

STATE OF OHIO, DEPARTMENT OF HIGHWAYS

Proj 516(72)

PLAN NO. BR-18-72

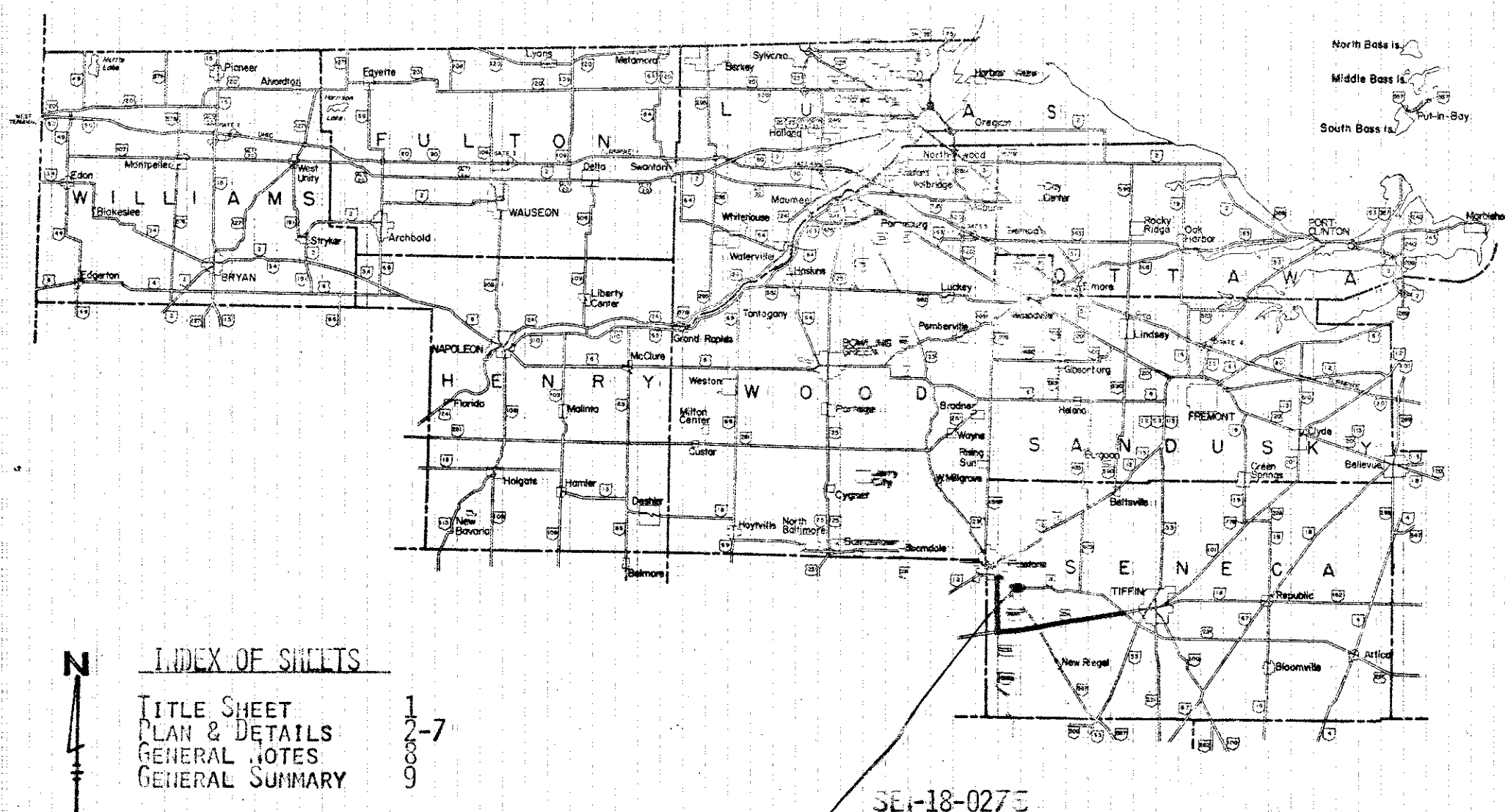
BRIDGE REPAIR

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		NET LENGTH MILES	TOWNSHIP	CITY	VILLAGE
				BEGIN	END				
1	SENECA	18	Br.No.SEN18-0276	2.76	2.78	0.02	London		

The Standard 1971 Specifications of the State of Ohio, Department of Highway including changes and Supplemental Specifications listed in the plans and proposal shall govern these improvements.

I hereby approve these plans and declare that the making of these improvements will require the closing of the highways to traffic on Parts # --- and that detours will be provided by State forces. The closing to traffic of highways will not be required on Parts # --- provisions for the maintenance and safety of traffic will be as indicated in proposal.

LOCATION MAP



INDEX OF SHEETS

TITLE SHEET
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GENERAL NOTES
GENERAL SUMMARY

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● PORTION TO BE IMPROVED
— DETOUR ROUTE

Approved Date 4-3-72 *[Signature]* Division Deputy Director

Approved Date 5-23-72 *[Signature]* Engineer of Bridges

Approved Date _____ Engineer of Location & Design

Approved Date _____ Deputy Director of Design & Construction

Approved Date 6-19-72 *[Signature]* Engineer of Maintenance

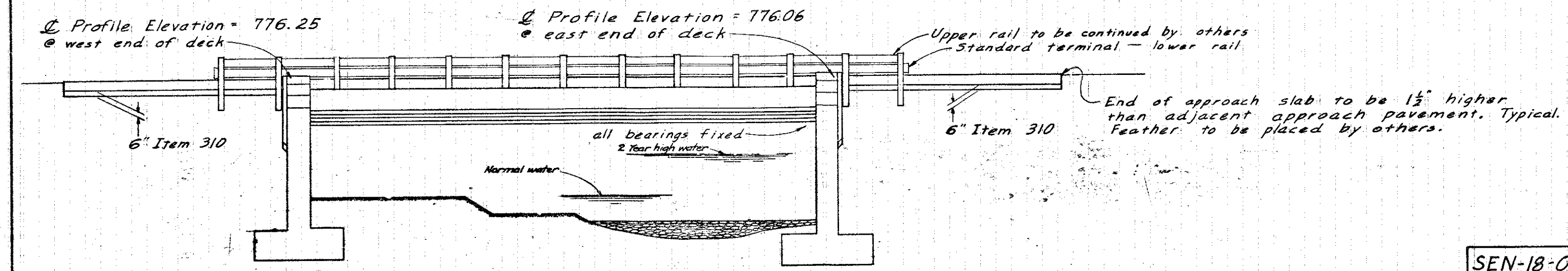
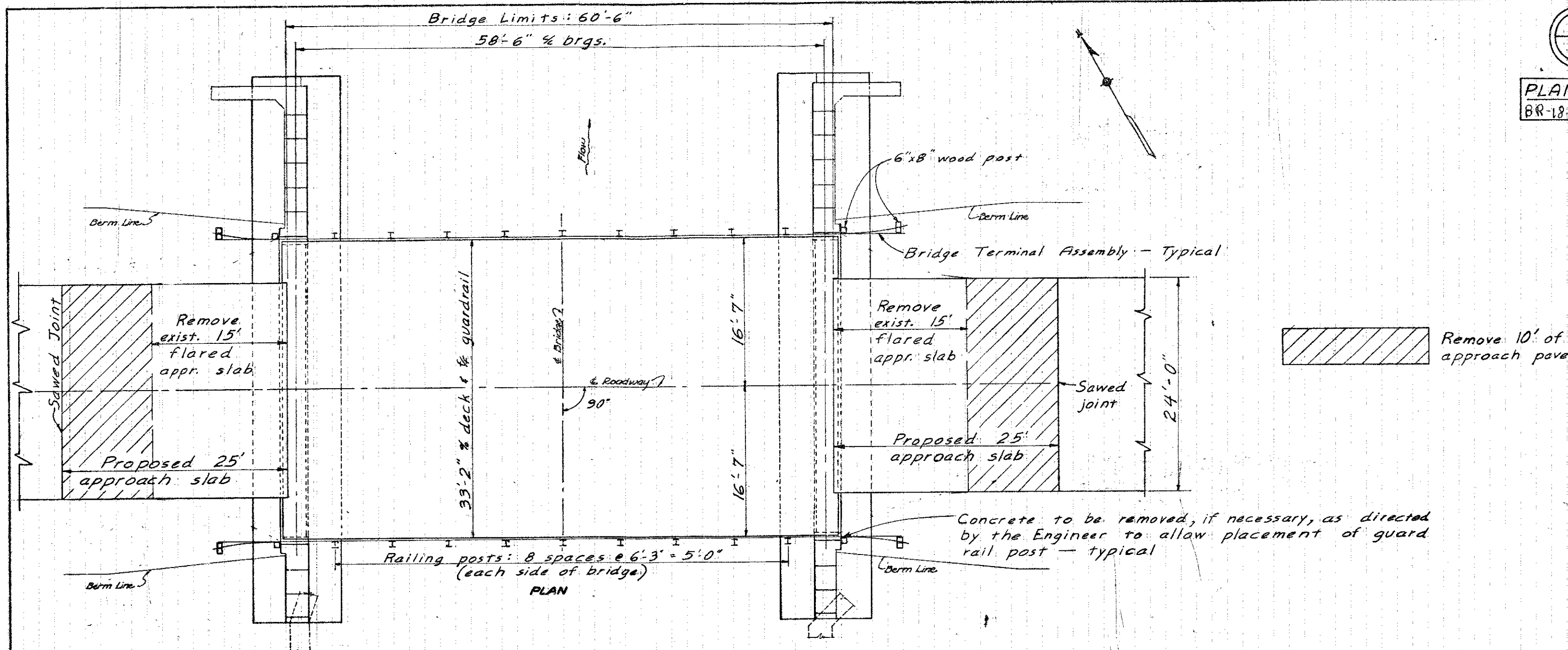
Approved Date 6-20-72 *[Signature]* Deputy Director of Operations

