERATURE HAS DROPPED TO LESS THAN 100°F. ATFDB SHALL NOT BE COOLED WITH WATER.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE FORMED BY CUTTING BACK INTO THE COMPLETED WORK TO FORM A VERTICAL FACE.

LATERAL SUPPORT OF THE ATFDB WILL BE REQUIRED WHEN THE ATFDB IS COMPACTED WITH A ROLLER AND SIGNIFICANT BREAKUP OF THE ATFDB OCCURS AT/OR NEAR THE OUTER PORTION OF A COMPACTED LIFT. EMBANKMENT MATERIAL, FORMS OR OTHER METHODS OF LATERAL SUPPORT SHALL BE USED. THIS LATERAL SUPPORT SHALL BE APPROVED BY THE ENGINEER AND PROVIDED AT NO ADDITIONAL COST TO THE DEPARTMENT. THIS LATERAL SUPPORT SHALL NOT CONTAMINATE THE ATFDB.

WHEN THE ATFDB IS PLACED IN AREAS INACCESSIBLE TO ROLLERS, THE ATFDB SHALL BE COMPACTED UTILIZING A METHOD APPROVED BY THE ENGINEER.

ATFDB THICKNESS TOLERANCES. THE MAXIMUM COMPACTED DEPTH OF THE ATFDB SHALL BE 4 INCHES. THE COMPACTED THICKNESS SHALL COMPLY WITH THE TYPICAL SECTION.

THE CONTRACTOR SHALL ENSURE THE PLACED ATFDB COMPLIES WITH THE SPECIFIED THICKNESS BY RANDOMLY CHECKING THE THICKNESS DURING CONSTRUCTION. ALL SECTIONS FOUND TO BE LESS THAN THE SPECIFIED THICKNESS BY MORE THAN 1/2 INCH SHALL BE REMOVED AND REPLACED WITH ATFDB AT NO ADDITIONAL COST TO THE DEPARTMENT.

SURFACE TOLERANCE. THE FINISHED SURFACE SHALL BE UNIFORM AND AT NO PLACE VARY MORE THAN 1/2 INCH FROM A TEN-FOOT STRAIGHT EDGE APPLIED TO THE SURFACE PARALLEL TO THE CENTERLINE OF THE PAVEMENT.

ALL SECTIONS FOUND TO BE OUT OF TOLERANCE SHALL BE REMOVED AND REPLACED WITH ATFDB WITHIN THE SPECIFIED TOLERANCE AT NO ADDITIONAL COST TO THE DEPARTMENT.

CURING. AFTER COMPACTION HAS BEEN COMPLETED THE ATFDB SHALL BE ALLOWED TO CURE FOR A MINIMUM OF ONE DAY BEFORE PLACING THE NEXT LAYER OF PAVEMENT ON THE ATFDB.

PROTECTION OF THE UNDERDRAINS. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR'S EQUIPMENT BE ALLOWED TO CRUSH THE UNDERDRAIN PIPE OR SYSTEM, AS A RESULT OF THE PLACEMENT OR COMPACTION OF THE ATFDB.

THE CONTRACTOR SHALL ENSURE A POSITIVE CONNECTION BETWEEN THE UNDERDRAIN SYSTEM AND THE ATFDB REGARDLESS OF THE SEQUENCE OF OPERATION ON THE PLANS, NOTES, OR SPECIFICATIONS.

PROTECTION OF THE ATFDB. THE CONTRACTOR IS ADVISED THAT THE DEPARTMENT HAS NOT DESIGNED THE ATFDB FOR THE PURPOSE OF BEING A HAUL ROAD. HAULING UNITS AND OTHER CONSTRUCTION VEHICLES WILL BE ALLOWED TO OPERATE ON THE ATFDB PROVIDED NO SIGNIFICANT DISPLACEMENT, BREAKUP, OR CONTAMINATION RESULTS.

IF THE ENGINEER DETERMINES SIGNIFICANT DISPLACEMENT, BREAKUP, OR CONTAMINATION OF THE ATFDB IS OCCURING, THE HAULING UNITS AND CONSTRUCTION VEHICLES SHALL CEASE TO OPERATE ON THE ATFDB.

HAULING UNITS AND CONSTRUCTION VEHICLES SHALL REFRAIN FROM TRAVEL ON THE ATFDB, UNTIL THE CONTRACTOR HAS SATISFACTORILY DEMONSTRATED TO THE ENGINEER THAT DISPLACEMENT, BREAKUP, OR CONTAMINATION IS NOT EXPECTED TO RECUR.

THE USE OF THE ATFDB, BY HAULING VEHICLES OR CONSTRUCTION EQUIPMENT IS AT THE RISK OF THE CONTRACTOR. ALL DAMAGE TO THE ATFDB, SUBBASE, SUBGRADE OR UNDERDRAINS CAUSED BY THE HAULING UNITS AND/OR CONSTRUCTION VEHICLES SHALL BE REPAIRED AND/OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE ATFDB SHALL BE PROTECTED FROM FINE MATERIAL CONTAMINATION AT ALL TIMES.

ADEQUATE SURFACE AND SUBSURFACE DRAINAGE SHALL BE PROVIDED FOR THE ATFDB, SUBBASE, AND SUBGRADE AT ALL TIMES.

WHEN ASPHALT CONCRETE PAVEMENT IS CONSTRUCTED ON THE ATFDB; THE FIRST COURSE SHALL BE PLACED USING A PAVER MOUNTED ON TRACKS, THE FIRST COURSE SHALL BE ALLOWED TO CURE OVERNIGHT BEFORE THE SUCCEEDING PAVEMENT COURSES ARE PLACED.

EXPOSURE TO THE ELEMENTS. THE NEXT LAYER OF MAINLINE PAVEMENT SHALL BE PLACED WITHIN 40 DAYS OF THE END OF THE CURE PERIOD OF THE ATFDB.

THE SHOULDER PAVEMENT SHALL BE PLACED WITHIN 75 DAYS OF THE END OF THE CURE PERIOD OF THE ATFDB.

THE CONTRACTOR MAY CONSTRUCT THE ATFDB AT ANY TIME THAT COMPLIES WITH THE TEMPERATURE RESTRICTIONS OF THIS SPECIFICATION. HOWEVER, THE CONTRACTOR SHALL HAVE THE ATFDB COMPLETELY COVERED WITH THE NEXT LAYER OF PAVEMENT WITH THE UNDERDRAINS PLACED AND FUNCTIONING BEFORE THE ATMOSPHERIC TEMPERATURE IS BELOW 35°F FOR ANY PERIOD OF TIME.

ALL DAMAGE CAUSED TO THE ATFDB, SUBBASE, SUBGRADE, AND UNDERDRAINS BY THE EXPOSURE TO TEMPERATURES BELOW 35°F SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THESE ITEMS SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEPARTMENT. THE ATFDB SHALL BE COVERED BY THE NEXT LAYER OF PAVEMENT (MIANLINE AND SHOULDERS) AND HAVE THE UNDERDRAIN SYSTEM FUNCTIONAL BY THE END OF THE CONSTRUCTION SEASON IN ANY GIVEN CALENDAR YEAR.

METHOD OF MEASUREMENT. THE YARDAGE UNDER THIS ITEM WILL BE THE NUMBER OF SQUARE YARDS COMPLETED AND ACCEPTED IN PLACE. THE WIDTH FOR MEASUREMENT WILL BE THE WIDTH OF THE PAVEMENT SHOWN ON THE TYPICAL SECTIONS OF THE PLANS AND ADDITIONAL WIDENING WHERE CALLED FOR, OR OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. THE LENGTH WILL BE MEASURED HORIZONTALLY ALONG THE CENTERLINE OF EACH ROADWAY OR RAMP. THE PLAN QUANTITIES AS ADJUSTED FOR CHANGES, ERRORS, AND DEVIATIONS IN EXCESS OF ALLOWABLE TOLERANCES WILL BE THE METHOD OF MEASUREMENT.

BASIS OF PAYMENT. PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT CONTRACT PRICE PER SQUARE YARD FOR:

ITEM	UNIT	DESCRIPTION
SPECIAL	SQUARE YARD	4" ASPHALT TREATED FREE DRAINING BASE

CALC BY R.L.S. DATE 2-14-92 CHKD BY T.S.B. DATE 2-28-92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	OHIO FHWA REGION 5	15 267

ITEM SPECIAL

CEMENT TREATED FREE DRAINING BASE

FEBRUARY 14, 1992

DESCRIPTION. THIS WORK SHALL CONSIST OF CONSTRUCTING A CEMENT TREATED FREE DRAINING BASE (CTFDB) ON A PREPARED SUBGRADE OR BASE COURSE IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, THICKNESS, AND TYPICAL CROSS SECTIONS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER.

MATERIALS. CTFDB SHALL CONSIST OF A MIXTURE OF DURABLE AGGREGATE, PORTLAND CEMENT AND WATER. THE PORTLAND CEMENT SHALL MEET THE REQUIREMENTS OF 701.01 OR 701.04. POZZOLANS SHALL NOT BE SUBSTITUTED FOR PORTLAND CEMENT. THE AGGREGATE FOR CTFDB SHALL BE CRUSHED CARBONATE STONE, CRUSHED GRAVEL, AIR-COOLED BLAST FURNACE SLAG, OR GRANULATED SLAG MEETING REQUIREMENTS OF 703.02 AND MEETING THE GRADATIONS OF 67 OR 57 IN TABLE 703-1. IF CRUSHED GRAVEL IS UTILIZED, 90 PERCENT BY COUNT SHALL HAVE AT LEAST 2 MECHANICALLY FRACTURED FACES.

UNDER AASHTO T-96, LOS ANGELES ABRASION TEST, 40 PERCENT WEAR SHALL BE THE MAXIMUM ALLOWABLE FOR ALL AGGREGATES USED UNDER THIS SPECIFICATION.

PROPORTIONING, MIXING, AND TRANSPORTING. PROPORTIONING, MIXING, AND TRANSPORTING CTFDB SHALL CONFORM TO 499 EXCEPT THE MIX DESIGN SHALL BE THE RESPONSIBLITY OF THE CONTRACTOR AND SHALL CONFORM WITH THE FOLLOWING REQUIREMENTS:

(1) THE MINIMUM CEMENT CONTENT BY WEIGHT SHALL BE 220 POUNDS PER CUBIC YARD.

(2) THE WATER CEMENT RATIO SHALL BE APPROXIMATELY 0.36. THIS RATIO IS THE AMOUNT OF WATER, EXCLUSIVE OF THAT ABSORBED BY THE AGGREGATES, TO THE AMOUNT OF CEMENT BY WEIGHT. THIS WATER CEMENT RATIO MAY BE CHANGED BY THE CONTRACTOR DEPENDING ON THE WORKABILITY OF THE MIXTURE.

(3) WATER REDUCING ADMIXTURES SHALL BE USED AS PER 499.03.

VERIFICATION OF DESIGN. A MINIMUM OF 30 DAYS PRIOR TO THE PRODUCTION OF THE CTFDB THE CONTRACTOR SHALL SUBMIT A COMPUTED BLEND OF AGGREGATES, CEMENT CONTENT, ADMIXTURE, AND WATER CONTENT TO THE LABORATORY TO PERFORM THE TESTING NECESSARY TO DETERMINE THE MIX DESIGN ACCEPTANCE. THE CONTRACTOR SHALL DELIVER TO THE LABORATORY THE NECESSARY CEMENT, AGGREGATE AND ADMIXTURE TO MAKE 15 CUBIC FEET OF THE CTFDB FOR THE DESIGN APPROVAL. THE CONTRACTOR SHALL NOTIFY THE LABORATORY PRIOR TO THE DELIVERY OF ANY MATERIAL.

EQUIPMENT. ALL EQUIPMENT NECESSARY TO MIX, TRANSPORT, PLACE, COMPACT, AND FURNISH THIS LAYER SHALL BE APPROVED BEFORE THE WORK WILL BE PERMITTED TO START.

PLACING AND SPREADING CTFDB. IF THE PLAN DOES NOT REQUIRE THE SUBGRADE OR BASE TO BE PRIMED IT SHALL BE SPRINKLED WITH WATER AT SUCH TIMES AND IN SUCH MANNER, AS DIRECTED BY THE ENGINEER, SO IT WILL BE IN A THOROUGHLY MOISTENED CONDITION WHEN THE CTFDB IS DEPOSITED THEREON.

WORKMEN SHALL NOT BE ALLOWED TO WALK IN FRESHLY MIXED CTFDB WITH BOOTS OR SHOES COATED WITH EARTH OR FOREIGN MATERIAL.

ALL SPREADING OPERATIONS SHALL PRODUCE A SMOOTH UNIFORM LAYER PRIOR TO THE COMPACTION OPERATION.

AN APPROVED SPREADER WILL BE REQUIRED WHEN THE WIDTH OF THE PAVEMENT BEING PLACED IN ONE OPERATION IS 12 OR MORE FEET AND THE TOTAL SQUARE YARDAGE OF ANY GIVEN WIDTH ON THE PROJECT EXCEEDS 5,000. THE ENGINEER SHALL APPROVE A SPREADING METHOD FOR OPERATIONS OTHER THAN THE ABOVE.

LIMITATIONS ON PLACING OPERATIONS. THE CTFDB SHALL BE SPREAD ONLY WHEN THE ATMOSPHERIC TEMPERATURE IS ABOVE 45°F AND THE PREDICTED TEMPERATURE IS TO REMAIN ABOVE 45°F FOR FIVE DAYS AFTER PLACEMENT.

THE CTFDB SHALL NOT BE PLACED WHEN RAIN IS FORECAST WITHIN THE INTENDED WORKING PERIOD. IF RAIN OCCURS DURING PLACEMENT OF THE CTFDB, ALL OPERATIONS SHALL CEASE.

THE CTFDB SHALL NOT BE PLACED DURING ANY WEATHER CONDITIONS THAT WOULD CAUSE ITS' DEGRADATION, SEGREGATION, OR CONTAMINATION.

COMPACTION AND SHAPING. THE COMPACTION AND SHAPING OF THE CTFDB SHALL PRODUCE UNIFORM DENSITY AND CROSS SECTION. THE METHOD OF COMPACTION SHALL BE APPROVED BY THE ENGINEER.

THE CTFDB SHALL BE COMPATED BY STEEL-WHEELED ROLLERS, MODIFIED SLIPFORM PAVERS (USING VIBRATORY PLATES), OR HIGH DENSITY SCREED PAVERS. THIS SHALL BE ACCOMPLISHED BY SEATING THE AGGREGATE, WITHOUT CRUSHING THE AGGREGATE OR SEGREGATING THE CTFDB MATERIALS.

STEEL-WHEELED ROLLERS USED FOR COMPACTION SHALL WEIGH FROM 6 TO 10 TONS. VIBRATORY ROLLERS MEETING THE ABOVE REQUIREMENTS MAY BE USED PROVIDED THE VIBRATORY UNIT IS TURNED OFF. UNLESS OTHERWISE DIRECTED, ROLLING SHALL CONSIST OF NOT LESS THAN 2 PASSES OVER ANY GIVEN POINT ON THE SURFACE.

COMPACTION SHALL BEGIN WITHIN 1/2 HOUR OF THE SPREADING OPERATION. SUFFICIENT SPREADING AND COMPACTION EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, TO ALLOW FOR NOT MORE THAN 1-1/2 HOURS TO ELAPSE BETWEEN THE TIME WATER IS ADDED TO THE COMBINED AGGREGATE AND CEMENT AND THE TIME COMPACTION IS COMPLETE.

WHEN UTILIZING THE SLIP FORM OR HIGH DENSITY SCREED OPERATION AND THE PLACED CTFDB DOES NOT HAVE UNIFORM DENSITY AND CROSS SECTION, IT SHALL BE CORRECTED BY UTILIZING A STEEL-WHEELED ROLLER OR OTHER METHOD SATISFACTORY TO THE ENGINEER.

LATERAL SUPPORT OF THE CTFDB WILL BE REQUIRED WHEN THE CTFDB IS COMPACTED WITH A ROLLER AND SIGNIFICANT BREAKUP OF THE CTFDB OCCURS AT/OR NEAR THE OUTER PORTION OF A COMPACTED LIFT. EMBANKMENT MATERIAL, FORMS OR OTHER METHOD OF LATERAL SUPPORT SHALL BE USED. THIS LATERAL SUPPORT SHALL BE APPROVED BY THE ENGINEER AND PROVIDED AT NO ADDITIONAL COST TO THE DEPARTMENT. THIS LATERAL SUPPORT SHALL NOT CONTAMINATE THE CTFDB.

WHEN THE CTFDB IS PLACED IN AREAS INACCESSIBLE TO ROLLERS, THE CTFDB SHALL BE COMPACTED UTILIZING A METHOD APPROVED BY THE ENGINEER.

CONSTRUCTION JOINTS SHALL BE MADE BY CONSTRUCTING AT THE END OF EACH DAY'S WORK OR WHEN WORK IS SUSPENDED FOR MORE THAN 3 HOURS. A STRAIGHT TRANSVERSE CONSTRUCTION JOINT SHALL BE FORMED BY CUTTING BACK INTO THE COMPLETED WORK TO FORM A VERTICAL FACE. THE CUTTING OF THE CTFDB SHALL BE DONE BY UTILIZING A DIAMOND BLADE SAW. A BULKHEAD MAY BE USED IN LIEU OF THIS PROCEDURE.

CURING. 6-MIL WHITE OPAQUE POLYETHYLENE SHEETING CONFORMING TO 705.06 SHALL BE PLACED OVER THE COMPLETED CTFDB COURSE IMMEDIATELY AFTER COMPACTION AND KEPT IN PLACE FOR 4 DAYS FOLLOWING PLACEMENT OF THE CTFDB. CONCRETE CURING MEMBRANES SHALL NOT BE ALLOWED.

TRAFFIC SHALL NOT BE ALLOWED ON THE CTFDB FOR ONE DAY FOLLOWING THE END OF THE CURE PERIOD.

A CURE DAY SHALL BE DEFINED AS A 24 CONSECUTIVE HOUR PERIOD OF TIME. THE TEMPERATURE OF THE CTFDB SHALL BE MAINTAINED ABOVE 35°F UNTIL THE CURING PERIOD IS COMPLETED. ANY DAY DURING WHICH THE TEMPERATURE OF THE CTFDB FALLS BELOW 45°F SHALL NOT BE COUNTED AS A CURE DAY.

PROTECTION OF THE UNDERDRAINS. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR'S EQUIPMENT BE ALLOWED TO CRUSH THE UNDERDRAIN PIPE OR SYSTEM, AS A RESULT OF THE PLACEMENT OR COMPACTION OF THE CTFDB.

THE CONTRACTOR SHALL ENSURE A POSITIVE CONNECTION BETWEEN THE UNDERDRAIN BACKFILL AND THE CTFDB REGARDLESS OF THE SEQUENCE OF CONSTRUCTION CALLED FOR ON THE PLANS, NOTES OR SPECIFICATIONS.

PROTECTION OF THE CTFDB. THE CONTRACTOR IS ADVISED THAT THE DEPARTMENT HAS NOT DESIGNED THE CTFDB FOR THE PURPOSE OF BEING A HAUL ROAD. HAULING UNITS AND OTHER CONSTRUCTION VEHICLES WILL BE ALLOWED TO OPERATE ON THE CTFDB PROVIDED NO SIGNIFICANT DISPLACEMENT, BREAKUP, OR CONTAMINATION RESULTS.

IF THE ENGINEER DETERMINES SIGNIFICANT DISPLACEMENT, BREAKUP, OR CONTAMINATION OF THE CTFDB IS OCCURING, THE HAULING UNITS AND CONSTRUCTION VEHICLES SHALL CEASE TO OPERATE ON THE CTFDB.

HAULING UNITS AND CONSTRUCTION VEHICLES SHALL REFRAIN FROM FURTHER TRAVEL ON THE CTFDB, UNTIL THE CONTRACTOR HAS SATISFACTORILY DEMONSTRATED TO THE ENGINEER THAT THAT DISPLACEMENT, BREAKUP OR CONTAMINATION IS NOT EXPECTED TO RECUR.

THE USE OF THE CTFDB, BY HAULING VEHICLES OR CONSTRUCTION EQUIPMENT IS AT THE RISK OF THE CONTRACTOR. ALL DAMAGE TO THE CTFDB, SUBBASE, SUBGRADE OR UNDERDRAINS CAUSED BY THE HAULING UNITS AND/OR CONSTRUCTION VEHICLES SHALL BE REPAIRED AND/OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE CTFDB SHALL BE PROTECTED FROM FINE MATERIAL CONTAMINATION AT ALL TIMES.

ADEQUATE SURFACE AND SUBSURFACE DRAINAGE SHALL BE PROVIDED FOR THE CTFDB, SUBBASE, AND SUBGRADE AT ALL TIMES.

WHEN BITUMINOUS CONCRETE PAVEMENT IS CONSTRUCTED ON THE CTFDB; THE FIRST COURSE SHALL BE PLACED USING A PAVER MOUNTED ON TRACKS, THE FIRST COURSE SHALL BE ALLOWED TO CURE OVERNIGHT BEFORE PLACING THE SUCCEEDING PAVEMENT COURSES.

CTFDB THICKNESS TOLERANCES. THE MAXIMUM COMPACTED DEPTH OF THE CTFDB SHALL BE 4 INCHES. THE COMPACTED THICKNESS SHALL COMPLY WITH THE PLAN TYPICAL SECTION.

THE CONTRACTOR SHALL ENSURE THE PLACED CTFDB COMPLIES WITH THE SPECIFIED THICKNESS BY RANDOMLY CHECKING THE THICKNESS DURING CONSTRUCTION. ALL SECTIONS FOUND TO BE LESS THAN THE SPECIFIED THICKNESS BY MORE THAN 1/2 INCH SHALL BE REMOVED AND REPLACED WITH CTFDB WITHIN TOLERANCE AT NO ADDITIONAL COST TO THE DEPARTMENT. SPECIFICATION 451.16 SHALL BE WAIVED FOR THIS ITEM.

SURFACE TOLERANCE. THE CONTRACTOR SHALL CHECK THE WORK UNDER THIS ITEM WITH TEMPLATES, SLOPE BOARDS OR OTHER DEVICES SATISFACTORY TO THE ENGINEER. THE COMPLETED WORK SHALL CONFORM TO THE PLANS WITHIN THE FOLLOWING TOLERANCE:

THE FINISHED SURFACE SHALL BE UNIFORM AND AT NO PLACE VARY MORE THAN 1/2 INCH FROM A TEN-FOOT STRAIGHT EDGE APPLIED TO THE SURFACE PARALLEL TO THE CENTERLINE OF THE PAVEMENT.

ALL SECTIONS FOUND TO BE OUT OF TOLERANCE SHALL BE REMOVED AND REPLACED WITH CTFDB WITHIN THE SPECIFIED TOLERANCE AT NO ADDITIONAL COST TO THE DEPARTMENT.

EXPOSURE TO THE ELEMENTS. THE NEXT LAYER OF MAINLINE PAVEMENT SHALL BE PLACED WITHIN 40 DAYS OF THE END OF THE CURE PERIOD OF THE CTFDB.

THE SHOULDER PAVEMENT SHALL BE PLACED WITHIN 75 DAYS OF THE END OF THE CURE PERIOD OF THE CTFDB.

THE CONTRACTOR MAY CONSTRUCT THE CTFDB AT ANY TIME THAT COMPLIES WITH THE TEMPERATURE RESTRICTIONS OF THIS SPECIFICATION. HOWEVER, THE CONTRACTOR SHALL HAVE THE CTFDB COMPLETELY COVERED WITH THE NEXT LAYER OF PAVEMENT WITH THE UNDERDRAINS PLACED AND FUNCTIONING BEFORE THE ATMOSPHERIC TEMPERATURE IS BELOW 35°F FOR ANY PERIOD OF TIME.

ALL DAMAGE CAUSED TO THE CTFDB, SUBBASE, SUBGRADE, AND UNDERDRAINS BY THE EXPOSURE TO TEMPERATURES BELOW 35°F SHALL BE THE REPONSIBILITY OF THE CONTRACTOR. THESE ITEMS SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE CTFDB SHALL BE COVERED BY THE NEXT LAYER OF PAVEMENT (MAINLINE AND SHOULDERS) AND HAVE THE UNDERDRAIN SYSTEM FUNCTIONAL BY THE END OF THE CONSTRUCTION SEASON IN ANY GIVEN CALENDAR YEAR.

METHOD OF MEASUREMENT. THE YARDAGE UNDER THIS ITEM WILL BE THE NUMBER OF SQUARE YARDS COMPLETED AND ACCEPTED IN PLACE. THE WIDTH FOR MEASUREMENT WILL BE THE WIDTH OF THE PAVEMENT SHOWN ON THE TYPICAL SECTIONS OF THE PLANS AND ADDITIONAL WIDENING WHERE CALLED FOR, OR OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. THE LENGTH WILL BE MEASURED HORIZONTALLY ALONG THE CENTERLINE OF EACH ROADWAY OR RAMP. THE PLAN QUANTITIES AS ADJUSTED FOR CHANGES, ERRORS, AND DEVIATIONS IN EXCESS OF ALLOWABLE TOLERANCES WILL BE THE METHOD OF MEASUREMENT.

PAYMENT. THE CONTRACT PRICE PAID PER SQUARE YARD FOR CEMENT TREATED FREE DRAINING BASE SHALL INCLUDE FULL COMPENSATION FOR FURNISHING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTIALS, AND FOR DOING ALL THE WORK INVOLVED IN CONSTRUCTING THE CEMENT TREATED FREE BASE, COMPLETE IN PLACE.

ITEM	UNIT	DESCRIPTION
SPECIAL	SQUARE YARD	4" CEMENT TREATED FREE DRAINING BASE

MAINTENANCE OF TRAFFIC

614 MAINTAINING TRAFFIC

THROUGH TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION AT ALL TIMES EXCEPT FOR THE CORING IN PHASE TWO AND FOR THE DETOURS AS SHOWN ON SHEETS 19 THROUGH 22. TRAFFIC SHALL BE MAINTAINED AS PER THE SPECIFICATIONS, PLAN DETAILS, STANDARD DRAWINGS AND AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE OPERATIONS SECTION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION WITH THE LATEST REVISIONS.

A MINIMUM OF ONE LANE OF THROUGH TRAFFIC SHALL BE MAINTAINED AS PER PLAN DETAILS & NOTES, AND STANDARD DRAWINGS MT-95.30, MT-98.13, MT-98.14, MT-98.15 AND PLAN INSERT SHEET 2095.40.

IN ADDITION, THE FOLLOWING REQUIREMENTS SHALL APPLY:

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

THE CONTRACTOR SHALL DESIGNATE A QUALIFIED INDIVIDUAL SUBJECT TO THE APPROVAL OF THE ENGINEER, TO BE AVAILABLE AND ON CALL DURING THE NON-WORKING PERIODS THAT TRAFFIC IS DIVERTED FROM ITS NORMAL PATH. THIS INDIVIDUAL SHALL AT A MINIMUM OF ONCE EVERY CALENDAR DAY INSPECT, DOCUMENT, REPAIR AND / OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. IN ADDITION, THIS INDIVIDUAL SHALL BE ABLE TO RESPOND AND BE ON THE PROJECT WITHIN SIXTY (60) MINUTES AFTER A CALL AND HAVE SUFFICICENT INVENTORY ON HAND TO REPAIR OR REPLACE THE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES.

MAINTENANCE OF TRAFFIC REQUIREMENTS

THE FOLLOWING IS A LIST OF GENERAL REQUIREMENTS AND INTENTS THAT MUST BE COMPLIED WITH DURING THE SEQUENCE OF CONSTRUCTION FOR THIS PROJECT.

1.) PLAN INTENT
THE INTENT OF THIS PLAN IS TO REHABILITATE THE EXISTING PAVEMENT BY REPLACING FAILED SLABS AND JOINTS, ADDING CONCRETE SHOULDERS, GRINDING THE PAVEMENT AND SEALING CRACKS AND JOINTS. IN ADDITION, THIS PROJECT WILL BE USED TO INSTALL RESEARCH SECTIONS FOR ONGOING RESEARCH PROJECTS. THE RESEARCH PROJECTS, CONTACTS AND ADDITIONAL RESPONSIBILITIES OF THE CONTRACTOR ARE GIVEN BELOW.

A. SHRP C 206, FAST SET FULL DEPTH REPAIRS. FAST SET REPAIRS WILL BE INSTALLED IN THE EASTBOUND DRIVING LANES FROM STATIONS 1828+26 TO 1832+61, 58+26 TO 63+00, 113+12 TO 115+94 AND 147+97 TO 150+05 AND IN THE WESTBOUND LANES FROM STATIONS 103+30 TO 107+08, 109+40 TO 112+44, 129+43 TO 136+63 AND 144+25 TO 147+82. THE RESEARCHERS, TOM YU FROM ERES CONSULTANTS (217-356-4500) AND THE PORTLAND CEMENT ASSOCIATION, WILL BE COLLECTING CONCRETE FOR CASTING APPROXIMATELY 22 CYLINDERS AND 3 BEAMS AT EACH LOCATION; TAKING VIDEOS; AND TAKING TWO CORES IMMEDIATELY AFTER PLACEMENT AND FROM 60 DAYS TO 90 DAYS AFTER PLACEMENT OF THE REPAIRS. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONSTRUCTING THE REPAIRS ACCORDING TO THE PLANS AND SPECIFICATIONS. THESE REPAIRS SHALL BE COMPLETED BEFORE SEPTEMBER 1, 1992. COST FOR THE ADDITIONAL CONCRETE AND ANY ADDITIONAL MATERIALS OR LABOR TO COMPLETE THE ABOVE WILL BE INCLUDED IN THE APPROPIATE UNIT BID PRICE FOR ITEM 255. SEE SHEETS 95-102 FOR ADDITIONAL NOTES AND DETAILS.

B. BASE DRAINAGE LAYERS. FREE DRAINING BASES WILL BE INSTALLED IN THE WESTBOUND LANES FROM STATIONS 1835+10 TO 14+60 AND 56+06 TO 90+23. DR. BRIAN RANDOLPH, THE UNIVERSITY OF TOLEDO (419-537-2524) WILL BE COLLECTING SAMPLES OF THE BASE MATERIALS AND CONDUCTING IN-SITU PERMEABILITY TESTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONSTRUCTING THE BASES IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND COOPERATING WITH THE UNIVERSITY OF TOLEDO DURING CONSTRUCTION. THIS BASE WILL BE BUILT 3 FEET BEYOND THE CENTERLINE OF THE LANES IN PHASES 2 & 3.

C. INSTALLATION OF PAVEMENT INSTRUMENTATION. INSTRUMENTATION WILL BE INSTALLED IN THE PAVEMENT AND BASE BY DR. SHAD SARGAND OF THE OHIO UNIVERSITY (614-593-1467) IN THE WESTBOUND DRIVING LANE FROM STATION 114+82 TO 123+26 DURING CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONSTRUCTING THE PAVEMENT AND BASE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND COOPERATING WITH THE OHIO UNIVERSITY. SEE SHEETS 262-267 FOR ADDITIONAL NOTES AND DETAILS.

D. SKID RESISTANCE TEST. MANUFACTURED SAND SHALL BE USED IN THE CONCRETE PAVEMENT BETWEEN STATION 153+12 TO 160+16 AND NATURAL SAND SHALL BE USED IN THE CONCRETE PAVEMENT BETWEEN STATION 160+16 TO 167+20 IN THE EASTBOUND DIRECTION. DUE TO THE NATURE OF THIS STUDY, THE PAVEMENT MUST BE CONSTRUCTED TO THE SMOOTHNESS SPECIFIED WITHOUT GRINDING. SEE PROPOSAL NOTE # FOR ADDITIONAL DETAILS.
#"MAINLINE PAVEMENT SURFACE SMOOTHNESS REQUIREMENTS"

2.) CLAUS AND SUNNYSIDE ROAD BRIDGES CANNOT BE CLOSED AT THE SAME TIME AND MAY BE CLOSED FOR A MAXIMUM OF THIRTY (30) DAYS EACH.

3.) THE WORK ON THE REST AREA RAMPS SHALL BE COMPLETED WITHIN 15 DAYS AND THE RAMPS REOPENED. RAMP "W", RAMP "Z",AND THE VERMILION INTERCHANGE BRIDGE SHALL BE DONE AT THE SAME TIME AND WITHIN THIRTY (30) DAYS. RAMPS "X" AND "Y" CAN BE CLOSED FOR FIFTEEN (15) DAYS AND MUST BE DONE WITHIN THE CLOSURE TIME OF RAMPS "W" AND "Z". RAMP "G" CAN BE CLOSED FOR FIFTEEN (15) DAYS BUT CANNOT BE CLOSED AT THE SAME TIME RAMP "Z" IS CLOSED. RAMP "H" CAN BE CLOSED FOR FIFTEEN (15) DAYS BUT CANNOT BE CLOSED AT THE SAME TIME RAMP "X" IS CLOSED. THE LEFT OUTSIDE LANE OF BAUMHART ROAD SHALL BE CLOSED WHILE WORK IS COMPLETED AT THE END OF RAMPS "G" AND "H". THIS LANE CLOSURE SHALL BE LIMITED TO TWO DAYS.

4.) THE WORK ON THE MAINLINE IN THE AREA OF THE RAMPS SHALL BE DONE AT THE SAME TIME AS THE RAMP CLOSURE.

5.) ALL JOINT REPAIRS GREATER THAN TEN FEET BUT LESS THAN SIXTY FEET SHALL BE REMOVED AND REPLACED WITHIN THE SAME WORKING DAY.

6.) TWO LANE CLOSURES (RIGHT OR LEFT) WITH LESS THAN A ONE MILE GAP BETWEEN THEM SHALL BE CLOSED TO PROVIDE ONE CONTINUOUS CONSTRUCTION CLOSURE.

MAINTENANCE OF TRAFFIC - CLOSURES

CLOSURE LIMITATION AND INTERIM COMPLETION DATE
THE FOLLOWING ROADS AND RAMPS WILL REQUIRE THE CLOSING OF TRAFFIC. THESE ROADS ARE IDENTIFIED AS FOLLOWS:

ROAD NAME	STRUCTURE	MAXIMUM LENGTH OF CLOSURE (CONSECUTIVE CALENDAR DAYS)	LIQUIDATED DAMAGES
SUNNYSIDE ROAD	LOR-2-0223	30 DAYS	$200 / DAY
CLAUS ROAD	LOR-2-0262	30 DAYS	$200 / DAY
REST AREA RAMPS		15 DAYS	$600 / DAY
RAMPS "W" & "Z" VERMILION INTERCHANGE	LOR-2-015)	30 DAYS	$600 / DAY
RAMPS "X" & "Y"		15 DAYS	$600 / DAY
RAMP "G"		15 DAYS	$600 / DAY
RAMP "H"		15 DAYS	$600 / DAY
BAUMHART ROAD (LEFT OUTSIDE LANE)		2 DAYS	$600 / DAY

THE MAXIMUM LENGTH OF CLOSURE FOR EACH INDIVIDUAL ROAD OR RAMP SHALL NOT EXCEED THE NUMBER OF CONSECUTIVE CALENDAR DAYS AS SHOWN ABOVE.

ONCE CLOSURE OF THE ROAD OR RAMP IS MADE, THE CONTRACTOR SHALL DILIGENTLY PURSUE THE WORK TO MINIMIZE THE INCONVENIENCE TO THE TRAVELING PUBLIC.

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

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND VERMILION CITY ENGINEER AT LEAST SEVEN (7) CALENDAR DAYS PRIOR TO THE CLOSURE OF ANY ROAD OR RAMP. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE GATES AND BARRICADES (AT THE APPROXIMATE WORK LIMITS) AND THE ADVANCE WARNING SIGNS AS SHOWN ON STANDARD DRAWING MT-101.60.

THE CONTRACTOR SHALL ALSO PROVIDE, ERECT, MAINTAIN, AND REMOVE ALL SIGN INSTALLATIONS ON SHEETS 19 THRU 22.

SIGN SUPPORTS AND LIGHTS FOR "ROAD CLOSED TO THRU TRAFFIC" SIGNS SHALL BE AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

ALL PERMANENT TRAFFIC CONTROL ITEMS SUCH AS SIGNING AND PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO REOPENING ANY ROAD TO TRAFFIC.

THE COST TO PROVIDE, ERECT, MAINTAIN AND REMOVE ALL TRAFFIC CONTROL DEVICES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID ITEM 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 614 WORK ZONE MARKING SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:
ITEM 614 WORK ZONE MARKING SIGNS 5 EACH
A QUANTITY OF 5 SIGNS, OW-167-48, "NO EDGE LINES," HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS PER STANDARD DRAWING MT-99.10.

ITEM 614 TEMPORARY PAVEMENT MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER TO PROVIDE WORK ZONE PAVEMENT MARKINGS.
ITEM 614 TEMPORARY LANE LINE, CLASS I, 740.05, TYPE C 7.00 MI.
THESE MARKINGS SHALL BE APPLIED PRIOR TO OPENING S.R.-2 TO TRAFFIC AFTER PHASE THREE.
ITEM 614 TEMPORARY LANE LINE, CLASS I, 740.05, TYPE C 7.00 MI.
ITEM 614 TEMPORARY GORE MARKING, CLASS II, 740.05, TYPE C 5,692 L.F.
THESE TEMPORARY PAVEMENT MARKINGS SHALL BE APPLIED AFTER THE GRINDING PROCESS IN PHASE FOUR.
ITEM 614 TEMPORARY CENTERLINES, CLASS II, 740.05, TYPE C 0.26 MI.
THESE PAVEMENT MARKINGS SHALL BE USED FOR VERMILION ROAD AND WEST RIVER ROAD.

ITEM SPECIAL - REPLACEMENT SIGNS

FLAT SHEET SIGNS ARE FURNISHED BY THE CONTRACTOR 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. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE USED BUT IN GOOD CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE BID PRICE PER SQUARE FOOT FOR "ITEM SPECIAL - REPLACEMENT SIGN" AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED SIGNS, HARDWARE AND SUPPORTS; AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 100 SQ. FT. HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM SPECIAL - REPLACEMENT DRUMS

DRUMS FURNISHED BY THE CONTRACTOR 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. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUM SHALL BE MADE AT THE BID PRICE PER EACH FOR "ITEM SPECIAL - REPLACEMENT DRUM" AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM; AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 200 EACH REPLACEMENT DRUMS HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

MAINTENANCE OF TRAFFIC

SEQUENCE OF OPERATIONS

IT IS THE INTENT OF THE FOLLOWING SEQUENCE OF OPERATIONS TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELLING PUBLIC; THEREFORE, THE PHASES SHALL BE STRICTLY ADHERED TO.

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

PHASE ONE

THE CONTRACTOR SHALL REPLACE THE OUTSIDE BERM WITH AN 8' SHOULDER IN THE DESIGNATED AREAS WITH TEMPORARY PAVEMENT USING A ONE-LANE CLOSURE PER MT-95.30.

AREAS OF SHOULDER REPLACEMENT:

EASTBOUND	WESTBOUND
Sta. 50+49 to Sta. 51+28.25	Sta. 1833+00 to Sta. 8+86
Sta. 55+81.25 to Sta. 58+20	Sta. 48+90 to Sta. 51+28.25
Sta. 116+23 to Sta. 128+26	Sta. 55+81.25 to Sta. 60+36
Sta. 150+12 to Sta. 160+10	Sta. 72+48 to Sta. 88+20.5
Sta. 167+67 to Sta. 175+76.71	Sta. 95+78 to Sta. 102+82
Sta. 177+35.21 to Sta. 183+56	Sta. 112+72 TO Sta. 126+26
	Sta. 136+82 to Sta. 144+13
	Sta. 172+63 to Sta. 175+76.71
	Sta. 177+35.21 to Sta. 180+55

A QUANTITY OF 9825 S.Y. OF ITEM 615 TEMPORARY PAVEMENT, CLASS A, AS PER PLAN HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

AFTER THE SHOULDER REPLACEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL THEN PERFORM THE JOINT REPAIRS IN THE FOLLOWING AREAS:

EASTBOUND

	REPAIR CLASS TYPE	PLAN NOTE SHEET
AREA A: STA. 147+97 TO STA. 150+05	HES	95
AREA B: STA. 113+12 TO STA. 115+94	FTI	96
AREA C: STA. 58+26 TO STA. 63+00	RSPCI	97
AREA D: STA. 1828+26 TO STA. 1832+61	RSCI	98
WESTBOUND		
AREA E: STA. 103+30 TO STA. 107+08	VES	99
AREA F: STA. 109+40 TO STA. 112+44	RSPC2	100
AREA G: STA. 129+43 TO STA. 136+63	RSC2	101
AREA H: STA. 144+25 TO STA. 147+82	FS	102
AREA I: STA. 148+66 TO STA. 152+94	MSU	102A

THE JOINT REPAIRS SHALL BE PERFORMED IN ALPHABETICAL ORDER ON EACH SIDE AND THE PAVEMENT WILL BE OPEN TO TRAFFIC AS SPECIFIED IN THE PLAN NOTE.

PHASE TWO

THE CONTRACTOR SHALL PERFORM THE WORK ON THE INSIDE LANES, WHICH SHALL INCLUDE THE JOINT REPAIR, FULL-DEPTH PAVEMENT, BERM REPLACEMENT, AND BRIDGE REHABILITATION. THE JOINT REPAIRS SHALL BE DONE PRIOR TO THE BERM REPLACEMENT. DETAILS FOR THIS PHASE ARE SHOWN ON SHEETS 24 THRU 37. CORES WILL BE TAKEN DURING THIS PHASE THAT WILL REQUIRE THE CLOSING OF BOTH LANES FOR A BRIEF PERIOD. ODOT WILL PROVIDE TRAFFIC MAINTENANCE FOR THE CORING PROCEDURE.

PHASE THREE

THE CONTRACTOR SHALL PERFORM THE WORK ON THE OUTSIDE LANES, WHICH SHALL INCLUDE THE JOINT REPAIR, FULL-DEPTH PAVEMENT, BERM REPLACEMENT, AND BRIDGE REHABILITATION. THE JOINT REPAIRS SHALL BE DONE PRIOR TO THE BERM REPLACEMENT. DETAILS FOR THIS PHASE ARE SHOWN ON SHEETS 38 THRU 52.

PHASE FOUR

THE CONTRACTOR SHALL GRIND AND SEAL THE PAVEMENT USING A ONE-LANE CLOSURE PER STANDARD DRAWING MT-95.30. THIS WORK SHALL BE PERFORMED ON BOTH LANES AND IN BOTH DIRECTIONS.

BRIDGES

WEST RIVER ROAD AND VERMILION ROAD BRIDGES WILL BE CONSTRUCTED PART-WIDTH USING A SIGNAL INSTALLATION TO MAINTAIN TWO-WAY TRAFFIC. DETAILS FOR THESE BRIDGES ARE SHOWN ON SHEETS 53 AND 54 SUNNYSIDE ROAD AND CLAUS ROAD BRIDGES MAY BE CLOSED FOR A MAXIMUM OF 30 DAYS EACH BUT THEY MAY NOT BE CLOSED AT THE SAME TIME. THE DETOUR PLAN FOR THESE BRIDGES IS SHOWN ON SHEET 19 AND 20. DETAILS FOR THE VERMILION INTERCHANGE BRIDGE CLOSURE ARE SHOWN ON SHEET 21.

MAINTENANCE OF TRAFFIC-OVERPASS CLOSURES

TWO LANE TRAFFIC ON THE FREEWAY SHALL BE MAINTAINED AT ALL TIMES IN EACH DIRECTION, UNLESS OTHERWISE SHOWN IN THE PLANS, DURING THE REHABILITATION OF THE EXISTING STRUCTURES OVER THE FREEWAY EXCEPT DURING THE RETROFITTING OF THE EXISTING BRIDGE PARAPETS OR AS DIRECTED BY THE ENGINEER.

A SAFETY NET OR PLATFORM SHALL BE REQUIRED TO PROTECT THE ROADWAY OF THE FREEWAY DURING RETROFITTING OF EXISTING CONCRETE PARAPETS. THE DESIGN OF THE NET OR PLATFORM SHALL CONFORM WITH OSHA REQUIREMENTS AND HAVE APPROVAL FROM THE ODOT BRIDGE BUREAU AND SHALL REMAIN IN PLACE UNTIL WORK HAS BEEN COMPLETED. THE EXISTING VERTICAL CLEARANCE OVER THE FREEWAY SHALL BE MAINTAINED AT ALL TIMES.

IN THE EVENT A LANE RESTRICTION ON THE FREEWAY IS NECESSARY, THE METHOD OF INSTALLATION AND DESIGN OF TEMPORARY LANE CLOSURE SHALL BE ACCORDING TO THE APPROPRIATE STANDARD DRAWING. COST FOR THE ABOVE WORK SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN ITEM 614 MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC – S. R. 2 OVER SIDE ROADS

TWO WAY TRAFFIC ON BAUMHART ROAD SHALL BE MAINTAINED AT ALL TIMES DURING REPLACEMENT OF BEARINGS AND REHABILITATION OF MAINLINE BRIDGES EXCEPT DURING THE FOLLOWING OPERATIONS OR AS DIRECTED BY THE ENGINEER:

1.) DEMOLITION OF THE EXISTING BRIDGE PARAPETS

2.) DURING THE CONSTRUCTION OF THE PROPOSED PARAPET OVER THE LOCAL ROAD OR STATE ROUTE WHERE THE ENGINEER BELIEVES TEMPORARY CLOSURE OF A TRAFFIC LANE IS WARRANTED.

A SAFETY NET OR PLATFORM SHALL BE REQUIRED TO PROTECT THE UNDERPASS ROAD-WAY DURING REMOVAL OF EXISTING AND CONSTRUCTION OF NEW CONCRETE PARAPETS. THE DESIGN OF THE NET OR PLATFORM SHALL CONFORM WITH OHSA REQUIREMENTS, SHALL HAVE APPROVAL FROM THE ODOT BUREAU OF BRIDGES AND STRUCTURAL DESIGN, AND SHALL REMAIN IN PLACE UNTIL WORK HAS BEEN COMPLETED. THE EXISTING VERTICAL CLEARANCE OVER THE UNDERPASS ROADWAY SHALL BE MAINTAINED AT ALL TIMES.

IN THE EVENT A LANE RESTRICTION IS NECESSARY, THE METHOD OF INSTALLATION AND DESIGN OF THE TEMPORARY LANE CLOSURE SHALL CONFORM TO STANDARD DRAWINGS MT-95.30 OR MT-97.10. COST FOR THE ABOVE WORK SHALL BE CONSIDERED INCIDENTAL TO AND SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

TEMPORARY PAVEMENT, CLASS A, AS PER PLAN

THE TEMPORARY PAVEMENT BUILDUP SHALL BE 6"-301 BITUMINOUS AGGREGATE BASE AND 4"-304 AGGREGATE BASE. PAYMENT SHALL INCLUDE ANY ADDITIONAL COST OF ITEM 203 EXCAVATION TO PLACE THE ITEM 301 OR ITEM 304. THE TEMPORARY PAVEMENT SHALL BE REMOVED UNDER ITEM 203.

TEMPORARY PAVEMENT, CLASS A, AS PER PLAN "A"

THE TEMPORARY PAVEMENT BUILDUP SHALL BE 6"-301 BITUMINOUS AGGREGATE BASE AND 4"-304 AGGREGATE BASE. PAYMENT SHALL INCLUDE ANY ADDITIONAL COST OF ITEM 203 EXCAVATION TO PLACE THE ITEM 301 OR ITEM 304. THE SUBGRADE SHALL BE COMPACTED TO A DEPTH OF SIX INCHES ACCORDING TO THE CONSTRUCTION AND MATERIALS SPECIFICATION 203.13 AND PAYMENT FOR SUCH WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, SUBGRADE COMPACTION (SEE SHEETS 148 THRU 151 FOR QUANTITIES). THIS PAVEMENT SHALL REMAIN IN PLACE.

ITEM 614 - BARRIER REFLECTORS

THESE REFLECTORS AND THEIR MOUNTINGS SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 802 EXCEPT THAT THE SPACING SHALL BE EVERY FIFTY (50) FEET ON TANGENT SECTIONS AND EVERY TEN (10) FEET ON APPROACH TAPERS.

ITEM 622 - PORTABLE CONCRETE BARRIER, 32", AS PER PLAN

PORTABLE CONCRETE BARRIER, 32", AS PER PLAN SHALL BE TIED TOGETHER AS PER SHEET 58. TONGUE AND GROOVE SECTIONS WILL NOT BE PERMITTED ON THIS PROJECT.

THE COST OF PROVIDING AND MAINTAINING ALL TYPE C STEADY BURN WARNING LIGHTS AS CALLED FOR IN THE PLANS AND APPROPRIATE STANDARD DRAWINGS SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT FOR ITEM 622 - PORTABLE CONCRETE BARRIER, 32", AS PER PLAN.

FOR QUANTITIES, SEE SHEETS 23.

ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFORM. NO ALTERNATE PLAN WILL BE PUT INTO EFFECT UNTIL THE APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR.

STANDARD DRAWING MT-95.30 & PLAN INSERT SHEET 2095.40

THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN AN ADDITIONAL ADVANCE WARNING SIGN GROUP AS SHOWN ON MT-95.30 OR PLAN INSERT SHEET 2095.40. THE OW-145A DISTANCE PLATES SHALL READ "(INTEGER) MILES." THE RIGHT (LEFT) LANE CLOSED AHEAD SIGNS SHALL BE LOCATED 3 MILES FROM THE BEGINNING OF THE LANE TAPER. SPACING OF THE OTHER SIGNS SHALL BE AS SHOWN ON MT-95.30 OR PLAN INSERT SHEET 2095.40. THE ADVANCE WARNING SIGN GROUP SHALL CONSIST OF TWO OW-128 (ROAD CONSTRUCTION AHEAD) SIGNS, TWO OW- 122 (OW-123) (RIGHT (LEFT) LANE CLOSED AHEAD) SIGNS WITH OW-145A DISTANCE PLATES, AND TWO OW-166 (WATCH FOR STOPPED TRAFFIC) SIGNS AND REQUIRED FLASHERS. PAYMENT FOR PROVIDING, ERECTING AND MAINTAINING ADVANCE WARNING SIGN GROUPS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC. IN ADDITION THE ADVISORY SPEED SIGN (OW-143-24) WILL NOT BE PERMITTED ON THIS PROJECT.

TRENCH FOR TEMPORARY PAVEMENTS

TRENCH EXCAVATION FOR TEMPORARY PAVEMENTS SHALL BE ADEQUATELY MAINTAINED AND PROTECTED AT ALL TIMES. STANDARD DRAWING MT-95.30 SHALL BE USED FOR MAINTAINING TRAFFIC DURING THE TEMPORARY PAVEMENT CONSTRUCTION. PLACEMENT OF THE PROPOSED 301 MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION OPERATIONS. THE LENGTH OF TRENCH OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO THE APPROVAL OF THE ENGINEER. NO EXCAVATION SHALL BE LEFT OPEN OVERNIGHT. IN CASE OF EMERGENCY, THE OPEN EXCAVATION SHALL BE BACKFILLED OR PROTECTED AS DIRECTED BY THE ENGINEER.

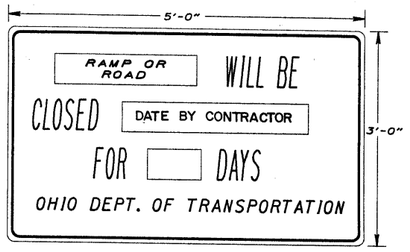
CALC BY K.A.S. DATE 3-14-95	ERI/LOR-2-30.51/0.00	OHIO	18
CHKD BY J.S.B. DATE 3-28-95	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

MAINTENANCE OF TRAFFIC

NOTICE OF CLOSURE SIGNS

THESE SIGNS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD / RAMP FACING TRAFFIC. THEY SHALL BE LOCATED IN THE FIELD SO AS NOT TO INTERFERE WITH ANY PERMANENT SIGNS. ON ROADWAYS THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. ON RAMPS THE SIGNS MAY BE ERECTED ANYWHERE ALONG IT, AS LONG AS IT IS VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING THE MOTORISTS.

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



WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND REMOVE WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS (R-10-48) (45 MPH) WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

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

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

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF ANY LANE RESTRICTION WHICH IS ½ MILE OR MORE IN LENGTH AND WHICH IS EXPECTED TO LAST AT LEAST 30 CONSECUTIVE CALENDAR DAYS OR AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF DIVIDED HIGHWAYS, 500 FEET IN ADVANCE OF THE LANE REDUCTION TAPER. THE SIGNS SHALL BE REPEATED ON BOTH SIDES AND EVERY ½ MILE FOR 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE. A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THIS SIGN SHALL BE AN R-8A.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED BUT GOOD CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF 730.19 AND U.S. DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION FOR TYPE III SHEETING, FP-85. WORKZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO (2) ITEM 630 GROUND MOUNTED SUPPORTS, NO. 4 POSTS.

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

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

ITEM 614 - WORK ZONE SPEED LIMIT SIGN — 38 EACH

COVERING OF SIGNS

WHERE THE PLANS CALL FOR A PERMANENT SIGN TO BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER SO AS TO AVOID DAMAGING THE PERMANENT SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO A SIGN FACE IS STRICTLY PROHIBITED. **THE COST FOR COVERING OF SIGNS SHALL BE INCLUDED IN ITEM 614 MAINTAINING TRAFFIC.**

CONTRACTOR'S EQUIPMENT-OPERATION AND STORAGE

IN ADDITION TO THE REQUIREMENTS OF SECTION 614.03A OF THE CONSTRUCTION & MATERIAL SPECIFICATIONS THE FOLLOWING SHALL APPLY.

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC WHERE PRACTICAL. A FLAGGER SHALL BE USED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S VEHICLES AND EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT.

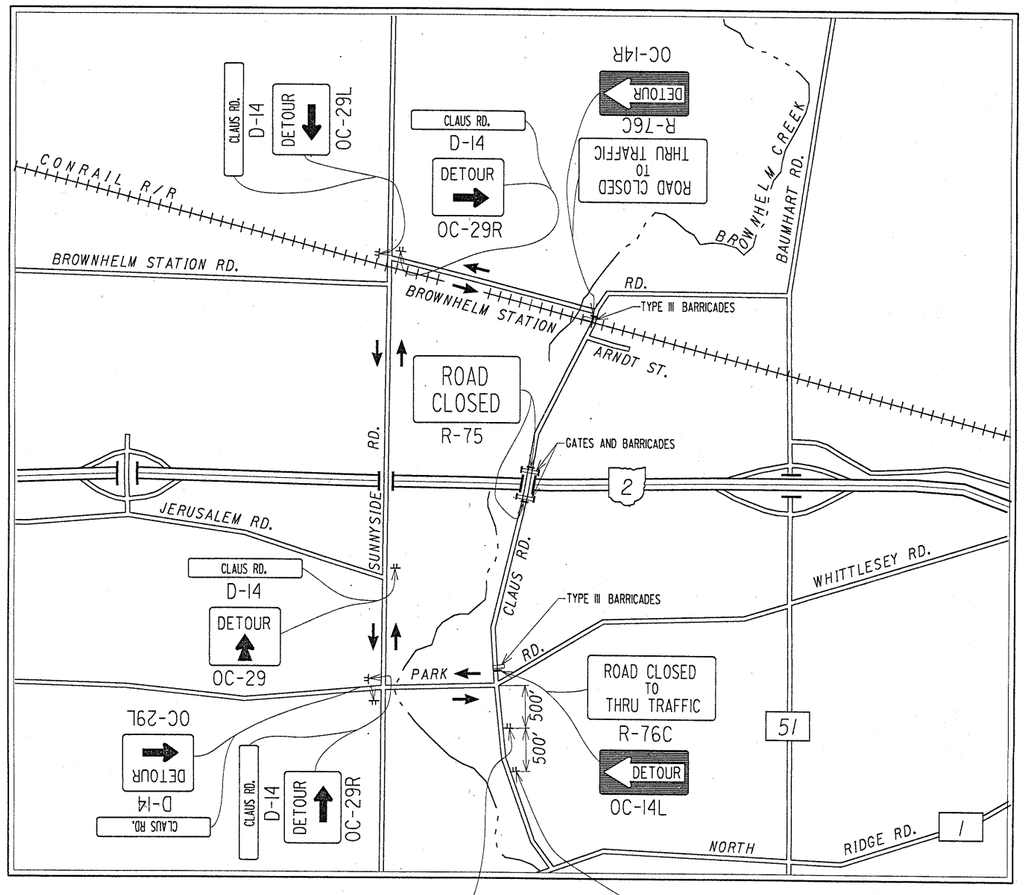
EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN VARIOUS OPERATIONS ARE SCHEDULED TO CONTINUE THE NEXT WORKDAY. ON WEEKENDS OR AT OTHER TIMES OF SUSPENSION OF WORK, THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA REMOVED FROM THE **RIGHT - OF - WAY.** . THE LOCATION SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF OF THE HIGHWAY. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED, **OR PARKED AT THE APPROVED CONTRACTOR'S STORAGE AREA.**

MEDIAN CONSTRUCTION EQUIPMENT CROSSINGS

CONSTRUCTION EQUIPMENT SHALL CROSS THE MEDIAN ONLY AT THE EXISTING CROSSOVERS AND AT OTHER ADDITIONAL LOCATIONS APPROVED BY THE ENGINEER. A MAXIMUM OF ONE ADDITIONAL EQUIPMENT CROSSING MAY BE ALLOWED BETWEEN THE EXISTING CROSSOVERS . USE OF ANY EXISTING MEDIAN CROSSOVER(S) AND OTHER ADDITIONAL EQUIPMENT CROSSOVERS WILL NOT BE PERMITTED WITHOUT PROVIDING ADEQUATE TRAFFIC CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE, AT HIS EXPENSE, FOR THE RESTORATION OF THE ADDITIONAL EQUIPMENT CROSSINGS TO A CONDITION AT LEAST EQUAL TO THAT EXISTING PRIOR TO HIS WORK OPERATIONS, INCLUDING RESEEDING AS PER 659.

CALC BY ____ DATE ____ CHKD BY ____ DATE ____	ERI/LOR-2-30.51/0.00 ERIE COUNTY LORAIN COUNTY	OHIO FHWA REGION 5	19 267

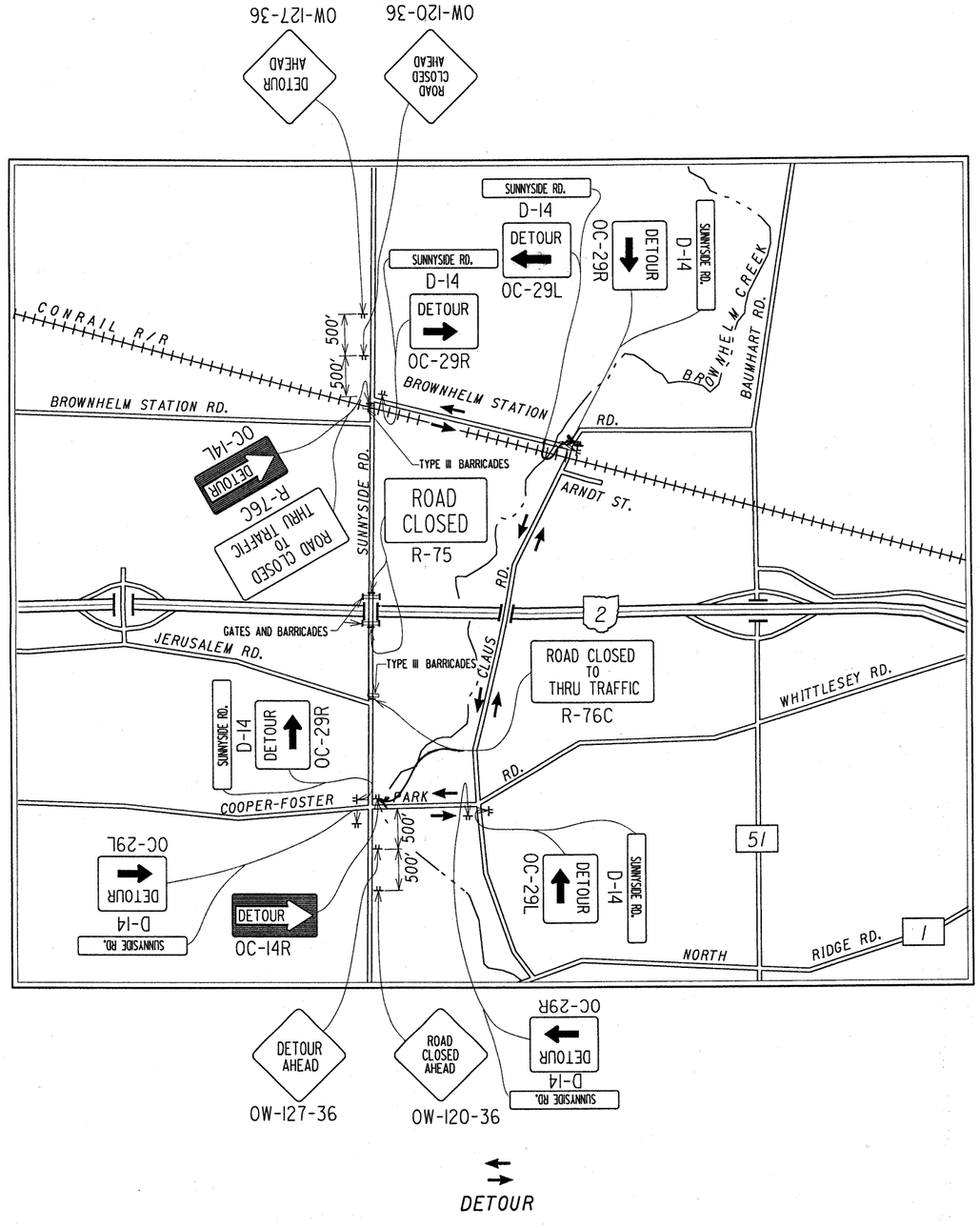
DETOUR FOR CLAUS RD.



MAINTENANCE OF TRAFFIC DETOUR

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	20
CHKD BY / DATE	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

DETOUR FOR SUNNYSIDE RD.

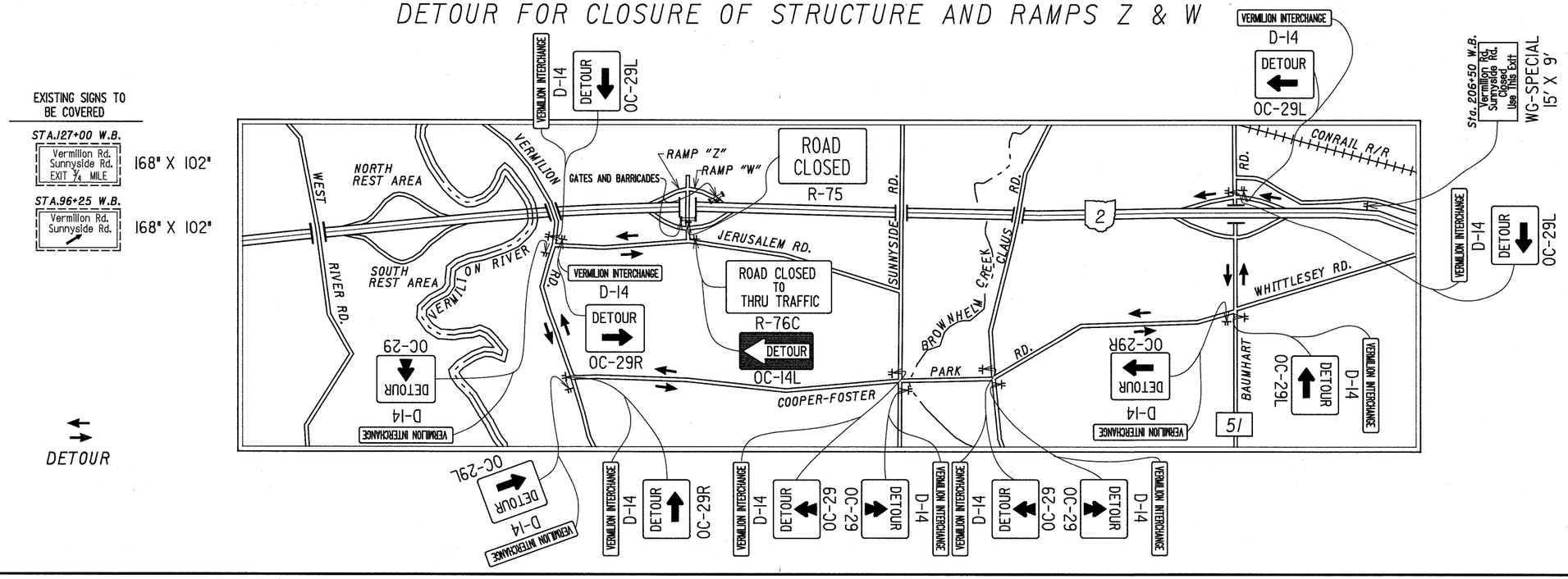


MAINTENANCE OF TRAFFIC DETOUR

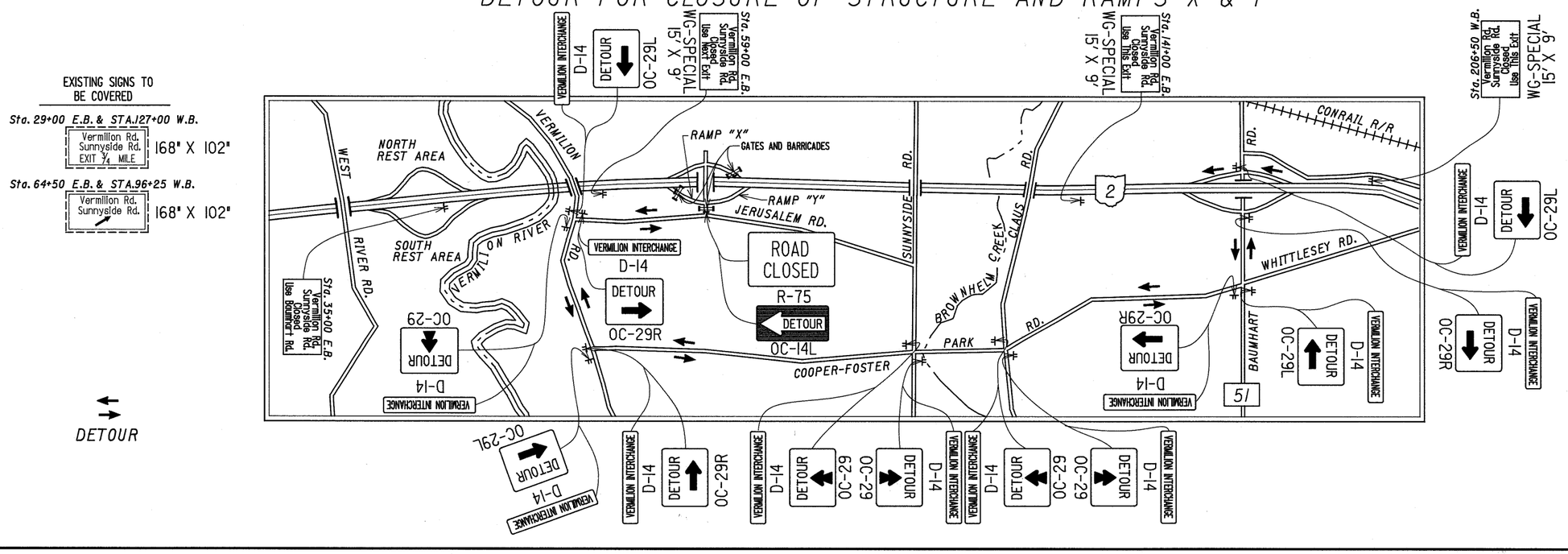
CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	21
CHKD BY / DATE	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

DETOURS FOR VERMILION INTERCHANGE

DETOUR FOR CLOSURE OF STRUCTURE AND RAMPS Z & W



DETOUR FOR CLOSURE OF STRUCTURE AND RAMPS X & Y



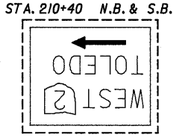
CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	22
CHKD BY / DATE	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

DETOUR FOR BAUMHART RD. INTERCHANGE

DETOUR FOR CLOSURE OF RAMPS G & H

EXISTING SIGNS TO BE COVERED

BAUMHART RD.
STA. 210+40 N.B. & S.B.



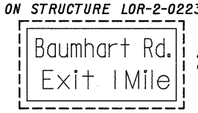
108" X 96"

108" X 96"

BAUMHART RD.
ON STRUCTURE LOR-2-0333 N.B.

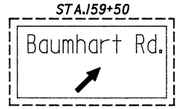
132" X 72"

ON STRUCTURE LOR-2-0223



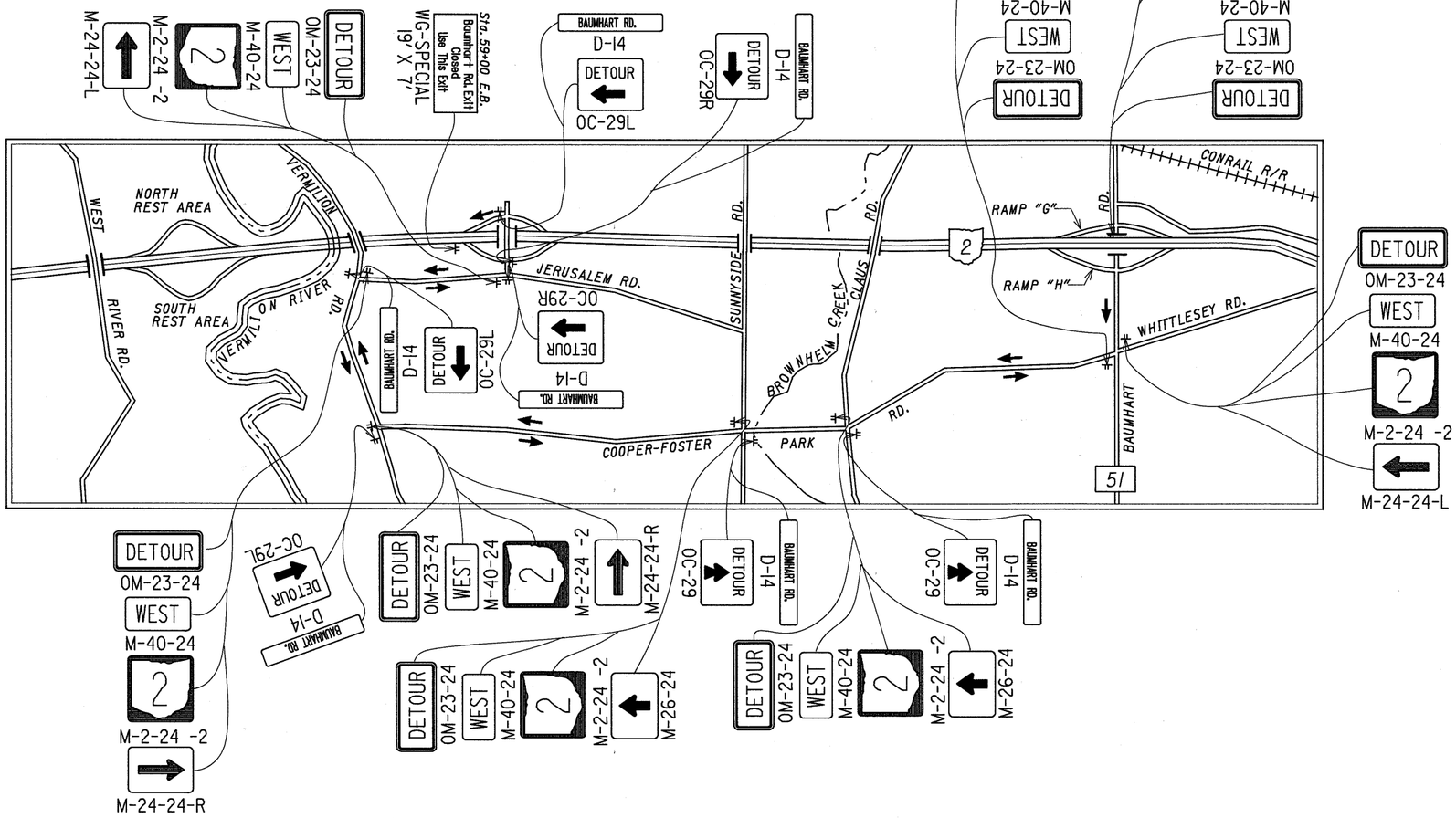
204" X 72"

STA.159+50



204" X 72"

DETOUR

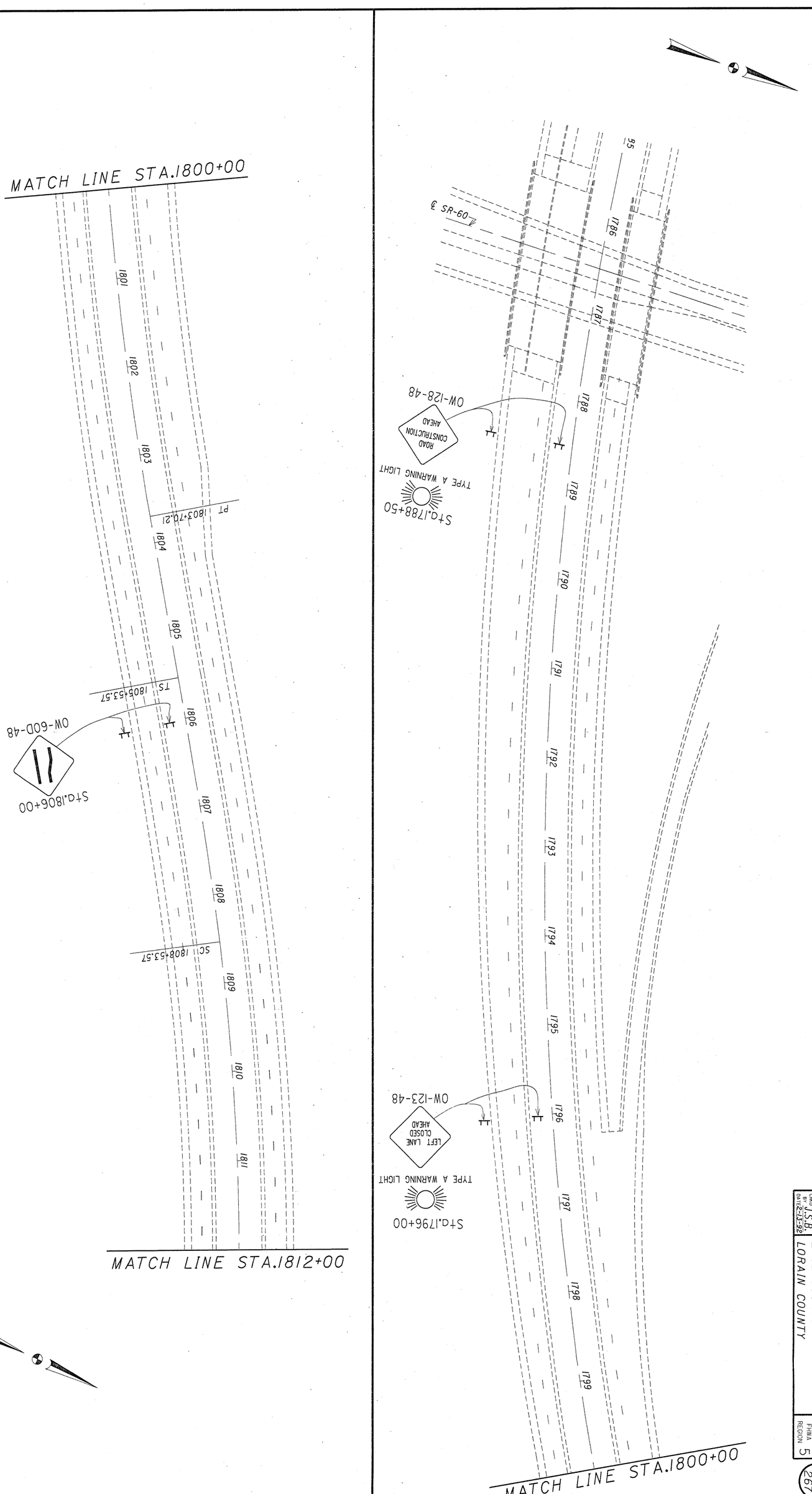


MAINTENANCE OF TRAFFIC SUB-SUMMARY

CALC BY KAS DATE 11/15/79	ERI/LOR-2-30.51/0.00
CHKD BY DPS DATE 11/16/79	ERIE COUNTY
	LORAIN COUNTY

OHIO | FHWA REGION 5 | 23 / 267

SHEET No.	PHASE		614								615	622	
			TEMPORARY EDGE LINE, CLASS I		TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C		TEMPORARY CENTER LINE, CLASS I, 740.05, TYPE C	TEMPORARY STOP LINE, CLASS I, 740.05, TYPE C	BARRIER REFLECTORS		TEMPORARY PAVEMENT, CLASS A, AS PER PLAN "A"	PORTABLE CONCRETE BARRIER, 32", AS PER PLAN	
			WHITE LIN.FT.	YELLOW LIN.FT.	WHITE LIN.FT.	YELLOW LIN.FT.	LIN.FT.	LIN.FT.	TYPE B2 EACH	TYPE B EACH	S.Y.	LIN.FT.	
25	2		830	630		660				13		630	
26	2		586	1160		300				53		1470	
29	2		1881	1430		300				59		1740	
30	2		336	1200						24		1200	
31	2		1600	1600						32		1600	
32	2		1032	405	190	1205				72		1160	
33	2		2947	1660		887				124		2570	
34	2		698	1718	165	300				60		1750	
35	2		2292	292		1304				78		1510	
36	2		56			660							
39	3				1290	830				13		630	
40	3				1460	1460				57		1500	
41	3									6		60	
42	3									11		120	
43	3				1726	2126				80		1930	
44	3				1200	1200				24		1200	
45	3				1600	1600				32		1600	
46	3				1610	1810				99		1420	
47	3				2559	2959				118		2620	
48	3				1728	1788				68		1810	
49	3				1657	2308				86		1580	
50	3				660								
51	3				660	156							
		VERMILION RD. BRIDGE											
53	1						300	24			526		
53	2				100				23			550	
53	3				100				23			550	
		WEST RIVER RD. BRIDGE											
54	1						300	24			418		
54	2				100				23			540	
54	3				100				23			540	
SUBTOTAL			12,258	10,095	16,885	21,853	600	48	92	1109	944	30,280	
TOTALS CARRIED TO GENERAL SUMMARY			22,353 LF = 4.23 MILES		38,738 LF = 7.34 MILES		600 LF = 0.11 MILES	48	1,201		944	30,280	



MAINTENANCE OF TRAFFIC STA 1786+00 TO STA 1812+00

PHASE TWO

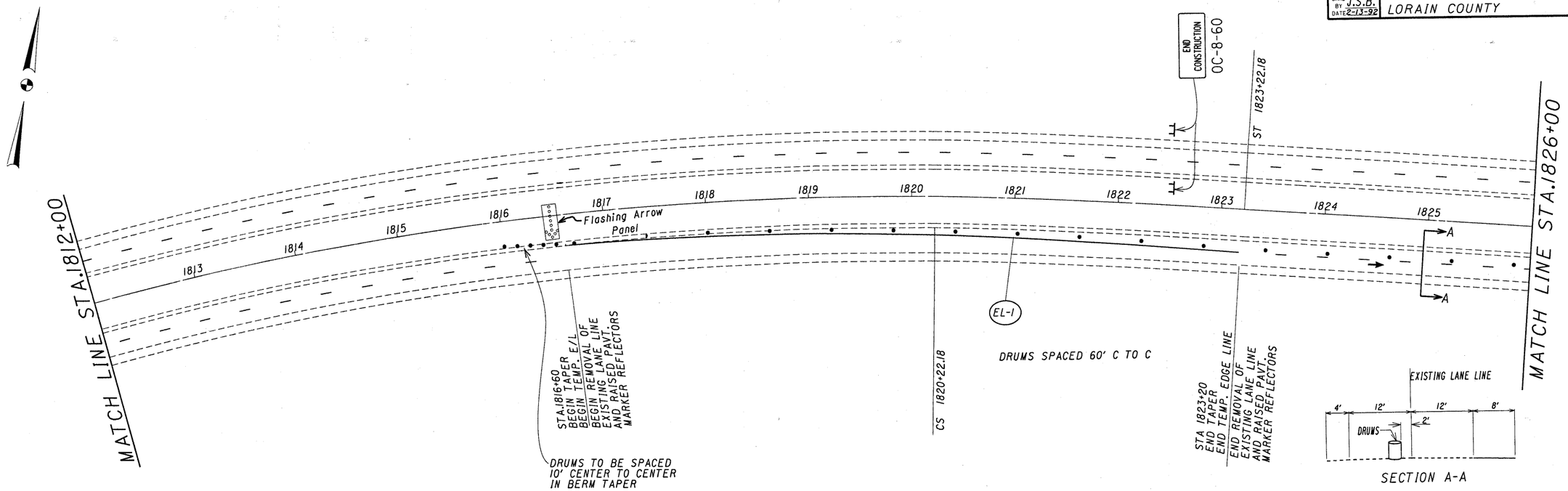
CALC. K.A.S. DATE 2-3-92
DRAWN BY J.S.B. DATE 12-13-92

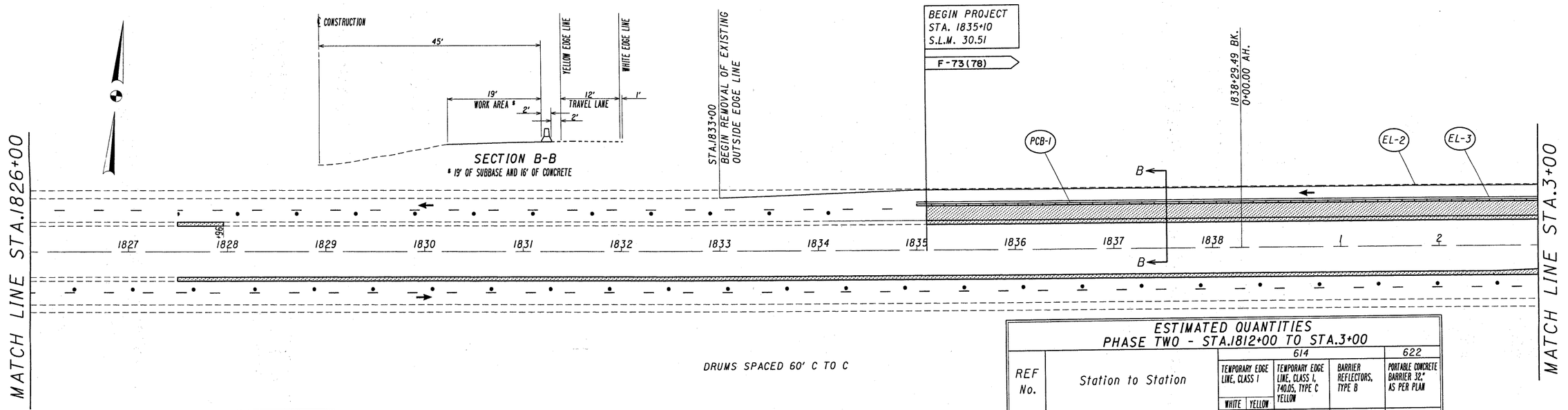
ERI/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY

OHIO
FHWA REGION 5

24
267

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	25
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		





- AREA TO BE CONSTRUCTED

- PORTABLE CONCRETE BARRIER

FOR ADDITIONAL NOTES AND DETAILS SEE MT-95.30.

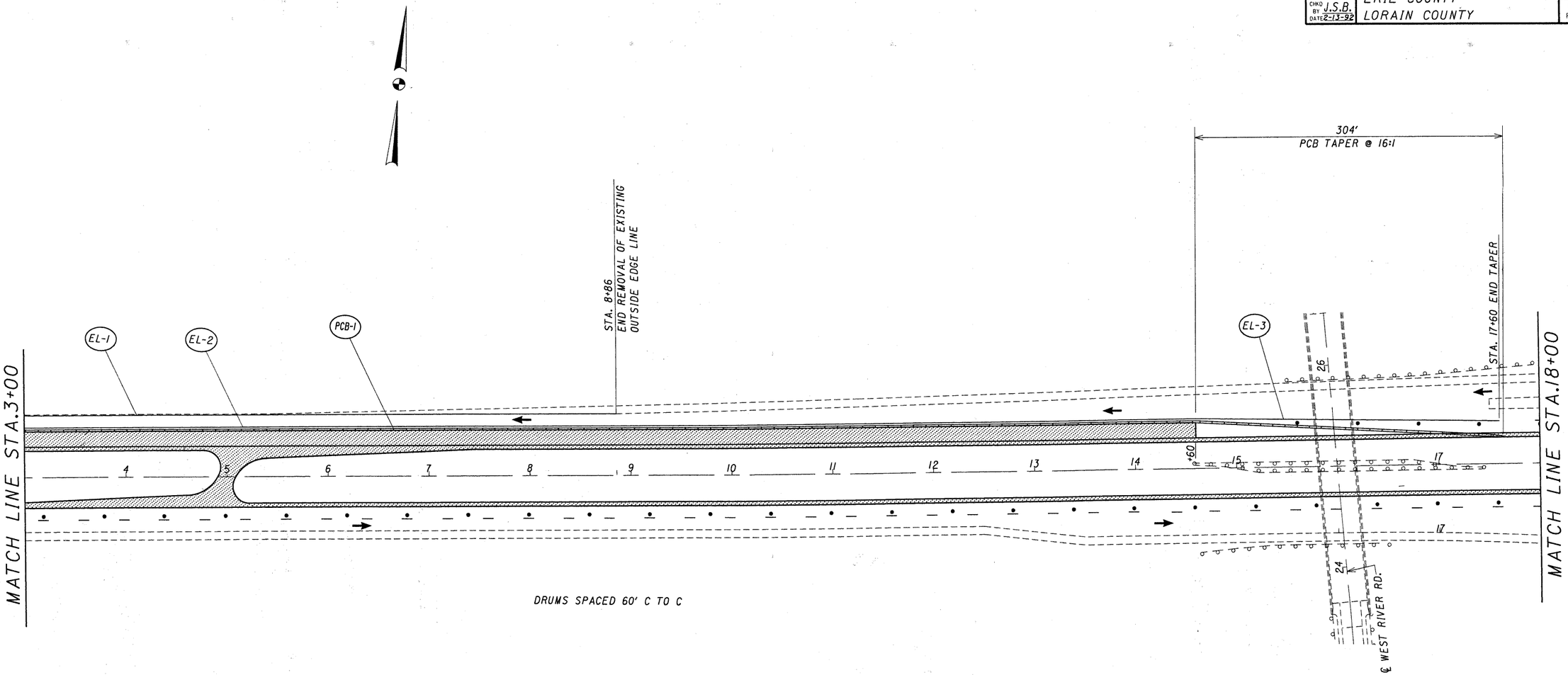
ESTIMATED QUANTITIES
PHASE TWO - STA.1812+00 TO STA.3+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS 1 WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW LIN FT	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32," AS PER PLAN
EL-1	1816+60 TO 1823+20			660		
EL-2	1833+00 TO 3+00	830				
EL-3	1835+00 TO 3+00		630			
PCB-1	1835+00 TO 3+00				13	630
TOTALS CARRIED TO SUB-SUMMARY		830	630	660	13	630

PHASE TWO

MAINTENANCE OF TRAFFIC STA.1812+00 TO STA.3+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	26
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		



ESTIMATED QUANTITIES
PHASE TWO - STA.3+00 TO STA.18+00

REF No.	Station to Station	614				622
		TEMPORARY EDGE LINE, CLASS I		TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C, YELLOW	BARRIER REFLECTORS, TYPE B	PORTABLE CONCRETE BARRIER 32", AS PER PLAN
		WHITE	YELLOW			
		LIN FT	LIN FT	LIN FT	EACH	LIN FT
EL-1	3+00 TO 8+86	586				
EL-2	3+00 TO 14+60		1160			
EL-3	14+60 TO 17+60			300		
PCB-1	3+00 TO 17+64				53	1470
TOTALS CARRIED TO SUB-SUMMARY		586	1160	300	53	1470

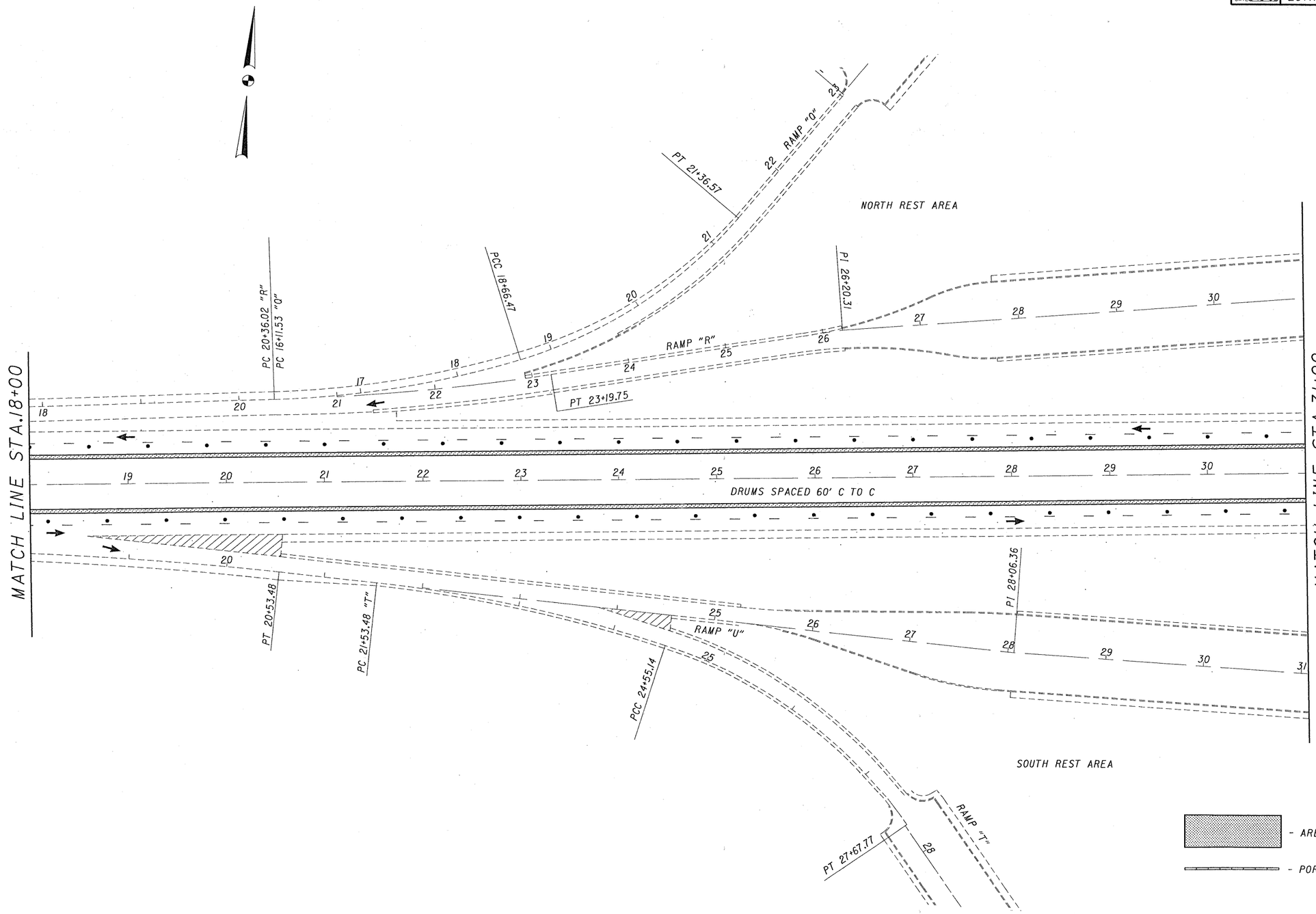
- AREA TO BE CONSTRUCTED

- PORTABLE CONCRETE BARRIER

PHASE TWO

MAINTENANCE OF TRAFFIC STA.3+00 TO STA.18+00

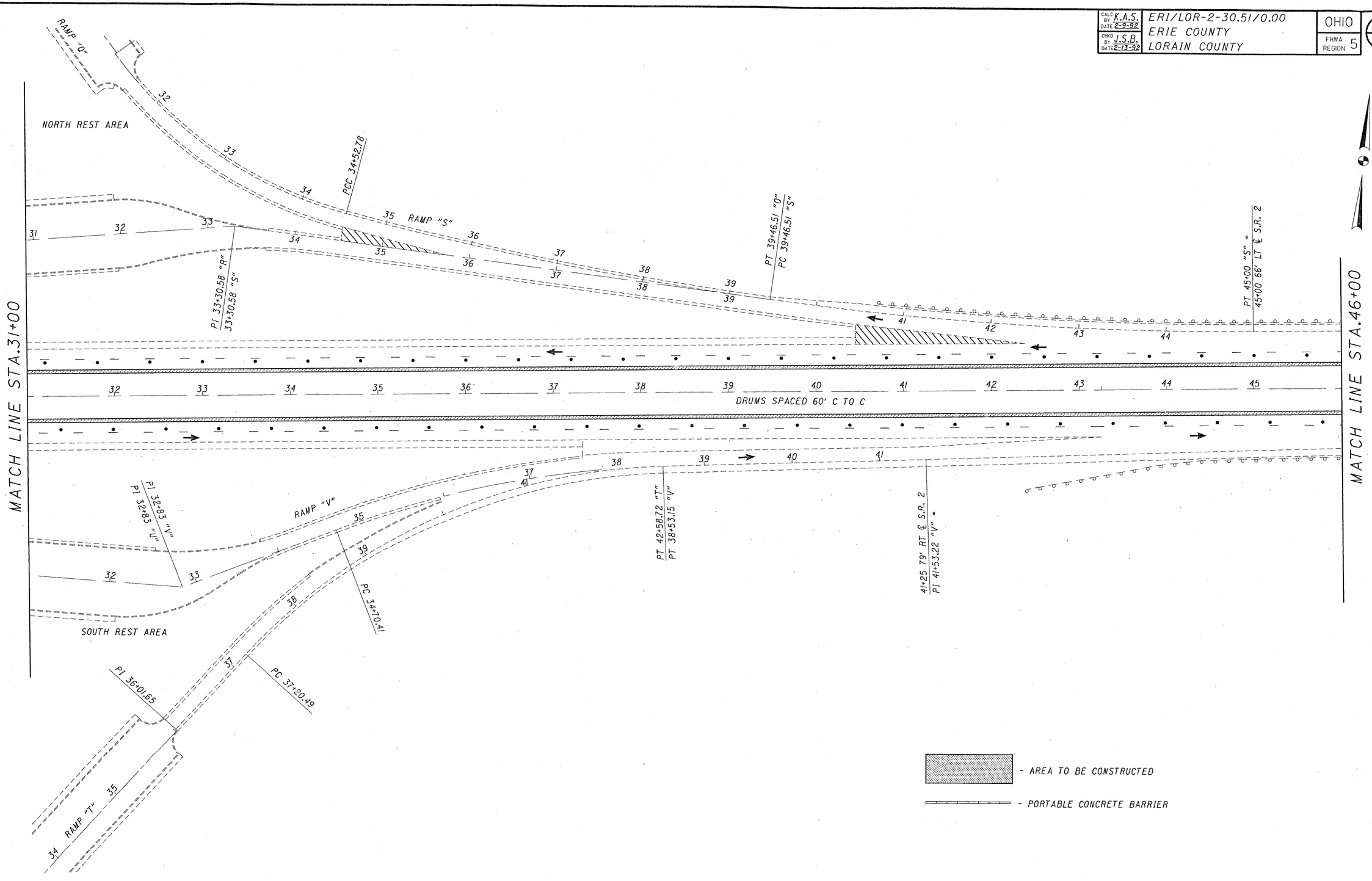
CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	27
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		



PHASE TWO

MAINTENANCE OF TRAFFIC STA.18+00 TO STA.31+00

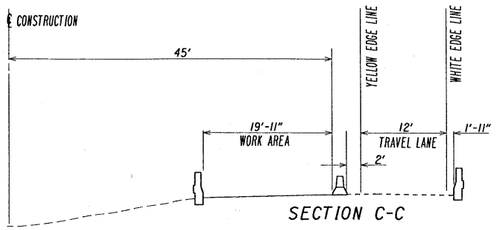
CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	28
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		



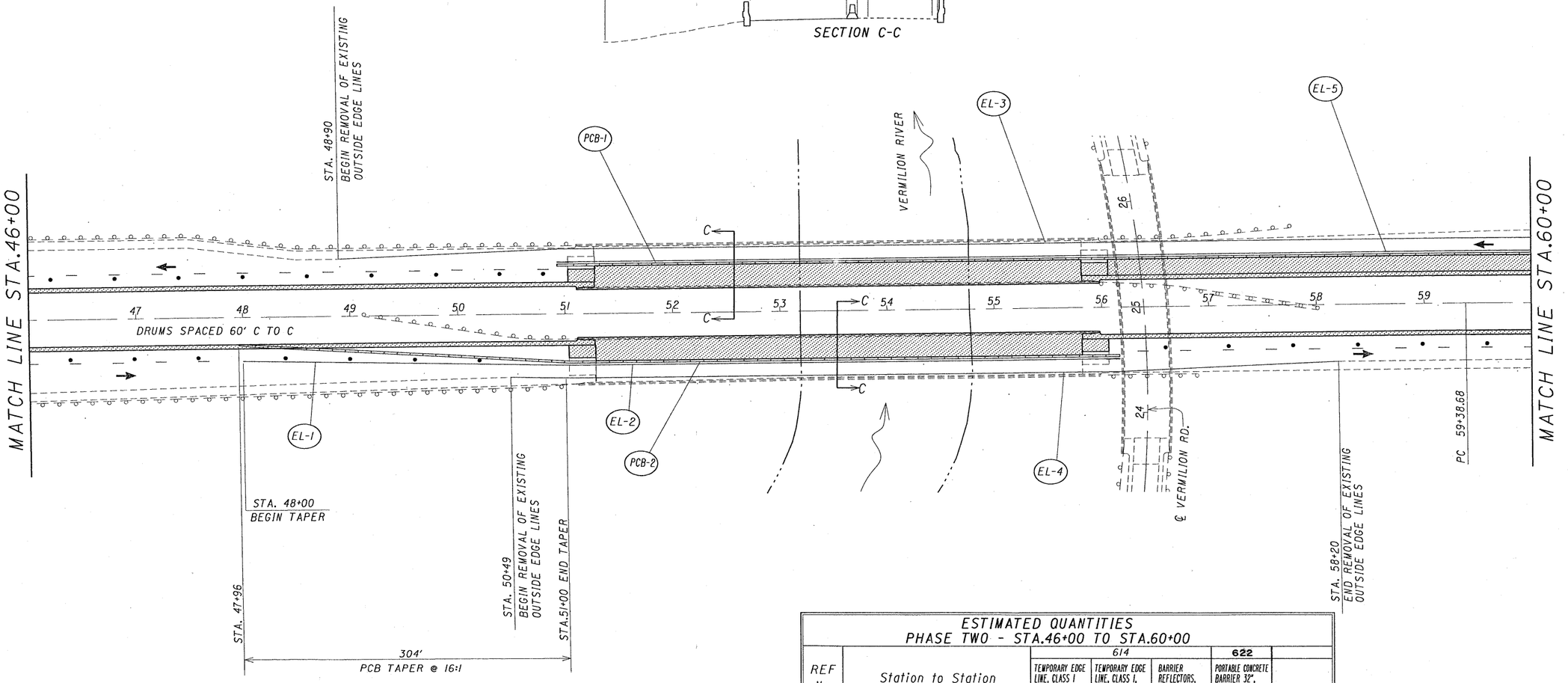
PHASE TWO

MAINTENANCE OF TRAFFIC STA 31+00 TO STA 46+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	29
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		



SECTION C-C



- AREA TO BE CONSTRUCTED

- PORTABLE CONCRETE BARRIER

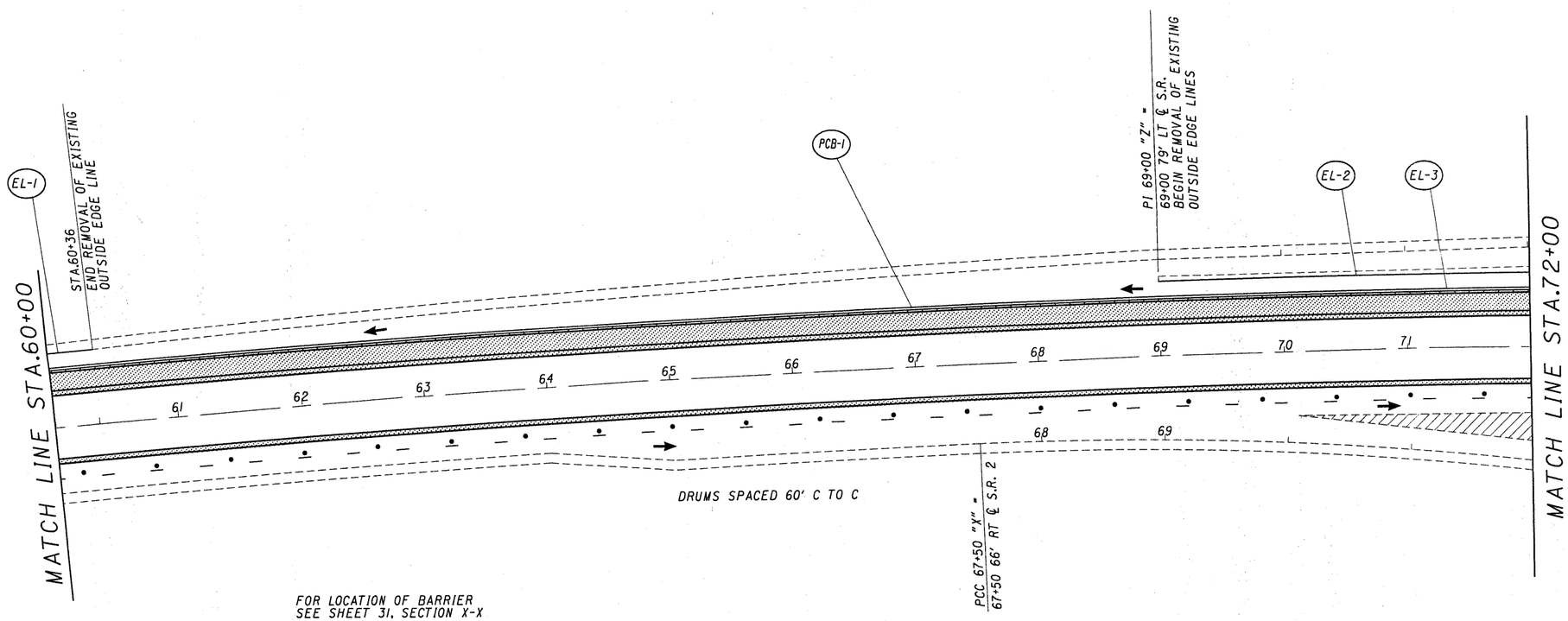
ESTIMATED QUANTITIES
PHASE TWO - STA.46+00 TO STA.60+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS 1 WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN LIN FT
EL-1	48+00 TO 51+00		300		
EL-2	51+00 TO 56+20		520		
EL-3	48+90 TO 60+00	1110			
EL-4	50+49 TO 58+20	771			
EL-5	50+90 TO 60+00		910		
PCB-1	50+90 TO 60+00			18	910
PCB-2	47+96 TO 56+20			41	830
TOTALS CARRIED TO SUB-SUMMARY		1881	1430	300	59	1740

PHASE TWO

MAINTENANCE OF TRAFFIC STA.46+00 TO STA.60+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	30
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267



- AREA TO BE CONSTRUCTED

- PORTABLE CONCRETE BARRIER

ESTIMATED QUANTITIES
PHASE TWO - STA.60+00 TO STA.72+00

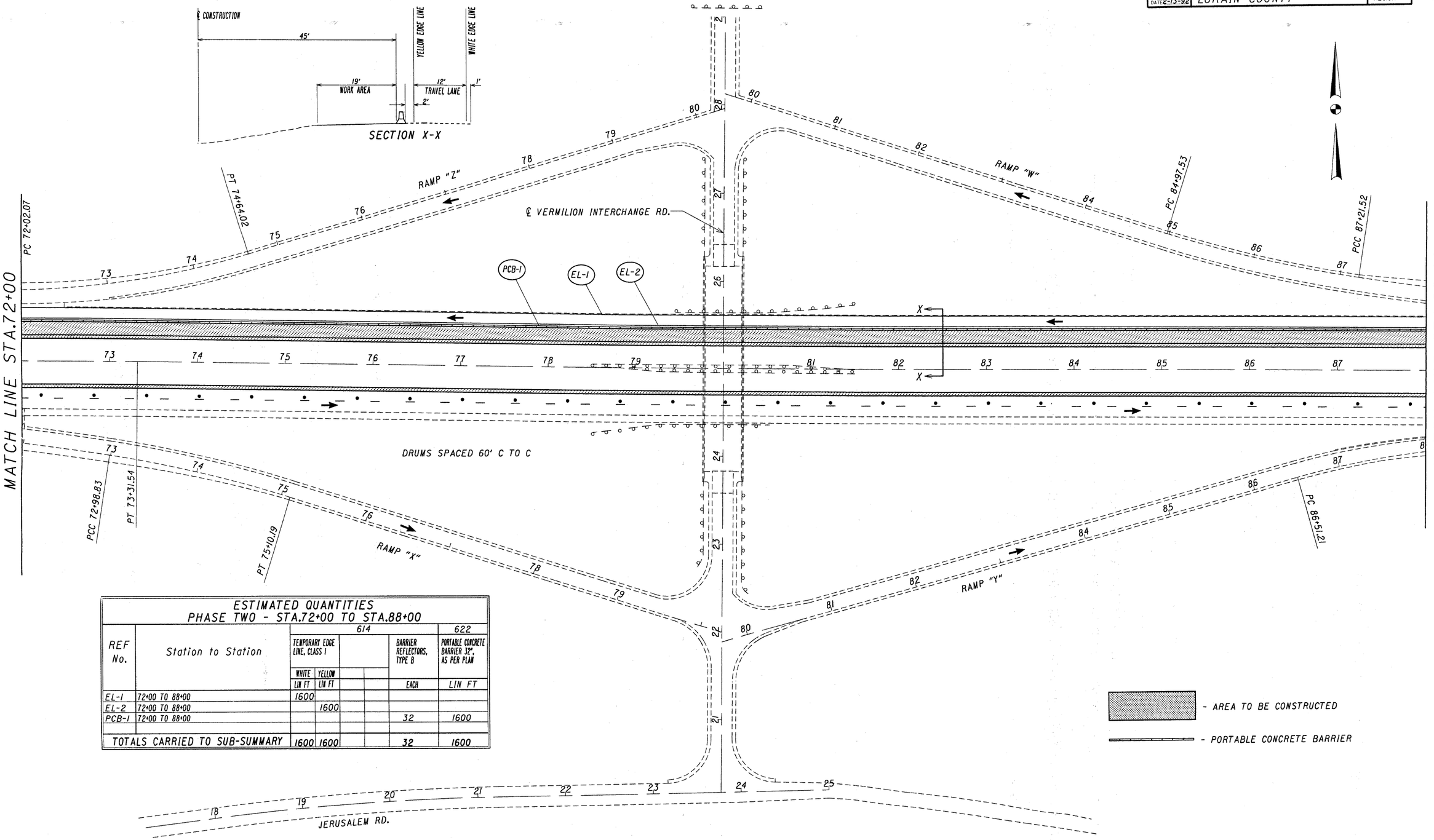
REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS 1 WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS 1 YELLOW LIN FT			614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN LIN FT
EL-1	60+00 TO 60+36	36					
EL-2	69+00 TO 72+00	300					
EL-3	60+00 TO 72+00		1200				
PCB-1	60+00 TO 72+00					24	1200
TOTALS CARRIED TO SUB-SUMMARY		336	1200			24	1200

PHASE TWO

MAINTENANCE OF TRAFFIC STA.60+00 TO STA.72+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	31
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

SECTION X-X



ESTIMATED QUANTITIES
PHASE TWO - STA.72+00 TO STA.88+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS I WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN LIN FT
EL-1	72+00 TO 88+00	1600			
EL-2	72+00 TO 88+00		1600		
PCB-1	72+00 TO 88+00			32	1600
TOTALS CARRIED TO SUB-SUMMARY		1600	1600	32	1600

PHASE TWO

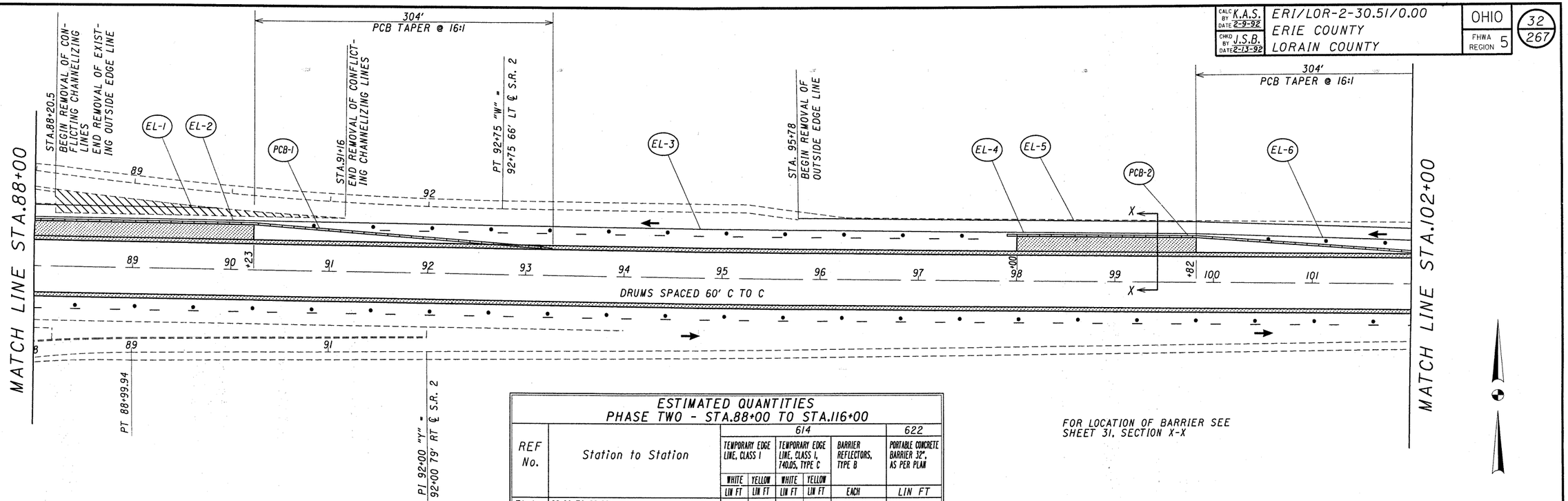
MAINTENANCE OF TRAFFIC STA.72+00 TO STA.88+00

CALC BY K.A.S. DATE 2-9-92
CHKD BY J.S.B. DATE 2-13-92

ERI/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY

OHIO
FHWA REGION 5

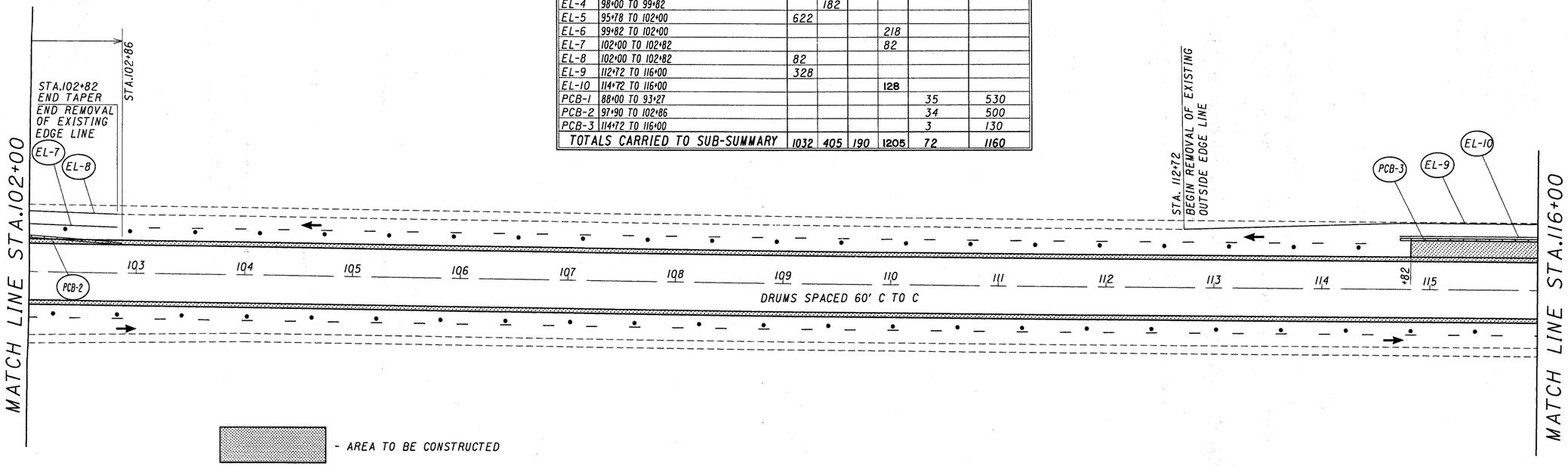
32
267



FOR LOCATION OF BARRIER SEE SHEET 31, SECTION X-X

ESTIMATED QUANTITIES
PHASE TWO - STA.88+00 TO STA.116+00

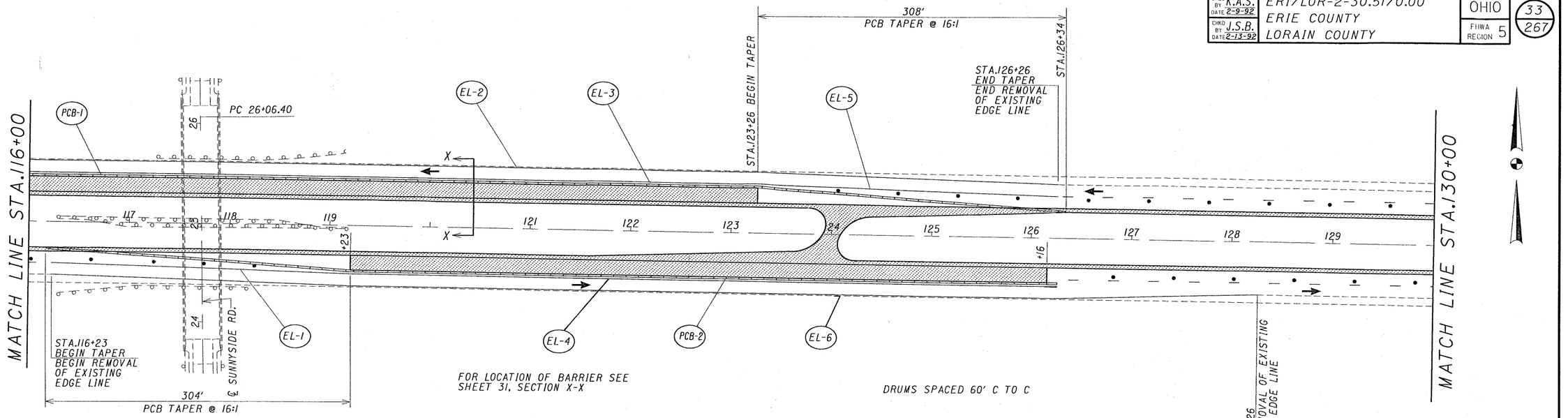
REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS I WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I YELLOW LIN FT	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN LIN FT
EL-1	88+00 TO 89+90			190			
EL-2	88+00 TO 90+23		223				
EL-3	90+23 TO 98+00				777		
EL-4	98+00 TO 99+82		182				
EL-5	95+78 TO 102+00	622					
EL-6	99+82 TO 102+00				218		
EL-7	102+00 TO 102+82				82		
EL-8	102+00 TO 102+82	82					
EL-9	112+72 TO 116+00	328					
EL-10	114+72 TO 116+00				128		
PCB-1	88+00 TO 93+27					35	530
PCB-2	97+90 TO 102+86					34	500
PCB-3	114+72 TO 116+00					3	130
TOTALS CARRIED TO SUB-SUMMARY		1032	405	190	1205	72	1160



PHASE TWO

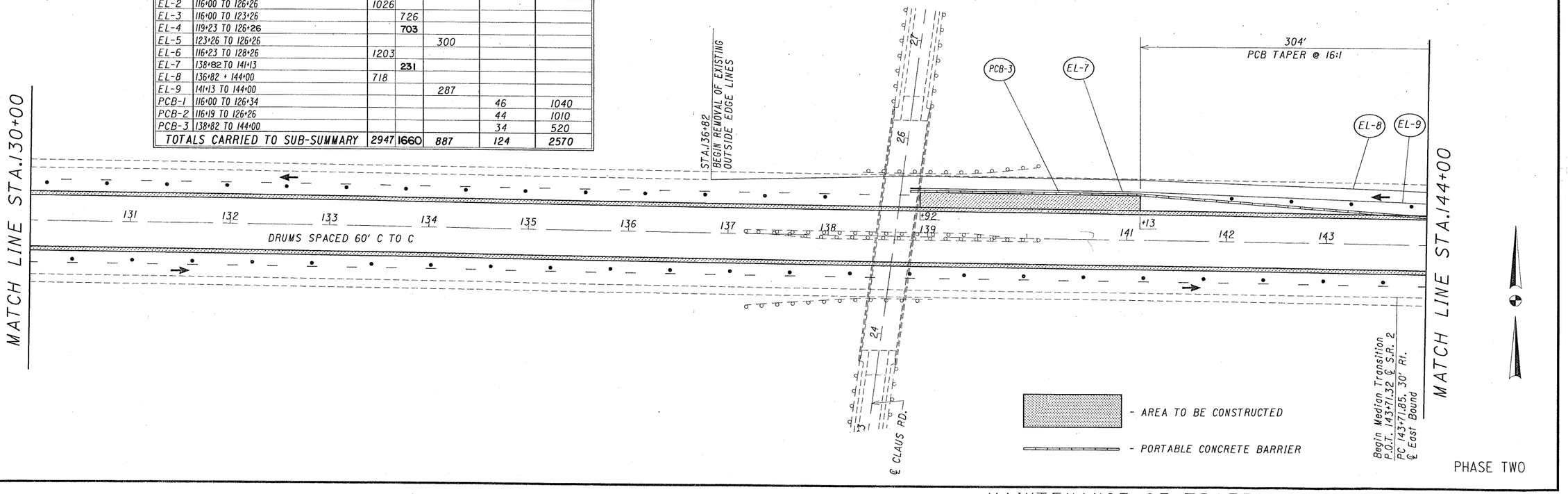
MAINTENANCE OF TRAFFIC STA.88+00 TO STA.116+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	33
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267



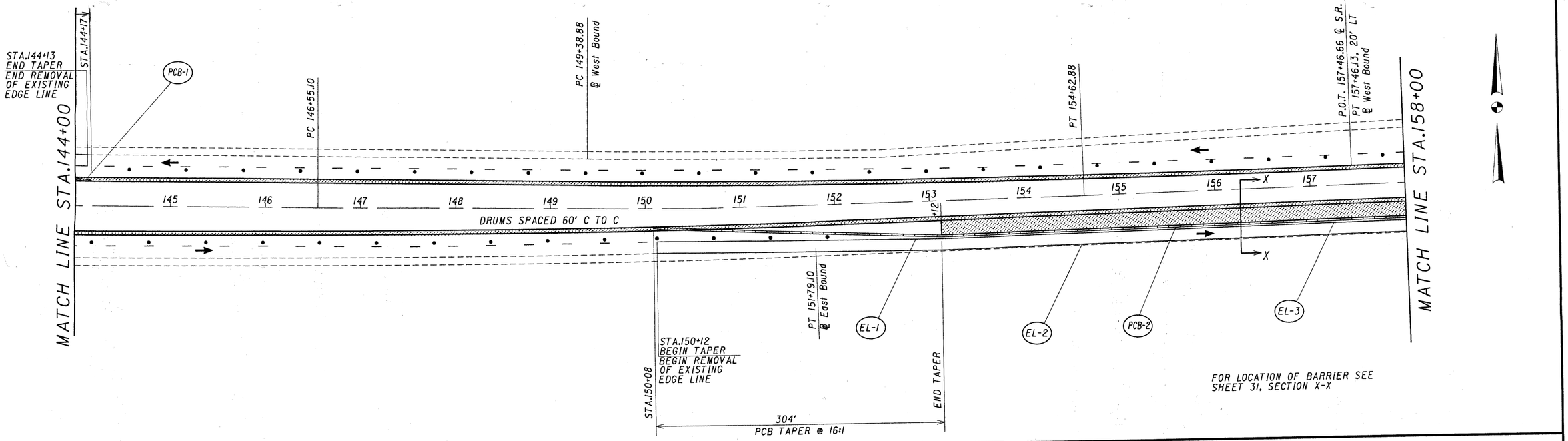
ESTIMATED QUANTITIES
PHASE TWO - STA.116+00 TO STA.144+00

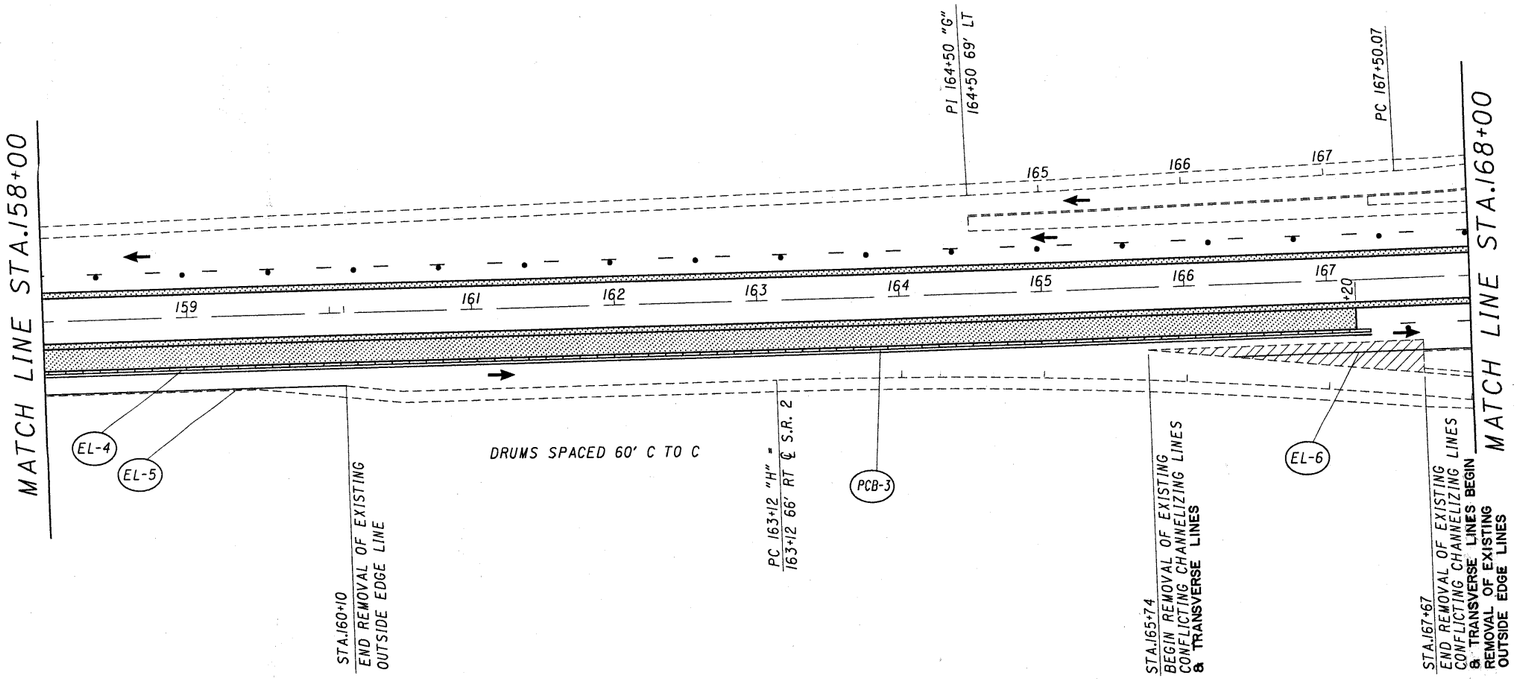
REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS I WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I YELLOW LIN FT	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN LIN FT
EL-1	116+23 TO 119+23			300		
EL-2	116+00 TO 126+26	1026				
EL-3	116+00 TO 123+26		726			
EL-4	119+23 TO 126+26		703			
EL-5	123+26 TO 126+26			300		
EL-6	116+23 TO 128+26	1203				
EL-7	138+82 TO 141+13		231			
EL-8	136+82 + 144+00	718				
EL-9	141+13 TO 144+00			287		
PCB-1	116+00 TO 126+34				46	1040
PCB-2	116+19 TO 126+26				44	1010
PCB-3	138+82 TO 144+00				34	520
TOTALS CARRIED TO SUB-SUMMARY		2947	1660	887	124	2570



PHASE TWO

MAINTENANCE OF TRAFFIC STA.116+00 TO STA.144+00





ESTIMATED QUANTITIES
PHASE TWO - STA.144+00 TO STA.168+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS I WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I YELLOW LIN FT	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C YELLOW LIN FT	622 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN LIN FT
EL-1	150+12 TO 153+12				300		
EL-2	153+12 TO 158+00	488					
EL-3	150+12 TO 158+00		788				
EL-4	158+00 TO 167+30		930				
EL-5	158+00 TO 160+10	210					
EL-6	166+35 TO 168+00			165			
PCB-1	144+00 TO 144+17					2	20
PCB-2	150+08 TO 158+00					40	800
PCB-3	158+00 TO 167+30					18	930
TOTALS CARRIED TO SUB-SUMMARY		698	1718	165	300	60	1750

- AREA TO BE CONSTRUCTED
- PORTABLE CONCRETE BARRIER

PHASE TWO

MAINTENANCE OF TRAFFIC STA.144+00 TO STA.168+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	35
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267

MATCH LINE STA.168+00

MATCH LINE STA.183+00

END PROJECT
STA. 181+46
S.L.M. 3.44

F-73(78)

℄ BAUMHART RD.

RAMP "G"

PT 170+90.66

PC 173+39.26

PT 175+76.27

DRUMS SPACED 60' C TO C

STA. 172+63
BEGIN REMOVAL OF EXISTING OUTSIDE EDGE LINES

304'
PCB TAPER @ 16:1

STA.177+56 BEGIN TAPER

STA.180+60

STA.180+56
END TAPER
END REMOVAL
OF EXISTING
EDGE LINE

EL-1 EL-2 EL-3 PCB-1 EL-4 EL-5 PCB-2

STA.171+00
BEGIN TAPER

STA.172+52
BEGIN TAPER
BEGIN REMOVAL
OF EXISTING
EDGE LINE

STA.172+48

STA.175+52

304'
PCB TAPER @ 16:1

PCC 168+65.48

PT 171+13.26

RAMP "H"

PC 173+18.64

℄ CONSTRUCTION

45'

YELLOW EDGE LINE

WHITE EDGE LINE

19'-11"
WORK AREA

12'
TRAVEL LANE

1'-11"

2'

SECTION D-D

- AREA TO BE CONSTRUCTED

- PORTABLE CONCRETE BARRIER

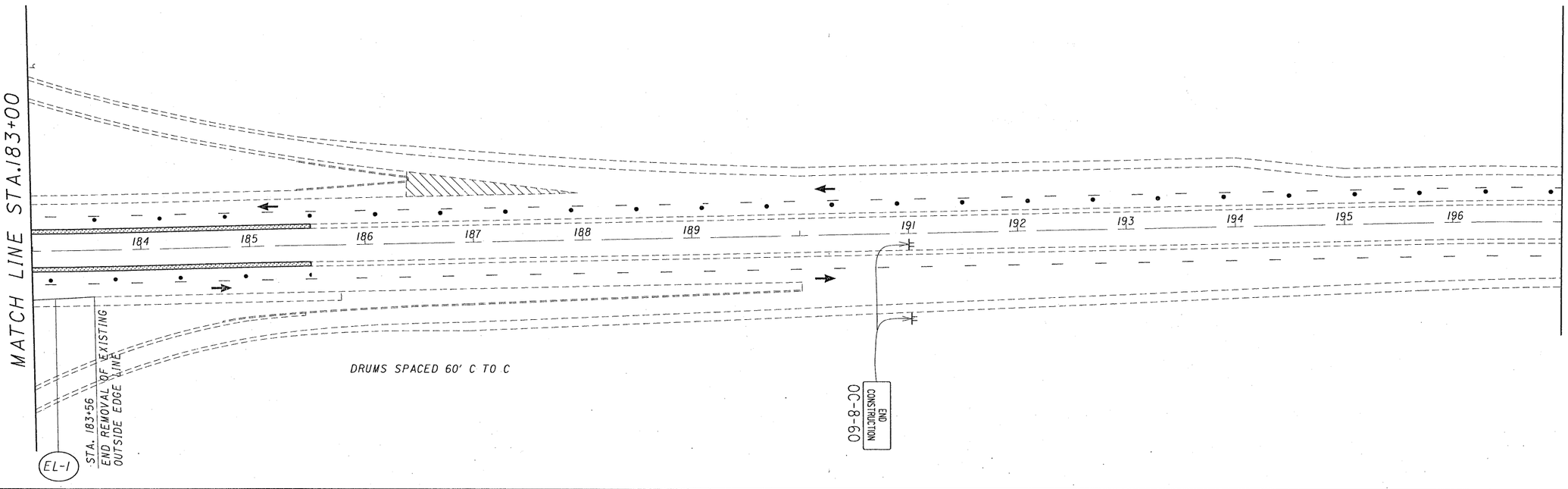
ESTIMATED QUANTITIES
PHASE TWO - STA.168+00 TO STA.183+00

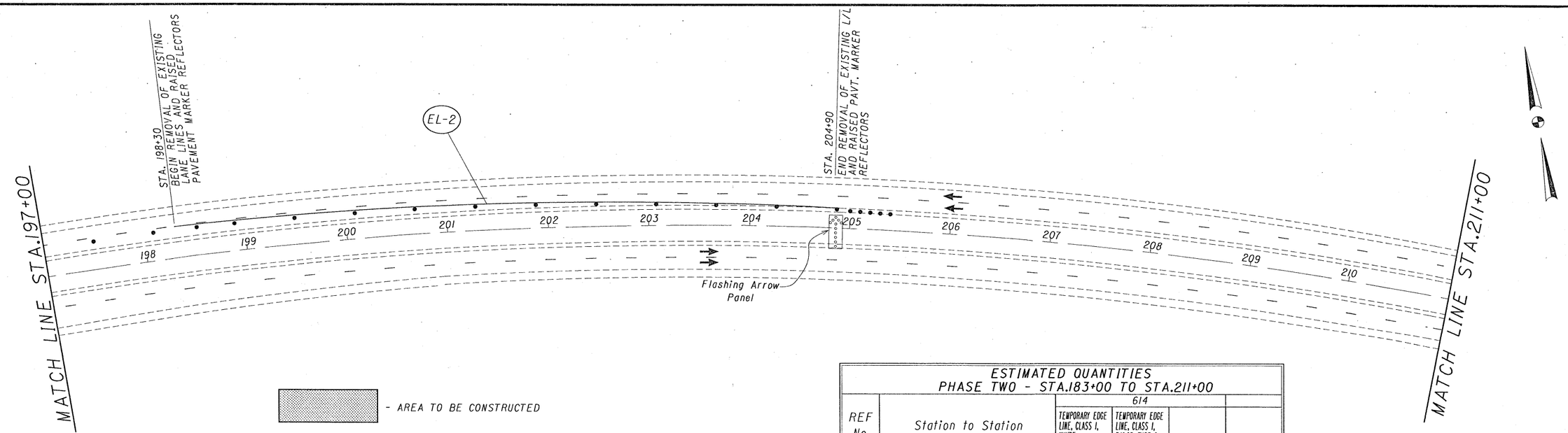
REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS 1 WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS 1 YELLOW LIN FT	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32" AS PER PLAN LIN FT
EL-1	168+00 TO 183+00	1500				
EL-2	172+63 TO 180+55	792				
EL-3	174+63 TO 177+55		292			
EL-4	177+55 TO 180+55			300		
EL-5	171+52 TO 181+56			1004		
PCB-1	174+63 TO 180+60				36	600
PCB-2	172+48 TO 181+56				42	910
TOTALS CARRIED TO SUB-SUMMARY		2292	292	1304	78	1510

PHASE TWO

MAINTENANCE OF TRAFFIC STA.168+00 TO STA.183+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00 ERIE COUNTY LORAIN COUNTY	OHIO FHWA REGION 5	36 267
CHKD BY J.S.B. DATE 2-13-92			





ESTIMATED QUANTITIES
PHASE TWO - STA.183+00 TO STA.211+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS 1, WHITE	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW		
		LIN FT	LIN FT		
EL-1	183+00 TO 183+56	56			
EL-2	198+30 TO 204+90		660		
TOTALS CARRIED TO SUB-SUMMARY		56	660		

PHASE TWO

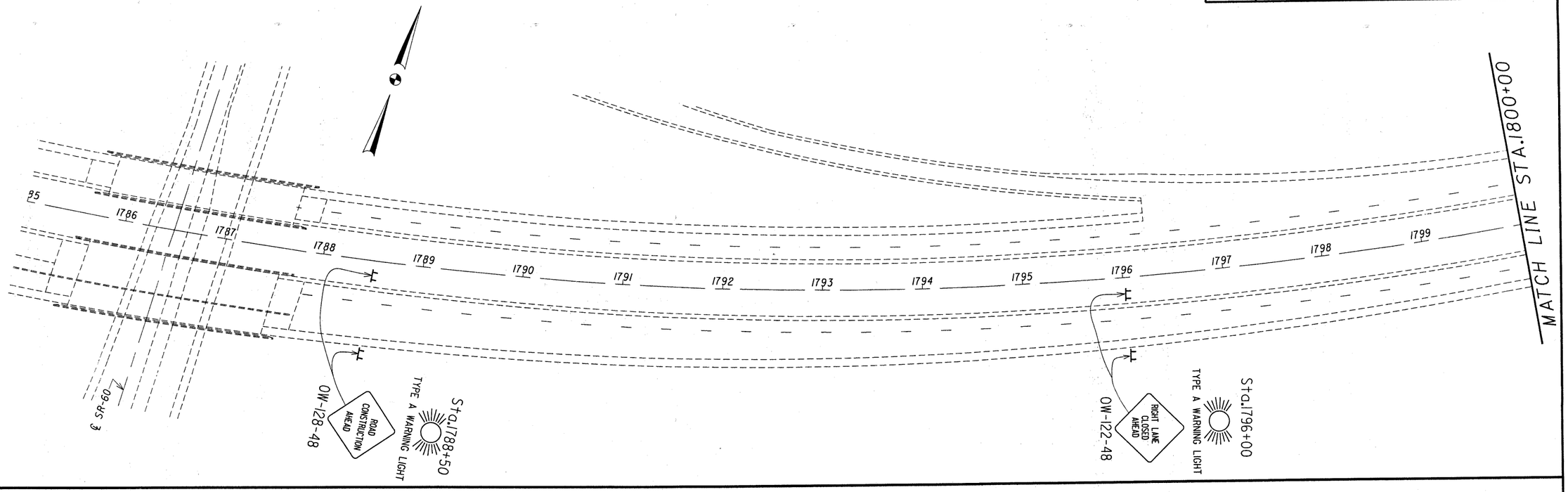
MAINTENANCE OF TRAFFIC STA.183+00 TO STA.211+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	37
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267

PHASE TWO

MAINTENANCE OF TRAFFIC STA.211+00 TO STA.237+00

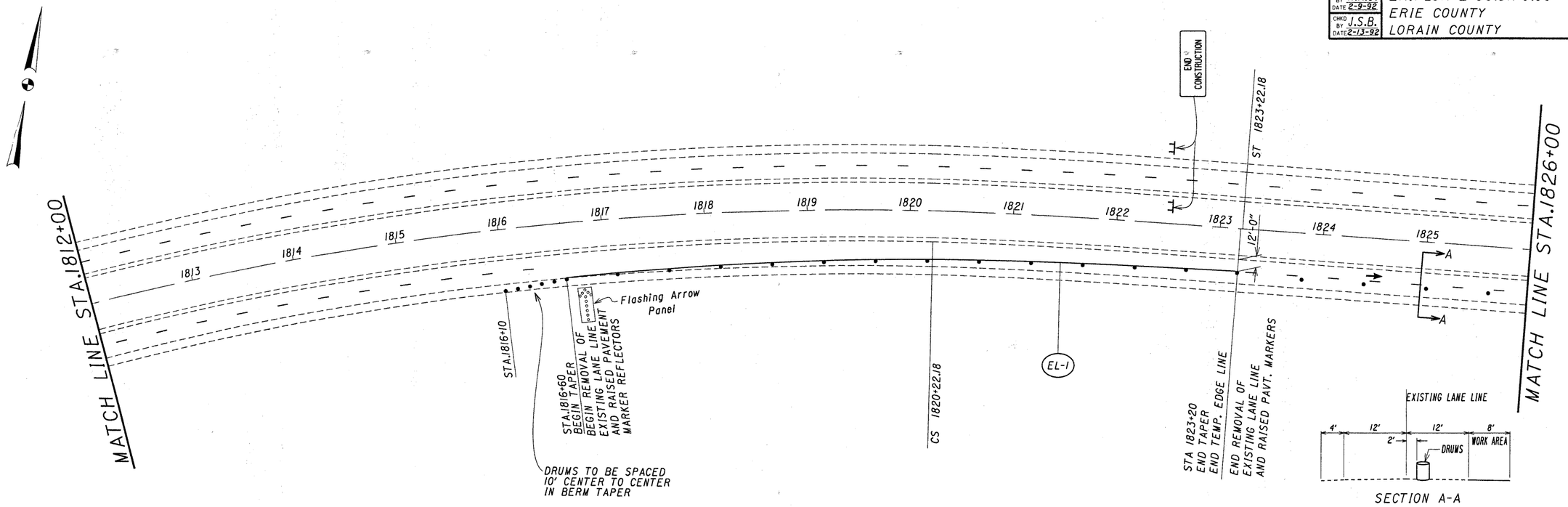
CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	38
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267

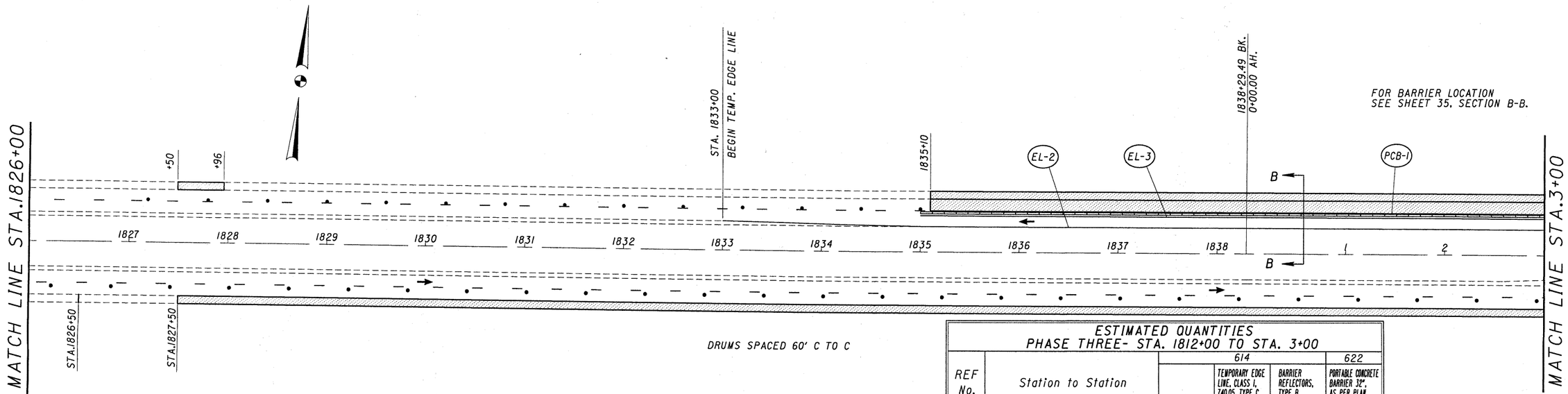


PHASE THREE

MAINTENANCE OF TRAFFIC STA.1785+00 TO STA.1812+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	39
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267





ESTIMATED QUANTITIES
PHASE THREE- STA. 1812+00 TO STA. 3+00

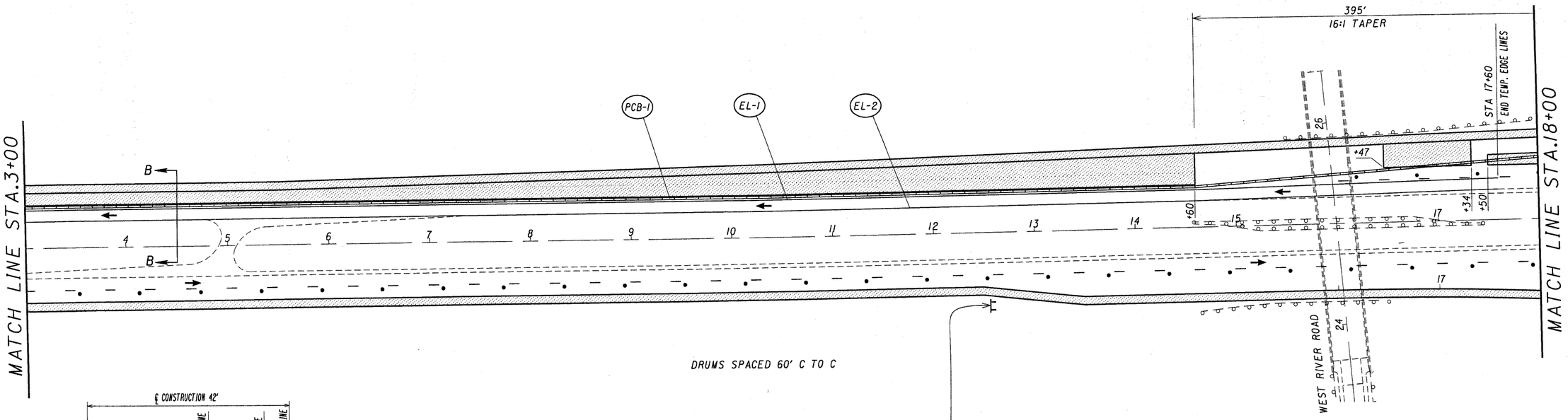
REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN LIN FT
EL-1	1816+60 TO 1823+20	660			
EL-2	1833+00 TO 3+00		830		
EL-3	1835+00 TO 3+00	630			
PCB-1	1835+00 TO 3+00			13	630
TOTALS CARRIED TO SUB-SUMMARY		1290	830	13	630

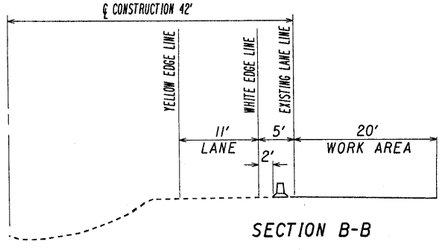
PHASE THREE

MAINTENANCE OF TRAFFIC STA.1812+00 TO STA.3+00

CALC BY K.A.S. DATE 2-9-92 CHKD BY J.S.B. DATE 2-13-92	ERI/LOR-2-30.51/0.00 ERIE COUNTY LORAIN COUNTY	OHIO FHWA REGION 5	40 267

THE WORK IN THIS AREA SHALL BE DONE WHILE THE RAMP IS CLOSED





SECTION B-B

- AREA TO BE CONSTRUCTED

- PORTABLE CONCRETE BARRIER

DRUMS SPACED 60' C TO C

STA.12+50

REST AREA

RA - 2

CLOSED

4' x 1.5'

NOTE:
"CLOSED" SIGN SHALL BE POSTED WHEN THE REST AREA IS CLOSED.

ESTIMATED QUANTITIES
PHASE THREE - STA. 3+00 TO STA. 18+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN LIN FT
EL-1	3+00 TO 17+60	1460			
EL-2	3+00 TO 17+60		1460		
PCB-1	3+00 TO 18+00			57	1500
TOTALS CARRIED TO SUB-SUMMARY		1460	1460	57	1500

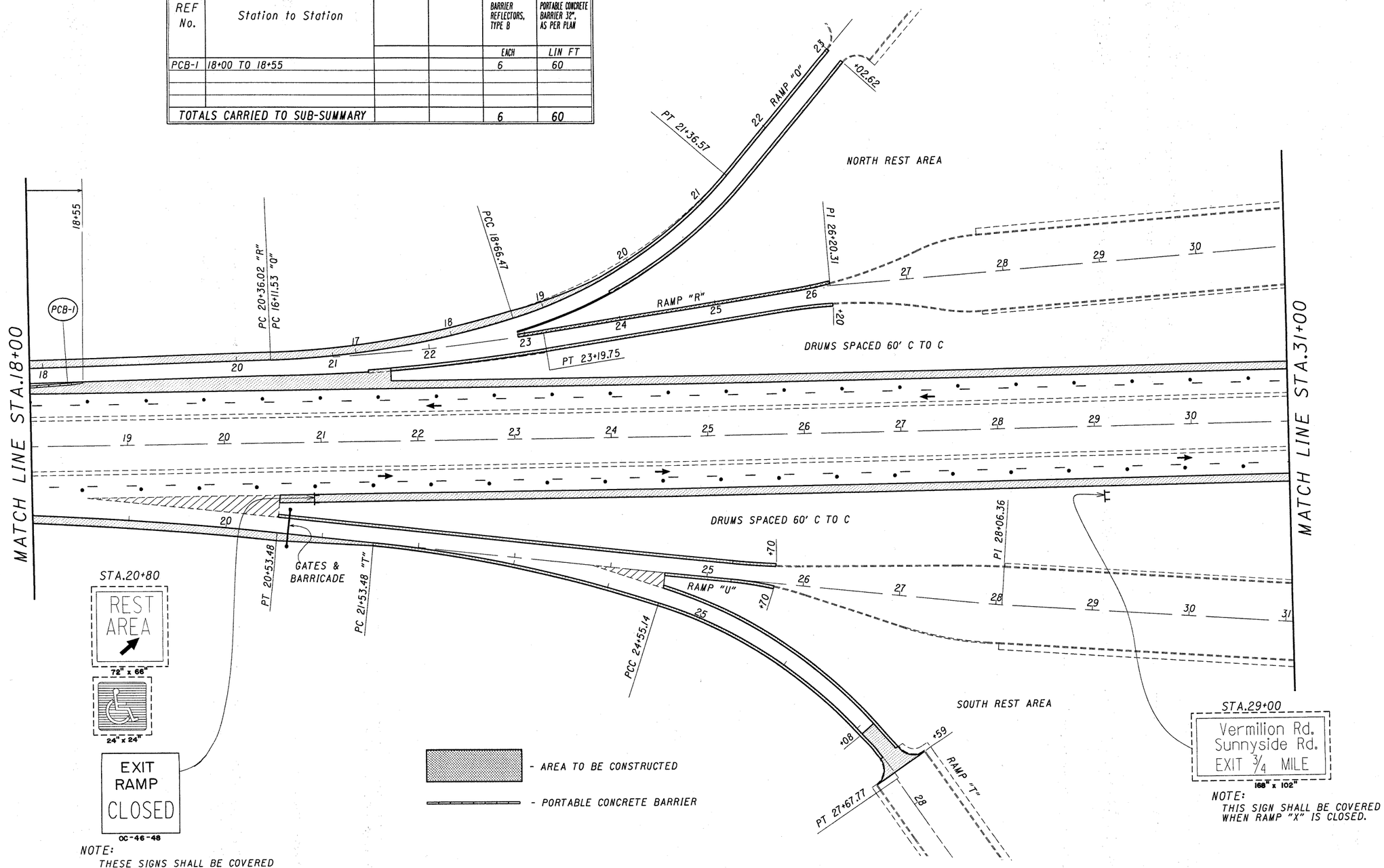
PHASE THREE

MAINTENANCE OF TRAFFIC STA.3+00 TO STA.18+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	41
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

ESTIMATED QUANTITIES
PHASE THREE - STA. 18+00 TO STA. 31+00

REF No.	Station to Station	614		622
			BARRIER REFLECTORS, TYPE B	PORTABLE CONCRETE BARRIER 32", AS PER PLAN
			EACH	LIN FT
PCB-1	18+00 TO 18+55		6	60
TOTALS CARRIED TO SUB-SUMMARY			6	60



NOTE:
THESE SIGNS SHALL BE COVERED WHEN THE REST AREA IS CLOSED AND THE "RAMP CLOSED" SIGN SHALL BE ERECTED.

NOTE:
THIS SIGN SHALL BE COVERED WHEN RAMP "X" IS CLOSED.

PHASE THREE

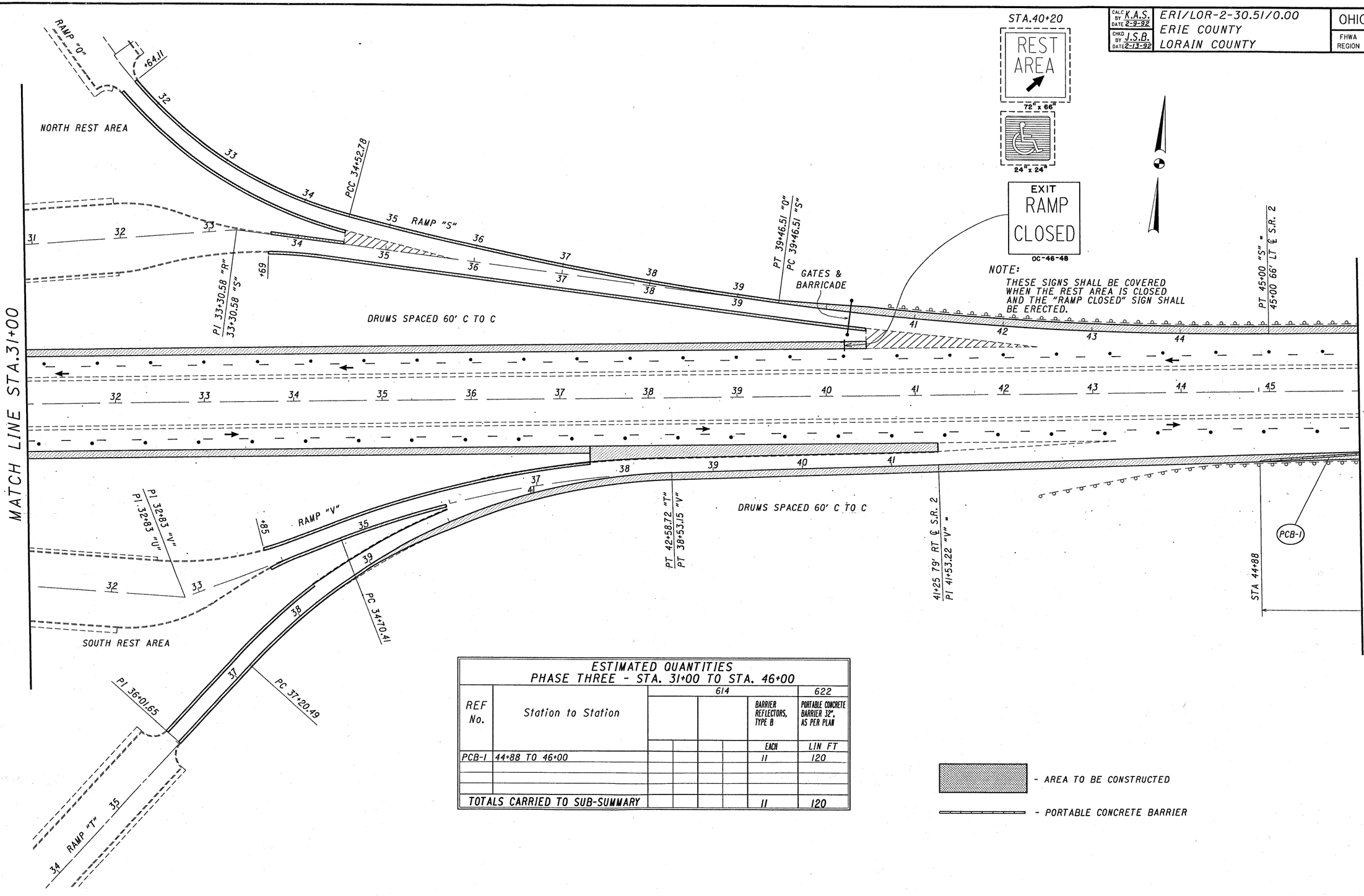
MAINTENANCE OF TRAFFIC STA.18+00 TO STA.31+00

CALC BY K.A.S. DATE 2-9-92
CHKD BY J.S.B. DATE 2-13-92

ERI/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY

OHIO
FHWA REGION 5

42
267



ESTIMATED QUANTITIES
PHASE THREE - STA. 31+00 TO STA. 46+00

REF No.	Station to Station	614				622
					BARRIER REFLECTORS, TYPE B	PORTABLE CONCRETE BARRIER 32", AS PER PLAN
					EACH	LIN FT
PCB-1	44+88 TO 46+00				11	120
TOTALS CARRIED TO SUB-SUMMARY					11	120

- AREA TO BE CONSTRUCTED
- PORTABLE CONCRETE BARRIER

PHASE THREE

MAINTENANCE OF TRAFFIC STA.31+00 TO STA.46+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	43
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

STA.49+80

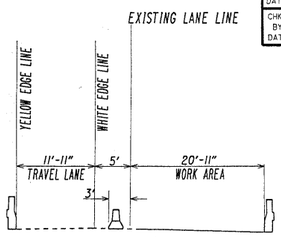
REST AREA

PHONE

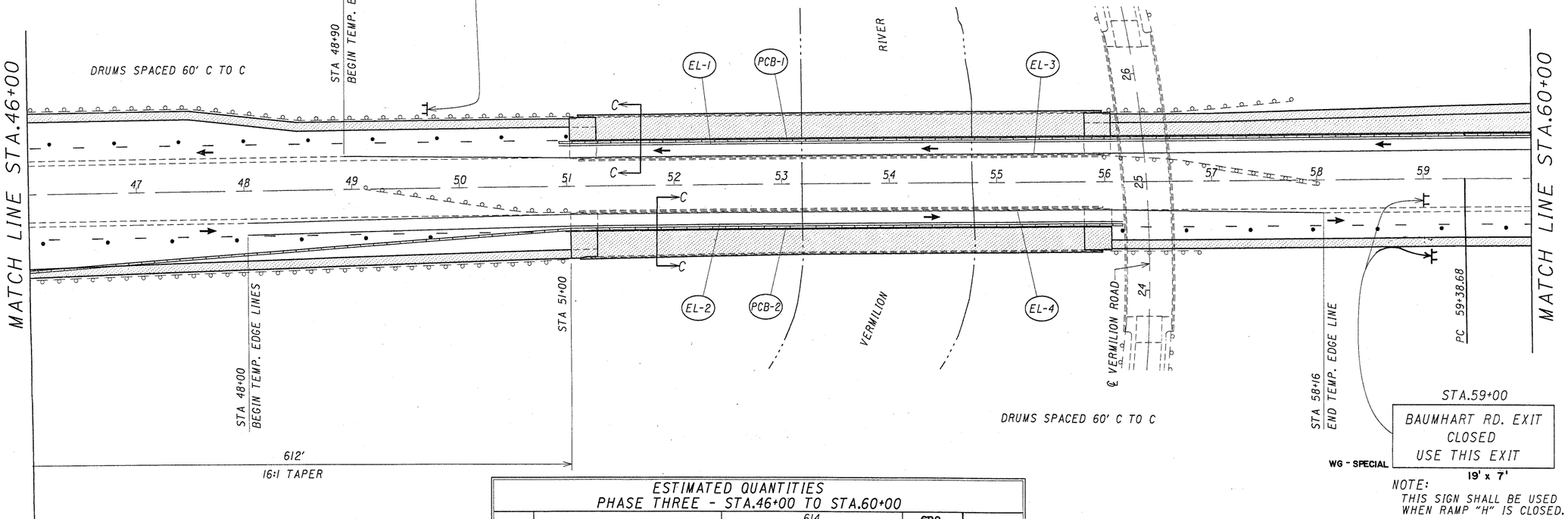
CLOSED

4' x 1.5'

NOTE:
"CLOSED" SIGN SHALL BE POSTED WHEN THE REST AREA IS CLOSED.



SECTION C-C



STA.59+00

BAUMHART RD. EXIT
CLOSED
USE THIS EXIT

WG - SPECIAL

19' x 7'

NOTE:
THIS SIGN SHALL BE USED WHEN RAMP "H" IS CLOSED.

STA.59+00

Vermilion Rd.
Sunnyside Rd.
Closed
Use Next Exit

WG - SPECIAL

15' x 9'

NOTE:
THIS SIGN SHALL BE USED WHEN RAMP "X" IS CLOSED.

ESTIMATED QUANTITIES
PHASE THREE - STA.46+00 TO STA.60+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32" AS PER PLAN LIN FT
EL-1	50+90 TO 60+00	910			
EL-2	48+00 TO 56+16	816			
EL-3	48+90 TO 60+00		1110		
EL-4	48+00 TO 58+16		1016		
PCB-1	50+90 TO 60+00			19	910
PCB-2	46+00 TO 56+16			61	1020
TOTALS CARRIED TO SUB-SUMMARY		1726	2126	80	1930

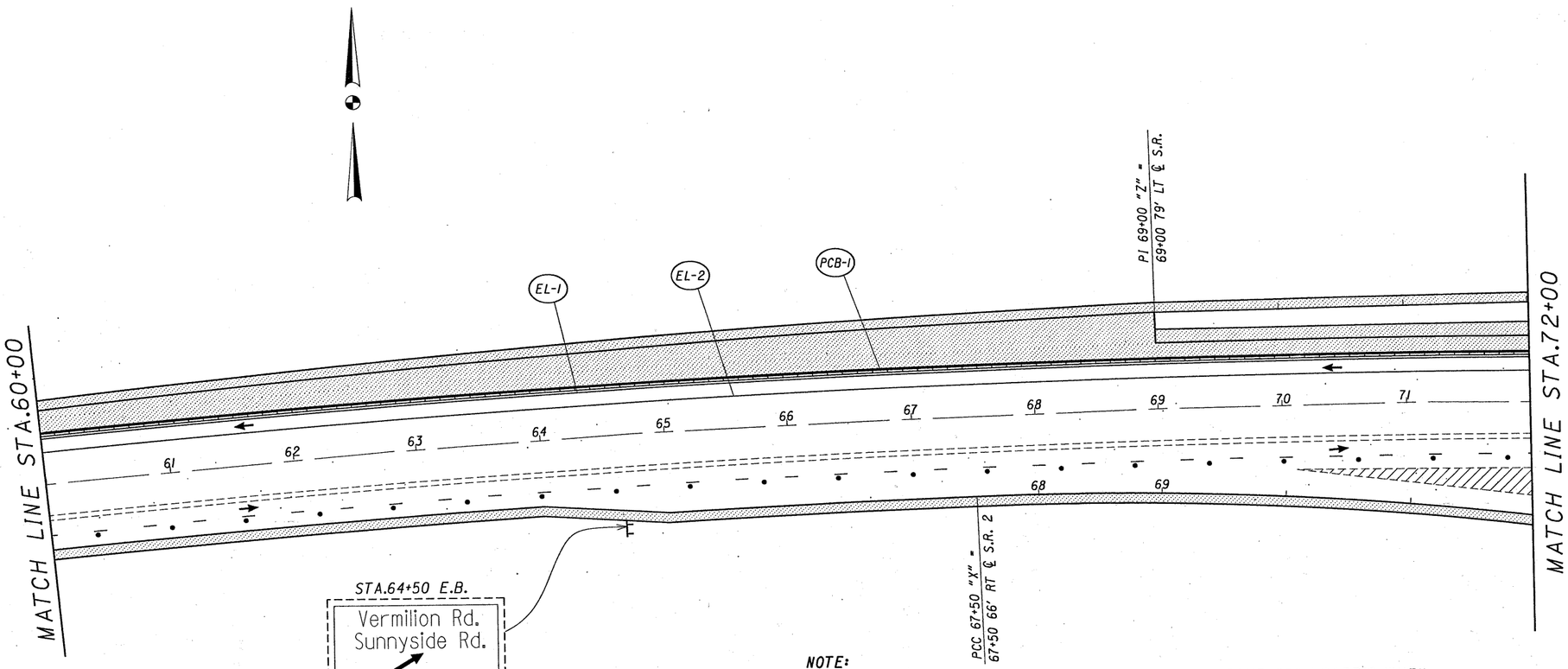
- AREA TO BE CONSTRUCTED

- PORTABLE CONCRETE BARRIER

PHASE THREE

MAINTENANCE OF TRAFFIC STA.46+00 TO STA.60+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	44
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267



NOTE:
THIS SIGN SHALL BE COVERED WHEN RAMP "X" IS CLOSED.

NOTE:
USE STANDARD DRAWING MT-98.15 TO MAINTAIN RAMP "Z" TRAFFIC WHEN THE RAMP IS OPEN. STANDARD DRAWING MT-98.13 SHALL BE USED TO MAINTAIN RAMP "X" TRAFFIC. THE WORK ON THE MAINLINE IN THE AREA OF THE RAMP SHALL BE COMPLETED DURING THE RAMP CLOSURE.

- AREA TO BE CONSTRUCTED

- PORTABLE CONCRETE BARRIER

ESTIMATED QUANTITIES
PHASE THREE - STA.60+00 TO STA.72+00

REF No.	Station to Station			614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN LIN FT
EL-1	60+00 TO 72+00			1200			
EL-2	60+00 TO 72+00				1200		
PCB-1	60+00 TO 72+00					24	1200
TOTALS CARRIED TO SUB-SUMMARY				1200	1200	24	1200

PHASE THREE

MAINTENANCE OF TRAFFIC STA.60+00 TO STA.72+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	45
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267

MATCH LINE STA.72+00

MATCH LINE STA.88+00

STA.LOR-2-0151
REST AREA
3/4 MILE
PHONE

CLOSED
8' x 1.5'

NOTE:
"CLOSED" SIGN SHALL BE POSTED WHEN THE REST AREA IS CLOSED.

STA.87+95
EXIT
72" x 60"

EXIT RAMP CLOSED
OW-46-48

NOTE:
THIS SIGN SHALL BE COVERED WHEN THE RAMP "W" IS CLOSED AND THE "RAMP CLOSED" SIGN SHALL BE ERECTED.

STA 28+00, LT
VERMILION INTERCHANGE RD.

STA 28+12.53, LT
VERMILION INTERCHANGE RD.

STA 27+46, LT
VERMILION INTERCHANGE RD.

STA 27+46, RT
VERMILION INTERCHANGE RD.

℄ VERMILION INTERCHANGE RD.

RAMP "Z"

RAMP "W"

PT 74+64.02

PC 84+97.53

PCC 87+21.52

EL-1

EL-2

PCB-1

DRUMS SPACED 60' C TO C

DRUMS SPACED 60' C TO C

GATES & BARRICADE

PCC 72+98.83

PT 73+31.54

PT 75+10.19

STA 22+67, LT
VERMILION INTERCHANGE RD.

GATES & BARRICADE POSITION B

STA 22+41, RT
VERMILION INTERCHANGE RD.

RAMP "X"

RAMP "Y"

PC 86+51.21

STA.72+25
EXIT
72" x 60"

EXIT RAMP CLOSED
OW-46-48

NOTE:
THIS SIGN SHALL BE COVERED WHEN THE RAMP "X" IS CLOSED AND THE "RAMP CLOSED" SIGN SHALL BE ERECTED.

NOTE : THE GATES AND BARRICADES SHALL BE PLACED IN POSITION A DURING THE CLOSING OF RAMPS "X" AND "Y". WHEN RAMPS "W" AND "Z" AND THE VERMILION INTERCHANGE BRIDGE ARE CLOSED. THE GATES AND BARRICADES SHALL BE IN POSITION B.

STA 21+43, RT
VERMILION INTERCHANGE RD.

STA 21+60, LT
VERMILION INTERCHANGE RD.

GATES & BARRICADE POSITION A

JERUSALEM RD.

- AREA TO BE CONSTRUCTED

- PORTABLE CONCRETE BARRIER

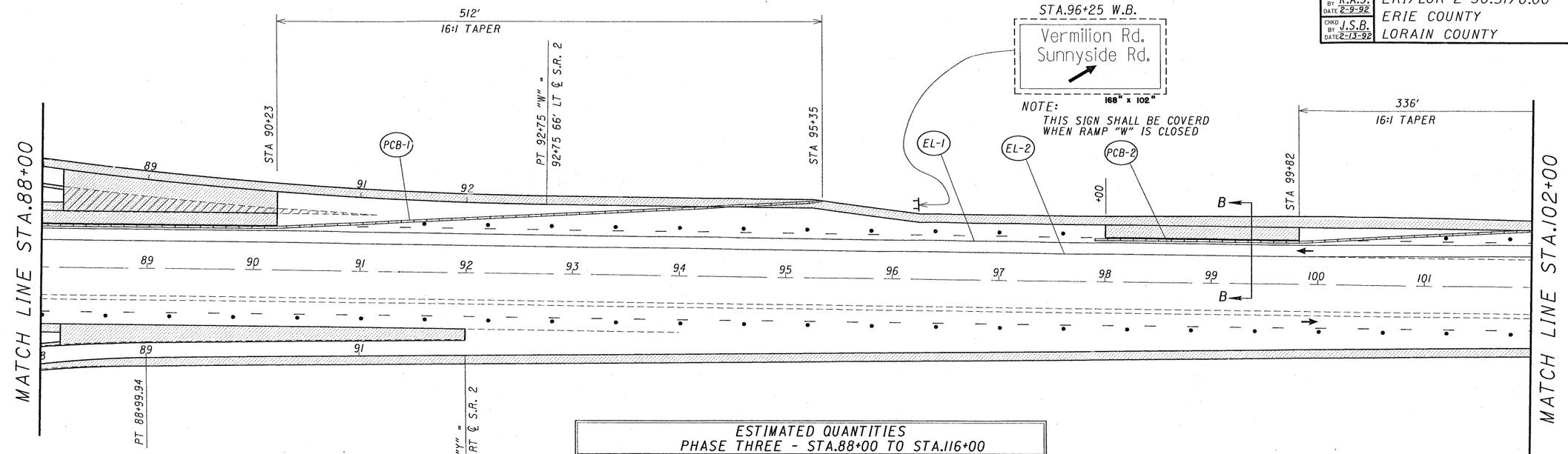
ESTIMATED QUANTITIES
PHASE THREE - STA.72+00 TO STA.88+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32" AS PER PLAN LIN FT
EL-1	72+00 TO 88+00	1600			
EL-2	72+00 TO 88+00		1600		
PCB-1	72+00 TO 88+00			32	1600
TOTALS CARRIED TO SUB-SUMMARY		1600	1600	32	1600

PHASE THREE

MAINTENANCE OF TRAFFIC STA.72+00 TO STA.88+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY
	LORAIN COUNTY
OHIO	FHWA REGION 5

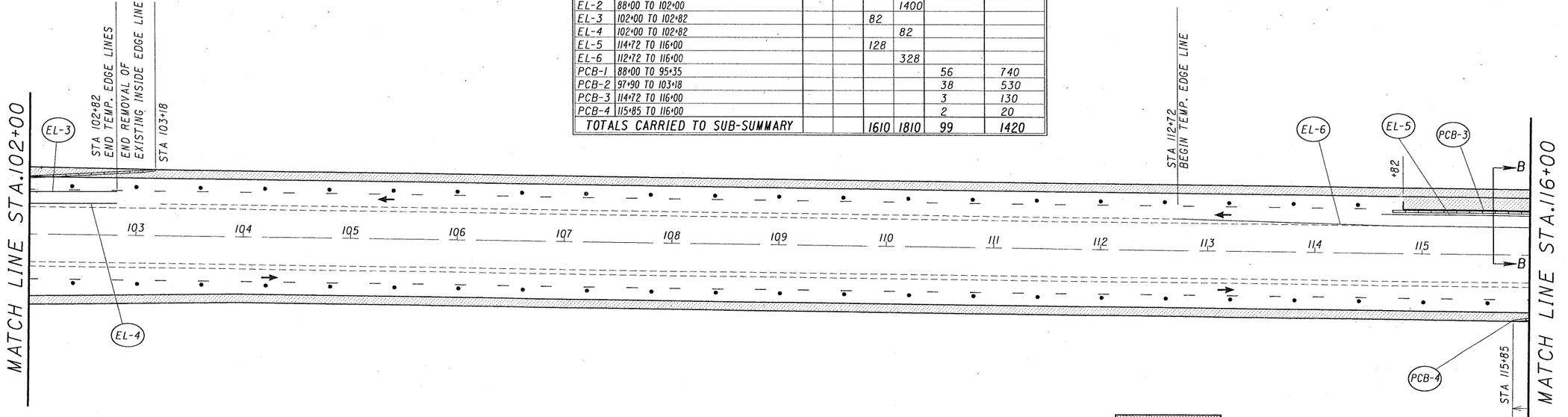


NOTE:
USE STANDARD DRAWING MT-98.13 OR MT-98.14 TO MAINTAIN RAMP "W" TRAFFIC WHEN THE RAMP IS OPEN. STANDARD DRAWING MT-98.15 SHALL BE USED TO MAINTAIN RAMP "Y" TRAFFIC. THE WORK ON THE MAINLINE IN THE AREA OF THE RAMP SHALL BE COMPLETED DURING THE RAMP CLOSURE.

ESTIMATED QUANTITIES
PHASE THREE - STA.88+00 TO STA.116+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32" AS PER PLAN LIN FT
EL-1	88+00 TO 102+00	1400			
EL-2	88+00 TO 102+00		1400		
EL-3	102+00 TO 102+82	82			
EL-4	102+00 TO 102+82		82		
EL-5	114+72 TO 116+00	128			
EL-6	112+72 TO 116+00		328		
PCB-1	88+00 TO 95+35			56	740
PCB-2	97+90 TO 103+18			38	530
PCB-3	114+72 TO 116+00			3	130
PCB-4	115+85 TO 116+00			2	20
TOTALS CARRIED TO SUB-SUMMARY		1610	1810	99	1420

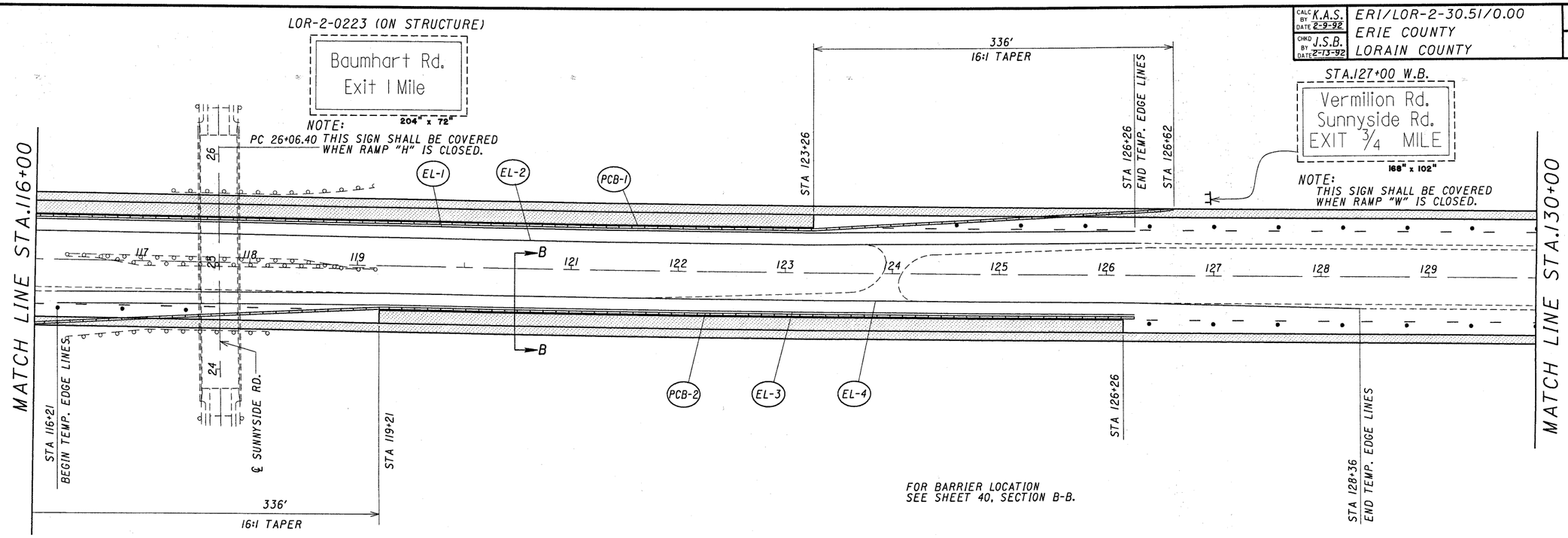
FOR BARRIER LOCATION SEE SHEET 40, SECTION B-B.

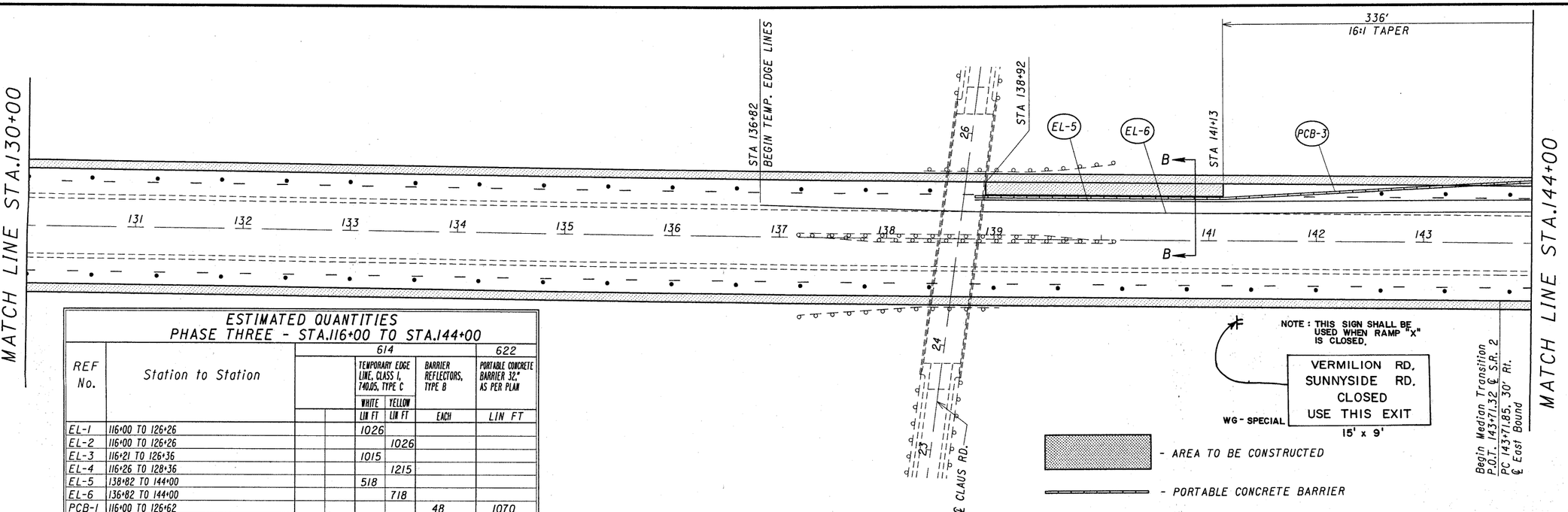


PHASE THREE

MAINTENANCE OF TRAFFIC STA.88+00 TO STA.116+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	47
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		





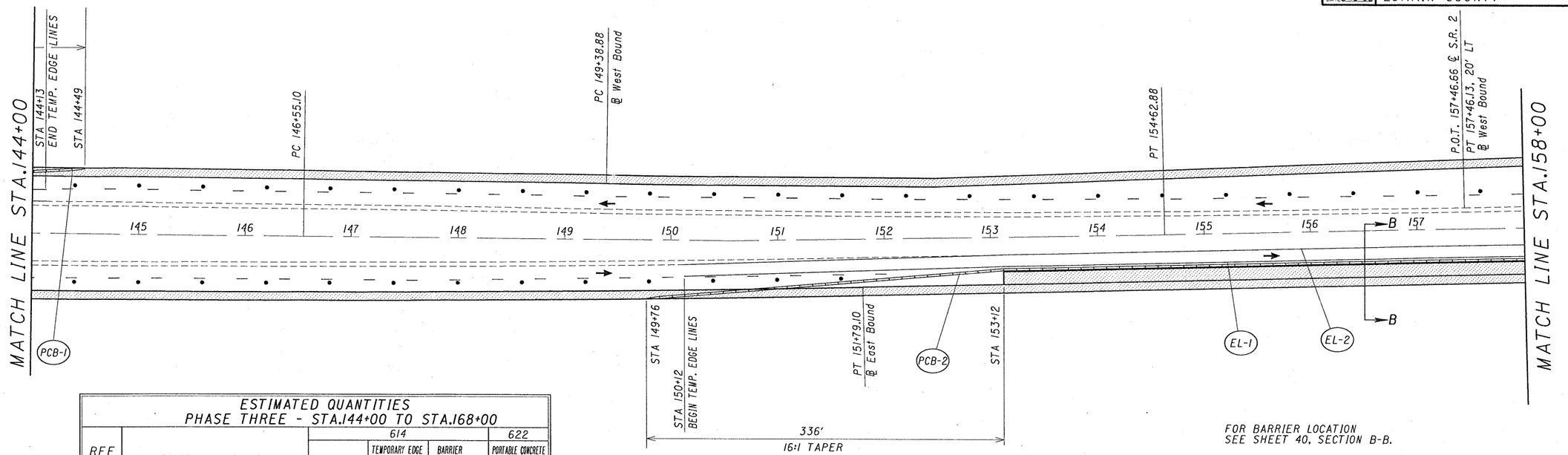
ESTIMATED QUANTITIES
PHASE THREE - STA.116+00 TO STA.144+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS 1, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32" AS PER PLAN LIN FT
EL-1	116+00 TO 126+26	1026			
EL-2	116+00 TO 126+26		1026		
EL-3	116+21 TO 126+36	1015			
EL-4	116+26 TO 128+36		1215		
EL-5	138+82 TO 144+00	518			
EL-6	136+82 TO 144+00		718		
PCB-1	116+00 TO 126+62			48	1070
PCB-2	116+00 TO 126+36			36	1030
PCB-3	138+82 TO 144+00			34	520
TOTALS CARRIED TO SUB-SUMMARY		2559	2959	118	2620

PHASE THREE

MAINTENANCE OF TRAFFIC STA.116+00 TO STA.144+00

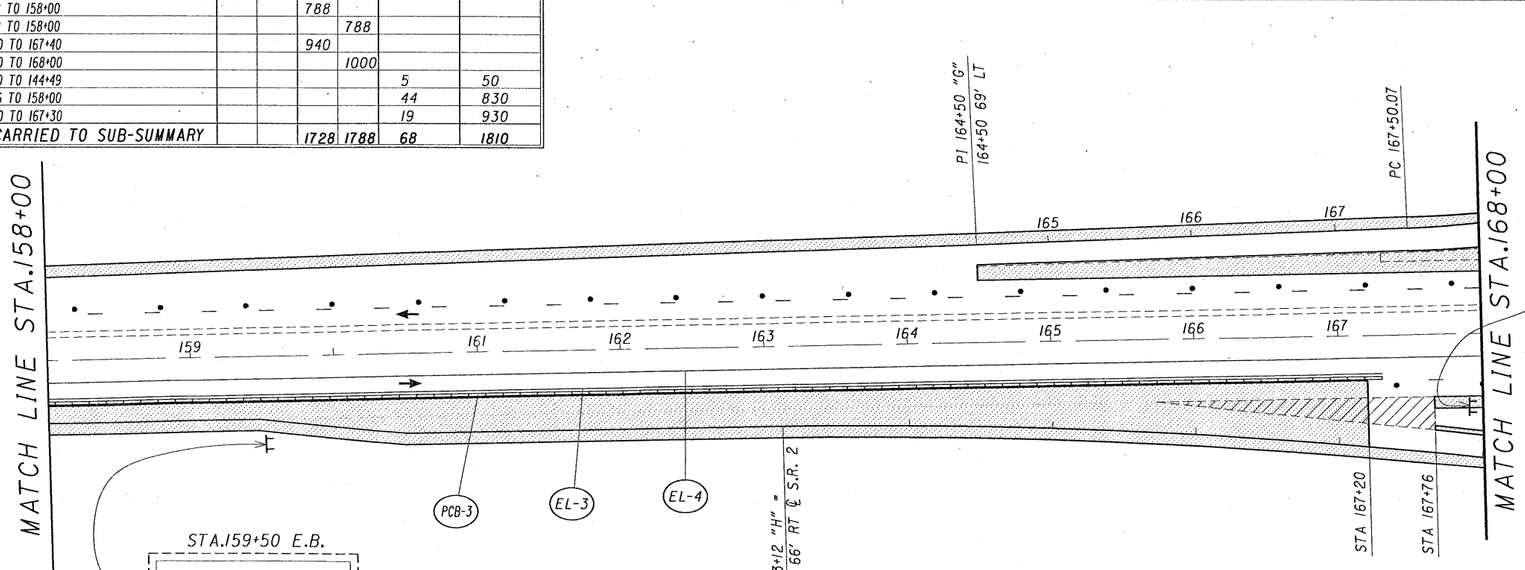
CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	48
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267



FOR BARRIER LOCATION
SEE SHEET 40, SECTION B-B.

ESTIMATED QUANTITIES
PHASE THREE - STA.144+00 TO STA.168+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32" AS PER PLAN LIN FT
EL-1	150+12 TO 158+00	788			
EL-2	150+12 TO 158+00		788		
EL-3	158+00 TO 167+40	940			
EL-4	158+00 TO 168+00		1000		
PCB-1	144+00 TO 144+49			5	50
PCB-2	149+76 TO 158+00			44	830
PCB-3	158+00 TO 167+30			19	930
TOTALS CARRIED TO SUB-SUMMARY		1728	1788	68	1810



NOTE:
THIS SIGN SHALL BE COVERED WHEN RAMP "H" IS CLOSED.

NOTE:
USE STANDARD DRAWING MT-98.13 TO MAINTAIN RAMP "H" TRAFFIC WHEN THE RAMP IS OPEN. STANDARD DRAWING MT-98.15 SHALL BE USED TO MAINTAIN RAMP "G" TRAFFIC. THE WORK ON THE MAINLINE IN THE AREA OF THE RAMP SHALL BE COMPLETED DURING THE RAMP CLOSURE.

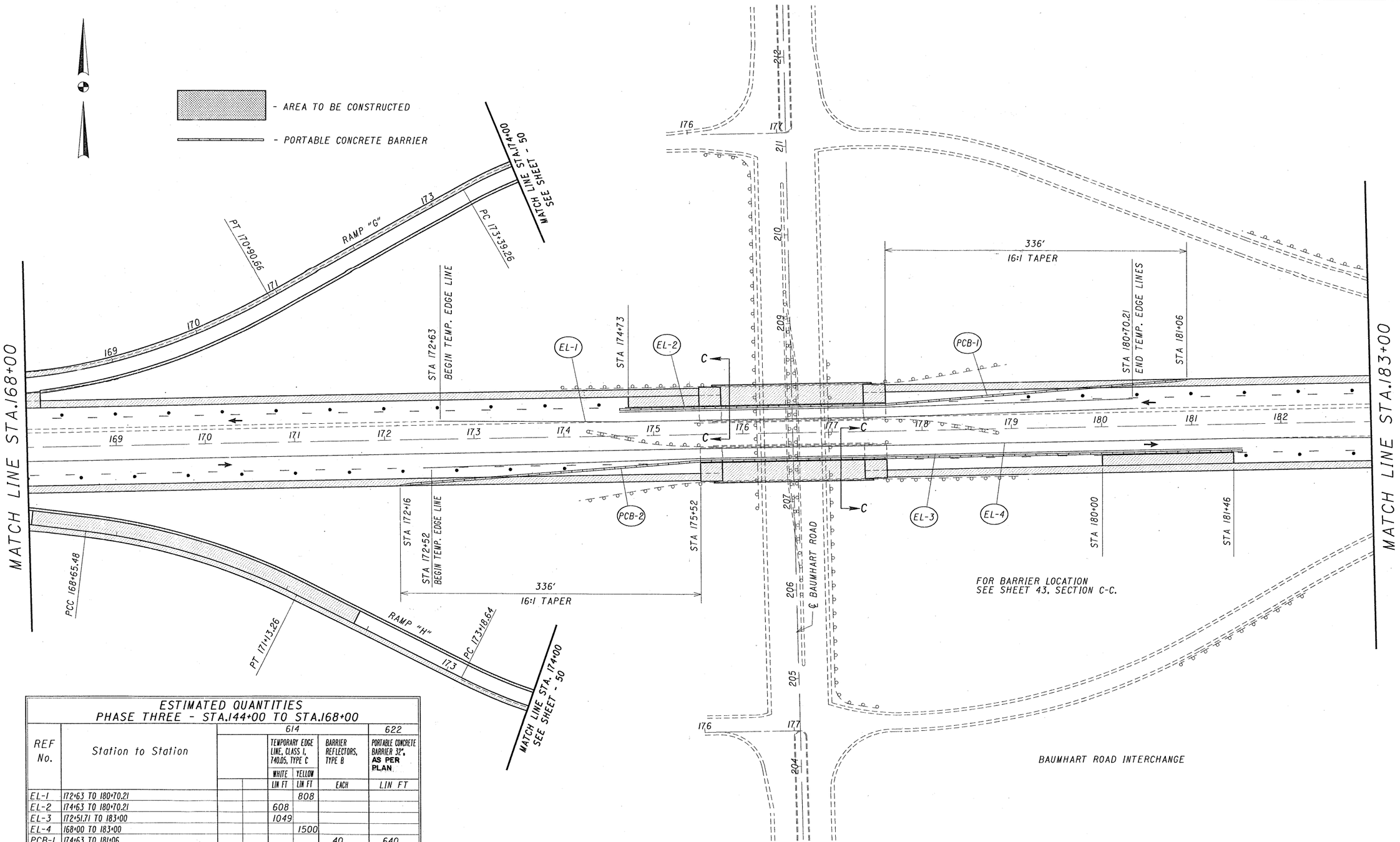
STA.167+92

NOTE:
THIS SIGN SHALL BE COVERED WHEN THE RAMP "H" IS CLOSED AND THE "RAMP CLOSED" SIGN SHALL BE ERECTED.

- AREA TO BE CONSTRUCTED
- PORTABLE CONCRETE BARRIER

PHASE THREE

MAINTENANCE OF TRAFFIC STA.144+00 TO STA.168+00



ESTIMATED QUANTITIES
PHASE THREE - STA.144+00 TO STA.168+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C YELLOW LIN FT	614 BARRIER REFLECTORS, TYPE B EACH	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN LIN FT
EL-1	172+63 TO 180+70.21		808		
EL-2	174+63 TO 180+70.21	608			
EL-3	172+51.71 TO 183+00	1049			
EL-4	168+00 TO 183+00		1500		
PCB-1	174+63 TO 181+06			40	640
PCB-2	172+16 TO 181+56			46	940
TOTALS CARRIED TO SUB-SUMMARY		1657	2308	86	1580

PHASE THREE

MAINTENANCE OF TRAFFIC STA.168+00 TO STA.183+00

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	50
CHKD BY / DATE	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

BEGIN WORK
STA. 193+00

RAMP "H"
MATCHLINE STA.174+00

STA.203+47.90 LT,
BAUMHART RD.

END CONSTRUCTION
OC-8-60

PT 175+99.89

STA.204+65 LT,
BAUMHART RD.

DRUMS SPACED 60' C TO C

℄ BAUMHART RD.

BAUMHART RD.
ON STRUCTURE LOR-2-0333 N.B.

2 WEST Toledo
132" x 72"

NOTE:
THIS SIGN SHALL BE COVERED
WHEN RAMP "G" IS CLOSED.

RAMP "G"
MATCHLINE STA.174+00

BAUMHART RD.
STA. 210+40 N.B. & S.B.

TOLEDO 2 WEST
108" x 96"

2 WEST TOLEDO
108" x 96"

NOTE:
THESE SIGNS SHALL BE COVERED
WHEN RAMP "G" IS CLOSED.

PT 175+76.27

STA.210+86 LT,
BAUMHART RD.

STA.212+13.15 LT,
BAUMHART RD.

STA.213+73
BEGIN TAPER
BEGIN REMOVAL OF
EXISTING LANE LINE
AND RAISED PAVT.
MARKER REFLECTORS

EL-1

DRUMS SPACED 20' C TO C

DRUMS SPACED 10' C TO C
FROM STA.210+50 TO STA.212+20

R-12I-36

END WORK
STA. 220+33

STA.220+33
END TAPER
END REMOVAL OF
EXISTING LANE LINE
AND RAISED PAVT.
MARKER REFLECTORS

DRUMS TO BE SPACED
10' CENTER TO CENTER
IN BERM TAPER

Flashing Arrow
Panel

OW-60C-48

TYPE A WARNING LIGHT

RIGHT LANE
CLOSED
AHEAD
OW-122-48

TYPE A WARNING LIGHT

ROAD
CONSTRUCTION
AHEAD
OW-128-48

MATCHLINE STA.218+00

MATCHLINE STA.218+00

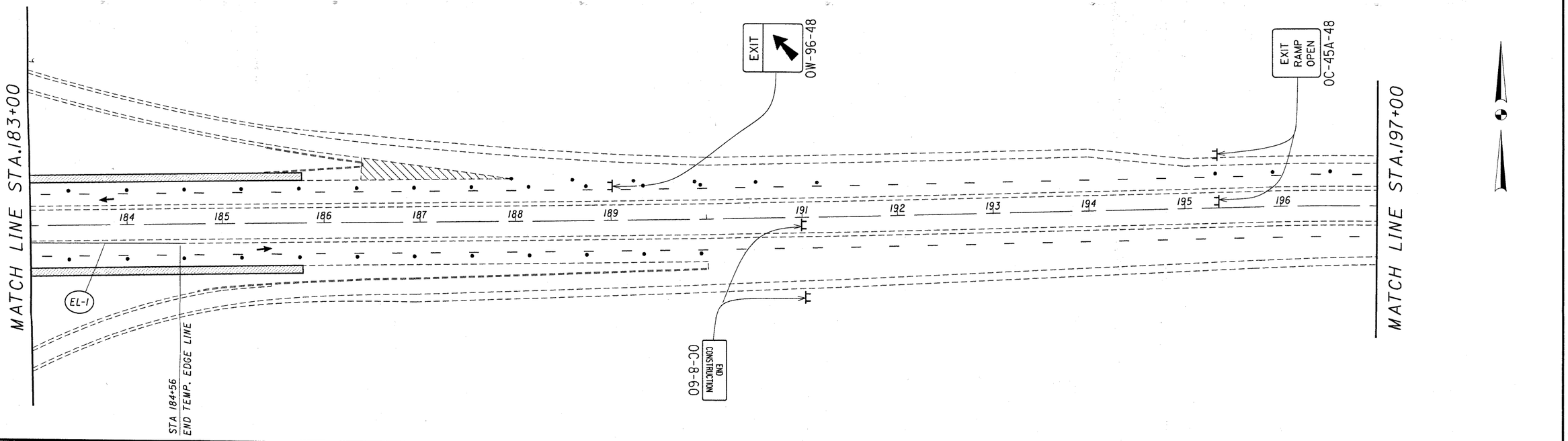
ESTIMATED QUANTITIES
PHASE THREE - BAUMHART RD. INTERCHANGE

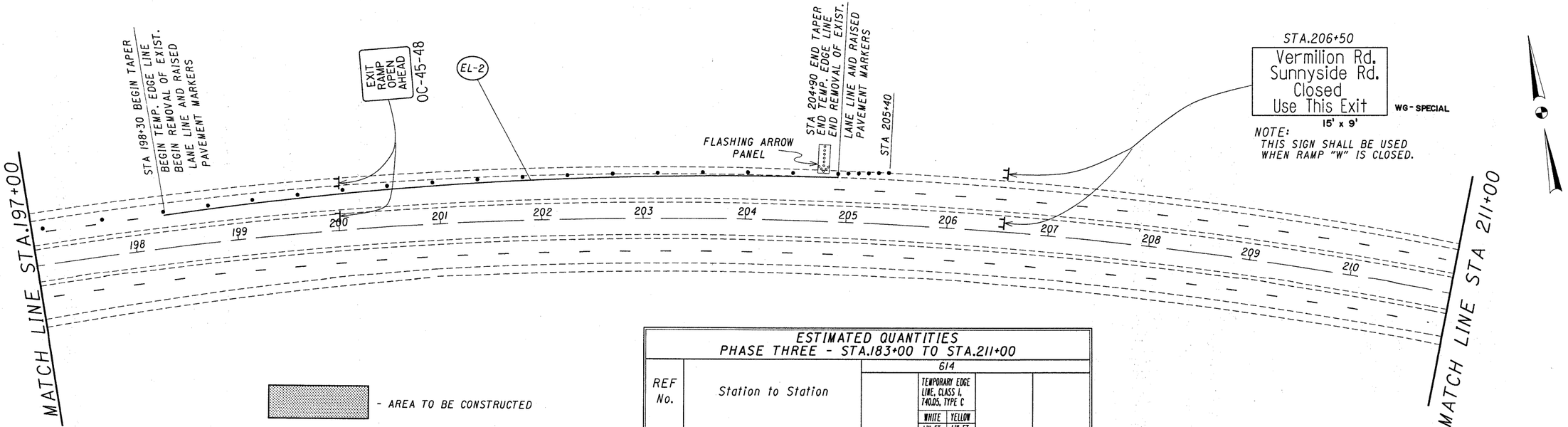
REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C WHITE LIN FT
EL-1	213+73 TO 220+33	660
TOTALS CARRIED TO SUB-SUMMARY		660

PHASE THREE

MAINTENANCE OF TRAFFIC BAUMHART RD. INTERCHANGE

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	51
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		





ESTIMATED QUANTITIES
PHASE THREE - STA.183+00 TO STA.211+00

REF No.	Station to Station	614 TEMPORARY EDGE LINE, CLASS I, 140.05, TYPE C WHITE LIN FT	614 TEMPORARY EDGE LINE, CLASS I, 140.05, TYPE C YELLOW LIN FT
EL-1	183+00 TO 184+56		156
EL-2	198+30 TO 204+90	660	
TOTALS CARRIED TO SUB-SUMMARY		660	156

PHASE THREE

MAINTENANCE OF TRAFFIC STA.183+00 TO STA.211+00

CALC BY K.A.S. DATE 2-9-92	ERI/LOR-2-30.51/0.00	OHIO	52
CHKD BY J.S.B. DATE 2-13-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267

PHASE THREE

MAINTENANCE OF TRAFFIC STA.211+00 TO STA.237+00

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	53
CHKD BY / DATE	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

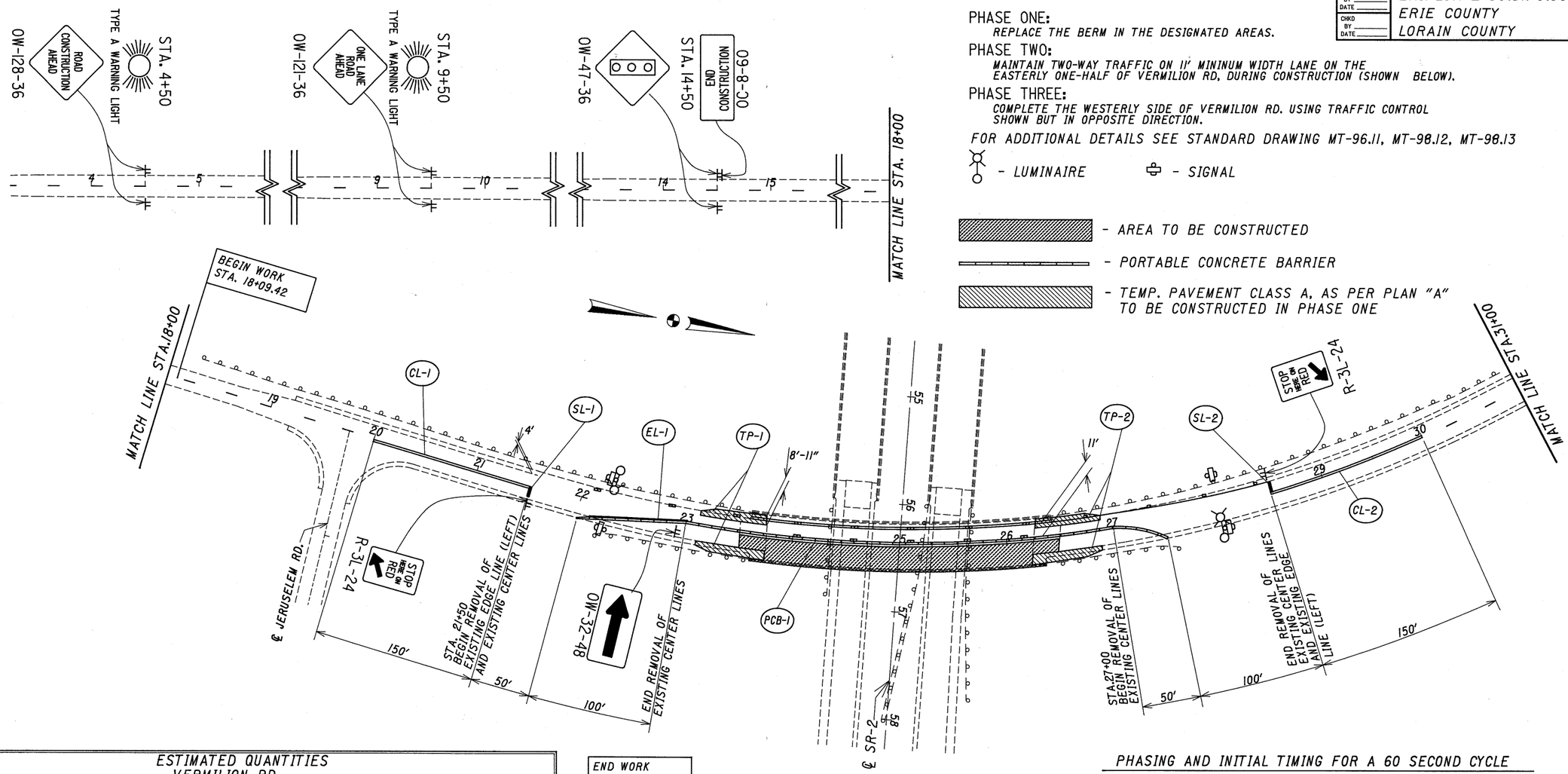
PHASE ONE:
REPLACE THE BERM IN THE DESIGNATED AREAS.

