

DESIGN DESIGNATION

Table with 2 columns: Item and Value. Includes 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')

CONVENTIONAL SIGNS

Table showing symbols for County Line, Township Line, Corporation Line, Fence Line, Center Line, Trees, Utility Poles, Limited Access (only), Right of Way (only), Limited Access & Right of Way, Existing Right of Way, Property Line, Railroad, and Guardrail.

INDEX OF SHEETS

Table listing various sheets and their corresponding page numbers. Includes TITLE SHEET, SCHEMATIC PLAN, TYPICAL SECTIONS, GENERAL NOTES, MAINTENANCE OF TRAFFIC, etc.

LINE DATA

Table with columns: STATION, LENGTH, and sub-columns for Begin Project, Resume Project, Suspend Project, End Project, and Lin. Ft. 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

Table with columns: SIDE ROADS, Begin Work, End Work, Length. Lists roads like West River Rd, Vermillion Rd, Sunnyside Rd, etc.

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

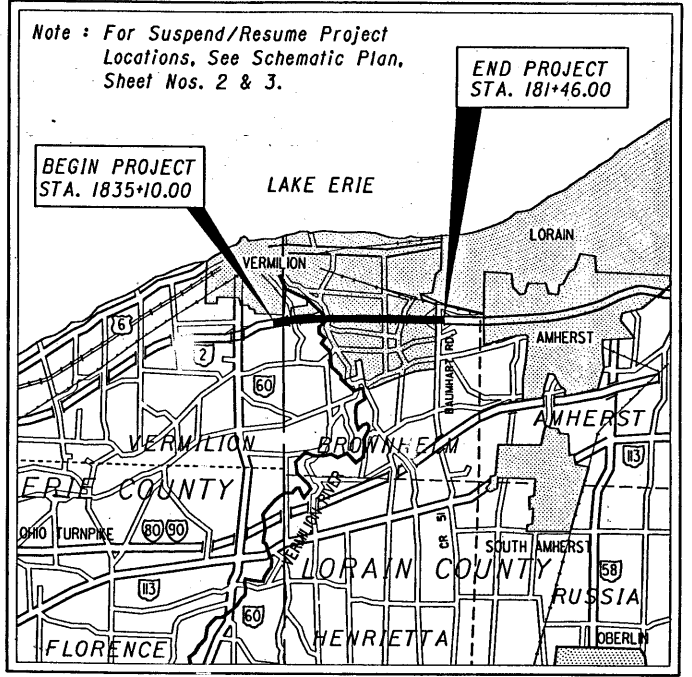
Plan Prepared By: OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF LOCATION AND DESIGN PLAN PREPARATION SECTION

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

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS. Table listing drawing codes and their corresponding sheet numbers.

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

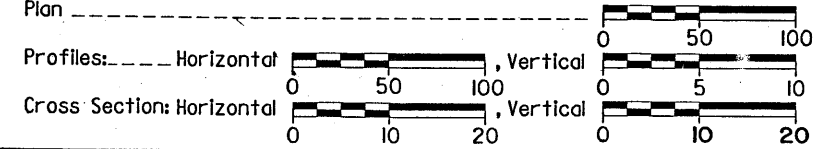
CITY OF VERMILION
VERMILION TOWNSHIP
BROWNHELM TOWNSHIP
ERIE AND LORAIN COUNTIES



LOCATION MAP SCALE IN MILES

Portion to be Improved: State & Federal Routes, Other Roads

SCALES



SUPPLEMENTAL SPECIFICATIONS table with columns for drawing number and date.

Table with project details: ERI/LOR-2-30.51/0.00, VARIOUS SECTIONS, ERI & LORAIN COUNTIES, NH-73(78), OHIO REGION 5, FEDERAL PROJECT.

NH-73(78)

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

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 551.02 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, District Deputy Director of Transportation, Date 3/11/92

Approved: B. D. Halabam, Engineer, Bureau of Bridges and Structural Design, Date 9-10-92

Approved: George L. Brey, Deputy Director, Planning and Design, Date 4/28/92

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.

Approved: [Signature], Director, Department of Transportation, Date 4-28-92

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

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 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 TRIPPLICATE.

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 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 THEREOF 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 EUCCO VERTICOAT, MASTER BUILDERS SET VERTIPATCH OR DURALTOP AND DURALPATCH 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 RECEIVE 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.

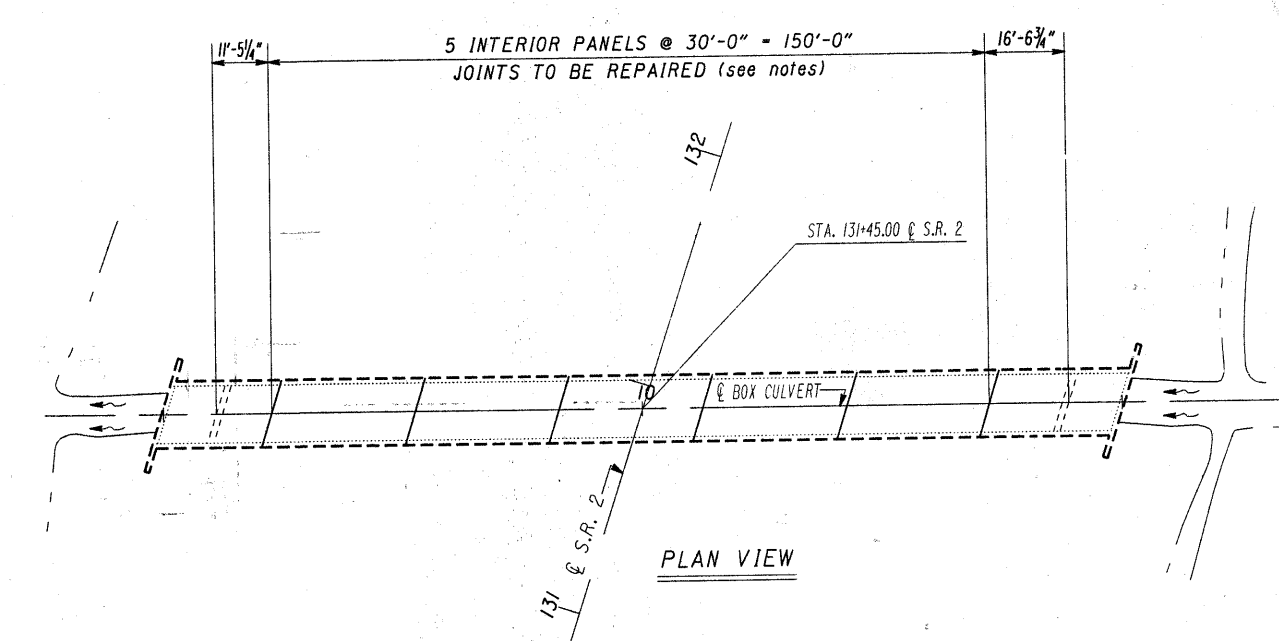
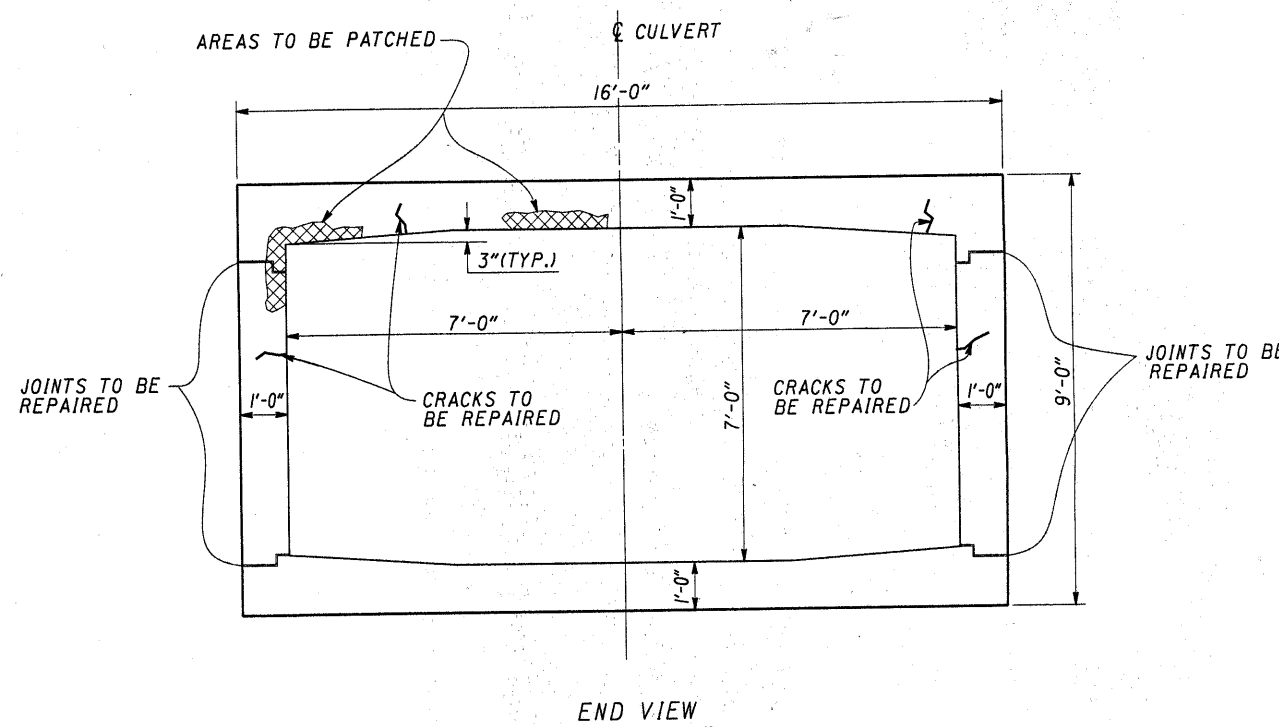
G. METHOD OF MEASUREMENT

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



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

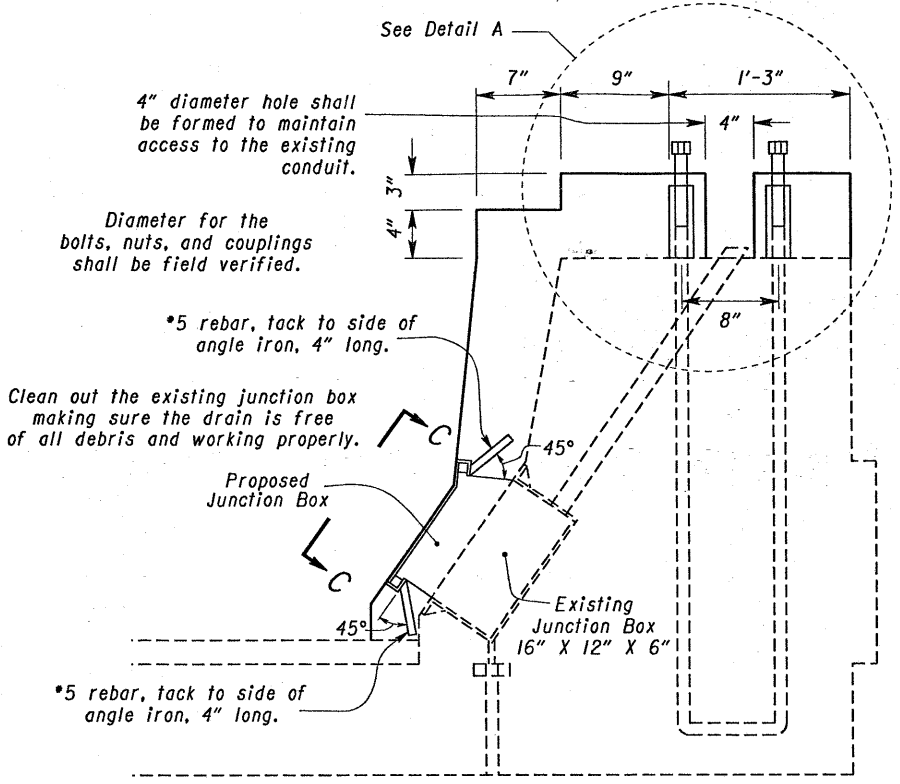
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

ERI-28-30.21 110-145 Spc 1101

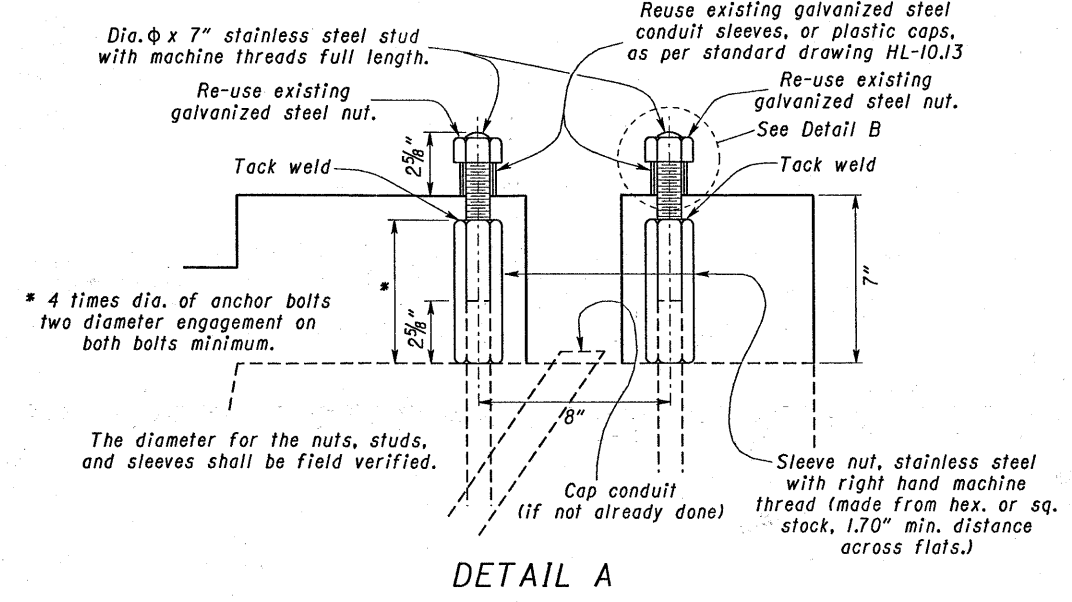
1992

ITEM SPECIAL LIGHT POLE ANCHOR BOLT EXTENSION ITEM 625 JUNCTION BOX, AS PER PLAN

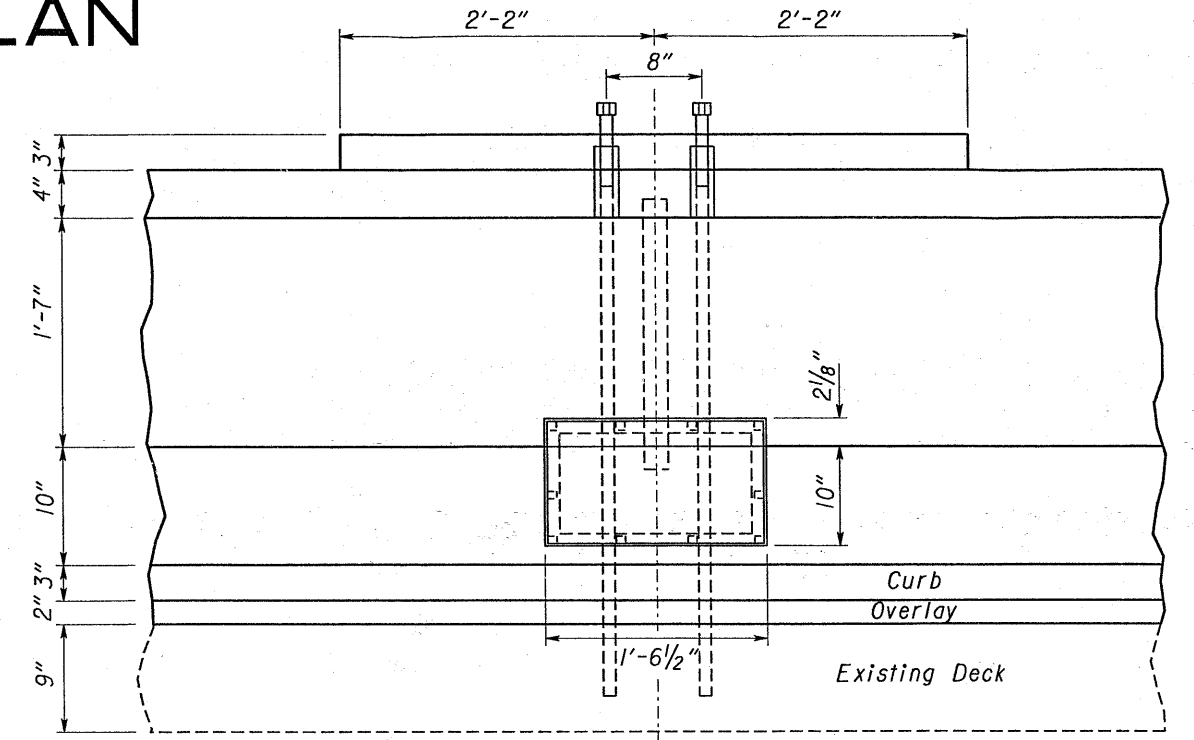
CALC BY	ERI/LOR-2-30.51/0.00	OHIO	196
DATE	VARIOUS SECTIONS	FWHA	267
CHKD BY	ERIE & LORAIN COUNTIES	REGION	5
BY			
DATE			