Approved Date 6-21-72 *[Signature]* Deputy Director of Planning & Programming

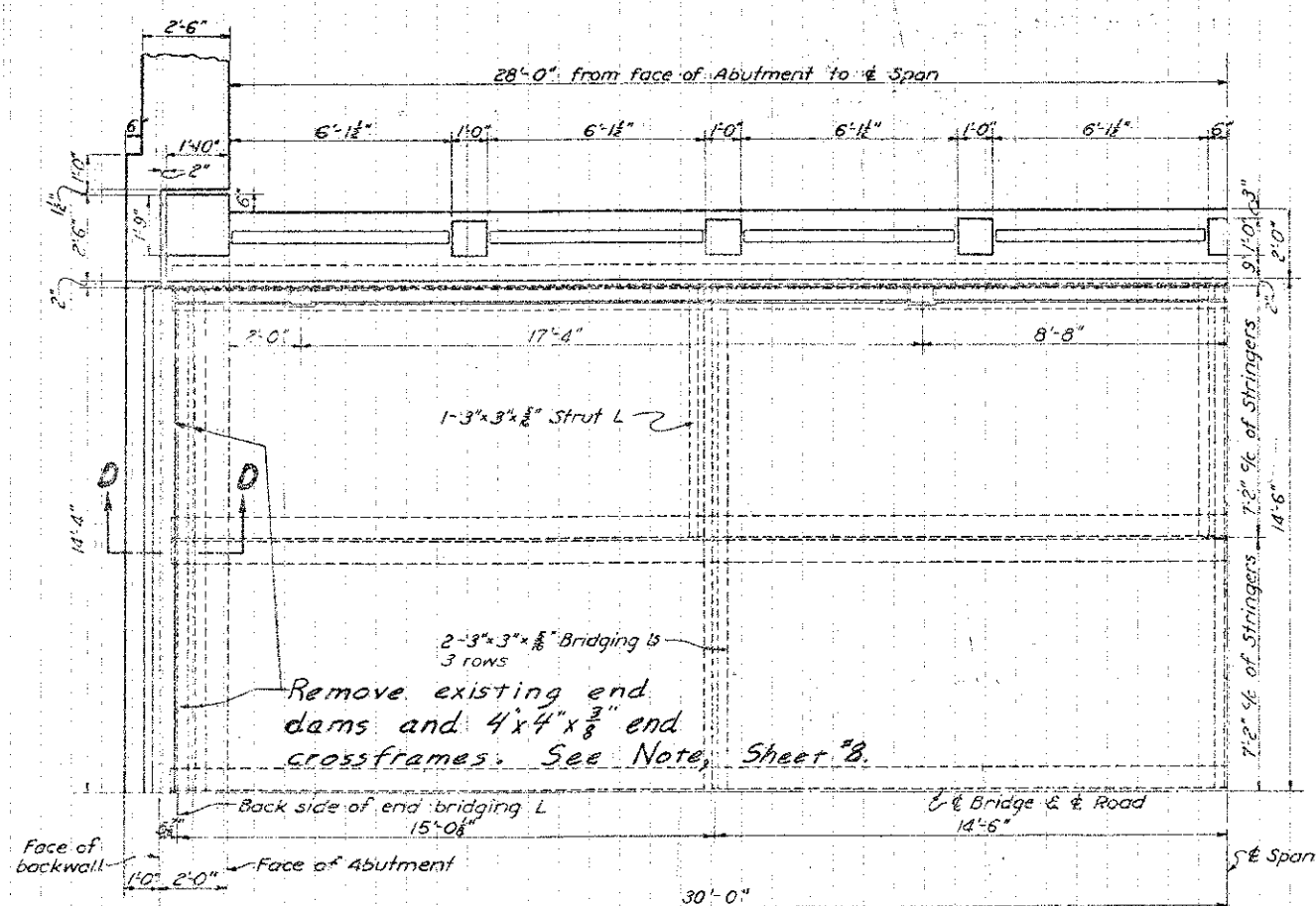
Approved Date 6-23-72 *[Signature]* First Assistant Director

Approved Date 6/26/72 *[Signature]* Director of Highways

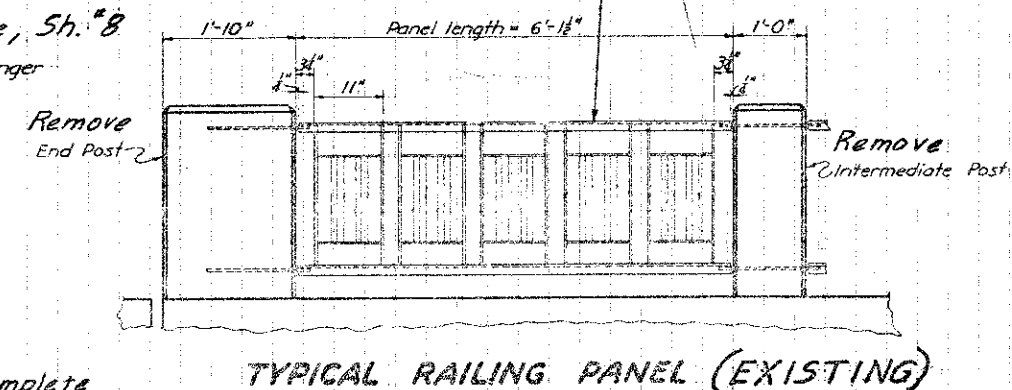
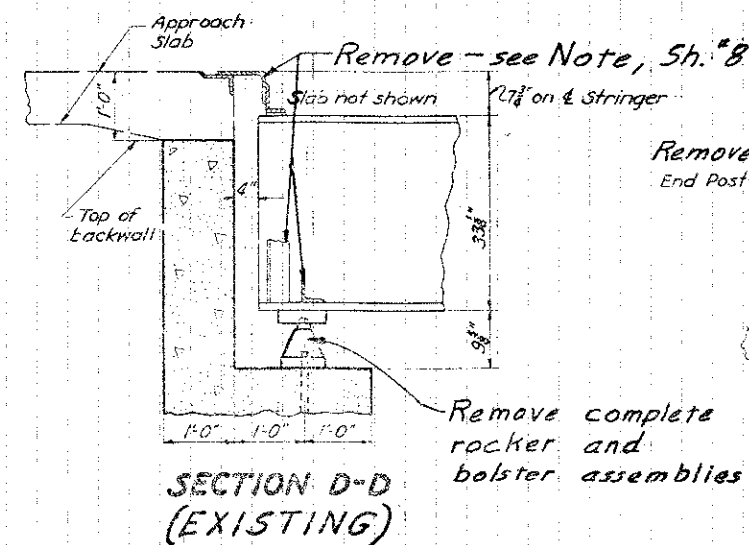
STANDARD DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
AS-1-67	6-12-69	838	1-1-71
DR-1-71	1-1-71	850	1-1-71
GR-3	11-9-71	857	12-31-71
NC-3	6-20-69	929	5-20-67



