

OTT-357-6.16

MICROFILMED
AUG 9 1965

GENERAL NOTES

REFERENCE shall be made to Supplemental Specification No 3-10.5 revised January 22, 1962.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated September 1, 1957, together with current revisions thereof.

DESIGN LOADING: CF 30(57)
Concrete Class C - basic unit stress 1,333 p.s.i.
Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic Unit Stress 20,000 p.s.i.

- PROPOSED WORK:**
1. Remove portions of existing structure as per Item 5-22
 2. Drive bearing piles
 3. Drive sheet piling
 4. Complete piling and accessories
 5. Construct proposed abutment cap to bridge seat
 6. Place prestressed beams, including transverse ties and deck anchor dowels.
 7. Complete proposed abutment cap
 8. Place embankment and backfill
 9. Complete remainder of proposed structure.

DIMENSIONS and details of existing structure, shown on the proposed bridge plans, shall be verified by the Contractor before proceeding with the proposed work.

REMOVAL OF PORTIONS OF EXISTING STRUCTURE: The existing deck slab, wearing surface, curb and railings shall be removed. Portions of abutment wing walls shall be removed as necessary to complete new construction.

BEARING PILES shall be driven to a minimum bearing capacity of 17 tons per pile. The casings of cast-in-place reinforced concrete piles shall be of the type that is left in place and which is designed to resist both direct compression and bending. The portion of the casing above flow line shall have a thickness of metal not less than 7 gage. Payment for bearing piles, per lin. Ft, includes payment for painting.

SHEET PILING shall conform to Section M-7.4(c). Sections furnished shall be as shown or approved equivalents. Mill test reports are not required for steel sheet piling. Piling accessories (anchors, caps, corners, wales and ties) shall conform to Section M-7.4(a). Payment for Item E-2 (Steel sheet piling left in place, including accessories) shall be based on the plan quantity per square foot of steel sheet piling, which price and payment shall constitute full compensation for furnishing and placing sheet piling and accessories (anchors, caps, corners, wales, ties, reinforced concrete dead men including all necessary excavation and backfill) including painting, labor and incidentals necessary to complete this item.

BEAM ERECTION PROCEDURE: The center beam shall be placed first on the level area furnished on the abutment caps, and the remaining beams placed as shown on the plans. After all beams are in place and tie rods tightened, 1/4" holes for the anchor dowels shall be drilled in the abutment cap. After placing the dowels they shall be grouted according to Section 5-23.02.

WELDING shall be Class "A". Any welds shown as field welds may at the option of the Contractor, be made in the shop.

BITUMINOUS SURFACE TREATMENT Item T-31, shall be placed to a thickness of 1/4" and shall be included with roadway quantities for payment.

REINFORCING STEEL LIST					BENDING DIAGRAMS	
MARK	NO.	LENGTH	WEIGHT	SHR		
Abutments						
P901	16	17'-0"	925	3		
P601	28	3'-4"	140	B		
P602	36	1'-6"	81	3		
P501	96	5'-9"	576	B		
P502	8	16'-3"	136	3		
P503	12	3'-10"	48	B		
P504	4	6'-3"	26	3		
P505	4	4'-3"	18	3		
P506	8	8'-0"	67	B		
P507	8	5'-1"	42	B		
P508	4	3'-9"	16	3		
P509	5	6'-2"	32	B		
P510	15	6'-3"	93	B		
P401	40	5'-6"	147	B		
Approach Slabs						
A601	70	12'-3"		B		
A501	24	19'-8"		3		
Dead Man						
D501	8	6'-9"		B		
D502	16	2'-8"		3		
Prestressed Beams						
B501	99	2'-7"		3		
B502	36	17'-2"		3		
B401	72	3'-10"		B		
Replacement Bars						
RE901	1	6'-10"		3		
RE601	1	5'-11"		3		
RE501	1	5'-7"		3		
RE401	1	5'-3"		3		

1. Included with Approach Slabs for payment.
2. Included with Steel Sheet Piling for payment.
3. Included with Prestressed Beams for payment.