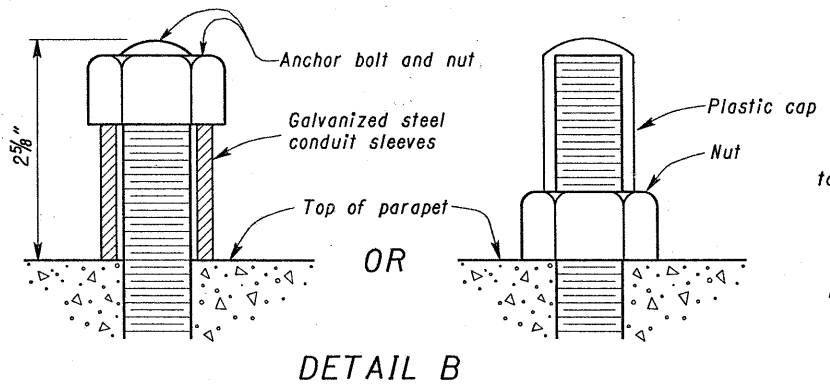
SECTION A-A



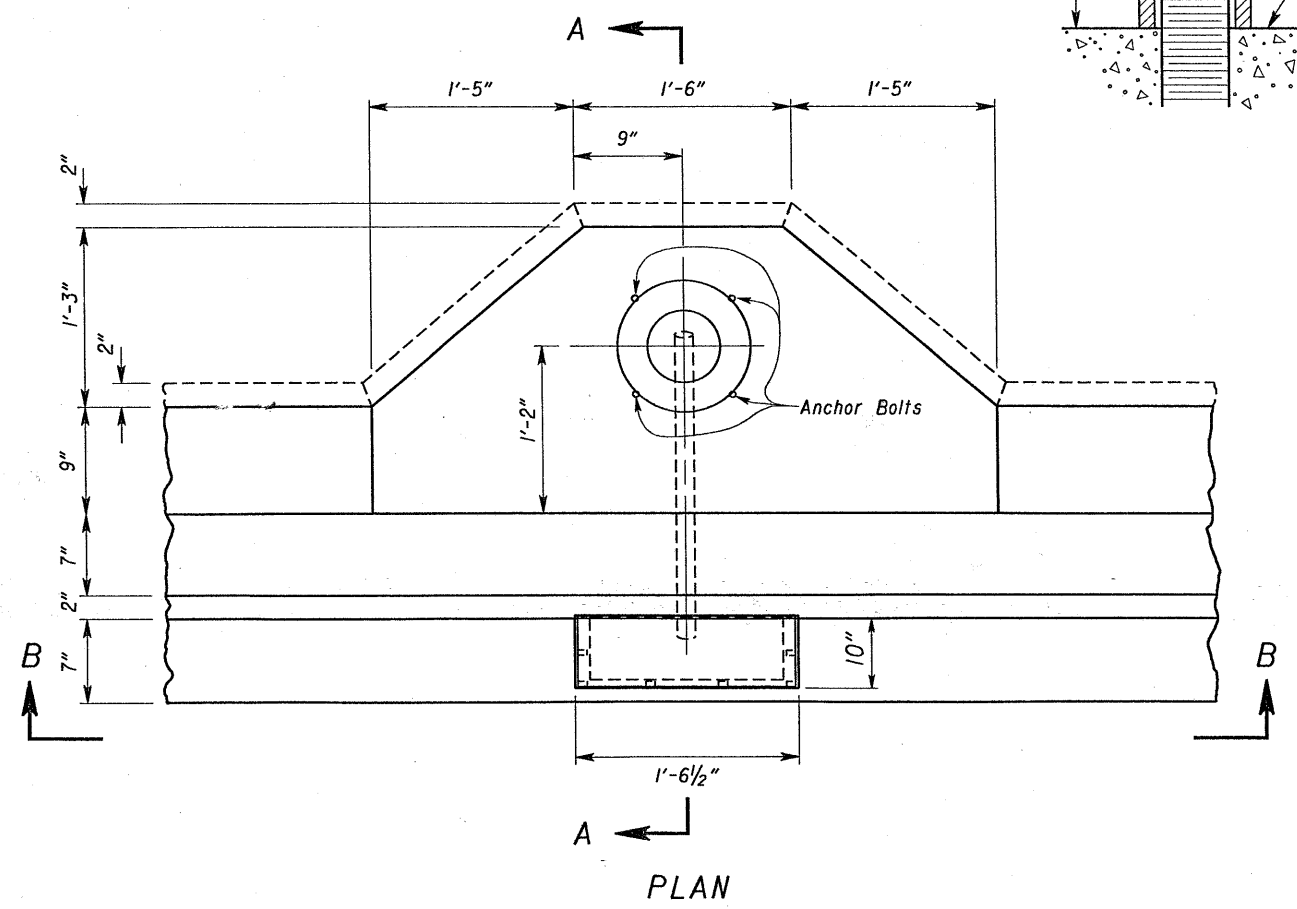
DETAIL A



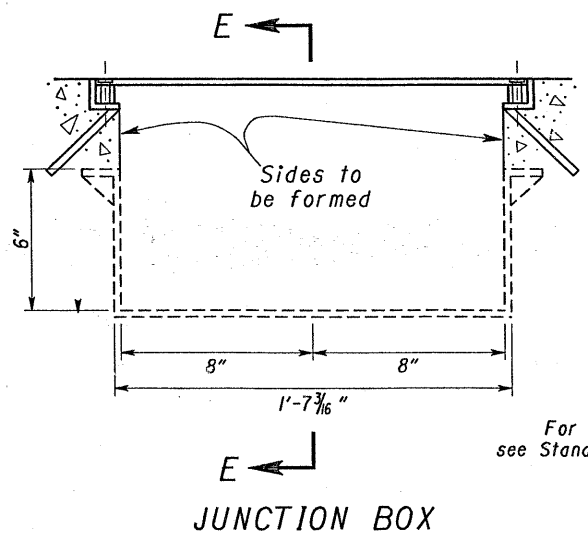
SECTION B-B



DETAIL B

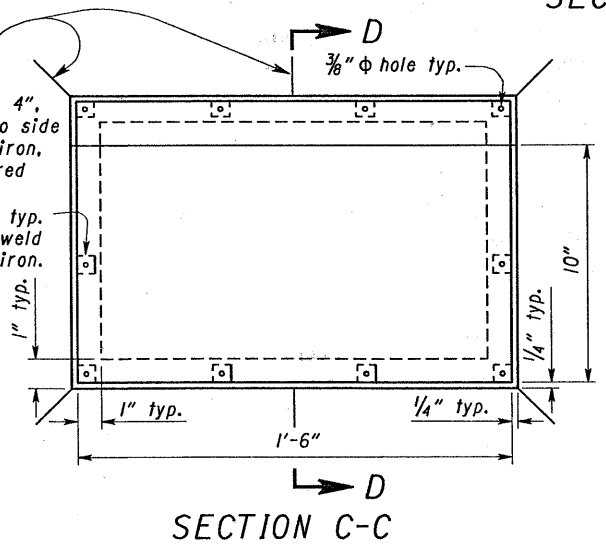


PLAN

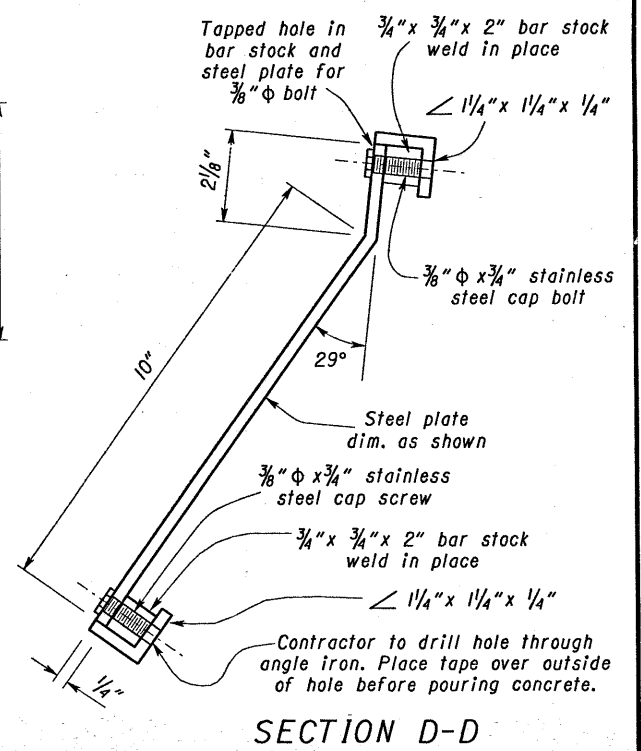


JUNCTION BOX

For additional details see Standard Drawing HL-20.14

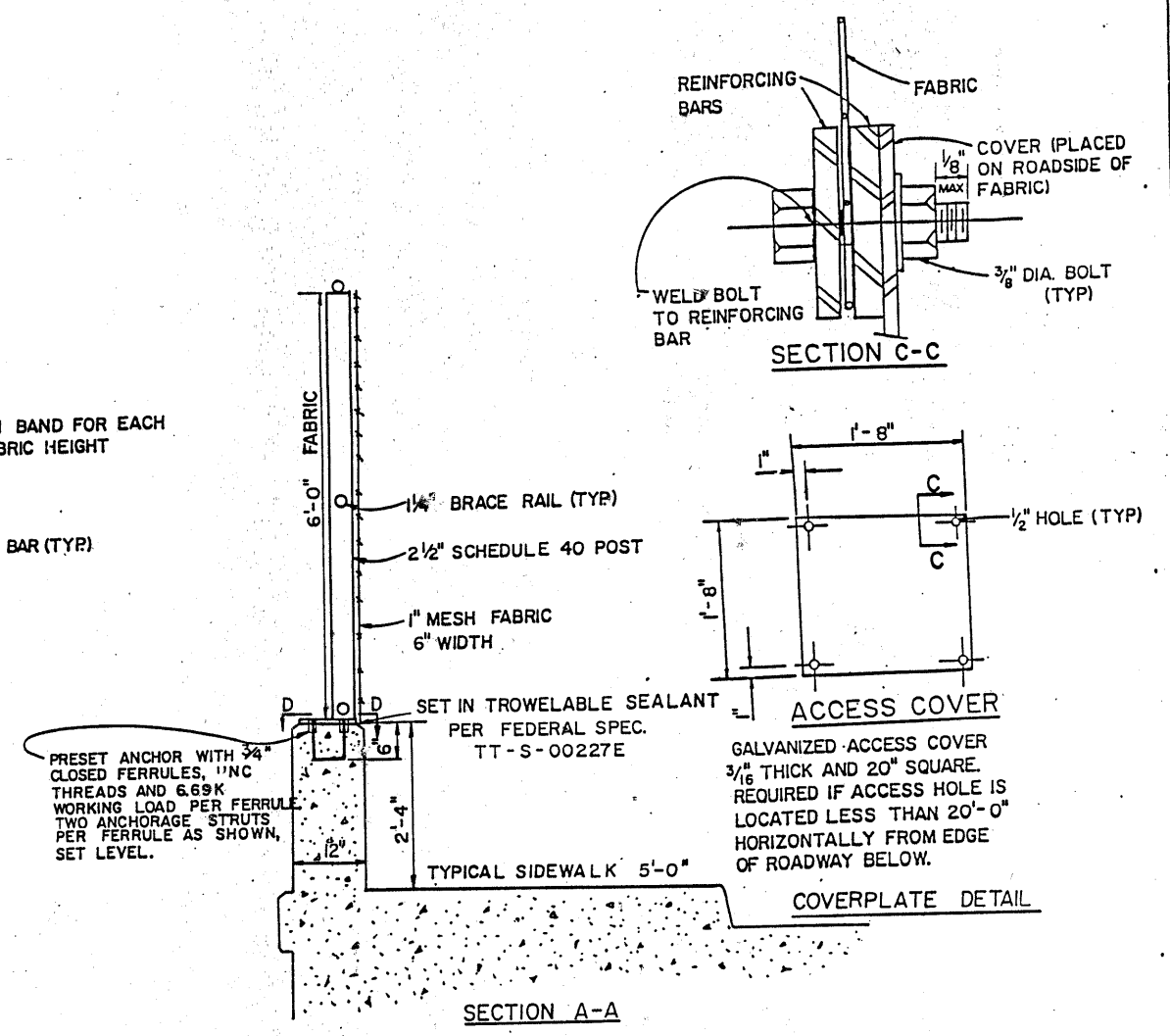
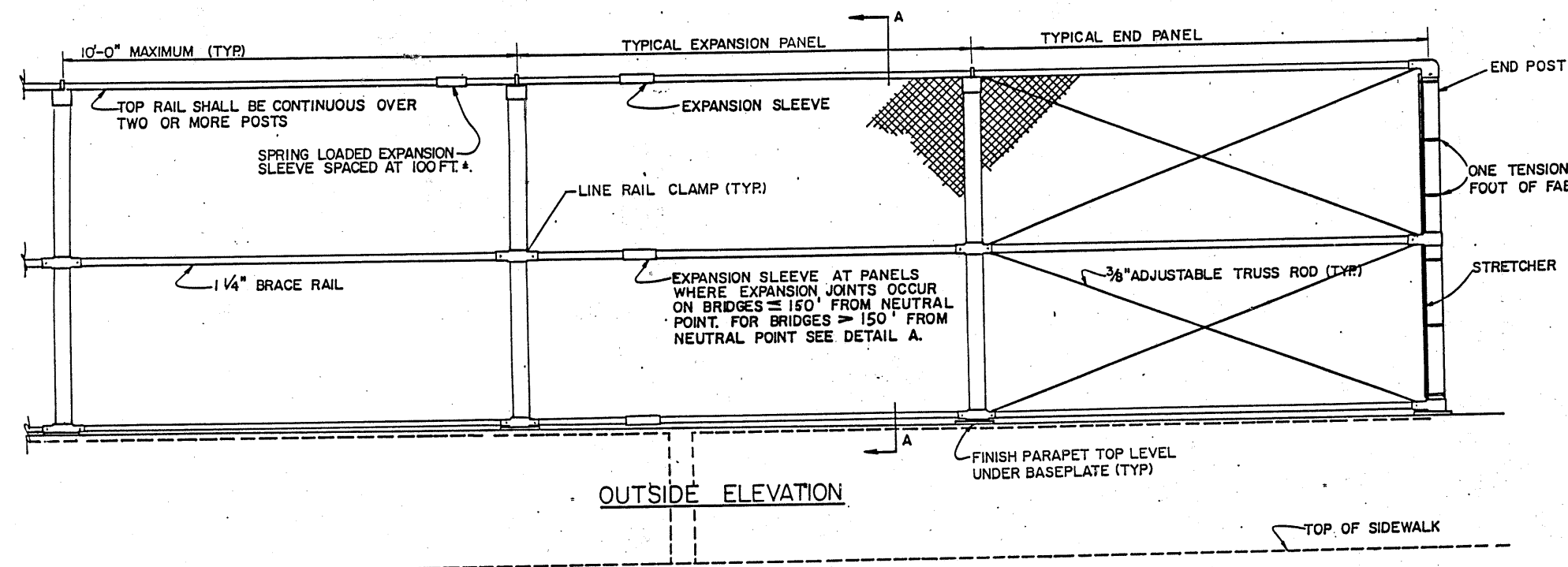