PHASE TWO:
MAINTAIN TWO-WAY TRAFFIC ON 11' MINIMUM WIDTH LANE ON THE EASTERLY ONE-HALF OF VERMILION RD. DURING CONSTRUCTION (SHOWN BELOW).

PHASE THREE:
COMPLETE THE WESTERLY SIDE OF VERMILION RD. USING TRAFFIC CONTROL SHOWN BUT IN OPPOSITE DIRECTION.

FOR ADDITIONAL DETAILS SEE STANDARD DRAWING MT-96.11, MT-98.12, MT-98.13

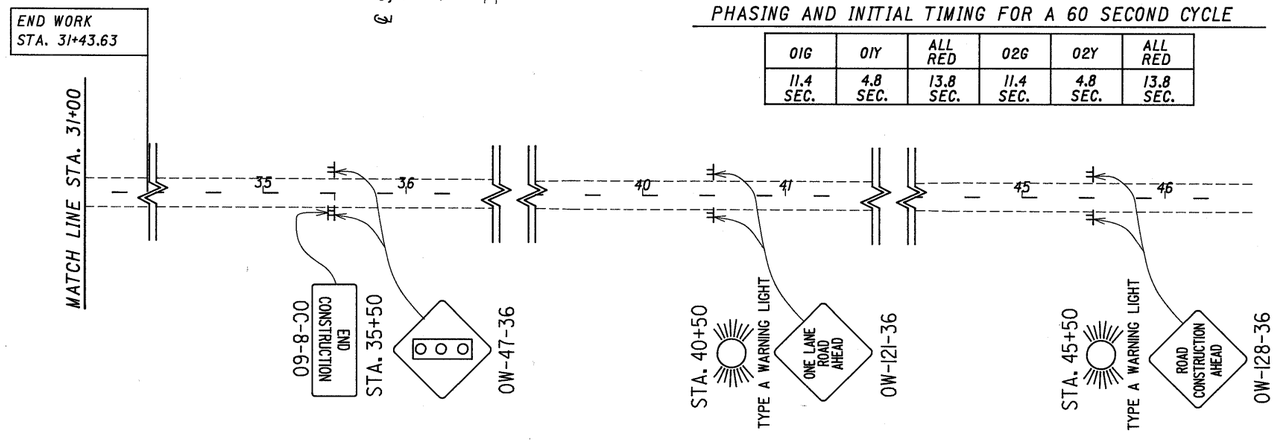
- LUMINAIRE
- SIGNAL
- AREA TO BE CONSTRUCTED
- PORTABLE CONCRETE BARRIER
- TEMP. PAVEMENT CLASS A, AS PER PLAN "A" TO BE CONSTRUCTED IN PHASE ONE



ESTIMATED QUANTITIES
VERMILION RD.

REF No.	Phase	Station to Station	614 TEMPORARY EDGE LINE, CLASS 1, WHITE	614 TEMPORARY STOP LINE, CLASS 1	614 TEMPORARY CENTER LINE, CLASS 1 SOLID DOUBLE	614 BARRIER REFLECTORS, TYPE B2	615 TEMPORARY PAVEMENT, CLASS A, AS PER PLAN "A"	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN
			LIN FT	LIN FT	LIN FT	EACH	SQ YD	LIN FT
EL-1	2	22+00 TO 23+00	100					
EL-1	3	27+00 TO 28+00	100					
SL-1	1	21+50		12				
SL-2	1	28+50		12				
CL-1	1	20+00 TO 21+50			150			
CL-2	1	28+50 TO 30+00			150			
PCB-1	2	22+00 TO 27+50				23		550
PCB-1	3	22+50 TO 28+00				23		550
TP-1	1	21+50 TO 23+76 (Lt & Rt)					263	
TP-2	1	26+24 TO 28+50 (Lt & Rt)					263	
TOTALS CARRIED TO SUB-SUMMARY			200	24	300	46	526	1100

SEE SHEET 55 FOR TEMPORARY RAISED PAVEMENT MARKERS.



PHASING AND INITIAL TIMING FOR A 60 SECOND CYCLE

01G	01Y	ALL RED	02G	02Y	ALL RED
11.4 SEC.	4.8 SEC.	13.8 SEC.	11.4 SEC.	4.8 SEC.	13.8 SEC.

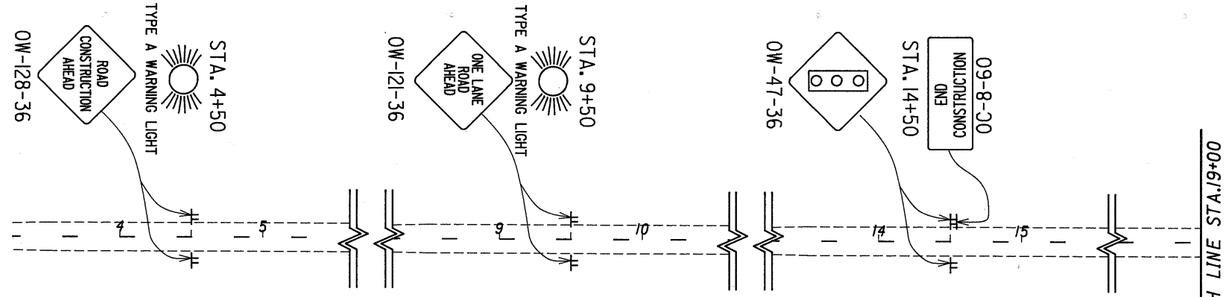
PHASE ONE:
REPLACE THE BERM IN THE DESIGNATED AREAS.

PHASE TWO:
MAINTAIN TWO-WAY TRAFFIC ON 11' MININUM WIDTH LANE ON THE EASTERLY ONE-HALF OF VERMILION RD. DURING CONSTRUCTION (SHOWN BELOW).

PHASE THREE:
COMPLETE THE WESTERLY SIDE OF VERMILION RD. USING TRAFFIC CONTROL SHOWN BUT IN OPPOSITE DIRECTION.

FOR ADDITIONAL DETAILS SEE STANDARD DRAWING MT-96.11, MT-98.12, MT-98.13

- LUMINAIRE
- SIGNAL
- AREA TO BE CONSTRUCTED
- PORTABLE CONCRETE BARRIER
- TEMP. PAVEMENT CLASS A, AS PER PLAN "A" TO BE CONSTRUCTED IN PHASE ONE

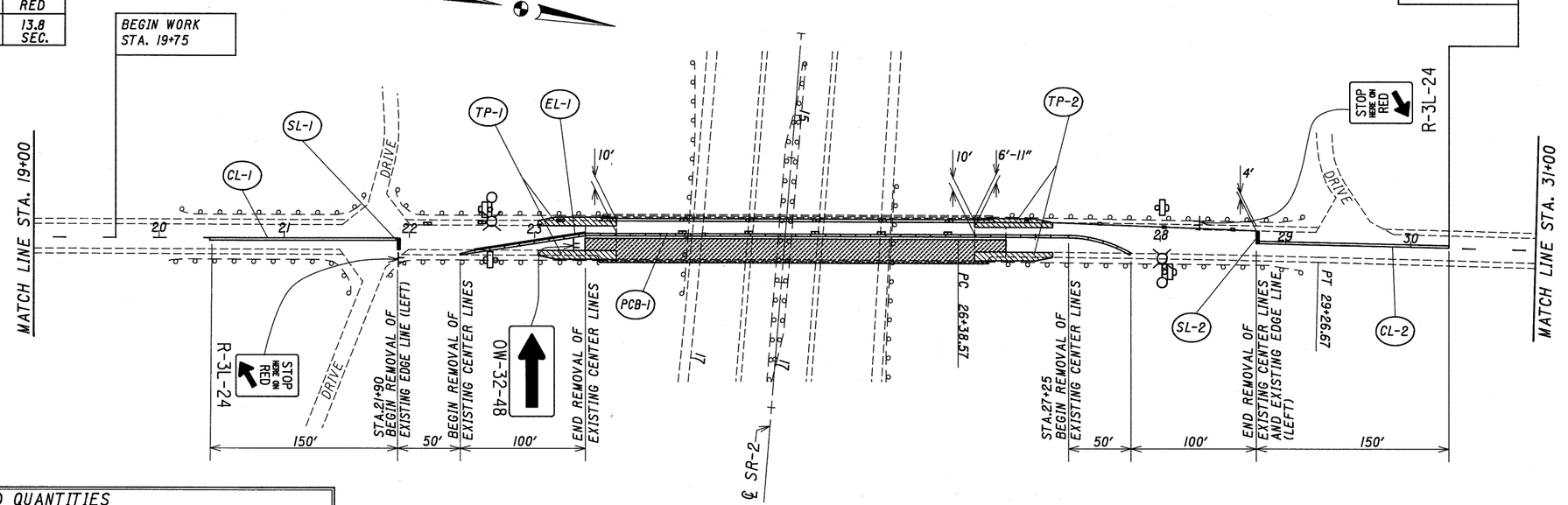


PHASING AND INITIAL TIMING FOR A 60 SECOND CYCLE

01G	01Y	ALL RED	02G	02Y	ALL RED
11.4 SEC.	4.8 SEC.	13.8 SEC.	11.4 SEC.	4.8 SEC.	13.8 SEC.

BEGIN WORK STA. 19+75

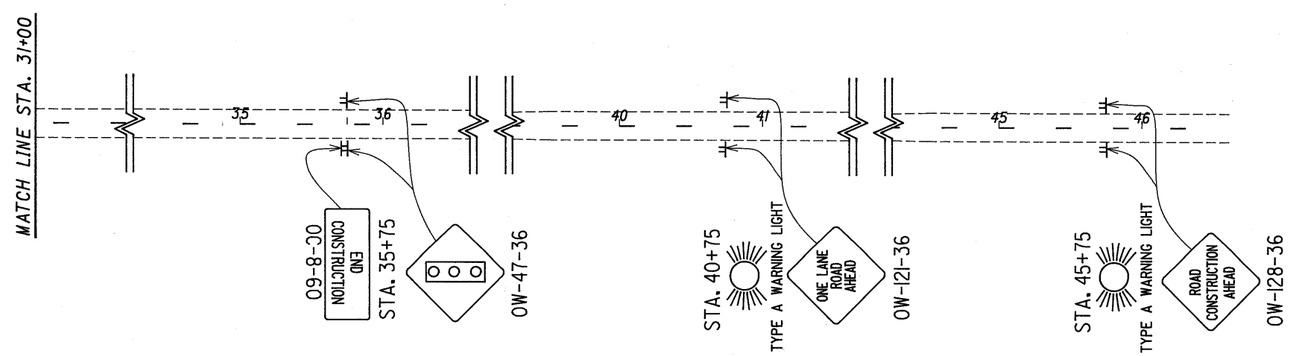
END WORK STA. 30+25



ESTIMATED QUANTITIES
WEST RIVER RD.

REF No.	Phase	Station to Station	614 TEMPORARY EDGE LINE, CLASS I, WHITE	614 TEMPORARY STOP LINE, CLASS I	614 TEMPORARY CENTER LINE, CLASS I SOLID DOUBLE	614 BARRIER REFLECTORS, TYPE B2	615 TEMPORARY PAVEMENT, CLASS A, AS PER PLAN "A"	622 PORTABLE CONCRETE BARRIER 32", AS PER PLAN
			LIN FT	LIN FT	LIN FT	EACH	SQ YD	LIN FT
EL-1	2	22+40 TO 23+40	100					
EL-1	3	27+25 TO 28+25	100					
SL-1	1	21+90		12				
SL-2	1	28+75		12				
CL-1	1	20+40 TO 21+90			150			
CL-2	1	28+75 TO 30+25			150			
PCB-1	2	22+40 TO 27+75				23		540
PCB-1	3	22+90 TO 28+25				23		540
TP-1	1	22+00 TO 23+66 (Lt & Rt)					184	
TP-2	1	26+52 TO 28+75 (Lt & Rt)					234	
TOTALS CARRIED TO SUB-SUMMARY			200	24	300	46	418	1080

SEE SHEET 55 FOR TEMPORARY RAISED PAVEMENT MARKERS



GENERAL

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING, INSTALLING, MAINTAINING, AND SUBSEQUENTLY REMOVING TEMPORARY RAISED PAVEMENT MARKERS (TRPM'S). THE MARKERS SHALL BE YELLOW OR WHITE, AS DESCRIBED IN THE PLAN.

MATERIAL

ALL MARKERS SHALL BE OF SUFFICIENT STRENGTH AND PROPERLY SHAPED SO AS NOT TO BE DISLODGED OR BROKEN, OR THE REFLECTOR DISLODGED OR BROKEN, OR THE REFLECTOR DISLODGED OR DAMAGED BY IMPACTS FROM VEHICLES TIRES, INCLUDING THOSE OF HIGH PRESSURE TRUCK TIRES LOADED TO 4500 POUNDS.

RETROREFLECTORS SHALL BE PROVIDED IN ONE OR TWO DIRECTIONS ON EACH MARKER AS REQUIRED BY THE USAGE AND SHALL RETURN WHITE OR YELLOW LIGHT AS IS APPROPRIATE FOR THE APPLICATION.

THE REFLECTOR SHALL HAVE AN EFFECTIVE AREA OF 0.35 SQUARE INCHES FOR TYPE A OR 3.0 SQUARE INCHES FOR TYPE B. ITS BRIGHTNESS OR SPECIFIC INTENSITY (WHEN TESTED AT 0.2 DEGREE ANGLE OF OBSERVATION AND THE FOLLOWING ANGLES OF INCIDENCE) SHALL MEET OR EXCEED THE FOLLOWING:

SPECIFIC INTENSITY

TYPE A

INCIDENCE ANGLE (DEGREES)	WHITE	YELLOW
0	1.0	0.6
20	0.4	0.24
45	—	—

TYPE B

	WHITE	YELLOW
0	3.0	1.8
20	1.2	0.72
45	0.3	0.2

ANGLE OF INCIDENCE- FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE NORMAL TO THE LEADING EDGE OF THE MARKER FACE (ALSO HORIZONTAL ENTRANCE ANGLE).

ANGLE OF OBSERVATION- FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE RETURNED RAY FROM THE MARKER TO THE MEASURING RECEPTOR.

SPECIFIC INTENSITY- IS THE MEAN CANDLEPOWER OF THE REFLECTED LIGHT (AT GIVEN INCIDENCE AND DIVERGENCE ANGLES) FOR EACH FOOT-CANDLE AT THE REFLECTOR (ON A PLANE PERPENDICULAR TO THE INCIDENT LIGHT).

TYPE A MARKERS ARE INTENDED TO PROVIDE HIGH VISIBILITY BOTH DAY OR NIGHT. THEIR DAY TIME VISIBILITY SHALL BE ASSURED BY SIZE, SHAPE AND COLOR AS FOLLOWS:

1.) THE MARKERS SHALL BE A HIGH VISIBILITY YELLOW OR WHITE COLOR WHICH WILL NOT DEGRADE SUBSTANTIALLY DUE TO TRAFFIC WEAR AND WHICH WILL MATCH THE COLOR OF THE REFLECTOR.

2.) WHEN VIEWED FROM ABOVE, THE MARKERS SHALL HAVE A VISIBLE AREA OF NOT LESS THAN 14 SQUARE INCHES.

3.) WHEN VIEWED FROM THE FRONT, PARALLEL TO THE PAVEMENT, AS FROM APPROACHING TRAFFIC, THE MARKER SHALL HAVE A WIDTH OF APPROXIMATELY 4 INCHES AND A VISIBLE AREA OF NOT LESS THAN 1.5 SQUARE INCHES.

TYPE B MARKERS ARE INTENDED TO PROVIDE HIGH VISIBILITY AT NIGHT BY RETROREFLECTING AUTOMOTIVE HEADLIGHT BACK TO DRIVER.

INSTALLATION

TEMPORARY RAISED PAVEMENT MARKERS SHALL BE ATTACHED TO CLEAN, DRY PAVEMENT BY A BUTYL ADHESIVE PAD. A BITUMINOUS ADHESIVE OR OTHER CONSTRUCTION GRADE ADHESIVES (SUCH AS FRANKLIN PANEL AND METAL ADHESIVE) SUITABLE TO ANCHOR THE MARKER UNDER THE ABOVE CONDITIONS. WHEN IT IS NECESSARY TO ATTACH MARKERS TO NEW CONCRETE PAVEMENT WITH CURING COMPOUND REMAINING, THE CURING COMPOUND MEMBRANE SHALL BE REMOVED BY SANDBLASTING OR OTHER MECHANICAL CLEANING METHOD. MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL IMMEDIATELY REPLACE, AT HIS EXPENSE, ANY MARKERS WHICH FAIL (BROKEN HOUSING, HOUSING WORN TO THE EXTENT THAT DAYTIME VISIBILITY IS SIGNIFICANTLY DIMINISHED OR OF AN UNACCEPTABLE COLOR, DETACHED OR BROKEN REFLECTOR, HOUSING DETACHED FROM ADHESIVE).

MARKERS ARE LIKELY TO BE REMOVED BY SNOW PLOWING OPERATIONS, THUS THEY ARE NOT CONSIDERED SUITABLE FOR USE DURING THE PERIOD FROM OCTOBER 15 UNTIL APRIL 30. THE CONTRACTOR IS ADVISED TO SCHEDULE HIS WORK AND / OR THE USE OF THESE DEVICES TO AVOID THIS PERIOD. SHOULD THE CONTRACTOR CHOOSE TO USE TRPM'S DURING THIS PERIOD AND THEY ARE SUBSEQUENTLY REMOVED OR DESTROYED BY SNOW AND ICE CONTROL ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY, AT HIS EXPENSE, PROVIDE A SUBSTITUTE TRAFFIC GUIDANCE SYSTEM EFFECTIVE DURING DAY AND NIGHT AND WHICH IS ACCEPTABLE TO THE ENGINEER.

THE MARKERS SHALL BE PLACED ACCURATELY TO DEPICT STRAIGHT OR UNIFORMLY CURVING LINES. WHEN USED TO SUPPLEMENT TEMPORARY PAVEMENT MARKINGS, THEY SHALL BE PLACED ON OR IMMEDIATELY ADJACENT TO THE PAVEMENT MARKING. LOCATIONS SHALL BE ADJUSTED UP TO ONE FOOT LONGITUDINALLY OR SIX INCHES LATERALLY TO AVOID PLACEMENT ON JOINTS, OR ON CRACKED OR DETERIORATED PAVEMENT. MARKERS SHALL NOT BE PLACED DIRECTLY ON PAVEMENT MARKINGS IF THIS DETRACTS FROM THEIR ABILITY TO REMAIN ATTACHED TO THE PAVEMENT.

APPLICATION

1.) WHEN REQUIRED TO SUPPLEMENT PAVEMENT MARKING, TEMPORARY RAISED PAVEMENT MARKERS SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A OR B	20' C/C
LANE LINE	A OR B	40' C/C*
CENTER LINE (SINGLE / BROKEN)	A OR B	40' C/C*
CENTER LINE (DOUBLE / SOLID)	A OR B	2 UNITS SIDE BY SIDE 4 INCHES APART 20' C/C
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A OR B	10' C/C

* CENTERED IN GAP

2.) WHEN USED TO SIMULATE (REPLACE PAVEMENT MARKING, TEMPORARY RAISED PAVEMENT MARKERS SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A	5' C/C
LANE LINE	A	403.33' C/C 30' GAP (40' CYCLE)
CENTER LINE (DOUBLE / SOLID)	A	2 UNITS SIDE BY SIDE 5' C/C
CENTER LINE (SINGLE / BROKEN)	A	403.33' C/C 30' GAP (40' CYCLE)
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A	5' C/C
EDGE LINE (TWO COLOR) (WHITE / YELLOW)	A	BACK TO BACK 5' C/C

YELLOW MARKERS USED TO SEPARATE OPPOSITE FLOWS OF TRAFFIC (CENTER LINES) SHALL INCLUDE REFLECTIONS FOR BOTH DIRECTIONS. ALL OTHER YELLOW AND WHITE MARKERS SHALL PROVIDE RETROREFLECTIVITY FOR ONE DIRECTION ONLY.

REMOVAL

REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT LITTLE OR NONE OF THE ADHESIVE REMAINS ON THE PAVEMENT. PERMANENT PAVEMENT SURFACES SHALL NOT BE SCARRED, BROKEN OR ROUGHENED SIGNIFICANTLY.

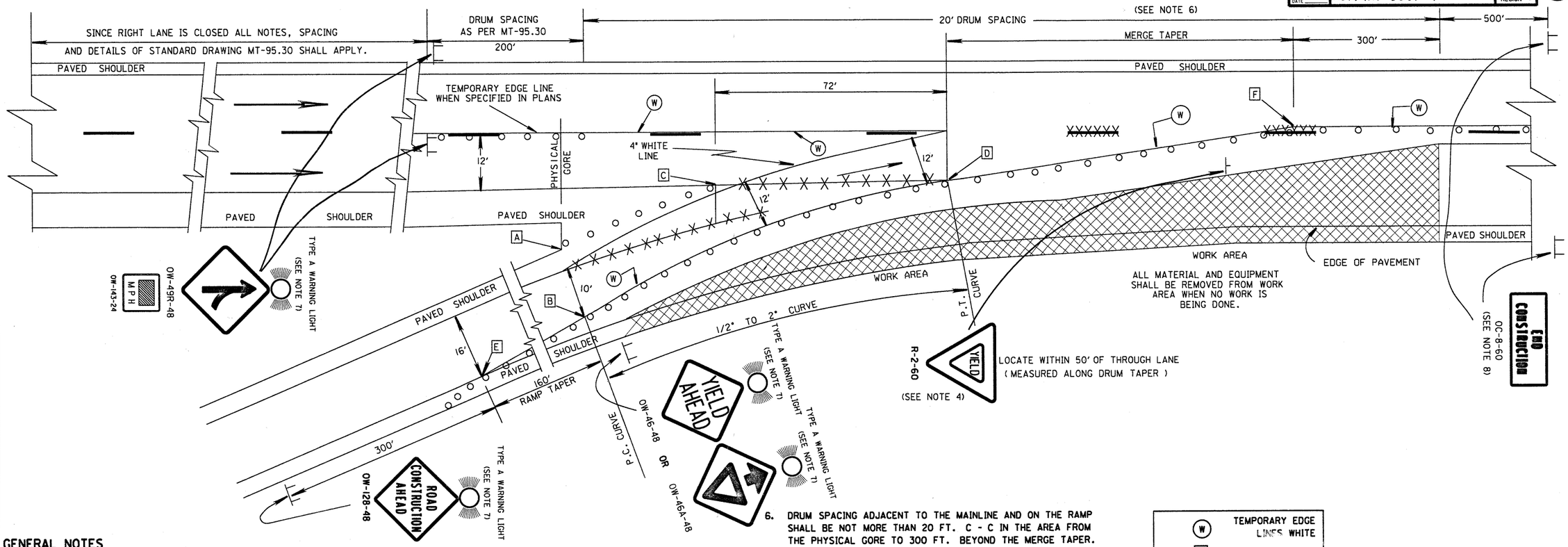
PAVEMENT

BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER EACH MARKER AND SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE AND INCIDENTALS REQUIRED TO PERFORM THE WORK. IT SHALL ALSO INCLUDE REPLACEMENT AT NO ADDITIONAL COST OF ALL TEMPORARY RAISED PAVEMENT MARKERS WHICH, IN THE JUDGEMENT OF THE ENGINEER, FAIL FOR ANY REASON, EXCEPT DUE TO FAILURE OF THE PAVEMENT TO WHICH THEY ARE ATTACHED.

ITEM	UNIT	DESCRIPTION
614	EACH	TEMPORARY RAISED PAVEMENT MARKERS

			TYPE A		REMARKS
SHEET	STATION TO STATION	PHASE	W	Y	(LINE TYPE)
48	21+50 TO 27+00	2	110	110	EDGE LINE, TYPE A
48	23+00 TO 27+00	2	80	80	EDGE LINE, TYPE A
48	27+00 TO 28+50	2	8		EDGE LINE, TYPE A
48	23+00 TO 28+50	3	110	110	EDGE LINE, TYPE A
48	23+00 TO 27+00	3	80	80	EDGE LINE, TYPE A
48	21+50 TO 23+00	3	8		EDGE LINE, TYPE A
49	21+90 TO 27+25	2	107	107	EDGE LINE, TYPE A
49	23+40 TO 27+25	2	77	77	EDGE LINE, TYPE A
49	27+25 TO 28+75	2	8		EDGE LINE, TYPE A
49	23+10 TO 28+75	3	107	107	EDGE LINE, TYPE A
49	23+40 TO 27+25	3	77	77	EDGE LINE, TYPE A
48	21+90 TO 23+40	3	8		EDGE LINE, TYPE A
TOTALS			780	748	
			1528		

Revised by:	Date:
210120	DATE
614 TEMPORARY RAISED PAVEMENT MARKERS	03/30/88 03/23/90 03/28/90 07/03/90
PLAN INSERT SHEET	



GENERAL NOTES

1. THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL BE EMPLOYED WHEN: (1) THE LATERAL CLEARANCE BETWEEN CHANNELIZING DEVICES AT THE RIGHT EDGE OF THE WORK AREA AND THE EDGE OF PAVEMENT IS LESS THAN 10 FT. (12 FT. IF THE SHOULDER PAVEMENT IS USED) AS SHOWN ON DRAWING MT-98.15, AND (2) THE REQUIRED RAMP TAPERS AND CURVES CAN BE PROVIDED AS SHOWN. IN THE EVENT THE WORK ZONE CONDITION WOULD PERMIT THE USE OF EITHER MT-98.15 OR MT-98.16, MT-98.15 SHALL BE USED. THIS TRAFFIC CONTROL MEASURE SHALL NOT BE PLACED IN EFFECT UNTIL IMMEDIATELY BEFORE THE CONTRACTOR IS FULLY PREPARED TO PERFORM THE WORK ON THE RAMP OR LANE ADJACENT TO IT. ONCE THIS MEASURE IS PLACED INTO EFFECT, THE CONTRACTOR SHALL EXPEDITIOUSLY PURSUE THE WORK (WORKING CONTINUOUSLY WITH FULL CREW IN THE RAMP AREA ON ALL NORMAL WORKING DAYS) UNTIL IT IS COMPLETED AND SHALL IMMEDIATELY OPEN THE AREA TO NORMAL TRAFFIC OR, AS A MINIMUM, REVERT TO THE METHODS SHOWN ON MT-98.15. IT IS THE INTENT THAT THE LONGEST MERGING TAPER LENGTH POSSIBLE SHALL BE CHOSEN, COMMENSURATE WITH THE REQUIREMENTS OF CONSTRUCTION.

2. THE RAMP TAPER SHALL DESIRABLY BE LOCATED TO PROVIDE A 10' MINIMUM PATH BETWEEN DRUMS AND THE PAVED SHOULDER IN THE GORE. THE RAMP TRAFFIC MAY BE PLACED ON THE PAVED GORE AS SHOWN ABOVE ONLY IF (1) THE TRAFFIC WILL USE THE PAVED SHOULDER PAVEMENT LESS THAN ONE DAY AND THE SHOULDER PAVEMENT IS IN GOOD CONDITION AND IS LEVEL AND SMOOTH OR (2) IF THE SHOULDER PAVEMENT IS ADEQUATELY STRENGTHENED, LEVELED AND SMOOTHED TO CARRY THE ANTICIPATED LOAD. A MINIMUM OF 3 DRUMS SHALL BE USED IN THE RAMP SHOULDER TAPER.

3. 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 FOOT MINIMUM SPACING MUST BE MAINTAINED).

4. IT WILL BE NECESSARY TO MOVE THE LOCATION OF ANY EXISTING YIELD CONDITION. IN THESE CASES, THE PERMANENT R-2 SIGN INSTALLATION SHALL BE COVERED AND THE TEMPORARY INSTALLATION SHALL BE MOUNTED APPROPRIATELY. IF THE REQUIRED DISTANCES (RAMP TAPER, CURVE AND MERGE TAPER) CANNOT BE OBTAINED, THE ENGINEER MAY APPROVE SLIGHTLY LOWER VALUES FOR A SHORT TIME, IN WHICH CASE THE YIELD SIGN SHALL BE REMOVED AND A 36" STOP SIGN PLACED APPROPRIATELY TO BE VISIBLE TO RAMP TRAFFIC BUT NOT BE OBTRUSIVE TO MAINLINE TRAFFIC.

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 (RPM'S) SHALL BE REMOVED AND THE APPROPRIATE COLOR TEMPORARY EDGE LINES SHALL BE APPLIED ALONG THE TAPER. TEMPORARY EDGE LINES WHICH WOULD CONFLICT WITH FINAL TRAFFIC LANES SHALL BE REMOVABLE (947.03 TYPE-C) TAPE UNLESS THE AREA WILL BE RESURFACED IN THE NEXT WORK PHASE. 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. DRUM SPACING ADJACENT TO THE MAINLINE AND ON THE RAMP SHALL BE NOT MORE THAN 20 FT. C - C IN THE AREA FROM THE PHYSICAL GORE TO 300 FT. BEYOND THE MERGE TAPER. CONES HAVING A MINIMUM HEIGHT OF 28 INCHES MAY BE SUBSTITUTED FOR DRUMS FOR DAYTIME LANE CLOSURES. PROVISIONS SHALL BE MADE TO SAFELY STABILIZE THE CONES TO PREVENT THEM FROM BLOWING OVER. IF THIS CANNOT BE ACHIEVED, DRUMS SHALL BE USED. TYPE C STEADY BURNING WARNING LIGHTS SHALL BE ERECTED ON EACH DRUM FOR NIGHT LANE CLOSURE.

7. TYPE A FLASHING WARNING LIGHTS ARE REQUIRED ON THE ROAD CONSTRUCTION AHEAD (OW-128-48), MERGE (OW-49R-48), AND THE YIELD AHEAD (OW-46-48) SIGNS WHENEVER A NIGHT LANE CLOSURE IS NECESSARY.

8. 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.

9. FROM THE END OF THE GORE AREA GRADED SHOULDER (POINT A), LOCATE THE PC OF THE CURVE BY MEASURING PERPENDICULAR TO THE RAMP CENTERLINE 10' OF RAMP PAVEMENT, NOT INCLUDING PAVED SHOULDER WIDTH (POINT B). FROM THE END OF THE GORE AREA PAVED SHOULDER (POINT C), LOCATE THE PT OF THE CURVE BY MEASURING 72' FROM POINT C ALONG THE EDGE OF PAVEMENT EXTENDED (POINT D).

10. PLACEMENT OF DRUMS SHALL BEGIN AT (POINT E) 160' UPSTREAM FROM THE PREVIOUSLY LOCATED PC (POINT B) AND AT THE RIGHT EDGE OF RAMP PAVEMENT. FROM THIS POINT A DRUM TAPER SHALL BE PLACED TO THE PC (POINT B) AND THEN ALONG A CURVE AS SHOWN TO THE PT (POINT D) WHERE A 48:1 (MIN.) MERGE TAPER SHALL MEET MAINLINE TRAFFIC CONTROL (POINT F).

(W)	TEMPORARY EDGE LINES WHITE
[A]	LAYOUT POINTS
XXXXXXXXX	MARKINGS REMOVED

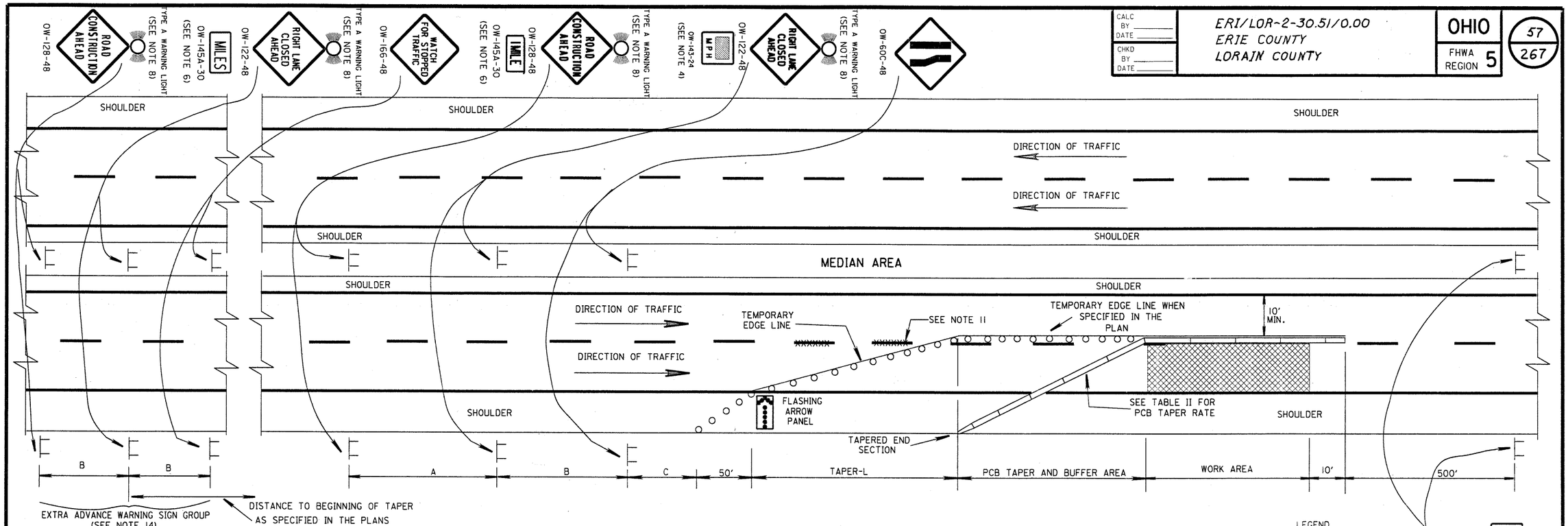
ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE C & M SPECIFICATIONS AS WELL AS IN ACCORDANCE WITH PART 7 OF THE OMUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE THIS METHOD OF TRAFFIC CONTROL SHALL BE INCLUDED IN THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

REVISED BY: DATE:

209816	DATE 05/07/90
LANE CLOSURE AT ENTRANCE RAMP PLAN B	
PLAN INSERT SHEET	

WCC

CALC BY DATE	ERI/LOR-2-30.51/0.00 ERIE COUNTY LORAIN COUNTY	OHIO FHWA REGION 5	57 267
CHKD BY DATE			



GENERAL NOTES:

1. THE LOCATION OF THE TRANSITION TAPER AND THE ADVANCE WARNING SIGNS SHOULD BE ADJUSTED TO PROVIDE FOR ADEQUATE SIGHT DISTANCE FOR THE EXISTING VERTICAL AND HORIZONTAL ROADWAY ALIGNMENT.

2. THE SPACING BETWEEN PROPOSED SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS.

3. THE TAPER LENGTH (L), NUMBER (N), AND SPACING (S) OF DRUMS SHALL CONFORM TO TABLE II. DRUM SPACING (S) SHALL BE USED FOR THE PAVEMENT TAPER AND THE BUFFER AREA. A MINIMUM OF 5 DRUMS SHALL BE USED IN THE SHOULDER TAPER.

4. THE ADVISORY SPEED SIGN OW-143-24 SHALL BE USED WHEN SPECIFIED IN THE PLAN OR AS DIRECTED BY THE ENGINEER. THE ADVISORY SPEED SHALL BE AS SPECIFIED IN THE PLAN OR AS DIRECTED BY THE ENGINEER.

5. TYPE C STEADY BURNING WARNING LIGHTS SHALL BE ERECTED ON EACH DRUM, AND ON PCB PARALLEL TO THE EDGE OF PAVEMENT. THE SPACING ON PCB SHALL BE FROM THE "MAXIMUM SPACING (S) COLUMN" SHOWN IN TABLE II.

6. THE DISTANCE PLATE OW-145A-30 SHALL INDICATE THE DISTANCE TO THE BEGINNING OF THE PAVEMENT TAPER (L). DISTANCES LESS THAN ONE MILE MAY BE EXPRESSED IN FEET. THE PLAQUE MAY BE OMITTED IF EXTRA ADVANCE SIGN GROUPS ARE NOT USED.

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

8. TYPE A FLASHING WARNING LIGHTS SHOWN ON THE "ROAD CONSTRUCTION AHEAD" AND "RIGHT (OR LEFT) LANE CLOSED AHEAD" SIGNS ARE REQUIRED.

9. WHEN WORK IS BEING PERFORMED IN THE LANE ADJACENT TO THE MEDIAN ON A DIVIDED HIGHWAY, OW-123-48 SIGNS SHALL BE SUBSTITUTED FOR THE OW-122-48 SIGNS AND OW-60D-48 SIGNS SHALL BE SUBSTITUTED FOR THE OW-60C-48 SIGNS.

10. 36" WARNING SIGN SIZES MAY BE USED ON DIVIDED ROADWAYS THAT ARE NOT CLASSIFIED AS FREEWAYS OR EXPRESSWAYS.

11. THE EXISTING CONFLICTING PAVEMENT MARKINGS AND REFLECTORS FROM THE RAISED PAVEMENT MARKERS (RPMS) SHALL BE REMOVED AND THE APPROPRIATE COLOR TEMPORARY EDGE LINES SHALL BE APPLIED ALONG THE TAPER. TEMPORARY EDGE LINES WHICH WOULD CONFLICT WITH FINAL TRAFFIC LANES SHALL BE REMOVABLE (947.03 TYPE-C) TAPE UNLESS THE AREA WILL BE RESURFACED IN THE NEXT WORK PHASE AFTER COMPLETION OF THE WORK. TEMPORARY MARKINGS SHALL BE REMOVED IN ACCORDANCE WITH 621.134 AND THE ORIGINAL MARKINGS AND PAVEMENT MARKER REFLECTORS SHALL BE RESTORED.

12. THE OC-8 SIGNS MAY BE OMITTED IF THEY FALL WITHIN THE LIMITS OF A CONSTRUCTION PROJECT.

13. BARRIER REFLECTORS (1-WAY WHITE FOR RIGHT LANE CLOSURES; 1-WAY YELLOW FOR LEFT LANE CLOSURE) SHALL BE PROVIDED AT 50' SPACING ON THE PARALLEL PORTIONS ONLY OF THE PCB. NONE SHALL BE VISIBLE ON THE TAPER SECTION OF PCB.

14. EXTRA ADVANCE WARNING SIGN GROUPS CONSISTING OF OW-128, OW-122 AND OW-166 SIGNS PLUS DISTANCE PLATES MAY BE SPECIFIED IN THE PLANS OR REQUIRED TO BE ERECTED AT THE DIRECTION OF THE ENGINEER.

15. THE SPEED LIMIT CHOSEN FOR DESIGN OF TAPERS SHALL BE THE NORMAL LEGAL SPEED EXCEPT WHERE THE LEGAL SPEED LIMIT IS REDUCED DUE TO THE CONSTRUCTION AND THE SUBJECT LANE CLOSURE IS NOT THE FIRST ACTIVE CONSTRUCTION AREA ENCOUNTERED BY TRAFFIC WITHIN THE PROJECT.

16. **NO EQUIPMENT OR MATERIAL SHALL BE LOCATED OTHER THAN BEHIND THE PCB.**

17. **PCB SHALL BE REMOVED IN SHOULDER AREA, ONLY DURING WORKING HOURS WHILE THE SHOULDER IS BEING REPLACED AND THE PCB SHALL BE PROPERLY RELOCATED AT THE END OF THE WORK DAY.**

TABLE I

MINIMUM DISTANCE	A	B	C
MAJOR STANDARD	500'	500'	500'
URBAN FREEWAY & EXPRESSWAY	500' TO 1000'	500' TO 1000'	500' TO 1000'
RURAL FREEWAY & EXPRESSWAY	2600'	1600'	1000'

✳ SEE NOTE (15)

TABLE II

SPEED LIMIT MPH✳	MINIMUM DRUM TAPER (L) IN FEET	MINIMUM NUMBER (N) OF DRUMS	MAXIMUM SPACING (S) OF DRUMS	PCB TAPER RATE
30-40	320	9	40	11 : 1
45-55	660	12	60	16 : 1
60-65	780	14	60	19 : 1

LEGEND

DRUMS	○ ○ ○ ○ ○ ○
PORTABLE CONCRETE BARRIER (PCB)	
REMOVE EXISTING MARKINGS	XXXXXXXXX

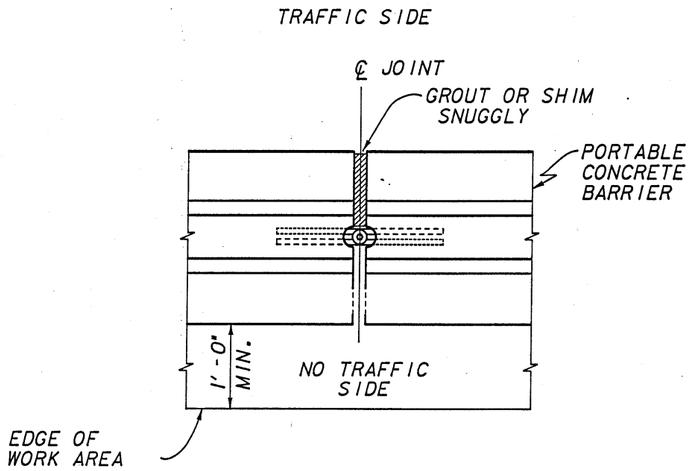
ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE C & M SPECIFICATIONS AS WELL AS IN ACCORDANCE WITH PART 7 OF THE OMUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE THIS METHOD OF TRAFFIC CONTROL SHALL BE INCLUDED IN THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

REVISED BY: C.W.N.	DATE: 1-22-92

209540	DATE 11/05/90
CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE CONCRETE BARRIER	
PLAN INSERT SHEET	

WCC

	ERI / LOR-2-30.51/0.00 ERIE COUNTY LORAIN COUNTY	OHIO FHWA REGION 5



PLAN AT JOINT

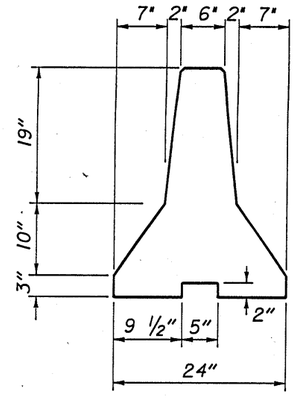
SURFACE PREPARATION:

THE FOLLOWING PROCEDURES MUST BE FOLLOWED WHEN INSTALLING PORTABLE CONCRETE BARRIERS, AS PER PLAN.

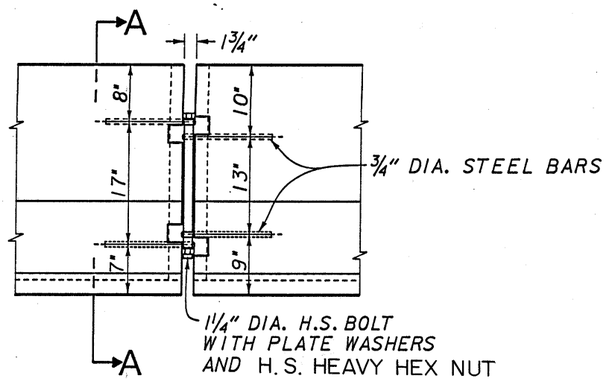
A. THE SURFACE ON WHICH THE PORTABLE CONCRETE BARRIERS WILL REST, SHALL BE CLEARED OF ALL LOOSE SAND, GRAVEL, DIRT AND DEBRIS.

B. ANY IRREGULARITIES IN THE SURFACE, 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 SURFACES, AS JUDGED BY THE ENGINEER, TO HAVE A SURFACE ROUGHNESS WHICH WOULD INHIBIT FRICTION CONTACT BETWEEN BARRIER SEGMENTS AND THE EXISTING SURFACE.



SECTION A–A



ELEVATION AT JOINT

SEE STANDARD DRAWING MC-9.2
FOR ADDITIONAL NOTES & DETAILS
SEE GENERAL NOTE, SHEET 17

PORTABLE CONCRETE BARRIER, AS PER PLAN

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

STANDARD NO. D3-2F

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE	REVISED
					11/20/69

DESIGN FILE: ZFA2:\170.31D3_2F.DGN:1 SCALE: 1" =10"

TEMPORARY SIGN SUPPORT REQUIREMENTS

A. PLACEMENT OF SIGNS WHICH WILL REMAIN MORE THAN ONE DAY:

1) LATERAL PLACEMENT TO NEAREST EDGE OF SIGNS SHALL BE AS FOLLOWS:

   a) ON THE RIGHT SIDE OF THE ROAD FOR APPROACHING TRAFFIC (EXCEPT FOR DUAL MOUNTED SIGNS AND SIGNS DESIGNATED IN THE PLANS FOR LEFT SIDE MOUNTING).

   b) CURBED ROADWAY - MINIMUM 2 FT. BEHIND FACE OF CURB.

   c) UNCURBED ROADWAY-12 FT. FROM EDGE OF TRAFFIC LANE OR 6 FT. FROM EDGE OF PAVED OR USEABLE SHOULDER, WHICHEVER IS GREATER.

   d) BEHIND GUARDRAIL OR BARRIER - PREFERABLY 2 FT. BEHIND FACE OF GUARDRAIL (MINIMUM 1 FT.) FOR SIGNS ON CLASS A SUPPORTS: 4 FT. FOR CLASS B OR C SUPPORTS 1 FT. BEHIND FACE OF CONCRETE BARRIER UNLESS BARRIER TOP MOUNTING IS REQUIRED BY THE PLAN.

2) VERTICAL CLEARANCE OF SIGNS, MEASURED ABOVE ROADWAY ELEVATION; SHALL BE AS FOLLOWS:

   a) RURAL - 5 FT. WHEN PARKED CARS, CONSTRUCTION EQUIPMENT, ETC WILL NOT OBSCURE SIGN VISIBILITY.

   b) RURAL AREAS WITH PARKED CARS OR CONSTRUCTION EQUIPMENT - 7 FT.

   c) URBAN - 7 FT.

   d) CARE SHALL BE TAKEN TO ASSURE THAT SIGNS WILL NOT BE OBSCURED BY CONSTRUCTION EQUIPMENT, TREES, WEEDS OR OTHER OBSTACLES. BRUSH, WEEDS OR GRASS WITHIN THE RIGHT OF WAY SHALL BE TRIMMED AS NECESSARY. SIGNS SHALL NORMALLY BE VISIBLE TO TRAFFIC 400 TO 600 FT. IN ADVANCE OF THE SIGN.

3) SUPPORTS FOR SIGNS WHICH WILL REMAIN IN PLACE MORE THAN ONE DAY SHALL BE FIXED RATHER THAN PORTABLE EXCEPT IN SITUATIONS WHERE THE SIGN MUST REST ON PERMANENT PAVEMENT OR OTHER SURFACE WHICH WOULD BE DAMAGED BY INSERTION OF POST TYPE SUPPORTS.

B. PLACEMENT OF SIGNS WHICH WILL REMAIN FOR ONE DAY OR LESS:

1) SAME AS A-1 ABOVE EXECPT THAT SIGNS MAY BE PLACED ON THE ROADWAY ONLY IF THEY DO NOT INTRUDE INTO A TRAFFIC LANE IN USE.

2) MINIMUM OF 1 FT. ABOVE ROADWAY

C. CLASSES OF SUPPORTS:

ALL TEMPORARY SIGN SUPPORTS SHALL BE OF THE FOLLOWING TYPES:

1) CLASS A:

   SUPPORTS SHALL BE USED FOR EXPOSED LOCATIONS ON HIGHWAYS WHERE TRAFFIC APPROACH SPEEDS OF 40 MPH AND HIGHER ARE ENCOUNTERED. THEY ARE ALSO SUITABLE FOR USE IN ALL OTHER LOCATIONS.

2) CLASS B:

   SUPPORTS SHALL BE USED FOR EXPOSED LOCATIONS ON HIGHWAYS WHERE TRAFFIC APPROACH SPEEDS OF LESS THAN 40 MPH ARE ENCOUNTERED. THEY ARE ALSO SUITABLE FOR USE IN ALL APPLICATIONS DEFINED FOR CLASS C SUPPORTS.

3) CLASS C:

   SUPPORTS MAY ONLY BE USED WHERE FULLY PROTECTED BY GUARDRAIL, CONCRETE BARRIER AND IN LOCATIONS POSITIVELY PROTECTED FROM TRAFFIC SUCH AS ON RETAINING WALLS OR WHERE TRAFFIC APPROACH SPEEDS ARE LESS THAN 25 MPH.

D. TRAFFIC APPROACH SPEEDS:

TRAFFIC APPROACH SPEEDS SHALL BE THE LOCALLY POSTED SPEED (NOT ADVISORY SPEED SIGNS) OR THE MEASURED ACTUAL (85TH PERCENTILE) SPEED (IF AVAILABLE) OF APPROACHING TRAFFIC, WHICHEVER IS HIGHER, ADJACENT TO THE SIGN LOCATION.

TABLE

APPROACH SPEED (MPH)	COMPLETELY PROTECTED BY GUARDRAIL OR BARRIER	PARTLY PROTECTED BY GUARDRAIL OR BARRIER *	GREATER THAN 30' FROM EDGE OF PAVEMENT	WITHIN 30' FROM EDGE OF PAVEMENT
40 AND HIGHER	A, B OR C	A OR B	A OR B **	A ONLY
26 TO 39	A, B OR C	A OR B	A OR B	A OR B
0 TO 25	A, B OR C	A, B OR C	A, B OR C	A, B OR C

* IF SUPPORTS ARE BEHIND GUARDRAIL BUT NOT FULLY 5.5' BEHIND FACE OF RAIL OR IF SIGN IS NOT 1' BEHIND FACE OF CONCRETE BARRIER.

** 30' CRITERION IS BASED UPON STRAIGHT ROADWAY AND A SLOPE OF 6:1 OR FLATTER. SUPPORTS ON THE OUTSIDE OF CURVES OR LOCATED DOWN A SLOPE (STEEPER THAN 6:1) WILL REQUIRE USE OF CLASS A SUPPORTS.

E. BALLASTING

BALLASTING OF PORTABLE SUPPORTS SHALL BE WITH SANDBAGS PLACED WITHIN 1 FT. OF THE GROUND. IN NO CASE SHALL HARD OBJECTS BE USED FOR BALLAST.

F. STRENGTH OF SIGN SUPPORTS

THE CONTRACTOR SHALL CHOOSE SIGN SUPPORTS OF ADEQUATE STRENGTH AND WITH ADEQUATE FOUNDATIONS AND ANCHORAGE TO SUPPORT THE SIGN SIZES ERECTED. PROPRIETARY DEVICES SHALL NOT BE LOADED BEYOND THE LIMITS RECOMMENDED BY THE MANUFACTURER. SLIP BASE TYPE BREAKAWAY BEAM CONNECTIONS SHALL BE AT LEAST PARTIALLY EMBEDDED IN CONCRETE CONSISTING OF A 1 FT. DEEP BY 12" DIAMETER COLLAR. SIGN SUPPORTS WHICH FAIL UNDER TYPICAL WIND LOAD CONDITIONS SHALL BE IMMEDIATELY MODIFIED OR REPLACED WITH A SUPPORT OF ADEQUATE STRENGTH.

G. PROHIBITED SUPPORTS

THE FOLLOWING SUPPORT TYPES SHALL NOT BE PERMITTED ON PROJECTS:

1) SUPPORTS FABRICATED FROM AUTOMOTIVE AXLE DIFFERENTIAL ASSEMBLIES AND SIMILARLY HEAVY ASSEMBLIES WHICH CANNOT BE CONSIDERED BREAKAWAY TYPE.

2) SUPPORTS CONSISTING OF VERTICAL POSTS WITH ANGLED BRACES MADE FROM DRIVEPOST OR OTHER RIGID ELEMENTS.

CLASS A SUPPORTS

FIXED SUPPORTS

1) ALL #2, #3, AND #4 POST WHEN INSTALLED SINGLY OR IN PAIRS ACCORDING TO THE DETAILS OF TC-41.20. THE NUMBER OF SUPPORTS SHALL BE AS SHOWN ON TC-52.10 AND TC-52.20.

2) THE FOLLOWING POST TYPES, WHEN INSTALLED SINGLY, BY IMBEDMENT OR DRIVING INTO EARTH TO A DEPTH OF ABOUT 42 INCHES:

   a) - UP TO 4" X 4" WOOD

   b) - UP TO 2 INCH DIAMETER SCHEDULE 40 STEEL PIPE

   c) - UP TO 3 INCH DIAMETER SCHEDULE 40 ALUMINUM PIPE

   d) - UP TO 2¼INCH SQUARE, 12 GAUGE WALL, PUNCHED STEEL POST

   e) - UP TO 6" X 8" WOOD WITH BREAKAWAY HOLES SHOWN BELOW

3) THE FOLLOWING POST TYPES WHEN INSTALLED IN PAIRS WITH LESS THAN 7 FT. BETWEEN POSTS, BY IMBEDMENT OR DRIVING INTO EARTH TO A DEPTH OF ABOUT 42 INCHES:

   a) - UP TO 4" X 4" WOOD

   b) - UP TO 2 INCH DIAMETER SCHEDULE 40 STEEL PIPE

   c) - UP TO 3 INCH DIAMETER SCHEDULE 40 ALUMINUM PIPE

   d) - UP TO 2 INCH SQUARE, 14 GAUGE WALL, PUNCHED STEEL POST

4) FIXED TYPE III BARRICADES:

5) ALL BREAKAWAY CONNECTION BEAM SUPPORTS, WHEN INSTALLED ACCORDING TO THE PROPER DETAILS SHOWN ON TC-41.10 WITH A MINIMUM CLEAR DISTANCE BETWEEN SUPPORTS OF 7 FT. FOR SUPPORTS LARGER THAN W6 X 9.

6) ANY BREAKAWAY POST OR POST AND CONNECTION WHICH HAS BEEN CRASH TESTED AND APPROVED BY THE FHWA AS SATISFYING THE BREAKAWAY CRITERIA DESCRIBED IN 630.06.

(CONTINUED ON 59A)

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE C & M SPECIFICATIONS AS WELL AS IN ACCORDANCE WITH PART 7 OF THE OMUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE THIS METHOD OF TRAFFIC CONTROL SHALL BE INCLUDED IN THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

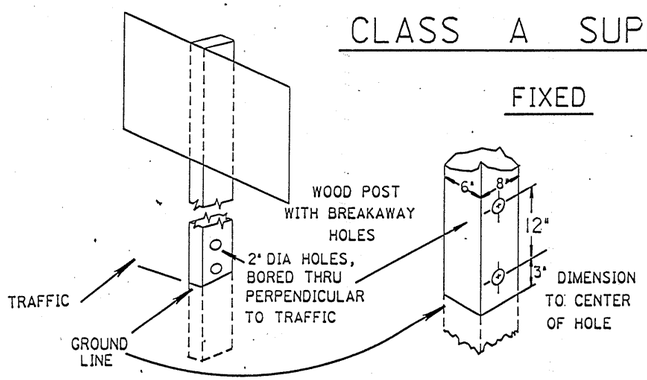
REVISED BY: cw DATE: 4/24/91

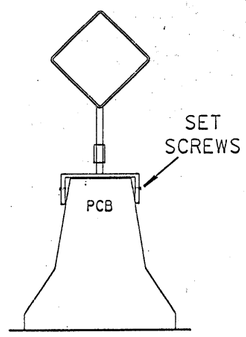
210510	DATE 05/07/90
TEMPORARY SIGN SUPPORT	
PLAN INSERT SHEET	

WCC

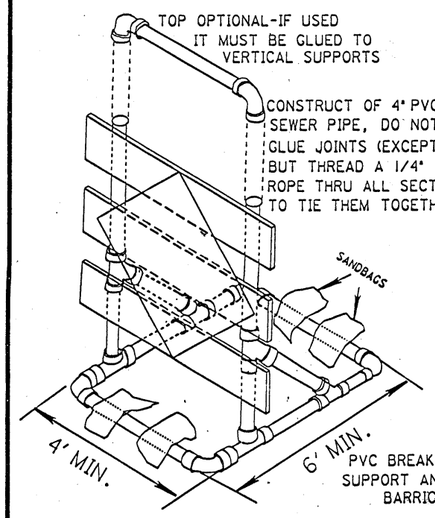
CLASS A SUPPORTS

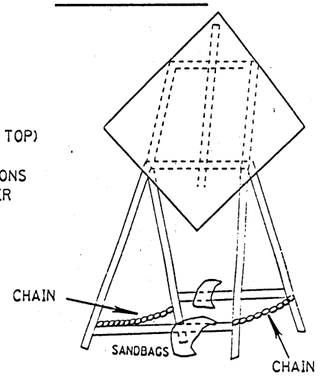
FIXED



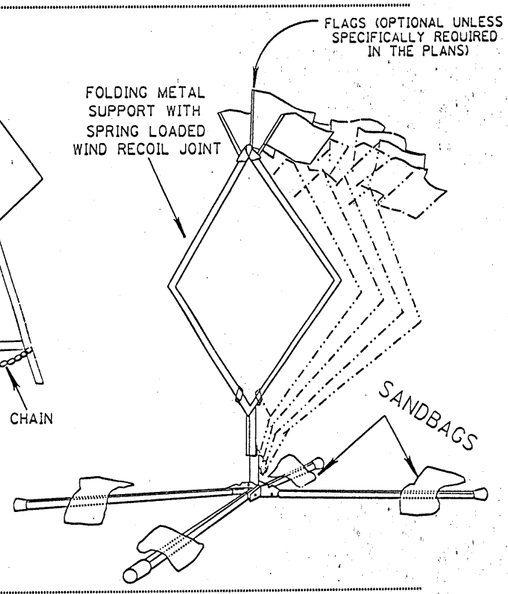


PORTABLE

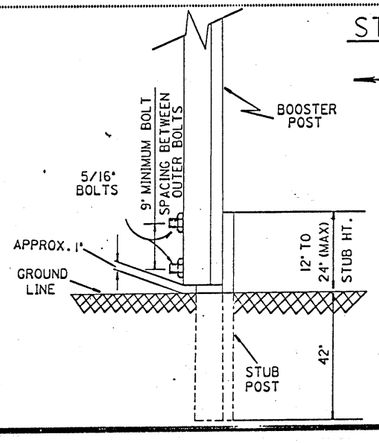




EASEL



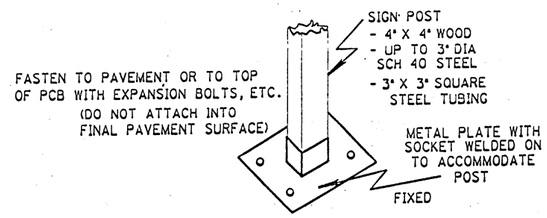
STUBBING STANDARD

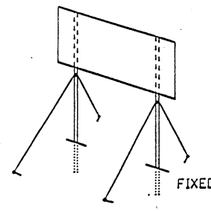


NOTES

1. FOR USE WITH #3 POST OR SMALLER ONLY
2. BOLTS SHALL BE STEEL OR ALUMINUM
3. A MINIMUM OF TWO FASTENERS SHALL BE USED PER ASSEMBLY
4. BOOSTER POST SHALL BE MOUNTED BEHIND STUB POST
5. BOOSTER POST SHALL BE THE SAME OR 1 LB./FT. LESS THAN STUB POST

CLASS B SUPPORTS

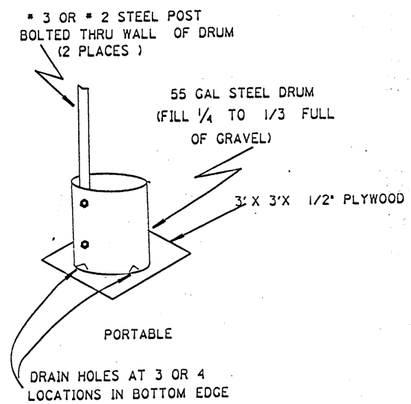




ANY CLASS A SIGN POST WITH GUY WIRES ADDED TO INCREASE SIGN CARRYING ABILITY. (GUY WIRES SHALL NOT BE HEAVIER THAN 1/8" DIA. BRAIDED CABLE. GUY ANCHORS SHALL NOT EXTEND MORE THAN 6" ABOVE GROUND SURFACE).

CLASS C SUPPORTS

1. ALL BEAM TYPE SUPPORTS WITHOUT BREAKAWAY CONNECTIONS.
2. SUPPORTS SIMILAR TO BUT LARGER THAN PERMITTED FOR CLASS A OR B.
3. THE STEEL DRUM(S) SHOWN BELOW MAY BE USED ONLY WHEN LOCATED BEHIND GUARDRAIL OR BARRIER.



ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE C & M SPECIFICATIONS AS WELL AS IN ACCORDANCE WITH PART 7 OF THE OMUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE THIS METHOD OF TRAFFIC CONTROL SHALL BE INCLUDED IN THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

REVISED BY: CN DATE: 4/24/91

210511	DATE 05/07/90
TEMPORARY SIGN SUPPORT	
PLAN INSERT SHEET	

PAVEMENT CALCULATIONS

CALC BY M.D.C. DATE 2-27-92
CHKD BY J.A.D. DATE 2-27-92
ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES
OHIO
FHWA REGION 5
60
267

WESTBOUND - MAINLINE

STA. 1835+10 TO STA. 3+60 (STA. EQ. 1838+29.49 BK. = 0.00 AHD.)

ITEM 451 679.49' X 24' = 16307.76 SQ. FT. / 9 = 1811.97 SQ. YD.
ITEM 310 679.49' X 29' X (4"/12)' = 6568.40 CU. FT. / 27 = 243.3 CU. YD.
ITEM 304 679.49' X 26' X (6"/12)' = 8833.37 CU. FT. / 27 = 327.2 CU. YD.
ITEM 203 679.49' X 26' = 17666.74 SQ. FT. / 9 = 1963.0 SQ. YD.
ITEM 203 679.49' X 24' X (5"/12)' = 6794.9 CU. FT. / 27 = 251.7 CU. YD.
ITEM 202 679.49' X 24' = 16307.76 SQ. FT. / 9 = 1812.0 SQ. YD.

STA. 3+60 TO STA. 4+75

ITEM 451 115' X 24' = 2760 SQ. FT. / 9 = 306.67 SQ. YD.
ITEM 310 115' X 29' X (4"/12)' = 1111.67 CU. FT. / 27 = 41.2 CU. YD.
ITEM 304 115' X 26' X (6"/12)' = 1495 CU. FT. / 27 = 55.4 CU. YD.
ITEM 203 115' X 26' = 2990 SQ. FT. / 9 = 332.2 SQ. YD.
ITEM 203 40' X 24' X (5"/12)' = 400 CU. FT. / 27 = 14.8 CU. YD.
ITEM 203 75' X 24' X (11"/12)' = 1650 CU. FT. / 27 = 61.1 CU. YD.
ITEM 202 115' X 24' = 2760 SQ. FT. / 9 = 306.7 SQ. YD.

STA. 4+75 TO STA. 5+50

ITEM 451 75' X 24' = 1800 SQ. FT. / 9 = 200 SQ. YD.
ITEM 310 25' X 29' X (4"/12)' = 241.67 CU. FT. / 27 = 9.0 CU. YD.
ITEM SPEC. 50' X 29' = 1450 SQ. FT. / 9 = 161.1 SQ. YD. (N.S.D.B. TYPE 'IA')
ITEM 304 75' X 26' X (6"/12)' = 975 CU. FT. / 27 = 36.1 CU. YD.
ITEM 203 75' X 26' = 1950 SQ. FT. / 9 = 216.67 SQ. YD.
ITEM 203 75' X 24' X (11"/12)' = 1650 CU. FT. / 27 = 61.1 CU. YD.
ITEM 202 75' X 24' = 1800 SQ. FT. / 9 = 200 SQ. YD.
ITEM 408 50' X 26.5' = 1325 SQ. FT. / 9 X 0.4 GAL./SQ. YD. = 58.9 GAL.

STA. 5+50 TO STA. 7+45

ITEM 451 195' X 24' = 4680 SQ. FT. / 9 = 520 SQ. YD.
ITEM SPEC. 195' X 24' = 4680 SQ. FT. / 9 = 520 SQ. YD. (N.S.D.B. TYPE 'IA')
ITEM 304 195' X 24' X (6"/12)' = 2340 CU. FT. / 27 = 86.7 CU. YD.
ITEM 203 195' X 24' = 4680 SQ. FT. / 9 = 520 SQ. YD.
ITEM 203 195' X 24' X (11"/12)' = 4290 CU. FT. / 27 = 158.9 CD. YD.
ITEM 202 195' X 24' = 4680 SQ. FT. / 9 = 520 SQ. YD.
ITEM 408 195' X 24' = 4680 SQ. FT. / 9 X 0.4 GAL./SQ. YD. = 208 GAL.

STA 5+50 TO STA 14+60 (ACCELERATION LANE)

ITEM 451 910' X 9.48' = 8626.8 SQ. FT. / 9 = 958.5 SQ. YD.
ITEM SPEC. 910' X (9.48'+3') = 11356.8 SQ. FT. / 9 = 1261.9 SQ. YD. (N.S.D.B. TYPE 'IA')
ITEM 304 910' X 9.48' X (6"/12)' = 4313.4 CU. FT. / 27 = 159.8 CU. YD.
ITEM 203 910' X 9.48' = 8626.8 SQ. FT. / 9 = 958.5 SQ. YD.
ITEM 203 910' X 9.48' X (11"/12)' = 7907.9 CU. FT. / 27 = 292.9 CU. YD.
ITEM 202 910' X 9.48' = 8626.8 SQ. FT. / 9 = 958.5 SQ. YD.
ITEM 408 910' X (9.48'+3'-2') = 9536.8 SQ. FT. / 9 = 1059.6 SQ. YD. X 0.4 GAL./SQ. YD. = 423.9 GAL.

STA. 7+45 TO STA. 14+60

ITEM 451 715' X 24' = 17160 SQ. FT. / 9 = 1906.67 SQ. YD.
ITEM SPEC. 715' X 26' = 18590 SQ. FT. / 9 = 2065.6 SQ. YD. (N.S.D.B. TYPE 'IA')
ITEM 304 715' X 26' X (6"/12)' = 9295 CU. FT. / 27 = 344.3 CU. YD.
ITEM 203 715' X 26' = 18590 SQ. FT. / 9 = 2065.6 SQ. YD.
ITEM 203 615' X 24' X (11"/12)' = 13530 CU. FT. / 27 = 501.1 CU. YD.
ITEM 203 100' X 24' X (12"/12)' = 2400 CU. FT. / 27 = 88.9 CU. YD.
ITEM 202 715' X 24' = 17160 SQ. FT. / 9 = 1906.7 SQ. YD.
ITEM 408 715' X 25.5' = 18232.5 SQ. FT. / 9 X 0.4 GAL./SQ. YD. = 810.3 GAL.

STA. 56+06.25 TO STA. 57+00

ITEM 451 93.75' X 24' = 2250 SQ. FT. / 9 = 250 SQ. YD.
ITEM 304 93.75' X 29' X (4"/12)' = 906.25 CU. FT. / 27 = 33.6 CU. YD.
ITEM 304 93.75' X 26' X (6"/12)' = 1218.75 CU. FT. / 27 = 45.1 CU. YD.
ITEM 203 93.75' X 26' = 2437.5 SQ. FT. / 9 = 270.8 SQ. YD.
ITEM 203 93.75' X 24' X (11"/12)' = 2062.5 CU. FT. / 27 = 76.4 CU. YD.
ITEM 202 93.75' X 24' = 2250 SQ. FT. / 9 = 250 SQ. YD.

STA. 57+00 TO STA. 72+81

ITEM 451 1585.59' X 24' = 38054.16 SQ. FT. / 9 = 4228.24 SQ. YD.
ITEM 304 761.78' X 26' X (4"/12)' = 6602.09 CU. FT. / 27 = 244.5 CU. YD.
ITEM SPEC. 823.81' X 26' = 21419.06 SQ. FT. / 9 = 2379.9 SQ. YD. (N.S.D.B. TYPE 'NJ')
ITEM 304 1585.59' X 26' X (6"/12)' = 20612.67 CU. FT. / 27 = 763.4 CU. YD.
ITEM 203 1585.59' X 26' = 41225.34 SQ. FT. / 9 = 4580.6 SQ. YD.
ITEM 203 1585.59' X 24 X (12"/12)' = 38054.16 CU. FT. / 27 = 1409.4 CU. YD.
ITEM 202 1585.59' X 24' = 38054.16 SQ. FT. / 9 = 4228.2 SQ. YD.
ITEM 408 823.81' X 25.5' = 21007.16 SQ. FT. / 9 X 0.4 GAL./SQ. YD. = 933.7 GAL.

STA. 57+00 TO STA. 69+00 (ACCELERATION LANE)

ITEM 451 1204.87' X 12.5' = 15060.88 SQ. FT. / 9 = 1673.4 SQ. YD.
ITEM 304 762.64' X (12.5'+3') X (4"/12)' = 3940.31 CU. FT. / 27 = 145.9 CU. YD.
ITEM 304 1204.87 X (12.5') X (6"/12)' = 7530.43 CU. FT. / 27 = 278.9 CU. YD.
ITEM SPEC. 442.23' X (12.5'+3') = 6854.57 SQ. FT. / 9 = 761.62 SQ. YD. (N.S.D.B. TYPE 'NJ')
ITEM 203 1204.87' X 12.5' = 15060.88 SQ. FT. / 9 = 1673.4 SQ. YD.
ITEM 203 1204.87' X 12.5' X (11"/12)' = 13805.80 CU. FT. / 27 = 511.3 CU. YD.
ITEM 202 1204.87' X 12.5' = 15060.88 SQ. FT. / 9 = 1673.4 SQ. YD.
ITEM 408 442.23' X (12.54'+1') = 5970.11 SQ. FT. / 9 = 663.3 CU. YD.

STA. 72+81 TO STA. 88+20.69

ITEM 451 1539.86' X 24' = 36956.64 SQ. FT. / 9 = 4106.3 SQ. YD.
ITEM SPEC. 33.11' X 29' = 960.19 SQ. FT. / 9 = 106.7 SQ. YD. (N.S.D.B. TYPE 'NJ')
ITEM SPEC. 854.06' X 29' = 24,767.74 SQ. FT. / 9 = 2752.0 SQ. YD. (A.T.D.B.)
ITEM SPEC. 652.69' X 29' = 18928.01 SQ. FT. / 9 = 2103.1 SQ. YD. (C.T.D.B.)
ITEM 304 1539.86' X 26' X (6"/12)' = 20018.18 CU. FT. / 27 = 741.4 CU. YD.
ITEM 203 1539.86' X 26' = 40036.36 SQ. FT. / 9 = 4448.5 SQ. YD.
ITEM 203 1539.86' X 24' X (11"/12)' = 33876.92 CU. FT. / 27 = 1254.7 CU. YD.
ITEM 202 1539.86' X 24' = 36956.64 SQ. FT. / 9 = 4106.3 SQ. YD.
ITEM 408 1539.86' X 26.5' = 40806.27 SQ. FT. / 9 X 0.4 GAL./SQ. YD. = 1813.6 GAL.

STA. 88+20.69 TO STA. 90+23

ITEM 451 202.31' X 24' = 4855.44 SQ. FT. / 9 = 539.49 SQ. YD.
ITEM SPEC. 202.31' X 26' = 5260.06 SQ. FT. / 9 = 584.5 SQ. YD. (C.T.D.B.)
ITEM 304 202.31' X 26' X (6"/12)' = 2630.03 CU. FT. / 27 = 97.4 CU. YD.
ITEM 203 202.31' X 26' = 5260.06 SQ. FT. / 9 = 584.5 SQ. YD.
ITEM 203 202.31' X 24' X (11"/12)' = 4450.82 CU. FT. / 27 = 164.8 CU. YD.
ITEM 202 202.31' X 24' = 4855.44 SQ. FT. / 9 = 539.5 SQ. YD.
ITEM 408 202.31' X 25.5' = 5158.91 SQ. FT. / 9 X 0.4 GAL./SQ. YD. = 229.3 GAL.

STA. 88+20.69 TO STA. 90+23 (DECELERATION LANE)

ITEM 451 202.31' X 28.81' = 5828.55 SQ. FT. / 9 = 647.62 SQ. YD.
ITEM 304 202.31' X 28.81' X (6"/12)' = 2914.28 CU. FT. / 27 = 107.9 CU. YD.
ITEM 408 202.31' X (28.81'+3'-2') = 6030.86 SQ. FT. / 9 X 0.4 GAL./SQ. YD. = 268.0 GAL.
ITEM 304 202.31' X (28.81'+3') X (4"/12') = 2145.2 CU. FT. / 27 = 79.5 CU. YD.
ITEM 202 202.31' X 28.81' = 5828.55 SQ. FT. / 9 = 647.62 SQ. YD.
ITEM 203 202.31' X 28.81' X (11"/12)' = 534.84 CU. FT. / 27 = 197.8 CU. YD.
ITEM 203 202.31' X 28.81' = 5828.55 SQ. FT. / 9 = 647.62 SQ. YD.

STA. 98+00 TO STA. 99+82

ITEM 451 182' X 24' = 4368 SQ. FT. / 9 = 485.33 SQ. YD.
ITEM 304 182' X 30' X (4"/12)' = 1820 CU. FT. / 27 = 67.4 CU. YD.
ITEM 304 182' X 24' X (6"/12)' = 2184 CU. FT. / 27 = 80.9 CU. YD.
ITEM 203 182' X 24' = 4368 SQ. FT. / 9 = 485.3 SQ. YD.
ITEM 203 182' X 24' X (11"/12') = 4004 CU. FT. / 27 = 148.3 CU. YD.
ITEM 202 182' X 24' = 4368 SQ. FT. / 9 = 485.3 SQ. YD.

STA. 114+82 TO STA. 123+26

ITEM 451 844' X 24' = 20256 SQ. FT. / 9 = 2250.67 SQ. YD.
ITEM 304 844' X 30' X (4"/12)' = 8440 CU. FT. / 27 = 312.6 CU. YD.
ITEM 304 844' X 24' X (6"/12)' = 10128 CU. FT. / 27 = 375.1 CU. YD.
ITEM 203 844' X 24' = 20256 SQ. FT. / 9 = 2250.7 SQ. YD.
ITEM 203 844' X 24' X (11"/12)' = 18568 CU. FT. / 27 = 687.7 CU. YD.
ITEM 202 844' X 24' = 20256 SQ. FT. / 9 = 2250.7 SQ. YD.

STA. 138+92 TO STA. 141+13

ITEM 451 221' X 24' = 5304 SQ. FT. / 9 = 589.33 SQ. YD.
ITEM 304 221' X 30' X (4"/12)' = 2210 CU. FT. / 27 = 81.9 CU. YD.
ITEM 304 221' X 24' X (6"/12)' = 2652 CU. FT. / 27 = 98.2 CU. YD.
ITEM 203 221' X 24' = 5304 SQ. FT. / 9 = 589.3 SQ. YD.
ITEM 203 221' X 24' X (11"/12)' = 4862 CU. FT. / 27 = 180.1 CU. YD.
ITEM 202 221' X 24' = 5304 SQ. FT. / 9 = 589.3 SQ. YD.

STA. 174+73 TO STA. 175+51.71

ITEM 451 78.71' X 24' = 1889.04 SQ. FT. / 9 = 209.89 SQ. YD.
ITEM 304 78.71' X 30' X (4"/12)' = 787.1 CU. FT. / 27 = 29.2 CU. YD.
ITEM 304 78.71' X 24' X (6"/12)' = 944.52 CU. FT. / 27 = 35.0 CU. YD.
ITEM 203 78.71' X 24' = 1889.04 SQ. FT. / 9 = 209.9 SQ. YD.
ITEM 203 78.71' X 24' X (11"/12)' = 1731.62 CU. FT. / 27 = 64.1 CU. YD.
ITEM 202 78.71' X 24' = 1889.04 SQ. FT. / 9 = 209.9 SQ. YD.

EASTBOUND - MAINLINE

STA. 119+21 TO STA. 126+16

ITEM 451 695' X 24' = 16680 SQ. FT. / 9 = 1853.33 SQ. YD.
ITEM 304 695' X 30' X (4"/12)' = 6950 CU. FT. / 27 = 257.4 CU. YD.
ITEM 304 270' X 3' X (4"/12)' = 270 CU. FT. / 27 = -10 CU. YD. (for median crossover)
ITEM 304 695' X 24' X (6"/12)' = 8340 CU. FT. / 27 = 308.9 CU. YD.
ITEM 203 695' X 24' = 16680 SQ. FT. / 9 = 1853.3 SQ. YD.
ITEM 203 695' X 24' X (11"/12)' = 15290 CU. FT. / 27 = 566.3 CU. YD.
ITEM 202 695' X 24' = 16680 SQ. FT. / 9 = 1853.3 SQ. YD.

SEE SHEET NOS. 82-84 FOR SUB-SUMMARY

PAVEMENT CALCULATIONS

CALC BY M.D.C. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	61
CHKD BY J.A.D. DATE 2-27-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

STA. 153+12 TO STA. 159+50

ITEM 451 638' X 24' = 15312 SQ. FT. / 9 = 1701.33 SQ. YD.
ITEM 304 638' X 29' X (4"/12)' = 6167.33 CU. FT. / 27 = 228.4 CU. YD.
ITEM 304 638' X 26' X (6"/12)' = 8294 CU. FT. / 27 = 307.2 CU. YD.
ITEM 203 638' X 26' = 16588 SQ. FT. / 9 = 1843.1 SQ. YD.
ITEM 203 638' X 24' X (11"/12)' = 14036 CU. FT. / 27 = 519.9 CU. YD.
ITEM 202 638' X 24' = 15312 SQ. FT. / 9 = 1701.3 SQ. YD.

STA. 159+50 TO STA. 167+20

ITEM 451 770' X 24' = 18480 SQ. FT. / 9 = 2053.33 SQ. YD.
ITEM 304 770' X 26' X (4"/12)' = 6673.33 CU. FT. / 27 = 247.2 CU. YD.
ITEM 304 770' X 26' X (6"/12)' = 10010 CU. FT. / 27 = 370.7 CU. YD.
ITEM 203 770' X 26' = 20020 SQ. FT. / 9 = 2224.4 SQ. YD.
ITEM 203 770' X 24' X (11"/12)' = 16940 CU. FT. / 27 = 627.4 CU. YD.
ITEM 202 770' X 24' = 18480 SQ. FT. / 9 = 2053.3 SQ. YD.

STA. 159+50 TO STA. 167+20 (DECELERATION LANE)

ITEM 451 770' X 17.77' = 13682.9 SQ. FT. / 9 = 1520.3 SQ. YD.
ITEM 304 770' X (17.7'+3') X (4"/12)' = 5331.0 CU. FT. / 27 = 197.4 CU. YD.
ITEM 304 770' X 17.77' X (6"/12)' = 6841.5 CU. FT. / 27 = 253.4 CU. YD.
ITEM 203 770' X 17.77' = 13682.9 SQ. FT. / 9 = 1520.3 SQ. YD.
ITEM 203 770' X 17.77' X (11"/12)' = 12542.66 CU. FT. / 27 = 464.5 CU. YD.
ITEM 202 770' X 17.77' = 13682.9 SQ. FT. / 9 = 1520.3 SQ. YD.

STA. 180+00 TO STA. 181+46

ITEM 451 146' X 24' = 3504 SQ. FT. / 9 = 389.33 SQ. YD.
ITEM 304 146' X 30' X (4"/12)' = 1460 CU. FT. / 27 = 54.1 CU. YD.
ITEM 304 146' X 24' X (6"/12)' = 1752 CU. FT. / 27 = 64.9 CU. YD.
ITEM 203 146' X 24' = 3504 SQ. FT. / 9 = 389.3 SQ. YD.
ITEM 203 146' X 24' X (11"/12)' = 3212 CU. FT. / 27 = 119.0 CU. YD.
ITEM 202 146' X 24' = 3504 SQ. FT. / 9 = 389.3 SQ. YD.

WESTBOUND - SHOULDERS

STA. 1827+50 TO STA. 1827+96

ITEM 452 46' X 8' = 368 SQ. FT. / 9 = 40.89 SQ. YD.
ITEM 304 46' X 4.50 SQ. FT. = 207 CU. FT. / 27 = 7.7 CU. YD.
ITEM 203 46' X 10.33 SQ. FT. = 475.18 CU. FT. / 27 = 17.6 CU. YD.
ITEM 203 46' X 7' = 322 SQ. FT. / 9 = 35.8 SQ. YD.

ITEM 452 46' X 4' = 184 SQ. FT. / 9 = 20.44 SQ. YD.
ITEM 304 46' X 1.79 SQ. FT. = 82.43 CU. FT. / 27 = 3.1 CU. YD.
ITEM 203 46' X 4.92 SQ. FT. = 226.32 CU. FT. / 27 = 8.4 CU. YD.

STA. 1835+10 TO STA. 3+60 (STA. EQ. 1838+29.49 BK. = 0.00 AHD.)

ITEM 452 679.49' X 8' = 5435.92 SQ. FT. / 9 = 603.99 SQ. YD.
ITEM 304 679.49' X 3.42 SQ. FT. = 2322.50 CU. FT. / 27 = 86.0 CU. YD.
ITEM 203 679.49' X 10.25 SQ. FT. = 6964.77 CU. FT. / 27 = 258.0 CU. YD.
ITEM 203 679.49' X 7' = 4756.43 SQ. FT. / 9 = 528.5 SQ. YD.

ITEM 452 679.49' X 4' = 2717.96 SQ. FT. / 9 = 302 SQ. YD.
ITEM 304 679.49' X 0.36 SQ. FT. = 244.62 CU. FT. / 27 = 9.1 CU. YD.
ITEM 203 679.49' X 5.16 SQ. FT. = 3506.17 CU. FT. / 27 = 129.8 CU. YD.
ITEM 203 679.49' X 3' = 2038.47 SQ. FT. / 9 = 226.5 SQ. YD.

STA. 3+60 TO STA. 4+75

ITEM 452 115' X 8' = 920 SQ. FT. / 9 = 102.22 SQ. YD.
ITEM 304 115' X 3.42 SQ. FT. = 393.3 CU. FT. / 27 = 14.6 CU. YD.
ITEM 203 115' X 7' = 805 SQ. FT. / 9 = 89.4 SQ. YD.
ITEM 203 115' X 10.25 SQ. FT. = 1178.75 CU. FT. / 27 = 43.7 CU. YD.

ITEM 452 115' X 4' = 460 SQ. FT. / 9 = 51.1 SQ. YD.
ITEM 304 115' X 0.37 SQ. FT. = 42.6 CU. FT. / 27 = 1.6 CU. YD.
ITEM 203 115' X 1' = 115 SQ. FT. / 9 = 12.8 SQ. YD.
ITEM 203 115' X 5.16 SQ. FT. = 593.4 CU. FT. / 27 = 22.0 CU. YD.

STA. 4+75 TO STA. 5+50

ITEM 452 75' X 8' = 600 SQ. FT. / 9 = 66.7 SQ. YD.
ITEM 304 75' X 3.42 SQ. FT. = 256.5 CU. FT. / 27 = 9.5 CU. YD.
ITEM 203 75' X 7' = 525 SQ. FT. / 9 = 58.3 SQ. YD.
ITEM 203 75' X 10.25 SQ. FT. = 768.75 CU. FT. / 27 = 28.5 CU. YD.

STA. 5+50 TO STA. 7+45

ITEM 452 195' X 8' = 1560 SQ. FT. / 9 = 173.3 SQ. YD.
ITEM 304 195' X 3.42 SQ. FT. = 666.9 CU. FT. / 27 = 24.7 CU. YD.
ITEM 203 195' X 7' = 1365 SQ. FT. / 9 = 151.7 SQ. YD.
ITEM 203 195' X 10.25 SQ. FT. = 1998.76 CU. FT. / 27 = 74.0 CU. YD.

STA. 7+45 TO STA. 14+60

ITEM 452 715' X 8' = 5720 SQ. FT. / 9 = 635.6 SQ. YD.
ITEM 304 715' X 3.42 SQ. FT. = 2445.3 CU. FT. / 27 = 90.6 CU. YD.
ITEM 203 715' X 7' = 5005 SQ. FT. / 9 = 556.1 SQ. YD.
ITEM 203 715' X 10.25 SQ. FT. = 7328.75 CU. FT. / 27 = 271.4 CU. YD.

ITEM 452 715' X 4' = 2860 SQ. FT. / 9 = 317.8 SQ. YD.
ITEM 304 715' X 0.37 SQ. FT. = 264.6 CU. FT. / 27 = 9.8 CU. YD.
ITEM 203 715' X 1' = 715 SQ. FT. / 9 = 79.4 SQ. YD
ITEM 203 715' X 5.16 SQ. FT. = 3689.4 CU. FT. / 27 = 136.6 CU. YD

STA. 14+60 TO STA. 51+03.25

ITEM 452 2116.94' X 8' = 16935.52 SQ. FT. / 9 = 1881.72 SQ. YD.
ITEM 304 2116.94' X 4.50 SQ. FT. = 9526.23 CU. FT. / 27 = 352.8 CU. YD.
ITEM 203 2116.94' X 10.33 SQ. FT. = 21867.99 CU. FT. / 27 = 809.9 CU. YD.
ITEM 203 2116.94' X 7' = 14818.58 SQ. FT. / 9 = 1646.5 SQ. YD.

ITEM 452 3643.25' X 4' = 14573 SQ. FT. / 9 = 1619.22 SQ. YD.
ITEM 304 3643.25' X 1.79 SQ. FT. = 6521.42 CU. FT. / 27 = 241.5 CU. YD.
ITEM 203 3643.25' X 4.92 SQ. FT. = 17924.79 CU. FT. / 27 = 663.9 CU. YD.

STA. 56+06.25 TO STA. 90+23

ITEM 452 93.75' X 8' = 750 SQ. FT. / 9 = 83.33 SQ. YD.
ITEM 304 93.75' X 3.42 SQ. FT. = 320.44 CU. FT. / 27 = 11.9 CU. YD.
ITEM 203 93.75' X 10.25 SQ. FT. = 960.94 CU. FT. / 27 = 35.6 CU. YD.
ITEM 203 93.75' X 7' = 656.25 SQ. FT. / 9 = 72.92 SQ. YD.

ITEM 452 1539.93' X 8' = 12319.44 SQ. FT. / 9 = 1368.83 SQ. YD.
ITEM 304 1539.93' X 3.42 SQ. FT. = 5266.56 CU. FT. / 27 = 195.1 CU. YD.
ITEM 203 1539.93' X 10.25 SQ. FT. = 15784.3 CU. FT. / 27 = 584.6 CU. YD.
ITEM 203 1539.93' X 7' = 10779.51 SQ. FT. / 9 = 1197.7 SQ. YD.

ITEM 452 3419.92' X 4' = 13679.68 SQ. FT. / 9 = 1519.96 SQ. YD.
ITEM 304 3419.92' X 0.37 SQ. FT. = 1265.37 CU. FT. / 27 = 46.9 CU. YD.
ITEM 203 3419.92' X 5.16 SQ. FT. = 17646.79 CU. FT. / 27 = 653.6 CU. YD.
ITEM 203 3419.92' X 1' = 3419.92 SQ. FT. / 9 = 380.0 SQ. YD.

STA. 90+23 TO STA. 98+00

ITEM 452 175' X 8' = 1400 SQ. FT. / 9 = 155.56 SQ. YD.
ITEM 304 175' X 4.50 SQ. FT. = 787.50 CU. FT. / 27 = 29.2 CU. YD.
ITEM 203 175' X 10.33 SQ. FT. = 1807.75 CU. FT. / 27 = 67.0 CU. YD.
ITEM 203 175' X 7' = 1225 SQ. FT. / 9 = 136.1 SQ. YD

ITEM 452 777' X 4' = 3108 SQ. FT. / 9 = 345.33 SQ. YD.
ITEM 304 777' X 1.79 SQ. FT. = 1390.83 CU. FT. / 27 = 51.5 CU. YD.
ITEM 203 777' X 4.92 SQ. FT. = 3822.84 CU. FT. / 27 = 141.6 CU. YD.

STA. 98+00 TO STA. 99+82

ITEM 452 182' X 8' = 1456 SQ. FT. / 9 = 161.78 SQ. YD.
ITEM 304 182' X 3.42 SQ. FT. = 622.08 CU. FT. / 27 = 23.0 CU. YD.
ITEM 203 182' X 10.25 SQ. FT. = 1865.5 CU. FT. / 27 = 69.1 CU. YD.
ITEM 203 182' X 7' = 1274 SQ. FT. / 9 = 141.6 SQ. YD.

ITEM 452 182' X 4' = 728 SQ. FT. / 9 = 80.89 SQ. YD.
ITEM 304 182' X 1.62 SQ. FT. = 293.93 CU. FT. / 27 = 10.9 CU. YD.
ITEM 203 182' X 5.74 SQ. FT. = 1044.68 CU. FT. / 27 = 38.7 CU. YD.
ITEM 203 182' X 3' = 546 SQ. FT. / 9 = 60.7 SQ. YD.

STA. 99+82 TO STA. 114+82

ITEM 452 1500' X 8' = 12000 SQ. FT. / 9 = 1333.33 SQ. YD.
ITEM 304 1500' X 4.50 SQ. FT. = 6750 CU. FT. / 27 = 250 CU. YD.
ITEM 203 1500' X 10.33 SQ. FT. = 15495 CU. FT. / 27 = 573.9 CU. YD.
ITEM 203 1500' X 7' = 10500 SQ. FT. / 9 = 1166.7 SQ. YD.

ITEM 452 1500' X 4' = 6000 SQ. FT. / 9 = 666.67 SQ. YD.
ITEM 304 1500' X 1.79 SQ. FT. = 2688 CU. FT. / 27 = 99.6 CU. YD.
ITEM 203 1500' X 4.92 SQ. FT. = 7380 CU. FT. / 27 = 273.3 CU. YD.

STA. 114+82 TO STA. 123+26

ITEM 452 844' X 8' = 6752 SQ. FT. / 9 = 750.22 SQ. YD.
ITEM 304 844' X 3.42 SQ. FT. = 2884.79 CU. FT. / 27 = 106.8 CU. YD.
ITEM 203 844' X 10.25 SQ. FT. = 8651 CU. FT. / 27 = 320.4 CU. YD.
ITEM 203 844' X 7' = 5908 SQ. FT. / 9 = 656.4 SQ. YD.

ITEM 452 844' X 4' = 3376 SQ. FT. / 9 = 375.11 SQ. YD.
ITEM 304 844' X 1.62 SQ. FT. = 1363.06 CU. FT. / 27 = 50.5 CU. YD.
ITEM 203 844' X 5.74 SQ. FT. = 4844.56 CU. FT. / 27 = 179.4 CU. YD.
ITEM 203 844' X 3' = 2532 SQ. FT. / 9 = 281.3 SQ. YD.

STA. 123+26 TO STA. 138+92

ITEM 452 1566' X 8' = 12528 SQ. FT. / 9 = 1392 SQ. YD.
ITEM 304 1566' X 4.50 SQ. FT. = 7047 CU. FT. / 27 = 261.0 CU. YD.
ITEM 203 1566' X 10.33 SQ. FT. = 16176.78 CU. FT. / 27 = 599.1 CU. YD.
ITEM 203 1566' X 8' = 12528 SQ. FT. /9 = 1392 SQ. YD.

ITEM 452 1296' X 4' = 5184 SQ. FT. / 9 = 576 SQ. YD.
ITEM 304 1296' X 1.79 SQ. FT. = 2322.43 CU. FT. / 27 = 86.0 CU. YD.
ITEM 203 1296' X 4.92 SQ. FT. = 6376.32 CU. FT. / 27 = 236.2 CU. YD.

STA. 138+92 TO STA. 141+13

ITEM 452 221' X 8' = 1768 SQ. FT. / 9 = 196.44 SQ. YD.
ITEM 304 221' X 3.42 SQ. FT. = 755.38 CU. FT. / 27 = 28.0 CU. YD.
ITEM 203 221' X 10.25 SQ. FT. = 2265.25 CU. FT. / 27 = 83.9 CU. YD.
ITEM 203 221' X 7' = 1547 SQ. FT. / 9 = 171.9 SQ. YD.

SEE SHEET NOS. 82-84 FOR SUB-SUMMARY

PAVEMENT CALCULATIONS

CALC BY M.D.C. DATE 2-27-92 | CHKD BY J.A.D. DATE 2-27-92 | ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES | OHIO FHWA REGION 5 | 62 267

STA. 138+92 TO STA. 141+13 (CONT.)

ITEM 452 221' X 4' = 884 SQ. FT. / 9 = 98.22 SQ. YD.
ITEM 304 221' X 1.62 SQ. FT. = 356.92 CU. FT. / 27 = 13.2 CU. YD.
ITEM 203 221' X 5.74 SQ. FT. = 1268.54 CU. FT. / 27 = 47.0 CU. YD.
ITEM 203 221' X 3' = 663 SQ. FT. / 9 = 73.7 SQ. YD.

STA. 141+13 TO STA. 174+73

ITEM 452 1794' X 8' = 14352 SQ. FT. / 9 = 1594.67 SQ. YD.
ITEM 304 1794' X 4.50 SQ. FT. = 8073 CU. FT. / 27 = 299.0 CU. YD.
ITEM 203 1794' X 10.33 SQ. FT. = 18532.02 CU. FT. / 27 = 686.4 CU. YD.
ITEM 203 1794' X 7' = 12558 SQ. FT. / 9 = 1395.3 SQ. YD.

ITEM 452 3360' X 4' = 13440 SQ. FT. / 9 = 1493.33 SQ. YD.
ITEM 304 3360' X 1.79 SQ. FT. = 6021.12 CU. FT. / 27 = 223.0 CU. YD.
ITEM 203 3360' X 4.92 SQ. FT. = 16531.2 CU. FT. / 27 = 612.3 CU. YD.

STA. 174+73 TO STA. 175+51.71

ITEM 452 78.71' X 8' = 629.68 SQ. FT. / 9 = 69.96 SQ. YD.
ITEM 304 78.71' X 3.42 SQ. FT. = 269.03 CU. FT. / 27 = 10.0 CU. YD.
ITEM 203 78.71' X 10.25 SQ. FT. = 806.78 CU. FT. / 27 = 29.9 CU. YD.
ITEM 203 78.71' X 7' = 550.97 SQ. FT. / 9 = 61.2 SQ. YD.

ITEM 452 78.71' X 4' = 314.84 SQ. FT. / 9 = 34.98 SQ. YD.
ITEM 304 78.71' X 1.62 SQ. FT. = 127.12 CU. FT. / 27 = 4.7 CU. YD.
ITEM 203 78.71' X 5.74 SQ. FT. = 451.80 CU. FT. / 27 = 16.7 CU. YD.
ITEM 203 78.71' X 3' = 236.13 SQ. FT. / 9 = 26.2 SQ. YD.

STA. 177+60.21 TO STA. 185+50 (STA. EQ. 185+05.96 BK. = 185+00 AHD.)

ITEM 452 795.75' X 8' = 6366 SQ. FT. / 9 = 707.33 SQ. YD.
ITEM 304 795.75' X 4.50 SQ. FT. = 3580.88 CU. FT. / 27 = 132.6 CU. YD.
ITEM 203 795.75' X 10.33 SQ. FT. = 8220.10 CU. FT. / 27 = 304.4 CU. YD.
ITEM 203 795.75' X 7' = 5570.25 SQ. FT. / 9 = 618.9 SQ. YD.

ITEM 452 795.75' X 4' = 3183 SQ. FT. / 9 = 353.67 SQ. YD.
ITEM 304 795.75' X 1.79 SQ. FT. = 1424.39 CU. FT. / 27 = 52.8 CU. YD.
ITEM 203 795.75' X 4.92 SQ. FT. = 3915.09 CU. FT. / 27 = 145.0 CU. YD.

EASTBOUND - SHOULDERS

STA. 1827+50 TO STA. 51+03.25 (STA. EQ. 1838+29.49 BK. = 0.00 AHD.)

ITEM 452 5912.74' X 4' = 23650.96 SQ. FT. / 9 = 2627.88 SQ. YD.
ITEM 304 5912.74' X 1.79 SQ. FT. = 10583.80 CU. FT. / 27 = 392.0 CU. YD.
ITEM 203 5912.74' X 4.92 SQ. FT. = 29090.68 CU. FT. / 27 = 1077.4 CU. YD.

ITEM 452 3983.18' X 8' = 31865.44 SQ. FT. / 9 = 3540.60 SQ. YD.
ITEM 304 3983.18' X 4.50 SQ. FT. = 17924.31 CU. FT. / 27 = 663.9 CU. YD.
ITEM 203 3983.18' X 10.33 SQ. FT. = 40571.38 CU. FT. / 27 = 1502.6 CU. YD.
ITEM 203 3983.18' X 7' = 27882.26 SQ. FT. / 9 = 3098.0 SQ. YD.

STA. 56+06.25 TO STA. 119+21

ITEM 452 6311.57' X 4' = 25246.28 SQ. FT. / 9 = 2805.14 SQ. YD.
ITEM 304 6311.57' X 1.79 SQ. FT. = 11297.71 CU. FT. / 27 = 418.4 CU. YD.
ITEM 203 6311.57' X 4.92 SQ. FT. = 31052.92 CU. FT. / 27 = 1150.1 CU. YD.

ITEM 452 3927.53' X 8' = 31420.24 SQ. FT. / 9 = 3491.14 SQ. YD.
ITEM 304 3927.53' X 4.50 SQ. FT. = 17673.89 CU. FT. / 27 = 654.6 CU. YD.
ITEM 203 3927.53' X 10.33 SQ. FT. = 40571.38 CU. FT. / 27 = 1502.6 CU. YD.
ITEM 203 3927.53' X 7' = 2749.71 SQ. FT. / 9 = 3054.7 SQ. YD.

STA. 119+21 TO STA. 126+16

ITEM 452 425' X 4' = 1700 SQ. FT. / 9 = 188.89 SQ. YD.
ITEM 304 425' X 1.62 SQ. FT. = 686.38 CU. FT. / 27 = 25.4 CU. YD.
ITEM 203 425' X 5.74 SQ. FT. = 2439.5 CU. FT. / 27 = 90.4 CU. YD.
ITEM 203 425' X 3' = 1275 SQ. FT. / 9 = 141.7 SQ. YD.

ITEM 452 695' X 8' = 5560 SQ. FT. / 9 = 617.78 SQ. YD.
ITEM 304 695' X 3.42 SQ. FT. = 2375.51 CU. FT. / 27 = 88.0 CU. YD.
ITEM 203 695' X 10.25 SQ. FT. = 7123.75 CU. FT. / 27 = 263.8 CU. YD.
ITEM 203 695' X 7' = 4865 SQ. FT. / 9 = 540.6 SQ. YD.

STA. 126+16 TO STA. 153+12

ITEM 452 2696' X 4' = 10784 SQ. FT. / 9 = 1198.22 SQ. YD.
ITEM 304 2696' X 1.79 SQ. FT. = 4831.23 CU. FT. / 27 = 178.9 CU. YD.
ITEM 203 2696' X 4.92 SQ. FT. = 13264.32 CU. FT. / 27 = 491.3 CU. YD.

ITEM 452 2696' X 8' = 21568 SQ. FT. / 9 = 2396.44 SQ. YD.
ITEM 304 2696' X 4.50 SQ. FT. = 12132 CU. FT. / 27 = 449.3 CU. YD.
ITEM 203 2696' X 10.33 SQ. FT. = 27849.68 CU. FT. / 27 = 1031.5 CU. YD.
ITEM 203 2696' X 7' = 18872 SQ. FT. / 9 = 2096.9 SQ. YD.

STA. 153+12 TO STA. 167+20

ITEM 452 1408' X 4' = 5632 SQ. FT. / 9 = 625.78 SQ. YD.
ITEM 304 1408' X 0.37 SQ. FT. = 513.92 CU. FT. / 27 = 19.0 CU. YD.
ITEM 203 1408' X 5.21 SQ. FT. = 7335.68 CU. FT. / 27 = 271.7 CU. YD.
ITEM 203 1408' X 3' = 4224 SQ. FT. / 9 = 469.3 SQ. YD.

ITEM 452 638' X 8' = 5104 SQ. FT. / 9 = 567.11 SQ. YD.
ITEM 304 638' X 3.42 SQ. FT. = 2180.68 CU. FT. / 27 = 80.8 CU. YD.
ITEM 203 638' X 10.25 SQ. FT. = 6539.5 CU. FT. / 27 = 242.2 CU. YD.
ITEM 203 638' X 7' = 4466 SQ. FT. / 9 = 496.2 SQ. YD.

STA. 167+20 TO STA. 175+51.71

ITEM 452 831.71' X 4' = 3326.84 SQ. FT. / 9 = 369.65 SQ. YD.
ITEM 304 831.71' X 1.79 SQ. FT. = 1488.76 CU. FT. / 27 = 55.1 CU. YD.
ITEM 203 831.71' X 4.92 SQ. FT. = 4092.01 CU. FT. / 27 = 151.6 CU. YD.

ITEM 452 785.40' X 8' = 6283.20 SQ. FT. / 9 = 698.10 SQ. YD.
ITEM 304 785.40' X 4.50 SQ. FT. = 3534.30 CU. FT. / 27 = 130.9 CU. YD.
ITEM 203 785.40' X 10.33 SQ. FT. = 8113.18 CU. FT. / 27 = 300.5 CU. YD.
ITEM 203 785.4' X 7' = 5498 SQ. FT. / 9 = 610.9 SQ. YD

STA. 177+60.21 TO STA. 180+00

ITEM 452 239.79' X 4' = 959.16 SQ. FT. / 9 = 106.57 SQ. YD.
ITEM 304 239.79' X 1.79 SQ. FT. = 429.22 CU. FT. / 27 = 15.9 CU. YD.
ITEM 203 239.79' X 4.92 SQ. FT. = 1179.77 CU. FT. / 27 = 43.7 CU. YD.

ITEM 452 239.79' X 8' = 1918.32 SQ. FT. / 9 = 213.15 SQ. YD.
ITEM 304 239.79' X 4.50 SQ. FT. = 1079.06 CU. FT. / 27 = 40.0 CU. YD.
ITEM 203 239.79' X 10.33 SQ. FT. = 2477.03 CU. FT. / 27 = 91.7 CU. YD.
ITEM 203 239.79' X 7' = 1678.53 SQ. FT. / 9 = 186.5 SQ. YD.

STA. 180+00 TO STA. 181+46

ITEM 452 146' X 4' = 584 SQ. FT. / 9 = 64.89 SQ. YD.
ITEM 304 146' X 1.62 SQ. FT. = 235.79 CU. FT. / 27 = 8.7 CU. YD.
ITEM 203 146' X 5.74 SQ. FT. = 838.04 CU. FT. / 27 = 31.0 CU. YD.
ITEM 203 146' X 3' = 438 SQ. FT. / 9 = 48.7 SQ. YD.

ITEM 452 146' X 8' = 1168 SQ. FT. / 9 = 129.78 SQ. YD.
ITEM 304 146' X 3.42 SQ. FT. = 499.03 CU. FT. / 27 = 18.5 CU. YD.
ITEM 203 146' X 10.25 SQ. FT. = 1496.5 CU. FT. / 27 = 55.4 CU. YD.
ITEM 203 146' X 7' = 1022 SQ. FT. / 9 = 113.6 SQ. YD.

STA. 181+46 TO STA. 185+50 (STA. EQ. 185+05.96 BK. = 185+00 AHD.)

ITEM 452 409.96' X 4' = 1639.84 SQ. FT. / 9 = 182.20 SQ. YD.
ITEM 304 409.96' X 1.79 SQ. FT. = 734.65 CU. FT. / 27 = 27.2 CU. YD.
ITEM 203 409.96' X 4.92 SQ. FT. = 2017.0 CU. FT. / 27 = 74.7 CU. YD.

ITEM 452 409.96' X 8' = 3279.68 SQ. FT. / 9 = 364.41 SQ. YD.
ITEM 304 409.96' X 4.50 SQ. FT. = 1844.82 CU. FT. / 27 = 68.3 CU. YD.
ITEM 203 409.96' X 10.33 SQ. FT. = 4234.89 CU. FT. / 27 = 156.8 CU. YD.
ITEM 203 409.96' X 7' = 2869.72 SQ. FT. / 9 = 318.9 SQ. YD.

RAMPS "R" & "Q"

STA. 16+47 TO STA. 17+34 (S.R. 2)

ITEM 451 87' X 24' = 2088 SQ. FT. / 9 = 232 SQ. YD.
ITEM 304 87' X 27' X (4"/12)' = 783 CU. FT. / 27 = 29.0 CU. YD.
ITEM 304 87' X 24' X (6"/12)' = 1044 CU. FT. / 27 = 38.7 CU. YD.
ITEM 203 87' X 24' = 2088 SQ. FT. / 9 = 232 SQ. YD.
ITEM 203 87' X 24' = (11"/12)' = 1914 CU. FT. / 27 = 70.9 CU. YD.
ITEM 202 87' X 24' = 2088 SQ. FT. / 9 = 232 SQ. YD.

STA. 14+60 TO STA. 17+50 (S.R. 2)

ITEM 452 290' X 8' = 2320 SQ. FT. / 9 = 257.8 SQ. YD.
ITEM 304 290' X 4.50 SQ. FT. = 1305 CU. FT. / 27 = 48.3 CU. YD.
ITEM 203 290' X 10.33 SQ. FT. = 2995.7 CU. FT. / 27 = 111.0 CU. YD.
ITEM 203 290' X 7' = 2030 SQ. FT. / 9 = 225.6 SQ. YD.

STA. 17+50 TO STA. 21+82 (S.R. 2)

ITEM 451 432' X 15' (AVG.) = 6480 SQ. FT. / 9 = 720 SQ. YD.
ITEM 304 432' X 15' (AVG.) X (10"/12)' = 5400 CU. FT. / 27 = 200.0 CU. YD.
ITEM 203 432' X 15' (AVG.) = 6480 SQ. FT. / 9 = 720.0 SQ. YD.
ITEM 203 432' X 14' (AVG.) X (11"/12)' = 5544 CU. FT. / 27 = 205.3 CU. YD.
ITEM 202 432' X 15' (AVG.) = 6480 SQ. FT. / 9 = 720.0 SQ. YD.

STA. 17+35.96 TO STA. 20+36.02 (RAMP "R")

ITEM 452 300.06' X 8' = 2400.48 SQ. FT. / 9 = 266.72 SQ. YD.
ITEM 304 300.06' X 8 X (6"/12)' = 1200.24 CU. FT. / 27 = 44.5 CU. YD.
ITEM 203 300.06' X 10 SQ. FT. = 3000.6 CU. FT. / 27 = 111.13 CU. YD.
ITEM 203 300.06' X 7' = 2100.42 SQ. FT. / 9 = 233.4 SQ. YD.

STA. 16+11.53 TO STA. 18+66.47 (RAMP "Q")

ITEM 452 253.87' X 8' = 2030.96 SQ. FT. / 9 = 225.66 SQ. YD.
ITEM 304 253.87' X 8 X (6"/12)' = 1015.48 CU. FT. / 27 = 37.6 CU. YD.
ITEM 203 253.87' X 10 SQ. FT. = 2538.7 CU. FT. / 27 = 94.0 CU. YD.
ITEM 203 253.87' X 7' = 1777.09 SQ. FT. / 9 = 197.5 SQ. YD.

STA. 18+66.47 TO STA. 19+66.47 (RAMP "Q")

ITEM 452 99.43' X 5.5' (AVG.) = 546.87 SQ. FT. / 9 = 60.76 SQ. YD.
ITEM 304 99.43' X 5.5' (AVG.) X (3"/12)' = 136.72 CU. FT. / 27 = 5.1 CU. YD.
ITEM 203 99.43' X 7.04 SQ. FT. (AVG.) = 699.9 CU. FT. / 27 = 25.9 CU. YD.
ITEM 203 25' X 6' = 150 SQ. FT. / 9 = 16.7 SQ. YD.

SEE SHEET NOS. 82-84 FOR SUB-SUMMARY

PAVEMENT CALCULATIONS

CALC BY M.D.C. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	63
CHKD BY J.A.D. DATE 2-27-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

STA. 19+66.47 TO STA. 23+02.62 (RAMP "Q")

ITEM 452 335.62' X 3' = 1006.86 SQ. FT. / 9 = 111.87 SQ. YD.
ITEM 304 335.62' X 3' X (6"/12)' = 503.43 CU. FT. / 27 = 18.6 CU. YD.
ITEM 203 335.62' X 3.75 SQ. FT. = 1258.58 CU. FT. / 27 = 46.6 CU. YD.

STA. 20+65 TO STA. 23+02.62 (RAMP "Q")

ITEM 452 242.01' X 3' = 726.03 SQ. FT. / 9 = 80.67 SQ. YD.
ITEM 304 242.01' X 3' X (6"/12)' = 363.02 CU. FT. / 27 = 13.45 CU. YD.
ITEM 203 242.01' X 3.75 SQ. FT. = 907.54 CU. FT. / 27 = 33.6 CU. YD.

STA. 22+93 TO STA. 26+20 (RAMP "R")

ITEM 452 326.98' X 3' = 980.94 SQ. FT. / 9 = 108.99 SQ. YD.
ITEM 304 326.98' X 3' X (6"/12)' = 490.47 CU. FT. / 27 = 18.2 CU. YD.
ITEM 203 326.98' X 3.75 SQ. FT. = 1226.18 CU. FT. / 27 = 45.4 CU. YD.

STA. 23+19.75 TO STA. 26+20 (RAMP "R")

ITEM 452 301.02' X 3' = 903.6 SQ. FT. / 9 = 100.34 SQ. YD.
ITEM 304 301.02' X 3' X (6"/12)' = 451.53 CU. FT. / 27 = 16.7 CU. YD.
ITEM 203 301.02' X 3.75 SQ. FT. = 1128.83 CU. FT. / 27 = 41.8 CU. YD.

RAMPS "S" & "Q"

STA. 45+00 TO STA. 48+50 (S.R. 2)

ITEM 452 350' X 8' = 2800 SQ. FT. / 9 = 311.11 SQ. YD.
ITEM 304 350' X 4.50 SQ. FT. = 1575 CU. FT. / 27 = 58.3 CU. YD.
ITEM 203 350' X 10.33 SQ. FT. = 3615.5 CU. FT. / 27 = 133.9 CU. YD.
ITEM 203 350' X 7' = 2450 SQ. FT. / 9 = 272.2 SQ. YD.

STA. 40+46.51 TO STA. 45+00 (RAMP "S")

ITEM 452 453.01' X 8' = 3624.05 SQ. FT. / 9 = 402.67 SQ. YD.
ITEM 304 453.01' X 4.50 SQ. FT. = 2038.55 CU. FT. / 27 = 75.5 CU. YD.
ITEM 203 453.01' X 10.33 SQ. FT. = 4679.59 CU. FT. / 27 = 173.3 CU. YD.

STA. 39+46.51 TO STA. 40+46.51 (RAMP "S")

ITEM 452 99.94' X 5.5' (AVG.) = 549.67 SQ. FT. / 9 = 61.07 SQ. YD.
ITEM 304 99.94' X 5.5' (AVG.) X (6"/12)' = 274.84 CU. FT. / 27 = 10.2 CU. YD.
ITEM 203 99.94' X 6.88 SQ. FT. (AVG.) = 687.5 CU. FT. / 27 = 25.4 CU. YD.
ITEM 203 25' X 6' = 150 SQ. FT. / 9 = 16.7 SQ. YD.

STA. 34+52.78 TO STA. 39+46.51 (RAMP "O")

ITEM 452 493.53' X 3' = 1480.59 SQ. FT. / 9 = 164.51 SQ. YD.
ITEM 304 493.53' X 3' X (6"/12)' = 740.30 CU. FT. / 27 = 27.4 CU. YD.
ITEM 203 493.53' X 3.75 SQ. FT. = 1850.74 CU. FT. / 27 = 68.5 CU. YD.

STA. 31+64.11 TO STA. 34+52.78 (RAMP "O")

ITEM 452 287.77' X 3' = 863.31 SQ. FT. / 9 = 95.92 SQ. YD.
ITEM 304 287.77' X 3' X (6"/12)' = 431.66 CU. FT. / 27 = 15.9 CU. YD.
ITEM 203 287.77' X 3.75 SQ. FT. = 1079.14 CU. FT. / 27 = 40.0 CU. YD.

STA. 31+64.11 TO STA. 34+52.78 (RAMP "O")

ITEM 452 299.26' X 3' = 897.78 SQ. FT. / 9 = 99.75 SQ. YD.
ITEM 304 299.26' X 3' X (6"/12)' = 448.89 CU. FT. / 27 = 16.6 CU. YD.
ITEM 203 299.26' X 3.75 SQ. FT. = 1122.23 CU. FT. / 27 = 41.6 CU. YD.

STA. 33+69 TO STA. 40+46.51 (RAMP "S")

ITEM 452 677.51' X 3' = 2032.53 SQ. FT. / 9 = 225.84 SQ. YD.
ITEM 304 677.51' X 3' X (6"/12)' = 1016.27 CU. FT. / 27 = 37.6 CU. YD.
ITEM 203 677.51' X 3.75 SQ. FT. = 2540.66 CU. FT. / 27 = 94.1 CU. YD.

STA. 33+69 TO STA. 34+52 (RAMP "S")

ITEM 452 83' X 3' = 249 SQ. FT. / 9 = 27.67 SQ. YD.
ITEM 304 83' X 3' X (6"/12)' = 124.5 CU. FT. / 27 = 4.6 CU. YD.
ITEM 203 83' X 3.75 SQ. FT. = 311.25 CU. FT. / 27 = 11.5 CU. YD.

RAMPS "T" & "U"

STA. 12+50 TO STA. 16+00 (RAMP "U")

ITEM 452 350' X 8' = 2800 SQ. FT. / 9 = 311.11 SQ. YD.
ITEM 304 350' X 4.50 SQ. FT. = 1575 CU. FT. / 27 = 58.3 CU. YD.
ITEM 203 350' X 10.33 SQ. FT. = 3615.5 CU. FT. / 27 = 133.9 CU. YD.
ITEM 203 350' X 7' = 2450 SQ. FT. / 9 = 272.2 SQ. YD.

STA. 16+00 TO STA. 20+53.48 (RAMP "U")

ITEM 452 453.01' X 8' = 3624.08 SQ. FT. / 9 = 402.68 SQ. YD.
ITEM 304 453.01' X 4.5 SQ. FT. = 2038.55 CU. FT. / 27 = 75.5 CU. YD.
ITEM 203 453.01' X 10.33 SQ. FT. = 4679.59 CU. FT. / 27 = 173.3 CU. YD.
ITEM 203 453.01' X 7' = 3171.07 SQ. FT. / 9 = 352.34 SQ. YD.

STA. 20+53.48 TO STA. 21+53.48 (RAMP "U")

ITEM 452 100' X 5.5' (AVG.) = 550 SQ. FT. / 9 = 61.11 SQ. YD.
ITEM 304 100' X 5.5' (AVG.) X (6"/12)' = 275.0 CU. FT. / 27 = 10.2 CU. YD.
ITEM 203 100' X 6.88 SQ. FT. (AVG.) = 688.0 CU. FT. / 27 = 25.5 CU. YD.
ITEM 203 25' X 6' = 150 SQ. FT. / 9 = 16.7 SQ. YD.

STA. 21+53.48 TO STA. 24+55.14 (RAMP "T")

ITEM 452 301.34' X 3' = 904.02 SQ. FT. / 9 = 100.45 SQ. YD.
ITEM 304 301.34' X 3' X (6"/12)' = 452.01 CU. FT. / 27 = 16.7 CU. YD.
ITEM 203 301.34' X 3.75 SQ. FT. = 1130.03 CU. FT. / 27 = 41.9 CU. YD.

STA. 24+55.14 TO STA. 27+41.18 (RAMP "T")

ITEM 452 285.14' X 3' = 855.42 SQ. FT. / 9 = 95.05 SQ. YD.
ITEM 304 285.14' X 3' X (6"/12)' = 427.71 CU. FT. / 27 = 15.8 CU. YD.
ITEM 203 285.14' X 3.75 SQ. FT. = 1069.28 CU. FT. / 27 = 39.6 CU. YD.

STA. 24+56.26 TO STA. 27+41.18 (RAMP "T")

ITEM 452 295.36' X 3' = 886.08 SQ. FT. / 9 = 98.45 SQ. YD.
ITEM 304 295.36' X 3' X (6"/12)' = 443.04 CU. FT. / 27 = 16.4 CU. YD.
ITEM 203 295.36' X 3.75 SQ. FT. = 1107.60 CU. FT. / 27 = 41.02 CU. YD.

STA. 20+53.48 TO STA. 25+70 (RAMP "U")

ITEM 452 516.52' X 3' = 1549.56 SQ. FT. / 9 = 172.17 SQ. YD.
ITEM 304 516.52' X 3' X (6"/12)' = 774.78 CU. FT. / 27 = 28.7 CU. YD.
ITEM 203 516.52' X 3.75 SQ. FT. = 1936.95 CU. FT. / 27 = 71.7 CU. YD.

STA. 24+56.26 TO STA. 25+70 (RAMP "U")

ITEM 452 113.74' X 3' = 341.22 SQ. FT. / 9 = 37.91 SQ. YD.
ITEM 304 113.74' X 3' X (6"/12)' = 170.61 CU. FT. / 27 = 6.3 CU. YD.
ITEM 203 113.74' X 3.75 SQ. FT. = 426.53 CU. FT. / 27 = 15.8 CU. YD.

STA. 27+08 TO STA. 27+59 (RAMP "T")

ITEM 451 1047.77 SQ. FT. / 9 = 116.42 SQ. YD.
ITEM 304 1047.77 SQ. FT. X (6"/12)' = 523.89 CU. FT. / 27 = 19.4 CU. YD.
ITEM 203 1047.77 SQ. FT. / 9 = 116.4 SQ. YD.
ITEM 203 1047.77' SQ. FT. X (4"/12)' = 349.26 CU. FT. / 27 = 12.9 CU. YD.
ITEM 202 1047.77 SQ. FT. / 9 = 116.4 SQ. YD.

RAMPS "T" & "V"

STA. 36+01.65 TO STA. 37+20.49 (RAMP "T")

ITEM 452 118.84' X 3' = 356.52 SQ. FT. / 9 = 39.61 SQ. YD.
ITEM 304 118.84' X 3' X (6"/12)' = 178.26 CU. FT. / 27 = 6.6 CU. YD.
ITEM 203 118.84' X 3.75 SQ. FT. = 445.65 CU. FT. / 27 = 16.5 CU. YD.

STA. 36+01.65 TO STA. 37+20.49 (RAMP "T")

ITEM 452 118.84' X 3' = 356.52 SQ. FT. / 9 = 39.61 SQ. YD.
ITEM 304 118.84' X 3' X (6"/12)' = 178.26 CU. FT. / 27 = 6.6 CU. YD.
ITEM 203 118.84' X 3.75 SQ. FT. = 445.65 CU. FT. / 27 = 16.5 CU. YD.

STA. 37+20.49 TO STA. 38+35 (RAMP "T")

ITEM 452 117.48' X 3' = 352.44 SQ. FT. / 9 = 39.16 SQ. YD.
ITEM 304 117.48' X 3' X (6"/12)' = 176.22 CU. FT. / 27 = 6.5 CU. YD.
ITEM 203 117.48' X 3.75 SQ. FT. = 440.55 CU. FT. / 27 = 16.3 CU. YD.

STA. 37+20.49 TO STA. 39+05.56 (RAMP "T")

ITEM 452 185.07' X 3' = 555.21 SQ. FT. / 9 = 61.69 SQ. YD.
ITEM 304 185.07' X 3' X (6"/12)' = 277.61 CU. FT. / 27 = 10.3 CU. YD.
ITEM 203 185.07' X 3.75 SQ. FT. = 694.01 CU. FT. / 27 = 25.7 CU. YD.

STA. 39+05.56 TO STA. 40+05.56 (RAMP "T")

ITEM 452 99.67' X 5.5' (AVG.) = 548.19 SQ. FT. / 9 = 60.91 SQ. YD.
ITEM 304 99.67' X 5.5' (AVG.) X (6"/12)' = 274.09 CU. FT. / 27 = 10.2 CU. YD.
ITEM 203 99.67' X 6.88 SQ. FT. (AVG.) = 685.73 CU. FT. / 27 = 25.4 CU. YD.
ITEM 203 25' X 6' = 150 SQ. FT. / 9 = 16.7 SQ. YD.

STA. 40+05.56 TO STA. 42+58.72 (RAMP "T")

ITEM 452 253.64' X 8' = 2029.12 SQ. FT. / 9 = 225.46 SQ. YD.
ITEM 304 253.64' X 8' X (6"/12)' = 1014.56 CU. FT. / 27 = 37.6 CU. YD.
ITEM 203 253.64' X 10 SQ. FT. = 2536.4 CU. FT. / 27 = 93.9 CU. YD.
ITEM 203 253.64' X 8' = 2029.12 SQ. FT. / 9 = 225.46 SQ. YD.

STA. 33+85 TO STA. 36+40.00 (RAMP "V")

ITEM 452 258.01' X 3' = 774.03 SQ. FT. / 9 = 86.00 SQ. YD.
ITEM 304 258.01' X 3' X (6"/12)' = 387.02 CU. FT. / 27 = 14.3 CU. YD.
ITEM 203 258.01' X 3.75 SQ. FT. = 967.54 CU. FT. / 27 = 35.8 CU. YD.

STA. 33+85 TO STA. 35+95.20 (RAMP "V")

ITEM 452 210.04' X 3' = 630.12 SQ. FT. / 9 = 70.01 SQ. YD.
ITEM 304 210.04' X 3' X (6"/12)' = 315.06 CU. FT. / 27 = 11.7 CU. YD.
ITEM 203 210.04' X 3.75 SQ. FT. = 787.65 CU. FT. / 27 = 29.2 CU. YD.

STA. 38+53.15 TO STA. 41+53.22 (RAMP "V")

ITEM 452 300.07' X 8' = 2400.56 SQ. FT. / 9 = 266.73 SQ. YD.
ITEM 304 300.07' X 8' X (6"/12)' = 1200.28 CU. FT. / 27 = 44.5 CU. YD.
ITEM 203 300.07' X 10 SQ. FT. = 3000.7 CU. FT. / 27 = 111.1 CU. YD.
ITEM 203 300.07' X 7' = 2100.49 SQ. FT. / 9 = 233.4 SQ. YD.

SEE SHEET NOS. 82-84 FOR SUB-SUMMARY

PAVEMENT CALCULATIONS

CALC BY M.D.C. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	64
CHKD BY J.A.D. DATE 2-27-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

STA. 37+33 TO STA. 41+25 (S.R. 2)

ITEM 451 392' X 15' (AVG.) = 5880 SQ. FT. / 9 = 653.33 SQ. YD.
ITEM 304 392' X 15' (AVG.) X (10"/12)' = 4900 CU. FT. / 27 = 181.5 CU. YD.
ITEM 203 392' X 14' (AVG.) = 5488 SQ. FT. / 9 = 609.8 SQ. YD.
ITEM 202 392' X 15' (AVG.) = 5880 SQ. FT. / 9 = 653.3 SQ. YD.
ITEM 203 392' X 15' X (11"/12)' = 5390 CU. FT. / 27 = 199.6 CU. YD.

STA. 41+25 TO STA. 51+28.25 (S.R. 2)

ITEM 452 1003.25' X 8' = 8026 SQ. FT. / 9 = 891.78 SQ. YD.
ITEM 304 1003.25' X 4.50 SQ. FT. = 4514.63 CU. FT. / 27 = 167.2 CU. YD.
ITEM 203 1003.25' X 10.33 SQ. FT. = 10363.57 CU. FT. / 27 = 383.8 CU. YD.
ITEM 203 1003.25' X 7' = 7022.75 SQ. FT. / 9 = 780.3 SQ. YD.

RAMP "Z"

STA. 57+00 TO STA. 59+38.68 (S.R. 2)

ITEM 452 238.68' X 8' = 1909.44 SQ. FT. / 9 = 212.16 SQ. YD.
ITEM 304 238.68' X 3.42 SQ. FT. = 816.29 CU. FT. / 27 = 30.2 CU. YD.
ITEM 203 238.68' X 10.25 SQ. FT. = 2446.47 CU. FT. / 27 = 90.6 CU. YD.
ITEM 203 238.68' X 7' = 1670.76 SQ. FT. / 9 = 185.64 SQ. YD.

STA. 59+38.68 TO STA. 69+00 (S.R. 2)

ITEM 452 967.03' X 8' = 7736.24 SQ. FT. / 9 = 859.58 SQ. YD.
ITEM 304 967.03' X 3.42 SQ. FT. = 3307.24 CU. FT. / 27 = 122.5 CU. YD.
ITEM 203 967.03' X 10.25 SQ. FT. = 9912.06 CU. FT. / 27 = 367.1 CU. YD.
ITEM 203 967.03' X 7' = 6769.21 SQ. FT. / 9 = 752.1 SQ. YD.

STA. 69+00 TO STA. 72+81 (S.R. 2)

ITEM 451 381.47' X 15' (AVG.) = 5722.05 SQ. FT. / 9 = 635.78 SQ. YD.
ITEM 304 381.47' X 15' (AVG.) X (10"/12)' = 4768.38 CU. FT. / 27 = 176.6 CU. YD.
ITEM 203 381.47' X 14' (AVG.) = 5340.58 SQ. FT. / 9 = 593.4 SQ. YD.
ITEM 203 381.47' X 15' X (11"/12)' = 5245.21 CU. FT. / 27 = 194.3 CU. YD.
ITEM 202 381.47' X 15' (AVG.) = 5722.05 SQ. FT. / 9 = 635.8 SQ. YD.

STA. 69+00 TO STA. 72+02.07 (RAMP "Z")

ITEM 452 302.07' X 8' = 2416.56 SQ. FT. / 9 = 268.51 SQ. YD.
ITEM 304 302.07' X 8' X (6"/12)' = 1208.28 CU. FT. / 27 = 44.8 CU. YD.
ITEM 203 302.07' X 10 SQ. FT. = 3020.7 CU. FT. / 27 = 111.9 CU. YD.
ITEM 203 302.07' X 7' = 2114.49 SQ. FT. / 9 = 234.9 SQ. YD.

STA. 72+02.07 TO STA. 73+02.07 (RAMP "Z")

ITEM 452 99.63' X 7' (AVG.) = 697.41 SQ. FT. / 9 = 77.49 SQ. YD.
ITEM 304 99.63' X 7' (AVG.) X (6"/12)' = 348.71 CU. FT. / 27 = 12.9 CU. YD.
ITEM 203 99.63' X 8.75 SQ. FT. (AVG.) = 871.76 CU. FT. / 27 = 32.3 CU. YD.
ITEM 203 99.63' X 6' = 597.78 SQ. FT. / 9 = 66.4 SQ. YD.

STA. 73+02.07 TO STA. 74+64.02 (RAMP "Z")

ITEM 452 161.44' X 6' = 968.64 SQ. FT. / 9 = 107.63 SQ. YD.
ITEM 304 161.44' X 6' X (6"/12)' = 484.32 CU. FT. / 27 = 17.9 CU. YD.
ITEM 203 161.44' X 7.5 SQ. FT. = 1210.8 CU. FT. / 27 = 44.8 CU. YD.
ITEM 203 161.44' X 5' = 807.2 SQ. FT. / 9 = 89.7 SQ. YD.

STA. 74+64.02 TO STA. 80+21.38 (RAMP "Z")

ITEM 452 557.36' X 6' = 3344.16 SQ. FT. / 9 = 371.57 SQ. YD.
ITEM 304 557.36' X 6' X (6"/12)' = 1672.08 CU. FT. / 27 = 61.9 CU. YD.
ITEM 203 557.36' X 7.5 SQ. FT. = 4180.2 CU. FT. / 27 = 154.8 CU. YD.
ITEM 203 557.36' X 5' = 2786.8 SQ. FT. / 9 = 309.6 SQ. YD.

STA. 73+97 TO STA. 74+64.02 (RAMP "Z")

ITEM 452 68.25' X 3' = 204.75 SQ. FT. / 9 = 22.75 SQ. YD.
ITEM 304 68.25' X 3' X (6"/12)' = 102.38 CU. FT. / 27 = 3.8 CU. YD.
ITEM 203 68.25' X 3.75 SQ. FT. = 255.94 CU. FT. / 27 = 9.5 CU. YD.

STA. 74+64.02 TO STA. 80+21.96 (RAMP "Z")

ITEM 452 557.94' X 3' = 1673.82 SQ. FT. / 9 = 185.98 SQ. YD.
ITEM 304 557.94' X 3' X (6"/12)' = 836.91 CU. FT. / 27 = 31.0 CU. YD.
ITEM 203 557.94' X 3.75 SQ. FT. = 2092.28 CU. FT. / 27 = 77.5 CU. YD.

RAMP "W"

STA. 92+75 TO STA. 96+25 (S.R. 2)

ITEM 452 350' X 8' = 2800 SQ. FT. / 9 = 311.11 SQ. YD.
ITEM 304 350' X 4.50 SQ. FT. = 1575 CU. FT. / 27 = 58.3 CU. YD.
ITEM 203 350' X 10.33 SQ. FT. = 3615.5 CU. FT. / 27 = 133.9 CU. YD.
ITEM 203 350' X 7' = 2450 SQ. FT. / 9 = 272.2 SQ. YD.

STA. 88+21.52 TO STA. 92+75 (RAMP "W")

ITEM 452 453' X 8' = 3624 SQ. FT. / 9 = 402.67 SQ. YD.
ITEM 304 453' X 3.42 SQ. FT. = 1549.26 CU. FT. / 27 = 57.4 CU. YD.
ITEM 203 453' X 10.25 SQ. FT. = 4643.25 CU. FT. / 27 = 172.0 CU. YD.
ITEM 203 453' X 7' = 3171 SQ. FT. / 9 = 352.3 SQ. YD.

STA. 87+21.52 TO STA. 88+21.52 (RAMP "W")

ITEM 452 99.91' X 7' (AVG.) = 699.37 SQ. FT. / 9 = 77.71 SQ. YD.
ITEM 304 99.91' X 7' (AVG.) X (6"/12)' = 349.69 CU. FT. / 27 = 13.0 CU. YD.
ITEM 203 99.91' X 8.75 SQ. FT. (AVG.) = 874.21 CU. FT. / 27 = 32.4 CU. YD.
ITEM 203 99.91' X 6' = 599.46 SQ. FT. / 9 = 66.6 SQ. YD.

STA. 84+97.53 TO STA. 87+21.52 (RAMP "W")

ITEM 452 223.52' X 6' = 1341.12 SQ. FT. / 9 = 149.01 SQ. YD.
ITEM 304 223.52' X 6' X (6"/12)' = 670.56 CU. FT. / 27 = 24.8 CU. YD.
ITEM 203 223.52' X 7.5 SQ. FT. = 1676.4 CU. FT. / 27 = 62.1 CU. YD.
ITEM 203 223.52' X 5' = 1117.6 SQ. FT. / 9 = 124.2 SQ. YD.

STA. 79+81.03 TO STA. 84+97.53 (RAMP "W")

ITEM 452 516.50' X 6' = 3099 SQ. FT. / 9 = 344.33 SQ. YD.
ITEM 304 516.50' X 6' X (6"/12)' = 1549.5 CU. FT. / 27 = 57.4 CU. YD.
ITEM 203 516.50' X 7.5 SQ. FT. = 3873.75 CU. FT. / 27 = 143.5 CU. YD.
ITEM 203 516.5' X 5' = 2582.5 SQ. FT. / 9 = 286.9 SQ. YD.

STA. 87+21.52 TO STA. 88+21.52 (RAMP "W")

ITEM 452 100.46' X 3' = 301.38 SQ. FT. / 9 = 33.49 SQ. YD.
ITEM 304 100.46' X 3' X (6"/12)' = 150.69 CU. FT. / 27 = 5.6 CU. YD.
ITEM 203 100.46' X 3.75 SQ. FT. = 376.73 CU. FT. / 27 = 14.0 CU. YD.

STA. 84+97.53 TO STA. 87+21.52 (RAMP "W")

ITEM 452 226.73' X 3' = 680.19 SQ. FT. / 9 = 75.58 SQ. YD.
ITEM 304 226.73' X 3' X (6"/12)' = 340.10 CU. FT. / 27 = 12.6 CU. YD.
ITEM 203 226.73' X 3.75 SQ. FT. = 850.24 CU. FT. / 27 = 31.5 CU. YD.

STA. 79+81.03 TO STA. 84+97.53 (RAMP "W")

ITEM 452 519.96' X 3' = 1559.88 SQ. FT. / 9 = 173.32 SQ. YD.
ITEM 304 519.96' X 3' X (6"/12)' = 779.94 CU. FT. / 27 = 28.8 CU. YD.
ITEM 203 519.96' X 3.75 SQ. FT. = 1949.85 CU. FT. / 27 = 72.2 CU. YD.

RAMP "X"

STA. 64+00 TO STA. 67+50 (S.R. 2)

ITEM 452 350' X 8' = 2800 SQ. FT. / 9 = 311.11 SQ. YD.
ITEM 304 350' X 4.50 SQ. FT. = 1575 CU. FT. / 27 = 58.3 CU. YD.
ITEM 203 350' X 10.33 SQ. FT. = 3615.5 CU. FT. / 27 = 133.9 CU. YD.
ITEM 203 350' X 7' = 2450 SQ. FT. / 9 = 272.2 SQ. YD.

STA. 67+50 TO STA. 71+98.83 (RAMP "X")

ITEM 452 448.21' X 8' = 3585.68 SQ. FT. / 9 = 398.41 SQ. YD.
ITEM 304 448.21' X 4.50 SQ. FT. = 2016.95 CU. FT. / 27 = 74.7 CU. YD.
ITEM 203 448.21' X 10.33 SQ. FT. = 4630.01 CU. FT. / 27 = 171.5 CU. YD.
ITEM 203 448.21' X 7' = 3137.47 SQ. FT. / 9 = 348.6 SQ. YD.

STA. 71+98.83 TO STA. 72+98.83 (RAMP "X")

ITEM 452 99.88' X 7' (AVG.) = 699.16 SQ. FT. / 9 = 77.68 SQ. YD.
ITEM 304 99.88' X 7' (AVG.) X (6"/12)' = 349.58 CU. FT. / 27 = 12.9 CU. YD.
ITEM 203 99.88' X 8.75 SQ. FT. (AVG.) = 873.95 CU. FT. / 27 = 32.4 CU. YD.
ITEM 203 99.88' X 6' = 599.28 SQ. FT. / 9 = 66.6 SQ. YD.

STA. 72+98.83 TO STA. 75+10.19 (RAMP "X")

ITEM 452 210.92' X 6' = 1265.52 SQ. FT. / 9 = 140.61 SQ. YD.
ITEM 304 210.92' X 6' X (6"/12)' = 632.76 CU. FT. / 27 = 23.4 CU. YD.
ITEM 203 210.92' X 7.5 SQ. FT. = 1581.9 CU. FT. / 27 = 58.6 CU. YD.
ITEM 203 210.92 X 5' = 1054.6 SQ. FT. / 9 = 117.2 SQ. YD.

STA. 75+10.19 TO STA. 79+63.76 (RAMP "X")

ITEM 452 453.57' X 6' = 2721.42 SQ. FT. / 9 = 302.38 SQ. YD.
ITEM 304 453.57' X 6' X (6"/12)' = 1360.71 CU. FT. / 27 = 50.4 CU. YD.
ITEM 203 453.57' X 7.5 SQ. FT. = 3401.8 CU. FT. / 27 = 126.0 CU. YD.
ITEM 203 453.57' X 5' = 2267.85 SQ. FT. / 9 = 252.0 SQ. YD.

STA. 79+63.76 TO STA. 21+60 (VERM. INT. RD.) (RAMP "X")

ITEM 452 94.20' X 5' (AVG.) = 471 SQ. FT. / 9 = 52.33 SQ. YD.
ITEM 304 94.20' X 5' (AVG.) X (6"/12)' = 235.5 CU. FT. / 27 = 8.7 CU. YD.
ITEM 203 94.20' X 6.25 SQ. FT. (AVG.) = 588.75 CU. FT. / 27 = 21.8 CU. YD.

STA. 71+98.83 TO STA. 72+98.83 (RAMP "X")

ITEM 452 100.61' X 3' = 301.83 SQ. FT. / 9 = 33.54 SQ. YD.
ITEM 304 100.61' X 3' X (6"/12)' = 150.92 CU. FT. / 27 = 5.6 CU. YD.
ITEM 203 100.61' X 3.75 SQ. FT. = 377.3 CU. FT. / 27 = 14.0 CU. YD.

STA. 72+98.83 TO STA. 75+10.19 (RAMP "X")

ITEM 452 213.94' X 3' = 641.82 SQ. FT. / 9 = 71.31 SQ. YD.
ITEM 304 213.94' X 3' X (6"/12)' = 320.91 CU. FT. / 27 = 11.9 CU. YD.
ITEM 203 213.94' X 3.75 SQ. FT. = 802.28 CU. FT. / 27 = 29.7 CU. YD.

STA. 75+10.19 TO STA. 79+44.71 (RAMP "X")

ITEM 452 434.52' X 3' = 1303.56 SQ. FT. / 9 = 144.84 SQ. YD.
ITEM 304 434.52' X 3' X (6"/12)' = 651.78 CU. FT. / 27 = 24.1 CU. YD.
ITEM 203 434.52' X 3.75 SQ. FT. = 1629.45 CU. FT. / 27 = 60.4 CU. YD.

STA. 79+44.71 TO STA. 22+67 (VERM. INT. RD.) (RAMP "X")

ITEM 452 69.81' X 3' = 209.43 SQ. FT. / 9 = 23.27 SQ. YD.
ITEM 304 69.81' X 3' X (6"/12)' = 104.72 CU. FT. / 27 = 3.9 CU. YD.
ITEM 203 69.81' X 3.75 SQ. FT. = 261.79 CU. FT. / 27 = 9.7 CU. YD.

SEE SHEET NOS. 82-84 FOR SUB-SUMMARY

PAVEMENT CALCULATIONS

CALC BY M.D.C. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	65
CHKD BY J.A.D. DATE 2-27-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

RAMP "Y"

STA. 92+00 TO STA. 104+00 (S.R. 2)

ITEM 452 1200' X 8' = 9600 SQ. FT. / 9 = 1066.67 SQ. YD.
ITEM 304 1200' X 4.50 SQ. FT. = 5400 CU. FT. / 27 = 200.0 CU. YD.
ITEM 203 1200' X 10.33 SQ. FT. = 12396 CU. FT. / 27 = 459.1 CU. YD.
ITEM 203 1200' X 7' = 8400 SQ. FT. / 9 = 933.3 SQ. Y.D

STA. 88+18 TO STA. 92+00 (RAMP "Y")

ITEM 451 382' X 15' (AVG.) = 5730 SQ. FT. / 9 = 636.67 SQ. YD.
ITEM 304 382' X 15' (AVG.) X (10"/12)' = 4775 CU. FT. / 27 = 176.9 CU. YD.
ITEM 203 382' X 15' (AVG.) = 5730 SQ. FT. / 9 = 636.7 SQ. YD.
ITEM 203 382' X 14' X (11"/12)' = 4902.3 CU. FT. / 27 = 181.6 CU. Y.D
ITEM 202 382' X 15' (AVG.) = 5730 SQ. FT. / 9 = 636.7 SQ. YD.

STA. 88+99.94 TO STA. 92+00 (RAMP "Y")

ITEM 452 300.06' X 8' = 2400.48 SQ. FT. / 9 = 266.72 SQ. YD.
ITEM 304 300.06' X 8' X (6"/12)' = 1200.2 CU. FT. / 27 = 44.5 CU. YD.
ITEM 203 300.06' X 10 SQ. FT. = 3000.6 CU. FT. / 27 = 111.1 CU. YD.
ITEM 203 300.06' X 7' = 2100.42 SQ. FT. / 9 = 233.4 SQ. YD.

STA. 87+99.94 TO STA. 88+99.94 (RAMP "Y")

ITEM 452 99.65' X 7' (AVG.) = 697.55 SQ. FT. / 9 = 77.51 SQ. YD.
ITEM 304 99.65' X 7' (AVG.) X (6"/12)' = 348.78 CU. FT. / 27 = 12.9 CU. YD.
ITEM 203 99.65' X 8.75 SQ. FT. (AVG.) = 871.94 CU. FT. / 27 = 32.3 CU. YD.
ITEM 203 99.65' X 6' = 597.9 SQ. FT. / 9 = 66.4 SQ. YD.

STA. 86+51.21 TO STA. 87+99.94 (RAMP "Y")

ITEM 452 148.26' X 6' = 889.56 SQ. FT. / 9 = 98.84 SQ. YD.
ITEM 304 148.26' X 6' X (6"/12)' = 444.78 CU. FT. / 27 = 16.5 CU. YD.
ITEM 203 148.26' X 7.5 SQ. FT. = 1111.95 CU. FT. / 27 = 41.2 CU. YD.
ITEM 203 148.26' X 5' = 741.3 SQ. FT. / 9 = 82.4 SQ. YD.

STA. 80+30.24 TO STA. 86+51.21 (RAMP "Y")

ITEM 452 620.97' X 6' = 3725.82 SQ. FT. / 9 = 413.98 SQ. YD.
ITEM 304 620.97' X 6' X (6"/12)' = 1862.91 CU. FT. / 27 = 69.0 CU. YD.
ITEM 203 620.97' X 7.5 SQ. FT. = 4657.28 CU. FT. / 27 = 172.5 CU. YD.

STA. 80+30.24 TO STA. 21+43 (VERM. INT. RD.) (RAMP "Y")

ITEM 452 94.25' X 5' (AVG.) = 471.25 SQ. FT. / 9 = 52.36 SQ. YD.
ITEM 304 94.25' X 5' (AVG.) X (6"/12)' = 235.63 CU. FT. / 27 = 8.7 CU. YD.
ITEM 203 94.25' X 6.25 SQ. FT. (AVG.) = 589.06 CU. FT. / 27 = 21.8 CU. YD.

STA. 22+41 (VERM. INT. RD.) TO STA. 80+41.89 (RAMP "Y")

ITEM 452 56.72' X 3' = 170.16 SQ. FT. / 9 = 18.91 SQ. YD.
ITEM 304 56.72' X 3' X (6"/12)' = 85.08 CU. FT. / 27 = 3.2 CU. YD.
ITEM 203 56.72' X 3.75 SQ. FT. = 212.7 CU. FT. / 27 = 7.9 CU. YD.

STA. 80+41.89 TO STA. 86+51.21 (RAMP "Y")

ITEM 452 609.32' X 3' = 1827.96 SQ. FT. / 9 = 203.11 SQ. YD.
ITEM 304 609.32' X 3' X (6"/12)' = 913.98 CU. FT. / 27 = 33.9 CU. YD.
ITEM 203 609.32' X 3.75 SQ. FT. = 2284.95 CU. FT. / 27 = 84.6 CU. YD.

STA. 86+51.21 TO STA. 87+00 (RAMP "Y")

ITEM 452 49.69' X 3' = 149.07 SQ. FT. / 9 = 16.56 SQ. YD.
ITEM 304 49.69' X 3' X (6"/12)' = 74.54 CU. FT. / 27 = 2.8 CU. YD.
ITEM 203 49.69' X 3.75 SQ. FT. = 186.34 CU. FT. / 27 = 6.9 CU. YD.

RAMP "G"

STA. 152+50 TO STA. 164+50 (S.R. 2)

ITEM 452 1200' X 8' = 9600 SQ. FT. / 9 = 1066.67 SQ. YD.
ITEM 304 1200' X 4.50 SQ. FT. = 5400 CU. FT. / 27 = 200.0 CU. YD.
ITEM 203 1200' X 10.33 SQ. FT. = 12396 CU. FT. / 27 = 459.1 CU. YD.
ITEM 203 1200' X 7' = 8400 SQ. FT. / 9 = 933.3 SQ. YD.

STA. 164+50 TO STA. 168+16 (RAMP "G")

ITEM 451 366' X 15' (AVG.) = 5490 SQ. FT. / 9 = 610 SQ. YD.
ITEM 304 366' X 15' (AVG.) X (10"/12)' = 4575 CU. FT. / 27 = 169.4 CU. YD.
ITEM 203 366' X 15' (AVG.) = 5490 SQ. FT. / 9 = 610 SQ. YD.
ITEM 203 366' X 15' X (11"/12)' = 5032.5 CU. FT. / 27 = 186.4 CU. YD.
ITEM 202 366' X 15' (AVG.) = 5490 SQ. FT. / 9 = 610 SQ. YD.

STA. 164+50 TO STA. 167+50.07 (RAMP "G")

ITEM 452 300.07' X 8' = 2400.56 SQ. FT. / 9 = 266.73 SQ. YD.
ITEM 304 300.07' X 8' X (3"/12)' = 600.14 CU. FT. / 27 = 22.2 CU. YD.
ITEM 203 300.07' X 10 SQ. FT. = 3000.7 CU. FT. / 27 = 111.1 CU. YD.
ITEM 203 300.07' X 7' = 2100.49 SQ. FT. / 9 = 233.4 SQ. YD.

STA. 167+50.07 TO STA. 168+50.07 (RAMP "G")

ITEM 452 99.51' X 7' (AVG.) = 696.57 SQ. FT. / 9 = 77.40 SQ. YD.
ITEM 304 99.51' X 7' (AVG.) X (6"/12)' = 348.29 CU. FT. / 27 = 12.9 CU. YD.
ITEM 203 99.51' X 8.75 SQ. FT. (AVG.) = 870.71 CU. FT. / 27 = 32.2 CU. YD.
ITEM 203 99.51' X 6' = 597.06 SQ. FT. / 9 = 66.3 SQ. YD.

STA. 168+50.07 TO STA. 170+90.66 (RAMP "G")

ITEM 452 239.59' X 6' = 1437.54 SQ. FT. / 9 = 159.73 SQ. YD.
ITEM 304 239.59' X 6' X (6"/12)' = 718.77 CU. FT. / 27 = 26.6 CU. YD.
ITEM 203 239.59' X 7.5 SQ. FT. = 1796.93 CU. FT. / 27 = 66.6 CU. YD.
ITEM 203 239.59' X 5' = 1197.95 SQ. FT. / 9 = 133.1 SQ. YD.

STA. 170+90.66 TO STA. 173+39.26 (RAMP "G")

ITEM 452 248.60' X 6' = 1491.60 SQ. FT. / 9 = 165.73 SQ. YD.
ITEM 304 248.60' X 6' X (6"/12)' = 745.80 CU. FT. / 27 = 27.6 CU. YD.
ITEM 203 248.60' X 7.5 SQ. FT. = 1864.5 CU. FT. / 27 = 69.1 CU. YD.
ITEM 203 159.34' X 5' = 796.7 SQ. FT. / 9 = 88.5 SQ. YD.
ITEM 203 89.26' X 6' = 535.56 SQ. FT. / 9 = 59.5 SQ. YD.

STA. 173+39.26 TO STA. 175+76.27 (RAMP "G")

ITEM 452 238.50' X 6' = 1431 SQ. FT. / 9 = 159 SQ. YD.
ITEM 304 238.50' X 6' X (6"/12)' = 715.5 CU. FT. / 27 = 26.5 CU. YD.
ITEM 203 238.50' X 7.5 SQ. FT. = 1788.75 CU. FT. / 27 = 66.3 CU. YD.
ITEM 203 238.50' X 5' = 1192.5 SQ. FT. / 9 = 132.5 SQ. YD.

STA. 175+76.27 TO STA. 211+79.12 (BAUMHART RD.) (RAMP "G")

ITEM 452 124.25' X 6' = 745.50 SQ. FT. / 9 = 82.80 SQ. YD.
ITEM 304 124.25' X 6' X (6"/12)' = 372.75 CU. FT. / 27 = 13.8 CU. YD.
ITEM 203 124.25' X 7.5 SQ. FT. = 931.88 CU. FT. / 27 = 34.5 CU. YD.
ITEM 203 124.25' X 5' = 621.25 SQ. FT. / 9 = 69.0 SQ. YD.

STA. 169+16 TO STA. 170+90.66 (RAMP "G")

ITEM 452 178.93' X 3' = 536.79 SQ. FT. / 9 = 59.64 SQ. YD.
ITEM 304 178.93' X 3' X (6"/12)' = 268.40 CU. FT. / 27 = 9.9 CU. YD.
ITEM 203 178.93' X 3.75 SQ. FT. = 670.99 CU. FT. / 27 = 24.9 CU. YD.

STA. 170+90.66 TO STA. 173+39.26 (RAMP "G")

ITEM 452 248.60' X 3' = 745.80 SQ. FT. / 9 = 82.87 SQ. YD.
ITEM 304 248.60' X 3' X (6"/12)' = 372.9 CU. FT. / 27 = 13.8 CU. YD.
ITEM 203 248.60' X 3.75 SQ. FT. = 932.25 CU. FT. / 27 = 34.5 CU. YD.

STA. 173+39.26 TO STA. 175+76.27 (RAMP "G")

ITEM 452 228.32' X 3' = 684.96 SQ. FT. / 9 = 76.11 SQ. YD.
ITEM 304 228.32' X 3' X (6"/12)' = 342.48 CU. FT. / 27 = 12.7 CU. YD.
ITEM 203 228.32' X 3.75 SQ. FT. = 856.20 CU. FT. / 27 = 31.71 CU. YD.

STA. 175+76.27 TO STA. 210+86 (BAUMHART RD.) (RAMP "G")

ITEM 452 68.62' X 3' = 205.86 SQ. FT. / 9 = 22.87 SQ. YD.
ITEM 304 68.62' X 3' X (6"/12)' = 102.93 CU. FT. / 27 = 3.8 CU. YD.
ITEM 203 68.62' X 3.75 SQ. FT. = 257.33 CU. FT. / 27 = 9.5 CU. YD.

STA. 176+48 TO STA. 176+78.06 (RAMP "G")

ITEM 451 2072.67 SQ. FT. / 9 = 230.30 SQ. YD.
ITEM 304 2072.67 SQ. FT. X (6"/12)' = 1036.34 CU. FT. / 27 = 38.4 CU. YD.
ITEM 203 2072.67 SQ. FT. / 9 = 230.3 SQ. YD.
ITEM 203 2072.67 SQ. FT. X (11"/12)' = 1899.95 CU. FT. / 27 = 70.4 CU. YD.
ITEM 202 2072.67 SQ. FT. / 9 = 230.3 SQ. YD.

RAMP "H"

STA. 159+50 TO STA. 163+12 (S.R. 2)

ITEM 452 362' X 8' = 2896 SQ. FT. / 9 = 321.78 SQ. YD.
ITEM 304 362' X 3.42 SQ. FT. = 1238.04 CU. FT. / 27 = 45.9 CU. YD.
ITEM 203 362' X 10.25 SQ. FT. = 3710.5 CU. FT. / 27 = 137.4 CU. YD.
ITEM 203 362' X 7' = 2534 SQ. FT. / 9 = 281.6 SQ. YD.

STA. 163+12 TO STA. 167+65.48 (RAMP "H")

ITEM 452 453' X 8' = 3624 SQ. FT. / 9 = 402.67 SQ. YD.
ITEM 304 453' X 3.42 SQ. FT. = 1549.26 CU. FT. / 27 = 57.4 CU. YD.
ITEM 203 453' X 10.25 SQ. FT. = 4643.25 CU. FT. / 27 = 172.0 CU. YD.
ITEM 203 453' X 7' = 3171 SQ. FT. / 9 = 352.3 SQ. YD.

STA. 167+65.48 TO STA. 168+65.48 (RAMP "H")

ITEM 452 99.91' X 7' (AVG.) = 699.37 SQ. FT. / 9 = 77.71 SQ. YD.
ITEM 304 99.91' X 7' (AVG.) X (6"/12)' = 349.69 CU. FT. / 27 = 13.0 CU. YD.
ITEM 203 99.91' X 8.75 SQ. FT. (AVG.) = 874.21 CU. FT. / 27 = 32.4 CU. YD.
ITEM 203 99.91' X 6' = 599.46 SQ. FT. / 9 = 66.6 SQ. YD.

STA. 168+65.48 TO STA. 171+13.26 (RAMP "H")

ITEM 452 246.74' X 6' = 1480.44 SQ. FT. / 9 = 164.49 SQ. YD.
ITEM 304 246.74' X 6' X (6"/12)' = 740.22 CU. FT. / 27 = 27.4 CU. YD.
ITEM 203 246.74' X 7.5 SQ. FT. = 1850.55 CU. FT. / 27 = 68.5 CU. YD.
ITEM 203 246.74' X 5' = 1233.7 SQ. FT. / 9 = 137.08 SQ. YD.

STA. 171+13.26 TO STA. 173+18.64 (RAMP "H")

ITEM 452 205.38' X 6' = 1232.28 SQ. FT. / 9 = 136.92 SQ. YD.
ITEM 304 205.38' X 6' X (6"/12)' = 616.14 CU. FT. / 27 = 22.8 CU. YD.
ITEM 203 205.38' X 7.5 SQ. FT. = 1540.35 CU. FT. / 27 = 57.05 CU. YD.
ITEM 203 136.74' X 5' = 683.7 SQ. FT. / 9 = 76.0 SQ. YD.
ITEM 203 68.64' X 6' = 411.84 SQ. FT. / 9 = 45.8 SQ. YD.

SEE SHEET NOS. 82-84 FOR SUB-SUMMARY

PAVEMENT CALCULATIONS

CALC BY M.D.C. DATE 2-27-92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO	66
CHKD BY J.A.D. DATE 2-27-92		FHWA REGION 5	267

STA. 173+18.64 TO STA. 175+99.89 (RAMP "H")

ITEM 452 282.72' X 6' = 1696.32 SQ. FT. / 9 = 188.48 SQ. YD.
ITEM 304 282.72' X 6' X (6"/12)' = 848.16 CU. FT. / 27 = 31.4 CU. YD.
ITEM 203 282.72' X 7.5 SQ. FT. = 2120.4 CU. FT. / 27 = 78.5 CU. YD.
ITEM 203 282.72' X 5' = 1413.6 SQ. FT. / 9 = 157.1 SQ. YD.

STA. 175+99.89 TO STA. 203+47.90 (BAUMHART RD.) (RAMP "H")

ITEM 452 88.56' X 6' = 531.36 SQ. FT. / 9 = 59.04 SQ. YD.
ITEM 304 88.56' X 6' X (6"/12)' = 265.68 CU. FT. / 27 = 9.8 CU. YD.
ITEM 203 88.56' X 7.5 SQ. FT. = 664.2 CU. FT. / 27 = 24.6 CU. YD.
ITEM 203 88.56' X 5' = 442.8 SQ. FT. / 9 = 49.2 SQ. YD.

STA. 203+97.90 TO STA. 203+47.90 (BAUMHART RD.)

ITEM 452 50' X 5' (AVG.) = 250 SQ. FT. / 9 = 27.78 SQ. YD.
ITEM 304 50' X 5' (AVG.) X (6"/12)' = 125.0 CU. FT. / 27 = 4.6 CU. YD.
ITEM 203 50' X 6.25 SQ. FT. (AVG.) = 312.5 CU. FT. / 27 = 11.6 CU. YD.

STA. 167+65.48 TO STA. 168+65.48 (RAMP "H")

ITEM 452 100.46' X 3' = 301.38 SQ. FT. / 9 = 33.49 SQ. YD.
ITEM 304 100.46' X 3' X (6"/12)' = 150.69 CU. FT. / 27 = 5.6 CU. YD.
ITEM 203 100.46' X 3.75 SQ. FT. = 376.73 CU. FT. / 27 = 14.0 CU. YD.
ITEM 203 100.46' X 2' = 200.92 SQ. FT. / 9 = 22.3 SQ. YD.

STA. 168+65.48 TO STA. 171+13.26 (RAMP "H")

ITEM 452 253.84' X 3' = 761.52 SQ. FT. / 9 = 84.61 SQ. YD.
ITEM 304 253.84' X 3' X (6"/12)' = 380.76 CU. FT. / 27 = 14.1 CU. YD.
ITEM 203 253.84' X 3.75 SQ. FT. = 951.9 CU. FT. / 27 = 35.3 CU. YD.
ITEM 203 253.84' X 2' = 507.68 SQ. FT. / 9 = 56.4 SQ. YD.

STA. 171+13.26 TO STA. 173+18.64 (RAMP "H")

ITEM 452 205.38' X 3' = 616.14 SQ. FT. / 9 = 68.46 SQ. YD.
ITEM 304 205.38' X 3' X (6"/12)' = 308.07 CU. FT. / 27 = 11.4 CU. YD.
ITEM 203 205.38' X 3.75 SQ. FT. = 770.18 CU. FT. / 27 = 28.5 CU. YD.
ITEM 203 205.38' X 2' = 410.76 SQ. FT. / 9 = 45.64 SQ. YD.

STA. 173+18.64 TO STA. 175+99.87 (RAMP "H")

ITEM 452 272.66' X 3' = 817.98 SQ. FT. / 9 = 90.89 SQ. YD.
ITEM 304 272.66' X 3' X (6"/12)' = 408.99 CU. FT. / 27 = 15.1 CU. YD.
ITEM 203 272.66' X 3.75 SQ. FT. = 1022.48 CU. FT. / 27 = 37.87 CU. YD.

STA. 175+99.87 TO STA. 204+65 (BAUMHART RD.) (RAMP "H")

ITEM 452 75.20' X 3' = 225.60 SQ. FT. / 9 = 25.10 SQ. YD.
ITEM 304 75.20' X 3' X (6"/12)' = 112.80 CU. FT. / 27 = 4.2 CU. YD.
ITEM 203 75.20' X 3.75 SQ. FT. = 282.0 CU. FT. / 27 = 10.4 CU. YD.

STA. 168+04 TO STA. 169+73 (RAMP "H")

ITEM 451 170.33' X 16' = 2725.28 SQ. FT. / 9 = 302.81 SQ. YD.
ITEM 304 170.33' X 16' X (6"/12)' = 1362.64 CU. FT. / 27 = 50.5 CU. YD.
ITEM 203 170.33' X 16' = 2725.28 SQ. FT. / 9 = 302.8 SQ. YD.
ITEM 203 170.33' X 16' X (11"/12)' = 2498.17 CU. FT. / 27 = 92.5 CU. YD.
ITEM 202 170.33' X 16' = 2725.28 SQ. FT. / 9 = 302.8 SQ. YD.

STA. 169+73 TO STA. 170+02 (RAMP "H")

ITEM 451 29.4' X 16' = 470.48 SQ. FT. / 9 = 52.3 SQ. YD.
ITEM 304 29.4' X 16' X (6"/12)' = 235.2 CU. FT. / 27 = 8.7 CU. YD.
ITEM 203 29.4' X 16' = 470.48 SQ. FT. / 9 = 52.3 SQ. YD.
ITEM 203 29.4' X 16' X (11"/12)' = 431.2 CU. FT. / 27 = 16.0 CU. YD.
ITEM 202 29.4' X 16' = 470.48 SQ. FT. / 9 = 52.3 SQ. YD.

STA. 170+02 TO STA. 171+84 (RAMP "H")

ITEM 451 183.24' X 16' = 2931.84 SQ. FT. / 9 = 325.76 SQ. YD.
ITEM 304 183.24' X 16' X (6"/12)' = 1465.92 CU. FT. / 27 = 54.3 CU. YD.
ITEM 203 183.24' X 16' = 2931.84 SQ. FT. / 9 = 325.8 SQ. YD.
ITEM 203 183.24' X 16' X (11"/12)' = 2687.52 CU. FT. / 27 = 99.5 CU. YD.
ITEM 202 183.24' X 16' = 2931.84 SQ. FT. / 9 = 325.8 SQ. YD.

SEE SHEET NOS. 82-84 FOR SUB-SUMMARY

FULL DEPTH PAVEMENT JOINT REPAIR CALCULATIONS

CALC BY M.D.C. DATE 2-27-92
CHKD BY J.A.D. DATE 2-27-92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
1827+93	WB	32 X 12	42.67	32 X 12	42.67					144		
1830+48	WB	6 X 12	8	6 X 12	8					66		SKEWED JOINTS
1831+18	WB	60 X 12	80	60 X 12	80					228		SKEWED JOINTS
1831+87	WB	6 X 12	8	6 X 12	8					66		SKEWED JOINTS
1832+07	WB	6 X 12	8	6 X 12	8					66		SKEWED JOINTS
1833+07	WB			6 X 12	8					36		SKEWED JOINTS
1833+47	WB			6 X 12	8					36		SKEWED JOINTS
1833+68	WB	6 X 12	8	6 X 12	8					66		SKEWED JOINTS
1834+29	WB			6 X 12	8					36		SKEWED JOINTS
1834+49	WB	6 X 12	8	6 X 12	8					66		SKEWED JOINTS
1834+99	WB			6 X 12	8					36		SKEWED JOINTS
16+88	WB					6 X 12	8	6 X 12	8	60		
17+32	WB					86 X 12	114.67			110		
17+39	WB							12 X 12	16	48		
17+75	WB					6 X 12	8	6 X 12	8	54		
18+06	WB					6 X 12	8	6 X 12	8	54		
18+13	WB					6 X 12	8	6 X 12	8	54		
19+04	WB					28 X 12	37.33	28 X 12	37.33	76		
20+78	WB					184 X 12	245.33	184 X 12	245.33	232		
21+85	WB					20 X 12	26.67			44		
23+23	WB					46 X 12	61.33	46 X 12	61.33	94		
26+51	WB					15 X 12	20	15 X 12	20	63		
26+93	WB					19 X 12	25.33	19 X 12	25.33	67		
29+25	WB							6 X 12	8	30		
33+19	WB							6 X 12	8	30		
33+41	WB							6 X 12	8	30		
33+94	WB							6 X 12	8	30		
34+81	WB							12 X 12	16	36		
35+21	WB							6 X 12	8	30		
35+57	WB							6 X 12	8	30		
35+72	WB							6 X 12	8	30		
36+04	WB					6 X 12	8	6 X 12	8	54		
37+64	WB							50 X 12	66.67	74		
39+21	WB							16 X 12	21.33	40		
39+52	WB							6 X 12	8	30		
39+63	WB							6 X 12	8	30		
40+38	WB							15 X 12	20	39		
40+78	WB							31X 12	41.33	86		
41+56	WB							6 X 12	8	36		
44+00	WB							6 X 12	8	36		
49+19	WB							6 X 12	8	36		
49+77	WB							6 X 12	8	30		
TOTALS			162.67		194.67		570.66		714.65	2539		

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
91+39	WB	6 X 12	8	6 X 12	8					60		
92+18	WB	15 X 12	20	15 X 12	20					78		
92+58	WB	10 X 12	13.33	10 X 12	13.33					68		
93+97	WB	10 X 12	13.33	10 X 12	13.33					68		
94+21	WB	10 X 12	13.33	10 X 12	13.33					68		
94+37	WB	12 X 12	16	12 X 12	16					72		
94+60	WB	36 X 12	48	36 X 12	48					120		
95+03	WB	6 X 12	8							30		
95+06	WB			10 X 12	13.33					44		
95+50	WB	6 X 12	8							30		
95+71	WB	28 X 12	37.33							52		
95+78	WB			14 X 12	18.67					52		
96+17	WB			12 X 12	16					48		
96+22	WB	6 X 12	8							30		
96+50	WB	18 X 12	24	18 X 12	24					66		
96+90	WB	6 X 12	8	See Sheet No. 11						54		
96+96	WB	6 X 12	8	See Sheet No. 11						54		
97+40	WB	6 X 12	8	See Sheet No. 11						54		
97+77	WB			See Sheet No. 11						30		
100+19	WB	6 X 12	8	See Sheet No. 11						54		
100+67	WB	6 X 12	8	See Sheet No. 11						54		
101+00	WB	6 X 12	8	See Sheet No. 11						54		
101+43	WB	6 X 12	8	See Sheet No. 11						54		
101+83	WB			See Sheet No. 11						30		
102+23	WB	6 X 12	8	See Sheet No. 11						54		
102+65	WB	6 X 12	8	6 X 12	8					54		
103+05	WB	6 X 12	8	6 X 12	8					54		
103+30	WB			See Sheet No. 99						30		
103+87	WB	6 X 12	8	See Sheet No. 99						54		
104+20	WB	6 X 12	8	See Sheet No. 99						54		
104+65	WB	6 X 12	8	See Sheet No. 99						54		
105+04	WB	6 X 12	8	See Sheet No. 99						54		
105+44	WB	6 X 12	8	See Sheet No. 99						54		
105+82	WB	6 X 12	8	See Sheet No. 99						54		
106+28	WB	6 X 12	8	See Sheet No. 99						54		
106+58	WB	6 X 12	8	See Sheet No. 99						54		
107+08	WB	6 X 12	8	See Sheet No. 99						54		
107+40	WB	6 X 12	8	6 X 12	8					54		
107+80	WB	6 X 12	8	6 X 12	8					54		
108+23	WB	10 X 12	13.33	10 X 12	13.33					58		
108+56	WB	6 X 12	8							30		
108+63	WB			16 X 12	21.33					40		
109+12	WB	6 X 12	8	6 X 12	8					54		
109+40	WB	6 X 12	8	See Sheet No. 100						54		
109+59	WB			10 X 12	13.33					34		
109+91	WB	6 X 12	8	See Sheet No. 100						54		
110+29	WB	6 X 12	8	See Sheet No. 100						54		
110+62	WB	15 X 12	20	15 X 12	20					63		
111+07	WB	6 X 12	8	See Sheet No. 100						54		
111+24	WB			See Sheet No. 100						30		
111+45	WB	6 X 12	8	See Sheet No. 100						54		
111+65	WB			See Sheet No. 100						30		
111+77	WB	6 X 12	8	See Sheet No. 100						54		
112+02	WB	6 X 12	8	See Sheet No. 100						54		
112+44	WB			See Sheet No. 100						30		
113+02	WB	6 X 12	8	6 X 12	8					54		
113+65	WB			6 X 12	8					30		
114+04	WB			6 X 12	8					30		
114+44	WB	6 X 12	8	6 X 12	8					54		
TOTALS			506.65		343.98					3025		
GRAND TOTALS CARRIED TO GENERAL SUMMARY			1207.97				1285.31			5564		

FULL DEPTH PAVEMENT JOINT REPAIR CALCULATIONS

CALC BY M.D.C. DATE 2-27-92	ERI/LOR-2-30.51/0.00
CHKD BY J.A.D. DATE 2-27-92	VARIOUS SECTIONS
	ERIE & LORAIN COUNTIES

OHIO | FHWA REGION 5 | 68 / 267

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
123+42	WB	6 X 12	8	6 X 12	8					54		
123+67	WB	6 X 12	8	6 X 12	8					54		
123+89	WB			6 X 12	8					30		
124+31	WB	6 X 12	8	6 X 12	8					54		
124+65	WB	6 X 12	8	6 X 12	8					54		
125+11	WB	6 X 12	8	6 X 12	8					54		
125+44	WB			6 X 12	8					30		
125+87	WB	6 X 12	8	6 X 12	8					54		
126+25	WB	6 X 12	8	6 X 12	8					54		
126+62	WB	10 X 12	13.33	10 X 12	13.33					58		
127+06	WB			18 X 12	24					42		
127+11	WB	9 X 12	12							33		
127+50	WB	12 X 12	16	12 X 12	16					60		
127+92	WB	6 X 12	8	6 X 12	8					54		
128+26	WB	6 X 12	8	6 X 12	8					54		
128+63	WB	6 X 12	8	6 X 12	8					54		
129+43	WB	6 X 12	8	See Sheet No. 101						54		
129+94	WB	6 X 12	8	See Sheet No. 101						54		
131+11	WB	6 X 12	8	See Sheet No. 101						54		
131+44	WB	6 X 12	8	See Sheet No. 101						54		
132+67	WB	6 X 12	8	See Sheet No. 101						54		
133+42	WB	6 X 12	8	See Sheet No. 101						54		
133+69	WB	6 X 12	8	See Sheet No. 101						54		
134+73	WB	6 X 12	8	See Sheet No. 101						54		
135+70	WB	6 X 12	8	See Sheet No. 101						54		
136+63	WB	6 X 12	8	See Sheet No. 101						54		
137+05	WB	6 X 12	8	6 X 12	8					54		
137+69	WB	6 X 12	8	6 X 12	8					54		
137+91	WB	9 X 12	12	9 X 12	12					57		
137+95	WB	6 X 12	8							30		
138+31	WB	6 X 12	8	6 X 12	8					54		
138+70	WB	6 X 12	8	6 X 12	8					54		
141+51	WB			6 X 12	8					30		
141+91	WB	6 X 12	8	6 X 12	8					54		
142+33	WB	6 X 12	8	6 X 12	8					54		
142+76	WB	6 X 12	8	6 X 12	8					54		
143+07	WB	12 X 12	16	12 X 12	16					60		
143+54	WB	6 X 12	8	6 X 12	8					54		
143+68	WB			6 X 12	8					30		
143+86	WB	6 X 12	8	6 X 12	8					54		
144+25	WB	6 X 12	8	See Sheet No. 102						54		
144+64	WB	6 X 12	8	See Sheet No. 102						54		
145+04	WB	6 X 12	8	See Sheet No. 102						54		
145+47	WB			9 X 12	12					33		
145+54	WB	6 X 12	8							30		
145+97	WB	6 X 12	8	See Sheet No. 102						54		
146+44	WB	14 X 12	18.67	14 X 12	18.67					62		
146+68	WB	6 X 12	8	See Sheet No. 102						54		
147+03	WB			See Sheet No. 102						30		
147+17	WB	6 X 12	8	See Sheet No. 102						54		
147+43	WB			See Sheet No. 102						30		
147+57	WB	6 X 12	8	See Sheet No. 102						54		
147+82	WB			See Sheet No. 102						30		
148+27	WB			15 X 6	10					27		
148+35	WB	6 X 12	8							30		
148+66	WB	6 X 12	8	See Sheet No. 102A						54		
149+14	WB	6 X 12	8	See Sheet No. 102A						54		
149+48	WB	6 X 12	8	See Sheet No. 102A						54		
149+97	WB	6 X 12	8	See Sheet No. 102A						54		
150+28	WB	6 X 12	8	See Sheet No. 102A						54		
TOTALS			440		306					2946		

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
150+76	WB	6 X 12	8	See Sheet No. 102A						54		
151+11	WB	6 X 12	8	See Sheet No. 102A						54		
152+14	WB			See Sheet No. 102A						30		
152+53	WB			See Sheet No. 102A						36		
152+94	WB			See Sheet No. 102A						36		
153+60	WB			6 X 12	8					36		
153+74	WB			6 X 12	8					36		
154+10	WB			6 X 12	8					36		
154+51	WB	6 X 12	8	6 X 12	8					60		
154+92	WB			6 X 12	8					36		
155+36	WB	6 X 12	8	6 X 12	8					60		
155+75	WB	6 X 12	8	6 X 12	8					60		
156+91	WB	6 X 12	8	6 X 12	8					60		
157+88	WB	6 X 12	8	6 X 12	8					60		
158+00	WB			6 X 12	8					36		
158+76	WB	6 X 12	8	6 X 12	8					60		
159+48	WB	6 X 12	8	6 X 12	8					60		
159+88	WB	6 X 12	8	6 X 12	8					60		
160+95	WB	6 X 12	8	6 X 12	8					60		
162+40	WB					6 X 12	8			30		
163+55	WB					84 X 12	112	84 X 12	112	216		
168+78	WB					6 X 12	8	6 X 12	8	54		
169+60	WB					6 X 12	8	6 X 12	8	54		
170+60	WB	6 X 12	8	6 X 12	8					54		
171+00	WB	6 X 12	8	6 X 12	8					54		
171+40	WB	6 X 12	8	6 X 12	8					54		
171+81	WB			6 X 12	8					30		
172+13	WB	6 X 12	8	6 X 12	8					54		
172+80	WB	6 X 12	8	6 X 12	8					54		
173+16	WB	6 X 12	8	6 X 12	8					54		
173+53	WB	6 X 12	8	6 X 12	8					54		
173+90	WB	6 X 12	8	6 X 12	8					54		
174+41	WB	6 X 12	8	6 X 12	8					54		
178+40	WB	6 X 12	8							30		
178+85	WB	6 X 12	8	6 X 12	8					54		
180+60	WB	6 X 12	8	6 X 12	8					54		
181+40	WB	6 X 12	8	6 X 12	8					54		
183+20	WB	6 X 12	8	6 X 12	8					54		
183+79	WB	6 X 12	8	6 X 12	8					54		
184+19	WB	6 X 12	8	6 X 12	8					54		
184+60	WB	6 X 12	8	6 X 12	8					54		
184+87	WB	6 X 12	8	6 X 12	8					54		
TOTALS			232		256		136		128	2262		
GRAND TOTALS CARRIED TO GENERAL SUMMARY		1234				264				5208		

FULL DEPTH PAVEMENT JOINT REPAIR CALCULATIONS

CALC BY M.D.C. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	69
CHKD BY J.A.D. DATE 2-27-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
1828+10	EB	6 X 12	8							30		
1828+26	EB			See Sheet No. 98						30		
1828+72	EB			See Sheet No. 98						30		
1829+11	EB			See Sheet No. 98						30		
1829+83	EB			See Sheet No. 98						30		
1830+25	EB			See Sheet No. 98						30		
1830+38	EB			See Sheet No. 98						30		
1830+71	EB			12 X 12	16					36		
1831+06	EB			12 X 12	16					36		
1831+84	EB	6 X 12	8	See Sheet No. 98						54		
1832+20	EB			See Sheet No. 98						30		
1832+34	EB	6 X 12	8	See Sheet No. 98						54		
1832+61	EB			See Sheet No. 98						30		
1833+09	EB	6 X 12	8	6 X 12	8					54		
1833+94	EB			6 X 12	8					30		
1834+35	EB			6 X 12	8					30		
1834+70	EB	6 X 12	8	6 X 12	8					54		
1835+15	EB			12 X 12	16					36		
1835+51	EB	6 X 12	8	6 X 12	8					54		
1835+92	EB	6 X 12	8	6 X 12	8					54		
1836+34	EB			6 X 12	8					30		
1836+70	EB	6 X 12	8	6 X 12	8					54		
1837+08	EB			6 X 12	8					30		
1837+52	EB	6 X 12	8	6 X 12	8					54		
1837+96	EB	6 X 12	8	6 X 12	8					54		
1838+39	EB			6 X 12	8					30		
1838+78	EB	6 X 12	8	6 X 12	8					54		
1+15	EB			6 X 12	8					30		
1+64	EB	6 X 12	8	6 X 12	8					54		
1+93	EB	6 X 12	8	6 X 12	8					54		
2+39	EB	6 X 12	8	6 X 12	8					54		
2+82	EB	6 X 12	8	6 X 12	8					54		
3+21	EB	6 X 12	8	6 X 12	8					54		
4+02	EB	6 X 12	8	6 X 12	8					54		
4+74	EB	6 X 12	8	6 X 12	8					54		
5+20	EB	6 X 12	8	6 X 12	8					54		
5+63	EB	6 X 12	8	6 X 12	8					54		
5+96	EB	6 X 12	8	6 X 12	8					54		
6+45	EB	6 X 12	8	6 X 12	8					54		
6+74	EB	6 X 12	8	6 X 12	8					54		
7+20	EB			6 X 12	8					30		
7+64	EB	6 X 12	8	6 X 12	8					54		
8+01	EB			6 X 12	8					30		
8+37	EB	6 X 12	8	6 X 12	8					54		
8+75	EB	6 X 12	8							30		
8+80	EB			12 X 12	16					36		
9+25	EB			6 X 12	8					30		
9+62	EB	6 X 12	8	6 X 12	8					54		
10+05	EB	6 X 12	8	6 X 12	8					54		
10+34	EB	6 X 12	8	6 X 12	8					54		
10+75	EB	6 X 12	8	6 X 12	8					54		
11+23	EB					6 X 12	8	6 X 12	8	54		
11+79	EB							6 X 12	8	30		
14+73	EB							6 X 12	8	36		
17+09	EB							6 X 12	8	36		
21+44	EB							6 X 12	8	30		
21+71	EB							6 X 12	8	30		
21+85	EB							6 X 12	8	30		
TOTALS			240		344		8		56	2472		

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
22+63	EB							18 X 12	24	42		
23+12	EB					6 X 12	8	6 X 12	8	54		
23+62	EB							36 X 12	48	60		
25+57	EB							6 X 12	8	30		
28+20	EB							6 X 12	8	30		
29+16	EB							6 X 12	8	30		
29+88	EB							24 X 12	32	48		
29+50	EB					100 X 12	133.33			124		
31+16	EB							6 X 12	8	30		
31+32	EB							6 X 12	8	30		
32+28	EB							6 X 12	8	30		
32+44	EB							6 X 12	8	30		
34+68	EB							109 X 12	145.33	133		
35+40	EB					80 X 12	106.67			104		
36+11	EB							10 X 12	13.33	34		
36+30	EB							6 X 12	8	30		
40+60	EB							120 X 12	160	144		
42+18	EB					6 X 12	8			36		
43+00	EB							6 X 12	8	36		
44+64	EB							18 X 12	24	60		
45+46	EB					6 X 12	8	6 X 12	8	60		
45+89	EB							6 X 12	8	36		
46+23	EB							12 X 12	16	48		
46+60	EB							40 X 12	53.33	104		
47+81	EB							6 X 12	8	36		
48+23	EB							33 X 12	44	90		
49+35	EB							6 X 12	8	36		
49+94	EB							58 X 12	77.33	140		
56+12	EB	6 X 12	8	6 X 12	8					54		
56+65	EB			6 X 12	8					30		
57+01	EB			22 X 12	29.33					46		
57+12	EB	6 X 12	8							30		
57+73	EB			6 X 12	8					30		
57+96	EB			6 X 12	8					30		
58+26	EB	6 X 12	8	See Sheet No. 97						54		
58+56	EB			See Sheet No. 97						30		
58+66	EB	6 X 12	8	12 X 12	16					60		
58+96	EB			See Sheet No. 97						30		
59+12	EB	6 X 12	8	See Sheet No. 97						54		
59+36	EB			See Sheet No. 97						30		
59+54	EB			See Sheet No. 97						30		
59+87	EB	6 X 12	8	10 X 12	13.33					58		
60+29	EB			16 X 12	21.33					40		
61+03	EB	6 X 12	8							30		
61+43	EB	6 X 12	8	10 X 12	13.33					58		
61+88	EB	6 X 12	8	See Sheet No. 97						54		
62+18	EB			See Sheet No. 97						30		
62+29	EB	6 X 12	8	See Sheet No. 97						54		
62+63	EB	6 X 12	8	10 X 12	13.33					58		
63+00	EB	6 X 12	8	See Sheet No. 97						54		
63+80	EB	6 X 12	8	6 X 12	8					54		
65+00	EB	6 X 12	8	6 X 12	8					60		
65+84	EB	6 X 12	8	6 X 12	8					60		
66+27	EB			6 X 12	8					36		
66+67	EB	6 X 12	8	6 X 12	8					60		
66+72	EB	6 X 12	8	6 X 12	8					60		
67+81	EB			6 X 12	8					36		
68+69	EB	6 X 12	8	6 X 12	8					60		
TOTALS			144		202.65		264		749.32	3035		
GRAND TOTALS CARRIED TO GENERAL SUMMARY			930.65				1077.32			5507		

FULL DEPTH PAVEMENT JOINT REPAIR CALCULATIONS

CALC BY M.D.C. DATE 2-27-92
CHKD BY J.A.D. DATE 2-27-92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

70
267

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
69+11	EB	6 X 12	8	6 X 12	8					60		
69+88	EB	6 X 12	8	6 X 12	8					60		
70+35	EB	6 X 12	8	6 X 12	8					60		
71+93	EB	6 X 12	8	6 X 12	8					60		
72+90	EB			6 X 12	8					30		
73+13	EB			6 X 12	8					30		
73+51	EB			6 X 12	8					30		
73+91	EB	6 X 12	8	6 X 12	8					54		
74+71	EB			6 X 12	8					30		
75+00	EB	6 X 12	8	6 X 12	8					54		
75+58	EB	6 X 12	8	6 X 12	8					54		
75+72	EB			6 X 12	8					30		
75+87	EB			6 X 12	8					30		
76+29	EB	6 X 12	8	6 X 12	8					54		
76+39	EB			6 X 12	8					30		
77+08	EB			12 X 12	16					36		
77+31	EB			6 X 12	8					30		
77+55	EB			6 X 12	8					30		
77+71	EB			6 X 12	8					30		
78+36	EB			6 X 12	8					30		
78+63	EB	6 X 12	8							30		
78+70	EB			14 X 12	18.67					38		
78+91	EB			6 X 12	8					30		
79+06	EB	6 X 12	8	6 X 12	8					54		
79+46	EB	6 X 12	8	6 X 12	8					54		
80+62	EB	6 X 12	8							30		
80+71	EB			18 X 12	24					42		
81+13	EB	6 X 12	8	6 X 12	8					54		
81+58	EB	12 X 12	16	12 X 12	16					60		
81+96	EB			6 X 12	8					30		
82+11	EB			6 X 12	8					30		
82+32	EB	12 X 12	16	12 X 12	16					60		
82+70	EB	16 X 12	21.33	16 X 12	21.33					64		
83+05	EB	6 X 12	8							30		
83+12	EB			14 X 12	18.67					38		
83+51	EB	6 X 12	8	6 X 12	8					54		
83+87	EB	6 X 12	8	6 X 12	8					54		
84+28	EB	6 X 12	8	6 X 12	8					54		
84+51	EB			6 X 12	8					30		
85+18	EB	28 X 12	37.33	28 X 12	37.33					76		
85+71	EB	6 X 12	8	6 X 12	8					54		
86+16	EB	32 X 12	42.67	32 X 12	42.67					80		
86+53	EB	6 X 12	8	6 X 12	8					54		
86+74	EB	6 X 12	8	6 X 12	8					54		
86+93	EB			6 X 12	8					30		
87+13	EB			6 X 12	8					30		
87+32	EB	6 X 12	8	6 X 12	8					54		
87+52	EB			6 X 12	8					30		
87+72	EB			6 X 12	8					30		
87+93	EB			6 X 12	8					30		
88+12	EB			6 X 12	8					30		
88+33	EB			6 X 12	8					30		
88+80	EB			6 X 12	8					30		
89+13	EB	6 X 12	8	6 X 12	8					54		
89+87	EB			6 X 12	8					30		
90+33	EB	6 X 12	8	6 X 12	8					54		
91+16	EB			6 X 12	8					30		
91+33	EB	6 X 12	8	6 X 12	8					54		
91+55	EB	6 X 12	8	6 X 12	8					54		
91+72	EB			6 X 12	8					30		
92+00	EB	6 X 12	8	6 X 12	8					57		
TOTALS			341.33		602.67					2633		

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
92+13	EB			6 X 12	8					36		
92+37	EB	6 X 12	8	6 X 12	8					60		
92+68	EB			6 X 12	8					36		
93+20	EB	6 X 12	8	6 X 12	8					60		
93+59	EB	6 X 12	8	6 X 12	8					60		
94+39	EB	6 X 12	8	6 X 12	8					60		
94+69	EB	6 X 12	8							30		
94+76	EB			20 X 12	26.67					64		
95+20	EB	6 X 12	8	6 X 12	8					60		
95+35	EB	6 X 12	8	6 X 12	8					60		
95+51	EB	6 X 12	8	6 X 12	8					60		
95+90	EB	6 X 12	8	6 X 12	8					60		
96+41	EB	6 X 12	8	6 X 12	8					60		
96+55	EB			6 X 12	8					36		
96+69	EB	6 X 12	8	6 X 12	8					60		
96+95	EB			6 X 12	8					36		
97+11	EB	6 X 12	8	6 X 12	8					60		
97+51	EB	6 X 12	8	6 X 12	8					60		
98+00	EB	6 X 12	8	6 X 12	8					60		
98+32	EB	6 X 12	8	6 X 12	8					60		
98+55	EB			6 X 12	8					36		
98+71	EB	6 X 12	8	6 X 12	8					60		
99+36	EB			6 X 12	8					36		
99+60	EB	6 X 12	8	6 X 12	8					60		
99+76	EB	6 X 12	8	6 X 12	8					60		
99+94	EB	6 X 12	8	6 X 12	8					60		
100+28	EB			6 X 12	8					36		
100+68	EB	6 X 12	8	6 X 12	8					60		
101+19	EB	6 X 12	8	6 X 12	8					60		
101+55	EB	6 X 12	8	6 X 12	8					60		
102+28	EB	6 X 12	8	6 X 12	8					60		
102+70	EB			10 X 12	13.33					44		
103+10	EB			6 X 12	8					36		
103+59	EB	6 X 12	8	6 X 12	8					60		
103+86	EB	6 X 12	8	6 X 12	8					60		
104+33	EB			6 X 12	8					30		
104+78	EB	6 X 12	8	6 X 12	8					54		
105+16	EB	6 X 12	8	6 X 12	8					54		
105+58	EB	6 X 12	8	6 X 12	8					54		
106+76	EB	6 X 12	8	6 X 12	8					54		
107+12	EB			6 X 12	8					30		
107+34	EB	6 X 12	8	6 X 12	8					54		
107+57	EB			6 X 12	8					30		
107+90	EB	6 X 12	8	6 X 12	8					54		
108+14	EB	6 X 12	8							30		
108+80	EB			6 X 12	8					30		
109+12	EB	6 X 12	8							30		
109+14	EB			16 X 12	21.33					40		
109+57	EB	6 X 12	8	8 X 12	10.67					56		
109+93	EB	6 X 12	8	6 X 12	8					54		
110+32	EB			6 X 12	8					30		
110+73	EB	6 X 12	8	6 X 12	8					54		
111+11	EB	6 X 12	8	6 X 12	8					54		
111+51	EB	6 X 12	8	6 X 12	8					54		
111+95	EB	6 X 12	8	6 X 12	8					54		
112+30	EB	6 X 12	8	6 X 12	8					54		
113+12	EB	6 X 12	8	See Sheet No. 96						54		
113+57	EB	6 X 12	8	See Sheet No. 96						54		
113+92	EB	6 X 12	8	See Sheet No. 96						54		
114+56	EB	6 X 12	8	See Sheet No. 96						54		
TOTALS			352		464					3036		
GRAND TOTALS CARRIED TO GENERAL SUMMARY		1760								5669		

FULL DEPTH PAVEMENT JOINT REPAIR CALCULATIONS

CALC BY M.D.C. DATE 2-27-92
CHKD BY J.A.D. DATE 2-27-92
ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES
OHIO
FHWA REGION 5
71
267

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
114+96	EB	6 X 12	8	See Sheet No. 96						54		
115+11	EB	6 X 12	8	See Sheet No. 96						54		
115+37	EB	6 X 12	8	See Sheet No. 96						54		
115+52	EB	6 X 12	8	See Sheet No. 96						54		
115+77	EB	6 X 12	8	See Sheet No. 96						54		
115+94	EB	6 X 12	8	See Sheet No. 96						54		
116+16	EB	6 X 12	8	6 X 12	8					54		
116+57	EB			6 X 12	8					30		
117+07	EB	26 X 12	34.67	26 X 12	34.67					74		
118+17	EB			6 X 12	8					30		
118+35	EB			6 X 12	8					30		
118+58	EB	6 X 12	8	6 X 12	8					54		
118+97	EB			6 X 12	8					30		
126+34	EB			6 X 12	8					30		
126+54	EB	6 X 12	8	6 X 12	8					54		
126+87	EB	6 X 12	8	6 X 12	8					54		
126+97	EB			6 X 12	8					30		
127+58	EB			6 X 12	8					30		
127+97	EB	6 X 12	8	6 X 12	8					54		
128+36	EB	12 X 12	16	12 X 12	16					60		
128+74	EB	6 X 12	8	10 X 12	13.33					58		
129+59	EB	6 X 12	8	6 X 12	8					54		
129+77	EB			6 X 12	8					30		
130+35	EB			6 X 12	8					30		
130+59	EB			6 X 12	8					30		
131+38	EB			6 X 12	8					30		
131+62	EB	6 X 12	8	6 X 12	8					54		
131+95	EB			24 X 12	32					48		
132+40	EB	6 X 12	8	6 X 12	8					54		
132+79	EB			6 X 12	8					30		
133+20	EB	6 X 12	8	6 X 12	8					54		
136+32	EB			6 X 12	8					30		
138+37	EB	6 X 12	8	6 X 12	8					54		
139+38	EB			6 X 12	8					30		
139+96	EB	6 X 12	8	6 X 12	8					54		
140+19	EB	6 X 12	8	6 X 12	8					54		
140+79	EB			6 X 12	8					30		
140+99	EB	6 X 12	8							30		
141+25	EB			6 X 12	8					30		
141+38	EB	6 X 12	8	6 X 12	8					54		
141+63	EB	6 X 12	8	6 X 12	8					54		
142+40	EB	6 X 12	8	6 X 12	8					54		
142+74	EB			6 X 12	8					30		
143+24	EB	6 X 12	8	6 X 12	8					54		
143+40	EB	6 X 12	8	6 X 12	8					54		
143+60	EB	6 X 12	8	6 X 12	8					54		
143+80	EB			6 X 12	8					30		
143+95	EB	6 X 12	8	6 X 12	8					54		
144+19	EB			6 X 12	8					30		
144+32	EB	6 X 12	8	6 X 12	8					54		
144+48	EB			6 X 12	8					30		
144+69	EB	6 X 12	8	6 X 12	8					54		
144+76	EB	6 X 12	8	6 X 12	8					54		
145+21	EB	6 X 12	8	6 X 12	8					54		
145+65	EB			6 X 12	8					30		
146+35	EB	6 X 12	8	6 X 12	8					54		
146+78	EB	10 X 12	13.33	10 X 12	13.33					58		
147+19	EB			10 X 12	13.33					34		
147+53	EB	6 X 12	8	6 X 12	8					54		
147+67	EB	6 X 12	8	6 X 12	8					54		
TOTALS			336		498.66					2720		

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
147+97	EB	6 X 12	8	See Sheet No. 95						54		
148+17	EB	6 X 12	8	See Sheet No. 95						54		
148+57	EB			See Sheet No. 95						30		
148+82	EB	6 X 12	8	See Sheet No. 95						54		
149+00	EB			See Sheet No. 95						30		
149+21	EB			See Sheet No. 95						30		
149+40	EB			See Sheet No. 95						30		
149+53	EB			See Sheet No. 95						30		
149+65	EB	6 X 12	8	See Sheet No. 95						54		
150+05	EB	6 X 12	8	See Sheet No. 95						54		
150+29	EB			20 X 12	26.67					44		
150+60	EB	6 X 12	8	6 X 12	8					54		
151+00	EB			6 X 12	8					30		
151+40	EB	6 X 12	8	6 X 12	8					54		
151+80	EB	6 X 12	8	6 X 12	8					54		
152+20	EB			6 X 12	8					30		
152+60	EB			6 X 12	8					30		
169+60	EB	6 X 12	8	6 X 12	8					54		
169+80	EB	6 X 12	8	6 X 12	8					54		
170+28	EB			6 X 12	8					30		
171+32	EB			6 X 12	8					30		
171+52	EB	6 X 12	8	6 X 12	8					54		
171+73	EB			6 X 12	8					30		
171+84	EB			6 X 12	8					30		
172+26	EB			6 X 12	8					30		
172+39	EB	6 X 12	8	6 X 12	8					54		
172+61	EB			6 X 12	8					30		
172+74	EB			6 X 12	8					30		
173+04	EB	10 X 12	13.33	10 X 12	13.33					58		
173+42	EB			6 X 12	8					30		
173+60	EB			6 X 12	8					30		
173+90	EB	20 X 12	26.67	20 X 12	26.67					68		
174+27	EB	11 X 12	14.67	11 X 12	14.67					59		
174+65	EB			12 X 12	16					36		
175+14	EB			6 X 12	8					30		
177+95	EB	6 X 12	8							30		
178+78	EB	6 X 12	8	6 X 12	8					54		
179+24	EB	6 X 12	8	6 X 12	8					54		
179+65	EB			6 X 12	8					30		
181+74	EB			6 X 12	8					30		
182+25	EB	6 X 12	8	6 X 12	8					54		
182+41	EB			6 X 12	8					30		
182+65	EB	6 X 12	8	6 X 12	8					54		
182+89	EB	6 X 12	8	6 X 12	8					54		
183+05	EB	6 X 12	8	6 X 12	8					54		
183+28	EB	6 X 12	8	6 X 12	8					54		
184+25	EB	6 X 12	8	6 X 12	8					54		
184+79	EB			6 X 12	8					30		
185+00	EB	6 X 12	8	6 X 12	8					54		
TOTALS			230.67		361.34					2089		
GRAND TOTALS CARRIED TO GENERAL SUMMARY			1426.67							4809		

FULL DEPTH PAVEMENT JOINT REPAIR CALCULATIONS

CALC BY M.D.C. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO
CHKD BY J.A.D. DATE 2-27-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
RAMP "U"												
14+89	EB			6 X 12	8					30		
15+02	EB			6 X 12	8					30		
15+26	EB			10 X 12	13.33					34		
15+73	EB			6 X 12	8					30		
16+13	EB			10 X 12	13.33					34		
16+47	EB			6 X 12	8					30		
17+09	EB			6 X 12	8					24		
18+04	EB			6 X 12	8					30		
18+52	EB			6 X 12	8					30		
19+00	EB			12 X 12	16					36		
19+88	EB			6 X 12	8					30		
20+34	EB			6 X 12	8					30		
20+55	EB			16 X 16	28.44					48		
25+09	EB			12 X 16	21.33					32		TRUCK LANE
RAMP "T"												
22+11	EB			10 X 16	17.78					20		
23+07	EB			6 X 25	16.67					50		
23+21	EB			6 X 12	8					30		
23+39	EB			6 X 12	8					30		
23+61	EB			6 X 12	8					30		
24+02	EB			6 X 12	8					30		
24+43	EB			6 X 12	8					30		
24+72	EB			6 X 16	10.67					32		
25+17	EB			6 X 16	10.67					32		
25+50	EB			6 X 16	10.67					32		
26+25	EB			6 X 16	10.67					32		
37+00	EB			6 X 16	10.67					32		TRUCK LANE
37+77	EB			6 X 16	10.67					32		TRUCK LANE
38+48	EB			6 X 16	10.67					32		TRUCK LANE
39+15	EB			6 X 16	10.67					32		TRUCK LANE
39+68	EB			6 X 16	10.67					32		TRUCK LANE
RAMP "V"												
35+88	EB			6 X 16	10.67					32		TRUCK LANE
34+00	EB			14 X 16	24.89					32		TRUCK LANE
35+17	EB			6 X 16	10.67					32		TRUCK LANE
37+04	EB			6 X 16	10.67					38		
39+19	EB			6 X 16	10.67					32		
40+00	EB			6 X 16	10.67					32		
40+45	EB			6 X 16	10.67					32		
41+27	EB			6 X 16	10.67					32		
42+16	EB			8 X 12	10.67					32		
43+87	EB			6 X 19	12.67					44		
46+66	EB			14 X 12	18.67					38		
47+10	EB			6 X 12	8					30		
47+41	EB			6 X 11	7.33					28		
47+87	EB			6 X 10	6.67					26		
48+68	EB			6 X 9	6					24		
49+05	EB			6 X 9	6					24		
49+44	EB			6 X 8	5.33					22		
TOTALS					515.83					1486		

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
RAMP "X"												
65+00	EB			6 X 12	8					24		
66+27	EB			6 X 12	8					30		
66+72	EB			6 X 12	8					24		
67+13	EB			6 X 12	8					30		
67+81	EB			6 X 12	8					24		
68+96	EB			6 X 12	8					30		
70+35	EB			6 X 22	14.67					44		
71+52	EB			6 X 12	8					30		
71+94	EB			6 X 16	10.67					38		
73+89	EB			6 X 16	10.67					32		
74+68	EB			6 X 16	10.67					32		
75+54	EB			6 X 16	10.67					32		
75+98	EB			6 X 16	10.67					32		
76+23	EB			6 X 16	10.67					32		
76+41	EB			6 X 16	10.67					32		
76+61	EB			6 X 16	10.67					32		
77+05	EB			6 X 16	10.67					32		
77+53	EB			6 X 16	10.67					32		
77+93	EB			6 X 16	10.67					32		
78+26	EB			6 X 16	10.67					32		
78+68	EB			6 X 16	10.67					32		
79+16	EB			6 X 16	10.67					32		
79+55	EB			6 X 16	10.67					32		
RAMP "Y"												
80+63	EB			6 X 16	10.67					32		
81+05	EB			6 X 16	10.67					32		
81+41	EB			6 X 16	10.67					32		
81+86	EB			6 X 16	10.67					32		
82+23	EB			6 X 16	10.67					32		
83+42	EB			6 X 16	10.67					32		
84+20	EB			6 X 16	10.67					32		
84+62	EB			6 X 16	10.67					32		
85+80	EB			6 X 16	10.67					32		
86+95	EB			6 X 16	10.67					32		
87+24	EB			6 X 16	10.67					32		
87+87	EB			6 X 16	10.67					32		
88+43	EB			6 X 16	10.67					32		
89+08	EB			6 X 16	10.67					32		
90+15	EB			6 X 16	10.67					32		
90+58	EB			6 X 16	10.67					32		
91+03	EB			6 X 16	10.67					32		
91+40	EB			6 X 16	10.67					32		
92+00	EB			6 X 16	10.67					35		
92+30	EB			6 X 12	8					30		
92+81	EB			6 X 12	8					30		
93+59	EB			6 X 22	14.67					44		
94+39	EB			6 X 20	13.33					40		
95+90	EB			6 X 16	10.67					32		
97+11	EB			6 X 13	8.67					26		
98+00	EB			6 X 12	8					24		
98+32	EB			6 X 12	8					24		
99+60	EB			6 X 8	5.33					16		
100+68	EB			6 X 6	4					12		
101+19	EB			6 X 4	2.67					8		
101+55	EB			6 X 3	2					6		
TOTALS					526.79					1625		
GRAND TOTALS CARRIED TO GENERAL SUMMARY		1042.62								3111		

FULL DEPTH PAVEMENT JOINT REPAIR CALCULATIONS

CALC BY M.D.C. DATE 2-27-92
CHKD BY J.A.D. DATE 2-27-92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
172+32	EB			6 X 16	10.67					32		
173+16	EB			6 X 16	10.67					32		
174+17	EB			6 X 16	10.67					32		
TOTALS					32.01					96		

EXISTING JOINT OR CRACK STENCIL STATION LOCATION (±)	DIRECTION	ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A				ITEM 255-FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B				ITEM 255 FULL DEPTH PVMT. SAWING		COMMENTS
		PASSING LANE		TRAVELING LANE		PASSING LANE		TRAVELING LANE				
		SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	SIZE	SQ. YD.	LIN. FT.		
RAMP "R"												
17+59	WB			6 X 21	14					42		
17+77	WB			6 X 4	2.67					8		VEHICLE MERGE LANE
18+00	WB			6 X 12	8					24		TRUCK LANE
18+49	WB			6 X 32	21.33					64		
19+19	WB			6 X 16	10.67					32		
19+97	WB			6 X 16	10.67					32		
19+73	WB			6 X 16	10.67					32		
RAMP "S"												
39+03	WB			6 X 16	10.67					32		
39+61	WB			8 X 16	14.22					32		
40+22	WB			14 X 16	24.89					32		
41+56	WB			6 X 24	16					48		
41+92	WB			6 X 24	16					54		
42+30	WB			6 X 21	14					48		
42+64	WB			6 X 19	12.67					44		
43+05	WB			6 X 12	8					30		
43+57	WB			6 X 12	8					30		
43+88	WB			6 X 12	8					30		
44+00	WB			6 X 12	8					24		
44+34	WB			6 X 12	8					30		
45+14	WB			6 X 12	8					30		
45+43	WB			6 X 12	8					30		
45+87	WB			6 X 12	8					30		
45+97	WB			6 X 12	8					30		
46+07	WB			6 X 12	8					30		
RAMP "W"												
90+27	WB			6 X 18	12					42		
90+57	WB			6 X 40	26.67					86		
91+00	WB			6 X 40	26.67					86		
91+83	WB			36 X 12	48					60		
93+02	WB			6 X 12	8					30		
RAMPS "C"												
156+91	WB			6 X 9	6					18		
157+88	WB			6 X 12	8					24		
159+48	WB			6 X 16	10.67					32		
162+20	WB			6 X 25	16.67					56		
165+05	WB			6 X 16	10.67					32		
165+43	WB			6 X 16	10.67					32		
165+90	WB			6 X 16	10.67					32		
166+64	WB			6 X 16	10.67					32		
168+07	WB			6 X 16	10.67					32		
171+10	WB			6 X 16	10.67					32		
173+07	WB			6 X 16	10.67					32		
175+09	WB			6 X 16	10.67					32		
175+51	WB			6 X 16	10.67					32		
175+77	WB			6 X 12	8					30		
176+16	WB			6 X 16	10.67					32		
TOTALS					543.84					1602		
GRAND TOTALS CARRIED TO GENERAL SUMMARY		575.85								1698		

PAVEMENT GRINDING CALCULATIONS

CALC BY MDC DATE 11-21-91
CHKD BY [illegible] DATE 11-21-91
ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES
OHIO
FHWA REGION 5
74
267

LOCATION	STATION TO STATION		LENGTH	WIDTH	AREA	SPECIAL GRINDING PORTLAND CEMENT CONCRETE PAVEMENT						REMARKS
	FROM	TO	LIN. FT.	LIN. FT.	SQ. FT.	SQ. YD.						
WESTBOUND MAINLINE	1827+50	1827+96	46	24	1104	122.7						
	1827+96	1835+10	714	24	17,136	1904						
	14+60	51+03.25	3643.25	24	87,438	9715.3						
	90+23	98+00	777	24	18,648	2072						
	99+82	114+82	1500	24	36,000	4000						
	123+26	138+92	1566	24	37,584	4176						
	141+13	174+73	3358.5	24	80,604	8956						
	177+60.21	185+50	795.75	24	19,098	2122						Adjusted Arc Length
EASTBOUND MAINLINE	1827+50	51+03.25	6182.74	24	148,385.76	16,487.3						STA EQ. 185+05.96 BK = 185+00 AHD
	56+06.25	119+21	6309.98	24	151,439.52	16,826.6						STA EQ. 1838+29.49 BK = 0.00 AHD
	126+16	153+12	2697	24	64,728	7192						Adjusted Arc Length
	167+20	175+51.71	831.71	24	19,961.04	2217.9						Adjusted Arc Length
	177+60.21	180+00	239.79	24	5754.96	639.4						
	181+46	185+50	409.96	24	9839.04	1093.2						
RAMPS "Q" & "R"	5+50	16+47	1097	11.5 (avg.)	12,615.5	1401.7						STA EQ. 185+05.96 BK = 185+00 AHD
	17+34	17+50	16	25	400	44.4						
	17+35.96	20+36.02	300.06	16	4800.96	533.4						
	20+36.02	26+20.31	585.27	16	9364.32	1040.5						
	16+11.53	18+66.47			1706.05	189.56						Adjusted Arc Length
	18+66.47	23+02.62	440.68	16	7050.88	783.4						Planimetered Area
RAMPS "Q" & "S"	31+64.11	34+52.78	293.51	16	4696.16	521.8						Adjusted Arc Length
	33+69	40+45.69	676.69	16	10,827.04	1203.0						Adjusted Arc Length
	34+52.78	39+46.51			5273.42	585.94						
	40+45.69	45+00			9536.44	1059.60						Planimetered Area
	45+00	47+50	250	12	3000	333.3						Planimetered Area
	47+50	48+50	100	6 (avg.)	600	66.7						
RAMPS "T" & "U"	12+50	13+50	100	6 (avg.)	600	66.7						
	13+50	16+00	250	12	3000	333.3						
	16+00	20+53.48			9536.88	1059.65						
	20+53.48	25+70	516.52	16	8264.32	918.3						Planimetered Area
	21+53.48	24+55.14			3224.36	358.26						
	24+55.14	27+08	257.10	16	4113.6	457.10						Planimetered Area
RAMPS "T" & "V"	36+01.65	40+03.56	405.27	16	6484.32	720.5						Adjusted Arc Length
	33+85	41+53.22	770.89	16	12,334.24	1370.5						Adjusted Arc Length
	35+95.20	38+53.15			1708.68	189.85						Adjusted Arc Length
	41+25	51+03.25	978.25	12.5 (avg.)	12228.13	1358.7						Planimetered Area
RAMP "Z"	57+00	69+00	1200.63	12.5 (avg.)	15007.9	1667.5						
	69+00	79+23.59	1025.78	16	16,412.48	1823.6						Adjusted Arc Length
	79+23.59	80+21.38			2128.22	236.47						Adjusted Arc Length
RAMP "W"	79+81.01	80+49.40			1920.48	213.39						Planimetered Area
	80+49.40	88+20.69	772.75	16	12,364	1373.8						Planimetered Area
	88+20.69	92+75			9536.43	1059.60						Adjusted Arc Length
	92+75	95+25	250	12	3000	333.3						Planimetered Area
	95+25	96+25	100	6 (avg.)	600	66.7						
RAMP "X"	64+00	65+00	100	6 (avg.)	600	66.7						
	65+00	67+50	250	12	3000	333.3						
	67+50	72+02.43			9455.01	1050.52						
	72+02.43	79+44.71	743.73	16	11,899.68	1322.2						Planimetered Area
	79+44.71	80+12.56			2494.11	277.12						Adjusted Arc Length
RAMP "Y"	79+82.11	80+76.92			2897.65	321.96						Planimetered Area
	80+76.92	92+00	1125.16	16	18,002.56	2000.3						Planimetered Area
	92+00	104+00	1200	12.5 (avg.)	15,000	1666.7						Adjusted Arc Length
RAMP "G"	152+50	164+50	1200	12.5 (avg.)	15,000	1666.7						
	164+50	175+80.04	1129.89	16	18,078.24	2008.7						
	175+80.04	176+48			1449	161.0						Adjusted Arc Length
RAMP "H"	159+50	160+50	100	6 (avg.)	600	66.7						Planimetered Area
	160+50	163+12	262	12	3144	349.3						
	163+12	167+66.31			9536.56	1059.62						
	167+66.31	168+03	37.77	16	604.32	67.1						Planimetered Area
	169+73	170+02	29.32	16	469.12	52.1						Adjusted Arc Length
	171+84	176+16.89	436.80	16	6988.8	776.5						Adjusted Arc Length
	176+16.87	176+74.89			2037.26	226.36						Adjusted Arc Length
												Planimetered Area
TOTALS CARRIED TO GENERAL SUMMARY						112,368						

TRANSVERSE JOINT SEALING CALCULATIONS

ITEM 801 - TRAVERSE JOINT SEALING, CLASS III, SILICONE

MAINLINE - WESTBOUND

Sta. 1827+50 to Sta. 1827+96
[46' X (1 Joint ÷20')] + 1 Joint = 3 Joints @ 24.33' = 73 L.F.