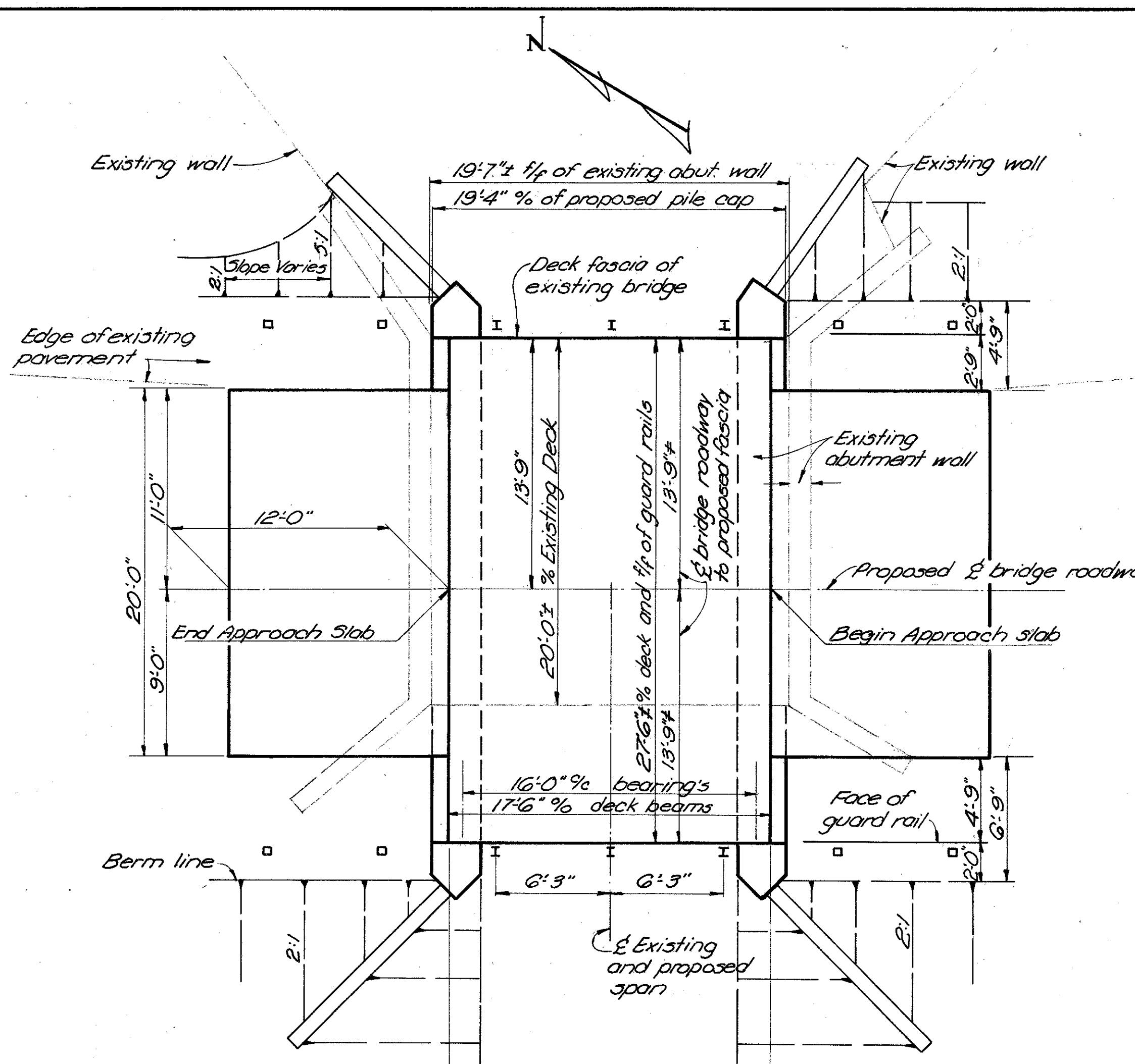
BAR SIZE is indicated in the bar mark. The first digit indicates the bar size number. For example A601 is a No. 6 size bar.

GENERAL NOTES CONT.

RAILING: The transition between the guard rail height on the bridge and on the approaches shall be made in the longest practical distance from each end of the bridge.

The guard rail and handrail shall be either galvanized or painted white in accordance with Item I-15 of the Construction and Material Specifications, except that the type of protective coating shall conform to that of the guard rail on the approaches. The galvanized posts and anchor studs shall not be painted.