SECTION C-C



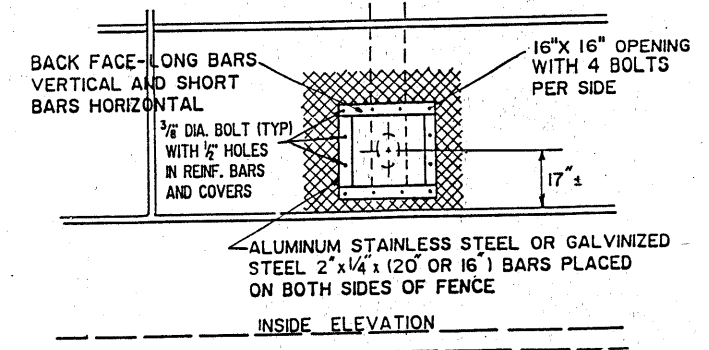
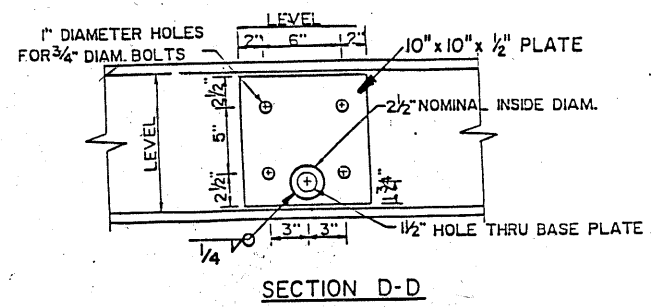
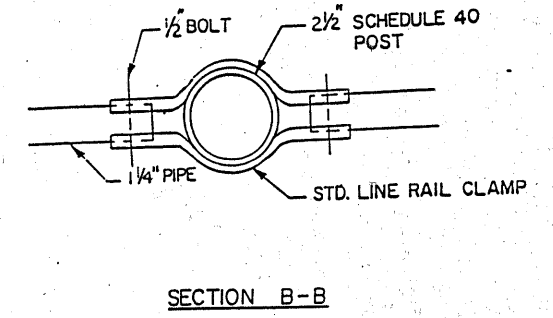
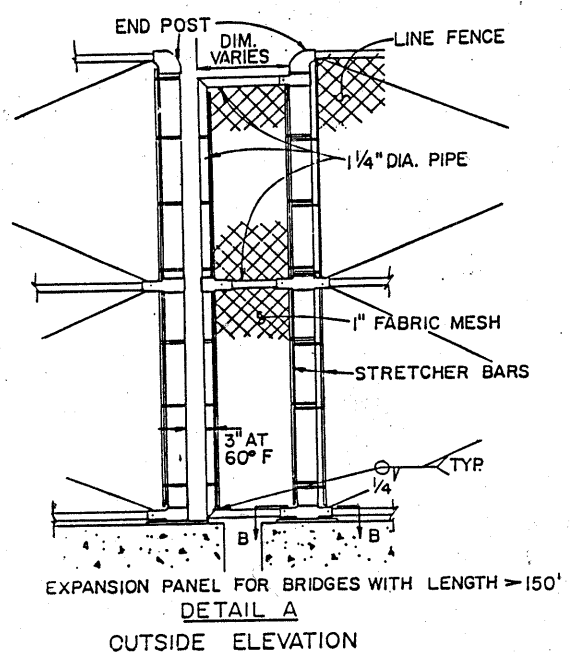
SECTION D-D

STATE OF OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF LOCATION AND DESIGN PLAN PREPARATION							
ITEM SPECIAL LIGHT POLE ANCHOR BOLT EXTENSION ITEM 625 JUNCTION BOX TYPE II AS PER PLAN							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
DGR	elt			J.S.B.	2-28-92	DGR	



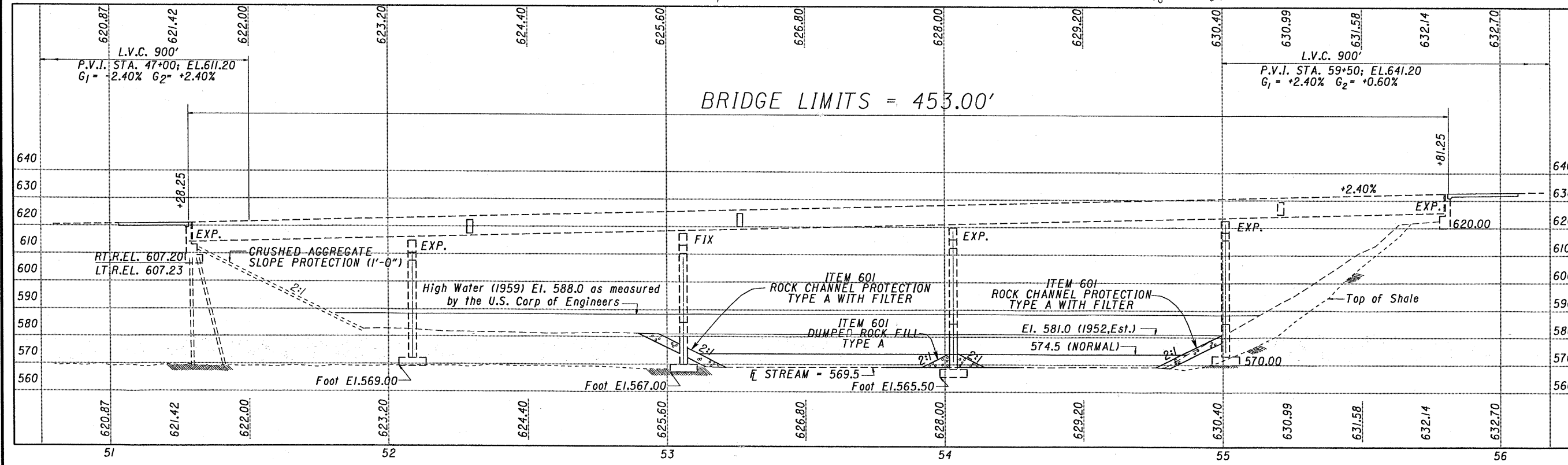
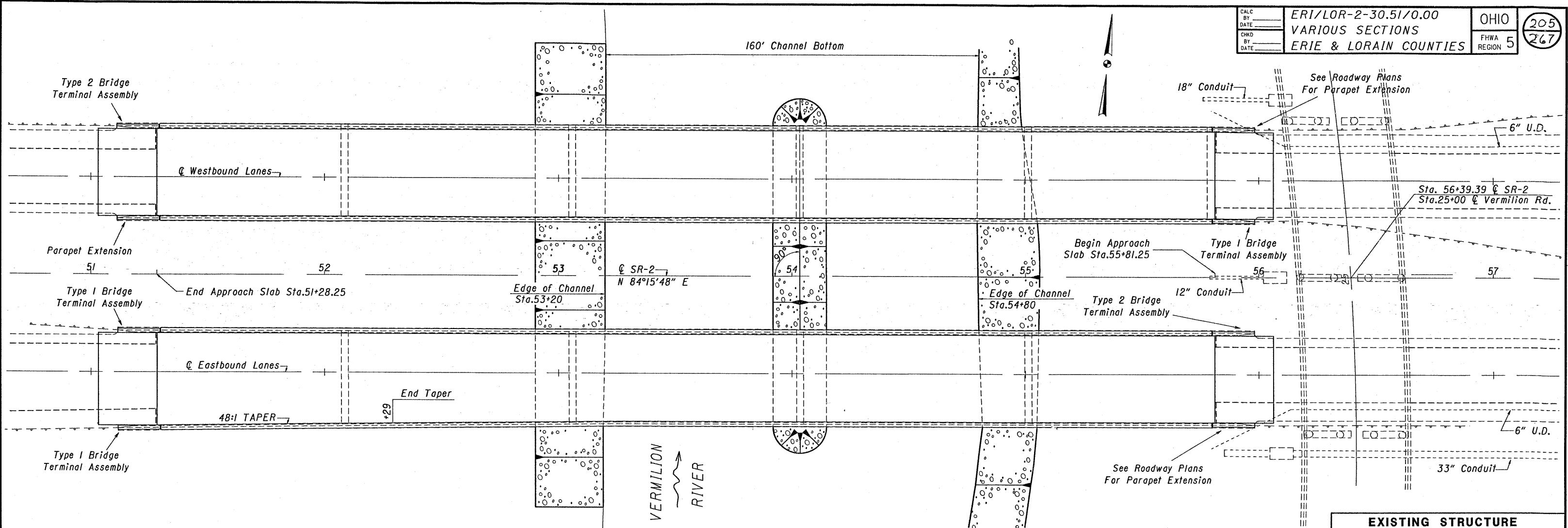
ITEM 607-FENCE TYPE CL,TPV WITH 6' FABRIC WIDTH
 THIS ITEM INCLUDES THE FURNISHING OF ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS INCLUDING THE PRESET ANCHOR WITH CLOSED FERRULES NECESSARY TO COMPLETE THE FENCING. MATERIALS AND WORKMANSHIP SHALL MEET THE REQUIREMENTS OF ITEM 607 EXCEPT THAT ALUMINUM 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 COMMERCIAL 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, CONFORMING 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



STATE OF OHIO						5/5
DEPARTMENT OF TRANSPORTATION						
DISTRICT 12 BRIDGE DEPARTMENT						
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

DETAIL AT LIGHT POLE



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: 2 1/4" 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

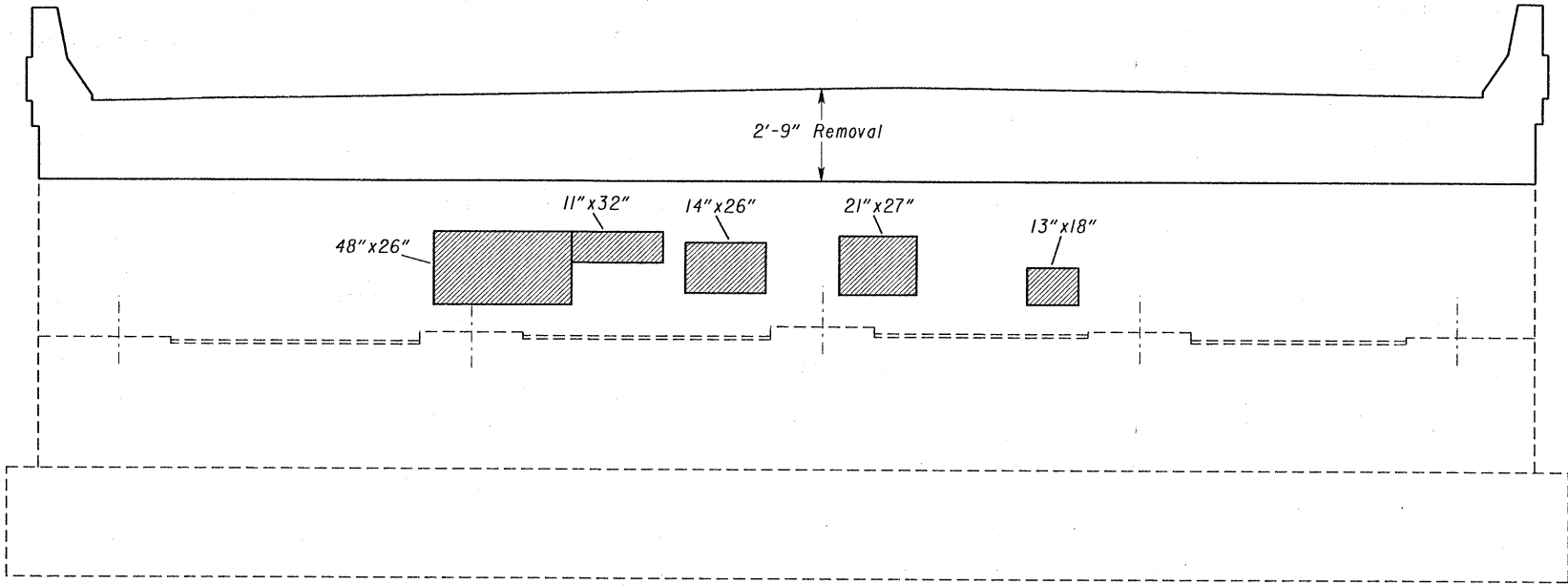
SITE PLAN

BRIDGE NO. LOR-2-0098 L&R OVER VERMILION RIVER

LORAIN COUNTY STA. 51+28.25

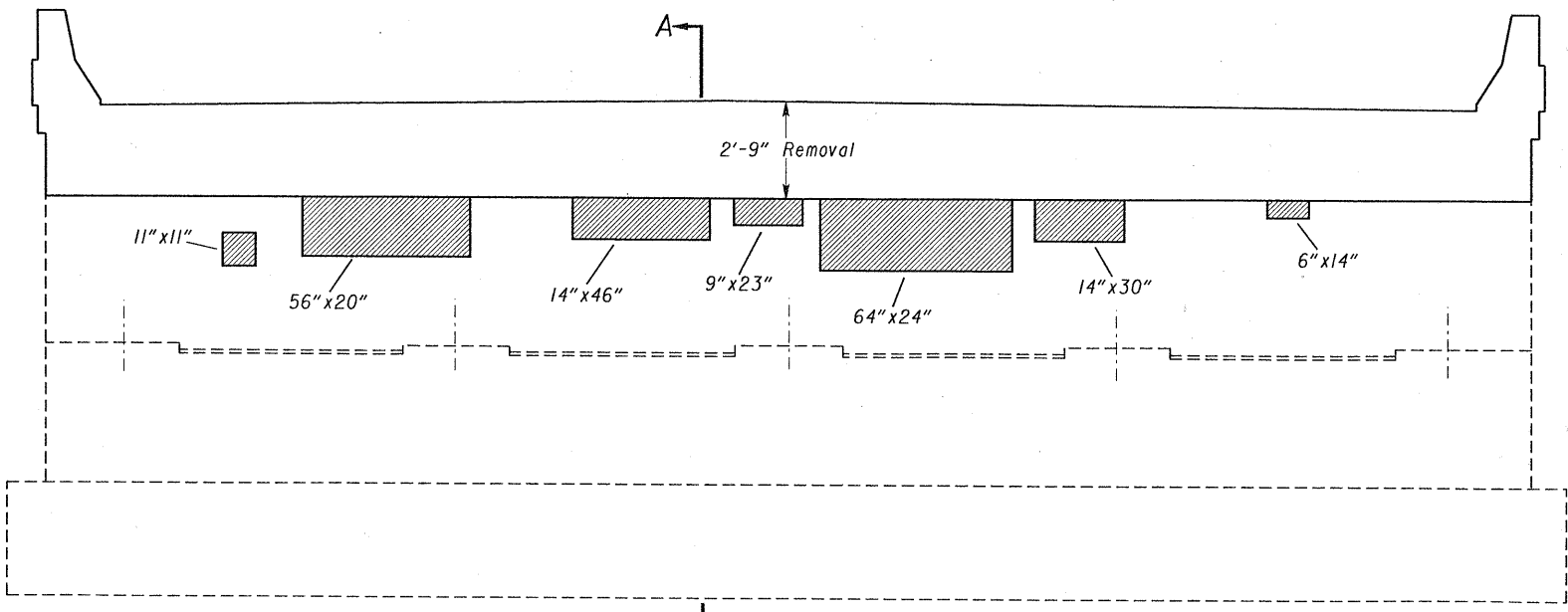
S.R.-2 STA. 55+81.25

DESIGNED	DRAIN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DCR	ELH			J.S.B.	2-28-92	DCR

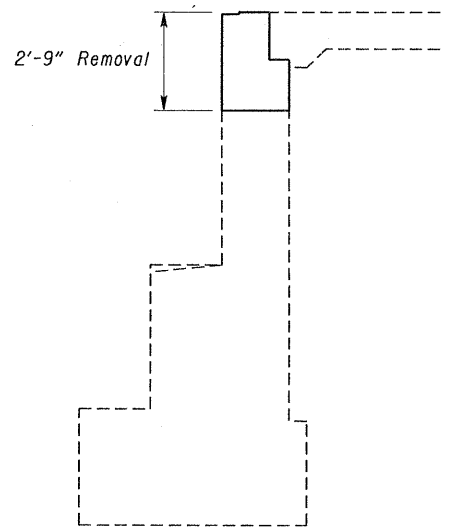


ELEVATION
RIGHT REAR ABUTMENT

BACKWALL PATCHING AREAS SHOWN.
 PAYMENT UNDER ITEM 519 - PATCHING CONCRETE STRUCTURES,
 AS PER PLAN.
 STRUCTURE LOR-2-0098 L.&R. 5.75 SQ. YD.