Sta. 1827+96 to Sta. 1835+10
[714' X (1 Joint ÷ 20')] + 2 Joints = 38 Joints @ 36.5' = 1387 L.F.

Sta. 90+23 to Sta. 98+00
[777' X (1 Joint ÷ 40')] + 2 Joints = 21 Joints @ 24' = 504 L.F.

Sta. 99+82 to Sta. 114+82
[1500' X (1 Joint ÷ 40')] + 2 Joints = 40 Joints @ 24' = 960 L.F.

Sta. 123+26 to Sta. 138+92
[1566' X (1 Joint ÷ 40')] + 2 Joints = 41 Joints @ 24' = 984 L.F.

Sta. 141+13 to Sta. 162+30
[2117' X (1 Joint ÷ 40')] + 2 Joints = 55 Joints @ 24' = 1320 L.F.

Sta. 169+75 to Sta. 174+73
[498' X (1 Joint ÷ 40')] + 2 Joints = 15 Joints @ 24' = 360 L.F.

Sta. 177+60.21 to Sta. 185+50
(Sta. Eq. 185+05.96 BK = 185+00 AHD)
[795.75' X (1 Joint ÷ 40)] + 2 Joints = 22 Joints @ 24' = 528 L.F.

TOTAL = 6116 L.F.

MAINLINE - EASTBOUND

Sta. 1827+50 to Sta. 11+05
(Sta. Eq. 1838+29.49 BK = 0+00 AHD)
[2184.49' X (1 Joint ÷ 40')] + 2 Joints = 57 Joints @ 24' = 1368 L.F.

Sta. 56+06.25 to Sta. 119+21
[6314.75' X (1 Joint ÷ 40')] + 2 Joints = 160 Joints @ 24' = 3840 L.F.

Sta. 126+16 to Sta. 153+12
[2696' X (1 Joint ÷ 40)] + 2 Joints = 69 Joints @ 24' = 1656 L.F.

Sta. 169+60 to Sta. 175+51.71
[591.71 X (1 Joint ÷ 40')] + 2 Joints = 17 Joints @ 24' = 408 L.F.

Sta. 177+60.21 to Sta. 180+00
[239.79 X (1 Joint ÷ 40')] + 2 Joints = 8 Joints @ 24' = 192 L.F.

Sta. 181+46 to Sta. 185+50
[409.96 X (±1 Joint ÷ 40')] + 2 Joints = 12 Joints @ 24' = 288 L.F.

TOTAL = 7752 L.F.

RAMPS "Q" & "R"

Sta. 5+50 to Sta. 17+50
[1200' X (1 Joint ÷ 40')] = 30 Joints @ 12.5' (avg.) = 375 L.F.

Sta. 17+35.96 to Sta. 26+20.31
[884.35' X (1 Joint ÷ 40')] + 1 Joint = 23 Joints @ 16' = 368 L.F.

Sta. 16+11.53 to Sta. 18+66.47
[254.94' X (1 Joint ÷ 40')] + 1 Joint = 7 Joints @ 8' (avg.) = 56 L.F.

Sta. 18+66.47 to Sta. 23+02.62
[436.15' X (1 Joint ÷ 40')] + 1 Joint = 12 Joints @ 16' = 192 L.F.

TOTAL = 991 L.F.

RAMPS "Q" & "S"

Sta. 31+64.11 to Sta. 34+52.78
[288.67' X (1 Joint ÷ 40')] + 1 Joint = 8 Joints @ 16' = 128 L.F.

Sta. 34+52.78 to Sta. 39+46.51
[493.73' X (1 Joint ÷ 40')] + 1 Joint = 13 Joints @ 16' (avg.) = 208 L.F.

Sta. 33+69 to Sta. 40+45.69
[676.69' X (1 Joint ÷ 40')] + 1 Joint = 18 Joints @ 16' = 288 L.F.

Sta. 40+45.69 to Sta. 45+00
[454.31' X (1 Joint ÷ 40')] + 1 Joint = 12 Joints @ 25.5' (avg.) = 306 L.F.

Sta. 45+00 to Sta. 47+50
[250' X (1 Joint ÷ 40')] + 1 Joint = 7 Joints @ 12' = 84 L.F.

Sta. 47+50 to Sta. 48+50
[100' X (1 Joint ÷ 40')] + 1 Joint = 4 Joints @ 6' (avg.) = 24 L.F.

TOTAL = 1038 L.F.

RAMPS "T" & "U"

Sta. 12+50 to Sta. 13+50
[100' X (1 Joint ÷ 40')] + 1 Joint = 4 Joints @ 6' (avg.) = 24 L.F.

Sta. 13+50 to Sta. 16+00
[250' X (1 Joint ÷ 40')] + 1 Joint = 7 Joints @ 12' = 84 L.F.

Sta. 16+00 to Sta. 20+54.81
[454.81' X (1 Joint ÷ 40')] + 1 Joint = 12 Joints @ 25.5' (avg.) = 306 L.F.

Sta. 20+54.81 to Sta. 25+70
[515.19' X (1 Joint ÷ 40')] + 1 Joint = 14 Joints @ 16' = 224 L.F.

Sta. 21+53.48 to Sta. 24+55.14
[301.66' X (1 Joint ÷ 40')] + 1 Joint = 9 Joints @ 16' (avg.) = 144 L.F.

Sta. 24+55.14 to Sta. 27+08
[252.86' X (1 Joint ÷ 40')] + 1 Joint = 7 Joints @ 16' = 112 L.F.

TOTAL = 894 L.F.

RAMPS "T" & "V"

Sta. 36+01.65 to Sta. 40+03.56
[401.91' X (1 Joint ÷ 40') + 1 Joint = 11 Joints @ 16' = 176 L.F.

Sta. 40+03.56 to Sta 42+58.72
[255.16' X (1 Joint ÷ 40')] + 1 Joint = 7 Joints @ 12' (avg.) = 84 L.F.

Sta. 33+85 to Sta 41+53.22
[768.22' X (1 Joint ÷ 40')] + 1 Joint = 20 Joints @ 16' = 320 L.F.

Sta. 41+25 to Sta. 51+03.25
[978.25' X (1 Joint ÷ 40')] + 2 Joints = 26 Joints@ 26.5' (avg.) = 689 L.F.

TOTAL = 1269 L.F.

RAMP "Z"

Sta. 57+00 to Sta. 69+00
[1200' X (1 Joint ÷ 40')] + 2 Joints = 32 Joints @ 12.5' (avg.) = 400 L.F.

Sta. 69+00 to Sta. 79+23.59
[1023.59' X (1 Joint ÷ 40')] + 2 Joints = 28 Joints @ 16' = 448 L.F.

Sta. 79+23.59 to Sta. 80+21.38
[97.79' X (1 Joint ÷ 40')] + 1 Joint = 3 Joints @ 28' (avg.) = 84 L.F.

TOTAL = 932 L.F.

RAMP "W"

Sta. 79+81.01 to Sta. 80+49.40
[68.39' X (1 Joint ÷ 40')] + 1 Joint = 3 Joints @ 28' = 84 L.F.

Sta. 80+49.40 to Sta. 88+20.69
[771.29' X (1 Joint ÷ 40')] + 1 Joint = 20 Joints @ 16' = 320 L.F.

Sta. 88+20.69 to Sta. 92+75
[454.31' X (1 Joint ÷ 40')] + 1 Joint = 12 Joints @ 25.5' (avg.) = 306 L.F.

Sta. 92+75 to Sta. 95+25
[250' X (1 Joint ÷ 40')] + 1 Joint = 7 Joints @ 12' = 84 L.F.

Sta. 95+25 to Sta. 96+25
[100' X (1 Joint ÷ 40')] + 1 Joint = 3 Joints @ 6' (avg.) = 18 L.F.

TOTAL = 812 L.F.

RAMP "X"

Sta. 64+00 to Sta. 65+00
[100' X (1 Joint ÷ 40')] + 1 Joint = 3 Joints @ 6' (avg.) = 18 L.F.

Sta. 65+00 to Sta. 67+50
[250' X (1 Joint ÷ 40')] + 1 Joint = 7 Joints @ 12' = 84 L.F.

Sta. 67+50 to Sta. 72+02.43
[452.43' X (1 Joint ÷ 40')] + 1 Joint = 12 Joints @ 19.5' = 234 L.F.

Sta. 72+02.43 to Sta. 79+44.71
[742.28' X (1 Joint ÷ 40')] + 1 Joint = 20 Joints @ 16' = 320 L.F.

Sta. 79+44.71 to Sta. 80+12.56
[67.86' X (1 Joint ÷ 40')] + 1 Joint = 3 Joints @ 28' (avg.) = 84 L.F.

TOTAL = 740 L.F.

RAMP "Y"

Sta. 79+82.11 to Sta. 80+76.92
[94.81' X (1 Joint ÷ 40')] + 1 Joint = 3 Joints @ 28' (avg.) = 84 L.F.

Sta. 80+76.92 to Sta. 92+00
[1123.08' X (1 Joint ÷ 40')] + 2 Joints = 30 Joints @ 16' = 480 L.F.

Sta. 92+00 to Sta. 104+00
[1200' X (1 Joint ÷ 40')] + 2 Joints = 32 Joints @ 12.5' (avg.) = 400 L.F.

TOTAL = 964 L.F.

RAMP "G"

Sta. 152+50 to Sta. 164+50
[1200' X (1 Joint ÷ 40')] + 2 Joints = 32 Joints @ 12.5' (avg.) = 400 L.F.

Sta. 164+50 to Sta. 175+80.04
[1130.04' X (1 Joint ÷ 40')] + 2 Joints = 30 Joints @ 16' = 480 L.F.

Sta. 175+80.04 to Sta. 176+48
[67.96' X (1 Joint ÷ 40')] + 1 Joint = 3 Joints @ 20' (avg.) = 60 L.F.

TOTAL = 940 L.F.

RAMP "H"

Sta. 159+50 to Sta. 160+50
[100' X (1 Joint ÷ 40')] + 1 Joint = 3 Joints @ 6' (avg.) = 18 L.F.

Sta. 160+50 to Sta. 163+12
[262' X (1 Joint ÷ 40')] + 1 Joint = 8 Joints @ 12' = 96 L.F.

Sta. 163+12 to Sta. 167+66.31
[454.31' X (1 Joint ÷ 40')] + 1 Joint = 12 Joints @ 25.5' (avg.) = 306 L.F.

Sta. 167+66.31 to 176+16.87
[499.56' X (1 Joint ÷ 40')] + 1 Joint = 14 Joints @ 16' = 224 L.F.

Sta. 176+16.87 to Sta. 176+74.89
[58.02' X (1 Joint ÷ 40')] + 1 Joint = 3 Joints @ 28' = 84 L.F.

TOTAL = 728 L.F.

MAINLINE - WESTBOUND	TOTAL =	6116 L.F.
MAINLINE - EASTBOUND	TOTAL =	7752 L.F.
RAMPS "Q" & "R"	TOTAL =	991 L.F.
RAMPS "Q" & "S"	TOTAL =	1038 L.F.
RAMPS "T" & "U"	TOTAL =	894 L.F.
RAMPS "T" & "V"	TOTAL =	1269 L.F.
RAMP "Z"	TOTAL =	932 L.F.
RAMP "W"	TOTAL =	812 L.F.
RAMP "X"	TOTAL =	740 L.F.
RAMP "Y"	TOTAL =	964 L.F.
RAMP "G"	TOTAL =	940 L.F.
RAMP "H"	TOTAL =	728 L.F.

ITEM 801 - TRANSVERSE JOINT SEALING, CLASS III, SILICONE
TOTAL = 23,176 L.F.
(Carried to General Summary)

LONGITUDINAL JOINT SEALING CALCULATIONS

ITEM 801 - LONGITUDINAL JOINT SEALING, CLASS V, SILICONE

MAINLINE - WESTBOUND

Sta. 1827+50 to Sta. 1827+96		= 46 L.F.
Sta. 1827+96 to Sta. 1835+10	3 X 714	= 2142 L.F.
Sta. 14+60 to Sta. 51+03.25		= 3644 L.F.
Sta. 90+23 to Sta. 98+00		= 777 L.F.
Sta. 98+82 to Sta. 114+82		= 1600 L.F.
Sta. 123+26 to Sta. 138+92		= 1566 L.F.
Sta. 141+13 to Sta. 174+73		= 3360 L.F.
Sta. 177+60.21 to Sta. 185+50 (Sta. Eq. 185+05.96 BK = 185+00 AHD)		= 796 L.F.
	TOTAL	= 13,931 L.F.

MAINLINE - EASTBOUND

Sta. 1827+50 to Sta. 51+03.25 (Sta. Eq. 1838+29.49 BK = 0+00 AHD)		= 6183 L.F.
Sta. 56+06.25 to Sta. 119+22		= 6316 L.F.
Sta. 126+16 to Sta. 153+12		= 2696 L.F.
Sta. 167+20 to Sta. 175+51.71		= 832 L.F.
Sta. 177+60.21 to Sta. 180+00		= 240 L.F.
Sta. 181+46 to Sta. 185+50 (Sta. Eq. 185+05.96 BK = 185+00 AHD)		= 410 L.F.
	TOTAL	= 16,677 L.F.

RAMPS "Q" & "R"

Sta. 5+50 to Sta. 16+47		= 1097 L.F.
Sta. 17+34 to Sta. 17+50	16' X 2	= 32 L.F.
Sta. 12+22 to Sta. 16+47		= 427 L.F.
Sta. 17+35.96 to Sta. 25+71.02		= 836 L.F.
Sta. 16+11.53 to Sta. 18+66.46		= 255 L.F.
Sta. 18+22 to Sta. 18+66.46		= 47 L.F.
Sta. 18+66.46 to Sta. 23+02.62		= 437 L.F.
	TOTAL	= 3131 L.F.

RAMPS "Q" & "S"

Sta. 31+64.11 to Sta. 36+20		= 460 L.F.
Sta. 36+18 to Sta. 39+46.51		= 330 L.F.
Sta. 33+84 t Sta. 40+46.51		= 664 L.F.
Sta. 34+52 to Sta. 36+20	168 X 2	= 336 L.F.
Sta. 34+52 to Sta. 35+41		= 90 L.F.
Sta. 40+45.69 to Sta. 43+75		= 332 L.F.
Sta. 40+45.69 to Sta. 41+74		= 130 L.F.
Sta. 40+45.69 to Sta. 48+50		= 805 L.F.
	TOTAL	= 3147 L.F.

RAMPS "T" & "U"

Sta. 12+50 to Sta. 20+54.81		= 805 L.F.
Sta. 17+25 to Sta. 20+54.81		= 332 L.F.
Sta. 19+23 to Sta. 20+54.81		= 134 L.F.
Sta. 20+53.48 to Sta. 25+96.88		= 544 L.F.
Sta. 21+53.48 to Sta. 24+56.26		= 304 L.F.
Sta. 23+53 to Sta. 24+55.14		= 105 L.F.
Sta. 24+28 to Sta. 24+55.14		= 30 L.F.
Sta. 24+55.14 to Sta. 27+41.18		= 288 L.F.
	TOTAL	= 2542 L.F.

RAMPS "T" & "V"

Sta. 36+01.65 to Sta. 40+03.56		= 404 L.F.
Sta. 35+95.20 to Sta. 36+36		= 43 L.F.
Sta. 34+20.46 to Sta. 41+53.22		= 735 L.F.
Sta. 35+95.20 to Sta. 38+53.15		= 260 L.F.
Sta. 41+25 to Sta. 46+51		= 528 L.F.
Sta. 41+25 to Sta. 51+03.25		= 980 L.F.
	TOTAL	= 2950 L.F.

RAMP "Z"

Sta. 57+00 to Sta. 69+00		= 1204 L.F.
Sta. 64+30 to Sta. 69+00		= 475 L.F.
Sta. 69+00 to Sta. 80+18		= 1122 L.F.
Sta. 79+43 to Sta. 80+16		= 75 L.F.
Sta. 79+90 to Sta. 80+12		= 24 L.F.
	TOTAL	= 2900 L.F.

RAMP "W"

Sta. 79+84 to Sta. 88+21.52		= 840 L.F.
Sta. 79+93 to Sta. 80+05		= 14 L.F.
Sta. 74+90 to Sta. 80+15		= 527 L.F.
Sta. 79+86 to Sta. 80+36		= 52 L.F.
Sta. 88+21.52 to Sta. 89+49		= 130 L.F.
Sta. 88+20.69 to sta. 89+48		= 128 L.F.
Sta. 89+49 to Sta. 91+51		= 205 L.F.
Sta. 88+20.69 to Sta. 96+25		= 805 L.F.
	TOTAL	= 2701 L.F.

RAMP "X"

Sta. 64+00 to Sta. 72+02.43		= 803 L.F.
Sta. 68+55 to Sta. 71+98.83		= 346 L.F.
Sta. 70+74 to Sta. 72+02.43		= 131 L.F.
Sta. 71+98.83 to Sta. 80+10		= 815 L.F.
Sta. 79+81 to Sta. 80+13		= 34 L.F.
Sta. 80+08 to Sta. 80+16		= 10 L.F.
Sta. 79+57 to Sta. 80+07		= 52 L.F.
Sta. 79+79 to Sta. 80+03		= 26 L.F.
Sta. 79+88 to sta. 79+99		= 13 L.F.
	TOTAL	= 2230 L.F.

RAMP "Y"

Sta. 79+91 to Sta. 80+10		= 21 L.F.
Sta. 79+87 to Sta. 80+58		= 73 L.F.
Sta. 79+83 to Sta. 80+45		= 64 L.F.
Sta. 79+79 to Sta. 79+97		= 20 L.F.
Sta. 79+75 to Sta. 79+83		= 10 L.F.
Sta. 79+85 to Sta. 92+00		= 1220 L.F.
Sta. 92+00 to Sta. 97+27		= 530 L.F.
Sta. 92+00 to Sta. 104+00		= 1200 L.F.
	TOTAL	= 3138 L.F.

RAMP "G"

Sta. 152+50 to Sta. 164+50		= 1200 L.F.
Sta. 159+22 to Sta. 164+50		= 530 L.F.
Sta. 164+50 to Sta. 176+48		= 1200 L.F.
Sta. 175+96 to Sta. 176+48		= 54 L.F.
Sta. 176+34 to sta. 176+48		= 14 L.F.
	TOTAL	= 2998 L.F.

RAMP "H"

Sta. 159+50 to Sta. 167+66.31		= 818 L.F.
Sta. 164+35 to Sta. 167+65.48		= 334 L.F.
Sta. 166+38 to Sta. 167+66.31		= 132 L.F.
Sta. 167+65.48 to Sta. 168+04		= 39 L.F.
Sta. 169+73 to Sta. 170+02		= 31 L.F.
Sta. 171+84 to Sta. 176+74.89		= 492 L.F.
Sta. 176+62 to sta. 176+74.89		= 15 L.F.
Sta. 176+31 to sta. 176+74.89		= 46 L.F.
Sta. 176+53 to sta. 176+74.89		= 24 L.F.
Sta. 176+62 to sta. 176+74.89		= 15 L.F.
Sta. 176+65 to sta. 176+74.89		= 10 L.F.
	TOTAL	= 1956 L.F.

MAINLINE - WESTBOUND	TOTAL	= 13,931 L.F.
MAINLINE - EASTBOUND	TOTAL	= 16,677 L.F.
RAMPS "Q" & "R"	TOTAL	= 3131 L.F.
RAMPS "Q" & "S"	TOTAL	= 3147 L.F.
RAMPS "T" & "U"	TOTAL	= 2542 L.F.
RAMPS "T" & "V"	TOTAL	= 2950 L.F.
RAMP "Z"	TOTAL	= 2900 L.F.
RAMP "W"	TOTAL	= 2701 L.F.
RAMP "X"	TOTAL	= 2230 L.F.
RAMP "Y"	TOTAL	= 3138 L.F.
RAMP "G"	TOTAL	= 2998 L.F.
RAMP "H"	TOTAL	= 1956 L.F.

ITEM 801 - LONGITUDINAL JOINT SEALING, CLASS V, SILICONE
TOTAL = 58,301 L.F.
(Carried to General Summary)

SEEDING CALCULATIONS

CALC BY M.D.C. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	77
CHKD BY J.A.D. DATE 2-27-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

WESTBOUND - MAINLINE

STA. 1827+50 TO STA. 17+50 (STA. EQ. 1838+29.49 BK. = 0.00 AHD.)
OUTSIDE 2829.49' X 10' = 28294.9 SQ. FT. / 9 = 3144 SQ. YD.

STA. 1827+50 TO STA. 4+75 (STA. EQ. 1838+29.49 BK. = 0.00 AHD.)
INSIDE 1554.49' X 10' = 15544.9 SQ. FT. / 9 = 1727 SQ. YD.

STA. 7+45 TO STA. 13+00
INSIDE 555.0' X 10' = 5550 SQ. FT. / 9 = 617 SQ. YD.

STA. 13+00 TO STA. 19+00
INSIDE 600' X 26' = 15600 SQ. FT. / 9 = 1733 SQ. YD.

STA. 19+00 TO STA. 51+28.25
INSIDE 3228.25' X 10' = 32282.5 SQ. FT. / 9 = 3587 SQ. YD.

STA. 21+82 TO STA. 40+45.69
OUTSIDE 1863.69' X 10' = 18636.9 SQ. FT. / 9 = 2071 SQ. YD.

STA. 45+00 TO STA. 51+28.25
OUTSIDE 628.25' X 10' = 6282.5 SQ. FT. / 9 = 698 SQ. YD.

STA. 55+81.25 TO STA. 58+17
OUTSIDE 235.75' X 14' (AVG.) = 3300.5 SQ. FT. / 9 = 367 SQ. YD.

STA. 58+17 TO STA. 69+00
OUTSIDE 1083' X 10' = 10830 SQ. FT. / 9 = 1203 SQ. YD.

STA. 55+81.25 TO STA. 58+00
INSIDE 218.75' X 18' (AVG.) = 3937.5 SQ. FT. / 9 = 438 SQ. YD.

STA. 58+00 TO STA. 77+00
INSIDE 1900' X 10' = 19000 SQ. FT. / 9 = 2111 SQ. YD.

STA. 77+00 TO STA. 83+00
INSIDE 600' X 26' = 15600 SQ. FT. / 9 = 1733 SQ. YD.

STA. 72+81 TO STA. 73+12
OUTSIDE 31' X 5' (AVE.) = 155 SQ. FT. / 9 = 17 SQ. YD.

STA. 73+12 TO STA. 80+37
OUTSIDE 725' X 10' = 7250 SQ. FT. / 9 = 806 SQ. YD.

STA. 80+37 TO STA. 81+85
OUTSIDE 148' X 15' (AVG.) = 2220 SQ. FT. / 9 = 247 SQ. YD.

STA. 81+85 TO STA. 88+20.69
OUTSIDE 635.69' X 10' = 6356.9 SQ. FT. / 9 = 706 SQ. YD.

STA. 83+00 TO STA. 114+70
INSIDE 3170' X 10' = 31700 SQ. FT. / 9 = 3522 SQ. YD.

STA. 114+70 TO STA. 120+70
INSIDE 600' X 26' = 15600 SQ. FT. / 9 = 1733 SQ. YD.

STA. 92+75 TO STA. 118+05
OUTSIDE 2530' X 10' = 25300 SQ. FT. / 9 = 2811 SQ. YD.

STA. 118+05 TO STA. 119+53
OUTSIDE 148' X 15' (AVG.) = 2220 SQ. FT. / 9 = 247 SQ. YD.

STA. 119+53 TO STA. 139+10
OUTSIDE 1957' X 10' = 19570 SQ. FT. / 9 = 2174 SQ. YD.

STA. 120+70 TO STA. 123+75
INSIDE 305' X 10' = 3050 SQ. FT. / 9 = 339 SQ. YD.

STA. 126+45 TO STA. 135+70
INSIDE 925' X 10' = 9250 SQ. FT. / 9 = 1028 SQ. YD.

STA. 135+70 TO STA. 141+70
INSIDE 600' X 26' = 15600 SQ. FT. / 9 = 1733 SQ. YD.

STA. 139+10 TO STA. 140+58
OUTSIDE 148' X 15' (AVG.) = 2220 SQ. FT. / 9 = 247 SQ. YD.

STA. 140+58 TO STA. 164+50
OUTSIDE 2392' X 10' = 23920 SQ. FT. / 9 = 2658 SQ. YD.

STA. 141+70 TO STA. 175+76.71
INSIDE 3406.71' X 10' = 34067.1 SQ. FT. / 9 = 3785 SQ. YD.

STA. 168+16 TO STA. 175+76.71
OUTSIDE 760.71' X 10' = 7607.1 SQ. FT. / 9 = 845 SQ. YD.

STA. 177+35.21 TO STA. 179+00
OUTSIDE 164.79' X 15' (AVG.) = 2471.85 SQ. FT. / 9 = 275 SQ. YD.

STA. 177+35.21 TO STA. 179+00
INSIDE 164.79' X 15' (AVG.) = 2471.85 SQ. FT. / 9 = 275 SQ. YD.

STA. 179+00 TO STA. 185+61 (STA. EQ. 185+05.96 BK. = 185+00 AHD.)
OUTSIDE 666.96' X 10' = 6669.6 SQ. FT. / 9 = 741 SQ. YD.

STA. 179+00 TO STA. 185+61 (STA. EQ. 185+05.96 BK. = 185+00 AHD.)
INSIDE 666.96' X 10' = 6669.6 SQ. FT. / 9 = 741 SQ. YD.

EASTBOUND - MAINLINE

STA. 1827+50 TO STA. 2+55 (STA. EQ. 1838+29.49 BK. = 0.00 AHD.)
INSIDE 1334.49' X 10' = 13344.9 SQ. FT. / 9 = 1483 SQ. YD.

STA. 1827+50 TO STA. 16+00 (STA. EQ. 1838+29.49 BK. = 0.00 AHD.)
OUTSIDE 2679.49' X 10' = 26794.9 SQ. FT. / 9 = 2977 SQ. YD.

STA. 5+25 TO STA. 13+00
INSIDE 775' X 10' = 7750 SQ. FT. / 9 = 861 SQ. YD.

STA. 13+00 TO STA. 19+00
INSIDE 600' X 26' = 15600 SQ. FT. / 9 = 1733 SQ. YD.

STA. 19+00 TO STA. 49+00
INSIDE 3000' X 10' = 30000 SQ. FT. / 9 = 3333 SQ. YD.

STA. 20+54.81 TO STA. 37+33
OUTSIDE 1678.19' X 10' = 16781.9 SQ. FT. / 9 = 1865 SQ. YD.

STA. 41+25 TO STA. 42+38
OUTSIDE 113' X 10' = 1130 SQ. FT. / 9 = 126 SQ. YD.

STA. 42+38 TO STA. 44+38
OUTSIDE 200' X 15' (AVG.) = 3000 SQ. FT. / 9 = 333 SQ. YD.

STA. 44+38 TO STA. 51+28.25
OUTSIDE 690.25' X 10' = 6902.5 SQ. FT. / 9 = 767 SQ. YD.

STA. 49+00 TO STA. 51+28.25
INSIDE 228.25' X 18' (AVG.) = 4108.5 SQ. FT. / 9 = 457 SQ. YD.

STA. 55+81.25 TO STA. 67+50
OUTSIDE 1168.75' X 10' = 11687.5 SQ. FT. / 9 = 1299 SQ. YD.

STA. 55+81.25 TO STA. 77+00
INSIDE 2118.75' X 10' = 21187.5 SQ. FT. / 9 = 2354 SQ. YD.

STA. 72+02.43 TO STA. 78+15
OUTSIDE 612.57' X 10' = 6125.7 SQ. FT. / 9 = 681 SQ. YD.

STA. 78+15 TO STA. 79+63
OUTSIDE 148' X 15' (AVG.) = 2220 SQ. FT. / 9 = 247 SQ. YD.

STA. 79+63 TO STA. 88+18
OUTSIDE 855' X 10' = 8550 SQ. FT. / 9 = 950 SQ. YD.

STA. 77+00 TO STA. 83+00
INSIDE 600' X 26' = 15600 SQ. FT. / 9 = 1733 SQ. YD.

STA. 83+00 TO STA. 114+70
INSIDE 3170' X 10' = 31700 SQ. FT. / 9 = 3522 SQ. YD.

FOR ADDITIONAL SEEDING QUANTITIES SEE
MEDIAN CROSSOVER DETAIL SHEET No. 91 AND
BERM REPLACEMENT DETAIL SHEET No. 105.

FOR SEEDING SUB-SUMMARY, SEE SHEET NO. 88.

SEEDING CALCULATIONS

STA. 92+00 TO STA. 115+91

OUTSIDE 2391' X 10' = 23910 SQ. FT. / 9 = 2657 SQ. YD.

STA. 114+70 TO STA. 120+70

INSIDE 600' X 26' = 15600 SQ. FT. / 9 = 1733 SQ. YD.

STA. 120+70 TO STA. 121+55

INSIDE 85' X 10' = 850 SQ. FT. / 9 = 94 SQ. YD.

STA. 115+91 TO STA. 119+39

OUTSIDE 348' X 15' (AVG.) = 5220 SQ. FT. / 9 = 508 SQ. YD.

STA. 119+39 TO STA. 136+77

OUTSIDE 1738' X 10' = 17380 SQ. FT. / 9 = 1931 SQ. YD.

STA. 124+25 TO STA. 135+70

INSIDE 1145' X 10' = 11450 SQ. FT. / 9 = 1272 SQ. YD.

STA. 135+70 TO STA. 141+70

INSIDE 600' X 26' = 15600 SQ. FT. / 9 = 1733 SQ. YD.

STA. 141+70 TO STA. 174+42

INSIDE 3272' X 10' = 32720 SQ. FT. / 9 = 3636 SQ. YD.

STA. 136+77 TO STA. 138+25

OUTSIDE 148' X 15' (AVG.) = 2220 SQ. FT. / 9 = 247 SQ. YD.

STA. 138+25 TO STA. 163+12

OUTSIDE 2487' X 10' = 24870 SQ. FT. / 9 = 2763 SQ. YD.

STA. 167+66.31 TO STA. 174+30

OUTSIDE 663.69' X 10' = 6636.9 SQ. FT. / 9 = 737 SQ. YD.

STA. 174+30 TO STA. 175+76.71

OUTSIDE 146.71' X 15' (AVG.) = 2200.65 SQ. FT. / 9 = 245 SQ. YD.

STA. 174+42 TO STA. 175+76.71

INSIDE 134.71' X 18' (AVG.) = 2424.78 SQ. FT. / 9 = 269 SQ. YD.

STA. 177+35.21 TO STA. 185+61 (STA. EQ. 185+05.96 BK. = 185+00 AHD.)

OUTSIDE 831.75' X 10' = 8317.5 SQ. FT. / 9 = 924 SQ. YD.

STA. 177+35.21 TO STA. 185+61 (STA. EQ. 185+05.96 BK. = 185+00 AHD.)

INSIDE 831.75' X 10' = 8317.5 SQ. FT. / 9 = 924 SQ. YD.

RAMPS "Q" & "R"

STA. 17+35.96 TO STA. 20+36.02

300.06' X 10' = 3000.6 SQ. FT. / 9 = 333 SQ. YD.

STA. 16+11.53 TO STA. 23+02.62

691.09' X 10' = 6910.9 SQ. FT. / 9 = 768 SQ. YD.

STA. 19+68 TO STA. 23+02.62

334.62' X 10' = 3346.2 SQ. FT. / 9 = 372 SQ. YD.

STA. 22+93 TO STA. 26+20

327' X 10' = 3270 SQ. FT. / 9 = 363 SQ. YD.

STA. 21+82 TO STA. 26+20

438' X 10' = 4380 SQ. FT. / 9 = 487 SQ. YD.

RAMPS "Q" & "S"

STA. 31+64.11 TO STA. 45+00

1335.89' X 10' = 13358.9 SQ. FT. / 9 = 1484 SQ. YD.

STA. 31+64.11 TO STA. 34+52

287.89' X 10' = 2878.9 SQ. FT. / 9 = 320 SQ. YD.

STA. 33+69 TO STA. 34+52

83' X 6.6' (AVE.) = 547.8 SQ. FT. / 9 = 61 SQ. YD.

STA. 33+69 TO STA. 39+85

616' X 10' = 6160 SQ. FT. / 9 = 684 SQ. YD.

STA. 39+85 TO STA. 40+46.51

61.51' X 5' (AVE.) = 307.6 SQ. FT. / 9 = 35 SQ. YD.

RAMPS "T" & "U"

STA. 16+00 TO STA. 27+67.77

1167.77' X 10' = 11677.7 SQ. FT. / 9 = 1298 SQ. YD.

STA. 20+53.48 TO STA. 21+20

66.52' X 5' (AVE.) = 332.6 SQ. FT. / 9 = 37 SQ. YD.

STA. 21+20 TO STA. 25+70

450' X 10' = 4500 SQ. FT. / 9 = 500 SQ. YD.

STA. 24+56.26 TO STA. 25+70

113.74' X 6.6' (AVE.) = 750.7 SQ. FT. / 9 = 83 SQ. YD.

STA. 24+56.26 TO STA. 27+41.18

284.92' X 10' = 2849.2 SQ. FT. / 9 = 317 SQ. YD.

RAMPS "T" & "V"

STA. 36+01.65 TO STA. 41+25

523.35' X 10' = 5233.5 SQ. FT. / 9 = 582 SQ. YD.

STA. 36+01.65 TO STA. 39+04

302.35' X 10' = 3023.5 SQ. FT. / 9 = 336 SQ. YD.

STA. 33+85 TO STA. 35+95.20

210.20' X 10' = 2102.0 SQ. FT. / 9 = 234 SQ. YD.

STA. 33+85 TO STA. 36+90

305' X 10' = 3050 SQ. FT. / 9 = 339 SQ. YD.

STA. 36+90 TO STA. 37+33

43' X 5' (AVE.) = 215 SQ. FT. / 9 = 24 SQ. YD.

RAMP "Z"

STA. 69+00 TO STA. 80+17.38

1117.38' X 10' = 11173.8 SQ. FT. / 9 = 1242 SQ. YD.

STA. 73+13 TO STA. 80+17.38

704.38' X 10' = 7043.8 SQ. FT. / 9 = 783 SQ. YD.

RAMP "W"

STA. 79+85.03 TO STA. 92+75

1289.97' X 10' = 12899.7 SQ. FT. / 9 = 1433 SQ. YD.

STA. 79+85.03 TO STA. 87+60.18

775.15' X 10' = 7751.5 SQ. FT. / 9 = 861 SQ. YD.

STA. 87+60.18 TO STA. 88+21.52

61.34' X 5' (AVE.) = 306.7 SQ. FT. / 9 = 34 SQ. YD.

RAMP "X"

STA. 67+50 TO STA. 80+08.56

1258.56' X 10' = 12585.6 SQ. FT. / 9 = 1398 SQ. YD.

STA. 71+98.83 TO STA. 72+60.81

61.98' X 5' (AVE.) = 309.9 SQ. FT. / 9 = 34 SQ. YD.

STA. 72+60.81 TO STA. 80+08.56

747.75' X 10' = 7477.5 SQ. FT. / 9 = 831 SQ. YD.

RAMP "Y"

STA. 79+86.11 TO STA. 92+00

1213.89' X 10' = 12138.9 SQ. FT. / 9 = 1349 SQ. YD.

STA. 79+86.11 TO STA. 87+47.87

761.76' X 10' = 7617.6 SQ. FT. / 9 = 846 SQ. YD.

STA. 87+47.87 TO STA. 88+18

70.13' X 5' (AVE.) = 350.7 SQ. FT. / 9 = 39 SQ. YD.

RAMP "G"

STA. 164+50 TO STA. 176+78.06

1228.06' X 10' = 12280.6 SQ. FT. / 9 = 1365 SQ. YD.

STA. 168+16 TO STA. 168+87

71' X 5' (AVE.) = 355 SQ. FT. / 9 = 39 SQ. YD.

STA. 168+87 TO STA. 176+78.06

791.06' X 10' = 7910.6 SQ. FT. / 9 = 879 SQ. YD.

RAMP "H"

STA. 163+12 TO STA. 176+74.89

1362.89' X 10' = 13628.9 SQ. FT. / 9 = 1514 SQ. YD.

STA. 167+65.48 TO STA. 168+28

62.52' X 5' (AVE.) = 312.6 SQ. FT. / 9 = 35 SQ. YD.

STA. 168+28 TO STA. 176+74.89

846.89' X 10' = 8468.9 SQ. FT. / 9 = 941 SQ. YD.

FOR ADDITIONAL SEEDING QUANTITIES SEE MEDIAN CROSSOVER DETAIL SHEET No. 91 AND BERM REPLACEMENT DETAIL SHEET No. 105.

FOR SEEDING SUB-SUMMARY, SEE SHEET NO. 88.

GENERAL SUMMARY

SHEET NUMBER 10	11	16	17	18	23	55	82	83	84	85	86	87	88	89	91	105	157	255	259	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
																								ROADWAY
LUMP																				201	11000	LUMP		CLEARING AND GRUBBING
														540						202	22900	540	SQ. YD.	APPROACH SLAB REMOVED
							28202	2358	2158							20				202	23000	32738	SQ. YD.	PAVEMENT REMOVED
										1503										202	23500	1503	SQ. YD.	WEARING COURSE REMOVED
																1953				202	32000	1953	LIN. FT.	CURB REMOVED
																927				202	32001	927	LIN. FT.	CURB REMOVED, AS PER PLAN (SEE DETAILS SHEETS 105-112)
												12681.5								202	38000	12681.5	LIN. FT.	GUARDRAIL REMOVED
												425.0								202	38300	425.0	LIN. FT.	GUARDRAIL REMOVED, BARRIER DESIGN
												34								202	38700	34	EACH	GUARDRAIL POST REMOVED
											3									202	58500	3	EACH	CATCH BASIN ABANDONED
	185						8423	20657	4551	169				188	479	153	331		2870	203	12000	35136	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
																	2054			203	20000	2054	CU. YD.	EMBANKMENT
							29627	29163	8638	1898				892	1246					203	50000	71464	SQ. YD.	SUBGRADE COMPACTION
189.23																				203	60001	189.23	STATION	LINEAR GRADING, AS PER PLAN (SEE SHEET 10)
												11650								606	13000	11675	LIN. FT.	GUARDRAIL, TYPE 5
												175								606	13050	175	LIN. FT.	GUARDRAIL, TYPE 5A
												1300								606	15500	1300	LIN. FT.	GUARDRAIL, BARRIER DESIGN, TYPE 5
												12								606	25000	12	EACH	ANCHOR ASSEMBLY, TYPE A
												10								606	25500	10	EACH	ANCHOR ASSEMBLY, BARRIER DESIGN, TYPE A
												23								606	26500	23	EACH	ANCHOR ASSEMBLY, TYPE T
												12								606	28000	12	EACH	ANCHOR ASSEMBLY, TYPE E (SEE NOTE ON SH.10)
												1								606	26000	1	EACH	ANCHOR ASSEMBLY, TYPE B
												36								606	35000	36	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1
												4								606	35100	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2
																6905				SPECIAL	60650000	6905	LIN. FT.	BERM RESHAPING (NOTE ON SH.10)
												2								SPECIAL	69010350	2	EACH	IMPACT ATTENUATOR, TYPE 1, BIDIRECTIONAL (NOTE ON SH. 10)
																								EROSION CONTROL
22942																				207	10000	22942	SQ. YD.	TEMPORARY SEEDING AND MULCHING
100																				207	70000	100	EACH	STRAW OR HAY BALES
																			1890	601	25000	3052	CU. YD.	DUMPED ROCK FILL, TYPE A
																			2772	601	32000	2862	CU. YD.	ROCK CHANNEL PROTECTION, TYPE A, WITH FILTER
																		50		601	32200	50	CU. YD.	ROCK CHANNEL PROTECTION, TYPE C, WITH FILTER
											14									601	32300	23	CU. YD.	ROCK CHANNEL PROTECTION, TYPE D, WITH FILTER
													111008		1288	4508				659	10000	116804	SQ. YD.	SEEDING AND MULCHING
6000																				659	14000	6000	CU. YD.	REPAIR SEEDING AND MULCHING
2													10.00		0.12	0.41				659	20000	12.53	TON	COMMERCIAL FERTILIZER
290															3	10				659	35000	553	M GAL.	WATER
																		1028		660	20000	1028	SQ. YD.	REINFORCED SODDING
																								MAINTENANCE OF TRAFFIC
		5																		614	12460	5	EACH	WORK ZONE MARKING SIGN
				38																614	12470	38	EACH	WORK ZONE SPEED LIMIT SIGN
		100																		SPECIAL	61412500	100	SQ. FT.	REPLACEMENT SIGN (NOTE ON SH. 16)
		200																		SPECIAL	61412600	200	EACH	REPLACEMENT DRUM (NOTE ON SH. 16)
						1528														614	12900	1528	EACH	TEMPORARY RAISED PAVEMENT MARKER, TYPE A
					1109															614	13300	1109	EACH	BARRIER REFLECTOR, TYPE B
					92															614	13302	92	EACH	BARRIER REFLECTOR, TYPE B2
		14.00																		614	20300	14.00	MILE	TEMPORARY LANE LINE, CLASS I, 740.05, TYPE C
					0.11															614	21300	0.11	MILE	TEMPORARY CENTER LINE, CLASS I, 740.05, TYPE C
		0.26																		614	21700	0.26	MILE	TEMPORARY CENTER LINE, CLASS II, 740.05, TYPE C
					4.23															614	22000	4.23	MILE	TEMPORARY EDGE LINE, CLASS I
					7.34															614	22300	7.34	MILE	TEMPORARY EDGE LINE, CLASS I, 740.05, TYPE C
					48															614	26600	48	LIN. FT.	TEMPORARY STOP LINE, CLASS I, 740.05, TYPE C
		5692																		614	28600	5,692	LIN. FT.	TEMPORARY GORE MARKING, CLASS II, 740.05, TYPE C
			9825																	615	20001	9825	SQ. YD.	TEMPORARY PAVEMENT, CLASS A, AS PER PLAN (SEE SHEET 17)
					944															615	20001	944	SQ. YD.	TEMPORARY PAVEMENT, CLASS A, AS PER PLAN "A" (SEE SHEET 17)
					30,280															622	40021	30,280	LIN. FT.	PORTABLE CONCRETE BARRIER, 32", AS PER PLAN (SEE SHEET 58 &17)

GENERAL SUMMARY

CALC BY R.L.S. DATE 2-27-92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	OHIO	80 267
CHKD BY J.A.D. DATE 2-28-92		FHWA REGION 5	

SHEET NUMBER																															ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
11	67	68	69	70	71	72	73	74	75	76	82	83	84	85	87	89	91	92	93	94	95	96	97	98	99	100	101	102	102A	105	113	123	135	255					
																																						PAVEMENT
								112368																										SPECIAL	25401400	112368	SQ. YD.	GRINDING PORTLAND CEMENT CONCRETE PAVEMENT (NOTE ON SH. 11)
																												80						255	10101	80	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN "A"
80																																		255	10200	80	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MSI, AS PER PLAN "A"
826	1208	1234	931	1760	1427	1043	576																											255	10001	9005	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "A"
266	1286	264	1078																															255	10001	2894	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "B"
5																			45															255	10001	50.0	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "C"
18																				180														255	10001	198	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "D"
																					80													255	10200	80	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS HES, AS PER PLAN "A"
																						80												255	10200	80	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FT1, AS PER PLAN "A"
																							80											255	10200	80	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RSPC1, AS PER PLAN "A"
																								80										255	10200	80	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RSC1, AS PER PLAN "A"
																									80									255	10200	80	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS VES, AS PER PLAN "A"
																										80								255	10200	80	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RSPC2, AS PER PLAN "A"
																											80							255	10200	80	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RSC2, AS PER PLAN "A"
																												80						255	10200	80	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MSU, AS PER PLAN "A"
3262	5564	5208	5507	5669	4809	3111	1698												208	816														255	20000	35852	LIN. FT.	FULL DEPTH PAVEMENT SAWING
														80				100																301	10002	180	CU. YD.	BITUMINOUS AGGREGATE BASE, AC-20
185											6907	8134	2054	87		149	161			30										73	9			304	20001	17789	CU. YD.	AGGREGATE BASE, AS PER PLAN (NOTE ON SH. 11)
											294						1																	310	10001	295	CU. YD.	SUBBASE, AS PER PLAN (NOTE ON SH. 11)
														24																				403	20000	24	CU. YD.	ASPHALT CONCRETE, AC-20
														62																				404	20000	62	CU. YD.	ASPHALT CONCRETE, AC-20
														127																				407	10000	127	GAL.	TACK COAT
											5409			382			22																	408	10000	5813	GAL.	BITUMINOUS PRIME COAT
														8																				409	12000	8	CU. YD.	SEAL COAT COVER AGGREGATE, NO. 8
														284																				409	20000	284	GAL.	SEAL COAT BITUMINOUS MATERIAL
500																																		SPECIAL	45037800	500	SQ. FT.	BONDED PATCHING OF RIGID PAVEMENTS, TYPE I (SEE PROPOSAL NOTE)
												117	912																					451	14001	1029	SQ. YD.	9" REINFORCED CONCRETE PAVEMENT, AS PER PLAN (SEE SHEET NO. 12)
											28202	2241	1247																					451	15001	31690	SQ. YD.	10" REINFORCED CONCRETE PAVEMENT, AS PER PLAN (SEE SHEET NO. 12)
																															36	36		SPECIAL	45130000	72	LIN. FT.	PRESSURE RELIEF JOINT, TYPE A
												2544	3672				186												381						452	13001	6783	SQ. YD.	9" PLAIN CONCRETE PAVEMENT, AS PER PLAN (SEE SHEET 12)
												44584	5567				126													65					452	17001	50342	SQ. YD.	VARIABLE THICKNESS PLAIN CONCRETE PAVEMENT, AS PER PLAN (SEE SHEET 12)
																													1630					516	13600	1630	SQ. FT.	1" PREFORMED EXP. JOINT FILLER
																																	528	609	26000	528	LIN. FT.	CURB, TYPE 6
																848																		611	25000	848	SQ. YD.	REINFORCED CONCRETE APPROACH SLAB (T=15")
															578																			622	24000	578	LIN. FT.	CONCRETE BARRIER, TYPE D
											3248																							SPECIAL	69000100	3248	SQ. YD.	4" NON-STABILIZED DRAINAGE BASE, TYPE NJ (NOTES ON SH. 13)
											4009						55																	SPECIAL	69000110	4064	SQ. YD.	4" NON-STABILIZED DRAINAGE BASE, TYPE IA (NOTES ON SH. 13)
											2752																							SPECIAL	69000120	2752	SQ. YD.	4" ASPHALT TREATED FREE DRAINING BASE (NOTES ON SH. 14)
											2688																							SPECIAL	69000130	2688	SQ. YD.	4" CEMENT TREATED FREE DRAINING BASE (NOTES ON SH. 15)
16600																																		801	00100	16600	LIN. FT.	CRACK SEALING, CLASS I, SILICONE
									23176																									801	00300	23176	LIN. FT.	TRANSVERSE JOINT SEALING, CLASS III, SILICONE
										58301																									801	00500	58301	LIN. FT.	LONGITUDINAL JOINT SEALING, CLASS V, SILICONE

GENERAL SUMMARY

SHEET NUMBER	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
					DRAINAGE
255: 5	602	20000	5	CU. YD.	CONCRETE MASONRY
86: 100	603	00900	100	LIN. FT.	6" CONDUIT, TYPE B
86: 183	603	00901	133	LIN. FT.	6" CONDUIT TYPE B, AS PER PLAN, BORED OR JACKED (SEE SHEET 11)
86: 3196	603	01500	3196	LIN. FT.	6" CONDUIT TYPE F, 707.17 NON-PERFORATED ASTM 3034 SDR 35, SS931 OR SS944
86: 215	603	04600	215	LIN. FT.	12" CONDUIT TYPE C
255: 1511	603	04600	1511	LIN. FT.	12" CONDUIT TYPE C, AS PER 707.13
86: 105	603	06100	105	LIN. FT.	15" CONDUIT TYPE C
255: 27	604	00800	27	EACH	CATCH BASIN NO. 3A
86: 3	604	01201	3	EACH	CATCH BASIN, NO. 4, AS PER PLAN (SEE DETAIL SHEET 116A)
86: 1	604	01600	1	EACH	CATCH BASIN, NO. 5, AS PER PLAN (SEE DETAIL SHEET 116A) (NOTE SH. 11)
86: 5	604	09001	5	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN (Sheet 11)
86: 3	604	09501	3	EACH	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN (Sheet 11)
86: 56	SPECIAL	60436600	56	EACH	PRECAST REINFORCED CONCRETE OUTLET (SEE DETAIL ON SH. 116)
86: 8680	605	05100	8680	LIN. FT.	4" SHALLOW PIPE UNDERDRAIN, 707.17, ASTM 3034 SDR35, SS931 OR SS944 PERFORATED AS PER 707.15
86: 147	605	05200	147	LIN. FT.	4" UNCLASSIFIED PIPE UNDERDRAIN, 707.17, ASTM 3034 SDR35, SS931 OR SS944 PERFORATED AS PER 707.15
86: 633	605	05201	633	LIN. FT.	4" UNCLASSIFIED PIPE UNDERDRAIN, AS PER PLAN, 707.15
86: 63317	605	05101	63317	LIN. FT.	4" SHALLOW PIPE UNDERDRAIN, AS PER PLAN, 707.15 (SEE SHEET 116)
86: 74	605	11100	74	LIN. FT.	6" SHALLOW PIPE UNDERDRAIN, 707.17, SS944, SS931 OR ASTM 3034 SRD35, PERFORATED AS PER 707.15
86: 1466	605	11101	1466	LIN. FT.	6" SHALLOW PIPE UNDERDRAIN, AS PER PLAN, 707.15
86: 30	605	13301	30	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAIN, AS PER PLAN, 707.15 (SEE DETAIL SHEET 116)
86: 9087	605	13500	9087	LIN. FT.	6" ROCK CUT UNDERDRAIN, 707.17, SS944, SS931 OR ASTM 3034 SDR 35 PERFORATED AS PER 707.15
					STRUCTURES (UNDER 20' SPAN)
192: 125	519	11101	125	SQ. FT.	PATCHING CONCRETE STRUCTURE, AS PER PLAN (SEE NOTE SHEET 195)
192: 60	SPECIAL	51911502	60	SQ. FT.	PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
192: 190	SPECIAL	51912600	190	LIN. FT.	EPOXY INJECTION
					FOR TRAFFIC CONTROL GENERAL SUMMARY SEE SHEET 172.
					FOR BRIDGE GENERAL SUMMARY SEE SHEET 195.
					FOR WEIGH-IN-MOTION INSTRUMENTATION GENERAL SUMMARY SEE SHEET 262.
					FOR LIGHTING GENERAL SUMMARY SEE SHEET 135.
16: LUMP	614	11000	LUMP		MAINTAINING TRAFFIC
	619	15020	LUMP		FIELD OFFICE, TYPE C
	623	10000	LUMP		CONSTRUCTION LAYOUT STAKES
	624	10000	LUMP		MOBILIZATION

CALC BY M.D.C. DATE 2-27-92
CHKD BY J.A.D. DATE 2-27-92

ERI/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY

OHIO
FHWA REGION 5

82
267

PAVEMENT CALCULATIONS SUB-SUMMARY

SHEET NO.	STATION TO STATION		202 PAVEMENT REMOVED SQ. YD.		203 SUBGRADE COMPACTION SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	304 6" AGGREGATE BASE AS PER PLAN CU. YD.	310 SUBBASE AS PER PLAN CU. YD.		408 BITUMINOUS PRIME COAT GAL.		451 10" REINFORCED CONCRETE PAVEMENT, AS PER PLAN SQ. YD.		SPECIAL NON-STABILIZED DRAINAGE BASE TYPE 'IA' SQ. YD.	SPECIAL NON-STABILIZED DRAINAGE BASE TYPE 'NJ' SQ. YD.	SPECIAL ASPHALT TREATED FREE DRAINING BASE SQ. YD.	SPECIAL CEMENT TREATED FREE DRAINING BASE SQ. YD.
	MAINLINE - WESTBOUND																
60	STA. 1835+10 TO STA. 3+60		1812.0		1963.0	252	327.2	243.3				1812.0					
60	STA. 3+60 TO STA. 4+75		306.7		332.2	75.9	55.4	41.2				306.7					
60	STA. 4+75 TO STA. 5+50		200.0		216.7	61.1	36.1	9.0		58.9		200.0		161.1			
60	STA. 5+50 TO STA. 7+45		520.0		520.0	158.9	86.7			208.0		520.0		520.0			
60	STA. 5+50 TO STA. 14+60 (ACCEL. LANE)		958.5		958.5	292.9	159.8			423.9		958.5		1261.9			
60	STA. 7+45 TO STA. 14+60		1906.7		2065.6	590.0	344.3			810.3		1906.7		2065.6			
60	STA. 56+06.25 TO STA. 57+00		250.0		270.8	76.4	78.7					250.0					
60	STA. 57+00 TO STA. 69+00 (ACCEL. LANE)		1673.4		1673.4	511.3	424.8			663.3		1673.4			761.6		
60	STA. 57+00 TO STA. 72+81		4228.2		4580.6	1409.4	1007.9			933.7		4228.2			2379.9		
60	STA. 72+81 TO STA. 88+20.69		4106.3		4448.5	1254.7	741.4			1813.6		4106.3			106.7	2752.0	2103.1
60	STA. 88+20.69 TO STA. 90+23		539.5		584.5	164.8	97.4			229.3		539.5					584.5
60	STA. 88+20.69 TO STA. 90+23 (DECEL. LANE)		647.6		647.6	197.8	187.4			268.0		647.6					
60	STA. 98+00 TO STA. 99+82		485.3		485.3	148.3	148.3					485.3					
60	STA. 114+82 TO STA. 123+26		2250.7		2250.7	687.7	687.7					2250.7					
60	STA. 138+92 TO STA. 141+13		589.3		589.3	180.1	180.1					589.3					
60	STA. 174+73 TO STA. 175+51.71		209.9		209.9	64.1	64.2					209.9					
	MAINLINE - EASTBOUND																
60	STA. 119+21 TO STA. 126+16		1853.3		1853.3	566.3	556.3					1853.3					
61	STA. 153+12 TO STA. 159+50		1701.3		1843.1	519.9	535.6					1701.3					
61	STA. 159+50 TO STA. 167+20		2053.3		2224.4	627.4	617.9					2053.3					
61	STA. 159+50 TO STA. 167+20 (DECEL. LANE)		1520.3		1520.3	464.5	450.8					1520.3					
61	STA. 180+00 TO STA. 181+46		389.3		389.3	119.0	119.0					389.3					
TOTALS			28201.6		29627.0	8422.5	6907.0	293.5		5409.0		28201.6		4008.6	3248.2	2752.0	2687.6
TOTALS CARRIED TO GENERAL SUMMARY			28202		29627	8423	6907	294		5409		28202		4009	3248	2752	2688

CALC BY M.D.C. DATE 2-27-92
CHKD BY J.A.D. DATE 2-27-92

ERI/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY

OHIO
FHWA REGION 5

83
267

PAVEMENT CALCULATIONS SUB-SUMMARY

SHEET NO.	STATION TO STATION	202 PAVEMENT REMOVED SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	304 AGGREGATE BASE AS PER PLAN CU. YD.	451 10" REINFORCED CONCRETE PAVEMENT, AS PER PLAN SQ. YD.	452 VARIABLE THICKNESS PLAIN CONCRETE PAVEMENT, AS PER PLAN SQ. YD.	452 9" PLAIN CONCRETE PAVEMENT, AS PER PLAN SQ. YD.
	SHOULDERS - WESTBOUND							
61	STA. 1827+50 TO STA. 1827+96		26.0	35.8	10.8		61.3	
61	STA. 1835+10 TO STA. 3+60		387.8	755.0	95.1		906.0	
61	STA. 3+60 TO STA. 4+75		65.7	102.2	16.2		153.3	
61	STA. 4+75 TO STA. 5+50		28.5	58.3	9.5		66.7	
61	STA. 5+50 TO STA. 7+45		74.0	151.7	24.7		173.3	
61	STA. 7+45 TO STA. 14+60		408.0	635.5	100.4		953.4	
61	STA. 14+60 TO STA. 51+03.25		1473.8	1646.5	594.3		3501.0	
61	STA. 56+06.25 TO STA. 90+23		1273.8	1650.6	253.9		2972.1	
61	STA. 90+23 TO STA. 98+00		208.6	136.1	80.7		500.9	
61	STA. 98+00 TO STA. 99+82		107.8	202.3	33.9		242.7	
61	STA. 99+82 TO STA. 114+82		847.2	1166.7	349.6		2000.0	
61	STA. 114+82 TO STA. 123+26		499.8	937.7	157.3		1125.3	
61	STA. 123+26 TO STA. 138+92		835.3	1392.0	347		1968.0	
61.62	STA. 138+92 TO STA. 141+13		130.9	245.6	41.2		294.7	
62	STA. 141+13 TO STA. 174+73		1298.7	1395.3	522		3088	
62	STA. 174+73 TO STA. 175+51.71		46.6	87.4	14.7		105.0	
62	STA. 177+60.21 TO STA. 185+50		449.4	618.9	185.4		1061	
	SHOULDERS - EASTBOUND							
62	STA. 1827+50 TO STA. 51+03.25		2580.0	3098.0	1055.9		6168.5	
62	STA. 56+06.25 TO STA. 119+21		2652.7	3054.7	1073		6296.3	
62	STA. 119+21 TO STA. 126+16		354.2	682.3	113.4		806.7	
62	STA. 126+16 TO STA. 153+12		1522.8	2096.9	628.2		3594.7	
62	STA. 153+12 TO STA. 167+20		513.9	965.5	99.8		1192.9	
62	STA. 167+20 TO STA. 175+51.71		452.1	610.9	186		1067.8	
62	STA. 177+60.21 TO STA. 180+00		135.4	186.5	55.9		319.7	
62	STA. 180+00 TO STA. 181+46		86.4	162.3	27.2		194.7	
62	STA. 181+46 TO STA. 185+50		231.5	318.9	95.5		546.6	
	RAMPS "R" & "Q"							
62	STA. 16+47 TO STA. 17+34 (S.R. 2)	232	70.9	232	67.7	232		
62	STA. 14+60 TO STA. 17+50 (S.R. 2)		111.0	225.6	48.3		257.8	
62	STA. 17+50 TO STA. 21+82 (S.R. 2)	720	205.3	720	200	720		
62	STA. 17+35.96 TO STA. 20+36.02 (RAMP R)		111.1	233.4	44.5		266.7	
62	STA. 16+11.53 TO STA. 18+66.47 (RAMP Q)		94.0	197.5	37.6		225.7	
62	STA. 18+66.47 TO STA. 19+66.47 (RAMP Q)		25.9	16.7	5.1		60.8	
63	STA. 19+66.47 TO STA. 23+02.62 (RAMP Q)		46.6		18.6			111.9
63	STA. 20+65 TO STA. 23+02.62 (RAMP Q)		33.6		13.5			80.7
63	STA. 22+93 TO STA. 26+20 (RAMP R)		45.4		18.2			109.0
63	STA. 23+19.75 TO STA. 26+20 (RAMP R)		41.8		16.7			100.3
TOTALS		952.0	17476.5	24018.8	6641.8	952.0	40171.6	401.9

SHEET NO.	STATION TO STATION	202 PAVEMENT REMOVED SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	304 AGGREGATE BASE AS PER PLAN CU. YD.	451 9" REINFORCED CONCRETE PAVEMENT, AS PER PLAN SQ. YD.	451 10" REINFORCED CONCRETE PAVEMENT, AS PER PLAN SQ. YD.	452 VARIABLE THICKNESS PLAIN CONCRETE PAVEMENT, AS PER PLAN SQ. YD.	452 9" PLAIN CONCRETE PAVEMENT, AS PER PLAN SQ. YD.
	RAMPS "S" & "O"								
63	STA. 45+00 TO STA. 48+50 (S.R. 2)		133.9	272.2	58.3			311.1	
63	STA. 40+46.51 TO STA. 45+00 (RAMP S)		173.3		75.5			402.7	
63	STA. 39+46.51 TO STA. 40+46.51 (RAMP S)		25.4	16.7	10.2			61.1	
63	STA. 34+52.78 TO STA. 39+46.51 (RAMP O)		68.5		27.4				164.5
63	STA. 31+64.11 TO STA. 34+52.78 (RAMP O)		40.0		15.9				95.9
63	STA. 31+64.11 TO STA. 34+52.78 (RAMP O)		41.6		16.6				99.8
63	STA. 33+69 TO STA. 40+46.51 (RAMP S)		94.1		37.6				225.8
63	STA. 33+69 TO STA. 34+52 (RAMP S)		11.5		4.6				27.7
	RAMPS "T" & "U"								
63	STA. 12+50 TO STA. 16+00 (RAMP U)		133.9	272.2	58.3			311.1	
63	STA. 16+00 TO STA. 20+53.48 (RAMP U)		173.3	352.3	75.5			402.7	
63	STA. 20+53.48 TO STA. 21+53.48 (RAMP U)		25.5	16.7	10.2			61.1	
63	STA. 21+53.48 TO STA. 24+55.14 (RAMP T)		41.9		16.7				100.5
63	STA. 24+55.14 TO STA. 27+41.18 (RAMP T)		39.6		15.8				95.1
63	STA. 24+56.26 TO STA. 27+41.18 (RAMP T)		41.0		16.4				98.5
63	STA. 20+53.48 TO STA. 25+70 (RAMP U)		71.7		28.7				172.2
63	STA. 24+56.26 TO STA. 25+70 (RAMP U)		15.8		6.3				37.9
63	STA. 27+08 TO STA. 27+59 (RAMP T)	116.4	12.9	116.4	19.4	116.4			
	RAMPS "T" & "V"								
63	STA. 36+01.65 TO STA. 37+20.49 (RAMP T)		16.5		6.6				39.6
63	STA. 36+01.65 TO STA. 37+20.49 (RAMP T)		16.5		6.6				39.6
63	STA. 37+20.49 TO STA. 38+35 (RAMP T)		16.3		6.5				39.2
63	STA. 37+20.49 TO STA. 39+05.56 (RAMP T)		25.7		10.3				61.7
63	STA. 39+05.56 TO STA. 40+05.56 (RAMP T)		25.4	16.7	10.2			60.9	
63	STA. 40+05.56 TO STA. 42+58.72 (RAMP T)		93.9	225.5	37.6			225.5	
63	STA. 33+85 TO STA. 36+40 (RAMP V)		35.8		14.3				86.0
63	STA. 33+85 TO STA. 35+95.20 (RAMP V)		29.2		11.7				70.0
63	STA. 38+53.15 TO STA. 41+53.22 (RAMP V)		111.1	233.4	44.5			266.7	
64	STA. 37+33 TO STA. 41+25 (S.R. 2)	653.3	199.6	609.8	181.5		653.3		
64	STA. 41+25 TO STA. 51+28.25 (S.R. 2)		383.8	780.3	167.2			891.8	
	RAMP "Z"								
64	STA. 57+00 TO STA. 59+38.68 (S.R. 2)		90.6	185.6	30.2			212.2	
64	STA. 59+38.68 TO STA. 69+00 (S.R. 2)		367.1	752.1	122.5			859.6	
64	STA. 69+00 TO STA. 72+81 (S.R. 2)	635.8	194.3	593.4	176.6		635.8		
64	STA. 69+00 TO STA. 72+02.07 (RAMP Z)		111.9	234.9	44.8			268.5	
64	STA. 72+02.07 TO STA. 73+02.07 (RAMP Z)		32.3	66.4	12.9			77.5	
64	STA. 73+02.07 TO STA. 74+64.02 (RAMP Z)		44.8	89.7	17.9				107.6
64	STA. 74+64.02 TO STA. 80+21.38 (RAMP Z)		154.8	309.6	61.9				371.6
64	STA. 72+81 TO STA. 74+64.02 (RAMP Z)		9.5		3.8				22.8
64	STA. 74+64.02 TO STA. 80+21.96 (RAMP Z)		77.5		31.0				186.0
TOTALS		1405.5	3180.5	5143.9	1492.0	116.42	1289.1	4412.5	2142.0
GRAND TOTALS		2357.5	20657.0	29162.7	8133.8	116.42	2241.1	44584.1	2543.9
GRAND TOTALS CARRIED TO GENERAL SUMMARY		2358	20657	29163	8134	117	2241	44584	2544

PAVEMENT CALCULATIONS SUB-SUMMARY

SHEET NO.	STATION TO STATION	202 PAVEMENT REMOVED SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	203 SUBGRADE COMPACTION SQ. YD.		304 AGGREGATE BASE AS PER PLAN CU. YD.		451 10" REINFORCED CONCRETE PAVEMENT, AS PER PLAN SQ. YD.	452 VARIABLE THICKNESS PLAIN CONCRETE PAVEMENT, AS PER PLAN SQ. YD.	452 9" PLAIN CONCRETE PAVEMENT, AS PER PLAN SQ. YD.
	RAMP "W"									
64	STA. 92+75 TO STA. 96+25 (S.R. 2)		133.9	272.2		58.3			311.1	
64	STA. 88+21.52 TO STA. 92+75 (RAMP W)		172.0	352.3		57.4			402.7	
64	STA. 87+21.52 TO STA. 88+21.52 (RAMP W)		32.4	66.6		13.0			77.7	
64	STA. 84+97.53 TO STA. 87+21.52 (RAMP W)		62.1	124.2		24.8				149.0
64	STA. 79+81.03 TO STA. 84+97.53 (RAMP W)		143.5	286.9		57.4				344.3
64	STA. 87+21.52 TO STA. 88+21.52 (RAMP W)		14.0			5.6				33.5
64	STA. 84+97.53 TO STA. 87+21.52 (RAMP W)		31.5			12.6				75.6
64	STA. 79+81.03 TO STA. 84+97.53 (RAMP W)		72.2			28.8				173.3
	RAMP "X"									
64	STA. 64+00 TO STA. 67+50 (S.R. 2)		133.9	272.2		58.3			311.1	
64	STA. 67+50 TO STA. 71+98.83 (RAMP X)		171.5	348.6		74.7			398.4	
64	STA. 71+98.83 TO STA. 72+98.83 (RAMP X)		32.4	66.6		12.9			77.7	
64	STA. 72+98.83 TO STA. 75+10.19 (RAMP X)		58.6	117.2		23.4				140.6
64	STA. 75+10.19 TO STA. 79+63.76 (RAMP X)		126.0	252.0		50.4				302.4
64	STA. 79+63.76 "X" TO STA. 21+60 VER. INT. RD.		21.8			8.7			52.3	
64	STA. 71+98.83 TO STA. 72+98.83 (RAMP X)		14.0			5.6				33.5
64	STA. 72+98.83 TO STA. 75+10.19 (RAMP X)		29.7			11.9				71.3
64	STA. 75+10.19 TO STA. 79+44.71 (RAMP X)		60.4			24.1				144.8
64	STA. 79+44.71 "X" TO STA. 22+67 VER. INT. RD.		9.7			3.9			23.3	
	RAMP "Y"									
65	STA. 92+00 TO STA. 104+00 (S.R. 2)		459.1	933.3		200.0			1066.7	
65	STA. 88+18 TO STA. 92+00 (RAMP Y)	636.7	181.6	636.7		176.9		636.7		
65	STA. 88+99.94 TO STA. 92+00 (RAMP Y)		111.1	233.4		44.5			266.7	
65	STA. 87+99.94 TO STA. 88+99.94 (RAMP Y)		32.3	66.4		12.9			77.5	
65	STA. 86+51.21 TO STA. 87+99.94 (RAMP Y)		41.2	82.4		16.5				98.8
65	STA. 80+30.24 TO STA. 86+51.21 (RAMP Y)		172.5			69.0				414.0
65	STA. 80+30.24 "Y" TO STA. 21+43 VER. INT. RD.		21.8			8.7			52.4	
65	STA. 22+41 VER. INT. RD. TO STA. 80+41.89 "Y"		7.9			3.2			18.9	
65	STA. 86+51.21 TO STA. 88+18 (RAMP Y)		6.9			2.8				16.6
65	STA. 80+41.89 TO STA. 86+51.21 (RAMP Y)		84.6			33.9				203.1
	TOTALS	636.7	2438.6	4111.0		1100.2		636.7	3136.5	2200.8

SHEET NO.	STATION TO STATION	202 PAVEMENT REMOVED SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	203 SUBGRADE COMPACTION SQ. YD.		304 AGGREGATE BASE AS PER PLAN CU. YD.	451 9" REINFORCED CONCRETE PAVEMENT, AS PER PLAN SQ. YD.	451 10" REINFORCED CONCRETE PAVEMENT, AS PER PLAN SQ. YD.	452 VARIABLE THICKNESS PLAIN CONCRETE PAVEMENT, AS PER PLAN SQ. YD.	452 9" PLAIN CONCRETE PAVEMENT, AS PER PLAN SQ. YD.
	RAMP "G"									
65	STA. 152+50 TO STA. 164+50 (S.R. 2)		459.1	933.3		200.0			1066.7	
65	STA. 164+50 TO STA. 168+16 (RAMP G)	610.0	186.4	610.0		169.4		610.0		
65	STA. 164+50 TO STA. 167+50.07 (RAMP G)		111.1	233.4		22.2			266.7	
65	STA. 167+50.07 TO STA. 168+50.07 (RAMP G)		32.2	66.3		12.9			77.4	
65	STA. 168+50.07 TO STA. 170+90.66 (RAMP G)		66.6	133.1		26.6				159.7
65	STA. 170+90.66 TO STA. 173+39.26 (RAMP G)		69.1	148.0		27.6				165.7
65	STA. 173+39.26 TO STA. 175+76.27 (RAMP G)		66.3	132.5		26.5				159.0
65	STA. 175+76.27 "G" TO STA. 211+79.12 BAUMHART RD.		34.5	69.0		13.8			82.8	
65	STA. 169+16 TO STA. 170+90.66 (RAMP G)		24.9			9.9				59.6
65	STA. 170+90.66 TO STA. 173+39.26 (RAMP G)		34.5			13.8				82.9
65	STA. 173+39.26 TO STA. 175+76.27 (RAMP G)		31.7			12.7				76.1
65	STA. 175+76.27 "G" TO STA. 210+86 BAUMHART RD.		9.5			3.8			22.9	
65	STA. 176+48 TO STA. 176+78.06 (RAMP G)	230.3	70.4	230.3		38.4	230.3			
	RAMP "H"									
65	STA. 159+50 TO STA. 163+12 (S.R. 2)		137.4	281.6		45.9			321.8	
65	STA. 163+12 TO STA. 167+65.48 (RAMP H)		172.0	352.3		57.4			402.7	
65	STA. 167+65.48 TO STA. 168+65.48 (RAMP H)		32.4	66.6		13.0			77.7	
65	STA. 168+65.48 TO STA. 171+13.26 (RAMP H)		68.5	137.1		27.4				164.5
65	STA. 171+13.26 TO STA. 173+18.64 (RAMP H)		57.1	121.8		22.8				136.9
65	STA. 173+18.64 TO STA. 175+99.89 (RAMP H)		78.5	157.1		31.4				188.5
65	STA. 175+99.89 "H" TO STA. 203+47.90 BAUMHART RD.		24.6	49.2		9.8			59.0	
65	STA. 203+97.90 TO STA. 203+47.90 (BAUMHART RD.)		11.6			4.6			27.8	
65	STA. 167+65.48 TO STA. 168+65.48 (RAMP H)		14.0	22.3		5.6				33.5
65	STA. 168+65.48 TO STA. 171+13.26 (RAMP H)		35.3	56.4		14.1				84.6
65	STA. 171+13.26 TO STA. 173+18.64 (RAMP H)		28.5	45.6		11.4				68.5
66	STA. 173+18.64 TO STA. 175+99.87 (RAMP H)		37.9			15.1				90.9
66	STA. 175+99.87 "H" TO STA. 204+65 BAUMHART RD.		10.4			4.2			25.1	
66	STA. 168+04 TO STA. 169+73 (RAMP H)	302.8	92.5	302.8		50.5	302.8			
66	STA. 169+73 TO STA. 170+02 (RAMP H)	52.3	16.0	52.3		8.7	52.3			
66	STA. 170+02 TO STA. 171+84 (RAMP H)	325.8	99.5	325.8		54.3	325.8			
	TOTALS	1521.2	2112.5	4526.8		953.8	911.2	610.0	2430.6	1470.4
	GRAND TOTALS	2157.9	4551.1	8637.8		2054.0	911.2	1246.7	5567.1	3671.2
	GRAND TOTALS CARRIED TO GENERAL SUMMARY	2158	4551	8638		2054	912	1247	5567	3672

CALC BY RLS DATE 2/28/92	ERI/LOR-2-30.51/0.00	OHIO	85
CHKD BY JSB DATE 2/28/92	VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	FHWA REGION 5	267

OVERPASS PAVEMENT SUB-SUMMARY

SHEET NO.	202 WEARING COURSE REMOVED SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	301 BITUMINOUS AGGREGATE BASE. AC-20 CU. YD.	304 AGGREGATE BASE. AS PER PLAN CU. YD.	403 ASPHALT CONCRETE. AC-20 CU. YD.	404 ASPHALT CONCRETE. AC-20 CU. YD.	407 TACK COAT GAL.	408 BITUMINOUS PRIME COAT GAL.	409 SEAL COAT BITUMINOUS MATERIAL GAL.	409 SEAL COAT COVER AGGREGATE NO. 8 CU. YD.
148	139.1	5.0	205.4	1.9	2.5	2.2	3.9	11.7	8.8	55.1	1.5
149	138.5	4.3	256.5	1.9	2.5	2.2	3.8	11.6	8.8	70.4	1.9
150	171.1	5.2	290.2	2.2	3.0	2.6	4.8	14.4	10.7	79.2	2.2
151	170.3	5.2	289.6	2.2	3.0	2.6	4.7	14.4	10.7	79.0	2.1
152	330.6	69.8	402.8	33.4	35.0	5.2	19.0	27.8	161.4		
153	138.7	19.8	113.6	9.5	10.1	2.2	6.5	11.6	45.4		
154	138.7	19.8	113.6	9.5	10.1	2.2	6.5	11.6	45.4		
155	137.9	19.7	113.0	9.5	10.1	2.2	6.4	11.6	45.2		
156	137.9	19.7	113.0	9.5	10.1	2.2	6.4	11.6	45.2		
TOTALS CARRIED TO GENERAL SUMMARY	1502.8	168.5	1897.7	79.6	86.4	23.6	62.0	126.3	381.6	283.7	7.7

DRAINAGE SUB-SUMMARY

CALC BY R.L.S. DATE 2-14-92	ERI/LOR-2-30.51/0.00	OHIO	86
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE AND LORAIN COUNTIES		

SHEET NO.			202		601		603						604							605								SPECIAL	
			CATCH BASIN ABANDONED		ROCK CHANNEL PROTECTION TYPE D. WITH FILTER		6" CONDUIT TYPE B BORED OR JACKED, AS PER PLAN	6" CONDUIT TYPE B	6" CONDUIT TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR 35, SS931, OR SS944	12" CONDUIT TYPE C	15" CONDUIT TYPE C		CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	CATCH BASIN, NO. 4, AS PER PLAN	CATCH BASIN, NO. 5, AS PER PLAN	CATCH BASIN ADJUSTED TO GRADE	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN	CATCH BASIN RECONSTRUCTED TO GRADE		4" SHALLOW PIPE UNDERDRAIN, 707.15, AS PER PLAN	4" UNCLASSIFIED PIPE UNDERDRAIN, 707.15, AS PER PLAN	4" SHALLOW PIPE UNDERDRAIN 707.17, ASTM 3034 SDR 35, SS931 OR SS944 PERFORATED AS PER 707.15	4" UNCLASSIFIED PIPE UNDERDRAIN 707.17, ASTM 3034 SDR 35, SS931 OR SS944 PERFORATED AS PER 707.15	6" ROCK CUT UNDERDRAIN, 707.17, SS944, SS931 OR ASTM 3034 SDR, PERFORATED AS PER 707.15	6" UNCLASSIFIED PIPE UNDERDRAIN, 707.15, AS PER PLAN	6" SHALLOW PIPE UNDERDRAIN, 707.15, AS PER PLAN	6" SHALLOW PIPE UNDERDRAIN 707.17, SS944, SS931, OR ASTM 3034 SDR 35, PERFORATED AS PER 707.15		PRECAST REINFORCED CONCRETE OUTLET	
			EACH		CU. YD.		LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.		EACH	EACH	EACH	EACH	EACH	EACH		LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	
117							35		222											2793								3	
118									42											4000								1	
119			1						260		105			1						3783				267				4	
120									26											50				3947				1	
121					14		70		180				1		1			1						4000					
122							51		213							1				1660				873	30	1403		3	
123									112											1882						63	36		
124								25	90							1				3984									
125									98									1		3683	283								
126			1						160	108				1						4071								2	
127									113											3650	350							1	
128									196											4000								4	
129			1						188	107				1						4000								4	
130								25	130											4000								1	
131									198											4000								4	
132									123											4000								2	
133									144											4000								3	
134							27		171							1				4577								3	
135																				3160							38		
135A								50	156								1			2024								1	
136									60													928						3	
137									26													836	47					1	
138									24													542	50					1	
139									40							1						958						2	
142									56													1122						3	
143									18													720	50					1	
144									38													814						2	
145									38													1218						2	
146									40													822						2	
147									34													720						2	
TOTALS CARRIED TO GENERAL SUMMARY			3		14		183	100	3196	215	105		1	3	1	4	1	2		63,317	633	8680	147	9087	30	1466	74	56	

CALC BY R.L.S. DATE 2-19-92	ERI/LOR-2-30.51/0.00	OHIO	87
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE AND LORAIN COUNTIES	FHWA REGION 5	267

GUARDRAIL SUB-SUMMARY

SHEET NO.			202				606											622			SPECIAL										
			GUARDRAIL REMOVED	GUARDRAIL REMOVED, BARRIER DESIGN	GUARDRAIL POSTS REMOVED		GUARDRAIL, TYPE 5A	GUARDRAIL, TYPE 5	GUARDRAIL, BARRIER DESIGN, TYPE 5	ANCHOR ASSEMBLY, TYPE A	ANCHOR ASSEMBLY, BARRIER DESIGN, TYPE A		ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 1	BRIDGE TERMINAL ASSEMBLY, TYPE 2	ANCHOR ASSEMBLY, TYPE E			CONCRETE BARRIER, TYPE D			IMPACT ATTENUATOR TYPE 1, BIDERECTIONAL									
			LIN. FT.	LIN. FT.	EACH		LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH		EACH	EACH	EACH	EACH			LIN. FT.			EACH										
119			900.0	50.0			25.0	437.50	225.0		2		2	2		2			106													
122			1678.0	75.0			100.0	1862.50	50.0		1		1	2	1	1															
123			722.0	75.0				325.00	50.0		1		1	2	1	1			138													
125			450.0	25.0				243.75	112.5		1		1	1		1			60													
126			450.0	25.0				243.75	112.5		1		1	1		1			60													
129			850.0	50.0				525.00	225.0		2		2	2		2			104													
131			839.5	39.5				587.50	225.0		2		2	2		2			110													
132			10.5	10.5																											
135			775.0	75.0				900.00	300.0				2	4	2	2						2									
148			712.5		34			862.50		2			4	2																	
149			500.0					512.50					2	2																	
150			675.0					650.00		2				2																	
151			619.0					625.00					1	2																	
152			500.0				50.0	587.50		2			2	4																	
153			750.0					837.50		2				2																	
154			650.0					812.50		1			1	2																	
155			750.0					662.50		2				2																	
156			850.0					975.00		1			1	2																	
TOTALS CARRIED TO GENERAL SUMMARY			12681.5	425.0	34		175	11650.0	1300.0	12	10		23	36	4	12			578			2									

SEEDING SUB-SUMMARY

SIDE	STATION TO STATION	659 SEEDING AND MULCHING SQ. YD.
	WESTBOUND - MAINLINE	
OUT	STA. 1827+50 TO STA. 17+50	3144
IN	STA. 1827+50 TO STA. 4+75	1727
IN	STA. 7+45 TO STA. 13+00	617
IN	STA. 13+00 TO STA. 19+00	1733
IN	STA. 19+00 TO STA. 51+28.25	3587
OUT	STA. 21+82 TO STA. 40+45.69	2071
OUT	STA. 45+00 TO STA. 51+28.25	698
OUT	STA. 55+81.25 TO STA. 58+17	367
OUT	STA. 58+17 TO STA. 69+00	1203
IN	STA. 55+81.25 TO STA. 58+00	438
IN	STA. 58+00 TO STA. 77+00	2111
IN	STA. 77+00 TO STA. 83+00	1733
OUT	STA. 72+81 TO STA. 73+12	17
OUT	STA. 73+12 TO STA. 80+37	806
OUT	STA. 80+37 TO STA. 81+85	247
OUT	STA. 81+85 TO STA. 88+20.69	706
IN	STA. 83+00 TO STA. 114+70	3522
IN	STA. 114+70 TO STA. 120+70	1733
OUT	STA. 92+75 TO STA. 118+05	2811
OUT	STA. 118+05 TO STA. 119+53	247
OUT	STA. 119+53 TO STA. 139+10	2174
IN	STA. 120+70 TO STA. 123+75	339
IN	STA. 126+45 TO STA. 135+70	1028
IN	STA. 135+70 TO STA. 141+70	1733
OUT	STA. 139+10 TO STA. 140+58	247
OUT	STA. 140+58 TO STA. 164+50	2658
IN	STA. 141+70 TO STA. 175+76.71	3785
OUT	STA. 168+16 TO STA. 175+76.71	845
OUT	STA. 177+35.21 TO STA. 179+00	275
IN	STA. 177+35.21 TO STA. 179+00	275
OUT	STA. 179+00 TO STA. 185+61	741
IN	STA. 179+00 TO STA. 185+61	741
	EASTBOUND - MAINLINE	
IN	STA. 1827+50 TO STA. 2+55	1483
OUT	STA. 1827+50 TO STA. 16+00	2977
IN	STA. 5+25 TO STA. 13+00	861
IN	STA. 13+00 TO STA. 19+00	1733
IN	STA. 19+00 TO STA. 49+00	3333
OUT	STA. 20+54.81 TO STA. 37+33	1865
OUT	STA. 41+25 TO STA. 42+38	126
OUT	STA. 42+38 TO STA. 44+38	333
OUT	STA. 44+38 TO STA. 51+28.25	767
IN	STA. 49+00 TO STA. 51+28.25	457
	TOTALS	58,314

SIDE	STATION TO STATION	659 SEEDING AND MULCHING SQ. YD.
OUT	STA. 55+81.25 TO STA. 67+50	1299
IN	STA. 55+81.25 TO STA. 77+00	2354
OUT	STA. 72+02.43 TO STA. 78+15	681
OUT	STA. 78+15 TO STA. 79+63	247
OUT	STA. 79+63 TO STA. 88+18	950
IN	STA. 77+00 TO STA. 83+00	1733
IN	STA. 83+00 TO STA. 114+70	3522
OUT	STA. 92+00 TO STA. 115+91	2657
IN	STA. 114+70 TO STA. 120+70	1733
IN	STA. 120+70 TO STA. 121+55	94
OUT	STA. 115+91 TO STA. 119+39	508
OUT	STA. 119+39 TO STA. 136+77	1931
IN	STA. 124+25 TO STA. 135+70	1272
IN	STA. 135+70 TO STA. 141+70	1733
IN	STA. 141+70 TO STA. 174+42	3636
OUT	STA. 136+77 TO STA. 138+25	247
OUT	STA. 138+25 TO STA. 163+12	2763
OUT	STA. 167+66.31 TO STA. 174+30	737
OUT	STA. 174+30 TO STA. 175+76.71	245
IN	STA. 174+42 TO STA. 175+76.71	269
OUT	STA. 177+35.21 TO STA. 185+61	924
IN	STA. 177+35.21 TO STA. 185+61	924
	RAMPS "Q" & "R"	
	STA. 17+35.96 TO STA. 20+36.02	333
	STA. 16+11.53 TO STA. 23+02.62	768
	STA. 19+68 TO STA. 23+02.62	372
	STA. 22+93 TO STA. 26+20	363
	STA. 21+82 TO STA. 26+20	487
	RAMPS "Q" & "S"	
	STA. 31+64.11 TO STA. 45+00	1484
	STA. 31+64.11 TO STA. 34+52	320
	STA. 33+69 TO STA. 34+52	61
	STA. 33+69 TO STA. 39+85	684
	STA. 39+85 TO STA. 40+46.51	35
	RAMPS "T" & "U"	
	STA. 16+00 TO STA. 27+67.77	1298
	STA. 20+53.48 TO STA. 21+20	37
	STA. 21+20 TO STA. 25+70	500
	STA. 24+56.26 TO STA. 25+70	83
	STA. 24+56.26 TO STA. 27+41.18	317
	TOTALS	37601

SIDE	STATION TO STATION	659 COMMERCIAL FERTILIZER TONS	659 SEEDING AND MULCHING SQ. YD.
	RAMPS "T" & "V"		
	STA. 36+01.65 TO STA. 41+25		582
	STA. 36+01.65 TO STA. 39+04		336
	STA. 33+85 TO STA. 35+95.20		234
	STA. 33+85 TO STA. 36+90		339
	STA. 36+90 TO STA. 37+33		24
	RAMP "Z"		
	STA. 69+00 TO STA. 80+17.38		1242
	STA. 73+13 TO STA. 80+17.38		738
	RAMP "W"		
	STA. 79+85.03 TO STA. 92+75		1433
	STA. 79+85.03 TO STA. 87+60.18		861
	STA. 87+60.18 TO STA. 88+21.52		34
	RAMP "X"		
	STA. 67+50 TO STA. 80+08.56		1398
	STA. 71+98.83 TO STA. 72+60.81		34
	STA. 72+60.81 TO STA. 80+08.56		831
	RAMP "Y"		
	STA. 79+86.11 TO STA. 92+00		1349
	STA. 79+86.11 TO STA. 87+47.87		846
	STA. 87+47.87 TO STA. 88+18		39
	RAMP "G"		
	STA. 164+50 TO STA. 176+78.06		1365
	STA. 168+16 TO STA. 168+87		39
	STA. 168+87 TO STA. 176+78.06		879
	RAMP "H"		
	STA. 163+12 TO STA. 176+74.89		1514
	STA. 167+65.48 TO STA. 168+28		35
	STA. 168+28 TO STA. 176+74.89		941
	TOTALS		15093
	GRAND TOTALS	10.00	111,008

MISCELLANEOUS COMPUTATIONS: ITEM 659 COMMERCIAL FERTILIZER (20 LBS./1000 SQ. FT.)
(111,008 X 9 X 20)(1/1600)(1/2000) = 10.00 TONS

ITEM 659 WATER (120 GAL./1000 SQ. FT.)
(111,008 X 9 X 120)(1/1000)(1/1000) X 2 Applications = 240 M. GALS. (TOTAL CARRIED TO SHEET 10)

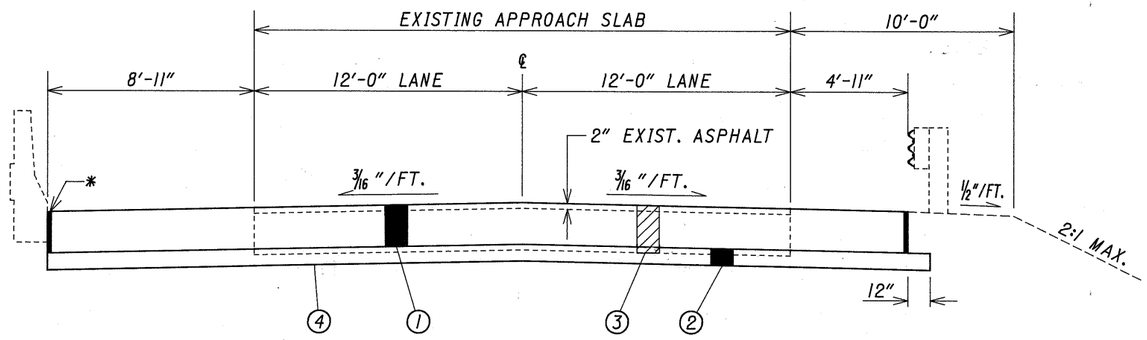
GRAND TOTALS CARRIED TO GENERAL SUMMARY

SEEDING CALCULATIONS SUB-SUMMARY

CALC BY RLS DATE 8-11-98	ERI/LOR-2-30.51/0.00	OHIO	89
CHKD BY DLW DATE 8-28-98	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

MAINLINE

APPROACH SLAB DETAILS



SECTION APPLIES:

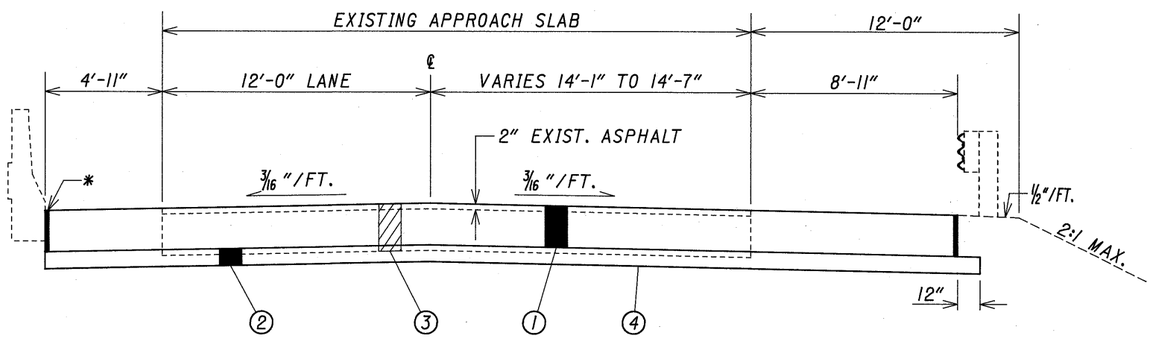
WESTBOUND

STA. 51+03.25 to STA. 51+28.25 = 25.00 L.F.

WESTBOUND AND EASTBOUND

STA. 55+81.25 to STA. 56+06.25 = 25.00 L.F. x 2 = 50.00 L.F.
STA. 175+51.71 to STA. 175+76.71 = 25.00 L.F. x 2 = 50.00 L.F.
STA. 177+35.21 to STA. 177+60.21 = 25.00 L.F. x 2 = 50.00 L.F.

TOTAL= 175.00 L.F.



SECTION APPLIES:

EASTBOUND

STA. 51+03.25 to STA. 51+28.25 = 25.00 L.F.

GRAND TOTAL = 200.00 LIN. FT.

* - 1" PREFORMED EXPANSION JOINT FILLER AND JOINT SEALER AS PER AS-1-81. (Typ.)

MAINLINE APPROACH SLAB SUB-SUMMARY

LOCATION	202 Approach Slab Removed	203 Excavation Not Including Embankment Construction	203 Subgrade Compaction	304 6" Aggregate Base As Per Plan	611 Reinforced Concrete Approach Slab (T=15")		
	SQ. YD.	CU. YD.	SQ. YD.	CU. YD.	SQ. YD.		
Sta. 51+03.25 to Sta. 51+28.25 ℄ S.R. 2 W.B.	66.7	23.5	110.7	18.5	105.1		
Sta. 51+03.25 to Sta. 51+28.25 ℄ S.R. 2 E.B.	73.1	23.5	117.2	19.5	111.6		
Sta. 55+81.25 to Sta. 56+06.25 ℄ S.R. 2 W.B. & E.B.	133.3	46.8	221.3	37.0	210.2		
Sta. 175+51.71 to Sta. 175+76.71 ℄ S.R. 2 W.B. & E.B.	133.3	46.8	221.3	37.0	210.2		
Sta. 177+35.21 to Sta. 177+60.21 ℄ S.R. 2 W.B. & E.B.	133.3	46.8	221.3	37.0	210.2		
TOTALS CARRIED TO GENERAL SUMMARY	539.7	187.4	891.8	149.0	847.3		

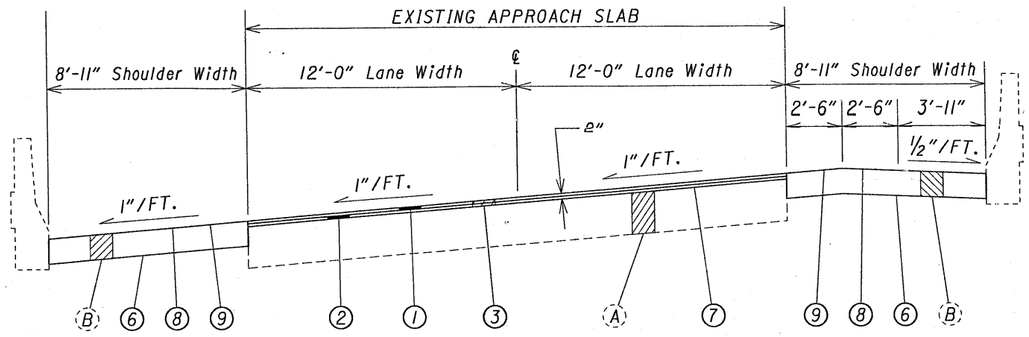
LEGEND

1. ITEM 611 - 15" Reinforced Concrete Approach Slab
2. ITEM 304 - 6" Aggregate Base, As Per Plan
3. ITEM 202 - Approach Slab Removed
4. ITEM 203 - Subgrade Compaction

Note: For Additional Details Not Shown See Standard Drawing AS-1-81.

OVERPASS

APPROACH SLAB DETAILS



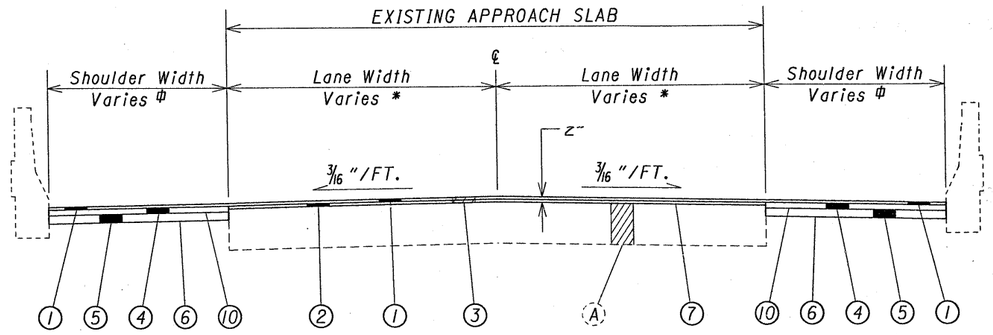
SECTION APPLIES:

VERMILION ROAD

STA. 23+51.17 to STA. 23+76.17 = 25.00 L.F.
STA. 26+24.12 to STA. 26+49.12 = 25.00 L.F.

TOTAL = 50 L.F.

(SHOULDER TREATMENT AS SHOWN ABOVE APPLIES:
STA. 21+50 TO STA. 23+76.17
AND
STA. 26+24.12 TO STA. 28+50)



SECTION APPLIES:

WEST RIVER ROAD Δ

STA. 23+40.58 to STA. 23+65.58 = 25.00 L.F.
STA. 26+51.67 to STA. 26+76.67 = 25.00 L.F.

SUNNYSIDE ROAD

STA. 23+57.42 to STA. 23+82.42 = 25.00 L.F.
STA. 26+17.58 to STA. 26+42.58 = 25.00 L.F.

VERMILION INTERCHANGE ROAD

STA. 23+58.00 to STA. 23+83.00 = 25.00 L.F.
STA. 26+17.00 to STA. 26+42.00 = 25.00 L.F.

CLAUS ROAD

STA. 23+57.07 to STA. 23+82.07 = 25.00 L.F.
STA. 26+17.93 to STA. 26+42.93 = 25.00 L.F.

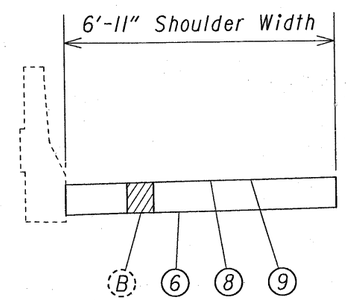
TOTAL = 200 L.F.

GRAND TOTAL = 250.00 LIN. FT.

* : 10'-0" West River Road, Sunnyside Road, Claus Road
12'-0" Vermilion Interchange Road

Φ : 6'-11" West River Road, Sunnyside Road, Claus Road
8'-11" Vermilion Interchange Road

Δ : Shoulder Treatment As Shown Below Applies:
West River Road : STA. 22+00 to STA. 23+65.58
: STA. 26+51.67 to STA. 28+75



LEGEND

1. ITEM 404 - 1" Asphalt Concrete, AC-20
2. ITEM 403 - 1" Asphalt Concrete, AC-20
3. ITEM 202 - Wearing Course Removed
4. ITEM 301 - 3" Bituminous Aggregate Base, AC-20
5. ITEM 304 - 3" Aggregate Base, As Per Plan
6. ITEM 203 - Subgrade Compaction
7. ITEM 407 - Tack Coat (See General Note)
8. ITEM 409 - Seal Coat Bituminous Material, Applied At A Rate Of 0.30 Gal/Sq. Yd.
9. ITEM 409 - Seal Coat Cover Aggregate, No. 8, Applied At A Rate Of 0.008 Cu. Yd./Sq. Yd.
10. ITEM 408 - Bituminous Prime Coat, Applied At A Rate Of 0.40 Gal/Sq. Yd.

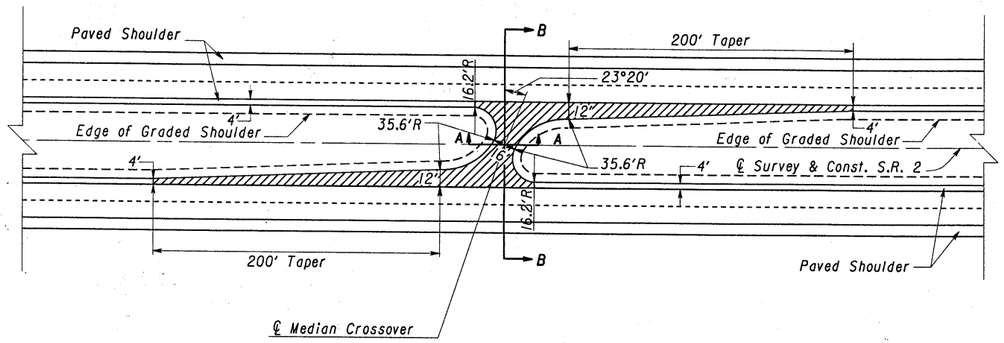
A. Existing 15" Reinforced Concrete Approach Slab

B. Temporary Pavement, Class A, As Per Plan "A", Installed In Maintenance Of Traffic Phase One, See Sheets 53 And 54.

For Overpass Resurfacing Quantities
See Sheets 148-156

MEDIAN CROSSOVER DETAILS

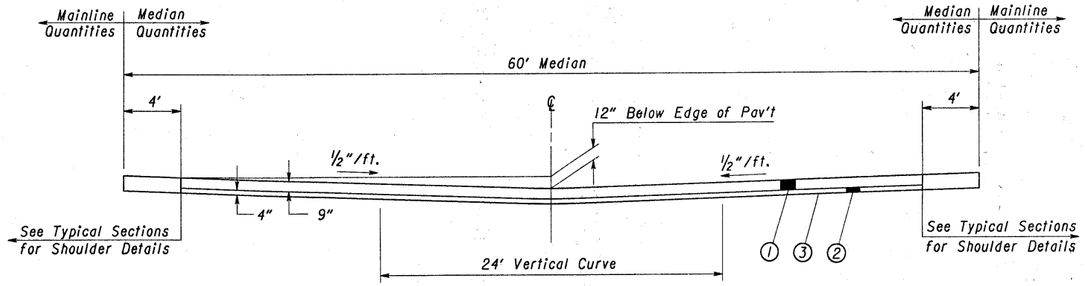
CALC BY JAD DATE 2-25-92	ERI/LOR-2-30.51/0.00	OHIO	91
CHKD BY RLS DATE 2-27-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



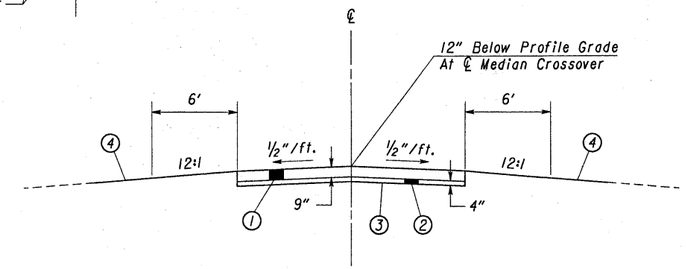
TYPICAL MEDIAN CROSSOVER DETAIL

Applies: Sta. 5+00 and Sta. 124+00

Note: Seed Area 10' Inside of Paved Shoulder



SECTION B-B



SECTION A-A

LEGEND

1. ITEM 452 - 9" Plain Concrete Pavement, As Per Plan
2. ITEM 304 - 4" Aggregate Base, As Per Plan
3. ITEM 202 - Subgrade Compaction
4. ITEM 659 - Seeding And Mulching

(D) Transverse Joint (With Dowels), As Per Standard Construction Drawing BP-4

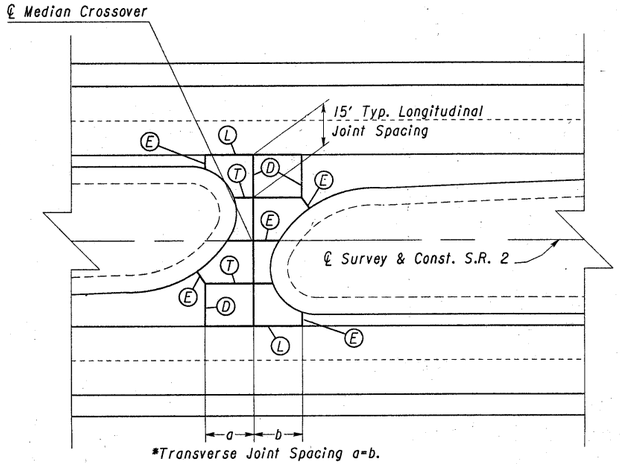
(E) Expansion Joint (Without Dowels), As Per Standard Construction Drawing BP-4

(T) Longitudinal Joint (Tied), As Per Standard Drawing BP-3

(L) Longitudinal Joint (without Tie-Bars), As Per Standard Drawing BP-3

MEDIAN CROSSOVER QUANTITIES

	ITEM 203 Excavation Not Including Embankment Construction	ITEM 304 4" Aggregate Base, As Per Plan	ITEM 304 Aggregate Base, As Per Plan, (Variable Depth)	ITEM 310 4" Subbase, As Per Plan	ITEM 408 Bituminous Prime Coat	ITEM 452 9" Plain Concrete Pavement, As Per Plan	ITEM 452 Plain Concrete Pavement, Variable Thickness, As Per Plan	ITEM 659 Seeding and Mulching	ITEM 659 Commercial Fertilizer	ITEM 659 Water	ITEM SPECIAL Non-Stabilized Drainage Base Type 'A'	ITEM 203 Subgrade Compaction
	CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	GAL.	CU. YDS.	CU. YDS.	SQ. YDS.	TONS	M GAL.	SQ. YDS.	SQ. YDS.
Sta. 2+55 to Sta. 5+25 E.B. Shoulder	49.2		17.9				31.3					120.0
Sta. 4+75 to Sta. 7+45 W.B. Shoulder	51.6		13.7	0.6	21.8		31.3				54.44	120.0
Sta. 2+55 to Sta. 7+45 Median Crossover	135.5	42.5				93.0		644.0	0.06	1.4		382.6
Sta. 121+55 to Sta. 124+25 E.B. Shoulder	57.4		26.2				31.3					120.0
Sta. 123+75 to 126+45 W.B. Shoulder	49.2		17.9				31.3					120.0
Sta. 121+55 to Sta. 126+45 Median Crossover	135.5	42.5				93.0		644.0	0.06	1.4		382.6
Totals	478.4	85.0	75.7	0.6	21.8	186.0	125.2	1288.0	0.12	2.8	54.44	1245.2



*Transverse Joint Spacing a=b.

MEDIAN CROSSOVER JOINT DETAIL

* Align Transverse Joints in Median Crossover and Proposed Pavement. Align Transverse Joints in Median Crossover with Transverse Joints in Existing Mainline Pavement (to Remain) when Practical.

Note: The Above is A Suggested Joint Diagram. The Contractor May Submit an Alternate Joint Diagram to the Engineer for Approval.

CALC BY R.L.S. DATE 2-18-92	ERI/LOR-2-30.51/0.00	OHIO	92
CHKD BY J.S.B. DATE 2-28-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

PAVEMENT JOINT REPAIR DETAILS

TRANSVERSE JOINT REPAIR

FOR CONTINUOUSLY REINFORCED CONCRETE PAVEMENT ITEM 255 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "B"

CONTINUOUSLY REINFORCED CONCRETE REPAIRS SHALL BE CONSTRUCTED AS PER ITEM 255 EXCEPT AS FOLLOWS:

SEQUENCE OF OPERATIONS

(1) *PARTIAL-DEPTH SAW CUTS (APPROX. DEPTH 1") SHALL BE MADE ALONG THE OUTER BOUNDARIES OF THE AREA TO BE REPAIRED, AS OUTLINED BY THE ENGINEER.*
THE PARTIAL-DEPTH SAW CUTS SHALL BE LOCATED AT LEAST 18 INCHES FROM THE NEAREST TIGHT TRANSVERSE CRACK AND SHALL NOT CROSS AN EXISTING CRACK. CARE SHALL BE TAKEN NOT TO CUT THE REINFORCEMENT.

(2) *FULL DEPTH SAW CUTS SHALL BE MADE PARALLEL TO AND 24" INSIDE THE PARTIAL-DEPTH SAW CUTS WHICH DEFINE THE BOUNDARIES.*

(3) *PAVEMENT BETWEEN THE INNER FULL DEPTH SAW CUTS SHALL BE REMOVED IN ACCORDANCE WITH 255.03.*

(4) *CONCRETE IN THE TWO END LAP AREAS SHALL BE CAREFULLY REMOVED BY USING ONLY JACKHAMMERS (MAX. 15 POUNDS), PRY BARS, PICKS, SHOVELS AND OTHER HAND TOOLS. THE REINFORCEMENT SHALL NOT BE BENT TO FACILITATE REMOVAL OF CONCRETE UNDERNEATH.*

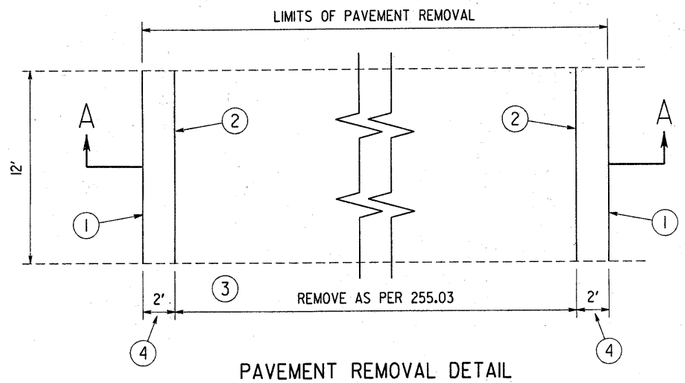
(5) *FOLLOWING THE REMOVAL OF PAVEMENT FROM THE AREA, THE EXISTING BASE SHALL BE EXAMINED BY THE ENGINEER AND RESTORED TO GRADE, IF REQUIRED. A QUANTITY OF 100 CU. YD. OF ITEM 301 - BITUMINOUS AGGREGATE BASE HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE. IT IS IMPORTANT THE ENTIRE OPERATION IS EXECUTED IN THIS ORDER TO AVOID DISTURBING OR DAMAGING THE REMAINING GOOD PAVEMENT.*

(6) *SPLICE DEFORMED LOOSE BARS (709.01) WITH EACH MEMBER OF EXISTING REINFORCEMENT WHICH EXTENDS INTO THE PATCH AREA.*
THE TYPE OF NEW REINFORCEMENT SHALL MEET THE REQUIREMENTS OF 453.02 AND SHALL MATCH THE ORIGINAL IN SIZE. ALL REQUIREMENTS SHALL BE AS PER STANDARD CONSTRUCTION DRAWING BP-8.
THE NEW REINFORCEMENT SHALL BE CUT SO THEIR ENDS ARE AT LEAST 2 INCHES FROM THE JOINT FACES.
TIED SPLICES IN THE LAP END SECTIONS SHALL BE A MINIMUM 22 INCHES. THE LAP SHALL BE SECURED WITH WIRE TIES. NO WELDING IS PERMITTED. THE REINFORCEMENT SHALL BE FIRMLY SUPPORTED AT THE PROPER ELEVATION ABOVE THE BASE BY APPROVED HIGH CHAIRS.
IF MOVEMENT OF THE PAVEMENT CAUSED BY EXPANSION, CAUSES THE REINFORCEMENT TO BUCKLE, THIS SHALL BE CORRECTED JUST PRIOR TO PLACING CONCRETE BY REMOVING AND REPLACING THE WIRE TIE AT LAPS.

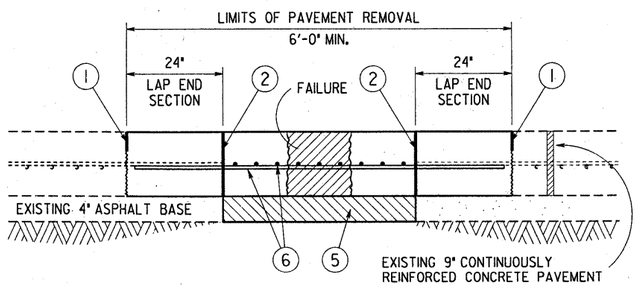
(7) *JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801 IN LIEU OF THE REQUIREMENTS OF BP-13 AND ITEM 255. THE SEALANT SHALL BE TYPE III AND V.*

THE COST OF ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "B".

FOR QUANTITIES SEE SHEETS 67-73.

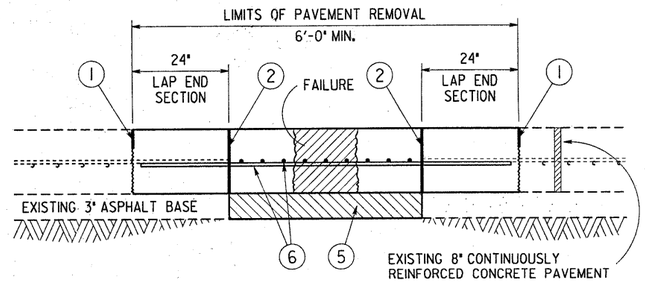


PAVEMENT REMOVAL DETAIL



SECTION A-A

APPLIES:
WESTBOUND - STA. 162+40.00 TO STA. 169+60.00 ℄ S.R. 2



SECTION A-A

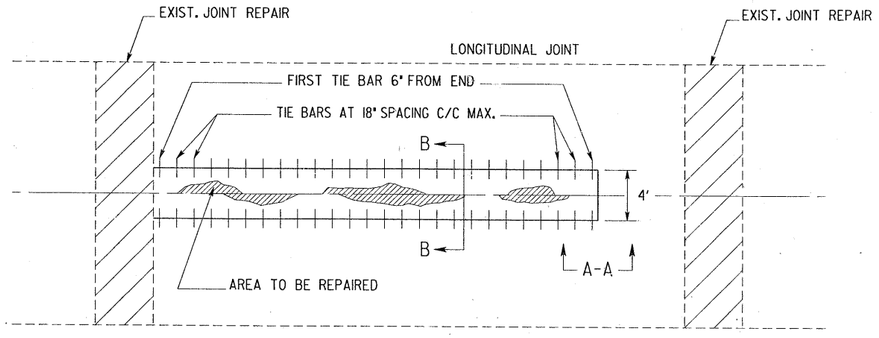
APPLIES:
WESTBOUND - STA. 16+88.00 TO STA. 51+03.25 ℄ S.R. 2
EASTBOUND - STA. 11+23.00 TO STA. 51+03.25 ℄ S.R. 2

CALC BY RLS DATE 2-25-92	ERI/LOR-2-30.51/0.00 ERIE COUNTY LORAIN COUNTY	OHIO FHWA REGION 5	93 267
CHKD BY DLW DATE 2-28-92			

PAVEMENT JOINT REPAIR DETAILS

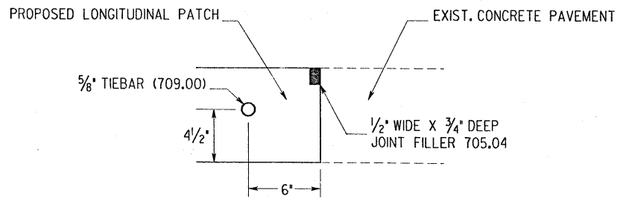
LONGITUDINAL JOINT REPAIR

FOR REINFORCED CONCRETE PAVEMENT
ITEM 255 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "C"



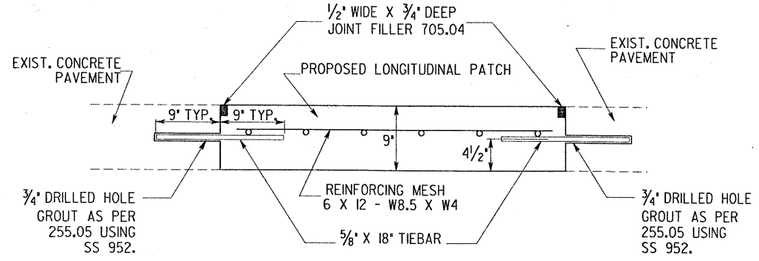
PLAN VIEW

APPLIES:
STA 169+60 TO 170+60 ℄ S.R. 2 - WESTBOUND
TOTAL = 100 L.F.



SECTION A-A

NOTE : JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801 IN LIEU OF THE REQUIREMENTS OF BP-13 AND ITEM 255. THE SEALANT SHALL BE TYPE III AND V. ALL COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "C".



SECTION B-B

SUB SUMMARY

LOCATION	SIZE	255 FULL DEPTH PAVEMENT SAWING (LIN. FT.)	255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "C" (SQ. YD.)
Sta. 169+60 to Sta. 170+60 ℄ S.R. 2 W.B.	4' x 100'	208	44.4
Totals Carried to General Summary		208	44.4

PAVEMENT JOINT REPAIR DETAILS

LONGITUDINAL JOINT REPAIR

FOR CONTINUOUSLY REINFORCED CONCRETE PAVEMENT
ITEM 255 - FULL DEPTH RIGID PAVEMENT REMOVAL AND
RIGID REPLACEMENT, CLASS C, AS PER PLAN "D"

CONTINUOUSLY REINFORCED CONCRETE REPAIRS SHALL BE CONSTRUCTED AS PER ITEM 255 EXCEPT AS FOLLOWS:

SEQUENCE OF OPERATIONS

(1) PARTIAL-DEPTH SAW CUTS (APPROX. DEPTH 1") SHALL BE MADE ALONG THE OUTER TRANSVERSE BOUNDARIES OF THE AREA TO BE REPAIRED AS SHOWN ON THE DETAILS AND AS OUTLINED BY THE ENGINEER. CARE SHALL BE TAKEN NOT TO CUT THE REINFORCEMENT.

(2) FULL DEPTH SAW CUTS SHALL BE MADE PARALLEL TO AND 24" INSIDE OF THE PARTIAL-DEPTH SAW CUTS WHICH DEFINE THE TRANSVERSE BOUNDARIES, AND ALONG THE LONGITUDINAL BOUNDARIES OF THE AREA TO BE REPAIRED AS SHOWN ON THE DETAILS AND AS OUTLINED BY THE ENGINEER.

(3) PAVEMENT BETWEEN THE INNER FULL DEPTH SAW CUTS SHALL BE REMOVED IN ACCORDANCE WITH 255.03.

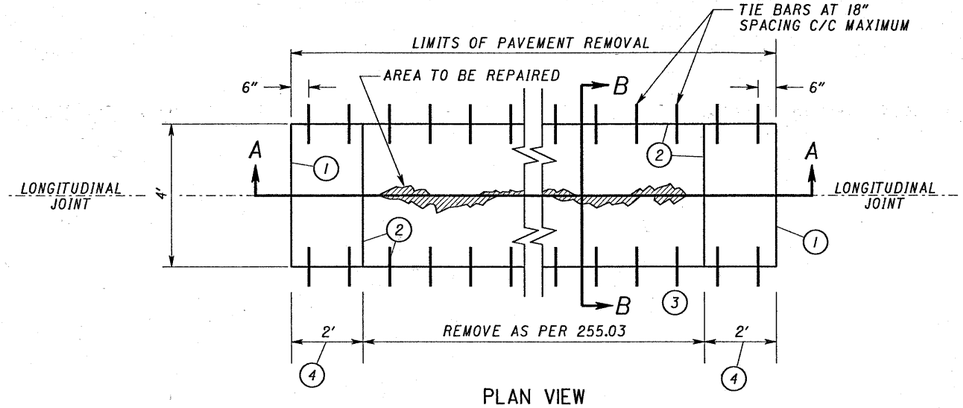
(4) CONCRETE IN THE TWO END LAP AREAS SHALL BE CAREFULLY REMOVED BY USING ONLY JACKHAMMERS (MAX. 15 POUNDS), PRY BARS, PICKS, SHOVELS AND OTHER HAND TOOLS. THE REINFORCEMENT SHALL NOT BE BENT TO FACILITATE REMOVAL OF CONCRETE UNDERNEATH.

(5) FOLLOWING THE REMOVAL OF PAVEMENT FROM THE AREA, THE EXISTING BASE SHALL BE REMOVED WITHIN THE AREA OF REPAIR AND RESTORED TO GRADE AS SHOWN ON THE DETAILS. A QUANTITY OF 30 CU. YD. OF ITEM 304, AGGREGATE BASE HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE. IN LIEU OF REPLACING WITH ITEM 304, THE CONTRACTOR MAY ELECT TO REPLACE UNSUITABLE SUBBASE WITH CONCRETE AS PER THIS SPECIFICATION.
IT IS IMPORTANT THE ENTIRE OPERATION IS EXECUTED IN THIS ORDER TO AVOID DISTURBING OR DAMAGING THE REMAINING GOOD PAVEMENT.

(6) SPLICE DEFORMED LOOSE BARS (709.01) WITH EACH MEMBER OF EXISTING REINFORCEMENT WHICH EXTENDS INTO THE PATCH AREA.
THE TYPE OF NEW REINFORCEMENT SHALL MEET THE REQUIREMENTS OF 453.02 AND SHALL MATCH THE ORIGINAL IN SIZE, ALL REQUIREMENTS SHALL BE AS PER STANDARD CONSTRUCTION DRAWING BP-8.
THE NEW REINFORCEMENT SHALL BE CUT SO THEIR ENDS ARE AT LEAST 2 INCHES FROM THE JOINT FACES.
TIED SPLICES IN THE LAP END SECTIONS SHALL BE A MINIMUM 22 INCHES.
THE LAP SHALL BE SECURED WITH WIRE TIES. NO WELDING IS PERMITTED.
THE REINFORCEMENT SHALL BE FIRMLY SUPPORTED AT THE PROPER ELEVATION ABOVE THE BASE BY APPROVED HIGH CHAIRS.
IF MOVEMENT OF THE PAVEMENT CAUSED BY EXPANSION, CAUSES THE REINFORCEMENT TO BUCKLE, THIS SHALL BE CORRECTED JUST PRIOR TO PLACING CONCRETE BY REMOVING AND REPLACING THE WIRE TIE AT LAPS.

(7) JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801 IN LIEU OF THE REQUIREMENTS OF BP-13 AND ITEM 255. THE SEALANT SHALL BE TYPE III AND V.

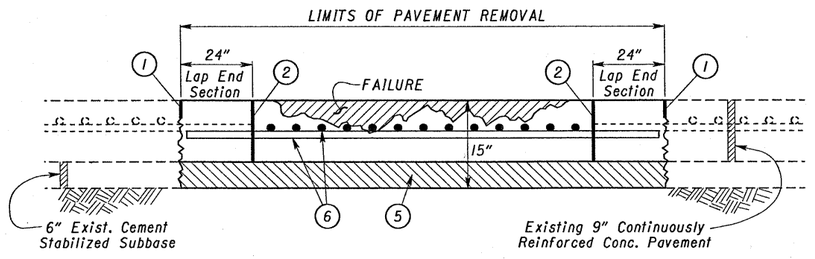
THE COST OF ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "D".



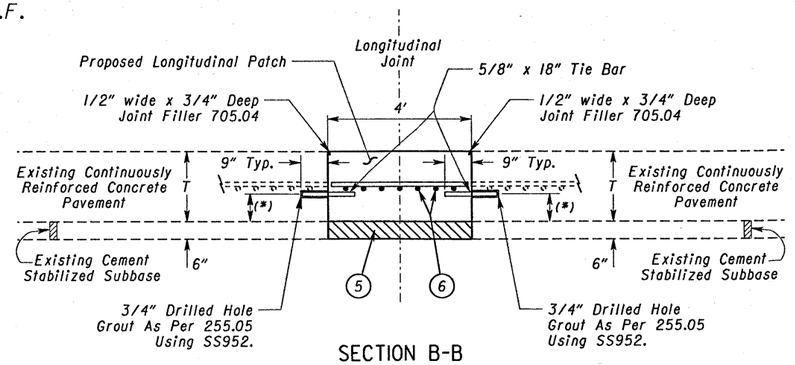
PLAN VIEW

APPLIES:

STA 165+60 TO 169+60 ℄ S.R. 2 - WESTBOUND
TOTAL = 400 L.F.



SECTION A-A



SECTION B-B

(*) Note : Tie Bars Shall Be Located a Distance of T/2"±. Locate Drilled Holes to Avoid Existing Steel.

SUB SUMMARY

LOCATION	SIZE	255 FULL DEPTH PAVEMENT SAWING (LIN. FT.)	255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "D" (SQ. YD.)
Sta. 165+60 to Sta. 169+60 ℄ S.R. 2 W.B.	4' x 404'	816	179.6
Totals Carried to General Summary		816	179.6

SHRP PAVEMENT REPAIR DETAILS

TRANSVERSE JOINT REPAIR

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS HES

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS HES

THIS WORK SHALL BE COMPLETED IN ACCORDANCE WITH ITEMS 255 AND 499 WITH THE FOLLOWING EXCEPTIONS:

1. IN LIEU OF THE BATCH WEIGHTS GIVEN IN THE CONCRETE TABLE IN 499.03, THE BATCH WEIGHTS GIVEN ON THIS SHEET SHALL BE USED. ONLY ONE MIX FROM THIS TABLE MAY BE PLACED ON ANY DAY.
2. PORTLAND CEMENT SHALL MEET THE REQUIREMENTS OF 701.05.
3. 499.031 WILL NOT APPLY FOR THIS MIX.
4. THE CONCRETE SHALL BE DELIVERED TO THE SITE OF THE WORK WITHIN 30 MINUTES AND DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 60 MINUTES AFTER COMBINING THE WATER AND CEMENT.
5. THIS MIX WILL BE USED FOR TEN (10) JOINT REPAIRS AT THE LOCATIONS SHOWN ON THIS SHEET. THE CONTRACTOR WILL TIME HIS OPERATION SUCH THAT WHEN OPENED TO TRAFFIC, THE REPAIRS WILL BE OF THE AGE INDICATED IN THE TABLE SHOWN AT RIGHT.
6. REPRESENTATIVES FROM CONSTRUCTION TECHNOLOGY LABORATORIES (CTL) OF SKOKIE, ILLINOIS AND ERES CONSULTANTS OF SAYOY, ILLINOIS WILL BE ON THE SITE DURING CONSTRUCTION. CTL AND ERES WILL BE INSTALLING INSTRUMENTATION, SAMPLING MATERIALS AND FILMING THE CONSTRUCTION PROCESS. THE CONTRACTOR WILL COOPERATE WITH CTL AND ERES.
7. ONCE OPENED TO TRAFFIC, THE REPAIRS SHALL REMAIN UNDER TRAFFIC FOR A MINIMUM PERIOD OF 28 DAYS. IF IT BECOMES NECESSARY TO CLOSE A TEST SECTION AFTER 28 DAYS, TRAFFIC WILL BE REMOVED FROM ALL REPAIRS WITHIN A TEST SECTION AND THE TIME AND DURATION OF CLOSURE RECORDED AND REPORTED TO ERES.
8. JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801, CLASS III AND CLASS V, IN LIEU OF THE REQUIREMENTS OF 255.02 AND BP-13.

COST FOR THE ABOVE WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS HES.

THE LOCATIONS WHERE THIS TYPE OF JOINT REPAIR WILL BE UTILIZED ARE AS FOLLOWS:

AREA A				
STATION	SIDE	LANE	SIZE	SQ. YD.
147+97	EB	TRAVELLING	6' X 12'	8
148+17	EB	TRAVELLING	6' X 12'	8
148+57	EB	TRAVELLING	6' X 12'	8
148+82	EB	TRAVELLING	6' X 12'	8
149+00	EB	TRAVELLING	6' X 12'	8
149+21	EB	TRAVELLING	6' X 12'	8
149+40	EB	TRAVELLING	6' X 12'	8
149+53	EB	TRAVELLING	6' X 12'	8
149+65	EB	TRAVELLING	6' X 12'	8
150+05	EB	TRAVELLING	6' X 12'	8
TOTALS CARRIED TO GENERAL SUMMARY				80

BATCH WEIGHT							
Material, Cubic Yard Basis	RSPC1	RSC1	VES	RSPC2	RSC2	FT1	HES
Cement-lb	710 (1)	750 (2)	960	610 (1)	650 (2)	710	810
Fine Aggregate-lb	1400	1100	890	1400	1000	1400	1100
Coarse Aggregate-lb	1360	1700	1750	1700	1800	1360	1720
Water Reducer-oz/cwt	4.5	-	4.5	-	-	4.5	-
Accelerator-Gal (non-chloride)	-	-	5.1	-	-	-	6.0
Accelerator (CaCl) % wt. of cement	-	-	1.75	-	-	-	-
High-Range Water Reducer-oz/cwt	-	-	18	-	-	-	14
Max w/c Ratio	0.44	0.40	0.34	0.41	0.45	0.44	0.40

(1) Regulated Set Cement
Holnam, Inc.
P.O. Box 99
Saratoga, AR 71859
Phone : (800) 874-5756

(2) Rapidset Cement
CTS Cement
8700 West Byron-Mawr, #800-S
Chicago, IL 60634
Phone : (800) 759-8255

AREA	CLASS	NUMBER OF REPAIRS FOR EACH OPENING TIME							
		Nominal Joint Repair Opening Time							
		1 HR	3 HR	5 HR	6 HR	8 HR	10 HR	18 HR	26 HR
C	RSPC1	3	4		3				
D	RSC1	3	4		3				
E	VES		3	4		3			
F	RSPC2		3	4		3			
G	RSC2		3	4		3			
H	FS		3	4		3			
B	FT1						3	4	3
A	HES						3	4	3

CALC BY RLS DATE 2-18-92	ERI/LOR-2-30.51/0.00	OHIO	96
CHKD BY DLW DATE 2-21-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

SHRP PAVEMENT REPAIR DETAILS

TRANSVERSE JOINT REPAIR

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS FTI

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS FTI

THIS WORK SHALL BE COMPLETED IN ACCORDANCE WITH ITEMS 255 AND 499 WITH THE FOLLOWING EXCEPTIONS:

1. IN LIEU OF THE BATCH WEIGHTS GIVEN IN THE CONCRETE TABLE IN 499.03, THE BATCH WEIGHTS GIVEN ON THIS SHEET SHALL BE USED. ONLY ONE MIX FROM THIS TABLE MAY BE PLACED ON ANY DAY.
2. PORTLAND CEMENT SHALL MEET THE REQUIREMENTS OF 701.05.
3. 499.031 WILL NOT APPLY FOR THIS MIX.
4. THE CONCRETE SHALL BE DELIVERED TO THE SITE OF THE WORK WITHIN 30 MINUTES AND DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 60 MINUTES AFTER COMBINING THE WATER AND CEMENT.
5. THIS MIX WILL BE USED FOR TEN (10) JOINT REPAIRS AT THE LOCATIONS SHOWN ON THIS SHEET. THE CONTRACTOR WILL TIME HIS OPERATION SUCH THAT WHEN OPENED TO TRAFFIC, THE REPAIRS WILL BE OF THE AGE INDICATED IN THE TABLE SHOWN AT RIGHT.
6. REPRESENTATIVES FROM CONSTRUCTION TECHNOLOGY LABORATORIES (CTL) OF SKOKIE, ILLINOIS AND ERES CONSULTANTS OF SAYOY, ILLINOIS WILL BE ON THE SITE DURING CONSTRUCTION. CTL AND ERES WILL BE INSTALLING INSTRUMENTATION, SAMPLING MATERIALS AND FILMING THE CONSTRUCTION PROCESS. THE CONTRACTOR WILL COOPERATE WITH CTL AND ERES.
7. ONCE OPENED TO TRAFFIC, THE REPAIRS SHALL REMAIN UNDER TRAFFIC FOR A MINIMUM PERIOD OF 28 DAYS. IF IT BECOMES NECESSARY TO CLOSE A TEST SECTION AFTER 28 DAYS, TRAFFIC WILL BE REMOVED FROM ALL REPAIRS WITHIN A TEST SECTION AND THE TIME AND DURATION OF CLOSURE RECORDED AND REPORTED TO ERES.
8. JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801, CLASS III AND CLASS V, IN LIEU OF THE REQUIREMENTS OF 255.02 AND BP-13.

COST FOR THE ABOVE WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS FTI.

THE LOCATIONS WHERE THIS TYPE OF JOINT REPAIR WILL BE UTILIZED ARE AS FOLLOWS:

AREA B				
STATION	SIDE	LANE	SIZE	SQ. YD.
113+12	EB	TRAVELLING	6' X 12'	8
113+57	EB	TRAVELLING	6' X 12'	8
113+92	EB	TRAVELLING	6' X 12'	8
114+56	EB	TRAVELLING	6' X 12'	8
114+96	EB	TRAVELLING	6' X 12'	8
115+11	EB	TRAVELLING	6' X 12'	8
115+37	EB	TRAVELLING	6' X 12'	8
115+52	EB	TRAVELLING	6' X 12'	8
115+77	EB	TRAVELLING	6' X 12'	8
115+94	EB	TRAVELLING	6' X 12'	8
TOTALS CARRIED TO GENERAL SUMMARY				80

BATCH WEIGHT							
Material, Cubic Yard Basis	RSPCI	RSCI	VES	RSPC2	RSC2	FTI	HES
Cement-lb	710 (1)	750 (2)	960	610 (1)	650 (2)	710	810
Fine Aggregate-lb	1400	1100	890	1400	1000	1400	1100
Coarse Aggregate-lb	1360	1700	1750	1700	1800	1360	1720
Water Reducer-oz/cwt	4.5	-	4.5	-	-	4.5	-
Accelerator-Gal (non-chloride)	-	-	5.1	-	-	-	6.0
Accelerator (CaCl) % wt. of cement	-	-	1.75	-	-	-	-
High-Range Water Reducer-oz/cwt	-	-	18	-	-	-	14
Max w/c Ratio	0.44	0.40	0.34	0.41	0.45	0.44	0.40

(1) Regulated Set Cement
Holnam, Inc.
P.O. Box 99
Saratoga, AR 71859
Phone : (800) 874-5756

(2) Rapidset Cement
CTS Cement
8700 West Byron-Mawr, #800-S
Chicago, IL 60634
Phone : (800) 759-8255

AREA	CLASS	NUMBER OF REPAIRS FOR EACH OPENING TIME							
		NOMINAL Joint Repair Opening Time							
		1 HR	3 HR	5 HR	6 HR	8 HR	10 HR	18 HR	26 HR
C	RSPCI	3	4		3				
D	RSCI	3	4		3				
E	VES		3	4		3			
F	RSPC2		3	4		3			
G	RSC2		3	4		3			
H	FS		3	4		3			
B	FTI						3	4	3
A	HES						3	4	3

SHRP PAVEMENT REPAIR DETAILS

TRANSVERSE JOINT REPAIR

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSPCI

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSPCI

THIS WORK SHALL BE COMPLETED IN ACCORDANCE WITH ITEMS 255 AND 499 WITH THE FOLLOWING EXCEPTIONS:

1. IN LIEU OF THE BATCH WEIGHTS GIVEN IN THE CONCRETE TABLE IN 499.03, THE BATCH WEIGHTS GIVEN ON THIS SHEET SHALL BE USED. ONLY ONE MIX FROM THIS TABLE MAY BE PLACED ON ANY DAY.
2. REGULATED SET CEMENT MANUFACTURED BY HOLNAM, INC. SHALL BE USED.
3. 499.031 WILL NOT APPLY FOR THIS MIX.
4. THE CONCRETE SHALL BE DELIVERED TO THE SITE OF THE WORK WITHIN 15 MINUTES AND DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 35 MINUTES AFTER COMBINING THE WATER AND CEMENT. IF AN APPROVED SET-RETARDING ADMIXTURE IS USED AT THE CONTRACTOR'S EXPENSE, DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 45 MINUTES AFTER COMBINING THE WATER AND CEMENT. A MOBILE MIXER MEETING THE APPROVAL OF THE ENGINEER MAY BE USED FOR THIS WORK.
5. THIS MIX WILL BE USED FOR TEN (10) JOINT REPAIRS AT THE LOCATIONS SHOWN ON THIS SHEET. THE CONTRACTOR WILL TIME HIS OPERATION SUCH THAT WHEN OPENED TO TRAFFIC, THE REPAIRS WILL BE OF THE AGE INDICATED IN THE TABLE SHOWN AT RIGHT.
6. REPRESENTATIVES FROM CONSTRUCTION TECHNOLOGY LABORATORIES (CTL) OF SKOKIE, ILLINOIS AND ERES CONSULTANTS OF SAYOY, ILLINOIS WILL BE ON THE SITE DURING CONSTRUCTION. CTL AND ERES WILL BE INSTALLING INSTRUMENTATION, SAMPLING MATERIALS AND FILMING THE CONSTRUCTION PROCESS. THE CONTRACTOR WILL COOPERATE WITH CTL AND ERES.
7. ONCE OPENED TO TRAFFIC, THE REPAIRS SHALL REMAIN UNDER TRAFFIC FOR A MINIMUM PERIOD OF 28 DAYS. IF IT BECOMES NECESSARY TO CLOSE A TEST SECTION AFTER 28 DAYS, TRAFFIC WILL BE REMOVED FROM ALL REPAIRS WITHIN A TEST SECTION AND THE TIME AND DURATION OF CLOSURE RECORDED AND REPORTED TO ERES.
8. JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801, CLASS III AND CLASS V, IN LIEU OF THE REQUIREMENTS OF 255.02 AND BP-13.

COST FOR THE ABOVE WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSPCI.

THE LOCATIONS WHERE THIS TYPE OF JOINT REPAIR WILL BE UTILIZED ARE AS FOLLOWS:

AREA C				
STATION	SIDE	LANE	SIZE	SQ. YD.
58+26	EB	TRAVELLING	6' X 12'	8
58+56	EB	TRAVELLING	6' X 12'	8
58+96	EB	TRAVELLING	6' X 12'	8
59+12	EB	TRAVELLING	6' X 12'	8
59+36	EB	TRAVELLING	6' X 12'	8
59+54	EB	TRAVELLING	6' X 12'	8
61+88	EB	TRAVELLING	6' X 12'	8
62+18	EB	TRAVELLING	6' X 12'	8
62+29	EB	TRAVELLING	6' X 12'	8
63+00	EB	TRAVELLING	6' X 12'	8
TOTALS CARRIED TO GENERAL SUMMARY				80

BATCH WEIGHT							
Material, Cubic Yard Basis	RSPCI	RSCI	VES	RSPC2	RSC2	FTI	HES
Cement-lb	710 (1)	750 (2)	960	610 (1)	650 (2)	710	810
Fine Aggregate-lb	1400	1100	890	1400	1000	1400	1100
Coarse Aggregate-lb	1360	1700	1750	1700	1800	1360	1720
Water Reducer-oz/cwt	4.5	-	4.5	-	-	4.5	-
Accelerator-Gal (non-chloride)	-	-	5.1	-	-	-	6.0
Accelerator (CaCl) % wt. of cement	-	-	1.75	-	-	-	-
High-Range Water Reducer-oz/cwt	-	-	18	-	-	-	14
Max w/c Ratio	0.44	0.40	0.34	0.41	0.45	0.44	0.40

(1) Regulated Set Cement
Holnam, Inc.
P.O. Box 99
Saratoga, AR 71859
Phone : (800) 874-5756

(2) Rapidset Cement
CTS Cement
8700 West Byron-Mawr, #800-S
Chicago, IL 60634
Phone : (800) 759-8255

AREA	CLASS	NUMBER OF REPAIRS FOR EACH OPENING TIME							
		Nominal Joint Repair Opening Time							
		1 HR	3 HR	5 HR	6 HR	8 HR	10 HR	18 HR	26 HR
C	RSPCI	3	4		3				
D	RSCI	3	4		3				
E	VES		3	4		3			
F	RSPC2		3	4		3			
G	RSC2		3	4		3			
H	FS		3	4		3			
B	FTI						3	4	3
A	HES						3	4	3

CALC BY RLS DATE 2-18-92	ERI/LOR-2-30.51/0.00	OHIO	98
CHKD BY DLW DATE 2-21-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

SHRP PAVEMENT REPAIR DETAILS

TRANSVERSE JOINT REPAIR

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSCI

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSCI

THIS WORK SHALL BE COMPLETED IN ACCORDANCE WITH ITEMS 255 AND 499 WITH THE FOLLOWING EXCEPTIONS:

1. IN LIEU OF THE BATCH WEIGHTS GIVEN IN THE CONCRETE TABLE IN 499.03, THE BATCH WEIGHTS GIVEN ON THIS SHEET SHALL BE USED. ONLY ONE MIX FROM THIS TABLE MAY BE PLACED ON ANY DAY.
2. RAPIDSET CEMENT MANUFACTURED BY CTS CEMENT SHALL BE USED.
3. 499.031 WILL NOT APPLY FOR THIS MIX.
4. THE CONCRETE SHALL BE DELIVERED TO THE SITE OF THE WORK WITHIN 30 MINUTES AND DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 60 MINUTES AFTER COMBINING THE WATER AND CEMENT. IF AN APPROVED SET-RETARDING ADMIXTURE IS USED AT THE CONTRACTOR'S EXPENSE, DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 75 MINUTES AFTER COMBINING THE WATER AND CEMENT. A MOBILE MIXER MEETING THE APPROVAL OF THE ENGINEER MAY BE USED FOR THIS WORK.
5. THIS MIX WILL BE USED FOR TEN (10) JOINT REPAIRS AT THE LOCATIONS SHOWN ON THIS SHEET. THE CONTRACTOR WILL TIME HIS OPERATION SUCH THAT WHEN OPENED TO TRAFFIC, THE REPAIRS WILL BE OF THE AGE INDICATED IN THE TABLE SHOWN AT RIGHT.
6. REPRESENTATIVES FROM CONSTRUCTION TECHNOLOGY LABORATORIES (CTL) OF SKOKIE, ILLINOIS AND ERES CONSULTANTS OF SAYOY, ILLINOIS WILL BE ON THE SITE DURING CONSTRUCTION. CTL AND ERES WILL BE INSTALLING INSTRUMENTATION, SAMPLING MATERIALS AND FILMING THE CONSTRUCTION PROCESS. THE CONTRACTOR WILL COOPERATE WITH CTL AND ERES.
7. ONCE OPENED TO TRAFFIC, THE REPAIRS SHALL REMAIN UNDER TRAFFIC FOR A MINIMUM PERIOD OF 28 DAYS. IF IT BECOMES NECESSARY TO CLOSE A TEST SECTION AFTER 28 DAYS, TRAFFIC WILL BE REMOVED FROM ALL REPAIRS WITHIN A TEST SECTION AND THE TIME AND DURATION OF CLOSURE RECORDED AND REPORTED TO ERES.
8. JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801, CLASS III AND CLASS V, IN LIEU OF THE REQUIREMENTS OF 255.02 AND BP-13.

COST FOR THE ABOVE WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSCI.

THE LOCATIONS WHERE THIS TYPE OF JOINT REPAIR WILL BE UTILIZED ARE AS FOLLOWS:

AREA D				
STATION	SIDE	LANE	SIZE	SQ. YD.
1828+26	EB	TRAVELLING	6' X 12'	8
1828+72	EB	TRAVELLING	6' X 12'	8
1829+11	EB	TRAVELLING	6' X 12'	8
1829+83	EB	TRAVELLING	6' X 12'	8
1830+25	EB	TRAVELLING	6' X 12'	8
1830+38	EB	TRAVELLING	6' X 12'	8
1831+84	EB	TRAVELLING	6' X 12'	8
1832+20	EB	TRAVELLING	6' X 12'	8
1832+34	EB	TRAVELLING	6' X 12'	8
1832+61	EB	TRAVELLING	6' X 12'	8
TOTALS CARRIED TO GENERAL SUMMARY				80

BATCH WEIGHT							
Material, Cubic Yard Basis	RSPCI	RSCI	VES	RSPC2	RSC2	FTI	HES
Cement-lb	710 (1)	750 (2)	960	610 (1)	650 (2)	710	810
Fine Aggregate-lb	1400	1100	890	1400	1000	1400	1100
Coarse Aggregate-lb	1360	1700	1750	1700	1800	1360	1720
Water Reducer-oz/cwt	4.5	–	4.5	-	-	4.5	-
Accelerator-Gal (non-chloride)	-	–	5.1	-	-	-	6.0
Accelerator (CaCl) % wt. of cement	-	–	1.75	-	-	-	-
High-Range Water Reducer-oz/cwt	-	–	18	-	-	-	14
Max w/c Ratio	0.44	0.40	0.34	0.41	0.45	0.44	0.40

(1) Regulated Set Cement
Holnam, Inc.
P.O. Box 99
Saratoga, AR 71859
Phone : (800) 874-5756

(2) Rapidset Cement
CTS Cement
8700 West Byron-Mawr, *800-S
Chicago, IL 60634
Phone : (800) 759-8255

AREA	CLASS	NUMBER OF REPAIRS FOR EACH OPENING TIME							
		NOMINAL Joint Repair Opening Time							
		1 HR	3 HR	5 HR	6 HR	8 HR	10 HR	18 HR	26 HR
C	RSPCI	3	4		3				
D	RSCI	3	4		3				
E	VES		3	4		3			
F	RSPC2		3	4		3			
G	RSC2		3	4		3			
H	FS		3	4		3			
B	FTI						3	4	3
A	HES						3	4	3

SHRP PAVEMENT REPAIR DETAILS

TRANSVERSE JOINT REPAIR

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS VES

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS VES

THIS WORK SHALL BE COMPLETED IN ACCORDANCE WITH ITEMS 255 AND 499 WITH THE FOLLOWING EXCEPTIONS:

1. IN LIEU OF THE BATCH WEIGHTS GIVEN IN THE CONCRETE TABLE IN 499.03, THE BATCH WEIGHTS GIVEN ON THIS SHEET SHALL BE USED. ONLY ONE MIX FROM THIS TABLE MAY BE PLACED ON ANY DAY.
2. PORTLAND CEMENT SHALL MEET THE REQUIREMENTS OF 701.05.
3. 499.031 WILL NOT APPLY FOR THIS MIX.
4. THE CONCRETE SHALL BE DELIVERED TO THE SITE OF THE WORK WITHIN 30 MINUTES AND DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 60 MINUTES AFTER COMBINING THE WATER AND CEMENT.
5. THIS MIX WILL BE USED FOR TEN (10) JOINT REPAIRS AT THE LOCATIONS SHOWN ON THIS SHEET. THE CONTRACTOR WILL TIME HIS OPERATION SUCH THAT WHEN OPENED TO TRAFFIC, THE REPAIRS WILL BE OF THE AGE INDICATED IN THE TABLE SHOWN AT RIGHT.
6. REPRESENTATIVES FROM CONSTRUCTION TECHNOLOGY LABORATORIES (CTL) OF SKOKIE, ILLINOIS AND ERES CONSULTANTS OF SAYOY, ILLINOIS WILL BE ON THE SITE DURING CONSTRUCTION. CTL AND ERES WILL BE INSTALLING INSTRUMENTATION, SAMPLING MATERIALS AND FILMING THE CONSTRUCTION PROCESS. THE CONTRACTOR WILL COOPERATE WITH CTL AND ERES.
7. ONCE OPENED TO TRAFFIC, THE REPAIRS SHALL REMAIN UNDER TRAFFIC FOR A MINIMUM PERIOD OF 28 DAYS. IF IT BECOMES NECESSARY TO CLOSE A TEST SECTION AFTER 28 DAYS, TRAFFIC WILL BE REMOVED FROM ALL REPAIRS WITHIN A TEST SECTION AND THE TIME AND DURATION OF CLOSURE RECORDED AND REPORTED TO ERES.
8. JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801, CLASS III AND CLASS V, IN LIEU OF THE REQUIREMENTS OF 255.02 AND BP-13.

COST FOR THE ABOVE WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS VES.

THE LOCATIONS WHERE THIS TYPE OF JOINT REPAIR WILL BE UTILIZED ARE AS FOLLOWS:

AREA E				
STATION	SIDE	LANE	SIZE	SQ. YD.
103+30	WB	TRAVELLING	6' X 12'	8
103+87	WB	TRAVELLING	6' X 12'	8
104+20	WB	TRAVELLING	6' X 12'	8
104+65	WB	TRAVELLING	6' X 12'	8
105+04	WB	TRAVELLING	6' X 12'	8
105+44	WB	TRAVELLING	6' X 12'	8
105+82	WB	TRAVELLING	6' X 12'	8
106+28	WB	TRAVELLING	6' X 12'	8
106+58	WB	TRAVELLING	6' X 12'	8
107+08	WB	TRAVELLING	6' X 12'	8
TOTALS CARRIED TO GENERAL SUMMARY				80

BATCH WEIGHT							
Material, Cubic Yard Basis	RSPC1	RSC1	VES	RSPC2	RSC2	FT1	HES
Cement-lb	710 (1)	750 (2)	960	610 (1)	650 (2)	710	810
Fine Aggregate-lb	1400	1100	890	1400	1000	1400	1100
Coarse Aggregate-lb	1360	1700	1750	1700	1800	1360	1720
Water Reducer-oz/cwt	4.5	-	4.5	-	-	4.5	-
Accelerator-Gal (non-chloride)	-	-	5.1	-	-	-	6.0
Accelerator (CaCl) % wt. of cement	-	-	1.75	-	-	-	-
High-Range Water Reducer-oz/cwt	-	-	18	-	-	-	14
Max w/c Ratio	0.44	0.40	0.34	0.41	0.45	0.44	0.40

(1) Regulated Set Cement
Holnam, Inc.
P.O. Box 99
Saratoga, AR 71859
Phone : (800) 874-5756

(2) Rapidset Cement
CTS Cement
8700 West Byron-Mawr, *800-S
Chicago, IL 60634
Phone : (800) 759-8255

AREA	CLASS	NUMBER OF REPAIRS FOR EACH OPENING TIME							
		NOMINAL Joint Repair Opening Time							
		1 HR	3 HR	5 HR	6 HR	8 HR	10 HR	18 HR	26 HR
C	RSPC1	3	4		3				
D	RSC1	3	4		3				
E	VES		3	4		3			
F	RSPC2		3	4		3			
G	RSC2		3	4		3			
H	FS		3	4		3			
B	FT1						3	4	3
A	HES						3	4	3

SHRP PAVEMENT REPAIR DETAILS

TRANSVERSE JOINT REPAIR

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSPC2

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSPC2

THIS WORK SHALL BE COMPLETED IN ACCORDANCE WITH ITEMS 255 AND 499 WITH THE FOLLOWING EXCEPTIONS:

1. IN LIEU OF THE BATCH WEIGHTS GIVEN IN THE CONCRETE TABLE IN 499.03, THE BATCH WEIGHTS GIVEN ON THIS SHEET SHALL BE USED. ONLY ONE MIX FROM THIS TABLE MAY BE PLACED ON ANY DAY.

2. REGULATED SET CEMENT MANUFACTURED BY HOLNAM, INC. SHALL BE USED.

3. 499.031 WILL NOT APPLY FOR THIS MIX.

4. THE CONCRETE SHALL BE DELIVERED TO THE SITE OF THE WORK WITHIN 15 MINUTES AND DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 35 MINUTES AFTER COMBINING THE WATER AND CEMENT. IF AN APPROVED SET-RETARDING ADMIXTURE IS USED AT THE CONTRACTOR'S EXPENSE, DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 45 MINUTES AFTER COMBINING THE WATER AND CEMENT. A MOBILE MIXER MEETING THE APPROVAL OF THE ENGINEER MAY BE USED FOR THIS WORK.

5. THIS MIX WILL BE USED FOR TEN (10) JOINT REPAIRS AT THE LOCATIONS SHOWN ON THIS SHEET. THE CONTRACTOR WILL TIME HIS OPERATION SUCH THAT WHEN OPENED TO TRAFFIC, THE REPAIRS WILL BE OF THE AGE INDICATED IN THE TABLE SHOWN AT RIGHT.

6. REPRESENTATIVES FROM CONSTRUCTION TECHNOLOGY LABORATORIES (CTL) OF SKOKIE, ILLINOIS AND ERES CONSULTANTS OF SAYOY, ILLINOIS WILL BE ON THE SITE DURING CONSTRUCTION. CTL AND ERES WILL BE INSTALLING INSTRUMENTATION, SAMPLING MATERIALS AND FILMING THE CONSTRUCTION PROCESS. THE CONTRACTOR WILL COOPERATE WITH CTL AND ERES.

7. ONCE OPENED TO TRAFFIC, THE REPAIRS SHALL REMAIN UNDER TRAFFIC FOR A MINIMUM PERIOD OF 28 DAYS. IF IT BECOMES NECESSARY TO CLOSE A TEST SECTION AFTER 28 DAYS, TRAFFIC WILL BE REMOVED FROM ALL REPAIRS WITHIN A TEST SECTION AND THE TIME AND DURATION OF CLOSURE RECORDED AND REPORTED TO ERES.

8. JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801, CLASS III AND CLASS V, IN LIEU OF THE REQUIREMENTS OF 255.02 AND BP-13.

COST FOR THE ABOVE WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSPC2.

THE LOCATIONS WHERE THIS TYPE OF JOINT REPAIR WILL BE UTILIZED ARE AS FOLLOWS:

AREA F				
STATION	SIDE	LANE	SIZE	SQ. YD.
109+40	WB	TRAVELLING	6' X 12'	8
109+91	WB	TRAVELLING	6' X 12'	8
110+29	WB	TRAVELLING	6' X 12'	8
111+07	WB	TRAVELLING	6' X 12'	8
111+24	WB	TRAVELLING	6' X 12'	8
111+45	WB	TRAVELLING	6' X 12'	8
111+65	WB	TRAVELLING	6' X 12'	8
111+77	WB	TRAVELLING	6' X 12'	8
112+02	WB	TRAVELLING	6' X 12'	8
112+44	WB	TRAVELLING	6' X 12'	8
TOTALS CARRIED TO GENERAL SUMMARY				80

BATCH WEIGHT							
Material, Cubic Yard Basis	RSPC1	RSC1	VES	RSPC2	RSC2	FT1	HES
Cement-lb	710 (1)	750 (2)	960	610 (1)	650 (2)	710	810
Fine Aggregate-lb	1400	1100	890	1400	1000	1400	1100
Coarse Aggregate-lb	1360	1700	1750	1700	1800	1360	1720
Water Reducer-oz/cwt	4.5	-	4.5	-	-	4.5	-
Accelerator-Gal (non-chloride)	-	-	5.1	-	-	-	6.0
Accelerator (CaCl) % wt. of cement	-	-	1.75	-	-	-	-
High-Range Water Reducer-oz/cwt	-	-	18	-	-	-	14
Max w/c Ratio	0.44	0.40	0.34	0.41	0.45	0.44	0.40

(1) Regulated Set Cement
Holnam, Inc.
P.O. Box 99
Saratoga, AR 71859
Phone : (800) 874-5756

(2) Rapidset Cement
CTS Cement
8700 West Byron-Mawr, #800-S
Chicago, IL 60634
Phone : (800) 759-8255

AREA	CLASS	NUMBER OF REPAIRS FOR EACH OPENING TIME							
		NOMINAL Joint Repair Opening Time							
		1 HR	3 HR	5 HR	6 HR	8 HR	10 HR	18 HR	26 HR
C	RSPC1	3	4		3				
D	RSC1	3	4		3				
E	VES		3	4		3			
F	RSPC2		3	4		3			
G	RSC2		3	4		3			
H	FS		3	4		3			
B	FT1						3	4	3
A	HES						3	4	3

CALC BY RLS DATE 2-18-98	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	101 267
CHKD BY DLW DATE 2-21-98			

SHRP PAVEMENT REPAIR DETAILS

TRANSVERSE JOINT REPAIR

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSC2

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSC2

THIS WORK SHALL BE COMPLETED IN ACCORDANCE WITH ITEMS 255 AND 499 WITH THE FOLLOWING EXCEPTIONS:

1. IN LIEU OF THE BATCH WEIGHTS GIVEN IN THE CONCRETE TABLE IN 499.03, THE BATCH WEIGHTS GIVEN ON THIS SHEET SHALL BE USED. ONLY ONE MIX FROM THIS TABLE MAY BE PLACED ON ANY DAY.
2. RAPIDSET CEMENT MANUFACTURED BY CTS CEMENT SHALL BE USED.
3. 499.031 WILL NOT APPLY FOR THIS MIX.
4. THE CONCRETE SHALL BE DELIVERED TO THE SITE OF THE WORK WITHIN 30 MINUTES AND DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 60 MINUTES AFTER COMBINING THE WATER AND CEMENT. IF AN APPROVED SET-RETARDING ADMIXTURE IS USED AT THE CONTRACTOR'S EXPENSE, DISCHARGE AND FINISHING SHALL BE COMPLETED WITHIN 75 MINUTES AFTER COMBINING THE WATER AND CEMENT. A MOBILE MIXER MEETING THE APPROVAL OF THE ENGINEER MAY BE USED FOR THIS WORK.
5. THIS MIX WILL BE USED FOR TEN (10) JOINT REPAIRS AT THE LOCATIONS SHOWN ON THIS SHEET. THE CONTRACTOR WILL TIME HIS OPERATION SUCH THAT WHEN OPENED TO TRAFFIC, THE REPAIRS WILL BE OF THE AGE INDICATED IN THE TABLE SHOWN AT RIGHT.
6. REPRESENTATIVES FROM CONSTRUCTION TECHNOLOGY LABORATORIES (CTL) OF SKOKIE, ILLINOIS AND ERES CONSULTANTS OF SAYOY, ILLINOIS WILL BE ON THE SITE DURING CONSTRUCTION. CTL AND ERES WILL BE INSTALLING INSTRUMENTATION, SAMPLING MATERIALS AND FILMING THE CONSTRUCTION PROCESS. THE CONTRACTOR WILL COOPERATE WITH CTL AND ERES.
7. ONCE OPENED TO TRAFFIC, THE REPAIRS SHALL REMAIN UNDER TRAFFIC FOR A MINIMUM PERIOD OF 28 DAYS. IF IT BECOMES NECESSARY TO CLOSE A TEST SECTION AFTER 28 DAYS, TRAFFIC WILL BE REMOVED FROM ALL REPAIRS WITHIN A TEST SECTION AND THE TIME AND DURATION OF CLOSURE RECORDED AND REPORTED TO ERES.
8. JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801, CLASS III AND CLASS V, IN LIEU OF THE REQUIREMENTS OF 255.02 AND BP-13.

COST FOR THE ABOVE WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS RSC2.

THE LOCATIONS WHERE THIS TYPE OF JOINT REPAIR WILL BE UTILIZED ARE AS FOLLOWS:

AREA G				
STATION	SIDE	LANE	SIZE	SQ. YD.
129+43	WB	TRAVELLING	6' X 12'	8
129+94	WB	TRAVELLING	6' X 12'	8
131+11	WB	TRAVELLING	6' X 12'	8
131+44	WB	TRAVELLING	6' X 12'	8
132+67	WB	TRAVELLING	6' X 12'	8
133+42	WB	TRAVELLING	6' X 12'	8
133+69	WB	TRAVELLING	6' X 12'	8
134+73	WB	TRAVELLING	6' X 12'	8
135+70	WB	TRAVELLING	6' X 12'	8
136+63	WB	TRAVELLING	6' X 12'	8
TOTALS CARRIED TO GENERAL SUMMARY				80

BATCH WEIGHT							
Material, Cubic Yard Basis	RSPC1	RSC1	VES	RSPC2	RSC2	FT1	HES
Cement-lb	710 (1)	750 (2)	960	610 (1)	650 (2)	710	810
Fine Aggregate-lb	1400	1100	890	1400	1000	1400	1100
Coarse Aggregate-lb	1360	1700	1750	1700	1800	1360	1720
Water Reducer-oz/cwt	4.5	-	4.5	-	-	4.5	-
Accelerator-Gal (non-chloride)	-	-	5.1	-	-	-	6.0
Accelerator (CaCl) % wt. of cement	-	-	1.75	-	-	-	-
High-Range Water Reducer-oz/cwt	-	-	18	-	-	-	14
Max w/c Ratio	0.44	0.40	0.34	0.41	0.45	0.44	0.40

(1) Regulated Set Cement
Holnam, Inc.
P.O. Box 99
Saratoga, AR 71859
Phone : (800) 874-5756

(2) Rapidset Cement
CTS Cement
8700 West Byron-Mawr, #800-S
Chicago, IL 60634
Phone : (800) 759-8255

AREA	CLASS	NUMBER OF REPAIRS FOR EACH OPENING TIME							
		Nominal Joint Repair Opening Time							
		1 HR	3 HR	5 HR	6 HR	8 HR	10 HR	18 HR	26 HR
C	RSPC1	3	4		3				
D	RSC1	3	4		3				
E	VES		3	4		3			
F	RSPC2		3	4		3			
G	RSC2		3	4		3			
H	FS		3	4		3			
B	FT1						3	4	3
A	HES						3	4	3

SHRP PAVEMENT REPAIR DETAILS

TRANSVERSE JOINT REPAIR

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS FS

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS FS

IN ADDITION TO THE REQUIREMENTS OF ITEMS 255 AND 499 THE FOLLOWING SHALL APPLY:

1. PORTLAND CEMENT SHALL MEET THE REQUIREMENTS OF 701.04
2. THIS MIX WILL BE USED FOR TEN (10) JOINT REPAIRS AT THE LOCATIONS SHOWN ON THIS SHEET. THE CONTRACTOR WILL TIME HIS OPERATION SUCH THAT WHEN OPENED TO TRAFFIC, THE REPAIRS WILL BE OF THE AGE INDICATED IN THE TABLE SHOWN AT RIGHT.
3. REPRESENTATIVES FROM CONSTRUCTION TECHNOLOGY LABORATORIES (CTL) OF SKOKIE, ILLINOIS AND ERES CONSULTANTS OF SAYOY, ILLINOIS WILL BE ON THE SITE DURING CONSTRUCTION. CTL AND ERES WILL BE INSTALLING INSTRUMENTATION, SAMPLING MATERIALS AND FILMING THE CONSTRUCTION PROCESS. THE CONTRACTOR WILL COOPERATE WITH CTL AND ERES.
4. ONCE OPENED TO TRAFFIC, THE REPAIRS SHALL REMAIN UNDER TRAFFIC FOR A MINIMUM PERIOD OF 28 DAYS. IF IT BECOMES NECESSARY TO CLOSE A TEST SECTION AFTER 28 DAYS, TRAFFIC WILL BE REMOVED FROM ALL REPAIRS WITHIN A TEST SECTION AND THE TIME AND DURATION OF CLOSURE RECORDED AND REPORTED TO ERES.
5. JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801, CLASS III AND CLASS V, IN LIEU OF THE REQUIREMENTS OF 255.02 AND BP-13.

COST FOR THE ABOVE WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS FS.

THE LOCATIONS WHERE THIS TYPE OF JOINT REPAIR WILL BE UTILIZED ARE AS FOLLOWS:

AREA H				
STATION	SIDE	LANE	SIZE	SQ. YD.
144+25	WB	TRAVELLING	6' X 12'	8
144+64	WB	TRAVELLING	6' X 12'	8
145+04	WB	TRAVELLING	6' X 12'	8
145+97	WB	TRAVELLING	6' X 12'	8
146+68	WB	TRAVELLING	6' X 12'	8
147+03	WB	TRAVELLING	6' X 12'	8
147+17	WB	TRAVELLING	6' X 12'	8
147+43	WB	TRAVELLING	6' X 12'	8
147+57	WB	TRAVELLING	6' X 12'	8
147+82	WB	TRAVELLING	6' X 12'	8
TOTALS CARRIED TO GENERAL SUMMARY				80

AREA	CLASS	NUMBER OF REPAIRS FOR EACH OPENING TIME							
		NOMINAL Joint Repair Opening Time							
		1 HR	3 HR	5 HR	6 HR	8 HR	10 HR	18 HR	26 HR
C	RSPC1	3	4		3				
D	RSC1	3	4		3				
E	VES		3	4		3			
F	RSPC2		3	4		3			
G	RSC2		3	4		3			
H	FS		3	4		3			
B	FTI						3	4	3
A	HES						3	4	3

SHRP PAVEMENT REPAIR DETAILS

TRANSVERSE JOINT REPAIR

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS MSU

ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS MSU

IN ADDITION TO THE REQUIREMENTS OF ITEMS 255 AND 499, THE FOLLOWING SHALL APPLY:

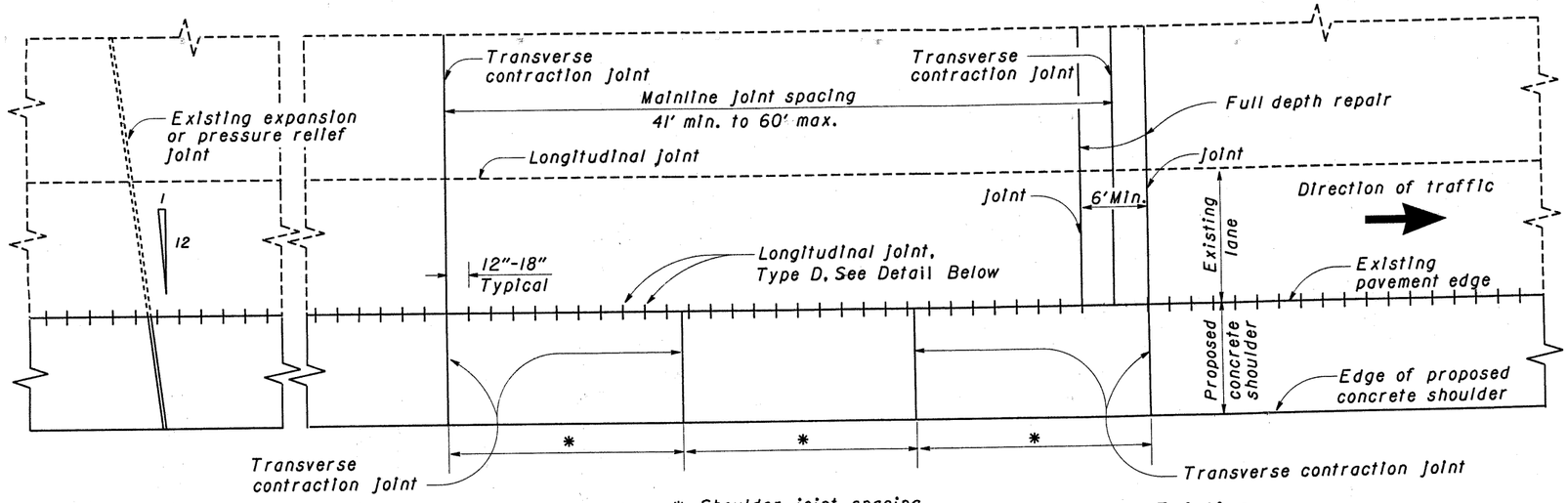
1. PORTLAND CEMENT SHALL MEET THE REQUIREMENTS OF 701.04.
2. THIS MIX WILL BE USED FOR TEN (10) JOINT REPAIRS AT THE LOCATIONS SHOWN ON THIS SHEET.
3. THE AMOUNT OF AIR-ENTRAINING ADMIXTURE (705.10) SHALL BE VARIED AS SHOWN IN THE TABLE ON THIS SHEET. 100% IS THE AMOUNT OF THE ADMIXTURE USED IN THE CLASS FS MIX ON THIS PROJECT (SEE SHEET 102).
4. REPRESENTATIVES FROM MICHIGAN STATE UNIVERSITY WILL BE ON THE SITE SAMPLING MATERIALS DURING CONSTRUCTION. THE CONTRACTOR WILL COOPERATE WITH THE REPRESENTATIVES FROM MICHIGAN STATE UNIVERSITY.
5. JOINT SEALER SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 801, CLASS III AND CLASS V, IN LIEU OF THE REQUIREMENTS OF 255.02 AND BP-13.

COST FOR THE ABOVE WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 255 FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, AS PER PLAN A, CLASS MSU.

THE LOCATIONS WHERE THIS TYPE OF JOINT REPAIR WILL BE UTILIZED ARE AS FOLLOWS:

AREA 1					
STATION	SIDE	LANE	SIZE	SQ. YD.	PERCENT AIR-ENTRAINING ADMIXTURE*
148+66	WB	TRAVELLING	6' X 12'	8	0
149+14	WB	TRAVELLING	6' X 12'	8	0
149+48	WB	TRAVELLING	6' X 12'	8	20
149+97	WB	TRAVELLING	6' X 12'	8	20
150+28	WB	TRAVELLING	6' X 12'	8	40
150+76	WB	TRAVELLING	6' X 12'	8	40
151+11	WB	TRAVELLING	6' X 12'	8	60
152+14	WB	TRAVELLING	6' X 12'	8	60
152+53	WB	TRAVELLING	6' X 12'	8	80
152+94	WB	TRAVELLING	6' X 12'	8	80
TOTALS CARRIED TO GENERAL SUMMARY				80	

* EXPRESSED AS A PERCENTAGE OF THE TOTAL AMOUNT OF ADMIXTURE USED IN THE CLASS FS MIX ON THIS PROJECT (SEE SHEET 102).



Pressure Relief or Expansion Joints

New or Existing Transverse Joint

* Shoulder joint spacing 13' min. to 22' max.

New or Existing Joint Repair

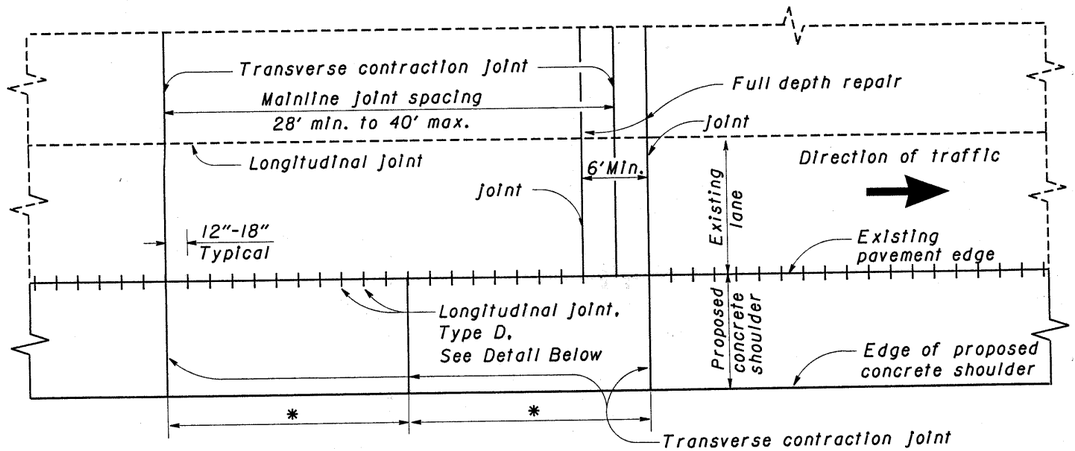
NOTES

SHOULDERS ADJACENT TO NEW PAVEMENT shall have the same joint spacing as mainline pavement.

TRANSVERSE CONTRACTION JOINTS In the shoulder shall be equally spaced and shall be dowelled when any portion of the shoulder is used for maintenance of traffic. Joint spacing may be shifted to be a continuation of an existing mid-slab crack. However, joint spacing shall not be less than 10'.

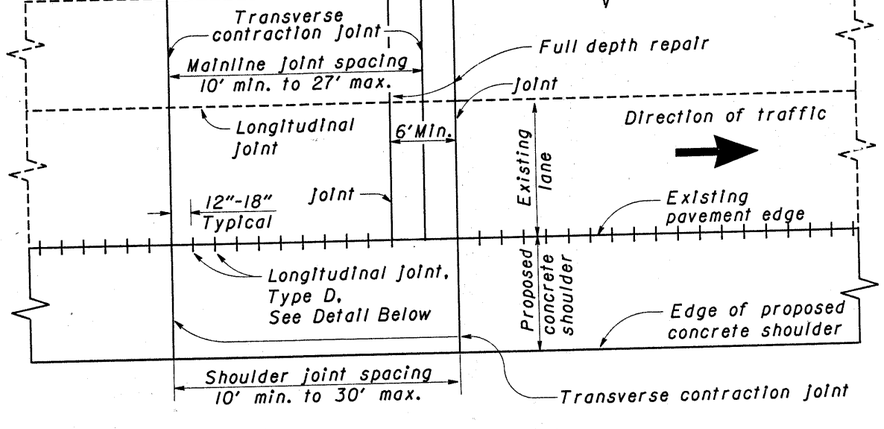
EXPANSION, PRESSURE RELIEF AND CONTRACTION JOINTS: Care shall be taken to make the expansion, pressure relief or contraction joints in the shoulder a straight line continuation of the new or existing expansion, pressure relief or contraction joints.

For clarity, transverse joints have been shown normal to the centerline. When placed next to mainline pavement with skewed joints, the joints in the shoulder shall be skewed to match the skew of the mainline joints.



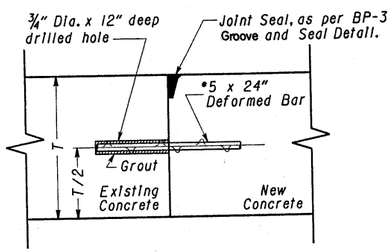
New or Existing Transverse Joint

New or Existing Joint Repair



New or Existing Transverse Joint

New or Existing Joint Repair



Type D (Drilled Tied Longitudinal) Joint

Type D joints shall be constructed in accordance with 255.05. Grout shall meet the requirements of 255.02.

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF TRANSPORTATION

CONCRETE SHOULDERS

SUPERELEVATION TABLES

RAMP "T"

STATION	LEFT EDGE EDGE OF PAVEMENT		℄ RAMP & ℄ CONST. PROFILE GRADE	RATE OF SUPERELEVATION
	OFFSET (FT)	EXISTING ELEVATION	EXISTING ELEVATION	(FT/FT)
24+00	12	655.66	655.16	0.042
24+25	12	655.72	655.19	0.044
24+50	12	655.78	655.22	0.047
PCC 24+55.14	16	656.01	655.23	0.049
24+75	16	656.14	655.26	0.055
25+00	16	656.32	655.31	0.063
25+25	16	656.49	655.38	0.069
25+50	16	656.61	655.47	0.071
25+75	16	656.71	655.57	0.071
26+00	16	656.78	655.69	0.068
26+25	16	656.79	655.83	0.060
26+50	16	656.76	655.98	0.049
26+75	16	656.74	656.14	0.038
27+00	16	656.73	656.30	0.027
◬ 27+08	16	656.73	656.35	0.024
27+25	16	656.77	656.46	0.019
27+41.18	16	656.83	656.56	0.017
27+50	16	656.87	656.62	0.016
◉ 27+59	16	656.93	656.68	0.016
PT 27+67.77			656.73	

◬ - BEGIN FULL DEPTH PAVEMENT REPLACEMENT STA. 27+08 RAMP "T"

◉ - END FULL DEPTH PAVEMENT REPLACEMENT STA. 27+59 RAMP "T"

RAMP "H"

STATION	LEFT EDGE EDGE OF PAVEMENT		℄ RAMP & ℄ CONST. PROFILE GRADE	RATE OF SUPERELEVATION
	OFFSET (FT)	EXISTING ELEVATION	EXISTING ELEVATION	(FT/FT)
167+00	12	655.57	655.27	0.025
167+25	12	655.93	655.63	0.025
166+50	12	656.30	655.98	0.027
166+75	16	656.82	656.29	0.033
168+00	16	657.23	656.56	0.042
◬ 168+04	16	657.29	656.60	0.043
168+25	16	657.59	656.79	0.050
168+50	16	657.91	656.98	0.058
PCC 168+65.48	16	658.08	657.07	0.063
168+75	16	658.19	657.13	0.066
169+00	16	658.44	657.24	0.075
169+25	16	658.61	657.31	0.081
169+50	16	658.67	657.34	0.083
169+75	16	658.66	657.33	0.083
170+00	16	658.61	657.28	0.083
170+25	16	658.52	657.19	0.083
170+50	16	658.35	657.06	0.081
170+75	16	658.03	656.89	0.071
171+00	16	657.63	656.68	0.059
PT 171+13.26	16	657.40	656.55	0.053
171+25	16	657.19	656.43	0.048
171+50	16	656.71	656.14	0.036
171+75	16	656.19	655.81	0.024
◉ 171+84	16	656.00	655.68	0.020
172+00	16	655.63	655.44	0.012
172+25	16	655.03	655.03	0.000
172+50	16	654.39	654.58	-0.012
172+75	16	653.73	654.11	-0.024
173+00	16	653.07	653.64	-0.036

◬ - BEGIN FULL DEPTH PAVEMENT REPLACEMENT STA. 168+04 RAMP "H"

◉ - END FULL DEPTH PAVEMENT REPLACEMENT STA. 171+84 RAMP "H"

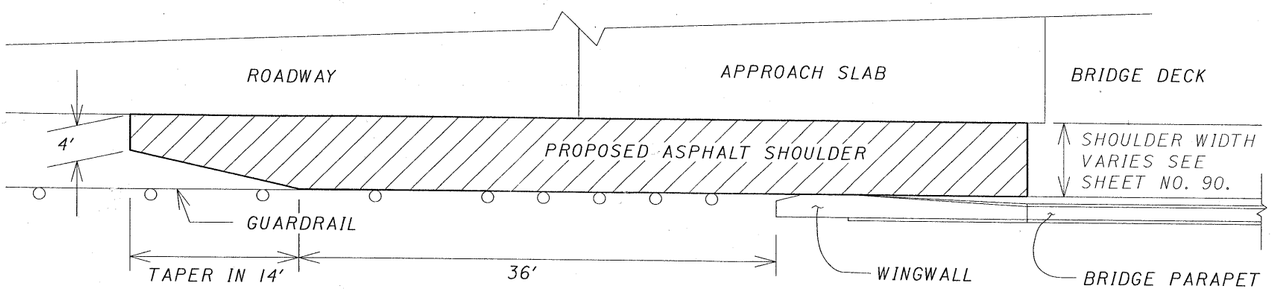
CALC BY DLW DATE 2/27/92	ERI/LOR-2-30.51/0.00	OHIO	105
CHKD BY RLS DATE 2/28/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

CURB REMOVAL AND BERM REPLACEMENT

CURB REMOVAL AND BERM REPLACEMENT TABLE

PLAN REF. NO.	SHEET NUMBER	LOCATION	STATION TO STATION FROM	STATION TO STATION TO	SIDE	ITEM 202 CURB REMOVED	ITEM 202 CURB REMOVED, AS PER PLAN	ITEM 202 PAVEMENT REMOVED	ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCITON	ITEM 452 9" PLAIN CONCRETE PAVEMENT, AS PER PLAN	ITEM 304 6" AGGREGATE BASE, AS PER PLAN	ITEM 516 1" PREFORMED EXP. JOINT FILLER, AS PER 705.03
						LIN. FT.	LIN. FT.	SQ. YD.	CU. YD.	SQ. YD.	CU. YD.	SQ. FT.
R-1 & R-5	119 & 120	RAMP "R"	17+50.00 ℄ S.R. 2	21+50.06 ℄ S.R. 2	LT.	400.1						334
R-1	120	RAMP "R"	21+50.06 ℄ S.R. 2	21+82.00 ℄ S.R. 2	LT.	31.9			3.2	7.6	1.3	27
R-1	120	RAMP "R"	21+68.00 RAMP "R"	23+19.75 RAMP "R"	RT.		154.2		22.4	51.4	10.0	
R-2	120	RAMP "Q"	18+66.46 RAMP "Q"	18+78± RAMP "Q"	RT.		11.8		2.1	5.1	0.9	
R-2	120	RAMP "Q"	18+78± RAMP "Q"	19+68.00 RAMP "Q"	RT.		92.4		15.8	40.0	7.5	
R-2	120	RAMP "Q"	19+68.00 RAMP "Q"	19+92.00 RAMP "Q"	RT.		25.0		5.3	13.2	2.4	
R-2	120	RAMP "Q"	19+92.00 RAMP "Q"	20+65 RAMP "Q"	RT.				13.9	31.7	6.0	
R-1	121	RAMP "V"	36+40.00 RAMP "V"	37+53.00 RAMP "V"	LT.		114.4		15.9	38.1	7.4	
R-1	121	RAMP "V"	37+53.00 RAMP "V"	37+64.00 RAMP "V"	LT.		11.0	2.4	0.8	3.7	0.7	
R-1	121 & 122	RAMP "V"	37+33.00 ℄ S.R. 2	41+25.00 ℄ S.R. 2	RT.	392.0						327
R-2	121	RAMP "T"	38+35.00 RAMP "T"	39+04.00 RAMP "T"	LT.		71.5		12.8	31.8	6.0	
R-2	121	RAMP "T"	39+04.00 RAMP "T"	39+91± RAMP "T"	LT.		89.9		15.4	38.9	7.3	
R-2	121	RAMP "T"	39+91± RAMP "T"	40+03.56 RAMP "T"	LT.		12.3		1.7	4.3	1.0	
R-1 & R-4	124 & 125	RAMP "Z"	69+00.00 ℄ S.R. 2	72+81.00 ℄ S.R. 2	LT.	381.0						318
R-4	125	RAMP "Z"	72+81.00 RAMP "Z"	73+00.00 RAMP "Z"	RT.		19.0	4.2	1.4	6.3	1.2	
R-4	125	RAMP "Z"	73+00.00 RAMP "Z"	73+97.00 RAMP "Z"	RT.		98.9		14.0	33.0	6.4	
R-5	126	RAMP "Y"	87+00.00 RAMP "Y"	88+00.00 RAMP "Y"	LT.		101.7		14.1	33.9	6.6	
R-5	126	RAMP "Y"	88+00.00 RAMP "Y"	88+20.38 RAMP "Y"	LT.		20.7	4.6	1.5	6.9	1.3	
R-1 & R-5	126 & 127	RAMP "Y"	88+18.00 ℄ S.R. 2	92+00.00 ℄ S.R. 2	RT.	382.0						319
R-1	134	RAMP "G"	164+50.00 ℄ S.R. 2	168+16.00 ℄ S.R. 2	LT.	366.0						305
R-1	134	RAMP "G"	168+14.50 RAMP "G"	168+50.00 RAMP "G"	RT.		36.5	8.1	2.7	12.2	2.4	
R-1	134	RAMP "G"	168+50.00 RAMP "G"	169+16.00 RAMP "G"	RT.		67.5		9.4	22.5	4.4	
TOTALS CARRIED TO GENERAL SUMMARY						1953.0	926.8	19.3	152.4	380.6	72.8	1630

PROPOSED OVERPASS SHOULDER TAPER *



PLAN VIEW

FOR SHOULDER BUILDUP SEE OVERPASS APPROACH SLAB DETAILS ON SHEET 90.

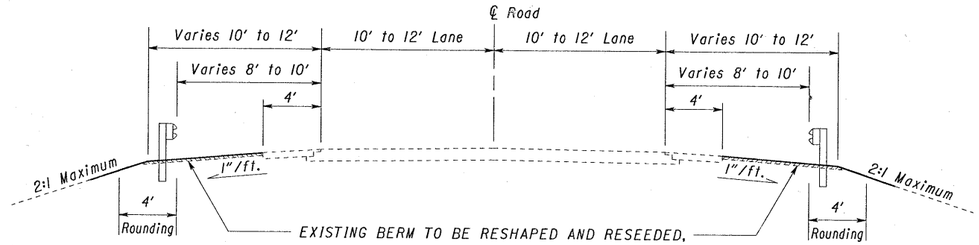
FOR QUANTITIES SEE SHEETS 148-156.

* APPLIES AT ALL OVERPASSES EXCEPT WEST RIVER ROAD, VERMILION ROAD, AND VERMILION INTERCHANGE ROAD. ON WEST RIVER ROAD AND VERMILION ROAD THE MOT TEMPORARY PAVEMENT WILL BE LEFT IN PLACE AS SHOWN ON SHEET NO. 90. ON VERMILION INTERCHANGE ROAD, THE ASPHALT SHOULDER WILL TAPER TO 4' WITHIN THE 14' TAPER AREA SHOWN ABOVE AND THEN CONTINUE AT THE 4' WIDTH TO MEET THE PROPOSED CONCRETE SHOULDERS ON RAMPS Z, W, X, AND Y AS SHOWN ON SHEET 152. SEE SHEET NO. 255 THRU 258 FOR DETAILS ON CATCH BASIN AND EROSION CONTROL AT BRIDGES.

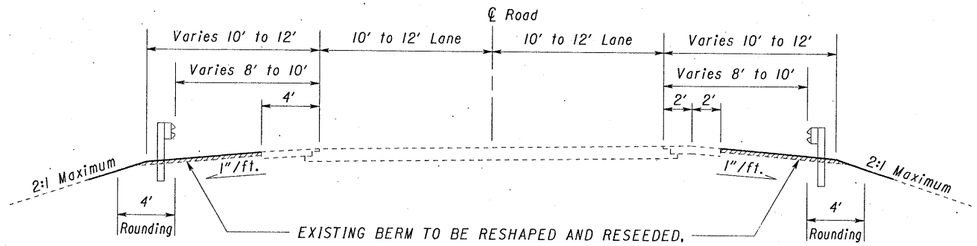
BERM RESHAPING DETAIL

TYPICAL BERM RESHAPING DETAIL FOR OVERPASSES APPLIES :

West River Road
Vermilion Road
Vermilion Interchange Road
Sunnyside Road
Claus Road



NORMAL SECTION



SUPERELEVATED SECTION

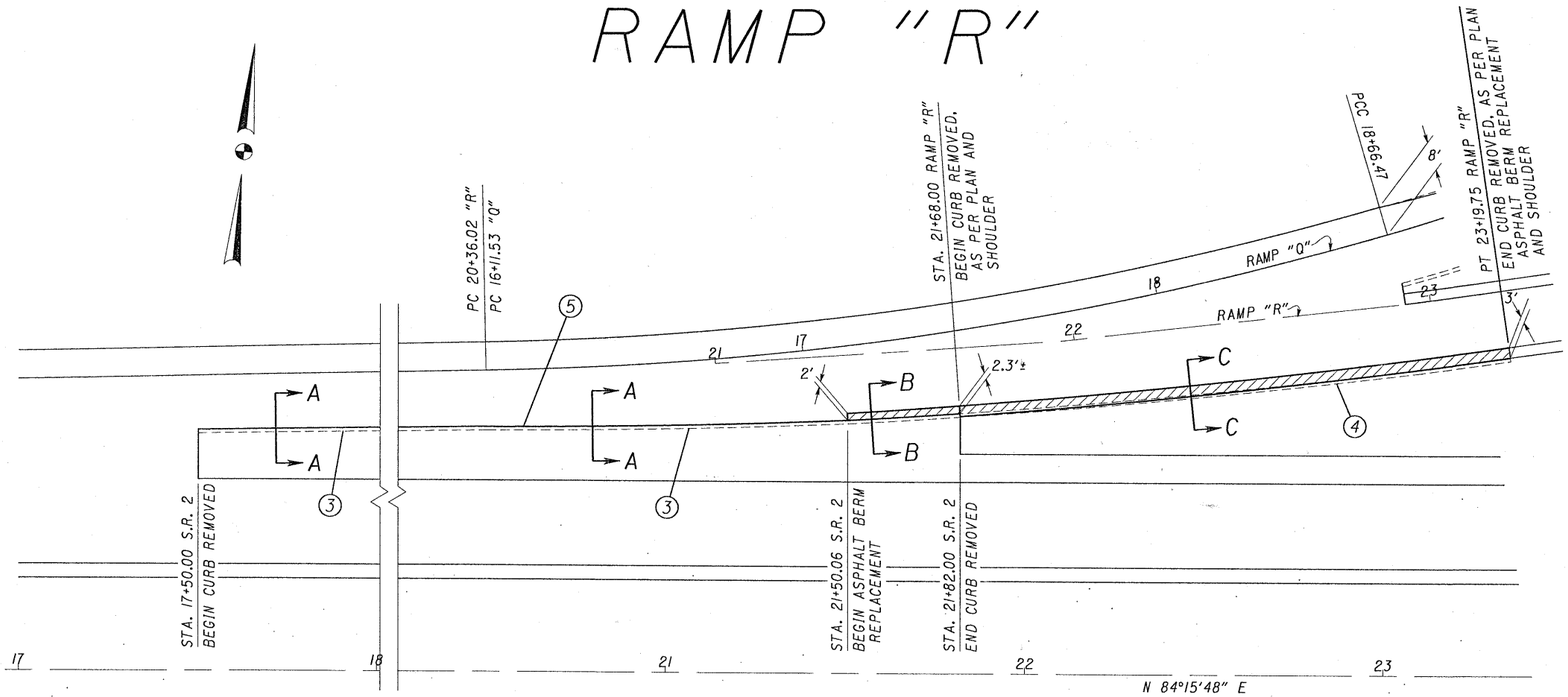
BERM RESHAPING SUB-SUMMARY

Sheet No.	LOCATION	SPECIAL Berm Reshaping		659 Seeding and Mulching	659 Comm. Fert.	659 Water					
		LIN. FT.		SQ. YD.	TON	M GAL					
148	15+00 to 25+00 W. River Rd.	975		580.9	0.05	1.25					
149	25+00 to 35+00 W. River Rd.	530		320.1	0.03	0.69					
150	17+00 to 25+00 Vermilion Rd.	690		605.8	0.05	1.31					
151	25+00 to 33+00 Vermilion Rd.	625		510.3	0.05	1.10					
152	22+50 to 27+50 Vermilion Int. Rd.	660		369.5	0.03	0.80					
153	15+00 to 25+00 Sunnyside Rd.	880		546.8	0.05	1.18					
154	25+00 to 35+00 Sunnyside Rd.	845		509.3	0.05	1.10					
155	15+00 to 25+00 Claus Rd.	700		430.6	0.04	0.93					
156	25+00 to 35+00 Claus Rd.	1000		634.8	0.06	1.37					
Totals Carried to General Summary		6905		4508.1	0.41	10.0					

CURB REMOVAL DETAILS

CALC BY DLW DATE 2-10-92 CHKD BY RLS DATE 2-26-92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	106 267

RAMP "R"

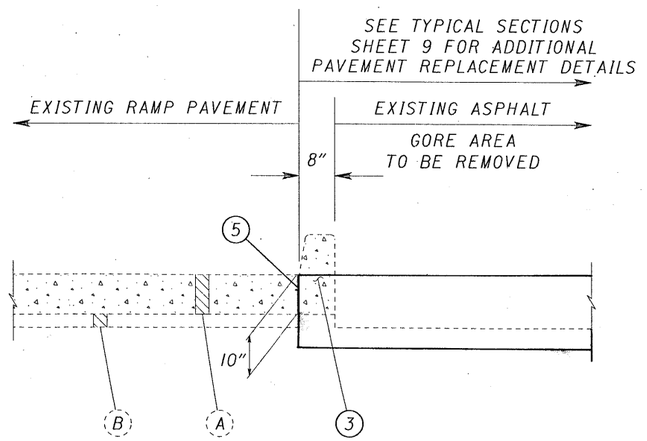


Existing Asphalt Berm To Be Removed

Legend For All Sections

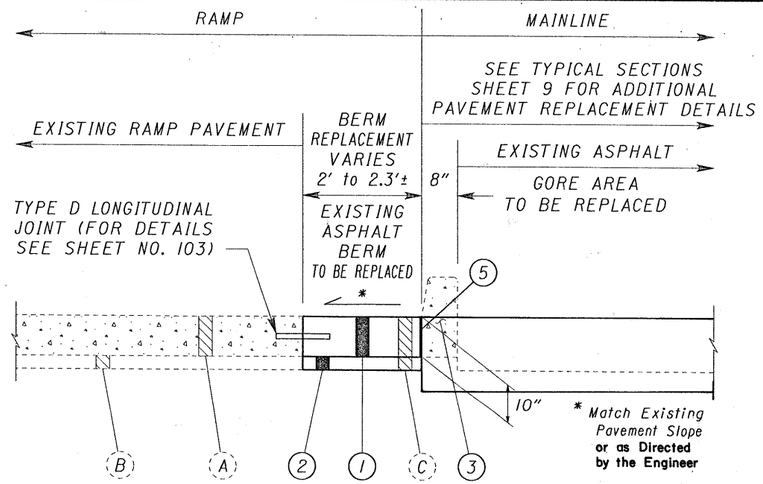
1. ITEM 452 - 9" Plain Concrete Pavement, As Per Plan
2. ITEM 304 - 6" Aggregate Base, As Per Plan
3. ITEM 202 - Curb Removed (Existing Type 8)
4. ITEM 202 - Curb Removed, As Per Plan (Existing Type 7)
5. ITEM 516 - 1" Preformed Exp. Joint Filler, As Per 705.03

(A) Existing 9" Reinforced Concrete Pavement
(B) Existing 3" Bituminous Aggregate Base
(C) Existing 12" Bituminous Aggregate Base



SECTION A-A

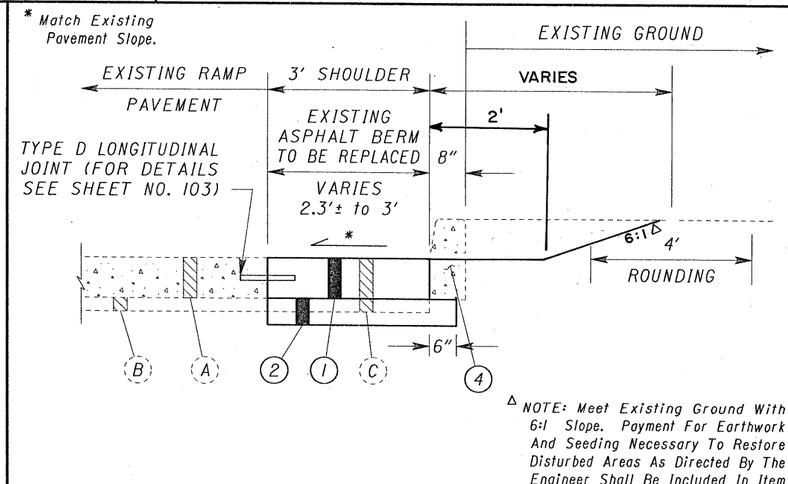
STA. 17+50.00 ℄ S.R. 2 To STA. 21+50.06 ℄ S.R. 2 = 400.06 L.F.



* Match Existing Pavement Slope or as Directed by the Engineer

SECTION B-B

STA. 21+50.06 ℄ S.R. 2 To STA. 21+82.00 ℄ S.R. 2 = 31.94 L.F.



Δ NOTE: Meet Existing Ground With 6:1 Slope. Payment For Earthwork And Seeding Necessary To Restore Disturbed Areas As Directed By The Engineer Shall Be Included In Item 202 Curb Removed As Per Plan.

SECTION C-C

STA. 21+68.00 RAMP "R" To STA. 23+19.75 RAMP "R" = 154.21 L.F.