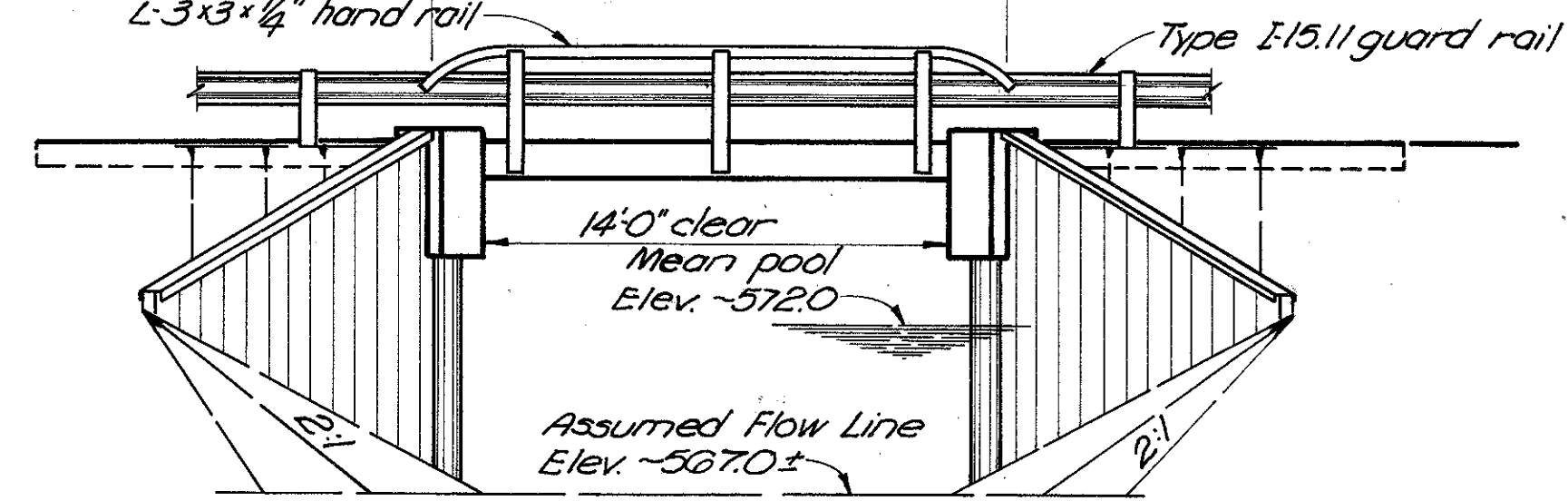
The tabulated railing quantity is for the length of railing between the bridge limits. This quantity includes guard rail, hand rail, posts, anchor studs and nuts, connections, galvanizing and painting, also those portions of the handrail that project beyond the stated limits.



*Refer to NOMINAL DIMENSION note on sheet 15.

GENERAL PLAN

Bridge Limits = 17.5'
0.00% Grade
Profile Grade Elev. -577.9



ELEVATION

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Abuts.	Gen'l.	As-Built	Item	Total	Unit	Description	Super.	Abuts.	Gen'l.	As-Built
E-2	2535	Sq. Ft.	Steel sheet piling left in place, including accessories					3-22	Lump	Sum	Removal of portions of existing structure				
								3-23	36	Each	Dowel holes		36		
								3-29	25	Cu. Yds.	Porous backfill		25		
3-1	19	Cu. Yds.	Class "C" concrete, abutment caps			19									
3-3	54	Sq. Yds.	Type "C" waterproofing			54									
3-4	2352	Lbs.	Reinforcing steel			2352									
3-9	8	Sq. Ft.	1/2" Preformed expansion joint filler.			8									
3-9	58	Sq. Ft.	1/4" Preformed expansion joint filler.			58		3-105	9	Each	Prestressed concrete bridge members		9		
3-14	35	Lin. Ft.	Railing (Type I-15.11 with handrail and galvanized steel posts and bolts.)			35		Special	16	Each	Elastomeric bearing pads, 5" x 1/2" x 26"		16		
								Special	4	Each	Elastomeric bearing pads, 5" x 1/2" x 13"		4		
3-16	Lump	Sum	First test pile												
3-18	450	Lin. Ft.	14" Cast-in-place reinforced concrete piles			450									