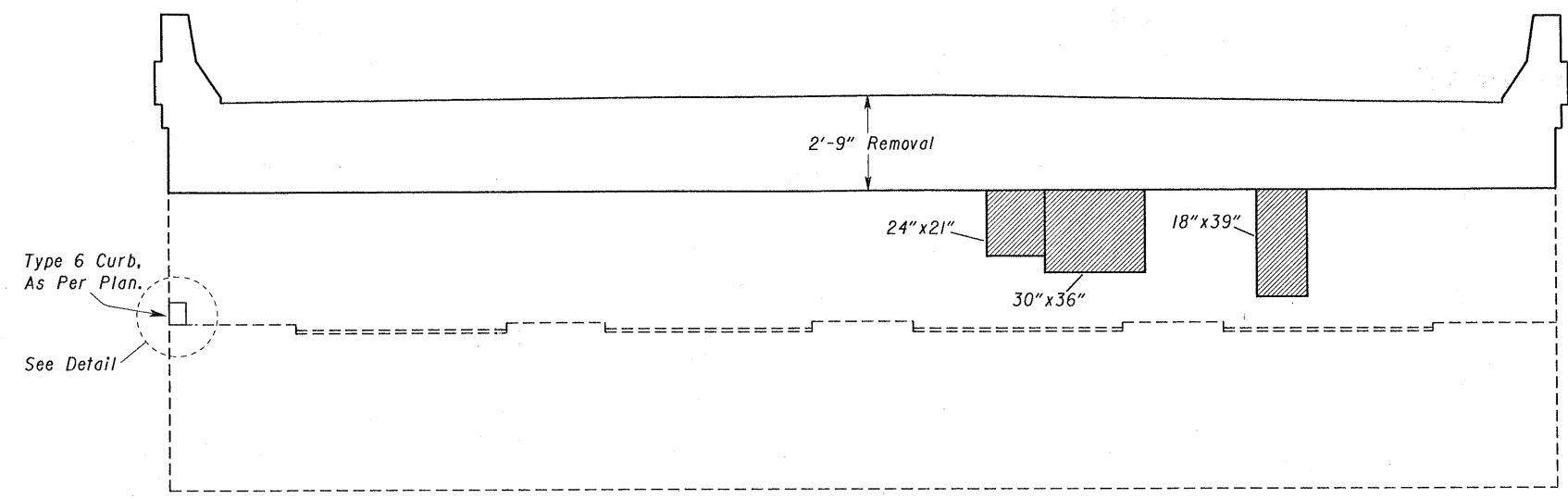


ELEVATION
LEFT REAR ABUTMENT



SECTION A-A

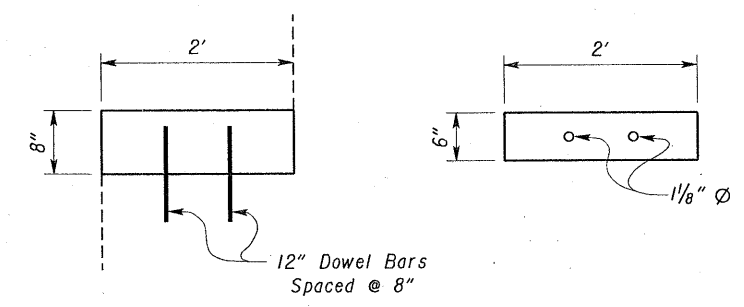
STATE OF OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF LOCATION AND DESIGN PLAN PREPARATION					
ABUTMENT PATCHING DETAILS					
BRIDGE NO. LOR-2-0098 L.&R. OVER VERMILION RIVER					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
DGR		EL		J.S.B.	2-28-92
					REVISED
					DGR



ELEVATION
FORWARD ABUTMENT LEFT 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

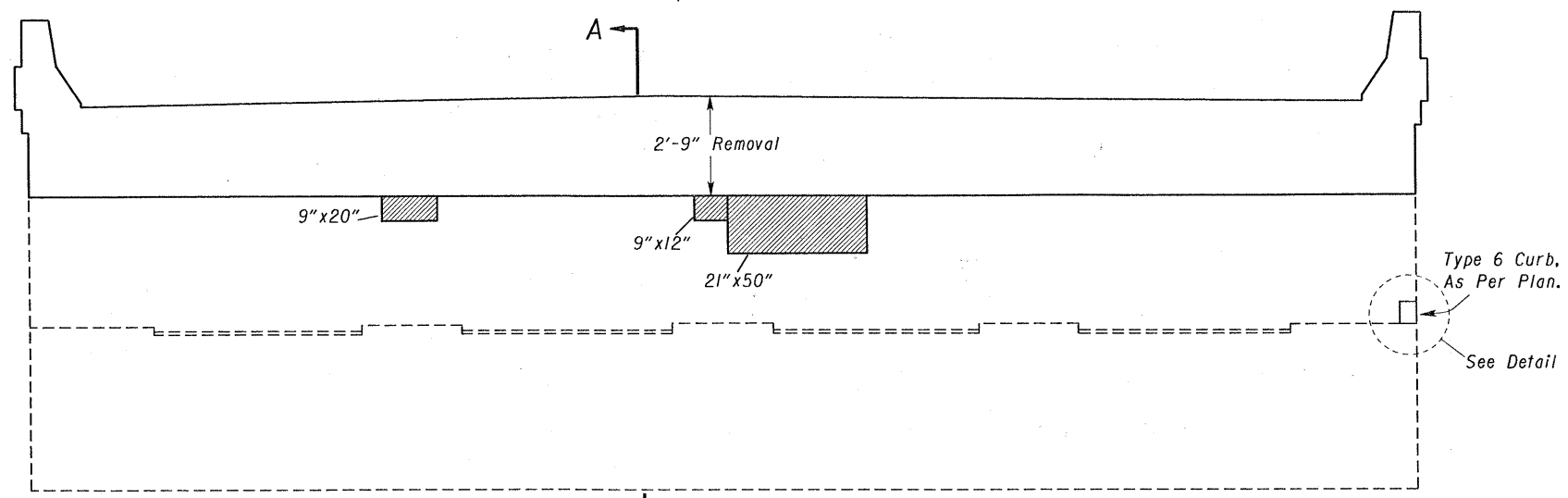


ELEVATION

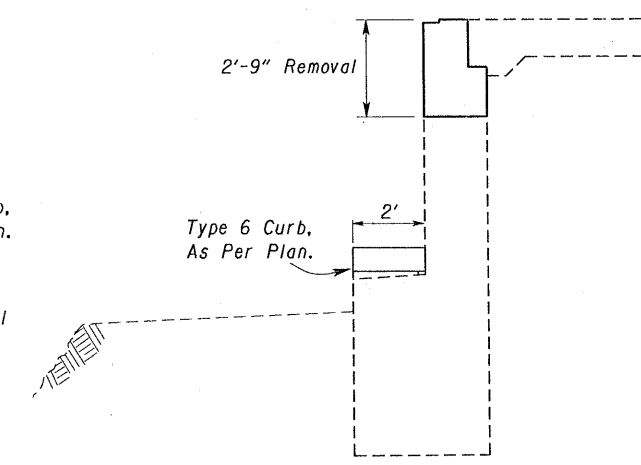
PLAN

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.



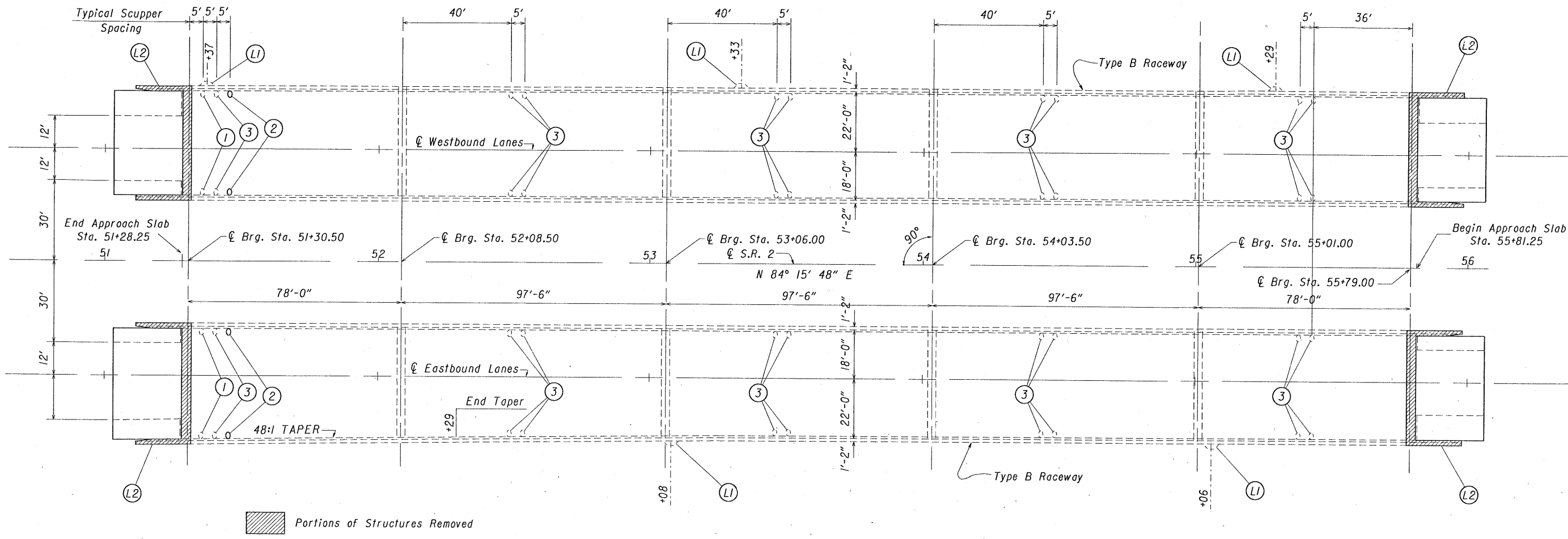
ELEVATION
FORWARD ABUTMENT RIGHT BRIDGE



SECTION A-A

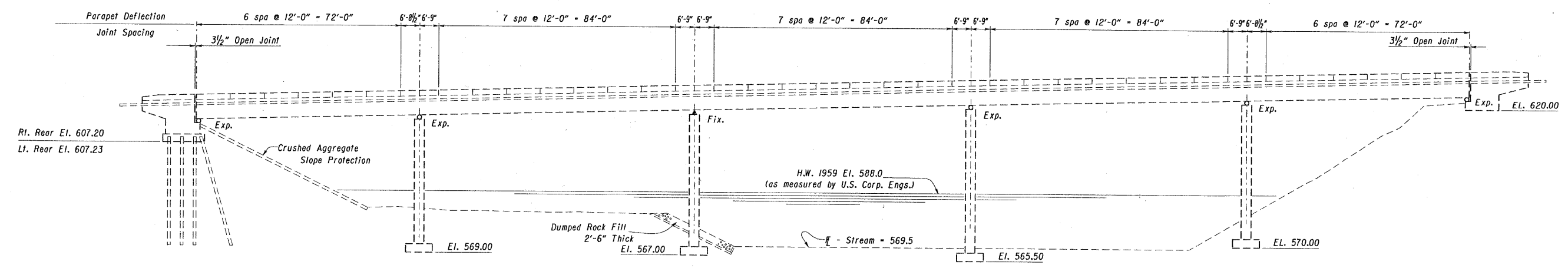
STATE OF OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF LOCATION AND DESIGN PLAN PREPARATION						3/12
ABUTMENT PATCHING DETAILS						
BRIDGE NO. LOR-2-0098 L.&R. OVER VERMILION RIVER						
DESIGNED DGR	DRAWN	TRACED EJA	CHECKED	REVIEWED J.S.B.	DATE 2-28-92	REVISED DGR

1992



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

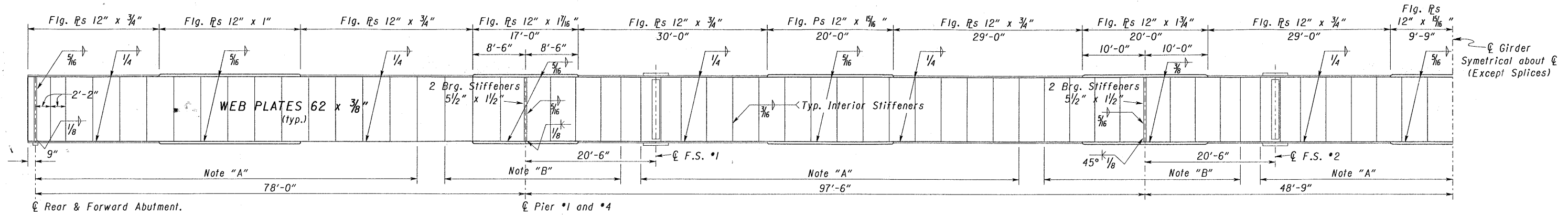
Totals Carried to Bridge Estimated Quantities



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

PARAPET DEFLECTION JOINT
SCUPPER PLAN
BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER

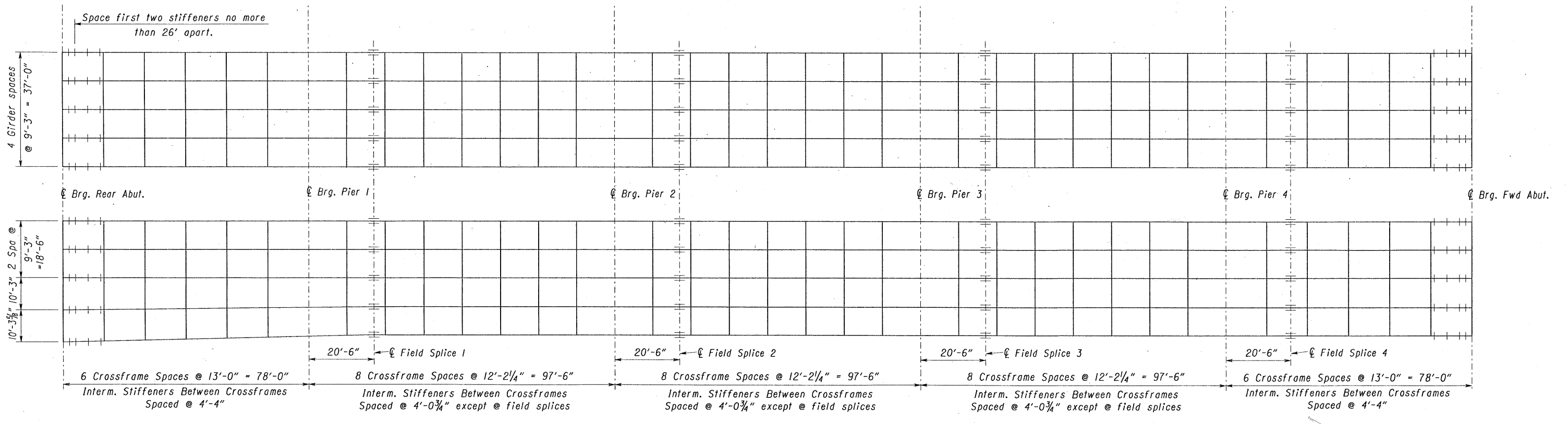
DESIGNED	DGR	DRAWN	elt	TRACED		CHECKED		REVIEWED		DATE	2-28-92	REVISED	
----------	-----	-------	-----	--------	--	---------	--	----------	--	------	---------	---------	--



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.