CURB REMOVAL DETAILS

CALC BY DLW DATE 2-10-92 CHKD BY RLS DATE 2-26-92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5

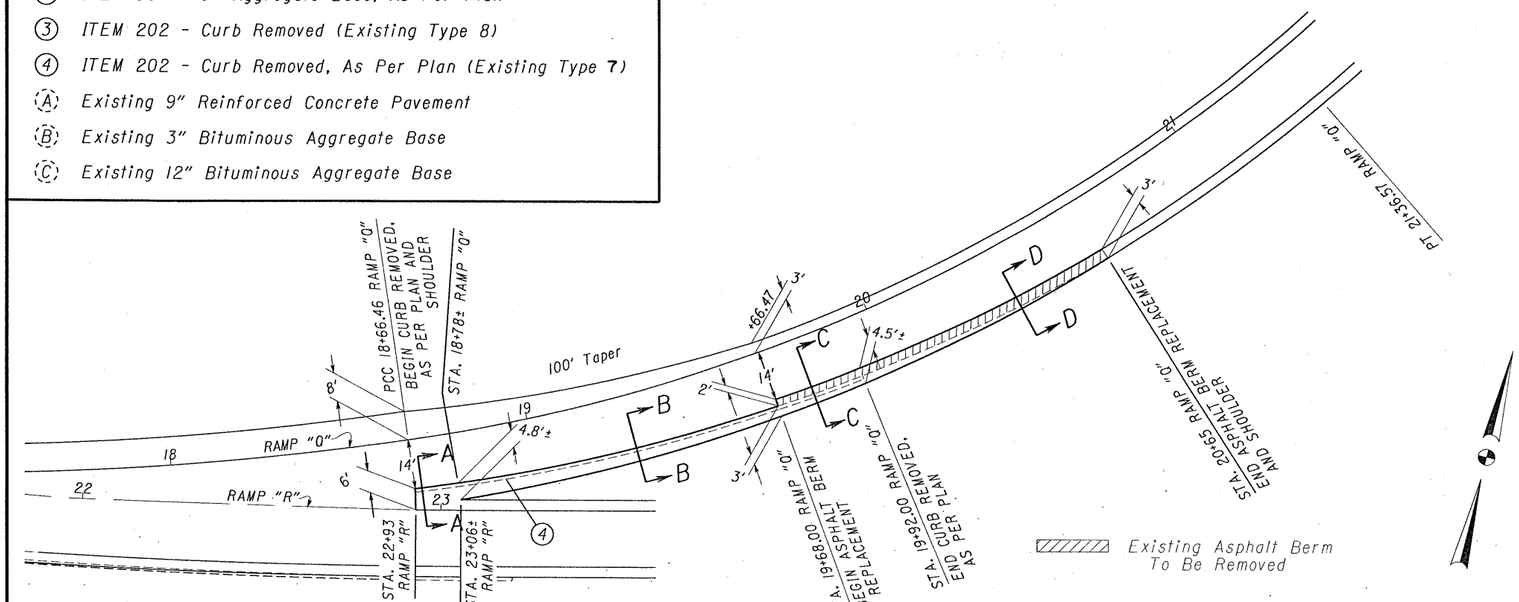
107 / 267

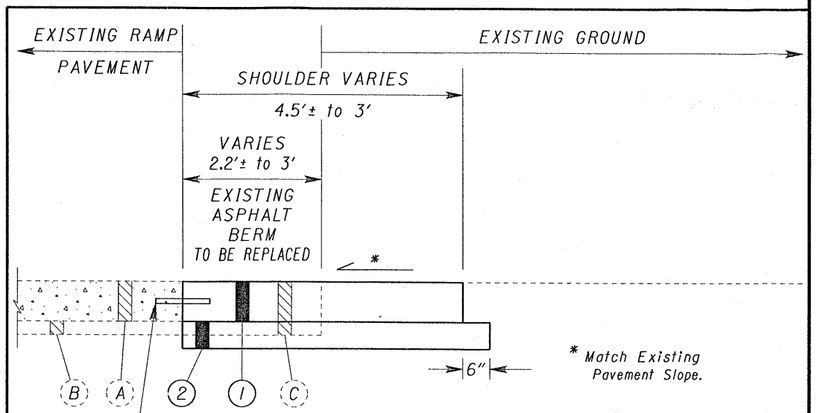
Legend For All Sections

1. ITEM 452 - 9" Plain Concrete Pavement, As Per Plan
2. ITEM 304 - 6" Aggregate Base, As Per Plan
3. ITEM 202 - Curb Removed (Existing Type B)
4. ITEM 202 - Curb Removed, As Per Plan (Existing Type 7)

- (A) Existing 9" Reinforced Concrete Pavement
- (B) Existing 3" Bituminous Aggregate Base
- (C) Existing 12" Bituminous Aggregate Base

RAMP "Q"

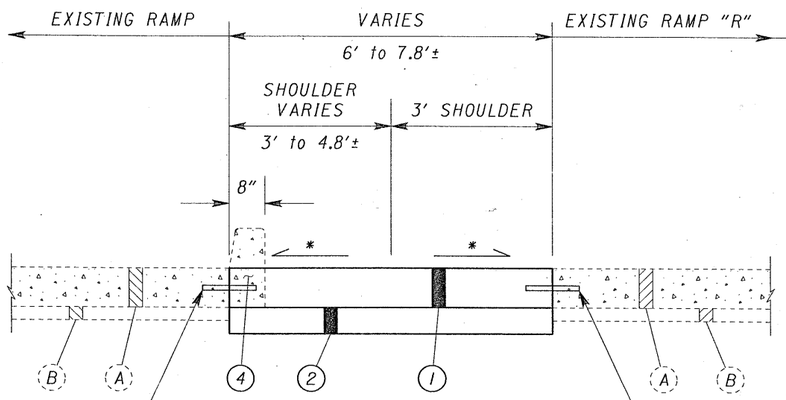




Engineer Shall Be Included In Item

SECTION D-D

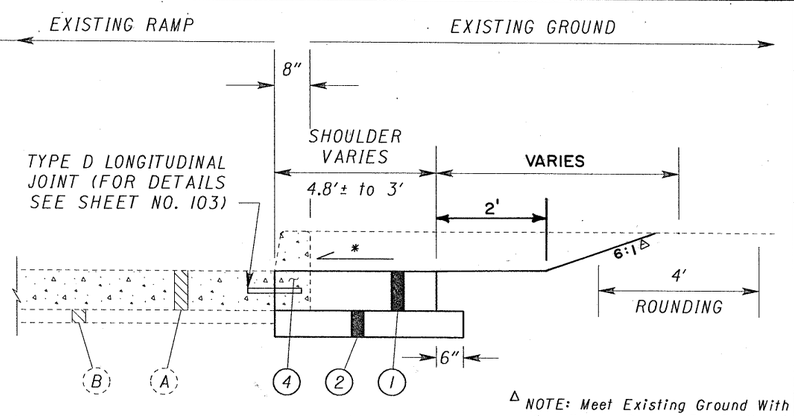
STA. 19+92.00 RAMP "Q" To STA. 20+65 RAMP "Q" = 76.06 L.F.



SECTION A-A

STA. 18+66.46 RAMP "Q" To STA. 18+78± RAMP "Q" = 11.84 L.F.

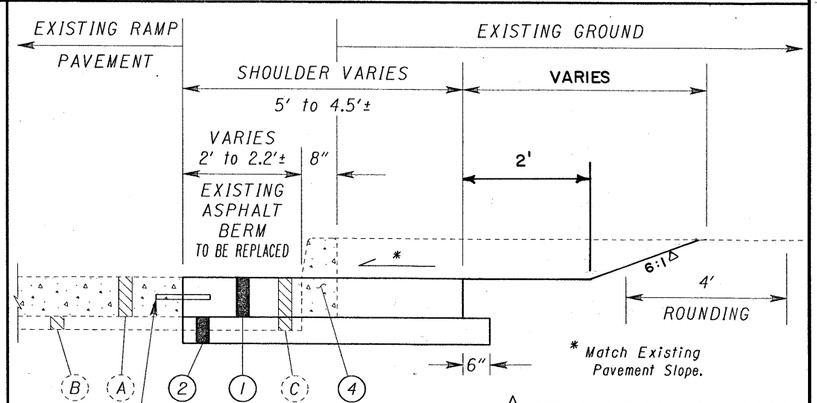
(Proposed 3' Shoulder Shown Above Included in Ramp "R" Pavement Calculations Sheet No. 60-66)



Δ NOTE: Meet Existing Ground With 6:1 Slope. Payment For Earthwork And Seeding Necessary To Restore Disturbed Areas As Directed By The Engineer Shall Be Included In Item 202 Curb Removed As Per Plan.

SECTION B-B

STA. 18+78± RAMP "Q" To STA. 19+68.00 RAMP "Q" = 92.36 L.F.



Δ NOTE: Meet Existing Ground With 6:1 Slope. Payment For Earthwork And Seeding Necessary To Restore Disturbed Areas As Directed By The Engineer Shall Be Included In Item 202 Curb Removed As Per Plan.

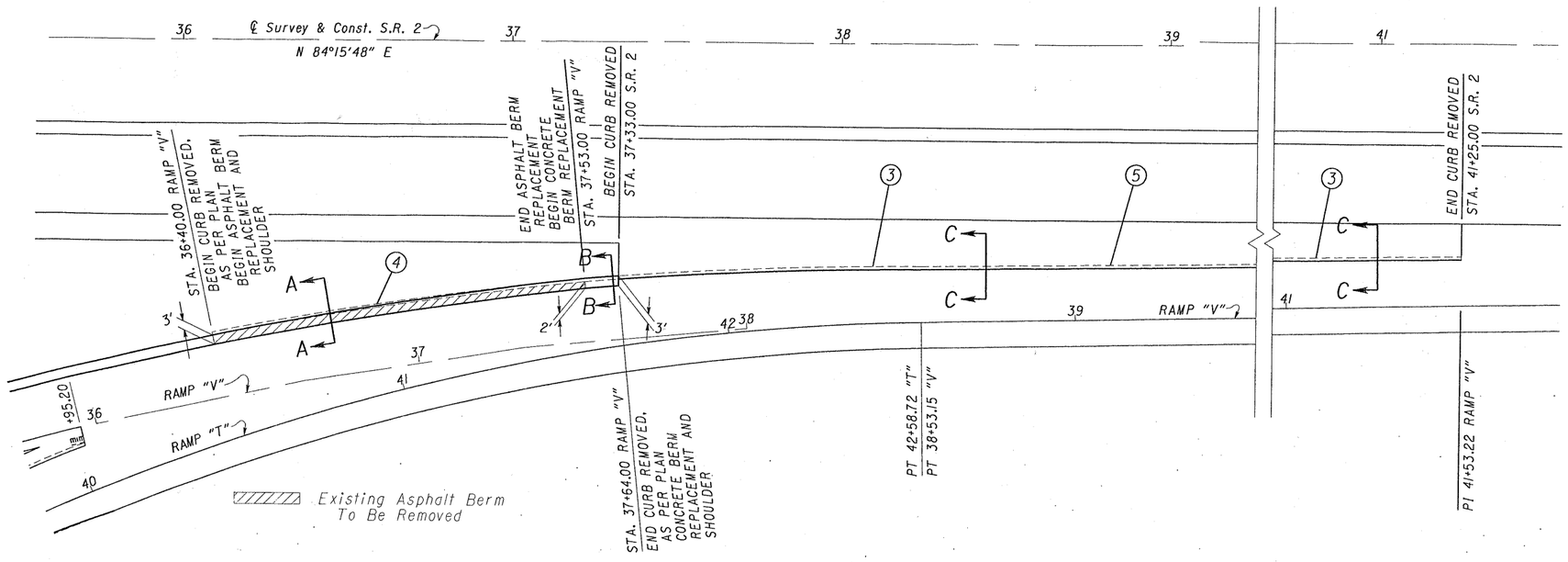
SECTION C-C

STA. 19+68.00 RAMP "Q" To STA. 19+92.00 RAMP "Q" = 25.00 L.F.

CURB REMOVAL DETAILS

CALC BY DLW DATE 2-10-92	ERI/LOR-2-30.51/0.00	OHIO	108
CHKD BY RLS DATE 2-26-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

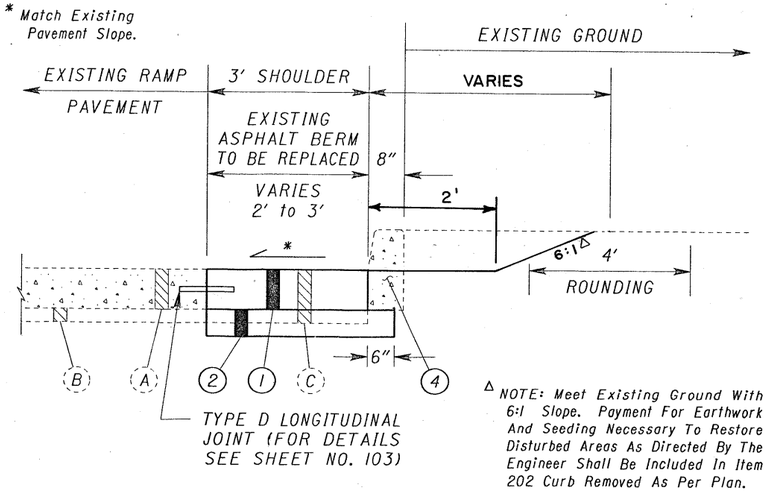
RAMP "V"



Legend For All Sections

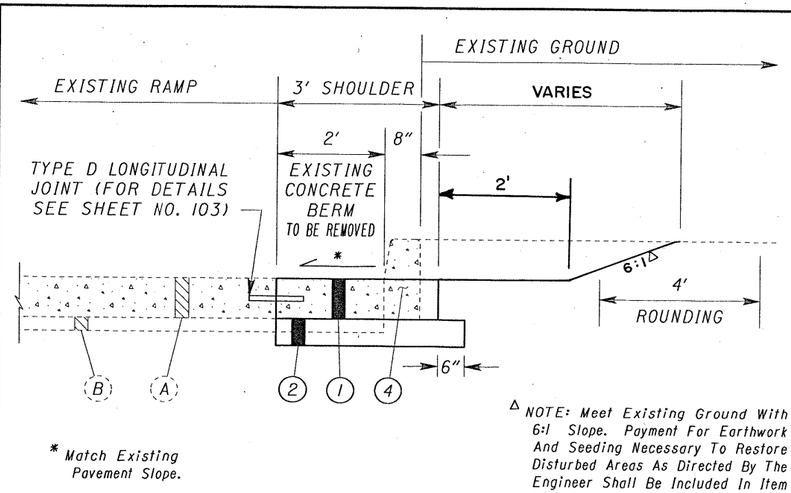
1. ITEM 452 - 9" Plain Concrete Pavement, As Per Plan
2. ITEM 304 - 6" Aggregate Base, As Per Plan
3. ITEM 202 - Curb Removed (Existing Type B)
4. ITEM 202 - Curb Removed, As Per Plan (Existing Type 7)
5. ITEM 516 - 1" Preformed Exp. Joint Filler, As Per 705.03

(A) Existing 9" Reinforced Concrete Pavement
(B) Existing 3" Bituminous Aggregate Base
(C) Existing 12" Bituminous Aggregate Base



SECTION A-A

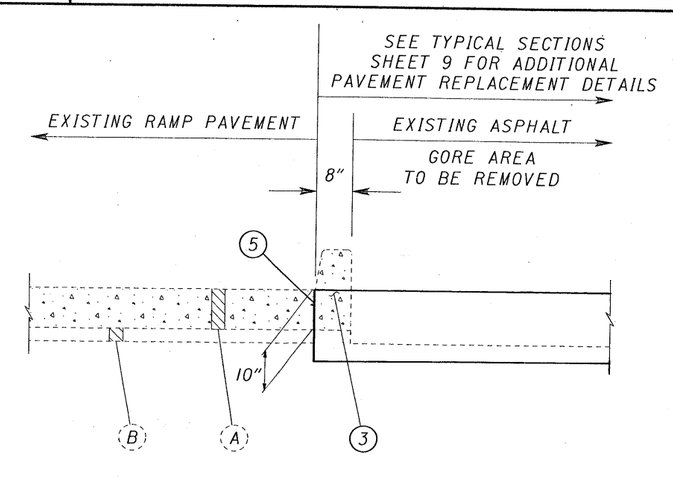
STA. 36+40.00 RAMP "V" To STA. 37+53.00 RAMP "V" = 114.37 L.F.



SECTION B-B

STA. 37+53.00 RAMP "V" To STA. 37+64.00 RAMP "V" = 11.00 L.F.

Existing 2' Concrete Berm To Be Removed



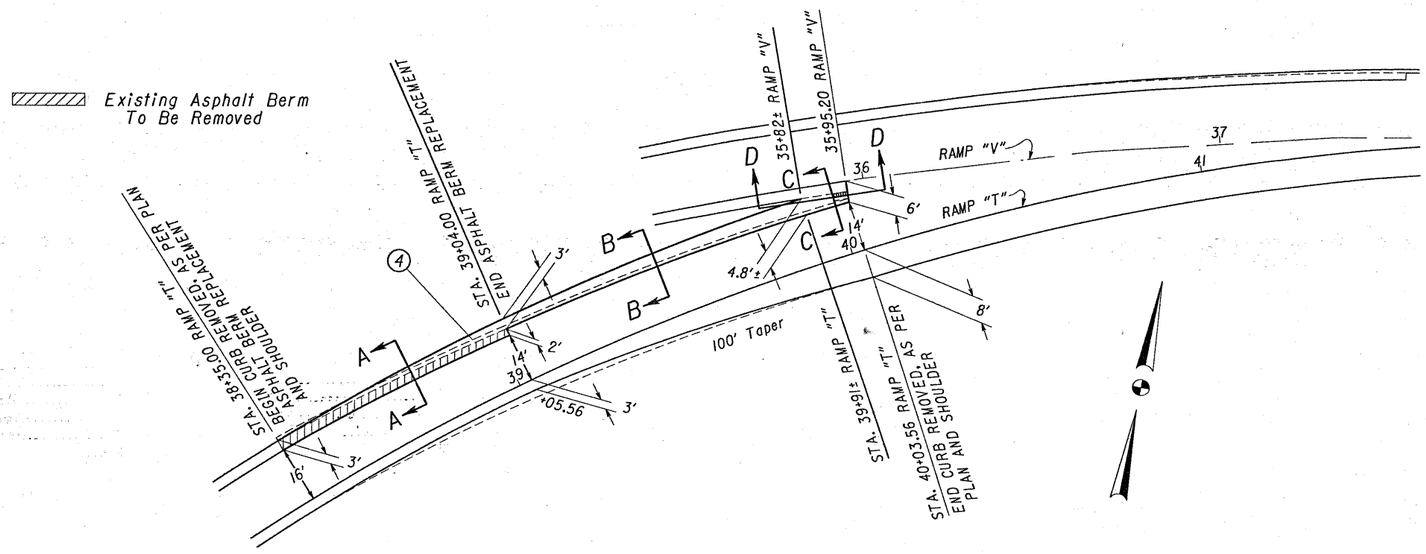
SECTION C-C

STA. 37+33.00 ℄ S.R. 2 To STA. 41+25.00 ℄ S.R. 2 = 392.00 L.F.

CURB REMOVAL DETAILS

CALC BY DLW DATE 2-10-92	ERI/LOR-2-30.51/0.00	OHIO	109
CHKD BY RLS DATE 2-26-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

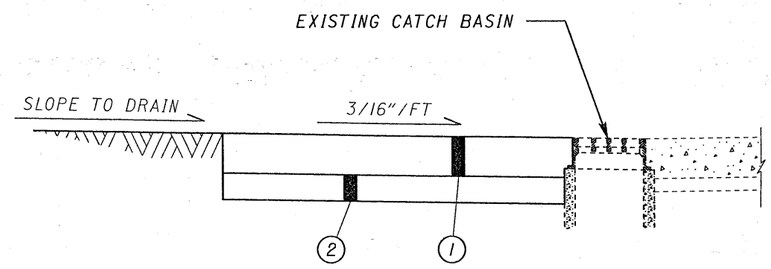
RAMP "T"



Legend For All Sections

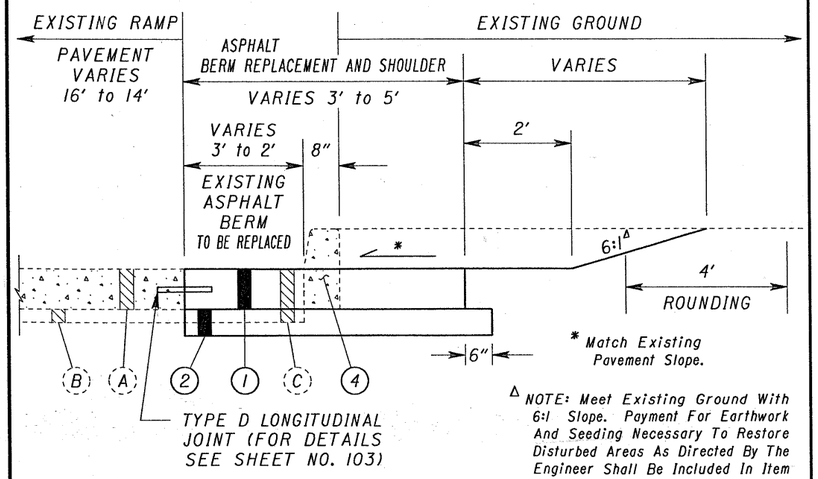
1. ITEM 452 - 9" Plain Concrete Pavement, As Per Plan
2. ITEM 304 - 6" Aggregate Base, As Per Plan
3. ITEM 202 - Curb Removed (Existing Type 8)
4. ITEM 202 - Curb Removed, As Per Plan (Existing Type 7)

(A) Existing 9" Reinforced Concrete Pavement
(B) Existing 3" Bituminous Aggregate Base
(C) Existing 12" Bituminous Aggregate Base



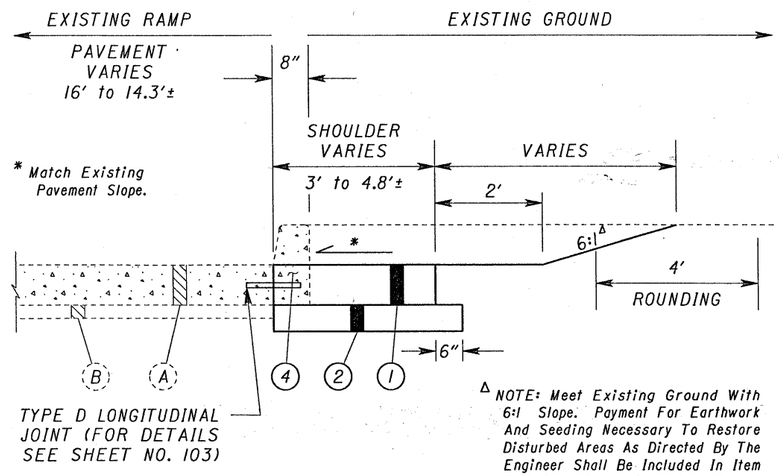
SECTION D-D

STA. 35+82± RAMP "V" To STA. 35+95 RAMP "V"



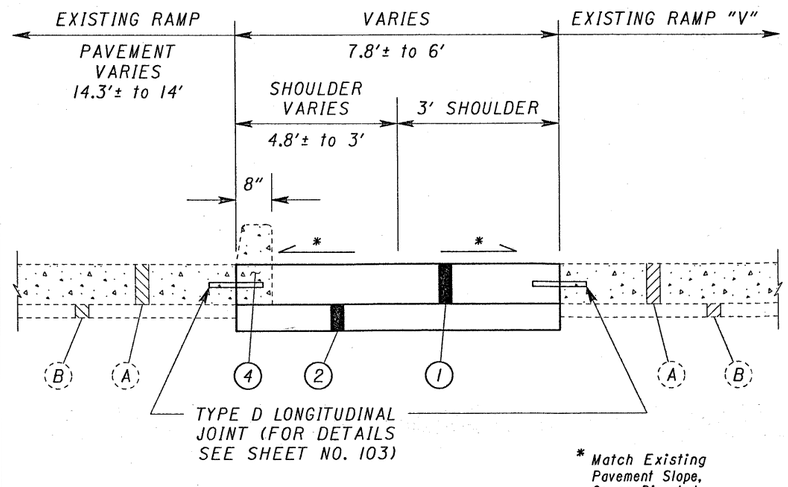
SECTION A-A

STA. 38+35.00 RAMP "T" To STA. 39+04.00 RAMP "T" = 71.46 L.F.



SECTION B-B

STA. 39+04.00 RAMP "T" To STA. 39+91± RAMP "T" = 89.87 L.F.



SECTION C-C

STA. 39+91± RAMP "T" To STA. 40+03.56 RAMP "T" = 12.28 L.F.

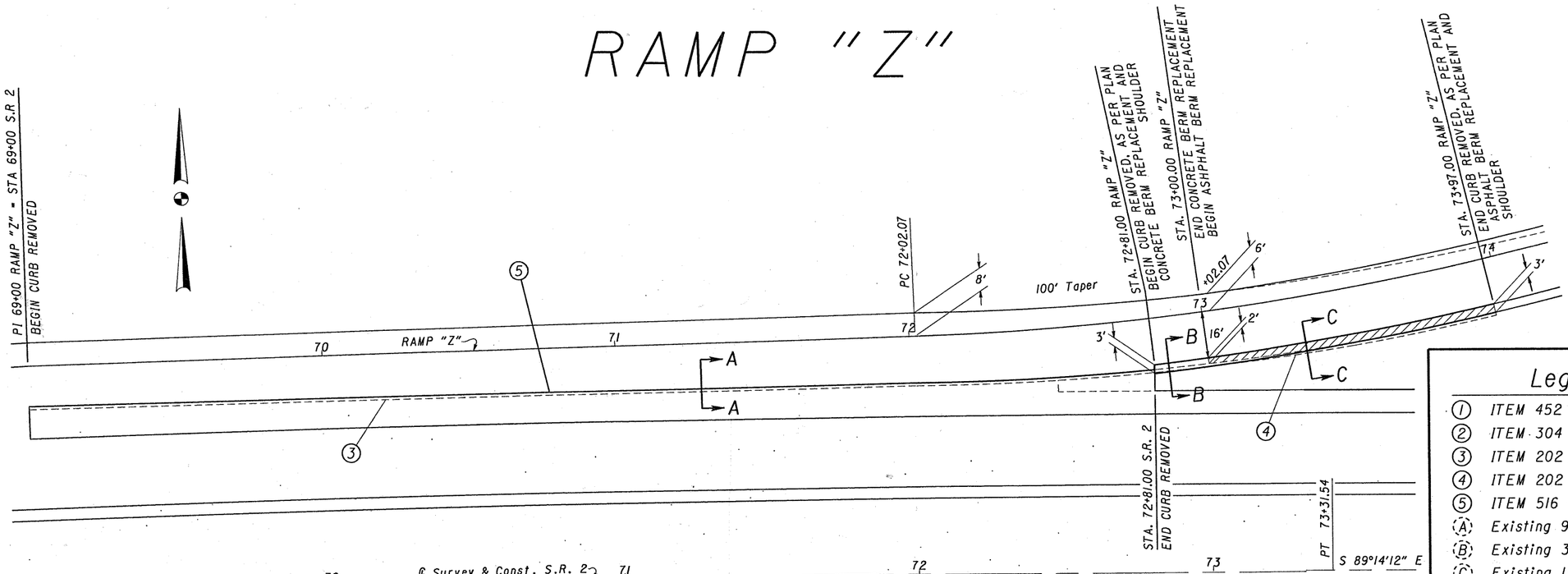
(Proposed 3' Shoulder Shown Above Included in Ramp "V" Pavement Calculations Sheet No. 60-66)

ERI-2-30.51/0.00

CURB REMOVAL DETAILS

CALC BY DLW DATE 2-10-98	ERI/LOR-2-30.51/0.00	OHIO	110
CHKD BY RLS DATE 2-26-98	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE & LORAIN COUNTIES		

RAMP "Z"

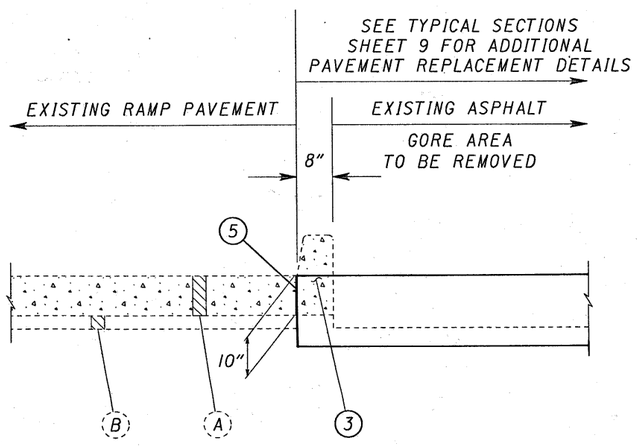


Existing Asphalt Berm To Be Removed

Legend For All Sections

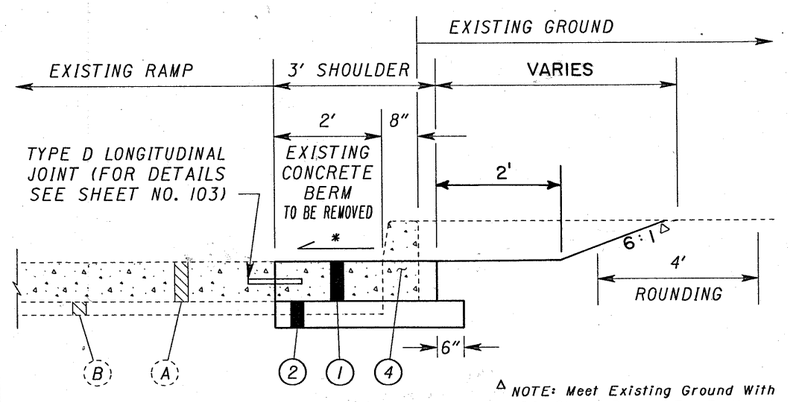
1. ITEM 452 - 9" Plain Concrete Pavement, As Per Plan
2. ITEM 304 - 6" Aggregate Base, As Per Plan
3. ITEM 202 - Curb Removed (Existing Type 8)
4. ITEM 202 - Curb Removed, As Per Plan (Existing Type 7)
5. ITEM 516 - 1" Preformed Exp. Joint Filler, As Per 705.03

- (A) Existing 9" Reinforced Concrete Pavement
- (B) Existing 3" Bituminous Aggregate Base
- (C) Existing 12" Bituminous Aggregate Base



SECTION A-A

STA. 69+00.00 ℄ S.R. 2 To STA. 72+81.00 ℄ S.R. 2 = 381.00 L.F.



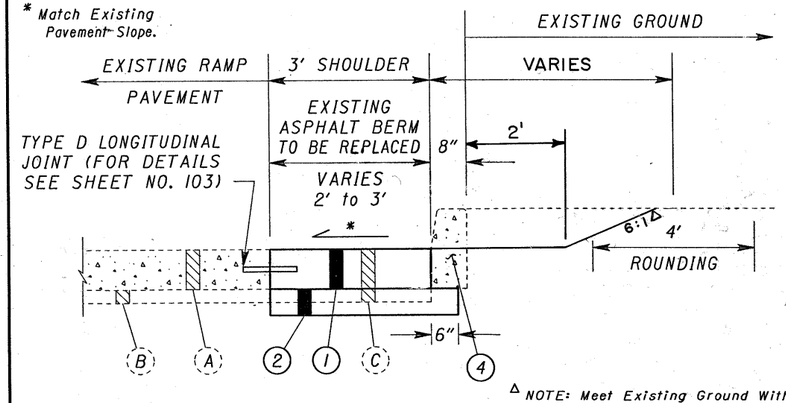
* Match Existing Pavement Slope.

Δ NOTE: Meet Existing Ground With 6:1 Slope. Payment For Earthwork And Seeding Necessary To Restore Disturbed Areas As Directed By The Engineer Shall Be Included In Item 202 Curb Removed As Per Plan.

SECTION B-B

STA. 72+81.00 RAMP "Z" To STA. 73+00.00 RAMP "Z" = 19.00 L.F.

Existing 2' Concrete Berm To Be Removed



Δ NOTE: Meet Existing Ground With 6:1 Slope. Payment For Earthwork And Seeding Necessary To Restore Disturbed Areas As Directed By The Engineer Shall Be Included In Item 202 Curb Removed As Per Plan.

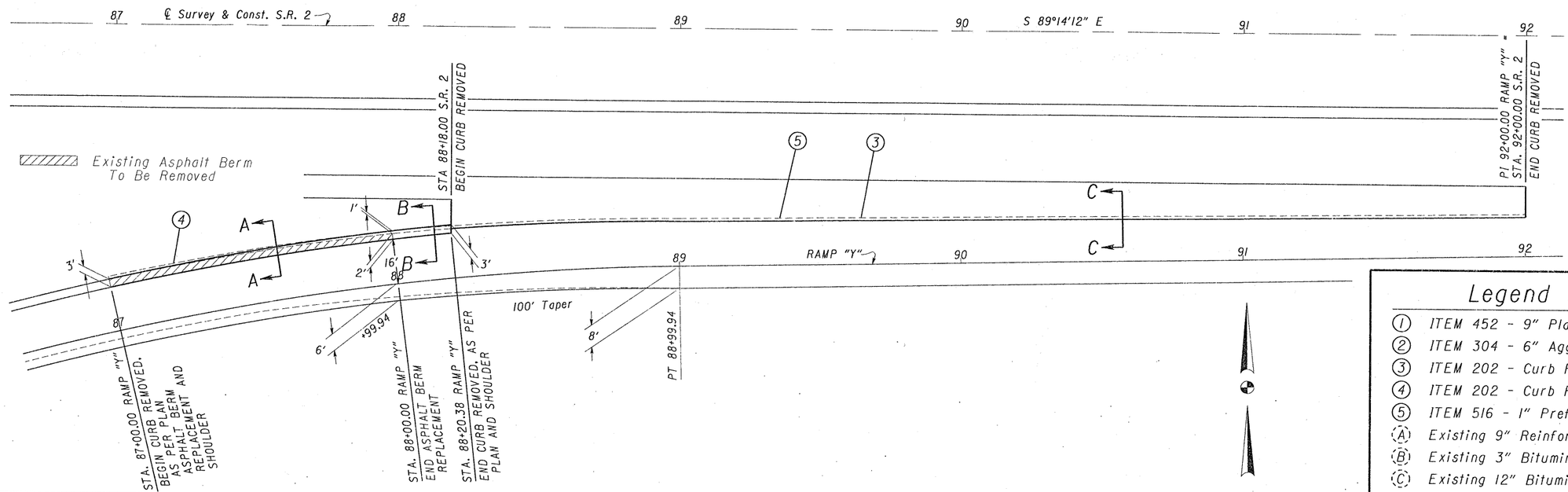
SECTION C-C

STA. 73+00.00 RAMP "Z" To STA. 73+97.00 RAMP "Z" = 98.91 L.F.

CURB REMOVAL DETAILS

CALC BY DLW DATE 2-10-92	ERI/LOR-2-30.51/0.00	OHIO	111
CHKD BY RLS DATE 2-26-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

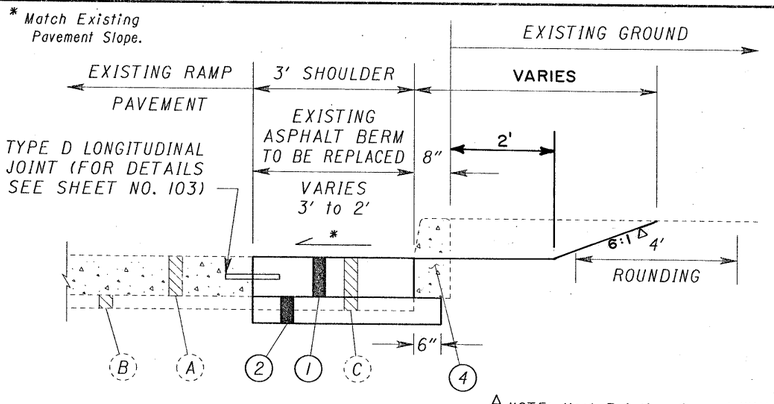
RAMP "Y"



Legend For All Sections

1. ITEM 452 - 9" Plain Concrete Pavement, As Per Plan
2. ITEM 304 - 6" Aggregate Base, As Per Plan
3. ITEM 202 - Curb Removed (Existing Type 8)
4. ITEM 202 - Curb Removed, As Per Plan (Existing Type 7)
5. ITEM 516 - 1" Preformed Exp. Joint Filler, As Per 705.03

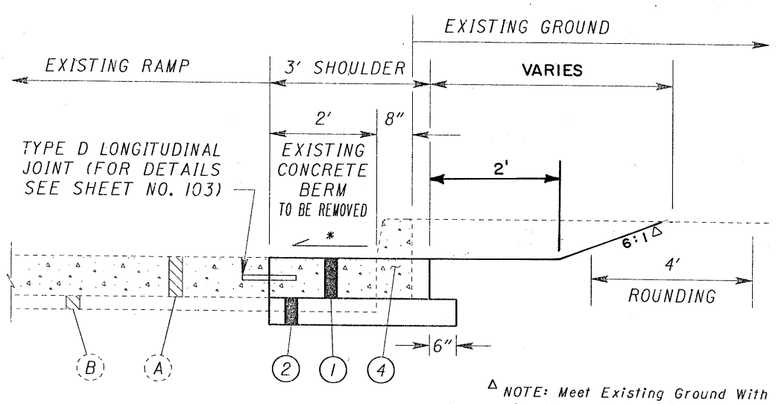
(A) Existing 9" Reinforced Concrete Pavement
(B) Existing 3" Bituminous Aggregate Base
(C) Existing 12" Bituminous Aggregate Base



Δ NOTE: Meet Existing Ground With 6:1 Slope. Payment For Earthwork And Seeding Necessary To Restore Disturbed Areas As Directed By The Engineer Shall Be Included In Item 202 Curb Removed As Per Plan.

SECTION A-A

STA. 87+00.00 RAMP "Y" To STA. 88+00.00 RAMP "Y" = 101.73 L.F.



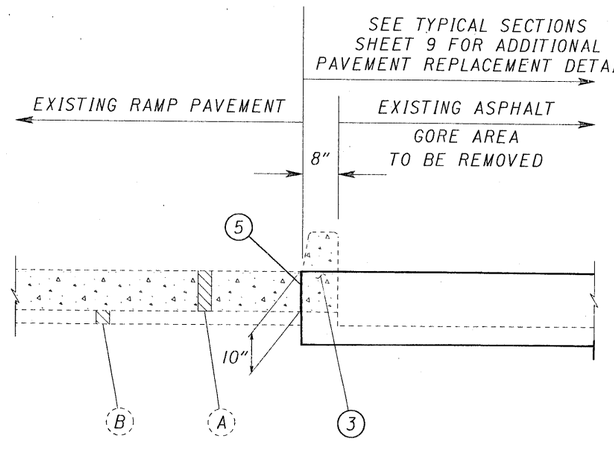
* Match Existing Pavement Slope.

Δ NOTE: Meet Existing Ground With 6:1 Slope. Payment For Earthwork And Seeding Necessary To Restore Disturbed Areas As Directed By The Engineer Shall Be Included In Item 202 Curb Removed As Per Plan.

SECTION B-B

STA. 88+00.00 RAMP "Y" To STA. 88+20.38 RAMP "Y" = 20.66 L.F.

Existing 2' Concrete Berm To Be Removed



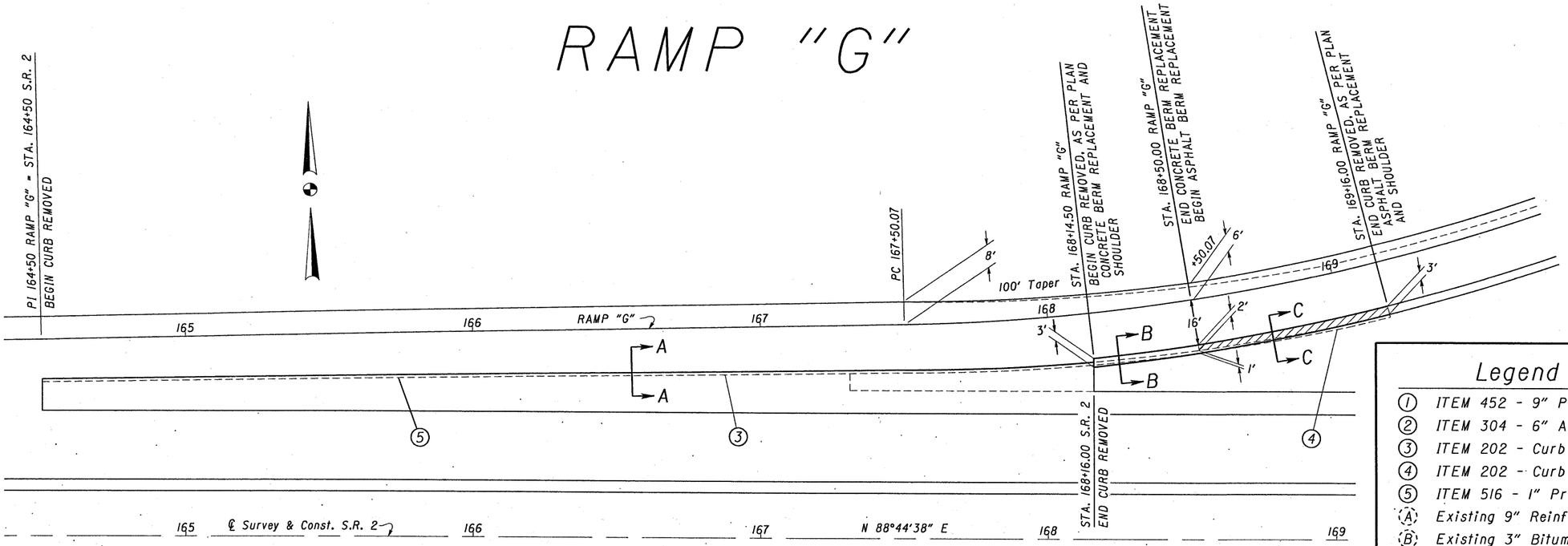
SECTION C-C

STA. 88+18.00 ℄ S.R. 2 To STA. 92+00.00 ℄ S.R. 2 = 382.00 L.F.

CURB REMOVAL DETAILS

CALC BY DLW DATE 2-10-92	ERI/LOR-2-30.51/0.00	OHIO	112
CHKD BY RLS DATE 2-26-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

RAMP "G"

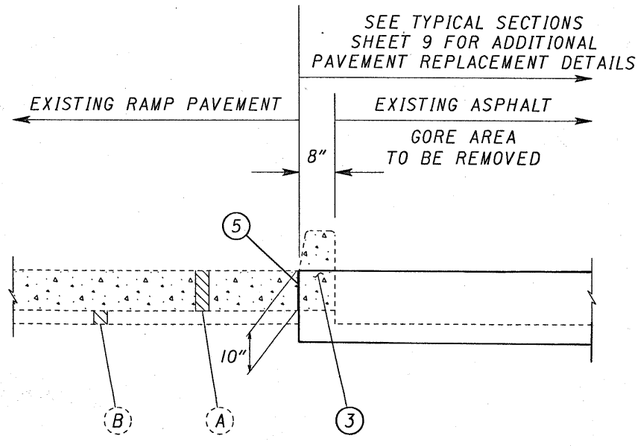


Existing Asphalt Berm To Be Removed

Legend For All Sections

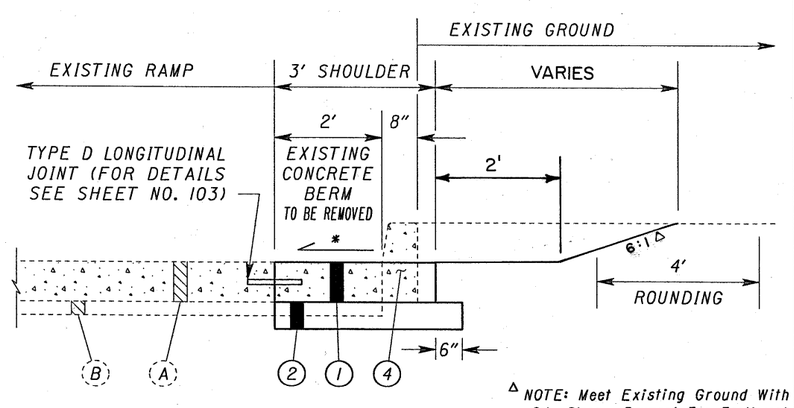
1. ITEM 452 - 9" Plain Concrete Pavement, As Per Plan
2. ITEM 304 - 6" Aggregate Base, As Per Plan
3. ITEM 202 - Curb Removed (Existing Type 8)
4. ITEM 202 - Curb Removed, As Per Plan (Existing Type 7)
5. ITEM 516 - 1" Preformed Exp. Joint Filler, As Per 705.03

- (A) Existing 9" Reinforced Concrete Pavement
- (B) Existing 3" Bituminous Aggregate Base
- (C) Existing 12" Bituminous Aggregate Base



SECTION A-A

STA. 164+50.00 ℄ S.R. 2 To STA. 168+16.000 ℄ S.R. 2 = 366.00 L.F.



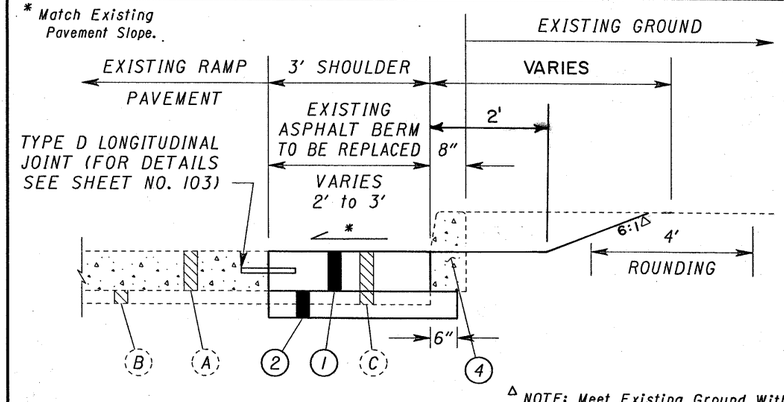
* Match Existing Pavement Slope.

△ NOTE: Meet Existing Ground With 6:1 Slope. Payment For Earthwork And Seeding Necessary To Restore Disturbed Areas As Directed By The Engineer Shall Be Included In Item 202 Curb Removed As Per Plan.

SECTION B-B

STA. 168+14.50 RAMP "G" To STA. 168+50.00 RAMP "G" = 36.50 L.F.

Existing 2' Concrete Berm To Be Removed



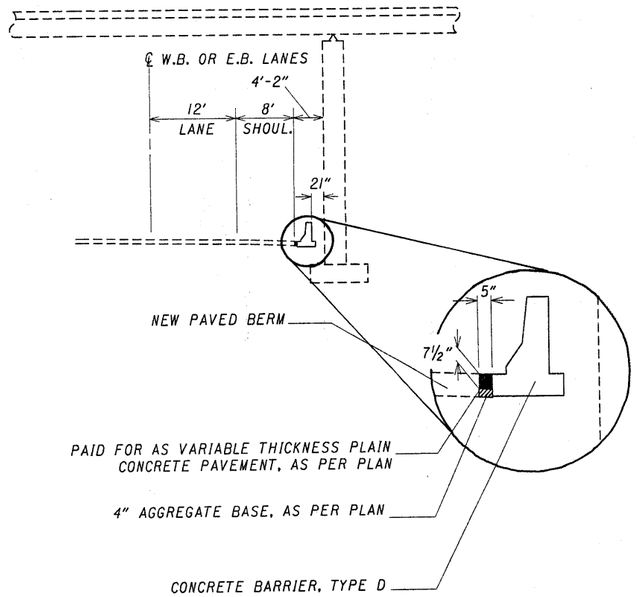
△ NOTE: Meet Existing Ground With 6:1 Slope. Payment For Earthwork And Seeding Necessary To Restore Disturbed Areas As Directed By The Engineer Shall Be Included In Item 202 Curb Removed As Per Plan.

SECTION C-C

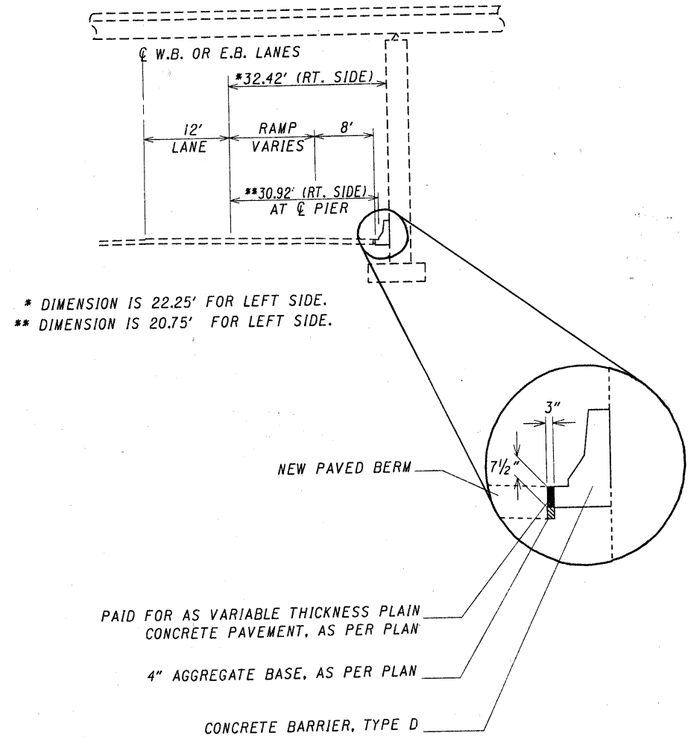
STA. 168+50.00 RAMP "G" To STA. 169+16.00 RAMP "G" = 67.50 L.F.

CALC BY RLS DATE 2/27/92	ERI/LOR-2-30.51/0.00	OHIO	113
CHKD BY JSB DATE 2/27/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

PIER PROTECTION DETAILS
OUTSIDE PIERS

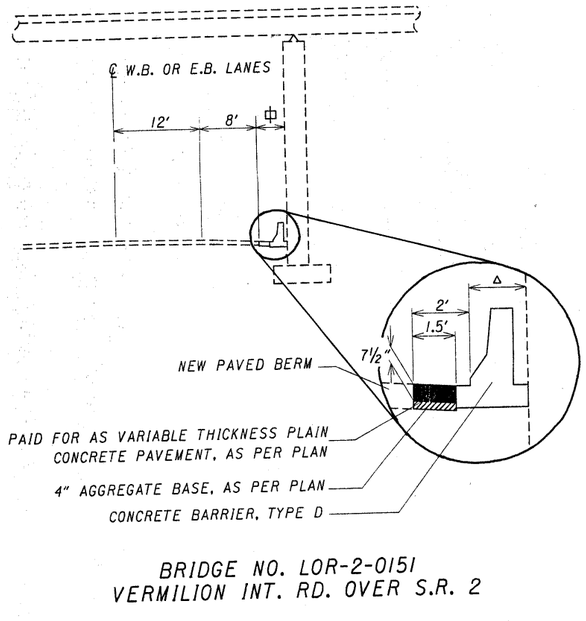


BRIDGE NO. LOR-2-0107
VERMILION RD. OVER S.R. 2



* DIMENSION IS 22.25' FOR LEFT SIDE.
** DIMENSION IS 20.75' FOR LEFT SIDE.

BRIDGE NO. LOR-2-0030
WEST RIVER RD. OVER S.R. 2



BRIDGE NO. LOR-2-0151
VERMILION INT. RD. OVER S.R. 2

BRIDGE NO. LOR-2-0223
SUNNYSIDE RD. OVER S.R. 2

BRIDGE NO. LOR-2-0262
CLAUS RD. OVER S.R. 2

ф 4.5' FOR SUNNYSIDE AND CLAUS RD. UNDERPASSES, 4.0' FOR VERMILION INTERCHANGE RD. UNDERPASS

Δ 2.5' FOR SUNNYSIDE AND CLAUS RD. UNDERPASSES, 2.0' FOR VERMILION INTERCHANGE RD. UNDERPASS

BRIDGE	ITEM 452 VARIABLE THICKNESS PLAIN CONCRETE PAVEMENT, AS PER PLAN	ITEM 304 AGGREGATE BASE, AS PER PLAN
	SQ. YD.	CU. YD.
LOR-2-0030 WEST RIVER RD. OVER S.R. 2	2.94	1
LOR-2-0107 VERMILION RD. OVER S.R. 2	6.39	1
LOR-2-0151 VERMILION INT. RD. OVER S.R. 2	20.00	3
LOR-2-0223 SUNNYSIDE RD. OVER S.R. 2	17.33	2
LOR-2-0262 CLAUS RD. OVER S.R. 2	18.33	2
TOTALS CARRIED TO GENERAL SUMMARY	64.99	9

NOTE:
THESE QUANTITIES ARE TO BE USED TO PAVE THE AREAS BETWEEN THE EDGE OF SHOULDER AND THE EDGE OF CONCRETE BARRIER AS SHOWN FOR THE ENTIRE LENGTH OF BARRIER. (SEE SHEETS 117 THROUGH 135A FOR BARRIER LOCATIONS.)

NOTES:
FOR BARRIER DETAILS NOT SHOWN SEE STD. DWG. MC-9.2 AND GR-8
FOR GUARDRAIL DETAILS NOT SHOWN SEE STD. DWG. GR-2.1
FOR BERM DETAILS NOT SHOWN, SEE S.R. 2 TYPICAL SECTIONS.

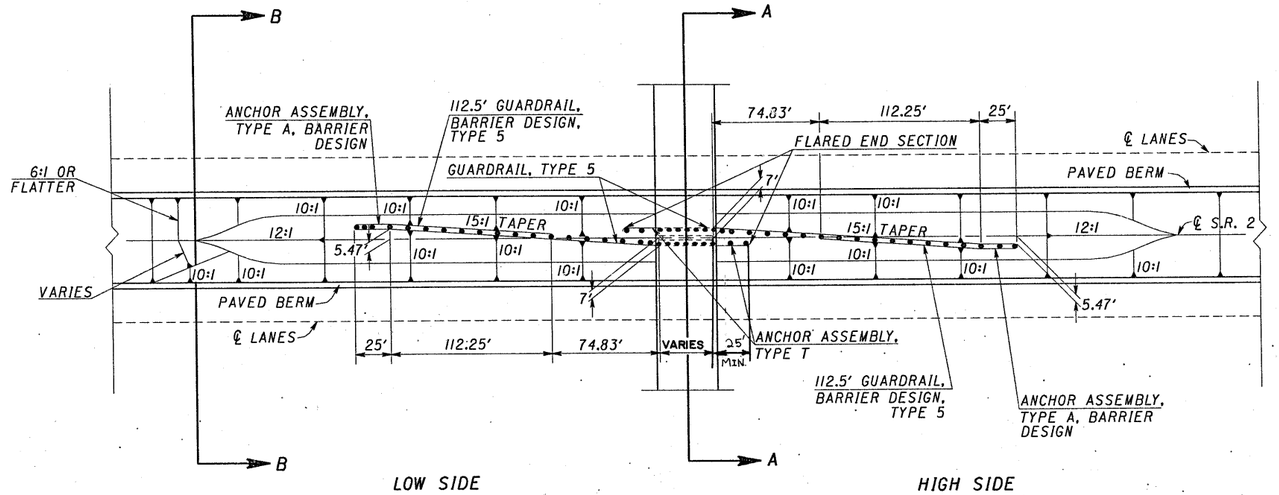
CALC BY JAD DATE 2/27/92	ERI/LOR-2-30.51/0.00	OHIO	114
CHKD BY RLS DATE 2/27/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

PIER PROTECTION DETAILS
INSIDE PIERS

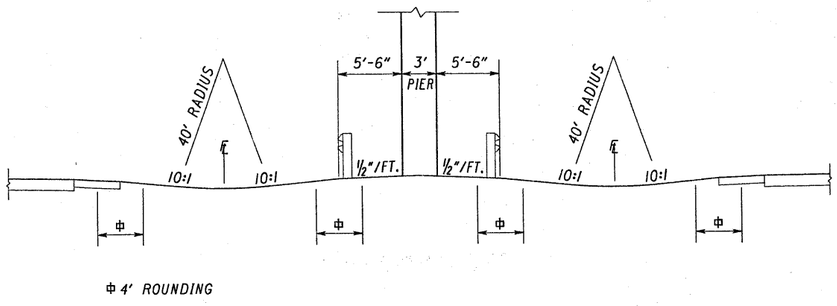
SEE CROSS SECTIONS FOR EMBANKMENT QUANTITIES AND EXACT LOCATIONS OF SLOPES.

SEE PLAN AND PROFILE SHEETS FOR GUARDRAIL QUANTITES.

NOTE: Use Type 5 Guardrail with 3'-1½" post spacing from 12.5' in advance of piers to the end of piers. Include cost in Type 5 price.

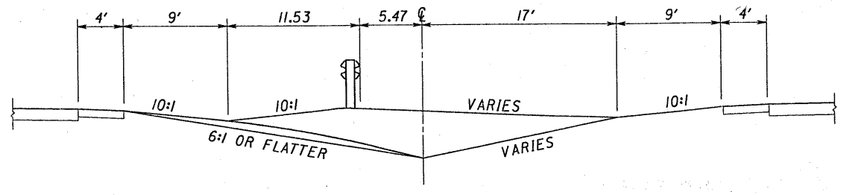


PLAN VIEW



Φ 4' ROUNDING

SECTION A-A



SECTION B-B

EXISTING PAVEMENT BUILDUP

CALC BY / DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO	115
CHKD BY / DATE		FHWA REGION 5	267

LIMITING STATIONS	PAVEMENT				BASE				SHOULDERS					
	8" CRCP	9" CRCP	9" RCP	15" PLAIN CONC. PAVEMENT	BITUMINOUS AGGREGATE BASE	SUBBASE	4" CEMENT STABILIZED BASE	NONE	PLAIN CONC. PAVEMENT INSIDE 7" AVG	PLAIN CONC. PAVEMENT OUTSIDE 8" AVG	BITUMINOUS AGGREGATE BASE	AGGREGATE BASE	SUBBASE	4" CEMENT STABILIZED BASE
WESTBOUND - MAINLINE														
1827+50 to 1827+96	X				X						X			
1827+96 to 1835+10				X				X	X					
1835+10 to 4+00				X				X			X			
4+00 to 13+60			X					X			X	X		
13+60 to 51+03.25	X				X						X			
56+03.25 to 97+60			X			X					X	X	X	
97+60 to 150+40			X			X					X	X	X	
150+40 to 162+40			X		X						X	X		
162+40 to 167+20		X			X						X	X		
167+20 to 169+60		X			X						X	X	X	
169+60 to 175+51.71			X		X						X	X	X	
177+60.21 to 185+05.96			X		X						X	X	X	
EASTBOUND - MAINLINE														
1827+50 to 1827+96	X				X						X			
1827+96 to 1838+29.49			X			X					X	X	X	
0+00 to 11+20			X			X					X	X	X	
11+20 to 51+03.25	X				X						X			
56+06.25 to 88+60			X			X					X	X	X	
88+60 to 150+40			X			X					X	X	X	
150+40 to 162+40			X				X				X	X		X
162+40 to 167+20		X					X				X	X		X
167+20 to 169+60		X					X				X	X	X	X
169+60 to 175+51.71			X				X				X	X	X	X
177+60.21 to 185+05.96			X				X				X	X	X	X
RAMP AND GORE AREAS														
ALL RAMPS AND GORE AREAS			X		X						X			

NOTE : The Ohio Department of Transportation is not responsible for the existing gradation or condition of these materials. These items are only indicating the as-built specification under which they were placed. All item thicknesses shown on this page are plan thicknesses, and the Department does not take responsibility for variations in these depths. The contractor is advised to bid accordingly.

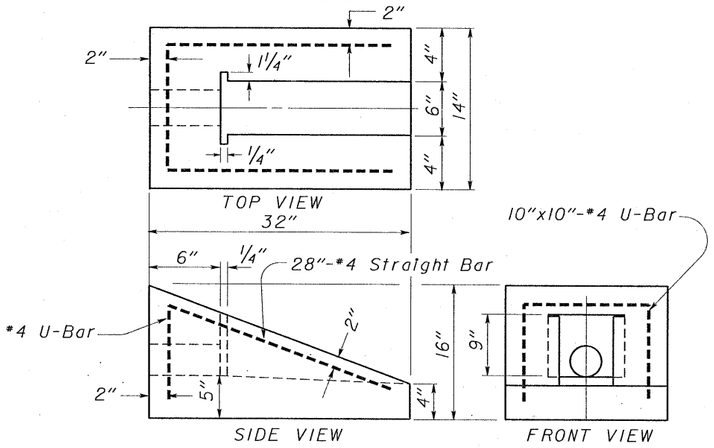
UNDERDRAIN OUTLET DETAILS

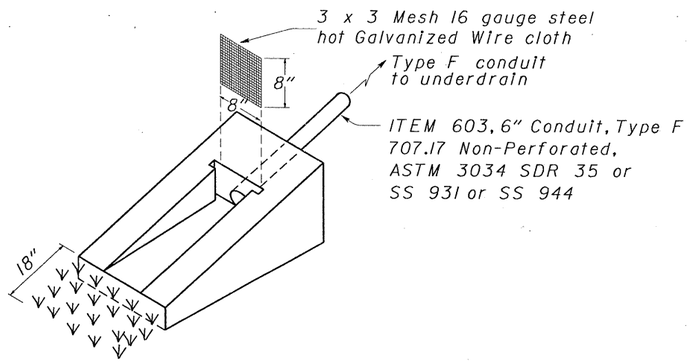
CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5

116
267

ITEM SPECIAL - PRECAST REINFORCED CONCRETE OUTLET

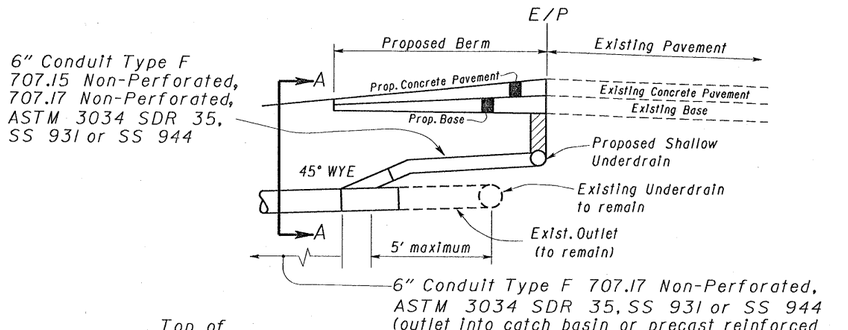
The Concrete outlet shall meet the requirements of Item 604 in the Construction & Materials Specifications. Payment shall be made on an Each basis. Payment shall include the cost of the Sod & Wire Cloth.



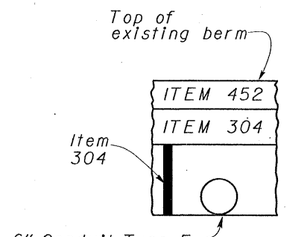


NOTE: The Sod shall be in accordance with Item 660 and staked at each corner approximately 3 inches in from the edge.

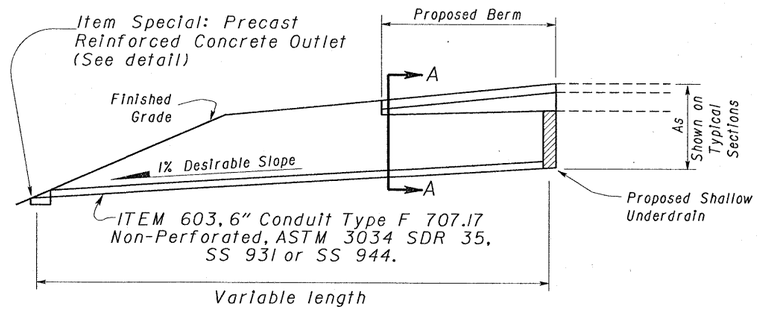
OUTLET DETAILS



NOTE:
The cost of the 6" 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.



SECTION A-A

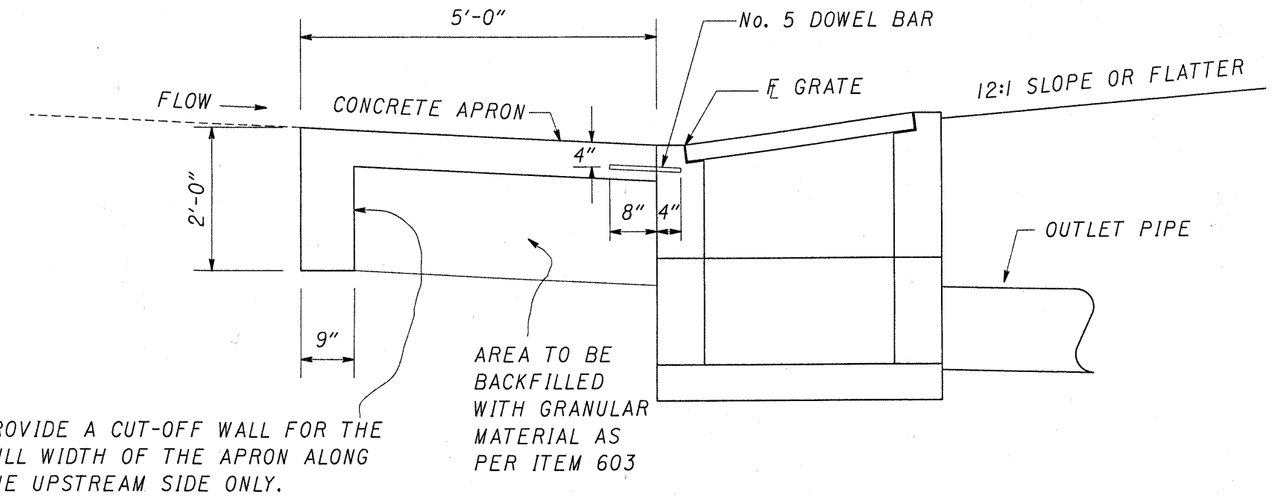


NOTE: For underdrain outlets into catch basins the above Type F Conduit shall be used entirely between the underdrain & catch basin.

CALC BY	ERI/LOR-2-30.51/0.00	OHIO
DATE	VARIOUS SECTIONS	FHWA REGION 5
CHKD BY	ERIE & LORAIN COUNTIES	116A 267
DATE		

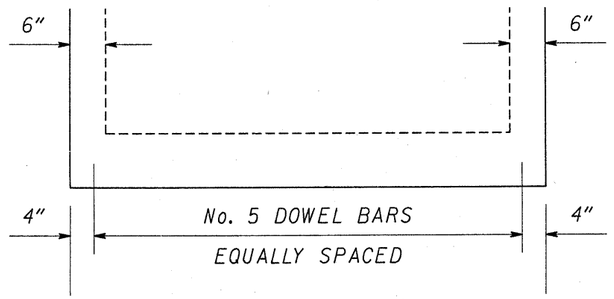
DRAINAGE DETAIL

CATCH BASIN NO. 4 & 5, AS PER PLAN



CATCH BASIN No.	TOTAL * OF BARS FOR A	
	STD. APRON	SAG APRON
4	7	14
5	12	16

BAR LOCATION DETAIL



THE FURNISHING AND PLACING OF STEEL FOR THE 5/8" X 12" DOWEL BARS SHALL BE PER 509 REINFORCING STEEL. THE DOWEL BARS SHALL BE EPOXY COATED PER 509.10. THE DOWEL BARS SHALL BE INSTALLED PER 510 OR CAST INTO THE BASIN. BOLT IN INSERTS MAY BE USED. THE CATCH BASIN SHALL BE PRECAST OR CAST-IN-PLACE CONCRETE. BRICK OR CONCRETE BLOCK WILL NOT BE PERMITTED. THE 6" CONCRETE APRON SHALL BE REINFORCED PER 601.04(3).

NOTE: THE REQUIREMENTS OF ITEM 604 SHALL GOVERN THE REPLACEMENT OF THE EXISTING CATCH BASIN. THE WORK SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE EXISTING CATCH BASIN AND ITS SUBSEQUENT REPLACEMENT. THE CONCRETE APRON SHALL BE REPLACED AND BACKFILLED AS SHOWN HERE AND IN THE STANDARD CONSTRUCTION DRAWING CB-4 OR CB-5.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 604 CATCH BASIN, No. 4 OR 5, AS PER PLAN, AND SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, TOOLS, AND EQUIPMENT INCIDENTAL TO COMPLETE THIS ITEM OF WORK.

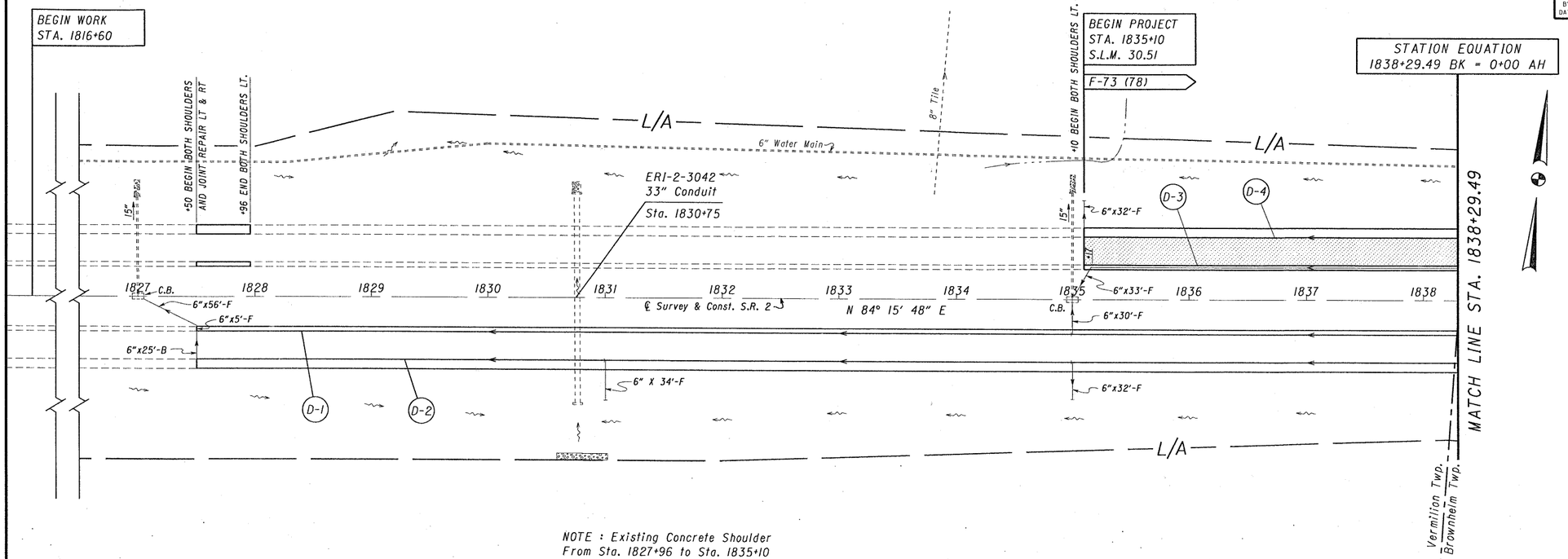
NOTE: THIS DETAIL SHALL BE USED FOR No. 4 OR NO. 5 CATCH BASINS, AS PER PLAN. FOR DETAILS NOT SHOWN SEE STANDARD CONSTRUCTION DRAWINGS CB-4 OR CB-5.

CALC BY RLS DATE 2/25/92
CHKD BY JSR DATE 2/26/92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

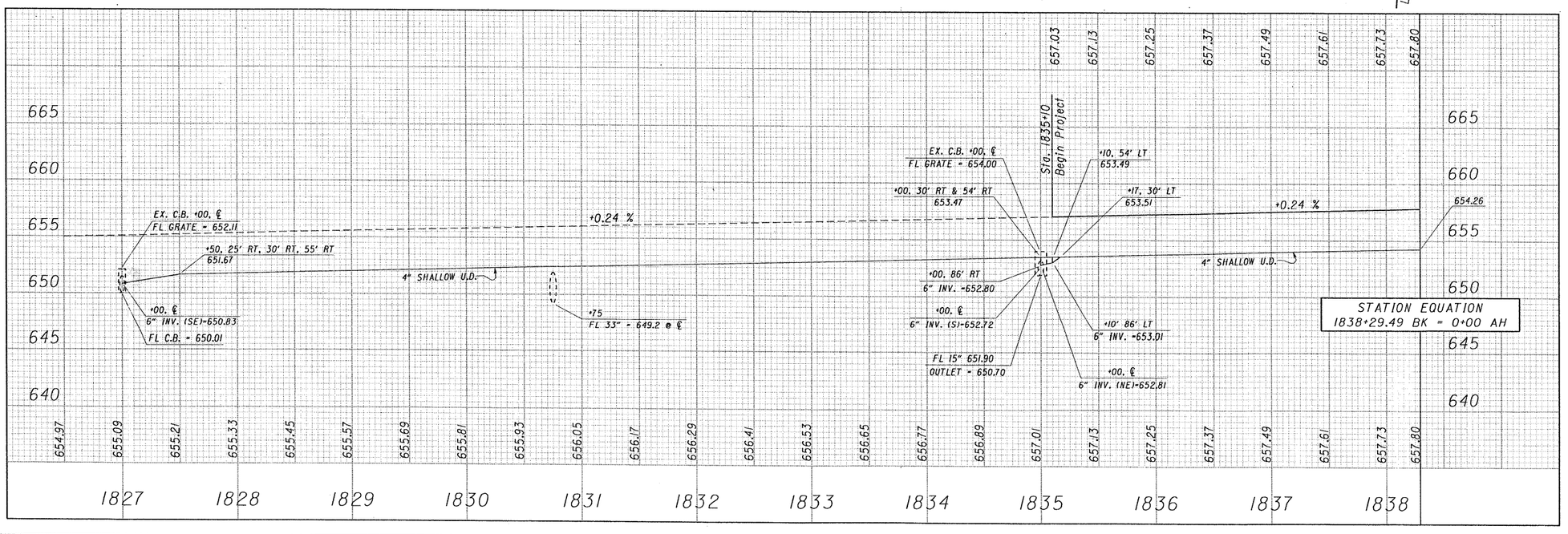
OHIO
FHWA REGION 5

117
267



NOTE : Existing Concrete Shoulder
From Sta. 1827+96 to Sta. 1835+10
Westbound to be Left in Place.

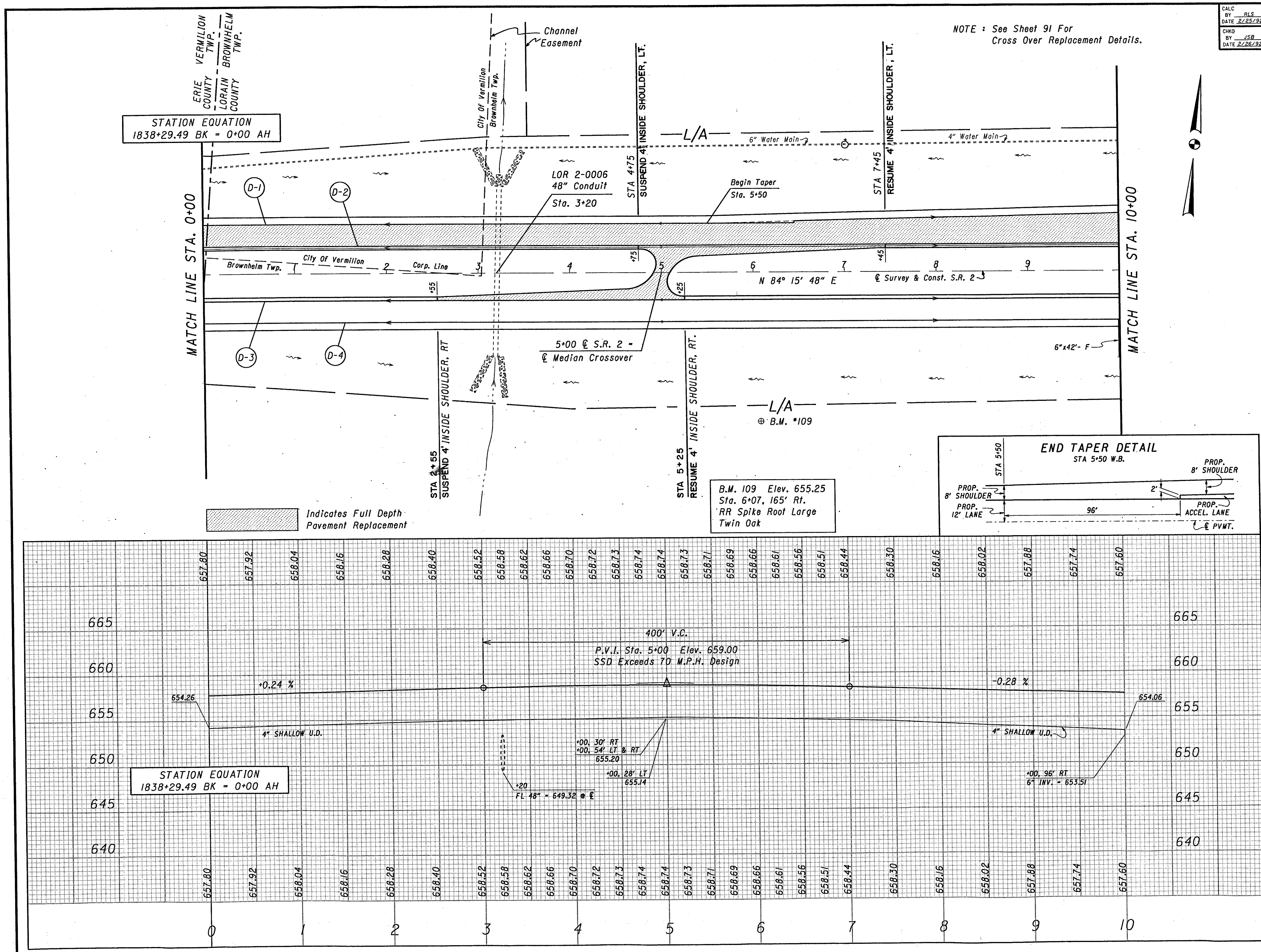
Indicates Full Depth Pavement Replacement



REF No.	Station to Station	Side	603 6" CONDUIT TYPE B BORED OR JACKED, AS PER PLAN LIN. FT.	603 6" CONDUIT, TYPE 1 W/ JT NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	605 4" SHALLOW PIPE U.D. TOT. JT. AS PER PLAN LIN. FT.	SPECIAL PRECAST REINFORCED CONCRETE OUTLET EACH	BENDS AND BRANCHES 6" X 60° BEND EACH	6" X 90° TEE EACH	6" X 90° BEND EACH
D-1	STA. 1827+00 TO STA. 1838+29.49	RT		91	1080		1		3
D-2	STA. 1827+50 TO STA. 1838+29.49	RT	35	66	1080	2			
D-3	STA. 1835+00 TO STA. 1838+29.49	LT		33	313	1	1		1
D-4	STA. 1835+10 TO STA. 1838+29.49	LT		32	320				
	Totals Carried to Sub-Summary See Sheet 86.		35	222	2793	3	2	1	5

PLAN AND PROFILE STA. 1826+50 TO STA. 1838+29.49

NOTE : See Sheet 91 For Cross Over Replacement Details.



REF No.	Station to Station	Side	603 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 (LIN. FT.)	605 4" SHALLOW PIPE U.D. 707.15, AS PER PLAN (LIN. FT.)	SPECIAL PRECAST REINFORCED CONCRETE OUTLET (EACH)	BENDS AND BRANCHES 6" X 90° BEND (EACH)
D-1	STA 0+00 TO STA 10+00	LT		1000		
D-2	STA 0+00 TO STA 10+00	LT		1000		
D-3	STA 0+00 TO STA 10+00	RT		1000		
D-4	STA 0+00 TO STA 10+00	RT	42	1000	1	1
Totals Carried to Sub-Summary See Sheet 86.			42	4000	1	1

PLAN AND PROFILE STA. 0+00 TO STA. 10+00

CALC BY RLS DATE 2/25/92
CHKD BY JSB DATE 2/26/92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

119
267

LOR-2-0030
15+99.40 ℄ S.R. 2
25+00 ℄ West River Rd.

MATCH LINE STA. 10+00

MATCH LINE STA. 20+00

L/A

4" Water Main

4" SHALLOW PIPE U.D. (6" DEEP)

1 ½" Duct-Cable

6"x40'-F

6"x28'-F

6"x30'-F

6"x58'-F

6"x20'-F

6"x34'-F

℄ Survey & Const. S.R. 2

N 84° 15' 48" E

End Taper
Sta. 13+50

Begin Taper
Sta. 12+50

RAMP "R"

RAMP "U"

6" SHALLOW PIPE U.D.
(12" DEEP IN ROCK CUT)

4" SHALLOW PIPE U.D.
(6" DEEP)

PC 26+38.57

PI 17+35.96 "R"

PC 16+00 "U" =
16+00 66' RT ℄ S.R. 2

LOR-2-0032
36" Conduit
Sta. 16+75

C.B.

D-1 D-2 D-3 D-4 D-5 D-6 D-7

R-1 R-2 R-3 R-4 R-5

G-1 G-2 G-3 G-4

B-1 B-2

E-1 E-2 E-3 E-4

CURVE DATA RAMP "U"
P.I. Sta. 18+27.01
Δ =6° 48' 08"
Dc=1° 30' 00"
L=453.48'
T=227.01'
E=6.74'
R=3819.72'

NOTE: Use Type 5A Guardrail with 3'-1½" Post Spacing 12.5' Ahead of Light Pole, Include Cost in Type 5A Price .

NOTE: Use Type 5A Guardrail with 3'-1½" Post Spacing 12.5' Ahead of and Behind Light Poles, Include Cost in Type 5A Price .

"6" ROCK CUT U.D. TO BE 707.17 OR SS944 OR SS931 OR ASTM 3034 SDR35, PERFORATED AS PER 707.15

CROSS REFERENCES

Sheet No.	Description
105	For (R-5) Curb Removal Quantities
148,149	For West River Rd. Quantities
113,114	For LOR-2-0030 Pier Protection Details
136 & 138	For Underdrain Locations on Ramps
116A	For C.B. No. 4, As Per Plan Details
255 & 258	For Erosion Control at Bridges

DUCT CABLE PROTECTION

ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.

SUSPEND PROJECT
STA. 14+60
S.L.M. 0.28

B.M. Elev. 656.00
Chiseled "+" N.W. Anchor Bolt - North Guardrail - W/W. River Rd.

Indicates Full Depth Pavement Replacement

R/W

℄ West River Road

N 10° 11' 42" W

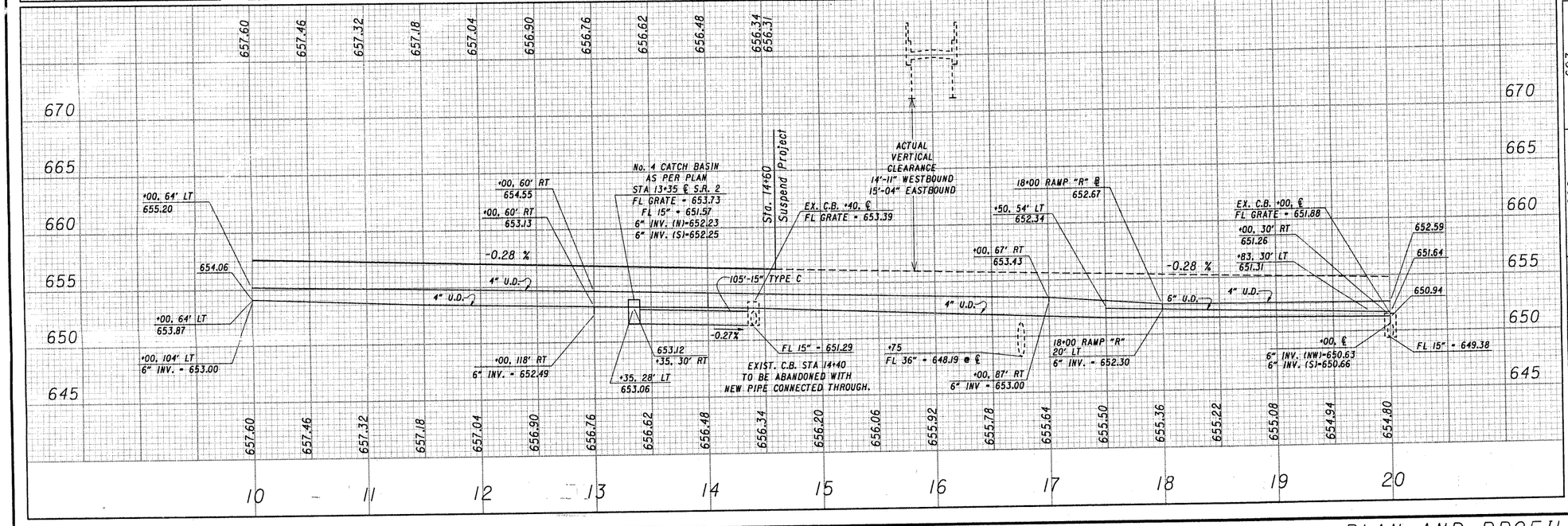
22

24

26

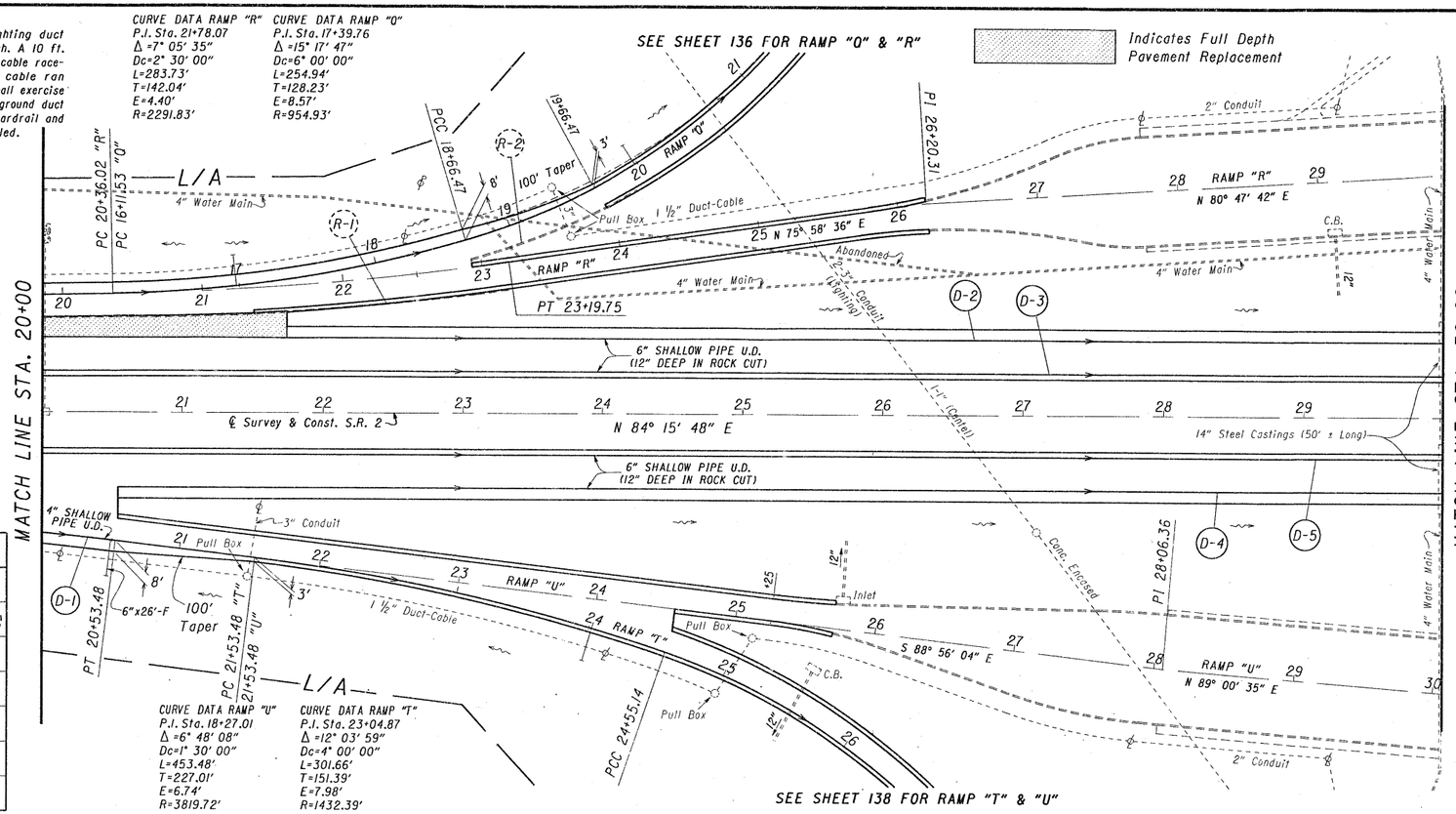
LOR-2-0030
West River Road over S.R. 2

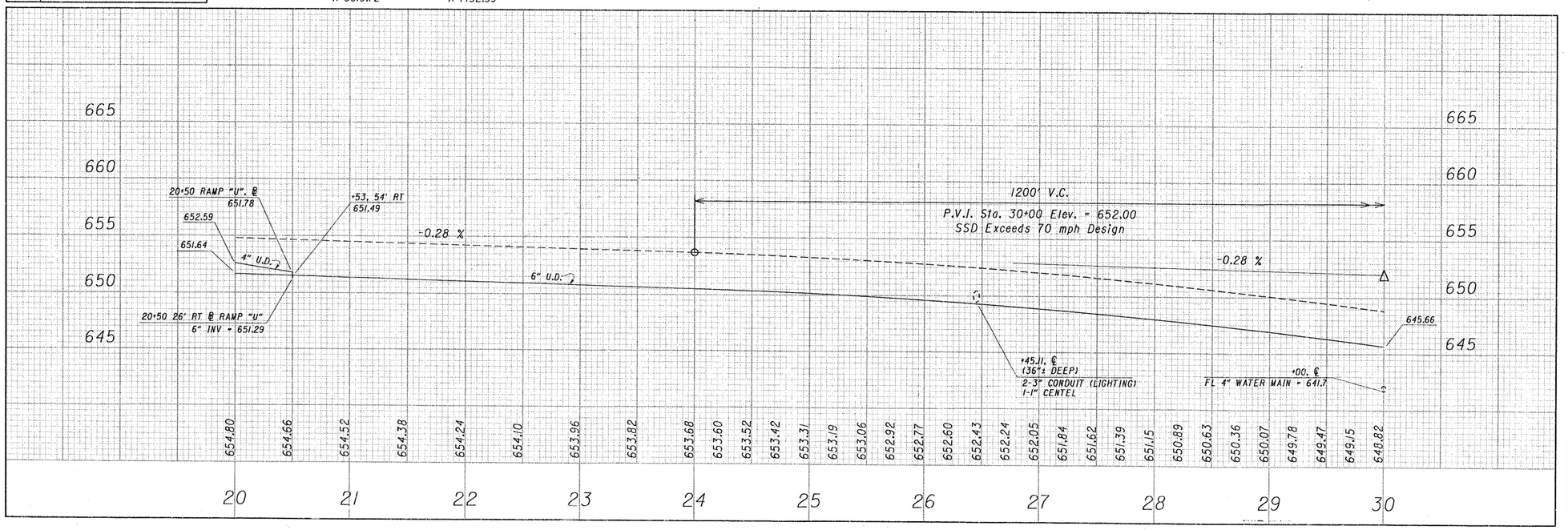
TYPE : Continuous Steel Beam
LENGTH : 286 ft.
WIDTH : 34'-6" T/T GM Parapet
SKEW : 4°-27'-30"
LOADING : HS-20-44



PLAN AND PROFILE STA. 10+00 TO STA. 20+00

REF No.	Station to Station	Side	GUARDRAIL REMOVED LIN. FT.	GUARDRAIL REMOVED BARRIER DESIGN LIN. FT.	CATCH BASIN ABANDONED EACH	6" CONDUIT TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	15" CONDUIT TYPE C LIN. FT.	CATCH BASIN No. 4 AS PER PLAN EACH	4" SHALLOW PIPE U.D. 707.15, AS PER PLAN LIN. FT.	"6" ROCK CUT U.D. 707.15, AS PER PLAN (12" DEEP) LIN. FT.	PRECAST REINFORCED CONCRETE OUTLET EACH	GUARDRAIL TYPE 5, CONCRETE BARRIER DESIGN LIN. FT.	GUARDRAIL TYPE 5A LIN. FT.	ANCHOR ASSEMBLY TYPE E EACH	ANCHOR ASSEMBLY BARRIER DESIGN TYPE A EACH	BRIDGE TERMINAL ASSEMBLY TYPE I EACH	ANCHOR ASSEMBLY TYPE T EACH	CONCRETE BARRIER TYPE D LIN. FT.	6" X 90° BEND EACH	6" X 60° BEND EACH
			202				603	604	605		SPECIAL		606						622	BENDS AND BRANCHES	
B-1	STA 15+74 TO 16+27	LT																			
B-2	STA 15+72 TO 16+25	RT																			
G-1	STA 14+30.40 TO 15+72	RT											118.75	1							
G-2	STA 13+62.92 TO STA 16+30.50	LT&RT											112.50		1						
G-3	STA 16+27 TO 17+68.80	LT											93.75	25.00		1					
G-4	STA 15+67.50 TO STA 18+42.05	LT&RT											112.50				1				
R-1	STA 14+55 TO 16+42.50	RT	187.5																		
R-2	STA 14+50 TO 17+50	LT&RT	475.0	50.0																	
R-3	STA 15+55 TO 17+92.50	LT	237.5		1																
R-4	STA 14+40	℄																			
D-1	STA 10+00 TO STA 18+00	LT				60			800												
D-2	STA 10+00 TO STA 20+00	RT				78			1000												
D-3	STA 10+00 TO STA 20+00	RT				60			1000												
D-4	STA 10+00 TO STA 19+83	LT				62			983												
D-5	STA 17+50 TO STA 20+00	LT					105			250											
D-6	STA 13+35 TO STA 14+40	℄						1													
D-7	STA 19+83 TO STA 20+00	LT								17											
	Totals Carried to Sub-Summaries See Sheets 86 & 87		900	50	1	260	105	1	3783	267	4	225.0	437.5	25.0	2	2	2	2	106	7	1





CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES
CHKD BY JSB DATE 2/26/92	OHIO FHWA REGION 5

DUCT CABLE PROTECTION

ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable ran underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.

CURVE DATA RAMP "R"
P.I. Sta. 21+78.07
Δ =7° 05′ 35″
Dc=2° 30′ 00″
L=283.73′
T=142.04′
E=4.40′
R=2291.83′

CURVE DATA RAMP "Q"
P.I. Sta. 17+39.76
Δ =15° 17′ 47″
Dc=6° 00′ 00″
L=254.94′
T=128.23′
E=8.57′
R=954.93′

▨ Indicates Full Depth Pavement Replacement

CURVE DATA RAMP "U"
P.I. Sta. 18+27.01
Δ =6° 48′ 08″
Dc=1° 30′ 00″
L=453.48′
T=227.01′
E=6.74′
R=3819.72′

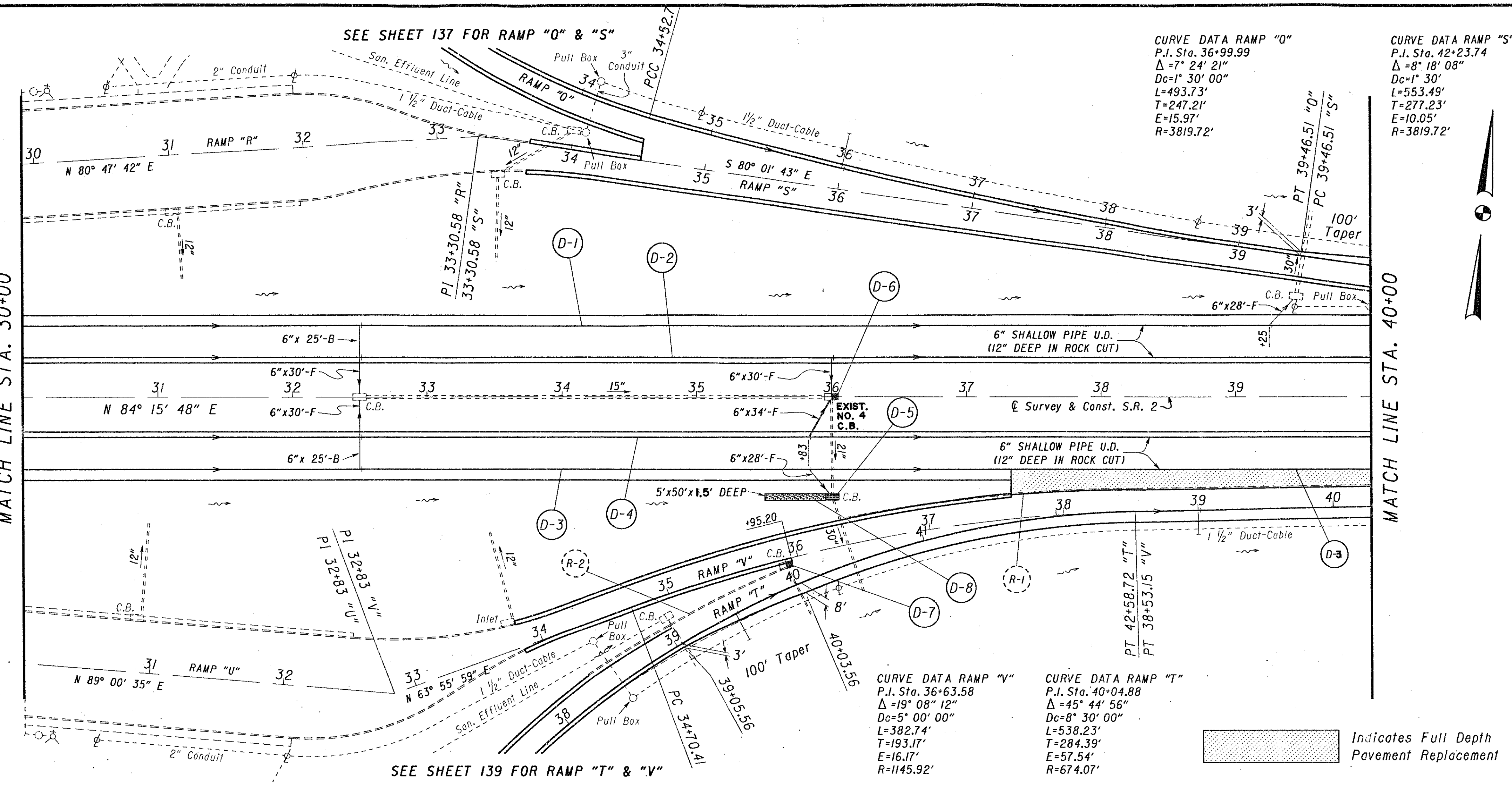
CURVE DATA RAMP "T"
P.I. Sta. 23+04.87
Δ =12° 03′ 59″
Dc=4° 00′ 00″
L=301.66′
T=151.39′
E=7.98′
R=1432.39′

CROSS REFERENCES	
Sheet No.	Description
105	For Curb Removal Quantities (R-1) and (R-2)
136 & 138	For Underdrain Locations on Ramps

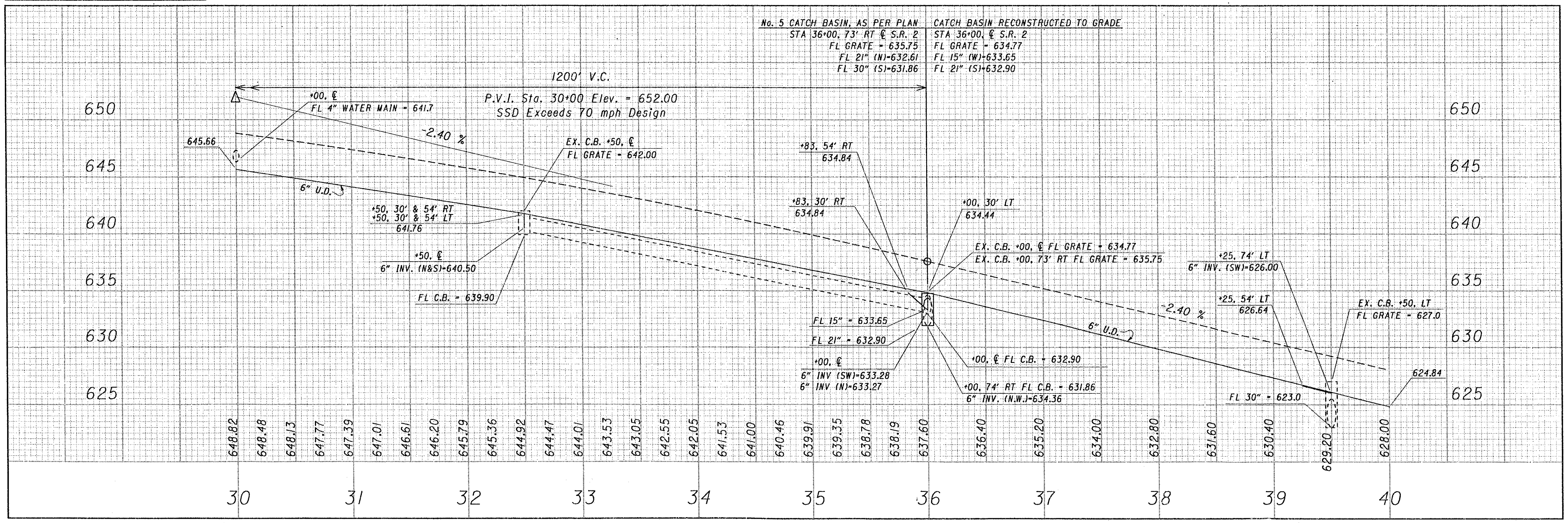
*6" ROCK CUT U.D. TO BE 707.17 OR SS944 OR SS931 OR ASTM 3034 SDR, PERFORATED AS PER 707.15

REF No.	Station to Station	Side	603	605	605	SPECIAL	BENDS AND BRANCHES
			6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944	4" SHALLOW PIPE U.D., 707.15 AS PER PLAN	*6" ROCK CUT U.D. (12" DEEP)	PRECAST REINFORCED CONCRETE OUTLET	6" X 90° TEE
			LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH
D-1	STA 20+00 TO STA 20+50	RT	26	50		1	1
D-2	STA 20+00 TO STA 30+00	LT			1000		
D-3	STA 20+00 TO STA 30+00	LT			1000		
D-4	STA 20+53 TO STA 30+00	RT			947		
D-5	STA 20+00 TO STA 30+00	RT			1000		
Totals Carried to Sub-Summary See Sheet 86.			26	50	3947	1	1

PLAN AND PROFILE STA. 20+00 TO STA. 30+00



Sheet No.	CROSS REFERENCES — Description
105	For Curb Removal Quantities (R-1) and (R-2)
137 & 139	For Underdrain Locations on Ramps
141	For (D-7) Elevation Information
116A	For C.B. No. 5, As Per Plan



REF No.	Station to Station	Side	601 ROCK CHANNEL PROTECTION TYPE D WITH FILTER (CU. YD.)	603 6" CONDUIT TYPE B BORED OR JACKED, AS PER PLAN (LIN. FT.)	603 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 (LIN. FT.)	604 CATCH BASIN RECON. TO GRADE AS PER PLAN (EACH)	604 CATCH BASIN ADJUSTED TO GRADE AS PER PLAN (EACH)	604 NO. 5 CATCH BASIN AS PER PLAN (EACH)	605 *6" ROCK CUT U.D. (12" DEEP) (LIN. FT.)	BENDS AND BRANCHES 6" X 90° BEND (EACH)	BENDS AND BRANCHES 6" X 60° BEND (EACH)	BENDS AND BRANCHES 6" X 45° BEND (EACH)	BENDS AND BRANCHES 6" X 90° TEE (EACH)
D-1	STA 30+00 TO STA 40+00	LT		35	28				1000	1		1	
D-2	STA 30+00 TO STA 40+00	LT			60				1000	1			1
D-3	STA 30+00 TO STA 40+00	RT		35	64				1000		1		1
D-4	STA 30+00 TO STA 40+00	RT			28				1000	1		1	
D-5	STA 36+00, 73' RT	RT						1					
D-6	STA 36+00, € S.R. 2	€				1							
D-7	STA 36+00, ℄ RAMP "V"	℄					1						
D-8	STA 35+50 TO STA 36+00	RT	14										
Totals Carried to Sub-Summary See Sheet 86.			14	70	180	1	1	1	4000	3	1	2	2

*6" ROCK CUT U.D. TO BE 707.17 OR SS944 OR SS931 OR ASTM 3034 SDR. PERFORATED AS PER 707.15

PLAN AND PROFILE STA. 30+00 TO STA. 40+00

CALC BY RLS DATE 8/25/92
CHKD BY JSB DATE 8/26/92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

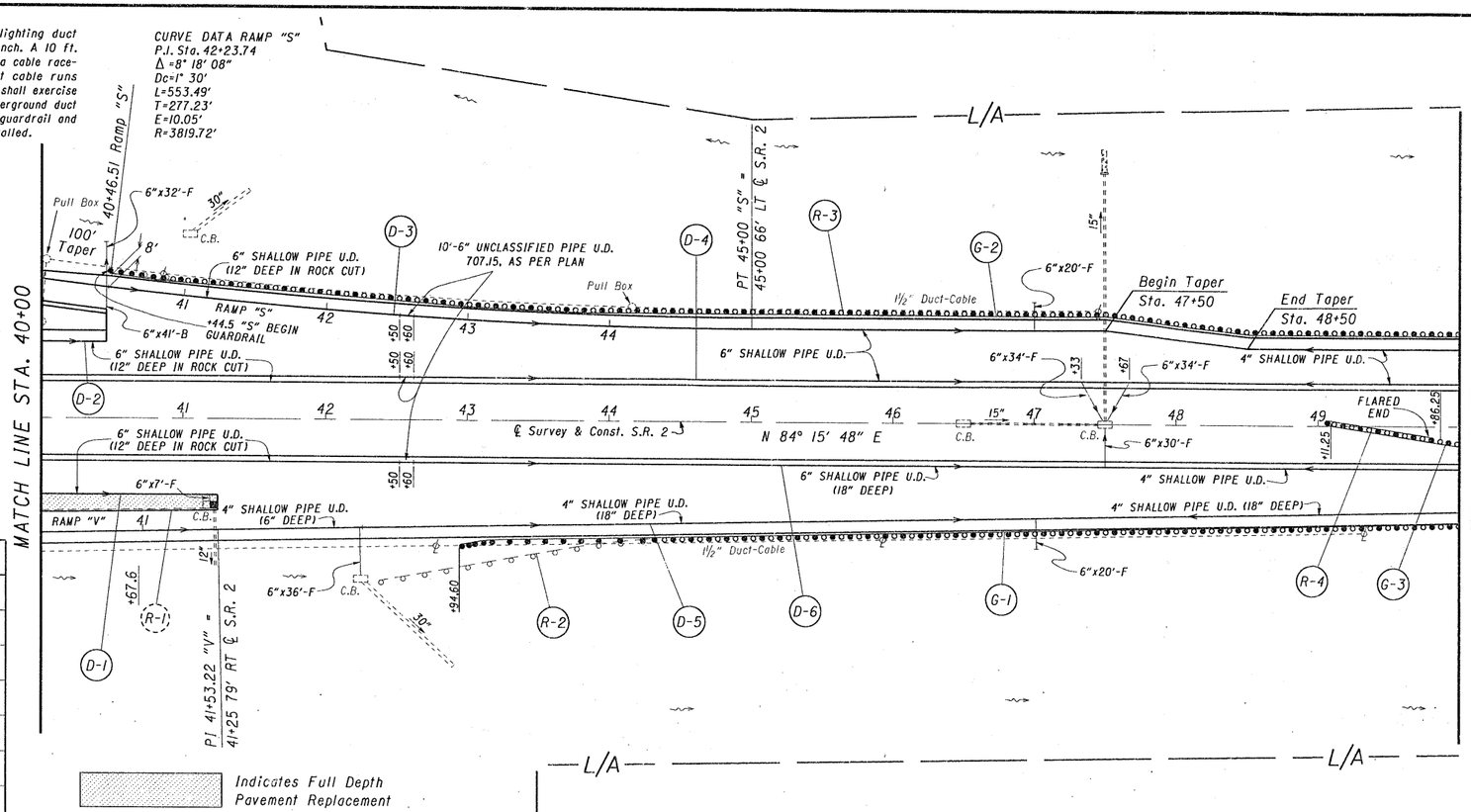
122
267

DUCT CABLE PROTECTION

ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.

NOTE: Use Type 5A Guardrail with 3'-1½" Post Spacing 12.5' Ahead of and Behind Light Poles, Include Cost in Type 5A Price .

CURVE DATA RAMP "S"
P.I. Sta. 42+23.74
Δ =8° 18' 08"
Dc=1° 30'
L=553.49'
T=277.23'
E=10.05'
R=3819.72'

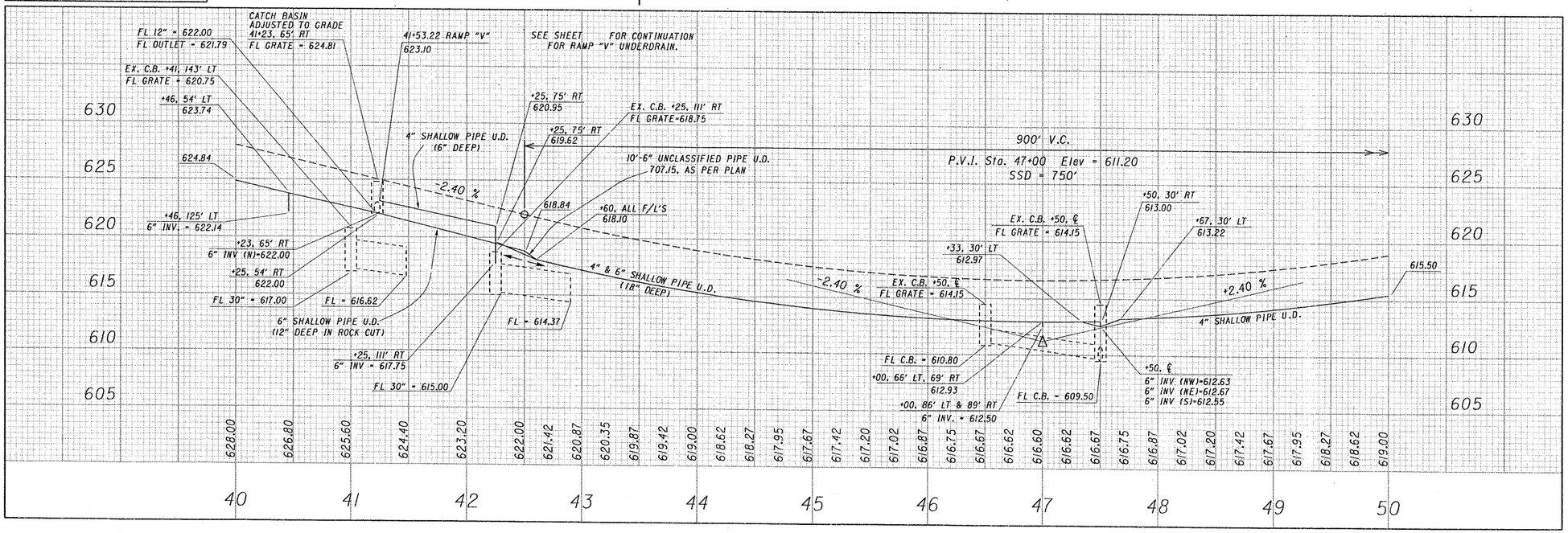


Indicates Full Depth Pavement Replacement

*"6" ROCK CUT U.D. TO BE 707.17 OR SS944 OR SS931 OR ASTM 3034 SDR 35, PERFORATED AS PER 707.15

CROSS REFERENCES

Sheet No.	Description
105	For (R-1) Curb Removal Quantities
137 & 139	For Underdrain Locations on Ramps



REF No.	Station to Station	Side	202 GUARDRAIL REMOVED LIN. FT.	202 GUARDRAIL REMOVED & REINSTALLED LIN. FT.	202 GUARDRAIL REMOVED & BARRIER DESIGN LIN. FT.	603 6" CONDUIT TYPE B BORED OR JACKED AS PER PLAN LIN. FT.	603 6" CONDUIT, TYPE F, 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931, OR SS944 LIN. FT.	604 CATCH BASIN ADJUSTED TO GRADE EACH	605 4" SHALLOW PIPE U.D. 707.15, AS PER PLAN LIN. FT.	605 6" UNCLASS. PIPE U.D. 707.15, AS PER PLAN LIN. FT.	605 6" ROCK CUT U.D. 112" DEEP) LIN. FT.	605 6" SHALLOW PIPE U.D. 707.15, AS PER PLAN LIN. FT.	SPECIAL PRECAST REINFORCED CONCRETE OUTLET EACH	SPECIAL GUARD-RAIL BARRIER DESIGN TYPE 3 LIN. FT.	SPECIAL GUARD-RAIL BARRIER DESIGN TYPE 5 LIN. FT.	606 ANCHOR ASSEMBLY TYPE E EACH	606 GUARD-RAIL ANCHOR ASSEMBLY TYPE 5A LIN. FT.	606 BRIDGE TERMINAL ASSEMBLY TYPE 1 EACH	606 BRIDGE TERMINAL ASSEMBLY TYPE 2 EACH	606 ANCHOR ASSEMBLY DESIGN TYPE A EACH	606 ANCHOR ASSEMBLY TYPE T EACH	BENDS AND BRANCHES 6" x 90° BEND EACH	BENDS AND BRANCHES 6" x 90° TEE EACH	BENDS AND BRANCHES 6" x 60° BEND EACH
G-1	STA 42+94.60 TO STA 50+11.25	RT									123			759.25											
G-2	STA 40+44.5 RAMP "S" TO STA 50+11.25	LT									46	440	1	975.0			50.0								
G-3	STA 49+11.25 TO STA 50+11.25	℄												131.25	50.0										
R-2	STA 42+49.0 TO STA 50+00	RT	751.0							10	204	473	1												
R-3	STA 40+86.5 TO STA 50+00	LT	913.5							10	250	490													
R-4	STA 49+11.5 TO STA 50+00	℄	13.5	75.0						10	250														
D-1	STA 40+00 TO STA 41+23	RT					7	1																	
D-2	STA 40+00 TO STA 40+46	LT				51	32																		
D-3	STA 40+00 TO STA 50+00	LT					20		300	10															
D-4	STA 40+00 TO STA 50+00	LT					68		233	10															
D-5	STA 41+23 TO STA 50+00	RT					56		877	10															
D-6	STA 40+00 TO STA 50+00	RT					30		250																
	Totals Carried to Sub-Summaries See Sheets 86 & 87		1678.0	75.0		51	213	1	1660	30	873	1403	3	1862.5	50.0	100.0	1	50.0					2	3	2

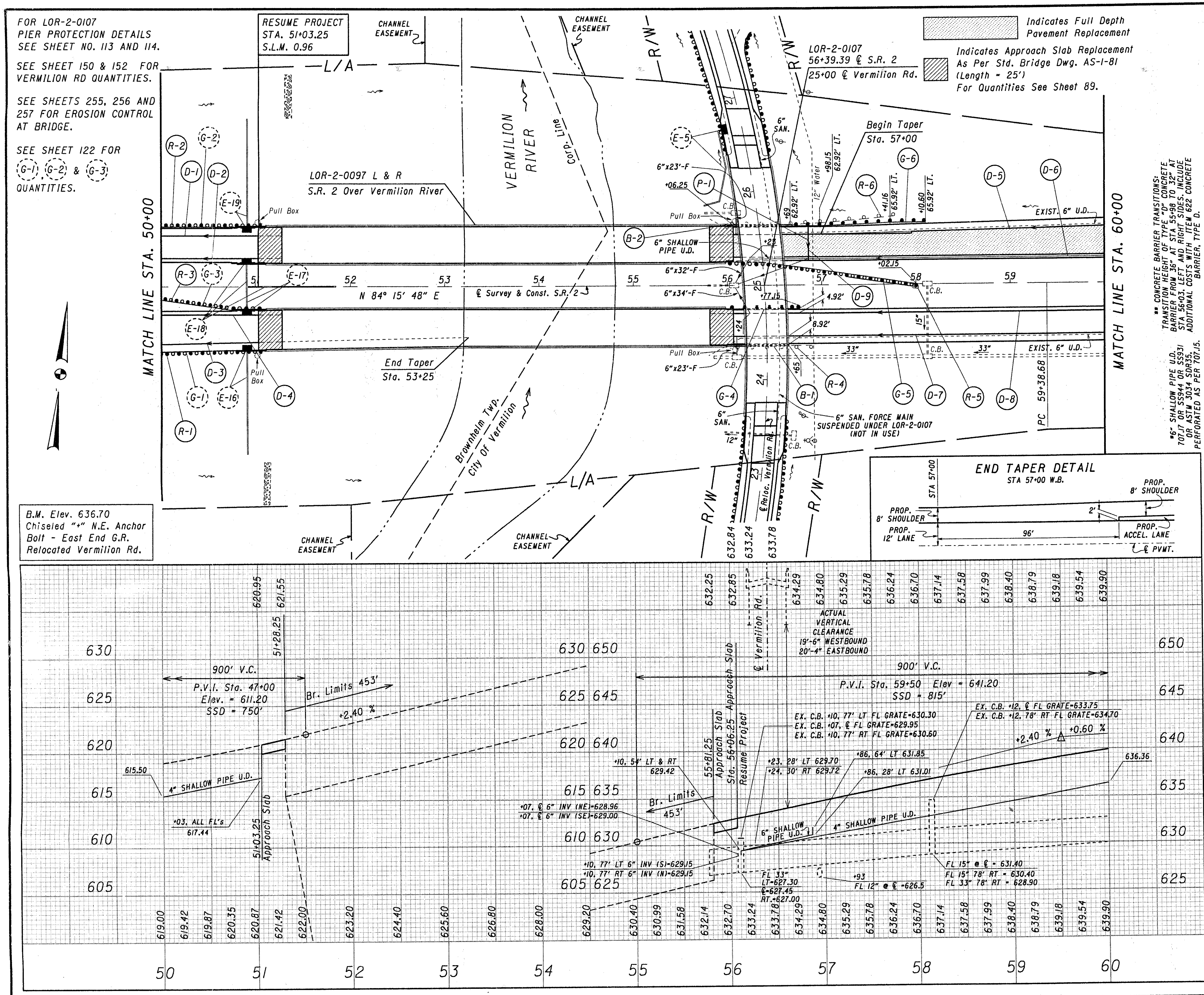
PLAN AND PROFILE STA. 40+00 TO STA. 50+00

FOR LOR-2-0107 PIER PROTECTION DETAILS SEE SHEET NO. 113 AND 114.

SEE SHEET 150 & 152 FOR VERMILION RD QUANTITIES.

SEE SHEETS 255, 256 AND 257 FOR EROSION CONTROL AT BRIDGE.

SEE SHEET 122 FOR G-1, G-2 & G-3 QUANTITIES.



** CONCRETE BARRIER TRANSITIONS: TRANSITION HEIGHT OF TYPE "D" CONCRETE BARRIER FROM 36" AT STA 55+98 TO 32" AT STA 56+03, LEFT AND RIGHT SIDES. INCLUDE ADDITIONAL COSTS WITH ITEM 622 CONCRETE BARRIER, TYPE D.

*6" SHALLOW PIPE U.D. 707.17 OR SS944 OR SS931 OR ASTM 3034 SDR35, PERFORATED AS PER 707.15.

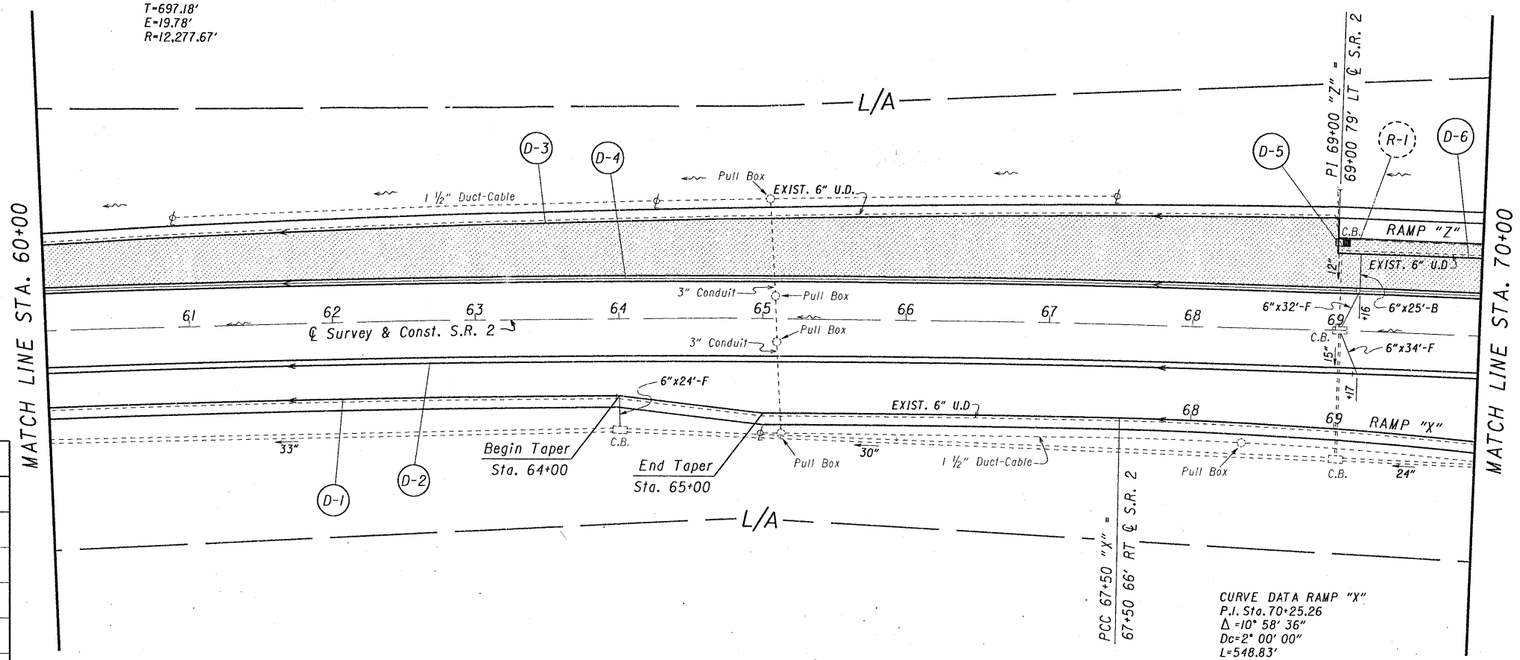
LOR-2-0097 Lt. & Rt. S.R. 2 over Vermilion River	LOR-2-0107 Vermilion Road over S.R. 2
TYPE : Continuous Steel Girder	TYPE : Continuous Steel Beam
LENGTH : 453 ft.	LENGTH : 248 ft.
WIDTH : 38'-6" T/T GM Parapet	WIDTH : 42'-6"
SKEW : None	SKEW : 3°-38'-56"
LOADING : HS-20-44	LOADING : HS-20-44

REF No.	Station to Station	Side	202 GUARDRAIL REMOVED	202 GUARDRAIL REMOVED BARRIER DESIGN	SPECIAL PRESSURE RELIEF JOINT TYPE A	603 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944	605 4" SHALLOW PIPE U.D. 707.15, AS PER PLAN	605 *6" SHALLOW PIPE U.D.	605 6" SHALLOW PIPE U.D. 707.15, AS PER PLAN	606 GUARDRAIL TYPE 5	606 ANCHOR ASSEMBLY TYPE E	606 ANCHOR ASSEMBLY TYPE T	606 BRIDGE TERMINAL ASSEMBLY TYPE 1	606 BRIDGE TERMINAL ASSEMBLY TYPE 2	606 GUARDRAIL TYPE 5, BARRIER DESIGN	606 ANCHOR ASSEMBLY, TYPE A BARRIER DESIGN	622** CONCRETE BARRIER TYPE D	BENDS AND BRANCHES 6" X 90° BEND	BENDS AND BRANCHES 6" X 90° TEE	BENDS AND BRANCHES 6" X 60° BEND
			LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.		LIN. FT.	EACH	EACH	EACH	EACH	LIN. FT	LIN. FT	LIN. FT.	EACH	EACH	EACH
B-1	STA 55+98 TO STA 56+65	RT															67.0			
B-2	STA 55+98 TO STA 56+69	LT															71.0			
D-1	STA 50+00 TO STA 51+03	LT					103													
D-2	STA 50+00 TO STA 51+03	LT					103													
D-3	STA 50+00 TO STA 51+03	RT					103													
D-4	STA 50+00 TO STA 51+03	RT					103													
D-5	STA 56+10 TO STA 60+00	LT				23	390											1		
D-6	STA 56+10 TO STA 60+00	LT				32	314		63										1	1
D-7	STA 56+10 TO STA 60+00	RT				23	390											1		
D-8	STA 56+10 TO STA 60+00	RT				34	376													1
D-9	STA STA 56+86	LT						36												
G-4	STA 55+98 TO STA 56+77.15	RT								75.0		1		1						
G-5	STA 55+98 TO STA 58+02.15	LT								131.25			1		50	1				
G-6	STA 56+69 TO STA 58+10.60	LT								118.75	1		1							
R-1	STA 50+00 TO STA 51+11.50	RT	111.5																	
R-2	STA 50+00 TO STA 51+11.50	LT	111.5																	
R-3	STA 50+00 TO STA 51+11.50	℄	111.5																	
R-4	STA 55+98 TO STA 56+85.50	RT	87.5																	
R-5	STA 55+98 TO STA 57+98	LT&RT	125.0	75.0																
R-6	STA 55+98 TO STA 57+73	LT	175.0																	
P-1	STA 56+86 (To General Summary)	LT			36															
Totals Carried to Sub-Summaries See Sheets 86 & 87			722.0	75.0	36	112	1882	36	63	325	1	1	2	1	50	1	138.0	2	1	2

PLAN AND PROFILE STA. 50+00 TO STA. 60+00

CALC BY ALS DATE 2/25/92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO	124
CHKD BY JSB DATE 2/26/92		FHWA REGION 5	267

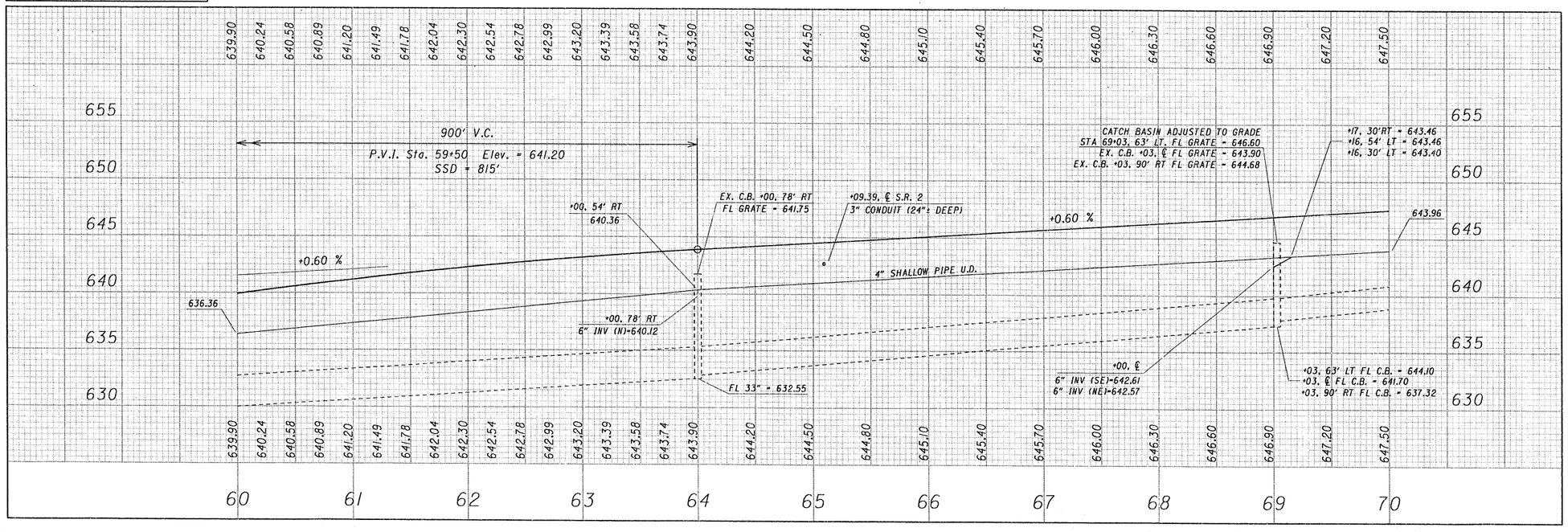
S.R. 2 CURVE DATA
P.I. Sta. 66+35.86
Δ =6° 30' 00" RT
Dc=0° 28' 00"
L=1392.86'
T=697.18'
E=19.78'
R=12,277.67'



CURVE DATA RAMP "X"
P.I. Sta. 70+25.26
Δ =10° 58' 36"
Dc=2° 00' 00"
L=548.83'
T=275.26'
E=13.19'
R=2864.79'

CROSS REFERENCES	
Sheet No.	Description
105	For (R-1) Curb Removal Quantities
142	For Underdrain Locations on Ramp "Z"

Indicates Full Depth Pavement Replacement



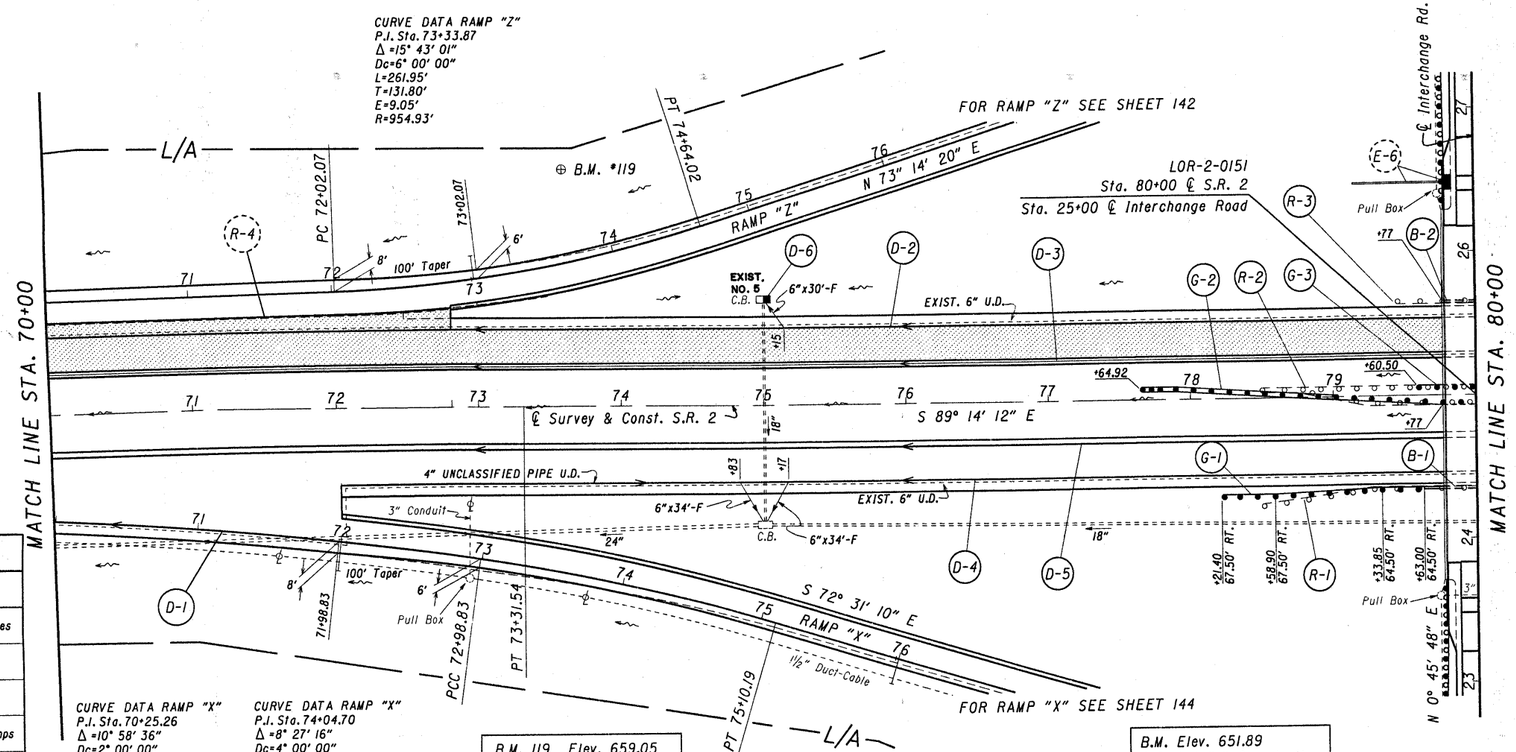
REF No.	Station to Station	Side	6" CONDUIT TYPE B LIN. FT.	6" CONDUIT TYPE F (OR NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	603	CATCH BASIN ADJUSTED TO GRADE EACH	604	4" SHALLOW PIPE U.D. 707.15. AS PER PLAN LIN. FT.	605	BENDS AND BRANCHES 6" X 90° BEND EACH	BENDS AND BRANCHES 6" X 60° BEND EACH	
D-1	STA 60+00 TO STA 70+00	RT		24				1000		1		2
D-2	STA 60+00 TO STA 70+00	RT		34				1000		1		3
D-3	STA 60+00 TO STA 69+00	LT						900			1	3984
D-4	STA 60+00 TO STA 70+00	LT		32				1000		1		
D-5	STA 69+00. 63' LT	LT				1				1		
D-6	STA 69+16 TO STA 70+00	LT	25					84		1		
	Totals Carried to Sub-Summary See Sheet 86		25	90		1		3984		3	2	

PLAN AND PROFILE STA. 60+00 TO STA. 70+00

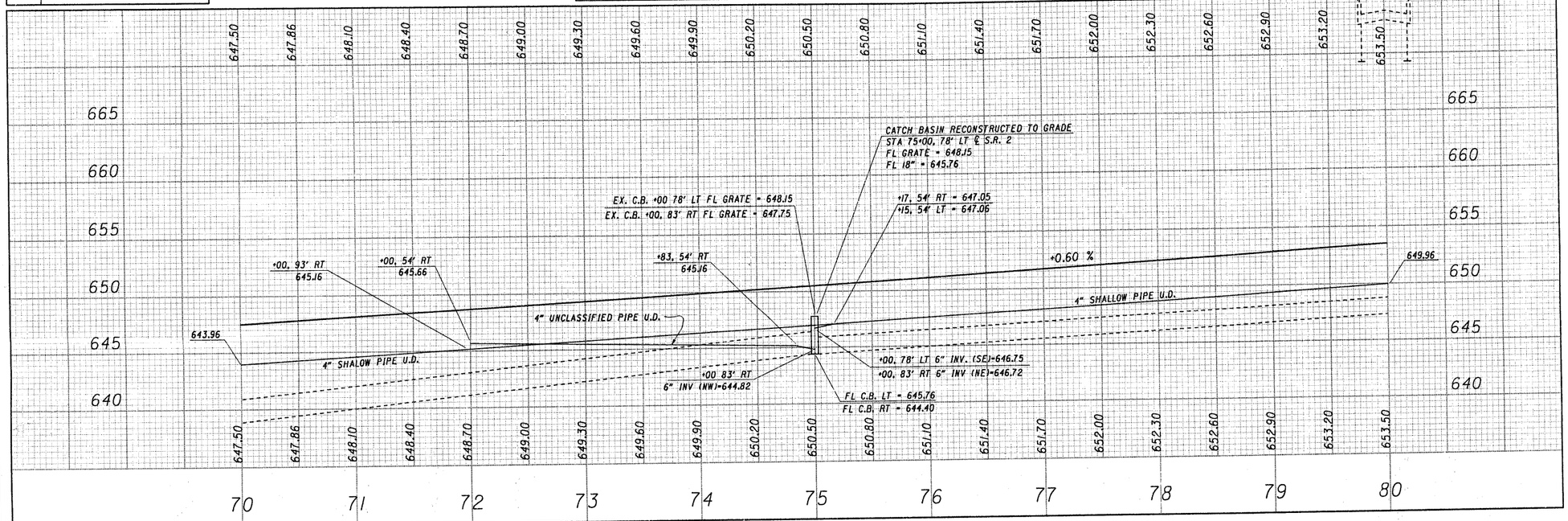
CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	125
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

LOR-2-0151
Vermilion Interchange Road over S.R. 2

TYPE : Continuous Steel Beam
LENGTH : 234 ft.
WIDTH : 42'-6" T/T GM Parapet
SKEW : None
LOADING : HS-20-44



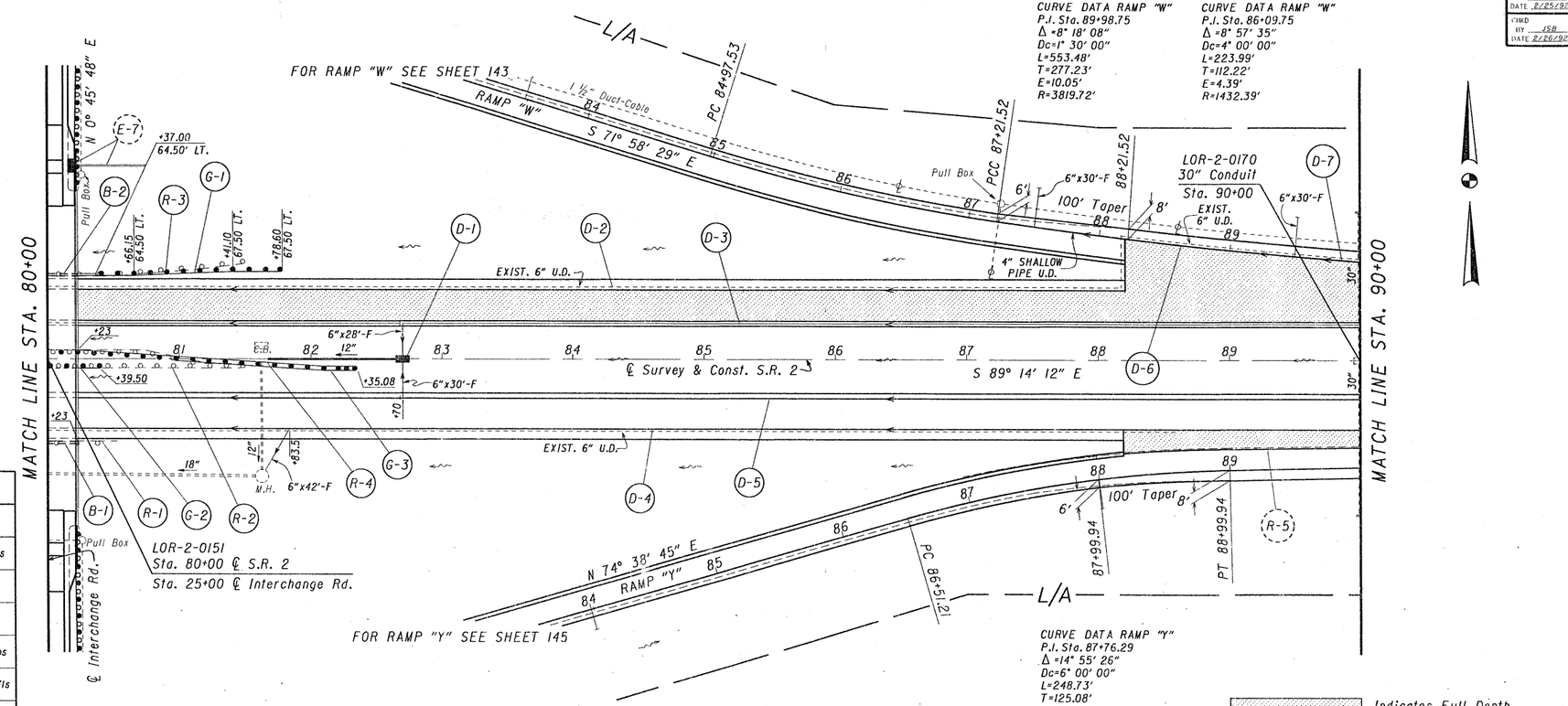
CROSS REFERENCES	
Sheet No.	Description
105	For (R-4) Curb Removal Quantities
152	For Interchange Rd. Quantities
113,114	For LOR-2-0151 Pier Protection Details
142,144	For Underdrain Locations on Ramps
255,258	For Erosion Control at Bridge



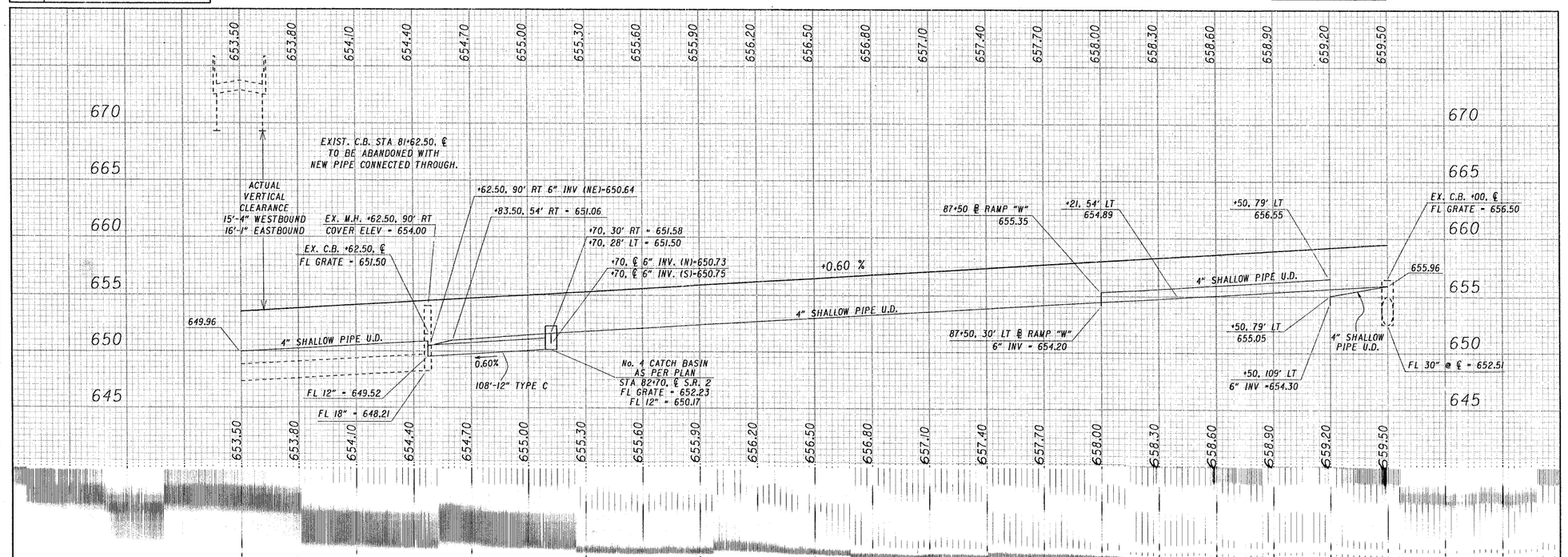
REF No.	Station to Station	Side	202 GUARDRAIL REMOVED LIN. FT.	202 GUARDRAIL REMOVED BARRIER DESIGN LIN. FT.	603 6" CONDUIT, TYPE FI TO IT MON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	604 CATCH BASIN RECON. TO GRADE EACH	605 4" SHALOW PIPE U.D. 707.15, TO GRADE AS PER PLAN LIN. FT.	605 4" UNCLASS. PIPE U.D. 707.15, AS PER PLAN LIN. FT.	GUARDRAIL ANCHOR ASSEMBLY TYPE 5 LIN. FT.	GUARDRAIL ANCHOR ASSEMBLY TYPE E EACH	GUARDRAIL ANCHOR ASSEMBLY BARRIER DESIGN TYPE A EACH	BRIDGE TERMINAL ANCHOR ASSEMBLY TYPE I EACH	GUARDRAIL ANCHOR ASSEMBLY TYPE T EACH	622 GUARDRAIL CONCRETE BARRIER TYPE D LIN. FT.	622 BENDS AND BRANCHES 6" X 60" BEND EACH
B-1	STA 79+63 TO STA 80+00	RT								1					
B-2	STA 79+77 TO STA 80+00	LT								1					
G-1	STA 78+21.40 TO STA 79+63	RT							118.75			1			
G-2	STA 77+64.92 TO STA 80+00	LT&RT							98.00						
G-3	STA 79+60.50 TO STA 80+00	LT							27.00						
R-1	STA 78+50 TO STA 80+00	RT	150.0											112.5	2
R-2	STA 78+50 TO STA 80+00	LT&RT	250.0	25.0											
R-3	STA 79+50 TO STA 80+00	LT	50.0												
D-1	STA 70+00 TO STA 72+00	RT					200								
D-2	STA 70+00 TO STA 80+00	LT			30		1000								
D-3	STA 70+00 TO STA 80+00	LT					1000								
D-4	STA 72+00 TO STA 80+00	RT			68		483	283							
D-5	STA 70+00 TO STA 80+00	RT					1000								
D-6	STA 75+00, 78' LT ℄ S.R. 2	LT				1									
	Totals Carried to Sub-Summaries See Sheets 86 & 87	Side	450.0	25.0	98	1	3683	283	243.75	1	1	1	1	112.5	3

PLAN AND PROFILE STA. 70+00 TO STA. 80+00

CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	126
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE & LORAIN COUNTIES		



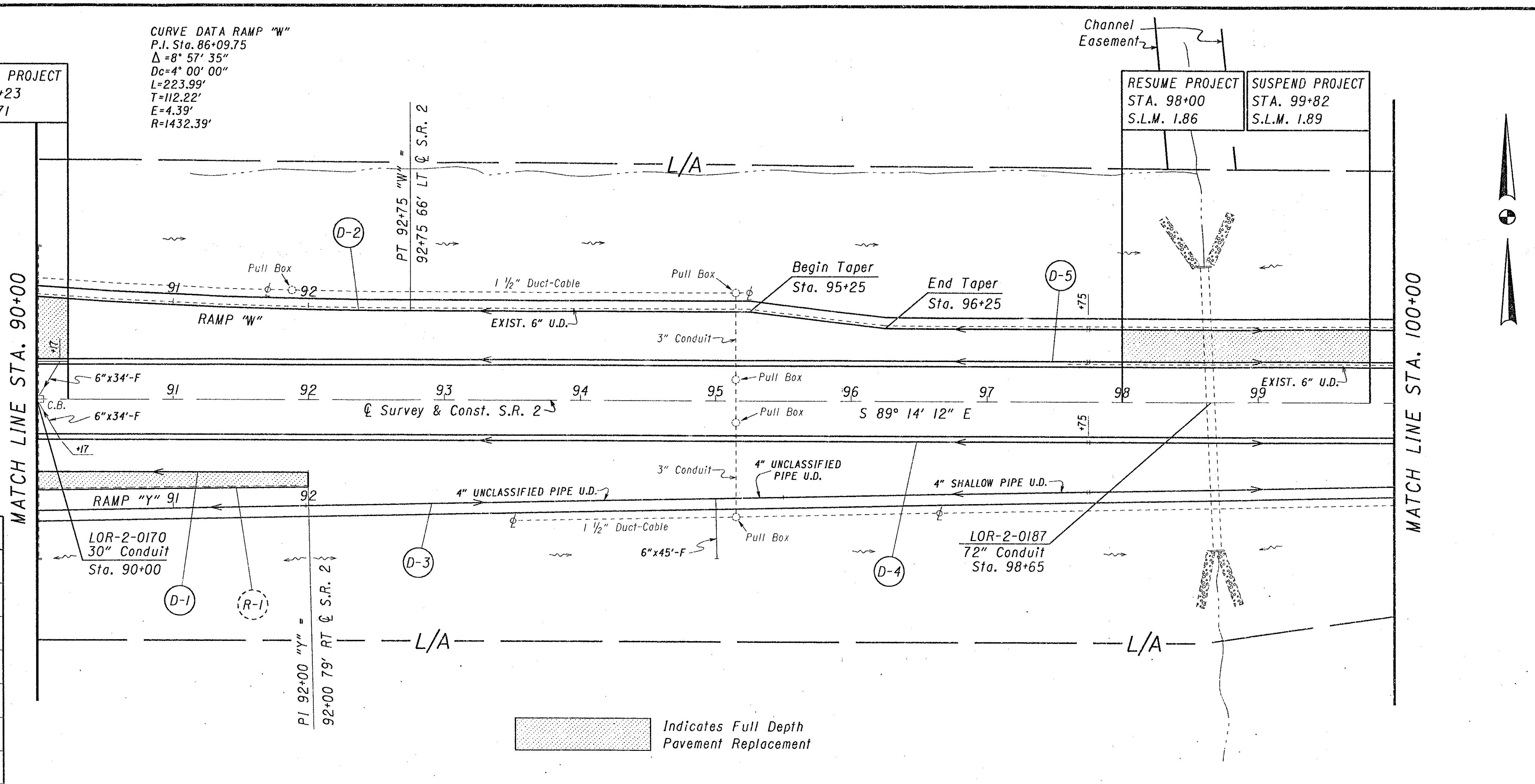
CROSS REFERENCES	
Sheet No.	Description
105	For (R-5) Curb Removal Quantities
152	For Interchange Rd. Quantities
113,114	For LOR-2-0151 Pier Protection Details
143,145	For Underdrain Locations on Ramps
116A	For C.B. No. 4, As Per Plan Details
255,258	For Erosion Control at Bridge



Station to Station	Side	202 GUARDRAIL REMOVED	202 GUARDRAIL REMOVED BARRIER DESIGN	202 CATCH BASIN ABANDONED	603 6" CONDUIT TYPE F (NON-PERFORATED) ASTM 3034 SDR35, SS931 OR SS944	603 12" CONDUIT TYPE C	604 CATCH BASIN No. 4 AS PER PLAN	605 4" SHALLOW PIPE U.D. 707.15, AS PER PLAN	606 PRECAST REINFORCED CONCRETE OUTLET	606 GUARDRAIL TYPE 5	606 ANCHOR ASSEMBLY BARRIER DESIGN TYPE E	606 ANCHOR ASSEMBLY TERMINAL SECTION TYPE A	606 BRIDGE TERMINAL ASSEMBLY TYPE I	606 ANCHOR ASSEMBLY TYPE T	GUARDRAIL TYPE 5, BARRIER DESIGN	622 CONCRETE BARRIER TYPE D	BENDS AND BRANCHES 6" x 90° BEND	6" x 60° BEND	6" X 90° TEE
		LIN. FT.	EACH	EACH	LIN. FT.	LIN. FT.	EACH	LIN. FT.	EACH	LIN. FT.	EACH	EACH	EACH	EACH	LIN. FT.	LIN. FT.	EACH	EACH	EACH
80+00 TO STA 80+23	RT															23.0			
80+00 TO STA 80+37	LT															37.0			
80+37 TO STA 81+78.60	LT														112.5		1	1	
80+00 TO STA 80+39.5	RT																		1
79+60.50 TO STA 82+35.08	LT&RT							821		118.75	1		1				1		
80+00 TO STA 80+50	RT	50.0						1000		27.00		1		1					
80+00 TO STA 81+50	LT&RT	250.0	25.0					1000		98.00	1								
80+00 TO STA 81+50	LT	150.0		1				1000	1										
81+62.50	℄							200											
81+62.50 TO STA 82+70	℄					108	1	50	1										
80+00 TO STA 88+21	LT																		
80+00 TO STA 90+00	LT					28													
80+00 TO STA 90+00	RT					42													
80+00 TO STA 90+00	RT					30													
87+50 "W" TO STA 89+50 S.R. 2	LT					30													
89+50 TO STA 90+00	LT					30													
		450.0	25.0	1	160	108	1	4071	2	243.75	1	1	1	1	112.5	60.0	3	1	1

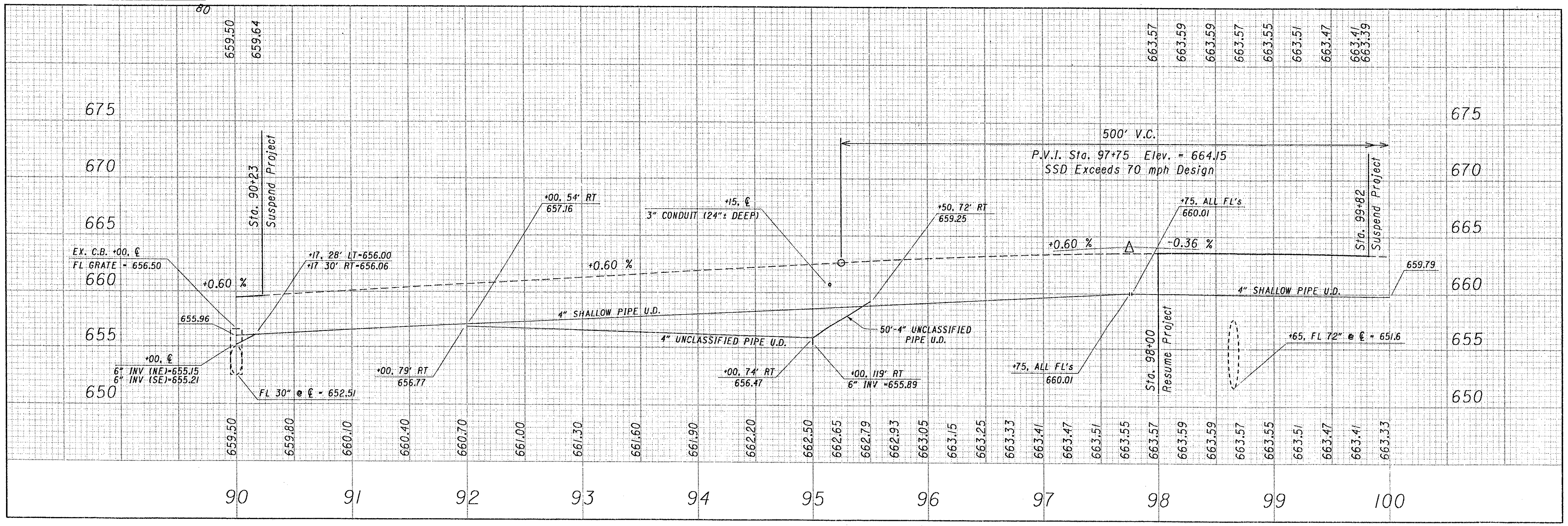
Carried to Sub-Summaries Sheets 86 & 87

CALC BY RLS DATE 2/25/92 CHKD BY JSG DATE 2/26/92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	127/267



CURVE DATA RAMP "W"
P.I. Sta. 86+09.75
Δ =8° 57' 35"
Dc=4° 00' 00"
L=223.99'
T=112.22'
E=4.39'
R=1432.39'
SUSPEND PROJECT STA. 90+23 S.L.M. 1.71
RESUME PROJECT STA. 98+00 S.L.M. 1.86
SUSPEND PROJECT STA. 99+82 S.L.M. 1.89
Channel Easement
PT 92+75 "W" = 92+75 66' LT ℄ S.R. 2
PI 92+00 "Y" = 92+00 79' RT ℄ S.R. 2
MATCH LINE STA. 90+00
MATCH LINE STA. 100+00
L/A
RAMP "W"
RAMP "Y"
1 1/2" Duct-Cable
Pull Box
3" Conduit
EXIST. 6" U.D.
Begin Taper Sta. 95+25
End Taper Sta. 96+25
℄ Survey & Const. S.R. 2
S 89° 14' 12" E
4" UNCLASSIFIED PIPE U.D.
4" SHALLOW PIPE U.D.
6"x34'-F
6"x45'-F
C.B.
LOR-2-0170 30" Conduit Sta. 90+00
LOR-2-0187 72" Conduit Sta. 98+65
D-1
D-2
D-3
D-4
D-5
R-1
Indicates Full Depth Pavement Replacement

CROSS REFERENCES	
Sheet No.	Description
105	For (R-1) Curb Removal Quantities
145	For Underdrain Locations on Ramp "Y"

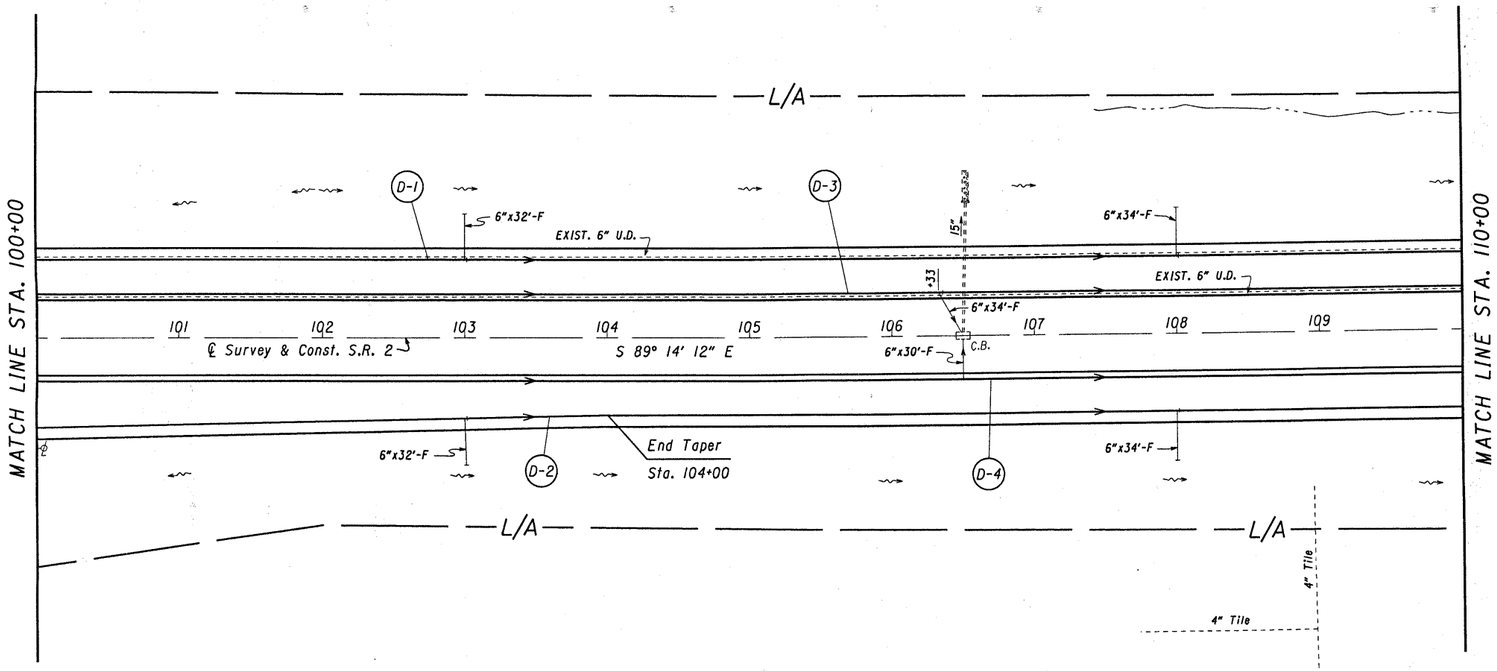


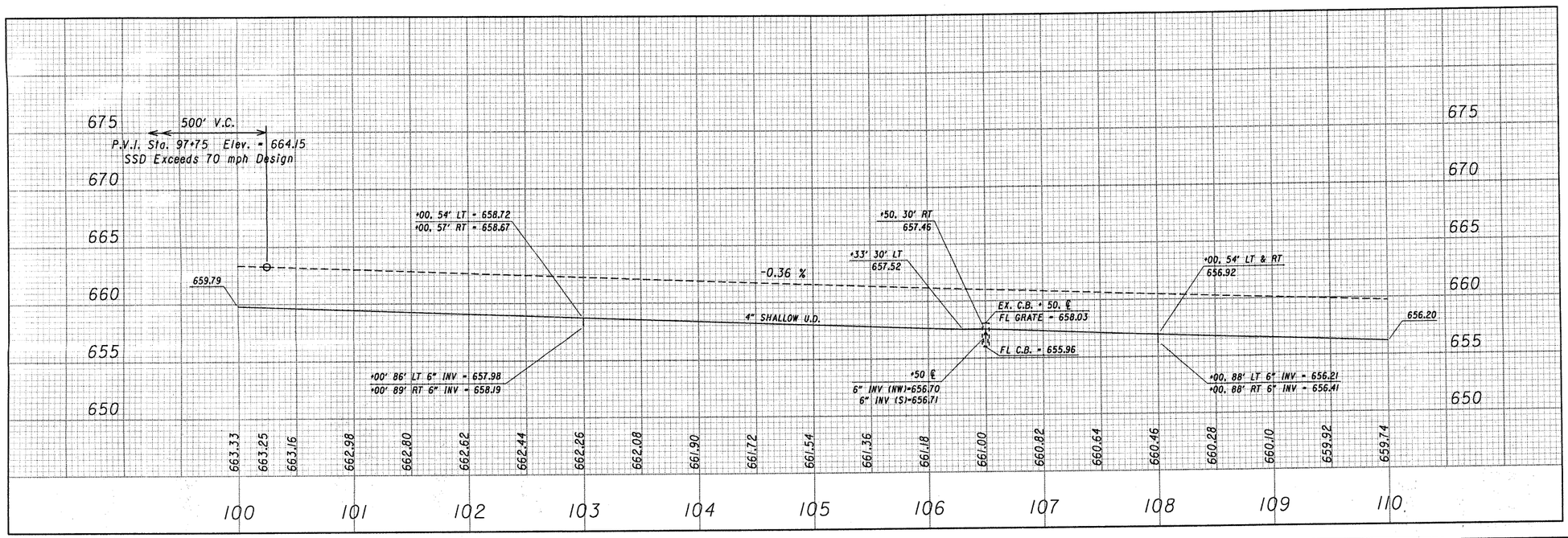
500' V.C.
P.V.I. Sta. 97+75 Elev. = 664.15
SSD Exceeds 70 mph Design
+0.60 %
-0.36 %
Sta. 90+23 Suspend Project
Sta. 98+00 Resume Project
Sta. 99+82 Suspend Project
EX. C.B. +00, ℄ FL GRATE = 656.50
+00, ℄ 6" INV (NE)=655.15 6" INV (SE)=655.21
FL 30" @ ℄ = 652.51
+17, 28' LT=656.00 +17 30' RT=656.06
+00, 79' RT 656.77
+00, 54' RT 657.16
+15, ℄ 3" CONDUIT (24"± DEEP)
+00, 74' RT 656.47
+00, 119' RT 6" INV =655.89
+50, 72' RT 659.25
50'-4" UNCLASSIFIED PIPE U.D.
+75, ALL FL's 660.01
+65, FL 72" @ ℄ = 651.6
4" SHALLOW PIPE U.D.
4" UNCLASSIFIED PIPE U.D.
659.79
650
655
660
665
670
675
90
91
92
93
94
95
96
97
98
99
100

REF No.	Station to Station	Side	603 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 (LIN. FT.)	605 4" SHALLOW PIPE U.D. 707.15, AS PER PLAN (LIN. FT.)	605 4" UNCLASS. PIPE U.D. 707.15, AS PER PLAN (LIN. FT.)	SPECIAL PRECAST REINFORCED CONCRETE OUTLET (EACH)	BENDS AND BRANCHES 6" X 90° TEE (EACH)	BENDS AND BRANCHES 6" X 60° BEND (EACH)
D-1	STA 90+00 TO STA 92+00	RT		200				
D-2	STA 90+00 TO STA 100+00	LT		1000				
D-3	STA 92+00 TO STA 100+00	RT	45	450	350	1	1	
D-4	STA 90+00 TO STA 100+00	RT	34	1000				1
D-5	STA 90+00 TO STA 100+00	LT	34	1000				1
Totals Carried to Sub-Summary See Sheets 86			113	3650	350	1	1	2

PLAN AND PROFILE STA. 90+00 TO STA. 100+00

CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	128
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267





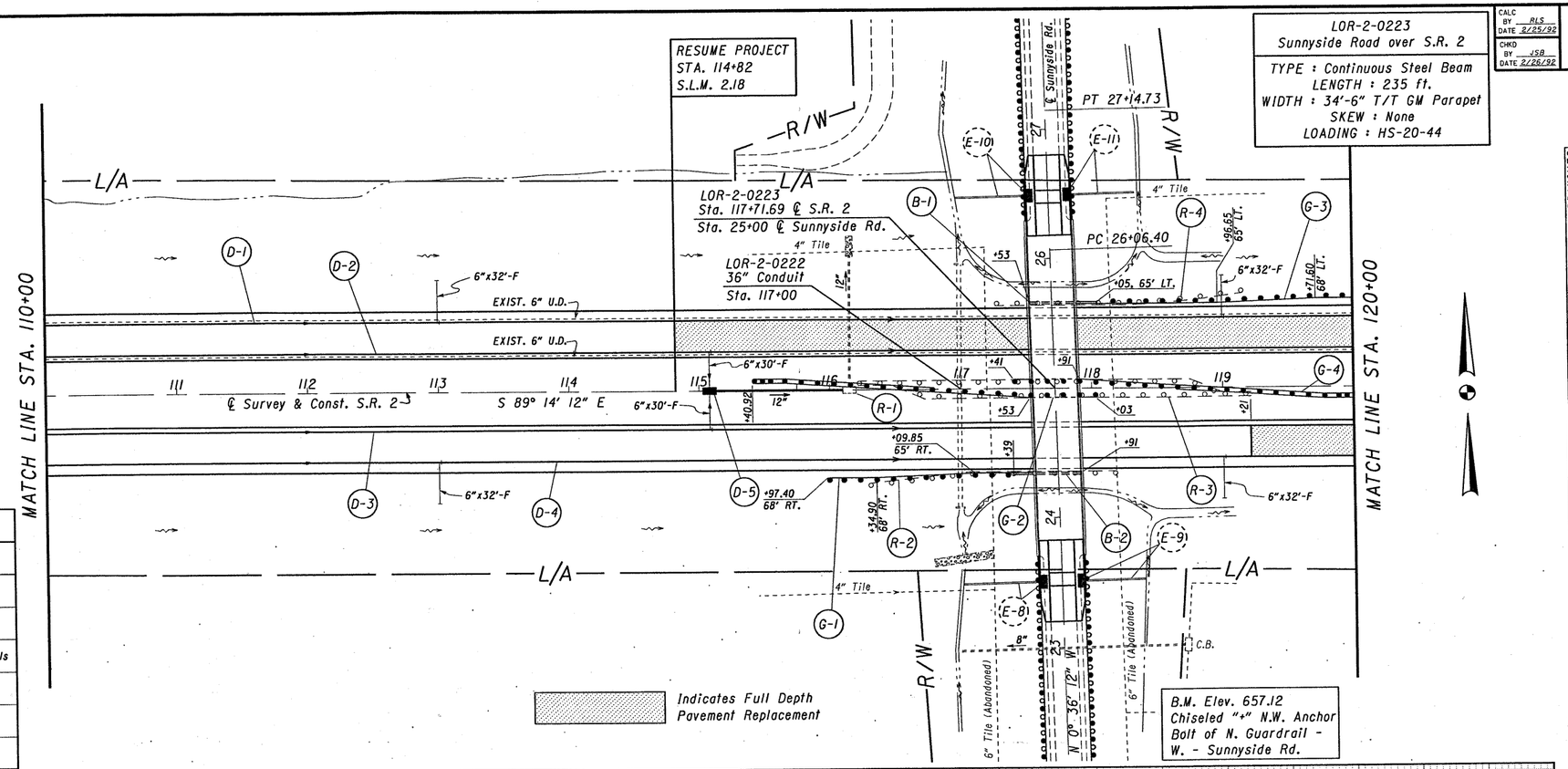
REF No.	Station to Station	Side	603 6" CONDUIT, TYPE C 700LF MIN PERFORATED ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	605 4" SHALLOW PIPE U.D. 707.15, AS PER PLAN LIN. FT.	SPECIAL PRECAST REINFORCED CONCRETE OUTLET EACH	BENDS AND BRANCHES 6" X 90° BEND EACH	BENDS AND BRANCHES 6" X 60° BEND EACH
D-1	STA 100+00 TO STA 110+00	LT	66	1000	2	2	
D-2	STA 100+00 TO STA 110+00	RT	66	1000	2		1
D-3	STA 100+00 TO STA 110+00	LT	34	1000			
D-4	STA 100+00 TO STA 110+00	RT	30	1000		1	
	Totals Carried to Sub-Summary See Sheet 86.		196	4000	4	5	1

PLAN AND PROFILE STA. 100+00 TO STA. 110+00

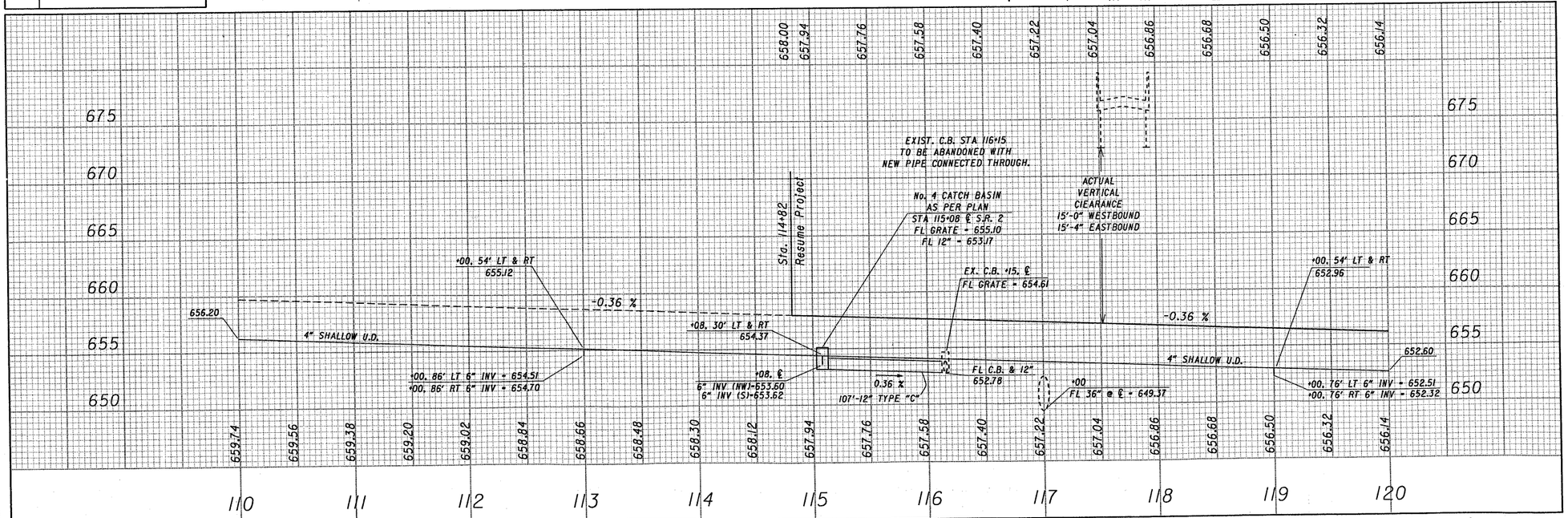
CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	129
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE & LORAIN COUNTIES		

LOR-2-0223
Sunnyside Road over S.R. 2

TYPE : Continuous Steel Beam
LENGTH : 235 ft.
WIDTH : 34'-6" T/T GM Parapet
SKEW : None
LOADING : HS-20-44



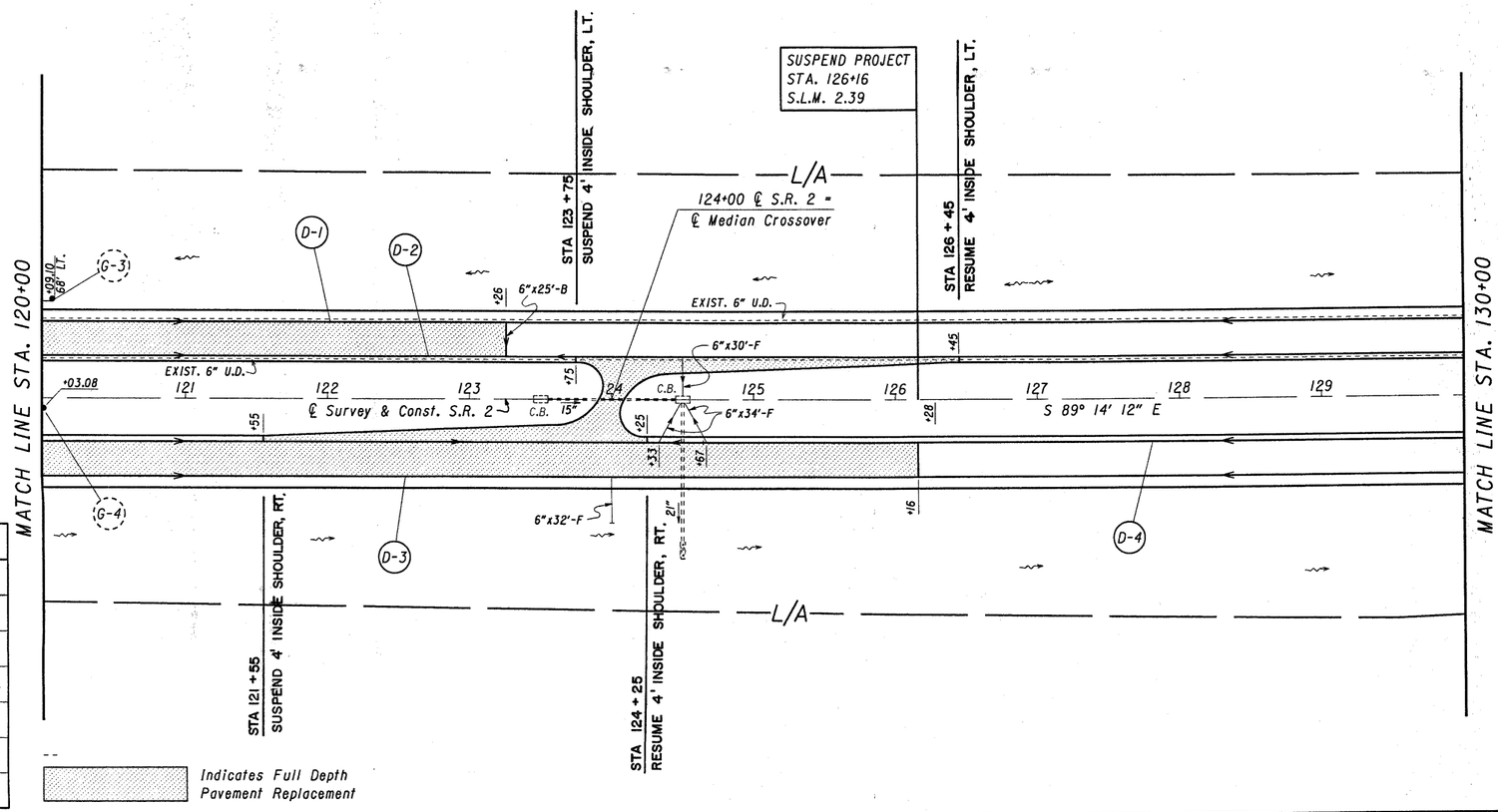
CROSS REFERENCES	
Sheet No.	Description
153 & 154	For Sunnyside Rd. Quantities
113 & 114	For LOR-2-0223 Pier Protection Details
116A	For CB No 4, As Per Plan Details
255 & 258	For Erosion Control at Bridge



PLAN AND PROFILE STA. 110+00 TO STA. 120+00

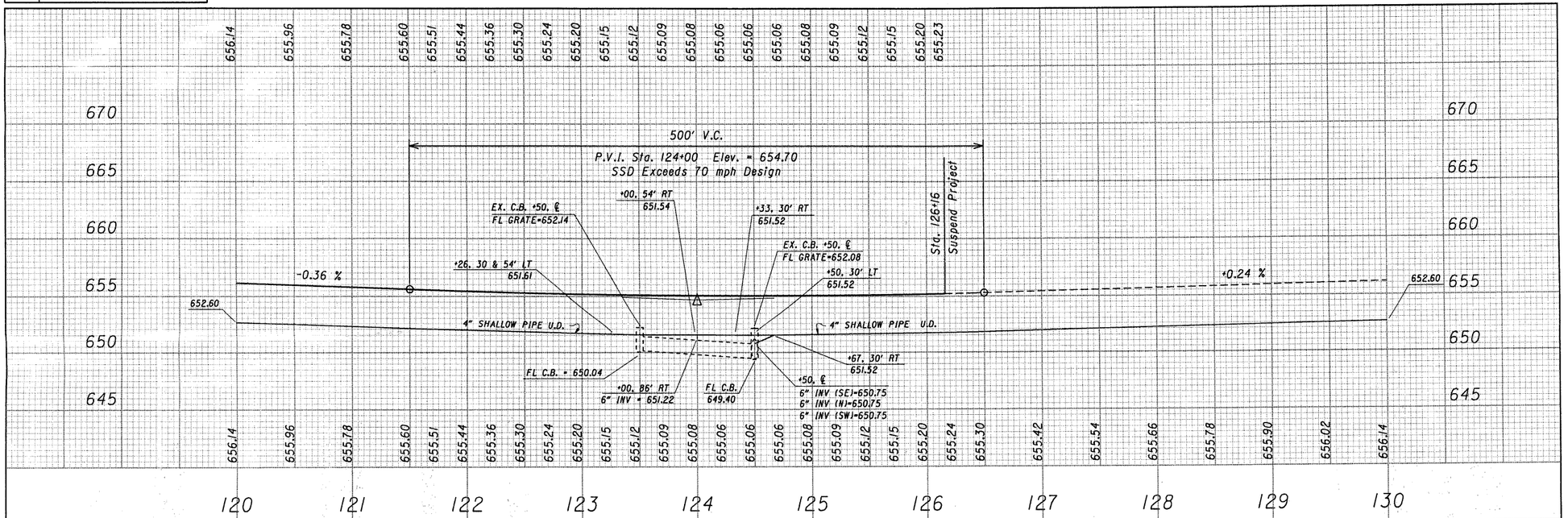
REF No.	Station to Station	Side	202 GUARDRAIL REMOVED	202 GUARDRAIL REMOVED BARRIER DESIGN	202 CATCH BASIN ABANDONED	603 6" CONDUIT, TYPE F 10FT NON-PERFORATED ASTM 3034 SDR35, S3931 OR S3944	603 12" CONDUIT TYPE C	604 CATCH BASIN No. 4 AS PER PLAN	605 4" SHALLOW PIPE U.D. TYP. 5, AS PER PLAN	605 PRECAST REINFORCED CONCRETE OUTLET	606 GUARDRAIL TYPE 5	606 ANCHOR ASSEMBLY TYPE E	606 ANCHOR ASSEMBLY BARRIER TYPE A	606 BRIDGE TERMINAL ASSEMBLY TYPE I	606 ANCHOR ASSEMBLY TYPE T	606 GUARDRAIL TYPE 5, BARRIER DESIGN	622 CONCRETE BARRIER TYPE D	BENDS AND BRANCHES 6" X 90° BEND
			LIN. FT.	LIN. FT.	EACH	LIN. FT.	LIN. FT.	EACH	LIN. FT.	EACH	LIN. FT.	EACH	EACH	EACH	EACH	LIN. FT.	LIN. FT.	EACH
B-1	STA 117+53 TO STA 118+05	LT									116.75	1					52.0	
B-2	STA 117+39 TO STA 117+91	RT									112.50		1	1	1	112.5		2
G-1	STA 115+97.40 TO STA 117+39	RT									181.25	1		1	1			1
G-2	STA 115+40.92 TO STA 118+03	LT&RT									112.50		1		1	112.5		2
G-3	STA 118+05 TO STA 120+09.10	LT																
G-4	STA 117+41 TO STA 120+03.08	LT&RT																
R-1	STA 116+15	℄			1													
R-2	STA 116+28 TO STA 118+15.50	RT	187.5						1000	2								
R-3	STA 116+28 TO STA 119+15	LT&RT	475.0	50.0					1000									
R-4	STA 117+28 TO STA 119+15.50	LT	187.5						1000									
D-1	STA 110+00 TO STA 120+00	LT				64												
D-2	STA 110+00 TO STA 120+00	LT				30												
D-3	STA 110+00 TO STA 120+00	RT				30												
D-4	STA 110+00 TO STA 120+00	RT				64												
D-5	STA 115+08 TO STA 116+15	℄					107	1										
Totals Carried to Sub-Summaries See Sheets 86 & 87			850.0	50.0	1	188	107	1	4000	4	525.0	2	2	2	2	225.0	104.0	6

CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO	130
CHKD BY JSB DATE 2/26/92		FHWA REGION 5	267



Indicates Full Depth Pavement Replacement

CROSS REFERENCES	
Sheet No.	Description
125	For (G-3) Guardrail Quantities
129	For (G-4) Guardrail Quantities
91	For Crossover Replacement Details.

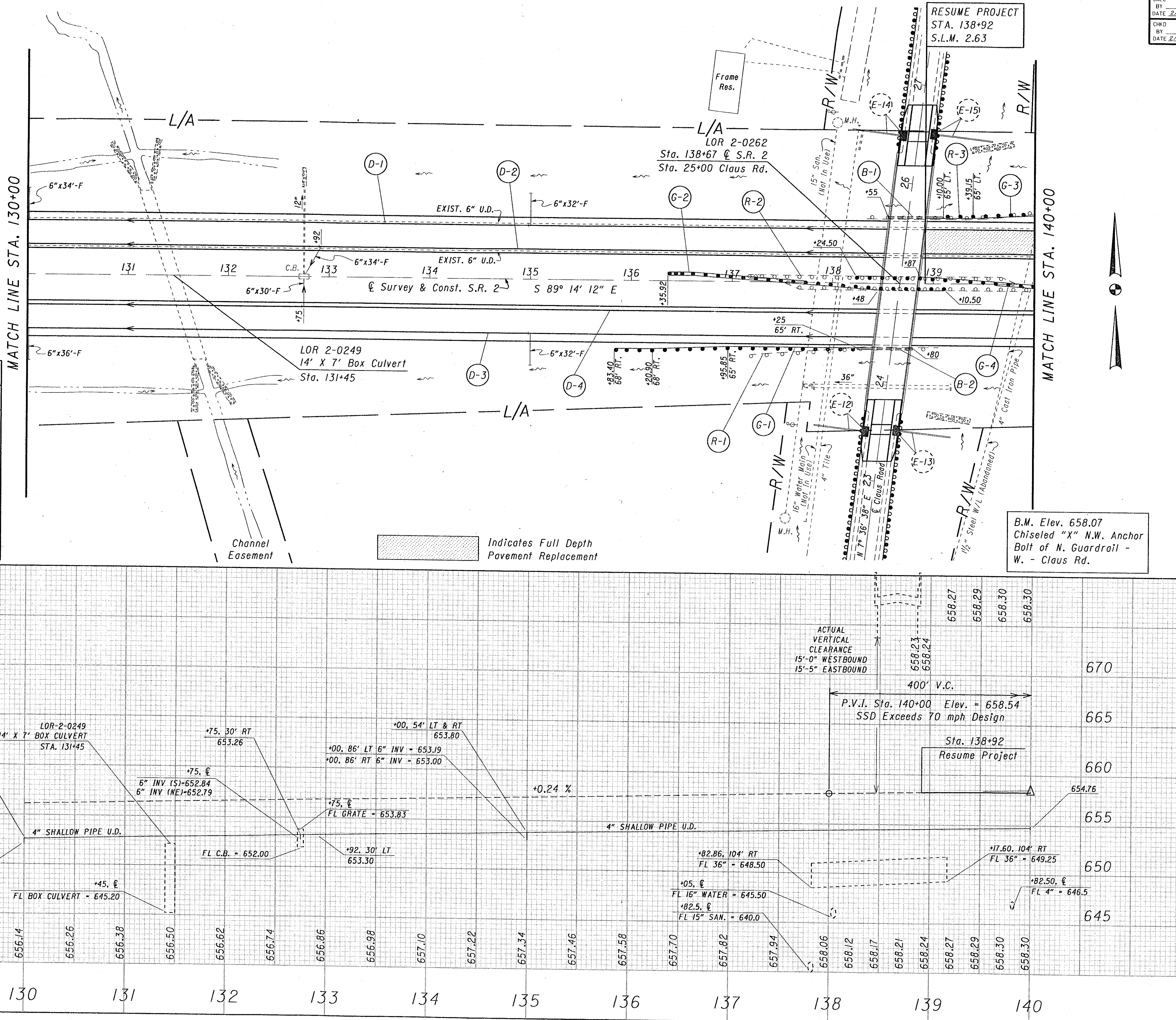


REF No.	Station to Station	Side	6" CONDUIT TYPE B LIN. FT.	603 6" CONDUIT, TYPE F(1) OR NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	605 4" SHALLOW PIPE U.D. TOPT. 707.15, AS PER PLAN LIN. FT.	SPECIAL PRECAST REINFORCED CONCRETE OUTLET EACH	BENDS AND BRANCHES 6" x 90° TEE EACH	6" x 60° BEND EACH	6" x 60° WYE EACH
D-1	STA 120+00 TO STA 130+00	LT	25		1000		1		1
D-2	STA 120+00 TO STA 130+00	LT		30	1000		2	1	
D-3	STA 120+00 TO STA 130+00	RT		32	1000	1	1	1	
D-4	STA 120+00 TO STA 130+00	RT		68	1000				1
Totals Carried to Sub-Summary See Sheet 86.			25	130	4000	1	4	1	1

PLAN AND PROFILE STA. 120+00 TO STA. 130+00

LOR-2-0262
Claus Road over S.R. 2

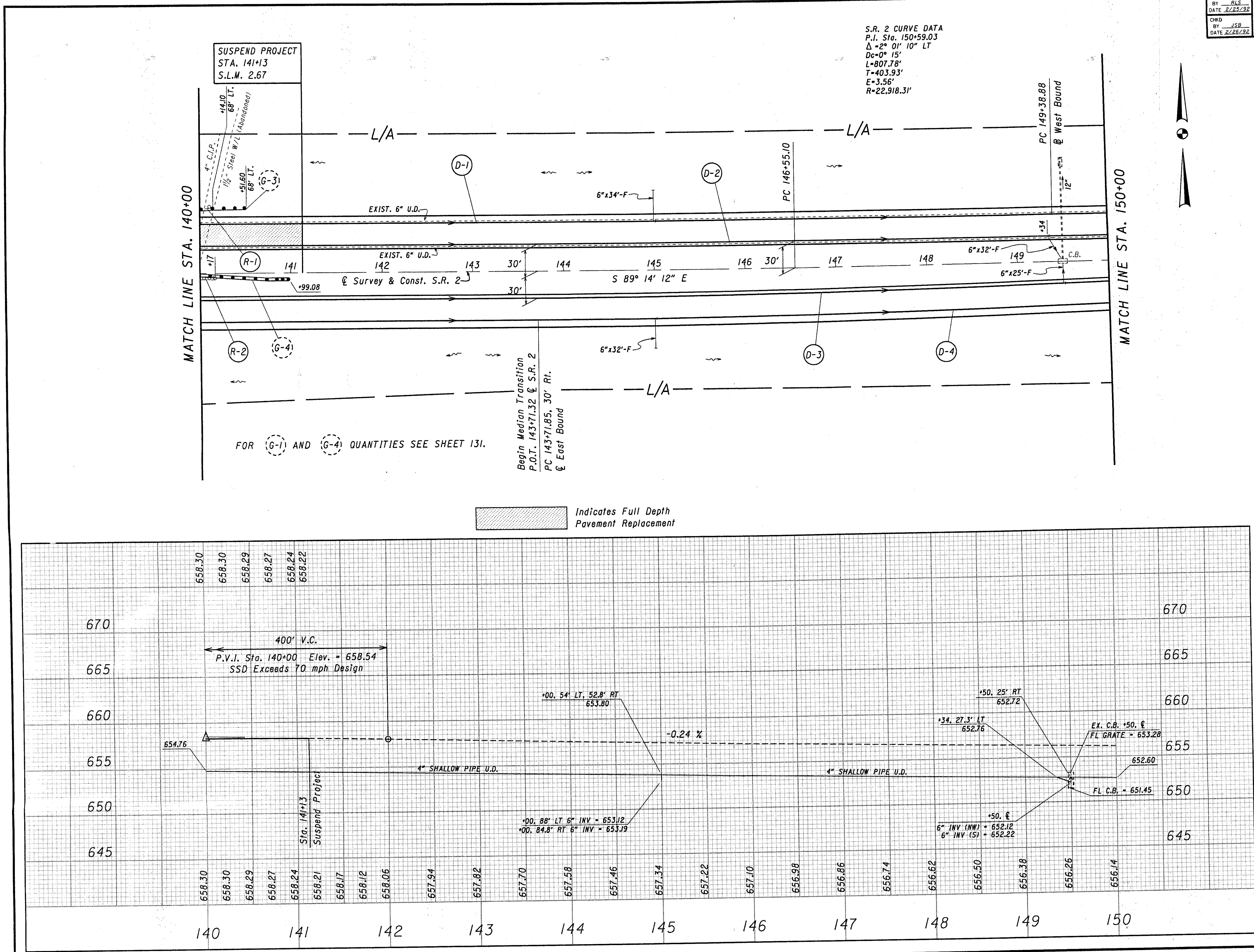
TYPE : Continuous Steel Beam
LENGTH : 236 ft.
WIDTH : 34'-6" T/T GM Parapet
SKEW : 6°-50'-50"
LOADING : HS-20-44



CROSS REFERENCES	
Sheet No.	Description
155 & 156	For Claus Rd. Quantities
113 & 114	For LOR-2-0262 Pier Protection Details
192	For Lor-2-0249 Repair Details And Quantities.
255 & 258	For Erosion Control at Bridge.