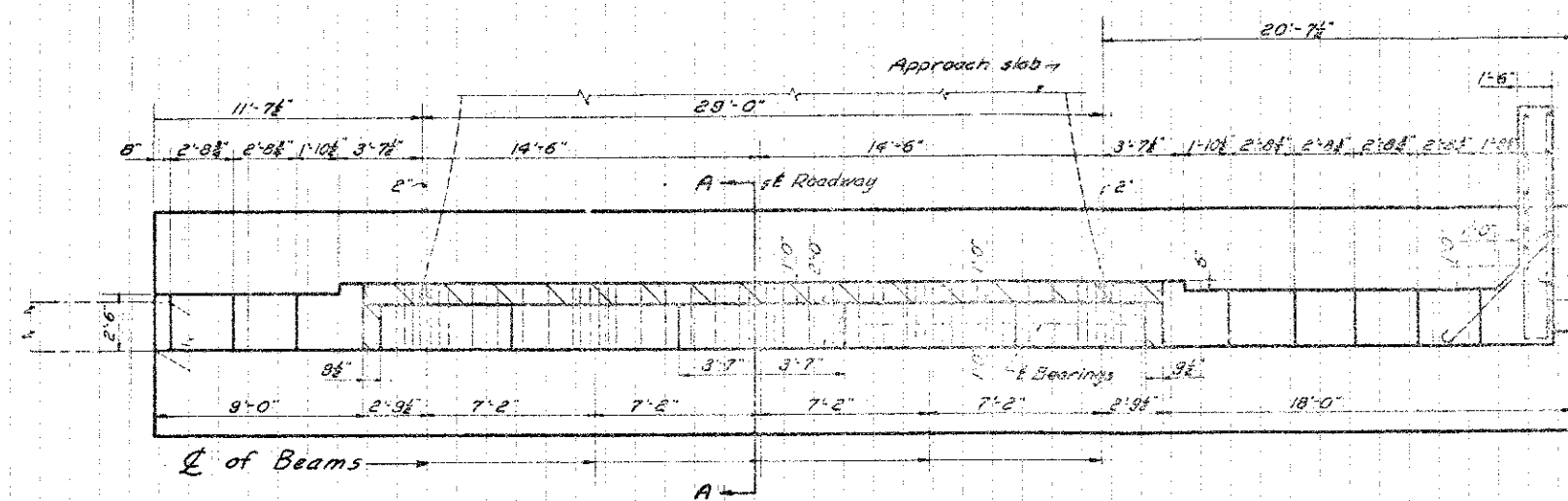
Steel railing panels are carefully removed for. They shall be stored directed by the En. to be picked up by S. Forces.



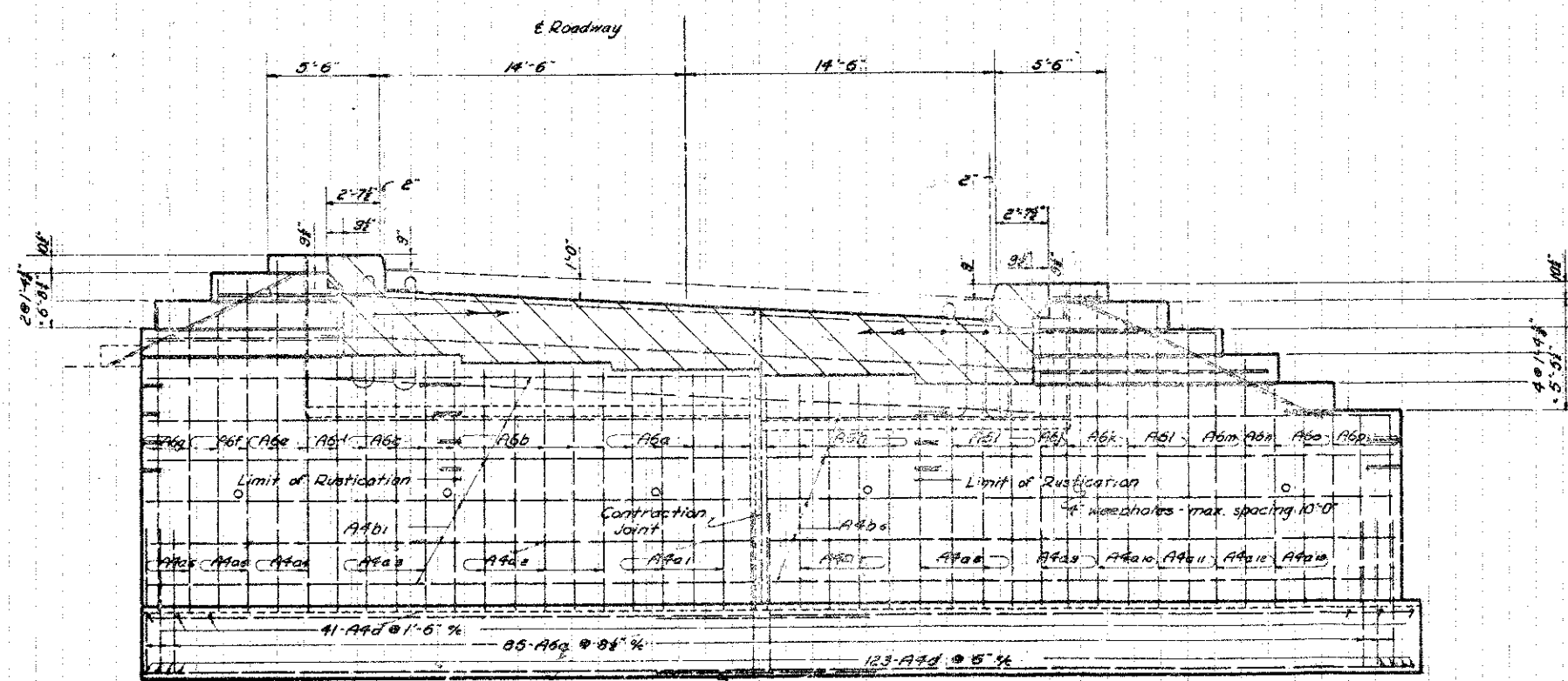
PLAN OF N.W. QUARTER OF SUPERSTRUCTURE
(TYPICAL)



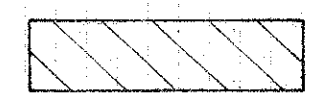
TYPICAL RAILING PANEL (EXISTING)