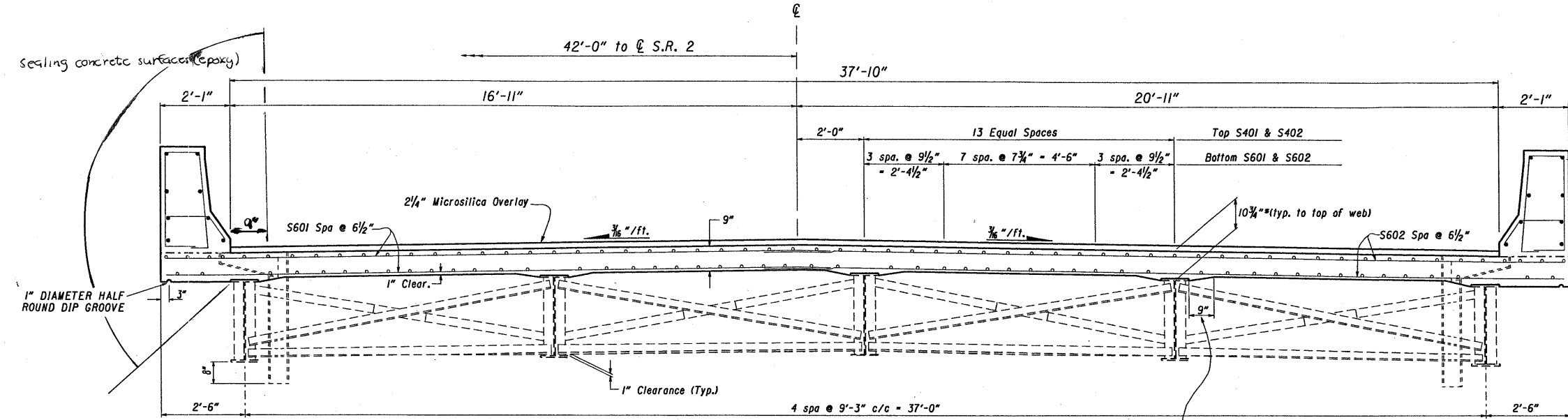
GIRDER ELEVATION

BEAM AREA LEFT	% INCREASE LEFT	BEAM AREA RIGHT	% INCREASE RIGHT
35,163 SQ. FT.	13.7	35,163 SQ. FT.	13.7



FRAMING PLAN

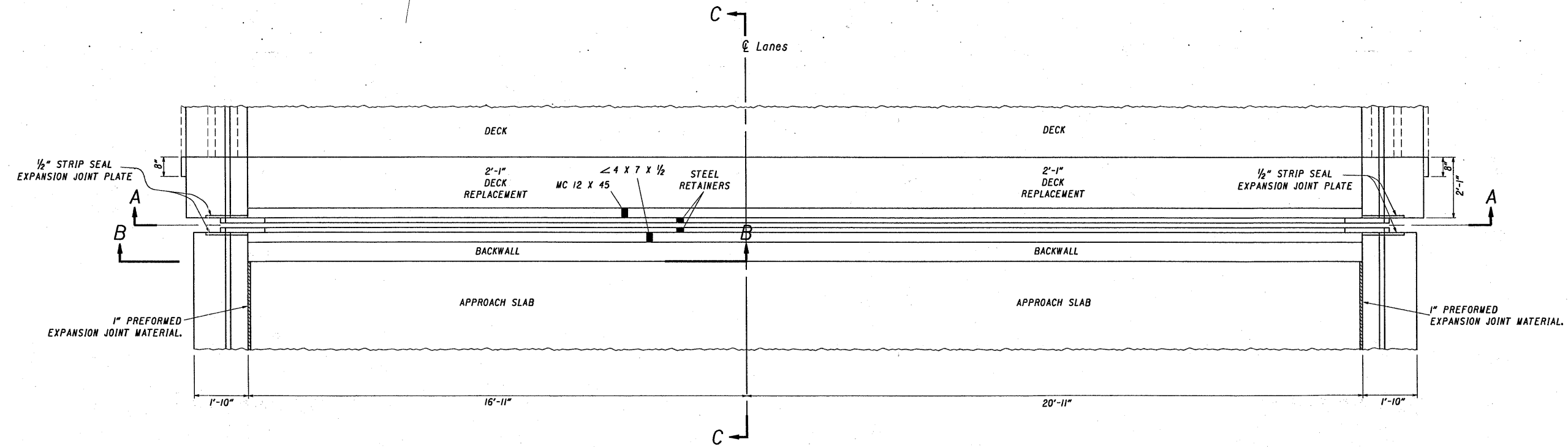
STATE OF OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF LOCATION AND DESIGN PLAN PREPARATION						5/12
FRAMING PLAN BRIDGE NO. LOR-2-0098 L.&R. OVER VERMILION RIVER						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR		elt		J.S.B.	2-28-92	DGR



* 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.

SECTION A-A
TRANSVERSE SECTION, LEFT BRIDGE



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.

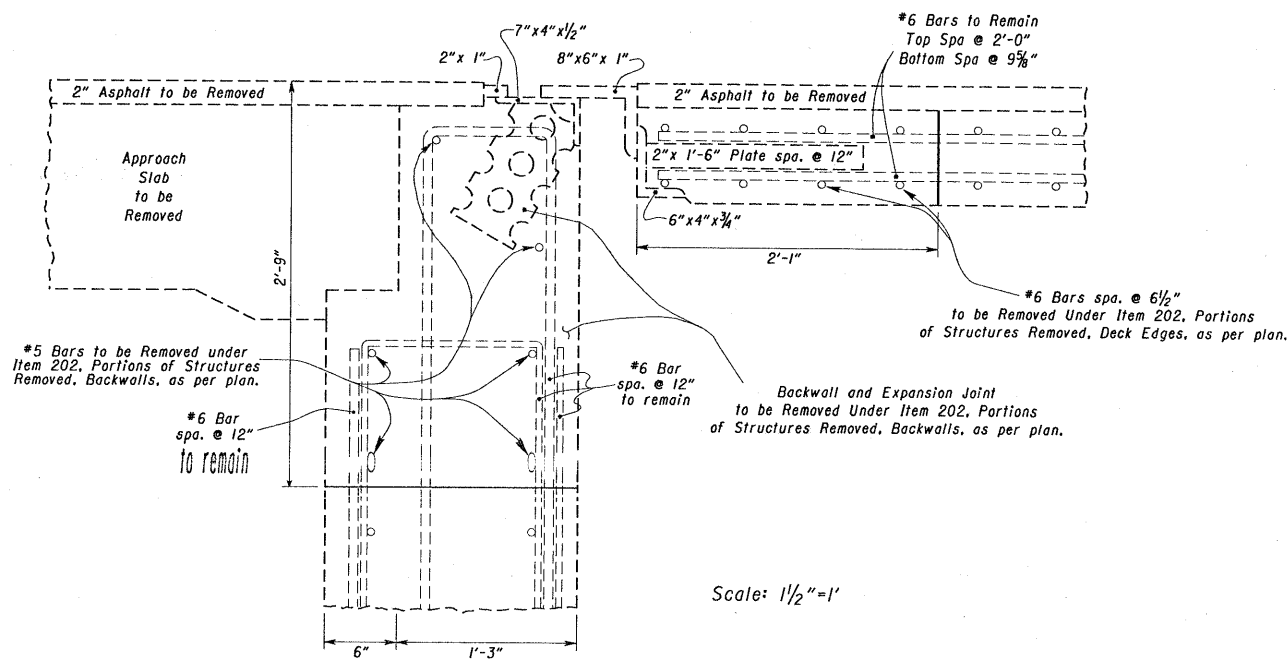
BRIDGE LOR-2-0098 SKEW 0° 0' 0" CURVE TAN

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.

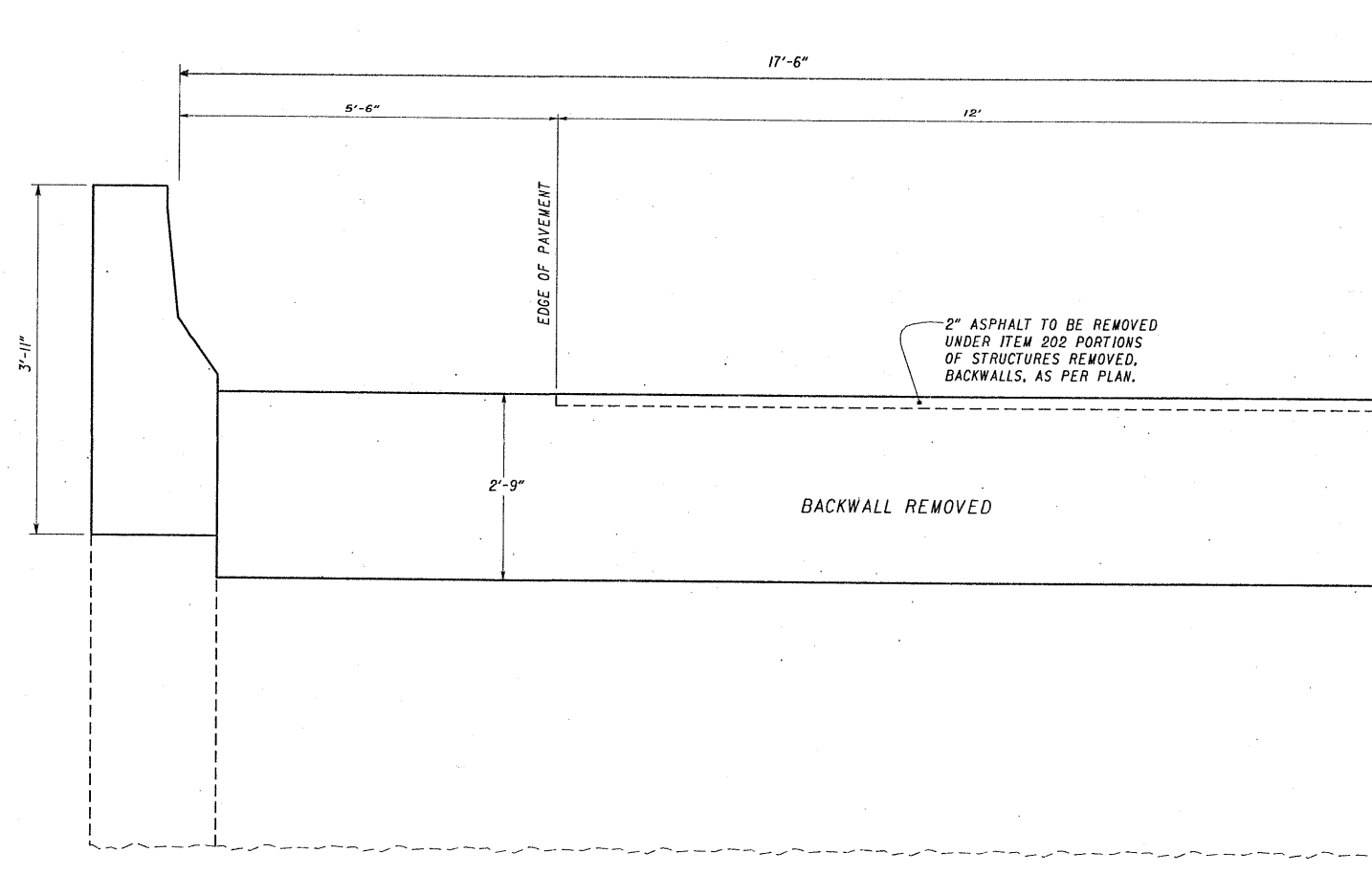
STATE OF OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF LOCATION AND DESIGN PLAN PREPARATION						6/12
SUPERSTRUCTURE DETAILS						
BRIDGE NO. LOR-2-0098 L.&R. OVER VERMILION RIVER						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	EA			J.S.B.	2-28-92	DGR

Scale: 1/2" = 1'



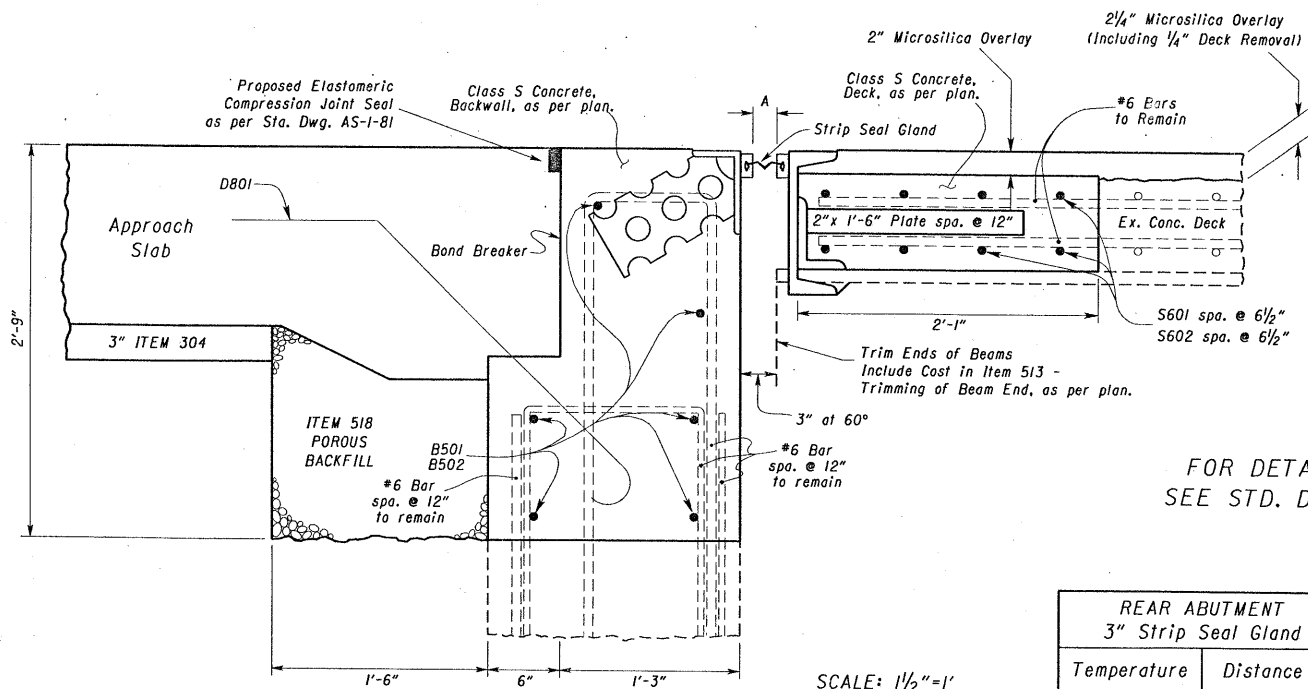
EXISTING EXPANSION JOINT SECTION C-C

Scale: 1/2"=1'