REF No.	Station to Station	Side	202 Guardrail Removed (LIN. FT.)	202 Guardrail Removed Barrier Design (LIN. FT.)	603 6" Conduit, Type F 707.17 Non-Perforated ASTM 3034 SDR35, SS931 or SS944 (LIN. FT.)	605 4" Shallow Pipe U.D. 707.15, As Per Plan (LIN. FT.)	Special Precast Reinforced Concrete Outlet (EACH)	Gaurdrail Type 5 Barrier Design (LIN. FT.)	Guardrail Type 5 (LIN. FT.)	606 Anchor Assembly Type E (EACH)	606 Anchor Assembly Barrier Design Type A (EACH)	Bridge Terminal Assembly Type 1 (EACH)	Anchor Assembly Type T (EACH)	622 Concrete Barrier Type D (LIN. FT.)		Bends and Branches 6" X 90° Bend (EACH)	Bends and Branches 6" X 60° Bend (EACH)	
B-1	STA 138+55 TO STA 139+10	LT												55.0				
B-2	STA 138+25 TO STA 138+80	RT												55.0				
G-1	STA 135+83.40 TO STA 138+25	RT							218.75	1		1						
G-2	STA 136+35.92 TO STA 139+10.50	LT&RT						112.5	125.00		1		1					
G-3	STA 139+10 TO STA 140+51.60	LT							118.75	1		1						
G-4	STA 138+24.50 TO STA 140+99.08	LT&RT						112.5	125.00		1		1					
R-1	STA 137+23 TO STA 139+10.50	RT	187.5															
R-2	STA 137+23 TO STA 140+00	LT&RT	475.0	39.5														
R-3	STA 138+23 TO STA 140+00	LT	177.0															
D-1	STA 130+00 TO STA 140+00	LT			66	1000	2									2		
D-2	STA 130+00 TO STA 140+00	LT			34	1000											1	
D-3	STA 130+00 TO STA 140+00	RT			68	1000	2									2		
D-4	STA 130+00 TO STA 140+00	RT			30	1000										1		
Totals Carried to Sub-Summaries See Sheets 86 & 87.			839.5	39.5	198	4000	4	225.0	587.5	2	2	2	2	110.0		5	1	

PLAN AND PROFILE STA. 130+00 TO STA. 140+00

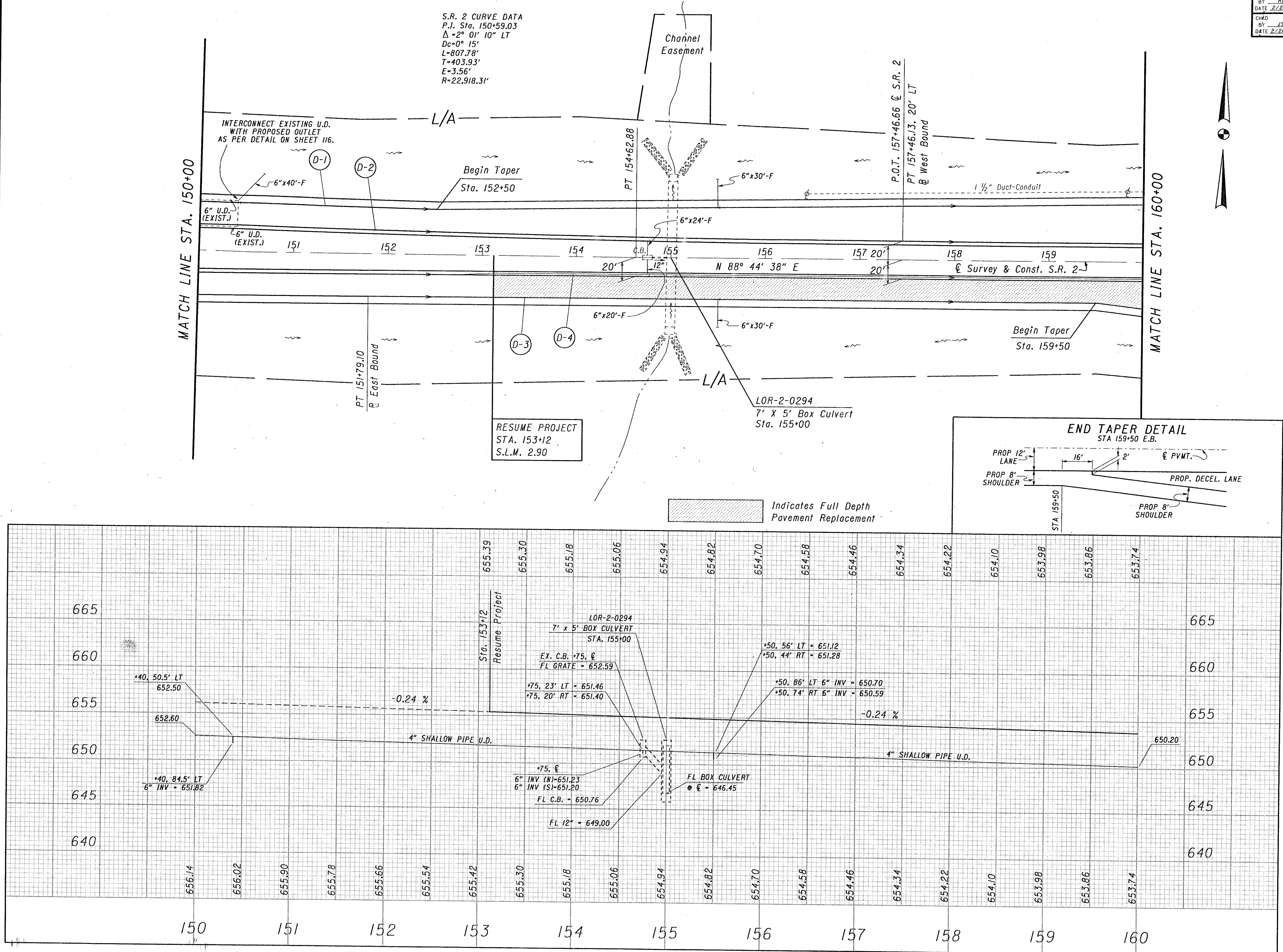


REF No.	Station to Station	Side	202 GUARDRAIL REMOVED (LIN. FT.)	202 GUARDRAIL REMOVED BARRIER DESIGN (LIN. FT.)	603 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 (LIN. FT.)	605 4" SHALLOW PIPE U.D. 707.15, AS PER PLAN (LIN. FT.)	SPECIAL PRECAST REINFORCED CONCRETE OUTLET (EACH)	BENDS AND BRANCHES 6" X 90° BEND (EACH)	BENDS AND BRANCHES 6" X 60° BEND (EACH)
R-1	STA 140+00 TO 140+10.50	LT&RT	10.5						
R-2	STA 140+00 TO 140+10.50	LT&RT		10.5					
D-1	STA 140+00 TO STA 150+00	LT			34	1000	1	1	
D-2	STA 140+00 TO STA 150+00	LT			32	1000			1
D-3	STA 140+00 TO STA 150+00	RT			25	1000		1	
D-4	STA 140+00 TO STA 150+00	RT			32	1000	1	1	
Totals Carried to Sub-Summaries See Sheets 86 & 87.			10.5	10.5	123	4000	2	3	1

PLAN AND PROFILE STA. 140+00 TO STA. 150+00

CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS
	ERIE & LORAIN COUNTIES

OHIO FHWA REGION 5 — 133/267

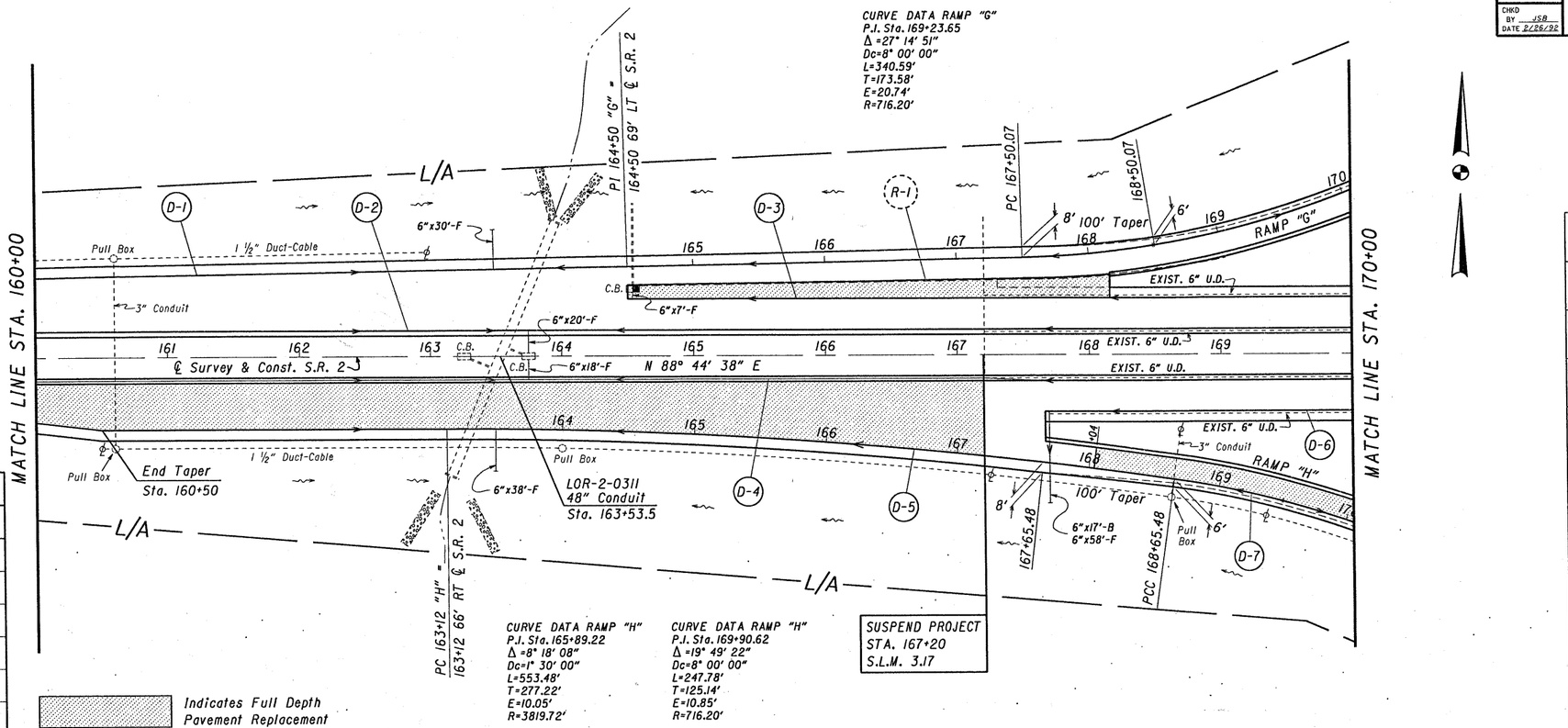


S.R. 2 CURVE DATA
P.I. Sta. 150+59.03
Δ=2° 01′ 10″ LT
Dc=0° 15′
L=807.78′
T=403.93′
E=3.56′
R=22,918.31′
Channel Easement
L/A
INTERCONNECT EXISTING U.D. WITH PROPOSED OUTLET AS PER DETAIL ON SHEET 116.
MATCH LINE STA. 150+00
MATCH LINE STA. 160+00
Begin Taper Sta. 152+50
PT 154+62.88
P.O.T. 157+46.66 ℄ S.R. 2
PT 157+46.13, 20′ LT ℄ West Bound
1 ½″ Duct-Conduit
N 88° 44′ 38″ E
℄ Survey & Const. S.R. 2
PT 151+79.10 ℄ East Bound
Begin Taper Sta. 159+50
RESUME PROJECT STA. 153+12 S.L.M. 2.90
LOR-2-0294 7′ X 5′ Box Culvert Sta. 155+00
END TAPER DETAIL STA 159+50 E.B.
PROP 12′ LANE
PROP 8′ SHOULDER
℄ PVMT.
PROP. DECEL. LANE
Indicates Full Depth Pavement Replacement
-0.24 %
4″ SHALLOW PIPE U.D.
FL BOX CULVERT @ ℄ = 646.45
FL C.B. = 650.76
FL 12″ = 649.00
EX. C.B. +75, ℄ FL GRATE = 652.59

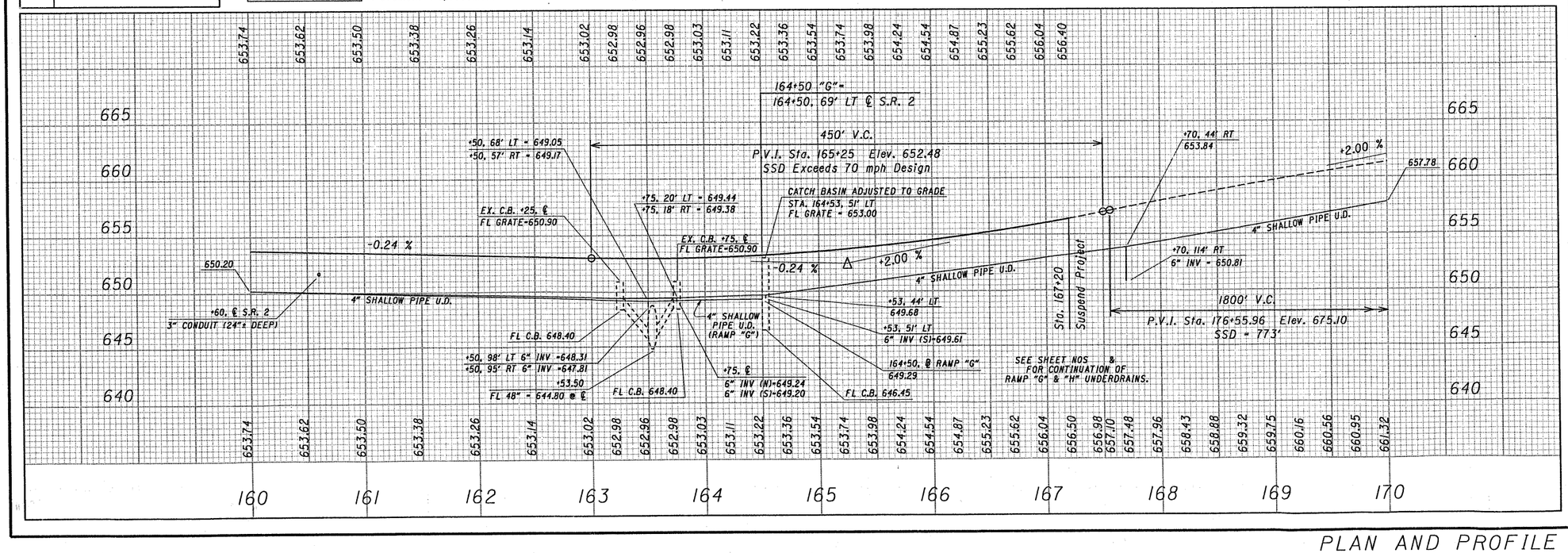
REF No.	Station to Station	Side	603 6″ CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944	605 4″ SHALLOW PIPE U.D. 707.15, AS PER PLAN	SPECIAL PRECAST REINFORCED CONCRETE OUTLET		BENDS AND BRANCHES 6″ X 45° BEND	6″ X 90° BEND
			LIN. FT.	LIN. FT.	EACH		EACH	EACH
D-1	STA 150+00 TO STA 160+00	LT	70	1000	2		1	1
D-2	STA 150+00 TO STA 160+00	LT	24	1000				1
D-3	STA 150+00 TO STA 160+00	RT	30	1000	1			1
D-4	STA 150+00 TO STA 160+00	RT	20	1000				1
Totals Carried to Sub-Summary See Sheet 86.			144	4000	3		1	4

PLAN AND PROFILE STA. 150+00 TO STA. 160+00

CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	134
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



CROSS REFERENCES	
Sheet No.	Description
105	For (R-1) Curb Removal Quantities
146 & 147	For Underdrain Locations on Ramps



REF No.	Station to Station	Side	603 6" CONDUIT TYPE B BORED OR JACKED, AS PER PLAN LIN. FT.	603 6" CONDUIT, TYPE F TOTAL NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	604 CATCH BASIN ADJUSTED TO GRADE EACH	605 4" SHALLOW PRECAST PIPE U.D. REINFORCED CONCRETE OUTLET AS PER PLAN LIN. FT.	SPECIAL EACH
D-1	STA 160+00 "G" TO STA 168+50 "G"	LT		30		850	1
D-2	STA 160+00 TO STA 170+00	LT		20		1000	
D-3	STA 164+53 TO STA 170+00	LT		7	1	547	
D-4	STA 160+00 TO STA 170+00	RT		18		1000	1
D-5	STA 160+00 "H" TO STA 167+70 "H"	RT		38		770	1
D-6	STA 167+70 TO STA 170+00	RT	27	58		230	1
D-7	STA 167+70 "H" TO STA 169+50 "H"	RT				180	
	Totals Carried to Sub-Summary See Sheet 86.		27	171	1	4577	3

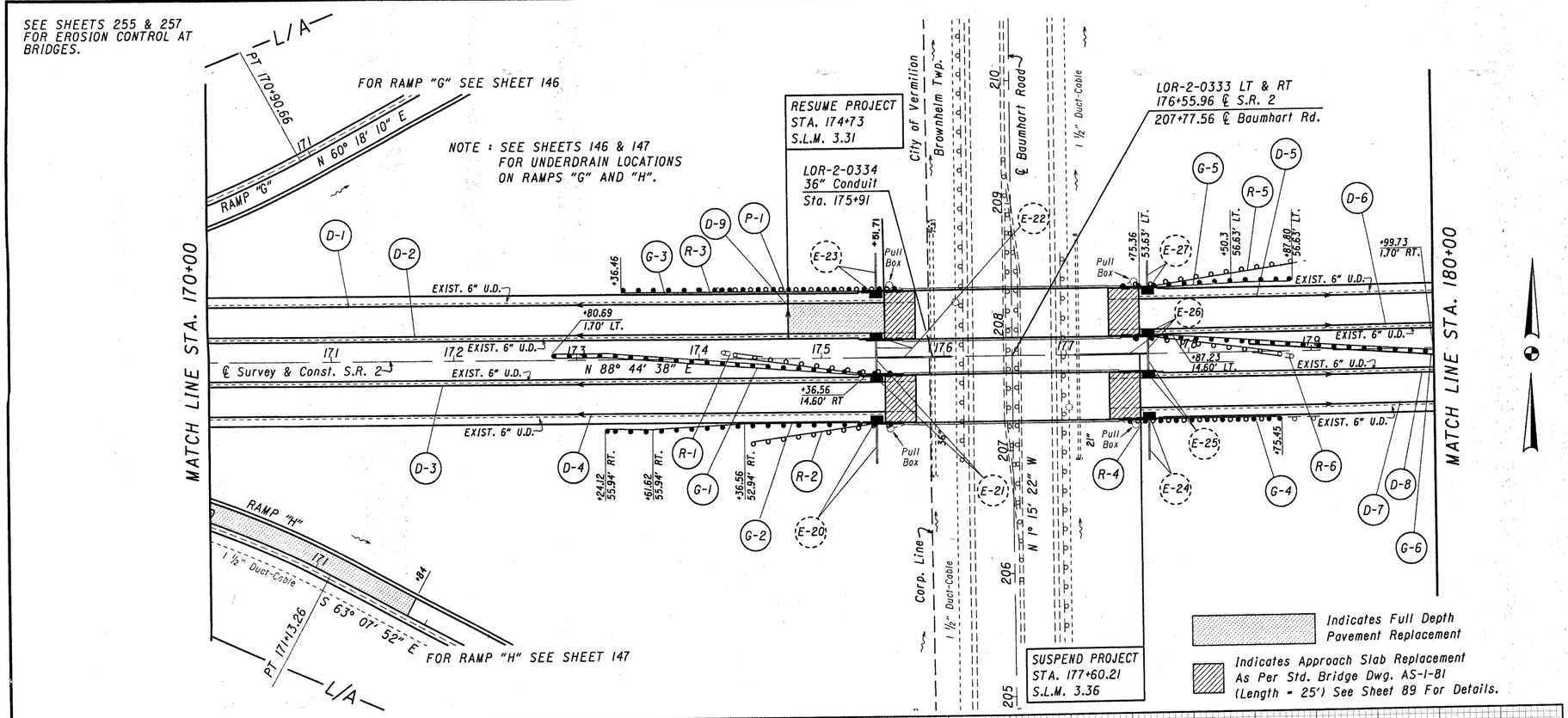
BENDS AND BRANCHES						
	6" X 90° TEE	EACH			5	2
	6" x 90° BEND	EACH				

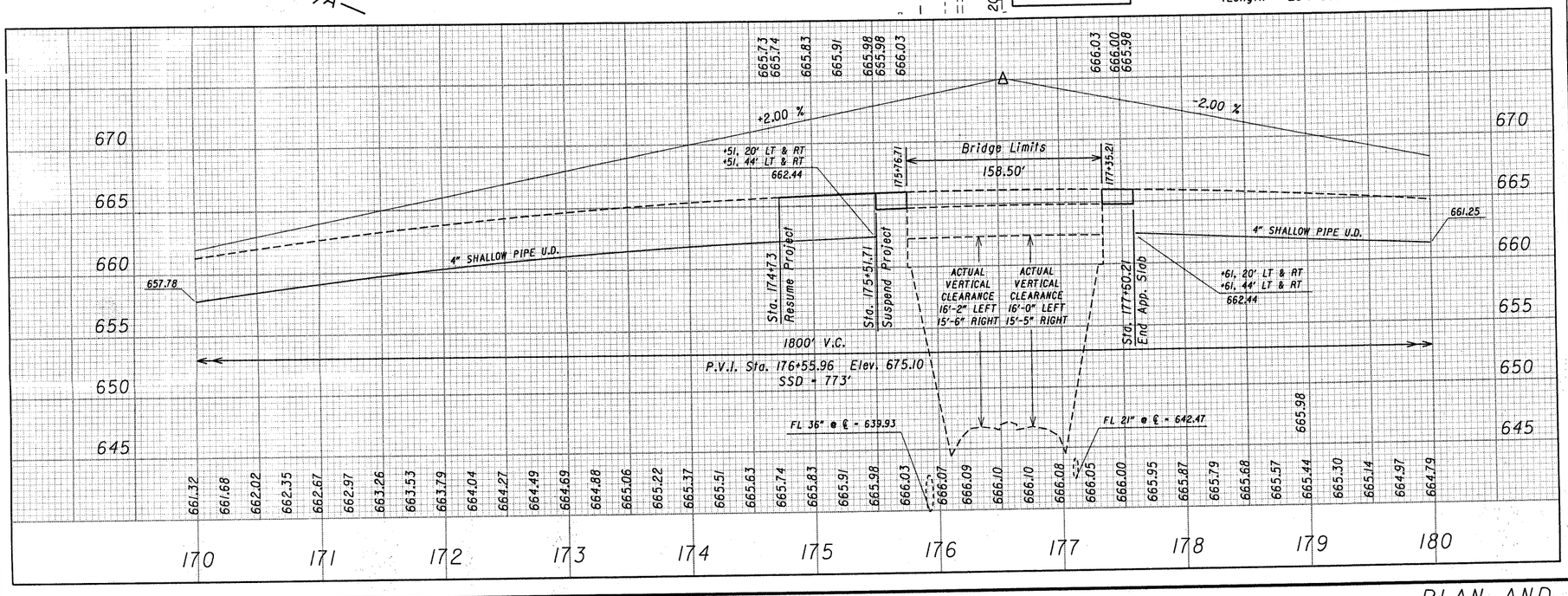
PLAN AND PROFILE STA. 160+00 TO STA. 170+00

CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	135
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

LOR-2-0333 Lt. & Rt.
S.R. 2 over Baumhart Road

TYPE : Continuous Steel Beam
LENGTH : 158.50 ft.
WIDTH : 38'-6" T/T GM Parapet
SKEW : None
LOADING : HS-20-44





REF No.	Station to Station		202 GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	SPECIAL PRESSURE RELIEF JOINT TYPE A	4" SHALLOW PIPE U.D. 707.15, AS PER PLAN	605 6" SHALLOW PIPE U.D. SS911 OR ASTM 3034 SDR35, PERFORATED AS PER 707.15	GUARDRAIL TYPE 5	GUARDRAIL TYPE 5 BARRIER DESIGN	606 GUARDRAIL TYPE 5 ANCHOR ASSEMBLY TYPE E	BRIDGE TERMINAL ASSEMBLY TYPE 1	BRIDGE TERMINAL ASSEMBLY TYPE 2	ANCHOR ASSEMBLY TYPE T	SPECIAL IMPACT ATTENUATOR, TYPE I, BIDIRECTIONAL	BENDS AND BRANCHES 6" X 90° TEE	6" X 60° BEND
			LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH
G-1	STA 172+80.69 TO STA 174+65.71	℄						106.25	150.00	1	1					
G-2	STA 173+24.12 TO STA 175+65.71	RT						218.75				1	1			
G-3	STA 173+36.46 TO STA 175+65.71	LT						225.0				1	1			
G-4	STA 177+46.21 TO STA 178+75.45	RT						125.0				1	1			
G-5	STA 177+46.21 TO STA 178+87.80	LT						118.75	150.0			1	1	1		
G-6	STA 177+46.21 TO STA 178+77.46	℄						105.25								
P-1	STA 174+73 (To General Summary)	LT			36											
R-1	STA 174+40.3 TO STA 175+65.30	℄	87.5	37.5												
R-2	STA 174+15.3 TO STA 175+65.30	RT	150.0				55l									
R-3	STA 174+15.3 TO STA 175+65.30	LT	150.0				55l									
R-4	STA 177+46.6 TO STA 178+96.60	RT	150.0				55l									
R-5	STA 177+46.6 TO STA 178+96.60	LT	150.0				239									
R-6	STA 177+46.6 TO STA 178+96.60	℄	87.5	37.5			239									
D-1	STA 170+00 TO STA 175+51	LT					55l									
D-2	STA 170+00 TO STA 175+51	LT					55l									
D-3	STA 170+00 TO STA 175+51	RT					55l									
D-4	STA 170+00 TO STA 175+51	RT					239									
D-5	STA 177+61 TO STA 180+00	LT					239									
D-6	STA 177+61 TO STA 180+00	LT					239									
D-7	STA 177+61 TO STA 180+00	RT					239									
D-8	STA 177+61 TO STA 180+00	RT					239									
D-9	STA 174+73	LT					38									
Totals Carried to Sub-Summaries See Sheets 86 & 87.			775.0	75.0	36	3160	38	900	300.0	2	4	2	2	2	1	1

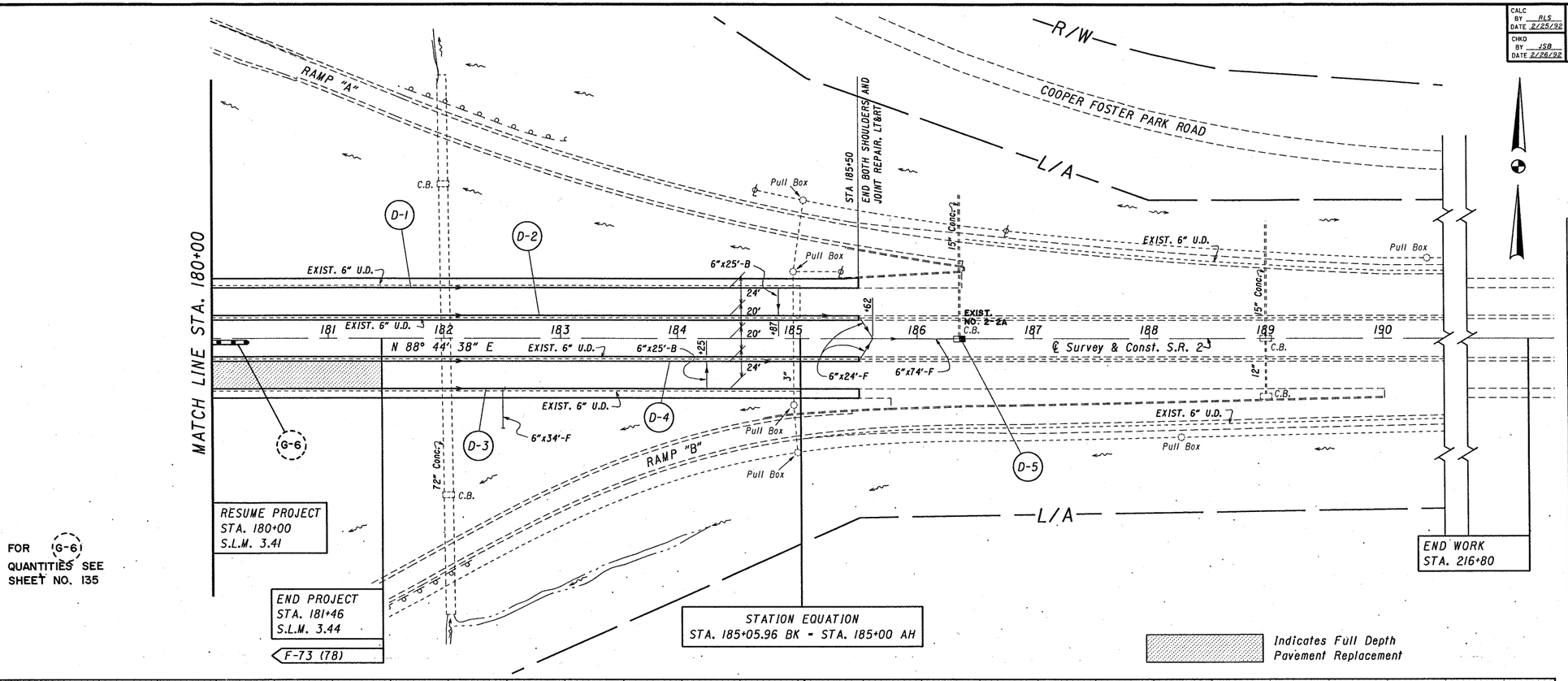
PLAN AND PROFILE STA. 170+00 TO STA. 180+00

CALC BY RLS DATE 2/25/92
CHKD BY JSB DATE 2/26/92

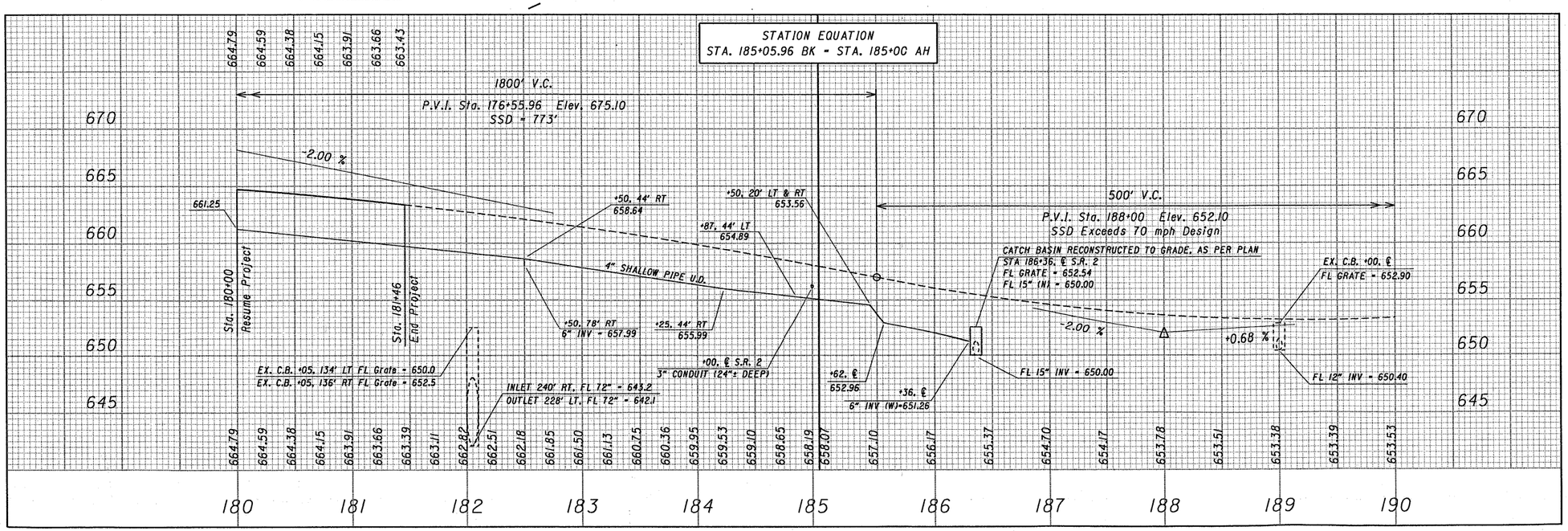
ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

135A
267



FOR (G-6) QUANTITIES SEE SHEET NO. 135



REF No.	Station to Station	Side	6" CONDUIT TYPE B LIN. FT.	6" CONDUIT, TYPE F 700 JT NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	CATCH BASIN RECONSTRUCTED TO GRADE AS PER PLAN EACH	4" SHALLOW PIPE U.D. TOT.LS. AS PER PLAN LIN. FT.	PRECAST REINFORCED CONCRETE OUTLET EACH	SPECIAL BENDS AND BRANCHES 6" X 90° BEND EACH	6" X 90° TEE EACH	6" X 60° BEND EACH	6" X 60° WYE EACH
D-1	STA. 180+00 TO STA. 184+87	LT	25			487		1		1	1
D-2	STA. 180+00 TO STA. 186+36	LT		98		556			1	1	
D-3	STA. 180+00 TO STA. 184+25	RT	25	34		425	1	1	1		
D-4	STA. 180+00 TO STA. 184+62	RT		24		556			1	1	
D-5	STA. 186+36, ℄ S.R. 2	℄			1						
	Totals Carried to Sub-Summary See Sheet 86.		50	156	1	2024	1	2	3	2	1

PLAN AND PROFILE STA. 180+00 TO STA. 190+00

RAMP "Q" CURVE DATA
P.I. Sta. 17+39.76
Δ =15° 17' 47"
Dc=6° 00' 00"
L=254.94'
T=128.23'
E=8.57'
R=954.93'

RAMP "O" CURVE DATA
P.I. Sta. 20+05.24
Δ =32° 24' 44"
Dc=12° 00' 00"
L=270.10'
T=138.77'
E=19.76'
R=477.47'

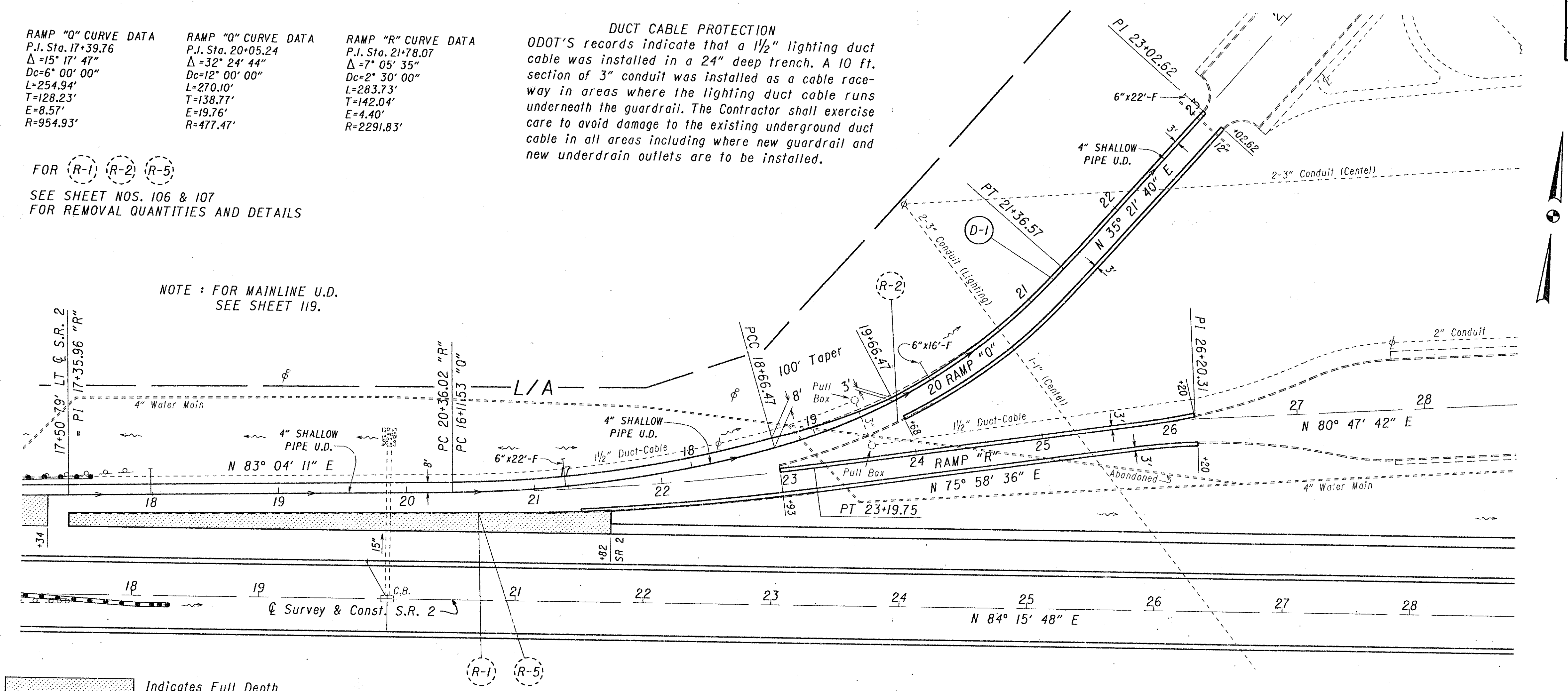
RAMP "R" CURVE DATA
P.I. Sta. 21+78.07
Δ =7° 05' 35"
Dc=2° 30' 00"
L=283.73'
T=142.04'
E=4.40'
R=2291.83'

DUCT CABLE PROTECTION

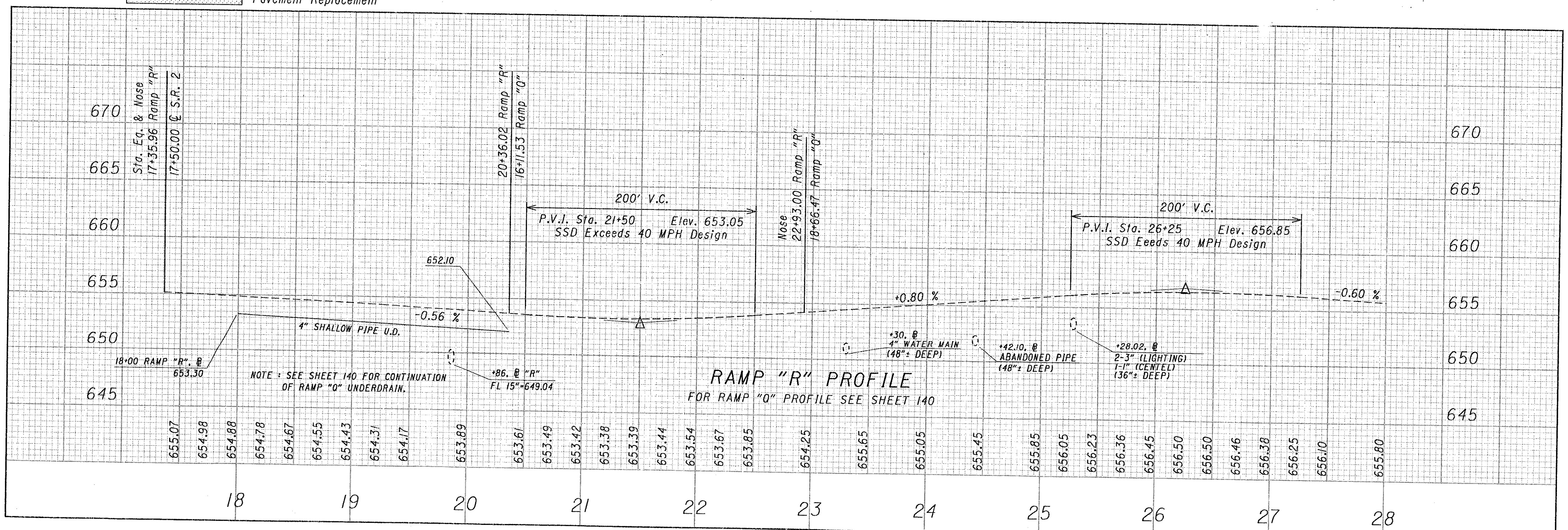
ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.

FOR (R-1) (R-2) (R-5)
SEE SHEET NOS. 106 & 107
FOR REMOVAL QUANTITIES AND DETAILS

NOTE : FOR MAINLINE U.D.
SEE SHEET 119.



Indicates Full Depth Pavement Replacement

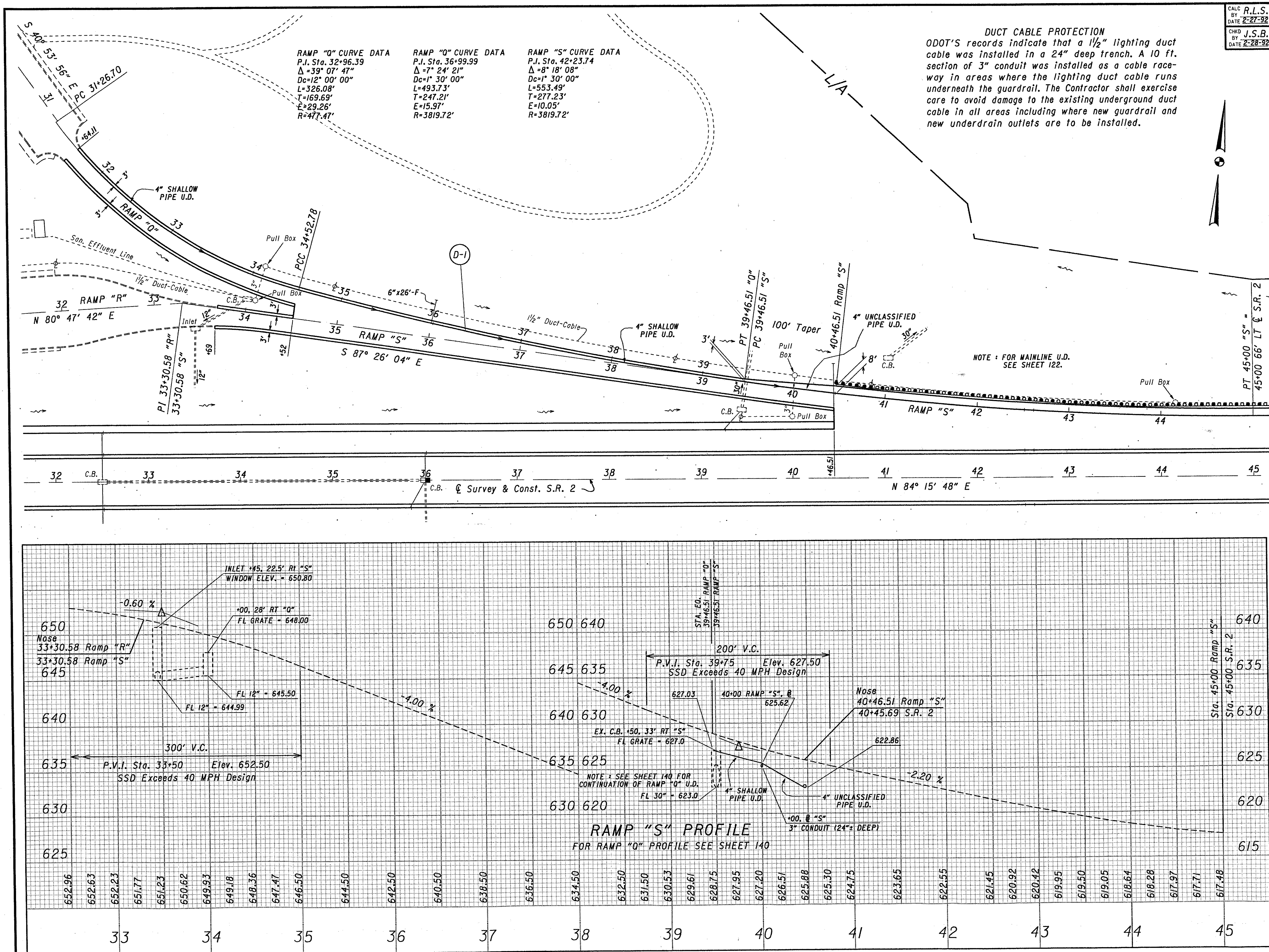


REF No.	Station to Station	603 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 (LIN. FT.)	605 4" SHALLOW PIPE U.D. 707.17, ASTM 3034 SDR35, OR SS931, OR SS944, PERFORATED AS PER 707.15 (LIN. FT.)	SPECIAL PRECAST REINFORCED CONCRETE OUTLET (EACH)		BENDS AND BRANCHES 6" X 90° BEND (EACH)		
D-1	STA 18+00 "R" TO STA 23+02.62 "O"	60	928	3		3		
Totals Carried to Sub-Summary See Sheet 86		60	928	3		3		

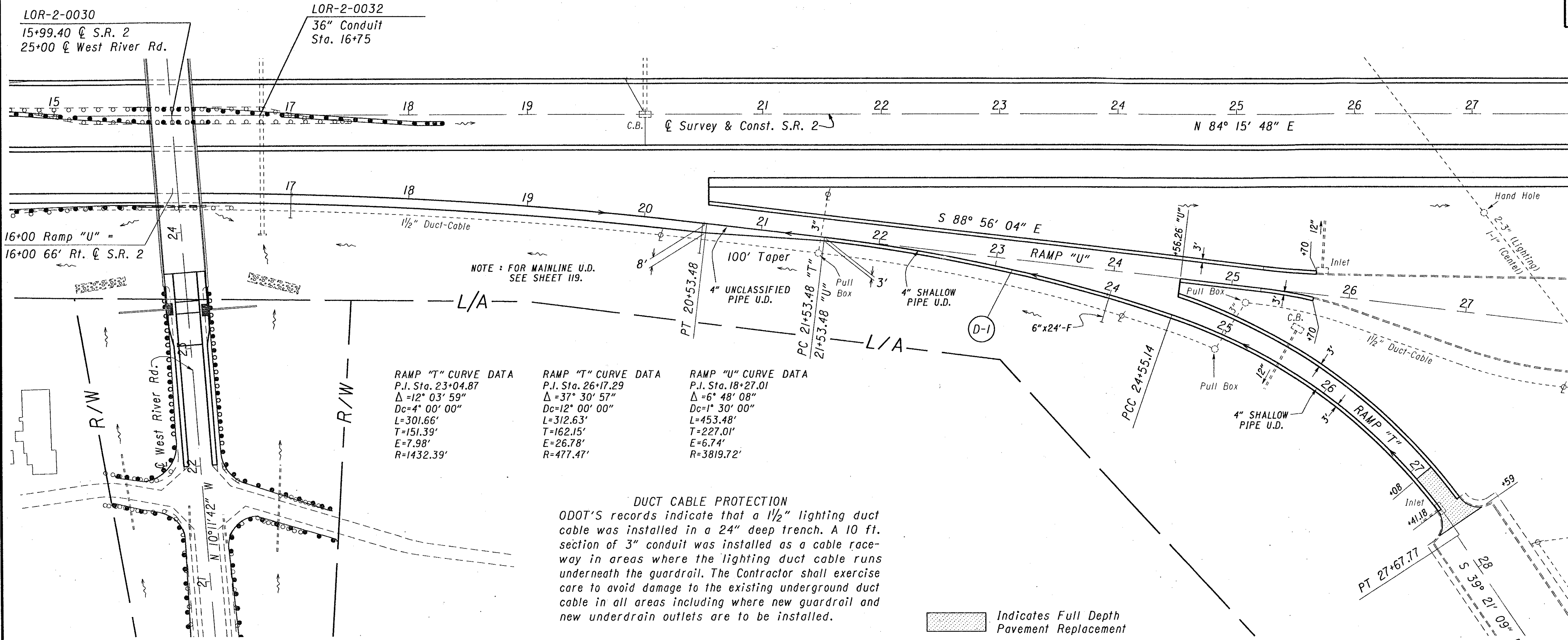
DUCT CABLE PROTECTION

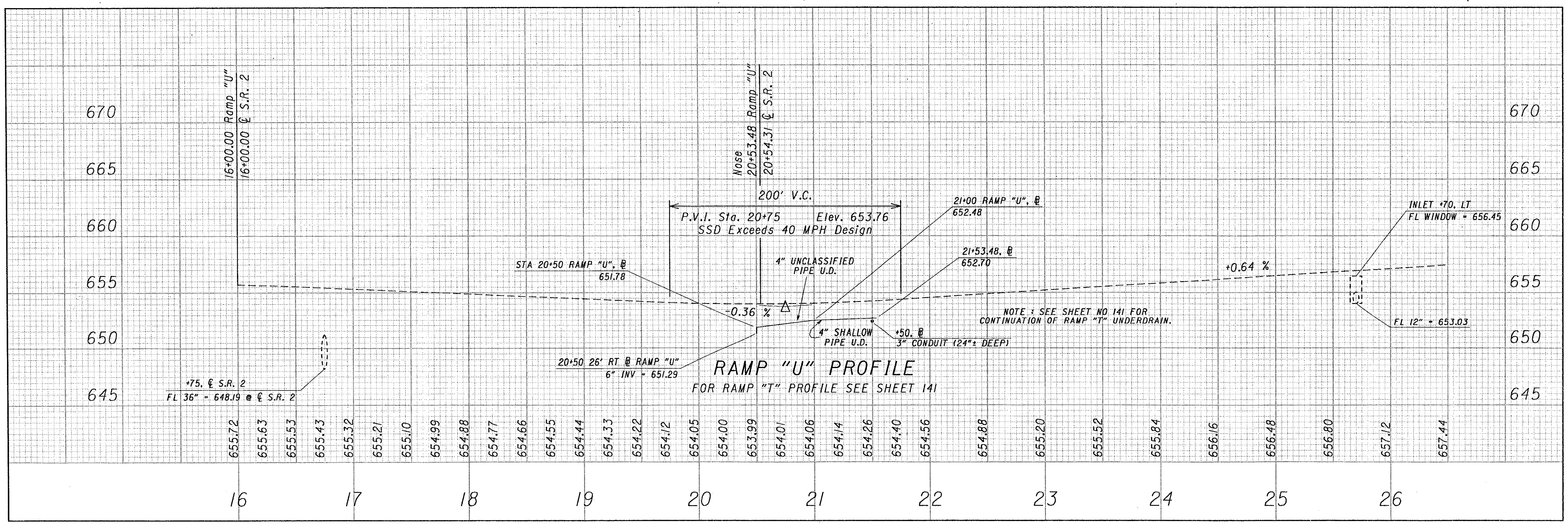
ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.

RAMP "Q" CURVE DATA	RAMP "Q" CURVE DATA	RAMP "S" CURVE DATA
P.I. Sta. 32+96.39	P.I. Sta. 36+99.99	P.I. Sta. 42+23.74
Δ =39° 07' 47"	Δ =7° 24' 21"	Δ =8° 18' 08"
Dc=12° 00' 00"	Dc=1° 30' 00"	Dc=1° 30' 00"
L=326.08'	L=493.73'	L=553.49'
T=169.69'	T=247.21'	T=277.23'
E=29.26'	E=15.97'	E=10.05'
R=477.47'	R=3819.72'	R=3819.72'



REF No.	Station to Station	603: 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 (LIN. FT.)	605: 4" SHALLOW PIPE U.D. 707.17, ASTM 3034 SDR35, OR SS931, OR SS944, PERFORATED AS PER 707.15 (LIN. FT.)	605: 4" UNCLAS. PIPE U.D. 707.17, ASTM 3034 SDR35, OR SS931, OR SS944, PERFORATED AS PER 707.15 (LIN. FT.)	SPECIAL: PRECAST REINFORCED CONCRETE OUTLET (EACH)	BENDS AND BRANCHES: 6" X 90° BEND (EACH)	BENDS AND BRANCHES: 6" X 90° TEE (EACH)
D-1	STA 31+64.11 "Q" TO STA 40+46.51 "S"	26	836	47	1	1	1
Totals Carried to Sub-Summary See Sheet 86		26	836	47	1	1	1


LOR-2-0030
15+99.40 ℄ S.R. 2
25+00 ℄ West River Rd.
LOR-2-0032
36" Conduit
Sta. 16+75
℄ Survey & Const. S.R. 2
N 84° 15' 48" E
C.B.
16+00 Ramp "U" =
16+00 66' Rt. ℄ S.R. 2
1½" Duct-Cable
NOTE : FOR MAINLINE U.D. SEE SHEET 119.
100' Taper
PT 20+53.48
PC 21+53.48 "T"
21+53.48 "U"
4" UNCLASSIFIED PIPE U.D.
Pull Box
4" SHALLOW PIPE U.D.
S 88° 56' 04" E
RAMP "U"
D-1
6"x24'-F
PCC 24+55.14
Pull Box
Inlet
Hand Hole
2-3" (Lighting) 1-1" (Center)
RAMP "T"
PT 27+67.77
S 39° 21' 09" E
L/A
R/W
West River Rd.
N 10° 11' 42" W
RAMP "T" CURVE DATA
P.I. Sta. 23+04.87
Δ =12° 03' 59"
Dc=4° 00' 00"
L=301.66'
T=151.39'
E=7.98'
R=1432.39'
RAMP "T" CURVE DATA
P.I. Sta. 26+17.29
Δ =37° 30' 57"
Dc=12° 00' 00"
L=312.63'
T=162.15'
E=26.78'
R=477.47'
RAMP "U" CURVE DATA
P.I. Sta. 18+27.01
Δ =6° 48' 08"
Dc=1° 30' 00"
L=453.48'
T=227.01'
E=6.74'
R=3819.72'
DUCT CABLE PROTECTION
ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.
Indicates Full Depth Pavement Replacement


16+00.00 Ramp "U"
16+00.00 ℄ S.R. 2
Nose
20+53.48 Ramp "U"
20+54.31 ℄ S.R. 2
200' V.C.
P.V.I. Sta. 20+75 Elev. 653.76
SSD Exceeds 40 MPH Design
4" UNCLASSIFIED PIPE U.D.
STA 20+50 RAMP "U", ℄ 651.78
-0.36 %
21+00 RAMP "U", ℄ 652.48
21+53.48, ℄ 652.70
4" SHALLOW PIPE U.D.
+50, ℄ 3" CONDUIT (24"± DEEP)
NOTE : SEE SHEET NO 141 FOR CONTINUATION OF RAMP "T" UNDERDRAIN.
+0.64 %
INLET +70, LT
FL WINDOW = 656.45
FL 12" = 653.03
20+50 26' RT ℄ RAMP "U"
6" INV = 651.29
+75, ℄ S.R. 2
FL 36" = 648.19 @ ℄ S.R. 2
RAMP "U" PROFILE
FOR RAMP "T" PROFILE SEE SHEET 141
670 665 660 655 650 645
655.72 655.63 655.53 655.43 655.32 655.21 655.10 654.99 654.88 654.77 654.66 654.55 654.44 654.33 654.22 654.12 654.05 654.00 653.99 654.01 654.06 654.14 654.26 654.40 654.56 654.88 655.20 655.52 655.84 656.16 656.48 656.80 657.12 657.44
16 17 18 19 20 21 22 23 24 25 26

REF No.	Station to Station	603 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944	605 4" SHALLOW PIPE U.D. 707.17, ASTM 3034 SDR35, OR SS931, OR SS944, PERFORATED AS PER 707.15	605 4" UNCLAS. PIPE U.D. 707.17, ASTM 3034 SDR35, OR SS931, OR SS944, PERFORATED AS PER 707.15	SPECIAL PRECAST REINFORCED CONCRETE OUTLET	BENDS AND BRANCHES 6" X 90° BEND
		LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH
D-1	STA 20+50 "U" TO STA 27+41.18 "T"	24	542	50	1	1
Totals Carried to Sub-Summary See Sheets 86		24	542	50	1	1

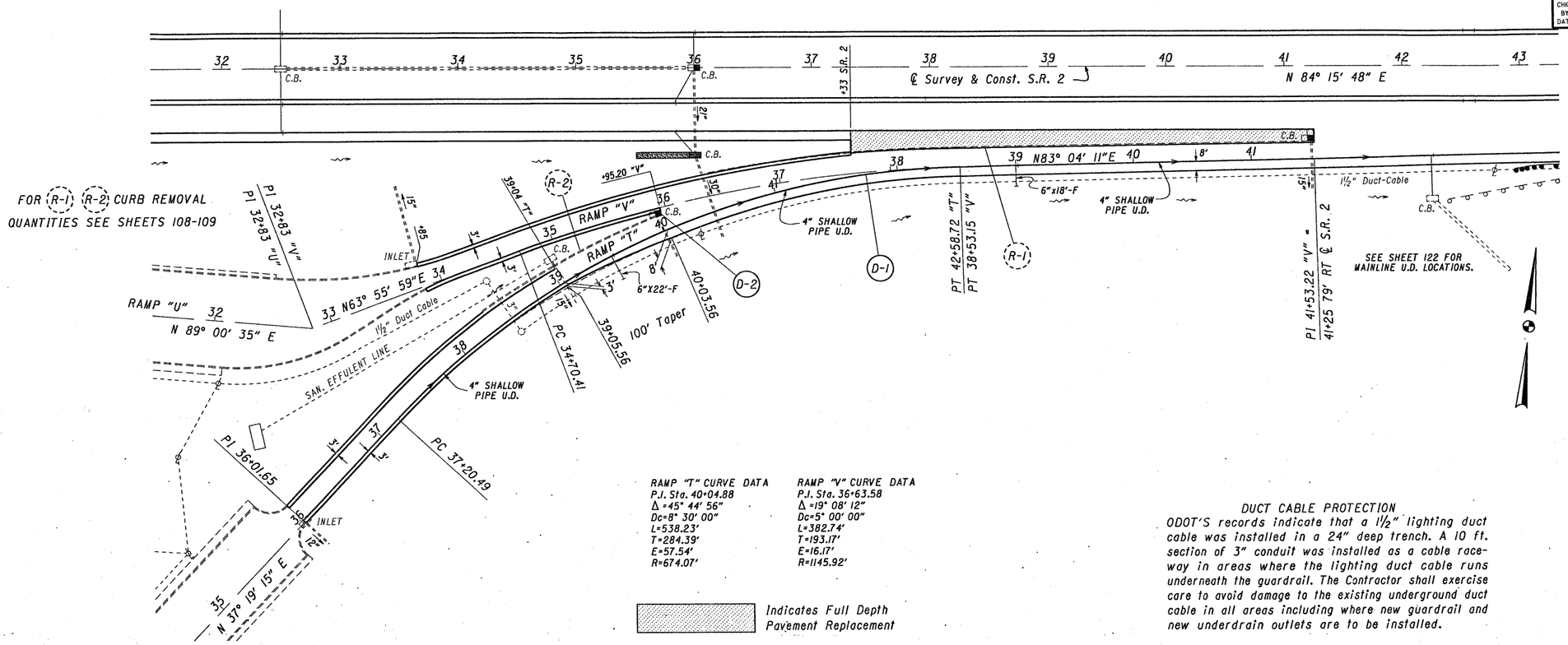
PLAN AND PROFILE SHEET DECELERATION LANE, RAMP "U" & RAMP "T"

CALC BY R.L.S. DATE 2-27-92
CHKD BY J.S.B. DATE 2-28-92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

139
267



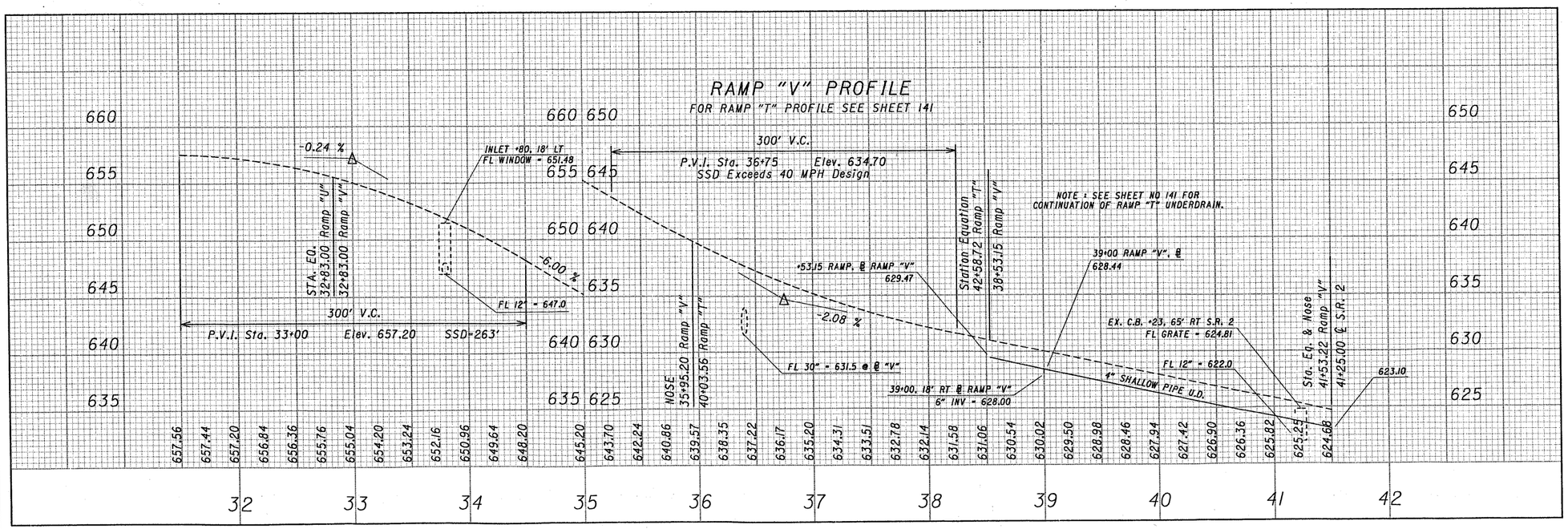
RAMP "T" CURVE DATA
P.I. Sta. 40+04.88
Δ =45° 44' 56"
Dc=8° 30' 00"
L=538.23'
T=284.39'
E=57.54'
R=674.07'

RAMP "V" CURVE DATA
P.I. Sta. 36+63.58
Δ =19° 08' 12"
Dc=5° 00' 00"
L=382.74'
T=193.17'
E=16.17'
R=1145.92'

Indicates Full Depth Pavement Replacement

DUCT CABLE PROTECTION

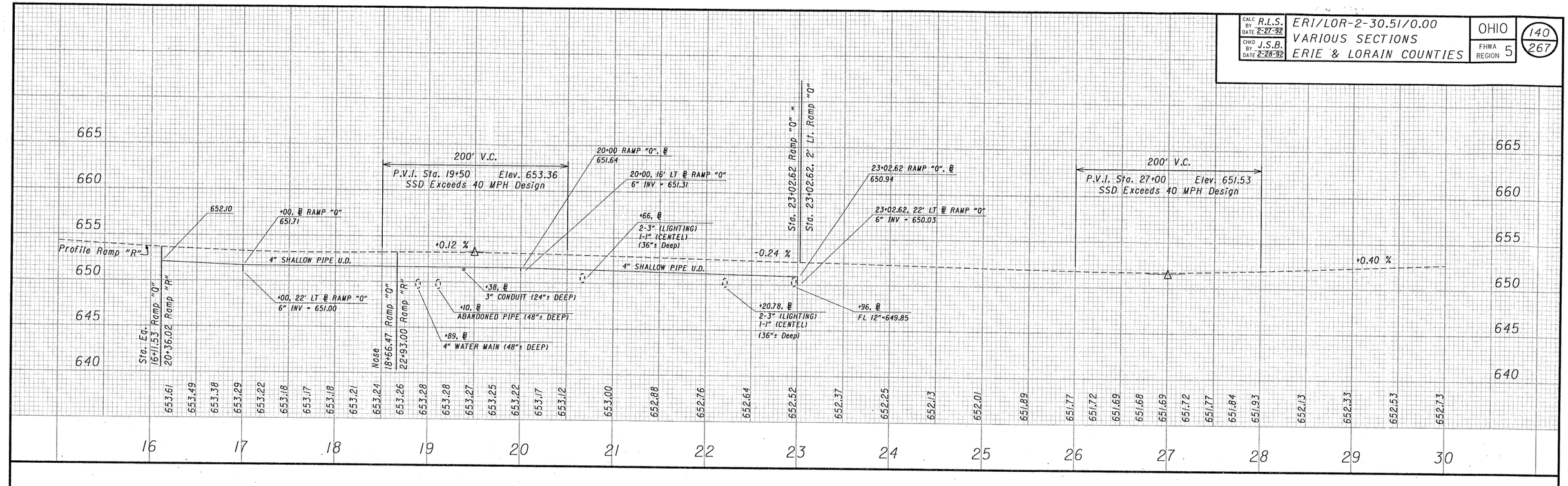
ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.

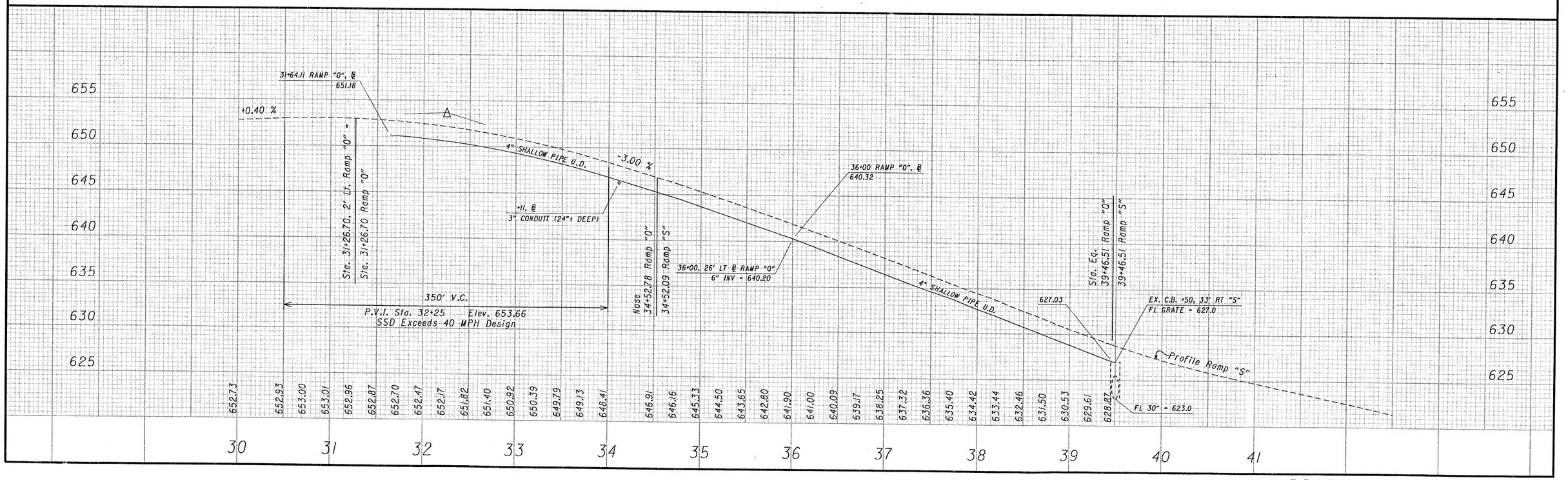


REF No.	Station to Station	603 6" CONDUIT TYPE F 100' MIN PERFORATED ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	604 CATCH BASIN ADJUSTED TO GRADE EACH	605 4" SHALLOW PIPE U.D. 707.17, ASTM 3034 SDR35, OR SS931, OR SS944 REINFORCED AS PER 707.15 LIN. FT.	SPECIAL PRECAST REINFORCED CONCRETE OUTLET EACH	BENDS AND BRANCHES 6" X 90° BEND EACH
D-1	STA 36+01.65 "T" TO STA 41+53.22 "V"	40		958	2	2
Totals Carried to Sub-Summary See Sheet 86		40	1	958	2	2

PLAN AND PROFILE SHEET ACCELERATION LANE & RAMP "V"

CALC BY R.L.S. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	140
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267





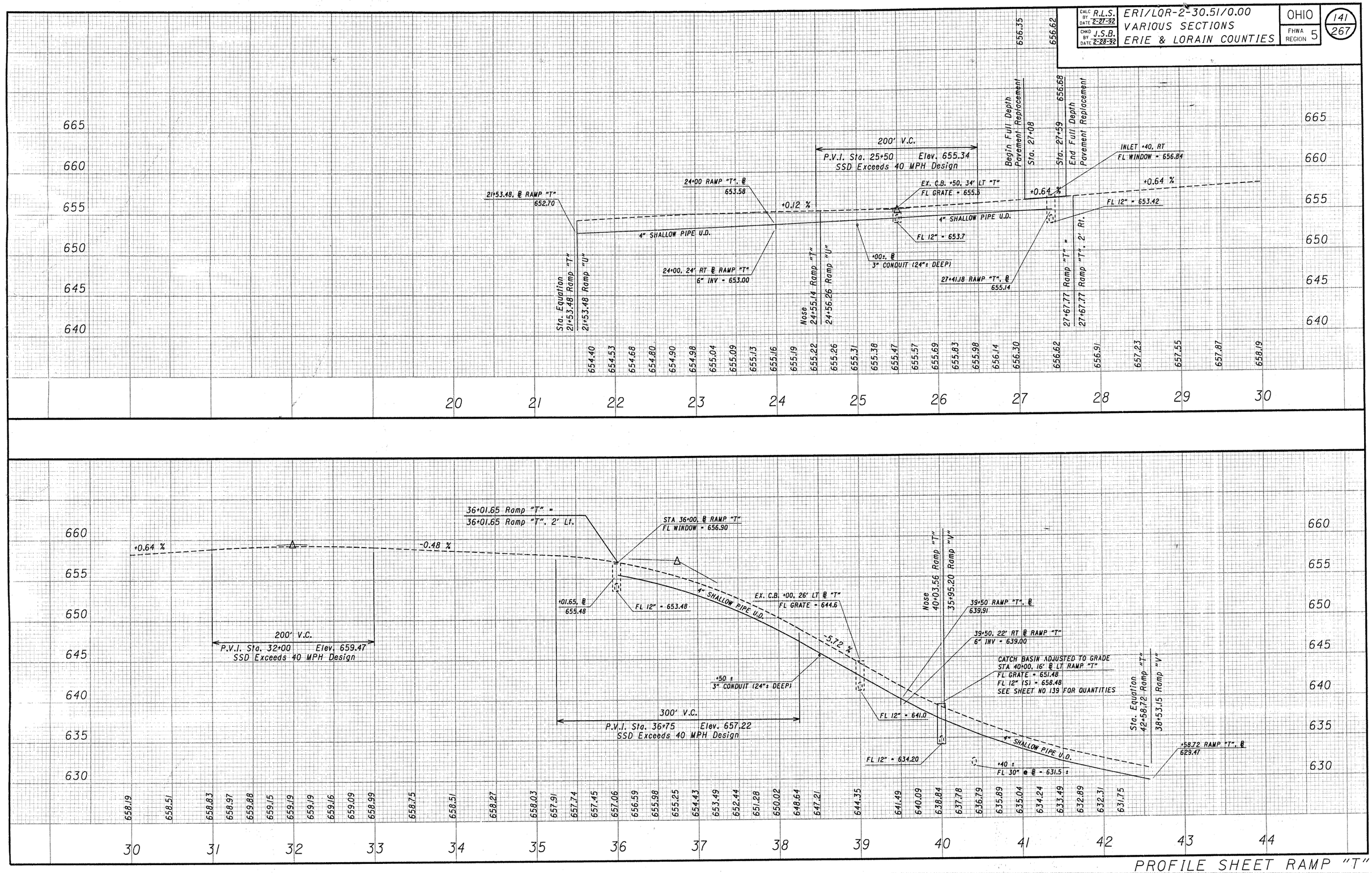
PROFILE SHEET RAMP "0"

CALC BY R.L.S. DATE 2-27-92
CHKD BY J.S.B. DATE 2-28-92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

141
267



PROFILE SHEET RAMP "T"

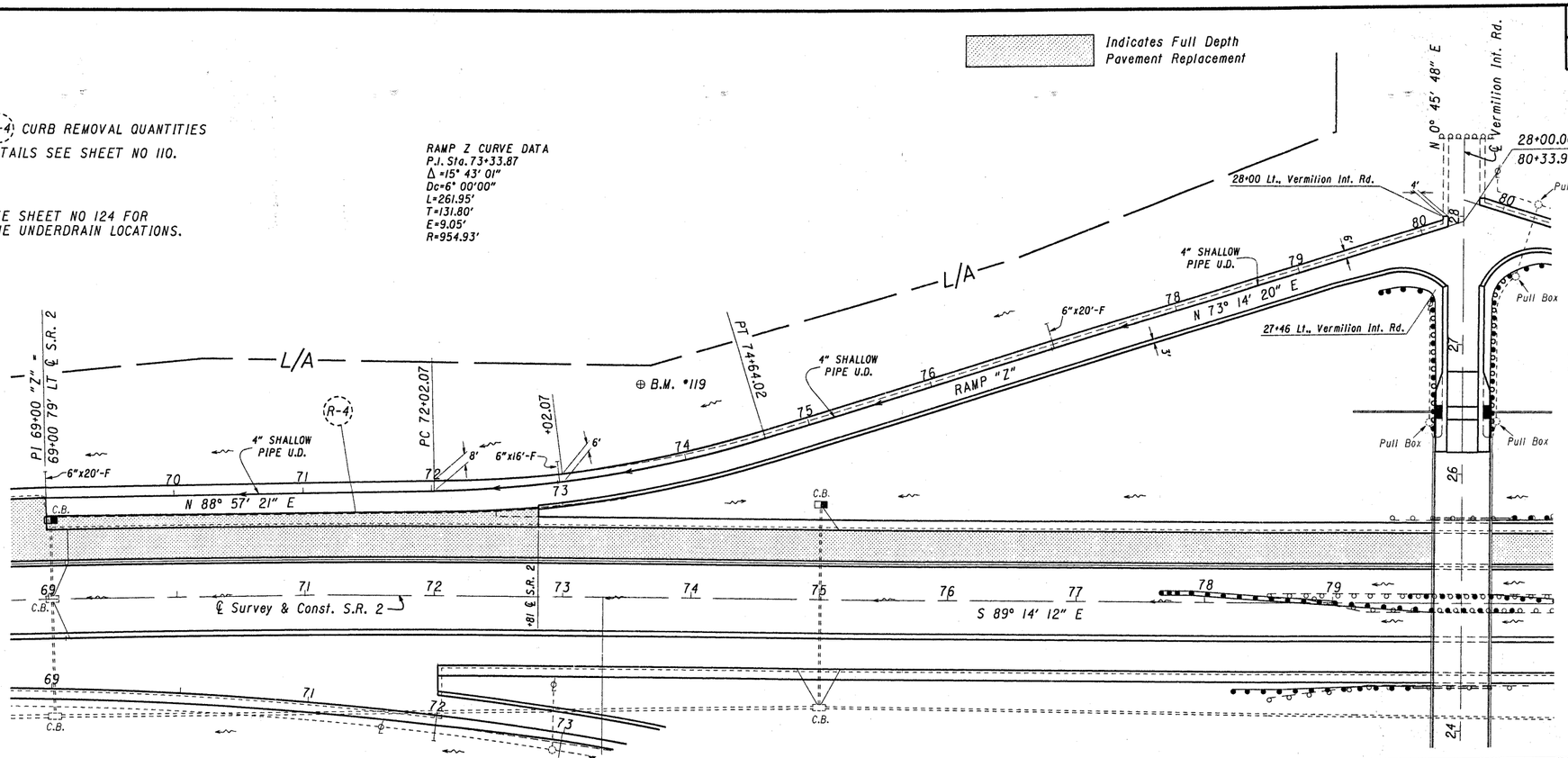
CALC BY R.L.S. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	142
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

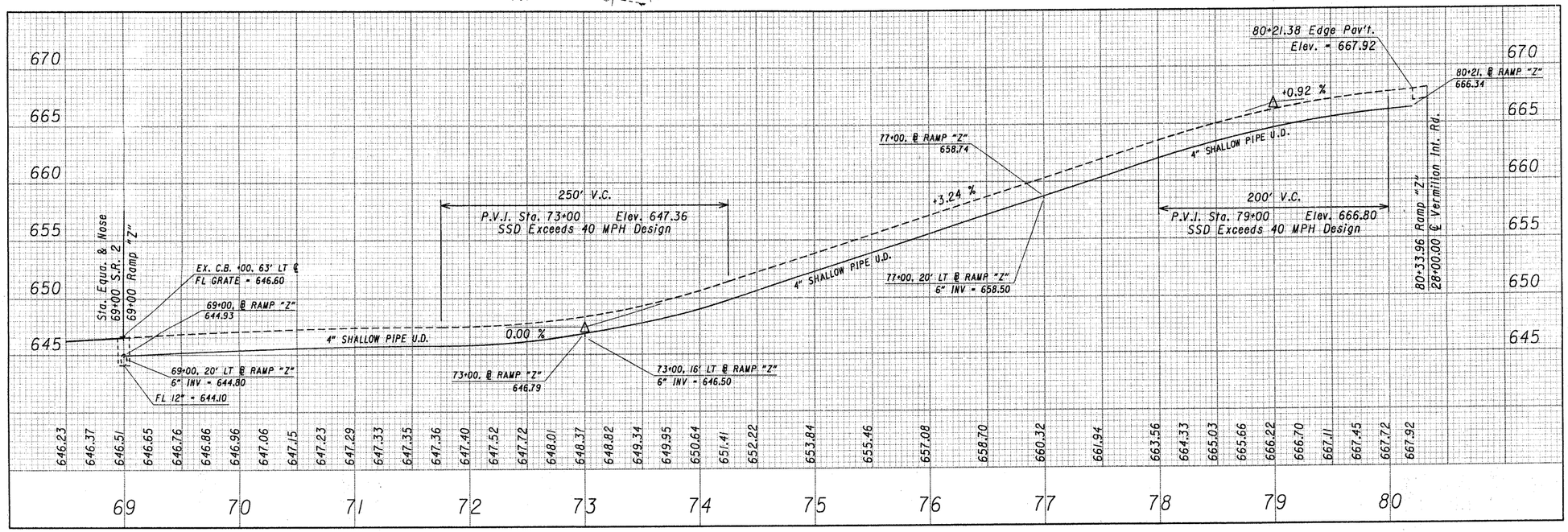
Indicates Full Depth Pavement Replacement

FOR (R-4) CURB REMOVAL QUANTITIES AND DETAILS SEE SHEET NO 110.

SEE SHEET NO 124 FOR MAINLINE UNDERDRAIN LOCATIONS.

RAMP Z CURVE DATA
P.I. Sta. 73+33.87
Δ =15° 43' 01"
Dc=6° 00'00"
L=261.95'
T=131.80'
E=9.05'
R=954.93'





REF No.	Station to Station	603 6" CONDUIT, TYPE F ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	605 4" SHALLOW PIPE U.D. 707.17- ASTM 3034 SDR35, OR SS931 OR SS944 AS PER 707.15 LIN. FT.	SPECIAL PRECAST REINFORCED CONCRETE OUTLET EACH	BENDS AND BRANCHES 6" x 90° BEND EACH
D-1	STA 69+00 "Z" TO STA 80+21 "Z"	56	1122	3	3
	Totals Carried to Sub-Summary See Sheet 86	56	1122	3	3

PLAN AND PROFILE SHEET RAMP "Z"

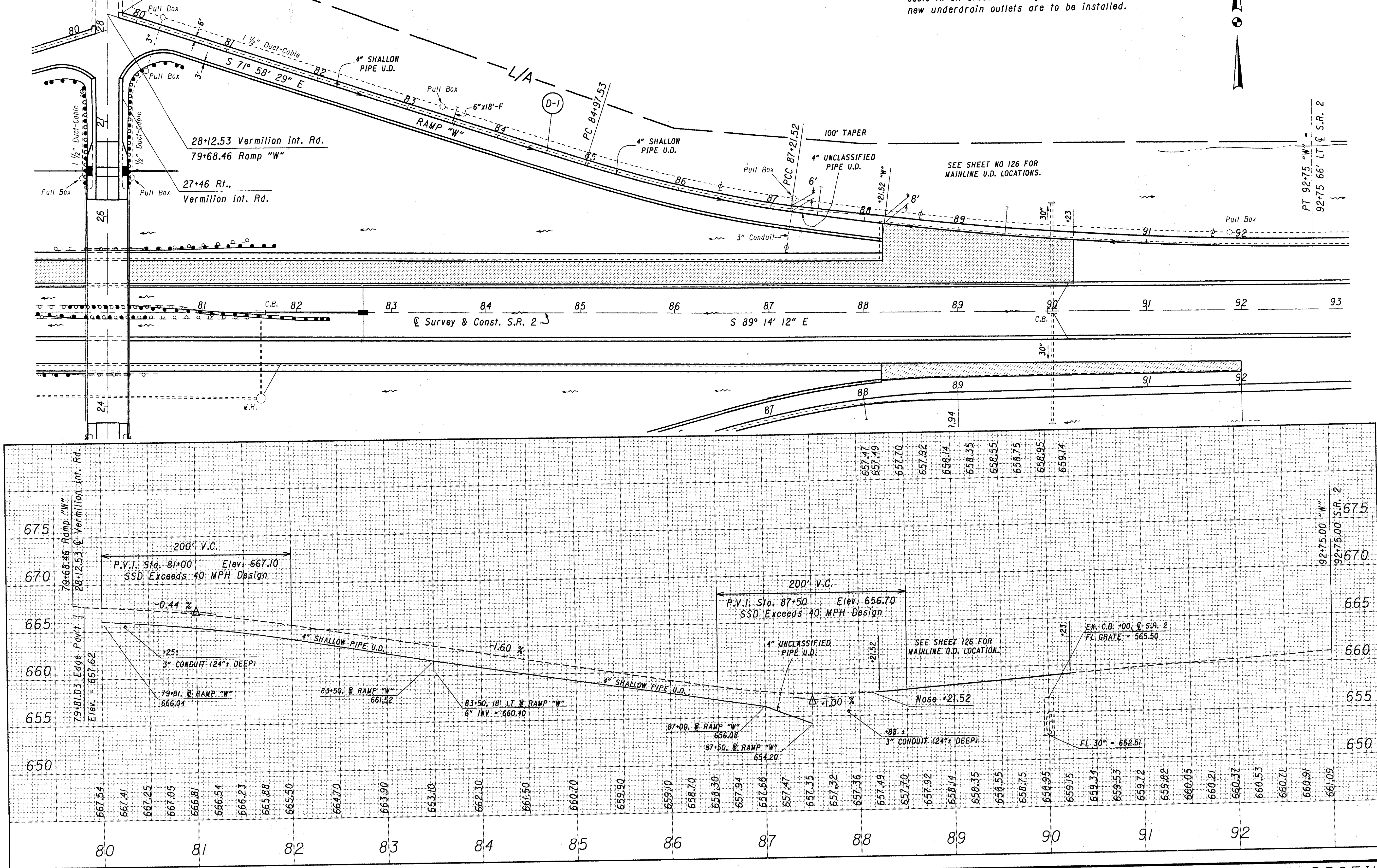
Indicates Full Depth Pavement Replacement

RAMP "W" CURVE DATA
P.I. Sta. 86+09.75
Δ =8° 57' 35"
Dc=4° 00' 00"
L=223.99'
T=112.22'
E=4.39'
R=1432.39'

RAMP "W" CURVE DATA
P.I. Sta. 89+98.75
Δ =8° 18' 08"
Dc=1° 30' 00"
L=553.48'
T=277.23'
E=10.05'
R=3819.72'

DUCT CABLE PROTECTION

ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.



REF No.	Station to Station	603: 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 (LIN. FT.)	605: 4" SHALLOW PIPE U.D. 707.17, ASTM 3034 SDR35, OR SS931, OR SS944, PERFORATED AS PER 707.15 (LIN. FT.)	605: 4" UNCLAS. PIPE U.D. 707.17, ASTM 3034 SDR35, OR SS931, OR SS944, PERFORATED AS PER 707.15 (LIN. FT.)	SPECIAL: PRECAST REINFORCED CONCRETE OUTLET (EACH)	BENDS AND BRANCHES: 6" X 90° BEND (EACH)
D-1	STA 79+81 "W" TO STA 87+50 "W"	18	720	50	1	1
Totals Carried to Sub-Summary See Sheet 86		18	720	50	1	1

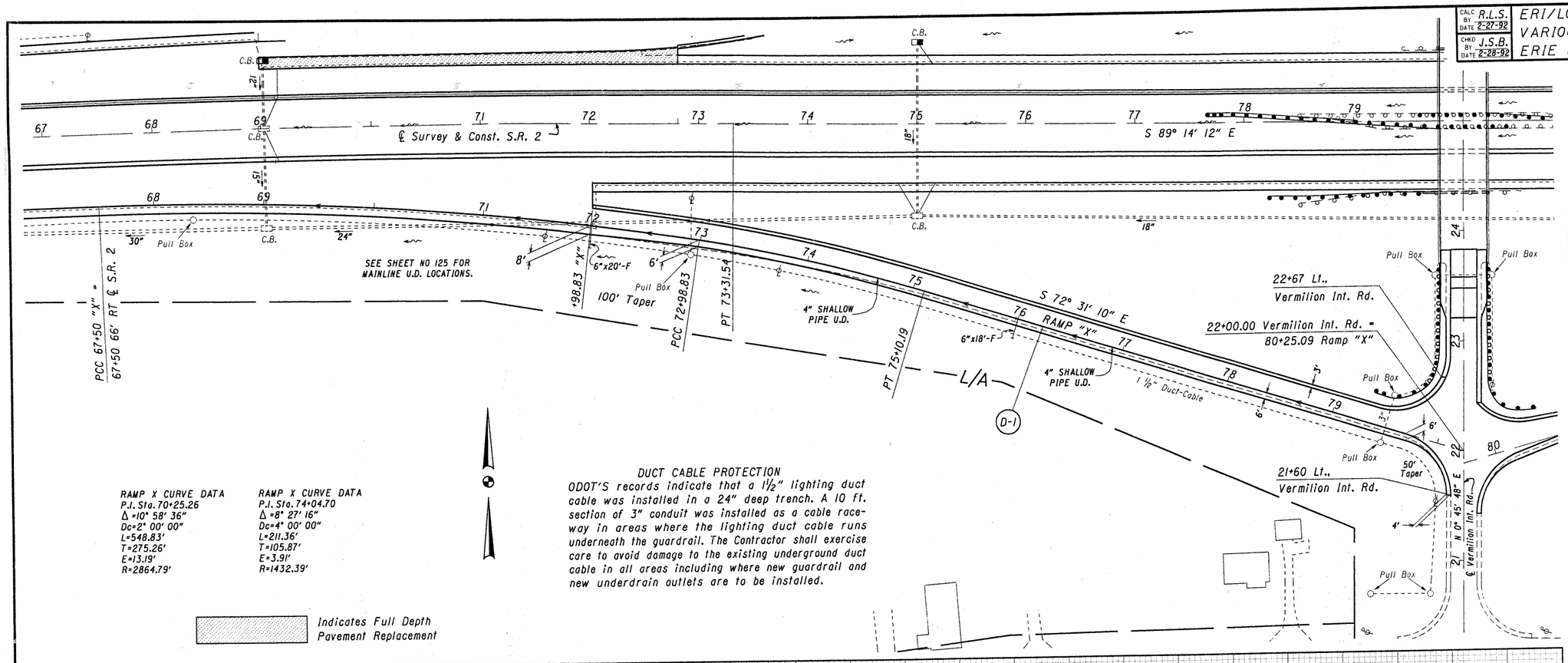
PLAN AND PROFILE SHEET RAMP "W"

CALC BY R.L.S. DATE 2-27-92
CHKD BY J.S.B. DATE 2-28-92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

144
267



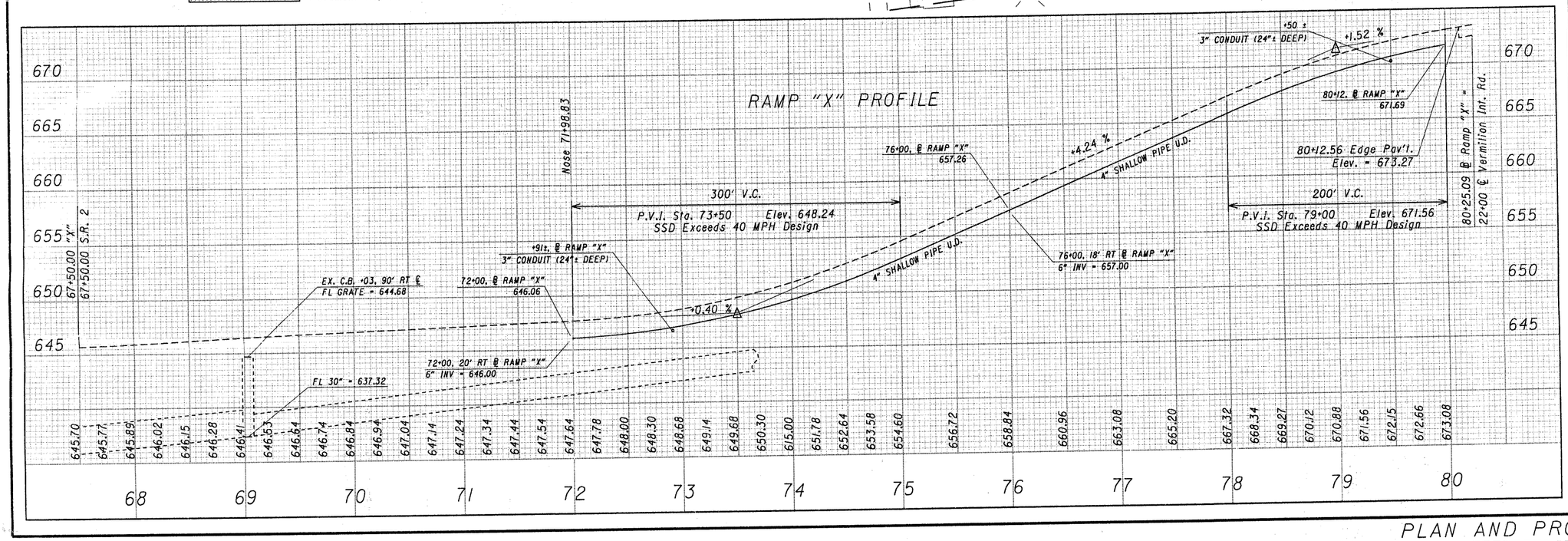
RAMP X CURVE DATA
P.I. Sta. 70+25.26
Δ =10° 58' 36"
Dc=2° 00' 00"
L=548.83'
T=275.26'
E=13.19'
R=2864.79'

RAMP X CURVE DATA
P.I. Sta. 74+04.70
Δ =8° 27' 16"
Dc=4° 00' 00"
L=211.36'
T=105.87'
E=3.91'
R=1432.39'

DUCT CABLE PROTECTION

ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.

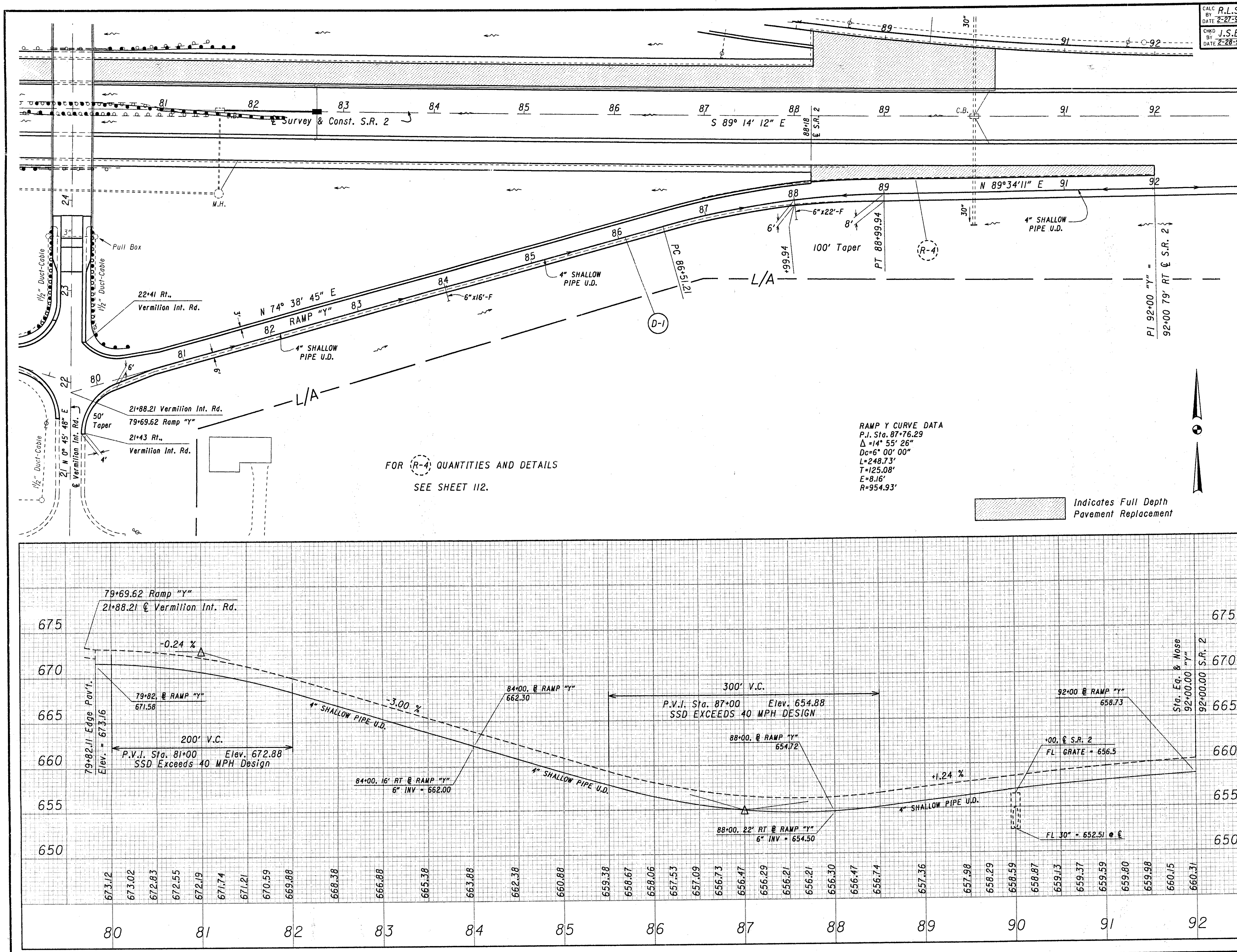
Indicates Full Depth Pavement Replacement



REF No.	Station to Station	603 6" CONDUIT, TYPE F 7DTJT, NON-PERFORATED ASTM 3034 SDR35, SS931, OR SS944 LIN. FT.	605 4" SHALLOW PIPE U.D. 7DTJT, ASTM 3034 SDR35, SS931, OR SS944 AS PER 707.15 LIN. FT.	SPECIAL PRECAST REINFORCED CONCRETE OUTLET EACH	BENDS AND BRANCHES 6" X 90° BEND EACH
D-1	STA 72+00 "X" TO STA 80+12 "X"	38	814	2	2
	Totals Carried to Sub-Summary See Sheet 86	38	814	2	2

PLAN AND PROFILE SHEET RAMP "X"

NOTE : SEE SHEET NO 126 FOR MAINLINE U.D. LOCATIONS.



REF No.	Station to Station	603 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944	605 4" SHALLOW PIPE U.D. 707.17, ASTM 3034 SDR35, OR SS931, OR SS944, PERFORATED AS PER 707.15	SPECIAL PRECAST REINFORCED CONCRETE OUTLET	BENDS AND BRANCHES 6" X 90° BEND	BENDS AND BRANCHES 6" X 90° TEE
		LIN. FT.	LIN. FT.	EACH	EACH	EACH
D-1	STA 79+82 "Y" TO 92+00 "Y"	38	1218	2	1	1
Totals Carried to Sub-Summary See Sheets 86		38	1218	2	1	1

PLAN AND PROFILE SHEET RAMP "Y"

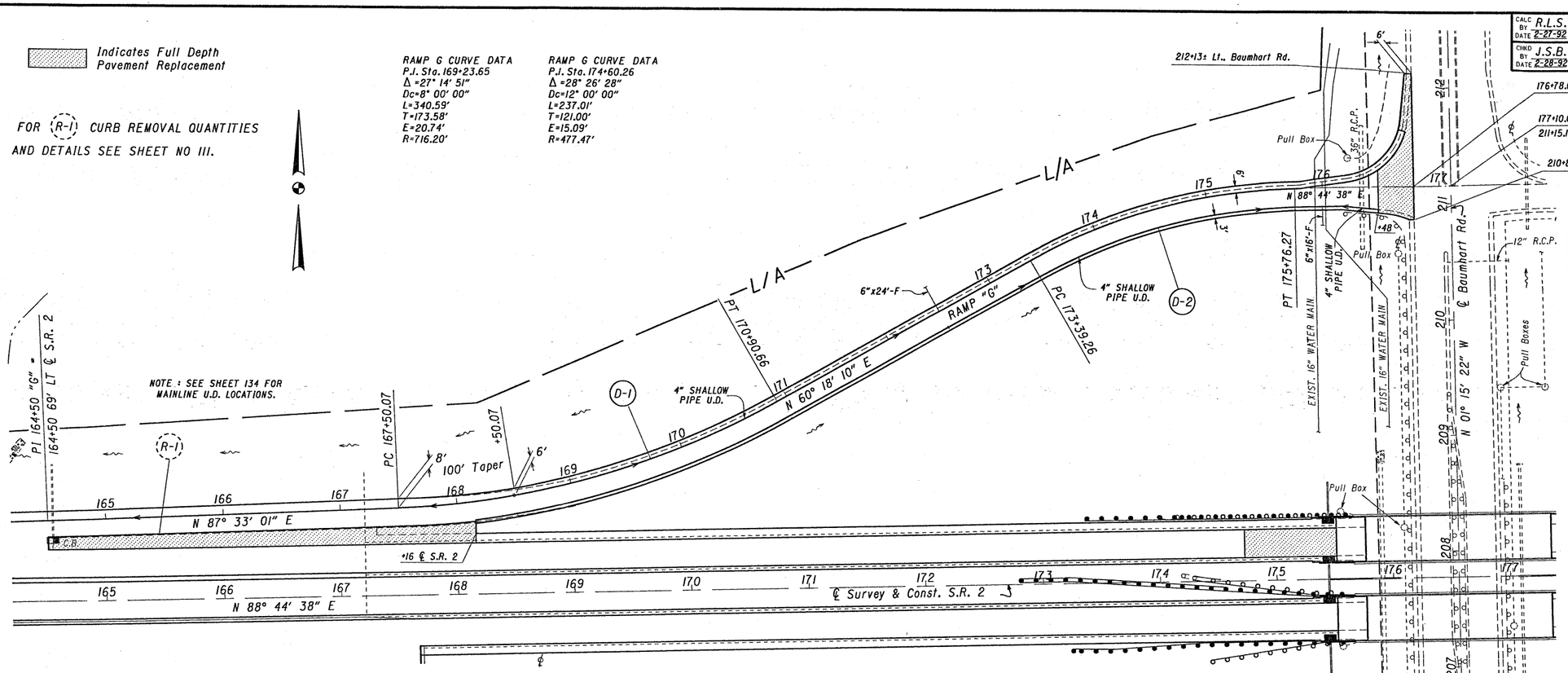
CALC BY R.L.S. DATE 2-27-92	ERI/LOR-2-30.51/0.00	OHIO	146
CHKD BY J.S.B. DATE 2-28-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

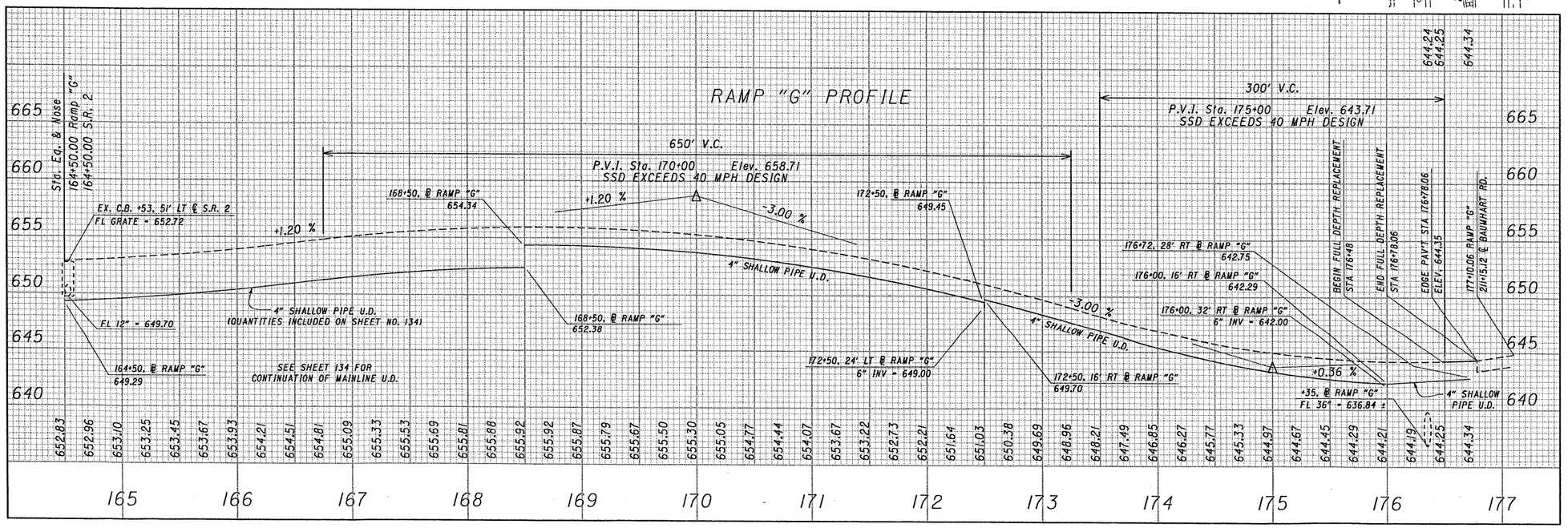
Indicates Full Depth Pavement Replacement

FOR (R-1) CURB REMOVAL QUANTITIES AND DETAILS SEE SHEET NO 111.

RAMP G CURVE DATA
P.I. Sta. 169+23.65
Δ =27° 14' 51"
Dc=8° 00' 00"
L=340.59'
T=173.58'
E=20.74'
R=716.20'

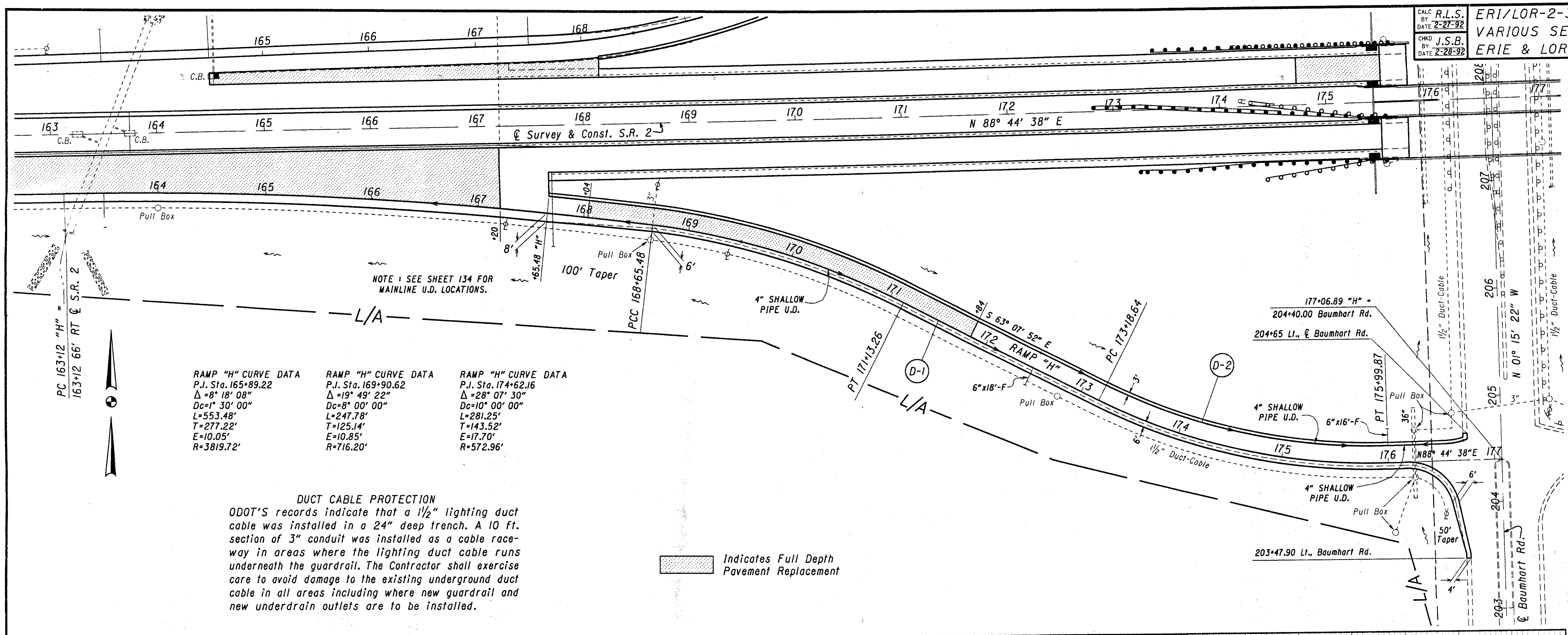
RAMP G CURVE DATA
P.I. Sta. 174+60.26
Δ =28° 26' 28"
Dc=12° 00' 00"
L=237.01'
T=121.00'
E=15.09'
R=477.47'

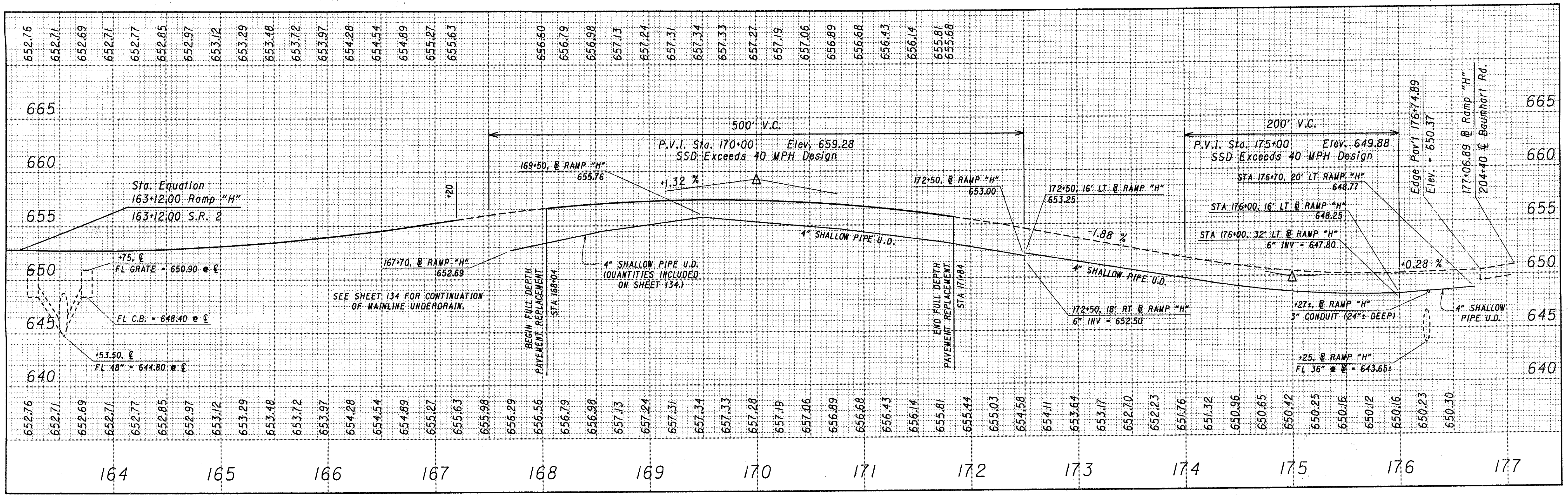




REF No.	Station to Station	603 6" CONDUIT, TYPE S ASTM 3034 SDR35, SS931 OR SS944 LIN. FT.	605 4" SHALLOW PIPE U.D. PERFORATED TYPE SP ASTM 3034 SDR35, SS931 OR SS934 "AS PER 707.15" LIN. FT.	SPECIAL PRECAST REINFORCED CONCRETE FLARED END OUTLET EACH	BENDS AND BRANCHES 6" X 90° BEND EACH	6" X 90° TEE EACH
D-1	STA 168+50 "G" TO STA 172+50 "G"	24	400	1	1	1
D-2	STA 172+50 "G" TO STA 176+72 "G"	16	422	1		1
	Totals Carried to Sub-Summary See Sheet 86	40	822	2	1	1

PLAN AND PROFILE SHEET RAMP "G"


℄ Survey & Const. S.R. 2
N 88° 44' 38" E
PC 163+12 "H" = 163+12 66' RT ℄ S.R. 2
NOTE : SEE SHEET 134 FOR MAINLINE U.D. LOCATIONS.
100' Taper
PCC 168+65.48
PT 171+13.26
PC 173+18.64
PT 175+99.87
S 63° 07' 52" E
RAMP "H"
4" SHALLOW PIPE U.D.
6"x18'-F
6"x16'-F
1½" Duct-Cable
Pull Box
L/A
177+06.89 "H" = 204+40.00 Baumhart Rd.
204+65 Lt., ℄ Baumhart Rd.
203+47.90 Lt., Baumhart Rd.
N 01° 15' 22" W
℄ Baumhart Rd.
50' Taper
RAMP "H" CURVE DATA
P.I. Sta. 165+89.22
Δ =8° 18' 08"
Dc=1° 30' 00"
L=553.48'
T=277.22'
E=10.05'
R=3819.72'
RAMP "H" CURVE DATA
P.I. Sta. 169+90.62
Δ =19° 49' 22"
Dc=8° 00' 00"
L=247.78'
T=125.14'
E=10.85'
R=716.20'
RAMP "H" CURVE DATA
P.I. Sta. 174+62.16
Δ =28° 07' 30"
Dc=10° 00' 00"
L=281.25'
T=143.52'
E=17.70'
R=572.96'
DUCT CABLE PROTECTION
ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.
Indicates Full Depth Pavement Replacement


500' V.C.
P.V.I. Sta. 170+00 Elev. 659.28
SSD Exceeds 40 MPH Design
+1.32 %
-1.88 %
200' V.C.
P.V.I. Sta. 175+00 Elev. 649.88
SSD Exceeds 40 MPH Design
+0.28 %
Sta. Equation
163+12.00 Ramp "H"
163+12.00 S.R. 2
+75, ℄ FL GRATE = 650.90 @ ℄
FL C.B. = 648.40 @ ℄
+53.50, ℄ FL 48" = 644.80 @ ℄
SEE SHEET 134 FOR CONTINUATION OF MAINLINE UNDERDRAIN.
167+70, ℄ RAMP "H" 652.69
169+50, ℄ RAMP "H" 655.76
BEGIN FULL DEPTH PAVEMENT REPLACEMENT STA 168+04
4" SHALLOW PIPE U.D. (QUANTITIES INCLUDED ON SHEET 134.)
4" SHALLOW PIPE U.D.
END FULL DEPTH PAVEMENT REPLACEMENT STA 171+84
172+50, ℄ RAMP "H" 653.00
172+50, 16' LT ℄ RAMP "H" 653.25
172+50, 18' RT ℄ RAMP "H" 6" INV = 652.50
STA 176+70, 20' LT RAMP "H" 648.77
STA 176+00, 16' LT ℄ RAMP "H" 648.25
STA 176+00, 32' LT ℄ RAMP "H" 6" INV = 647.80
+27±, ℄ RAMP "H" 3" CONDUIT (24"± DEEP)
+25, ℄ RAMP "H" FL 36" @ ℄ = 643.65±
Edge Pav't 176+74.89 Elev. = 650.37
177+06.89 ℄ Ramp "H" 204+40 ℄ Baumhart Rd.

REF No.	Station to Station	603 6" CONDUIT, TYPE F 707.17 NON-PERFORATED ASTM 3034 SDR35, SS931 OR SS944 (LIN. FT.)	605 4" SHALLOW PIPE U.D. 707.17, ASTM 3034 SDR35, OR SS931, OR SS944, PERFORATED AS PER 707.15 (LIN. FT.)	SPECIAL PRECAST REINFORCED CONCRETE OUTLET (EACH)	BENDS AND BRANCHES 6" X 90° BEND (EACH)	BENDS AND BRANCHES 6" X 90° TEE (EACH)
D-1	STA 169+50 "H" TO STA 172+50 "H"	18	300	1	1	1
D-2	STA 172+50 "H" TO STA 176+70 "H"	16	420	1		
Totals Carried to Sub-Summary See Sheet 86		34	720	2	1	1

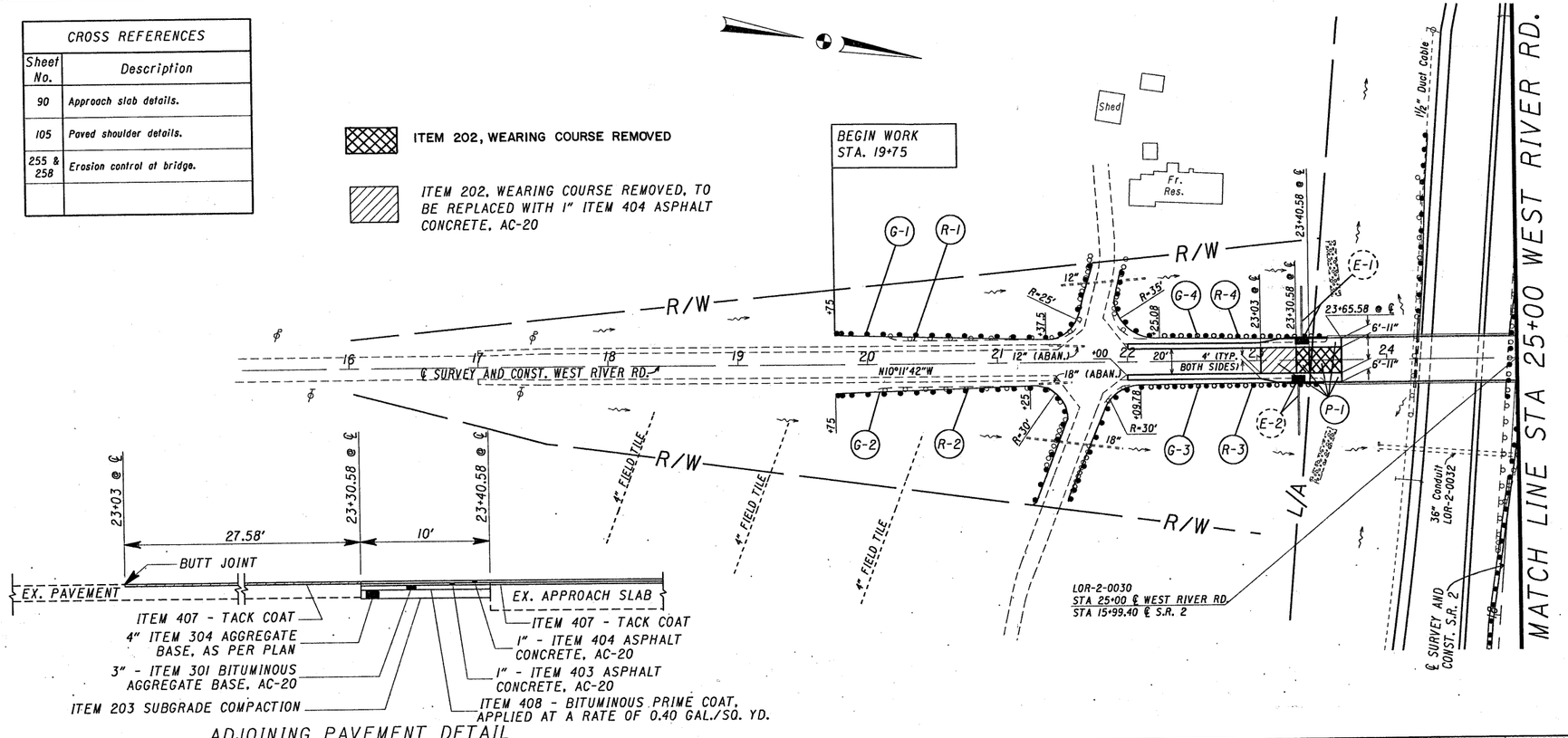
PLAN AND PROFILE SHEET RAMP "H"

CALC BY RLS DATE 2/26/92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	148 267
CHKD BY JSB DATE 2/26/92			

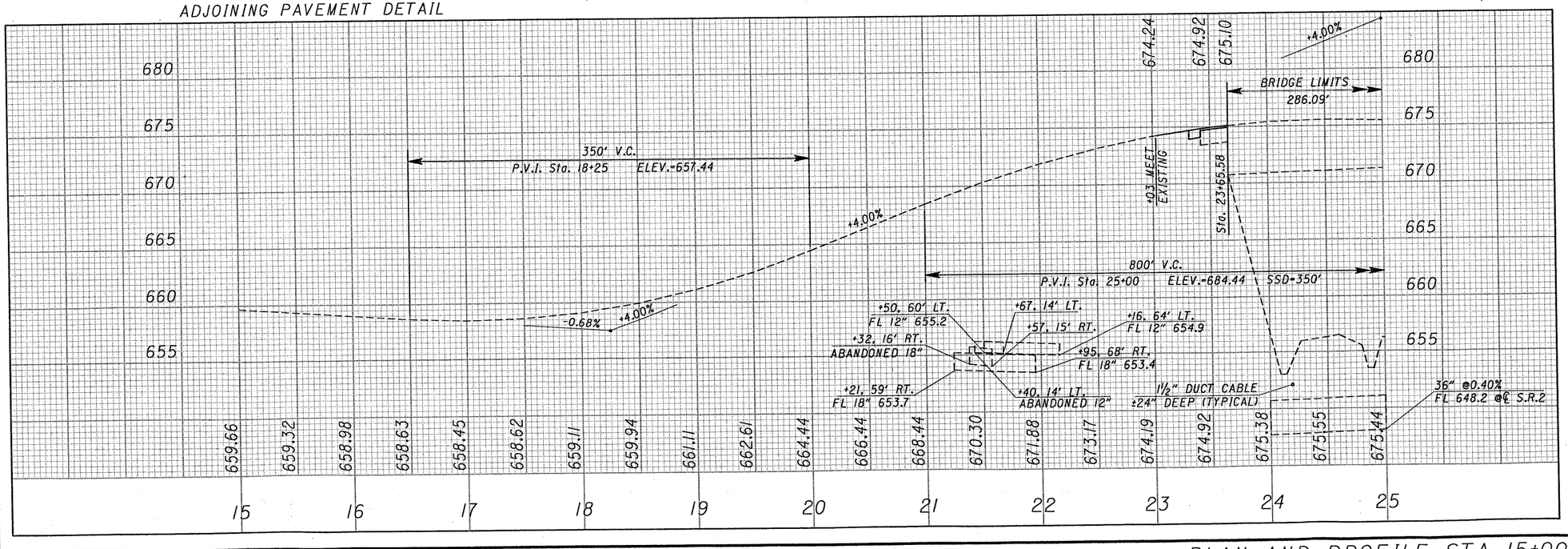
CROSS REFERENCES	
Sheet No.	Description
90	Approach slab details.
105	Paved shoulder details.
255 & 258	Erosion control at bridge.

ITEM 202, WEARING COURSE REMOVED

ITEM 202, WEARING COURSE REMOVED, TO BE REPLACED WITH 1" ITEM 404 ASPHALT CONCRETE, AC-20



ADJOINING PAVEMENT DETAIL



PLAN AND PROFILE STA 15+00 TO 25+00 WEST RIVER RD.

DUCT CABLE PROTECTION

ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.

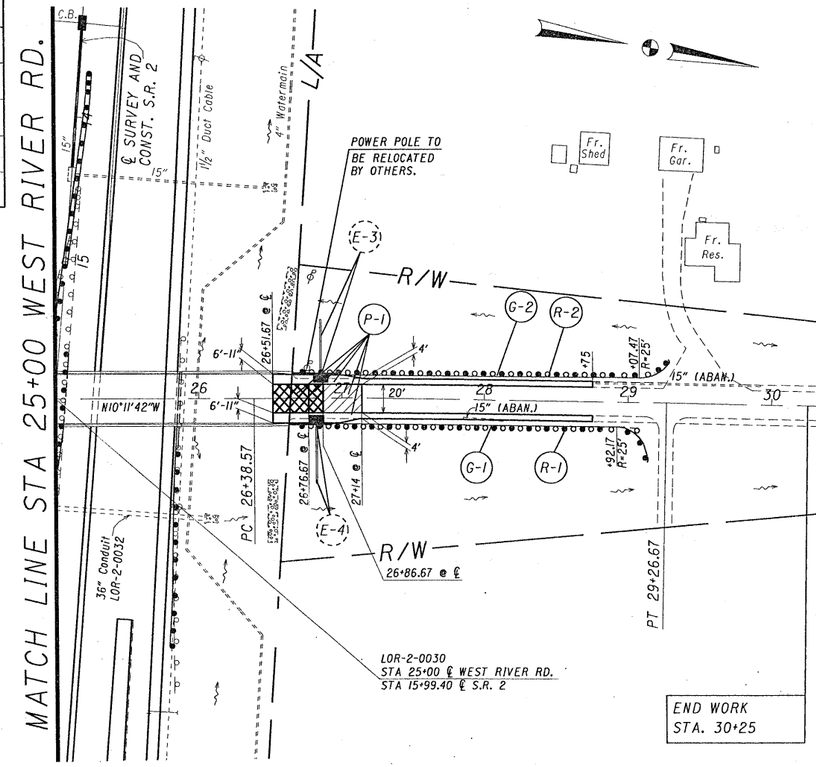
LOR-2-0030
West River Road over S.R. 2

TYPE : Continuous Steel Beam
LENGTH : 286 ft.
WIDTH : 34'-6" T/T GM Parapet
SKEW : 4°-27'-30"
LOADING : HS-20-44

REF No.	Station to Station	202 GUARDRAIL REMOVED LIN. FT.	202 GUARDRAIL POSTS REMOVED EA.	202 WEARING COURSE REMOVED SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	301 BITUMINOUS AGGREGATE BASE, AC-20 CU. YD.	304 AGGREGATE BASE, AS PER PLAN CU. YD.	403 ASPHALT CONCRETE AC-20 CU. YD.	404 ASPHALT CONCRETE AC-20 CU. YD.	407 TACK COAT GAL.	408 BITUMINOUS PRIME COAT GAL.	409 SEAL COAT BITUMINOUS MATERIAL GAL.	409 SEAL COAT COVER AGGREGATE NO. 8 CU. YD.	606 GUARDRAIL TYPE 5 LIN. FT.	606 ANCHOR ASSEMBLY TYPE A EA.	606 ANCHOR ASSEMBLY TYPE T EA.	606 BRIDGE TERMINAL ASSEMBLY TYPE 1 EA.	
G-1	STA 19+75 TO 21+62.5 (LT)														200.0	1	1		
G-2	STA 19+75 TO 21+53.5 (RT)														225.0	1	1		
G-3	STA 21+52.81 TO 23+51.4 (RT)														243.75		1	1	
G-4	STA 21+90.60 TO 23+54.2 (LT)														193.75		1	1	
P-1	STA 22+00 TO 23+65.58			139.1	5.0	205.4	1.9	2.5	2.2	3.9	11.7	8.8	55.1	1.5					2
R-1	STA 20+17 TO 21+70 (LT)	150.0	9																4
R-2	STA 20+05 TO 21+52 (RT)	162.5	7																2
R-3	STA 21+65 TO 23+51.68 (RT)	200.0	10												862.5				1.5
R-4	STA 21+80 TO 23+55.48 (LT)	200.0	8																55.1
	Totals Carried to Sub-Summaries (Sheets 85 and 87.)	712.5	34	139.1	5.0	205.4	1.9	2.5	2.2	3.9	11.7	8.8	55.1	1.5					

CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	149
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

CROSS REFERENCES	
Sheet No.	Description
90	Approach slab details.
105	Paved shoulder details.
255 & 258	Erosion control at bridge.



CURVE DATA
P.I. Sta. 27+82.62
Δ =1° 20' 40"
Dc=0° 28' 00"
L=288.10'
T=144.05'
E=0.85'
R=12277.67'

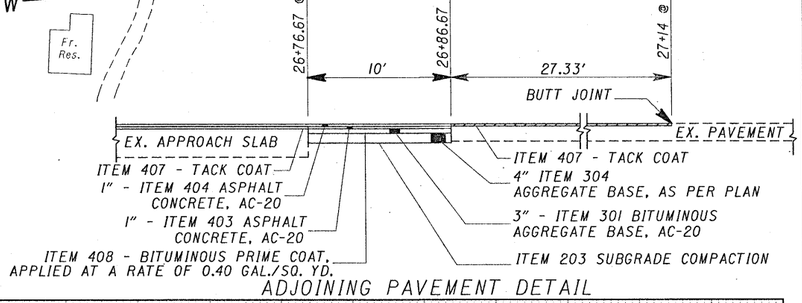
DUCT CABLE PROTECTION
ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable ran underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.

ITEM 202, WEARING COURSE REMOVED, TO BE REPLACED WITH 1" ITEM 404 ASPHALT CONCRETE, AC-20

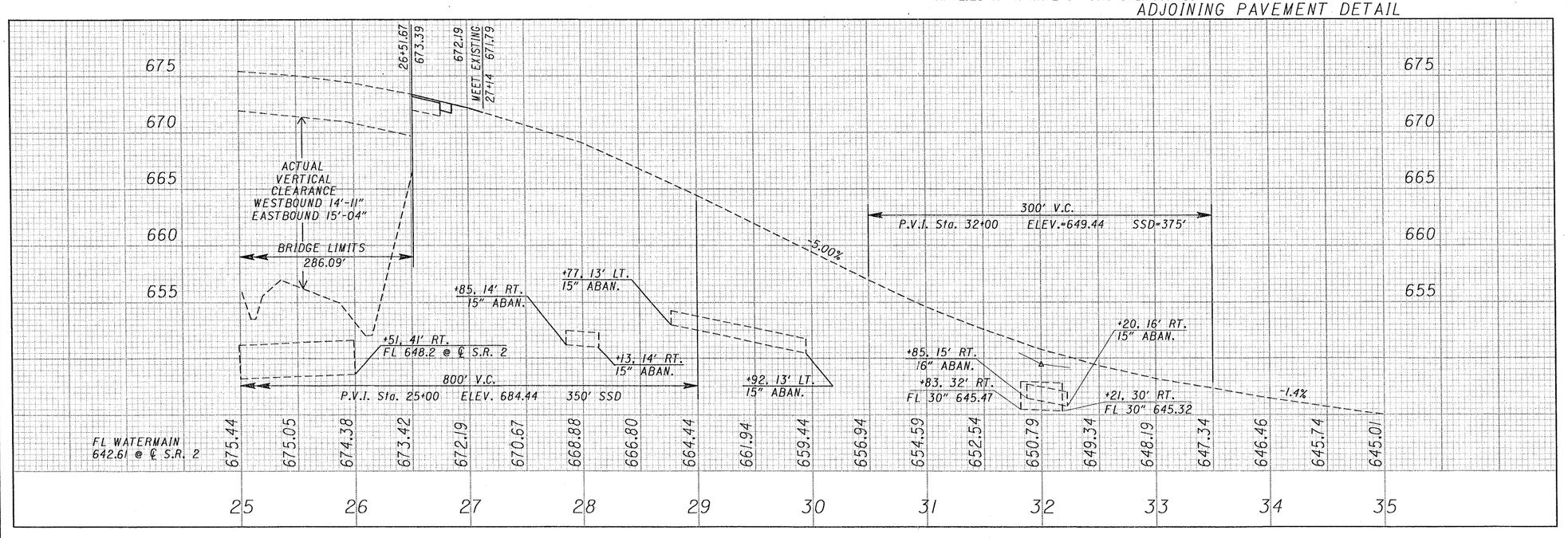
ITEM 202, WEARING COURSE REMOVED

LOR-2-0030
West River Road over S.R. 2

TYPE : Continuous Steel Beam
LENGTH : 286 ft.
WIDTH : 34'-6" T/T GM Parapet
SKEW : 4°-27'-30"
LOADING : HS-20-44



ADJOINING PAVEMENT DETAIL



REF No.	Station to Station	606 BRIDGE TERMINAL ASSEMBLY TYPE 1 EA.	606 ANCHOR ASSEMBLY TYPE T EA.	606 GUARDRAIL TYPE 5 LIN. FT.	409 SEAL COAT COVER AGGREGATE NO. 8 CU. YD.	409 SEAL COAT BITUMINOUS MATERIAL GAL.	408 BITUMINOUS PRIME COAT GAL.	407 TACK COAT GAL.	404 ASPHALT CONCRETE, AC-20 CU. YD.	403 ASPHALT CONCRETE, AC-20 CU. YD.	304 AGGREGATE BASE, AS PER PLAN CU. YD.	301 BITUMINOUS AGGREGATE BASE, AC-20 CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	202 GUARDRAIL REMOVED LIN. FT.	202 WEARING COURSE REMOVED SQ. YD.
		2	2	512.5	1.9	70.4	8.8	11.6	3.8	2.2	2.5	1.9	256.5	4.3	500.0	138.5
G-1	STA 26+63.0 TO 29+13.63 (RT)	1	1	256.25												
G-2	STA 26+65.8 TO 29+29.62 (LT)	1	1	256.25												
P-1	STA 26+51.67 TO 28+75				1.9	70.4	8.8	11.6	3.8	2.2	2.5	1.9	256.5	4.3		138.5
R-1	STA 26+61 TO 29+11 (RT)														250.0	
R-2	STA 26+66 TO 29+16 (LT)														250.0	
	Totals Carried to Sub-Summaries (See Sheets 85 and 87.)	2	2	512.5	1.9	70.4	8.8	11.6	3.8	2.2	2.5	1.9	256.5	4.3	500.0	138.5

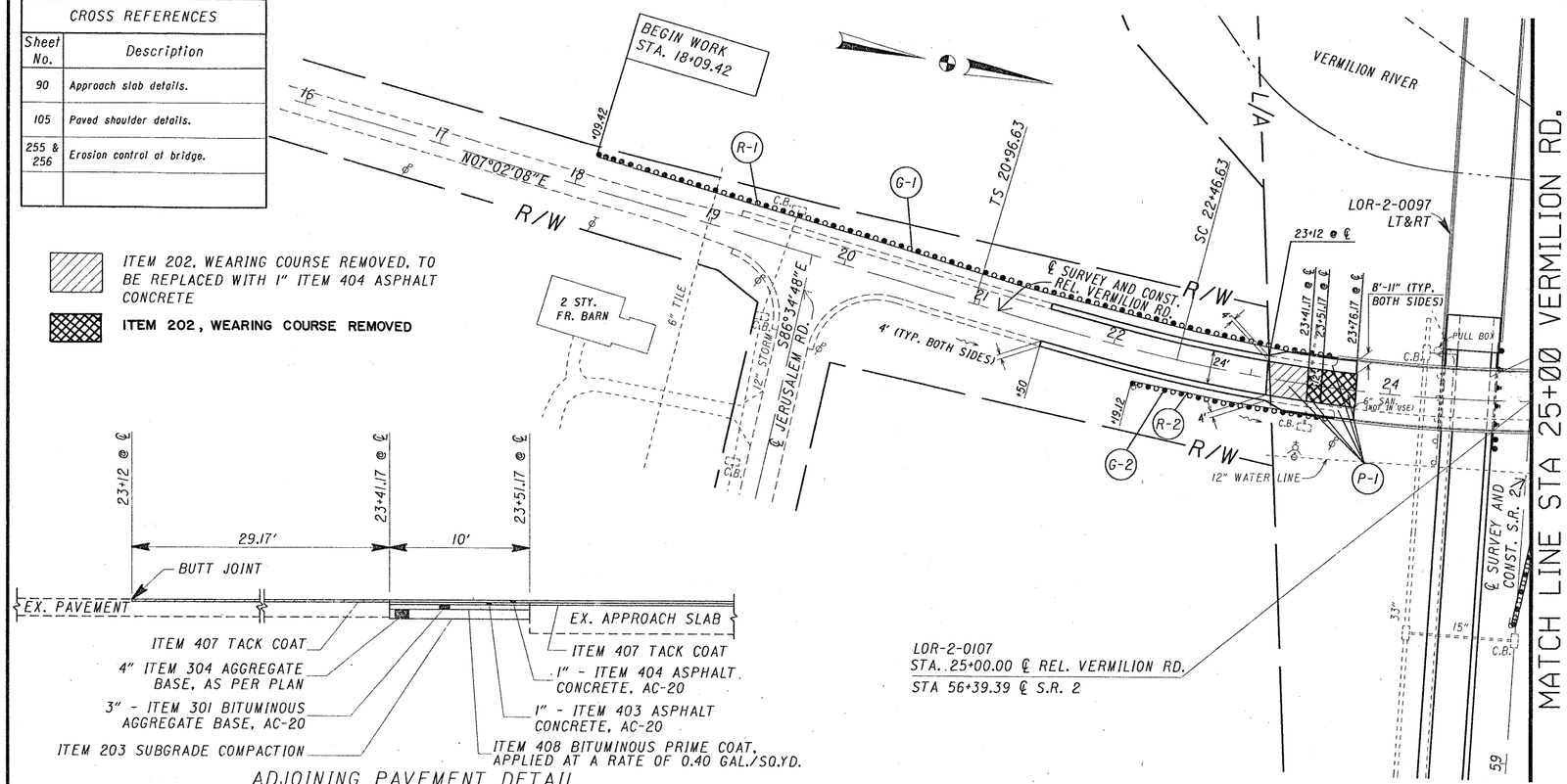
PLAN AND PROFILE STA 25+00 TO 35+00 WEST RIVER RD.

CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	150
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

CROSS REFERENCES	
Sheet No.	Description
90	Approach slab details.
105	Paved shoulder details.
255 & 256	Erosion control at bridge.

LOR-2-0097 Lt. & Rt. S.R. 2 over Vermilion River
TYPE : Continuous Steel Girder LENGTH : 453 ft. WIDTH : 38'-6" T/T GM Parapet SKEW : None LOADING : HS-20-44

LOR-2-0107 Vermilion Road over S.R. 2
TYPE : Continuous Steel Beam LENGTH : 248 ft. WIDTH : 42'-6" SKEW : 3°-38'-56" LOADING : HS-20-44

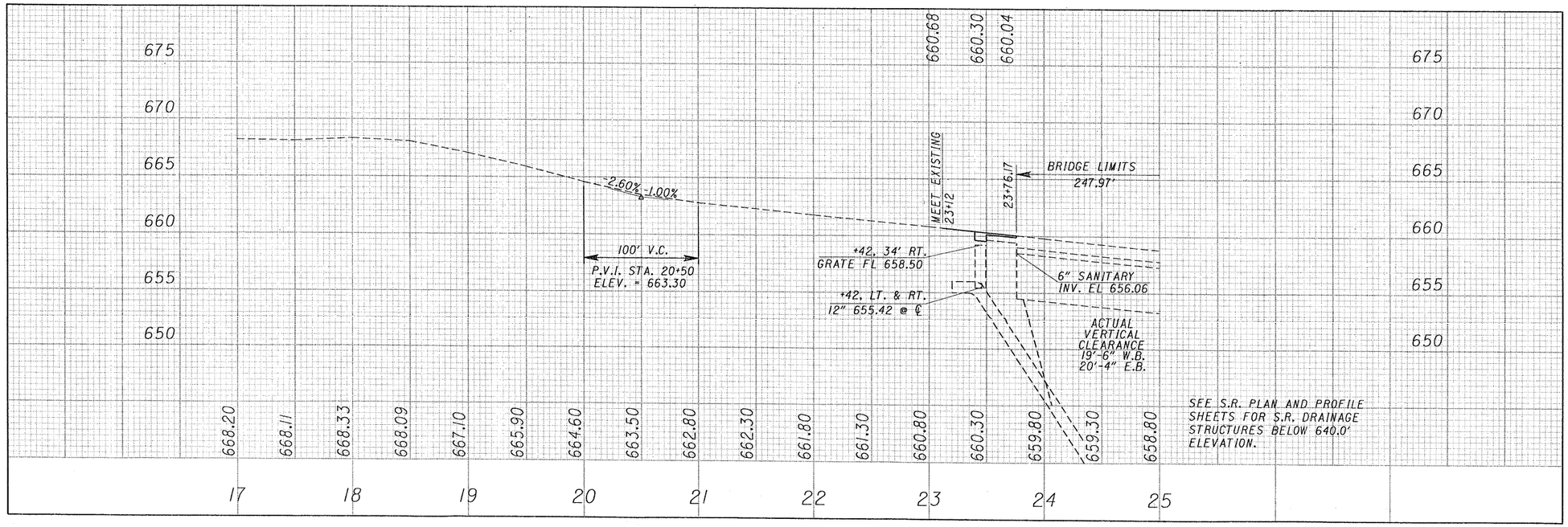


ITEM 202, WEARING COURSE REMOVED, TO BE REPLACED WITH I" ITEM 404 ASPHALT CONCRETE

ITEM 202, WEARING COURSE REMOVED

ADJOINING PAVEMENT DETAIL

CURVE AND SPIRAL DATA
P.I. Sta. 26+47.16
Δ =45°02'48"
Dc=5°00'
Lc=750.93'
Ls=150.0'
Ts=550.53'
Es=95.51'
R=1145.92'
K=74.99'
P=0.82'
Xc=149.94'
Yc=3.27'



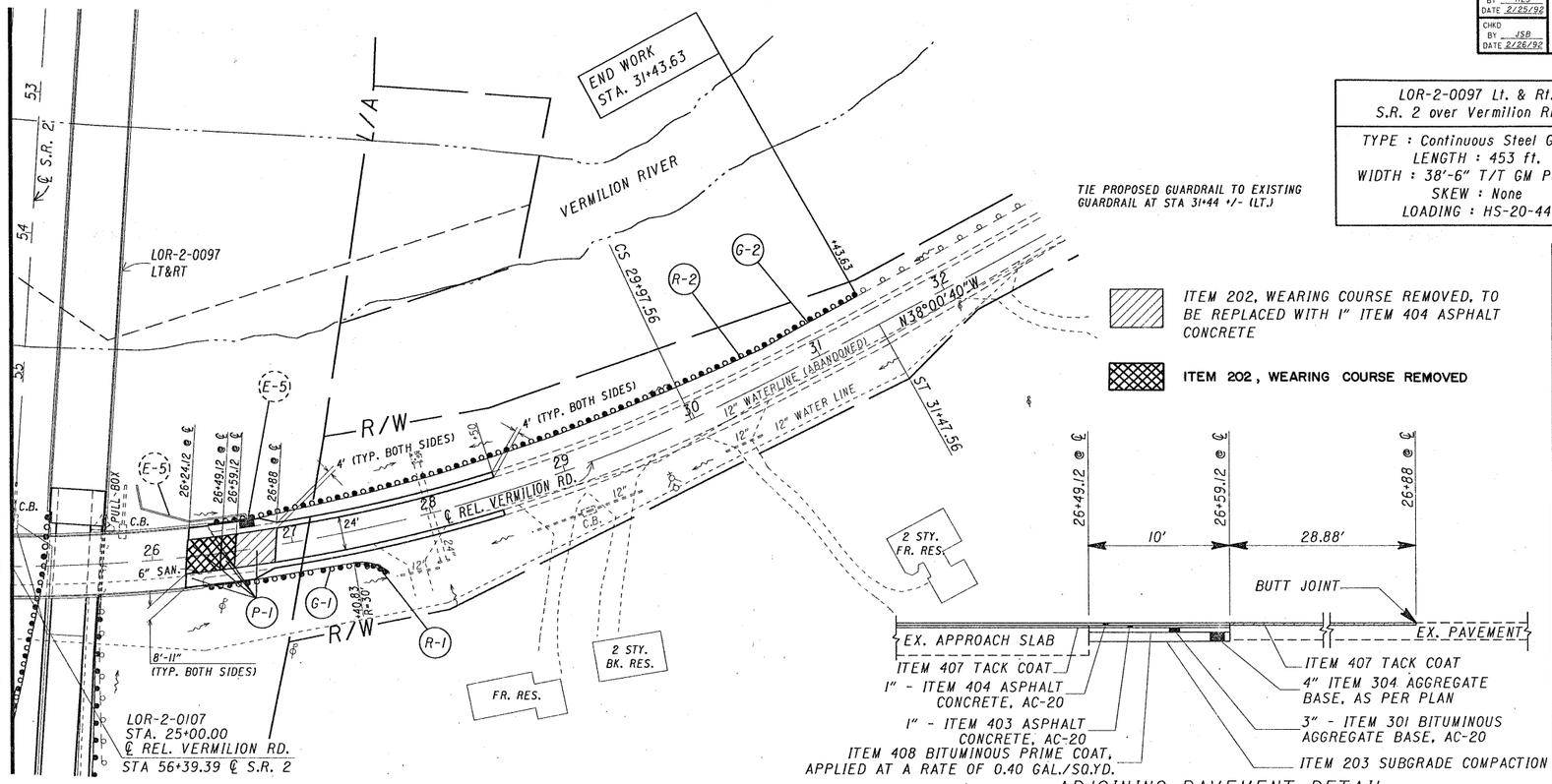
REF No.	Station to Station	202 GUARDRAIL REMOVED LIN. FT.	202 WEARING COURSE REMOVED SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	301 BITUMINOUS AGGREGATE BASE, AC-20 CU. YD.	304 AGGREGATE BASE, AS PER PLAN CU. YD.	403 ASPHALT CONCRETE, AC-20 CU. YD.	404 ASPHALT CONCRETE, AC-20 CU. YD.	407 TACK COAT GAL.	408 BITUMINOUS PRIME COAT GAL.	409 BITUMINOUS SEAL COAT COVER AGGREGATE NO. 8 CU. YD.	409 BITUMINOUS SEAL COAT MATERIAL GAL.	606 GUARDRAIL TYPE 5 LIN. FT.	606 ANCHOR ASSEMBLY TYPE A EA.	606 BRIDGE TERMINAL ASSEMBLY TYPE 1 EA.	
G-1	STA 18+09.42 TO 23+63.57 (LT)													531.25	1	1	
G-2	STA 22+19.12 TO 23+60.77 (RT)													118.75	1	1	
P-1	STA 21+50 TO 23+76.17			171.1	5.2	290.2	2.2	3.0	2.6	4.8	14.4	10.7	79.2	2.2	650.0	2	2
R-1	STA 18+36 TO 23+61 (LT)	525.0															
R-2	STA 22+14 TO 23+64 (RT)	150.0															
	Totals Carried to Sub-Summaries (See Sheets 85 and 87.)	675.0	171.1	5.2	290.2	2.2	3.0	2.6	4.8	14.4	10.7	2.2	79.2	650.0	2	2	

PLAN AND PROFILE SHEET STA 17+00 TO 25+00 VERMILION RD

CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	151
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

CROSS REFERENCES	
Sheet No.	Description
90	Approach slab details.
105	Paved shoulder details.
255 & 256	Erosion control at bridge.

MATCH LINE STA 25+00 VERMILION RD.



CURVE AND SPIRAL DATA
P.I. Sta. 26+47.16
Δ =45°02'48"
Dc=5°00'
Lc=750.93'
Ls=150.0'
Ts=550.53'
Es=95.51'
R=1145.92'
K=74.99'
P=0.82'
Xc=149.94'
Yc=3.27'

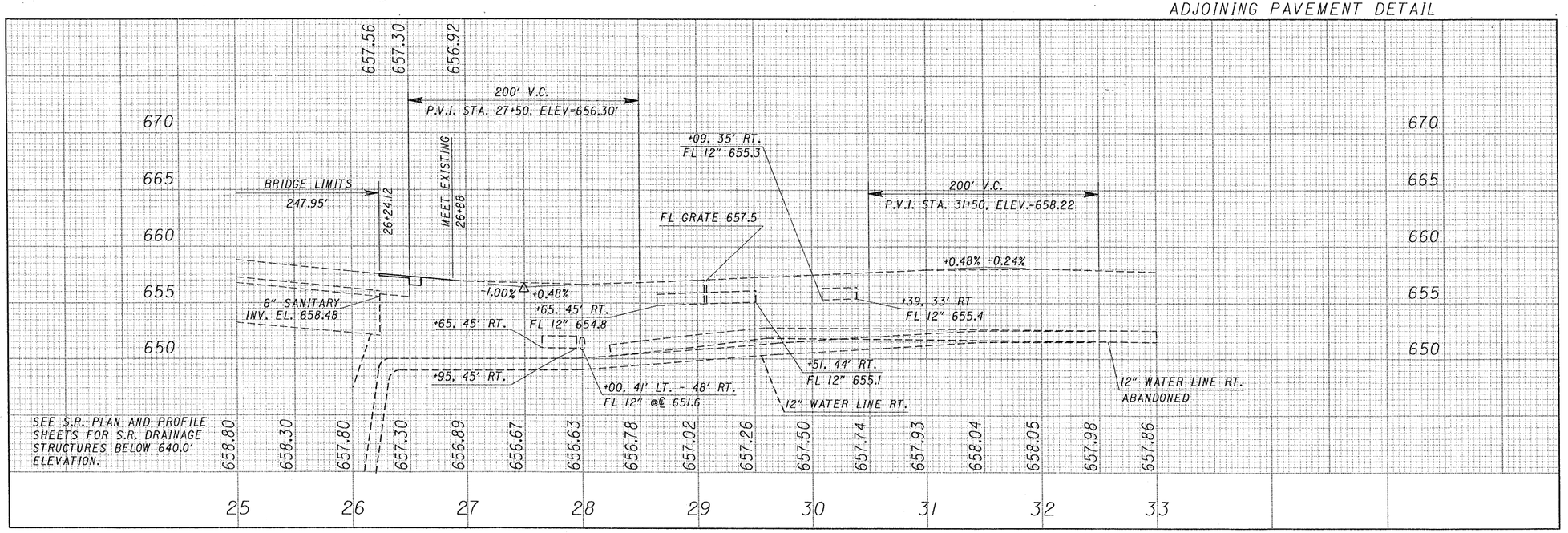
LOR-2-0097 Lt. & Rt. S.R. 2 over Vermilion River
TYPE : Continuous Steel Girder LENGTH : 453 ft. WIDTH : 38'-6" T/T GM Parapet SKEW : None LOADING : HS-20-44

LOR-2-0107 Vermilion Road over S.R. 2
TYPE : Continuous Steel Beam LENGTH : 248 ft. WIDTH : 42'-6" SKEW : 3°-38'-56" LOADING : HS-20-44

ITEM 202, WEARING COURSE REMOVED, TO BE REPLACED WITH 1" ITEM 404 ASPHALT CONCRETE

ITEM 202, WEARING COURSE REMOVED

ADJOINING PAVEMENT DETAIL



SEE S.R. PLAN AND PROFILE SHEETS FOR S.R. DRAINAGE STRUCTURES BELOW 640.0' ELEVATION.

REF No.	Station to Station	606 BRIDGE TERMINAL ASSEMBLY TYPE 1 EA.	606 ANCHOR ASSEMBLY TYPE 1 EA.	606 GUARDRAIL TYPE 5 LIN. FT.	409 SEAL COAT COVER AGGREGATE NO. 8 CU. YD.	409 SEAL COAT BITUMINOUS MATERIAL GAL.	408 BITUMINOUS PRIME COAT GAL.	407 TACK COAT GAL.	404 ASPHALT CONCRETE, AC-20 CU. YD.	403 ASPHALT CONCRETE, AC-20 CU. YD.	304 AGGREGATE BASE, AS PER PLAN CU. YD.	301 BITUMINOUS AGGREGATE BASE, AC-20 CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	202 WEARING COURSE REMOVED SQ. YD.	202 GUARDRAIL REMOVED LIN. FT.	
G-1	STA 26+36.68 TO 27+82.59 (RT)			118.75													2
G-2	STA 26+39.48 TO 31+43.63 (LT)		1	506.25													1
P-1	STA 26+24.12 TO 28+50	1	1		2.1	79.0	10.7	14.4	4.7	2.6	3.0	2.2	289.6	5.2	170.3		625.0
R-1	STA 26+35 TO 27+60 (RT)															125.0	2.1
R-2	STA 26+43 TO 31+37 (LT)															494.0	79.0
	Totals Carried to Sub-Summaries (See Sheets 85 and 87.)																10.7
																	14.4
																	4.7
																	2.6
																	3.0
																	2.2
																	289.6
																	5.2
																	170.3
																	6/9.0

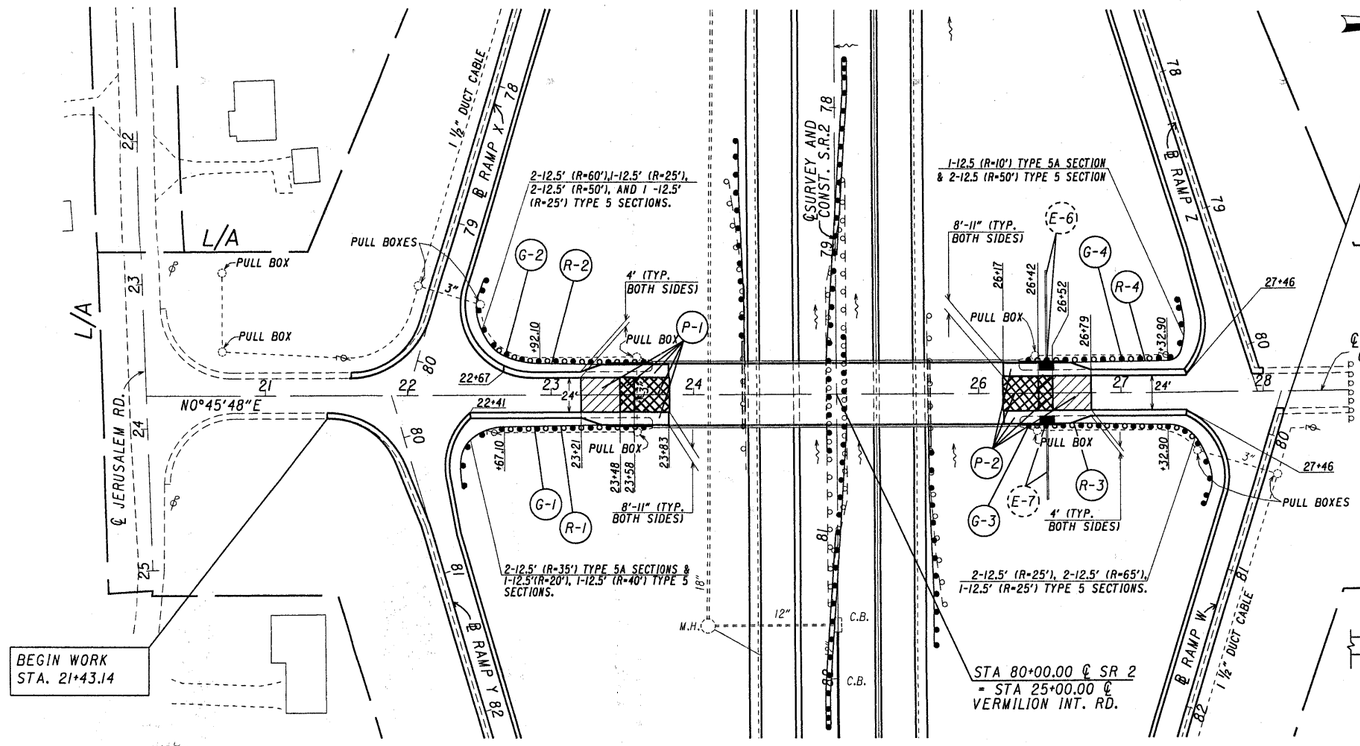
PLAN AND PROFILE SHEET STA 25+00 TO 33+00 VERMILION RD.

CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	152
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

CROSS REFERENCES	
Sheet No.	Description
90	Approach slab details.
105	Paved shoulder details.
190	Sign Pole Locations.
255 & 258	Erosion Control at Bridge.

LOR-2-0151
Vermilion Interchange Road over S.R. 2

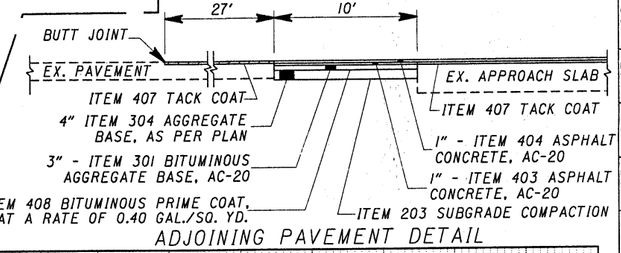
TYPE : Continuous Steel Beam
LENGTH : 234 ft.
WIDTH : 42'-6" T/T GM Parapet
SKEW : None
LOADING : HS-20-44



DUCT CABLE PROTECTION

ODOT'S records indicate that a 1½" lighting duct cable was installed in a 24" deep trench. A 10 ft. section of 3" conduit was installed as a cable raceway in areas where the lighting duct cable runs underneath the guardrail. The Contractor shall exercise care to avoid damage to the existing underground duct cable in all areas including where new guardrail and new underdrain outlets are to be installed.

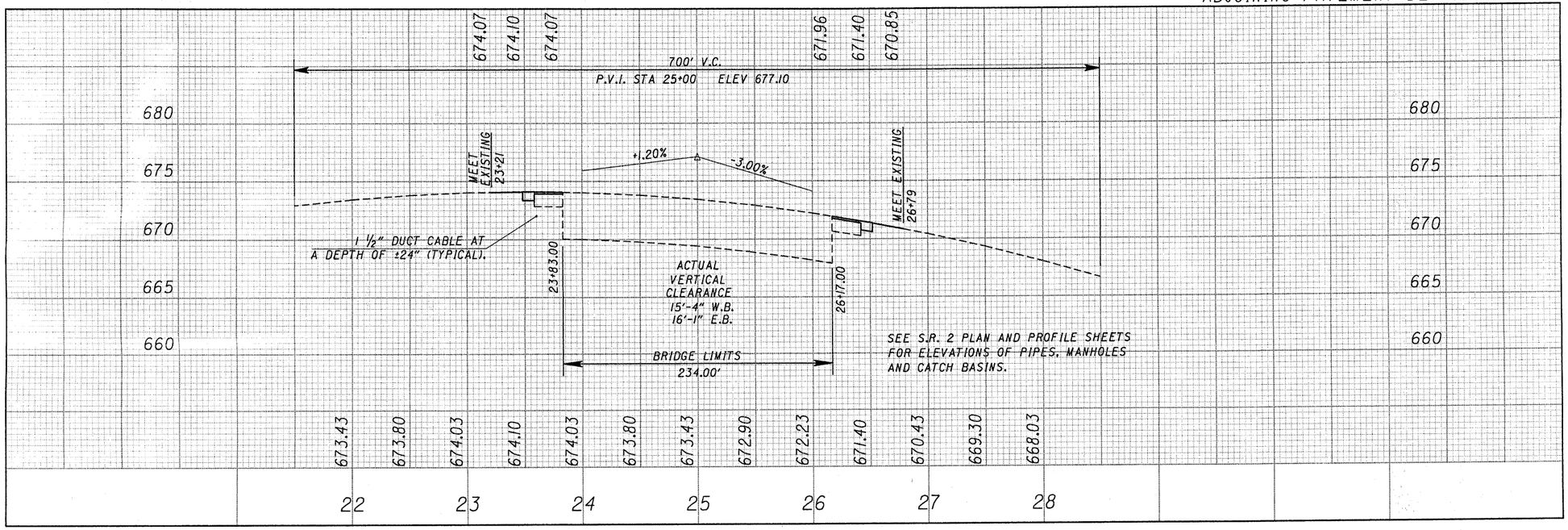
NOTE: Use Type 5A Guardrail with 3'-1½" Post Spacing 12.5' Ahead of and Behind Light Poles, Include Cost in Type 5A Price .



ADJOINING PAVEMENT DETAIL

ITEM 202, WEARING COURSE REMOVED, TO BE REPLACED WITH 1" ITEM 404 ASPHALT CONCRETE,AC-20

ITEM 202, WEARING COURSE REMOVED



REF No.	Station to Station	202 GUARDRAIL REMOVED LIN. FT.	202 WEARING COURSE REMOVED SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	301 BITUMINOUS AGGREGATE BASE, AC-20 CU. YD.	304 AGGREGATE BASE, AS PER PLAN CU. YD.	403 ASPHALT CONCRETE, AC-20 CU. YD.	404 ASPHALT CONCRETE, AC-20 CU. YD.	407 TACK COAT GAL.	408 BITUMINOUS PRIME COAT GAL.	606 GUARDRAIL TYPE 5A EA.	606 GUARDRAIL TYPE 5 LIN. FT.	606 ANCHOR ASSEMBLY TYPE A EA.	606 ANCHOR ASSEMBLY TYPE T EA.	606 BRIDGE TERMINAL ASSEMBLY TYPE I EA.
G-1	STA 22+36.74 to 23+71.25 (RT)												131.25			1
G-2	STA 22+48.05 TO 23+71.25 (LT)												156.25	1		1
G-3	STA 26+28.75 TO 27+63.50 (RT)												168.75	1		1
G-4	STA 26+28.75 TO 27+44.94 (LT)											25.0	131.25		1	
P-1	STA 22+41 TO 23+83		165.3	34.9	201.4	16.7	17.5	2.6	9.5	13.9	80.7					
P-2	STA 26+17 TO 27+46		165.3	34.9	201.4	16.7	17.5	2.6	9.5	13.9	80.7					
R-1	STA 22+37.5 TO 23+75 (RT)	137.5														
R-2	STA 22+62.5 TO 23+75 (LT)	112.5														
R-3	STA 26+25 TO 27+50 (RT)	125.0														
R-4	STA 26+25 TO 27+50 (LT)	125.0														
	Totals Carried to Sub-Summaries (See Sheets 85 and 87.)	500.0	330.6	69.8	402.8	33.4	35.0	5.2	19.0	27.8	161.4	50.0	587.5	2	2	4

PLAN AND PROFILE SHEET VERMILION INTERCHANGE

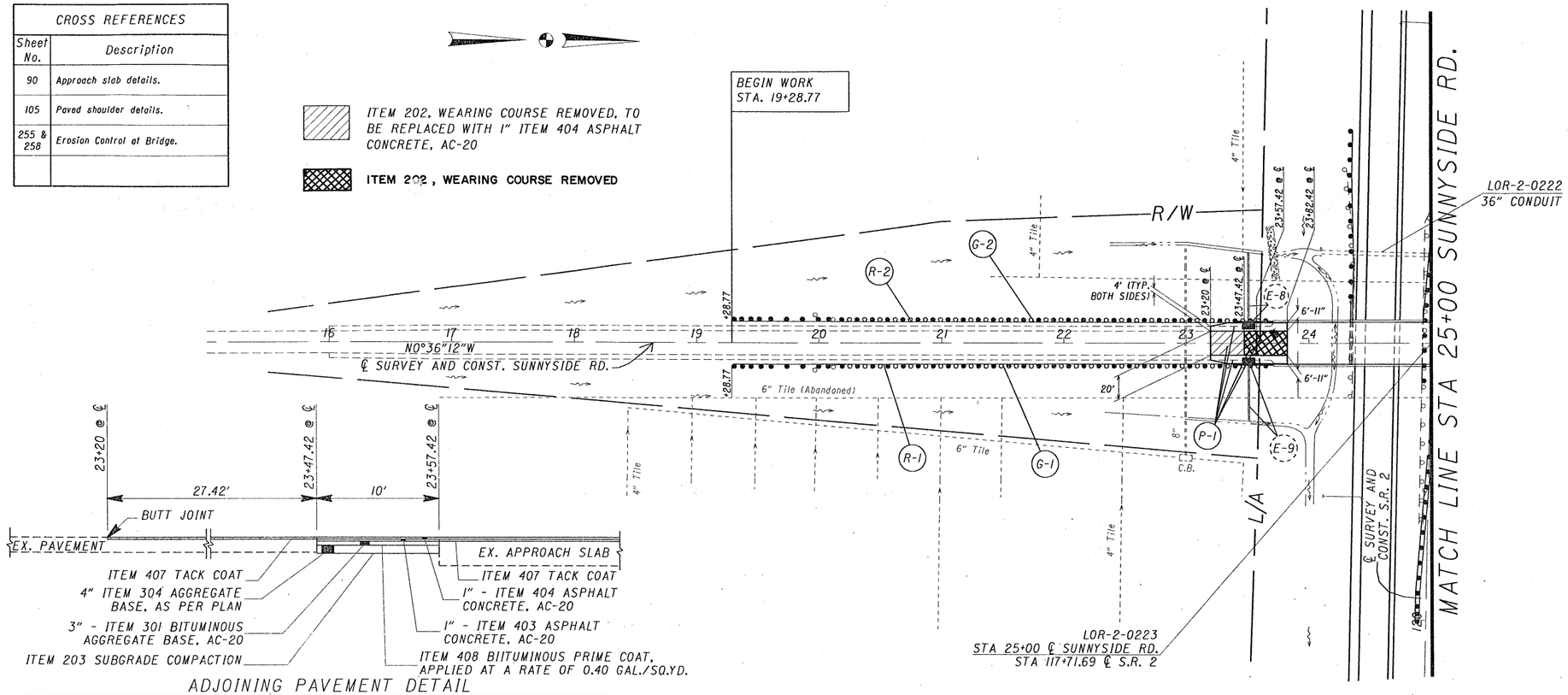
CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	153 267
CHKD BY JSB DATE 2/26/92			

CROSS REFERENCES	
Sheet No.	Description
90	Approach slab details.
105	Paved shoulder details.
255 & 258	Erosion Control at Bridge.

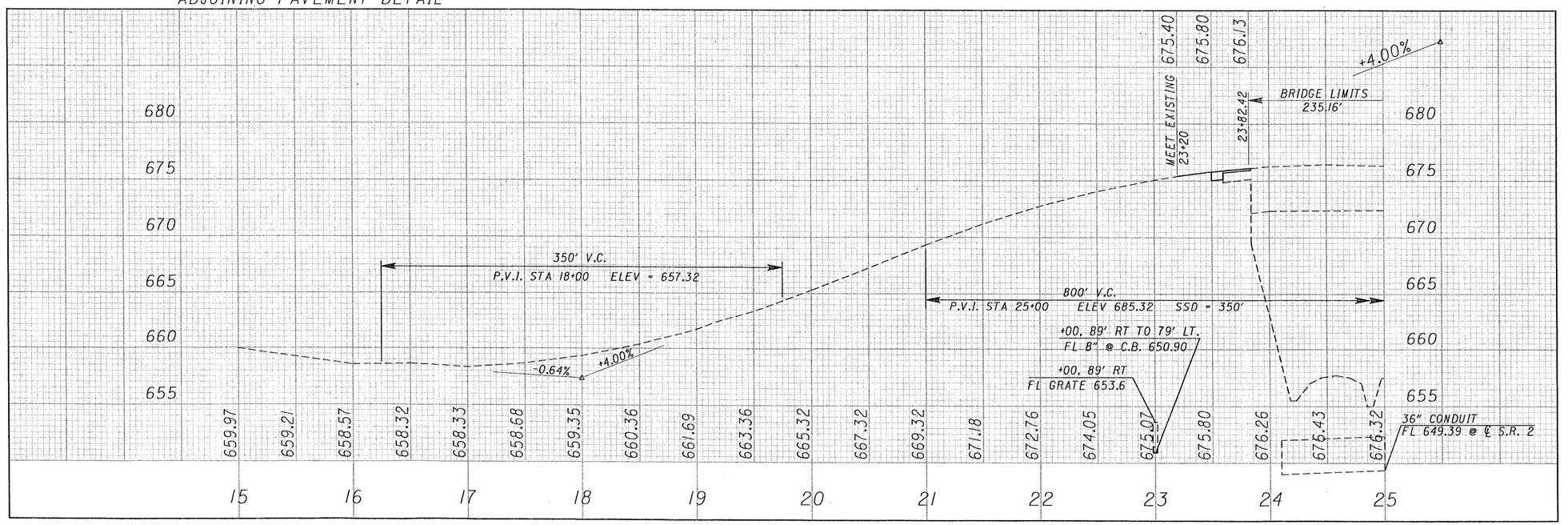
ITEM 202, WEARING COURSE REMOVED, TO BE REPLACED WITH 1" ITEM 404 ASPHALT CONCRETE, AC-20

ITEM 202, WEARING COURSE REMOVED

BEGIN WORK STA. 19+28.77



ADJOINING PAVEMENT DETAIL



LOR-2-0223
Sunnyside Road over S.R. 2

TYPE : Continuous Steel Beam
LENGTH : 235 ft.
WIDTH : 34'-6" T/T GM Parapet
SKEW : None
LOADING : HS-20-44

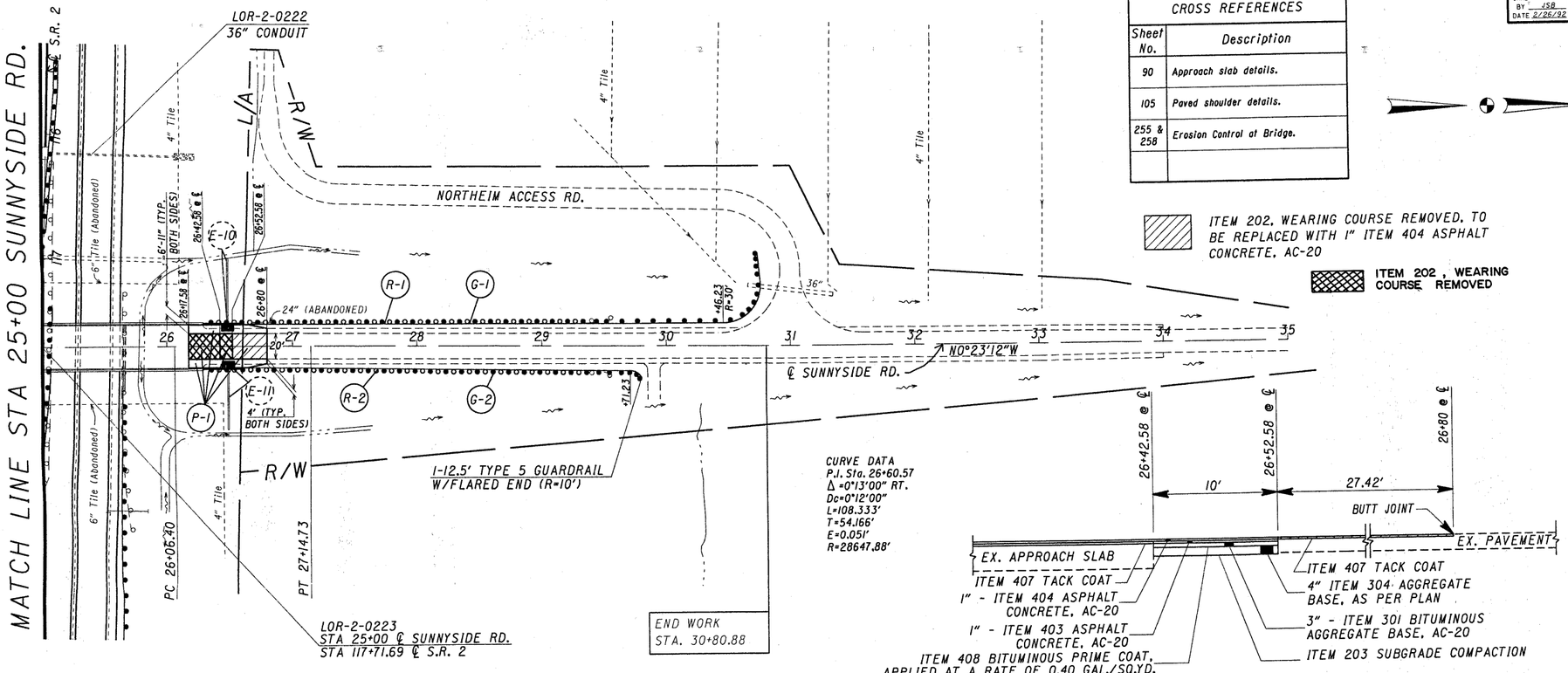
REF No.	Station to Station	202 GUARDRAIL REMOVED LIN. FT.	202 WEARING COURSE REMOVED SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	301 BITUMINOUS AGGREGATE BASE, AC-20 CU. YD.	304 AGGREGATE BASE, AS PER PLAN CU. YD.	403 ASPHALT CONCRETE, AC-20 CU. YD.	404 ASPHALT CONCRETE, AC-20 CU. YD.	407 TACK COAT GAL.	408 BITUMINOUS PRIME COAT GAL.	606 GUARDRAIL TYPE 5 LIN. FT.	606 ANCHOR ASSEMBLY TYPE A EA.	606 BRIDGE TERMINAL ASSEMBLY TYPE I EA.	
G-1	STA 19+28.77 TO 23+70.42 (RT)											418.75	1	1	
G-2	STA 19+28.77 TO 23+70.42 (LT)											418.75	1	1	
P-1	STA 23+20 TO 23+82.42		138.7	19.8	113.6	9.5	10.1	2.2	6.5	11.6	45.4				
R-1	STA 19+95 TO 23+70 (RT)	375.0													
R-2	STA 19+95 TO 23+70 (LT)	375.0													
	Totals Carried to Sub-Summaries (See Sheets 85 and 87.)	750.0	138.7	19.8	113.6	9.5	10.1	2.2	6.5	11.6	45.4	837.5	2	2	

CALC BY MLS DATE 2/25/92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO	154
CHKD BY JSB DATE 2/26/92		FHWA REGION 5	267

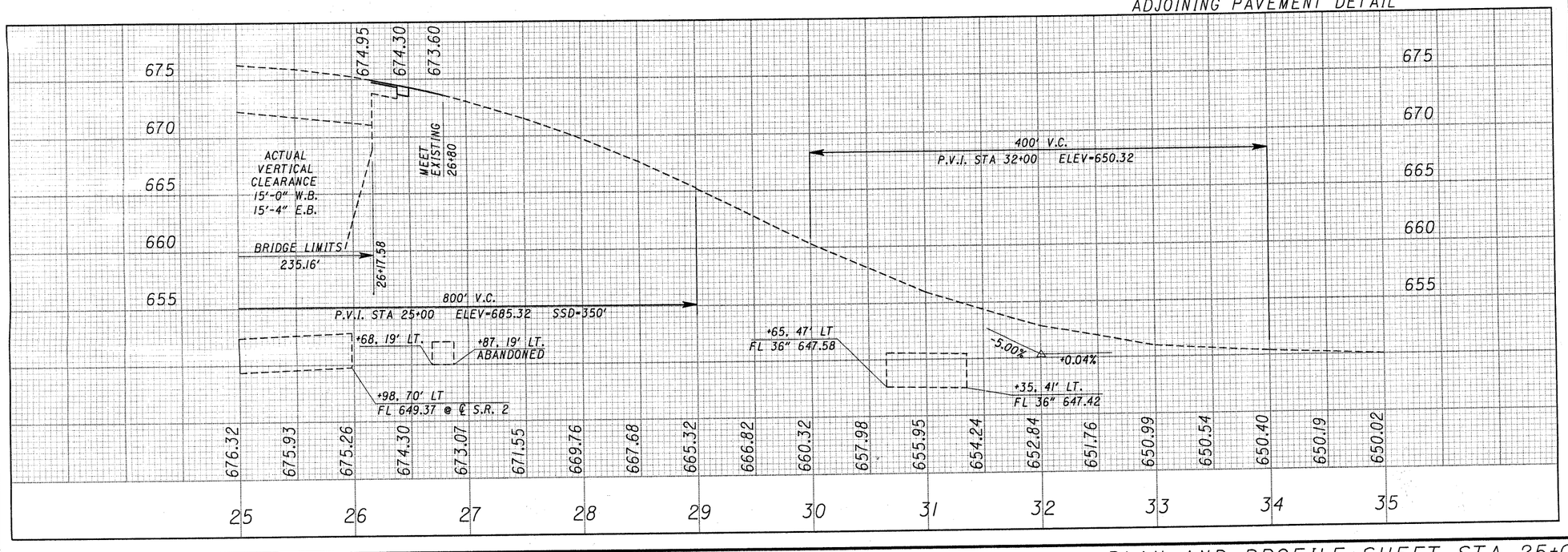
CROSS REFERENCES	
Sheet No.	Description
90	Approach slab details.
105	Paved shoulder details.
255 & 258	Erosion Control at Bridge.

LOR-2-0223
Sunnyside Road over S.R. 2

TYPE : Continuous Steel Beam
LENGTH : 235 ft.
WIDTH : 34'-6" T/T GM Parapet
SKEW : None
LOADING : HS-20-44



ADJOINING PAVEMENT DETAIL



REF No.	Station to Station	606 BRIDGE TERMINAL ASSEMBLY TYPE I EA.	606 ANCHOR ASSEMBLY TYPE T EA.	606 GUARDRAIL ANCHOR ASSEMBLY TYPE 5 EA.	606 GUARDRAIL ANCHOR ASSEMBLY TYPE A EA.	408 BITUMINOUS PRIME COAT GAL.	407 TACK COAT GAL.	404 ASPHALT CONCRETE, AC-20 CU. YD.	403 ASPHALT CONCRETE, AC-20 CU. YD.	304 AGGREGATE BASE, AS PER PLAN CU. YD.	301 BITUMINOUS AGGREGATE BASE, AC-20 CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	202 WEARING COURSE REMOVED SQ. YD.	202 GUARDRAIL REMOVED LIN. FT.
		2	1	812.5	1	45.4	11.6	6.5	2.2	10.1	9.5	113.6	19.8	138.7	650.0
G-1	STA 26+29.58 TO 30+80.88 (LT)			468.75											
G-2	STA 26+29.58 TO 29+80.72 (RT)			343.75											
P-1	STA 26+17.58 TO 26+80				1	45.4	11.6	6.5	2.2	10.1	9.5	113.6	19.8	138.7	
R-1	STA. 26+30 TO 29+55 (LT)														325.0
R-2	STA 26+30 TO 29+55 (RT)														325.0
	Totals Carried to Sub-Summaries (See Sheets 85 and 87.)	2	1	812.5	1	45.4	11.6	6.5	2.2	10.1	9.5	113.6	19.8	138.7	650.0

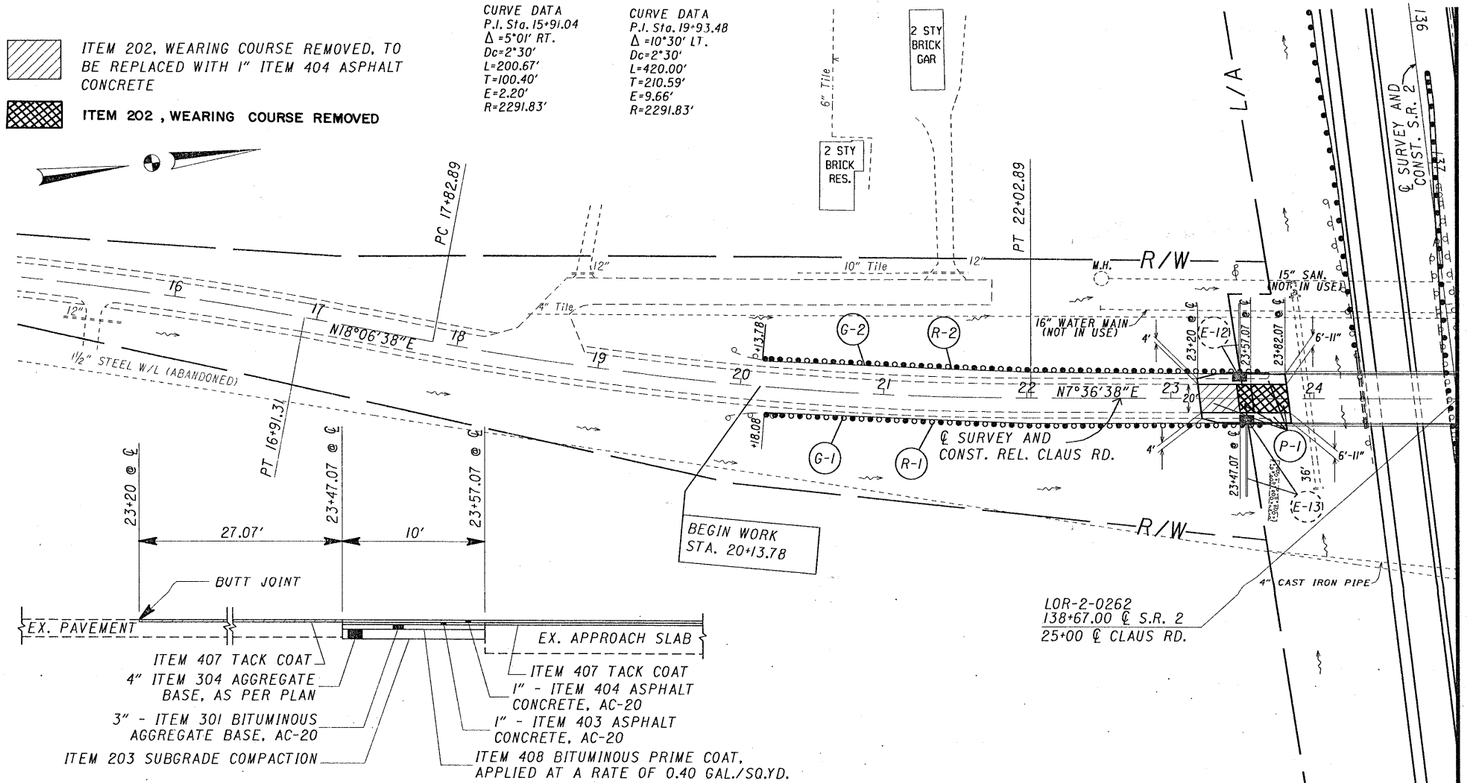
CALC BY RLS DATE 2/25/92	ERI/LOR-2-30.51/0.00	OHIO	155
CHKD BY JSB DATE 2/26/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

ITEM 202, WEARING COURSE REMOVED, TO BE REPLACED WITH 1" ITEM 404 ASPHALT CONCRETE

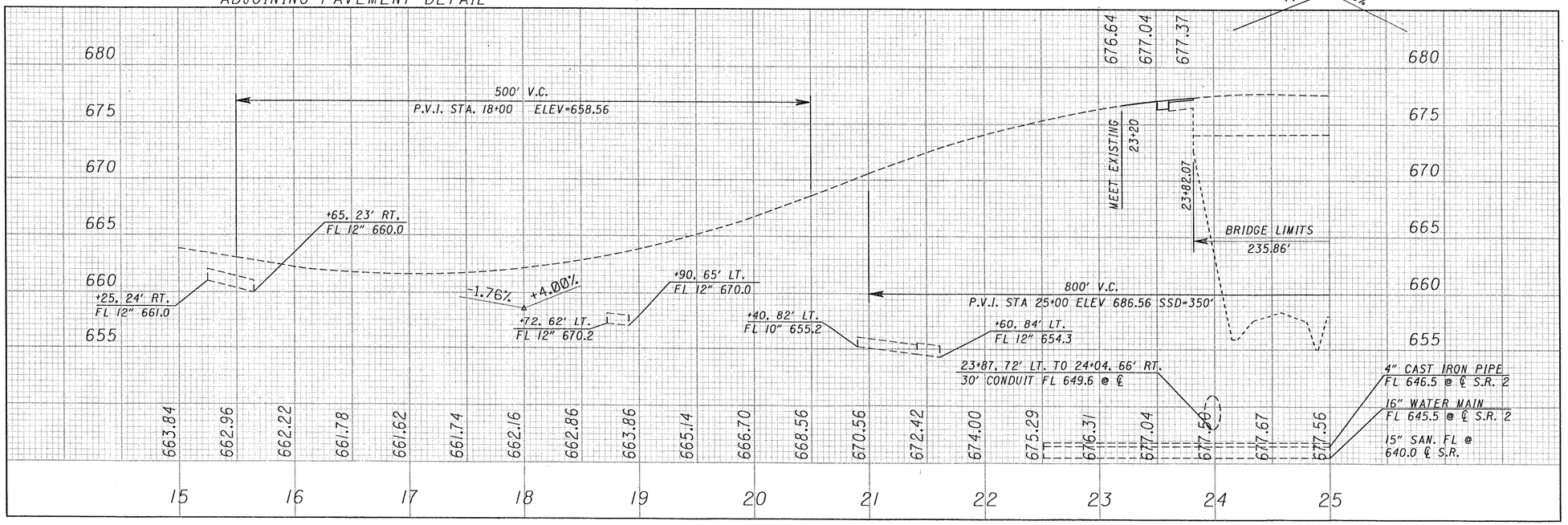
ITEM 202, WEARING COURSE REMOVED

CURVE DATA
P.I. Sta. 15+91.04
Δ =5°01' RT.
Dc=2°30'
L=200.67'
T=100.40'
E=2.20'
R=2291.83'

CURVE DATA
P.I. Sta. 19+93.48
Δ =10°30' LT.
Dc=2°30'
L=420.00'
T=210.59'
E=9.66'
R=2291.83'



ADJOINING PAVEMENT DETAIL



CROSS REFERENCES	
Sheet No.	Description
90	Approach slab details.
105	Paved shoulder details.
255 & 258	Erosion Control at Bridge.

LOR-2-0262
Claus Road over S.R. 2

TYPE : Continuous Steel Beam
LENGTH : 236 ft.
WIDTH : 34'-6" T/T GM Parapet
SKEW : 6°-50'-50"
LOADING : HS-20-44

REF No.	Station to Station	606 BRIDGE TERMINAL ASSEMBLY TYPE 1 EA.	606 ANCHOR ASSEMBLY TYPE A EA.	606 GUARDRAIL TYPE 5 LIN. FT.	408 BITUMINOUS PRIME COAT GAL.	407 TACK COAT GAL.	404 ASPHALT CONCRETE, AC-20 CU. YD.	403 ASPHALT CONCRETE, AC-20 CU. YD.	304 AGGREGATE BASE, AS PER PLAN CU. YD.	301 BITUMINOUS AGGREGATE BASE, AC-20 CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	202 WEARING COURSE REMOVED SQ. YD.	202 GUARDRAIL REMOVED LIN. FT.
G-1	STA 20+18.08 TO 23+72.23 (RT)			331.25										
G-2	STA 20+13.78 TO 23+67.93 (LT)			331.25										
P-1	STA 23+20 TO 23+82.07	1	1		45.2	11.6	6.4	2.2	10.1	9.5	113.0	19.7	137.9	
R-1	STA 19+93 TO 23+68 (RT)													375.0
R-2	STA 19+93 TO 23+68 (LT)													375.0
	Totals Carried to Sub-Summaries (See Sheets 85 and 87.)	2	2	662.5	45.2	11.6	6.4	2.2	10.1	9.5	113.0	19.7	137.9	750.0

PLAN AND PROFILE SHEET STA 15+00 TO 25+00 CLAUS RD.

CALC BY RLS DATE 2/25/92
CHKD BY JSB DATE 2/26/92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

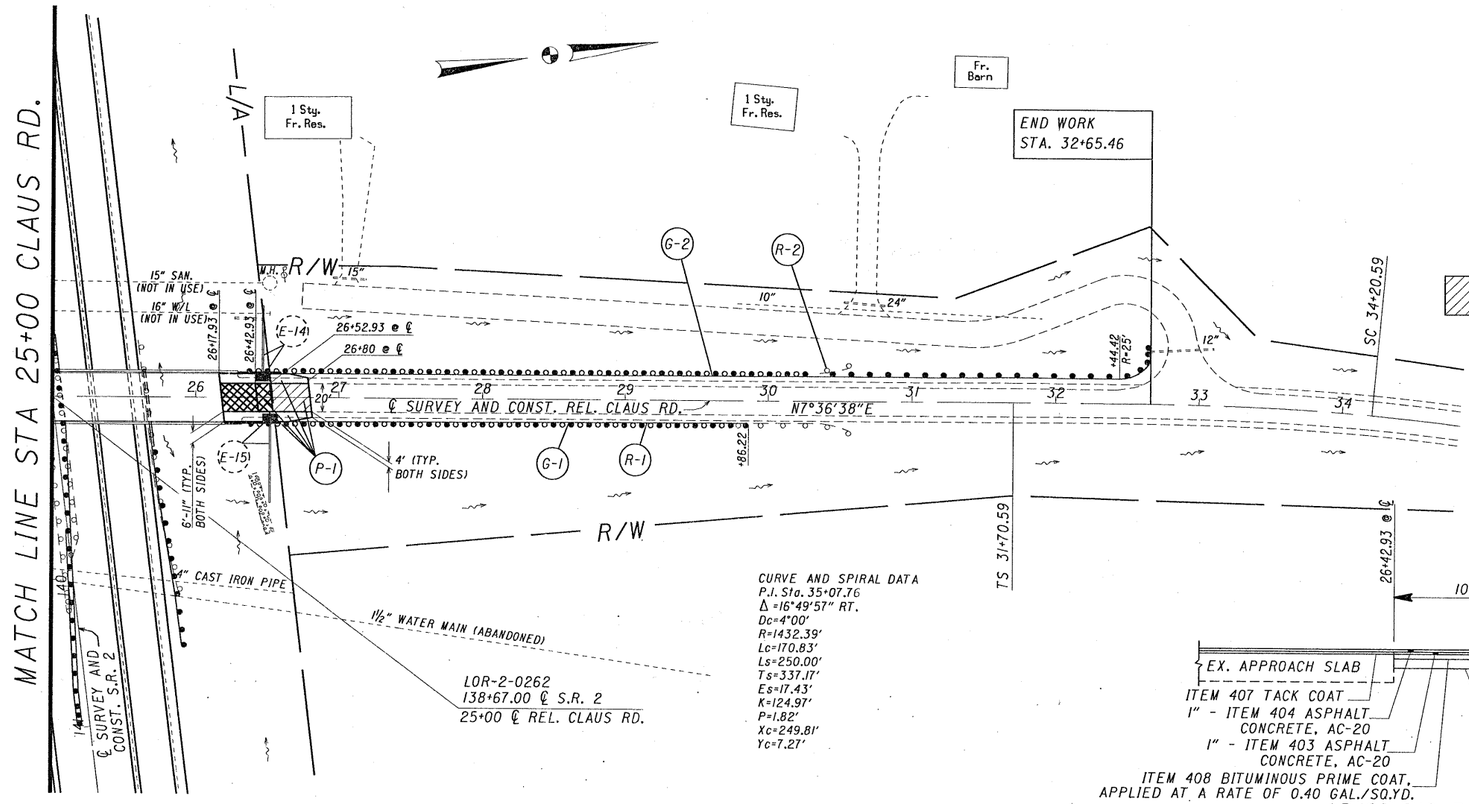
OHIO
FHWA REGION 5

156
267

CROSS REFERENCES	
Sheet No.	Description
90	Approach slab details.
105	Paved shoulder details.
255 & 258	Erosion Control at Bridge.

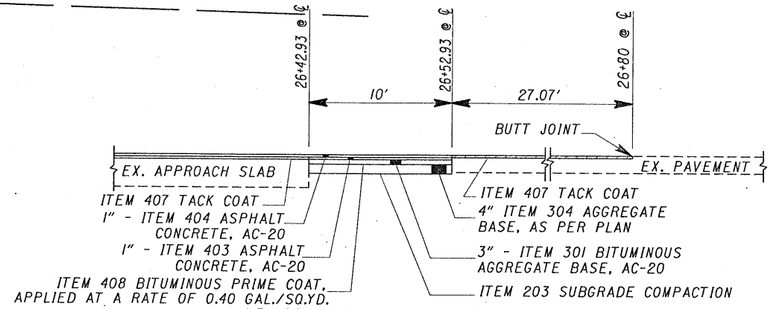
LOR-2-0262
Claus Road over S.R. 2

TYPE : Continuous Steel Beam
LENGTH : 236 ft.
WIDTH : 34'-6" T/T GM Parapet
SKEW : 6°-50'-50"
LOADING : HS-20-44

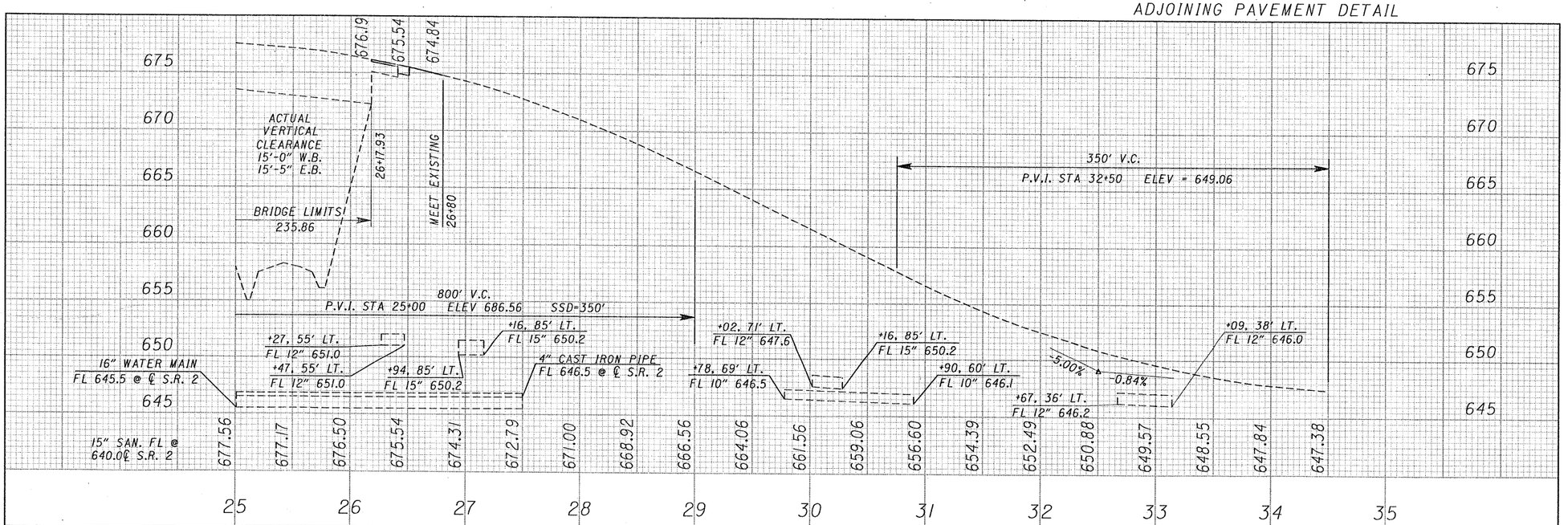


ITEM 202, WEARING COURSE REMOVED, TO BE REPLACED WITH 1" ITEM 404 ASPHALT CONCRETE, AC-20

ITEM 202 , WEARING COURSE REMOVED



ADJOINING PAVEMENT DETAIL



REF No.	Station to Station	606 BRIDGE TERMINAL ASSEMBLY TYPE 1 EA.	606 ANCHOR ASSEMBLY TYPE T EA.	606 ANCHOR ASSEMBLY TYPE A EA.	606 GUARDRAIL TYPE 5 LIN. FT.	408 BITUMINOUS PRIME COAT GAL.	407 TACK COAT GAL.	404 ASPHALT CONCRETE, AC-20 CU. YD.	403 ASPHALT CONCRETE, AC-20 CU. YD.	304 AGGREGATE BASE, AS PER PLAN AC-20 CU. YD.	301 BITUMINOUS AGGREGATE BASE, AC-20 CU. YD.	203 SUBGRADE COMPACTION SQ. YD.	203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION CU. YD.	202 WEARING COURSE REMOVED SQ. YD.	202 GUARDRAIL REMOVED LIN. FT.	
G-1	STA 26+32.07 TO 29+86.22 (RT)				331.25											975.0
G-2	STA 26+27.77 TO 32+65.45 (LT)				643.75											
P-1	STA. 26+17.93 TO 26+80	1	1	1		45.2	11.6	6.4	2.2	10.1	9.5	113.0	19.7	137.9		45.2
R-1	STA 26+30 TO 30+55 (RT)														425.0	11.6
R-2	STA 26+30 TO 30+55 (LT)														425.0	6.4
	Totals Carried to Sub-Summaries (See Sheets 85 and 87.)	2	1	1	975.0	45.2	11.6	6.4	2.2	10.1	9.5	113.0	19.7	137.9	850.0	

PLAN AND PROFILE SHEET STA 25+00 TO 35+00 CLAUS RD.

CALC BY	M.D.C.
DATE	2/27/92
CHKD BY	R.L.S.
DATE	2/27/92

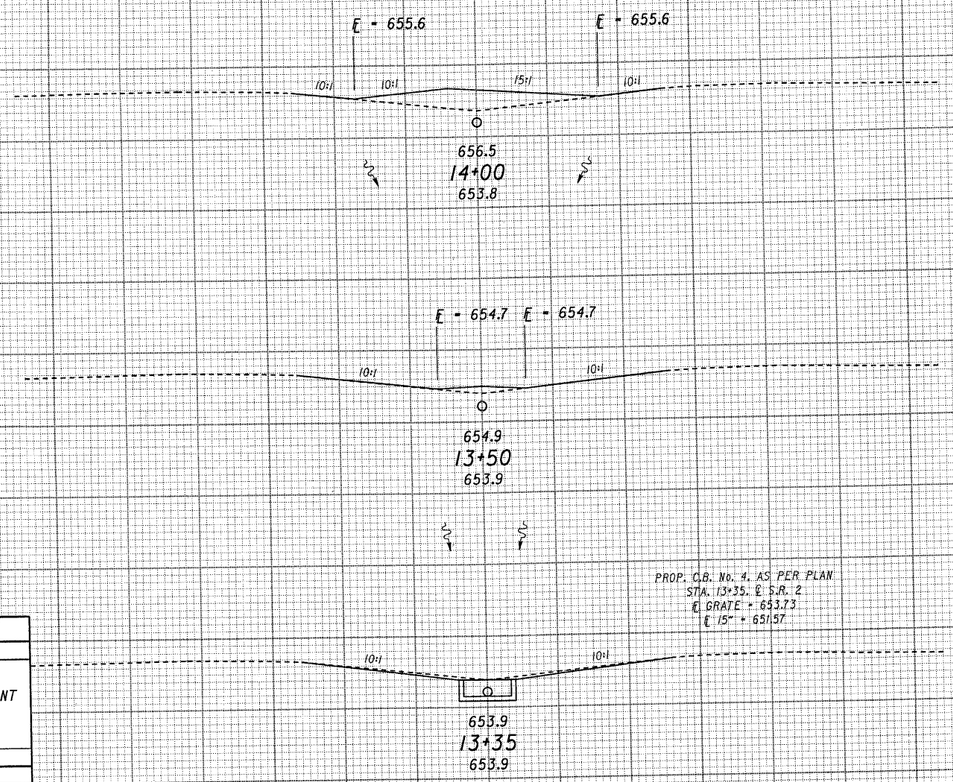
ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

157
267

FOR QUANTITY TOTALS SEE THIS SHEET.

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		0	103
0	54		
		0	56
0	6		
		10	2
35	0		
		6	0
0	0		

EARTHWORK AT PIERS SUB-SUMMARY

SHEET NO.	Station to Station		203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	203 EMBANKMENT
	FROM	TO	CU. YD.	CU. YD.
157	13+00 ℄ S.R. 2	14+00 ℄ S.R. 2	16	161
158	14+40 ℄ S.R. 2	16+00 ℄ S.R. 2	24	117
159	16+50 ℄ S.R. 2	19+00 ℄ S.R. 2	27	72
160	55+90 ℄ S.R. 2	57+00 ℄ S.R. 2	10	3
161	77+00 ℄ S.R. 2	78+50 ℄ S.R. 2	3	233
162	79+00 ℄ S.R. 2	80+50 ℄ S.R. 2	20	100
163	81+00 ℄ S.R. 2	83+00 ℄ S.R. 2	14	196
164	115+00 ℄ S.R. 2	116+50 ℄ S.R. 2	42	206
165	117+00 ℄ S.R. 2	118+50 ℄ S.R. 2	77	49
166	119+00 ℄ S.R. 2	120+50 ℄ S.R. 2	14	148
167	136+00 ℄ S.R. 2	137+50 ℄ S.R. 2	10	195
168	138+00 ℄ S.R. 2	139+50 ℄ S.R. 2	29	84
169	140+00 ℄ S.R. 2	141+50 ℄ S.R. 2	8	142
170	172+00 ℄ S.R. 2	177+50 ℄ S.R. 2	22	171
171	178+00 ℄ S.R. 2	182+00 ℄ S.R. 2	15	177
Totals Carried to General Summary			331	2054

100 50

CROSS SECTIONS STA 13+00 TO STA 14+00 S.R. 2

CALC BY N.D.C. DATE 2/27/92	ERI/LOR-2-30.51/0.00	OHIO	158
CHKD BY R.L.S. DATE 2/27/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

FOR QUANTITY TOTALS SEE SHEET 157.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
				11	10
		3	7		
				8	12
		1	5		
				2	26
		1	23		
				3	52
		2	33		
				0	17
		0	57		

BARRIER EARTHWORK ENDS @ STA. 16+27

℄ PIER @ STA. 15+99.40

BARRIER EARTHWORK ENDS @ STA. 16+25

℄ = 655.1 ℄ = 655.1

15:1 10:1 10:1 1/2"/FT. 1/2"/FT. 10:1 10:1 8:1

670 660 650

BARRIER EARTHWORK BEGINS @ STA. 15+74

656.2
16+00
656.0

BARRIER EARTHWORK BEGINS @ STA. 15+72

℄ = 655.2 ℄ = 655.2

10:1 16:1 10:1 10:1

660 650

656.1
15+50
656.2

℄ = 655.4 ℄ = 655.4

10:1 10:1 10:1 10:1

660 650

30" WATER MAIN

656.8
15+00
656.1

℄ = 655.5 ℄ = 655.5

1½" DUCT-CABLE

10:1 10:1 11:1 10:1

660 650

656.8
14+50
655.3

EX. C.B. TO BE ABANDONED AND CONNECTED THROUGH STA. 14+40, ℄ S.R. 2
℄ GRATE = 653.39
℄ 15" = 651.29

℄ = 655.6 ℄ = 655.6

1½" DUCT-CABLE

10:1 10:1 11:1 10:1

660 650

656.9
14+40
653.7

100 50 ℄ 50 100

CROSS SECTIONS STA. 14+40 TO STA. 16+00 S.R. 2

CALC BY W.D.C. DATE 2/27/92	ERI/LOR-2-30.51/0.00	OHIO	159
CHKD BY R.L.S. DATE 2/27/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

FOR QUANTITY TOTALS SEE SHEET 157.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		0	0		
				0	0
		0	0		
				4	24
		4	26		
				7	31
		4	8		
				7	11
		4	4		
				9	6
		6	3		

660
650

653.4
19+00
653.4

EARTHWORK ENDS @ STA. 18+52

℄ = 653.5

17:1 17:1

653.5
18+50
653.5

℄ = 654.5 ℄ = 654.5

10:1 18:1 10:1 10:1

655.2
18+00
653.7

℄ = 654.7 ℄ = 654.7

10:1 11:1 10:1 10:1

655.9
17+50
655.5

℄ = 654.8 ℄ = 654.8

10:1 10:1 12:1 10:1

656.2
17+00
655.8

℄ = 654.9 ℄ = 654.9

10:1 10:1 15:1 10:1

655.7
16+50
656.0

30" WATER MAIN

1½" DUCT-CABLE

1½" DUCT-CABLE

100 50 ℄ 50 100

CROSS SECTIONS STA. 16+50 TO STA. 19+00 S.R. 2

SEEDING	
END WIDTH	SQ. YDS.

CALC BY M.D.C. DATE 2/27/98	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	160 267
CHKD BY R.L.S. DATE 3/27/98			

FOR QUANTITY TOTALS SEE SHEET 157.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		2	1
4	1		
		8	2
4	1		
		0	0
0	0		

660
650
640
630

634.07
57+00
634.07

BARRIER EARTHWORK ENDS @ STA. 56+69

℄ PIER @ STA. 56+39.39

BARRIER EARTHWORK ENDS @ STA. 56+65

15:1

8:1

634.07
56+50
634.07

650
640
630

EX. C.B. STA. 56+10, 77' LT
FL GRATE = 630.30
FL 12" = 627.30

EX. C.B. STA. 56+07
FL GRATE = 629.95
FL 12" = 627.45

EX. C.B. STA. 56+10, 77' RT
FL GRATE = 630.60
FL 12" = 627.00

632.27
56+00
632.27

BARRIER EARTHWORK BEGINS @ STA. 55+98

BARRIER EARTHWORK BEGINS @ STA. 55+98

650
640
630

631.97
55+90
631.97

℄

100 50 50 100

CROSS SECTIONS STA 55+90 TO STA 57+00 S.R. 2

CALC BY M.D.C. DATE 2/27/98	ERI/LOR-2-30.51/0.00
CHKD BY R.L.S. DATE 2/27/98	VARIOUS SECTIONS
	ERIE & LORAIN COUNTIES

OHIO | FHWA REGION 5 | 161 / 267

FOR QUANTITY TOTALS SEE SHEET 157.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
				1	64
		1	43		
				2	90
		0	54		
				0	69
		0	21		
				0	10
		0	0		

℄ = 651.8 ℄ = 651.8
10:1 10:1 11:1 10:1
660 650 640
652.8
78+50
651.8

℄ = 651.5 ℄ = 651.5
10:1 10:1 16:1 10:1
660 650 640
652.5
78+00
649.6

℄ = 650.6 ℄ = 650.6
10:1 10:1
660 650 640
651.3
77+50
649.3

EARTHWORK BEGINS @ STA. 77+25
660 650 640
18" CONDUIT
649.0
77+00
649.0

100 50 ℄ 50 100

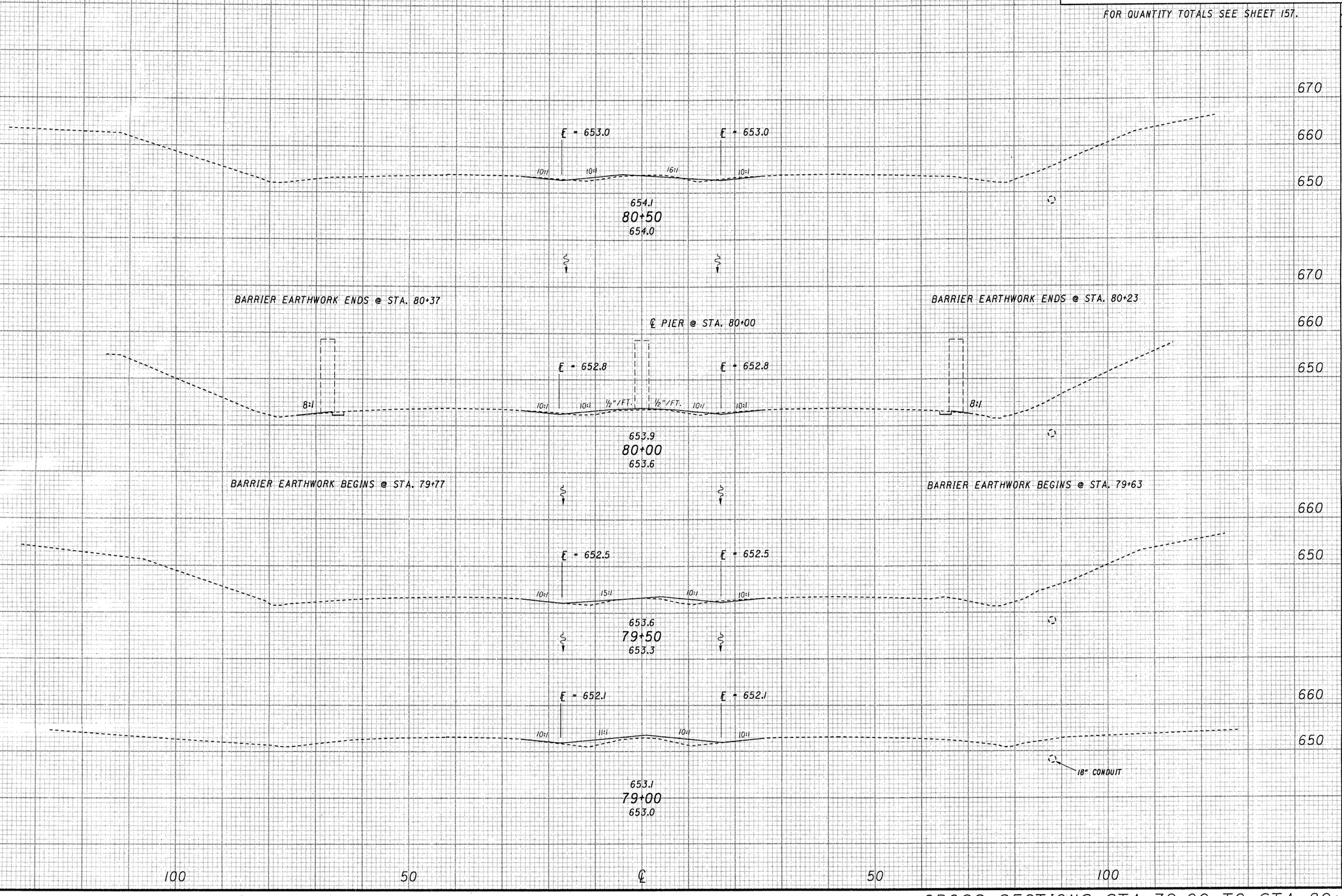
CROSS SECTIONS STA 77+00 TO STA 78+50 S.R. 2

SEEDING	
FAT WIDTH	SQ. YDS.

CALC BY M.D.C. DATE 2/27/92	ERI/LOR-2-30.51/0.00
CHKD BY R.L.S. DATE 2/27/92	VARIOUS SECTIONS
	ERIE & LORAIN COUNTIES

OHIO | FHWA REGION 5 | 162 / 267

FOR QUANTITY TOTALS SEE SHEET 157.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		7	18
4	8		
		6	18
3	11		
		5	25
2	16		
		2	39
0	26		

CROSS SECTIONS STA 79+00 TO STA 80+50 S.R. 2

CALC BY W.D.C. DATE 2/27/92	ERI/LOR-2-30.51/0.00	OHIO	163
CHKD BY R.L.S. DATE 2/27/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

FOR QUANTITY TOTALS SEE SHEET 157.

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		0	0		
				0	6
		0	32		
				0	25
		1	36		
				2	83
		1	54		
				5	61
		4	12		
				7	21
		4	11		

660
650

652.6
83+00
652.6

EARTHWORK ENDS @ STA. 82+80

PROP. C.B. No. 4, AS PER PLAN
STA. 82+70, ℄ S.R. 2
E GRATE = 652.23
E 12" = 650.17

10:1 10:1
652.4
82+70
652.4
E = 653.4 E = 653.4

10:1 10:1
653.4
82+50
652.3

EX. C.B. TO BE ABANDONED
AND CONNECTED THROUGH
STA. 81+62.5, ℄ S.R. 2
E GRATE = 651.50
E 12" = 649.52

EX. MAN HOLE
STA 81+62.50, 90° RT
FL COVER = 654.0
FL 12" = 648.46
FL 18" = 648.21

E = 653.7 E = 653.7
10:1 18:1 10:1 10:1
654.7
82+00
652.0

E = 653.6 E = 653.6
10:1 12:1 10:1 10:1
654.7
81+50
654.4

E = 653.3 E = 653.3
10:1 10:1 11:1 10:1
654.3
81+00
654.2

100 50 ℄ 50 100

CROSS SECTIONS STA 81+00 TO STA 83+00 S.R. 2

CALC BY M.D.C. DATE 2/27/92	ERI/LOR-2-30.51/0.00	OHIO	164
CHKD BY R.L.S. DATE 2/27/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

FOR QUANTITY TOTALS SEE SHEET 157.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
				8	17
		3	10		
				3	56
		0	51		
				0	94
		0	50		
				26	39
		34	0		
				5	0
		0	0		

℄ = 656.7 ℄ = 656.7

10:1 10:1 10:1 10:1

658.0
116+50
657.5

EX. C.B. TO BE ABANDONED AND CONNECTED THROUGH STA. 116+15, ℄ S.R. 2
℄ GRATE = 654.61
℄ 15" = 652.78

℄ = 657.0 ℄ = 656.9

10:1 10:1 17:1 10:1

657.6
116+00
654.9

℄ = 657.0 ℄ = 657.0

10:1 10:1 18:1 10:1

657.8
115+50
655.1

PROP. C.B. No. 4, AS PER PLAN
STA. 115+08, ℄ S.R. 2
℄ GRATE = 655.10
℄ 12" = 655.17

10:1 10:1

655.3
115+08
655.3

EARTHWORK BEGINS @ STA. 115+00

655.3
115+00
655.3

660 650 660 650 660 650 660 650

100 50 ℄ 50 100

CROSS SECTIONS STA 115+00 TO STA 116+50 S.R. 2

SEEDING	
END WIDTH	SQ. YDS.