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

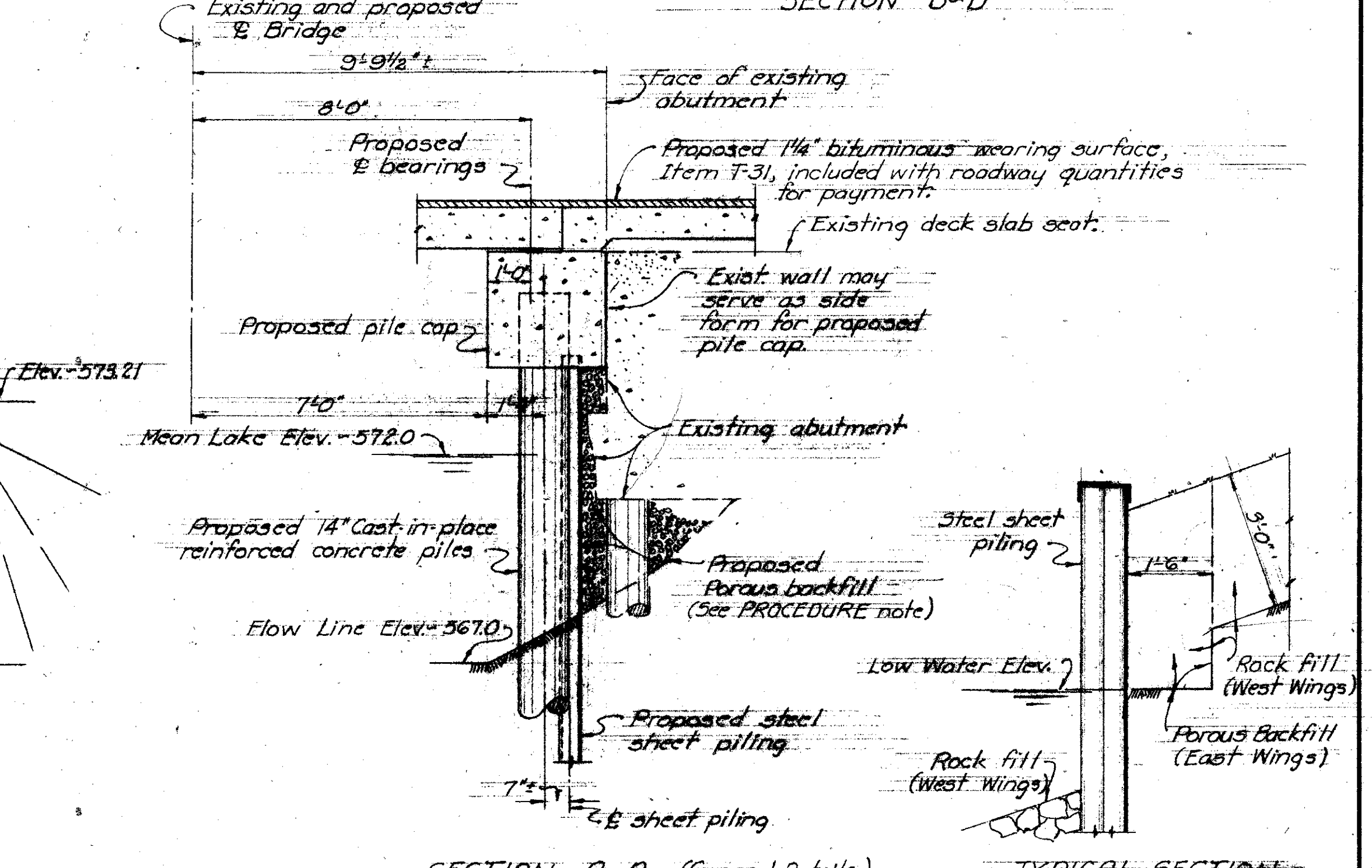