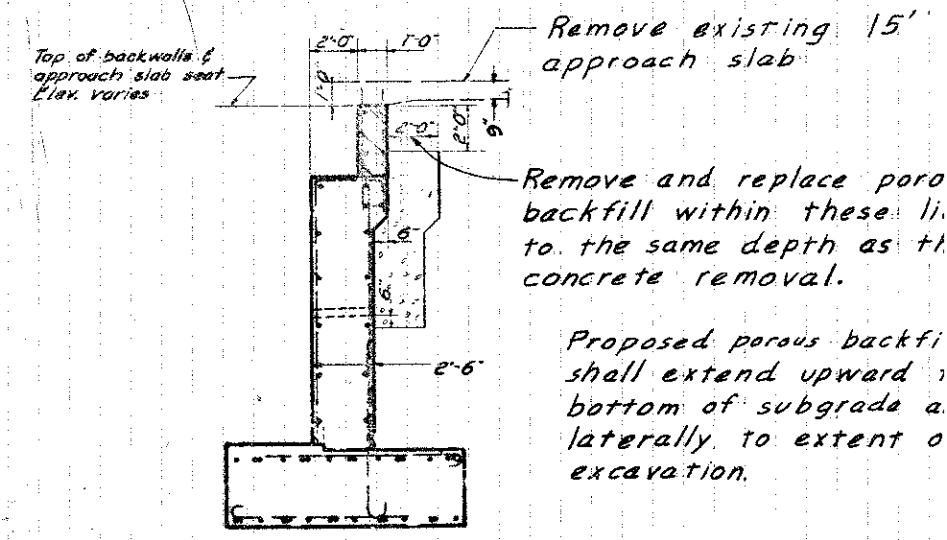
PLAN



ELEVATION



Portion of existing backwal.
to be removed

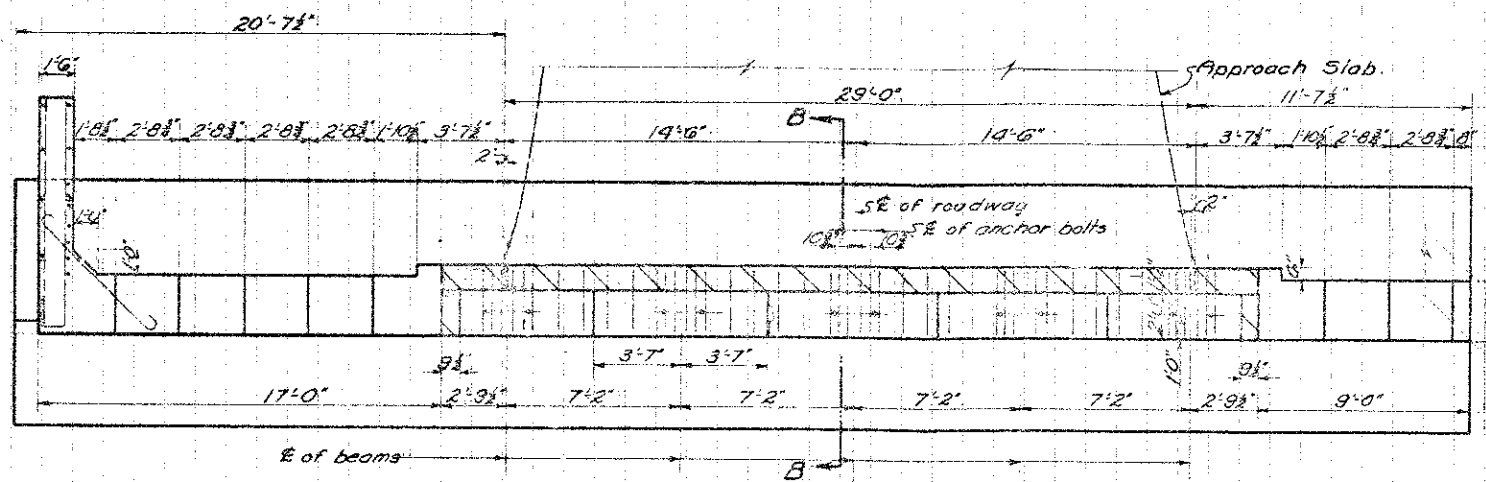


Section A-A

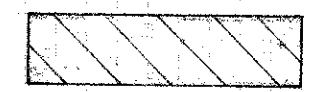
SEN-18-02

EXISTING
WEST ABUTMENT

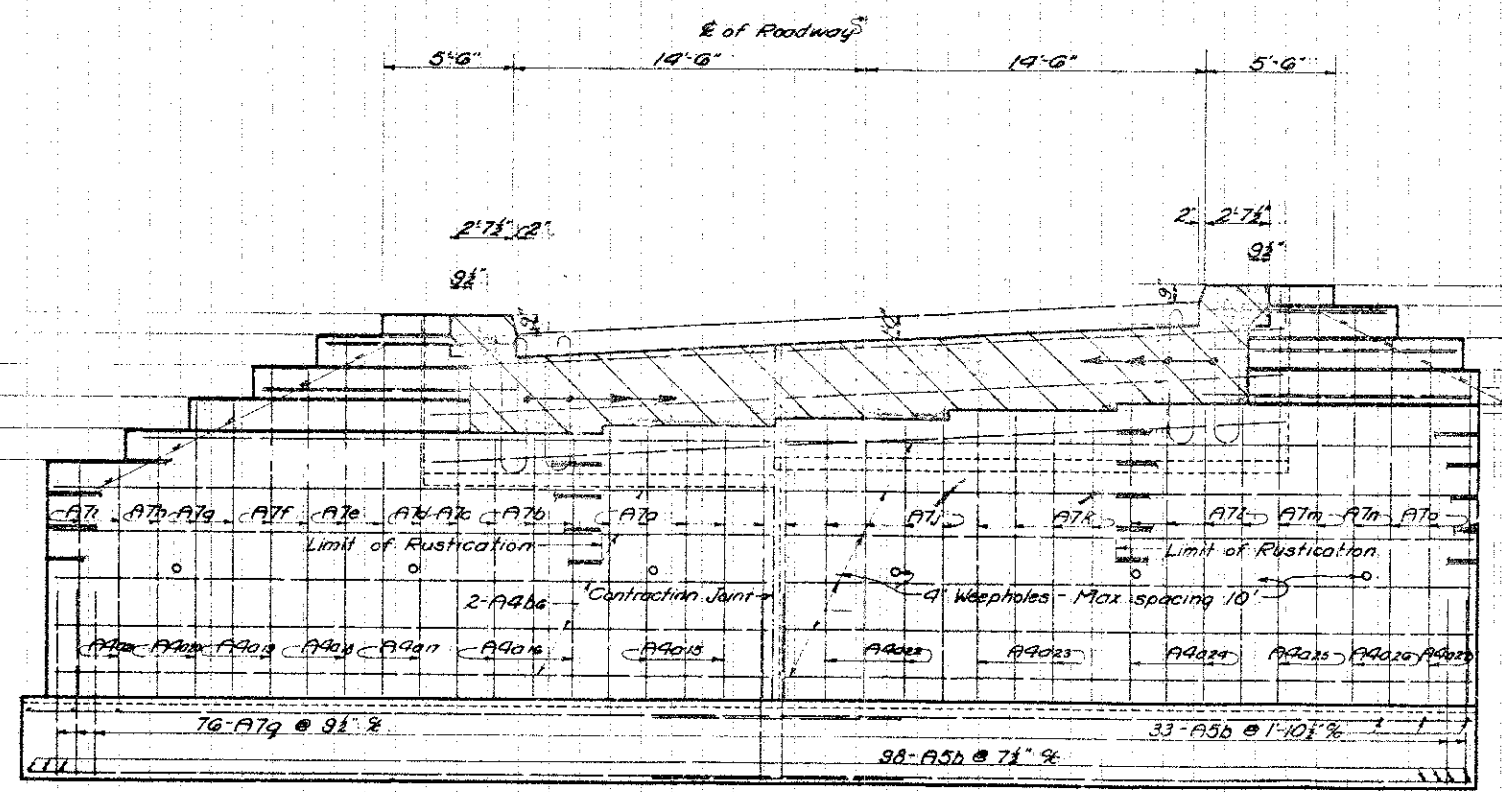
Designed: LCL



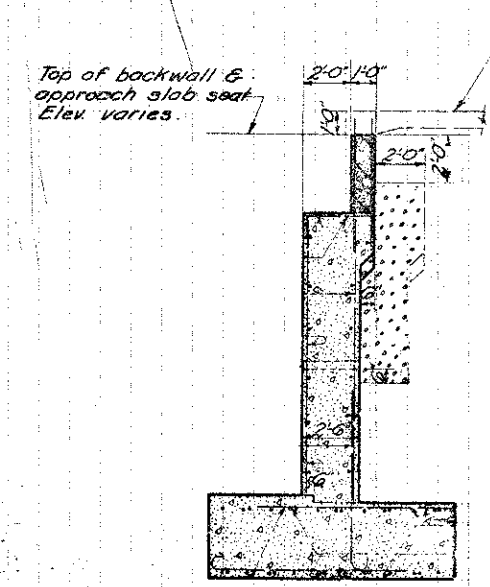