SECTION B-B
LEFT BRIDGE SHOWN

SCALE: 3/4"=1'



PROPOSED EXPANSION JOINT SECTION C-C

SCALE: 1/2"=1'

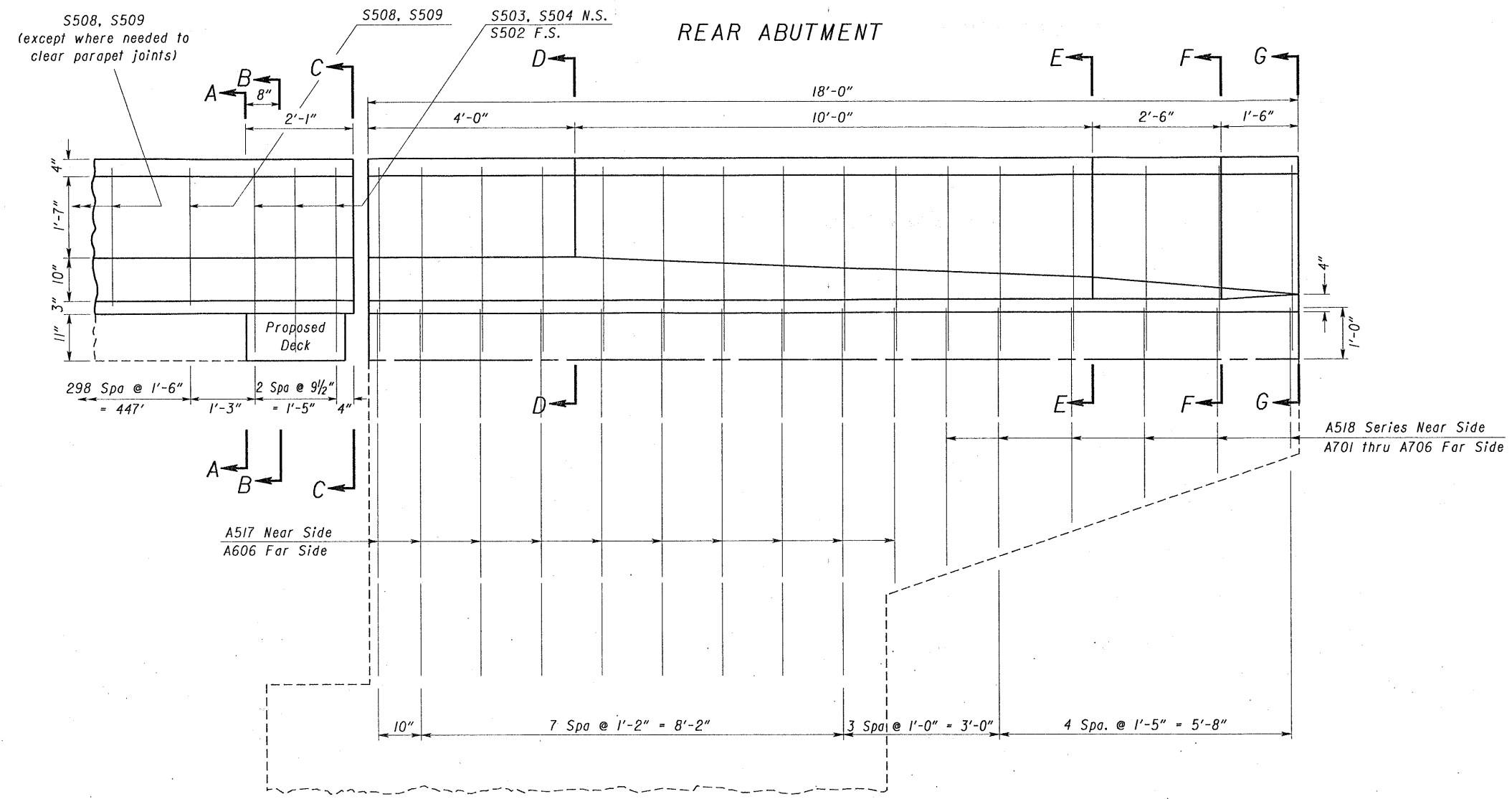
FOR DETAILS NOT SHOWN
SEE STD. DRAWING EXJ-4-87

REAR ABUTMENT 3" Strip Seal Gland		FOREWARD ABUTMENT 4" Strip Seal Gland	
Temperature	Distance A	Temperature	Distance A
90°	1 1/2"	90°	1 1/2"
80°	1 1/2"	80°	1 1/2"
70°	1 1/2"	70°	1 11/16"
60°	1 17/32"	60°	1 29/32"
50°	1 11/16"	50°	2 1/8"
40°	1 13/16"	40°	2 11/32"
30°	1 15/16"	30°	2 9/16"

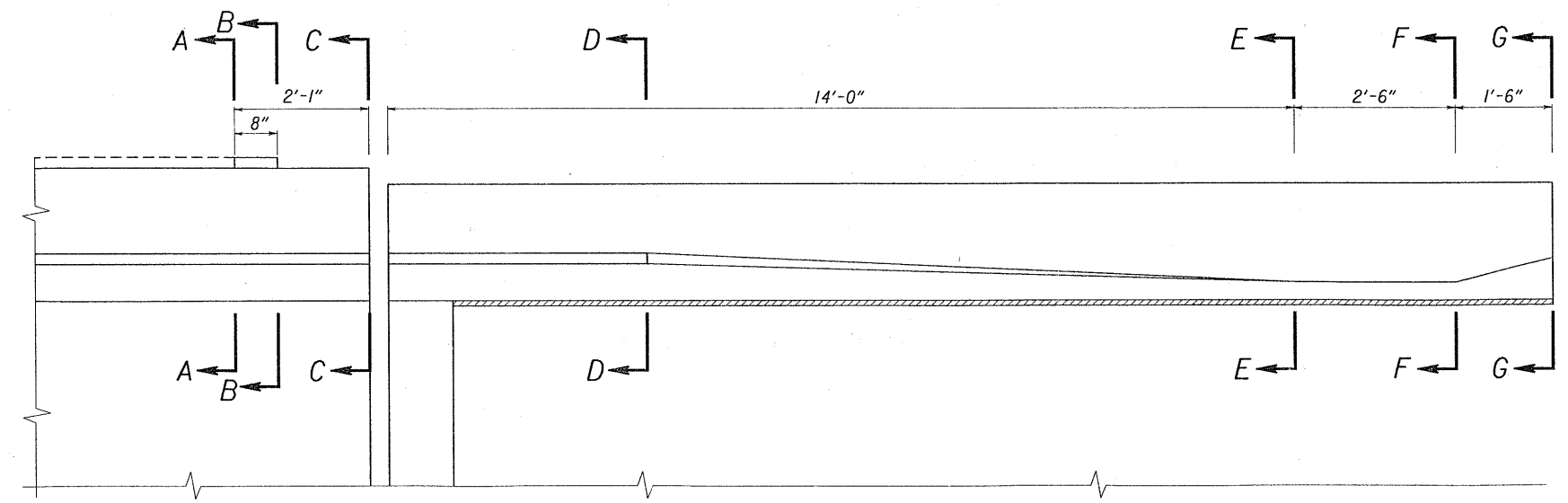
STATE OF OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF LOCATION AND DESIGN PLAN PREPARATION						
EXPANSION JOINT DETAILS BACKWALL DETAILS						
BRIDGE NO. LOR-2-0098 L&R. OVER VERMILION RIVER						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	elt			J.S.B.	2-28-92	DGR

1992

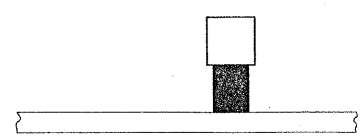
CALC BY	ERI/LOR-2-30.51/0.00	OHIO	212
DATE	VARIOUS SECTIONS	FHWA	267
CHKD BY	ERIE & LORAIN COUNTIES	REGION	5
DATE			



ELEVATION VIEW
 WINGWALL FOR LEFT BRIDGE NORTH SIDE AND RIGHT BRIDGE BOTH SIDES
 FOR SECTION A-A THRU G-G SEE SHEET 9.



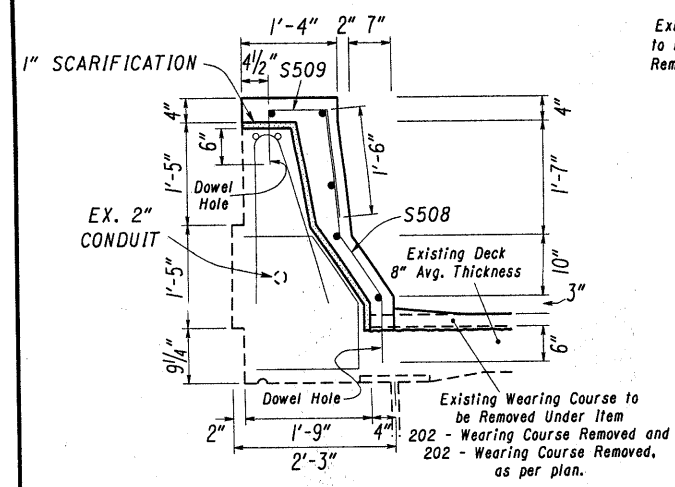
PLAN VIEW



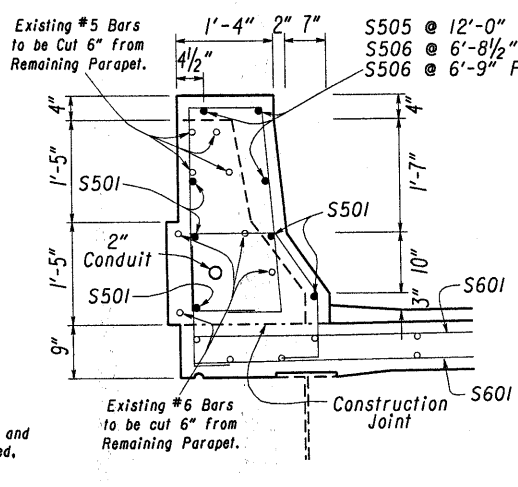
For Guardrail See Standard Drawing GR-3.1 5-6-91 and Roadway Plans For Pavement.