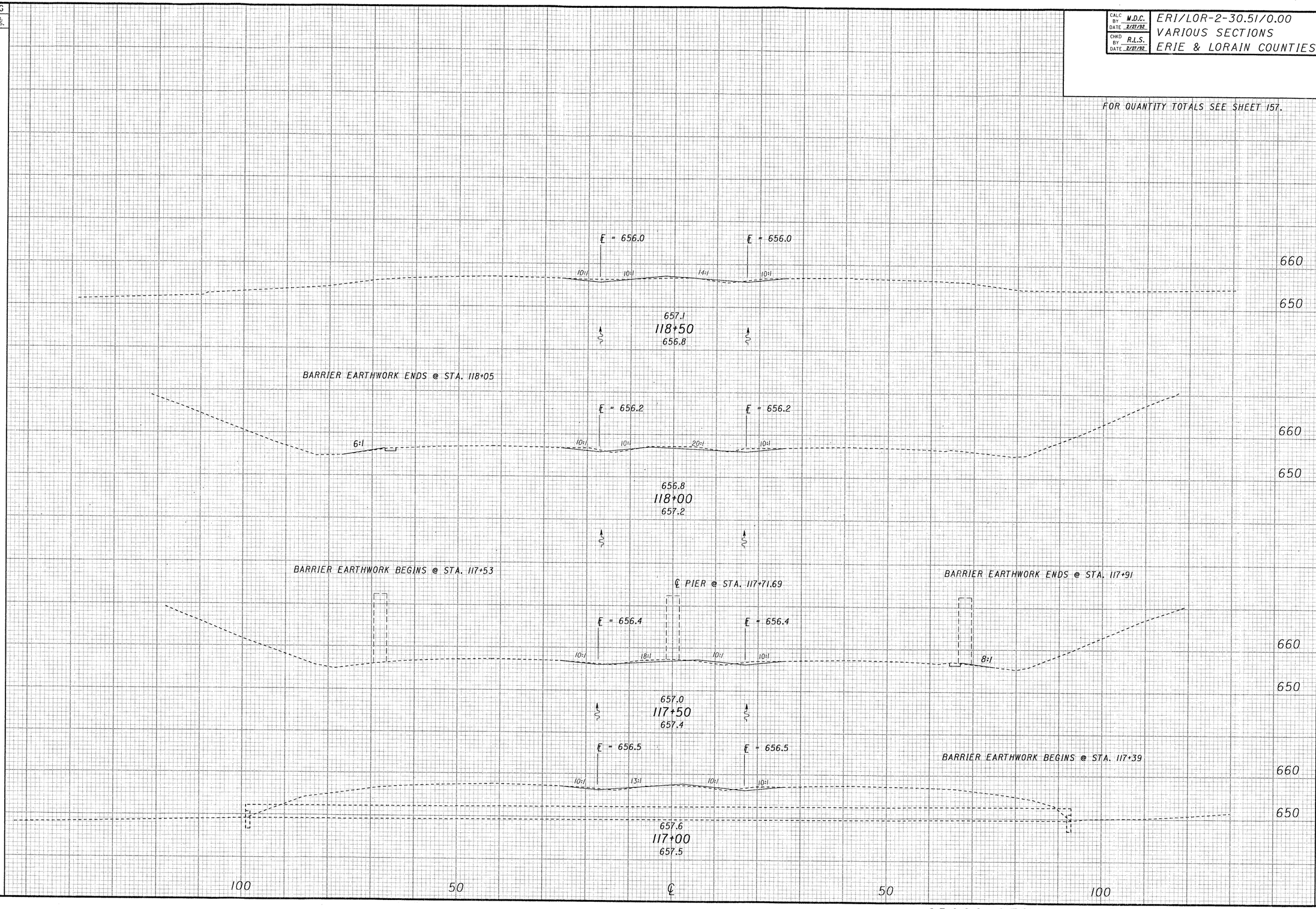
CALC BY M.D.C. DATE 2/27/92	ERI/LOR-2-30.51/0.00
CHKD BY R.L.S. DATE 2/27/92	VARIOUS SECTIONS
	ERIE & LORAIN COUNTIES

OHIO

FHWA REGION 5

FOR QUANTITY TOTALS SEE SHEET 157.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		11	19
8	7		
		20	9
14	3		
		29	9
11	5		
		17	12
6	8		



SEEDING	
END WIDTH	SQ. YDS.

CALC BY M.D.C. DATE 2/27/92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	166 267
CHKD BY R.L.S. DATE 2/27/92			

FOR QUANTITY TOTALS SEE SHEET 157.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		2	28
3	38		
		6	70
3	38		
		6	48
4	14		

660
650

653.9
120+50
653.9

EARTHWORK ENDS @ STA. 120+40

℄ = 655.4 ℄ = 655.4

10:1 20:1 10:1 10:1

660
650

656.1
120+00
654.1

℄ = 655.6 ℄ = 655.6

10:1 15:1 10:1 10:1

660
650

656.5
119+50
654.3

℄ = 655.8 ℄ = 655.8

10:1 10:1 10:1 10:1

660
650

657.1
119+00
656.5

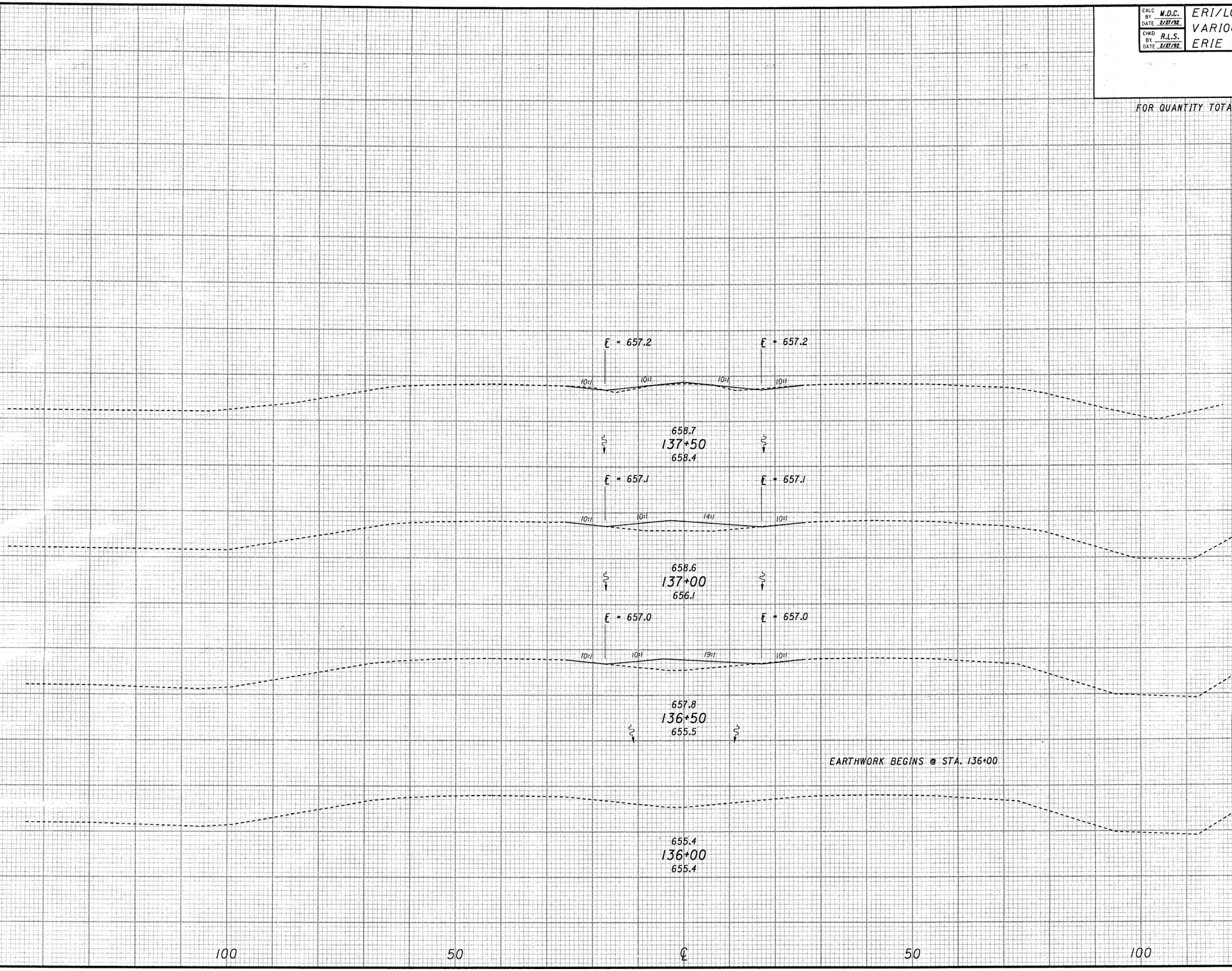
100 50 ℄ 50 100

CROSS SECTIONS STA 119+00 TO STA 120+50 S.R. 2

SEEDING	
END WIDTH	SQ. YDS.

CALC BY M.D.C. DATE 2/27/92	ERI/LOR-2-30.51/0.00
CHKD BY R.L.S. DATE 2/27/92	VARIOUS SECTIONS
	ERIE & LORAIN COUNTIES
OHIO	FHWA REGION 5

FOR QUANTITY TOTALS SEE SHEET 157.



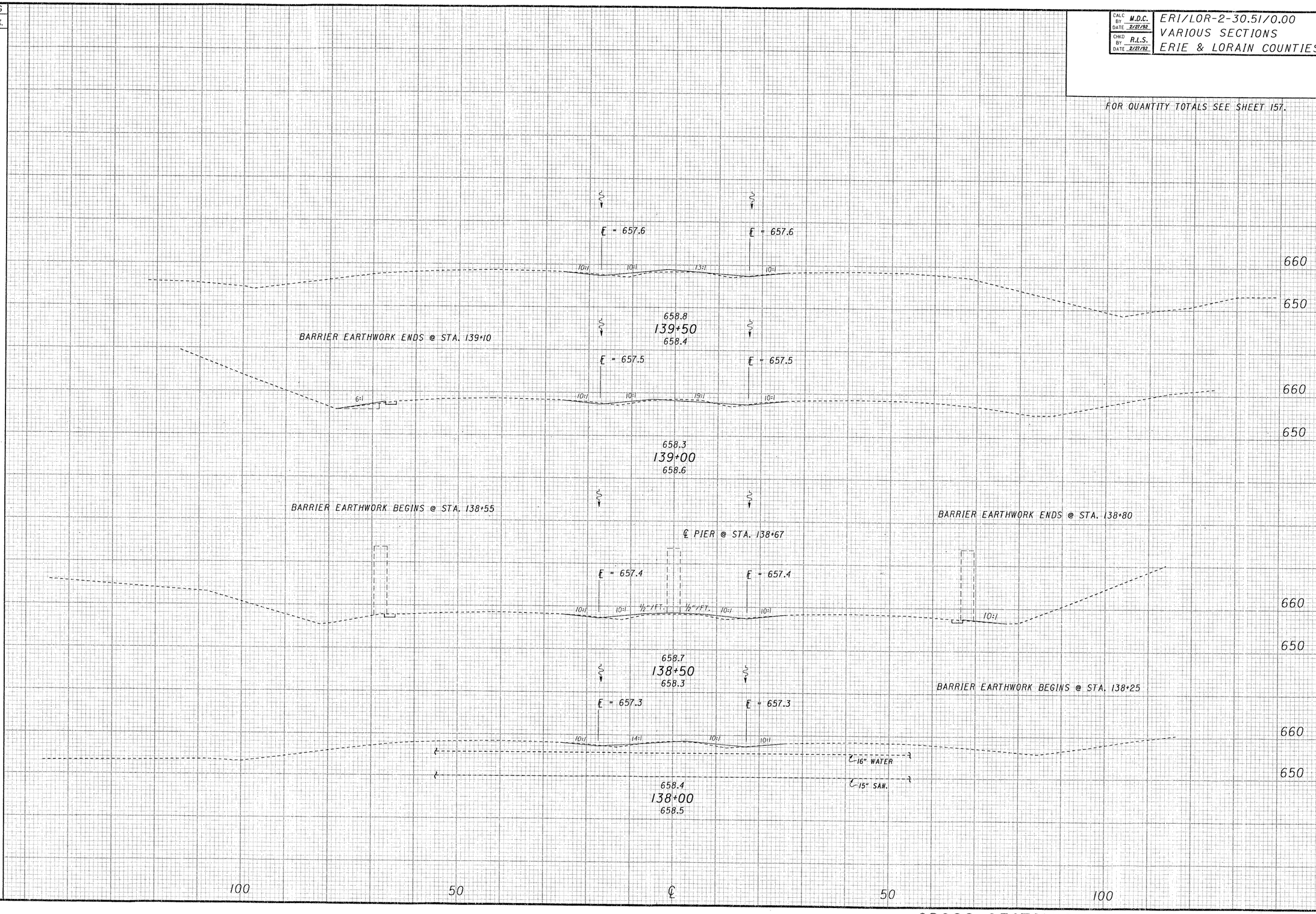
END AREA		VOLUME	
CUT	FILL	CUT	FILL
		6	18
4	11		
		4	52
0	45		
		0	83
0	45		
		0	42
0	0		

CROSS SECTIONS STA 136+00 TO STA 137+50 S.R. 2

SEEDING	
END WIDTH	SQ. YDS.

CALC BY M.D.C. DATE 3/27/92	ERI/LOR-2-30.51/0.00	OHIO	168
CHKD BY R.L.S. DATE 3/27/92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

FOR QUANTITY TOTALS SEE SHEET 157.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		5	27
3	13		
		9	19
7	7		
		8	18
2	12		
		7	20
3	8		

CROSS SECTIONS STA 138+00 TO STA 139+50 S.R. 2

SEEDING	
END WIDTH	SQ. YDS.

CALC BY M.D.C. DATE 2/27/92 CHKD BY R.L.S. DATE 2/27/92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	169/267

FOR QUANTITY TOTALS SEE SHEET 157.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
		1	26
1	40		
		3	69
2	35		
		4	47
2	16		

CROSS SECTIONS STA 140+00 TO **STA 141+50 S.R. 2**

SEEDING	
END WIDTH	SQ. YDS.

CALC BY M.D.C. DATE 2/27/92
CHKD BY R.L.S. DATE 2/27/92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION

FOR QUANTITY TOTALS SEE SHEET 157.

END AR	
CUT	F
4	
0	
3	
0	
0	

℄ = 665.0
20:1 20:1
665.0
177+50
665.9
660
650
℄ = 665.0
660
650
175+60
665.0
℄ = 664.6
15:1 15:1
660
664.6
175+00
664.6
650
℄ = 664.4 ℄ = 664.8
10:1 10:1 10:1 10:1
660
665.1
174+00
662.4
650
℄ = 663.7 ℄ = 663.7
10:1 10:1 10:1 10:1
660
664.4
173+00
661.7
650
EARTHWORK BEGINS @ STA 172+30
660
172+00
660.8
650

100 50 ℄ 50 100

CROSS SECTIONS STA 172+00 TO STA 177+50

CALC BY	M.D.C.
DATE	2/27/92
CHKD BY	R.L.S.
DATE	2/27/92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

171/267

SEEDING	
END WIDTH	SQ. YDS.

FOR QUANTITY TOTALS SEE SHEET 157.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
		0	28
0	25		
		2	93
1	25		
		13	56
6	5		

CROSS SECTIONS STA 178+00 TO STA 182+00 S.R. 2

TRAFFIC CONTROL SUMMARY

CALC BY KAS DATE 2-14-92	ERI/LOR-2-30.51/0.00	OHIO	172
CHKD BY JSB DATE 2-28-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

SHEET NUMBER					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
173	174	175	176	177					
				855	202	54100	855	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE
23.04	15.08	3.28			630	00100	41.4	CU. YD.	CONCRETE FOR EMBEDDED FOUNDATION
155	65	96			630	02100	316	LIN. FT.	GROUND MOUNTED SUPPORT, NO. 2 POST
156.5	197	226			630	03100	580	LIN. FT.	GROUND MOUNTED SUPPORT, NO. 3 POST
92	127	58			630	04100	277	LIN. FT.	GROUND MOUNTED SUPPORT, NO. 4 POST
107	102	56.5			630	06400	266	LIN. FT.	GROUND MOUNTED SUPPORT, S4X7.7 BEAM
154					630	06500	154	LIN. FT.	GROUND MOUNTED SUPPORT, W6X9 BEAM
	93				630	07000	93	LIN. FT.	GROUND MOUNTED SUPPORT, W8X18 BEAM
103.5	50				630	07500	154	LIN. FT.	GROUND MOUNTED SUPPORT, W10X22 BEAM
303.5	130	37.5			630	07600	471	LIN. FT.	GROUND MOUNTED SUPPORT, W10X12 BEAM
17	16.5	13			630	08004	47	LIN. FT.	ONE-WAY SIGN SUPPORT, NO. 3 POST
22	12	6			630	09000	40	EACH	BREAKAWAY BEAM CONNECTION
1	3				630	77000	4	EACH	OVERPASS STRUCTURE MOUNTED SIGN SUPPORT, TYPE TC-18.24
279	233.36	237.5			630	80102	750	SQ. FT.	SIGNS, FLAT SHEET, TYPE G
1342	1329.5	249			630	80204	2921	SQ. FT.	SIGNS, EXTRUSHEET, TYPE G
38	32	34			630	84900	104	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
16	5	1			630	85400	22	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL
59	37	33			630	86002	129	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
3	2				630	86102	5	EACH	REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL
1	7				630	87400	8	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL
1	3				630	88800	4	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN SUPPORT & STORAGE
	6				631	84300	6	EACH	SIGNS WIRED
	7				631	94100	7	EACH	REMOVAL OF LUMINAIRE AND RE-ERECTION
			20.18		642	00102	20.18	MI.	EDGE LINE, TYPE 2
			7.91		642	00202	7.91	MI.	LANE LINE, TYPE 2
			0.37		642	00302	0.37	MI.	CENTER LINE, TYPE 2
			4476		642	00402	4476	LIN. FT.	CHANNELIZING LINE, TYPE 2
			2495		642	00702	2495	LIN. FT.	TRANSVERSE LINE, TYPE 2
				98	802	00100	190	EACH	BARRIER REFLECTOR, TYPE A
				44	802	00200	81	EACH	BARRIER REFLECTOR, TYPE B
				855	862	00100	855	EACH	RAISED PAVEMENT MARKER

SIGN SUB-SUMMARY

CALC BY KAS DATE 2/14/92	ERI/LOR-2-30.51/0.00	OHIO
CHKD BY JSB DATE 2/28/92	ERIE COUNTY	FHWA REGION 5
	LORAIN COUNTY	173 / 267

REF. No.	SHEET No.	STATION	SIDE	CODE	LEVEL	SIZE	Signs Flat Sheet Type G.	Signs Extrusheet Type G.	Removal of Ground Mounted Sign & Disposal	Removal of Ground Mounted Major Sign & Disposal	Removal of Overhead Mounted Sign & Disposal	Removal of Ground Mounted Post Support & Disposal	Removal of Ground Mounted Beam Support & Disposal	Overpass Structure Mounted Sign Support, Type TC-18.24	Removal of Overhead Mounted Sign Support and Storage	630 Ground Mounted Support No.2 Post	Ground Mounted Support No.3 Post	Ground Mounted Support No.4 Post	One-Way Sign Support No.3 Post	Ground Mounted Support S4 X 7.7 BEAM	Ground Mounted Support W6 X 9 BEAM	Ground Mounted Support W10 X 12 BEAM	Ground Mounted Support W10 X 22 BEAM		Concrete for Embedded Foundation	Breakaway Beam Connection
							S.F.	S.F.	Each	Each	Each	Each	Each	Each	Each	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.		Cu.Yd.	Each
1S	178	1830+00	Lt.							1			1													
3S	178	0+00	Rt.	GP	III	96" x 60"		40.0		1		2									19-20				0.66	2
4S	178	0+00	Rt.	N-41-12		12" x 24"	2.0		1			1				11										
5S	178	0+00	Lt.	GP		96" x 60"		40.0		1		2									19.5-19				0.66	2
6S	178	U-Turn Median Opening At Sta. 5+00	Center	R-19-24		24" x 30"	5.0		1			1														
7S				R-123-36		36" x 36"	9.0		1									14								
8S				R-123-36		36" x 36"	9.0		1			1						14								
9S				R-19-24		24" x 30"	5.0		1																	
10S	178	8+00	Lt.	GB	I	156" x 144"		156.0															28.5-27.5		2.46	2
11S	178	12+50	Rt.	RA-2		132" x 60"		55.0		1		3									19.5-20				2.20	2
12S	179	22+50 Ramp "Q"	Rt.	N-84-48		48" x 36"	12.0		1			2						11								
13S	179	23+00 Ramp "R"	Lt.	R-2-48		48"x 48" x 48"	6.0			1		1				14-14										
14S	179	23+00	Lt.	W-49R-48		48" x 48"	16.0			1		1					14-14									
15S	179	21+10 Sign Assembly	Rt.	RA-4		72" x 66"		33.0	1			3								17.5-17.5					0.54	2
16S				N-61-24		24" x 24"	4.0																			
17S	179	25+00	Rt.	GB	I	168" x 102"		119.0														21.5-22.5			2.20	2
18S	179	29+00	Rt.							1			2													
19S	179	36+50 Ramp "T"	Rt.	R-2-48		48"x 48" x 48"	6.0		1			1				13.5-13.5										
20S	179	36+75 Ramp "T"	Lt.	N-84-48		48" x 36"	12.0		1			2						11								
21S	179	37+00	Rt.	W-49R-48		48" x 48"	16.0		1			1					14.5-14.5									
22S	180	39+90 Sign Assembly	Lt.	RA-4		72" x 66"		33.0	1			3								17.5-17.5					0.54	2
23S				N-61-24		24" x 24"	4.0		1																	
24S	180	45+85	Rt.	GB	I	168" x 102"		119.0															23-24.5		2.46	
25S	180	51+05	Lt.	X-6L		12" x 36"	3.0		1			1				10.5										
26S				X-6R		12" x 36"	3.0		1			1				10.5										
27S	180	49+80 Sign Assembly	Lt.	RA-2		132" x 60"		55.0		1																
28S				GSF-1-24		24" x 72"						3										24.5-21.5			2.20	
29S				N-61-24		24" x 24"	4.0		1																	
30S	180	51+00	Rt.	GN	III	108" x 42"		31.5		1		2									18.5-20				0.66	
31S	180	56+05	Rt.	N-41-12		12" x 24"	2.0		1			1				11										
32S	180	56+05	Lt.	N-41-12		12" x 24"	2.0		1			1				11										
33S	180	56+05	Lt.	X-6R		12" x 36"	3.0		1			1				10.5										
34S				X-6L		12" x 36"	3.0		1			1				10.5										
35S	180	57+50 Sign Assembly	Lt.	M-40-36		36" x 18"	4.5		1			1					15-15									
36S				M-2-36-2		36" x 36"	9.0		1																	
37S	180	64+50	Rt.	GC	I	168" x 102"		119.0		1																
38S	181	72+50 Sign Assembly	Rt.	R-142-36		36" x 36"	9.0		1			2									19-19				0.66	2
39S				GF		72" x 60"		30.0	1																	
40S	181	77+50 Ramp "X"	Rt.	D-4A	IV	144" x 24"		24.0	1			3										20.5-21			2.20	2
				D-4B	IV	144" x 48"		48.0		1																
41S	181	27+40 Ver.Int.Rd.	Lt.	GH	III	96" x 78"		52.0		1		2										23.5-22			2.20	
42S	181	Lor-2-0151	Lt.	RA-1		132" x 54"		49.5			1			1	1											
43S				GSF-1-24		24" x 72"																				
44S	181	83+00 Ramp "W"	Lt.	D-4A	IV	144" x 24"		24.0	1			3										21.5-20			0.66	2
				D-4B	IV	144" x 48"		48.0		1																
45S	181	22+50 Ver.Int.Rd.	Rt.	GH	III	108" X 78"		58.5		1		2										22-23.5			2.20	
46S				GH	III	108" X 78"		58.5		1																
47S	181	87+65 Sign Assembly	Lt.	GF		72" x 60"		30.0	1			2								18.5-18.5					0.54	2
48S				R-142-36		36" x 36"	9.0																			
49S	181	96+25	Lt.	GC	I	168" x 102"		119.0		1																
50S	182	75+25	Rt.	M-2-36-2		36" x 36"	9.0		1			1						13								
51S	182	74+00	Lt.	W-49R-48		48" x 48"	16.0		1			1						14.5-14.5								
52S	182	79+06	Lt.	R-15A-36		36" x 36"	9.0										12.5									
53S	182	79+87 Ramp "W" 27+40 Ver. Int. Rd.	Lt.						1			1														
			Rt.	R-42-SPEC.		42" x 60"	17.5																			
54S	182	80+25 Ramp "W" Sign Assembly	Lt.	R-41B-36		36" x 36"	9.0		1			1					14-14									
55S				R-1-48		48" x 48"	16.0		1																	
56S	182	80+50 Ramp "W"	Rt.	R-43R-36		48" x 18"	6.0		1			1					16		17							
57S				R-41B-36		36" x 36"	9.0		1																	
58S				R-43L-36		48" x 18"	6.0		1																	
59S	182	83+00 Ramp "W"	Lt.	R-41A-36		36" x 24"	6.0		1			1														
			Rt.	R-41A-36		36" x 24"	6.0		1			1					13									
60S	182	77+50 Ramp "X"	Lt.	R-41A-36		36" x 24"	6.0		1			1				12.5-12.5										
			Rt.	R-41A-36		36" x 24"	6.0		1			1														
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							279.0	1342	38	16	1	59	3	1	1	155	156.5	92	17	107	154	303.5	103.5		23.04	22

SIGN SUB-SUMMARY

CALC BY KAS DATE 2/14/92
CHKD BY JSB DATE 2/14/92
ERIE/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY
OHIO
FHWA REGION 5
174
267

REF. No.	SHEET No.	STATION	SIDE	CODE	LEVEL	SIZE	630 Signs Flat Sheet Type G. S.F.	630 Signs Extrusheet Type G. S.F.	630 Removal of Ground Mounted Sign & Disposal Each	630 Removal of Ground Mounted Major Sign & Disposal Each	630 Removal of Overhead Mounted Sign & Disposal Each	630 Removal of Ground Mounted Post Support & Disposal Each	630 Removal of Ground Mounted Beam Support & Disposal Each	630 Overpass Structure Mounted Sign Support, Type TC-18.24 Each	630 Removal of Overhead Mounted Sign Support and Storage Each	630 Ground Mounted Support No.2 Post Lin.Ft.	630 Ground Mounted Support No.3 Post Lin.Ft.	630 Ground Mounted Support No.4 Post Lin.Ft.	630 One-Way Sign Support No.3 Post Lin.Ft.	630 Ground Mounted Support S4 X 7.7 BEAM Lin.Ft.	630 Ground Mounted Support W10 X 12 BEAM Lin.Ft.	630 Ground Mounted Support W8 X 18 BEAM Lin.Ft.	630 Ground Mounted Support W10 X 22 BEAM Lin.Ft.	630 Concrete for Embedded Foundation Cu.Yd.	630 Breakaway Beam Connection Each	631 Signs Wired Each	631 Removal of Luminaire & Re-erection Each
61S	182	79+50 Ramp "X" Sign Assembly	Lt.	R-43L-48		48" x 18"	6.93		1								15.5		16.5								
62S				R-41B-36		36" x 36"	9.0		1			1															
63S				R-43R-48		48" x 18"	6.93		1																		
64S	182	79+63 Ramp "X" Sign Assembly	Rt.	R-1-48		48" x 48"	16.0		1			1					14-14										
65S				R-41B-36		36" x 36"	9.0		1			1															
66S	182	21+55 Ver. Int. Rd.	Lt.	R-42-Spec.		42" x 60"	17.5										14.5-14.5										
		79+76 Ramp "X"	Rt.						1			1															
67S	182	87+00	Rt.	W-49R-48		48" x 48"	16.0		1			1						16-16									
68S	182	80+70 Ramp "Y"	Rt.	R-15A-36		36" x 36"	9.0		1			1					12.5										
69S	182	85+50 Ramp "W"	Lt.	W-45-48		48" x 48"	16.0		1			1					13.5-13.5										
70S	182	86+00	Lt.	M-2-36-2		36" x 36"	9.0		1			1					12.5										
71S	183	105+79	Rt.	N-41-12		12" x 24"	2.0		1			1				11											
72S	183	105+79	Lt.	N-41-12		12" x 24"	2.0		1			1				11											
73S	183	108+50 Sign Assembly	Rt.	M-2-36-2		36" x 36"	9.0		1			1					15-15										
74S				M-39-36		36" x 18"	4.5		1																		
75S	183	Lor-2-0333	Rt.	GB	1	204" x 72"		102.0			1			1	1												
76S	183	118+50	Lt.	GB	1	168" x 102"		119.0														25-23.5		2.20			
77S	183	U-Turn Median Opening At Sta. 124+00	Center	R-19-24		24" x 30"	5.0		1			1						14.5									
78S				R-123-36		36" x 36"	9.0		1																		
79S				R-123-36		36" x 36"	9.0		1			1						14.5									
80S				R-19-24		24" x 30"	5.0		1																		
81S	183	127+00	Lt.							1			2														
82S	183	127+00	Rt.	R-10-48		48" x 60"	20.0		1			2						16.5-16.5									
83S	184	135+00	Lt.	R-10-48		48" x 60"	20.0											16.5-16.5									
		139+00	Lt.						1			2															
84S	184	138+00	Rt.	GA-1	1	180" x 72"		90.0		1		3									20.5-22			2.20			
85S	184	140+00	Lt.	GB	1	168" x 102"		119.0															25.5-24.5	2.46	2		
86S	184	145+00	Rt.	GB	1	204" x 72"		102.0														21.5-23		2.20	2		
87S	184	148+00 Sign Assembly	Lt.	M-40-36		36" x 18"	4.5		1			1					15-15										
88S				M-2-36-2		36" x 36"	9.0		1																		
89S	184	158+84	Lt.	N-41-12		12" x 24"	2.0		1			1				11											
90S	184	158+84	Rt.	N-41-12		12" x 24"	2.0		1			1				11											
91S	184	159+50	Rt.	GE	1	204" x 72"		102.0		1																	
92S	185	168+15	Rt.	GF		72" x 60"		30.0	1			2								17-17				0.54	2		
93S	185	Lor-2-0333	Lt.	GH	II	156" x 72"		78.0			1			1	1											1	2
94S	185	210+50 Baumhart Rd. Sign Assembly	Rt.	GH	II	108" x 96"		72.0			1															1	1
95S				GH	II	108" x 96"		72.0			1															1	1
96S	185	Sta. 173+00 Ramp "H" Sign Assembly	Rt.	D-4E	IV	120" x 36"		30.0	1			2									21-22.5			2.20	2		
97S				D-4B	IV	120" x 48"		40.0		1																	
98S	185	178+00	Lt.	GN	III	108" x 42"		31.5	1			2								17.0-16.0				0.54			
99S	185	181+00 Ramp "A" Sign Assembly	Rt.	D-4E	IV	120" x 36"		30.0	1			3									23-21			2.20	2		
100S				D-4B	IV	120" x 48"		40.0		1																	
101S	185	185+50	Lt.	GF		72" x 60"		30.0	1			2								17.5-17.5				0.54	2		
102S	185	204+85 Baumhart Rd. Sign Assembly	Rt.	GH	II	132" x 96"		88.0			1															1	1
103S				GH	II	132" x 96"		88.0			1															1	1
104S	185	Lor-2-0333	Rt.	GH	II	132" x 72"		66.0			1			1	1											1	1
105S	186	170+00	Rt.	M-2-36-2		36" x 36"	9.0		1			1					12.5										
106S	186	175+65	Rt.	X-6L		12" x 36"	3.0		1			1				10.5											
107S	186		Rt.	X-6R		12" x 36"	3.0		1			1				10.5											
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							233.36	1329.5	32	5	7	37	2	3	3	65	197	127	16.5	102	130	93	50	15.08	12	6	7

SIGN SUB-SUMMARY

CALC BY KAS DATE 2/14/92
CHKD BY JSB DATE 2/28/92
ERI/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY
OHIO
FHWA REGION 5
175
267

REF. No.	SHEET No.	STATION	SIDE	CODE	LEVEL	SIZE	Signs Flat Sheet Type G. S.F.	Signs Extrusheet Type G. S.F.	Removal of Ground Mounted Sign & Disposal Each	Removal of Ground Mounted Major Sign & Disposal Each	Removal of Overhead Mounted Sign & Disposal Each	Removal of Ground Mounted Post Support & Disposal Each	Removal of Ground Mounted Beam Support & Disposal Each	630 Ground Mounted Support No.2 Post Lin.Ft.	Ground Mounted Support No.3 Post Lin.Ft.	Ground Mounted Support No.4 Post Lin.Ft.	One-Way Sign Support No.3 Post Lin.Ft.	Ground Mounted Support S4 X 7.7 BEAM Lin.Ft.	Ground Mounted Support W6 X 9 BEAM Lin.Ft.	Ground Mounted Support W10 X 12 BEAM Lin.Ft.	Ground Mounted Support W8 X 18 BEAM Lin.Ft.	Ground Mounted Support W10 X 22 BEAM Lin.Ft.	Concrete for Embedded Foundation Cu.Yd.	Breakaway Beam Connection Each
108S	186	169+00	Lt.	W-49R-48		48" x 48"	16.0		1			2				15-15								
109S	186	213+70 Baumhart Rd.	Center	R-37R-24		24" x 30"	5.0		1			1		11.5										
110S	186	175+44 Ramp "G"	Lt.	R-15A-36		36" x 36"	9.0		1			1			12.5									
111S	186	176+50 Ramp "H" Sign Assembly	Lt.	R-43L-48		48" x 18"	6.0		1			1			12		13							
112S				R-41B-36		36" x 36"	9.0		1															
113S				R-43R-48		48" x 18"	6.0		1															
114S	186	173+00 Ramp "H"	Lt.	R-41A-36		36" x 24"	6.0		1			1			12									
			Rt.	R-41A-36		36" x 24"	6.0		1			1												
115S	186	176+50 Ramp "H" Sign Assembly	Rt.	R-1-48		48" x 48"	16.0		1			2			13.5-13.5									
116S				R-41B-36		36" x 36"	9.0		1															
117S	186	214+85 Baumhart Rd.	Center	R-37R-24		24" x 30"	5.0		1			1		11.5										
125S	186	184+00	Lt.	M-2-36-2		36" x 36"	9.0		1			1			12.5									
126S	186	203+50 Baumhart Rd.	Lt.	W-60D-36		36" x 36"	9.0		1			1			13.5									
			Center	W-60D-36		36" x 36"	9.0		1			1			12.5									
127S	186	205+20 Baumhart Rd.	Center	R-37R-24		24" x 30"	5.0		1			1		10										
128S	186	179+59 Ramp "B"	Rt.	R-15A-36		36" x 36"	9.0		1			1			13-13									
129S	186	177+55	Lt.	X-6R		12" x 36"	3.0		1			1		10.5										
130S				X-6L		12" x 36"	3.0		1			1		10.5										
131S	186	185+00	Rt.	W-49R-48		48" x 48"	16.0		1			1			15-15									
132S	187	218+00 Baumhart Rd.	Lt.	M-52A		108" x 30"		22.5	1			2						15-14					0.54	2
133S	187	217+00 Baumhart Rd.	Lt.	R-38R-24		24" x 30"	5.0		1			1		10										
134S	187	201+00 Baumhart Rd.	Rt.	R-38R-24		24" x 30"	5.0		1			1		10										
135S	187	198+00 Baumhart Rd.	Rt.	M-52A		108" x 30"		22.5	1			2						13.5-14					0.54	2
136S	187	193+00 Baumhart Rd. Sign Assembly	Rt.	M-17-24		24" x 12"	2.0		1			1			12									
137S				M-2-24-2		24" x 24"	4.0		1			1												
138S	188	195+00	Lt.	GE	1	204" x 72"		102.0		1														
139S	188	200+00 Sign Assembly	Rt.						1			1												
									1															
140S	188	205+00 Sign Assembly	Rt.	M-2-36-2		36" x 36"	9.0								15-15									
				M-39-36		36" x 18"	4.5																	
141S	188	210+68	Lt.	N-41-12		12" x 24"	2.0		1			1		11										
142S	188	U-Turn Median Opening At 210+70	Center	R-19-24		24" x 30"	5.0		1			1				14								
143S				R-123-36		36" x 36"	9.0		1															
144S				R-123-36		36" x 36"	9.0		1			1				14								
145S				R-19-24		24" x 30"	5.0		1															
146S	188	210+68	Rt.	N-41-12		12" x 24"	2.0		1			1		11										
147S	188	212+00	Lt.	GB	1	204" x 72"		102.0												18.5-19			2.20	2
148S	188	216+80	Rt.	R-10-48		48" X 60"	20.0		1			2			13-13									
TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY							237.5	249.0	34	1		33		96	226	58	13	56.5		37.5			3.28	6

PAVEMENT MARKING SUB-SUMMARY

CALC BY KAS DATE 2-14-92
CHKD BY JSB DATE 2-28-92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

176
267

MAINLINE PAVEMENT MARKING				642				
SHEET No.	REF. No.	STATION TO STATION	SIDE	Edge Lines, White	Edge Lines, Yellow	Center Lines	Channelizing Lines	Transverse Lines
				MILE	MILE	MILE	L.F.	L.F.
178	CL-1	STA. 17+82 TO STA. 20+00	Rt.				434	250
179	CL-2	STA. 20+00 TO STA. 20+55	Rt.				110	100
179	CL-3	STA. 23+78 TO STA. 24+52	Rt.				150	70
179	CL-4	STA. 34+54 TO STA. 35+81	Lt.				150	70
180	CL-5	STA. 40+45 TO STA. 43+21	Lt.				558	350
180	CL-6	STA. 68+61 TO STA. 70+00	Rt.				275	375
181	CL-7	STA. 70+00 TO STA. 72+00	Rt.				400	400
181	CL-8	STA. 88+20 TO STA 91+00	Lt.				560	400
185	CL-9	STA. 164+87 TO STA. 167+66	Rt.				560	480
178	EL-1	STA. 1827+50 TO STA. 20+00	Lt.	0.583	0.583			
178	EL-2	STA. 1827+50 TO 20+00	Rt.	0.583	0.583			
178	EL-3	STA. 15+43 TO STA. 20+00	Lt.	0.086	0.047		208	
179	EL-4	STA. 20+00 TO STA.23+02.62 (RAMP "Q")	Lt.	0.140	0.084			
179	EL-5	STA. 20+00 TO STA. 26+20 (RAMP "R")	Lt.	0.062	0.121			
179	EL-6	STA. 31+64.11 (RAMP "S") TO STA 40+00	Lt.	0.156	0.055			
179	EL-7	STA. 33+69 (RAMP "R") TO STA. 40+00	Lt.	0.016	0.120			
179	EL-8	STA. 20+00 TO STA. 40+00	Lt.	0.379	0.379			
179	EL-9	STA. 20+00 TO STA. 40+00	Rt.	0.374	0.379			
179	EL-10	STA. 20+55 TO 25+70 (RAMP "U")	Rt.	0.021	0.098			
179	EL-11	STA. 20+00 TO STA. 27+41.18 (RAMP "T")	Rt.	0.145	0.061			
179	EL-12	STA. STA 33+85 (RAMP "U") TO STA. 40+00	Rt.	0.040	0.123			
179	EL-13	STA. 36+01.65 (RAMP "V") TO STA 40+00	Rt.	0.157	0.077			
180	EL-14	STA. 40+00 TO STA. 40+45	Lt.	0.009	0.009			
180	EL-15	STA. 40+00 TO STA. 44+68	Rt.	0.089	0.024		343	
180	EL-16	STA. 40+00 TO STA. 70+00	Rt.	0.568	0.568			
180	EL-17	STA. 40+00 TO STA. 70+00	Lt.	0.570	0.568			
180	EL-18	STA. 66+47 TO STA. 70+00	Lt.	0.067	0.019		253	
181	EL-19	STA. 70+00 TO STA. 80+30 (RAMP "Z")	Lt.	0.193	0.193			
181	EL-20	STA. 70+00 TO STA. 101+00	Lt.	0.345	0.587			
181	EL-21	STA. 70+00 TO STA. 101+00	Rt.	0.423	0.587			
181	EL-22	STA. 70+00 TO STA. 80+10 (RAMP "X")	Rt.	0.197	0.159			
181	EL-23	STA. 80+10 TO STA. 101+00	Lt.	0.401	0.164			
181	EL-24	STA. 80+10 TO STA. 101+00	Rt.	0.407	0.231		238	
183	EL-25	STA. 101+00 TO STA. 131+00	Lt.	0.568	0.568			
183	EL-26	STA. 101+00 TO STA. 131+00	Rt.	0.568	0.568			
184	EL-27	STA. 131+00 TO STA. 161+00	Lt.	0.568	0.568			
184	EL-28	STA. 131+00 TO STA. 161+00	Rt.	0.568	0.568			
185	EL-29	STA. 161+00 TO 176+80 (RAMP "G")	Lt.	0.311	0.233		237	
185	EL-30	STA. 161+00 TO STA. 185+50	Lt.	0.443	0.465			
185	EL-31	STA. 161+00 TO STA. 185+50	Rt.	0.329	0.465			
185	EL-32	STA. 161+00 TO STA. 176+80 (RAMP "H")	Rt.	0.310	0.172			
		SUBTOTAL FOR MAINLINE		9.676	9.426		4476	2495
		SUBTOTAL FOR SIDEROADS		1.081		0.365		
		TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY		20.183		0.365	4476	2495

MAINLINE PAVEMENT MARKING				642
SHEET No.	REF. No.	STATION TO STATION	SIDE	Lane Lines
				MILE
178	L-1	STA. 1827+50 TO STA. 20+00	Lt.	0.583
178	L-2	STA. 1827+50 TO STA. 20+00	Rt.	0.583
178	L-3	STA. 12+22 TO STA. 15+43	Lt.	0.061
178	L-4	STA. 15+66 TO STA. 17+82	Rt.	0.041
179	L-5	STA. 20+00 TO STA. 40+00	Lt.	0.379
179	L-6	STA. 20+00 TO STA. 40+00	Rt.	0.379
180	L-7	STA. 43+24 TO STA. 45+24	Lt.	0.038
180	L-8	STA. 44+67 TO STA. 47+02	Rt.	0.045
180	L-9	STA. 63+72 TO STA. 66+47	Lt.	0.052
180	L-10	STA. 40+00 TO STA. 70+00	Lt.	0.568
180	L-11	STA. 40+00 TO STA. 70+00	Rt.	0.568
180	L-12	STA. 66+75 TO STA. 68+60	Rt.	0.035
181	L-13	STA. 70+00 TO STA. 101+00	Lt.	0.587
181	L-14	STA. 70+00 TO STA. 101+00	Rt.	0.587
181	L-15	STA. 91+00 TO STA. 92+85	Lt.	0.035
181	L-16	STA. 94+37 TO STA. 97+37	Rt.	0.057
183	L-17	STA. 101+00 TO STA. 131+00	Lt.	0.568
183	L-18	STA. 101+00 TO STA. 131+00	Rt.	0.568
184	L-19	STA. 131+00 TO STA. 161+00	Lt.	0.568
184	L-20	STA. 131+00 TO STA. 161+00	Rt.	0.568
184	L-21	STA. 158+46 TO STA. 161+00	Lt.	0.048
185	L-22	STA. 161+00 TO STA. 162+16	Lt.	0.022
185	L-23	STA. 161+00 TO STA. 185+50	Lt.	0.465
185	L-24	STA. 161+00 TO STA. 185+50	Rt.	0.465
185	L-25	STA. 162+87 TO STA. 164+87	Rt.	0.038
		TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY		7.91

SIDE ROADS PAVEMENT MARKING		642	
STATION TO STATION	SIDE	Edge line, White	Center Line, Double Solid
		MILE	MILE
Vermilion Interchange			
22+41 to 27+46	Rt.	0.096	
22+67 to 27+46	Lt.	0.091	
23+21 to 27+46	Center		.080
Sunnyside Road			
23+20 to 26+80	Lt.	0.068	
23+20 to 26+80	Rt.	0.068	
23+20 to 26+80	Center		0.068
Claus Road			
23+18 to 26+79	Lt.	0.068	
23+20 to 26+80	Center		0.068
23+21 to 26+82	Rd.	0.068	
Vermilion Road			
21+50 to 28+50	Lt.	.133	
23+12 to 26+88	Center		.071
21+50 to 28+50	Rt.	.133	
W. River Road			
19+75 to 29+24	Lt.	.178	
23+03 to 27+14	Center		.078
19+75 to 29+12	Rt.	.178	
TOTALS		1.081	0.365

PAVEMENT MARKING SUB-SUMMARY

CALC BY KAS DATE 2-28-92	ERI/LOR-2-30.51/0.00	OHIO	177
CHKD BY JSB DATE 2-28-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		

STATION TO STATION	SIDE	202 RAISED PAVEMENT MARKER REMOVED FOR STORAGE	862 RAISED PAVEMENT MARKER			
			2-WAY (WHITE/RED)	1-WAY (WHITE)	1-WAY (YELLOW)	REMARKS (LINE TYPE)
		EACH	EACH	EACH	EACH	
1827+00 to 1838+29.49	Rt.	14		14		Lane
0+00 to 13+50	Rt.	17		17		Lane
13+50 to 20+55	Rt.	9	9			Lane
17+82 to 20+55	Rt.	28		28		Channelizing
20+53 to 21+33 Ramp "U"	Lt.	2			2	Edge
20+55 to 21+35	Rt.	2		2		Edge
20+55 to 65+00	Rt.	56		56		Lane
37+33 to 44+68	Rt.	19		19		Edge
37+62 to 41+53.32 Ramp "V"	Lt.	10			10	Edge
41+25 to 44+68	Rt.	9		9		Edge
36+53 to 37+33	Rt.	2		2		Edge
36+82 to 37+62 Ramp "V"	Lt.	2			2	Edge
65+00 to 72+00	Rt.	9	9			Lane
68+61 to 72+00	Rt.	34		34		Channelizing
71+98.83 to 72+78.83 Ramp "X"	Lt.	2			2	Edge
72+00 to 72+80	Rt.	2		2		Edge
72+00 to 160+50	Rt.	111		111		Lane
87+38 to 94+35	Rt.	18		18		Edge
92+00 to 94+40 Ramp "Y"	Rt.	6		6		Edge
87+38 to 92+00 Ramp "Y"	Lt.	12			12	Edge
160+50 to 167+66	Rt.	9	9			Lane
167+66 to 168+46	Rt.	2		2		Edge
167+65.48 to 168+43.48 Ramp "H"	Lt.	2			2	Edge
164+87 to 167+66	Rt.	28		28		Channelizing
167+66 to 185+50	Rt.	23		23		Lane
185+00 to 185+80	Rt.	2		2		Edge
1827+50 to 40+45	Lt.	64		64		Lane
15+43 to 17+50	Lt.	6		6		Edge
17+35.96 to 22+40 Ramp "R"	Rt.	13			13	Edge
15+43 to 22+62	Lt.	18		18		Edge
40+45 to 47+50	Lt.	9	9			Lane
39+66.51 to 40+46.51 Ramp "S"	Rt.	2			2	Edge
39+65 to 40+45	Lt.	2		2		Edge
40+45 to 43+21	Lt.	28		28		Channelizing
47+50 to 88+20	Rt.	51		51		Lane
66+47 to 73+61	Lt.	18		18		Edge
65+47 to 69+00	Lt.	7		7		Edge
69+00 to 73+61 Ramp "Z"	Rt.	12			12	Edge
88+20 to 95+25	Lt.	9	9			Lane
87+40 to 88+20	Lt.	2		2		Edge
87+41.52 to 88+21.52 Ramp "W"	Rt.	2			2	Edge
88+20 to 91+00	Lt.	28		28		Channelizing
95+25 to 185+50	Lt.	113		113		Lane
161+00 to 168+96	Lt.	20		20		Edge
161+00 to 164+50	Lt.	9		9		Edge
164+50 to 168+96 Ramp "G"	Rt.	12			12	Edge
TOTALS		855	45	739	71	
TOTAL CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY		855		855		

STATION TO STATION	SIDE	802 BARRIER REFLECTORS TOTAL LENGTH OF RUN	TYPE A	TYPE A2	TYPE B	TYPE B2
		FT.	EACH	EACH	EACH	EACH
West River Road						
19+75 to 21+62.5	Lt.	237.5	4			
19+75 to 21+53.5	Rt.	262.5	4			
21+52.81 to 29+43.63	Rt.	836.6	6		3	
21+90.6 to 29+29.62	Lt.	786.6	6		3	
Vermilion Road						
1809.42 to 31+43.63	Lt.	1338.41	20		5	
22+19.12 to 27+62.59	Rt.	550.91	6		7	
Vermilion Interchange Road						
22+36.74 to 27+63.5	Lt.	582.5	4		3	
22+48.05 to 27+44.94	Rt.	595	4		3	
Sunnyside Road						
19+28.77 to 30+80.88	Lt.	1196.66	10		3	
19+28.77 to 29+80.72	Rt.	1059.16	9		4	
Claus Road						
20+13.78 to 32+65.45	Lt.	1272.34	11		3	
20+18.08 to 29+86.22	Rt.	972.34	8		3	
S.R. 2						
15+74 to 17+68.60	Lt.	196.75	2		1	
14+30.4 to 16+25	Rt.	196.75	2		1	
15+67.5 to 18+42.05	Lt. & Rt.	262.5	4			
13+62.92 to 16+30.5	Lt. & Rt.	262.5	4			
42+94.60 to 56+65	Rt.	1697.5	11		8	
40+44.5 to 58+10.60	Lt.	1689	11		8	
49+1.25 to 56+77.15	Rt.	793	3		6	
50+11.25 to 58+02.15	Lt.	818	3		6	
78+21.40 to 80+23	Rt.	203.75	2		1	
79+77 to 81+78..60	Lt.	203.75	2		1	
77+64.92 to	Lt. & Rt.	275	4			
79+60.50 to 80+39.5	Lt. & Rt.	275	4			
117+53 to 120+09.10	Lt.	258.25	3		1	
115+97.40 to 117+91	Rt.	195.75	2		1	
117+41 to 120+03.08	Lt. & Rt.	262.50	4			
115+40.92 to 118+03	Lt. & Rt.	262.50	4			
138+55 to 140+51.60	Lt.	198.75	2		1	
135+83.40 to 138+80	Rt.	298.75	3		1	
138+24.5 to 144+99.08	Lt. & Rt.	275	4			
136+35.92 to 139+10.5	Lt. & Rt.	275	4			
173+36.46 to 178+87.8	Lt.	555.50	5		3	
172+80.69 to 178+75.45	Rt.	555.50	5		3	
175+65.71 to 178+77.46	Lt.	468.25	5		1	
172+77.69 to 177+46.21	Rt.	468.25	5		1	
TOTAL CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY			190		81	

ERI/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY

OHIO
FHWA REGION 5

178
267

TRAFFIC CONTROL

BEGIN PROJECT
STA. 1835+10
S.L.M. 30.51

NH-73 (78)

1S — Sta. 1830+00 — W1-4(60) Advance Warning Sign 500' 1/4 MILE

STA 1838+29.49 BK
STA 0+00 AH

5S — Sta. 0+00 — ENTERING Erie County — GP — EXITING Erie County

6S — Sta. 5+00 — 7S

R-19-24 — EMERGENCY AND AUTHORIZED VEHICLES ONLY

R-123-36

10S — Sta. 8+00 — W1-4(60) Wakeman Vermilion EXIT 1 MILE — GB

L-1 · L-2 · L-3 · EL-1 · EL-2 · EL-3 · L-4 · CL-1 · L/A

1830 · 1835 · 5 · 10 · 15 · 20

WEST RIVER RD. — R/W

MATCH LINE STA.20+00

3S — Sta. 0+00 — ENTERING Lorain County — GP — EXITING Lorain County

4S — Sta. 0+00 — N-41-12 — MILE — 0

ERIE COUNTY
LORAIN COUNTY

8S — Sta. 5+00 — 9S

R-123-36 · R-19-24 — EMERGENCY AND AUTHORIZED VEHICLES ONLY

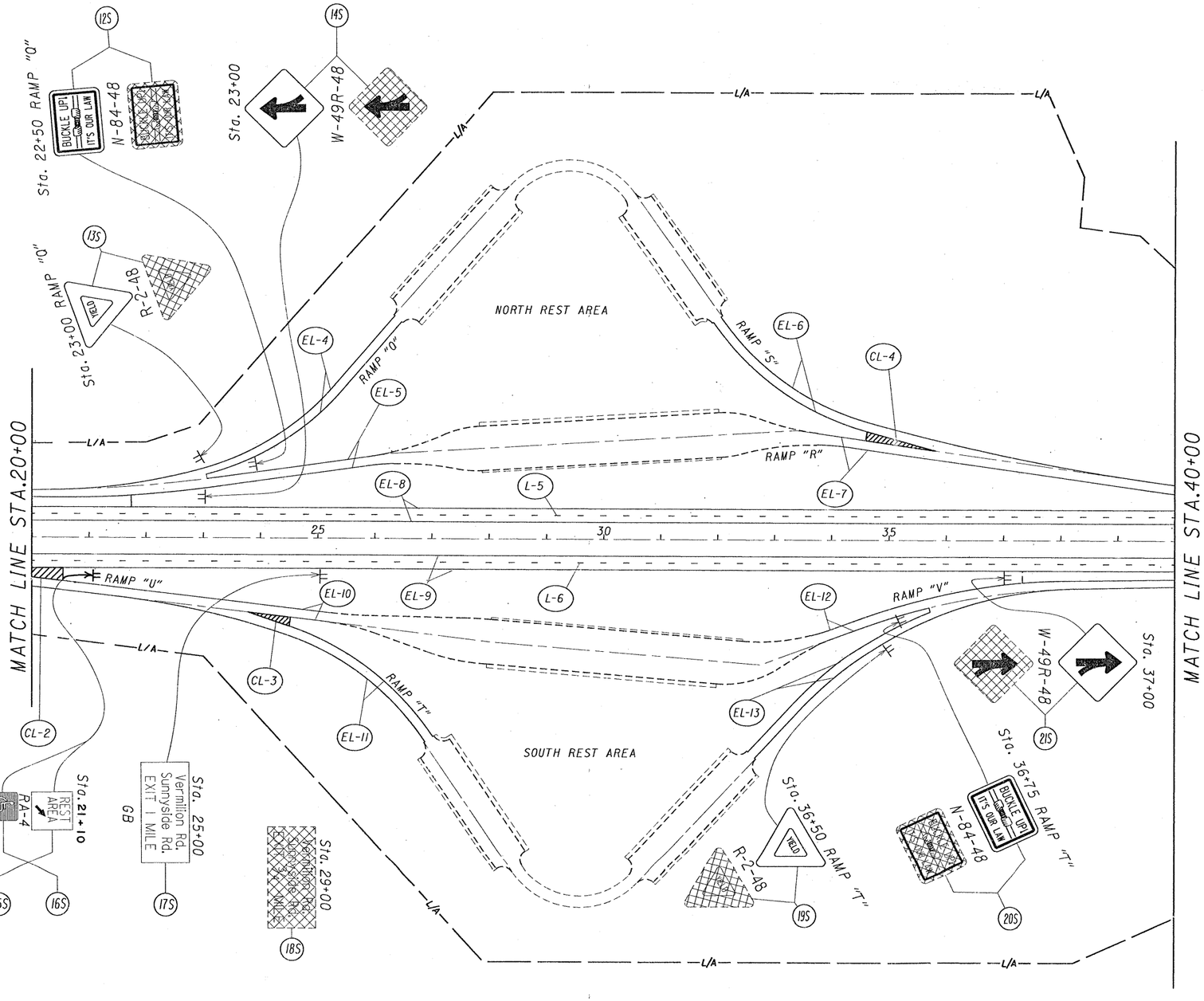
11S — Sta. 12+50 — RA-2 REST AREA

LEGEND

Proposed · Existing to Remain · Existing to be Removed

TRAFFIC CONTROL AND SIGNS STA. 1826+00 TO STA. 20+00

TRAFFIC CONTROL



LEGEND

Proposed

Existing to Remain

Existing to be Removed

TRAFFIC CONTROL AND SIGNS STA. 20+00 TO STA. 40+00

ERI/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY

OHIO
FHWA REGION 5

180
267

TRAFFIC CONTROL

MATCH LINE STA.40+00

MATCH LINE STA.70+00

L/A

R/W

VERMILLION RIVER

VERMILLION RD.

JERUSALEM RD.

EL-14 CL-5 L-7 EL-15 L-8 EL-16 EL-17 L-9 L-10 L-11 L-12 CL-6 EL-18

45 50 55 60 65 5 10 20

Sta. 39+90 REST AREA RA-4 N-61-24 22S 23S

Sta. 49+80 REST AREA RA-2 PHONE N-61-24 27S 28S 29S

Sta. 56+05 N-41-12 MILE 32S

Sta. 56+05 X-6R X-6L 33S 34S

Sta. 57+50 WEST M-40-36 M-2-36-2 35S 36S

Sta. 45+85 Vermilion Rd. Sunnyside Rd. EXIT 1/2 MILE GB 24S

Sta. 51+00 GN CORPORATION LIMIT Vermilion 30S

Sta. 51+05 X-6L X-6R 25S 26S

Sta. 56+05 N-41-12 MILE 31S

Sta. 64+50 Vermilion Rd. Sunnyside Rd. GC 37S

LEGEND

Proposed

Existing to Remain

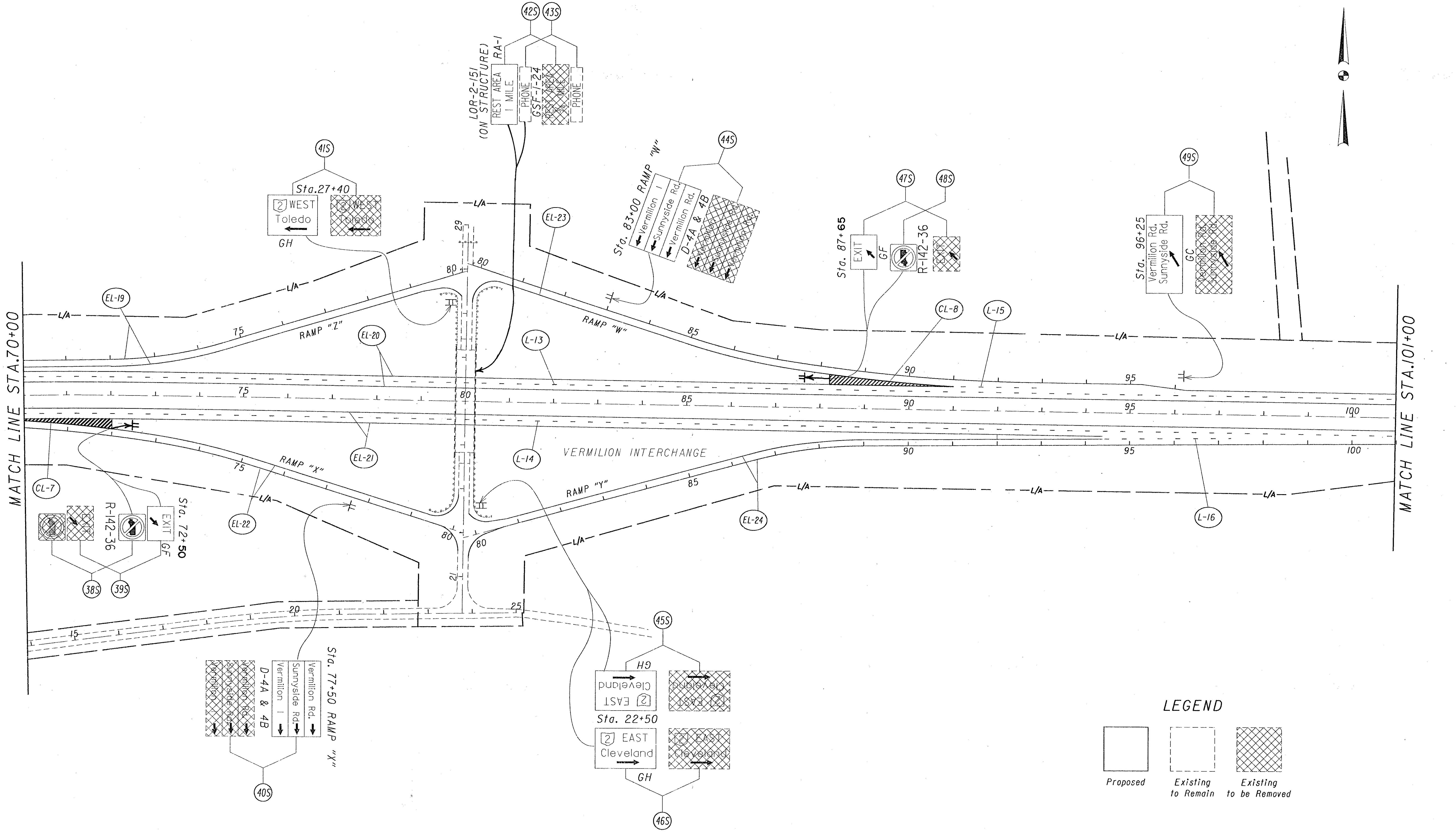
Existing to be Removed

TRAFFIC CONTROL AND SIGNS STA. 40+00 TO STA. 70+00

ERI/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY

OHIO | FHWA REGION 5 | 181/267

TRAFFIC CONTROL



MATCH LINE STA.70+00
MATCH LINE STA.101+00
LOR-2-151 (ON STRUCTURE)
RA-1
REST AREA 1 MILE
PHONE
GSF-1-24
42S
43S
41S
Sta.27+40
2 WEST Toledo
GH
44S
Sta. 83+00 RAMP "W"
Vermilion 1
Sunnyside Rd.
Vermilion Rd.
D-4A & 4B
47S
48S
Sta. 87+65
EXIT
GF
R-142-36
49S
Sta. 96+25
Vermilion Rd.
Sunnyside Rd.
GC
L/A
EL-19
EL-20
EL-21
EL-22
EL-23
EL-24
CL-7
CL-8
L-13
L-14
L-15
L-16
RAMP "Z"
RAMP "W"
RAMP "X"
RAMP "Y"
VERMILION INTERCHANGE
Sta. 72+50
38S
39S
40S
Sta. 77+50 RAMP "X"
45S
46S
Sta. 22+50
2 EAST Cleveland
LEGEND
Proposed
Existing to Remain
Existing to be Removed

TRAFFIC CONTROL AND SIGNS STA. 70+00 TO STA. 101+00

TRAFFIC CONTROL

MATCH LINE STA.70+00

MATCH LINE STA.101+00

L/A

RAMP "Z"

RAMP "W"

RAMP "X"

RAMP "Y"

VERMILION INTERCHANGE

Sta. 74+00
W-49R-48

Sta. 79+06 RAMP "Z"
PROHIBITED PEDESTRIANS AND BICYCLES
R-15A-36

Sta. 79+87 RAMP "W"
THROUGH TRUCKS PROHIBITED EXIT Rt. 611
R-42-SPECIAL

Sta. 27+40 VERMILION INTERCHANGE RD.
THROUGH TRUCKS PROHIBITED EXIT SR 60
R-42-SPECIAL

Sta. 80+25 RAMP "W"
DO NOT ENTER
R-41B-36
STOP
R-1-48

Sta. 80+50 RAMP "W"
R-43R-48 ONE WAY
DO NOT ENTER
R-41B-36
R-43L-48 ONE WAY
ONE WAY
ONE WAY

Sta. 83+00 Ramp "W" LT. & RT.
WRONG WAY
R-41A-36

Sta. 85+50 RAMP "W"
STOP AHEAD
W-45-48

Sta. 86+00
M-2-36-2

Sta. 75+25
M-2-36-2

Sta. 77+50 RAMP "X" LT. & RT.
WRONG WAY
R-41A-36

Sta. 79+50 RAMP "X"
R-43L-48 ONE WAY
DO NOT ENTER
R-41B-36
R-43R-48 ONE WAY
ONE WAY
ONE WAY

Sta. 79+63
STOP
R-1-48
DO NOT ENTER
R-41B-36

Sta. 79+76 "RAMP "X""
THROUGH TRUCKS PROHIBITED EXIT BAUMHART RD.
R-42-SPECIAL

Sta. 87+00
W-49R-48

Sta. 80+70 RAMP "Y"
PROHIBITED PEDESTRIANS AND BICYCLES
R-15A-36

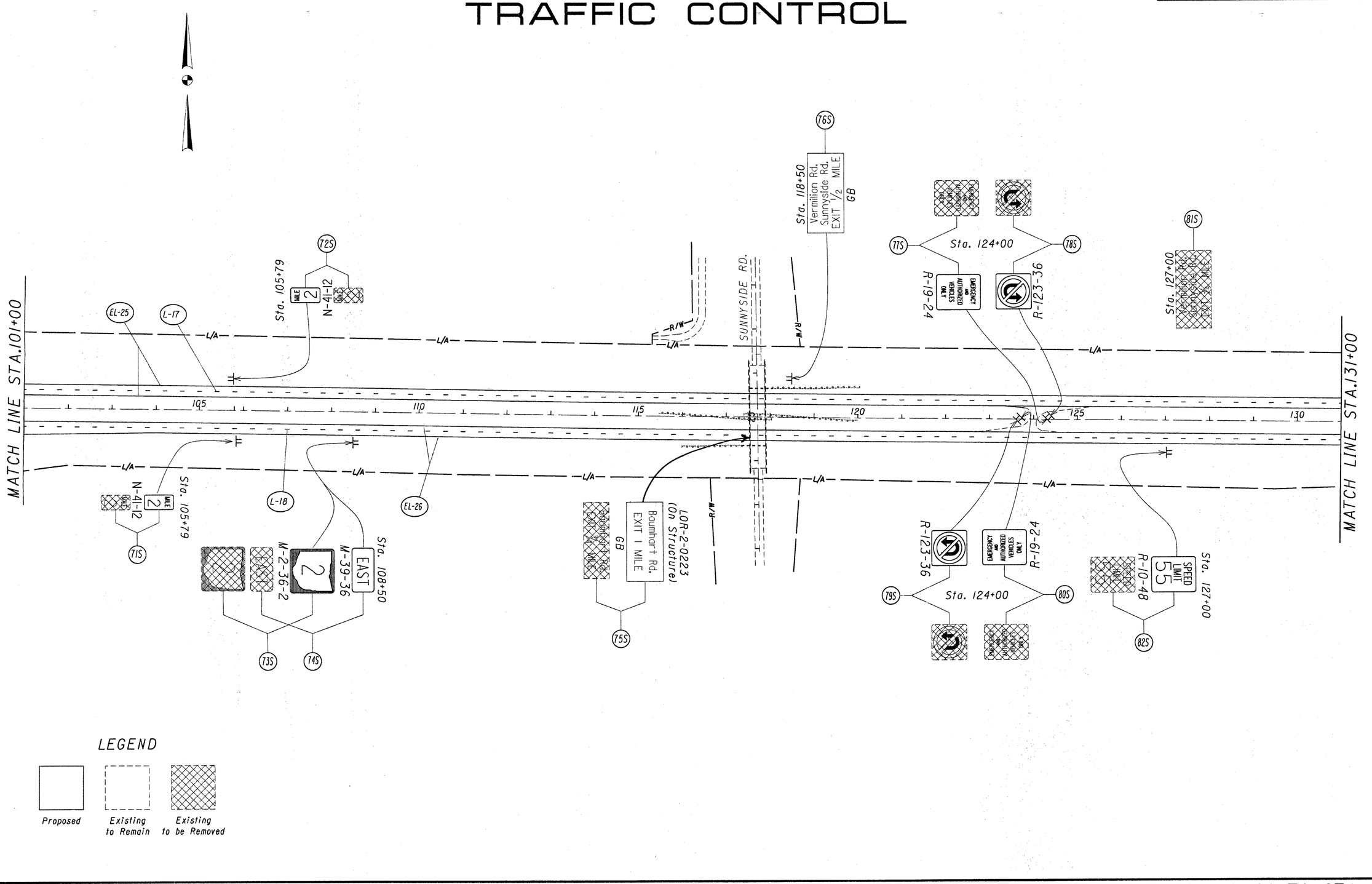
Sta. 2+55

LEGEND

Proposed | Existing to Remain | Existing to be Removed

TRAFFIC CONTROL AND SIGNS STA. 70+00 TO STA. 101+00

TRAFFIC CONTROL



LEGEND

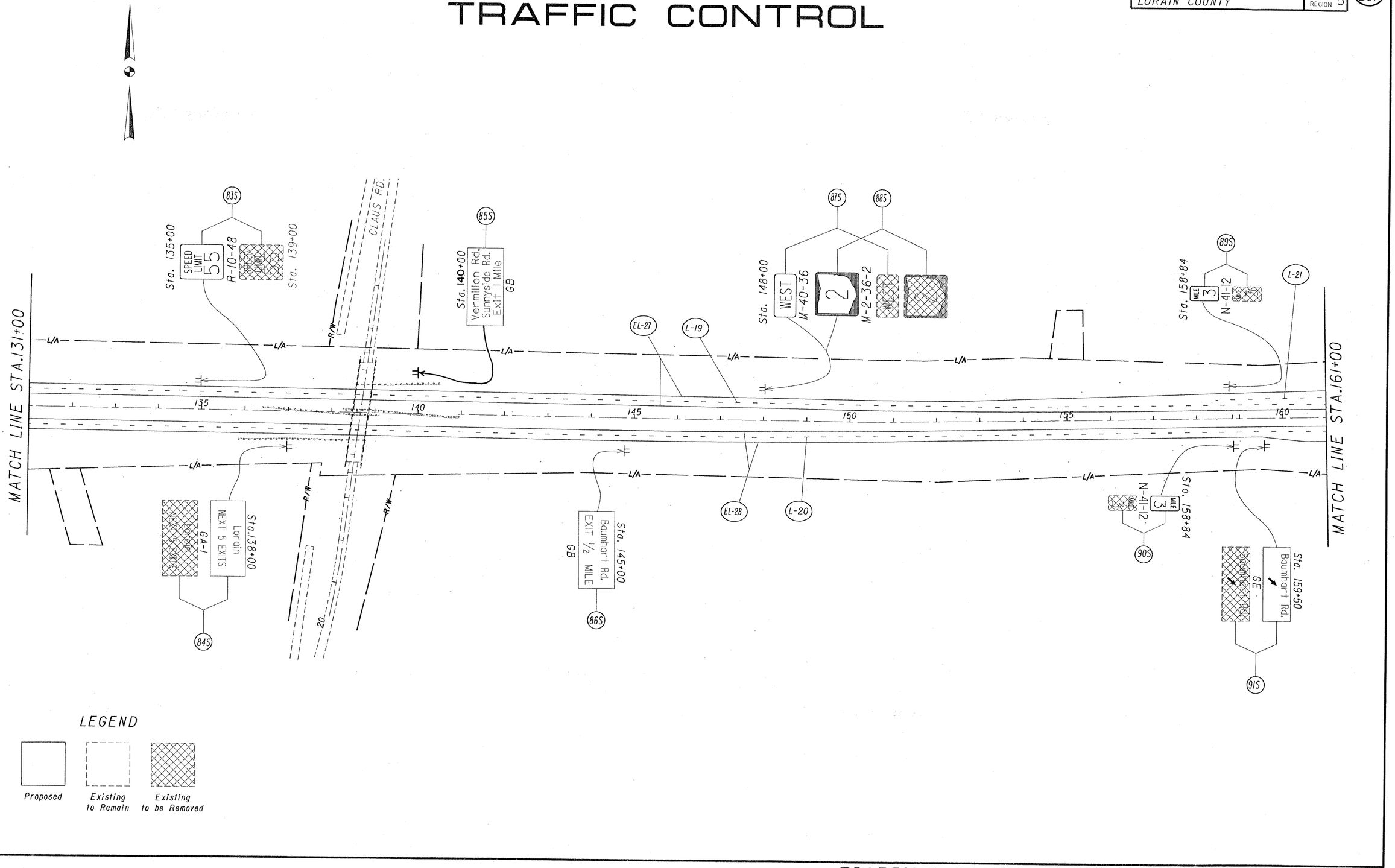
Proposed

Existing to Remain

Existing to be Removed

TRAFFIC CONTROL AND SIGNS STA. 101+00 TO STA. 131+00

TRAFFIC CONTROL



LEGEND

Proposed | Existing to Remain | Existing to be Removed

TRAFFIC CONTROL AND SIGNS STA. 131+00 TO STA. 161+00

TRAFFIC CONTROL

MATCH LINE STA.161+00

MATCH LINE STA. 203+00

MATCH LINE STA.192+00

END PROJECT
STA. 181+46.00
S.L.M. 3.44

N.H-73(78)

MATCH LINE STA. 215+00

Sta.210+50 BAUMHART RD.

94S GH WEST TOLEDO
95S GH WEST TOLEDO
WEST TOLEDO GH
WEST TOLEDO GH

93S GH EAST Cleveland
LOR-2-0333-L (ON STRUCTURE)
EAST Cleveland GH

Sta. 178+00 Vermilion CORPORATION LIMIT GW
98S
Vermilion CORPORATION LIMIT GW

Sta. 181+00 RAMP "A" D-4E
99S
100S
Baumhart Rd. SOUTH NORTH
Vermilion
Lorain 8
D-4A

Sta. 185+85
101S
EXIT GF

COOPER-FOSTER PARK RD. R/W

RAMP "A"
LOOP DETECTORS
STA 185+05.85 BK
STA 185+00 AH

RAMP "G"
RAMP "H"
RAMP "B"

BAUMHART RD.

L-22 EL-29 L-23 EL-30 EL-31 L-24 L-25 CL-9 EL-32

L/A
165 170 175 180 185 190 205

Sta. 169+15
EXIT GF
92S

Sta. 173+00 RAMP "H" D-4E
Baumhart Rd. SOUTH NORTH
Vermilion
Lorain 8
D-4A
96S
97S

LOR-2-0333 Rt.
(On Structure)
WEST Toledo GH
WEST Toledo
104S

102S
GH EAST Cleveland
EAST Cleveland
Sta. 204+85
EAST Cleveland GH
EAST Cleveland
103S

LEGEND
Proposed
Existing to Remain
Existing to be Removed

TRAFFIC CONTROL AND SIGNS STA. 161+00 TO STA. 192+00

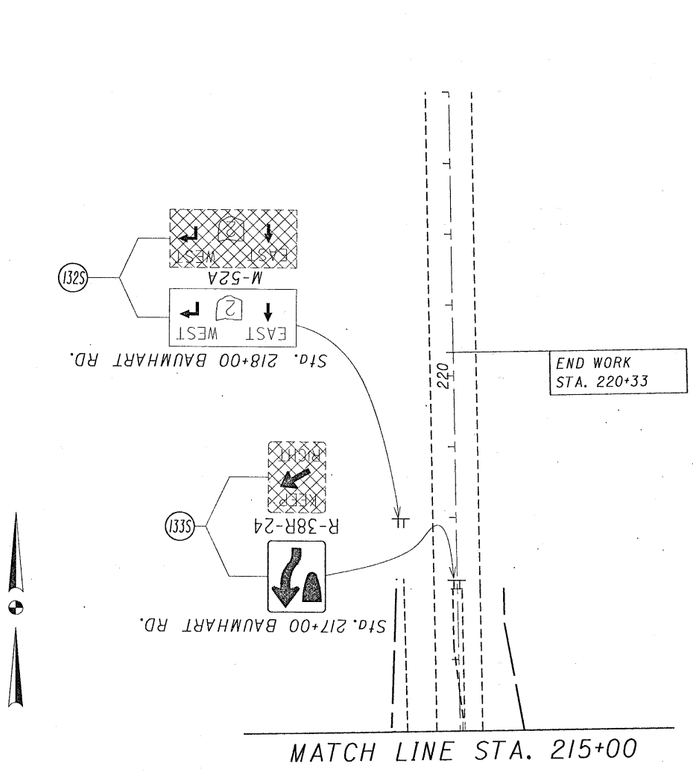
TRAFFIC CONTROL

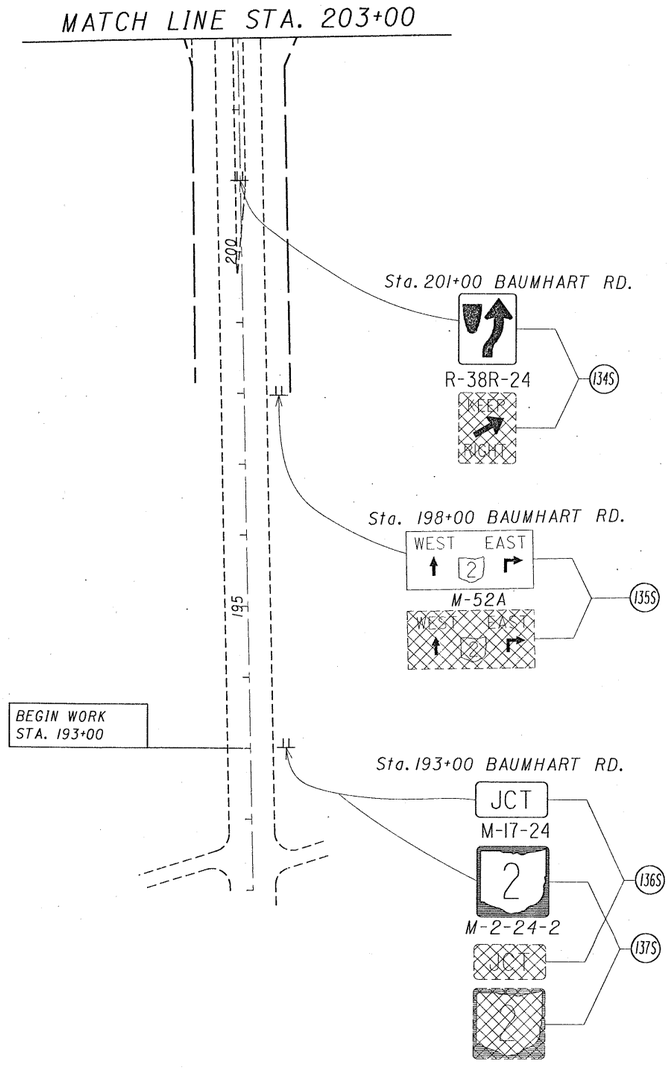
Sta. 214+85 BAUMHART RD.
KEEP RIGHT
R-37R-24
108S
117S
Sta. 213+70 BAUMHART RD.
KEEP RIGHT
R-37R-24
109S
MATCH LINE STA. 215+00
Sta. 176+89 RAMP "A" LEFT
ENTER
DO NOT
R-41B-36
ONLY
R-31A-36
Sta. 176+89 RAMP "A" RIGHT
ONE WAY
R-43R-48
ENTER
DO NOT
R-41B-36
ONLY
R-31A-36
ONE WAY
R-43L-48
Sta. 175+65
X-6L
X-6R
107S
Sta. 175+44 RAMP "G"
PROHIBITED
PEDESTRIANS
FARM MACHINERY
MAXIMUM SPEED
105S
R-15A-36
PROHIBITED
COOPER-FOSTER PARK RD.
Sta. 183+00 RAMP "A"
W-47-48
WRONG WAY
R-41A-36
Sta. 179+00 RAMP "A" RIGHT & LEFT
ONLY
R-31A-36
125S
2
M-2-36-2
Sta. 184+00
108S
Sta. 169+00
W-49R-48
END PROJECT
STA. 181+46.00
S.L.M. 3.44
F-73(78)
R-37R-36
RIGHT
KEEP
Sta.210+35 BAUMHART RD.
LOOP DETECTORS
Sta.210+50 BAUMHART RD.
ONLY ONLY ONLY
R-31FF-48
RAMP "G"
RAMP "A"
STA 185+05.95 BK
STA 185+00 AH
MATCH LINE STA.161+00
MATCH LINE STA.192+00
L/A
R/W
17.5
210
185
165
170
175
180
190
Sta.173+00 RAMP "H" LT. & RT.
WRONG WAY
R-41A-36
114S
RAMP "H"
RAMP "B"
Sta.208+97 BAUMHART RD.
BAUMHART RD.
COOPER-FOSTER PARK ROAD 500 FT. AHEAD
205
R-43L-48
ONE WAY
Sta. 176+50 RAMP "H"
ENTER
DO NOT
R-41B-36
R-43R-48
ONE WAY
ONE WAY
ENTER
DO NOT
ONE WAY
111S
112S
113S
2
W-2-36-2
Sta. 170+00
105S
MATCH LINE STA. 203+00
STOP
R-1-48
115S
Sta. 176+50 RAMP "H"
ENTER
DO NOT
R-41B-36
116S
Sta. 203+50 BAUMHART RD.
W-60D-36
126S
Sta.205+20 BAUMHART RD.
KEEP RIGHT
R-37R-24
127S
PROHIBITED
R-15A-36
126S
Sta. 179+59 RAMP "B"
Sta. 177+55
X-6R
X-6L
130S
W-49R-48
Sta. 185+00
129S
131S

LEGEND
Proposed
Existing to Remain
Existing to be Removed

TRAFFIC CONTROL AND SIGNS STA. 161+00 TO STA. 192+00

TRAFFIC CONTROL

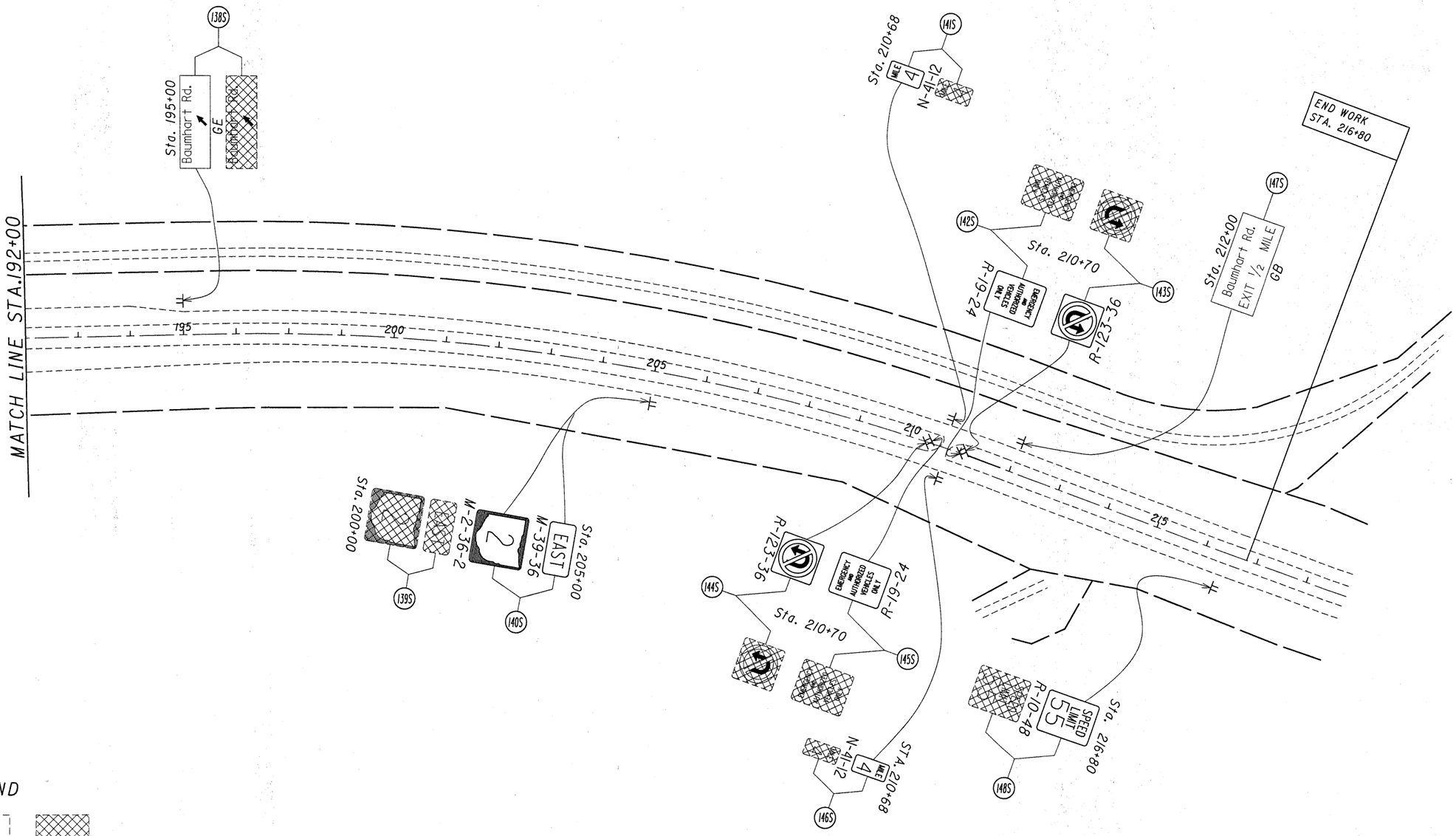




LEGEND

Proposed | Existing to Remain | Existing to be Removed

TRAFFIC CONTROL

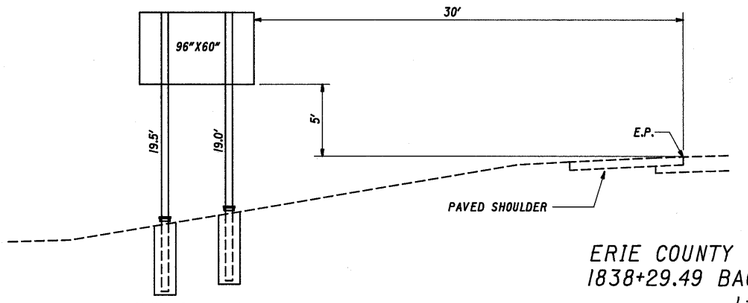


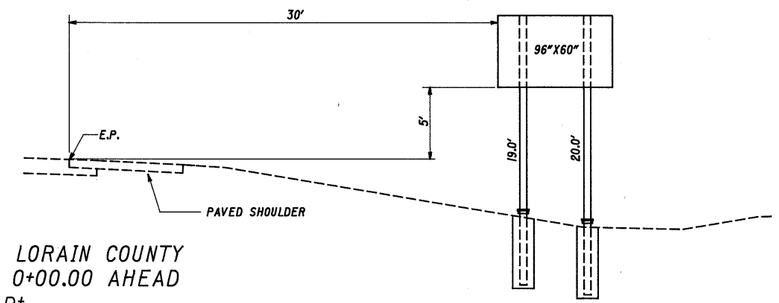
LEGEND

Proposed | Existing to Remain | Existing to be Removed

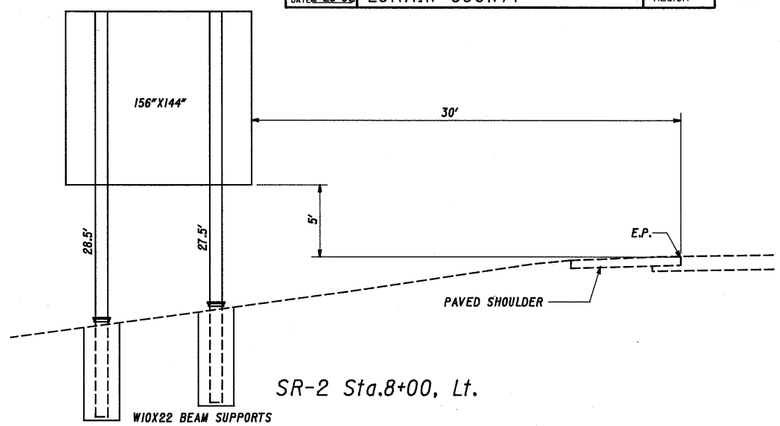
TRAFFIC CONTROL AND SIGNS STA. 192+00 TO STA. 219+00

CALC BY E.P.S. DATE 2-25-92	ERI/LOR-2-30.51/0.00	OHIO	189
CHKD BY K.A.S. DATE 2-28-92	ERIE COUNTY LORAIN COUNTY	FHWA REGION 5	267

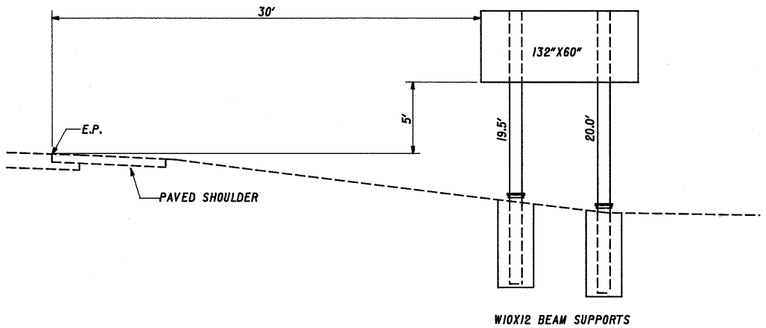




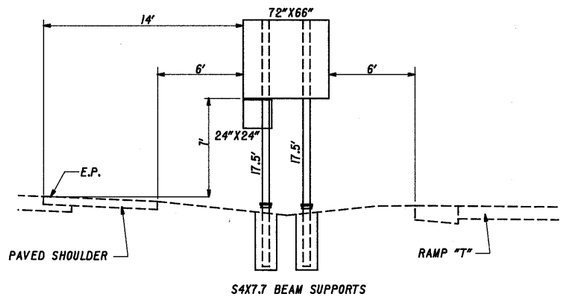
ERIE COUNTY LORAIN COUNTY
1838+29.49 BACK = 0+00.00 AHEAD
Lt. & Rt.



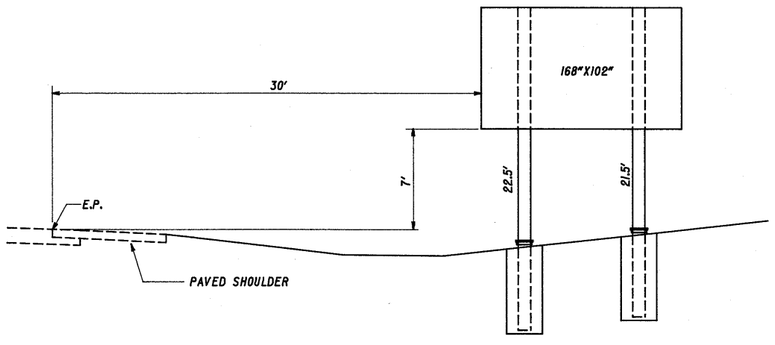
SR-2 Sta.8+00, Lt.



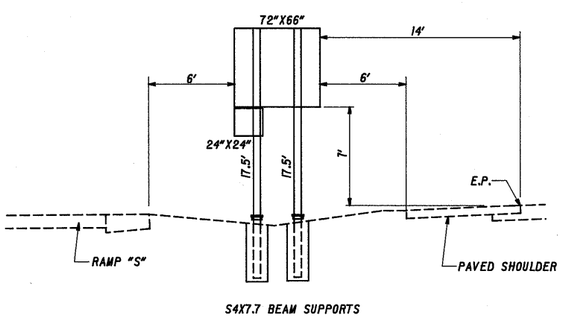
SR-2 Sta.12+50, Rt.



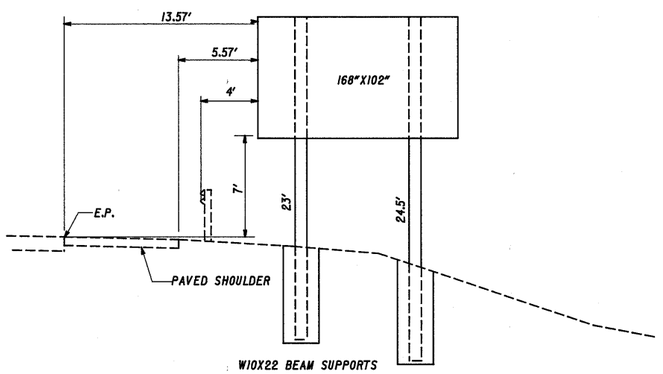
SR-2 Sta.21+10, Rt.



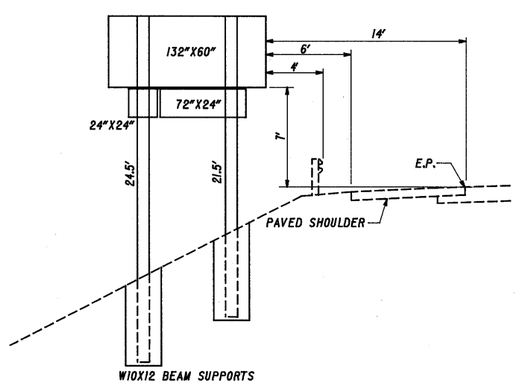
SR-2 Sta.25+00, Rt.



SR-2 Sta.39+90, Lt.



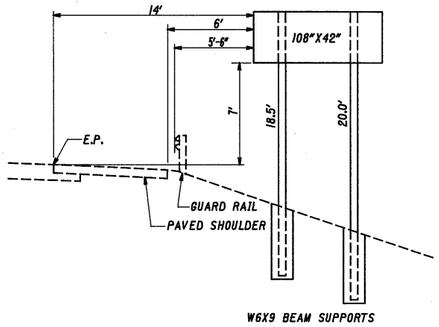
SR-2 Sta.45+85, Rt.



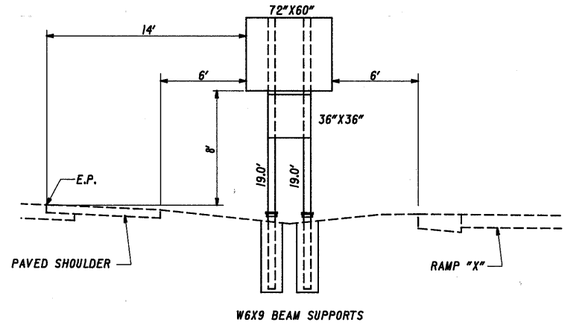
SR-2 Sta.49+80, Lt.

ELEVATIONS VIEWS OF MAJOR SIGNS

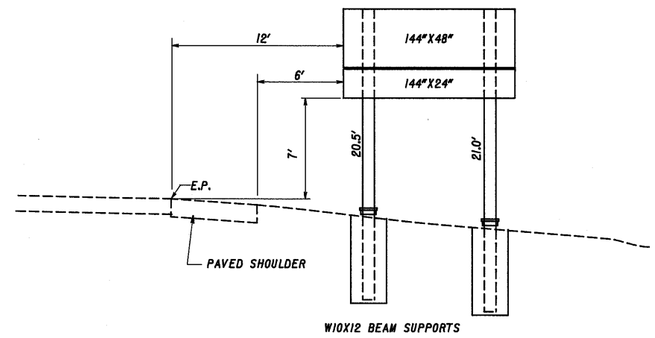
CALC BY E.P.S. DATE 2-25-92	ERI/LOR-2-30.51/0.00	OHIO	190
CHKD BY K.A.S. DATE 2-28-92	ERIE COUNTY	FHWA REGION 5	267
	LORAIN COUNTY		



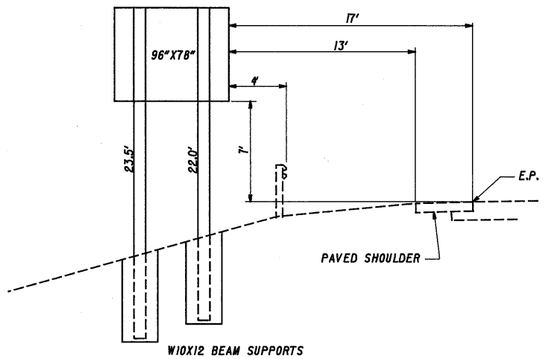
SR-2 Sta.51+00, Rt.



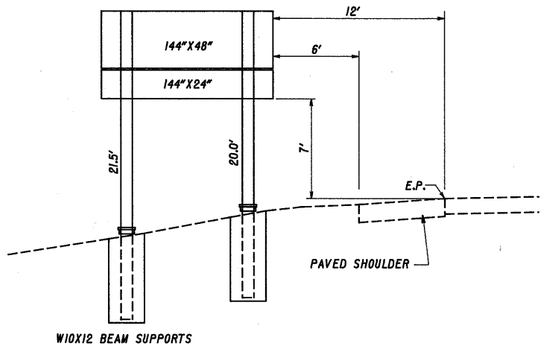
SR-2 Sta.72+50, Rt.



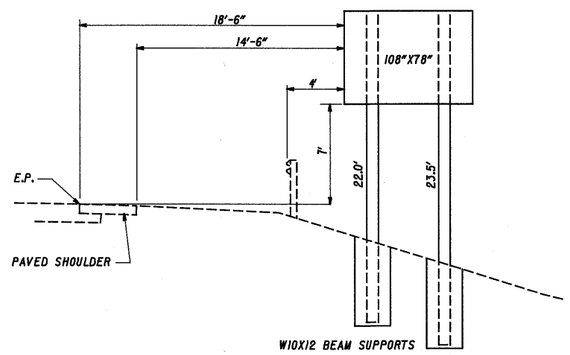
RAMP-X Sta.77+50, Rt.



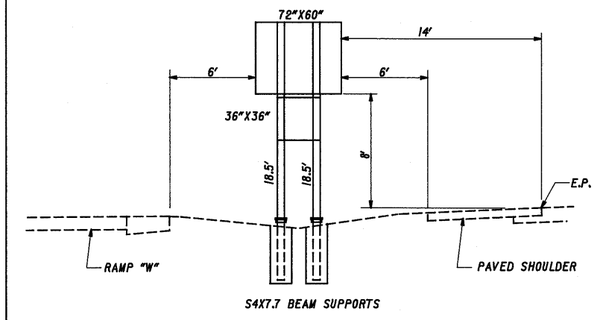
VERMILION INTERCHANGE RD. Sta.27+40, Lt.



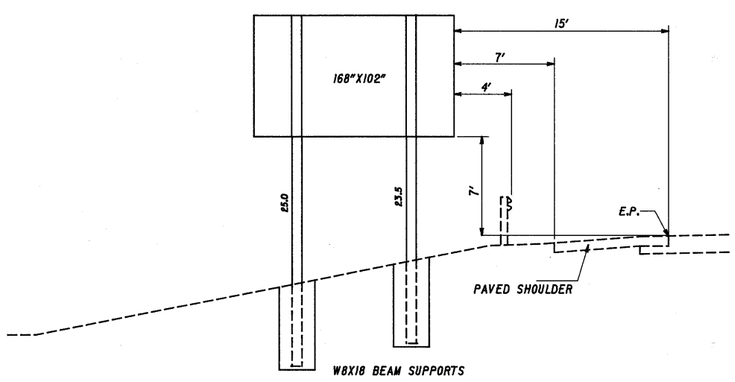
RAMP-W Sta.83+00, Lt.



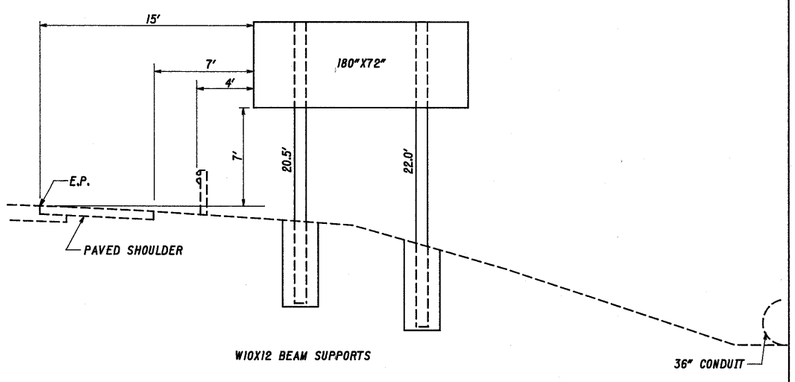
VERMILION INTERCHANGE RD. Sta.22+50, Rt.



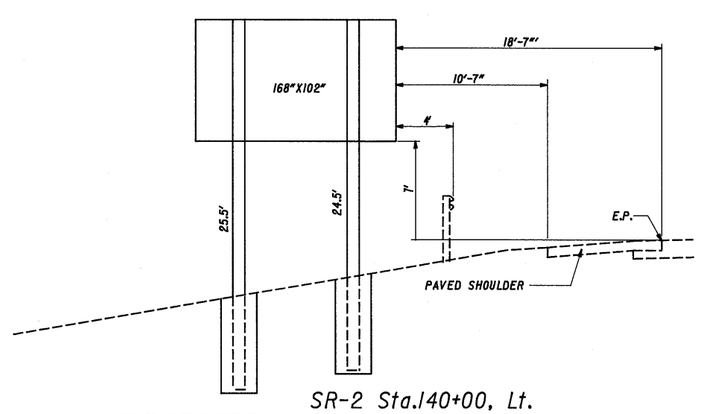
SR-2 Sta.87+65, Lt.



SR-2 Sta.118+50, Lt.



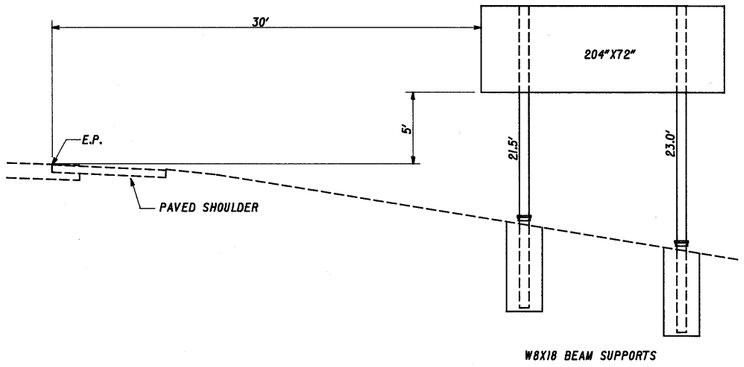
SR-2 Sta.138+00, Rt.



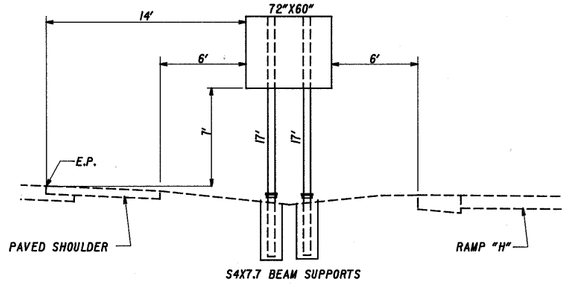
SR-2 Sta.140+00, Lt.

ELEVATIONS VIEWS OF MAJOR SIGNS

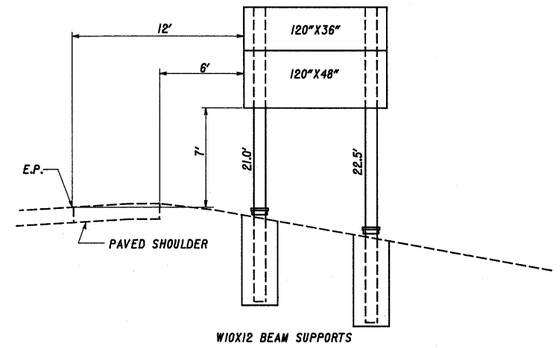
CALC BY E.P.S. DATE 2-25-82	ERI/LOR-2-30.51/0.00	OHIO
CHKD BY K.A.S. DATE 2-28-82	ERIE COUNTY	FHWA REGION 5
	LORAIN COUNTY	



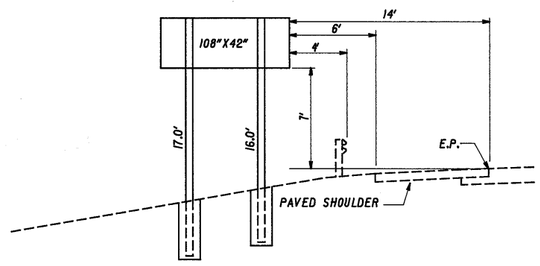
SR-2 Sta.145+00, Rt.



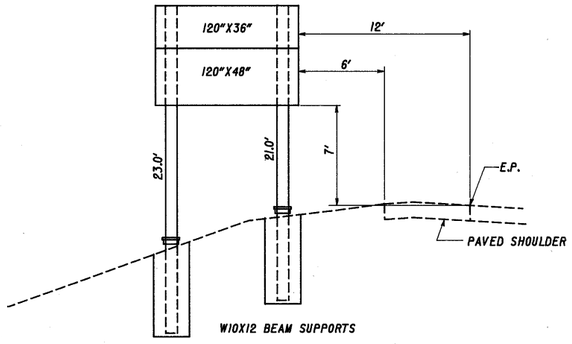
SR-2 Sta.168+15, Rt.



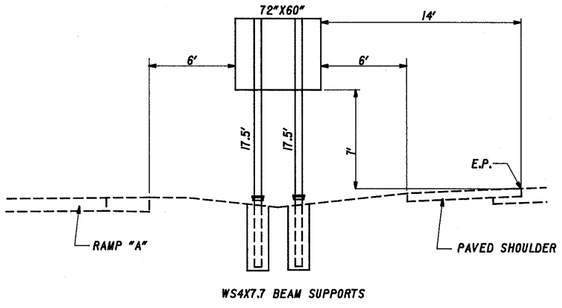
RAMP-H Sta.173+00, Rt.



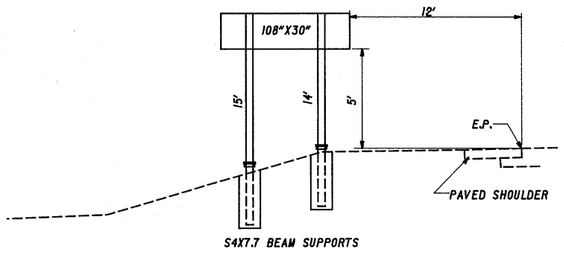
SR-2 Sta.178+00, Lt.



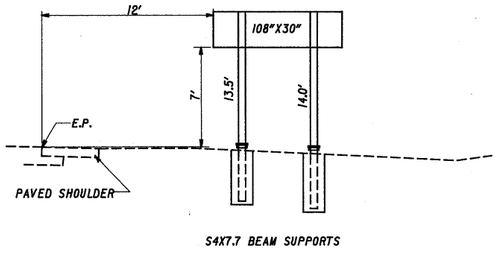
RAMP-A Sta.181+00, Lt.



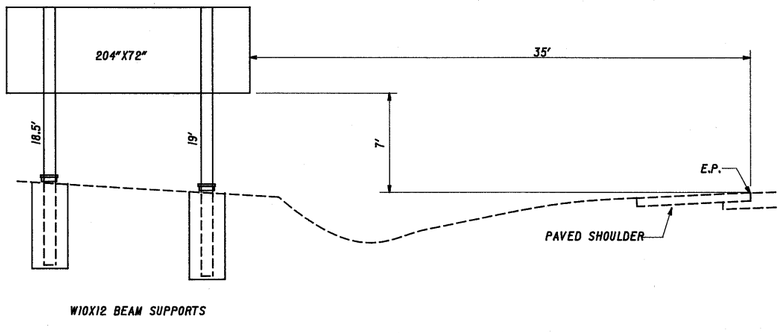
SR-2 Sta.185+85, Lt.



BAUMHART RD. Sta.218+00, Lt.



BAUMHART RD. Sta.198+00, Rt.



SR-2 Sta.212+00, Lt.

ELEVATIONS VIEWS OF MAJOR SIGNS

NOTES:

ITEM SPECIAL - EPOXY INJECTION

FOR REHABILITATION OF THE SINGLE CELL BOX CULVERT, BRIDGE NO. LOR-2-0249

A. DESCRIPTION

THE WORK CONSISTS OF THE REPAIR OF CONCRETE JOINTS AND CRACKS BY THE INJECTION OF EPOXY RESIN ADHESIVES.

SEE PROPOSAL NOTE TITLED CONCRETE REPAIR BY EPOXY INJECTION [redacted] FOR FURTHER INFORMATION NOT PROVIDED BY THESE NOTES.

IT IS NOT REQUIRED THAT THE ENTIRE THICKNESS OF THE WALL BE INJECTED. A CLOSE PORT SPACING (8"±) AND HIGH MODULUS EPOXY INJECTION GEL IS RECOMMENDED.

THE ACTUAL QUANTITY OF REPAIR WORK WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

B. CERTIFICATES OF COMPLIANCE

THE CONTRACTOR SHALL FURNISH CERTIFICATES REQUIRED FOR DEMONSTRATING PROOF OF COMPLIANCE IN TRIPLICATE.

THE CONTRACTOR SHALL FURNISH A LETTER OF COMPLIANCE STATING THAT HE HAS SUCCESSFULLY BEEN INVOLVED IN THE SPECIFIED TYPE OF WORK FOR THE LAST SIX YEARS. THE CONTRACTOR SHALL FURNISH THE NAMES AND ADDRESSES AT LEAST TEN PROJECTS OF OF SIMILAR NATURE HE HAS COMPLETED OVER THE LAST THREE YEARS.

C. METHOD OF MEASUREMENT

THE QUANTITY OF CRACK REPAIR BY EPOXY ADHESIVE INJECTION SHALL BE MEASURED PER LINEAL FOOT OF CRACK INJECTED, COMPLETED, AND ACCEPTED.

D. BASIS OF PAYMENT

THE PAYMENT FOR REPAIRS OF CRACKS AS DESCRIBED ABOVE SHALL CONSTITUTE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT NECESSARY TO SATISFACTORILY COMPLETE THIS ITEM. ENTRY PORTS, SURFACE PREPARATION, SURFACE SEAL, AND OTHER RELATED ITEMS WILL NOT BE PAID FOR SEPARATELY, BUT THE COST THEREFORE SHALL BE INCLUDED IN THE COST OF THE REPAIR OF THE CRACKS OF WHICH THEY ARE A PART.

PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID FOR:

ITEM	UNIT	DESCRIPTION
SPECIAL	LIN. FT.	EPOXY INJECTION

ITEM 519 - PATCHING STRUCTURES, AS PER PLAN

A. DESCRIPTION

THIS ITEM SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPAIR DAMAGED CONCRETE AREAS. GENERALLY, ITEM 519 SHALL BE USED WHERE THE DAMAGE DEPTH IS 2 INCHES OR GREATER AND THE SURFACE CAN BE FORMED AND POURED. THE DEPTH OF 519 PATCHES SHALL NOT BE LESS THAN 4 INCHES. ALL SURFACES TO BE PATCHED AND THE EXPOSED REINFORCING STEEL WITHIN SHALL BE THOROUGHLY CLEANED BY SANDBLASTING PRIOR TO THE CLEANING SPECIFIED BY 519.04. CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL OR ERECTION OF THE FORMS BY NOT MORE THAN 24 HOURS.

B. BASIS OF PAYMENT

PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID FOR:

ITEM	UNIT	DESCRIPTION
519	SQ. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN

ITEM SPECIAL - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

A. DESCRIPTION

THIS ITEM CONSISTS OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE. PREPARATION OF THE SURFACE, AND THE MIXING, PLACING, FINISHING AND THE CURING OF THE PATCHES AS DIRECTED BY THE ENGINEER AND IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS

B. MATERIAL

THE PATCHING MATERIAL SHALL BE SIKATOP 122 AND 123, THERMAL-CHEM PRODUCT NO.304, POLYCARB MARK 193.4 AND 194, FIVE STAR HIGHWAY PATCH, UPCO BOSTICK 964, EUCLID CHEMICAL EUCO VERTICOAT, MASTER BUILDERS SET VERTIPATCH OR DURALTOP AND DURAL-PATCH GEL OR APPROVED EQUAL. THE MATERIAL SHALL BE TINTED TO CURE TO THE COLOR OF THE EXISTING CONCRETE. ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS RECOMMENDED BY THE MANUFACTURER. A MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT AT THE JOB SITE UNTIL SUCH TIME AS HE AND THE ENGINEER ARE SURE THAT THE CONTRACTOR IS QUALIFIED IN ALL ASPECTS OF PATCHING CONCRETE STRUCTURES WITH THE SELECTED MATERIAL.

C. REMOVAL OF CONCRETE

THE ENGINEER SHALL SOUND THE STRUCTURE AND OUTLINE THE AREAS TO BE REMOVED. ALL LOOSE, SOFT, HONEY-COMBED, AND DISINTEGRATED CONCRETE, PLUS ONE-FOURTH OF AN INCH DEPTH OF SOUND CONCRETE SHALL BE REMOVED. WHERE THE BOND BETWEEN THE CONCRETE AND A REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE-HALF OF THE PERIPHERY OF SUCH A BAR HAS BEEN EXPOSED, THE ADJACENT CONCRETE SHALL BE REMOVED TO A DEPTH THAT WILL PROVIDE A MINIMUM ONE-HALF OF AN INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICAL. AFTER COMPLETION OF THE SECONDARY REMOVAL OPERATION, THE ENGINEER WILL RE-SOUND THE AREAS TO ENSURE THAT ONLY SOUND CONCRETE REMAINS.

ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT DAMAGE OR SHATTER THE CONCRETE THAT IS TO REMAIN, AND WILL NOT CUT, ELONGATE OR DAMAGE THE REINFORCING STEEL IN ANY WAY. CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35-POUND CLASS.

D. SURFACE PREPARATION

CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL BY NOT MORE THAN 24 HOURS. THE SURFACE TO BE PATCHED AND THE EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING FOLLOWED BY AN AIR BLAST. IT MAY BE NECESSARY TO USE HAND TOOLS TO REMOVE SCALE FROM THE REINFORCING STEEL. THE SURFACE SHALL BE MADE FREE OF SPALLS, LAITANCE AND ALL TRACES OF FOREIGN MATERIAL. IF NECESSARY, DETERGENT CLEANING SHALL PRECEDE BLAST CLEANING TO ENSURE THE REMOVAL OF CONTAMINANTS THAT ARE DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND. THE PREPARED SURFACE SHALL BE LEFT IN THE CONDITION AS RECOMMENDED BY THE MANUFACTURER. ANY ADDITIONAL SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE PATCHING MATERIAL WHICH IS USED. ALL UNCHIPPED SURFACES THAT WILL RECIEVE NEW MATERIAL SHALL BE MECHANICALLY ROUGHENED.

E. CURING

PATCHES SHALL BE CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS

F. PROTECTION

DURING SANDBLASTING, CLEANING AND PATCHING OPERATIONS ADJACENT AND NEARBY STRUCTURAL STEEL, INCLUDING DRAINAGE ITEMS, SHALL BE MASKED AND PROTECTED FROM DAMAGE. ANY DAMAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

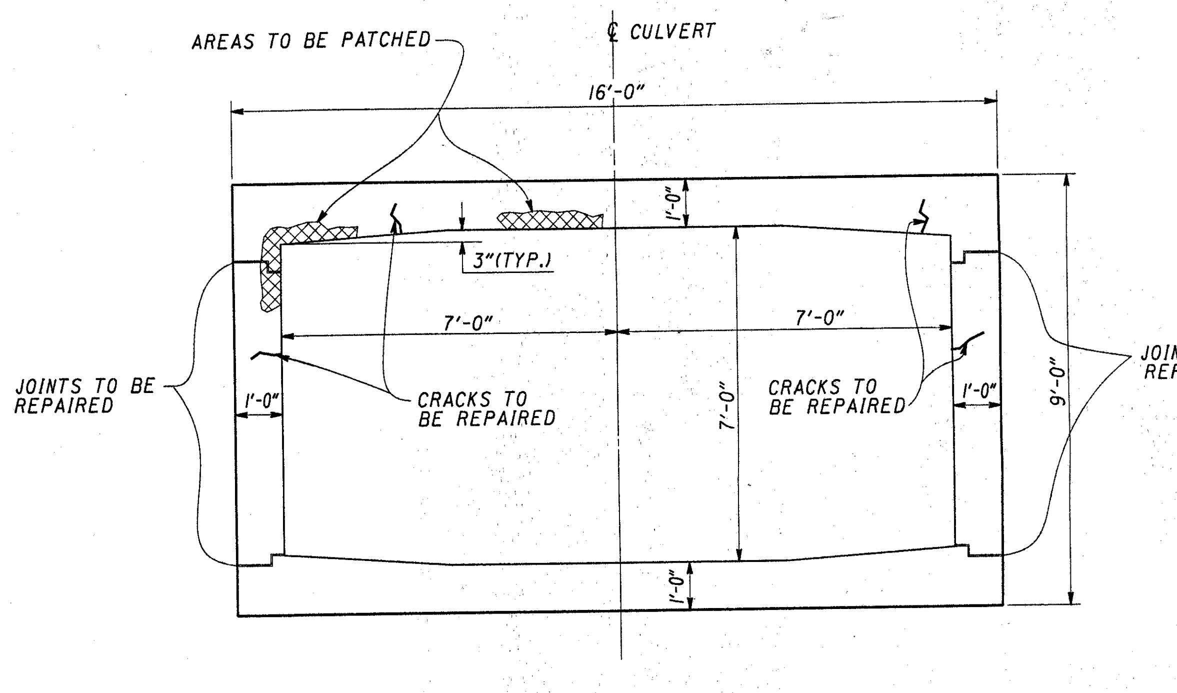
G. METHOD OF MEASUREMENT

THE QUANTITY SHALL BE THE ACTUAL AREA IN SQUARE FEET OF THE EXPOSED SURFACE OF ALL COMPLETED PATCHES, IRRESPECTIVE OF DEPTH OR THICKNESS OF THE PATCH COMPLETE, IN PLACE AND ACCEPTED. IF THE PATCH INCLUDES CORNERS OR EDGES OF MEMBERS ALL OF THE EXPOSED SURFACES SHALL BE INCLUDED. THE COST OF ALL LABOR, EQUIPMENT, INCIDENTALS AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

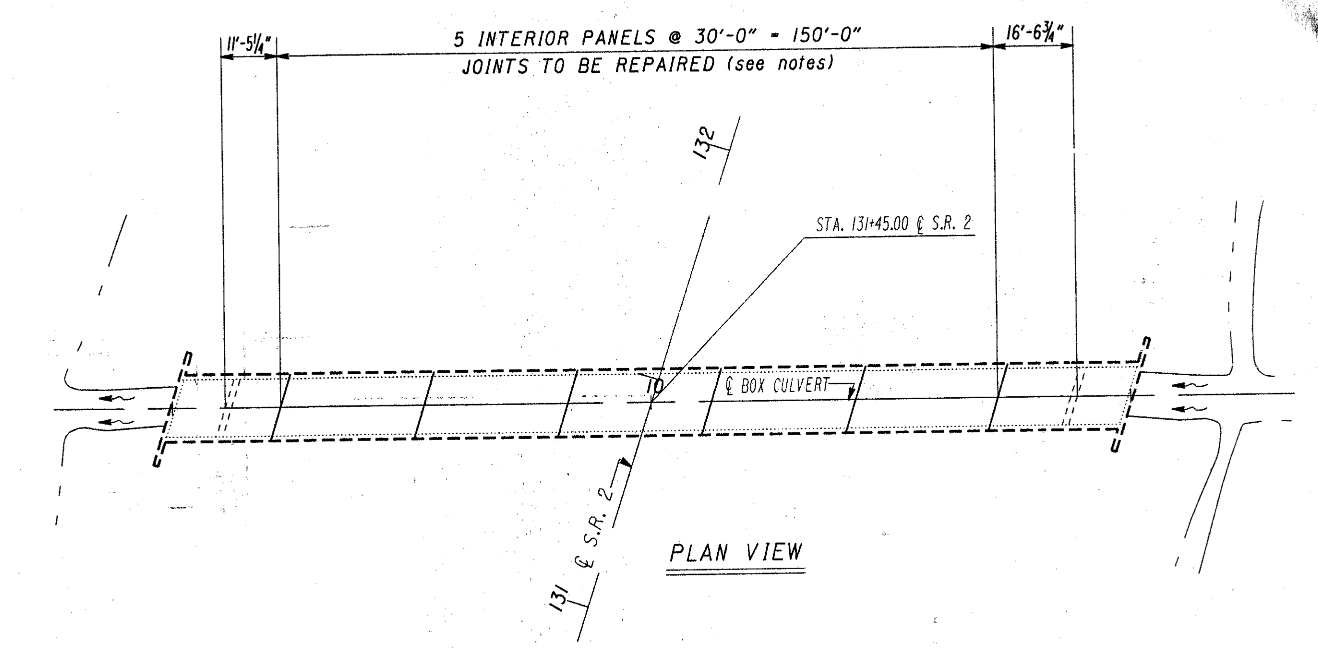
H. BASIS OF PAYMENT

PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID FOR:

ITEM	UNIT	DESCRIPTION
SPECIAL	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR



END VIEW



PLAN VIEW

ESTIMATED QUANTITIES			
ITEM	UNIT	QUANTITY	DESCRIPTION
SPECIAL	LIN FT	190	EPOXY INJECTION
519	SQ FT	125	PATCHING CONCRETE STRUCTURES, AS PER PLAN
SPECIAL	SQ FT	60	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

Totals Carried To General Summary

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

EXISTING CULVERT REPAIRS & GENERAL NOTES

STRUCTURE NO. LOR-2-0249
BOX CULVERT (14' X 7')
BROWNHELM DITCH - Sta.131+45.00

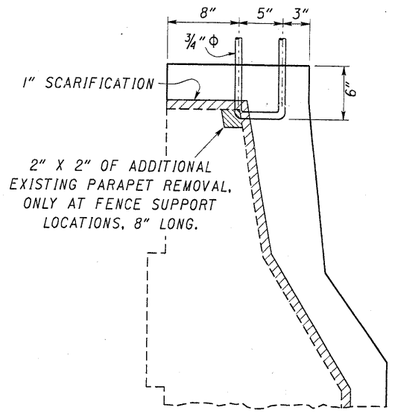
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	EPS					

STRUCTURE GENERAL NOTES & GENERAL SUMMARY

CALC BY / DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	195 267
CHKD BY / DATE			

ITEM 607 - FENCE, TYPE CL TPV WITH 6" FABRIC WIDTH

REMOVE A 2 INCH BY 2 INCH BLOCK OF ADDITIONAL CONCRETE AT FENCE SUPPORT LOCATIONS TO PRESET THE ANCHORS. THE LENGTH OF THE REMOVAL ALONG THE TOP SHALL BE 8 INCHES TO INCLUDE BOTH ANCHORS AT EACH LOCATION. FOR ADDITIONAL INFORMATION SEE SHEET 5 OF 5, FENCE DETAILS.



ITEM 625 - CONDUIT, 2 INCH, 713.04, AS PER PLAN

THE EXISTING CONDUIT SHALL BE REPLACED IN THE PARAPET AND WINGWALL. THE PROPOSED CONDUIT SHALL BE CONNECTED TO THE EXISTING WITH A COUPLING AFTER SPLICING AND A CONDUIT EXPANSION FITTING SHALL BE PLACED BETWEEN THE PARAPET AND WINGWALL AS SHOWN ON STANDARD DRAWING HL-30.31, SEE DETAIL BELOW. THE LENGTH OF CONDUIT NEEDED IS FROM THE DETAIL SHOWN WHICH MAY VARY BASED ON THE ORIGINAL CONSTRUCTION OF THE WINGWALL.

THE COST OF ALL LABOR, EQUIPMENT, INCIDENTALS AND MATERIALS NEEDED SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM 625 CONDUIT 2 INCH 713.04, AS PER PLAN.

ITEM SPECIAL - REMOVAL OF EXISTING CONDUIT

THE EXISTING CONDUIT SHALL BE CUT AT THE LIMITS OF THE REMOVAL IN SUCH A WAY THAT THE PROPOSED CONDUIT CAN BE CONNECTED TO THE EXISTING WITH A COUPLING AFTER SPLICING.

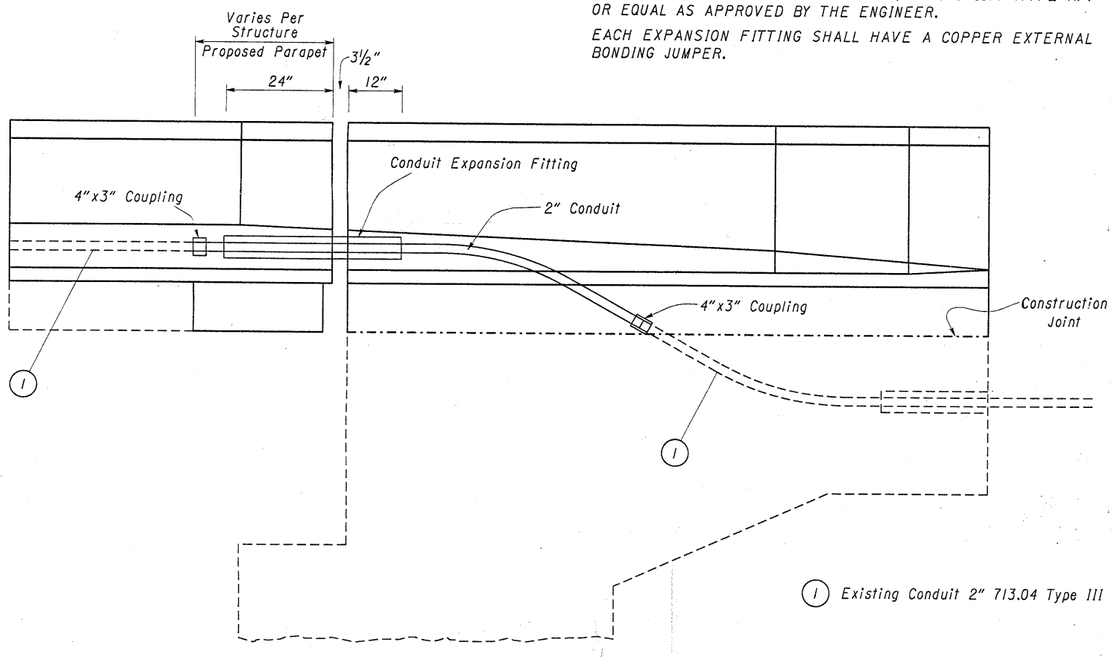
THE EXISTING CONDUIT IN THE REMOVAL AREA IS EITHER RIGID ASBESTOS-CEMENT CONDUIT OR BITUMINIZED FIBER CONDUIT. THE FOLLOWING PROCEDURES SHALL BE FOLLOWED FOR THE REMOVAL OF THE ASBESTOS-CEMENT CONDUIT. THE CONTRACTOR SHALL ENSURE MONITORING OF ASBESTOS CONTENT IN AIR DURING THE REMOVAL ACCORDING TO OHIO EPA REGULATIONS. THE CONTRACTOR SHALL NOTIFY OHIO EPA IF CONDITIONS PREVAIL THAT ARE IN CONFLICT OF AIR POLLUTION/HAZARDOUS MATERIAL REGULATIONS 1926.58 A3. ALL ASBESTOS-CEMENT CONDUIT REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH OHIO EPA OFF SITE BY THE CONTRACTOR. THE BITUMINIZED FIBER CONDUIT SHALL BE REMOVED AND DISPOSED OF ACCORDING TO ITEM 202 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE COST OF ALL LABOR, EQUIPMENT, INCIDENTALS AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL REMOVAL OF EXISTING CONDUIT.

CONDUIT ON STRUCTURE

EXPANSION FITTINGS FOR CONDUIT ON STRUCTURE SHALL BE OZ (TYPE AX), CROUSE-HINDS (TYPE XJ-4), SPRING CITY (TYPE AF) OR EQUAL AS APPROVED BY THE ENGINEER.

EACH EXPANSION FITTING SHALL HAVE A COPPER EXTERNAL BONDING JUMPER.



(1) *Existing Conduit 2" 713.04 Type III*

SHEET No.											
204	216	225	232	239	246	254	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION
BRIDGE No.											
0030	0098	0107	0151	0223	0262	0333					
											STRUCTURES 20' SPAN AND OVER
10	26	10	9	9	9	17	202	11301	90	CU. YD.	PORTIONS OF STRUCTURES REMOVED, WINGWALLS, AS PER PLAN.
4	25	5	5	4	4	25	202	11301	72	CU. YD.	PORTIONS OF STRUCTURES REMOVED, BACKWALLS, AS PER PLAN.
5	10	6	6	5	5	12	202	11301	49	CU. YD.	PORTIONS OF STRUCTURES REMOVED, DECK EDGES, AS PER PLAN.
1	2	1	1	1	1	3	202	11301	10	CU. YD.	PORTIONS OF STRUCTURES REMOVED, PARAPETS, AS PER PLAN.
1097	3876	1171	1105	901	904	1356	202	23500	10,410	SQ. YD.	WEARING COURSE REMOVED
1097	3876	1171	1105	901	904	1356	202	23501	10,410	SQ. YD.	WEARING COURSE REMOVED, AS PER PLAN
4	4	6	2	4	4	8	202	98100	32	EACH	SCUPPER REMOVED
	27					14	203	12000	41	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
6219	20,883	5856	5834	5644	5652	10,925	509	15800	61,013	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60
752	2396	644	612	616	616	800	510	11101	6436	EACH	DOWEL HOLES, AS PER PLAN.
1.8	3.1	1.8	1.8	1.8	1.8	3.9	511	34450	16	CU. YD.	CLASS S CONCRETE PARAPET REPLACEMENT, AS PER PLAN
13.3	30.3	12.6	12.5	11.8	11.8	21.2	511	34450	133.5	CU. YD.	CLASS S CONCRETE WINGWALL, AS PER PLAN
4.3	24.6	5.3	5.3	4.4	4.4	23.9	511	34450	72.2	CU. YD.	CLASS S CONCRETE BACKWALL, AS PER PLAN
4.9	9.7	6.0	6.0	4.9	4.9	12	511	34450	48.4	CU. YD.	CLASS S CONCRETE DECK, AS PER PLAN
43.8	139.6	37.8	35.7	35.9	36	47.7	511	34450	376.5	CU. YD.	CLASS S CONCRETE PARAPETS, AS PER PLAN
527	528	521	591	517	518	933	SPECIAL	51267502	4135	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	513	21201	LUMP		TRIMMING OF BEAM END, AS PER PLAN
67.9	151.3	83.8	83.7	67.7	68.2	151.3	516	11231	673.9	LIN. FT.	STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN
15,584	79,970	15,857	14,836	12,522	12,372	15,236	SPECIAL	51400050	*	SQ. FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)
15,584	79,970	15,857	14,836	12,522	12,372	15,236	SPECIAL	51400056	*	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
15,584	79,970	15,857	14,836	12,522	12,372	15,236	SPECIAL	51400060	*	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
15,584	79,970	15,857	14,836	12,522	12,372	15,236	SPECIAL	51400066	*	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
100		100	100	100	100	100	SPECIAL	51400504	*	MAN HR.	GRINDING FINS, TEARS & SLIVERS
3313		3301	3240	3400	2720	3480	SPECIAL	51400508	*	LIN. FT.	GRINDING OF FLANGE EDGES
	20						516	46701	20	EACH	RESET BEARING, AS PER PLAN
4	4			4		8	518	12201	20	EACH	SCUPPER, INCLUDING SUPPORTS, AS PER PLAN
4	36	5	8	4	8	8	518	12801	73	EACH	SCUPPER MODIFICATION, AS PER PLAN
	25					14	518	21201	39	CU. YD.	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN
0.89	8.55	3.12	3.60	0.56	2.45	2.88	519	11101	22.1	SQ. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN.
1076	3808	1153	1088	884	887	1332	SPECIAL	51922006	10,228	SQ. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (2 1/4" THICK) (SEE PROPOSAL NOTE).
11	71	25	21	12	13	42	SPECIAL	51922100	195	CU. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) (SEE PROPOSAL NOTE)
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	SPECIAL	51922300	LUMP		TEST SLAB (SEE PROPOSAL NOTE)
572		496	468	470	472		607	20100	2478	LIN. FT.	FENCE, TYPE CL, TPV WITH 6' FABRIC WIDTH
	4						609	26001	4	LIN. FT.	CURB, TYPE 6, AS PER PLAN
											LIGHTING
	LUMP		LUMP			LUMP	SPECIAL	20298000	LUMP		REMOVAL OF EXISTING CONDUIT
	20	4	8				SPECIAL	62598000	32	EACH	LIGHT POLE ANCHOR BOLT EXTENSION
	80		60			50	625	25401	190	LIN. FT.	CONDUIT 2 INCH 713.04, AS PER PLAN
	5		2				625	29901	7	EACH	JUNCTION BOX, AS PER PLAN

* *EACH BRIDGE IS A SEPARATE PAY ITEM*

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

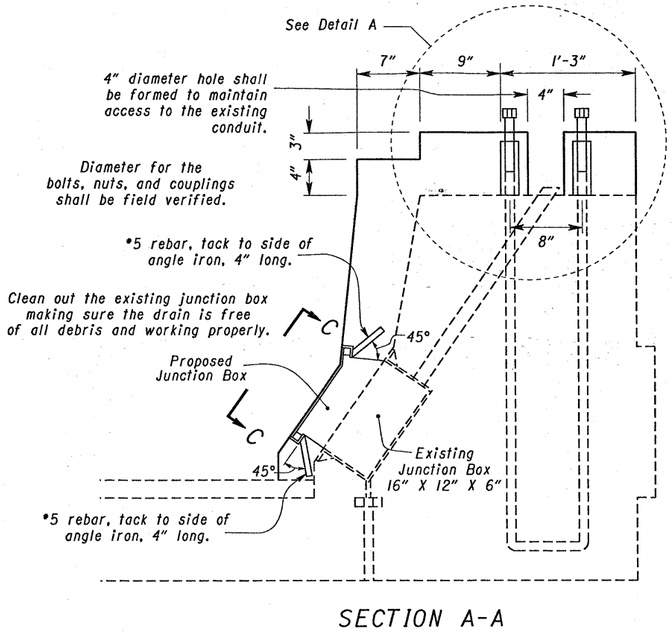
3/5

STRUCTURE GENERAL NOTES & GENERAL SUMMARY

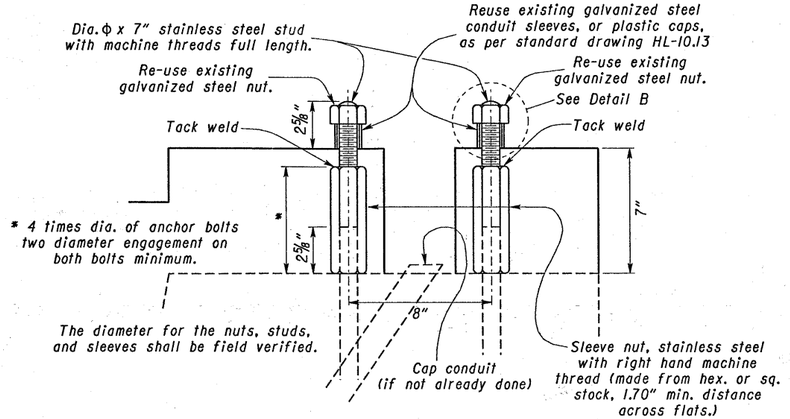
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EEL			J.S.B.	2-28-92	DGR

ITEM SPECIAL LIGHT POLE ANCHOR BOLT EXTENSION
ITEM 625 JUNCTION BOX, AS PER PLAN

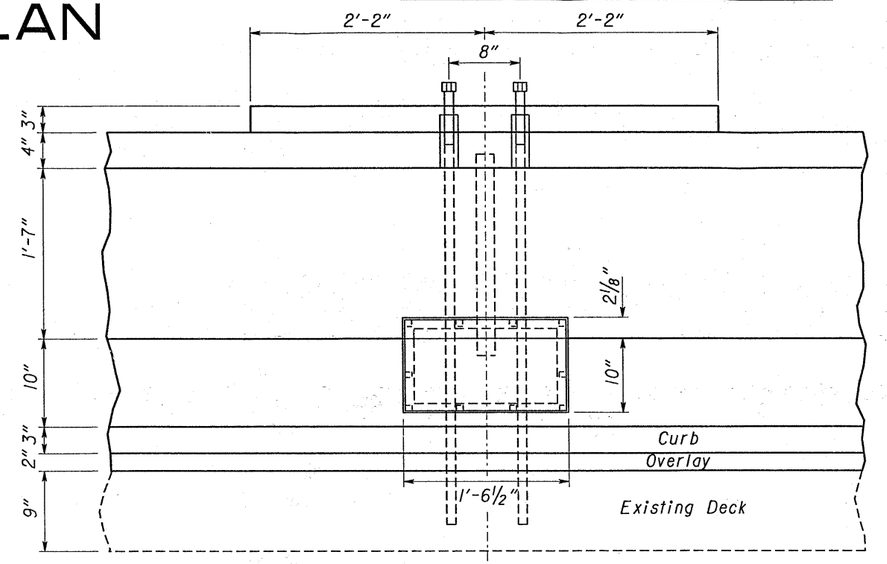
CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	196
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



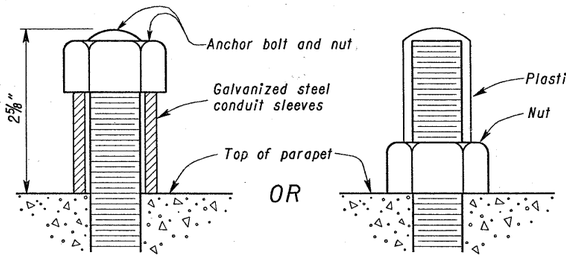
SECTION A-A



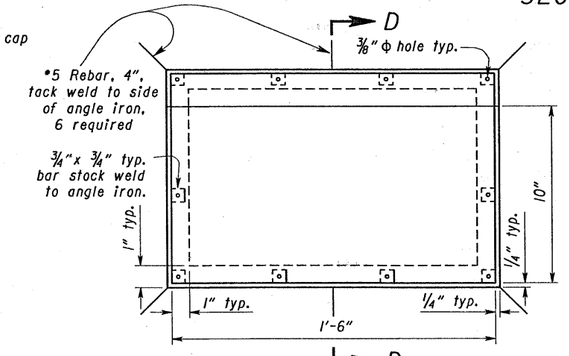
DETAIL A



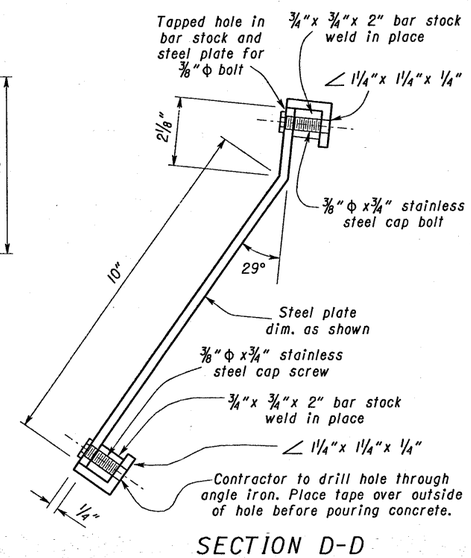
SECTION B-B



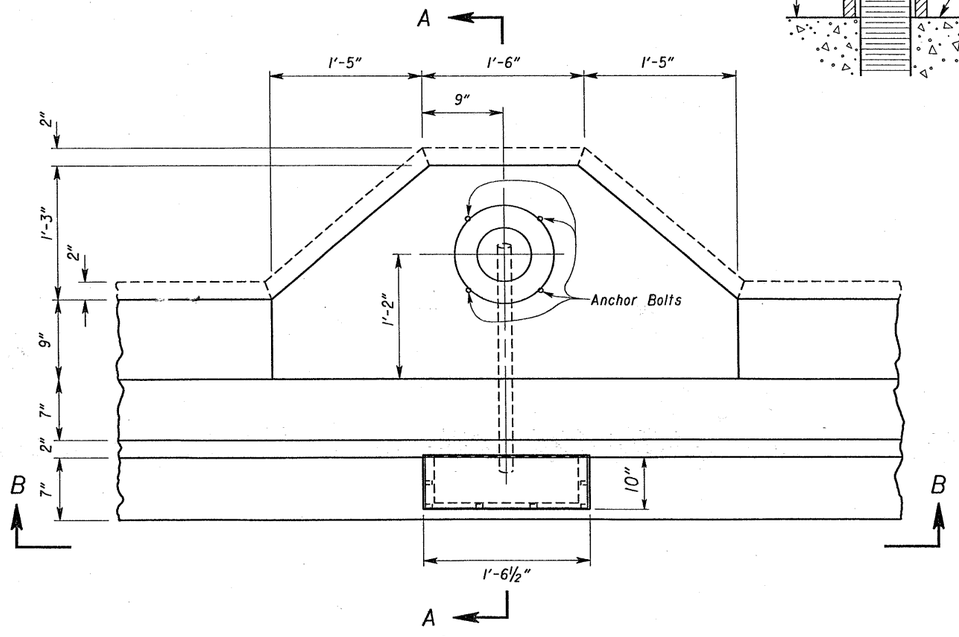
DETAIL B



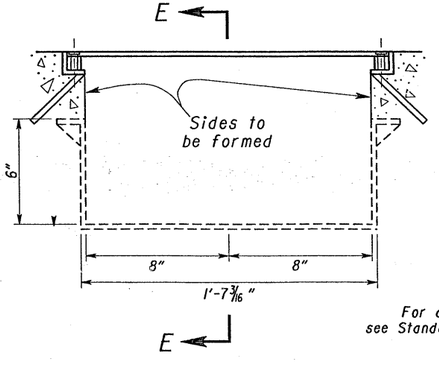
SECTION C-C



SECTION D-D

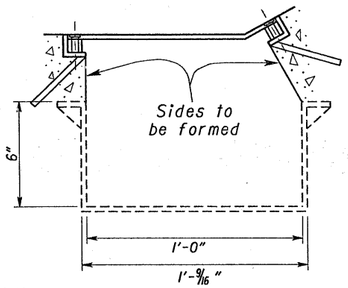


PLAN



JUNCTION BOX

For additional details see Standard Drawing HL-20.14



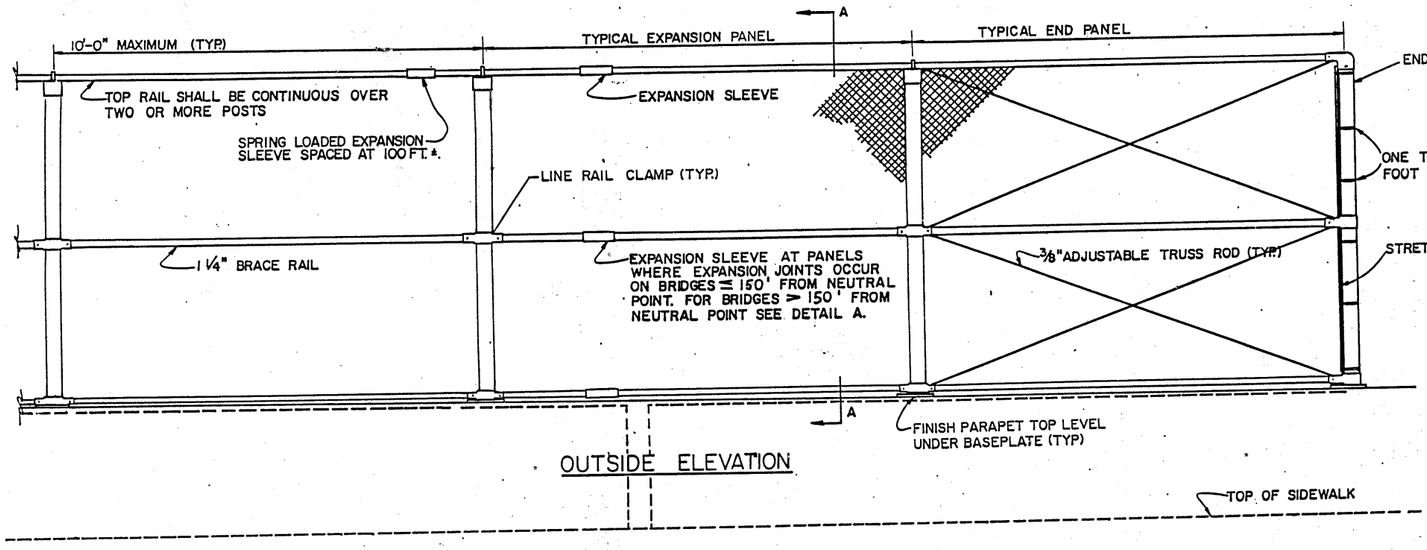
SECTION E-E

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

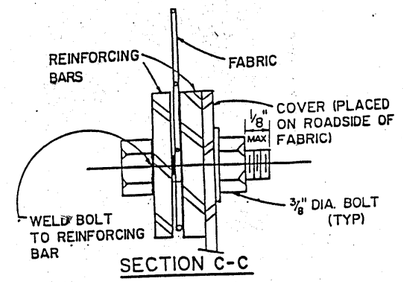
4/5

ITEM SPECIAL LIGHT POLE ANCHOR BOLT EXTENSION
ITEM 625 JUNCTION BOX TYPE II
AS PER PLAN

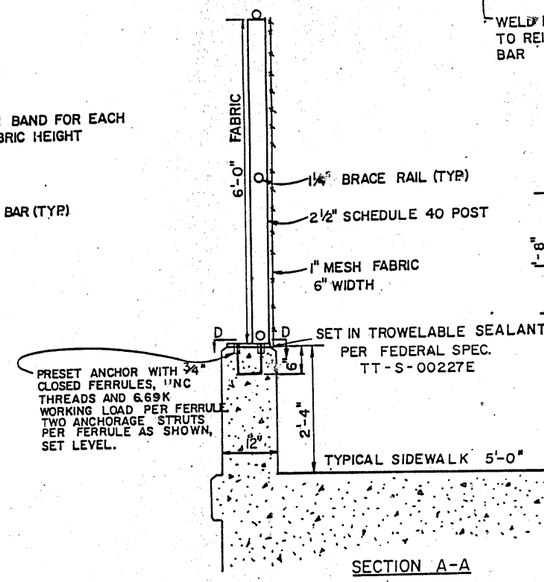
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EEL			J.S.B.	2-28-92	DGR



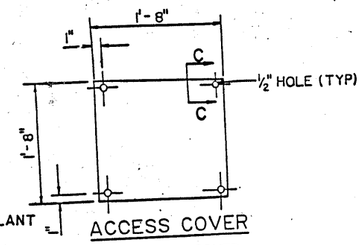
OUTSIDE ELEVATION



SECTION C-C



SECTION A-A



ACCESS COVER

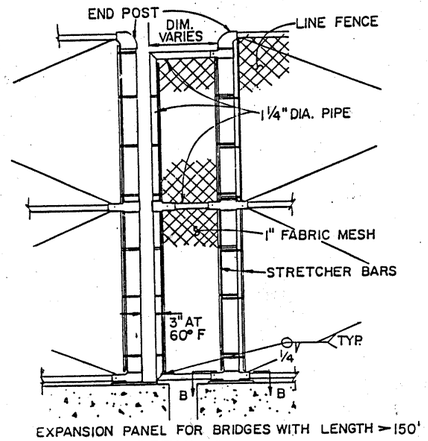
GALVANIZED ACCESS COVER 3/16" THICK AND 20" SQUARE. REQUIRED IF ACCESS HOLE IS LOCATED LESS THAN 20'-0" HORIZONTALLY FROM EDGE OF ROADWAY BELOW.

COVERPLATE DETAIL

ITEM 607-FENCE TYPE CL, TPV WITH 6' FABRIC WIDTH

THIS ITEM INCLUDES THE FURNISHING OF ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS INCLUDING THE PRESET ANCHOR WITH CLOSED FERRULES NECESSARY TO COMPLETE THE FENCING. MATERIALS AND WORKMANSHIP SHALL MEET THE REQUIREMENTS OF ITEM 607 EXCEPT THAT ALUMINUM ALLOY POSTS SHALL NOT BE USED. CHAIN LINK FENCE SHALL CONFORM TO THE CONSTRUCTION AND MATERIALS SPECIFICATION 710.03. ALUMINUM ALLOY FABRIC AASHTO M-181, TYPE III SHALL BE USED. POSTS SHALL BE VERTICAL. BRACE RAIL SHALL BE PARALLEL TO THE GRADE LINE. FENCE POSTS AND RAILS SHALL BE OF NOMINAL INSIDE DIAMETER, STANDARD WEIGHT AND WALL THICKNESS PIPE, SCHEDULE 40 UNLESS OTHERWISE NOTED. SPRING LOADED EXPANSION SLEEVES SHALL BE PROVIDED AT APPROXIMATELY 100 FOOT INTERVALS IN ALL HORIZONTAL RAILS. STRETCHER BARS AND MISCELLANEOUS HARDWARE SHALL BE THAT OF THE CHAIN-LINK FENCE INDUSTRY STANDARD. THE BASE PLATES MAY BE OF ANY COMMERCIALLY WELDABLE STEEL HAVING A YIELD STRENGTH OF NOT LESS THAN 33 KSI. POSTS SHALL HAVE A YIELD STRENGTH OF 30 KSI. TENSION BANDS SHALL BE A MINIMUM OF 12 GAUGE STEEL BY 7/8 INCHES WIDE ASSEMBLED WITH 5/16 INCH DIAMETER BOLTS BY 1 1/4 INCH BOLTS. ALL PARTS SHALL BE STEEL GALVANIZED, CONFOMING TO CMS 711.02, AND ALL GALVANIZING SHALL BE DONE AFTER FABRICATION. FIELD WELDING SHALL NOT BE PERMITTED. PAYMENT SHALL BE MADE UNDER:

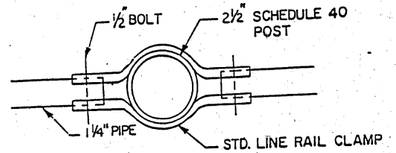
ITEM 607- FENCE TYPE CL, TPV WITH 6' FABRIC WIDTH



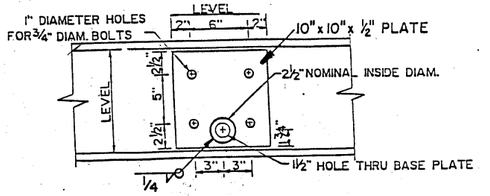
EXPANSION PANEL FOR BRIDGES WITH LENGTH > 150'

DETAIL A

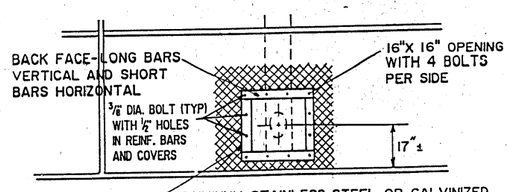
CUTSIDE ELEVATION



SECTION B-B



SECTION D-D



INSIDE ELEVATION

DETAIL AT LIGHT POLE

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 12 BRIDGE DEPARTMENT

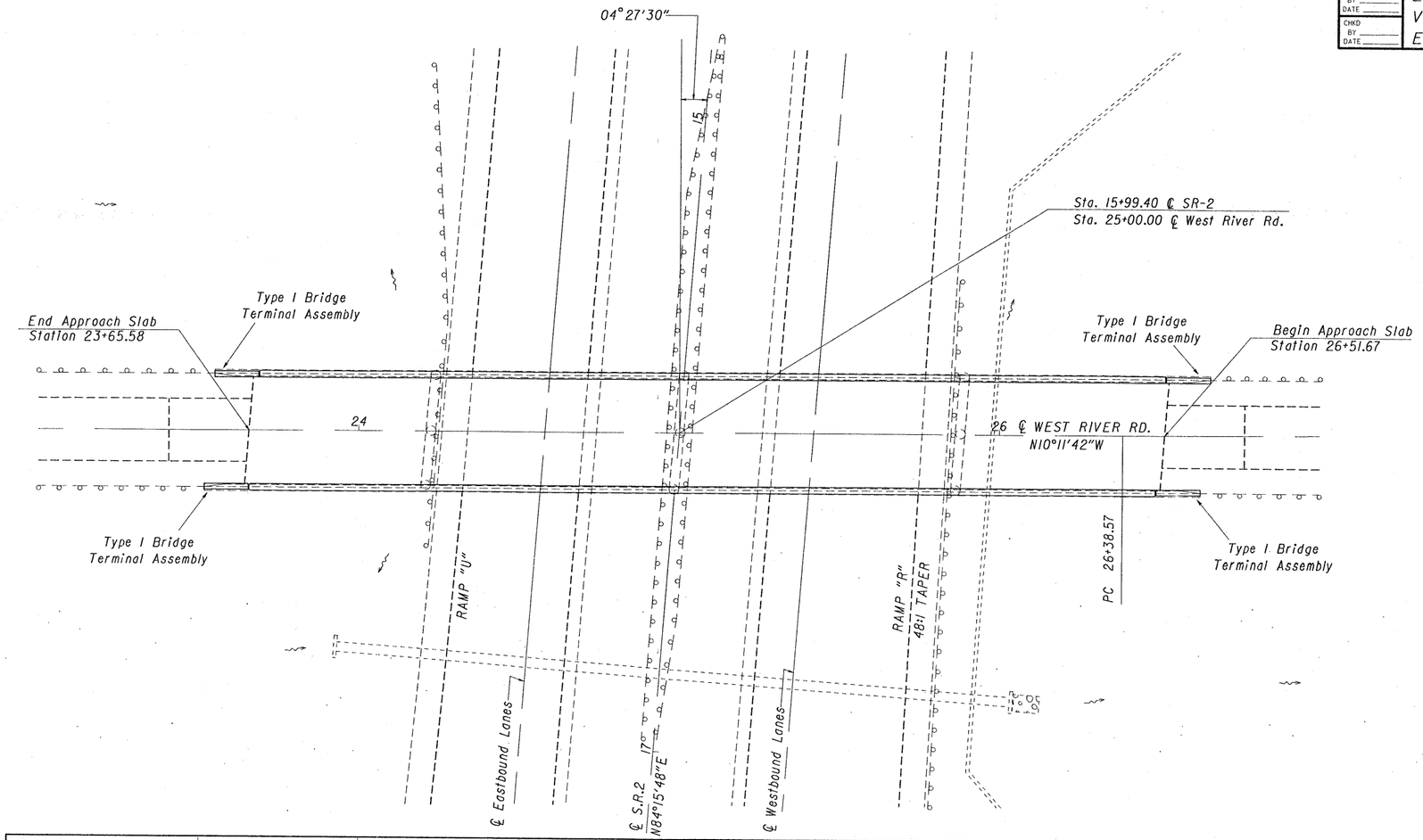
5/5

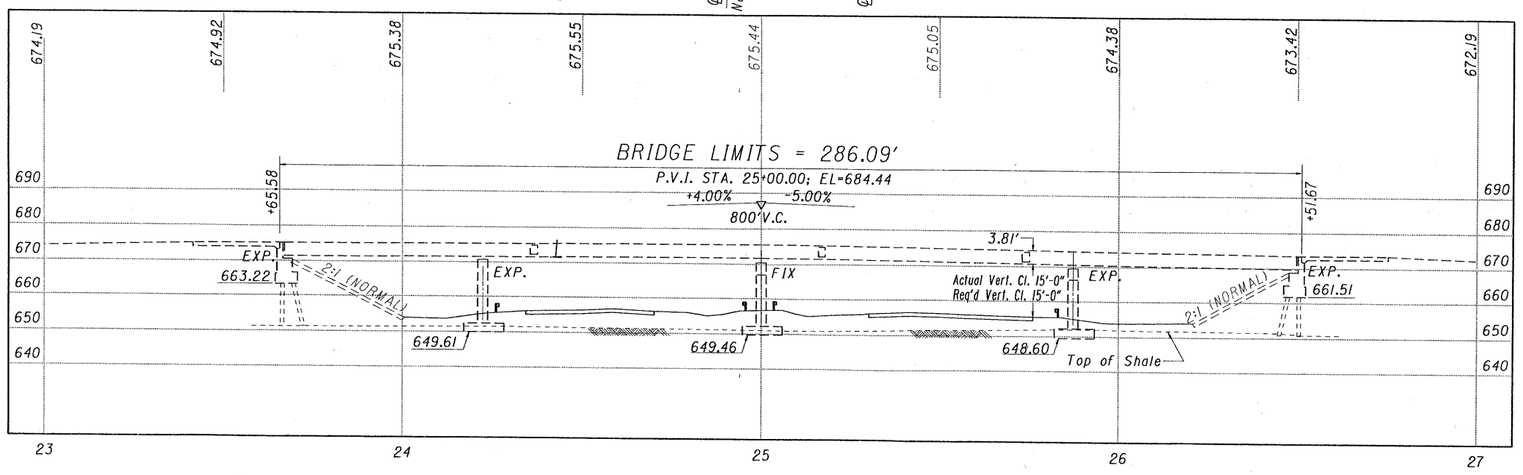
TOP PARAPET VERTICAL (TPV)

FENCE DETAIL

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
B.G.W.	J.P.H.	J.P.H.	D.W.L.		2/91	MAK

CALC BY DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	198 267
CHKD BY DATE			





ELEVATION

WEST RIVER RD. CURVE DATA
P.I. Sta. 27+82.62
Δ = 1°20'40" Rt.
Dc = 0° 28'
L = 288.095'
T = 144.054'
E = 0.845'
R = 12,277.668'

EXISTING STRUCTURE

TYPE: *Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures*
SPAN: *54'-5": 77'-9": 87'-11": 61'-6" % Brgs.*
ROADWAY: *36'-0" f/f parapets*
LOADING: *HS 20-44*
WEARING SURFACE: *2" Asphalt Concrete*
SKEW: *4°-27'-30" L.F.*
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *TANGENT*
SUPERELEVATION: *NONE*

PROPOSED STRUCTURE

TYPE: *Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures*
SPAN: *54'-5": 77'-9": 87'-11": 61'-6" % Brgs.*
ROADWAY: *33'-10" T/T Parapets*
LOADING: *HS 20-44*
WEARING SURFACE: *2¼" Microsilica Concrete*
SKEW: *4°-27'-30" L.F.*
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *TANGENT*
SUPERELEVATION: *NONE*

OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION SECTION

1/7

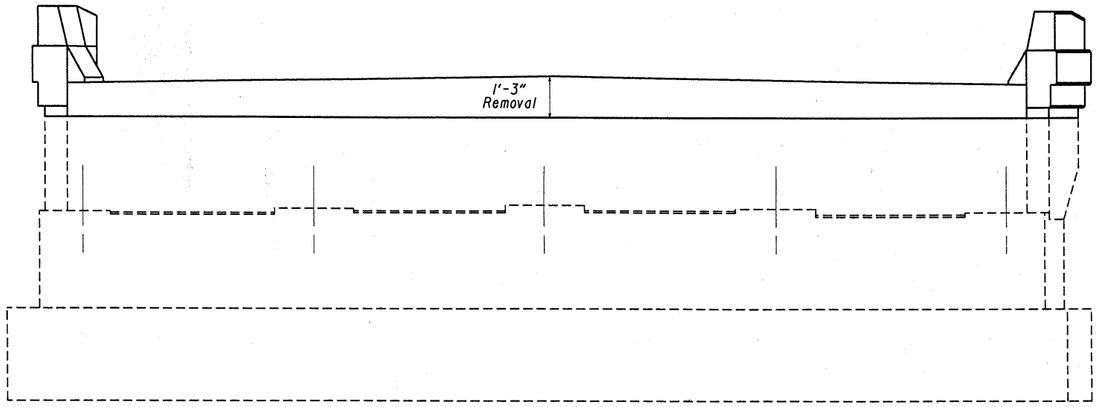
SITE PLAN

BRIDGE NO. LOR-2-0030
UNDER WEST RIVER ROAD

LORAIN COUNTY S.R.-2
STA. 15+99.40

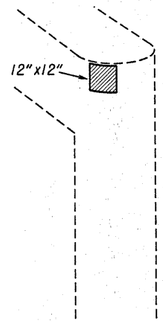
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EAK			J.S.B.	2-28-92	DGR

SITE PLAN

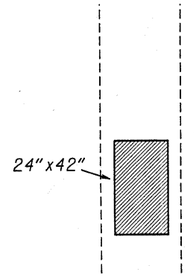


ELEVATION
REAR ABUTMENT

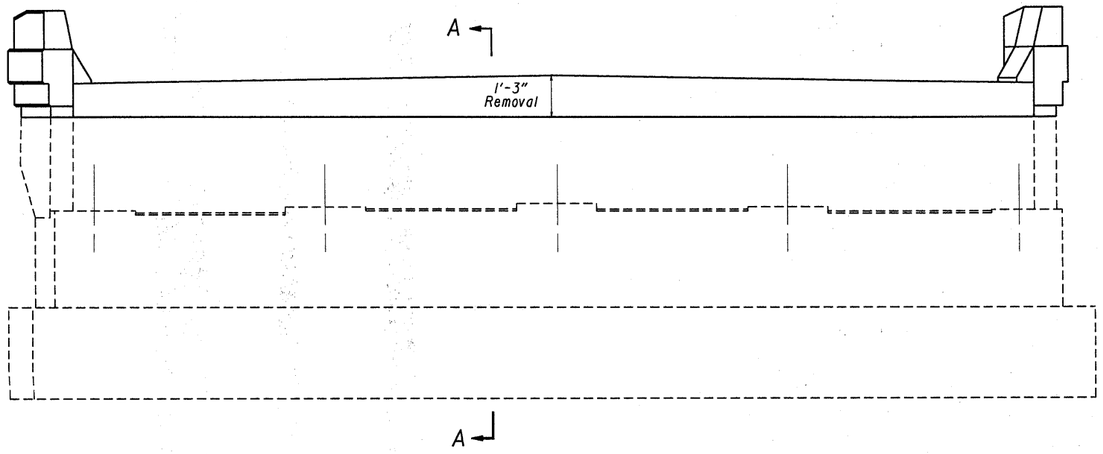
BACKWALL PATCHING AREAS SHOWN.
PAYMENT UNDER ITEM 519 - PATCHING CONCRETE STRUCTURES,
AS PER PLAN.
STRUCTURE LOR-2-0030 0.89 SQ. YD.



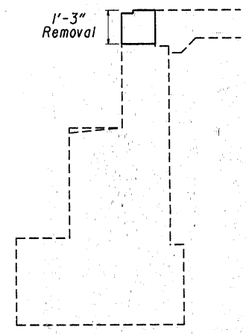
Right Pier-Rear Face



Left Pier-Center Column
Rear Face



ELEVATION
FOREWARD ABUTMENT

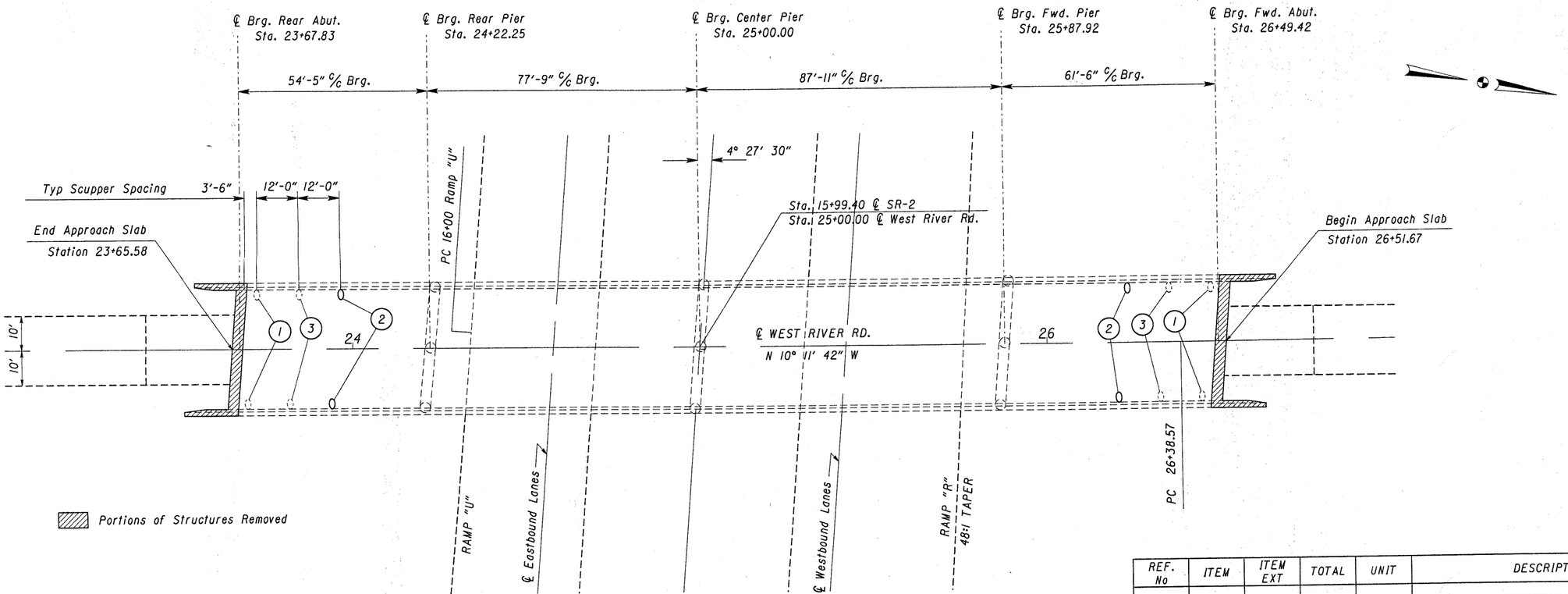


SECTION A-A

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION
2/7

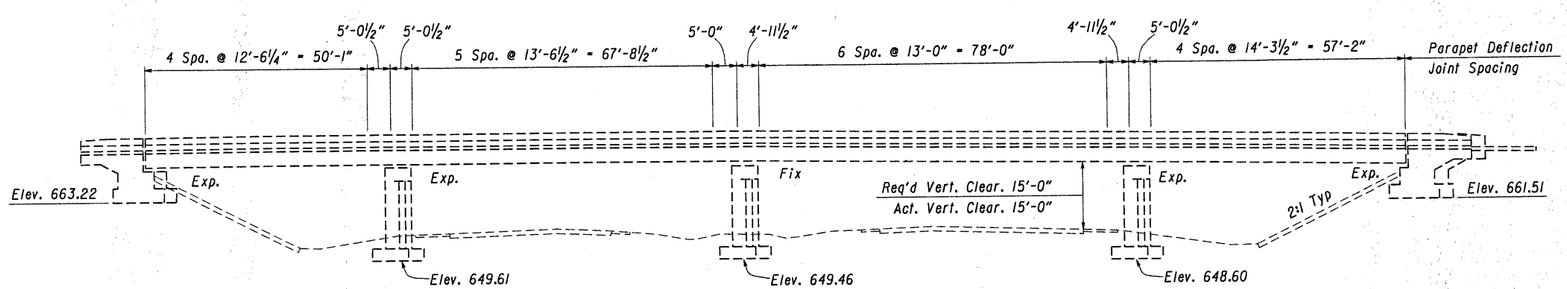
ABUTMENT PATCHING DETAILS
BRIDGE NO. LOR-2-0030
UNDER WEST RIVER ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR		EdL		J.S.B.	2-28-92	DGR



REF. No	ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
1	202		4	EACH	Scupper Removed
2	518		4	EACH	Scuppers, including Supports, as per plan
3	518		4	EACH	Scupper Modification, as per plan

Totals Carried to Bridge Estimated Quantities



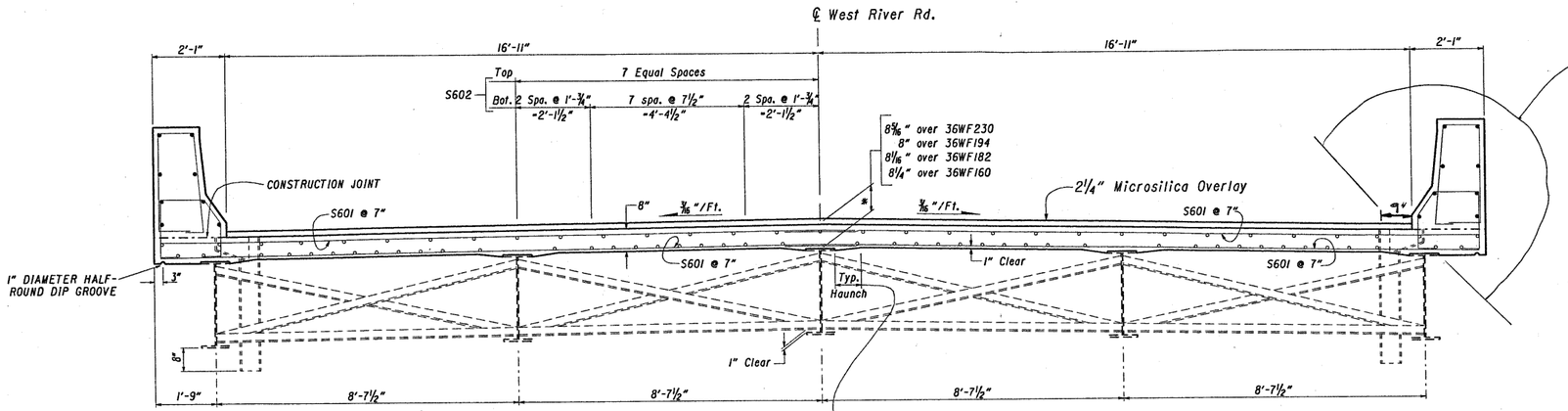
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

3/7

PARAPET DEFLECTION JOINT SCUPPER PLAN
BRIDGE NO. LOR-2-0030
UNDER WEST RIVER ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EH			J.S.B.	2-28-92	DGR

CALC BY		ERI/LOR-2-30.51/0.00	OHIO	201
DATE		VARIOUS SECTIONS	FHWA REGION 5	267
CHKD BY		ERIE & LORAIN COUNTIES		
DATE				



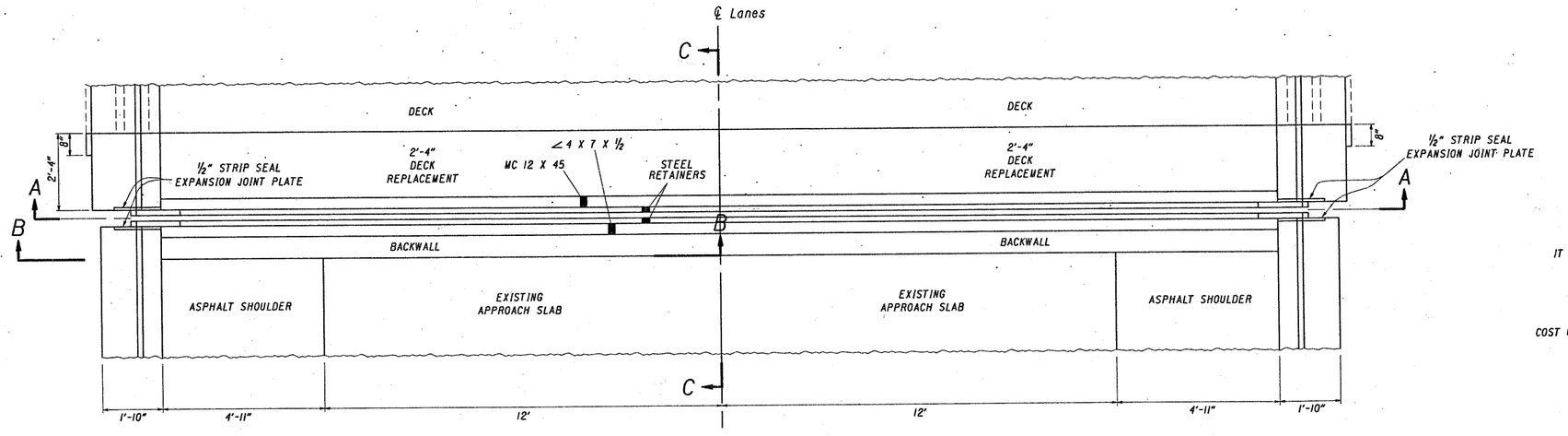
Sealing Concrete Surfaces (Epoxy)

*This is a nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessar because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per sec. 511.18 of the Construction and Material Specifications.

A typical haunch width of 9" shall be used for computing quantity of concrete, however, the haunch width may vary between 6" & 12" provided that the slope be not more than 1:4 for a haunch less than 9" in width.

SECTION A-A

BEAM AREA	% INCREASE
13,436 SQ. FT.	15.9



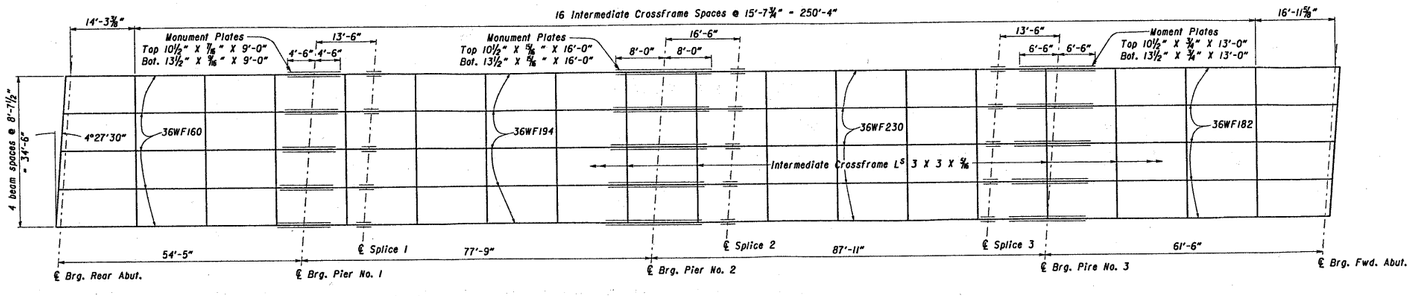
PLAN

IT IS THE FABRICATORS RESPONSIBILITY TO DETERMINE THE PLATE SIZE FOR THE STRIP SEAL EXPANSION JOINT PLATES AT THE DECK AND WINGWALL PARAPETS.

BRIDGE	SKEW	CURVE
LOR-2-0030	4° 27' 30" L.F.	TAN

COST OF PLATES SHALL BE INCLUDED IN ITEM 516 STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

FOR ADDITIONAL DETAILS SEE STANDARD DRAWING EXJ-4-87.



FRAMING PLAN

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

1/1

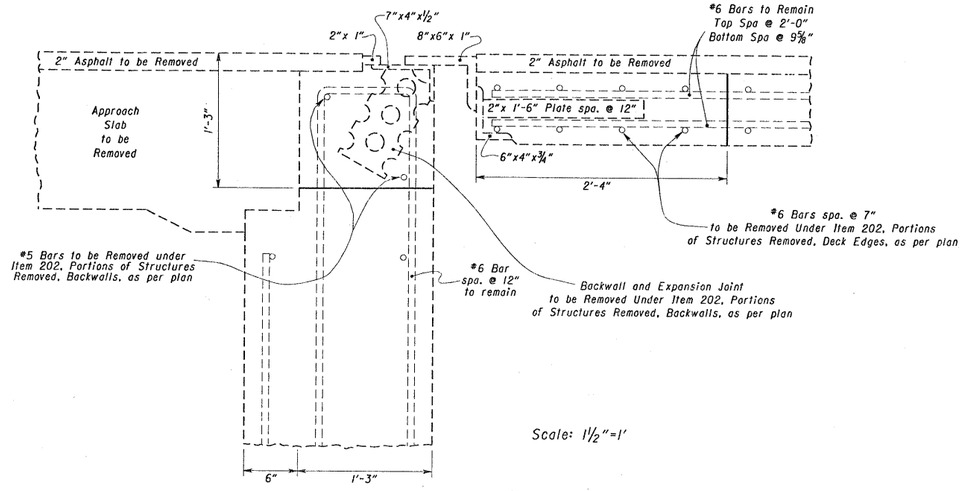
SUPERSTRUCTURE DETAILS FRAMING PLAN

BRIDGE NO. LOR-2-0030
UNDER WEST RIVER ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EJL			J.S.B.	2-28-92	DGR

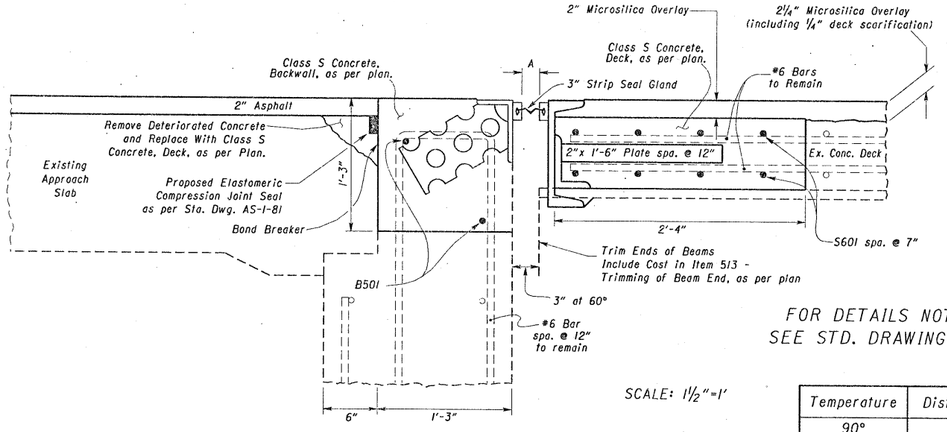
STRUCTURE LOR-2-0030

CALC BY	ERI/LOR-2-30.51/0.00	OHIO	202
DATE	VARIOUS SECTIONS	FHWA REGION 5	267
CHKD BY	ERIE & LORAIN COUNTIES		
DATE			



Scale: 1½"=1'

EXISTING EXPANSION LOINT
SECTION C-C

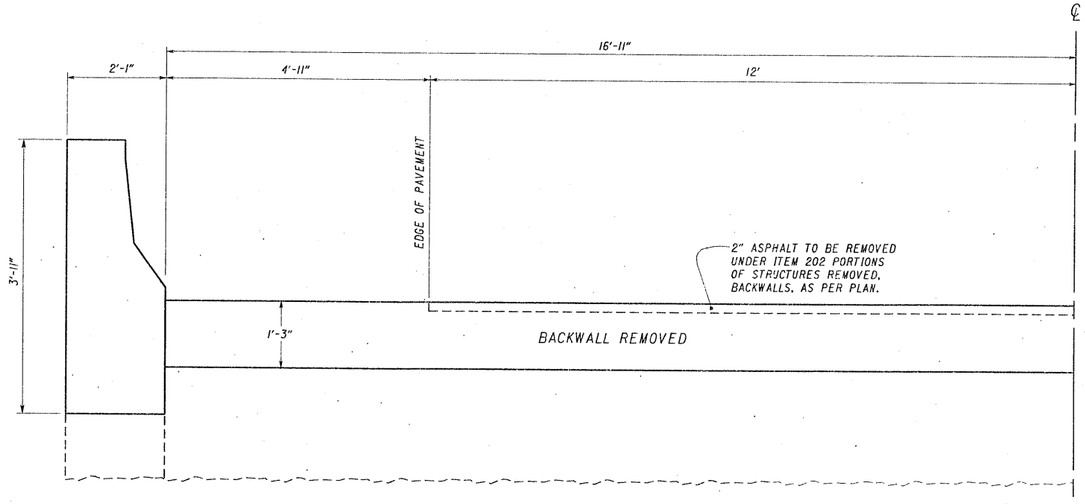


SCALE: 1½"=1'

FOR DETAILS NOT SHOWN
SEE STD. DRAWING EXJ-4-87

PROPOSED EXPANSION JOINT
SECTION C-C

Temperature	Distance A
90°	½"
80°	½"
70°	½"
60°	1 9/16"
50°	1 11/16"
40°	1 13/16"
30°	1 15/16"



SECTION B-B

SCALE: ¾"=1'

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

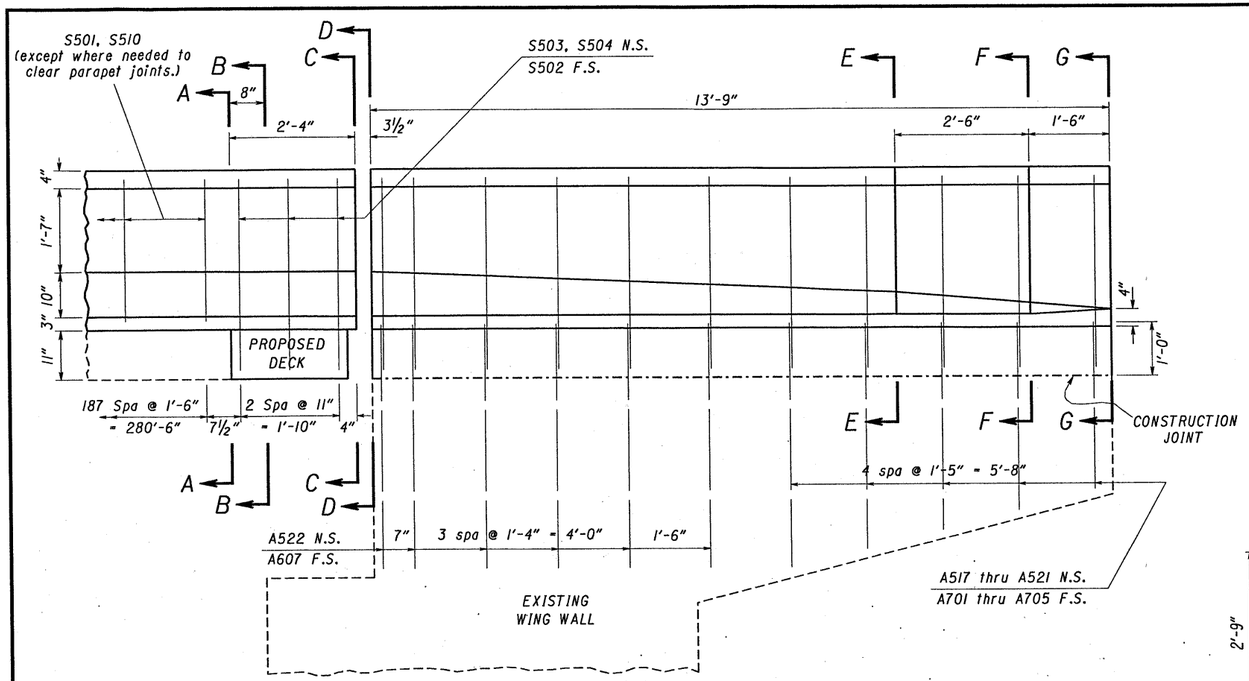
5/7

EXPANSION JOINT DETAILS
BACKWALL DETAILS

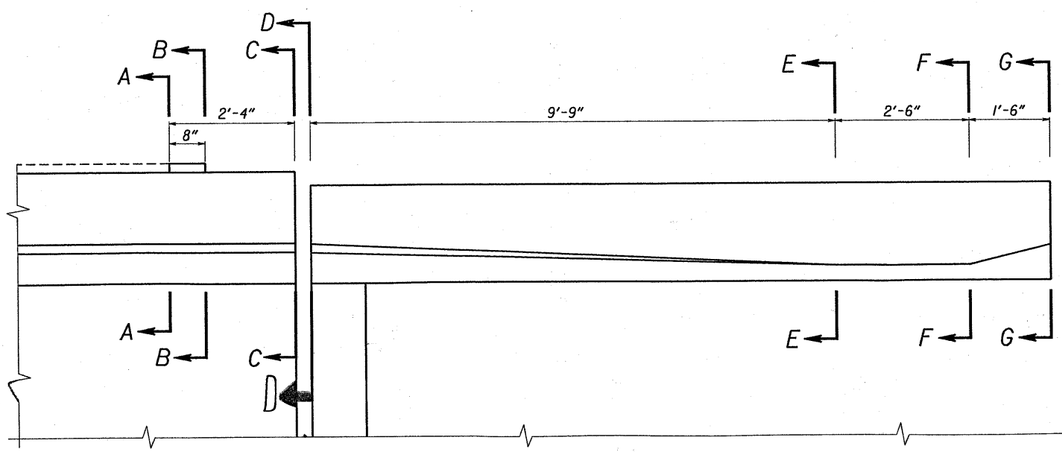
BRIDGE NO. LOR-2-0030
UNDER WEST RIVER ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	ELA			J.S.B.	2-28-92	DGR

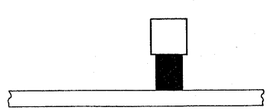
CALC BY DATE	ERI/LOR-2-30.51/0.00	OHIO	203
CHKD BY DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



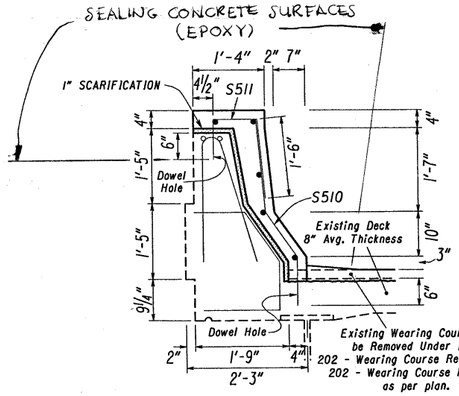
ELEVATION VIEW



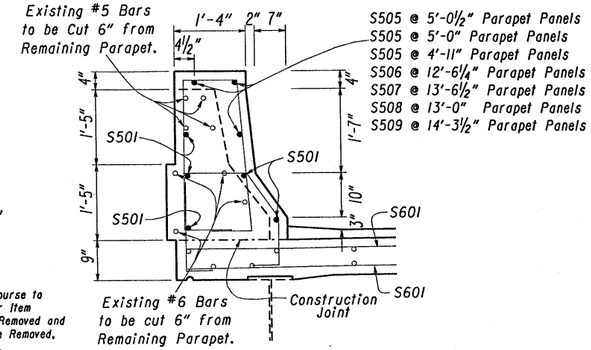
PLAN VIEW



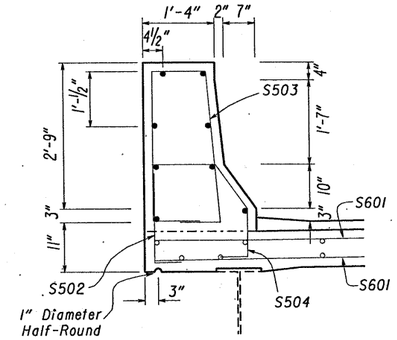
For Guardrail See Standard Drawing GR-3.1 5-6-91 and Roadway Plans For Pavement.



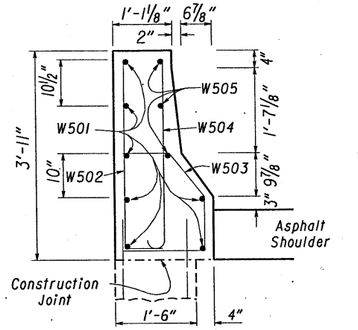
SECTION A-A



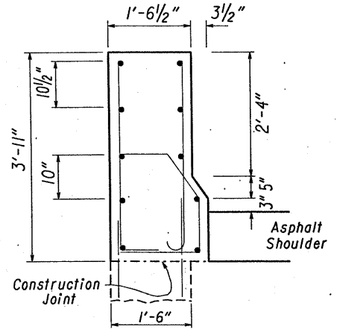
SECTION B-B



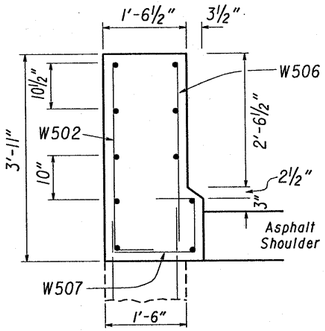
SECTION C-C



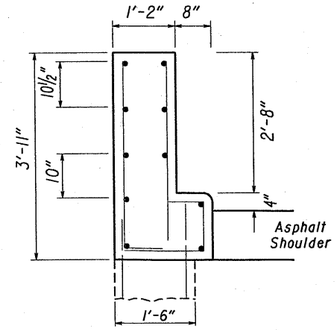
SECTION D-D



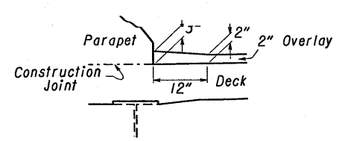
SECTION E-E



SECTION F-F



SECTION G-G



TYPICAL OVERLAY at Curb Face

DEPARTMENT OF TRANSPORTATION
PLAN PREPARATION

WINGWALL DETAILS

BRIDGE NO. LOR-2-0030
UNDER WEST RIVER ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EA			J.S.B.	2-28-92	DGR

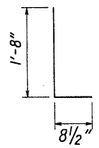
STRUCTURE LOR-2-0030

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	204
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

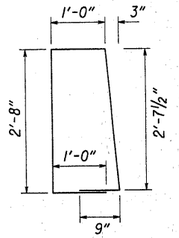
BRIDGE ESTIMATED QUANTITIES

SHEET NUMBER 2	3	7	ITEM	ITEM EXT	PLAN TOTAL	UNIT	DESCRIPTION
							STRUCTURE LOR-2-0030
			202	11301	10	CU. YD.	PORTIONS OF STRUCTURES REMOVED, WINGWALLS, AS PER PLAN.
			202	11301	4	CU. YD.	PORTIONS OF STRUCTURES REMOVED, BACKWALLS, AS PER PLAN.
			202	11301	5	CU. YD.	PORTIONS OF STRUCTURES REMOVED, DECK EDGES, AS PER PLAN.
			202	11301	1	CU. YD.	PORTIONS OF STRUCTURES REMOVED, PARAPETS, AS PER PLAN.
			202	23500	1097	SQ. YD.	WEARING COURSE REMOVED
			202	23501	1097	SQ. YD.	WEARING COURSE REMOVED, AS PER PLAN
	4		202	98100	4	EACH	SCUPPER REMOVED
		6219	509	15800	6219	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60
			510	11101	752	EACH	DOWEL HOLES, AS PER PLAN.
			511	34450	1.8	CU. YD.	CLASS S CONCRETE PARAPET REPLACEMENT, AS PER PLAN
			511	34450	13.3	CU. YD.	CLASS S CONCRETE WINGWALL, AS PER PLAN
			511	34450	4.3	CU. YD.	CLASS S CONCRETE BACKWALL, AS PER PLAN
			511	34450	4.9	CU. YD.	CLASS S CONCRETE DECK, AS PER PLAN
			511	34450	43.8	CU. YD.	CLASS S CONCRETE PARAPETS, AS PER PLAN
			SPECIAL	51267502	527	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
			513	21201	LUMP		TRIMMING OF BEAM END, AS PER PLAN
			516	11201	67.88	LIN. FT.	STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN
			SPECIAL	51400050	15584	SQ. FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)
			SPECIAL	51400056	15584	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
			SPECIAL	51400060	15584	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
			SPECIAL	51400066	15584	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
			SPECIAL	51400504	100	MAN HR.	GRINDING FINS, TEARS AND SLIVERS
			SPECIAL	51400508	3313	LIN. FT.	GRINDING OF FLANGE EDGES
			SPECIAL	51426010	LUMP		NON-HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
			SPECIAL	51426020	LUMP		HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
	4		518	12201	4	EACH	SCUPPER, INCLUDING SUPPORTS, AS PER PLAN
	4		518	12801	4	EACH	SCUPPER MODIFICATION, AS PER PLAN
0.89			519	11101	0.89	SQ. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN.
			SPECIAL	51922006	1076	SQ. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (2¼" THICK) (SEE PROPOSAL NOTE).
			SPECIAL	51922100	11	CU. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) (SEE PROPOSAL NOTE)
			SPECIAL	51922300	LUMP		TEST SLAB (SEE PROPOSAL NOTE)
			607	60720100	572	LIN. FT.	FENCE, TYPE CL, TPV WITH 6' FABRIC WIDTH

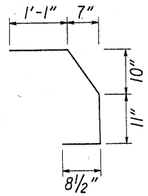
BAR SIZE : THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE : A506 IS A NO. 5 SIZE BAR AND P1101 IS A NO. 11 SIZE BAR.



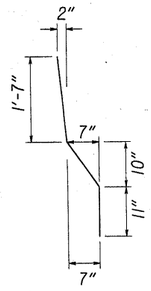
TYPE I



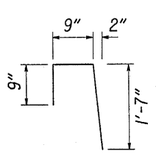
TYPE II



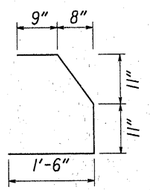
TYPE III



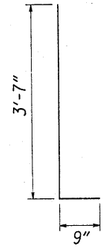
TYPE IV



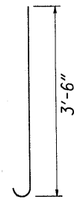
TYPE V



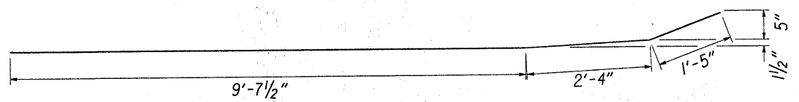
TYPE VI



TYPE VII



TYPE VIII



TYPE IX

ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60

WINGWALLS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
W501	28	13'-4½"	Str.				391
W502	44	2'-2½"	VII				101
W503	32	4'-½"	VI				135
W504	32	3'-11½"	VIII				132
W505	12	13'-4½"	IX				167
W506	12	3'-7"	Str.				45
W507	12	2'-10½"	X				36
							1007

PARAPET FACING

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S505	36	4'-8"	Str.				175
S506	24	12'-2"	Str.				305
S507	30	13'-2"	Str.				412
S508	36	12'-8"	Str.				476
S509	24	14'-0"	Str.				350
S510	376	3'-5"	IV				1340
S511	376	2'-9"	V				1078
							4136

PARAPET REPLACEMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S501	20	2'-0"	Str.				42
S502	12	2'-3"	I				28
S503	12	7'-6½"	II				94
S504	12	2'-9"	III				34
							198

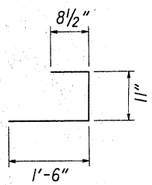
DECK

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S601	24	19'-10½"	Str.				716
							716

BACKWALL

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
B501	8	19'-5"	Str.				162
							162

GRAND TOTAL 6219



TYPE X

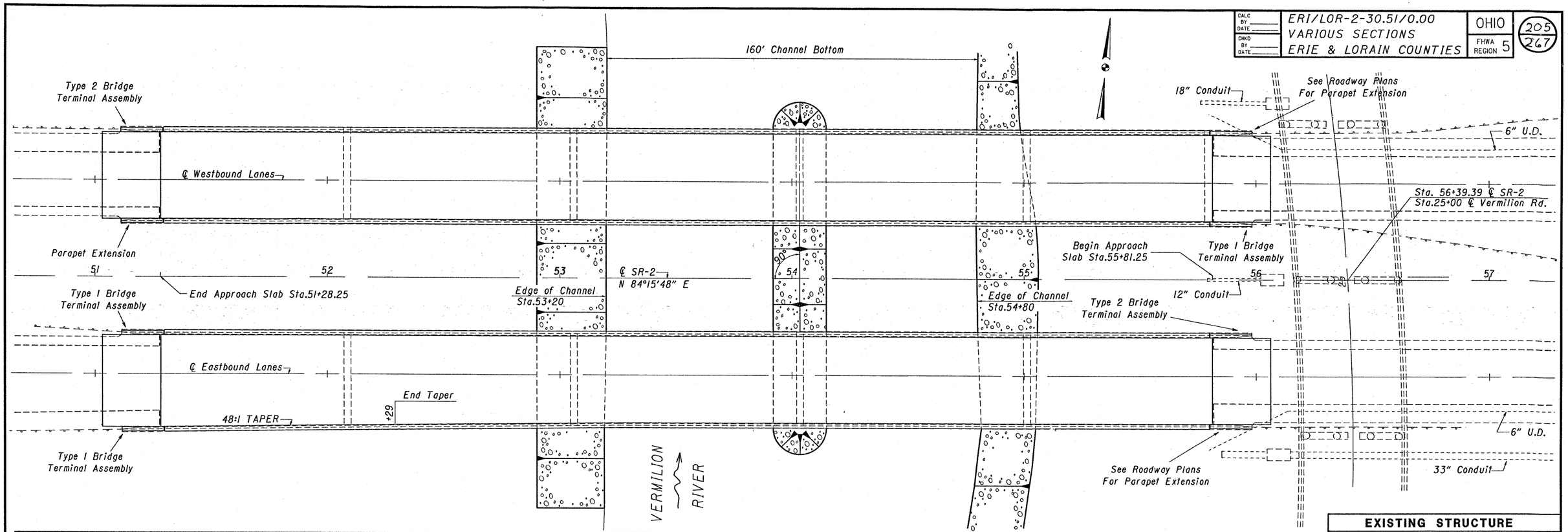
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

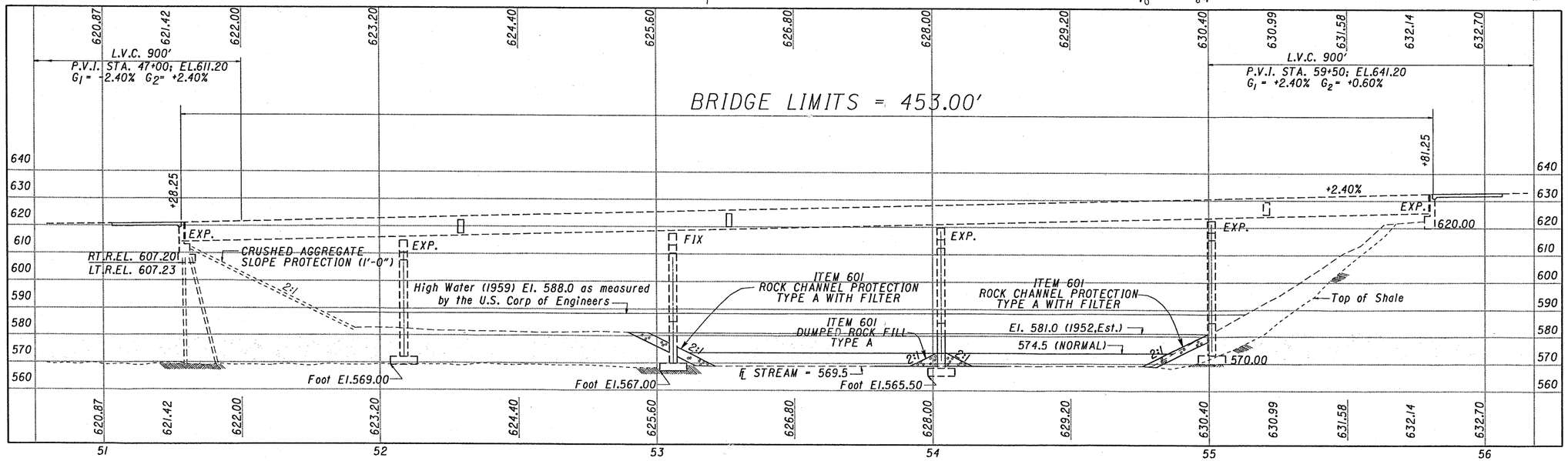
7/7

ESTIMATED QUANTITIES
REINFORCING STEEL
BRIDGE NO. LOR-2-0030
UNDER WEST RIVER ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EAL			J.S.B.	2-28-92	DGR

CALC BY DATE	ERI/LOR-2-30.51/0.00	OHIO	205
CHKD BY DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267





PROFILE ALONG ℄ EASTBOUND LANES

EXISTING STRUCTURE

TYPE: *Continuous Steel Girder Bridge With Reinforced Conc. Deck & Substructures*
SPAN: *78'-0": 97'-6": 97'-6": 97'-6": 78'-0"* ℅ Brgs.
ROADWAY: *40'-0" f/f parapets Lt.Br.,Variable Rt. Br.*
LOADING: *HS 20-44*
WEARING SURFACE: *2" Asphalt Concrete*
SKEW: *None*
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *Tangent*
SUPERELEVATION: *None*

PROPOSED STRUCTURE

TYPE: *Continuous Steel Girder Bridge With Reinforced Conc. Deck & Substructures*
SPAN: *78'-0": 97'-6": 97'-6": 97'-6": 78'-0"* ℅ Brgs.
ROADWAY: *37'-10" T/T Parapet Lt.Br.,Variable Rt. Br.*
LOADING: *HS 20-44*
WEARING SURFACE: *2¼" Microsilica Concrete*
SKEW: *None*
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *Tangent*
SUPERELEVATION: *None*

OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION SECTION

1/12

SITE PLAN

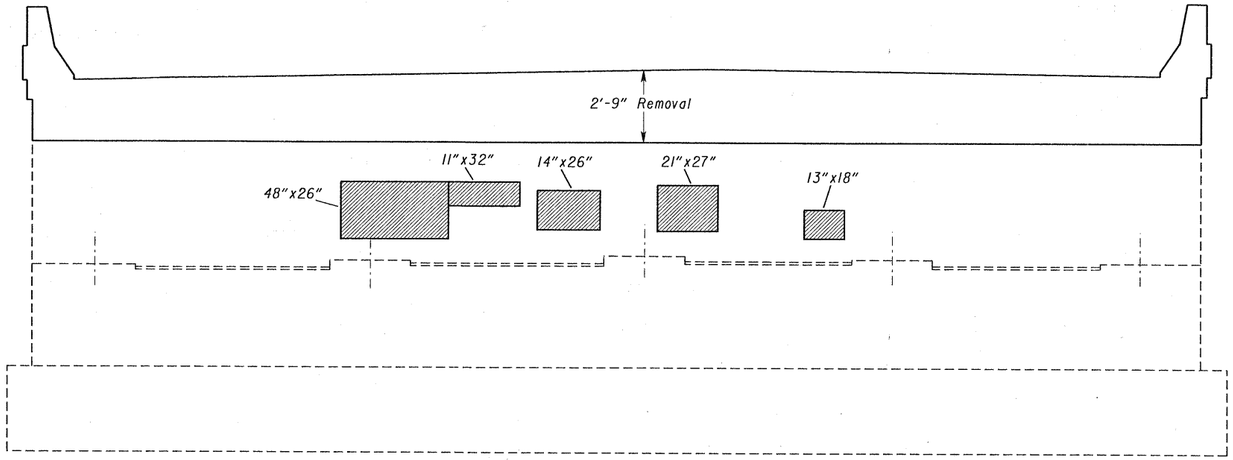
BRIDGE NO. LOR-2-0098 L&R
OVER VERMILION RIVER

LORAIN COUNTY — S.R.-2
STA. 51+28.25 — STA. 55+81.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EGL			J.S.B.	2-28-92	DGR

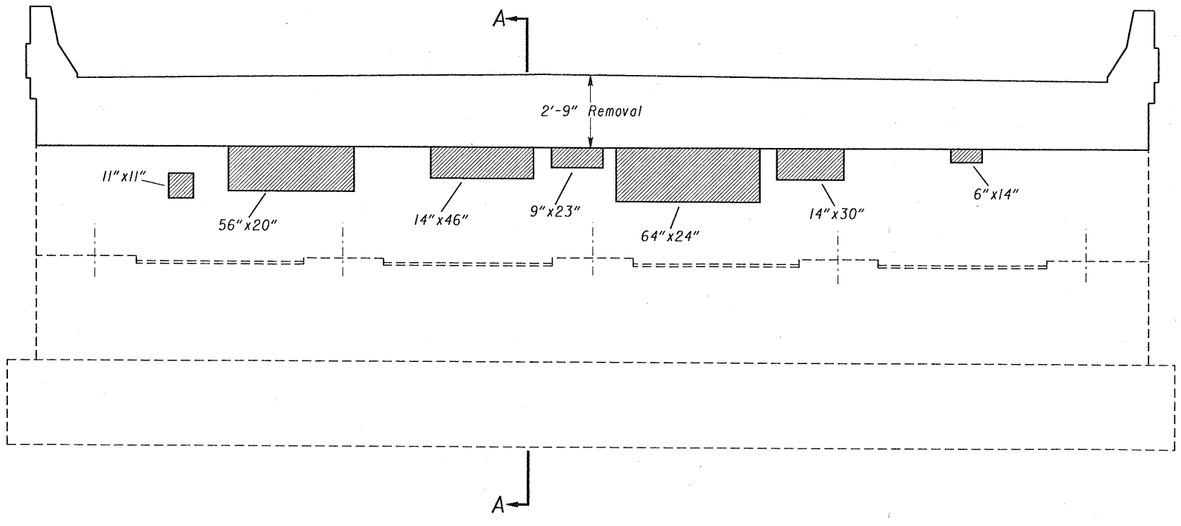
SITE PLAN

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	206
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

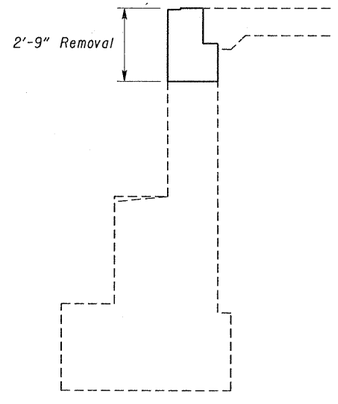


ELEVATION
RIGHT REAR ABUTMENT

BACKWALL PATCHING AREAS SHOWN.
PAYMENT UNDER ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN.
STRUCTURE LOR-2-0098 L.&R. 5.75 SQ. YD.