PLAN



Portion of existing backwall to be removed



ELEVATION



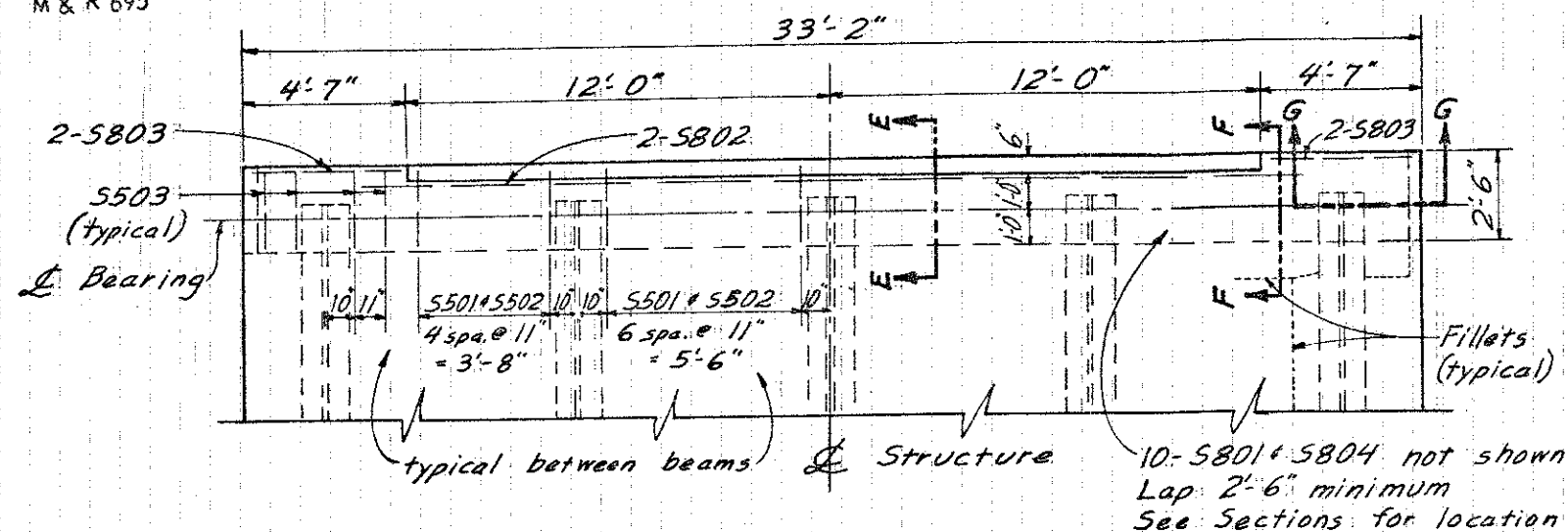
Section B-B

Remove existing 15' approach slab
Porous Backfill See Sheet #4

EXISTING
EAST ABUTMENT

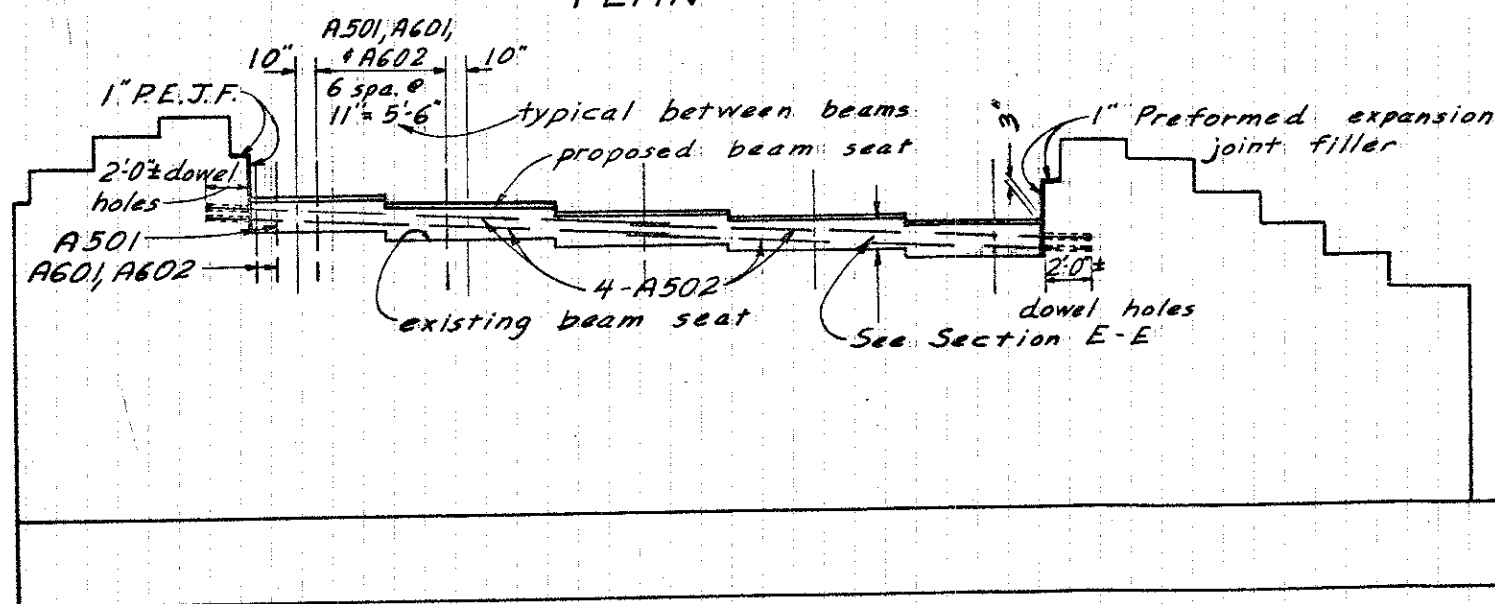
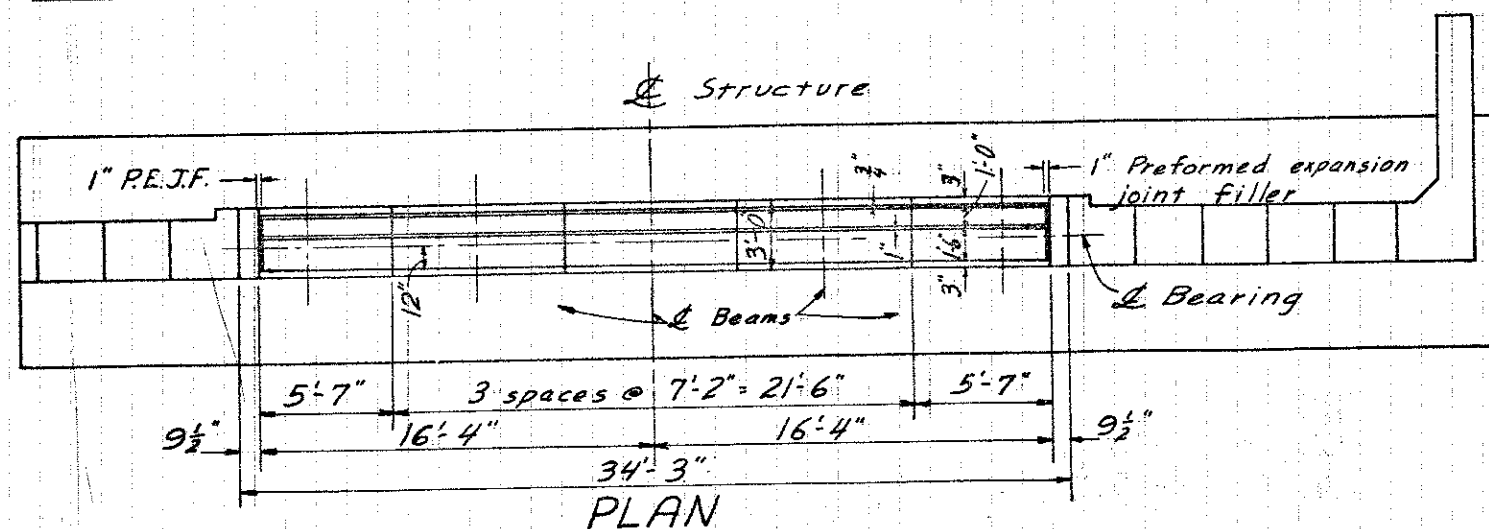
Designed: LCL