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	EA			J.S.B.	2-28-92	DGR

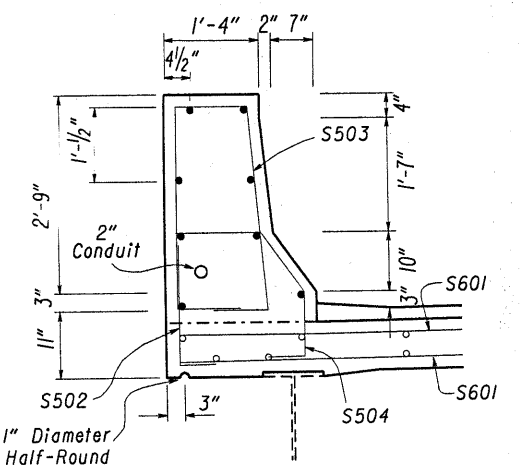
1992



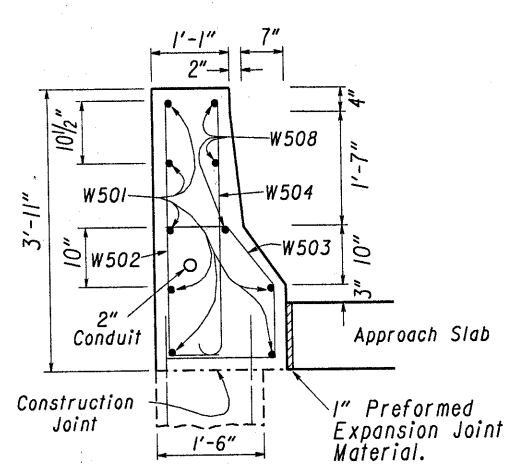
SECTION A-A



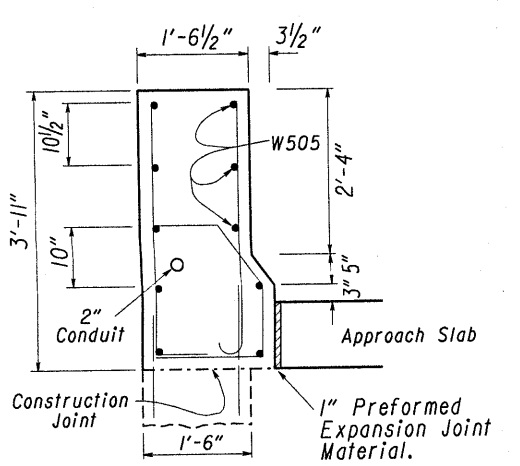
SECTION B-B



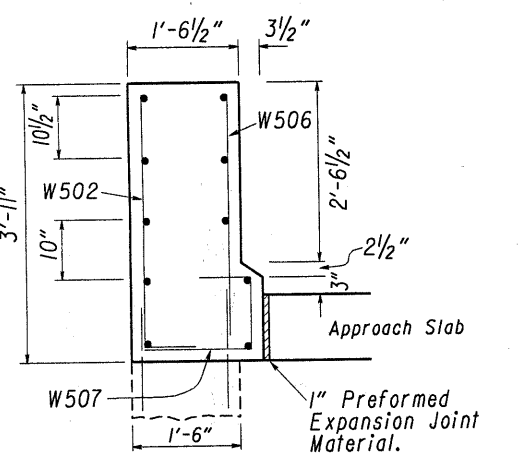
SECTION C-C



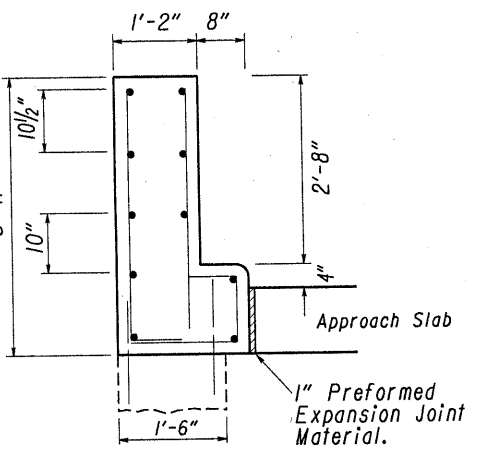
SECTION D-D



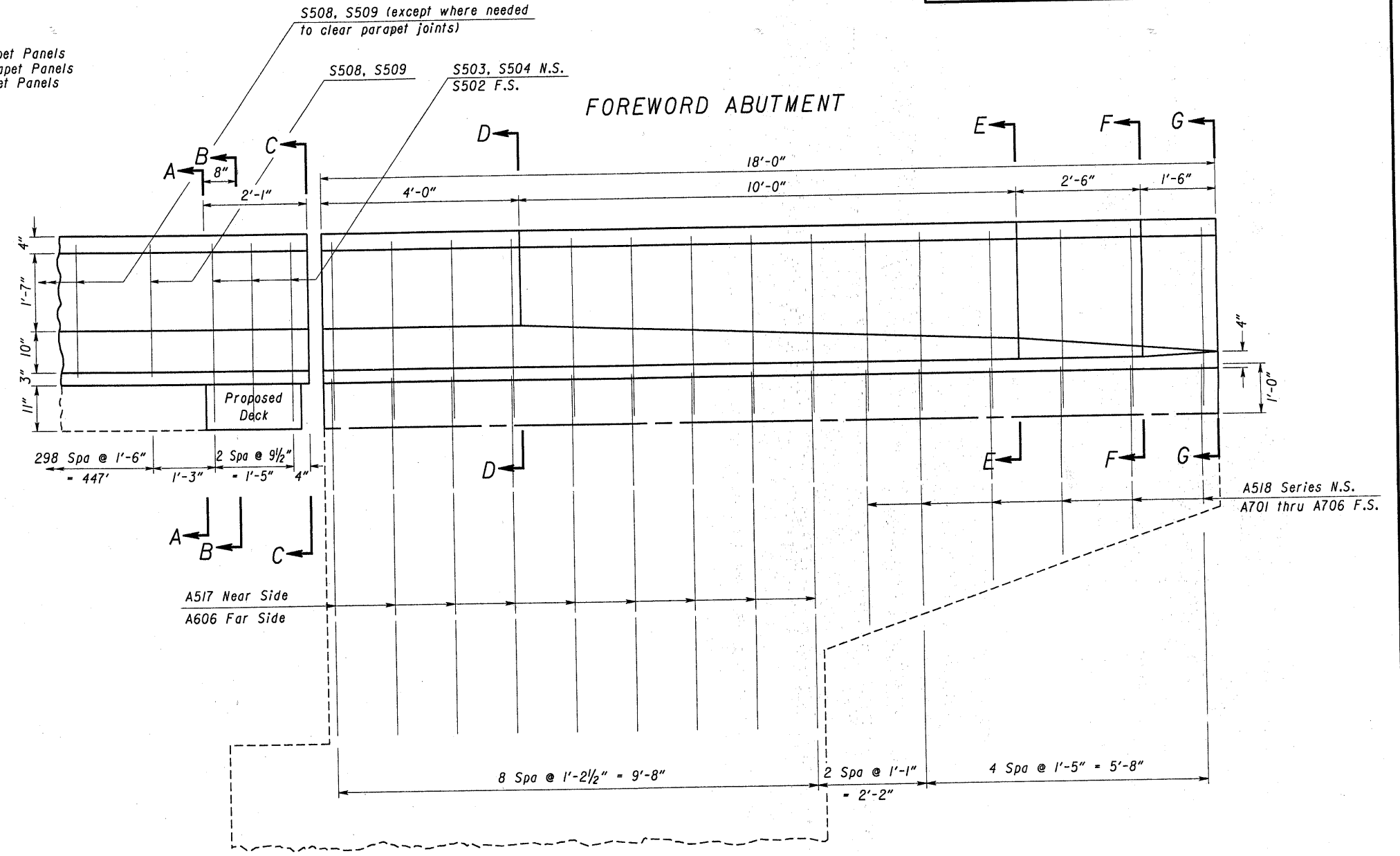
SECTION E-E



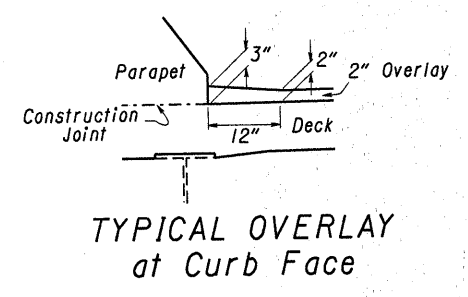
SECTION F-F



SECTION G-G

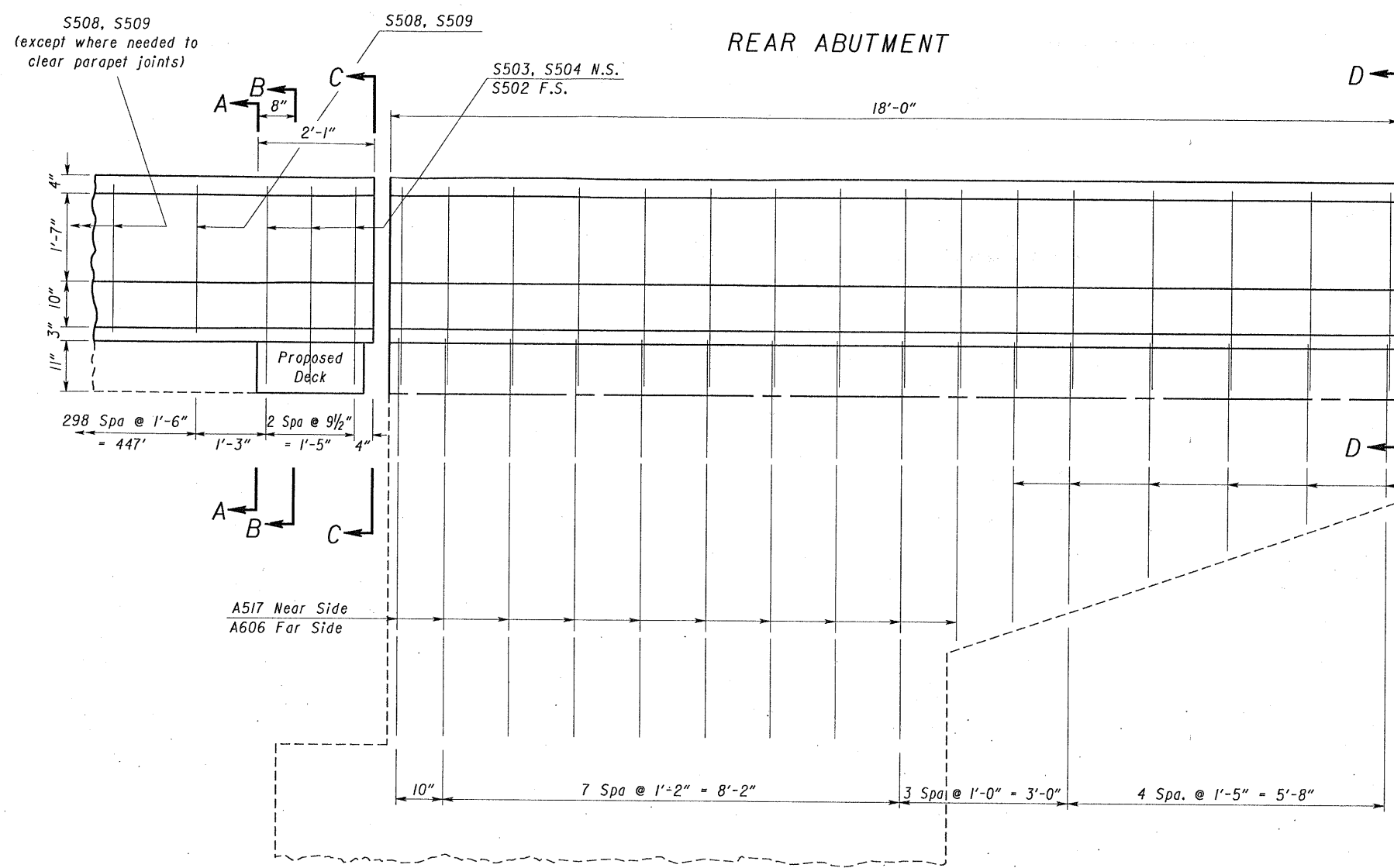


ELEVATION VIEW
WINGWALL FOR LEFT BRIDGE SOUTH SIDE AND RIGHT BRIDGE NORTH SIDE
FOR PLAN VIEW, SEE SHEET 8

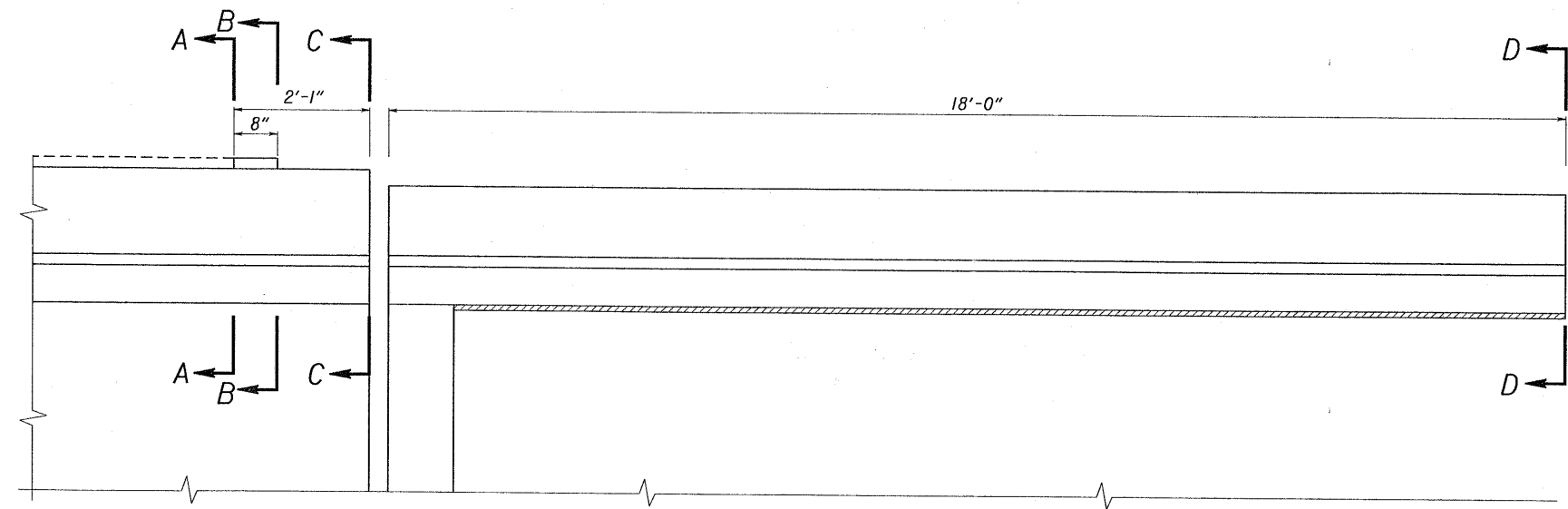


STATE OF OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF LOCATION AND DESIGN PLAN PREPARATION						
WINGWALL DETAILS BRIDGE NO. LOR-2-0098 L.&R. OVER VERMILION RIVER						
DESIGNED DGR	DRAWN EJL	TRACED	CHECKED	REVIEWED J.S.B.	DATE 2-28-92	REVISED DGR

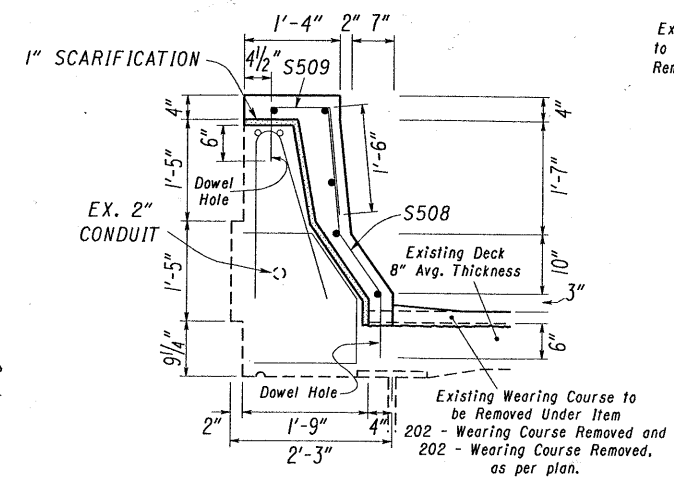
1992



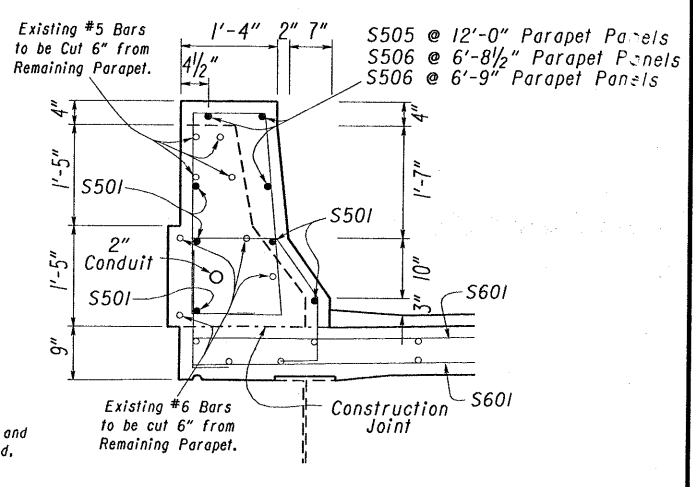
ELEVATION VIEW
WINGWALL FOR LEFT BRIDGE SOUTH SIDE



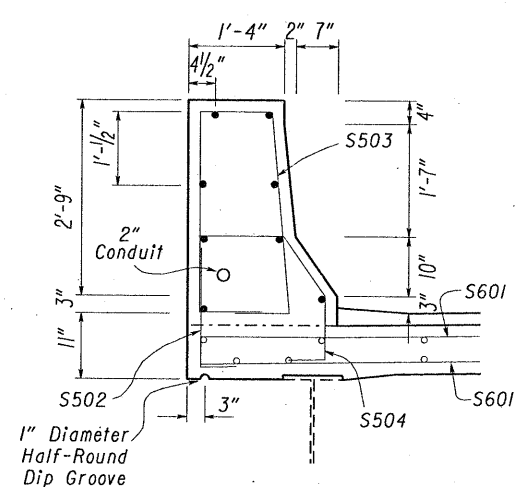
PLAN VIEW



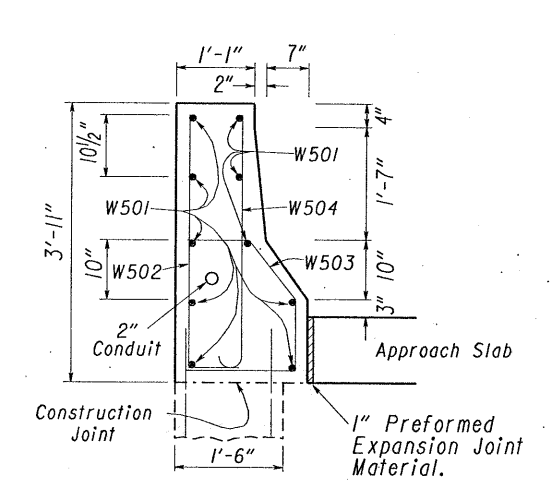
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

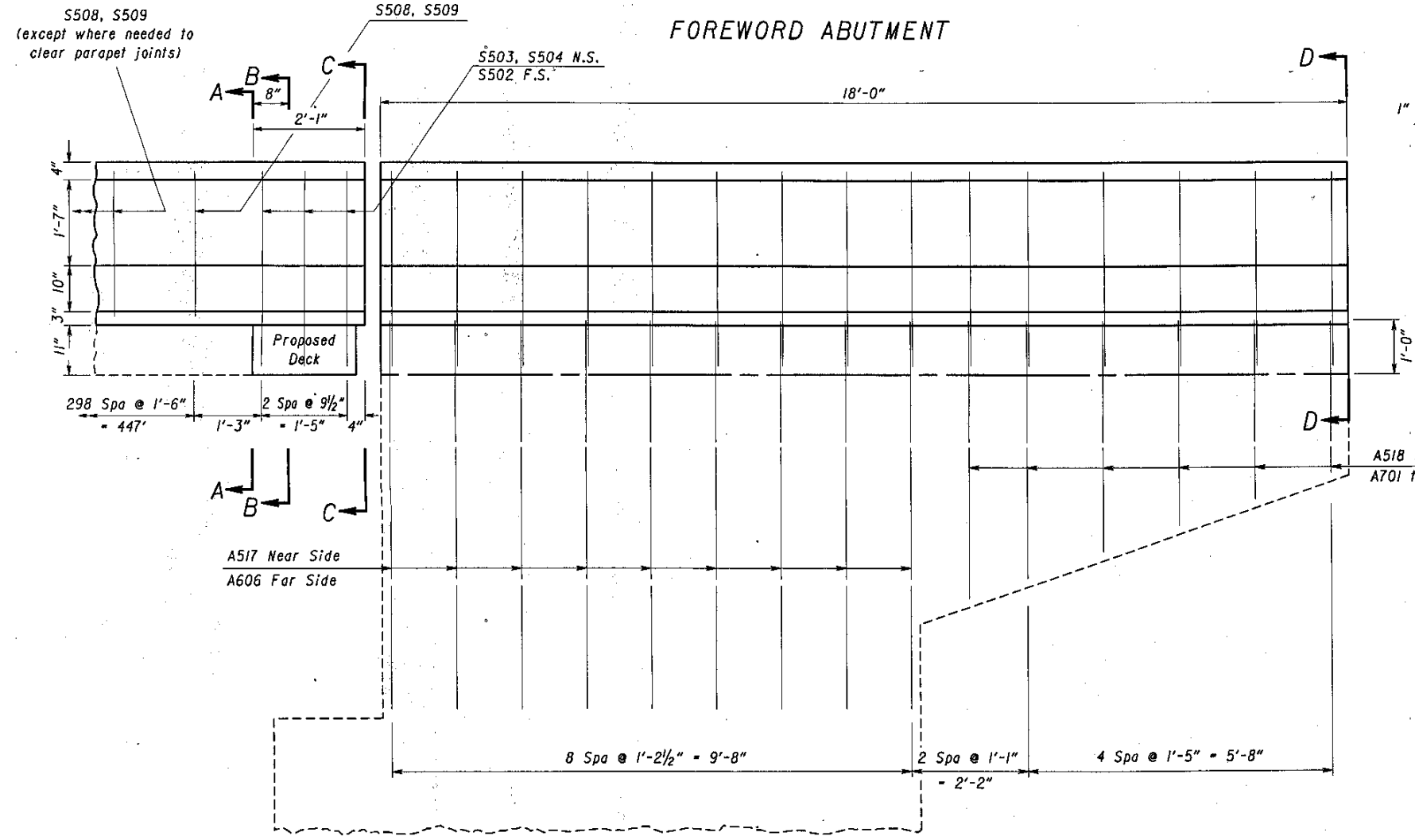
A518 Series Near Side
A701 thru A706 Far Side