ELEVATION
LEFT REAR ABUTMENT



SECTION A-A

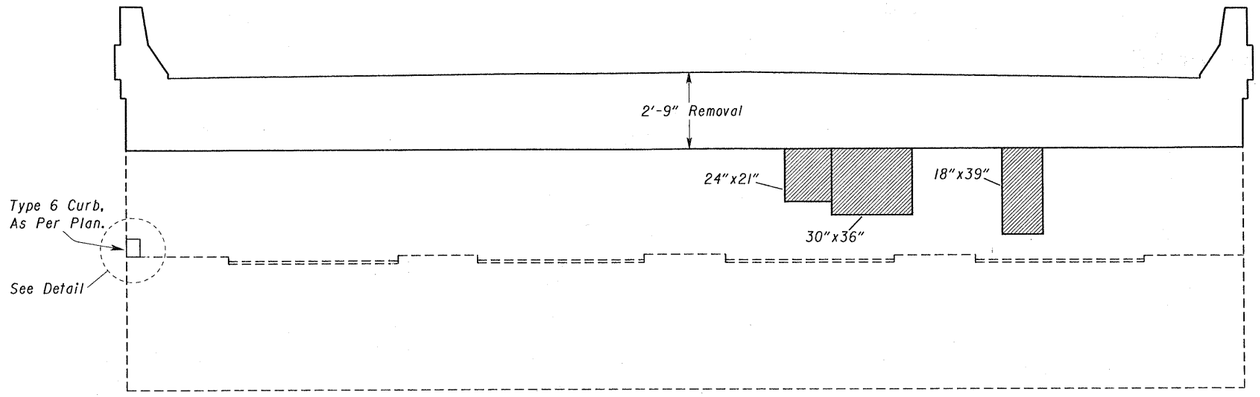
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

2/12

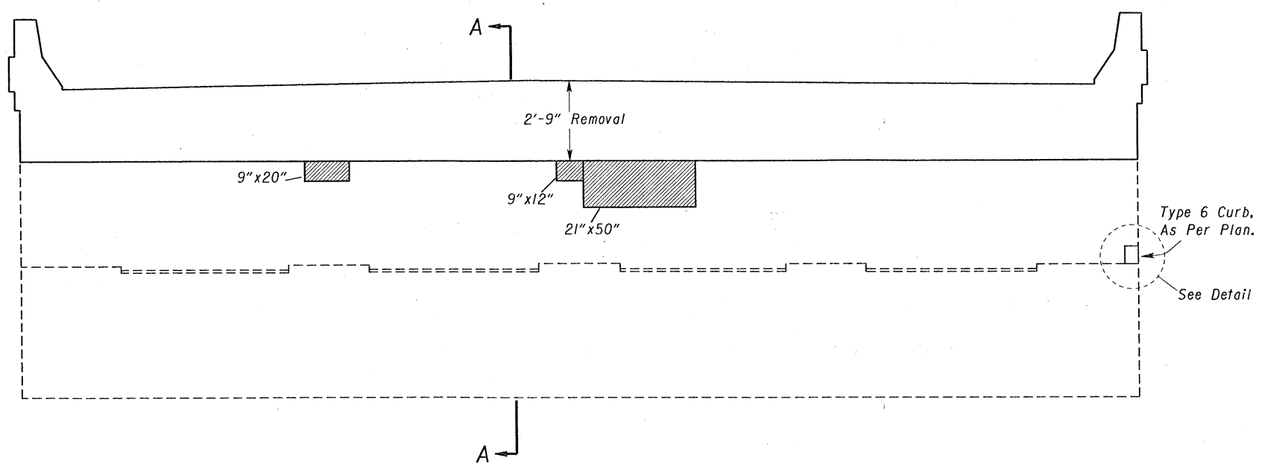
ABUTMENT PATCHING DETAILS

BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR		EH		J.S.B.	2-28-92	DGR



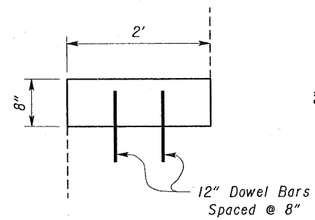
ELEVATION
FOREWARD ABUTMENT LEFT BRIDGE



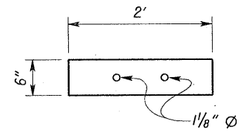
ELEVATION
FOREWARD ABUTMENT RIGHT BRIDGE

BACKWALL PATCHING AREAS SHOWN.
PAYMENT UNDER ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN.
STRUCTURE LOR-2-0098 L.&R. 2.80 SQ. YD.

ITEM 609 - CURB, TYPE 6, AS PER PLAN



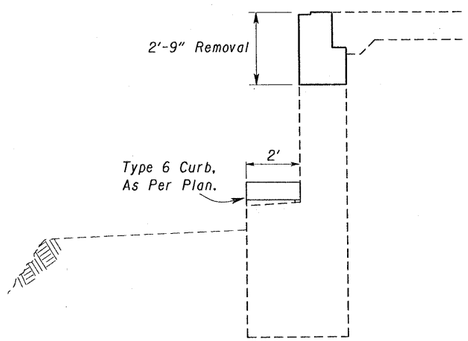
ELEVATION



PLAN

ITEM 609 - CURB, TYPE 6, AS PER PLAN
A TOTAL OF 4 LIN. FT. CARRIED TO GENERAL SUMMARY PAGE 12 OF 12.

ITEM 510 - DOWEL HOLES, AS PER PLAN
A TOTAL OF 4 CARRIED TO GENERAL SUMMARY PAGE 12 OF 12.



SECTION A-A

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

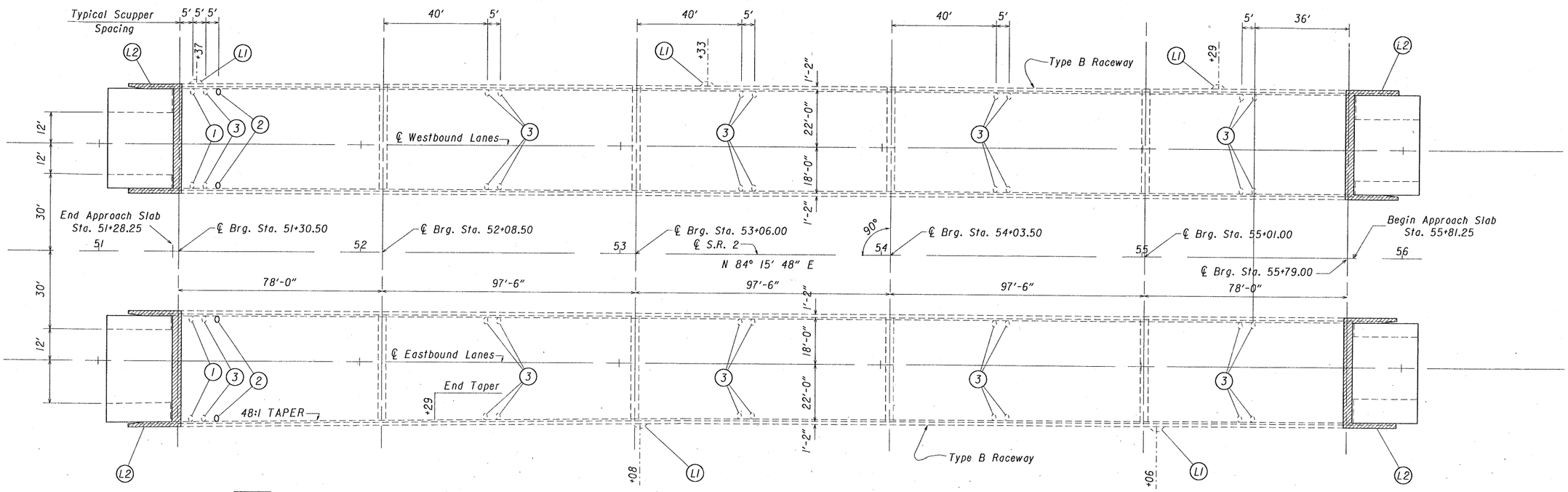
3/12

ABUTMENT PATCHING DETAILS

BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR		EAF		J.S.B.	2-28-92	DGR

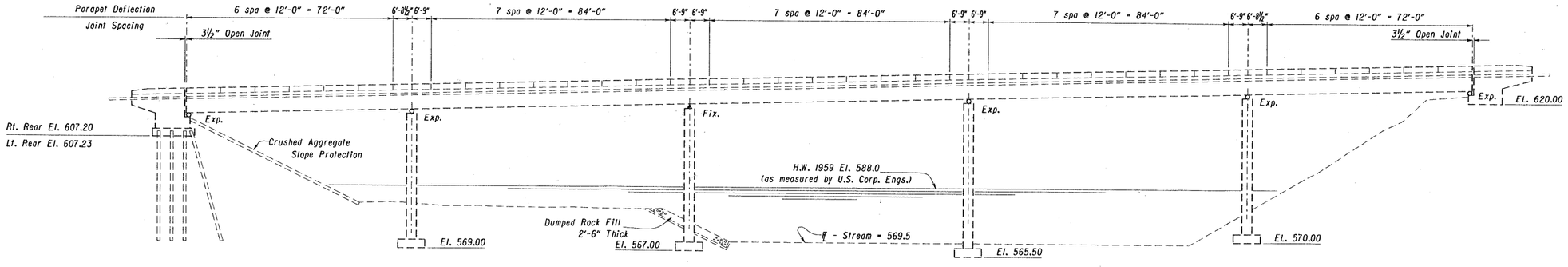
CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	208
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



Portions of Structures Removed

REF. No	ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
1	202	98100	4	EACH	Scupper Removed
2	518	12201	4	EACH	Scuppers, including Supports, as per plan
3	518	12801	36	EACH	Scupper Modification, as per plan
L1	SPECIAL	10670	20	EACH	Light Pole Anchor Bolt EXTENSION
L2	625	25401	80	Lin. Ft.	Conduit 2 inch 713.04, as per plan
L1	625	29901	5	EACH	Junction Box, as per plan

Totals Carried to Bridge Estimated Quantities



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

4/12

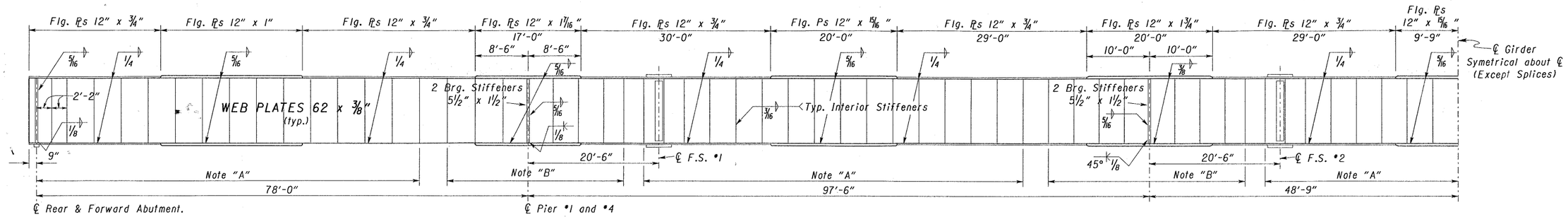
PARAPET DEFLECTION JOINT SCUPPER PLAN

BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EA			J.S.B.	2-28-92	DGR

STRUCTURE LOR-2-0098 L.&R.

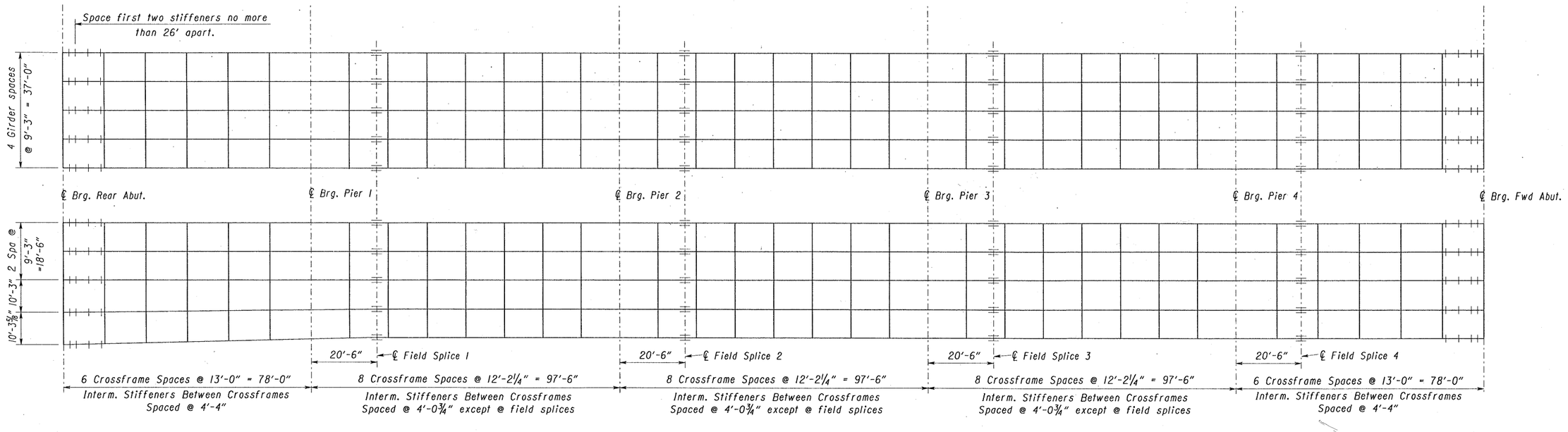
CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	209
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



Note "A" : Stiffeners shall have contact bearing at top and 1/8" maximum clearance at bottom.
Note "B" : Stiffeners shall have contact bearing at bottom and 1/8" maximum clearance at top.

GIRDER ELEVATION

BEAM AREA LEFT	% INCREASE LEFT	BEAM AREA RIGHT	% INCREASE RIGHT
35,163 SQ. FT.	13.7	35,163 SQ. FT.	13.7



FRAMING PLAN

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

5/12

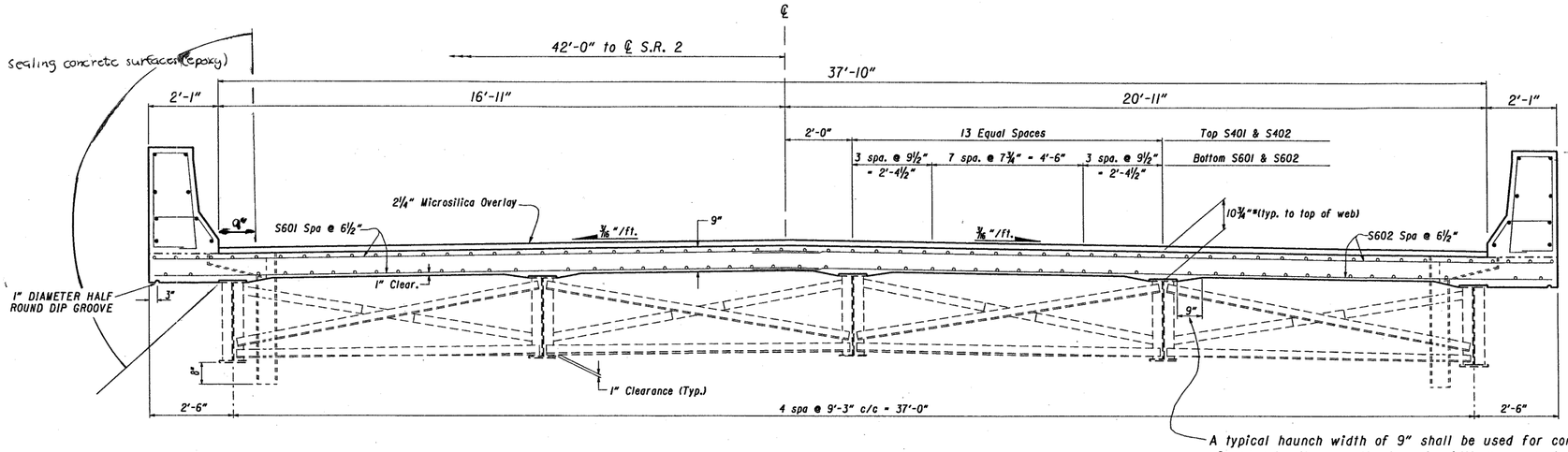
FRAMING PLAN

BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR		Edt		J.S.B.	2-28-92	DGR

STRUCTURE LOR-2-0098 L.&R.

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	210
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

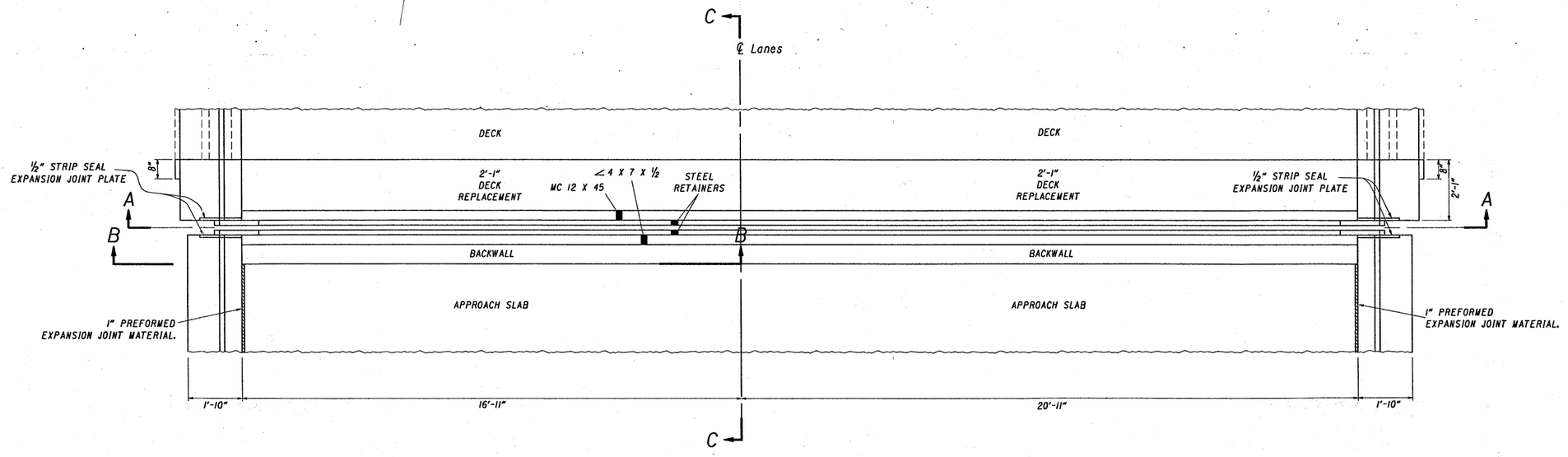


SECTION A-A

TRANSVERSE SECTION, LEFT BRIDGE

* This is a nominal Dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deductions shall be made for the volume of encased steel plates as per Section 511.18 of the Construction and Material Specifications.

A typical haunch width of 9" shall be used for computing quantity of concrete. However the haunch width may vary between 6" & 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.



PLAN

LEFT BRIDGE

IT IS THE FABRICATORS RESPONSIBILITY TO DETERMINE THE PLATE SIZE FOR THE STRIP SEAL EXPANSION JOINT PLATES AT THE DECK AND WINGWALL PARAPETS.

BRIDGE	SKEW	CURVE
LOR-2-0098	0° 0' 0"	TAN

COST OF PLATES SHALL BE INCLUDED IN ITEM 516 STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

FOR ADDITIONAL DETAILS SEE STANDARD DRAWING EXJ-4-87.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

6/12

SUPERSTRUCTURE DETAILS

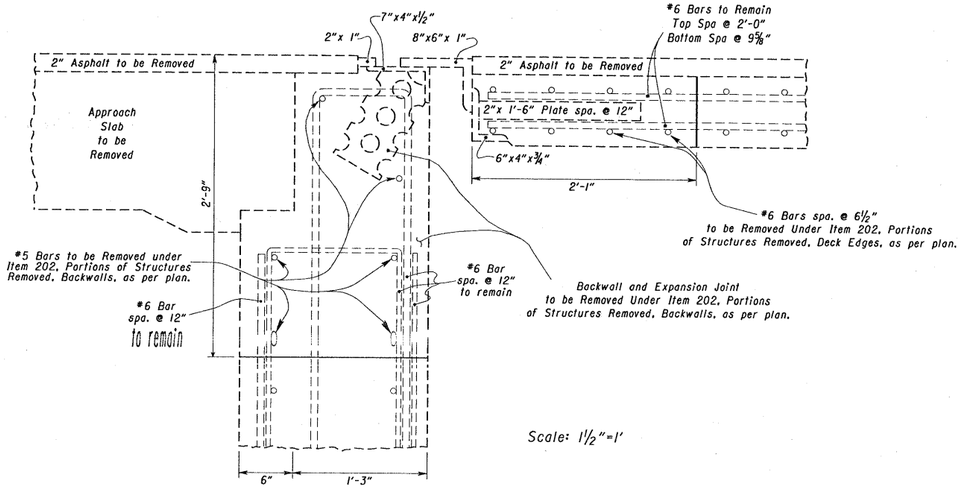
BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EAL			J.S.B.	2-28-92	DGR

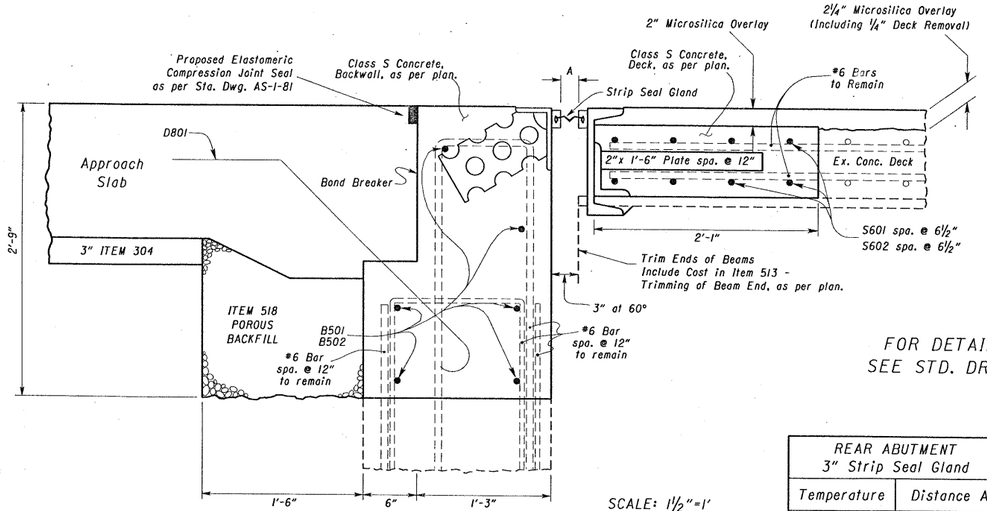
Scale: ½"=1'

STRUCTURE LOR-2-0098 L.&R.

CALC BY DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	211 267
CHKD BY DATE			



EXISTING EXPANSION LOINT
SECTION C-C

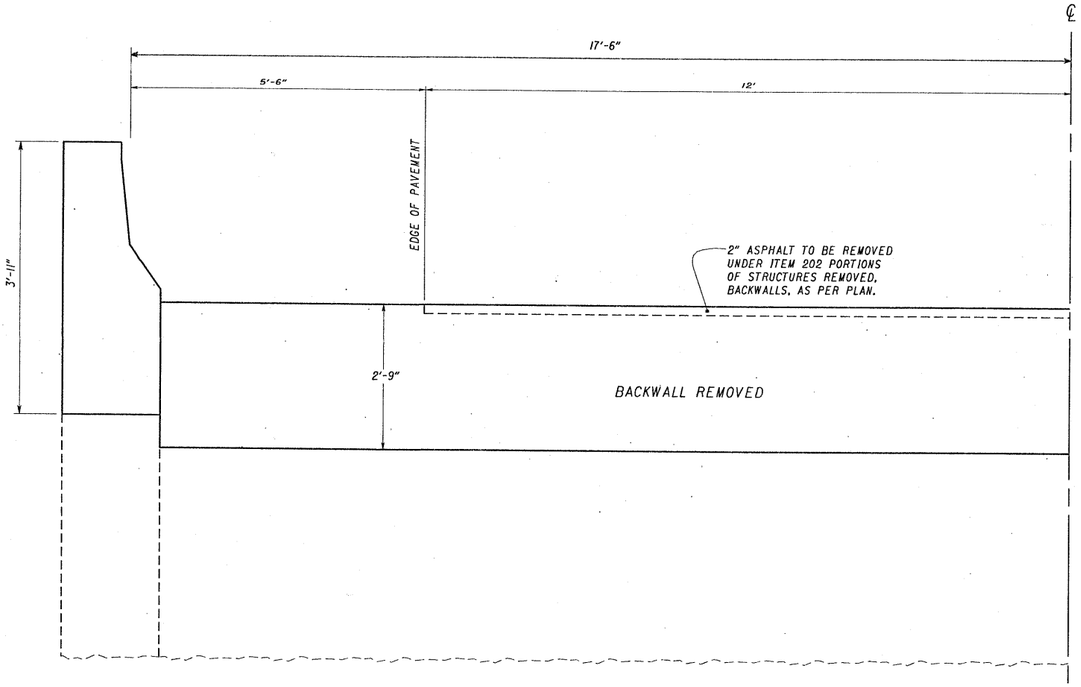


SCALE: 1½"=1'

PROPOSED EXPANSION JOINT
SECTION C-C

FOR DETAILS NOT SHOWN
SEE STD. DRAWING EXJ-4-87

REAR ABUTMENT 3" Strip Seal Gland		FOREWARD ABUTMENT 4" Strip Seal Gland	
Temperature	Distance A	Temperature	Distance A
90°	1½"	90°	1½"
80°	1½"	80°	1½"
70°	1½"	70°	1 11/16"
60°	1 17/32"	60°	1 23/32"
50°	1 11/16"	50°	2⅛"
40°	1 13/16"	40°	2 11/32"
30°	1 15/16"	30°	2 9/16"



SECTION B-B
LEFT BRIDGE SHOWN

SCALE: ¾"=1'

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

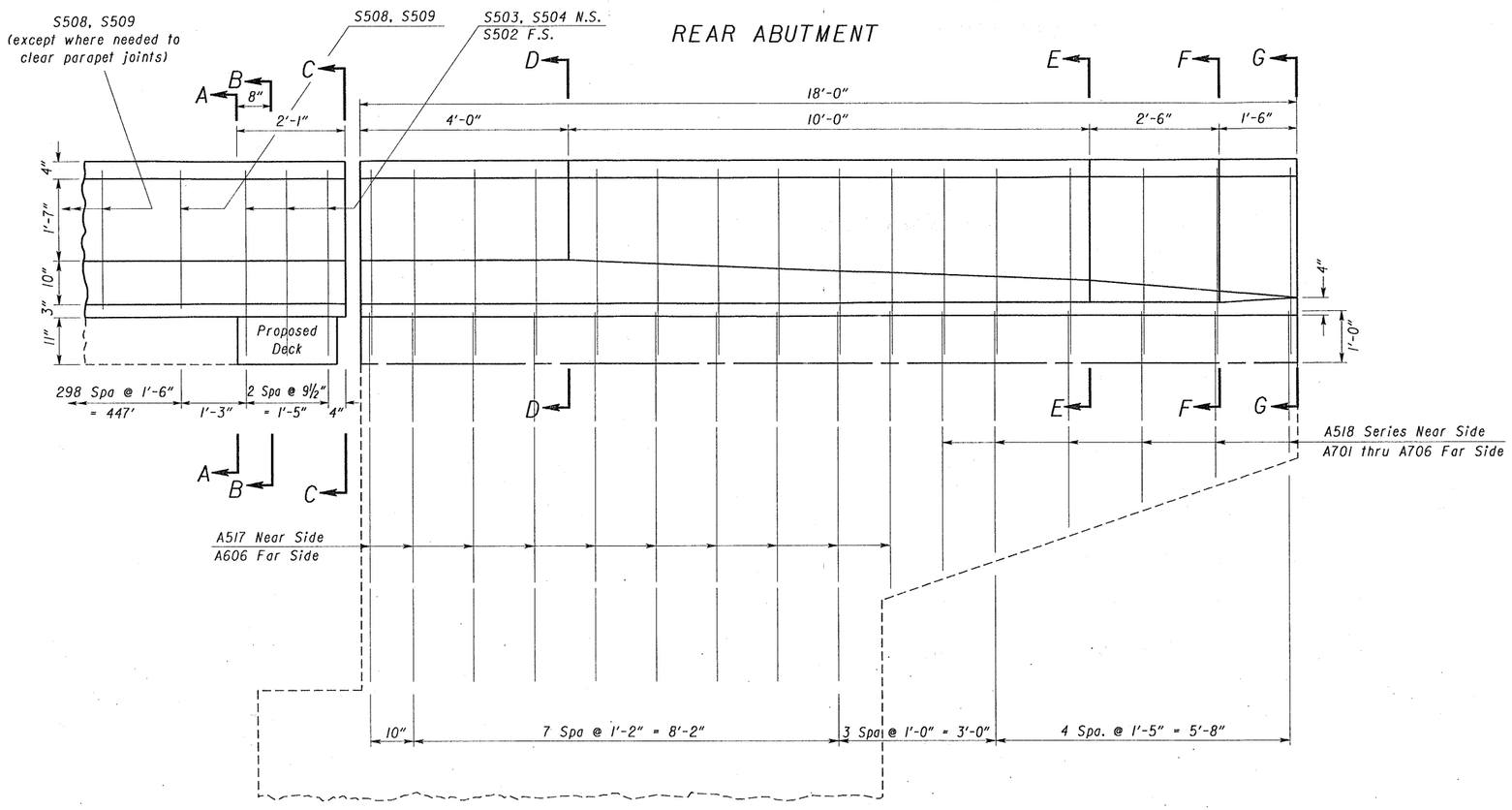
7/12

EXPANSION JOINT DETAILS
BACKWALL DETAILS

BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EH			J.S.B.	2-28-92	DGR

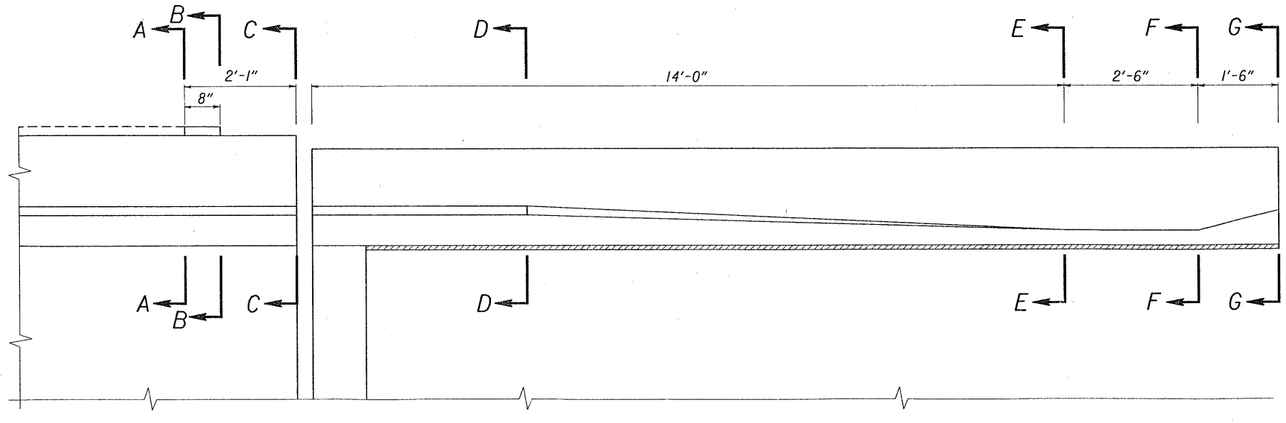
CALC BY	ERI/LOR-2-30.51/0.00	OHIO	212
CHKD BY	VARIOUS SECTIONS	FHWA REGION 5	267
DATE	ERIE & LORAIN COUNTIES		



ELEVATION VIEW

WINGWALL FOR LEFT BRIDGE NORTH SIDE AND RIGHT BRIDGE BOTH SIDES

FOR SECTION A-A THRU G-G SEE SHEET 9.



PLAN VIEW

For Guardrail See Standard Drawing GR-3.1 5-6-91 and Roadway Plans For Pavement.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

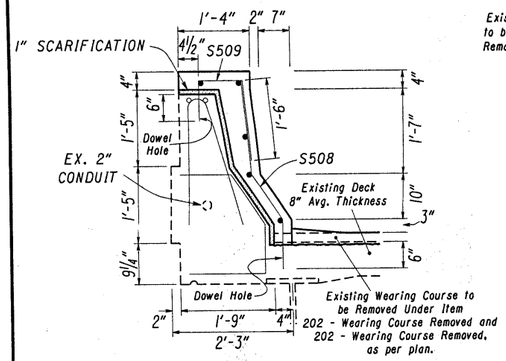
8/12

WINGWALL DETAILS

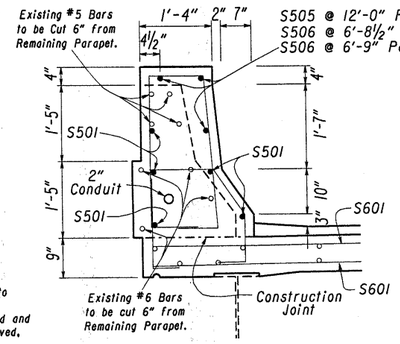
BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EH			J.S.B.	2-28-92	DGR

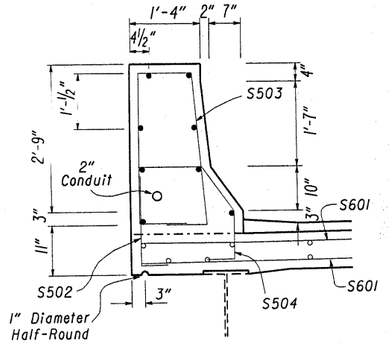
STRUCTURE LOR-2-0098 L&R



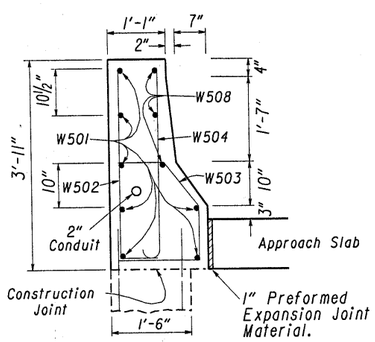
SECTION A-A



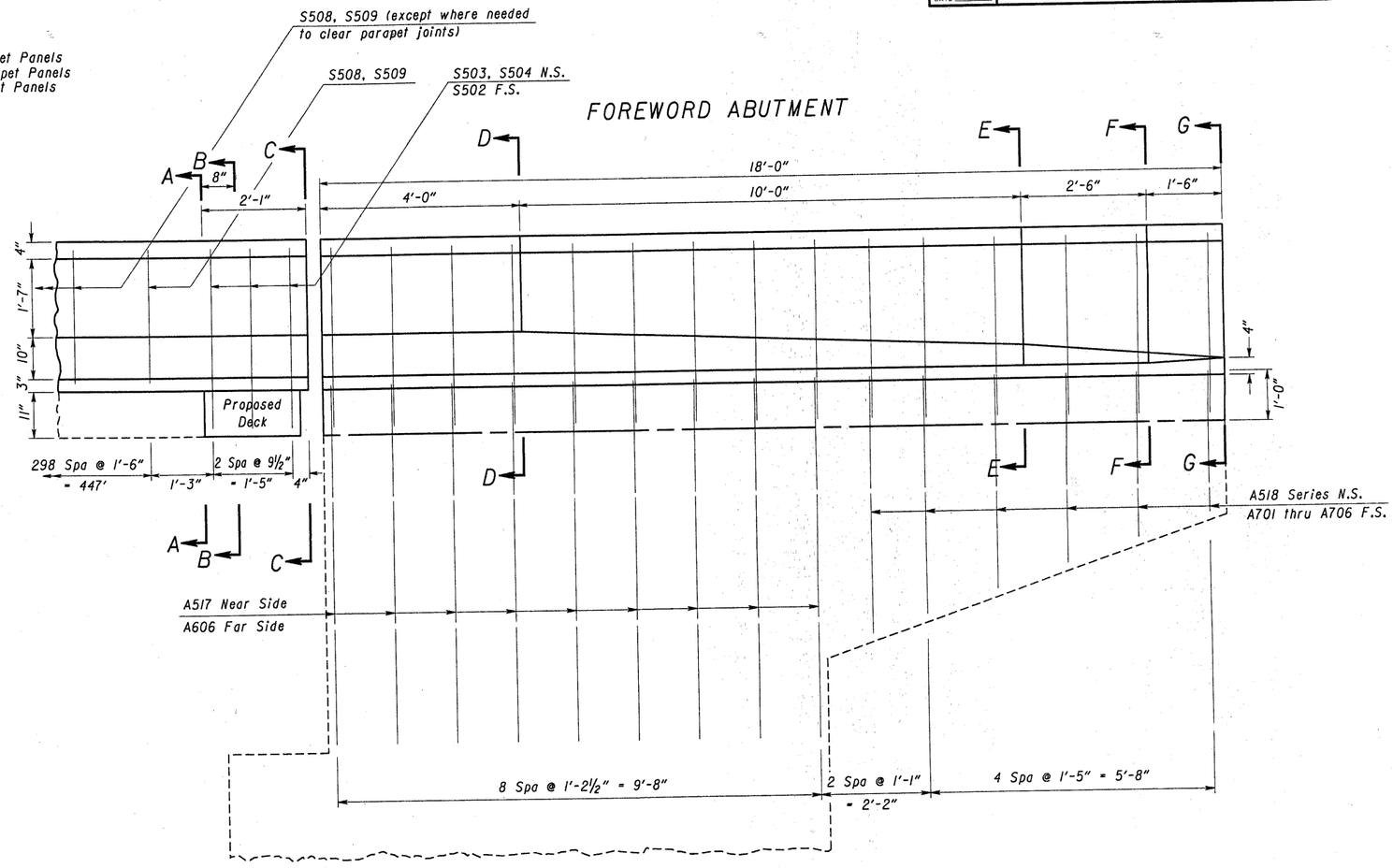
SECTION B-B



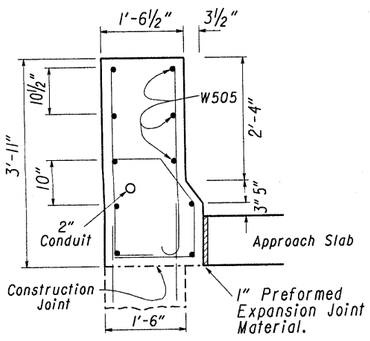
SECTION C-C



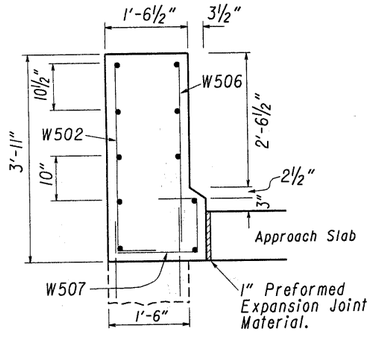
SECTION D-D



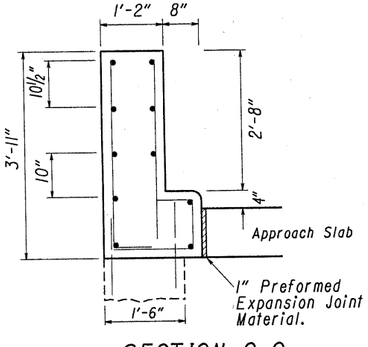
ELEVATION VIEW
WINGWALL FOR LEFT BRIDGE SOUTH SIDE AND RIGHT BRIDGE NORTH SIDE
FOR PLAN VIEW, SEE SHEET 8



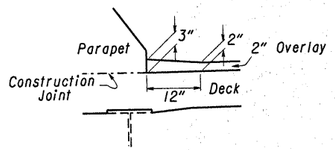
SECTION E-E



SECTION F-F



SECTION G-G



TYPICAL OVERLAY at Curb Face

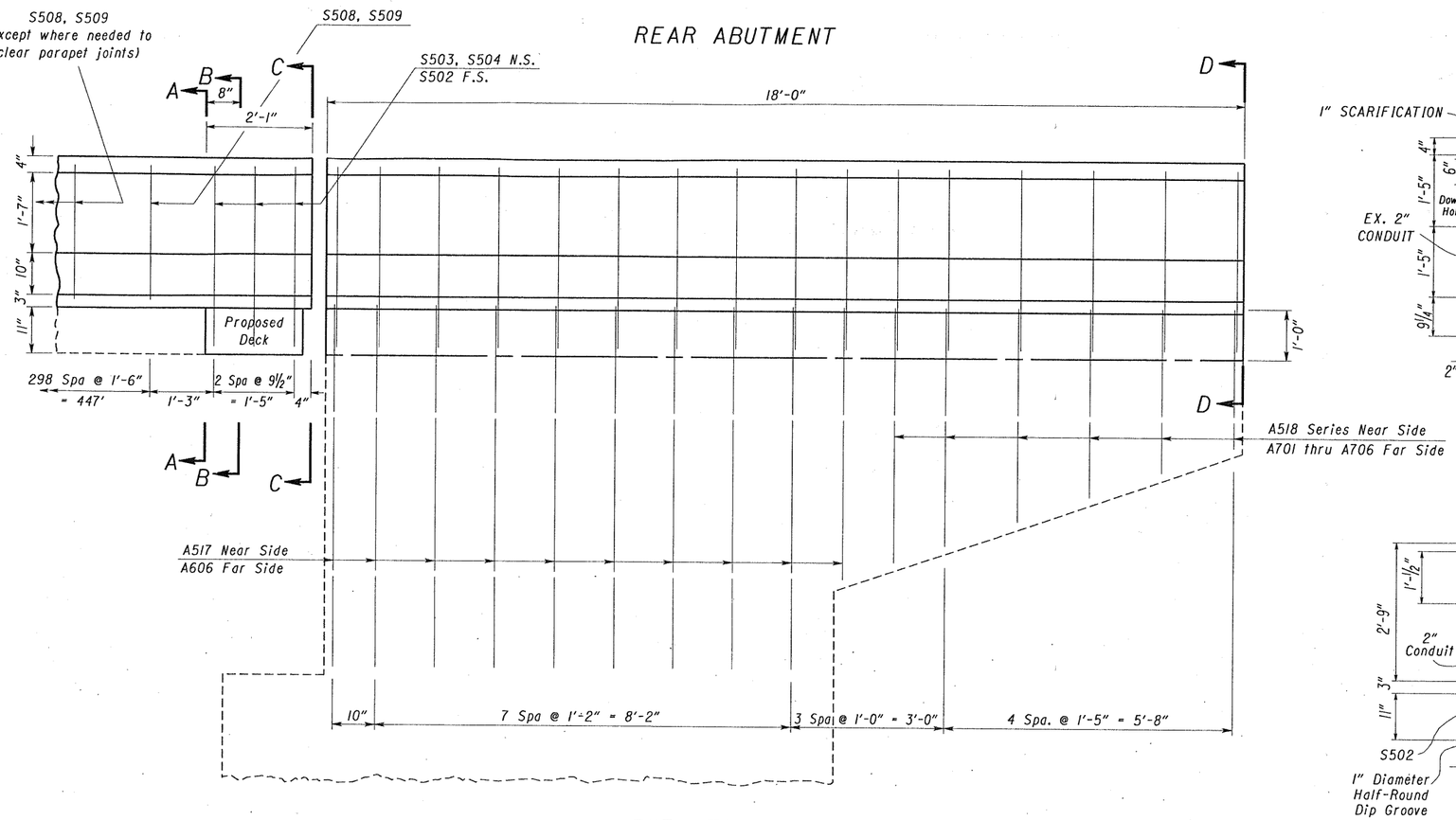
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION
9/12

WINGWALL DETAILS
BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

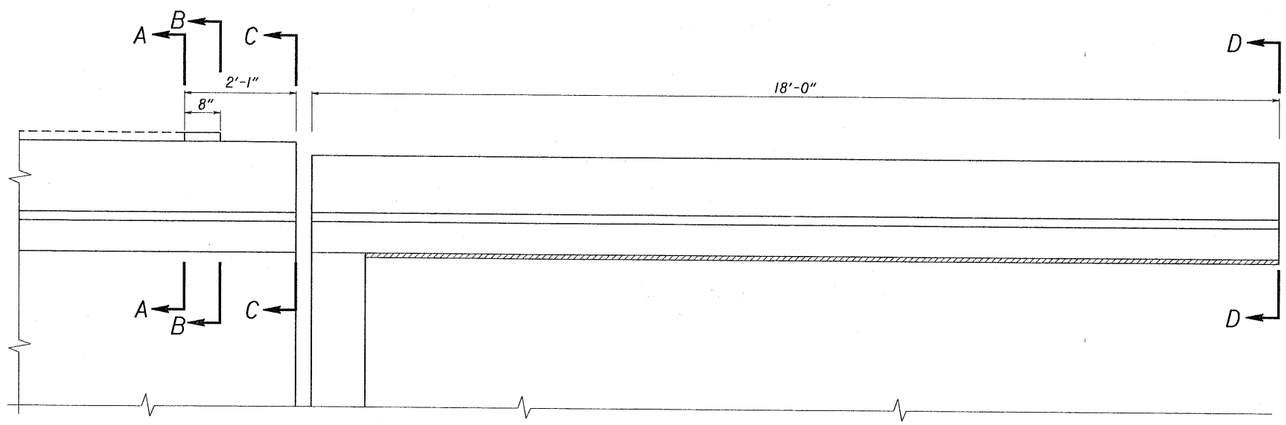
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	Edt			J.S.B.	2-28-92	DGR

CALC BY DATE	ERI/LOR-2-30.51/0.00	OHIO	214
CHKD BY DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

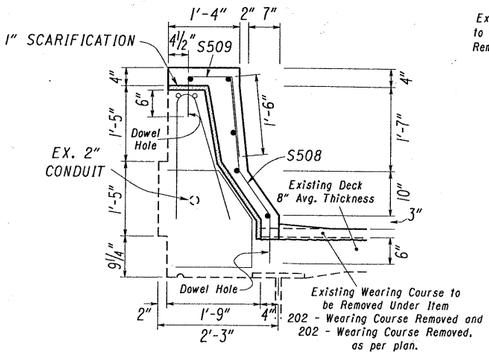
REAR ABUTMENT



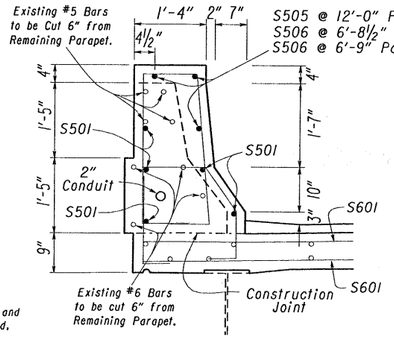
ELEVATION VIEW
WINGWALL FOR LEFT BRIDGE SOUTH SIDE



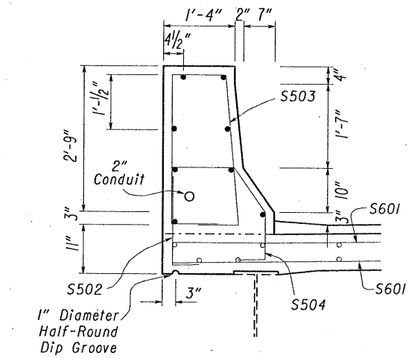
PLAN VIEW



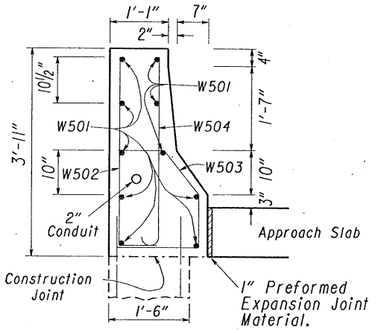
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

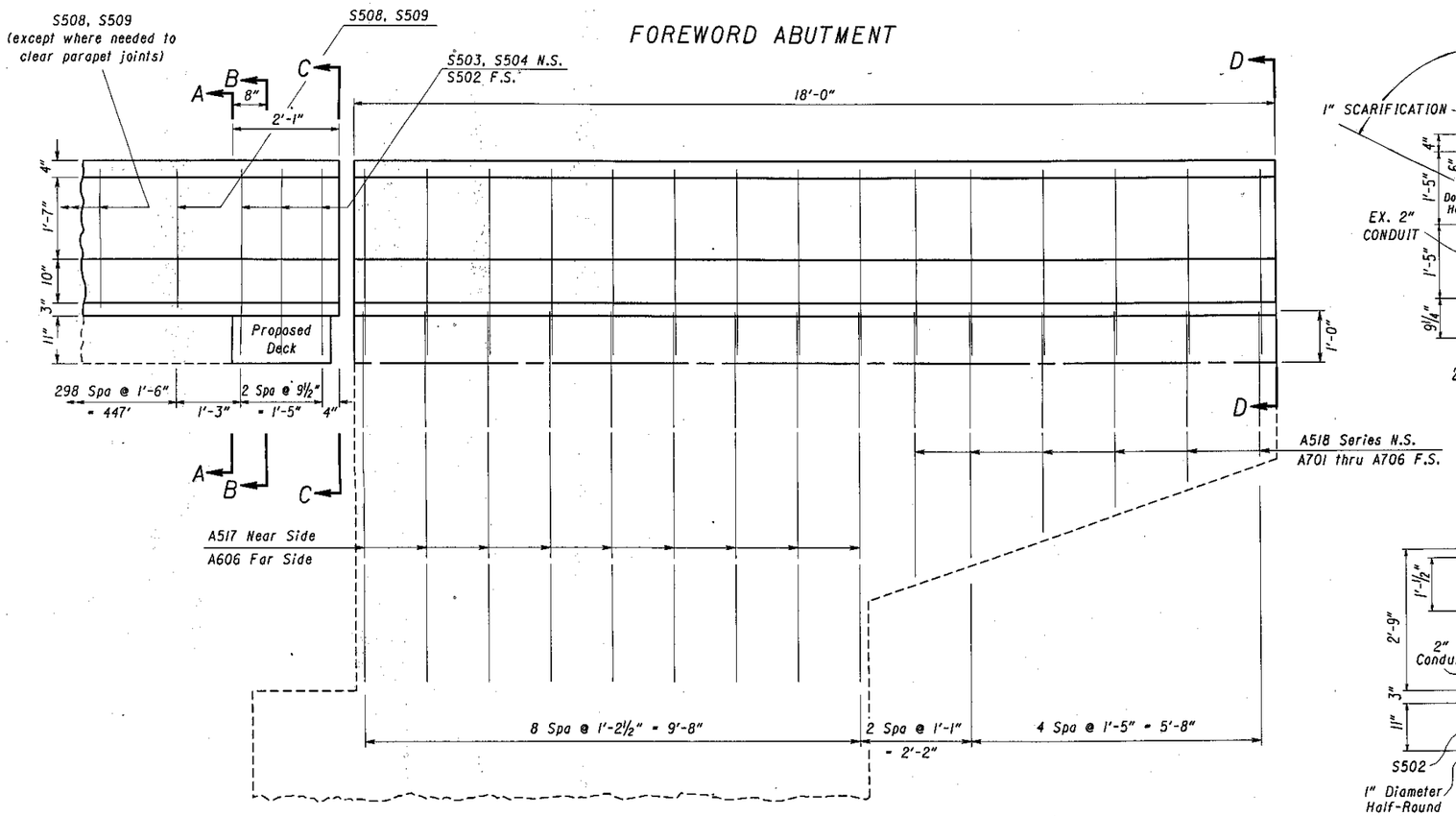
10/12

WINGWALL DETAILS

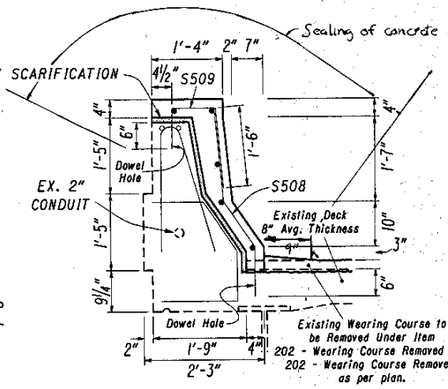
BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EA			J.S.B.	2-28-92	DGR

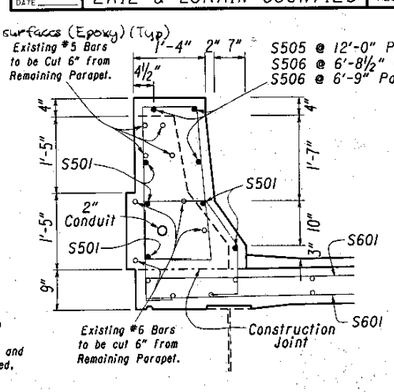
FOREWORD ABUTMENT



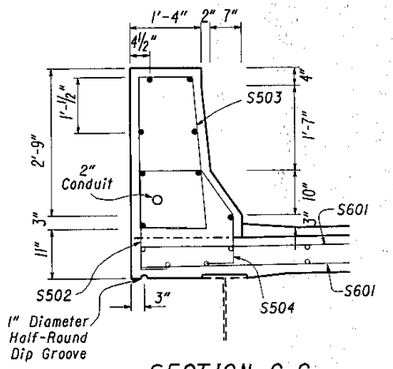
ELEVATION VIEW
WINGWALL FOR LEFT BRIDGE NORTH SIDE AND RIGHT BRIDGE SOUTH SIDE



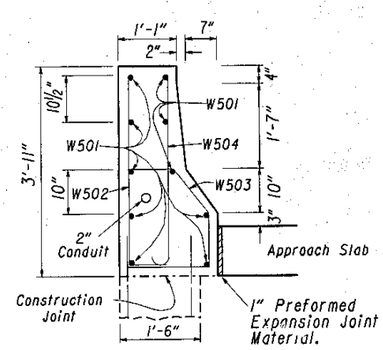
SECTION A-A



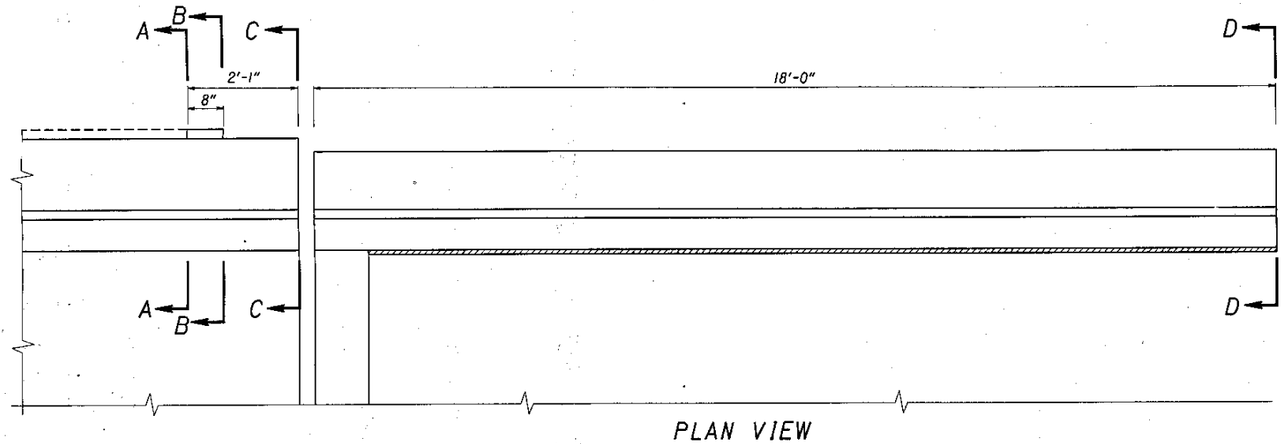
SECTION B-B



SECTION C-C



SECTION D-D



PLAN VIEW

ITEM 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION A QUANTITY OF 2 CU. YDS. HAS BEEN PROVIDED TO REMOVE FILL 1 FOOT DEEP, 1 FOOT WIDE AND 18 FEET LONG ON THE OUTSIDE OF THESE TWO WINGWALLS. THIS QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY, PAGE 12 OF 12.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

11/12

WINGWALL DETAILS

BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

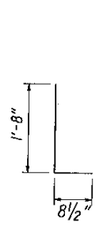
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EA			J.S.B.	2-28-92	DGR

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	216
CHKD BY / DATE	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE & LORAIN COUNTIES		

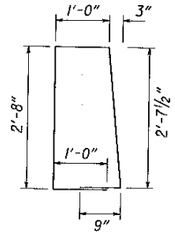
BRIDGE ESTIMATED QUANTITIES

SHEET NUMBER 2	3	4		11	12	ITEM	ITEM EXT	PLAN TOTAL	UNIT	DESCRIPTION
										STRUCTURE LOR-2-0098 L.&R.
						202	11301	26	CU. YD.	PORTIONS OF STRUCTURES REMOVED, WINGWALLS, AS PER PLAN.
						202	11301	25	CU. YD.	PORTIONS OF STRUCTURES REMOVED, BACKWALLS, AS PER PLAN.
						202	11301	10	CU. YD.	PORTIONS OF STRUCTURES REMOVED, DECK EDGES, AS PER PLAN.
						202	11301	2	CU. YD.	PORTIONS OF STRUCTURES REMOVED, PARAPETS, AS PER PLAN.
						202	23500	3876	SQ. YD.	WEARING COURSE REMOVED
						202	23501	3876	SQ. YD.	WEARING COURSE REMOVED, AS PER PLAN
		1				202	98100	4	EACH	SCUPPER REMOVED
				2		203	1200	27	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
					20883	509	15800	20,883	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60
	4					510	11101	2396	EACH	DOWEL HOLES, AS PER PLAN.
						511	34450	3.1	CU. YD.	CLASS S CONCRETE PARAPET REPLACEMENT, AS PER PLAN
						511	34450	30.3	CU. YD.	CLASS S CONCRETE WINGWALL, AS PER PLAN
						511	34450	24.6	CU. YD.	CLASS S CONCRETE BACKWALL, AS PER PLAN
						511	34450	9.7	CU. YD.	CLASS S CONCRETE DECK, AS PER PLAN
						511	34450	139.6	CU. YD.	CLASS S CONCRETE PARAPETS, AS PER PLAN
						SPECIAL	51267502	528	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
						513	21201	LUMP		TRIMMING OF BEAM END, AS PER PLAN
						516	11201	151.3	LIN. FT.	STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN
						SPECIAL	51400050	79970	SQ. FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)
						SPECIAL	51400056	79970	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
						SPECIAL	51400060	79970	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
						SPECIAL	51400066	79970	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
						SPECIAL	51426010	LUMP		NON-HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
						SPECIAL	51426020	LUMP		HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
						516	46701	20	EACH	RESET BEARING, AS PER PLAN
		4				518	12201	4	EACH	SCUPPER, INCLUDING SUPPORTS, AS PER PLAN
		36				518	12801	36	EACH	SCUPPER MODIFICATION, AS PER PLAN
						518	21101	25	CU. YD.	POROUS BACKFILL, AS PER PLAN.
5.75	2.80					519	11101	8.55	SQ. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN.
						SPECIAL	51922006	3808	SQ. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (2¼" THICK) (SEE PROPOSAL NOTE).
						SPECIAL	51922100	71	CU. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) (SEE PROPOSAL NOTE)
						SPECIAL	51922300	LUMP		TEST SLAB (SEE PROPOSAL NOTE)
	4					609	26001	4	LIN. FT.	CURB, TYPE 6, AS PER PLAN
										LIGHTING
						SPECIAL	20298000	LUMP		REMOVAL OF EXISTING CONDUIT
		20				SPECIAL	10670	20	EACH	LIGHT POLE ANCHOR BOLT EXTENSION
		80				625	25401	80	LIN. FT.	CONDUIT 2 INCH 713.04, AS PER PLAN
		5				625	29901	5	EACH	JUNCTION BOX, AS PER PLAN

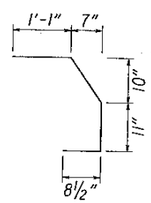
BAR SIZE : THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE : A506 IS A NO. 5 SIZE BAR AND P1101 IS A NO. 11 SIZE BAR.



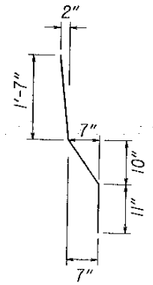
TYPE I



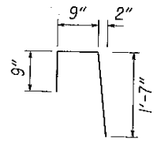
TYPE II



TYPE III

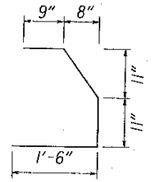


TYPE IV

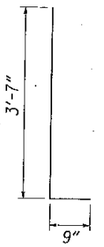


TYPE V

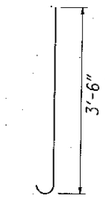
TYPE IX



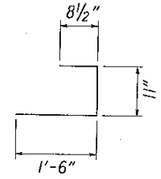
TYPE VI



TYPE VII



TYPE VIII



TYPE X

ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60

WINGWALLS

ABUTMENT	LEFT BRIDGE	RIGHT BRIDGE
REAR	NORTH	BOTH
FOREWORD	SOUTH	NORTH

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
W501	35	17'-8"	Str.				618
W502	78	2'-2½"	VII				180
W503	63	4'-½"	VI				266
W504	63	3'-11½"	VIII				260
W505	15	13'-8"	IX				214
W506	15	3'-7"	Str.				56
W507	15	2'-10½"	X				45
W508	15	5'-8"	Str.				89
							1728

WINGWALLS

ABUTMENT	LEFT BRIDGE	RIGHT BRIDGE
REAR	SOUTH	-
FOREWORD	NORTH	SOUTH

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
W501	30	17'-8"	Str.				553
W502	46	2'-2½"	VII				106
W503	46	4'-½"	VI				194
W504	46	3'-11½"	VIII				190
							1043

DECK

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S601	32	19'-10"	Str.				953
S602	32	23'-10"	Str.				1146
							2099

PARAPET REPLACEMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S501	40	1'-9"	Str.				73
S502	24	2'-3"	I				56
S503	24	7'-6½"	II				189
S504	24	2'-9"	III				69
							387

PARAPET FACING

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S505	396	11'-8"	Str.				4819
S506	96	6'-4"	Str.				634
S508	1196	3'-5"	IV				4262
S509	1196	2'-9"	V				3430
							13,145

BACKWALL

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
B501	24	19'-10"	Str.				496
B502	24	23'-10"	Str.				597
D801	104	5'-0"	Bent				1388
							2481

GRAND TOTAL	20,883

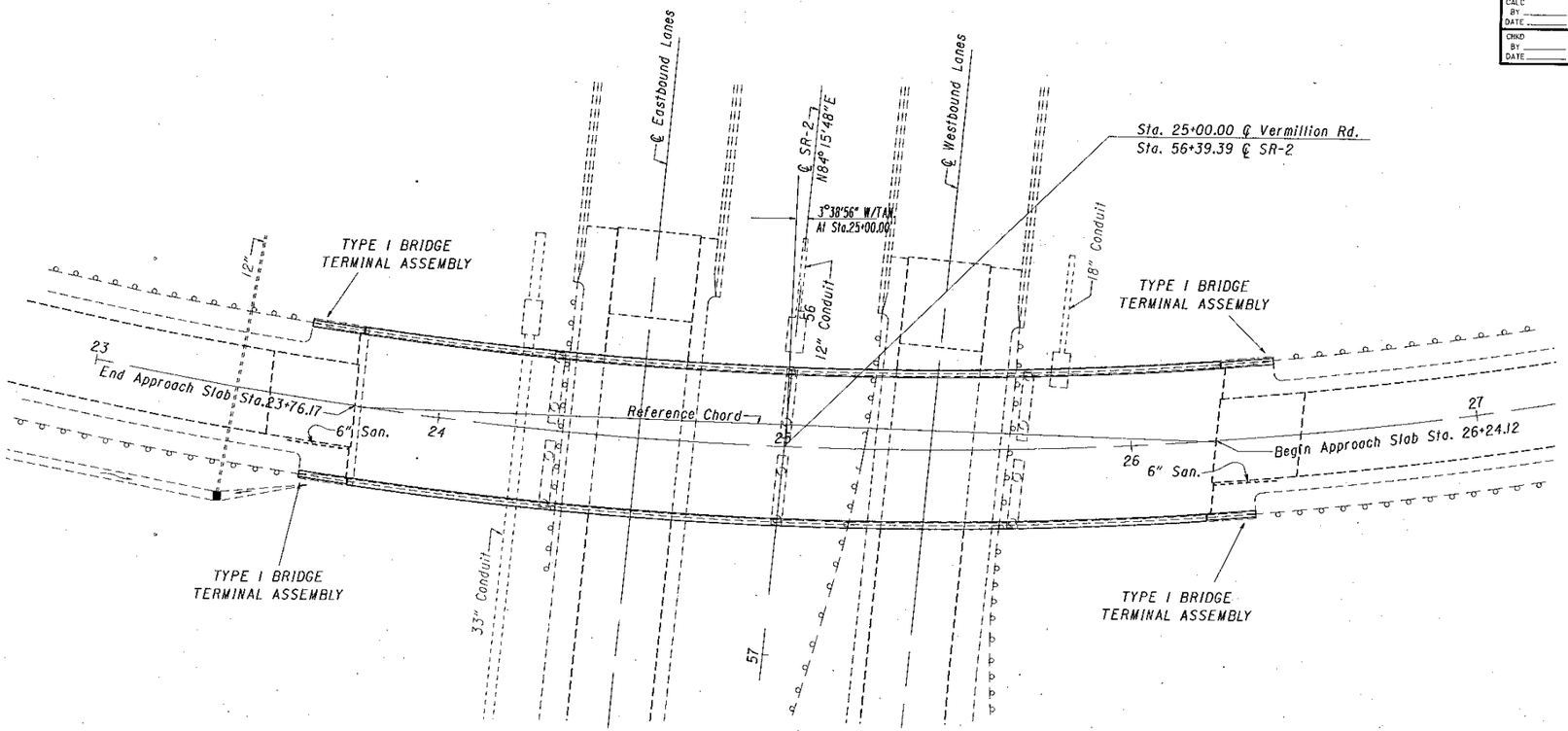
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

12/12

ESTIMATED QUANTITIES
REINFORCING STEEL
BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

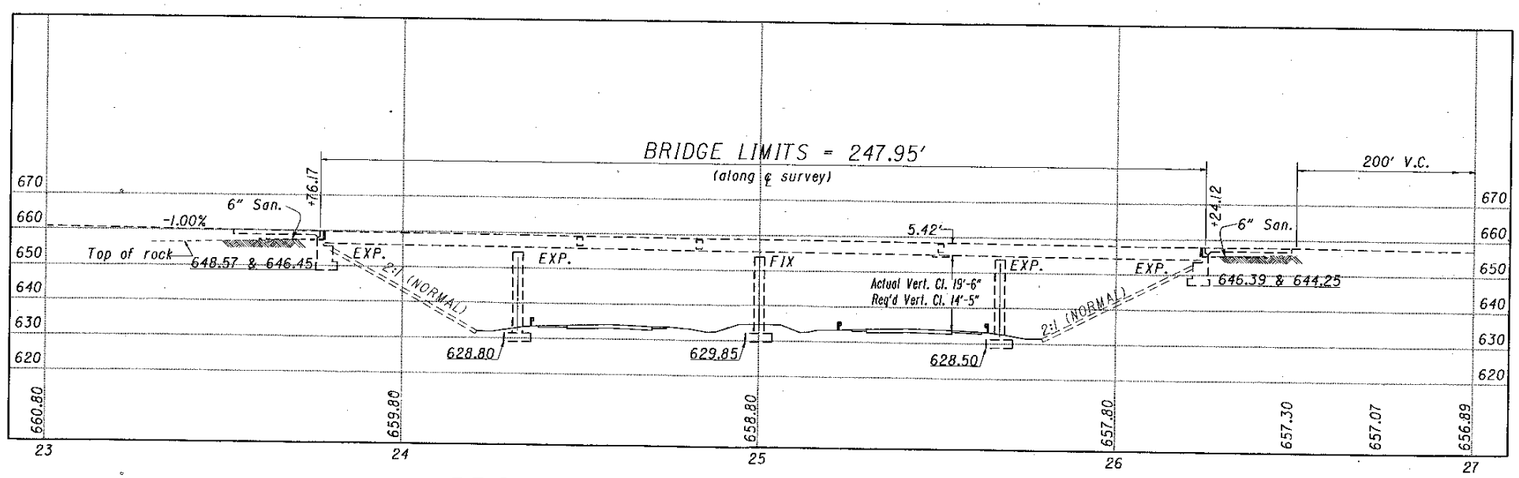
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EAL			J.S.B.	2-28-92	DGR

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	217
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



CURVE DATA

P.V.I. Sta. 26+47.109
S.C. Sta.22+46.63
C.S. Sta.29+97.56
Δ c=37° 32'48"
Dc=5° 00'00"
Lc=750.933'
Ls=150.00'
Ec=95.51'
R=1145.9156'



PROFILE ALONG ℄ VERMILION RD.

EXISTING STRUCTURE

TYPE: Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures
SPAN: 54'-0": 67'-7": 67'-10": 54'-0" % Brgs.
ROADWAY: 44'-0" f/f parapets
LOADING: AASHO HS 20-44
WEARING SURFACE: 2" Asphalt Concrete
SKEW: 3°-38'-56" L.F. (WITH TANGENT)
APPROACH SLAB: AS-1-67 (25'-0" long)
ALIGNMENT: 5°-00'-00" CURVE
SUPERELEVATION: 0.0833 ft./ft.

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures
SPAN: 54'-0": 67'-7": 67'-10": 54'-0" % Brgs.
ROADWAY: 41'-10" T/T Parapets
LOADING: AASHO HS 20-44
WEARING SURFACE: 2¼" Microsilica Concrete
SKEW: 3°-38'-56" L.F. (WITH TANGENT)
APPROACH SLAB: AS-1-67 (25'-0" long)
ALIGNMENT: 5°-00'-00" CURVE
SUPERELEVATION: 0.0833 ft./ft.

OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION SECTION

1/9

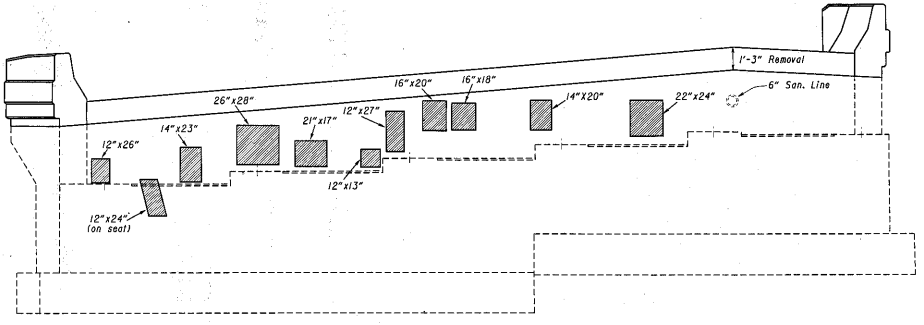
SITE PLAN

BRIDGE NO. LOR-2-0107
UNDER VERMILION ROAD

LORAIN COUNTY — S.R.-2
STA. 23+76.17 — STA. 26+24.12

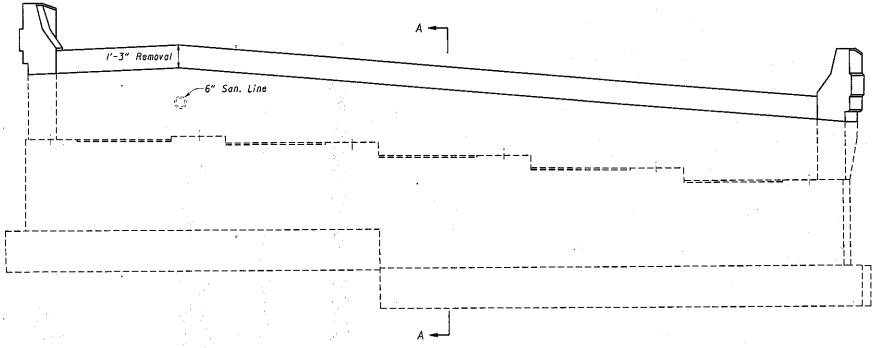
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	ELK			J.S.B.	2-28-92	DGR

SITE PLAN

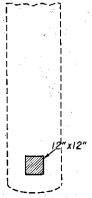


ELEVATION
Foreward Abutment

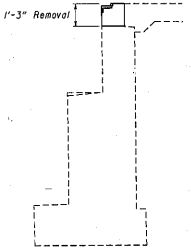
BACKWALL PATCHING AREAS SHOWN.
PAYMENT UNDER ITEM 519 - PATCHING CONCRETE STRUCTUCTURES,
AS PER PLAN
STRUCTURE LOR-2-0107 3.12 SQ. YD.



ELEVATION
Rear Abutment



Middle Pier-Foreword Column
Left Face



SECTION A-A

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

9/9

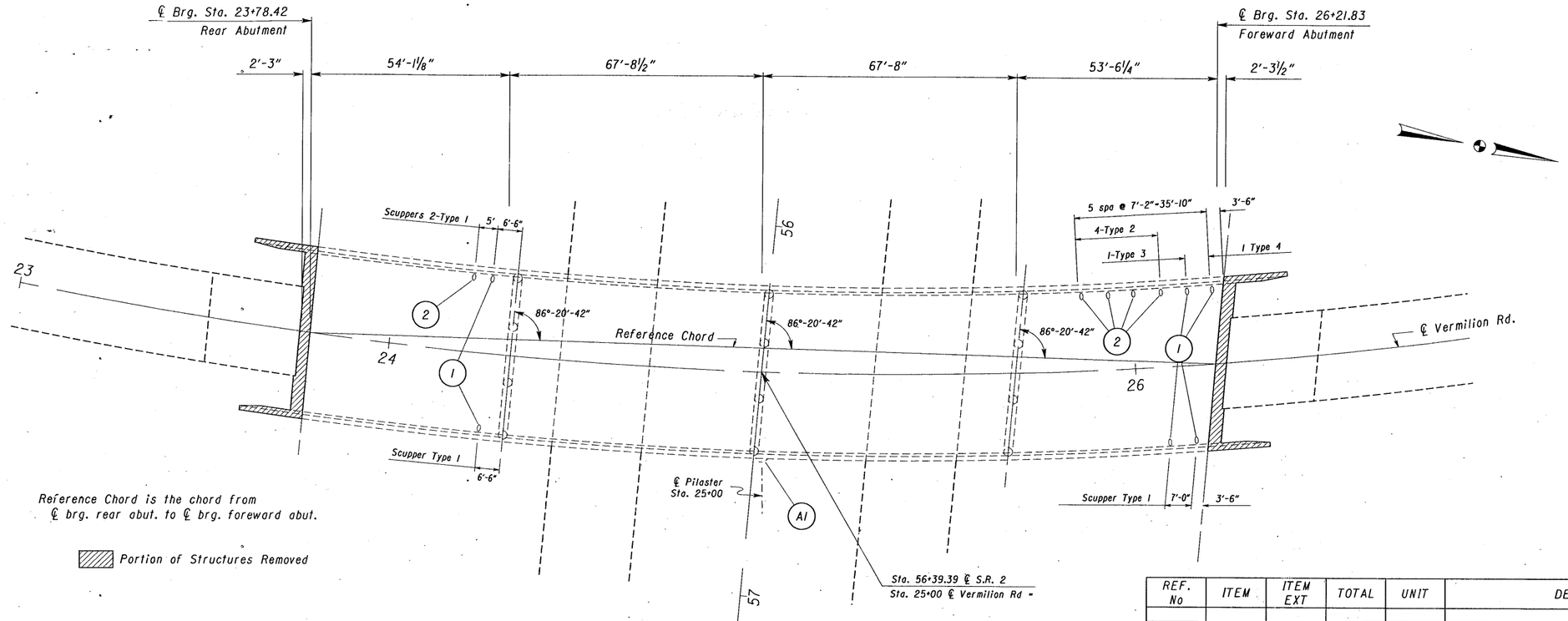
ABUTMENT PATCHING DETAILS
BRIDGE NO. LOR-2-0107
UNDER VERMILION ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR		EAL		J.S.B.	2-28-92	DGR

STRUCTURE LOR-2-0107

CALC BY / DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO	219
CHKD BY / DATE		FHWA REGION 5	267

Note : Spans measured along the reference chord.

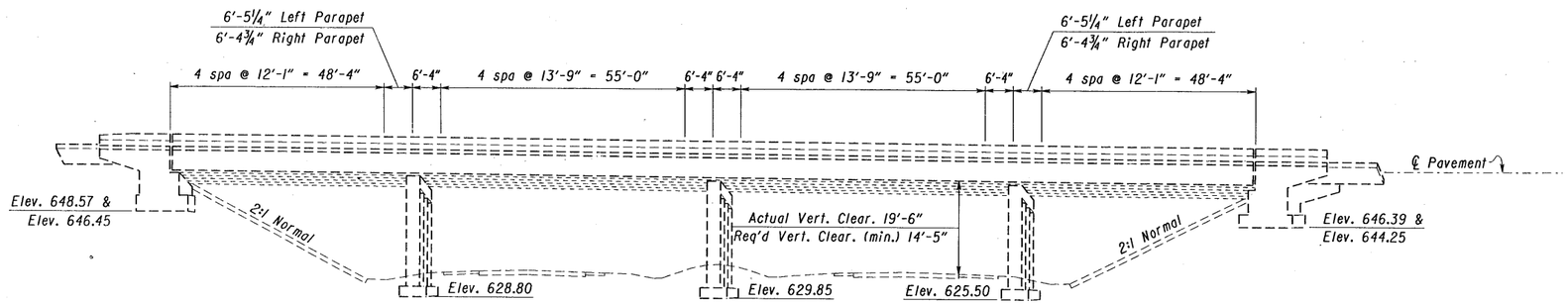


Reference Chord is the chord from ℄ brg. rear abut. to ℄ brg. foreward abut.

▨ Portion of Structures Removed

REF. No	ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
1	202	98100	6	EACH	Scupper Removed
2	518	12801	5	EACH	Scupper Modification, as per plan
A1	SPECIAL	10670	4	EACH	Light Pole Anchor Bolt Extension

Totals Carried to Bridge Estimated Quantities



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

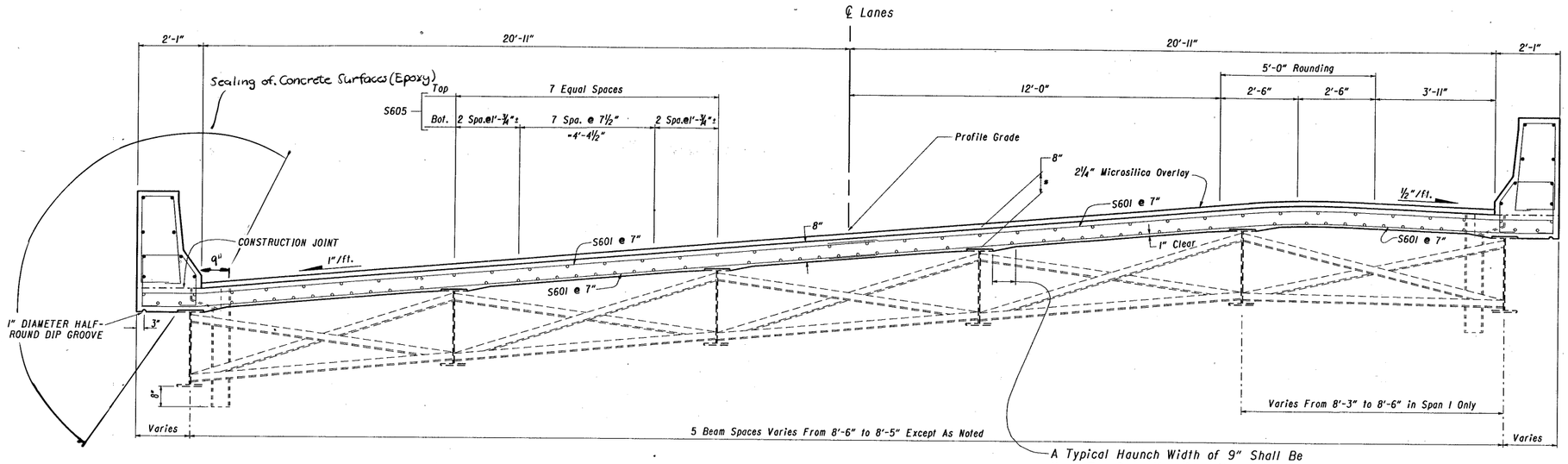
3/9

PARAPET DEFLECTION JOINT SCUPPER PLAN

BRIDGE NO. LOR-2-0107
UNDER VERMILION ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EEL			J.S.B.	2-28-92	DGR

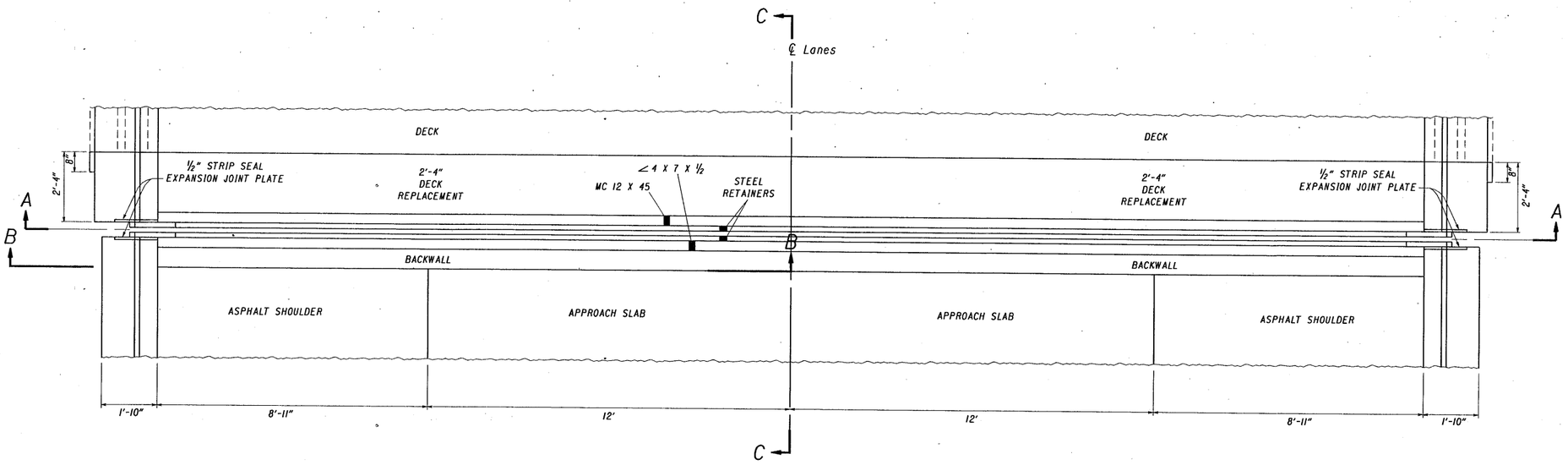
STRUCTURE LOR-2-0107



SECTION A-A

A Typical Haunch Width of 9" Shall Be Used For Computing Quantity of Concrete. However, The Haunch Width May Vary Between 6" & 12" Provided That The Slope Be Not More Than 1:4 For A Haunch Less Than 9" In Width.

*This is a nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessar because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per sec. 511.18 of the Construction and Material Specifications.



PLAN

IT IS THE FABRICATORS RESPONSIBILITY TO DETERMINE THE PLATE SIZE FOR THE STRIP SEAL EXPANSION JOINT PLATES AT THE DECK AND WINGWALL PARAPETS.

BRIDGE	SKEW	CURVE
LOR-2-0107	3°-38'-56"	5°-00'-00"

COST OF PLATES SHALL BE INCLUDED IN ITEM 516 STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

FOR ADDITIONAL DETAILS SEE STANDARD DRAWING EXJ-4-87.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

4/9

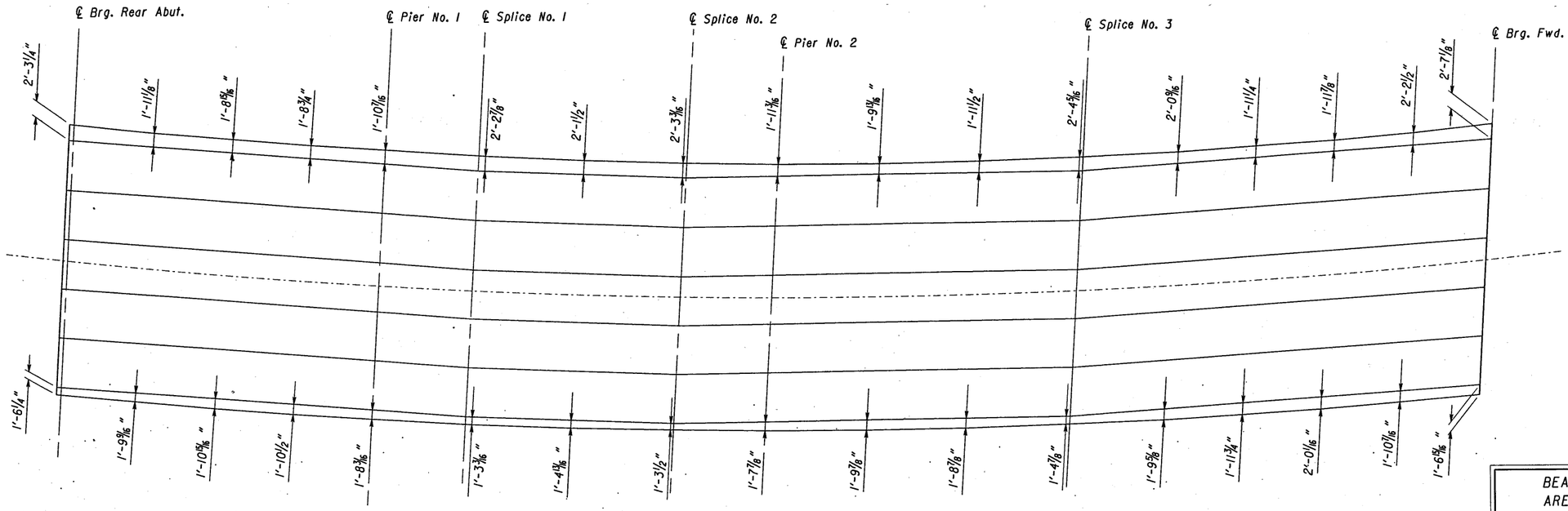
SUPERSTRUCTURE DETAILS

BRIDGE NO. LOR-2-0107
UNDER VERMILION ROAD

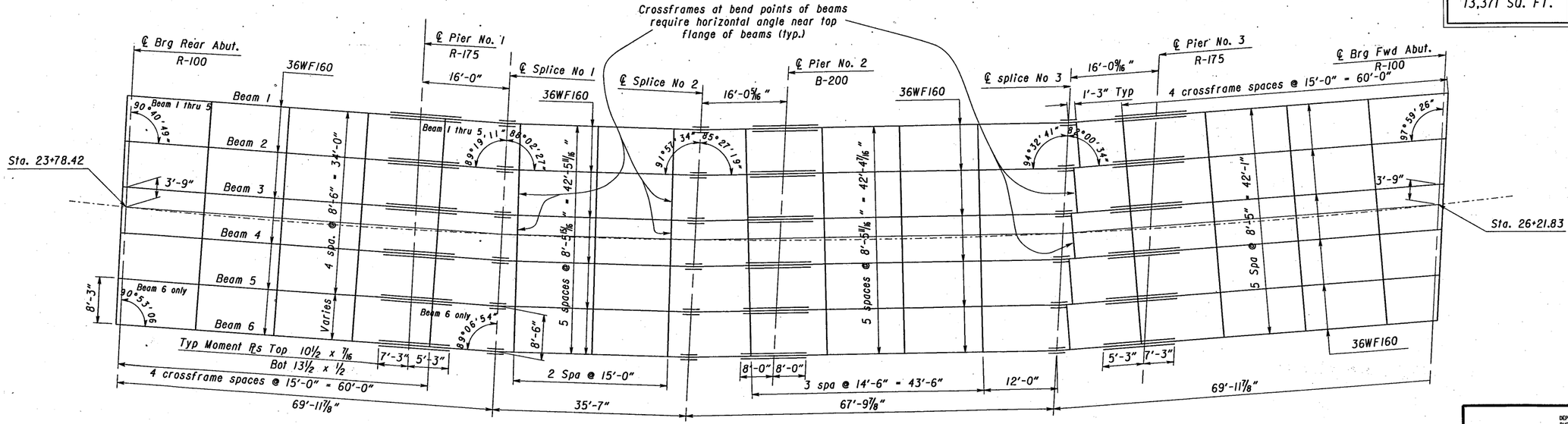
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EGL			J.S.B.	2-28-92	DGR

STRUCTURE LOR-2-0107

CALC BY DATE	ERI/LOR-2-30.51/0.00	OHIO	221
CHKD BY DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



BEAM AREA	% INCREASE
13,371 SQ. FT.	18.6



FRAMING PLAN

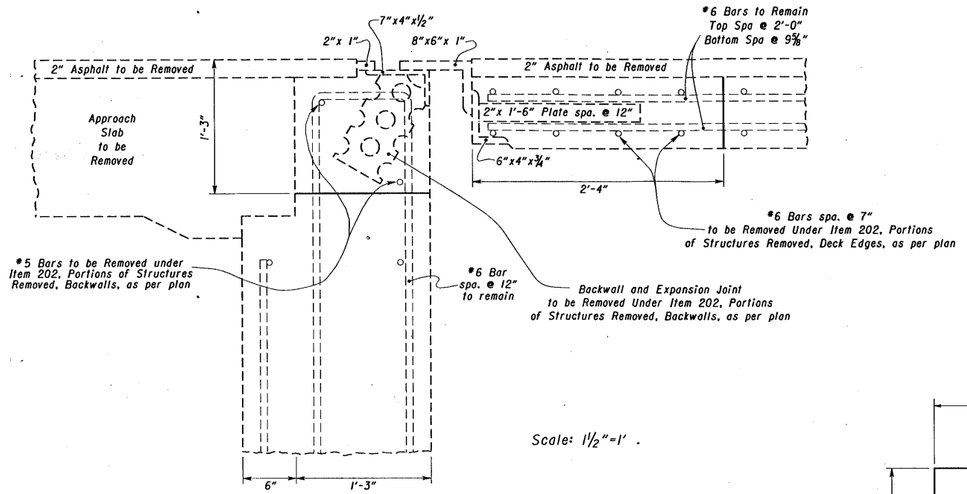
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

5/9

SUPERSTRUCTURE DETAILS
FRAMING PLAN
BRIDGE NO. LOR-2-0107
UNDER VERMILION ROAD

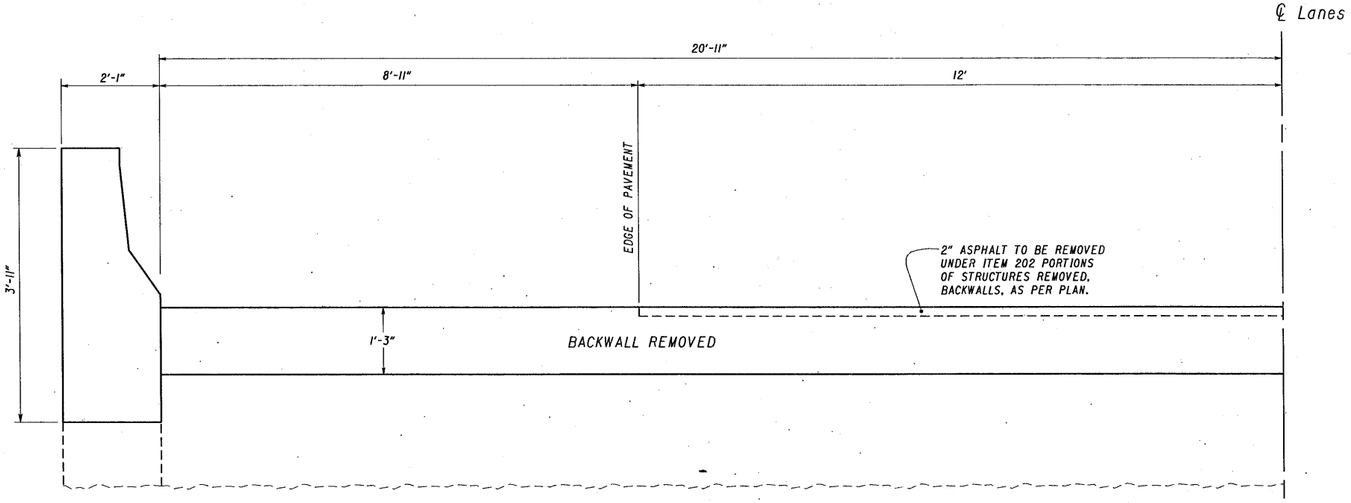
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR		Elt		J.S.B.	2-28-92	DGR

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	222
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



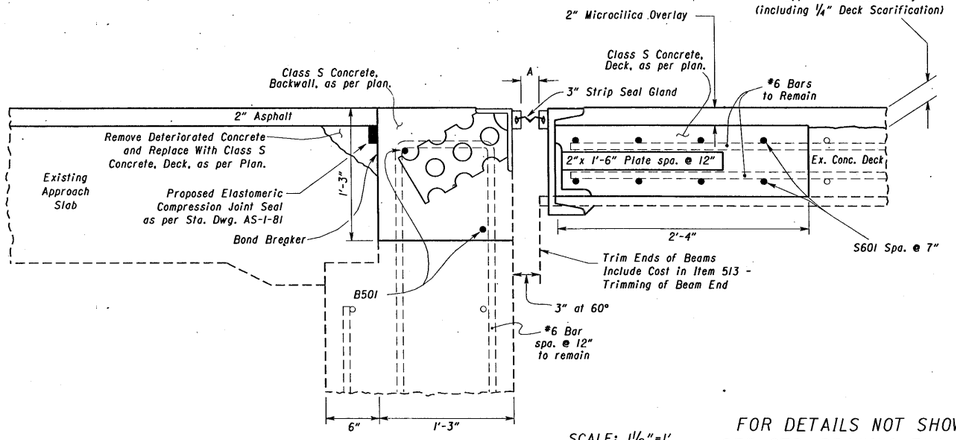
Scale: 1½"=1' .

EXISTING EXPANSION LOINT
SECTION C-C



SECTION B-B

SCALE: ¾"=1'



SCALE: 1½"=1'

FOR DETAILS NOT SHOWN
SEE STD. DRAWING EXJ-4-87

PROPOSED EXPANSION JOINT
SECTION C-C

Temperature	Distance A
90°	1½"
80°	1½"
70°	1½"
60°	1⅝"
50°	1 29/32"
40°	1 13/16"
30°	1 29/32"

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

6 / 9

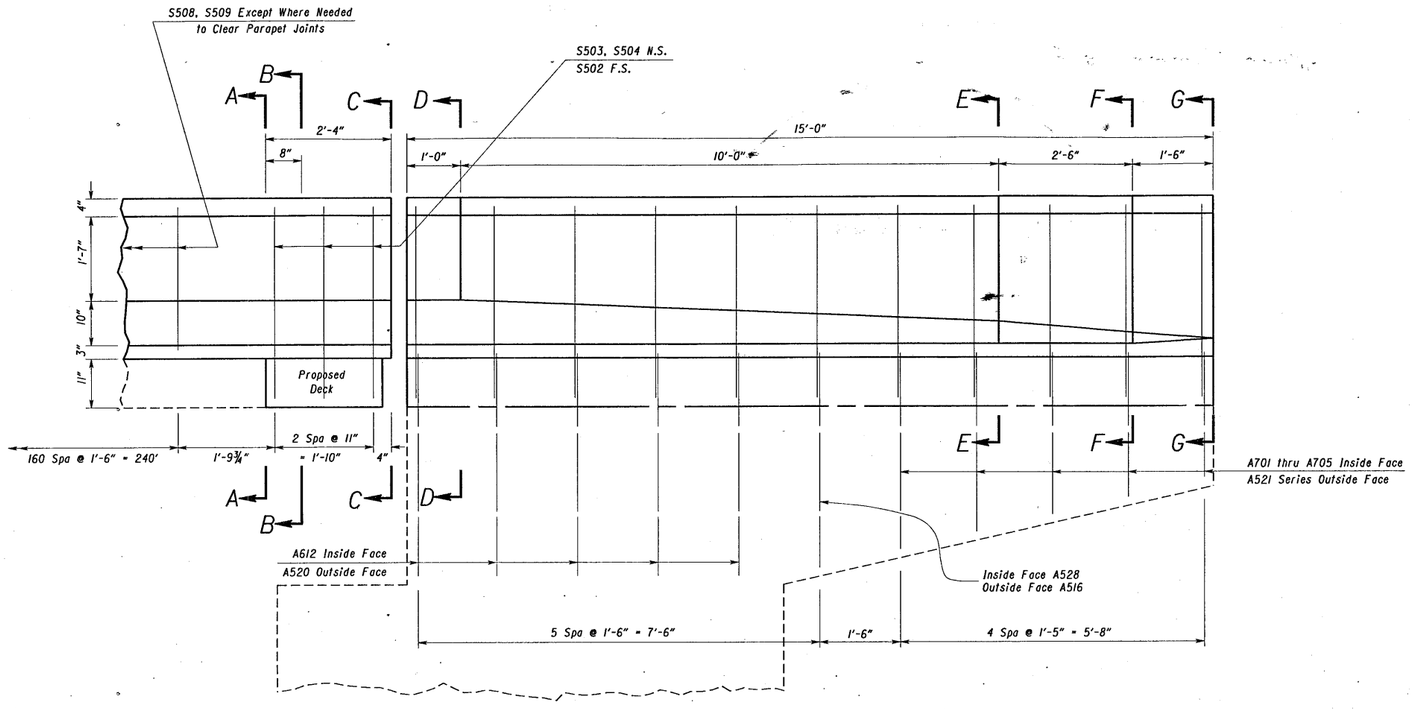
EXPANSION JOINT DETAILS
BACKWALL DETAILS

BRIDGE NO. LOR-2-0107
UNDER VERMILION ROAD

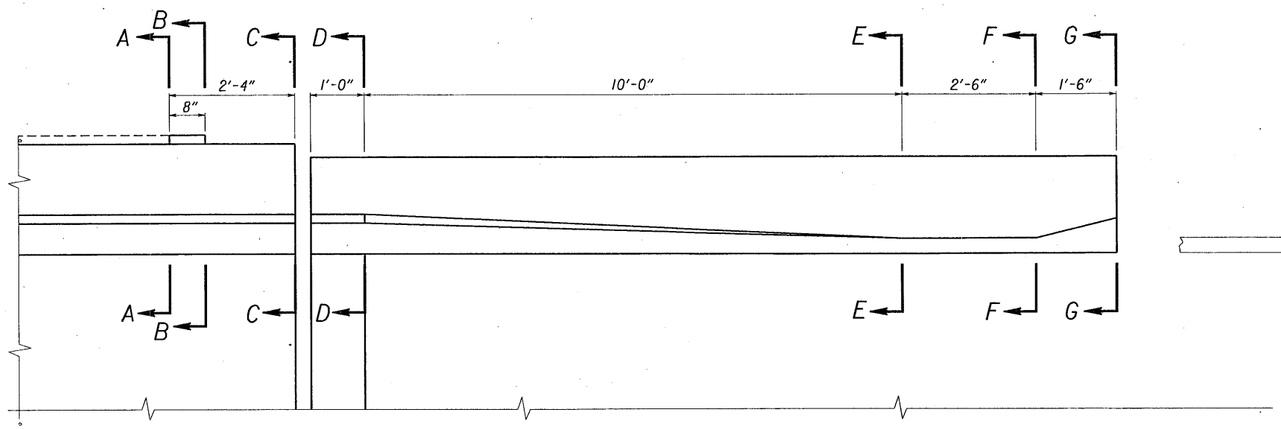
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EEL			J.S.B.	2-28-92	DGR

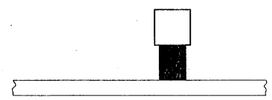
STRUCTURE LOR-2-0107

CALC BY DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	223 267
CHKD BY DATE			



ELEVATION VIEW
15'-0" WINGWALL B DETAIL





For Guardrail See Standard Drawing GR-3.1 5-6-91 and Roadway Plans For Pavement.

PLAN VIEW

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

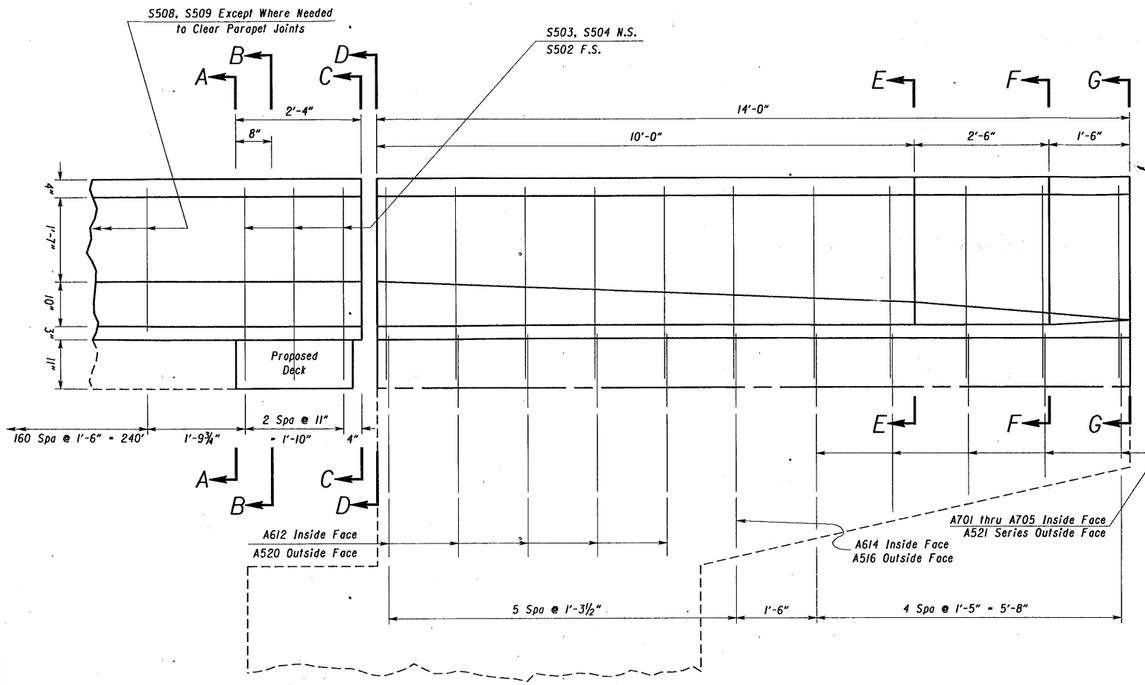
7/9

WINGWALL DETAILS

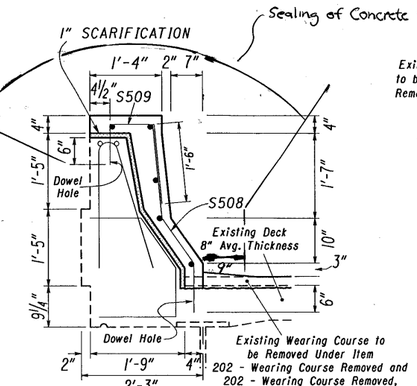
BRIDGE NO. LOR-2-0107
UNDER VERMILION ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EH			J.S.B.	2-28-92	DGR

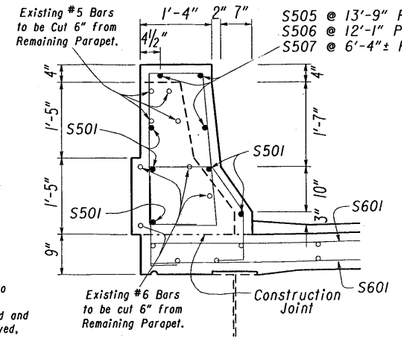
CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	224
CHKD BY / DATE	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE & LORAIN COUNTIES		



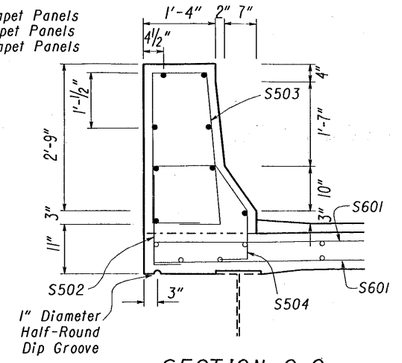
ELEVATION VIEW
14'-0" WINGWALL A DETAIL



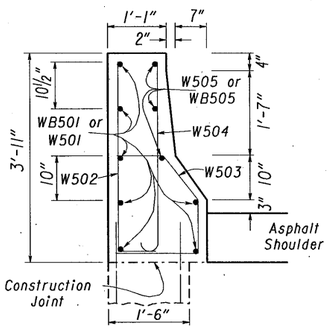
SECTION A-A



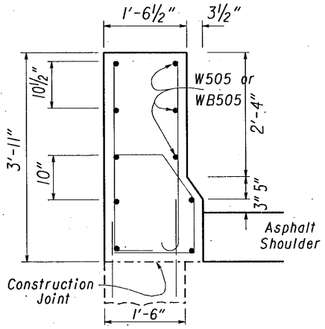
SECTION B-B



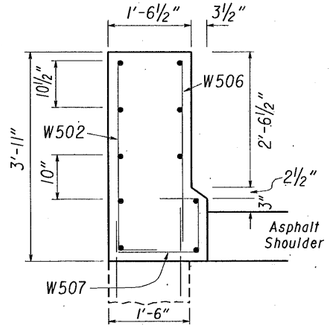
SECTION C-C



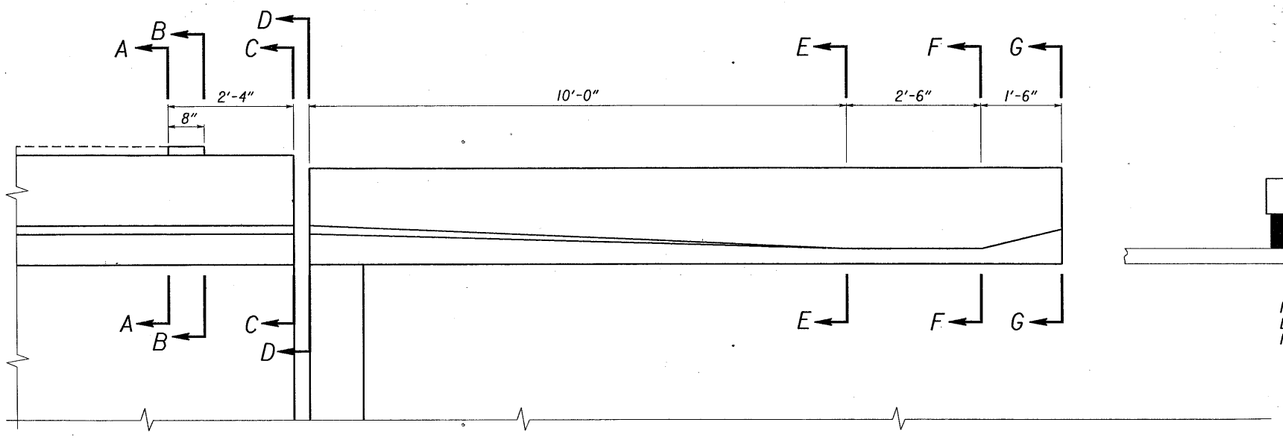
SECTION D-D



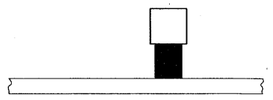
SECTION E-E



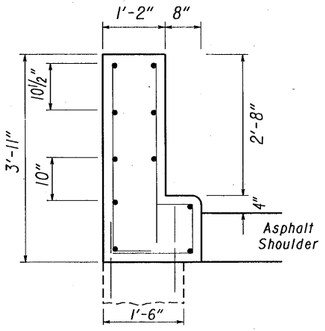
SECTION F-F



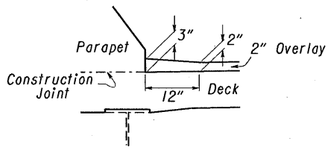
PLAN VIEW



For Guardrail See Standard Drawing GR-3.1 5-6-91 and Roadway Plans For Pavement.



SECTION G-G



TYPICAL OVERLAY at Curb Face

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

8/9

WINGWALL DETAILS

BRIDGE NO. LOR-2-0107
UNDER VERMILION ROAD

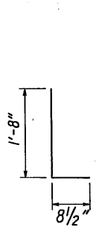
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EEA			J.S.B.	2-28-92	DGR

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	225
CHKD BY / DATE	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE & LORAIN COUNTIES		

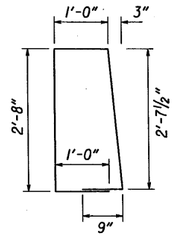
BRIDGE ESTIMATED QUANTITIES

SHEET NUMBER						ITEM	ITEM EXT	PLAN TOTAL	UNIT	DESCRIPTION
2	3			9						
										STRUCTURE LOR-2-0107
						202	11301	10	CU. YD.	PORTIONS OF STRUCTURES REMOVED, WINGWALLS, AS PER PLAN.
						202	11301	5	CU. YD.	PORTIONS OF STRUCTURES REMOVED, BACKWALLS, AS PER PLAN.
						202	11301	6	CU. YD.	PORTIONS OF STRUCTURES REMOVED, DECK EDGES, AS PER PLAN.
						202	11301	1	CU. YD.	PORTIONS OF STRUCTURES REMOVED, PARAPETS, AS PER PLAN.
						202	23500	1171	SQ. YD.	WEARING COURSE REMOVED
						202	23501	1171	SQ. YD.	WEARING COURSE REMOVED, AS PER PLAN
	6					202	98100	6	EACH	SCUPPER REMOVED
				5856		509	15800	5856	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60
						510	11101	644	EACH	DOWEL HOLES, AS PER PLAN.
						511	34450	1.8	CU. YD.	CLASS S CONCRETE PARAPET REPLACEMENT, AS PER PLAN
						511	34450	12.6	CU. YD.	CLASS S CONCRETE WINGWALL, AS PER PLAN
						511	34450	5.3	CU. YD.	CLASS S CONCRETE BACKWALL, AS PER PLAN
						511	34450	6.0	CU. YD.	CLASS S CONCRETE DECK, AS PER PLAN
						511	34450	37.8	CU. YD.	CLASS S CONCRETE PARAPETS, AS PER PLAN
						SPECIAL	51267502	521	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
						513	21201	LUMP		TRIMMING OF BEAM END, AS PER PLAN
						516	11201	83.84	LIN. FT.	STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN
						SPECIAL	51400050	15857	SQ. FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)
						SPECIAL	51400056	15857	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
						SPECIAL	51400060	15857	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
						SPECIAL	51400066	15857	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
						SPECIAL	51400504	100	MAN HR.	GRINDING FINS, TEARS AND SLIVERS
						SPECIAL	51400508	3301	LIN. FT.	GRINDING OF FLANGE EDGES
						SPECIAL	51426010	LUMP		NON-HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
						SPECIAL	51426020	LUMP		HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
	5					518	12801	5	EACH	SCUPPER MODIFICATION, AS PER PLAN
3.12						519	11101	3.12	SQ. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN.
						SPECIAL	51922006	1153	SQ. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (2¼" THICK) (SEE PROPOSAL NOTE).
						SPECIAL	51922100	25	CU. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) (SEE PROPOSAL NOTE)
						SPECIAL	51922300	LUMP		TEST SLAB (SEE PROPOSAL NOTE)
						607	60720100	496	LIN. FT.	FENCE, TYPE CL, TPV WITH 6' FABRIC WIDTH
										LIGHTING
	4					SPECIAL	10670	4	EACH	LIGHT POLE ANCHOR BOLT EXTENSION

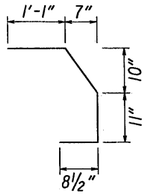
BAR SIZE : THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE : A506 IS A NO. 5 SIZE BAR AND P1101 IS A NO. 11 SIZE BAR.



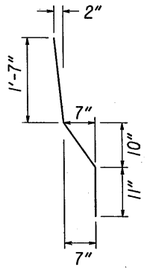
TYPE I



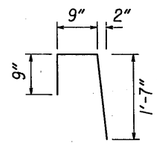
TYPE II



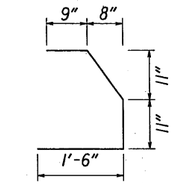
TYPE III



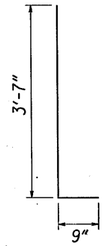
TYPE IV



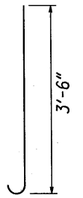
TYPE V



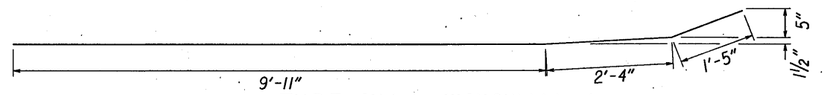
TYPE VI



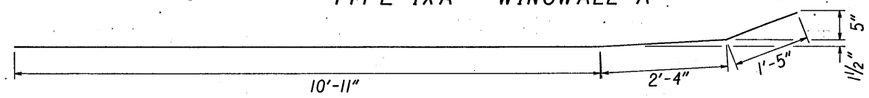
TYPE VII



TYPE VIII



TYPE IXA - WINGWALL A



TYPE IXB - WINGWALL B

ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60

WINGWALL A

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
W501	14	13'-8"	Str.				200
W502	22	2'-2½"	VII				51
W503	16	4'-½"	VI				67
W504	16	3'-11½"	VIII				66
W505	6	13'-8"	IXA				86
W506	6	3'-7"	Str.				22
W507	6	2'-10½"	X				18
							510

WINGWALL B

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
WB501	14	14'-8"	Str.				214
W502	22	2'-2½"	VII				51
W503	16	4'-½"	VI				67
W504	16	3'-11½"	VIII				66
WB505	6	14'-8"	IXB				92
W506	6	3'-7"	Str.				22
W507	6	2'-10½"	X				18
							530

DECK

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S601	24	24'-0"	Str.				865
							865

PARAPET FACING

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S505	48	13'-5"	Str.				672
S506	48	11'-9"	Str.				588
S507	36	6'-0"	Str.				225
S508	322	3'-5"	IV				1147
S509	322	2'-9"	V				924
							3556

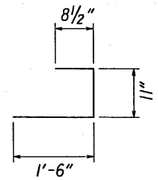
PARAPET REPLACEMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S501	20	2'-0"	Str.				42
S502	12	2'-3"	I				28
S503	12	7'-6½"	II				94
S504	12	2'-9"	III				34
							198

BACKWALL

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
B501	8	23'-8"	Str.				197
							197

GRAND TOTAL 5856



TYPE X

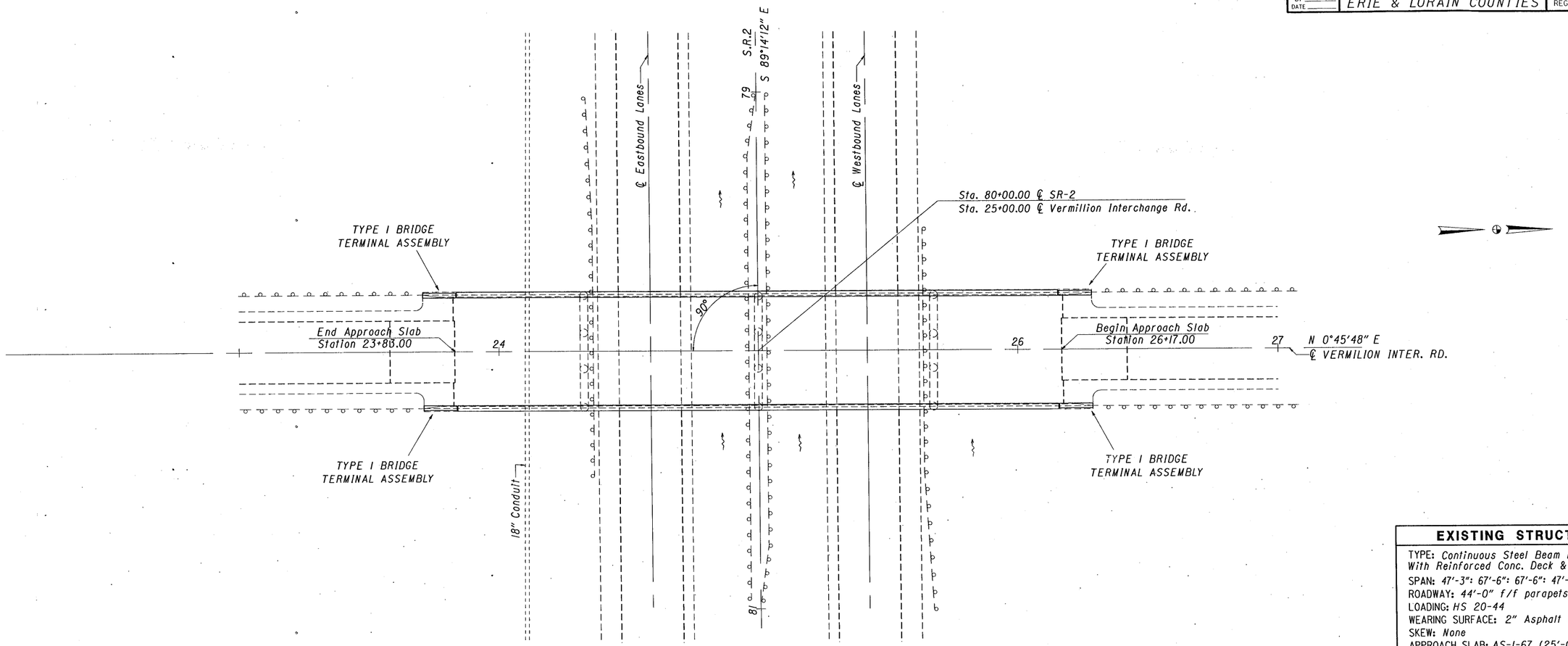
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

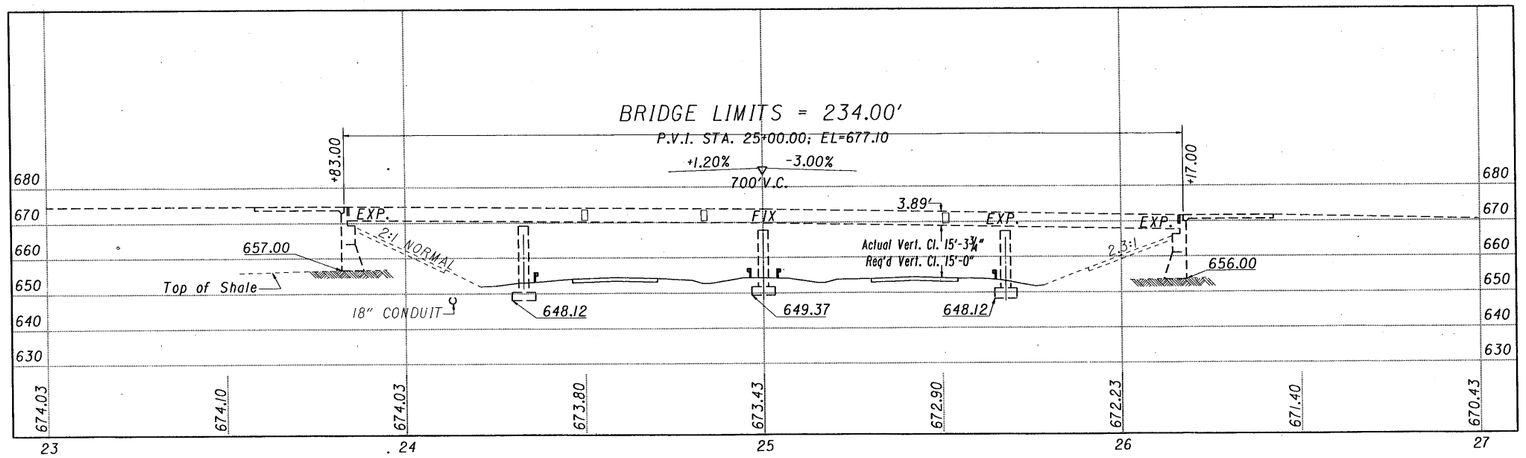
9/9

ESTIMATED QUANTITIES
REINFORCING STEEL
BRIDGE NO. LOR-2-0107
OVER VERMILION ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EH			J.S.B.	2-28-92	DGR

CALC BY DATE	ERI/LOR-2-30.51/0.00	OHIO	226
CHKD BY DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267





PROFILE ALONG ℄

EXISTING STRUCTURE

TYPE: *Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures*
SPAN: *47'-3": 67'-6": 67'-6": 47'-3"*
ROADWAY: *44'-0" f/f parapets*
LOADING: *HS 20-44*
WEARING SURFACE: *2" Asphalt Concrete*
SKEW: *None*
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *Tangent*
SUPERELEVATION: *None*

PROPOSED STRUCTURE

TYPE: *Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures*
SPAN: *47'-3": 67'-6": 67'-6": 47'-3"*
ROADWAY: *41'-10" T/T Parapets*
LOADING: *HS 20-44*
WEARING SURFACE: *2¼" Microsilica Concrete*
SKEW: *None*
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *Tangent*
SUPERELEVATION: *None*

OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION SECTION

1/1

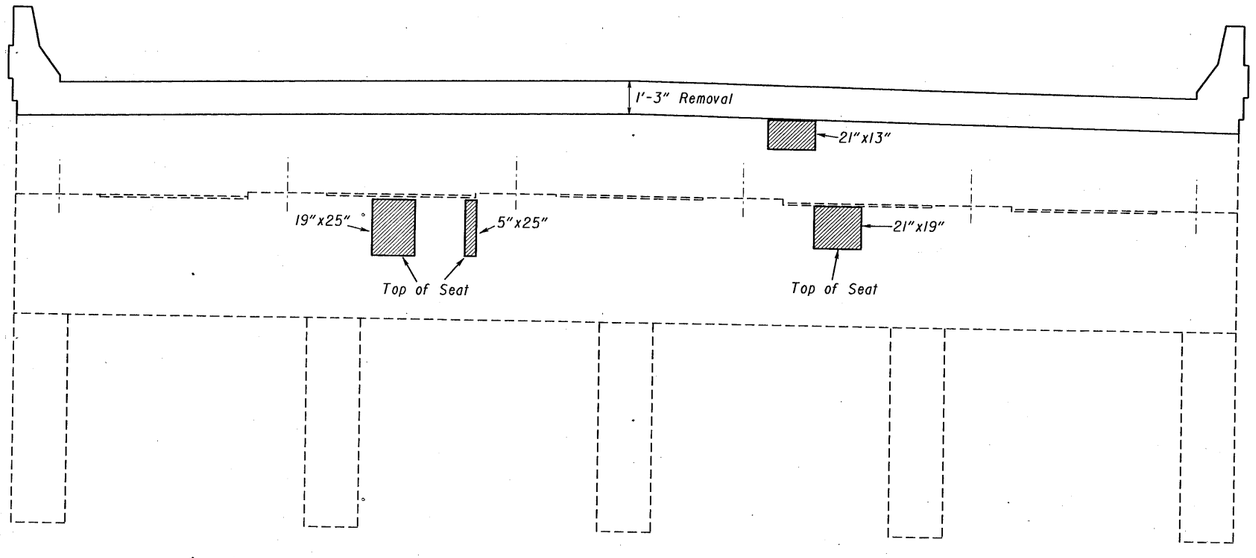
SITE PLAN

BRIDGE NO. LOR-2-0151
UNDER VERMILION INTERCHANGE ROAD

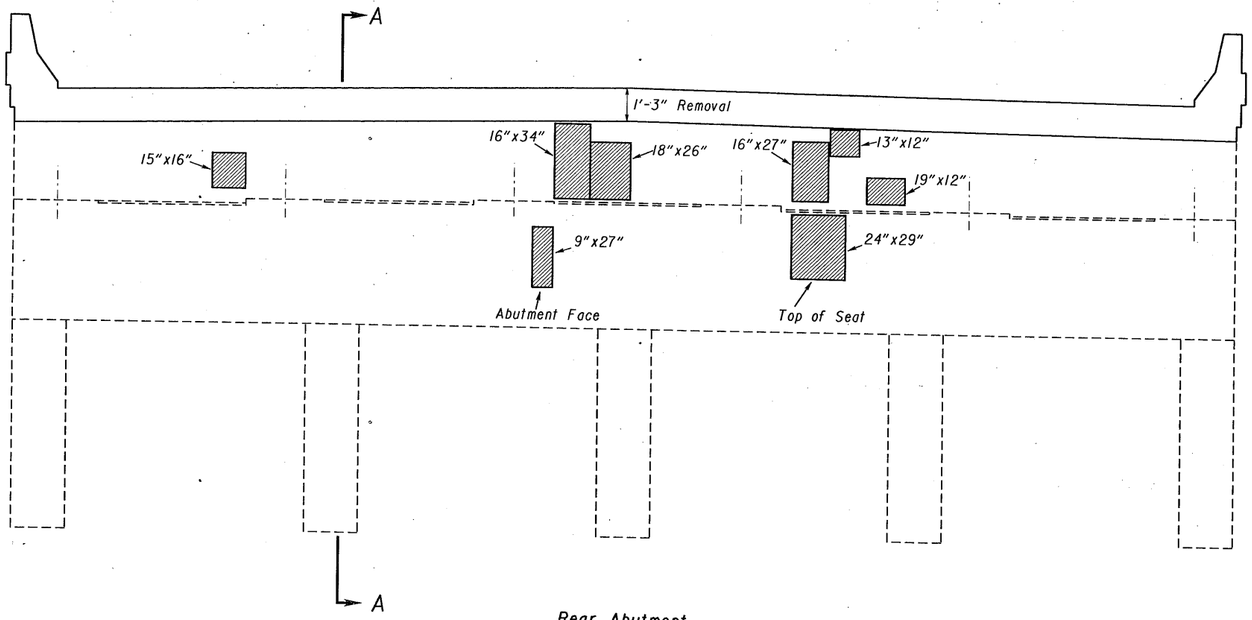
LORAIN COUNTY — S.R.-2
STA. 23+83.00 — STA. 26+17.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

CALC BY DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	227 267
CHKD BY DATE			

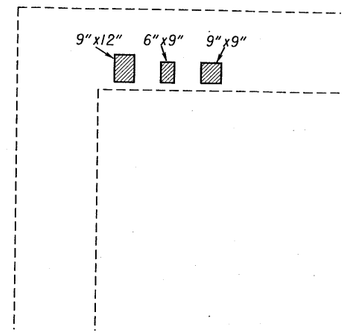


Foreword Abutment
Left Side

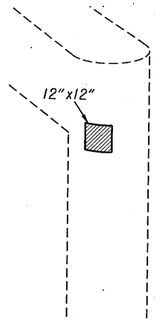


Rear Abutment
Right Side

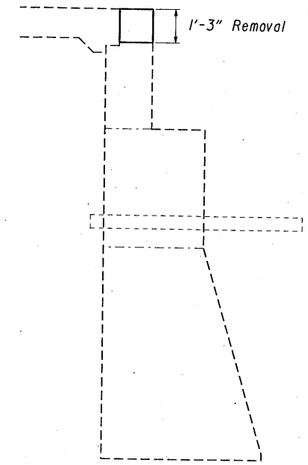
BACKWALL PATCHING AREAS SHOWN.
PAYMENT UNDER ITEM 519 - PATCHING CONCRETE STRUCTURES,
AS PER PLAN
STRUCTURE LOR-2-0151 3.60 SQ. YD.



Left Pier-Right Face @ Rear End



Right Pier-Rear End
Rear Column #1



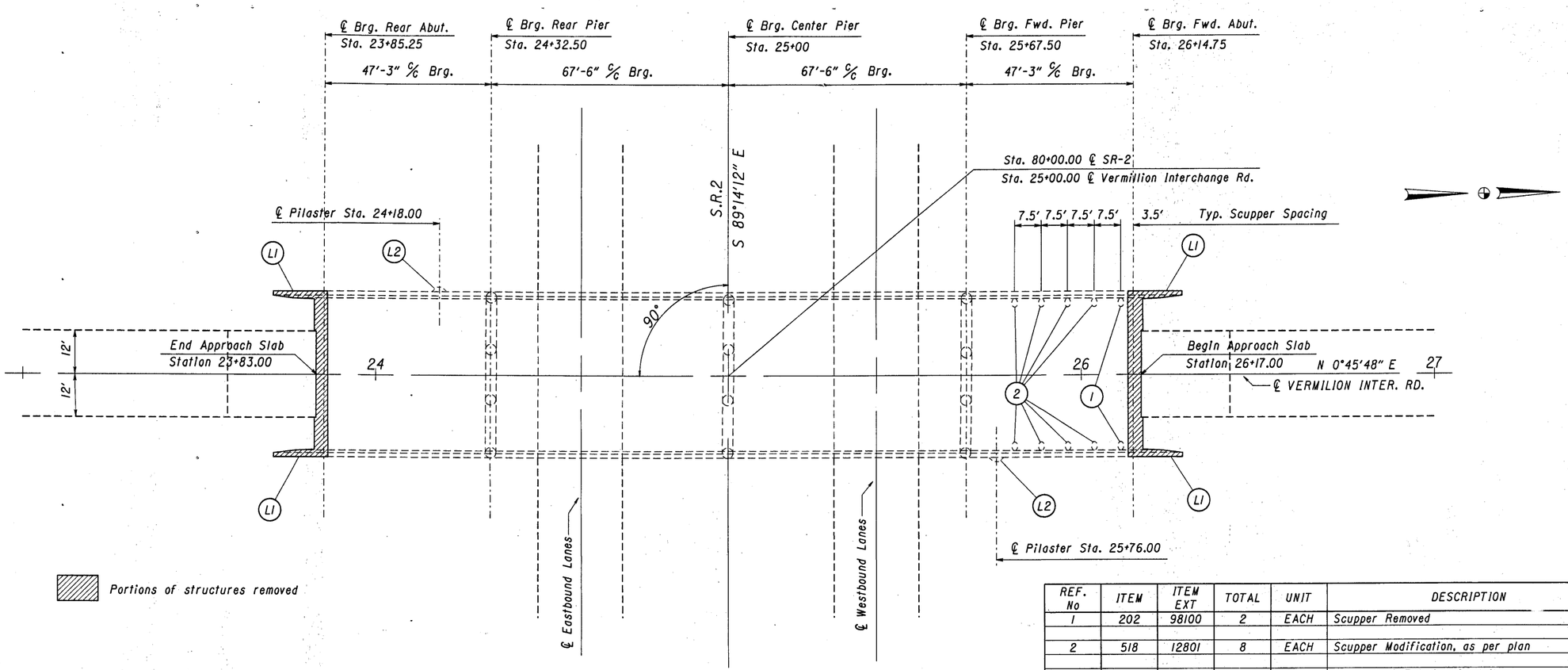
SECTION A-A

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

2/1

ABUTMENT PATCHING DETAILS

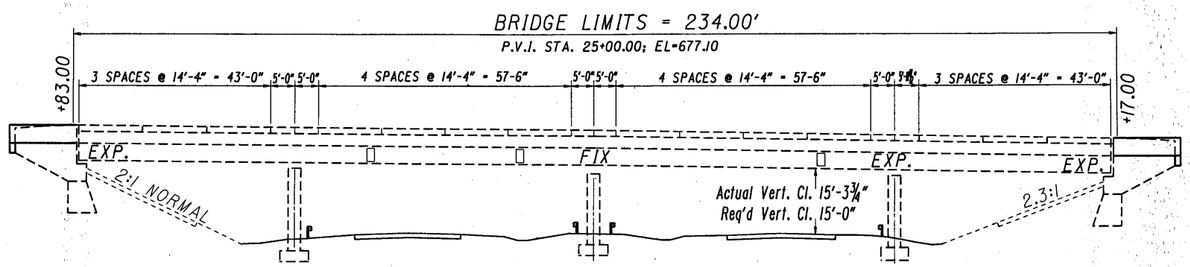
CALC BY DATE	ERI/LOR-2-30.51/0.00	OHIO	228
CHKD BY DATE	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE & LORAIN COUNTIES		



Portions of structures removed

REF. No	ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
1	202	98100	2	EACH	Scupper Removed
2	518	12801	8	EACH	Scupper Modification, as per plan
L1	SPECIAL	20298000	LUMP		Removal of Existing Conduit
L1	625	10670	60	EACH	Conduit, 2 inch. 713.04, as per plan
L2	SPECIAL	25401	8	EACH	Light Pole Anchor Bolt Extension
L2	625	29901	2	EACH	Junction Box, as per plan

Totals Carried to Bridge Estimated Quantities



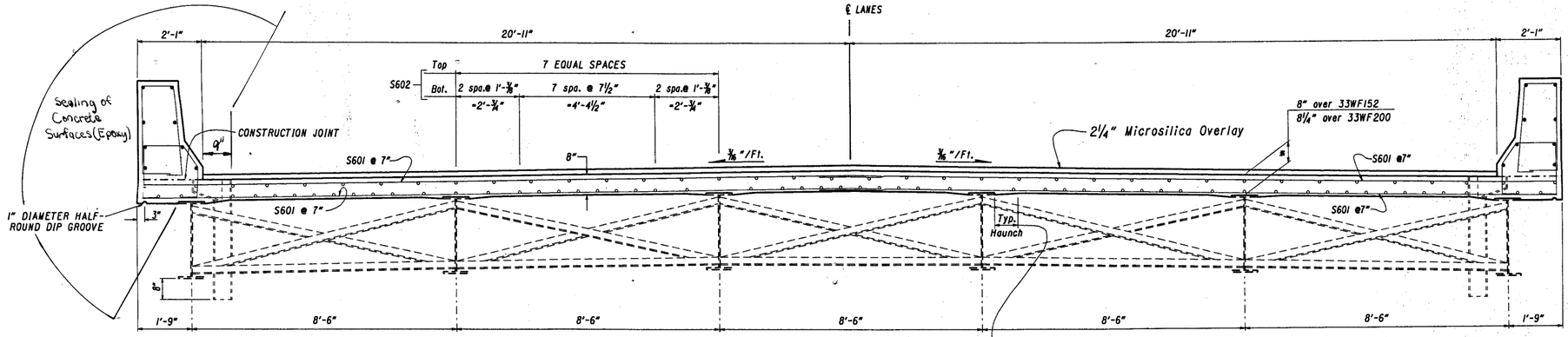
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

3/7

PARAPET DEFLECTION JOINT SCUPPER PLAN

BRIDGE NO. LOR-2-0151
UNDER VERMILION INTERCHANGE ROAD

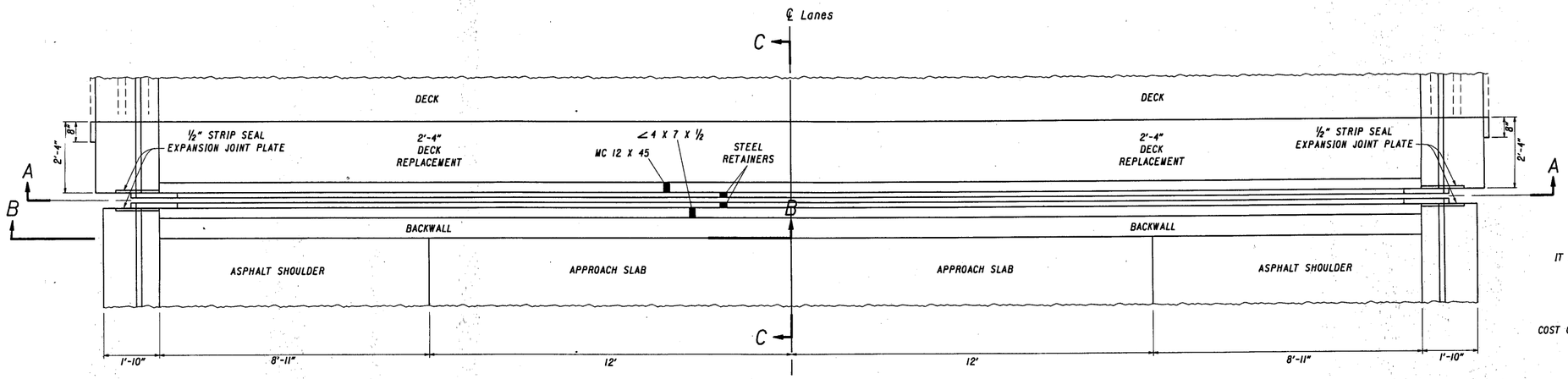
CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	229
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



SECTION A-A

A typical haunch width of 9" shall be used for computing quantity of concrete, however, the haunch width may vary between 6" & 12" provided that the slope be not more than 1:4 for a haunch less than 9" in width.

* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessar because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per sec. 511.18 of the Construction and Material Specifications.



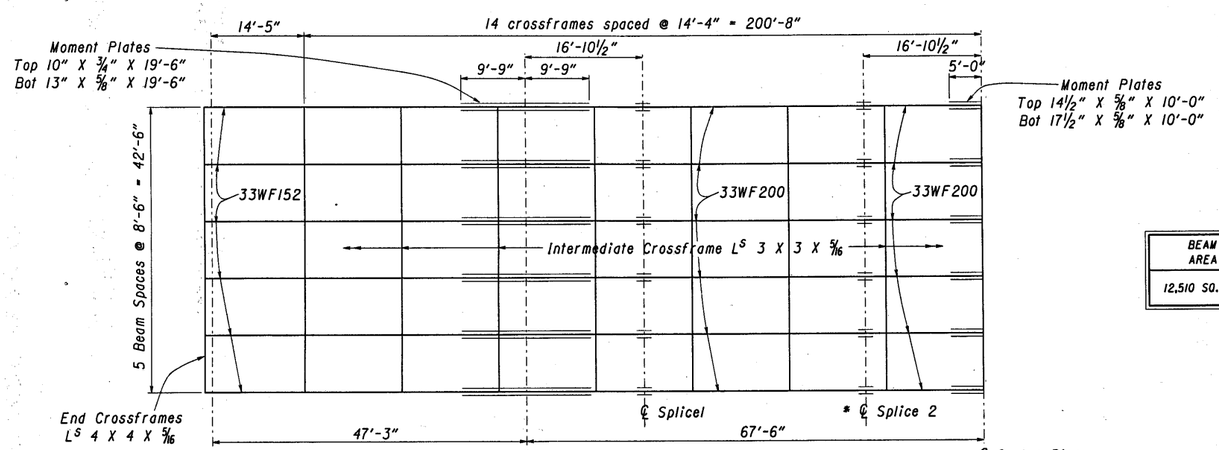
PLAN

IT IS THE FABRICATORS RESPONSIBILITY TO DETERMINE THE PLATE SIZE FOR THE STRIP SEAL EXPANSION JOINT PLATES AT THE DECK AND WINGWALL PARAPETS.

BRIDGE	SKEW	CURVE
LOR-2-0151	0° 0' 0"	TAN

COST OF PLATES SHALL BE INCLUDED IN ITEM 516 STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

FOR ADDITIONAL DETAILS SEE STANDARD DRAWING EXJ-4-87.



HALF FRAMING PLAN

* Symetrical About ℄ Center Pier Except Splice 2

BEAM AREA	% INCREASE
12,510 SQ. FT.	18.6

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

4/7

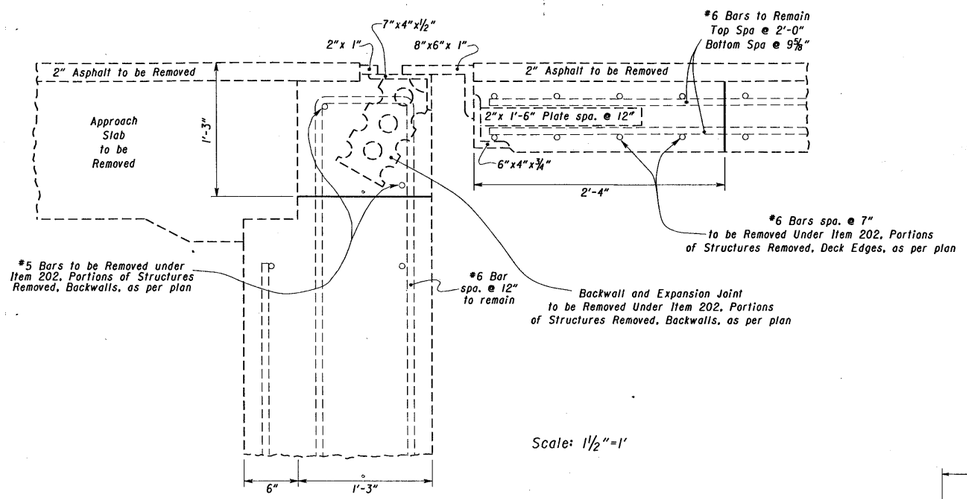
SUPERSTRUCTURE DETAILS FRAMING PLAN

BRIDGE NO. LOR-2-0151
UNDER VERMILION INTERCHANGE ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EAL			J.S.B.	2-28-92	DGR

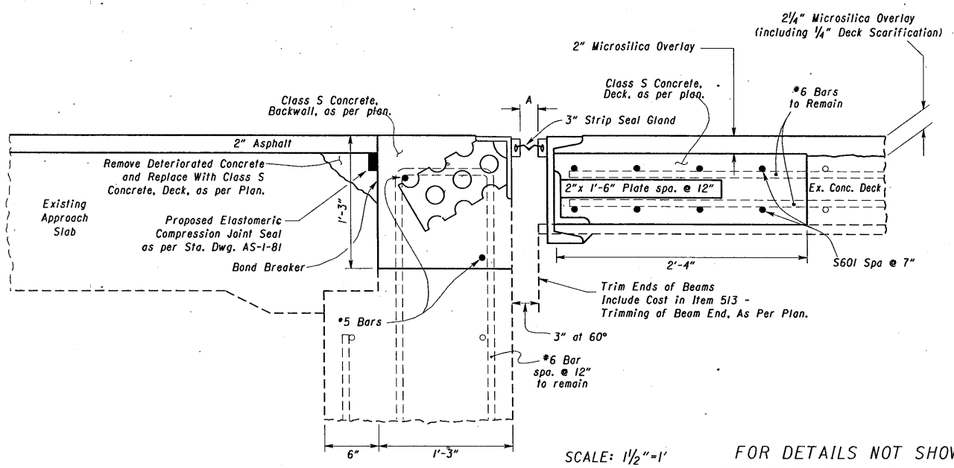
STRUCTURE LOR-2-0151

CALC BY	ERI/LOR-2-30.51/0.00	OHIO	230
CHKD BY	VARIOUS SECTIONS	FHWA REGION 5	267
DATE	ERIE & LORAIN COUNTIES		



Scale: 1½"=1'

EXISTING EXPANSION JOINT
SECTION C-C

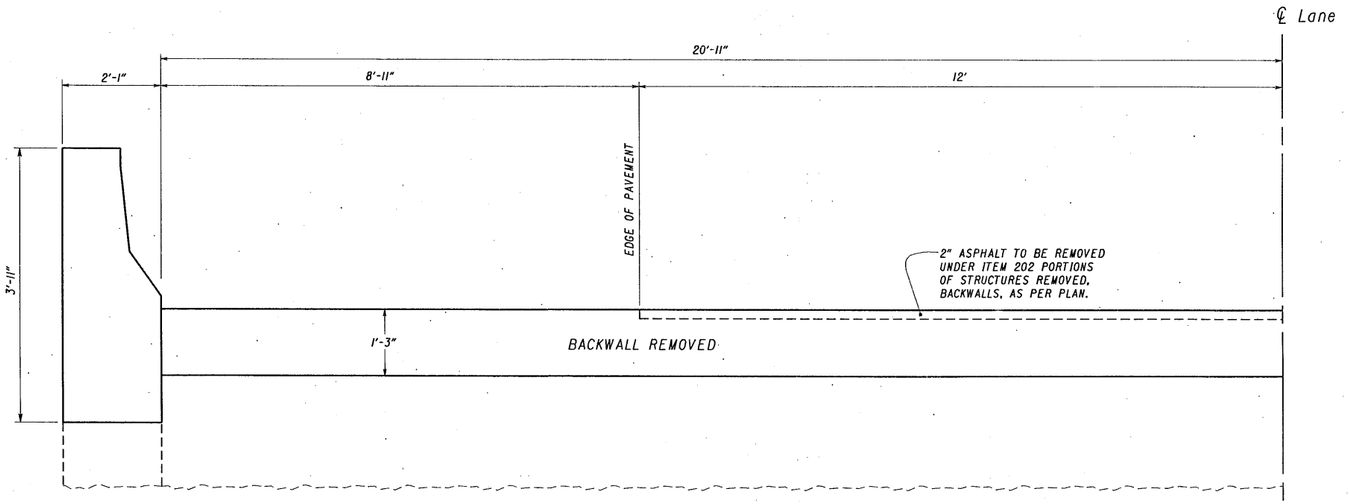


SCALE: 1½"=1'

FOR DETAILS NOT SHOWN
SEE STD. DRAWING EXJ-4-87

PROPOSED EXPANSION JOINT
SECTION C-C

Temperature	Distance A
90°	1½"
80°	1½"
70°	1½"
60°	1⅝"
50°	1²⁹⁄₃₂"
40°	1¹³⁄₁₆"
30°	1²⁹⁄₃₂"



SECTION B-B

SCALE: ¾"=1'

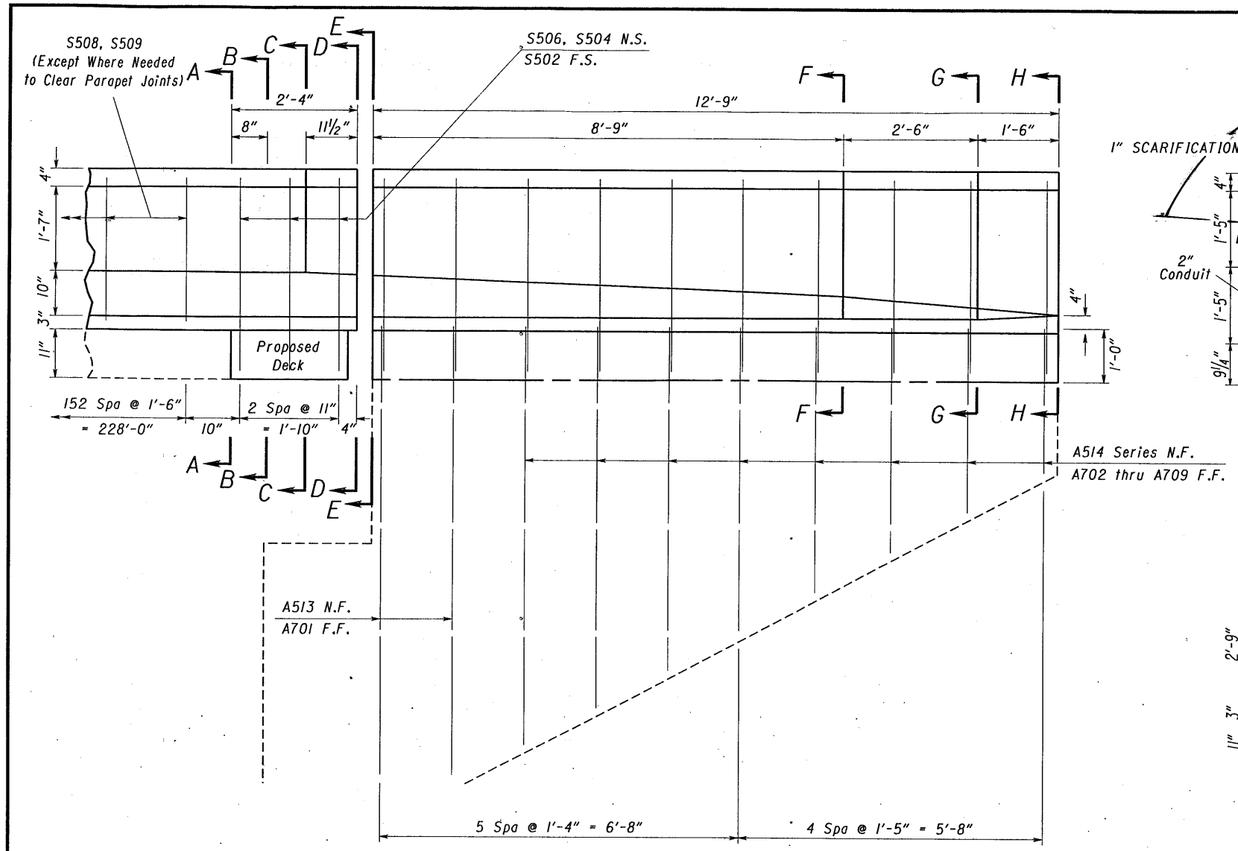
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

5/7

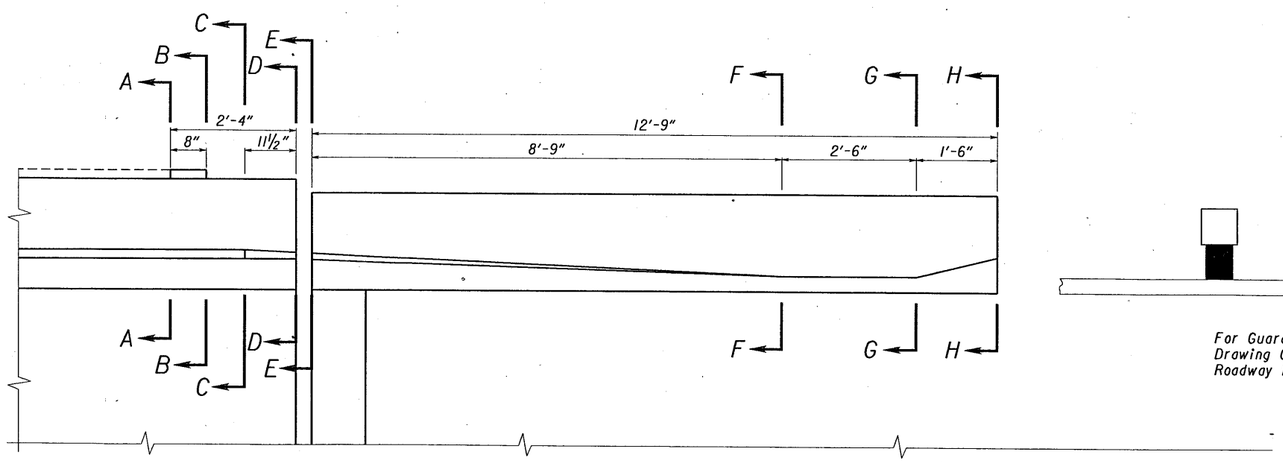
EXPANSION JOINT DETAILS
BACKWALL DETAILS

BRIDGE NO. LOR-2-0151
UNDER VERMILION INTERCHANGE ROAD

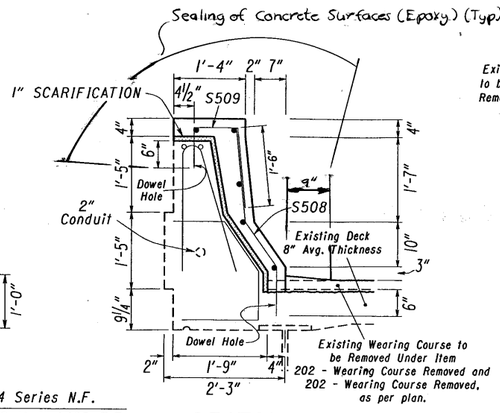
CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	231
CHKD BY / DATE	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE & LORAIN COUNTIES		



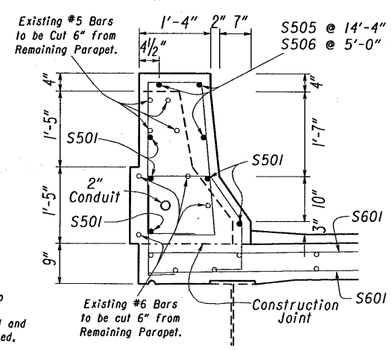
ELEVATION VIEW



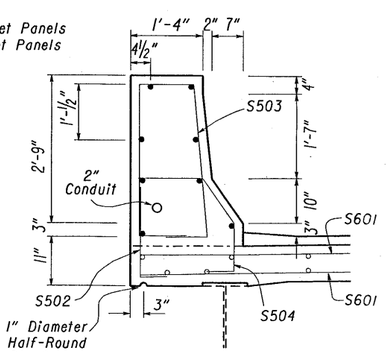
PLAN VIEW



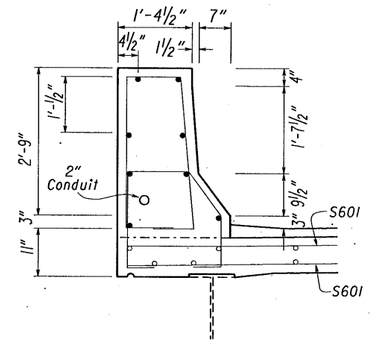
SECTION A-A



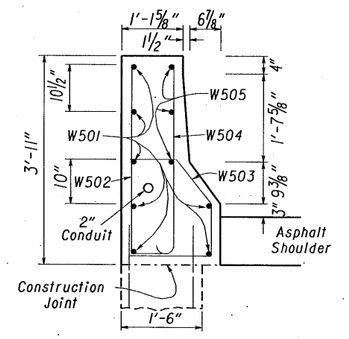
SECTION B-B



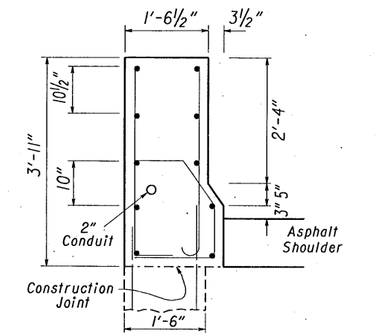
SECTION C-C



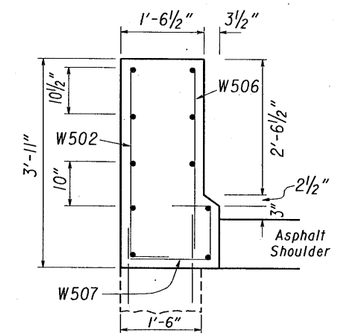
SECTION D-D



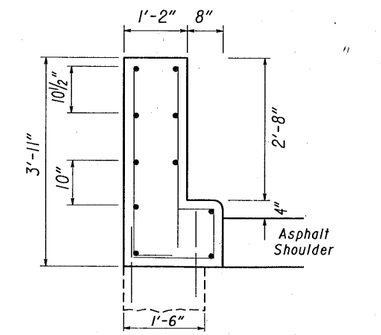
SECTION E-E



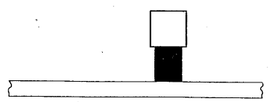
SECTION F-F



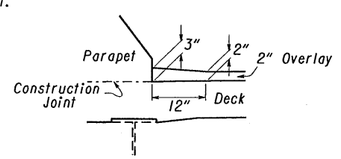
SECTION G-G



SECTION H-H



For Guardrail See Standard
Drawing GR-3.1 5-6-91 and
Roadway Plans For Pavement.



TYPICAL OVERLAY
at Curb Face

Scale: 3/4"=1'

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

6/7

WINGWALL DETAILS

BRIDGE NO. LOR-2-0151
UNDER VERMILION INTERCHANGE ROAD

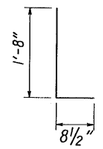
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EdL			J.S.B.	2-28-92	DGR

CALC BY / DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	232 267
CHKD BY / DATE			

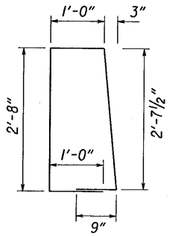
BRIDGE ESTIMATED QUANTITIES

SHEET NUMBER	ITEM	ITEM EXT	PLAN TOTAL	UNIT	DESCRIPTION
					STRUCTURE LOR-2-0151
	202	11301	9	CU. YD.	PORTIONS OF STRUCTURES REMOVED, WINGWALLS, AS PER PLAN.
	202	11301	5	CU. YD.	PORTIONS OF STRUCTURES REMOVED, BACKWALLS, AS PER PLAN.
	202	11301	6	CU. YD.	PORTIONS OF STRUCTURES REMOVED, DECK EDGES, AS PER PLAN.
	202	11301	1	CU. YD.	PORTIONS OF STRUCTURES REMOVED, PARAPETS, AS PER PLAN.
	202	23500	1105	SQ. YD.	WEARING COURSE REMOVED
	202	23501	1105	SQ. YD.	WEARING COURSE REMOVED, AS PER PLAN
2	202	98100	2	EACH	SCUPPER REMOVED
5834	509	15800	5834	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60
	510	11101	612	EACH	DOWEL HOLES, AS PER PLAN.
	511	34450	1.8	CU. YD.	CLASS S CONCRETE PARAPET REPLACEMENT, AS PER PLAN
	511	34450	12.5	CU. YD.	CLASS S CONCRETE WINGWALL, AS PER PLAN
	511	34450	5.3	CU. YD.	CLASS S CONCRETE BACKWALL, AS PER PLAN
	511	34450	6.0	CU. YD.	CLASS S CONCRETE DECK, AS PER PLAN
	511	34450	35.7	CU. YD.	CLASS S CONCRETE PARAPETS, AS PER PLAN
	SPECIAL	51267502	591	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
	513	21201	LUMP		TRIMMING OF BEAM END, AS PER PLAN
	516	11201	83.7	LIN. FT.	STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN
	SPECIAL	51400050	14836	SQ. FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400056	14836	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400060	14836	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400066	14836	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400504	100	MAN HR.	GRINDING FINS, TEARS AND SLIVERS
	SPECIAL	51400508	3240	LIN. FT.	GRINDING OF FLANGE EDGES
	SPECIAL	51426010	LUMP		NON-HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
	SPECIAL	51426020	LUMP		HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
8	518	12801	8	EACH	SCUPPER MODIFICATION, AS PER PLAN
3.60	519	11101	3.60	SQ. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN.
	SPECIAL	51922006	1088	SQ. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (2¼" THICK) (SEE PROPOSAL NOTE).
	SPECIAL	51922100	21	CU. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) (SEE PROPOSAL NOTE)
	SPECIAL	51922300	LUMP		TEST SLAB (SEE PROPOSAL NOTE)
	607	60720100	468	LIN. FT.	FENCE, TYPE CL, TPV WITH 6' FABRIC WIDTH
					LIGHTING
LUMP	SPECIAL	20298000	LUMP		REMOVAL OF EXISTING CONDUIT
8	SPECIAL	10670	8	EACH	LIGHT POLE ANCHOR BOLT EXTENSION
60	625	25401	60	LIN. FT.	CONDUIT 2 INCH 713.04, AS PER PLAN
2	625	29901	2	EACH	JUNCTION BOX, AS PER PLAN

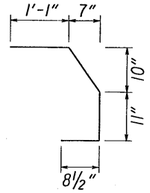
BAR SIZE : THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE : A506 IS A NO. 5 SIZE BAR AND P1101 IS A NO. 11 SIZE BAR.



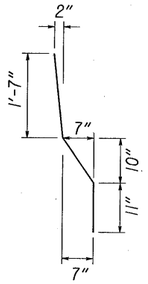
TYPE I



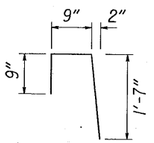
TYPE II



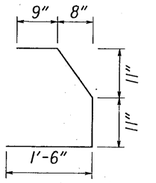
TYPE III



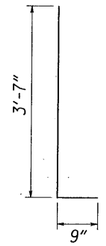
TYPE IV



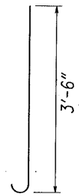
TYPE V



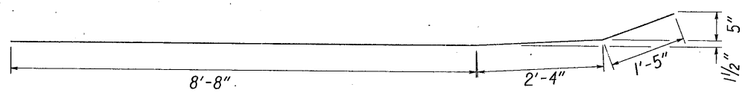
TYPE VI



TYPE VII



TYPE VIII



TYPE IX

ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60

WING WALLS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
W501	28	12'-5"	Str.				363
W502	40	2'-2½"	VII				92
W503	28	4'-½"	VI				118
W504	28	3'-11½"	VIII				116
W505	12	12'-5"	IX				155
W506	12	3'-7"	Str.				45
W507	12	2'-10½"	X				36
							925

PARAPET FACING

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S505	84	14'-0"	Str.				1227
S506	36	14'-8"	Str.				175
S508	306	3'-5"	IV				1090
S509	306	2'-9"	V				878
							3370

PARAPET REPLACEMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S501	20	2'-0"	Str.				42
S502	12	2'-3"	I				28
S503	12	7'-6½"	II				94
S504	12	2'-9"	III				34
							198

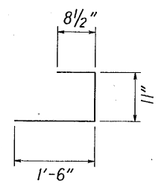
DECK

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S601	32	23'-10"	Str.				1146
							1146

BACKWALL

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
B501	8	23'-5"	Str.				195
							195

GRAND TOTAL 5834



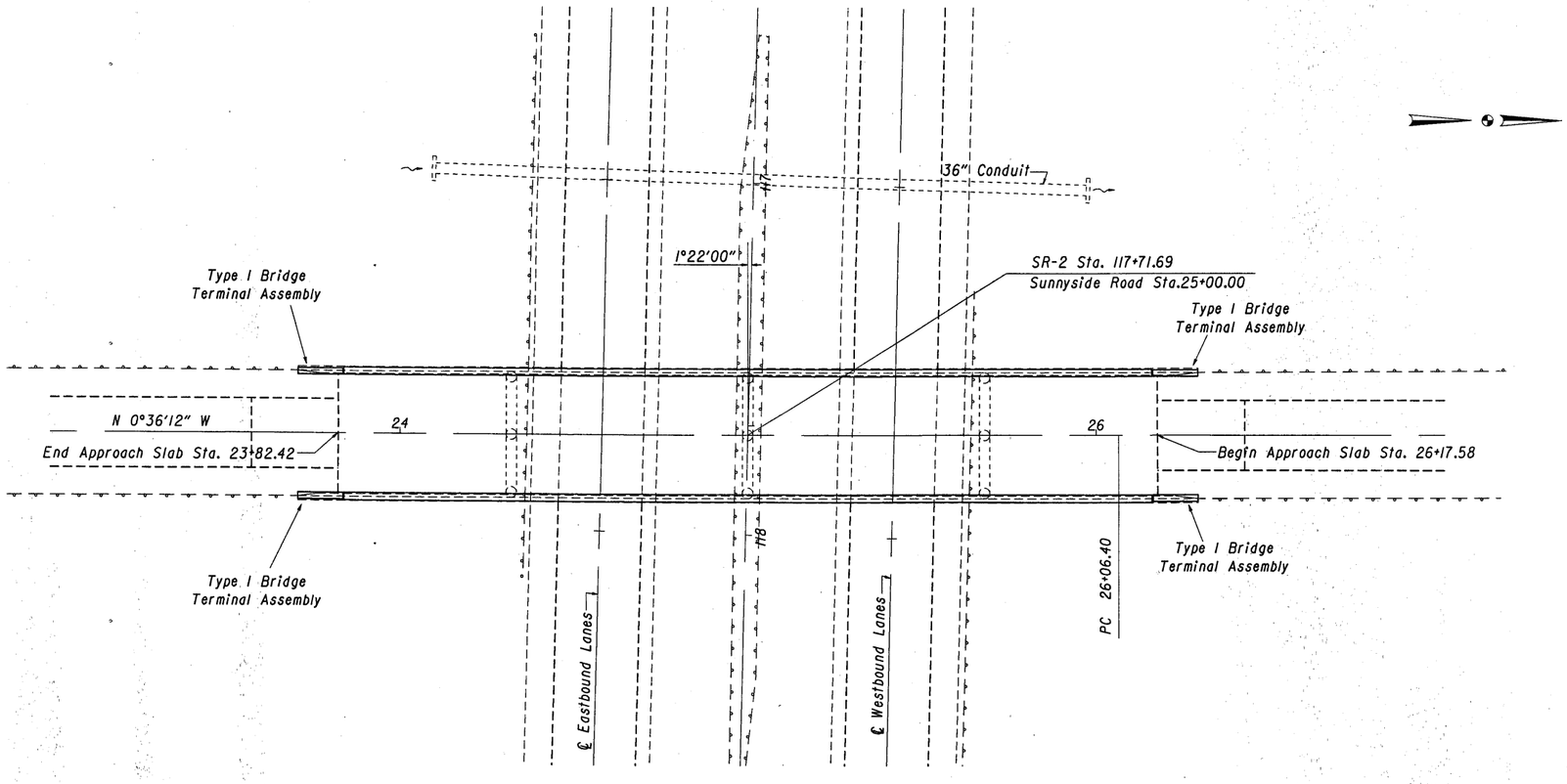
TYPE X

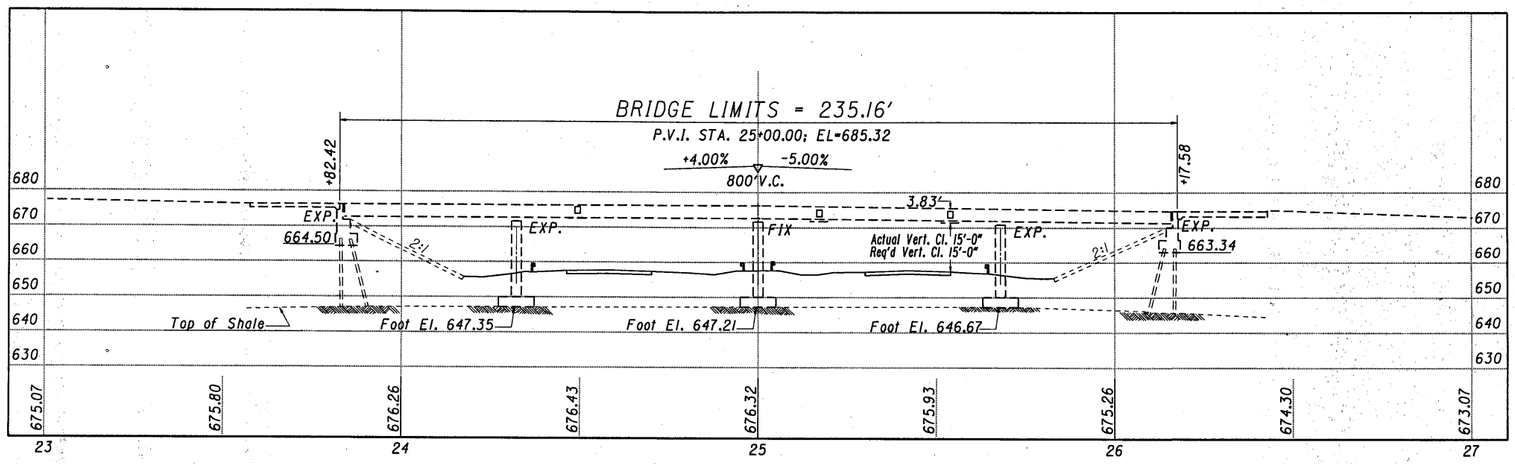
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

7/7

ESTIMATED QUANTITIES
REINFORCING STEEL
BRIDGE NO. LOR-2-0151
UNDER VERMILION INTERCHANGE ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EDL			J.S.B.	2-28-92	DGR





PROFILE ALONG ℄ SUNNYSIDE RD.

EXISTING STRUCTURE

TYPE: *Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures*
SPAN: *47'-4": 68'-0": 68'-0": 47'-4" ℅ Brgs.*
ROADWAY: *36'-0" f/f parapets*
LOADING: *HS 20-44*
WEARING SURFACE: *2" Asphalt Concrete*
SKEW: *None*
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *Tangent*
SUPERELEVATION: *None*

PROPOSED STRUCTURE

TYPE: *Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures*
SPAN: *47'-4": 68'-0": 68'-0": 47'-4" ℅ Brgs.*
ROADWAY: *33'-10" T/T Parapets*
LOADING: *HS 20-44*
WEARING SURFACE: *2¼" Microsilica Concrete*
SKEW: *None*
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *Tangent*
SUPERELEVATION: *None*

OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION SECTION

1/7

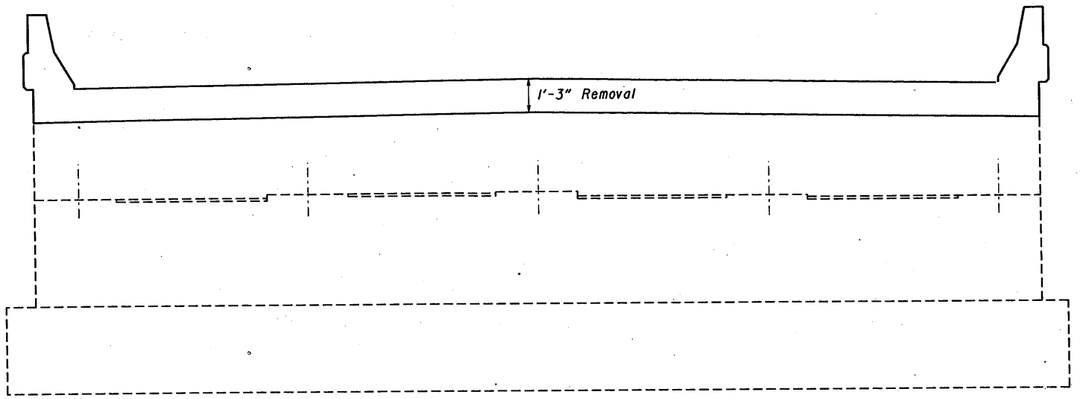
SITE PLAN

BRIDGE NO. LOR-2-0223
UNDER SUNNYSIDE ROAD

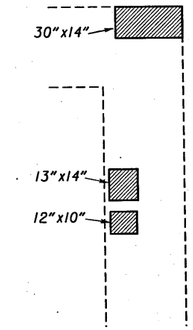
ERIE COUNTY — S.R.-2
STA. 23+82.42 — STA. 26+17.58

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EGF			J.S.B.	2-28-92	DGR

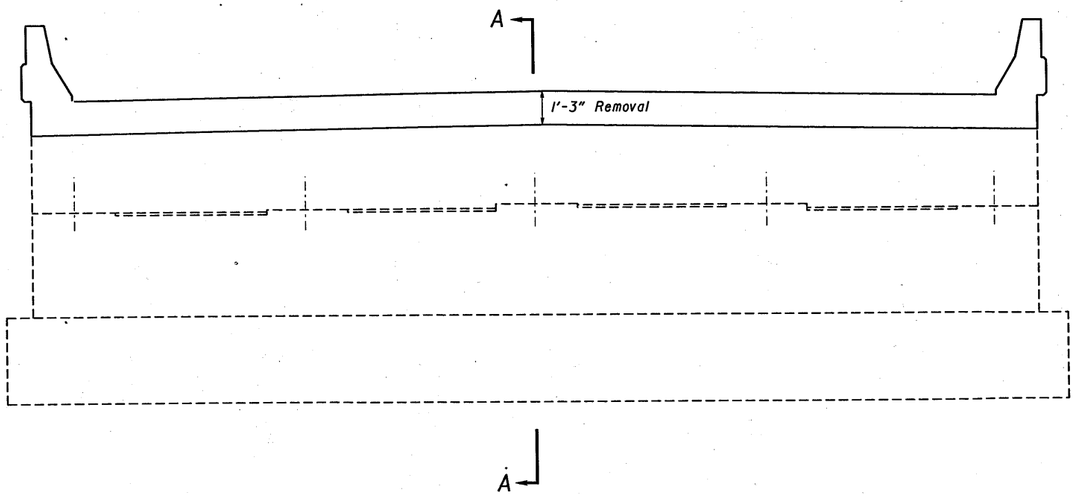
SITE PLAN



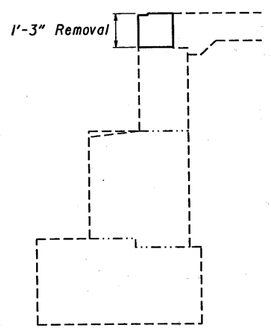
BACKWALL PATCHING AREAS SHOWN.
PATMENT UNDER ITEM 519 - PATCHING CONCRETE STRUCTURES,
AS PER PLAN
STRUCTURE LOR-2-0223 0.56 SQ. YD.



Middle Pier-Rear End



ELEVATION



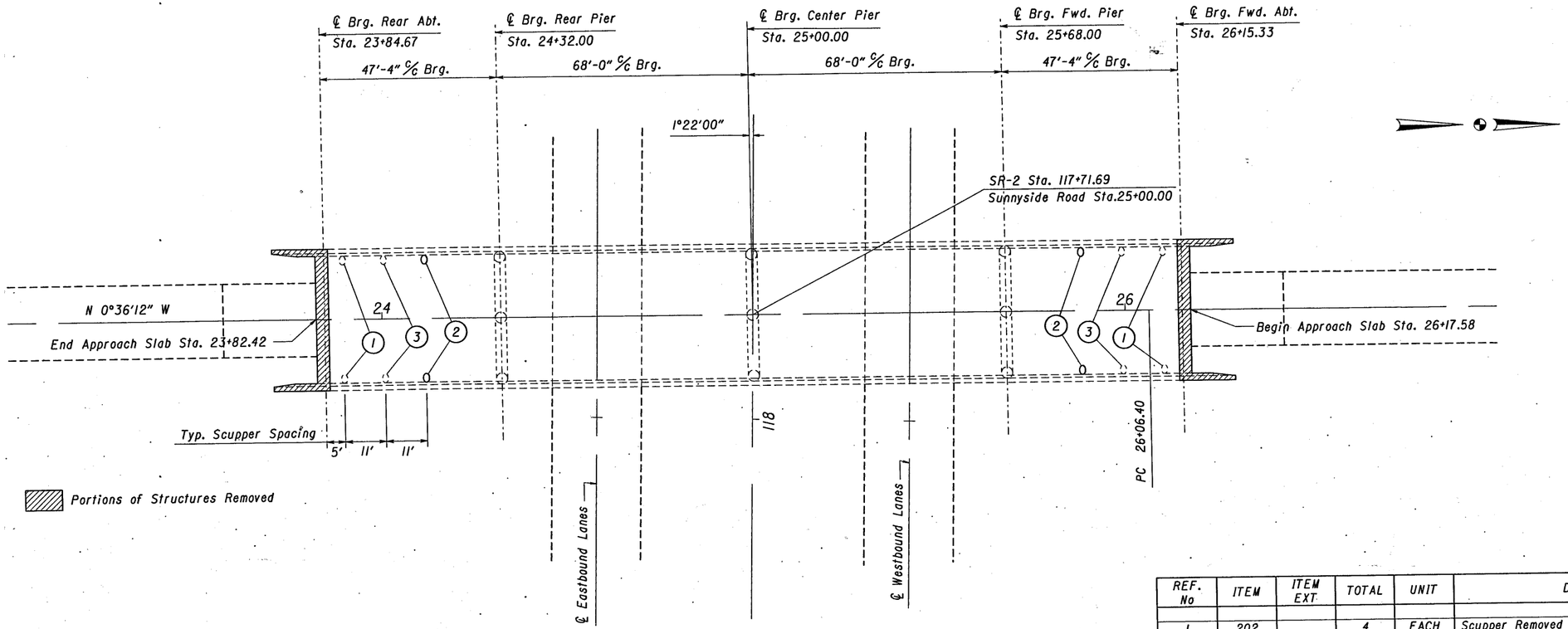
SECTION A-A

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

2/7

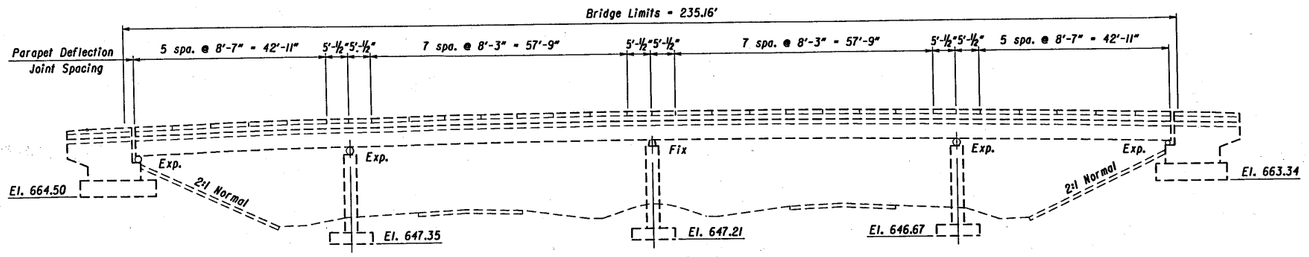
ABUTMENT PATCHING DETAILS
BRIDGE NO. LOR-2-0223
UNDER SUNNYSIDE ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR		Edt		J.S.B.	2-28-92	DGR



REF. No	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
1	202		4	EACH	Scupper Removed
2	518		4	EACH	Scuppers, including Supparts, as per plan
3	518		4	EACH	Scupper Modification, as per plan

Totals Carried to Bridge Estimated Quantities



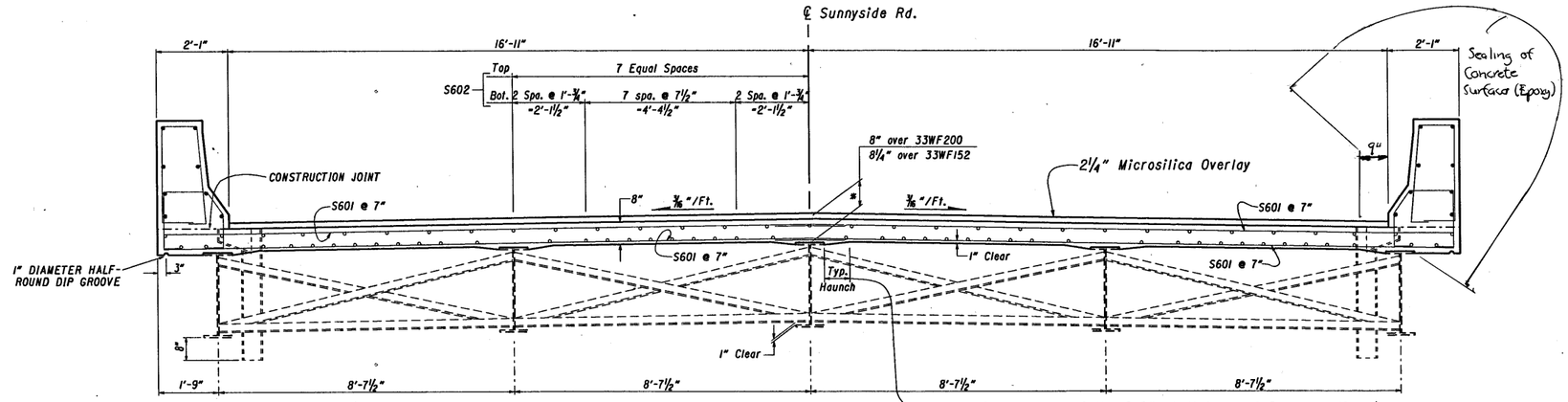
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

3/7

PARAPET DEFLECTION JOINT SCUPPER PLAN

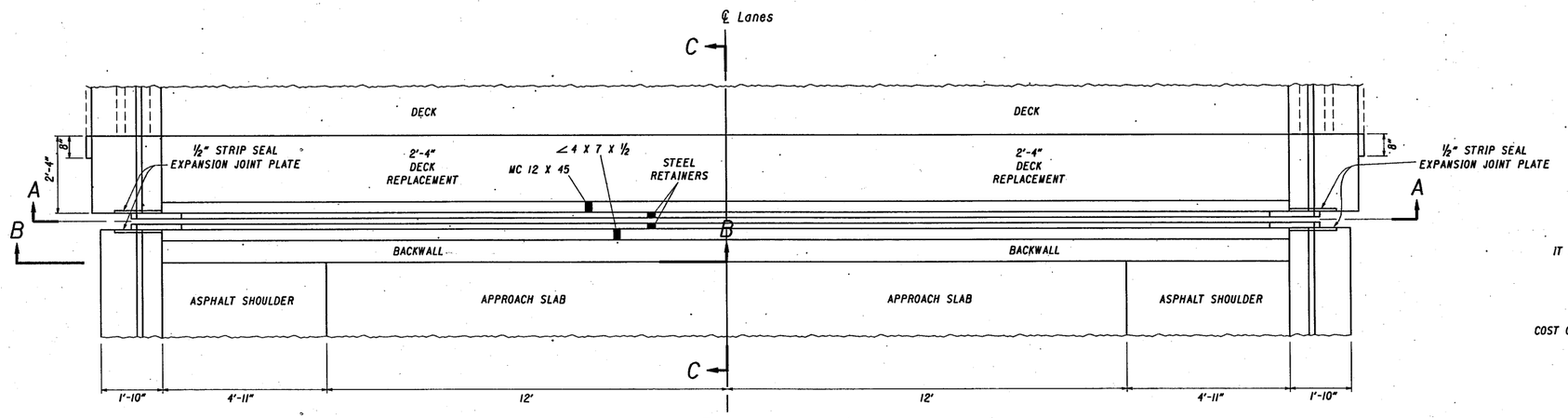
BRIDGE NO. LOR-2-0223
UNDER SUNNYSIDE ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EA			J.S.B.	2-28-92	DGR



* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessar because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per sec. 511.18 of the Construction and Material Specifications.

A typical haunch width of 9" shall be used for computing quantity of concrete, however, the haunch width may vary between 6" & 12" provided that the slope be not more than 1:4 for a haunch less than 9" in width.

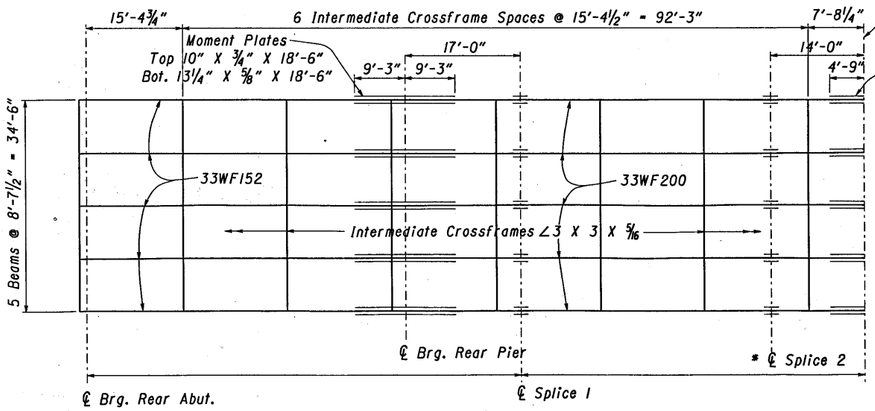


IT IS THE FABRICATORS RESPONSIBILITY TO DETERMINE THE PLATE SIZE FOR THE STRIP SEAL EXPANSION JOINT PLATES AT THE DECK AND WINGWALL PARAPETS.

BRIDGE	SKEW	CURVE
LOR-2-0223	0° 0' 0"	TAN

COST OF PLATES SHALL BE INCLUDED IN ITEM 516 STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

FOR ADDITIONAL DETAILS SEE STANDARD DRAWING EXJ-4-87.



BEAM AREA	% INCREASE
10,711 SQ. FT.	16.9

Splice *1 33WF152 with 33WF200
Splice *2 33WF200 with 33WF200
* Splice *2 is only on second span.

HALF FRAMING PLAN

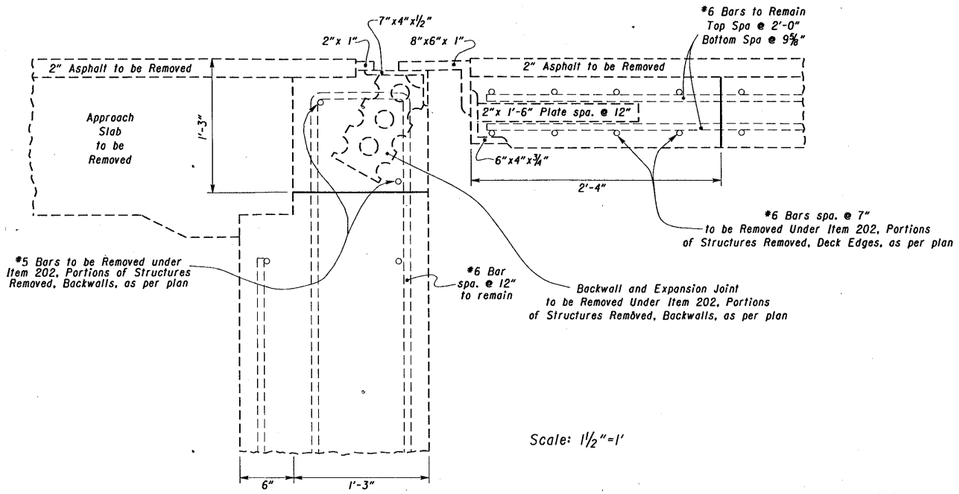
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

4/7

SUPERSTRUCTURE DETAILS FRAMING PLAN

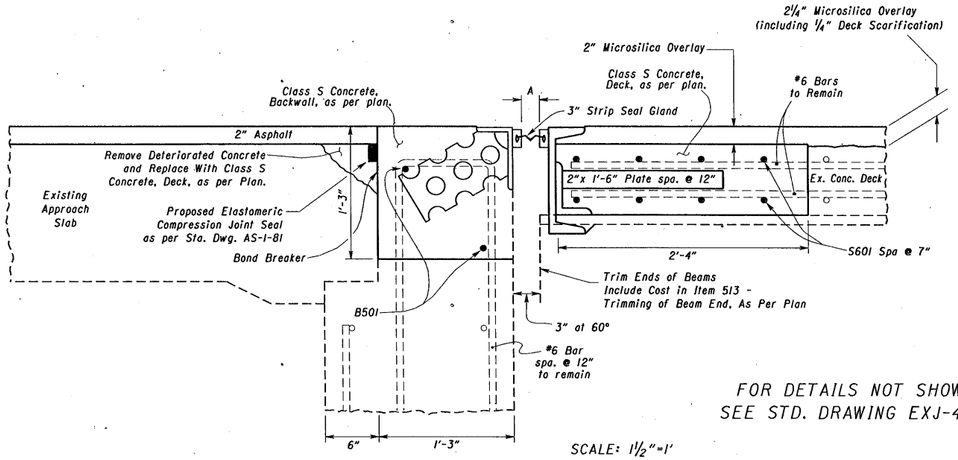
BRIDGE NO. LOR-2-0223
UNDER SUNNYSIDE ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EGL			J.S.B.	2-28-92	DGR



Scale: 1 1/2"=1'

EXISTING EXPANSION JOINT
SECTION C-C

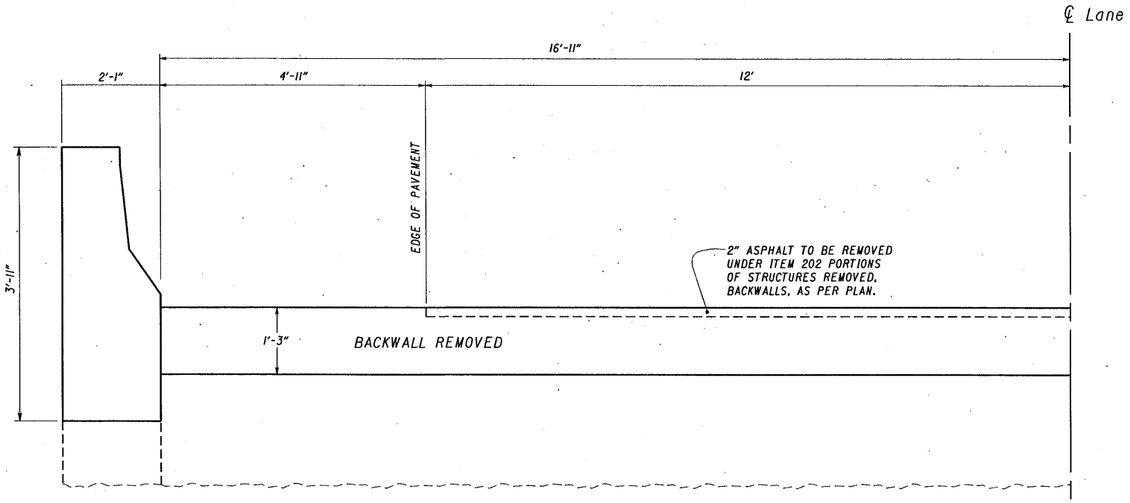


FOR DETAILS NOT SHOWN
SEE STD. DRAWING EXJ-4-87

SCALE: 1 1/2"=1'

PROPOSED EXPANSION JOINT
SECTION C-C

Temperature	Distance A
90°	1 1/2"
80°	1 1/2"
70°	1 1/2"
60°	1 5/8"
50°	1 29/32"
40°	1 13/16"
30°	1 29/32"



SECTION B-B

SCALE: 3/4"=1'

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

5/7

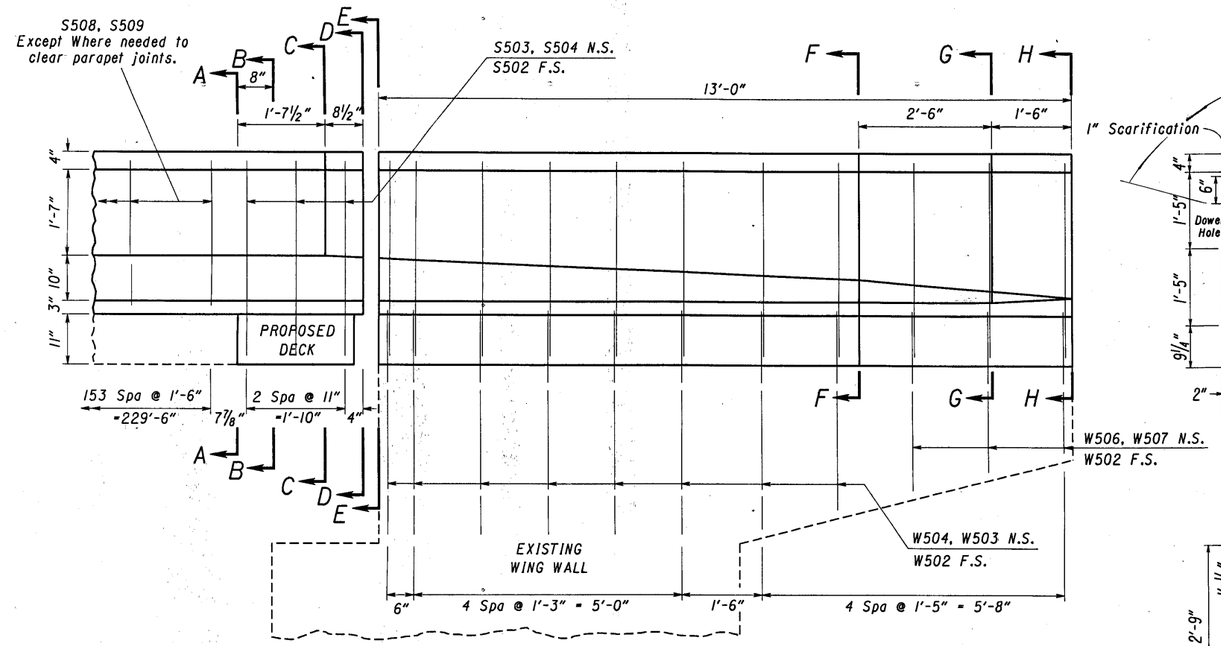
EXPANSION JOINT DETAILS
BACKWALL DETAILS

BRIDGE NO. LOR-2-0223
UNDER SUNNYSIDE ROAD

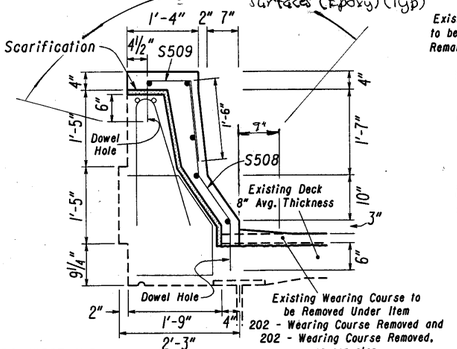
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EAL			J.S.B.	2-28-92	DGR

STRUCTURE LOR-2-0223

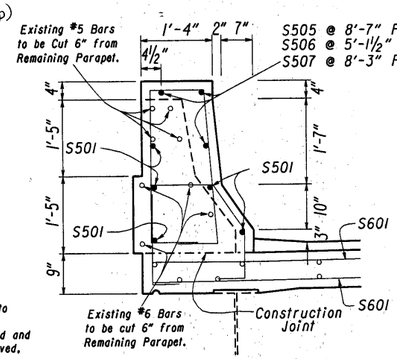
CALC BY DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO	238
CHKD BY DATE		FHWA REGION 5	267



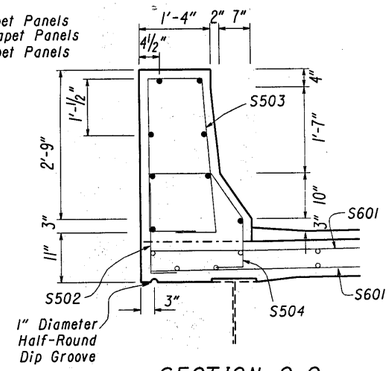
ELEVATION VIEW



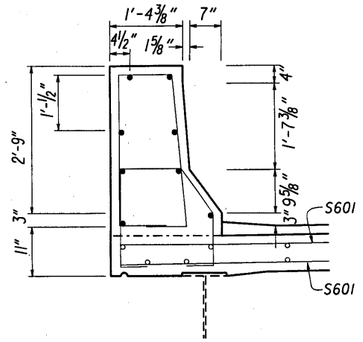
SECTION A-A



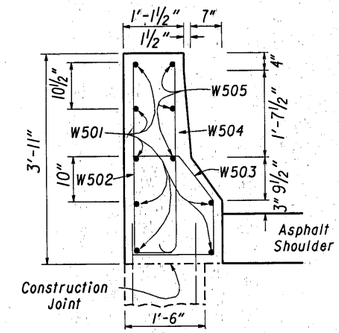
SECTION B-B



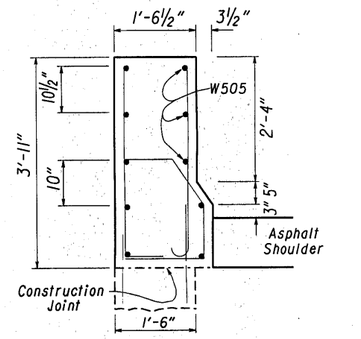
SECTION C-C



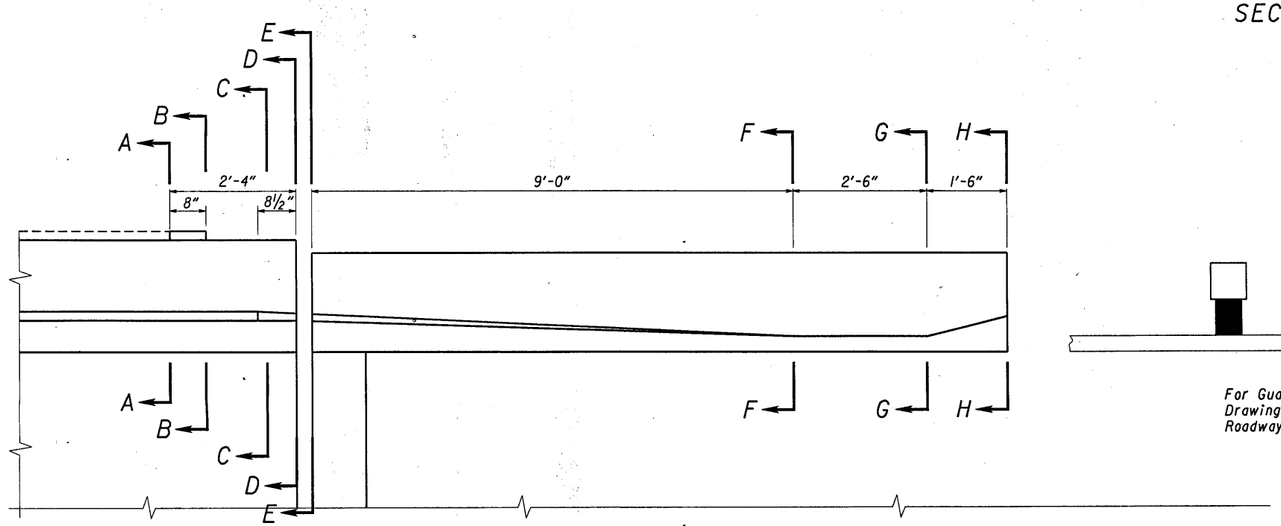
SECTION D-D



SECTION E-E

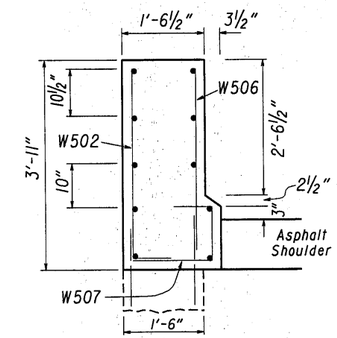


SECTION F-F

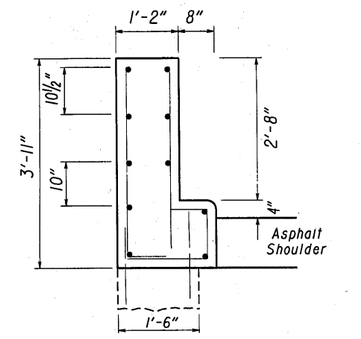


PLAN VIEW

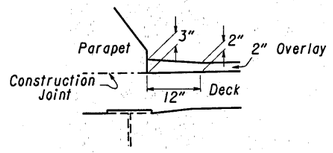
For Guardrail See Standard Drawing GR-3.1 5-6-91 and Roadway Plans For Pavement.