SEN-18-02

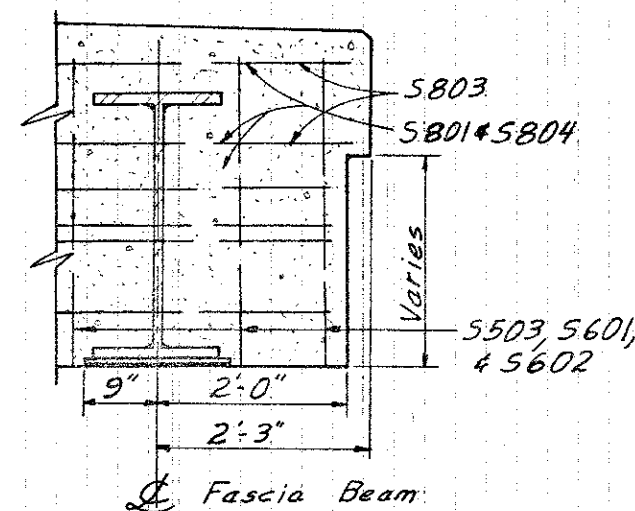


DECK PLAN AT ABUTMENT

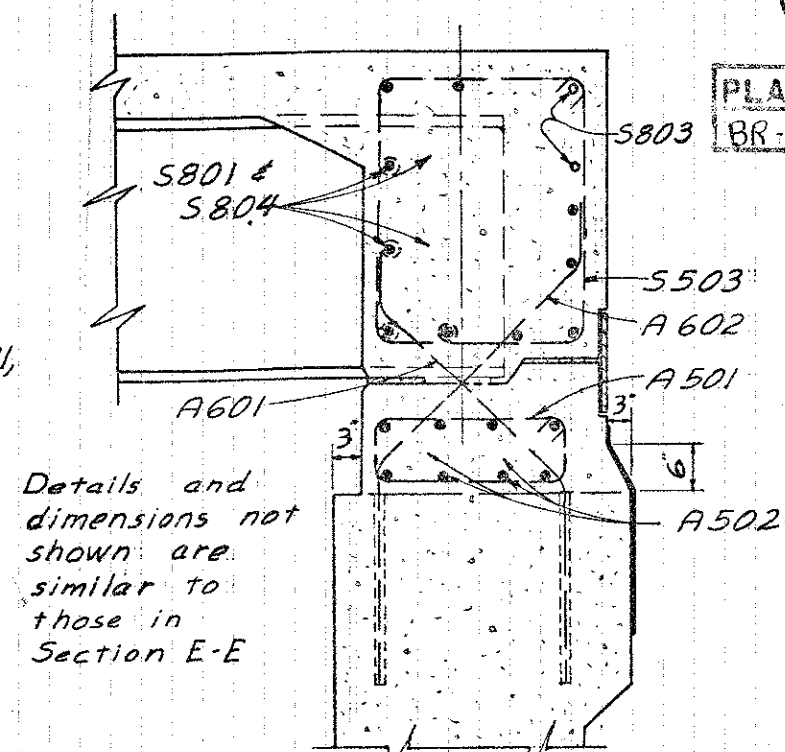
Portion of backwall to be replaced



ELEVATION
Rear Abutment shown
Forward Abutment opposite hand

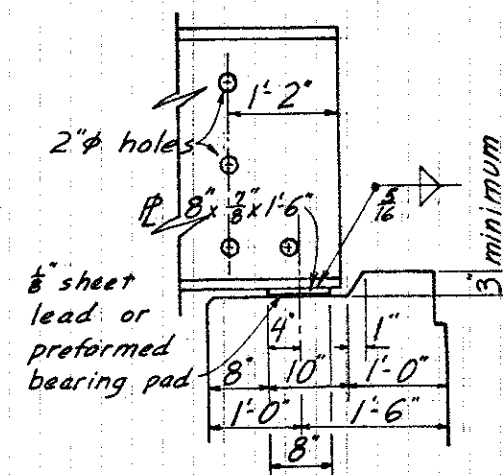


SECTION G-G

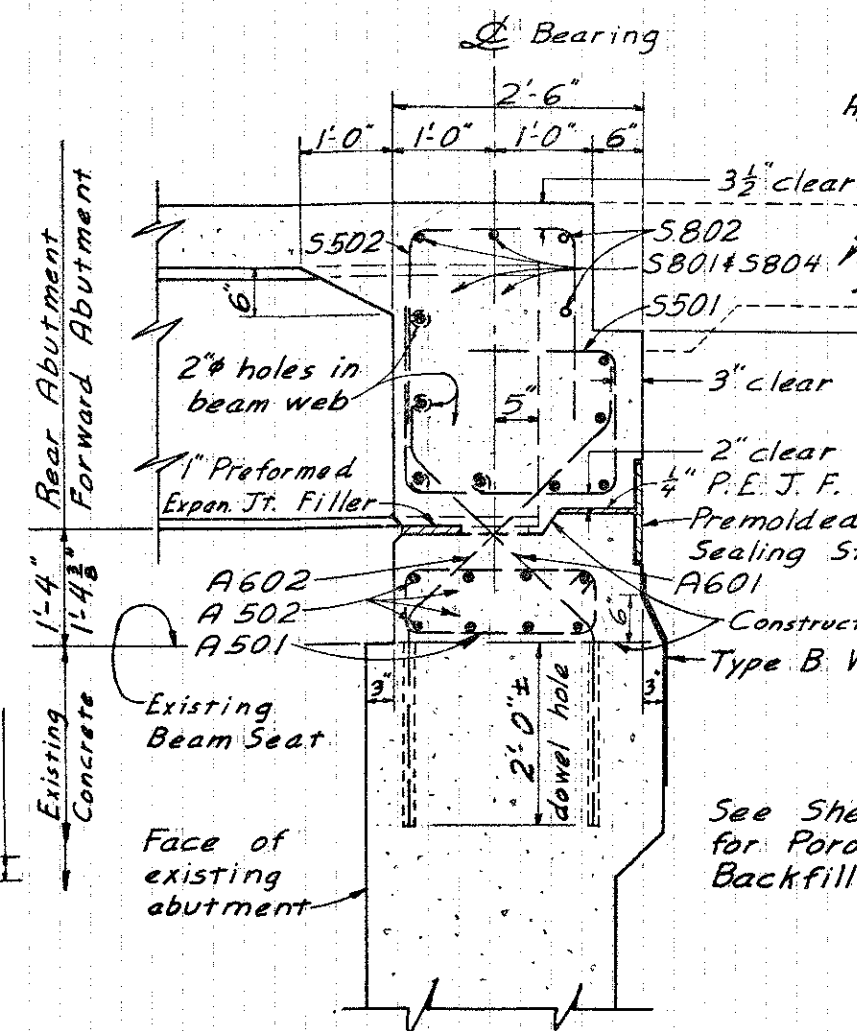


SECTION F-F

Note: 2" ϕ holes in beams to be included with Bearing Devices for payment.



BEARING DETAIL



SECTION E-E

PROPOSED
ABUTMENT
DETAILS

GENERAL NOTES:

202 PAVEMENT REMOVED:

WORK UNDER THIS ITEM SHALL INCLUDE THE FOLLOWING:

REMOVE EXISTING 15' FLARED REINFORCED CONCRETE APPROACH SLAB ON BOTH ENDS.
REMOVE 10' OF EXISTING PAVEMENT, BOTH ENDS, FOR NEW APPROACH SLABS.

202 PORTIONS OF STRUCTURE REMOVED:

WORK UNDER THIS ITEM SHALL INCLUDE THE FOLLOWING:

REMOVE CONCRETE DECK AND ALL CONCRETE RAILING POSTS AS PER PLAN.
REMOVE STEEL RAILING PANELS FOR RE-USE AS PER PLAN.
REMOVE COMPLETE END DAM ASSEMBLIES, END CROSSFRAMES, AND ROCKER AND BOLSTER ASSEMBLIES ON BOTH ABUTMENTS AS PER PLAN.
REMOVE PORTION OF BACKWALLS ON BOTH ABUTMENTS AS PER PLAN.

203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION:

MATERIAL SHALL BE EXCAVATED TO ALLOW A 6" DEPTH OF ITEM 310 TO BE PLACED AS A SUBBASE FOR THE APPROACH SLAB.

503 UNCLASSIFIED EXCAVATION:

WORK UNDER THIS ITEM SHALL INCLUDE REMOVAL OF EXISTING POROUS BACKFILL, AS PER PLAN.

513 RAISING, SUPPORTING, AND LOWERING STRUCTURE AS PER PLAN:

THE BEAMS SHALL BE RAISED IN SUCH A MANNER AS TO PREVENT TWISTING OF THE CROSSFRAMES. THE PROPOSED JACKING AND SHORING PROCEDURES SHALL BE SUBMITTED TO THE ENGINEER FOR HIS APPROVAL PRIOR TO COMMENCING THIS OPERATION.

516 BEARING DEVICES:

THE CONTRACTOR SHALL FURNISH AND ERECT BEARING PLATES AND SHEET PILE OR PREFORMED BEARING PADS AS PER PLAN.

837 FIELD PAINTING OF EXISTING STRUCTURE:

ALL STRUCTURAL STEEL SHALL BE PAINTED WITH THE FOLLOWING:

ONE FIELD COAT OF RED LEAD PAINT, 703.07.
ONE FIELD COAT OF GREEN FINISH PAINT, SS 929.

SPECIAL BLAST CLEANING FLANGES:

THE CONTRACTOR SHALL BLAST CLEAN THE TOP OF THE TOP FLANGE OF THE BEAMS AT THE OPTION OF THE ENGINEER.

ANY EXISTING ABUTMENT REINFORCING STEEL EXPOSED DURING THE CONCRETE REMOVAL SHALL BE CUT OFF TO PROVIDE 2" MINIMUM CLEARANCE WITH THE FACE OF PROPOSED ABUTMENT CONCRETE.

PLANS OF THE EXISTING STRUCTURE MAY BE EXAMINED IN THE DIVISION OFFICE OF THE HIGHWAY DEPARTMENT IN DOWLING GREEN, OHIO.