A517 Near Side
A606 Far Side

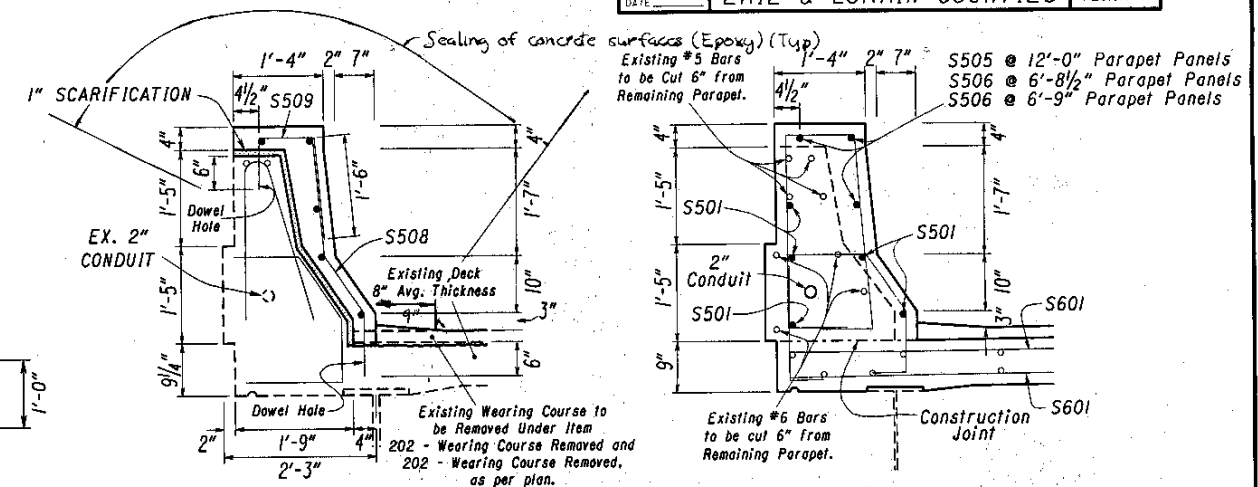
STATE OF OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF LOCATION AND DESIGN PLAN PREPARATION						10/12
WINGWALL DETAILS BRIDGE NO. LOR-2-0098 L.&R. OVER VERMILION RIVER						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	elt			J.S.B.	2-28-92	DGR

1992

FOREWORD ABUTMENT

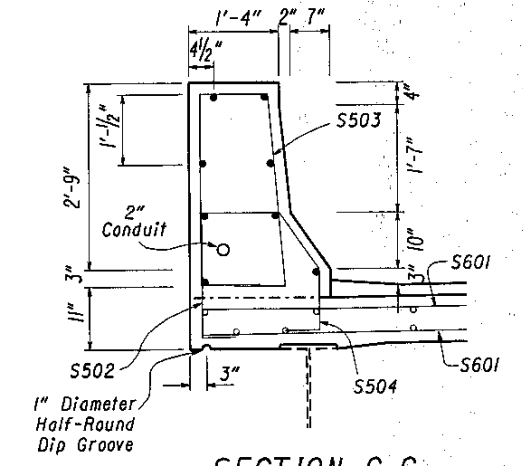


ELEVATION VIEW
WINGWALL FOR LEFT BRIDGE NORTH SIDE AND RIGHT BRIDGE SOUTH SIDE

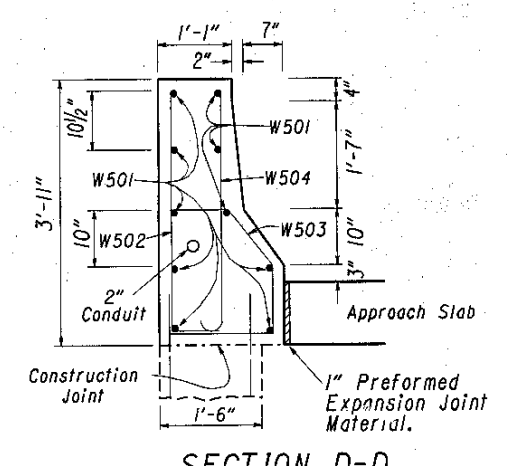


SECTION A-A

SECTION B-B

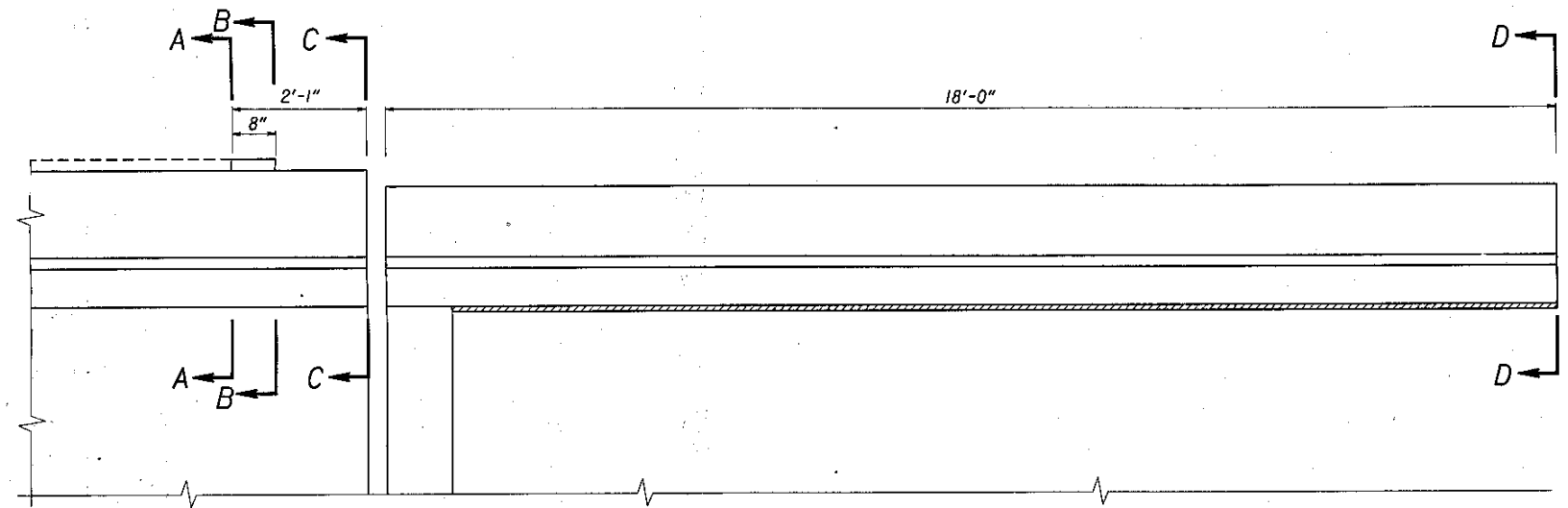


SECTION C-C



SECTION D-D

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.



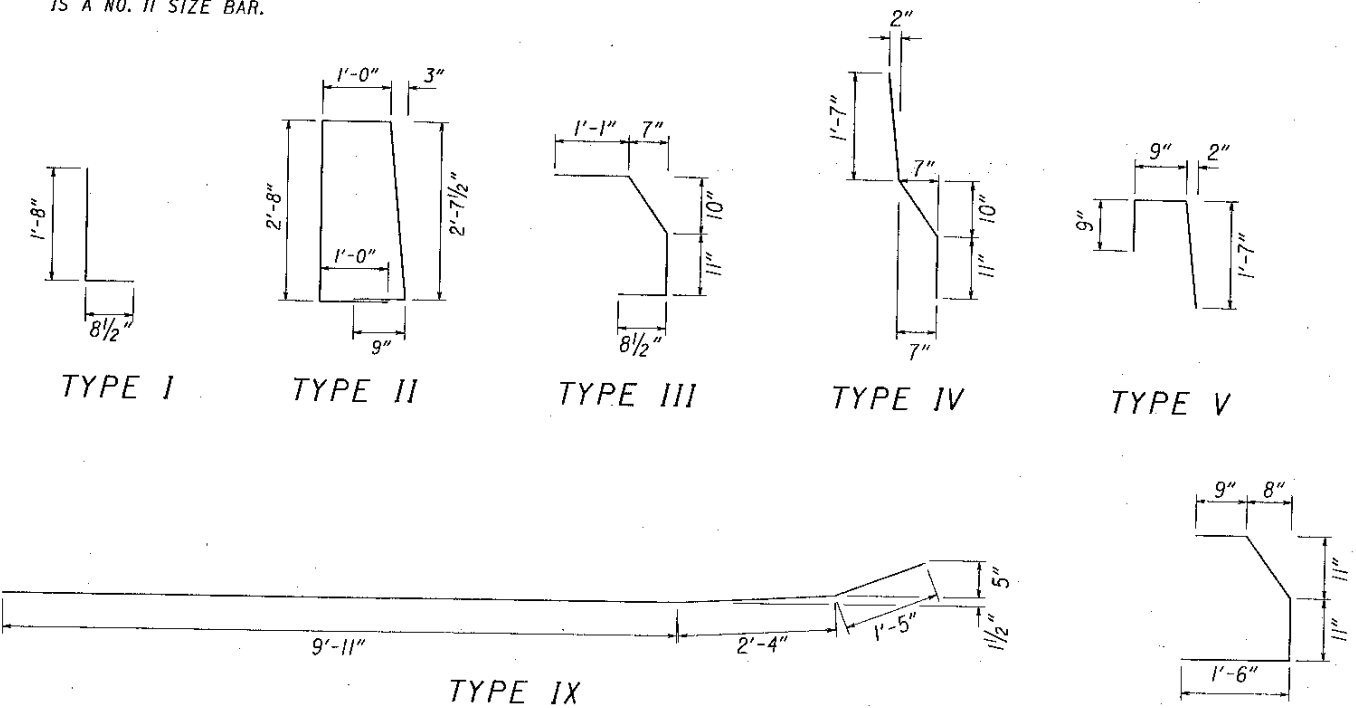
PLAN VIEW

STATE OF OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF LOCATION AND DESIGN PLAN PREPARATION						
WINGWALL DETAILS BRIDGE NO. LOR-2-0098 L.&R. OVER VERMILION RIVER						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGR	elt			J.S.B.	2-28-92	DGR

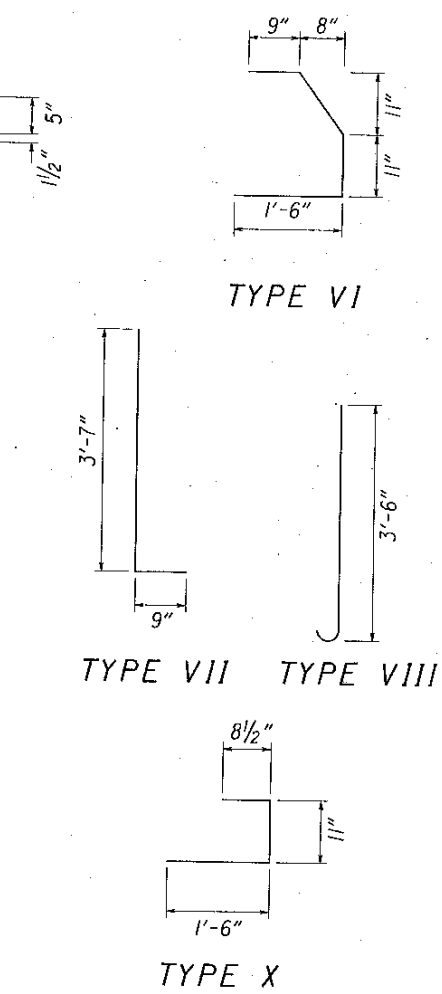
BAR SIZE : THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE : A506 IS A NO. 5 SIZE BAR AND P1101 IS A NO. 11 SIZE BAR.

BRIDGE ESTIMATED QUANTITIES

SHEET NUMBER		ITEM	ITEM EXT	PLAN TOTAL	UNIT	DESCRIPTION
2	3					
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	SO. YD.	WEARING COURSE REMOVED
		202	23501	3876	SO. YD.	WEARING COURSE REMOVED, AS PER PLAN
		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
		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	SO. 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	SO. FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)
		SPECIAL	51400056	79970	SO. FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
		SPECIAL	51400060	79970	SO. FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
		SPECIAL	51400066	79970	SO. 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
		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	SO. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN.
		SPECIAL	51922006	3808	SO. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (2 1/4" 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)
		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



ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60													
WINGWALLS						DECK							
ABUTMENT	LEFT BRIDGE		RIGHT BRIDGE			MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
REAR	NORTH		BOTH			S601	32	19'-10"	Str.				953
FOREWARD	SOUTH		NORTH			S602	32	23'-10"	Str.				1146
MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT						
W501	35	17'-8"	Str.				618						
W502	78	2'-2 1/2"	VII				180						
W503	63	4'-1 1/2"	VI				266						
W504	63	3'-11 1/2"	VIII				260						
W505	15	13'-8"	IX				214						
W506	15	3'-7"	Str.				56						
W507	15	2'-10 1/2"	X				45						
W508	15	5'-8"	Str.				89						
1728													
WINGWALLS						PARAPET FACING							
ABUTMENT	LEFT BRIDGE		RIGHT BRIDGE			MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT
REAR	SOUTH		-			S505	396	11'-8"	Str.				4819
FOREWARD	NORTH		SOUTH			S506	96	6'-4"	Str.				634
						S508	1196	3'-5"	IV				4262
						S509	1196	2'-9"	V				3430
13,145													
WINGWALLS						BACKWALL							
MARK	NO.	LENGTH	TYPE	A	B	C	WEIGHT						
W501	30	17'-8"	Str.				553						
W502	46	2'-2 1/2"	VII				106						
W503	46	4'-1 1/2"	VI				194						
W504	46	3'-11 1/2"	VIII				190						
1043													
GRAND TOTAL													
20,883													



12/92

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF LOCATION AND DESIGN
PLAN PREPARATION

**ESTIMATED QUANTITIES
REINFORCING STEEL
BRIDGE NO. LOR-2-0098 L.&R.
OVER VERMILION RIVER**

DESIGNED	DRAWN	TRACKED	CHECKED	REVIEWED	DATE	BLIND
DGR	elt			J.S.B.	2-28-92	DGR