SECTION G-G



SECTION H-H



TYPICAL OVERLAY at Curb Face

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

6/7

WINGWALL DETAILS

BRIDGE NO. LOR-2-0223
UNDER SUNNYSIDE ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EAT			J.S.B.	2-28-92	DGR

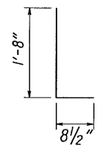
STRUCTURE LOR-2-0223

CALC BY / DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO	239
CHKD BY / DATE		FHWA REGION 5	267

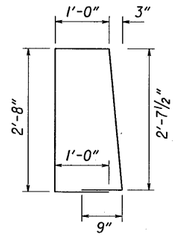
BRIDGE ESTIMATED QUANTITIES

SHEET NUMBER	ITEM	ITEM EXT	PLAN TOTAL	UNIT	DESCRIPTION
2 3 7					
					STRUCTURE LOR-2-0223
	202	11301	9	CU. YD.	PORTIONS OF STRUCTURES REMOVED, WINGWALLS, AS PER PLAN.
	202	11301	4	CU. YD.	PORTIONS OF STRUCTURES REMOVED, BACKWALLS, AS PER PLAN.
	202	11301	5	CU. YD.	PORTIONS OF STRUCTURES REMOVED, DECK EDGES, AS PER PLAN.
	202	11301	1	CU. YD.	PORTIONS OF STRUCTURES REMOVED, PARAPETS, AS PER PLAN.
	202	23500	901	SQ. YD.	WEARING COURSE REMOVED
	202	23501	901	SQ. YD.	WEARING COURSE REMOVED, AS PER PLAN
4	202	98100	4	EACH	SCUPPER REMOVED
5644	509	15800	5644	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60
	510	11101	616	EACH	DOWEL HOLES, AS PER PLAN.
	511	34450	1.8	CU. YD.	CLASS S CONCRETE PARAPET REPLACEMENT, AS PER PLAN
	511	34450	11.8	CU. YD.	CLASS S CONCRETE WINGWALL, AS PER PLAN
	511	34450	4.4	CU. YD.	CLASS S CONCRETE BACKWALL, AS PER PLAN
	511	34450	4.9	CU. YD.	CLASS S CONCRETE DECK, AS PER PLAN
	511	34450	35.9	CU. YD.	CLASS S CONCRETE PARAPETS, AS PER PLAN
	SPECIAL	51267502	517	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
	513	21201	LUMP		TRIMMING OF BEAM END, AS PER PLAN
	516	11201	67.7	LIN. FT.	STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN
	SPECIAL	51400050	12522	SQ. FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400056	12522	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400060	12522	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400066	12522	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400504	100	MAN HR.	GRINDING FINS, TEARS AND SLIVERS
	SPECIAL	51400508	3400	LIN. FT.	GRINDING OF FLANGE EDGES
	SPECIAL	51426010	LUMP		NON-HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
	SPECIAL	51426020	LUMP		HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
4	518	12201	4	EACH	SCUPPER, INCLUDING SUPPORTS, AS PER PLAN
4	518	12801	4	EACH	SCUPPER MODIFICATION, AS PER PLAN
0.56	519	11101	0.56	SQ. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN.
	SPECIAL	51922006	884	SQ. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (2¼" THICK) (SEE PROPOSAL NOTE).
	SPECIAL	51922100	12	CU. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) (SEE PROPOSAL NOTE)
	SPECIAL	51922300	LUMP		TEST SLAB (SEE PROPOSAL NOTE)
	607	60720100	470	LIN. FT.	FENCE, TYPE CL, TPV WITH 6' FABRIC WIDTH

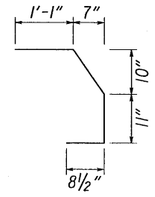
BAR SIZE : THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE : A506 IS A NO. 5 SIZE BAR AND P1101 IS A NO. 11 SIZE BAR.



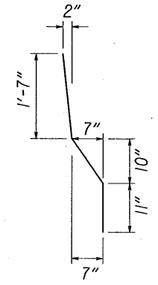
TYPE I



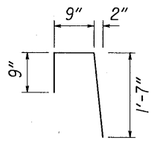
TYPE II



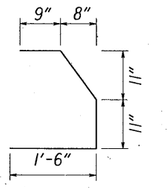
TYPE III



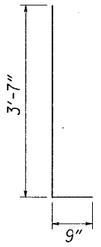
TYPE IV



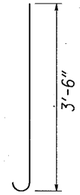
TYPE V



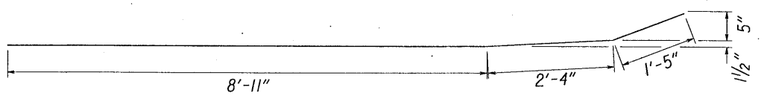
TYPE VI



TYPE VII



TYPE VIII



TYPE IX

ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60

WING WALLS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
W501	28	12'-8"	Str.				370
W502	44	2'-2½"	VII				101
W503	32	4'-½"	VI				135
W504	32	3'-11½"	VIII				132
W505	12	12'-8"	IX				146
W506	12	3'-7"	Str.				45
W507	12	2'-10½"	X				36
							965

PARAPET FACING

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S505	60	8'-2"	Str.				511
S506	36	4'-9"	Str.				178
S507	84	7'-11"	Str.				694
S508	308	3'-5"	IV				1098
S509	308	2'-9"	V				883
							3364

PARAPET REPLACEMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S501	20	2'-0"	Str.				42
S502	12	2'-3"	I				28
S503	12	7'-6½"	II				94
S504	12	2'-9"	III				34
							198

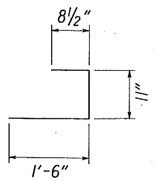
DECK

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S601	32	19'-10½"	Str.				955
							955

BACKWALL

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
B501	8	19'-5"	Str.				162
							162

GRAND TOTAL 5644



TYPE X

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

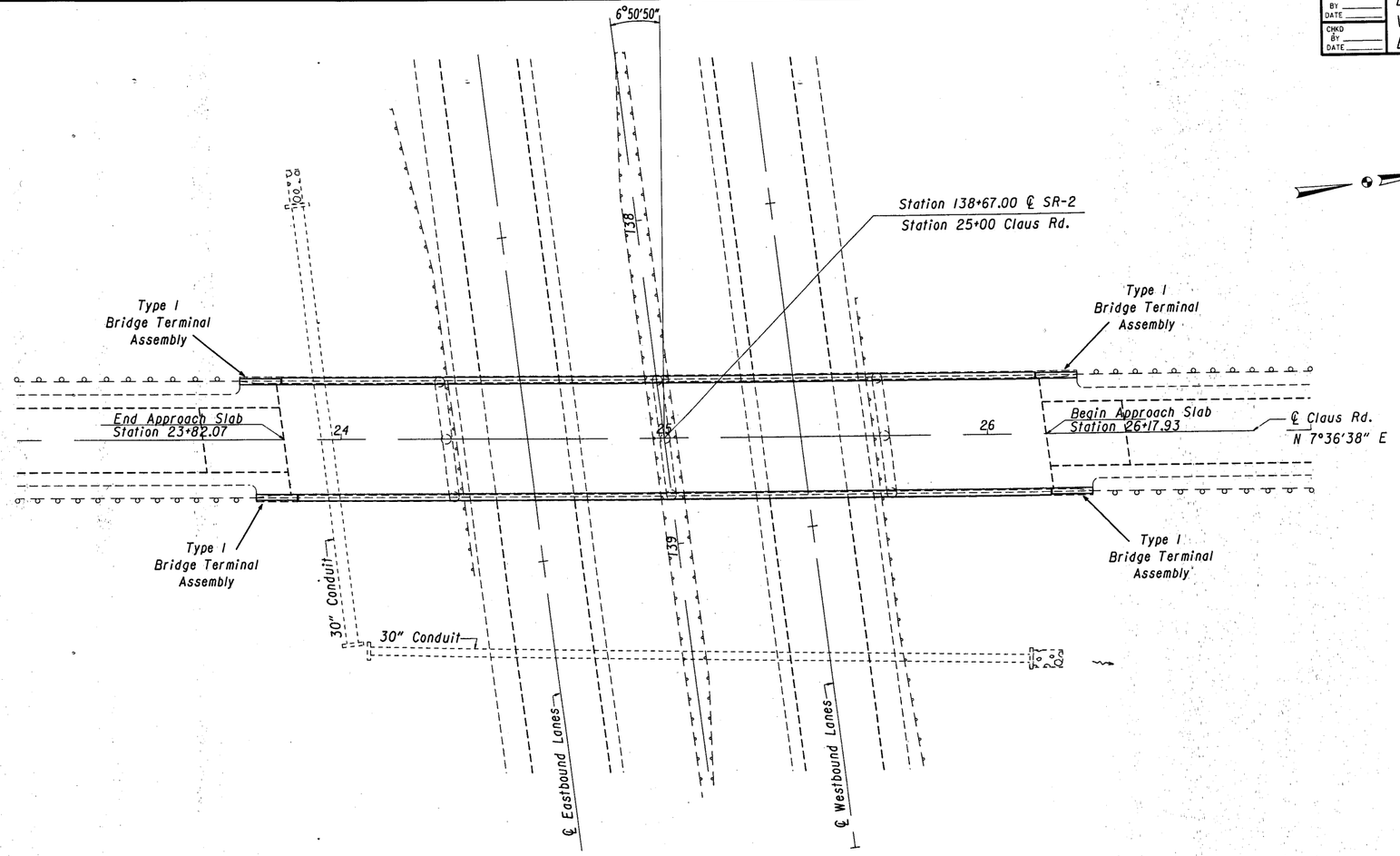
7/7

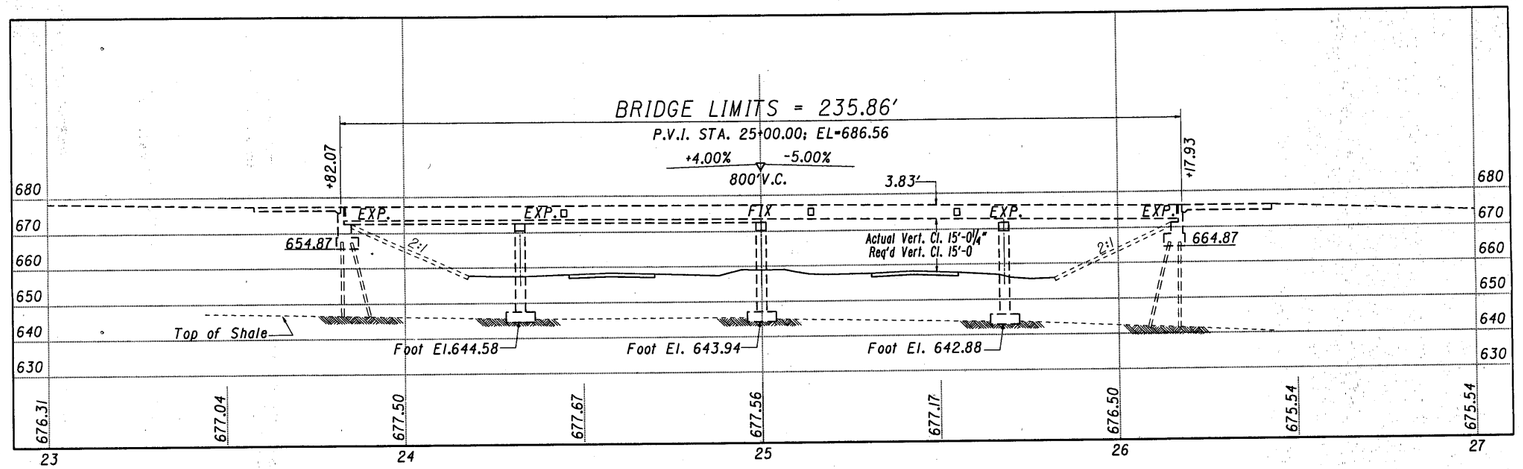
ESTIMATED QUANTITIES
REINFORCING STEEL
BRIDGE NO. LOR-2-0223
UNDER SUNNYSIDE ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	ELA			J.S.B.	2-28-92	DGR

STRUCTURE LOR-2-0223

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	240
CHKD BY / DATE	VARIOUS SECTIONS, ERIE & LORAIN COUNTIES	FHWA REGION 5	267





ELEVATION

EXISTING STRUCTURE

TYPE: *Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures*
SPAN: 47'-8": 68'-0": 68'-0": 47'-8" % Brgs.
ROADWAY: 36'-0" f/f parapets
LOADING: *HS 20-44*
WEARING SURFACE: *2" Asphalt Concrete*
SKEW: 6°-50'-50" RF
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *Tangent*
SUPERELEVATION: *None*

PROPOSED STRUCTURE

TYPE: *Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures*
SPAN: 47'-8": 68'-0": 68'-0": 47'-8" % Brgs.
ROADWAY: 33'-10" T/T Parapets
LOADING: *HS 20-44*
WEARING SURFACE: *2¼" Microsilica Concrete*
SKEW: 6°-50'-50" RF
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *Tangent*
SUPERELEVATION: *None*

OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION SECTION

1/1

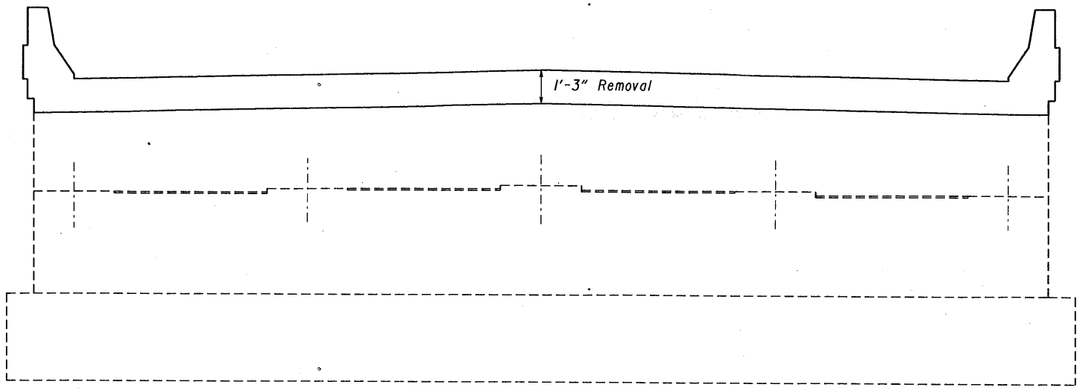
SITE PLAN

BRIDGE NO. LOR-2-0262
UNDER CLAUS ROAD

LORAIN COUNTY — S.R.-2
STA. 23+82.07 — STA. 26+17.93

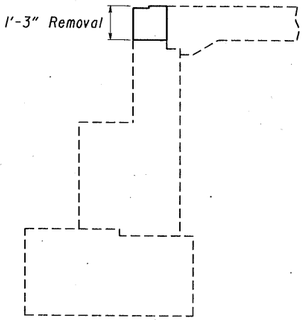
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EAL			J.S.B.	2-28-92	DGR

SITE PLAN

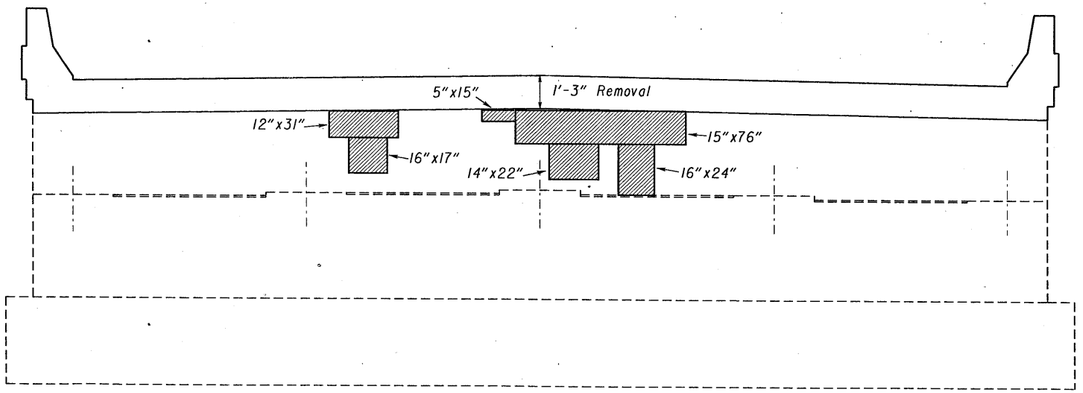


ELEVATION
FORWARD ABUTMENT

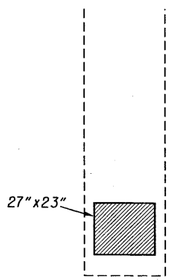
BACKWALL PATCHING AREAS SHOWN.
PAYMENT UNDER ITEM 519 - PATCHING CONCRETE STRUCTURES,
AS PER PLAN
STRUCTURE LOR-2-0262 2.45 SQ. YD.



SIDE VIEW ABUTMENT



ELEVATION
REAR ABUTMENT

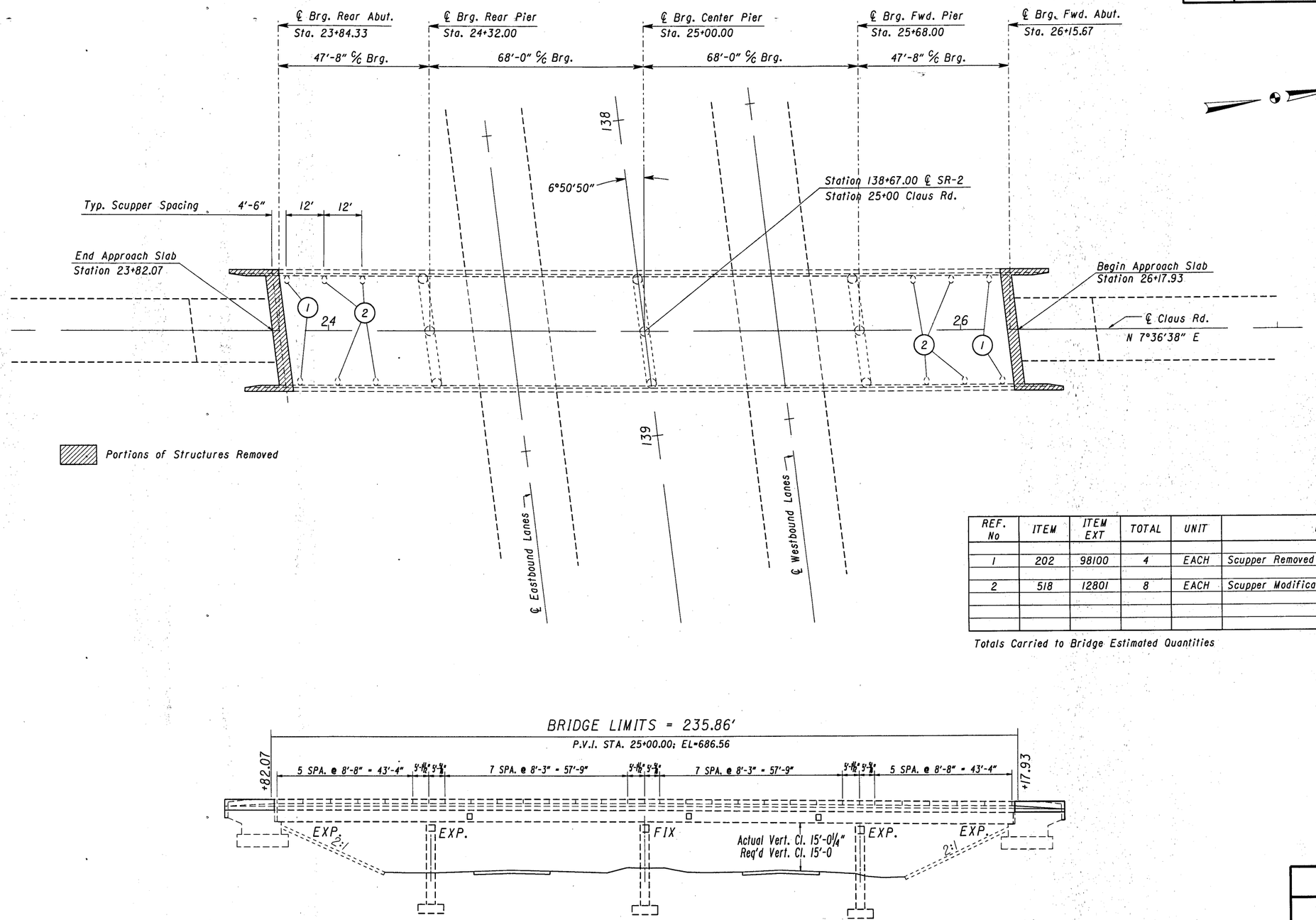


Right Pier-Column #3
Left Face

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION
2/1

ABUTMENT PATCHING DETAILS
BRIDGE NO. LOR-2-0262
UNDER CLAUS ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR		EdL		J.S.B.	2-28-52	DGR



REF. No	ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
1	202	98100	4	EACH	Scupper Removed
2	518	12801	8	EACH	Scupper Modification, as per plan

Totals Carried to Bridge Estimated Quantities

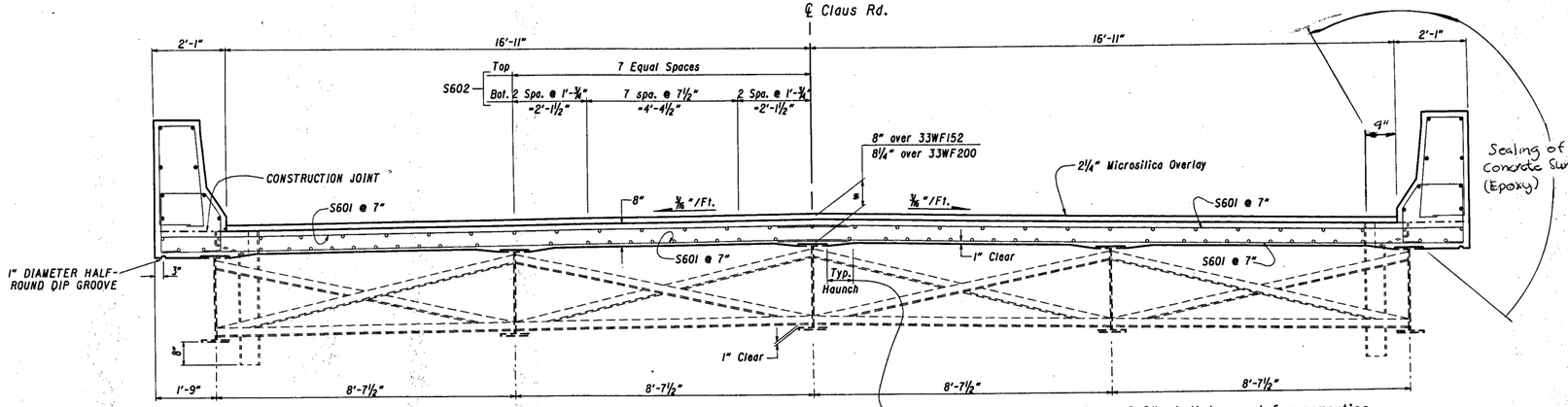
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

3/7

PARAPET DEFLECTION JOINT SCUPPER PLAN

BRIDGE NO. LOR-2-0262
UNDER CLAUS ROAD

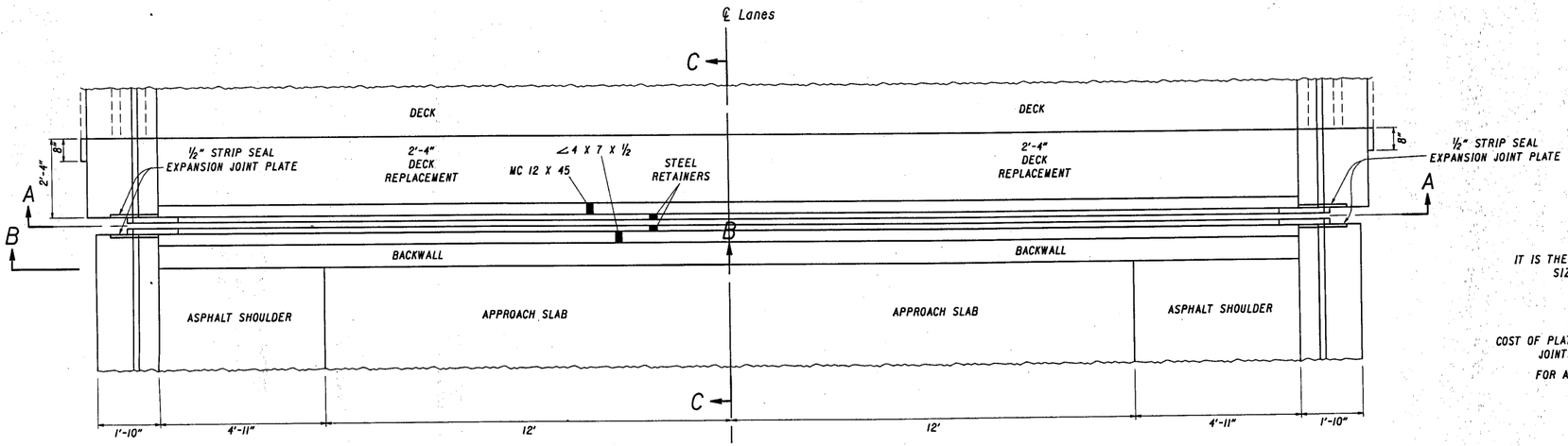
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EA			J.S.B.	2-28-92	DGR



SECTION A-A

A typical haunch width of 9" shall be used for computing quantity of concrete, however, the haunch width may vary between 6" & 12" provided that the slope be not more than 1:4 for a haunch less than 9" in width.

* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessar because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per sec. 511.18 of the Construction and Material Specifications.



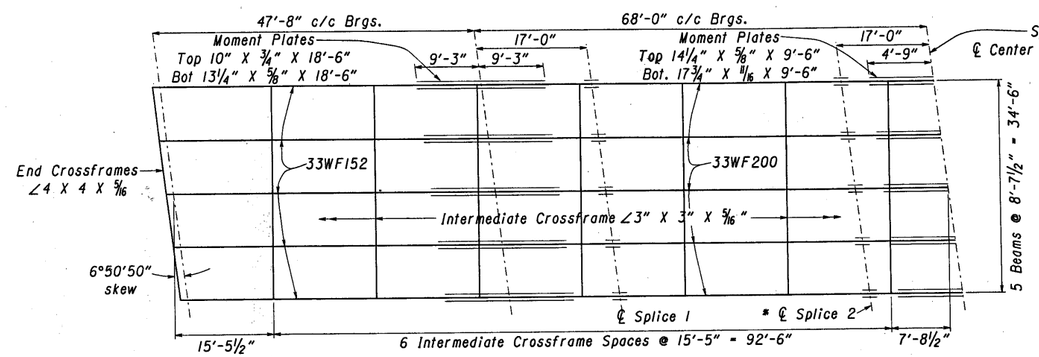
PLAN

IT IS THE FABRICATORS RESPONSIBILITY TO DETERMINE THE PLATE SIZE FOR THE STRIP SEAL EXPANSION JOINT PLATES AT THE DECK AND WINGWALL PARAPETS.

BRIDGE	SKEW	CURVE
LOR-2-0262	6° 50' 50"	TAN

COST OF PLATES SHALL BE INCLUDED IN ITEM 516 STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

FOR ADDITIONAL DETAILS SEE STANDARD DRAWING EXJ-4-87.



HALF FRAMING PLAN

BEAM AREA	% INCREASE
10,560 SQ. FT.	17.2

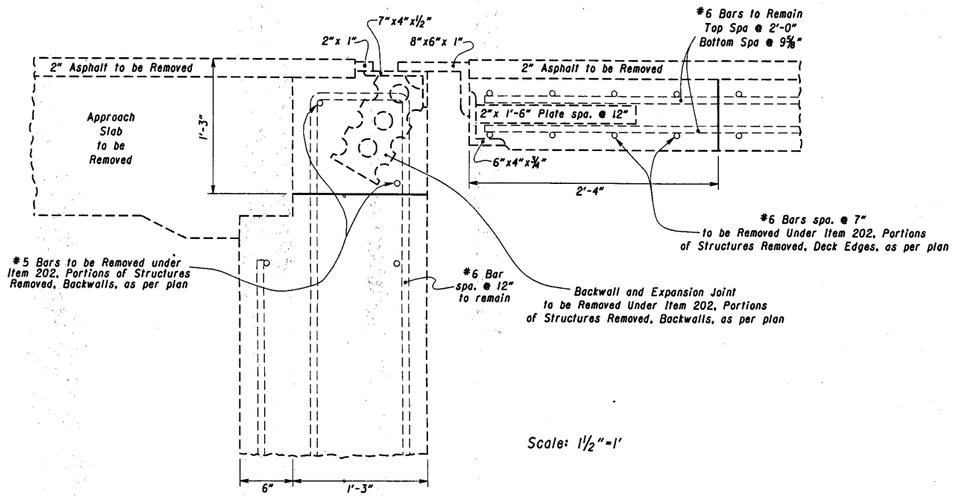
Splice *1 33WF152 with 33WF200
Splice *2 33WF200 with 33WF200
* Splice *2 is only on second span

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

4/7

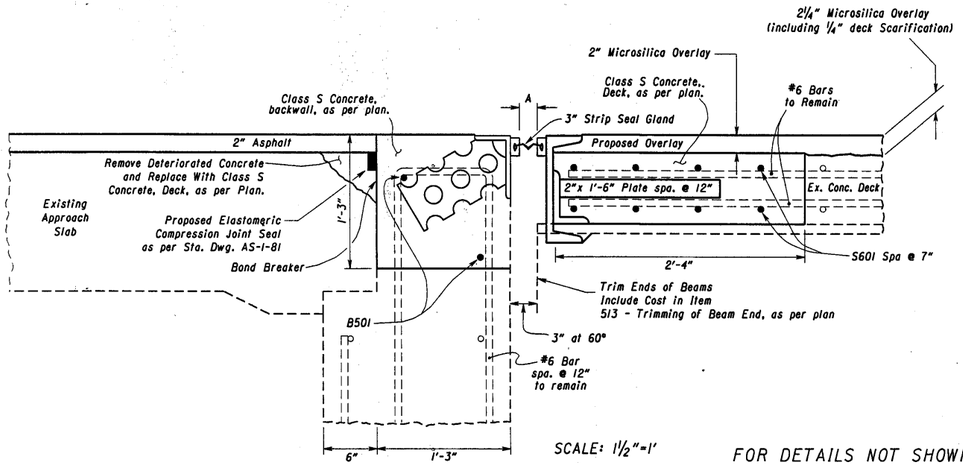
SUPERSTRUCTURE DETAILS
FRAMING PLAN
BRIDGE NO. LOR-2-0262
UNDER CLAUS ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EdA			J.S.B.	2-28-92	DGR



Scale: 1½"=1'

EXISTING EXPANSION LOINT SECTION C-C

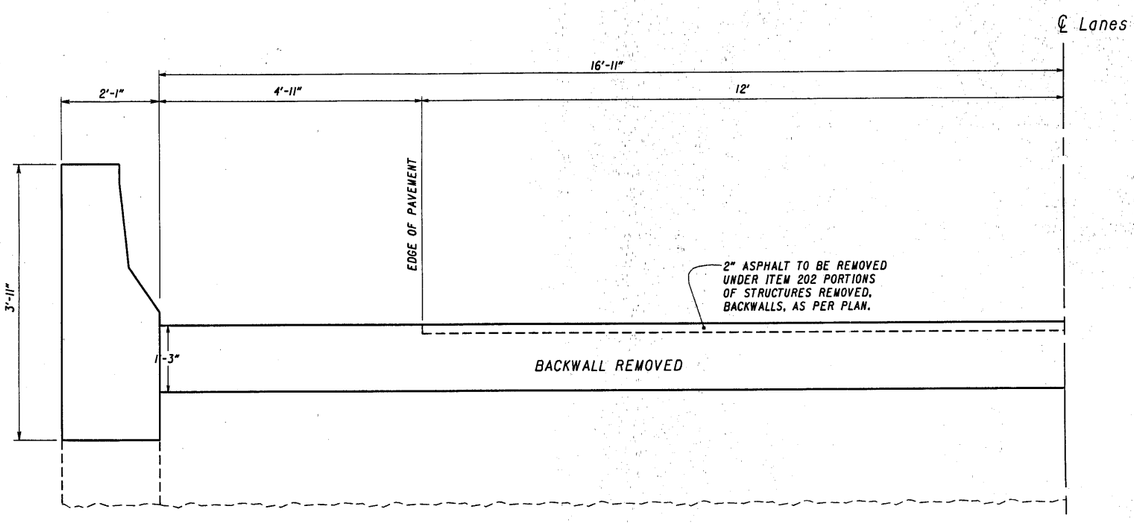


SCALE: 1½"=1'

PROPOSED EXPANSION JOINT SECTION C-C

FOR DETAILS NOT SHOWN SEE STD. DRAWING EXJ-4-87

Temperature	Distance A
90°	1½"
80°	1½"
70°	1½"
60°	1 5/8"
50°	1 23/32"
40°	1 13/16"
30°	1 29/32"



SCALE: ¾"=1'

SECTION B-B

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

5/7

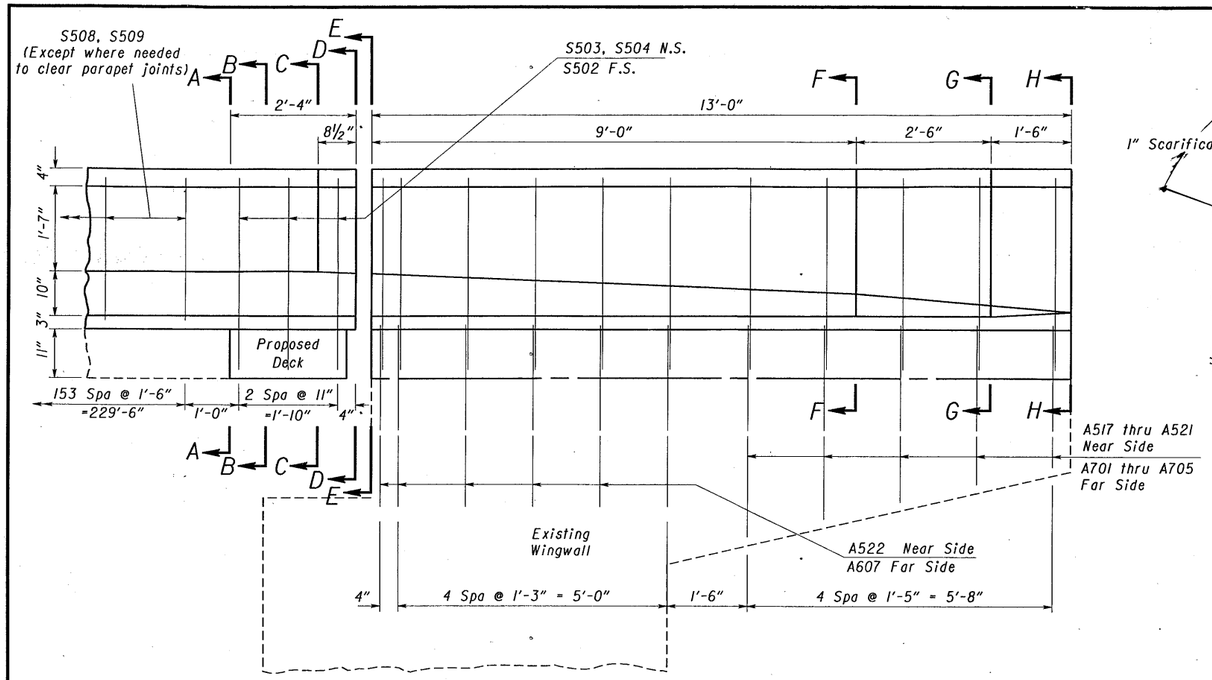
EXPANSION JOINT DETAILS BACKWALL DETAILS

BRIDGE NO. LOR-2-0262
UNDER CLAUS ROAD

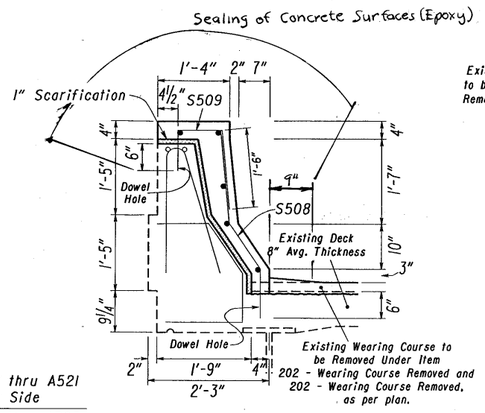
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EAA			J.S.B.	2-28-92	DGR

STRUCTURE LOR-2-0262

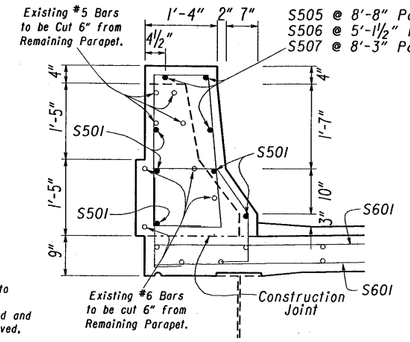
CALC BY / DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO FHWA REGION 5	245 267
CHKD BY / DATE			



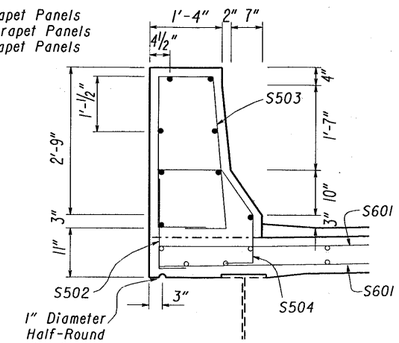
ELEVATION VIEW



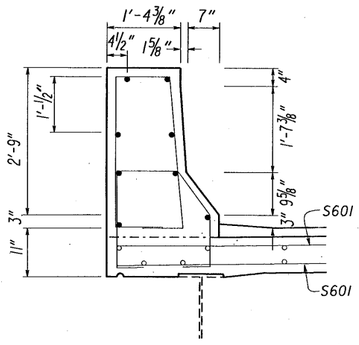
SECTION A-A



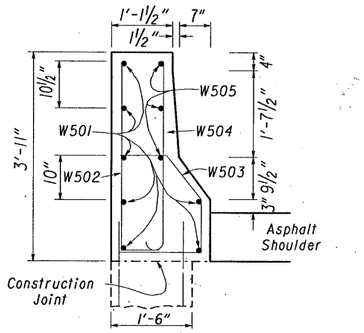
SECTION B-B



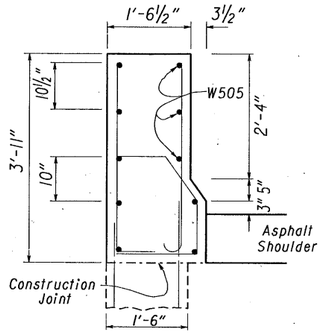
SECTION C-C



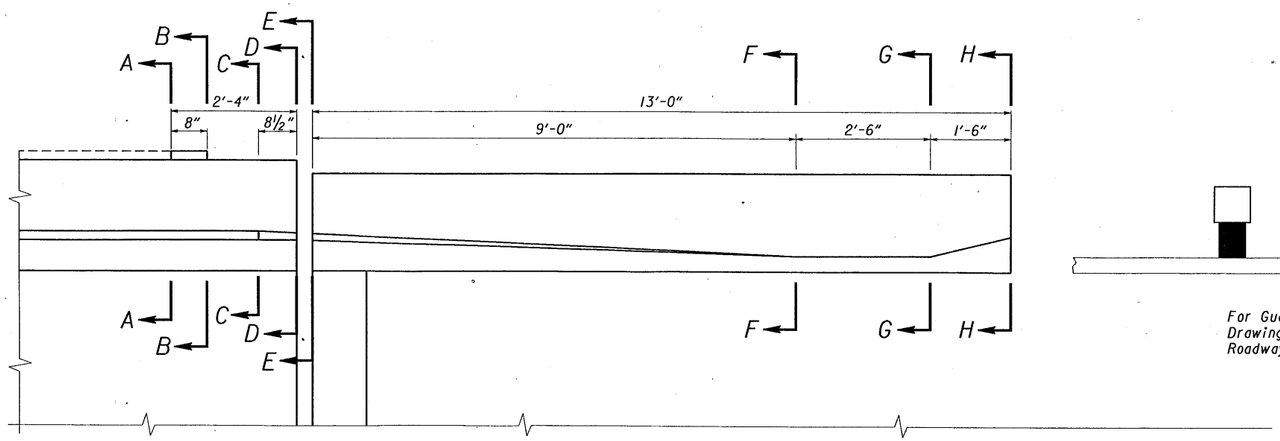
SECTION D-D



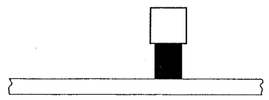
SECTION E-E



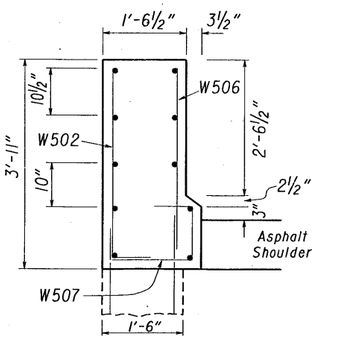
SECTION F-F



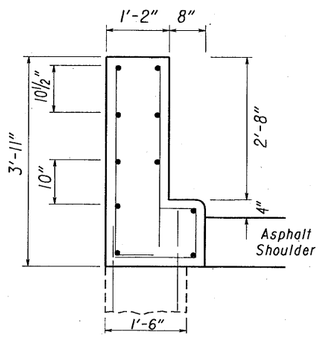
PLAN VIEW



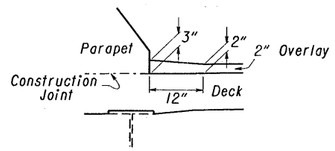
For Guardrail See Standard
Drawing GR-3.1 5-6-91 and
Roadway Plans For Pavement.



SECTION G-G



SECTION H-H



TYPICAL OVERLAY
at Curb Face

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

6/7

WINGWALL DETAILS

BRIDGE NO. LOR-2-0262
UNDER CLAUS ROAD

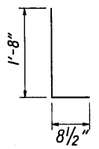
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EDL			J.S.B.	2-28-92	DGR

STRUCTURE_LOR-2-0262

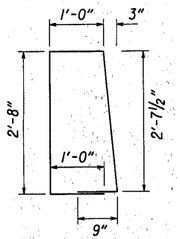
BRIDGE ESTIMATED QUANTITIES

SHEET NUMBER	ITEM	ITEM EXT	PLAN TOTAL	UNIT	DESCRIPTION
					STRUCTURE LOR-2-0262
	202	11301	9	CU. YD.	PORTIONS OF STRUCTURES REMOVED, WINGWALLS, AS PER PLAN.
	202	11301	4	CU. YD.	PORTIONS OF STRUCTURES REMOVED, BACKWALLS, AS PER PLAN.
	202	11301	5	CU. YD.	PORTIONS OF STRUCTURES REMOVED, DECK EDGES, AS PER PLAN.
	202	11301	1	CU. YD.	PORTIONS OF STRUCTURES REMOVED, PARAPETS, AS PER PLAN.
	202	23500	904	SQ. YD.	WEARING COURSE REMOVED
	202	23501	904	SQ. YD.	WEARING COURSE REMOVED, AS PER PLAN
4	202	98100	4	EACH	SCUPPER REMOVED
5652	509	15800	5652	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60
	510	H101	616	EACH	DOWEL HOLES, AS PER PLAN.
	511	34450	1.8	CU. YD.	CLASS S CONCRETE PARAPET REPLACEMENT, AS PER PLAN
	511	34450	11.8	CU. YD.	CLASS S CONCRETE WINGWALL, AS PER PLAN
	511	34450	4.4	CU. YD.	CLASS S CONCRETE BACKWALL, AS PER PLAN
	511	34450	4.9	CU. YD.	CLASS S CONCRETE DECK, AS PER PLAN
	511	34450	36	CU. YD.	CLASS S CONCRETE PARAPETS, AS PER PLAN
	SPECIAL	51267502	518	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY). (SEE PROPOSAL NOTE)
	513	21201	LUMP		TRIMMING OF BEAM END, AS PER PLAN
	516	11201	68.2	LIN. FT.	STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN
	SPECIAL	51400050	12372	SQ. FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400056	12372	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400060	12372	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400066	12372	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400504	100	MAN HR.	GRINDING FINS, TEARS AND SLIVERS
	SPECIAL	51400508	2720	LIN. FT.	GRINDING OF FLANGE EDGES
	SPECIAL	51426010	LUMP		NON-HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
	SPECIAL	51426020	LUMP		HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
8	518	12801	8	EACH	SCUPPER MODIFICATION, AS PER PLAN
2.45	519	11101	2.45	SQ. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN.
	SPECIAL	51922006	887	SQ. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (2¼" THICK) (SEE PROPOSAL NOTE).
	SPECIAL	51922100	13	CU. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) (SEE PROPOSAL NOTE)
	SPECIAL	5192230	LUMP		TEST SLAB (SEE PROPOSAL NOTE)
	607	60720100	472	LIN. FT.	FENCE, TYPE CL, TPV WITH 6' FABRIC WIDTH

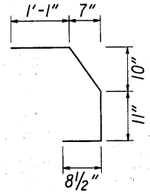
BAR SIZE : THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE : A506 IS A NO. 5 SIZE BAR AND P1101 IS A NO. 11 SIZE BAR.



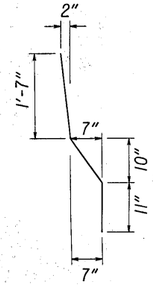
TYPE I



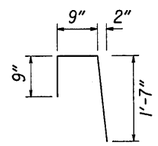
TYPE II



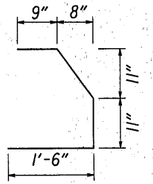
TYPE III



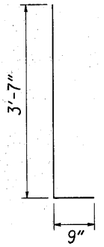
TYPE IV



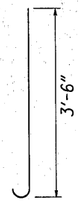
TYPE V



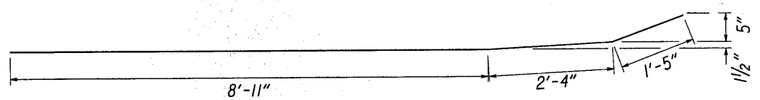
TYPE VI



TYPE VII



TYPE VIII



TYPE IX

ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60

WING WALLS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
W501	28	12'-8"	Str.				370
W502	44	2'-2½"	VII				101
W503	32	4'-½"	VI				135
W504	32	3'-11½"	VIII				132
W505	12	12'-8"	IX				146
W506	12	3'-7"	Str.				45
W507	12	2'-10½"	X				36
							965

PARAPET FACING

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S505	60	8'-4"	Str.				522
S506	36	4'-8"	Str.				175
S507	84	7'-11"	Str.				694
S508	308	3'-5"	IV				1098
S509	308	2'-9"	V				883
							3372

PARAPET REPLACEMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S501	20	2'-0"	Str.				42
S502	12	2'-3"	I				28
S503	12	7'-6½"	II				94
S504	12	2'-9"	III				34
							198

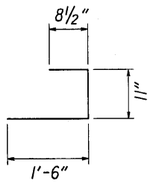
DECK

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S601	32	19'-10½"	Str.				955
							955

BACKWALL

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
B501	8	19'-5"	Str.				162
							162

GRAND TOTAL 5652



TYPE X

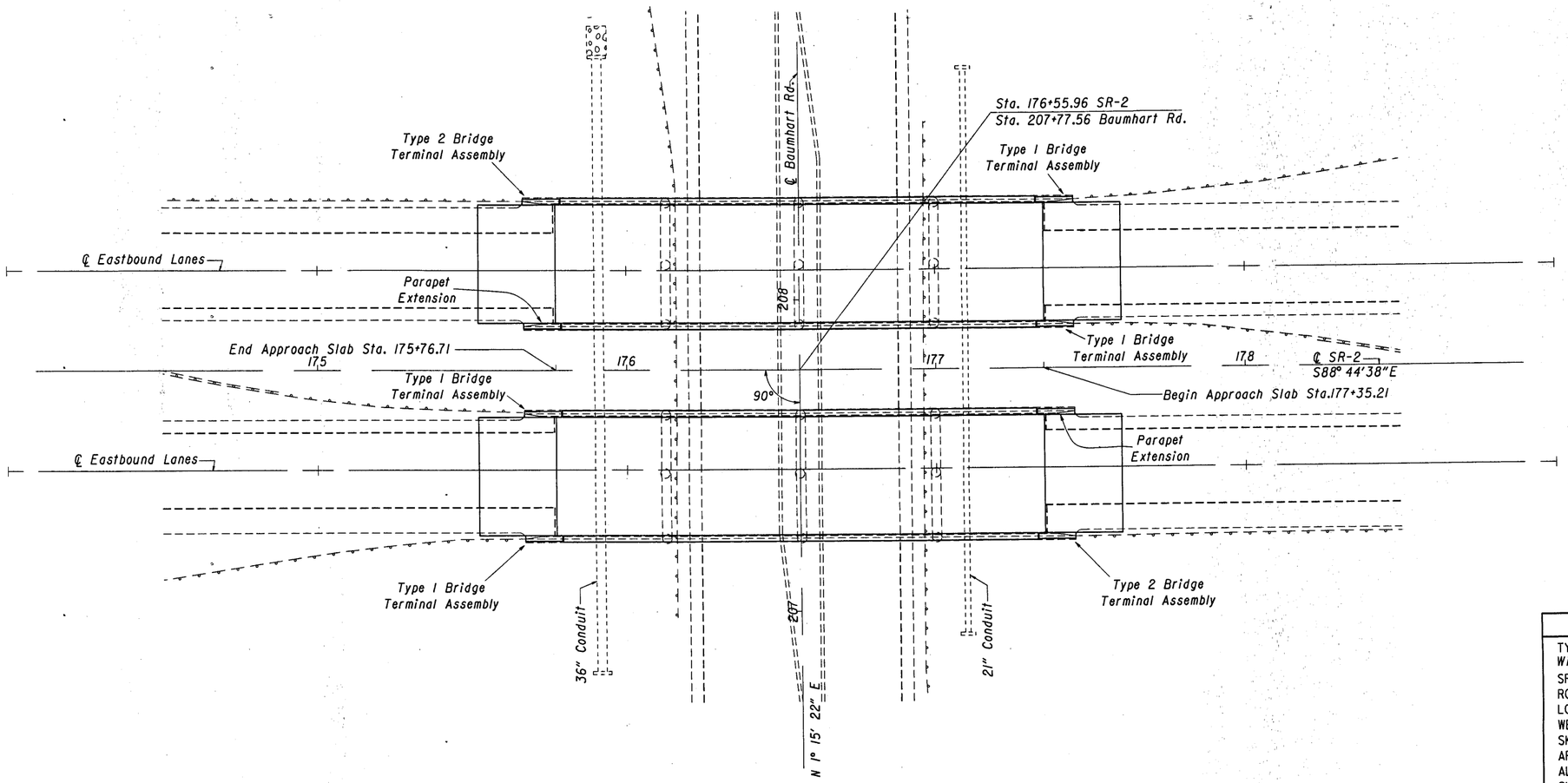
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

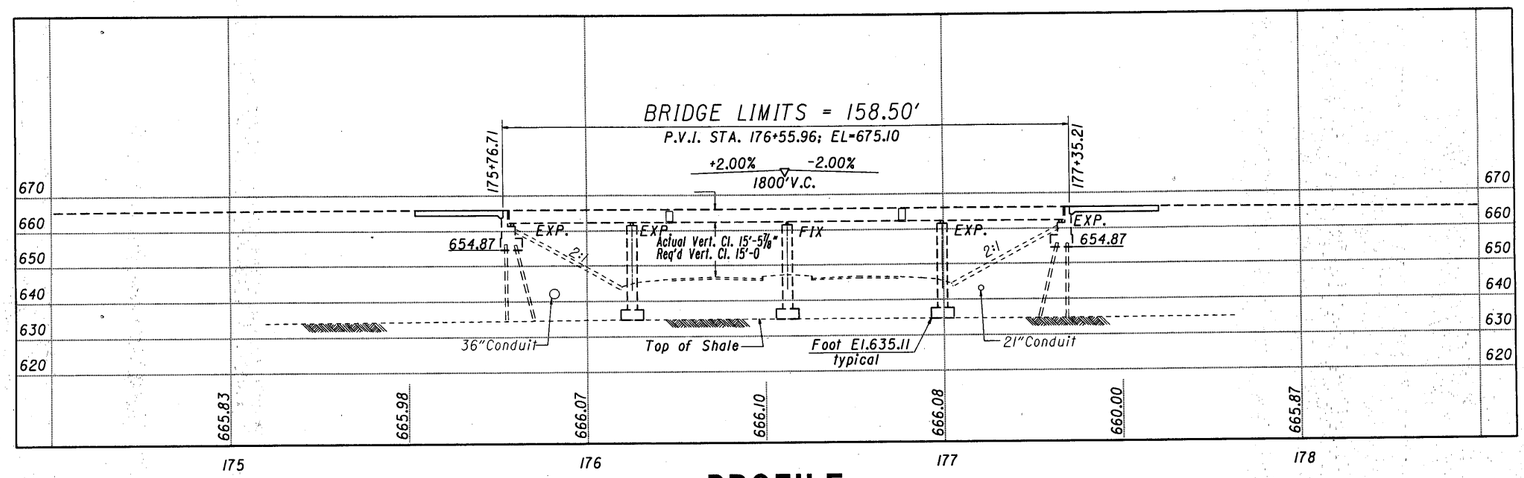
7/7

ESTIMATED QUANTITIES
REINFORCING STEEL
BRIDGE NO. LOR-2-0262
UNDER CLAUS ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EEL			J.S.B.	2-28-92	DGR

CALC BY DATE	ERI/LOR-2-30.51/0.00	OHIO	247
CHKD BY DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267





PROFILE

EXISTING STRUCTURE

TYPE: *Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures*
SPAN: *33'-6"; 43'-6"; 43'-6"; 33'-6" ℄ Brgs.*
ROADWAY: *40'-0" f/f parapets*
LOADING: *HS 20-44*
WEARING SURFACE: *2" Asphalt Concrete*
SKEW: *None*
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *Tangent*
SUPERELEVATION: *None*

PROPOSED STRUCTURE

TYPE: *Continuous Steel Beam Bridge With Reinforced Conc. Deck & Substructures*
SPAN: *33'-6"; 43'-6"; 43'-6"; 33'-6" ℄ Brgs.*
ROADWAY: *37'-10" T/T Parapets*
LOADING: *HS 20-44*
WEARING SURFACE: *2¼" Microsilica Concrete*
SKEW: *None*
APPROACH SLAB: *AS-1-67 (25'-0" long)*
ALIGNMENT: *Tangent*
SUPERELEVATION: *None*

OHIO DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION SECTION

1/a

SITE PLAN

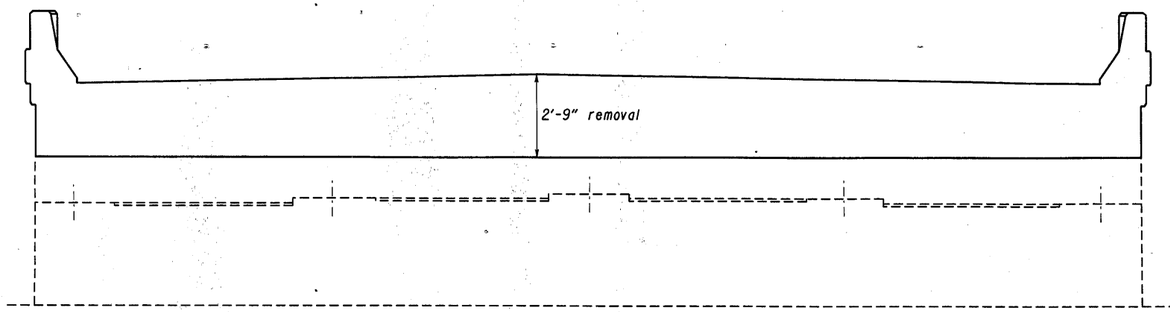
BRIDGE NO. LOR-2-0333 L.&R.
OVER BAUMHART ROAD

LORAIN COUNTY — S.R.-254
STA. 175+76.71 — STA. 177+35.21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EAA			J.S.B.	2-28-92	DGR

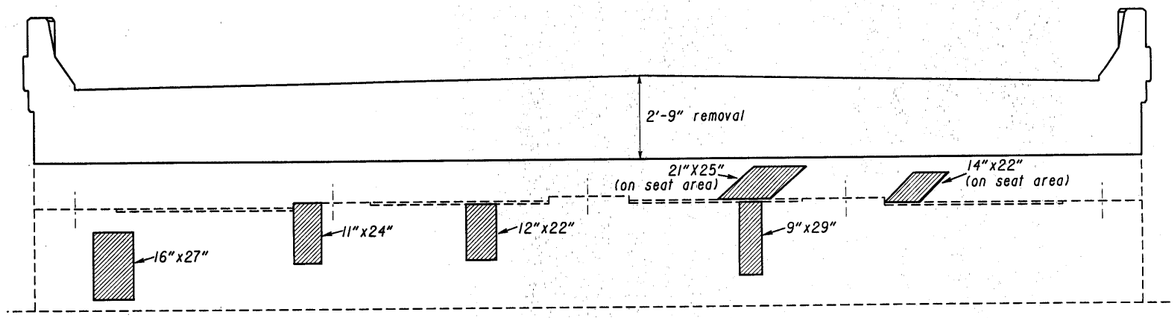
SITE PLAN

CALC BY DATE	ERI/LOR-2-30.51/0.00	OHIO	248
CHKD BY DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

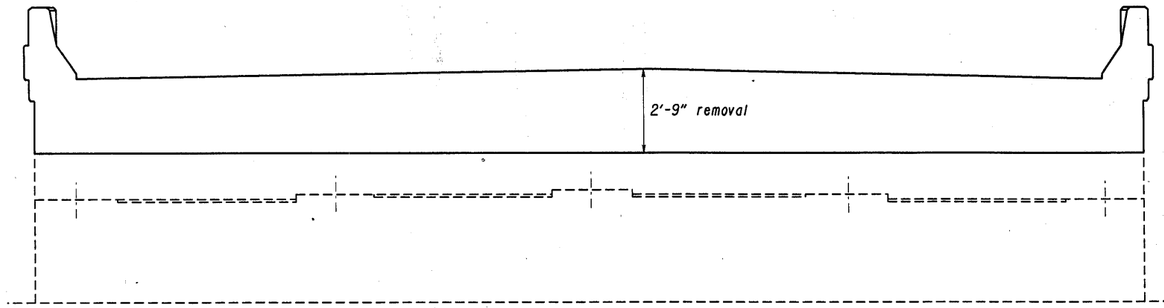


ELEVATION
Foreward Abutment Left Bridge

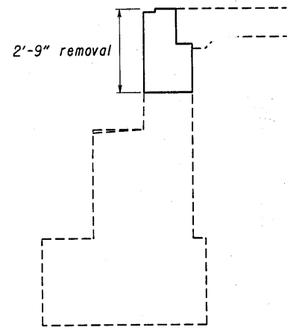
BACKWALL PATCHING AREAS SHOWN.
PAYMENT UNDER ITEM 519 - PATCHING CONCRETE STRUCTURES,
AS PER PLAN
STRUCTURE LOR-2-0333 2.88 SQ. YD.



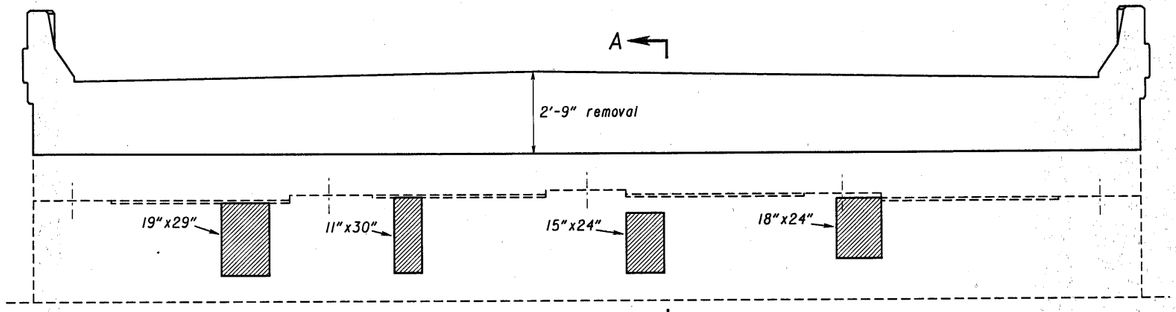
ELEVATION
Rear Abutment Left Bridge



ELEVATION
Foreward Abutment Right Bridge



SECTION A-A



ELEVATION
Rear Abutment Right Bridge

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

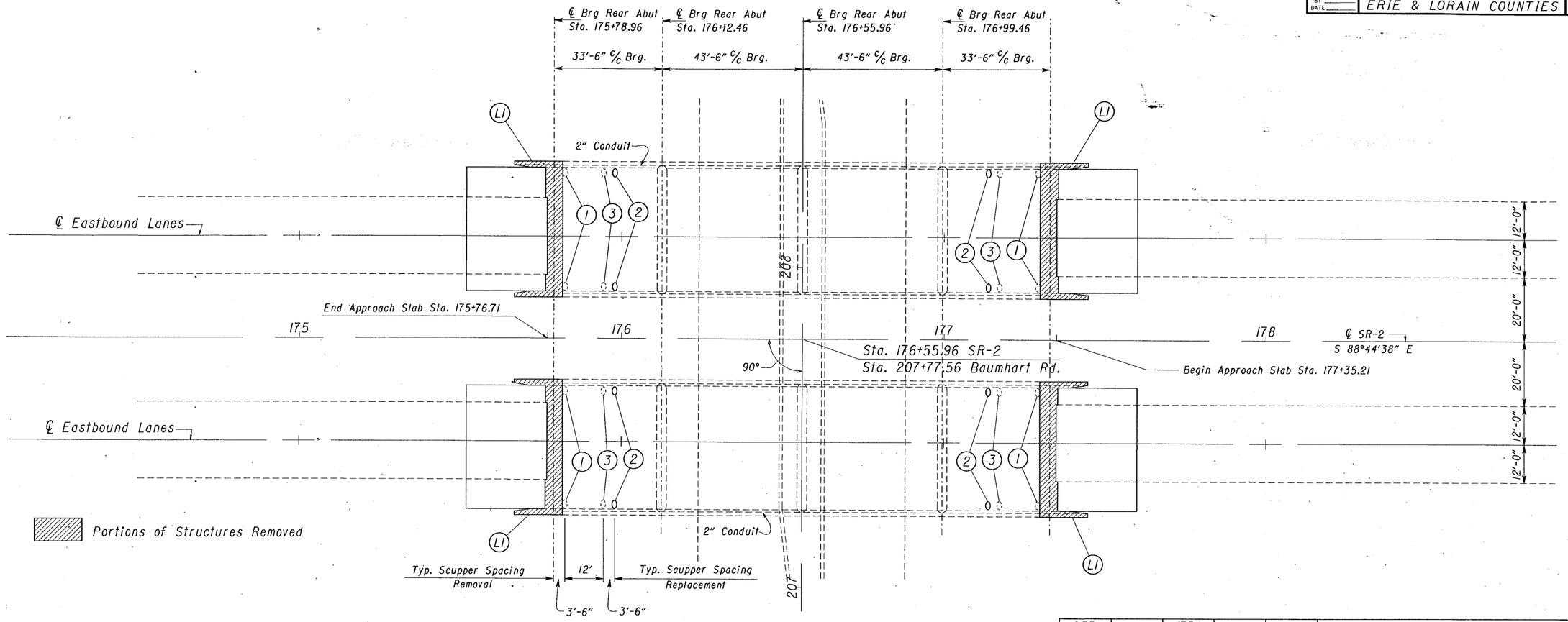
2/8

ABUTMENT PATCHING DETAILS
BRIDGE NO. LOR-2-0333 L.&R.
OVER BAUMHART ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR		Elf		J.S.B.	2-28-92	DGR

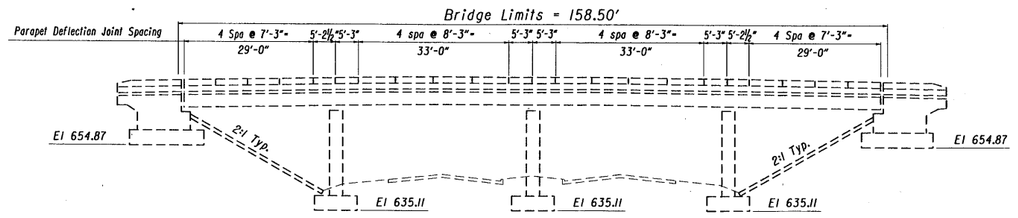
CALC BY / DATE	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO
CHKD BY / DATE		FHWA REGION 5

249
267



REF. No	ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
1	202	98100	8	EACH	Scupper Removed
2	518	12201	8	EACH	Scuppers, including Supparts, as per plan
3	518	12801	8	EACH	Scupper Modification, as per plan
LI	625	25401	50	LIN. FT.	Conduit 2 Inch 713.04, as per plan

Totals Carried to Bridge Estimated Quantities



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

3/8

PARAPET DEFLECTION JOINT SCUPPER PLAN

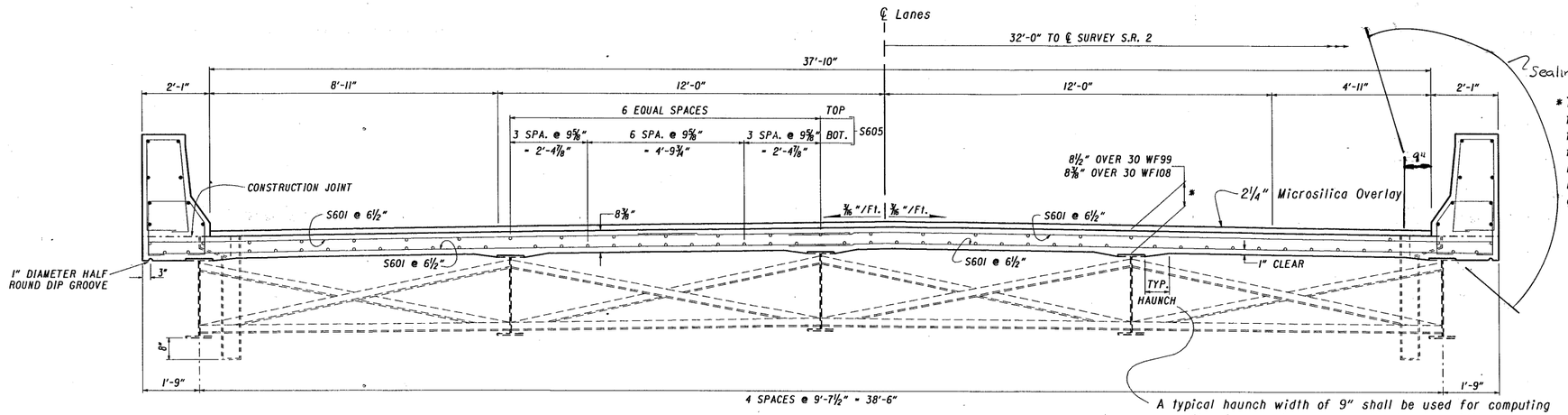
BRIDGE NO. LOR-2-0333 L.&R.
OVER BAUMHART ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	ELH			J.S.B.	2-28-92	DGR

STRUCTURE LOR-2-0333 L.&R.

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5

250/267

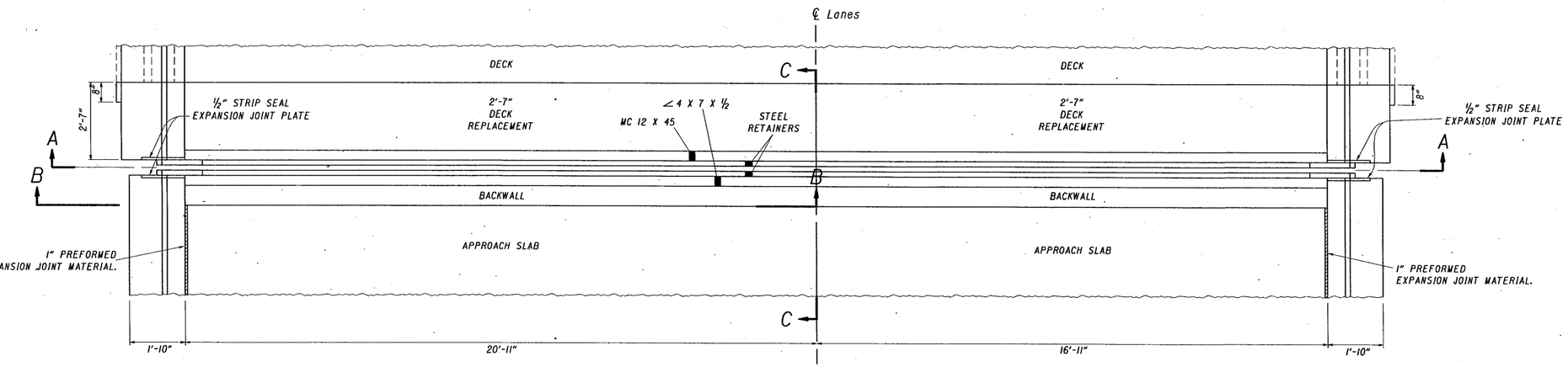


Sealing of Concrete Surfaces (Epoxy)

*This is a nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessar because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per sec. 511.18 of the Construction and Material Specifications.

A typical haunch width of 9" shall be used for computing quantity of concrete, however, the haunch width may vary between 6" & 12" provided that the slope be not more than 1:4 for a haunch less than 9" in width.

SECTION A-A



PLAN

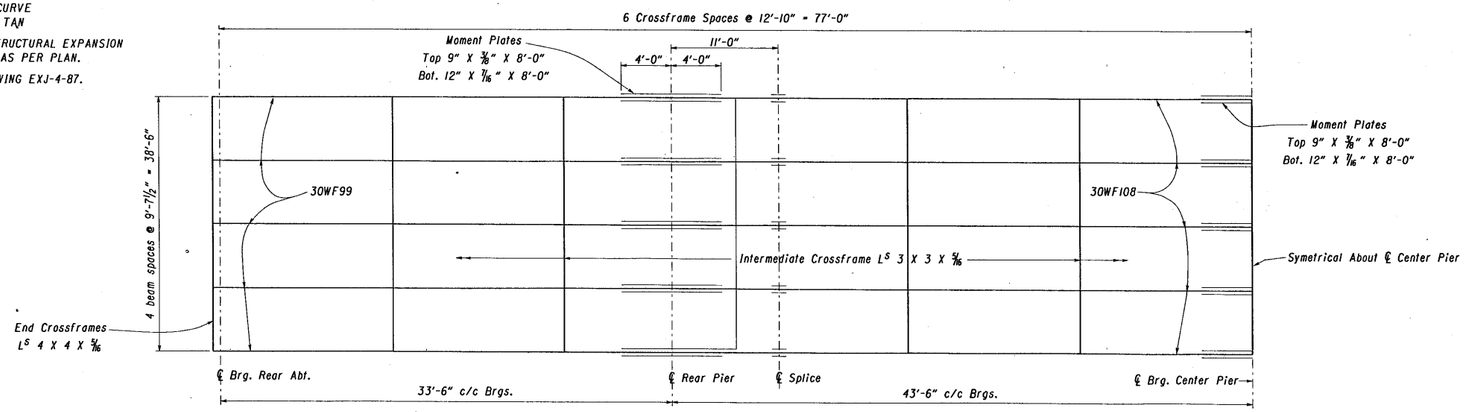
LEFT STRUCTURE SHOWN - RIGHT STRUCTURE OPPOSITE HAND

IT IS THE FABRICATORS RESPONSIBILITY TO DETERMINE THE PLATE SIZE FOR THE STRIP SEAL EXPANSION JOINT PLATES AT THE DECK AND WINGWALL PARAPETS.

BRIDGE	SKEW	CURVE
LOR-2-0333	0° 0' 0"	TAN

COST OF PLATES SHALL BE INCLUDED IN ITEM 516 STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

FOR ADDITIONAL DETAILS SEE STANDARD DRAWING EXJ-4-87.



HALF FRAMING PLAN

BEAM AREA LEFT	% INCREASE
6034 SQ. FT.	26.3

BEAM AREA RIGHT	% INCREASE
6034 SQ. FT.	26.3

Scale: ½"=1'

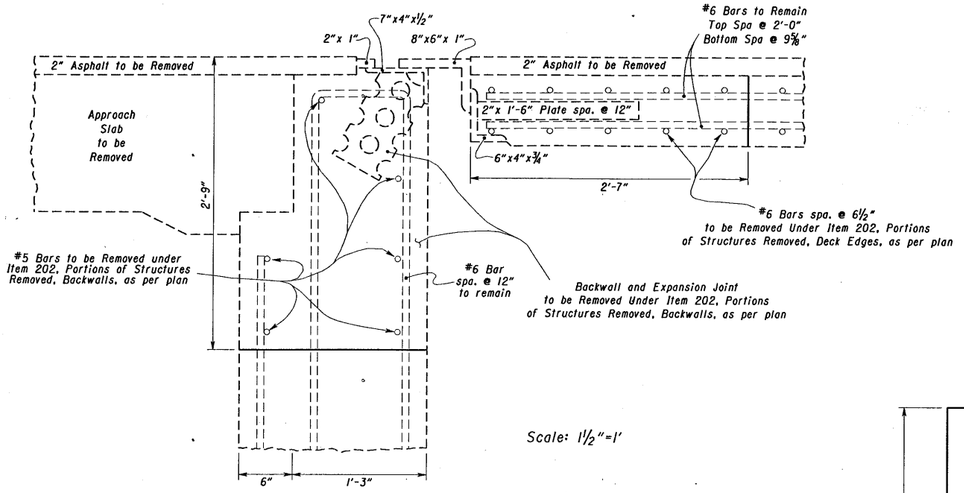
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

4/8

EXPANSION JOINT DETAILS
BACKWALL DETAILS
DECK DETAILS

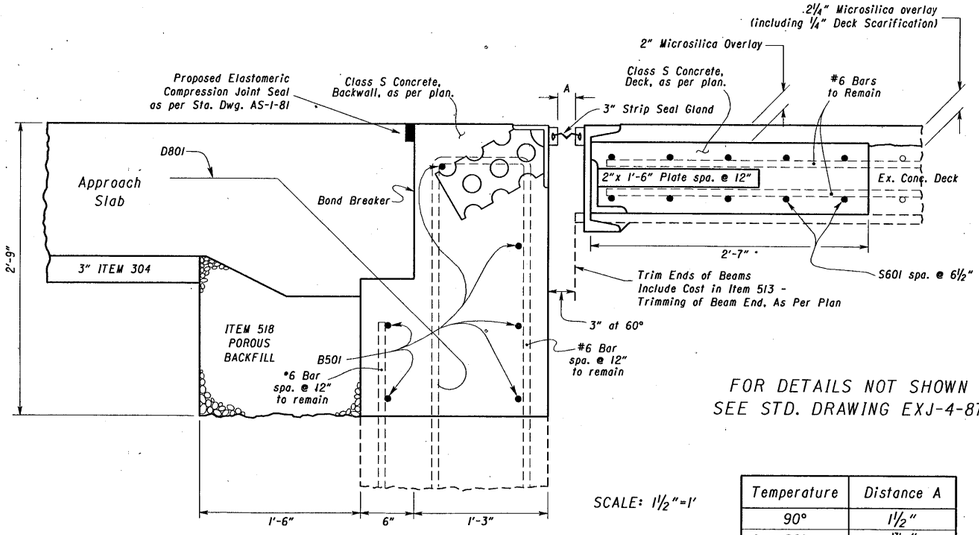
BRIDGE NO. LOR-2-0333 L.&R.
OVER BAUMHART ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EEL			J.S.B.	2-28-92	DGR



Scale: 1½"=1'

EXISTING EXPANSION LOINT SECTION C-C

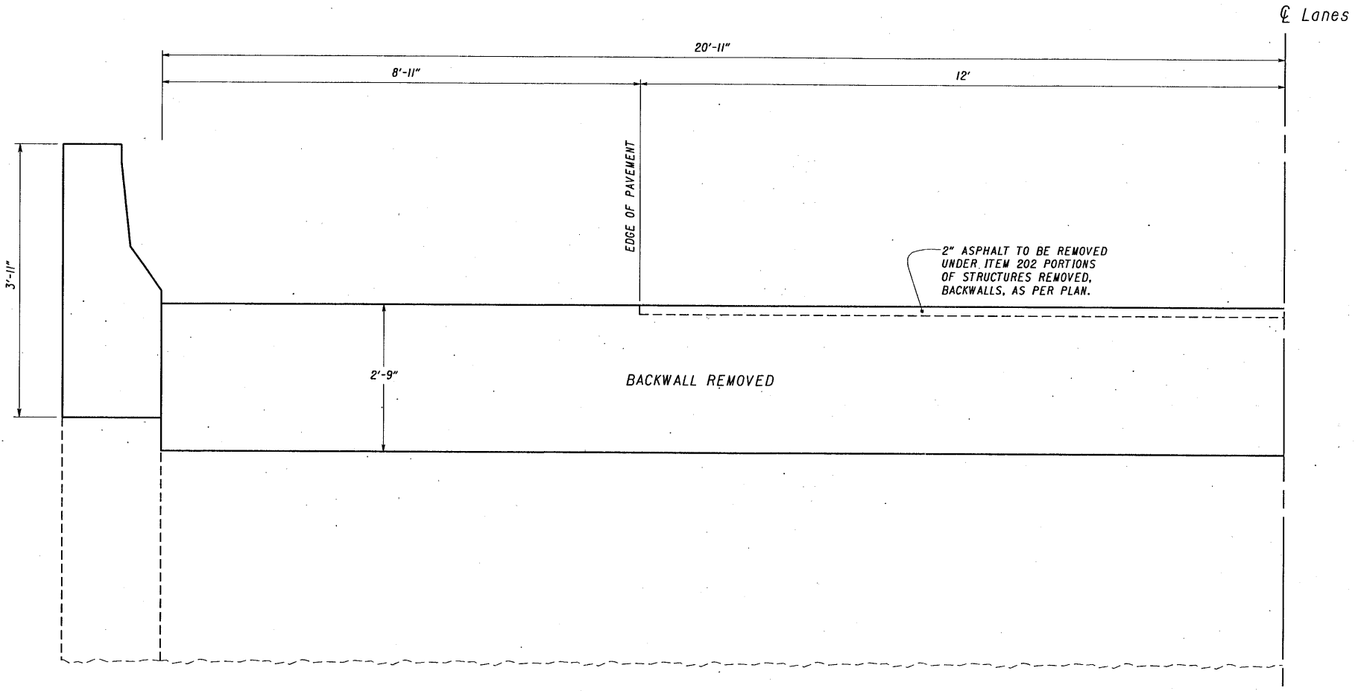


SCALE: 1½"=1'

FOR DETAILS NOT SHOWN SEE STD. DRAWING EXJ-4-87

PROPOSED EXPANSION JOINT SECTION C-C

Temperature	Distance A
90°	1½"
80°	1 17/32"
70°	1 9/32"
60°	1 21/32"
50°	1 13/32"
40°	1 25/32"
30°	1 21/32"



SECTION B-B

SCALE: ¾"=1'

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

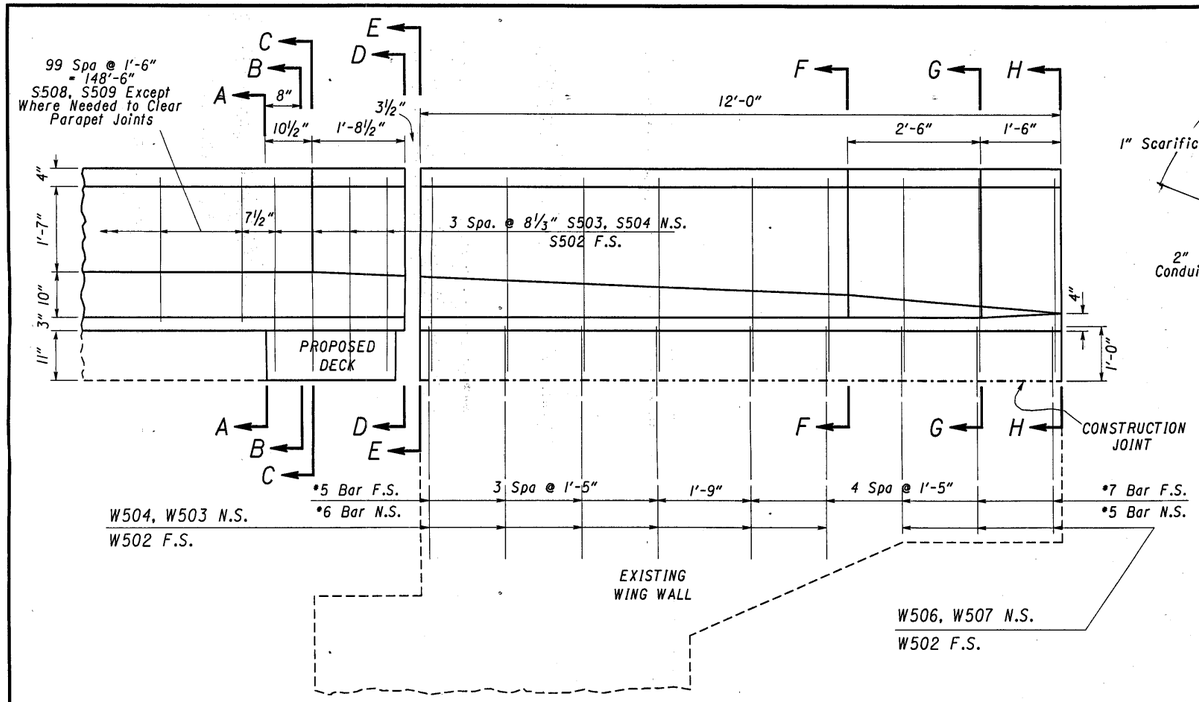
5/8

EXPANSION JOINT DETAILS
BACKWALL DETAILS
DECK DETAILS

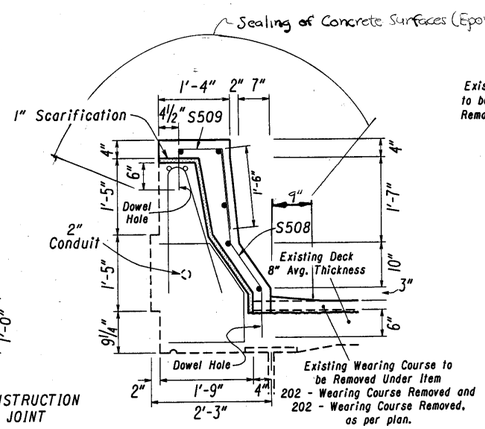
BRIDGE NO. LOR-2-0333 L.&R.
OVER BAUMHART ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	P.E. SED
DGR	EdA			J.S.B.	2-28-92	DGR

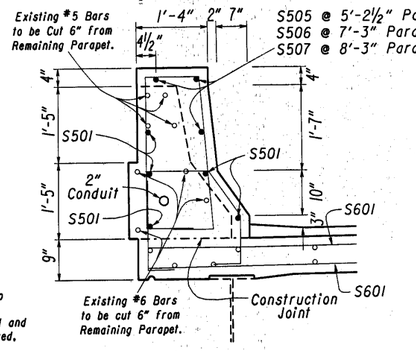
CALC BY DATE	ERI/LOR-2-30.51/0.00	OHIO	252
CHKD BY DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



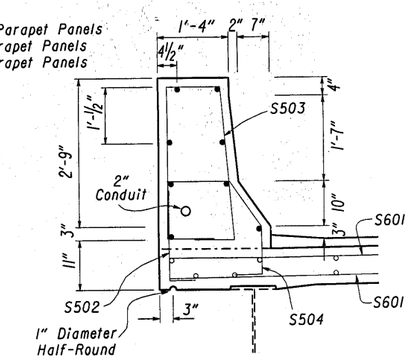
ELEVATION VIEW
REAR ABUTMENT, RIGHT BRIDGE BOTH SIDES, LEFT BRIDGE NORTH SIDE
FOREWARD ABUTMENT, RIGHT BRIDGE SOUTH SIDE, LEFT BRIDGE BOTH SIDES



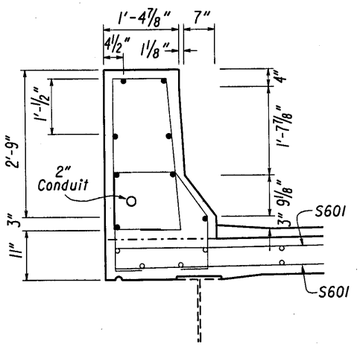
SECTION A-A



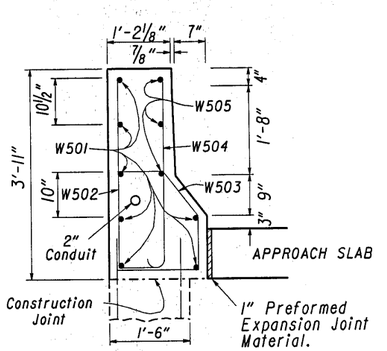
SECTION B-B



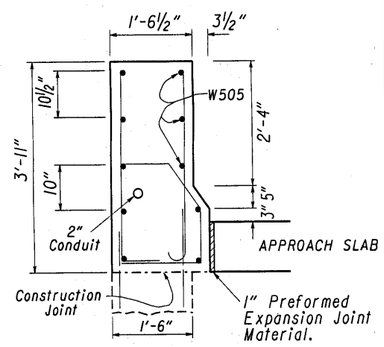
SECTION C-C



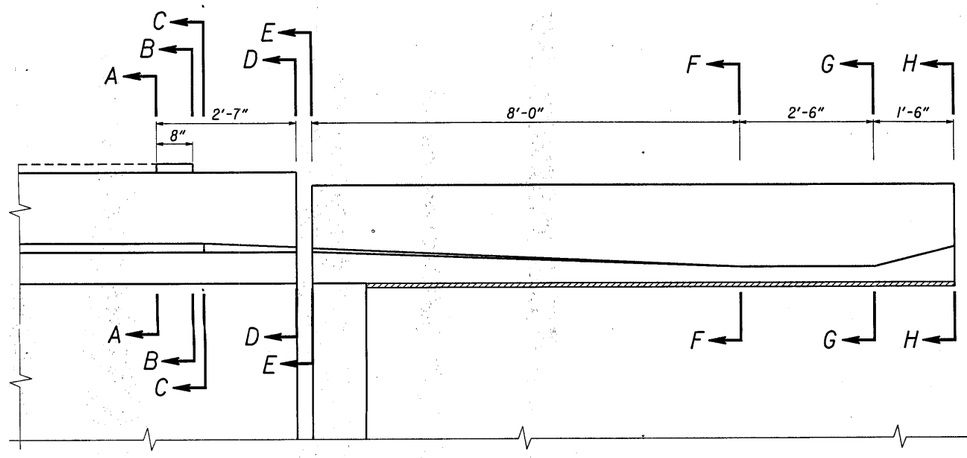
SECTION D-D



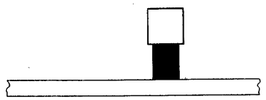
SECTION E-E



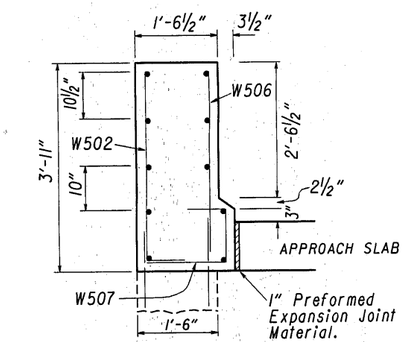
SECTION F-F



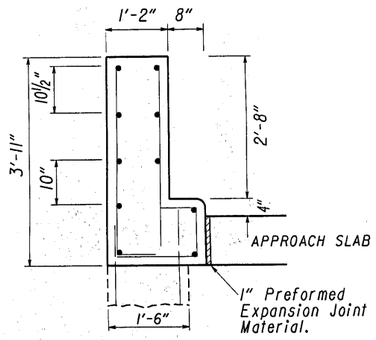
PLAN VIEW



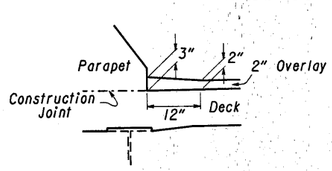
For Guardrail See Standard Drawing GR-3.1 5-6-91 and Roadway Plans For Pavement.



SECTION G-G



SECTION H-H



TYPICAL OVERLAY at Curb Face

Scale: ¾"=1'

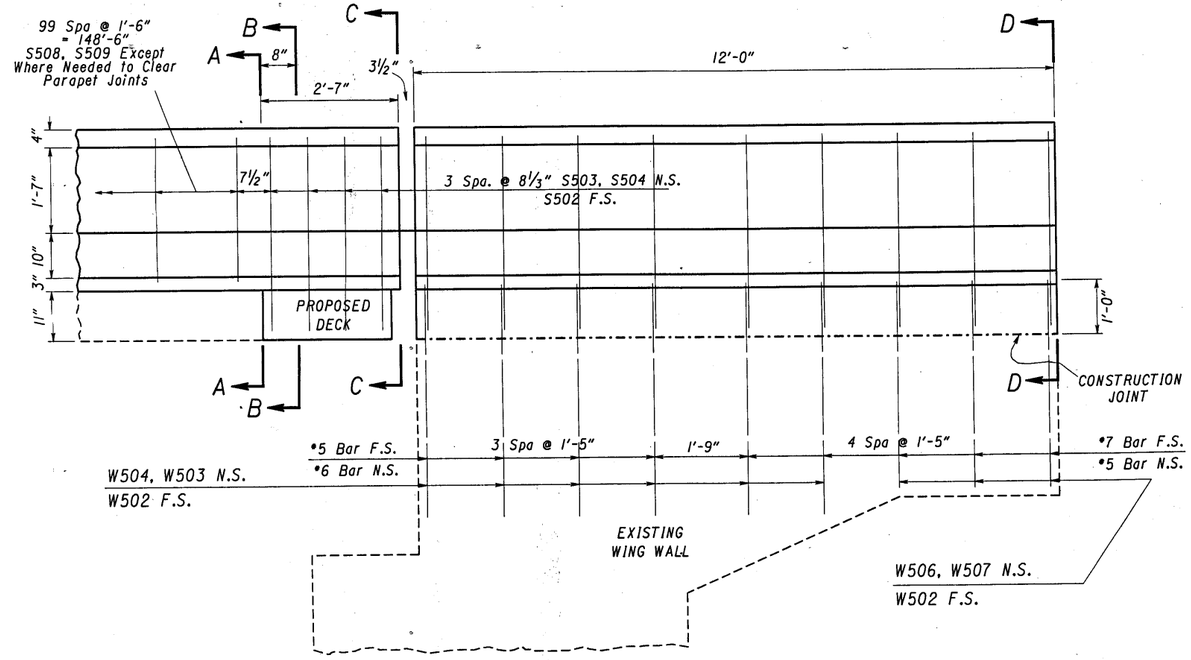
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

6/8

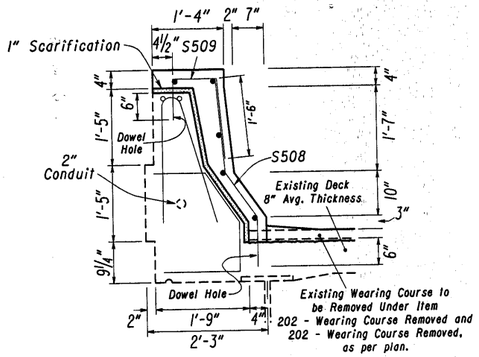
WINGWALL DETAILS
BRIDGE NO. LOR-2-0333 L.&R.
OVER BAUMHART ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EEA			J.S.B.	2-28-92	DGR

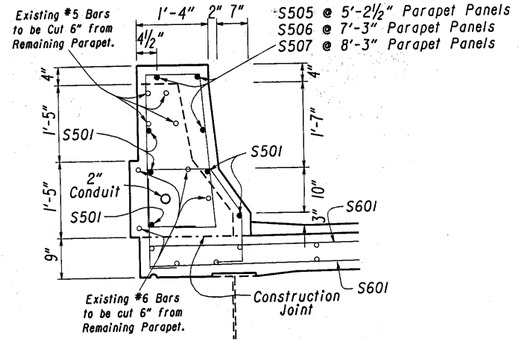
STRUCTURE LOR-2-0333 L.&R.



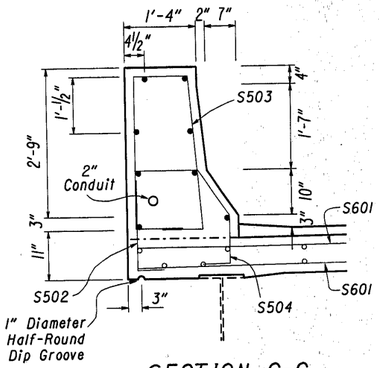
ELEVATION VIEW
REAR ABUTMENT, LEFT BRIDGE SOUTH SIDE
FOREWORD ABUTMENT, RIGHT BRIDGE NORTH SIDE



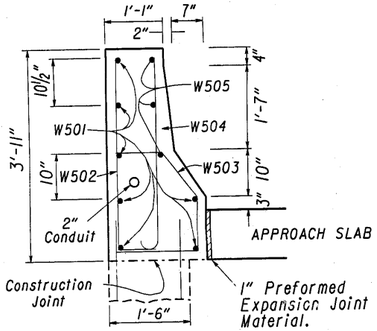
SECTION A-A



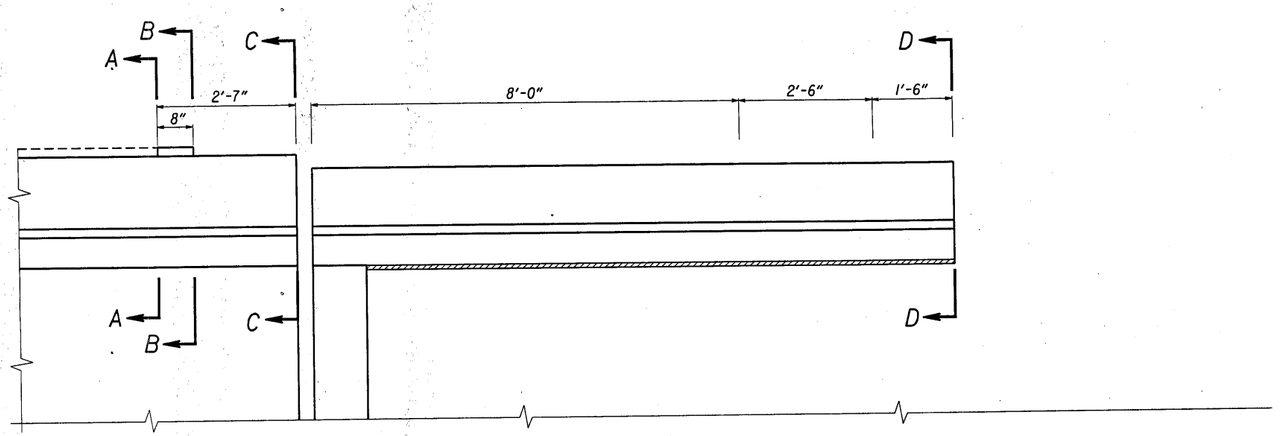
SECTION B-B



SECTION C-C



SECTION D-D



PLAN VIEW

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

7/8

WINGWALL DETAILS

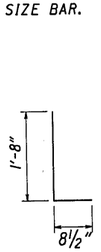
BRIDGE NO. LOR-2-0333 L.&R.
OVER BAUMHART ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EEA			J.S.B.	2-28-92	DGR

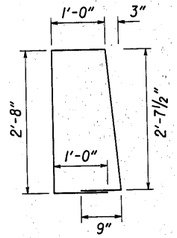
BRIDGE ESTIMATED QUANTITIES

SHEET NUMBER	ITEM	ITEM EXT	PLAN TOTAL	UNIT	DESCRIPTION
					STRUCTURE LOR-2-0333 L.&R.
	202	11301	17	CU. YD.	PORTIONS OF STRUCTURES REMOVED, WINGWALLS, AS PER PLAN.
	202	11301	25	CU. YD.	PORTIONS OF STRUCTURES REMOVED, BACKWALLS, AS PER PLAN.
	202	11301	12	CU. YD.	PORTIONS OF STRUCTURES REMOVED, DECK EDGES, AS PER PLAN.
	202	11301	3	CU. YD.	PORTIONS OF STRUCTURES REMOVED, PARAPETS, AS PER PLAN.
	202	23500	1356	SQ. YD.	WEARING COURSE REMOVED
	202	23501	1356	SQ. YD.	WEARING COURSE REMOVED, AS PER PLAN
8	202	98100	8	EACH	SCUPPER REMOVED
	203	1200	14	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
10,925	509	15800	10,925	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60
	510	11101	800	EACH	DOWEL HOLES, AS PER PLAN.
	511	34450	3.9	CU. YD.	CLASS S CONCRETE PARAPET REPLACEMENT, AS PER PLAN
	511	34450	21.2	CU. YD.	CLASS S CONCRETE WINGWALL, AS PER PLAN
	511	34450	23.9	CU. YD.	CLASS S CONCRETE BACKWALL, AS PER PLAN
	511	34450	12	CU. YD.	CLASS S CONCRETE DECK, AS PER PLAN
	511	34450	47.7	CU. YD.	CLASS S CONCRETE PARAPETS, AS PER PLAN
	SPECIAL	51267502	933	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
	513	21201	LUMP		TRIMMING OF BEAM END, AS PER PLAN
	516	11201	151.3	LIN. FT.	STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN
	SPECIAL	51400050	15,236	SQ. FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400056	15,236	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400060	15,236	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400066	15,236	SQ. FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
	SPECIAL	51400504	100	MAN HR.	GRINDING FINS, TEARS AND SLIVERS
	SPECIAL	51400508	3480	LIN. FT.	GRINDING OF FLANGE EDGES
	SPECIAL	51426010	LUMP		NON-HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
	SPECIAL	51426020	LUMP		HAZARDOUS WASTE MANAGEMENT (SEE PROPOSAL NOTE)
8	518	12201	8	EACH	SCUPPER, INCLUDING SUPPORTS, AS PER PLAN
8	518	12801	8	EACH	SCUPPER MODIFICATION, AS PER PLAN
	518	21101	14	CU. YD.	POROUS BACKFILL, AS PER PLAN.
2.88	519	11101	2.88	SQ. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN.
	SPECIAL	51922006	1332	SQ. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (2¼" THICK) (SEE PROPOSAL NOTE).
	SPECIAL	51922100	42	CU. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) (SEE PROPOSAL NOTE)
	SPECIAL	51922300	LUMP		TEST SLAB (SEE PROPOSAL NOTE)
					LIGHTING
	SPECIAL	20298000	LUMP		REMOVAL OF EXISTING CONDUIT
50	625	25401	50	LIN. FT.	CONDUIT 2 INCH 713.04, AS PER PLAN

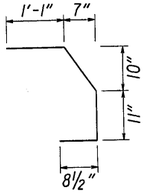
BAR SIZE : THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE : A506 IS A NO. 5 SIZE BAR AND P1101 IS A NO. 11 SIZE BAR.



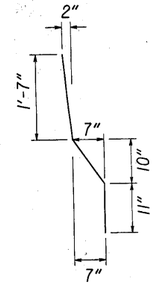
TYPE I



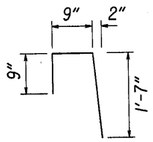
TYPE II



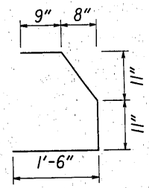
TYPE III



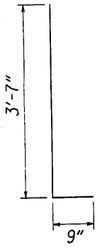
TYPE IV



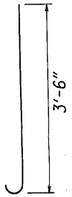
TYPE V



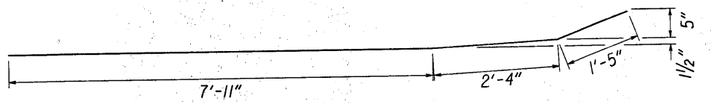
TYPE VI



TYPE VII



TYPE VIII



TYPE IX

ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60

WINGWALLS

ABUTMENT	RIGHT BRIDGE	LEFT BRIDGE
REAR	BOTH	NORTH
FOREWORD	SOUTH	BOTH

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
W501	42	11'-8"	Str.				511
W502	54	2'-2½"	VII				124
W503	36	4'-½"	VI				152
W504	36	3'-11½"	VIII				149
W505	18	11'-8"	IX				219
W506	18	3'-7"	Str.				67
W507	18	2'-10½"	X				54
							1276

WINGWALLS

ABUTMENT	RIGHT BRIDGE	LEFT BRIDGE
REAR	-	SOUTH
FOREWORD	NORTH	-

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
W501	20	11'-8"	Str.				243
W502	18	2'-2½"	VII				41
W503	18	4'-½"	VI				76
W504	18	3'-11½"	VIII				74
							434

DECK

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S601	80	21'-10"	Str.				1822
							1822

PARAPET FACING

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S505	72	4'-10"	Str.				363
S506	96	6'-11"	Str.				693
S507	96	7'-11"	Str.				793
S508	400	3'-5"	IV				1425
S509	400	2'-9"	V				1147
							4421

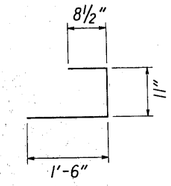
PARAPET REPLACEMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
S501	40	2'-3"	Str.				94
S502	32	2'-3"	I				75
S503	32	7'-6½"	II				251
S504	32	2'-9"	III				92
							512

BACKWALL

MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
B501	48	21'-5"	Str.				1072
D801	104	5'-0"	Bent				1388
							2460

GRAND TOTAL	10,925



TYPE X

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

8 / 8

ESTIMATED QUANTITIES
REINFORCING STEEL
BRIDGE NO. LOR-2-0333 L.&R.
OVER BAUMHART ROAD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EEL			J.S.B.	2-28-92	DGR

EROSION CONTROL SUB-SUMMARY

CALC BY K.A.S. DATE 2/21/92
CHKD BY J.S.B. DATE 2/29/92

ERI/LOR-2-30.51/0.00
ERIE COUNTY
LORAIN COUNTY

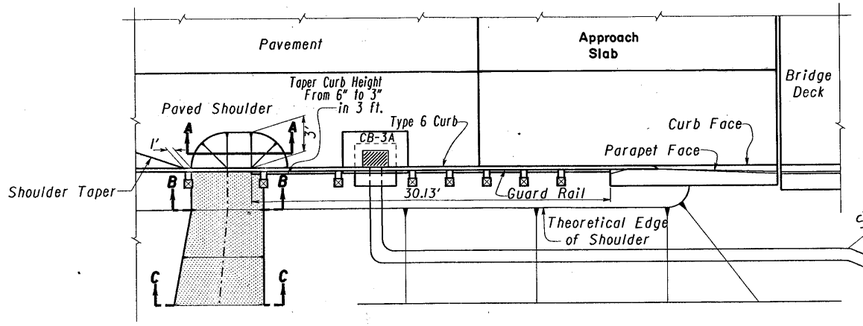
OHIO
FHWA REGION 5

255
267

REF. No.	SHEET No.	STATION	Offset	604 Catch Basin No. 3A (Each)	Catch Basin Grate Elevation / Pipe Flowline Elevation (Ft.)	603 12" Conduit, Type C, 707.13 (Lin. Ft.)	Pipe Outlet Elevation (Ft.)	Elevation at Tee	Bends & Branches	602 Concrete Masonry (Cu. Yd.)	601 Rock Channel Protection, Type C with Filter (Cu. Yd.)	660 Reinforced Sodding (Sq. Yd.)	609 Curb Type 6 (Lin. Ft.)		
West River Rd. (Lor-2-0030)															
E1	148	23+35	16.92' Lt.	1	674.30 / 671.30	41	656.10		1 - 12" x 22.5°	0.21	2.2	43	30		
E2	148	23+32	16.92' Rt.	1	674.26 / 670.80	41	655.80		1 - 12" x 22.5°	0.21	2.2	44	30		
E3	149	26+85	16.92' Lt.	1	672.15 / 668.20	39	655.20		1 - 12" x 22.5°	0.21	2.2	40	30		
E4	149	26+82	16.92' Rt.	1	672.23 / 668.50	42	647.5		1 - 12" x 30°	0.21	2.2	39	30		
Vermilion Rd. (Lor-2-0107)															
E5	151	26+59	20.92' Lt.	1	655.20 / 652.20	99	626.90			0.21	2.2	9	30		
		23+33 to 23+53	Lt.									9	30		
		23+30 to 23+50	Rt.									9	30		
		26+49 to 26+67	Lt.									7	30		
Vermilion Interchange Rd. (Lor-2-0151)															
E6	152	26+48	20.92' Lt.	1	671.10 / 668.00	64	666.00		--	0.21	2.2	40	30		
E7	152	26+48	20.92' Rt.	1	671.10 / 668.00	54	666.00		--	0.21	2.2	30	30		
		23+41 to 23+58	Lt.									40	30		
		23+41 to 23+58	Rt.									40	30		
Sunnyside Rd. (Lor-2-0223)															
E8	153	23+51	16.92' Lt.	1	675.37 / 672.00	58	651.00		1 - 12" x 22.5°	0.21	2.2	43	30		
E9	153	23+51	16.92' Rt.	1	675.37 / 672.30	50	653.30		1 - 12" x 22.5°	0.21	2.2	52	30		
E10	154	26+49	16.92' Lt.	1	673.88 / 670.00	54	651.00		1 - 12" x 22.5°	0.21	2.2	43	30		
E11	154	26+49	16.92' Rt.	1	673.88 / 670.30	49	652.30		1 - 12" x 22.5°	0.21	2.2	40	30		
Claus Rd. (Lor-2-0262)															
E12	155	23+48	16.92' Lt.	1	676.57 / 674.00	49	655.00		1 - 12" x 22.5°	0.21	2.2	51	30		
E13	155	23+53	16.92' Rt.	1	676.62 / 674.00	52	653.50		1 - 12" x 22.5°	0.21	2.2	49	30		
E14	156	26+47	16.92' Lt.	1	675.15 / 672.00	48	653.00		1 - 12" x 22.5°	0.21	2.2	44	30		
E15	156	26+52	16.92' Rt.	1	675.06 / 671.70	56	649.70		1 - 12" x 22.5°	0.21	2.2	50	30		
Lor-2-0097															
E16	123	50+91	66.94' Rt.	1	620.14 / 617.14	116	579.50		1 - 12" x 22.5°	0.21	2.2	62	20		
E17	123	50+91	24.37' Rt.	1	620.45 / 617.45	25		617.20	1 - 12" x 90° Tee	0.21	1.1	19	20		
E18	123	50+91	24.37' Lt.	1	620.45 / 617.45	129	585.00		2 - 12" x 22.5°			19	20		
E19	123	50+91	63.63' Lt.	1	620.28 / 617.28	119	583.50		1 - 12" x 22.5°	0.21	2.2	56	20		
Lor-2-0333															
E20	135	175+46	53.63' Rt.	1	665.57 / 662.57	36	650.00		1 - 12" x 22.5°	0.21	2.2	30	15		
E21	135	175+46	14.37' Rt.	1	665.70 / 662.70	15		662.55	1 - 12" x 90° Tee	0.21	1.1	9	15		
E22	135	175+46	14.37' Lt.	1	665.70 / 662.70	79	647.00		2 - 12" x 11.25°			9	15		
E23	135	175+46	53.63' Lt.	1	665.57 / 662.57	35	646.00		1 - 12" x 30°	0.21	2.2	38	15		
E24	135	177+67	53.63' Rt.	1	665.56 / 662.56	37	654.00		1 - 12" x 11.25°	0.21	2.2	33	15		
E25	135	177+67	14.37' Rt.	1	665.69 / 662.69	15		662.54	1 - 12" x 90° Tee	0.21	1.1	9	15		
E26	135	177+67	14.37' Lt.	1	665.69 / 662.69	80	647.00		2 - 12" x 11.25°			9	15		
E27	135	177+67	53.63' Lt.	1	665.56 / 662.56	29	648.00		1 - 12" x 45°	0.21	2.2	13	15		
TOTALS TO GENERAL SUMMARY				27		1511				5.04	49.5	1028	800		

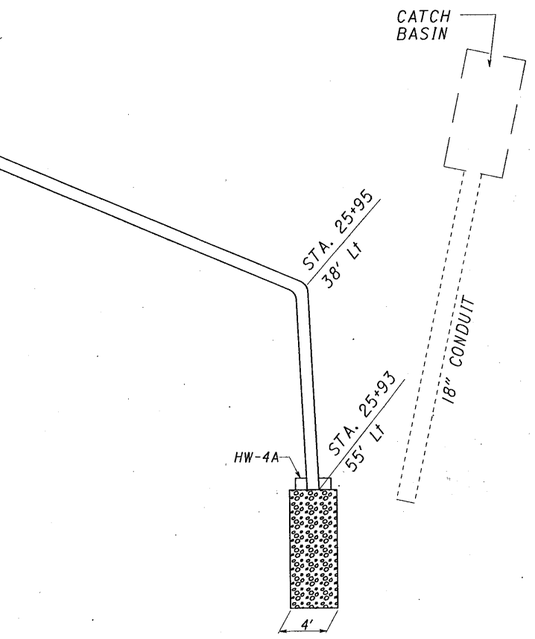
CALC BY K.A.S. DATE 2-24-92	ERI/LOR-2-30.51/0.00	OHIO	256
CHKD BY J.S.B. DATE 2-26-92	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

EROSION CONTROL AT BRIDGES



DETAIL-A

VERMILION RD. (North of Lor-2-0107, Lt)



LEGEND

- Reinforced Sod
- Rock Channel Protection Type C, with Filter

NOTE:

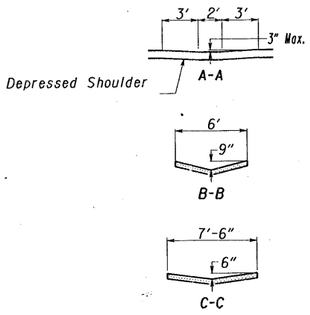
DEPRESSED SHOULDER: This portion of the shoulder shall be depressed to assure positive drainage into the sodded flume. Especially in the shoulder area it is important to excavate and shape the subgrade according to the cross sections.

PLACING REINFORCED SODDING: Prior to the placement of sod, galvanized poultry netting shall be placed on the finished subgrade. The netting shall be 4 foot wide, poultry fence or equivalent, with 2 inch mesh and No. 20 gauge minimum wire. Each strand shall be staked securely to the subgrade by using 1"x1"x8" wood stakes or T-shaped pins of the size stated in 660.06. The stakes or pins shall be placed at 4 foot intervals on the top and bottom and in rows 4 feet apart. The fence shall be fastened to the wood stakes with metal staples. Where the sodding is from 8 feet to 9 feet wide, two strands of netting for a total width of 8 feet is permitted.

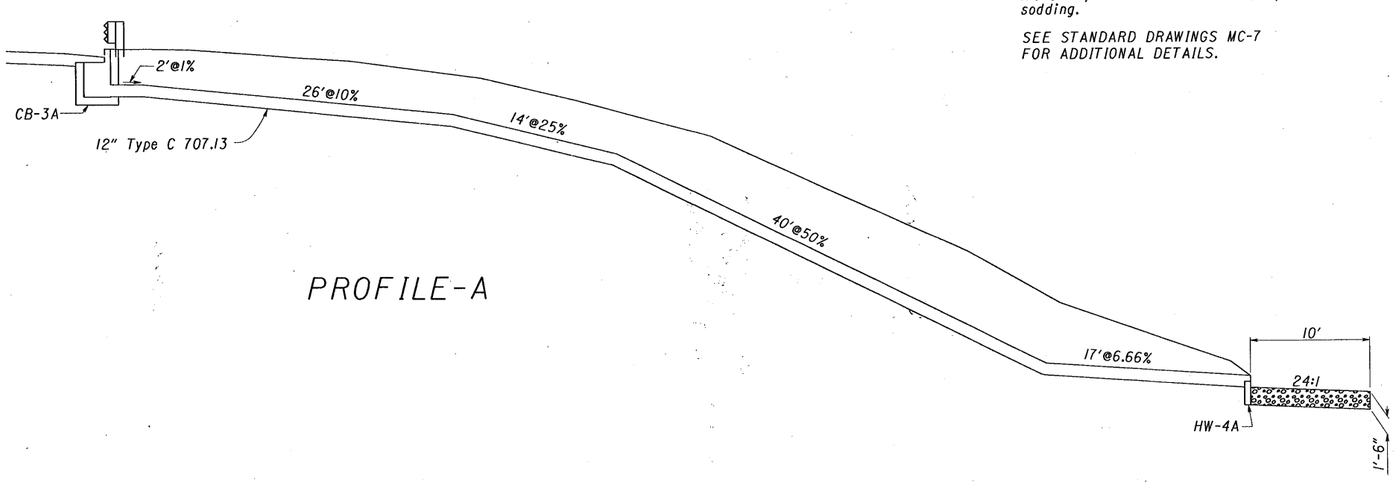
SOD: Sod shall be laid in accordance with 660. Special care shall be taken to excavate the sod bed to a proper depth so that the sod is flush with the surrounding grade.

PAYMENT: Payment for all the above shall be included in the unit price bid for Item 660, Square Yard, Reinforced sodding.

SEE STANDARD DRAWINGS MC-7 FOR ADDITIONAL DETAILS.

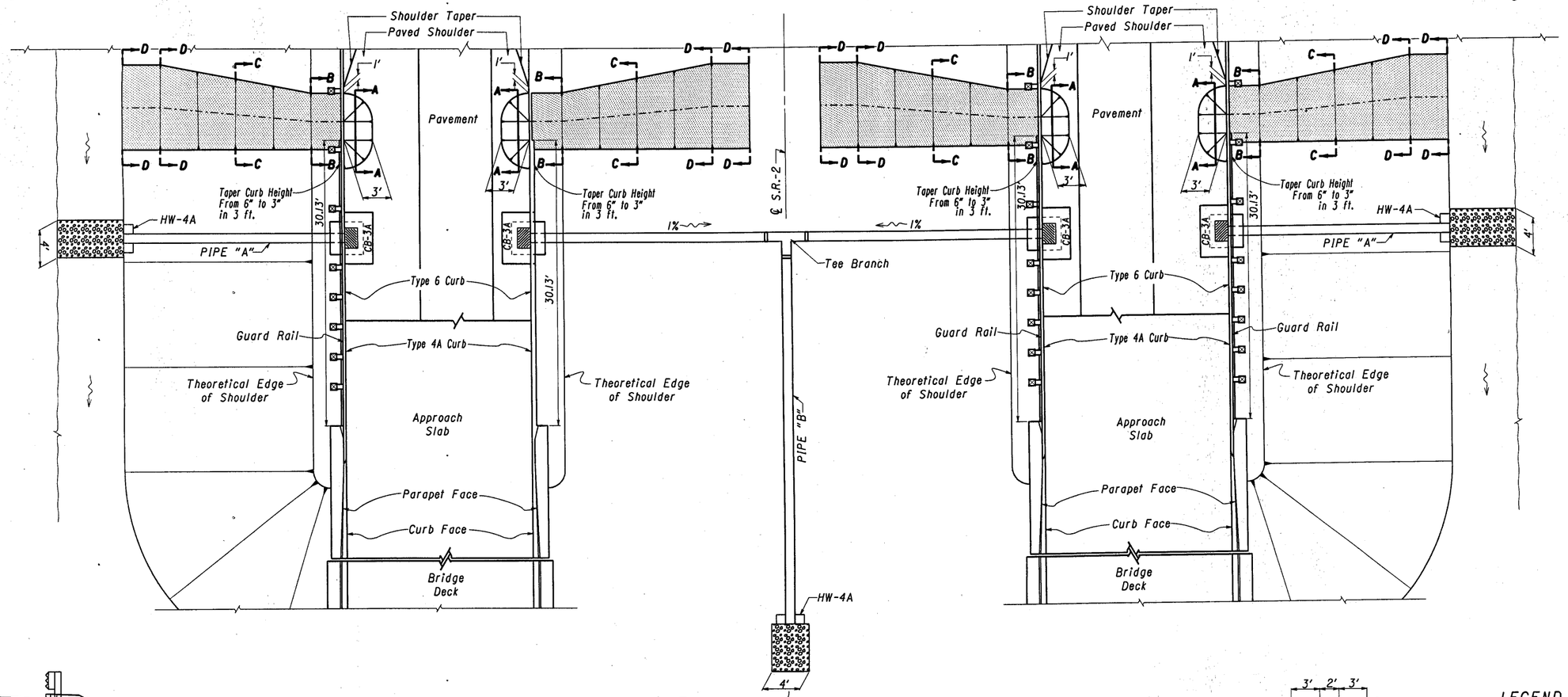


CROSS SECTIONS



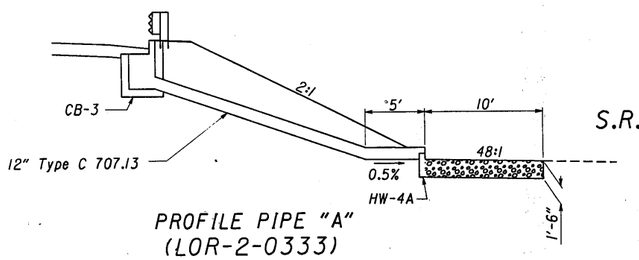
PROFILE-A

EROSION CONTROL AT BRIDGES

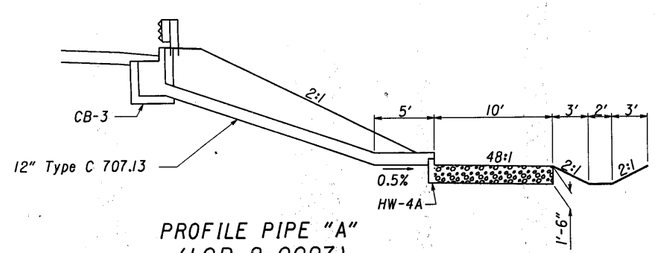


DETAIL-B

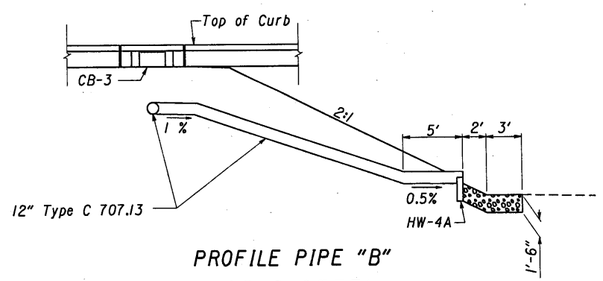
S.R.-2 (West of Lor-2-0097, Lt & Rt)
S.R.-2 (East & West of Lor-2-0333, Lt & Rt)



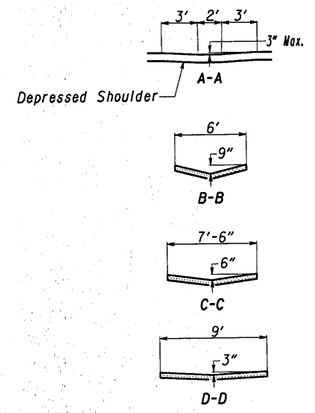
PROFILE PIPE "A"
(LOR-2-0333)



PROFILE PIPE "A"
(LOR-2-0097)



PROFILE PIPE "B"
(LOR-2-0333)
(LOR-2-0097)



CROSS SECTIONS

LEGEND

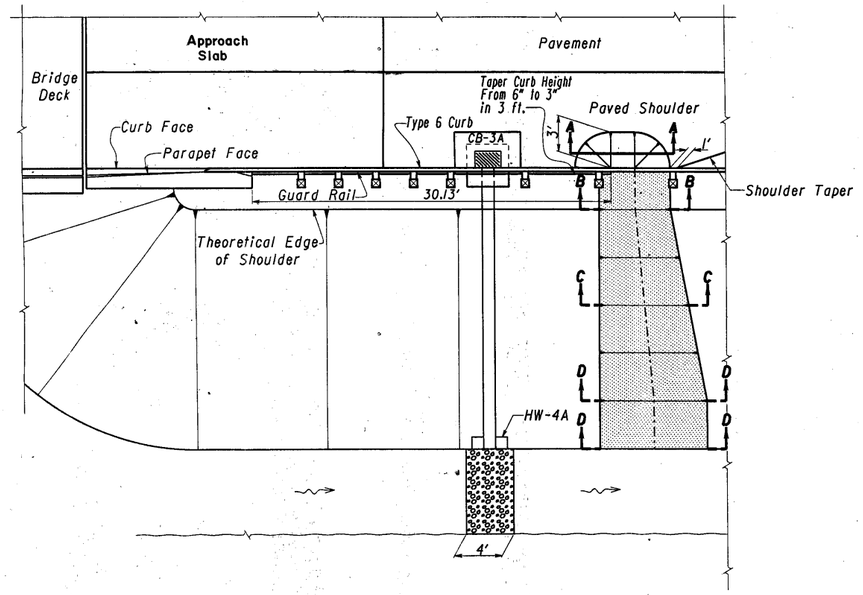
- Reinforced Sod
- Rock Channel Protection Type C, with Filter

NOTES:

FOR EROSION CONTROL NOTES SEE SHEET-256

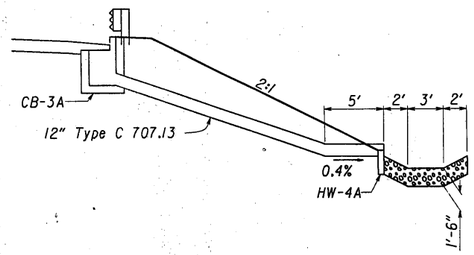
SEE STANDARD DRAWINGS MC-7 FOR ADDITIONAL DETAILS.

EROSION CONTROL AT BRIDGES

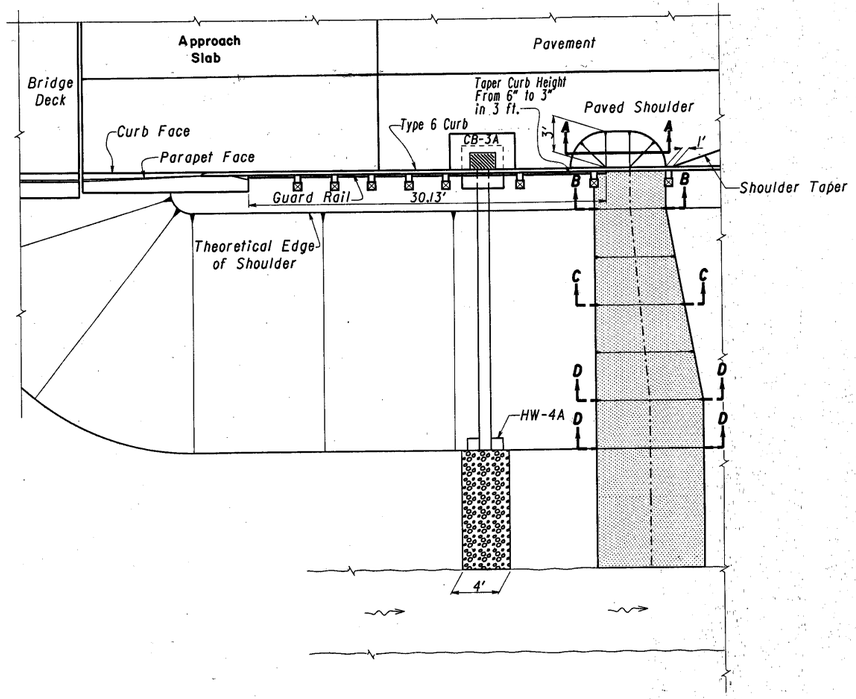


DETAIL-C

WEST RIVER RD. (North and South of Lor-2-0030, Lt & Rt)
SUNNYSIDE RD. (North and South of Lor-2-0223, Rt)
CLAUS RD. (South of Lor-2-0262, Lt & Rt)

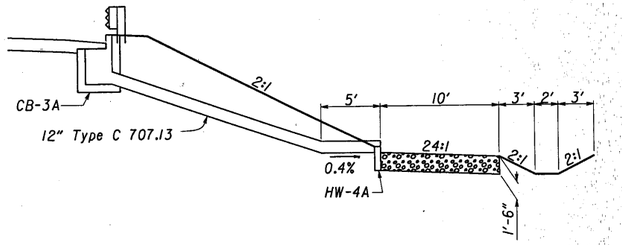


PROFILE-C



DETAIL-D

SUNNYSIDE RD. (North and South of Lor-2-0223, Lt)
CLAUS RD. (North of Lor-2-0262, Lt & Rt)
VERMILION INTERCHANGE RD. (North of Lor-2-0151, Lt & RT)



PROFILE-D

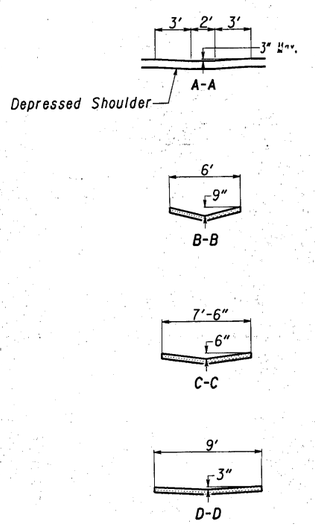
LEGEND

- Reinforced Sod
- Rock Channel Protection Type C, with Filter

NOTES:

FOR EROSION CONTROL NOTES SEE SHEET-256

SEE STANDARD DRAWINGS MC-7 FOR ADDITIONAL DETAILS.



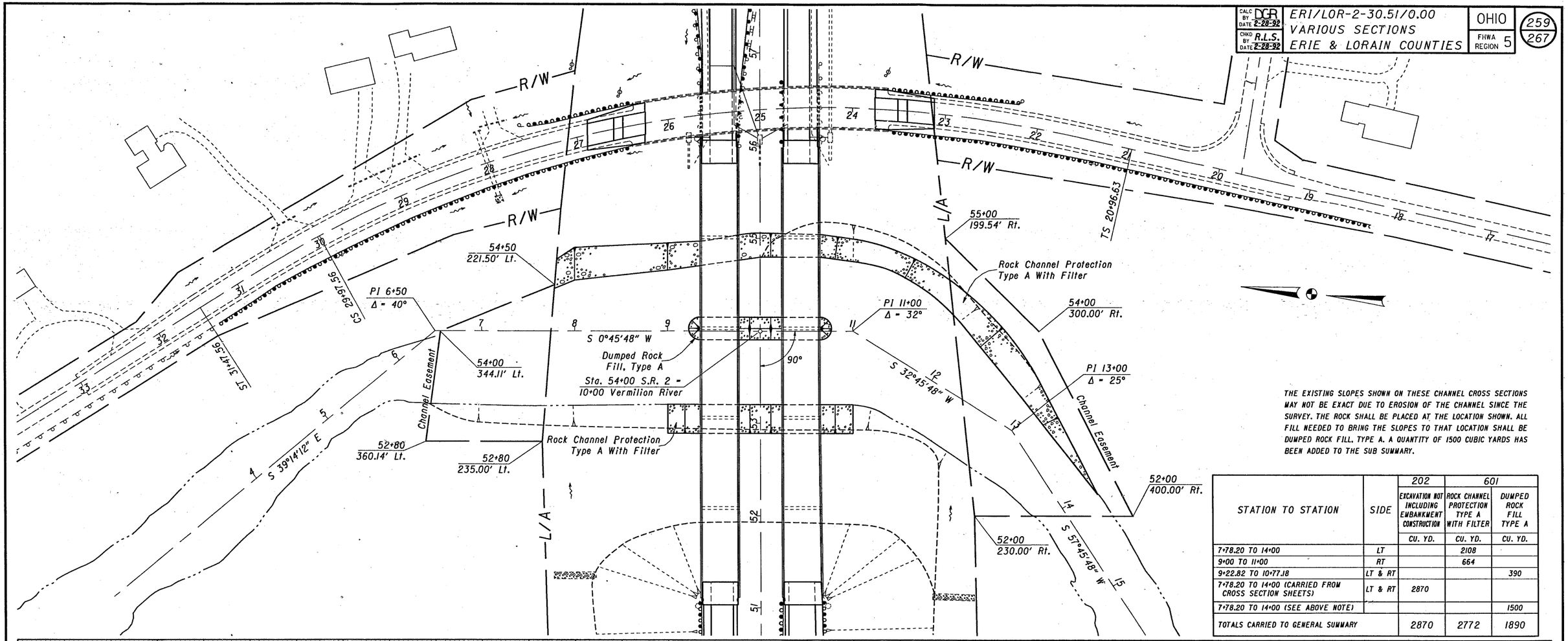
CROSS SECTIONS

CALC BY DGR DATE 2-28-92
CHKD BY R.L.S. DATE 2-28-92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

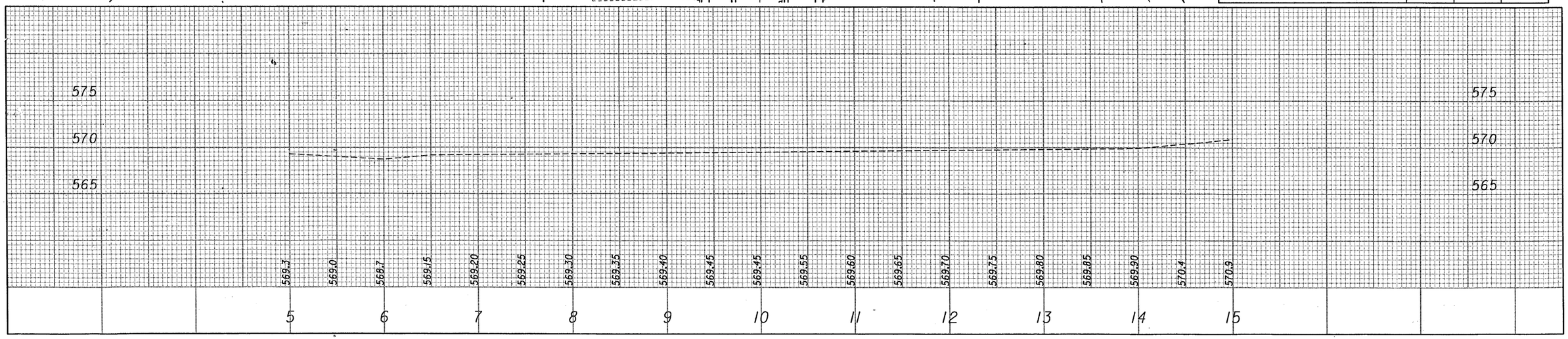
OHIO
FHWA REGION 5

259
267



THE EXISTING SLOPES SHOWN ON THESE CHANNEL CROSS SECTIONS MAY NOT BE EXACT DUE TO EROSION OF THE CHANNEL SINCE THE SURVEY. THE ROCK SHALL BE PLACED AT THE LOCATION SHOWN. ALL FILL NEEDED TO BRING THE SLOPES TO THAT LOCATION SHALL BE DUMPED ROCK FILL, TYPE A. A QUANTITY OF 1500 CUBIC YARDS HAS BEEN ADDED TO THE SUB SUMMARY.

STATION TO STATION	SIDE	202	601	
		EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	ROCK CHANNEL PROTECTION TYPE A WITH FILTER	DUMPED ROCK FILL TYPE A
		CU. YD.	CU. YD.	CU. YD.
7+78.20 TO 14+00	LT		2108	
9+00 TO 11+00	RT		664	
9+22.82 TO 10+77.18	LT & RT			390
7+78.20 TO 14+00 (CARRIED FROM CROSS SECTION SHEETS)	LT & RT	2870		
7+78.20 TO 14+00 (SEE ABOVE NOTE)				1500
TOTALS CARRIED TO GENERAL SUMMARY		2870	2772	1890



VERMILION RIVER PLAN AND PROFILE SHEET

SEEDING	
END WIDTH	SQ. YDS.

CALC BY DGR DATE 2-18-92	ERI/LOR-2-30.51/0.00 VARIOUS SECTIONS ERIE & LORAIN COUNTIES	OHIO	260 267
CHKD BY DATE 2-18-92		FHWA REGION 5	

Rock Channel Protection Type A With Filter Thickness = 3'

Dumped Rock Fill, Type A Thickness as Shown

Rock Channel Protection Type A With Filter Thickness = 3'

10+00
FL 569.50

9+35
FL 569.44

Sta 9+00
Begin Rock Channel Protection Type A With Filter Thickness = 3'

Begin Dumped Rock Fill Type A Sta 9+22.82

9+00
FL 569.40

Ahead
Back

8+00
FL 569.30

Sta. 7+78.20
Begin Rock Channel Protection Type A With Filter Thickness = 3'

7+78.20
FL 569.12

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			550
318			
			538
129			
			173
Ahead	138		
Back	50		
			404
168			
			105
91			

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

CHANNEL CROSS SECTIONS

SEEDING	
END WIDTH	SQ. YDS.

CALC BY DGR DATE 2-18-92
CHKD BY EAF DATE 2-18-92

ERI/LOR-2-30.51/0.00
VARIOUS SECTIONS
ERIE & LORAIN COUNTIES

OHIO
FHWA REGION 5

261
267

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0			
		172	
93			
		330	
85			
*439			
Ahead 73			
Back 107			
		159	
139			

Sta 14+00
End Rock Channel Protection
Type A With Filter

14+00
FL 569.8

13+00
FL 569.80

12+00
FL 569.70

Sta 11+00
End Rock Channel Protection
Type A With Filter

*Based on a curved length of 150'.

11+00
FL 569.60

End Dumped Rock Fill
Type A
Sta 10+77.18

Dumped Rock Fill, Type A
Thickness as Shown

Rock Channel Protection
Type A With Filter
Thickness = 3'

Rock Channel Protection
Type A With Filter
Thickness = 3'

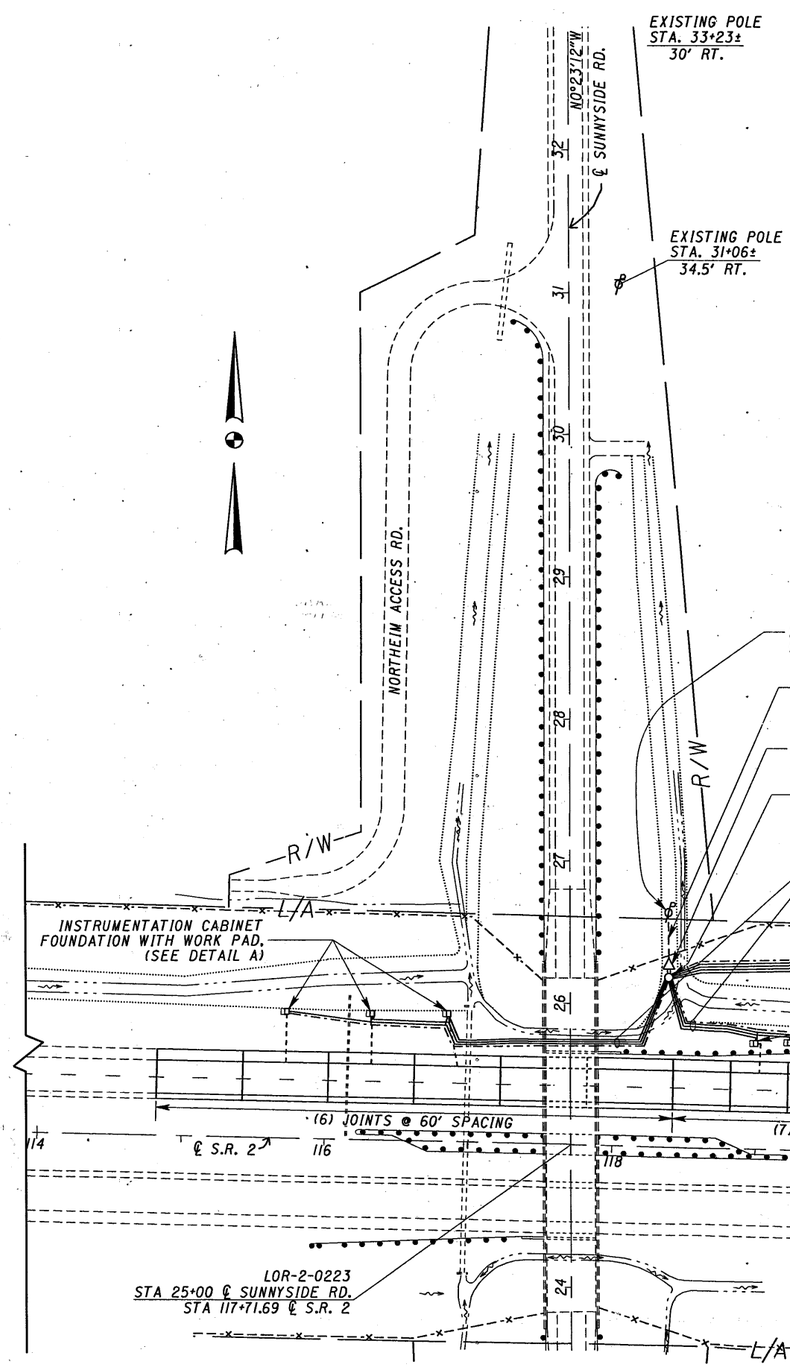
10+65
FL 569.57

580
570
2:1
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

CHANNEL CROSS SECTIONS

INSTRUMENTATION SITE PLAN

CALC BY DLW DATE 1-22-98	ERI/LOR-2-30.51/0.00	OHIO	262
CHKD BY ____ DATE ____	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



INSTRUMENTATION GENERAL SUMMARY

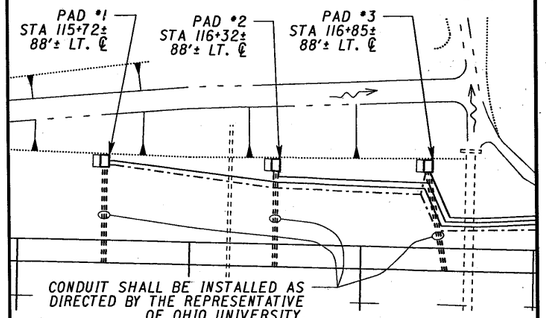
ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
SPECIAL	690 98000	1	EACH	WEIGH-IN-MOTION PAVEMENT SYSTEM (SEE NOTE ON SHTS. 266 & 267)
SPECIAL	20363500	48	HOURS	LOADER WITH BACKHOE RENTAL (SEE NOTE ON SHT 263)
603	00400	60	LIN. FT.	4" CONDUIT, TYPE E (SEE NOTE THIS PAGE)
625	34001	1	EACH	POWER SERVICE, AS PER PLAN (SEE NOTE ON SHT. 263)
625	30700	2	EACH	PULL BOX, 713.08, 18"
625	30706	1	EACH	PULL BOX, 713.08, 24"
625	29003	870	LIN. FT.	TRENCH, 24" DEEP, AS PER PLAN (SEE NOTE ON SHT. 263)
625	24100	2550	LIN. FT.	1-1/2" DUCT-CABLE WITH TWO NO. 4 AWG 5000 VOLT CABLES
625	25400	2200	LIN. FT.	CONDUIT, 2", 713.04
625	32001	10	EACH	GROUND ROD, AS PER PLAN (SEE NOTE ON SHT. 263)
633	70000	1	CU. YD.	CONCRETE FOR CABINET FOUNDATION, 3'-4" x 2'-0" x 48"
633	70000	17	CU. YD.	CONCRETE FOR CABINET FOUNDATION, 4'-2" x 3'-0" x 48"
633	70500	9	SQ. FT.	CONTROLLER WORK PAD, 3'-4" x 2'-6" x 4"
633	70500	94	SQ. FT.	CONTROLLER WORK PAD, 4'-2" x 2'-6" x 4"
633	65001	1	EACH	CABINET WITHOUT CONTROLLER, AS PER PLAN (SEE NOTE ON SHT. 263)

LEGEND

- BREAK IN SLOPE
- EXISTING FENCE
- DITCH BOTTOM
- SIGNAL CONNECTOR CONDUIT
- POWER CABLE
- CABINET CONDUIT

(*) UNDERDRAINS FOR PULL BOXES NOTE :
REFERENCE IS MADE TO STANDARD DRAWING HL-30.11 FOR DETAILS OF DRAWING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. AN ESTIMATED QUANTITY OF "60 LINEAR FEET OF ITEM 603 4" CONDUIT TYPE E" IS INCLUDED IN THE INSTRUMENTATION GENERAL SUMMARY FOR THIS PURPOSE.

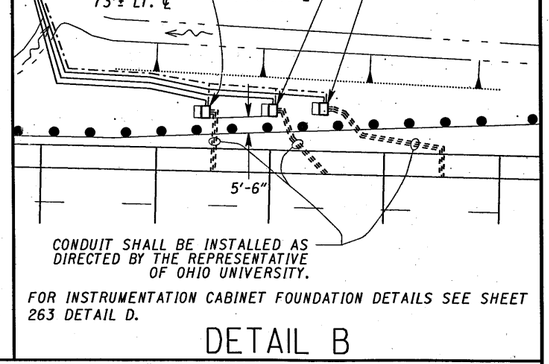
CONCRETE CABINET FOUNDATIONS SHALL BE PLACED A MINIMUM OF 6" FROM THE TOP EDGE OF THE DITCH FORESLOPE. CABINETS SHALL BE A MINIMUM OF 32' FROM THE EDGE OF PAVEMENT.



FOR INSTRUMENTATION CABINET FOUNDATION DETAILS SEE SHEET 263 DETAIL D.

DETAIL A

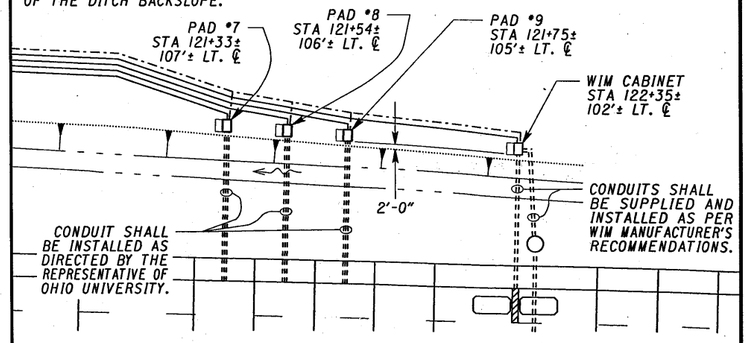
CONCRETE CABINET FOUNDATIONS SHALL BE PLACED A MINIMUM OF 5'-6" FROM THE FACE OF THE GUARDRAIL.



FOR INSTRUMENTATION CABINET FOUNDATION DETAILS SEE SHEET 263 DETAIL D.

DETAIL B

CONCRETE CABINET FOUNDATIONS SHALL BE PLACED A MINIMUM OF 2' FROM THE TOP EDGE OF THE DITCH BACKSLOPE.



FOR WIM CABINET FOUNDATION DETAILS SEE SHEET 263 DETAIL E.
FOR INSTRUMENTATION CABINET FOUNDATION DETAILS SEE SHEET 263 DETAIL D.

DETAIL C

NOTES FOR SCALE INSTALLATION:

SEE SHEET 264 FOR WEIGH-IN-MOTION (WIM) SCALE INSTALLATION DETAILS.
SEE SHEET 265 FOR WIM LOOP INSTALLATION DETAILS.

CALC BY DATE	ERI/LOR-2-30.51/0.00	OHIO	263
CHKD BY DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

INSTRUMENTATION NOTES AND DETAILS

ITEM SPECIAL LOADER WITH BACKHOE RENTAL, AS PER PLAN

THE CONTRACTOR SHALL SUPPLY A FRONT END LOADER WITH BACKHOE TO ASSIST THE OHIO UNIVERSITY REPRESENTATIVE IN EXCAVATING, PLACING, AND BACKFILLING THE 2" CONDUIT FOR THE INSTRUMETATION OF THE PAVEMENT. AN ESTIMATED QUANTITY OF 48 HOURS OF LOADER WITH BACKHOE, AS PER PLAN HAS BEEN INCLUDED IN THE INSTRUMENTATION GENERAL SUMMARY ON SHEET 262.

ITEM 625 GROUND ROD, AS PER PLAN

A ½" DIAMETER BY 8'-0" COPPERWELD GROUND ROD SHALL BE PLACED IN THE TRENCH LINE. A #6 AWG SOLID COPPER WIRE SHALL BE USED TO CONNECT THE GROUND ROD TO THE WIM AND INSTRUMENTATION CABINETS. INSTALLATION FOR THE WIM CABINET SHALL BE AS PER RECOMMENDATION OF THE WIM VENDOR AND INSTALLATION FOR THE INSTRUMENTATION CABINET SHALL BE AS DIRECTED BY THE REPRESENTATIVE OF OHIO UNIVERSITY.

ITEM 625 POWER SERVICE, AS PER PLAN

POWER IS TO BE SUPPLIED BY OHIO EDISON COMPANY AND BE 120/240 VOLT, 3-WIRE, GROUNDED NEUTRAL. CONTACT DAVE MEYERS AT OHIO EDISON COMPANY, WEST RIVER ROAD, ELYRIA, OHIO 44035 (PHONE NUMBER: 216-324-5515).

POWER SERVICE EQUIPMENT SHALL BE INSTALLED AS SPECIFIED IN THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ON STANDARD CONSTRUCTION DRAWING HL-40.10 EXCEPT THE CONTACTOR AND PHOTOELECTRIC CELL SHALL BE ELIMINATED. THE THE METER SHALL BE ORIENTATED SO IT CAN BE READ WHILE STANDING OUTSIDE THE RIGHT-OF-WAY FENCE. THE CONTRACTOR SHALL PAY ANY POWER COMPANY FEES ASSOCIATED WITH THE INSTALLATION AND CONNECTION OF THE POWER SERVICE.

THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL NEMA TYPE 4X ENCLOSURE TO HOUSE THE CONTROL CENTER AS SHOWN IN THE WIRING DETAIL ON THIS SHEET.

WHEN PLACING THE CONCRETE FOR THE INSTRUMENTATION CABINET THE CONTRACTOR SHALL STENCIL THE PAD NUMBER AS SHOWN IN DETAILS A, B, AND C ON SHEET 262 INTO THE FOUNDATION. THE PAD NUMBER SHALL BE IMPRESSED INTO THE FOUNDATION BEFORE IT TAKES ITS FINAL SET. THE NUMERALS SHALL BE 3 TO 4 INCHES IN HEIGHT AND ¼ INCH IN DEPTH. THE NUMBER SHALL BE PLACED PARALLEL WITH THE FOUNDATION EDGE ADJACENT TO THE WORK PAD. IT SHALL BE CENTERED ON THE FRONT EDGE OF THE FOUNDATION AND PLACED ON THE CABINET DOOR SIDE.

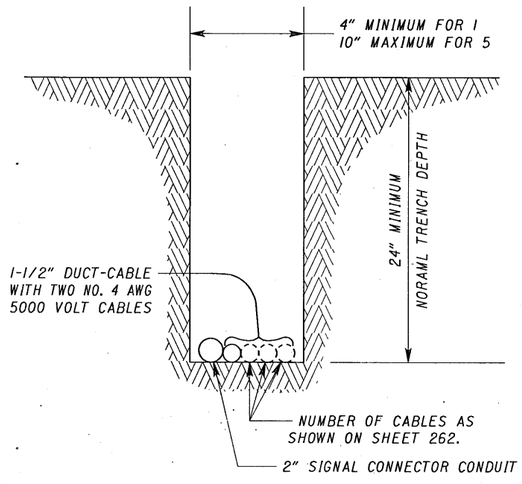
ITEM 633 CABINET WITHOUT CONTROLLER, AS PER PLAN

THE CONTRACTOR SHALL PROVIDE ONE (1) HENNESSY LARGE SINGLE DOOR NEMA 3R CABINET CATALOG NO. HP774426 WITH (4) SHELF KITS CATALOG NO. 231636 AND (1) THERMOSTATICALLY CONTROLLED COOLING FAN ASSEMBLY CATALOG NO. 230220 WITH MOUNTING HARDWARE OR EQUIVALENT WITH IDENTICAL DIMENSIONS AND SIZES INCLUDING SHELVES AND FAN. THE CABINET SHALL BE INSTALLED ON THE CONCRETE CABINET FOUNDATION DESIGNATED BY THE ENGINEER. SEE DETAIL D FOR FURTHER DETAILS. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 633 CABINET WITHOUT CONTROLLER, AS PER PLAN.

ITEM 625 TRENCH, 24" DEEP, AS PER PLAN

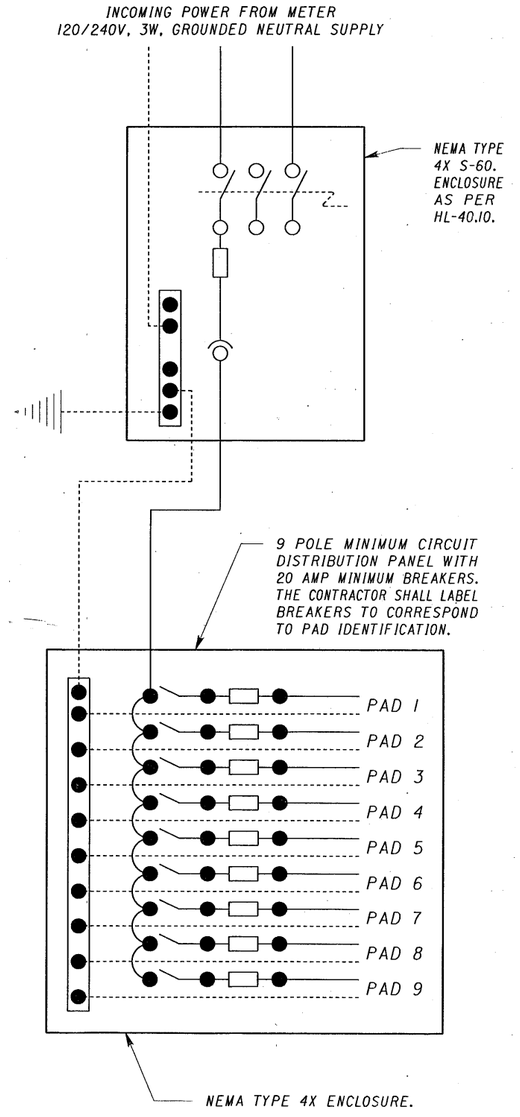
THIS ITEM SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 625 AND SHALL BE CONSTRUCTED AS PER THE DETAIL ON THIS SHEET.

TRENCH, 24" DEEP, AS PER PLAN DETAIL

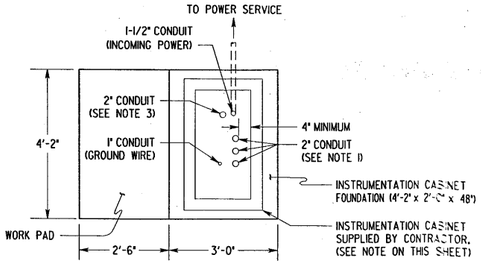


CROSS-SECTION OF TRENCH

CONTROL CENTER WIRING DETAIL



DETAIL D

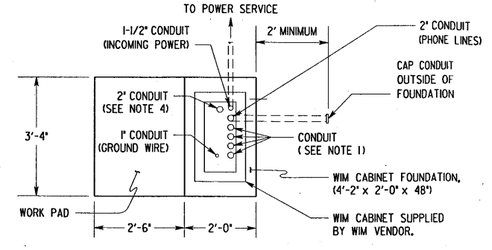


INSTRUMENTATION FOUNDATION DETAIL
SEE INSTRUMENTATION SITE PLAN FOR PLACEMENT

NOTES

1. CONDUITS FOR INSTRUMENTATION CABINET SHALL BE PROVIDED BY THE CONTRACTOR. THE SIZE, NUMBER, ORIENTATION OF CONDUIT SHALL BE AS SHOWN ABOVE. CONDUIT SHALL BE INSTALLED AS DIRECTED BY THE REPRESENTATIVE OF OHIO UNIVERSITY.
2. THE SIZE, NUMBER AND LOCATION OF ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH THE CABINET MANUFACTURER'S RECOMMEDATIONS.
3. 2" SIGNAL CONNECTOR CONDUIT SHALL BE USED TO CONNECT WIM CABINET TO THE OTHER PROPOSED CABINETS AS SHOWN ON SHEET 262.
4. CONDUIT FOR ELECTRIC DROP AND GROUND ROD WILL BE SUPPLIED BY THE CONTRACTOR UNDER ITEM 625.
5. CONDUIT SHALL BE CAPPED AND INSTALLED WITH INSULATED BUSHINGS.
6. ½" PREFORMED JOINT FILLER AS PER 705.03 SHALL BE USED BETWEEN FOUNDATIONS AND ADJACENT WORK PAD.
7. THE TOP OF THE WORK PAD SHALL BE 1" ABOVE THE GROUND LINE. IN STEEPLY SLOPED AREAS THE PAD'S LOCATION SHALL BE ADJUSTED TO PROVIDE ACCESS AND DRAINAGE.
8. THE CABINET FOUNDATIONS SHALL BE ORIENTATED AS SHOWN IN DETAILS A, B, AND C ON SHEET 262. THE TOP OF THE FOUNDATION SHALL BE 12" ABOVE THE GROUND LINE.

DETAIL E



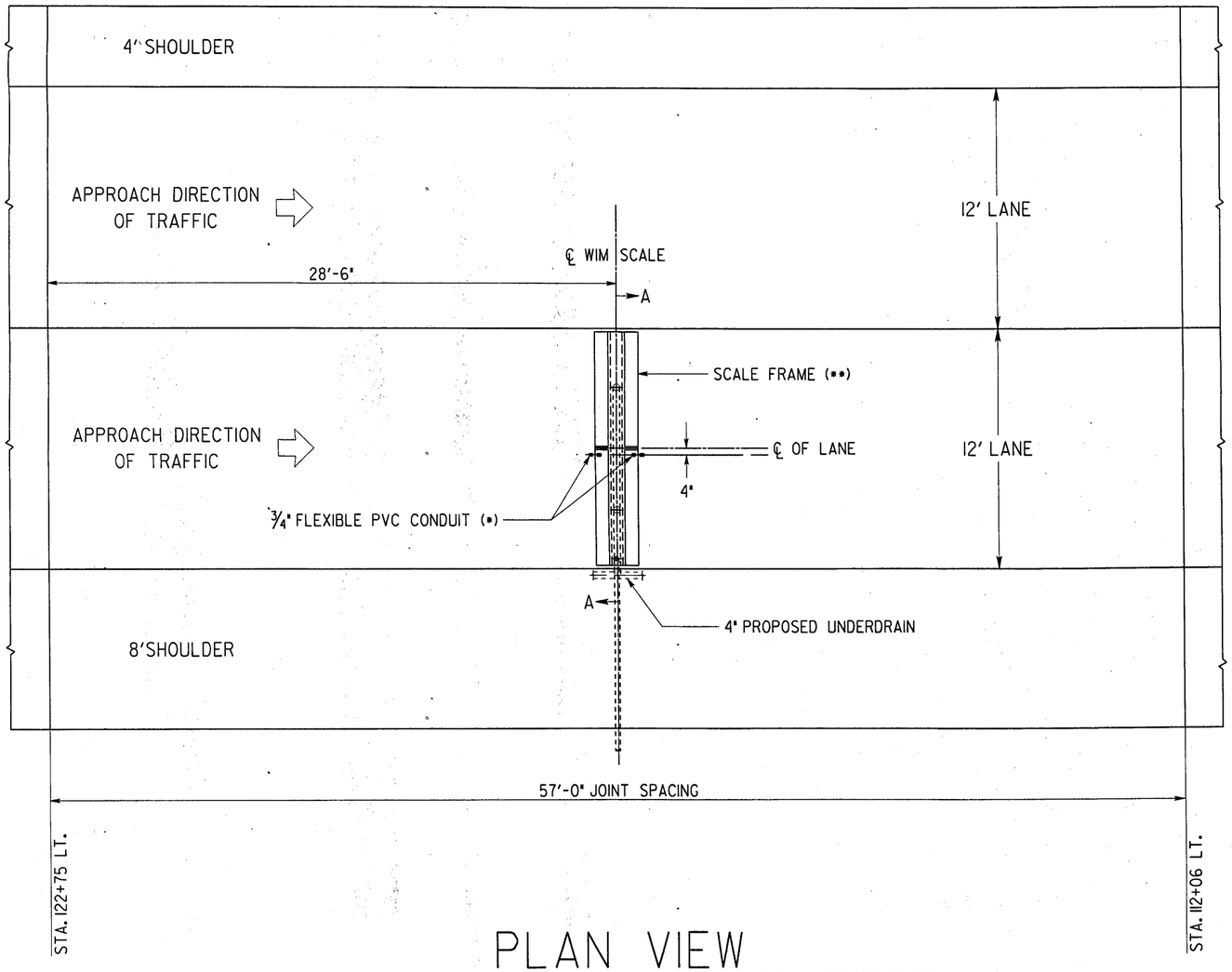
WIM FOUNDATION DETAIL
SEE INSTRUMENTATION SITE PLAN FOR PLACEMENT

NOTES

1. CONDUITS FOR WIM CABINET SHALL BE PROVIDED BY WIM VENDOR. THE SIZE, NUMBER, ORIENTATION AND INSTALLATION OF CONDUIT SHALL BE AS PER WIM MANUFACTURER'S RECOMMENDATIONS.
2. THE SIZE, NUMBER AND LOCATION OF ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH THE WIM MANUFACTURER'S RECOMMEDATIONS.
3. CONDUIT FOR TELEPHONE DROP AND GROUND ROD WILL BE SUPPLIED BY THE CONTRACTOR UNDER ITEM 625.
4. 2" SIGNAL CONNECTOR CONDUIT SHALL BE USED TO CONNECT WIM CABINET TO THE OTHER PROPOSED CABINETS AS SHOWN ON SHEET 262.
5. CONDUIT SHALL BE CAPPED AND INSTALLED WITH INSULATED BUSHINGS.
6. ½" PREFORMED JOINT FILLER AS PER 705.03 SHALL BE USED BETWEEN FOUNDATIONS AND ADJACENT WORK PAD.
7. CONTROLLER CABINET SHALL BE SEALED TO THE FOUNDATION WITH A FLEXIBLE WEATHERPROOF CAULKING COMPOUND.
8. THE TOP OF THE WORK PAD SHALL BE 1" ABOVE THE GROUND LINE. IN STEEPLY SLOPED AREAS THE PAD'S LOCATION SHALL BE ADJUSTED TO PROVIDE ACCESS AND DRAINAGE.
9. THE CABINET FOUNDATION SHALL BE ORIENTATED AS SHOWN IN DETAIL C ON SHEET 262. THE TOP OF THE FOUNDATION SHALL BE 12" ABOVE THE GROUND LINE.

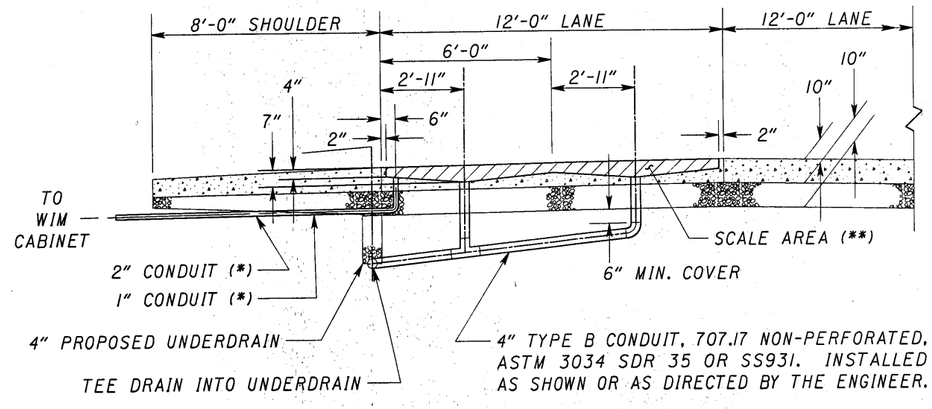
WIM SCALE INSTALLATION

CALC BY / DATE	ERI/LOR-2-30.51/0.00	OHIO	264
CHKD BY / DATE	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267



PLAN VIEW

PLACEMENT OF WEIGH-IN-MOTION SCALE/FOUNDATION



ALL COSTS FOR CONNECTION INTO UNDERDRAIN TO BE INCLUDED IN THE UNIT PRICE BID ITEM SPECIAL WEIGH-IN-MOTION PAVEMENT SYSTEM.

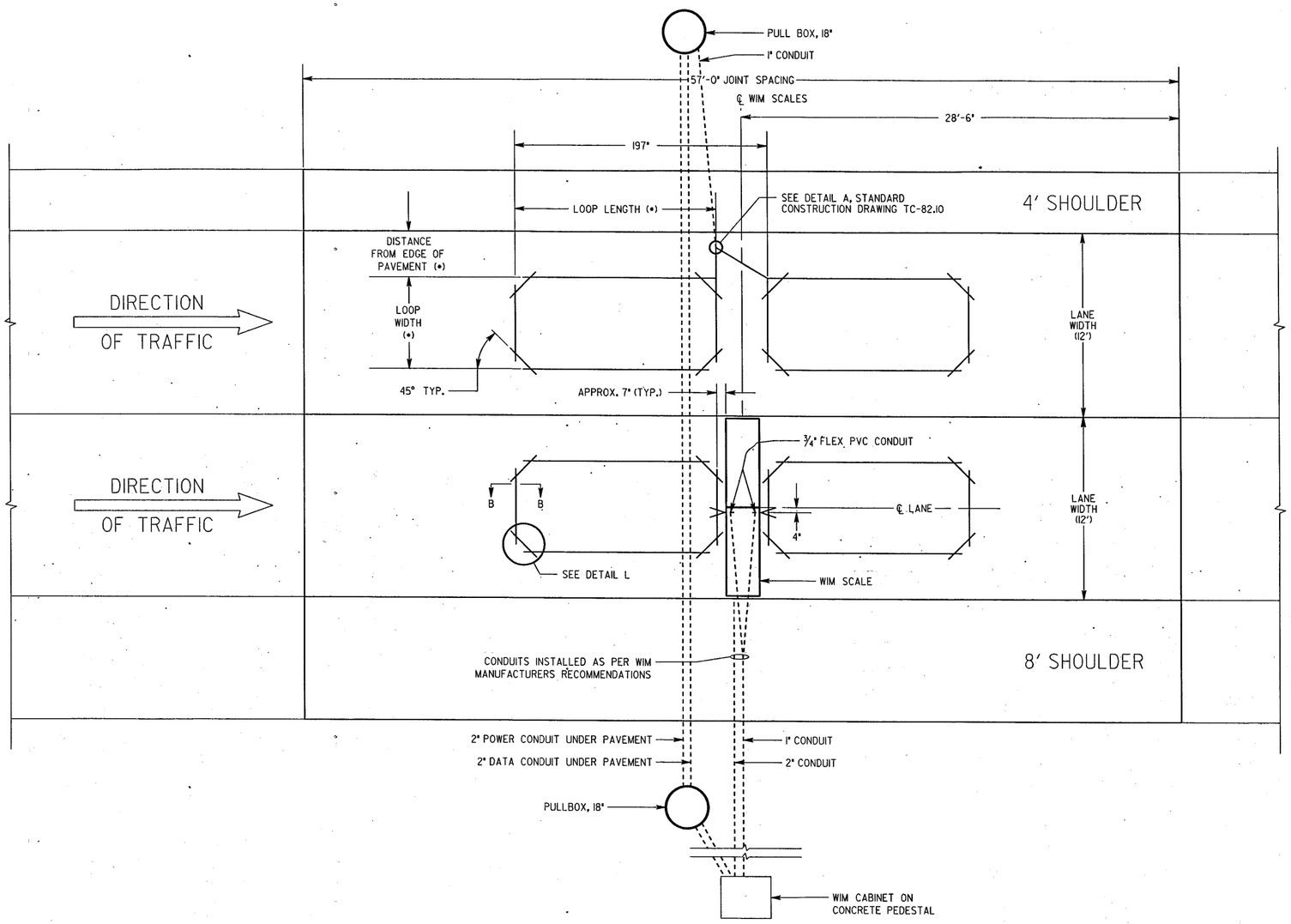
VIEW A-A

NOTE (*) : SUPPLIED AND INSTALLED AS PER WIM MANUFACTURER'S RECOMMENDATION
NOTE (**) : SCALE FRAME (140" x 26") SUPPLIED AND INSTALLED AS PER WIM MANUFACTURER'S RECOMMENDATION

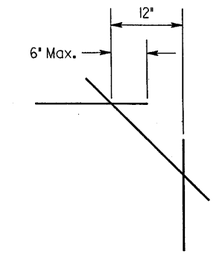
NOTES : SEE SHEET 265 FOR LOOP INSTALLATION
SEE SHEET 262 FOR INSTRUMENTATION SITE PLAN
SEE SHEET 263 FOR INSTRUMENTATION NOTES AND DETAILS
SEE SHEETS 266 & 267 FOR WEIGH-IN-MOTION PAVEMENT SYSTEM NOTE

WIM LOOP INSTALLATION

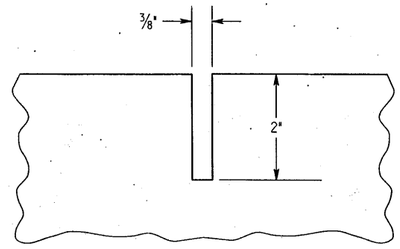
CALC BY ____ DATE ____	ERI/LOR-2-30.51/0.00	OHIO	265
CHKD BY ____ DATE ____	VARIOUS SECTIONS	FHWA REGION 5	267
	ERIE & LORAIN COUNTIES		



PLAN VIEW



Detail L
Plan View of Diagonal Slot at Corners



Section B-B
Saw Cut Dimensions

LOOP INSTALLATION NOTES:

1. *The loop width shall be centered in the width of the lane (see loop configuration). The corners of the rectangle shall be cut at 45 degree angles (see plan view of diagonal slot at corners) or core drilled to avoid undue stress on the wire.*
2. *If more than one lead-in is to be placed in the slot, add ¼" to the minimum slot depth for each additional lead-in.*
3. *Slots shall be washed, blown out, and thoroughly dried immediately before installation of the loop by the WIM manufacturer.*
4. *The distance between the side of a loop and a lead-in saw cut from adjacent detectors shall be 2 feet minimum. The distance between adjacent lead-in saw cuts shall be 6 inches minimum.*
5. *Contractor will notify WIM vendor at least 2 weeks before sawing for loops.*

NOTE (*) : AS RECOMMENDED BY WIM MANUFACTURER

NOTES : SEE SHEET 264 FOR WEIGH-IN-MOTION SCALE INSTALLATION
SEE SHEET 262 FOR INSTRUMENTATION SITE PLAN
SEE SHEET 263 FOR INSTRUMENTATION NOTES AND DETAILS
SEE SHEETS 266 & 267 FOR WEIGH-IN-MOTION PAVEMENT SYSTEM NOTE

CALC BY ____ DATE ____	ERI/LOR-2-30.51/0.00	OHIO	266
CHKD BY ____ DATE ____	VARIOUS SECTIONS ERIE & LORAIN COUNTIES	FHWA REGION 5	267

ITEM SPECIAL
WEIGH-IN-MOTION PAVEMENT SYSTEM

THE INTENT IS TO INSTALL A WEIGH-IN-MOTION (WIM) SYSTEM TO WEIGH ALL INDIVIDUAL SINGLE/TANDEM WHEELS ON VEHICLES TRAVELING IN THE RIGHT LANE, AND CLASSIFY ALL VEHICLES TRAVELING IN BOTH LANES AT THE LOCATION SPECIFIED IN THE PLANS.

THE CONTRACTOR SHALL FURNISH ALL HARDWARE, SOFTWARE, LABOR, AND INCIDENTALS NECESSARY TO COMPLETE THE WIM SYSTEM. THE CONTRACTOR SHALL INSTALL WEIGH PLATFORMS IN THE RIGHT LANE, AND VEHICLE CLASSIFICATION LOOPS, AND AXLE DETECTORS IN THE PASSING LANE AND A DATA COLLECTION/PROCESSING UNIT AT THE SITE.

EQUIPMENT. THE WIM SYSTEM SHALL BE A DAW 200 CENTRAL UNIT/CSW 400 CONTROLLER AND A TYPE M CABINET MANUFACTURED BY PAT EQUIPMENT COMPANY, 1665 ORCHARD DRIVE, CHAMBERSBURG, PA 17201 (PHONE NUMBER : 717-263-7655). THE SYSTEM SHALL MEET THE REQUIREMENTS OF ASTM E 1318-90, SECTIONS 4.1, 4.1.1, AND 5 WITH THE FOLLOWING ADDITIONS:

1. MEANS SHALL BE PROVIDED FOR RECORDING ALL DATA ITEMS IN TABLE 1 FOR PERMANENT RECORD.
2. PROVIDE OPTIONS 2 AND 3 UNDER 4.1.1
3. THE SYSTEM SHALL ALLOW THE USER TO CREATE AND MODIFY CLASSIFICATION SCHEMES BASED ON THE NUMBER AND SPACING OF AXLES. THE SOFTWARE WILL ALLOW DEFINITION OF AT LEAST 20 VEHICLE TYPES. THE CLASSIFICATION SCHEME SHALL BE FHWA SCHEME F AS DEFAULT.
4. EACH TIME A CLASS 4 OR ABOVE VEHICLE CROSSES THE WEIGH PADS, THE SYSTEM SHALL GENERATE AN EXTERNAL PULSE TO TRIGGER OTHER PAVEMENT INSTRUMENTATION. THE TYPE OF CONNECTOR AND PULSE GENERATED SHALL BE COORDINATED WITH THE DEPARTMENT.

THE WIM SCALE SHALL CONSIST OF WEIGH PLATES MOUNTED IN THE PAVEMENT. THE SCALE SHALL CONSIST OF TWO STEEL PLATES WHICH COVER THE ENTIRE LANE WIDTH AND WEIGH ALL INDIVIDUAL SINGLE/TANDEM WHEELS CROSSING THE PLATES. SCALES SHALL HAVE A SAFE OVERLOAD RATING OF 120,000 POUNDS. THE MEASURED WEIGHT SHALL RETURN TO ZERO BETWEEN TANDEM AXLES TRAVELLING AT SPEEDS UP TO 70 MPH. THE SCALE VAULTS SHALL INCORPORATE DRAINAGE TO PREVENT WATER BUILD-UP UNDER THE SCALE PLATFORMS. SCALE FRAMES, LOAD TRANSDUCERS AND MOUNTING HARDWARE SHALL BE OF STEEL CONSTRUCTION AND TREATED IN A MANNER APPROVED BY THE DEPARTMENT TO RESIST CORROSION. THE WEIGH SCALES SHALL BE FABRICATED SO THEY CAN BE EASILY REMOVED, REPAIRED AND REPLACED.

THE WIM DATA COLLECTION SYSTEM SHALL COLLECT AND SORT RAW DATA INTO SELECTED VEHICLE CLASSIFICATIONS. FOR VEHICLE CLASSES NOT SELECTED, TABULAR DATA SHALL BE STORED SHOWING THE NUMBER OF VEHICLES IN EACH UNSELECTED CLASS PER LANE. A FIXED ON-SITE SYSTEM SHALL STORE RAW RECORDS TO THE NEAREST SECOND. THE STORAGE SYSTEM SHALL PREVENT LOSS OF DATA IN THE EVENT THE SYSTEM SHUTS DOWN DUE TO A LOW POWER STATE. THE DATA COLLECTION SYSTEM SHALL, AT A MINIMUM, STORE THE MOST RECENT **60,000** VEHICLES WHICH PASS OVER THE WIM PLATFORMS AND CLASSIFICATION EQUIPMENT AT A FIELD UNIT. DATA SHALL BE STORED IN A COMPRESSED FORMAT FOR EFFICIENT DATA TRANSFER. THE CONTRACTOR SHALL SUBMIT DETAILS OF THE COMPRESSED FORMAT THEY PROPOSE TO USE.

THE DATA COLLECTION/PROCESSING SYSTEM SHALL:

1. BE CAPABLE OF OPERATING BETWEEN TEMPERATURES OF -40 AND 158 DEGREES F.
2. CONTAIN COMPONENTS WHICH ARE SECURELY MOUNTED; FULLY PROTECTED AGAINST OVERLOADS, POWER SURGES AND LIGHTNING.
3. BE EQUIPPED WITH A READILY VISIBLE RESET BUTTON MOUNTED IN THE BOX TO RESTART THE EQUIPMENT SHOULD THE UNIT MALFUNCTION,
4. TRANSMIT DATA AUTOMATICALLY THROUGH VOICE GRADE TELEPHONE CIRCUITS TO THE CENTRAL CONTROL UNIT; PROVIDE FOR REVIEW AND ADJUSTMENT OF RAW DATA THROUGH A MONITOR; EDIT AND PRINT DATA.
5. CONTAIN A TELEPHONE COMMUNICATION MODEM WHICH TRANSMITS DATA AT A MINIMUM OF 9600 BPS.
6. DOWNLOAD TO PORTABLE DATA RETRIEVAL UNITS.

THE CONTRACTOR SHALL SUPPLY CONDUIT AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION.

THE SUPPLIED COMMUNICATION AND ANALYSIS SOFTWARE AND HARDWARE SHALL OPERATE ON ANY IBM OR COMPATIBLE PERSONAL COMPUTER UNDER MS-DOS. THE COMMUNICATION SOFTWARE SHALL ALLOW USER FRIENDLY COMMUNICATION WITH THE SITE SYSTEM AND USER MENUS. THE ANALYSIS SOFTWARE SHALL ALLOW REAL TIME VIEWING OF VEHICLE SPEED, CLASSIFICATION, AND WEIGHT, SELECTABLE BY LANE; OR THE MOST RECENT HISTORICAL DATA.

THE CONTRACTOR SHALL SUPPLY NECESSARY SOFTWARE TO PERMIT DATA COLLECTION AND ANALYSIS ON AN IBM PS/2 SYSTEM COMPUTER, OR COMPATIBLE, LOCATED IN COLUMBUS, OHIO. SOFTWARE TO BE FURNISHED FOR THIS UNIT SHALL HAVE THE FOLLOWING FEATURES:

1. WHILE CONNECTED TO THE FIELD UNIT VIA A TELEPHONE LINK, THE USER SHALL BE ABLE TO PERFORM AS A MINIMUM THE FOLLOWING TASKS:
   - A. REAL-TIME VIEWING OF VEHICLE SPEED, CLASSIFICATION AND WEIGHT, SELECTABLE BY LANE, WITH OPTIONAL GRAPHICAL OUTPUT,
   - B. RESETTING OF THE SYSTEM CLOCK AND DATE,
   - C. MONITOR SYSTEM MEMORY IN TERMS OF STORAGE REMAINING,
   - D. SET UP AND INITIATE THE GENERATION OF SUMMARY REPORTS ON DATA PREVIOUSLY COLLECTED BY THE SYSTEM,
   - E. VIEW GENERATED SUMMARY REPORTS,
   - F. GENERATE AND VIEW ERROR REPORTS INCLUDING TIME DOWN, SYSTEM ACCESS, AUTOCALIBRATION AND IMPROPERLY COMPLETED RECORDS,
   - G. TRANSFER SELECTED RAW DATA FILES OR GENERATED REPORTS FROM THE SITE SYSTEM TO THE OFFICE COMPUTER. ALL FORMATS ARE SPECIFIED IN TABLE A,
   - H. PURGE OLD DATA FILES FROM THE SYSTEM,
   - I. DISPLAY AND EDIT ALL STATION CALIBRATION FACTORS.
   - J. DISPLAY, MODIFY AND REPLACE ALL SOFTWARE RESIDENT AT THE FIELD UNIT. ALL ACCUMULATED DATA SHALL REMAIN IN MEMORY WHILE THIS FUNCTION IS BEING USED.
2. POLL ANY FIELD STATION AT ANY TIME. THE USER SHALL BE ABLE TO SET THE FOLLOWING SYSTEM PARAMETERS:
   - A. CALLING SEQUENCE NUMBER/POLLING GROUP
   - B. PHONE NUMBER (INCLUDING AREA CODE)
   - C. COUNTY CODE (3 DIGITS)
   - D. STATION NUMBER (5 DIGITS)
   - E. LOCATION DESCRIPTION (40 CHARACTERS)
   - F. DIRECTION
   - G. TIME AND DATE AT WHICH AUTOMATIC POLLING WILL BEGIN.
3. SOFTWARE SHALL PROVIDE AUTOMATIC DIAL-UP CAPABILITIES AND SHALL RECORD THE FOLLOWING PROBLEMS:
   - A. FAILURE TO MAKE CONNECTION BECAUSE OF WRONG NUMBER, OR LINE BUSY
   - B. FIELD STATION ANSWERED BUT NO DATA TRANSMITTED
   - C. TRANSMISSION IN WRONG FORMAT
   - D. TRANSMISSION OF TOO MUCH DATA
   - E. TRANSMISSION OF WRONG DATA
   - F. TRANSMISSION OF ONLY A PARTIAL AMOUNT OF DATA
4. THE CONTRACTOR SHALL PROVIDE DIAGNOSTIC SOFTWARE TO COMPLETE THE FOLLOWING FIELD TESTS FROM THE CENTRAL CONTROL UNIT:
   - A. TEST THE MEMORY AND DISK SYSTEMS,
   - B. TEST ALL INTERNAL CIRCUITS IN THE FIELD UNIT.
   - C. TEST THE LOOP DETECTORS, PIEZO-CABLES, AND SCALE OUTPUT,
   - D. PROVIDE DIAGNOSTIC MESSAGES INDICATING THE DETECTED PROBLEMS FORMATTED FOR OUTPUT VIA A PRINTER ATTACHED TO THE CENTRAL CONTROL UNIT.
5. DISPLAY AND EDIT RAW VEHICLE RECORD FILES AND GENERATE REPORTS. SOFTWARE SHOULD GENERATE AS A MINIMUM, THE FOLLOWING DATAFILES AND REPORTS.

DATAFILES

- A. TRUCK WEIGHT RECORD IN THE TRAFFIC MONITORING GUIDE (TMG) FORMAT (SEE TABLE A).
- B. VEHICLE CLASSIFICATION RECORD IN THE TMG FORMAT (SEE TABLE B).
- C. STATION DESCRIPTION RECORD IN THE TMG FORMAT (SEE TABLE C).
- D. FOR CLASS 4 AND ABOVE, INDIVIDUAL VEHICLE RECORDS THAT DISPLAY DATE AND TIME TO THE NEAREST SECOND, VEHICLE SPEED, VEHICLE CLASSIFICATION AND INDIVIDUAL SINGLE/TANDEM WHEEL WEIGHTS.

REPORTS

THE FORMAT OF THE REPORTS SHALL MEET THE APPROVAL OF ODOT'S BUREAU OF TRANSPORTATION TECHNICAL SERVICES (KEN CORNS, PHONE : 614-466-2852). COPIES OF ALL REPORTS SHALL BE PRESENTED TO THE ENGINEER AT THE PRECONSTRUCTION MEETING FOR REVIEW AND SUBSEQUENT APPROVAL.

- A. DISTRIBUTION OF VEHICLE CLASSIFICATION BY HOUR OF DAY AND EXPRESSED AS PERCENT OF TOTAL TRAFFIC FOR ALL VEHICLE TYPES

REPORTS CON'T

- B. DISTRIBUTION OF SPEEDS BY VEHICLE CLASSIFICATION
- C. DISTRIBUTION OF VEHICLE SPEEDS BY HOUR OF DAY
- D. WEIGHT VIOLATIONS AND INVALID MEASUREMENTS FOR CLASSES 4-15 AND PERCENT WEIGHT VIOLATIONS TO TOTAL VIOLATIONS
- E. GROSS WEIGHT VIOLATIONS BY HOUR OF DAY FOR CLASSES 4-15 (FOR TANDEM, BRIDGE, GROSS, AXLE VIOLATIONS)
- F. OVERWEIGHT VEHICLES BY HOUR OF DAY FOR CLASSES 4-15 (FOR TANDEM, BRIDGE, GROSS, AXLE)
- G. GROSS WEIGHTS FOR VEHICLE CLASSES 4-15 AND AVERAGE WEIGHT FOR EACH
- H. 18 KIP ESAL BY VEHICLE TYPE

6. THE CONTRACTOR SHALL INSTALL AT NO ADDITIONAL EXPENSE ANY SOFTWARE UPGRADES PRODUCED WITHIN 24 MONTHS AFTER ACCEPTANCE OF THIS WIM SYSTEM.

THE FIELD UNIT SHALL BE EQUIPPED WITH SURGE PROTECTION DEVICES FOR ALL CIRCUITS INCLUDING:

1. DATA LINE PROTECTION
2. LOOP DETECTOR-AMPLIFIER INPUT
3. PIEZO-ELECTRIC SENSORS-AMPLIFIER INPUT.

THE CONTRACTOR SHALL FURNISH FOUR (4) COMPLETE SETS OF OPERATING INSTRUCTIONS, MAINTENANCE MANUALS, DIAGNOSTICS, AND OTHER DOCUMENTATION NECESSARY TO OPERATE AND MAINTAIN THE SYSTEM. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION AND TRAIN DEPARTMENT PERSONNEL IN THE OPERATION, TROUBLE SHOOTING, AND MAINTENANCE OF ALL EQUIPMENT PRIOR TO THE ACCEPTANCE OF THE UNIT. DOCUMENTATION SHALL CONTAIN:

1. MAINTENANCE MANUALS WHICH INCLUDE SCHEMATICS, CIRCUIT DIAGRAMS, PARTS LISTS, PARTS PRICE LIST, PARTS LIST WITH CROSS-REFERENCE OF ALL COMPONENTS BY MANUFACTURERS, AND INSTRUCTIONS.
2. DOCUMENTATION OF ALL SOFTWARE USED WITH THE SYSTEM.
3. PROPOSED SOFTWARE LICENSING AGREEMENTS.
4. RS-232 SERVICE INTERFACING AND ANY REQUIRED INTERFACE HARDWARE CABLES AND DEVICE DRIVERS.

INSTALLATION. THE FIELD UNIT SHALL BE INSTALLED AND SUCCESSFULLY TESTED FOR **60** CONSECUTIVE DAYS OF UNINTERRUPTED SERVICE BEFORE FINAL ACCEPTANCE BY THE DEPARTMENT.

THE CONTRACTOR SHALL CALIBRATE THE FIELD UNIT TO HIS SATISFACTION AND DECLARE IT READY FOR ACCEPTANCE TESTING. THE SCALE SHALL MEET THE PERFORMANCE REQUIREMENTS GIVEN IN TABLE 2 OF ASTM E 1318-90, AND SHALL ALSO PROPERLY CLASSIFY A MINIMUM OF 90% OF ALL VEHICLES AND 90% OF THE 5 AXLE SEMI-TRAILER TRUCKS.

ITEM SPECIAL
WEIGH-IN-MOTION PAVEMENT SYSTEM

ACCEPTANCE. UPON COMPLETION OF THE CALIBRATION PROCESS AND WRITTEN NOTIFICATION FROM THE CONTRACTOR, THE FIELD DATA COLLECTION UNIT SHALL UNDERGO A 60 DAY ACCEPTANCE PERIOD. THIS CONSTITUTES A PERIOD OF 60 CONSECUTIVE DAYS WHERE NO REMEDIAL ACTION OR INTERPRETATION IS REQUIRED BY THE CONTRACTOR OR ODOT PERSONNEL TO VIEW OR OBTAIN DATA AND TABLES WHICH ARE BEING ACCUMULATED. AT THE BEGINNING OF EACH ACCEPTANCE PERIOD, THE CONTRACTOR SHALL DEMONSTRATE UNIT ACCURACY FOR ALL VEHICLE TYPES, WEIGHTS, AND SPEEDS SELECTED BY ODOT. SHOULD THE UNIT NOT PERFORM SATISFACTORILY FOR THE 60 DAY ACCEPTANCE PERIOD, IT SHALL BE SUBJECTED TO ANOTHER 60 DAY ACCEPTANCE TEST AFTER CORRECTION OF THE DEFECT. IF THE UNIT DOES NOT PERFORM SATISFACTORILY AFTER THE SECOND ACCEPTANCE TEST, ODOT WILL HAVE THE OPTION OF CONTINUING WITH FURTHER 60 DAY ACCEPTANCE PERIODS OR HAVING THE SYSTEM NONPERFORMED AND THE PAVEMENT REPLACED AT THE CONTRACTORS EXPENSE.

WARRANTY. THE MANUFACTURER SHALL WARRANTY ALL HARDWARE AND SOFTWARE FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY THE DEPARTMENT. ANY MALFUNCTIONS WITHIN THE SYSTEM DURING THE WARRANTY PERIOD SHALL BE CORRECTED BY THE MANUFACTURER AT NO COST.

PAYMENT. UNIT COST FOR THE WEIGH-IN-MOTION SYSTEM SHALL INCLUDE COST OF ALL HARDWARE, SOFTWARE, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE WEIGH-IN-MOTION SYSTEM. TOTALS HAVE BEEN CARRIED TO GENERAL SUMMARY.

ITEM	TOTAL	UNIT	DESCRIPTION
SPECIAL	1	EACH	WEIGH-IN-MOTION PAVEMENT SYSTEM

TABLE A

TRUCK WEIGHT RECORD

COLUMNS	NO. OF COLUMNS	DESCRIPTION		TMG REF. PAGE
1	1	TRUCK WEIGHT RECORD CODE (7)		
2-3	2	STATE CODE		5-6-2
4-5	2	FUNCTIONAL CLASSIFICATION		5-6-3
6-8	3	STATION IDENTIFICATION NUMBER		5-6-3
9	1	DIRECTION OF TRAVEL		5-6-3
10-11	2	YEAR OF DATA		5-6-4
12-13	2	MONTH OF DATA		5-6-19
14-15	2	DATE OF MONTH		5-6-19
16-17	2	HOUR OF DAY		5-6-19
18-23	6	VEHICLE TYPE CODE		5-6-19
24-25	2	BODY TYPE (OPTIONAL)*		5-6-22
26	1	ENGINE TYPE (OPTIONAL)*		5-6-25
27-28	2	(OPEN)		5-6-26
29-31	3	REGISTERED WEIGHT (THOUSANDS OF POUNDS)	OPTIONAL IF ONE IS CODED, BOTH MUST BE CODED*	5-6-26
32	1	BASIS OF REGISTRATION		5-6-26
33-35	3	(OPEN)		5-6-26
36-40	5	COMMODITY CODE (OPTIONAL)*		5-6-27
41	1	LOAD STATUS CODE (OPTIONAL)*		5-6-32
42-45	4	TOTAL WEIGHT OF TRUCK OR COMBINATION		5-6-32
46-48	3	A-AXLE WEIGHT (HUNDREDS OF POUNDS)		5-6-32
49-51	3	B-AXLE WEIGHT (HUNDREDS OF POUNDS)		5-6-32
52-54	3	C-AXLE WEIGHT (HUNDREDS OF POUNDS)		5-6-32
55-57	3	D-AXLE WEIGHT (HUNDREDS OF POUNDS)		5-6-32
58-60	3	E-AXLE WEIGHT (HUNDREDS OF POUNDS)		5-6-32
61-63	3	(A-B) AXLE SPACING (FEET AND TENTHS)		5-6-32
64-66	3	(B-C) AXLE SPACING (FEET AND TENTHS)		5-6-32
67-69	3	(C-C) AXLE SPACING (FEET AND TENTHS)		5-6-32
70-72	3	(D-E) AXLE SPACING (FEET AND TENTHS)		5-6-32
73-76	4	TOTAL WHEELBASE (FEET AND TENTHS)		5-6-32
77-79	3	RECORD SERIAL NUMBER (SAME FOR CONTINUATION RECORD)		5-6-32
80	1	CONTINUATION INDICATOR 0 = NO CONTINUATION RECORD 1 = HAS A CONTINUATION RECORD		5-6-32
81-83	3	COUNTY		
84	1	BLANK		
85-88	4	ROUTE NUMBER		
89	1	ROUTE SUFFIX		
90	1	BLANK		
91-94	4	LOG POINT		

*EACH INTERVIEW DATA ITEM HAS A DEFAULT VALUE WHICH MUST BE ENTERED WHEN THE DATA ITEM IS NOT COLLECTED.

CONTINUATION RECORD (USED ONLY FOR TRUCK COMBINATIONS HAVING SIX OR MORE AXLES AND IMMEDIATELY FOLLOWS THE FACE RECORD.)

COLUMNS	NO. OF COLUMNS	DESCRIPTION	TMG REF. PAGE
1-28	28	SAME AS COLUMNS 1-28 OF THE FACE RECORD	
29-31	3	F-AXLE WEIGHT (HUNDREDS OF POUNDS)	5-6-32
32-34	3	G-AXLE WEIGHT (HUNDREDS OF POUNDS)	5-6-32
35-37	3	H-AXLE WEIGHT (HUNDREDS OF POUNDS)	5-6-32
38-40	3	I-AXLE WEIGHT (HUNDREDS OF POUNDS)	5-6-32
41-43	3	J-AXLE WEIGHT (HUNDREDS OF POUNDS)	5-6-32
44-46	3	K-AXLE WEIGHT (HUNDREDS OF POUNDS)	5-6-32
47-49	3	L-AXLE WEIGHT (HUNDREDS OF POUNDS)	5-6-32
50-52	3	M-AXLE WEIGHT (HUNDREDS OF POUNDS)	5-6-32
53-55	3	(E-F) AXLE SPACING (FEET AND TENTHS)	5-6-32
56-58	3	(F-G) AXLE SPACING (FEET AND TENTHS)	5-6-32
59-61	3	(G-H) AXLE SPACING (FEET AND TENTHS)	5-6-32
62-64	3	(H-I) AXLE SPACING (FEET AND TENTHS)	5-6-32
65-67	3	(I-J) AXLE SPACING (FEET AND TENTHS)	5-6-32
68-70	3	(J-K) AXLE SPACING (FEET AND TENTHS)	5-6-32
71-73	3	(K-L) AXLE SPACING (FEET AND TENTHS)	5-6-32
74-76	3	(L-M) AXLE SPACING (FEET AND TENTHS)	5-6-32
77-79	3	RECORD SERIAL NUMBER (SAME AS FACE RECORD)	5-6-32
80		1 = CONTINUATION INDICATOR 2 = FIRST CONTINUATION RECORD FOR VEHICLE WITH MORE THAN 13 AXLES 9 = LAST CONTINUATION RECORD	5-6-32

TABLE B

VEHICLE CLASSIFICATION RECORD

COLUMNS	NO. OF COLUMNS	DESCRIPTION	TMG REF. PAGE
1	1	VEHICLE CLASSIFICATION RECORD CODE (4)	
2-3	2	STATE CODE	5-6-2
4-5	2	FUNCTIONAL CLASSIFICATION	5-6-3
6-8	3	STATION IDENTIFICATION NUMBER	5-6-3
9	1	DIRECTION OF TRAVEL	5-6-3
10-11	2	YEAR OF DATA	5-6-4
12-13	2	MONTH OF DATA	5-6-14
14-15	2	DATE OF MONTH	5-6-14
16-17	2	HOUR OF DAY	5-6-14
18-19	2	NUMBER OF MOTORCYCLES (OPTIONAL)	5-6-14
20-23	4	NUMBER OF PASSENGER CARS OR ALL 2-AXLE, 4-TIRE SINGLE UNIT VEHICLES	5-6-14
24-26	3	NUMBER OF OTHER 2-AXLE, 4-TIRE SINGLE UNIT VEHICLES	5-6-14
27-28	2	NUMBER OF BUSES	5-6-14
29-31	3	NUMBER OF 2-AXLE, 6-TIRE SINGLE UNIT TRUCKS	5-6-14
32-33	2	NUMBER OF 3-AXLE SINGLE UNIT TRUCKS	5-6-14
34-35	2	NUMBER OF 4 OR MORE AXLE SINGLE UNIT TRUCKS	5-6-14
36-37	2	NUMBER OF 4 OR LESS AXLE SINGLE TRAILER TRUCKS	5-6-14
38-40	3	NUMBER OF 5-AXLE SINGLE TRAILER TRUCKS	5-6-14
41-42	2	NUMBER OF 6 OR MORE AXLE SINGLE TRAILER TRUCKS	5-6-14
43-44	2	NUMBER OF 5 OR LESS AXLE MULTI-TRAILER TRUCKS	5-6-14
45-46	2	NUMBER OF 6-AXLE MULTI-TRAILER TRUCKS	5-6-14
47-48	2	NUMBER OF 7 OR MORE AXLE MULTI-TRAILER TRUCKS	5-6-14
49	1	MOTORCYCLE REPORTING INDICATOR	5-6-14
50	1	VEHICLE CLASS COMBINATION INDICATOR	5-6-15
51	1	LANE OF TRAVEL: 0 = COMBINED LANES 1 = OUTSIDE (RIGHTMOST) LANE 2 = NEXT TO OUTSIDE LANE 3 TO 9 = INSIDE LANES	
52-56	5	HPMS NO.	
57-59	2	BLANK	
60-68	9	LEFT MOST 9 CHAR FROM STATION INDENT FIELD	
69-72	4	CLASS 14	
73-76	4	CLASS 15	
77-81	4	BLANK	
82-84	3	COUNTY	
85	1	BLANK	
86-89	4	ROUTE NUMBER	
90	1	ROUTE SUFFIX	
91	1	BLANK	
92-95	4	LOG POINT	

TABLE C

STATION DESCRIPTION RECORD

COLUMNS	NO. OF COLUMNS	DESCRIPTION	TMG REF. PAGE
1	1	STATION DESCRIPTION RECORD CODE (2)	
2-3	2	STATE CODE	5-6-2
4-5	2	FUNCTIONAL CLASSIFICATION	5-6-3
6-8	3	STATION IDENTIFICATION NUMBER	5-6-3
9	1	DIRECTION OF TRAVEL	5-6-3
10-11	2	YEAR OF DATA	5-6-4
12	1	POSTED ROUTE NUMBER CATEGORY	5-6-7
13-17	5	POSTED ROUTE NUMBER	5-6-7
18-20	3	COUNTY CODE	5-6-7
21-32	12	HPMS SAMPLE NUMBER	5-6-7
33	1	HPMS SAMPLE SECTION SUBDIVISION NUMBER	5-6-7
34-35	2	YEAR STATION WAS ESTABLISHED	5-6-8
36	1	TYPE OF SITE	5-6-8
37	1	TYPE OF WEIGHING EQUIPMENT	5-6-8
38	1	METHOD OF VEHICLE CLASSIFICATION COUNTING	5-6-8
39	1	COORDINATION WITH ENFORCEMENT ACTIVITIES	5-6-8
40-45	6	AADT MOST CURRENT FIGURE	5-6-9
46-80	35	LOCATION OF STATION (DISTANCE AND DIRECTION FROM NEAREST MAJOR INTERSECTING ROUTE)	5-6-9

ERI-267-30.51