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS AS-1-67, REVISED 6-12-69, DDR-1-71, DATED 1-1-71, AND TO SUPPLEMENTAL SPECIFICATIONS 808 AND 856, DATED 1-1-71, 857, DATED 12-31-70, AND 929, DATED 5-28-67.

DESIGN DATA:

CONCRETE CLASS C - UNIT STRESS 1200 P.S.I. FOR SUPERSTRUCTURE.

UNIT STRESS 1333 P.S.I. FOR SUBSTRUCTURE.

REINFORCING STEEL, A615, A616, OR A617, UNIT STRESS 20,000 P.S.I.

DESIGN LOADING FOR SLAB HS 20-44.

IF BARS IN ACCORDANCE WITH ASTM A616 ARE PROVIDED THEY SHALL BE SUBJECT TO BEND TESTS AS PER AASHTO DESIGNATION M42-70.

513 WELDED STUD SHEAR CONNECTORS

THE CURRENT AMERICAN WELDING SOCIETY SPECIFICATION D2.0 SHALL GOVERN THIS ITEM.

THE QUANTITY SHALL BE THE ACTUAL NUMBER OF WELDED STUD SHEAR CONNECTORS FURNISHED AND WELDED IN PLACE.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT PRICE FOR:

ITEM	UNIT	DESCRIPTION
513	EACH	WELDED STUD SHEAR CONNECTORS

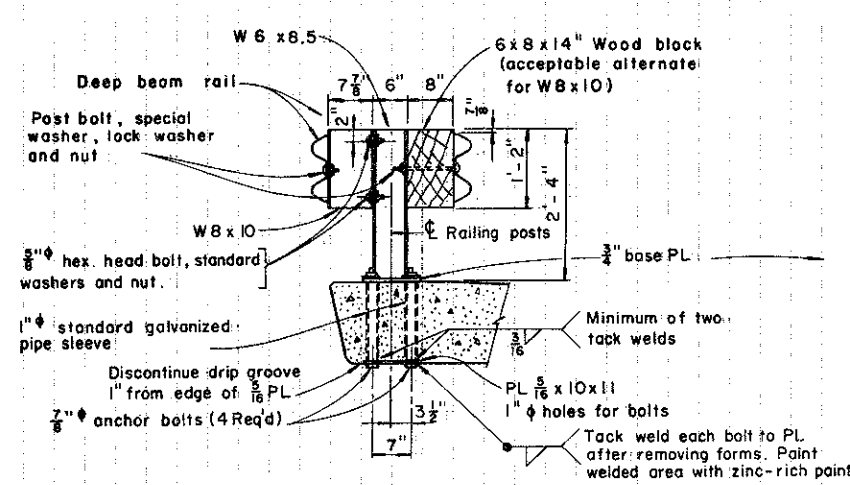
BENCH MARK: SOUTHEAST CORNER OF TOP STEP EAST ABUTMENT, RIGHT SIDE.
ELEVATION: 777.04

NOTE: END CROSSFRAMES SHALL NOT BE REMOVED UNTIL THE STRUCTURAL STEEL IS IN ITS FINAL POSITION.

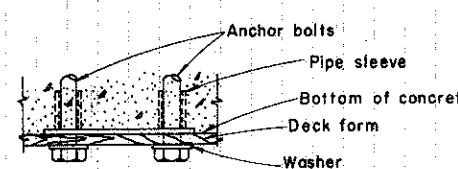
PLAN
BR-1

GENERAL SUMMARY

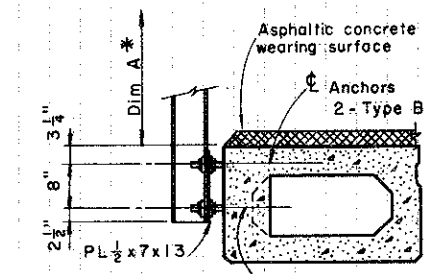
ITEM	GRAND TOTAL	UNIT	DESCRIPTION
202	123	Sq.Yds.	PAVEMENT REMOVED
202	LUMP	SUM	PORTIONS OF STRUCTURE REMOVED
203	15	Cu.Yds.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
203	151	Sq.Yds.	SUBGRADE COMPACTION
310	22	Cu.Yds.	SUBBASE
503	13	Cu.Yds.	UNCLASSIFIED EXCAVATION
509	18,908	LBS.	REINFORCING STEEL
510	320	LIN.Ft.	DOWEL HOLES
511	3	Cu.Yds.	CLASS C. CONCRETE ABUTMENTS
511	73	Cu.Yds.	CLASS C CONCRETE SUPERSTRUCTURE
508	73	UNITS	CHEMICAL ADMIXTURE FOR CONCRETE, TYPE A, B OR D
512	22	Sq.Yds.	TYPE D WATERPROOFING
512	65	LIN.Ft.	PREFOLDED SEALING STRIP
513	LUMP	SUM	RAISING, SUPPORTING, AND LOWERING STRUCTURE AS PER
516	10	EACH	BEARING DEVICES
516	30	Sq.Ft.	1" PREFORMED EXPANSION JOINT FILLER
515	50	Sq.Ft.	1/4" PREFORMED EXPANSION JOINT FILLER
517	121	LIN.Ft.	RAILING (TWO DEEP BEAM RAILS WITH STEEL POSTS &
606	4	EACH	BRIDGE TERMINAL ASSEMBLY
518	21	Cu.Yds.	POROUS BACKFILL
611	133	Sq.Yds.	REINFORCED CONCRETE APPROACH SLAB (T=13")
837	LUMP	SUM	SURFACE PREPARATION
837	LUMP	SUM	COMPLETE COAT PRIME PAINTING
837	LUMP	SUM	COMPLETE COAT FINISH PAINTING
SPECIAL	LUMP	SUM	LAST CLEANING FLANGES, <i>as per plan</i>
619	LUMP	SUM	FIELD OFFICE
614	LUMP	SUM	MAINTAINING TRAFFIC
513	535	EACH	WELDED STUD SHEAR CONNECTORS, <i>as per plan</i>



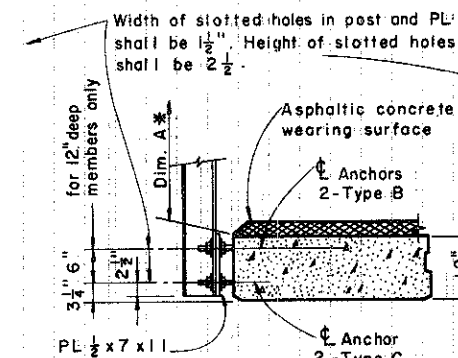
ANCHOR BOLT ASSEMBLY shall include the PL 5/16 x 10 x 11, the pipe sleeves, the bolts, nuts and washers and a forming template as a temporary substitute for the 3/4" base plate. The assembly shall be carefully anchored to the forms as a unit prior to placing the deck slab so that the guard rail posts will be plumb and in proper alignment when installed.



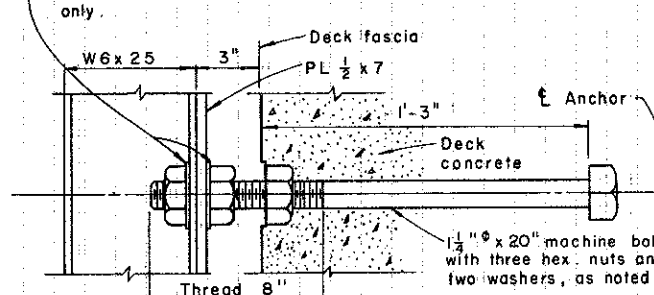
BARRIER GUARD RAIL DETAILS



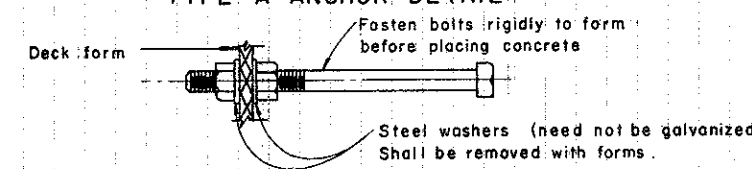
* Where a separate wearing surface is called for on the plans, add its thickness to Dim. A.