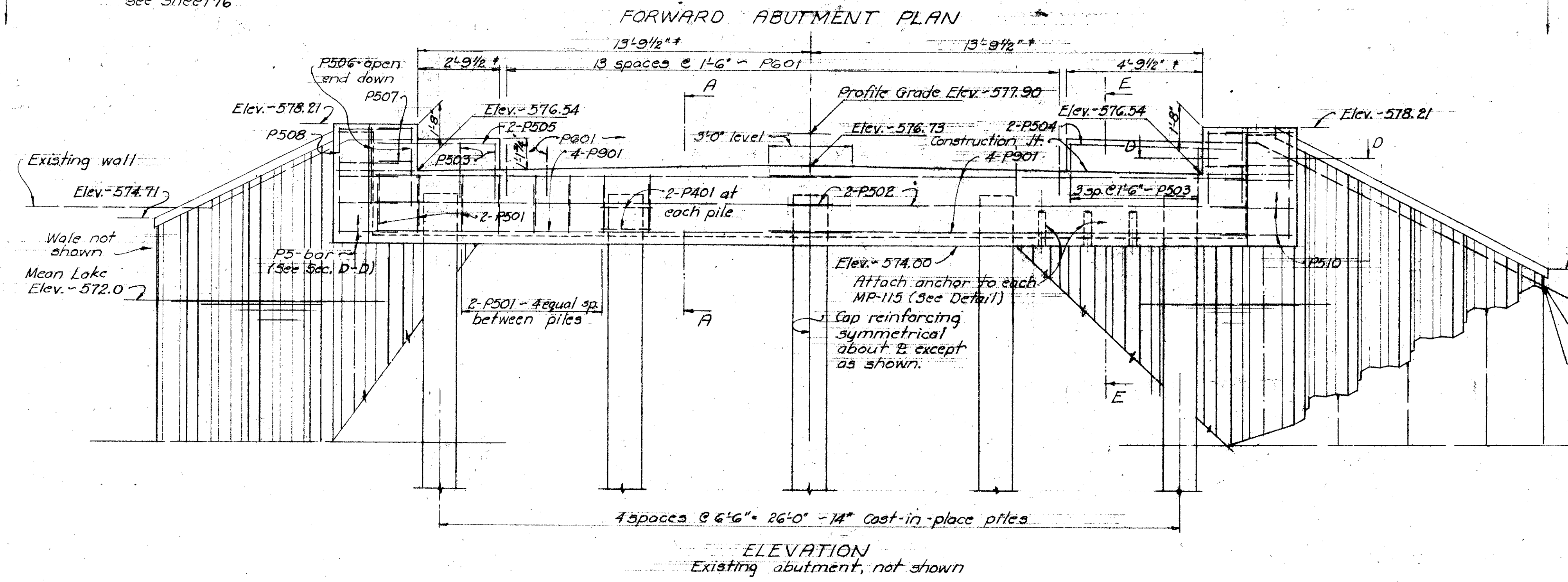
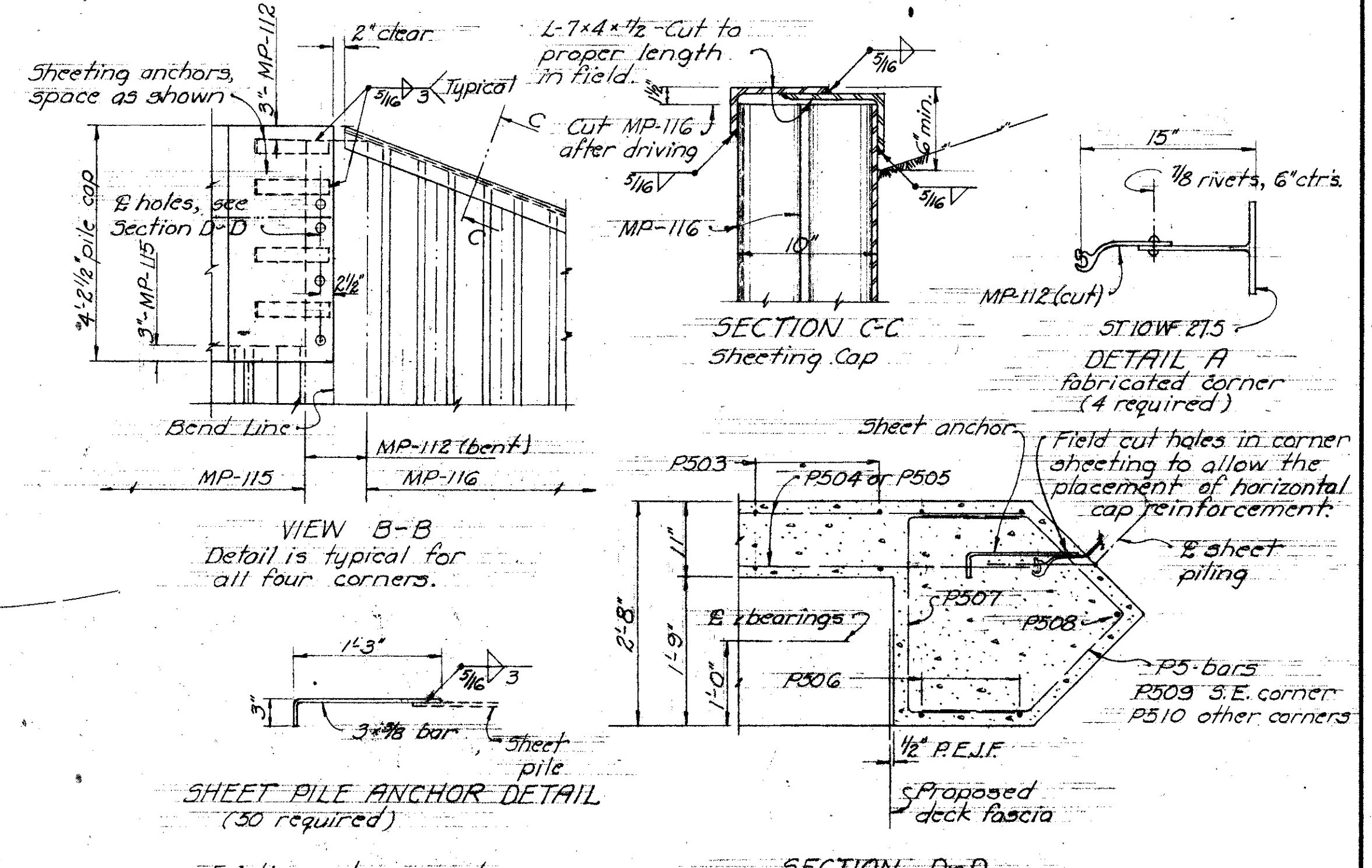
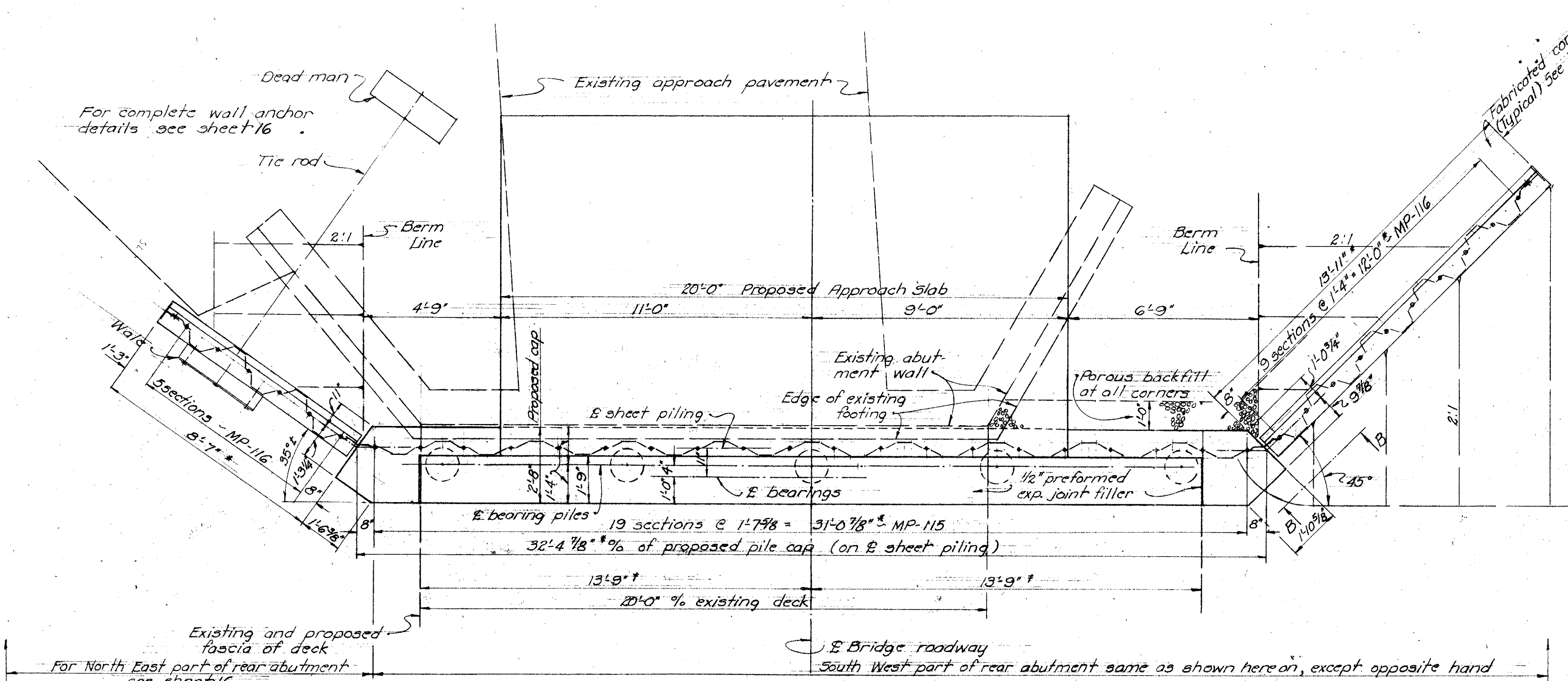
**GENERAL PLAN AND ELEVATION,
NOTES, ESTIMATED QUANTITIES
AND REINFORCING STEEL LIST**
BRIDGE NO. OTT-357-0620
over BOAT CHANNEL

OTTAWA COUNTY
STA. 57A.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MPB	MPB	GAM	JFS	BFG	4-26-65	

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REINFORCING CLEARANCE: Care shall be used in placing reinforcing steel in the proposed pile cap to insure adequate clearance between the steel and the deck beam anchor bars.

NOMINAL DIMENSIONS: The proposed pile cap and wing wall lengths are nominal. Dimensions noted thus * will be established after sheet piles are driven. The bridge seat length and dimensions noted thus † are nominal. Actual dimensions will be established after precast deck beams are in place. Nominal dimensions shall be adjusted to conform with the intent of the plans.

POROUS BACKFILL shall extend from the lower limits shown up to the under-side of the proposed concrete pile cap and approach slabs, to the surface of the earth shoulders and outward to the surface of the north east embankment slopes.

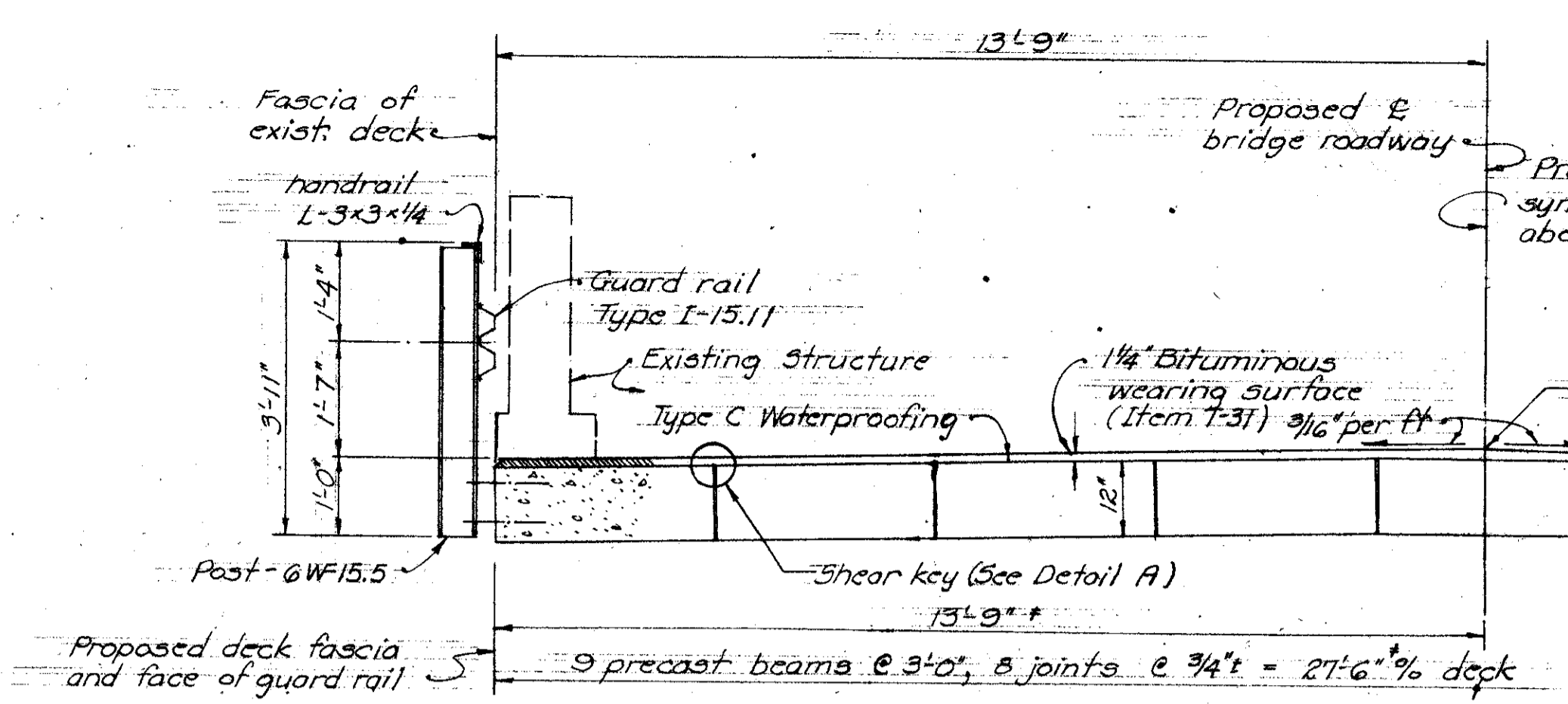
SHEET PILING: Driving of sheet piles shall start at the E of bridge roadway and progress towards the wings. All sheet piles shall be driven to Elev. - 552.0.