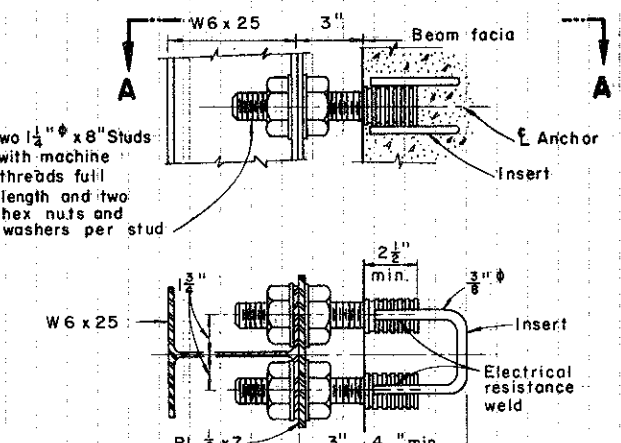
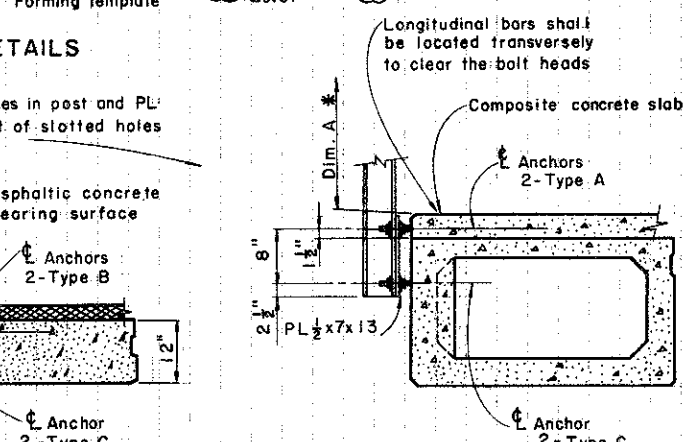
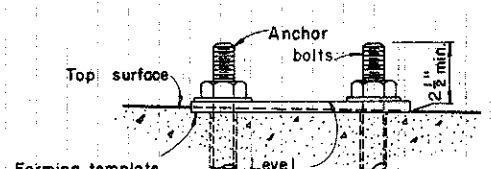
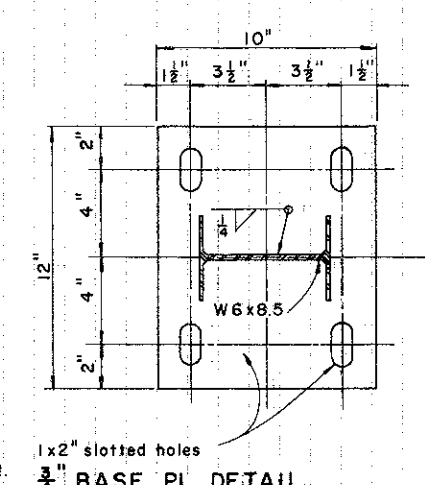
SPECIAL ANCHOR SPACING PRESTRESSED CONCRETE BOX BEAMS



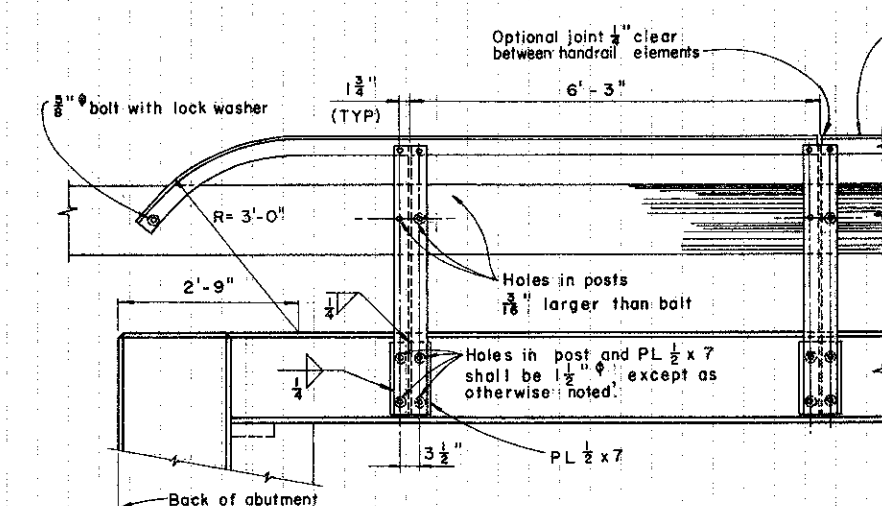
TYPE A ANCHOR DETAIL



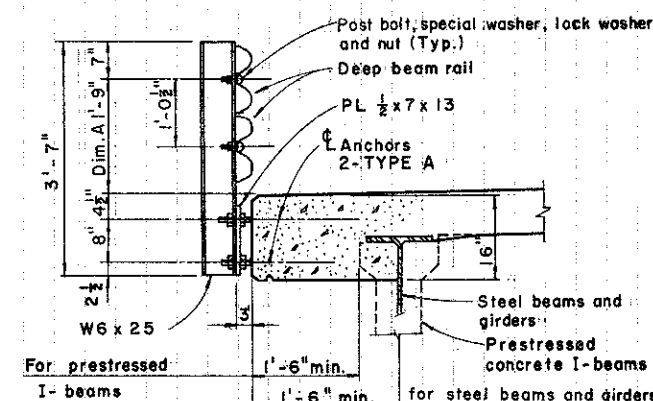
TYPE A ANCHORS SUPPORTED BY FORMS



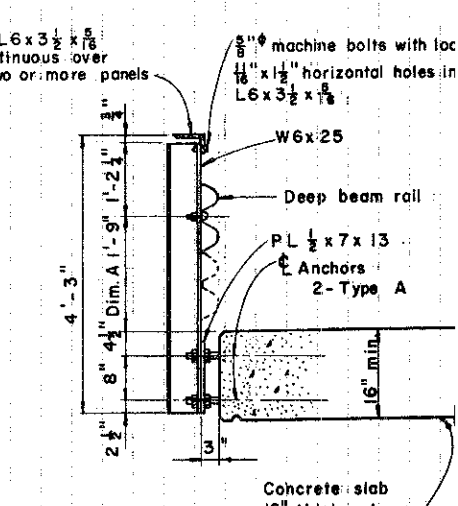
SECTION A-A TYPE C ANCHOR DETAIL



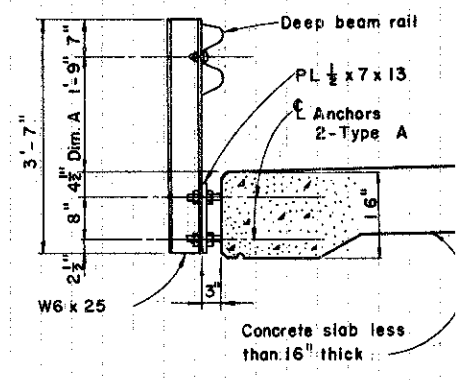
RAILING ELEVATION



DOUBLE DEEP BEAM



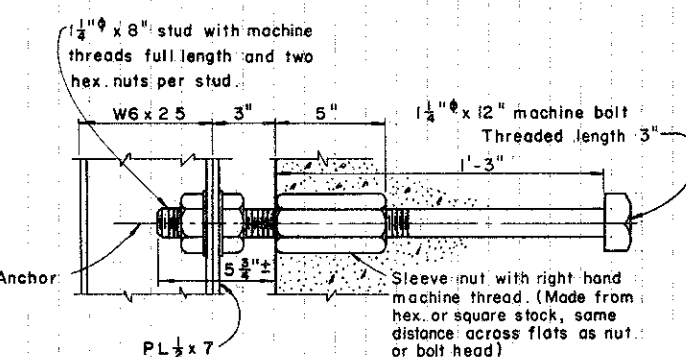
DEEP BEAM WITH HANDRAIL



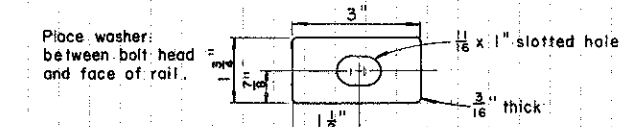
SINGLE DEEP BEAM

DEEP BEAM GUARD RAIL, HANDRAIL AND RAILING POST DETAILS

Railing type shall be as specified on the project plans.



TYPE B ANCHOR DETAIL



SPECIAL WASHER

MATERIAL: All anchor bolts, nuts and studs shall conform to ASTM A325.
GALVANIZING: All metal parts of the railing shall be galvanized.

REVISIONS			
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES			
STANDARD			
DEEP BEAM BRIDGE GUARD RAIL			
APPROVED	DATE: 1-1-76	C. J. Allen ENGR OF BRIDGES	
PREPARED INNES	TRACED GFJ	CHECKED JDR	REVIEWED BFG