PROCEDURE: Backfill, except for the backfill between proposed sheeting and face of exist abutment wall, shall not be placed until after deck beams (including anchors), pile cap, sheeting and accessories are complete and in place. Proposed east embankment, including rock fill, shall be complete on the channel side of the cast wings before remainder of east embankment is placed higher than Elev. -572.0. Embankment shall be placed simultaneously behind both abutments.

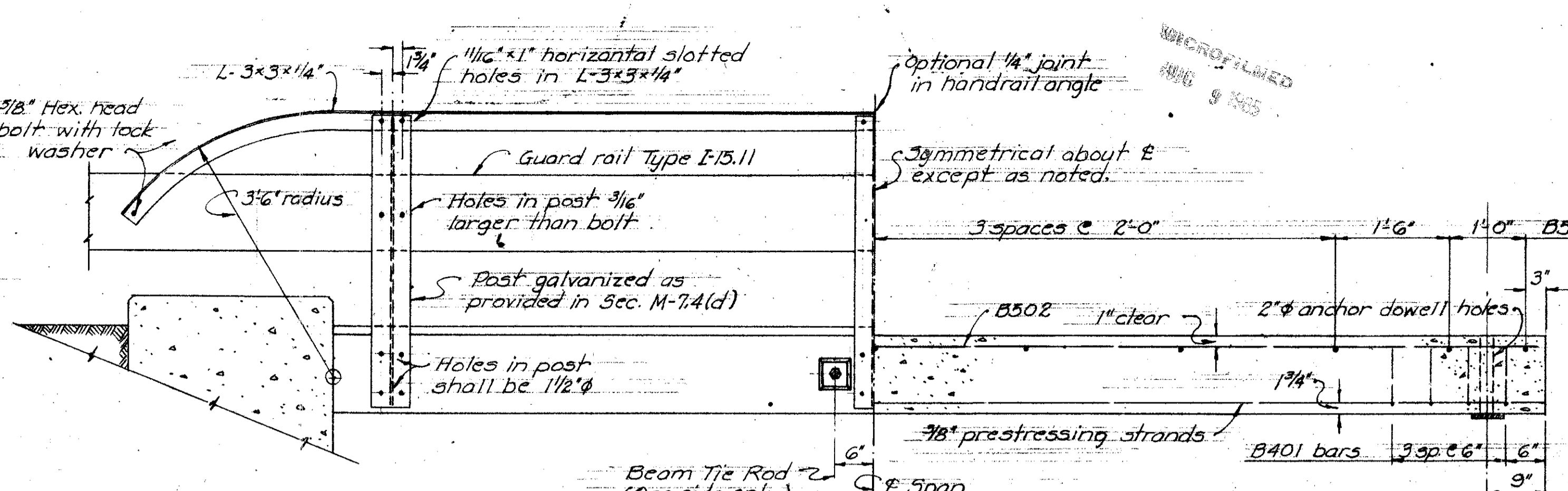
PILE PAINTING: The painting of bearing piles and sheet piling (including steel accessories) shall extend to low water elevation or, where the proposed surface of the ground is above low water elevation, the painting shall extend at least one foot below proposed ground surface. Painting shall be in accordance with Item 5-8, applying two coats as per Sections M-9.9, M-9.20 or M-9.21 and two coats as per Section M-9.12.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
ABUTMENT DETAILS						
BRIDGE NO OTT-357-0620 over BOAT CHANNEL						
572. Sta.						
OTTAWA COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MPB	MPB		JFS	BFG	4-26-65	

OTT-357-6.16



PART TRANSVERSE SECTION
* Refer to NOMINAL DIMENSION note on sheet

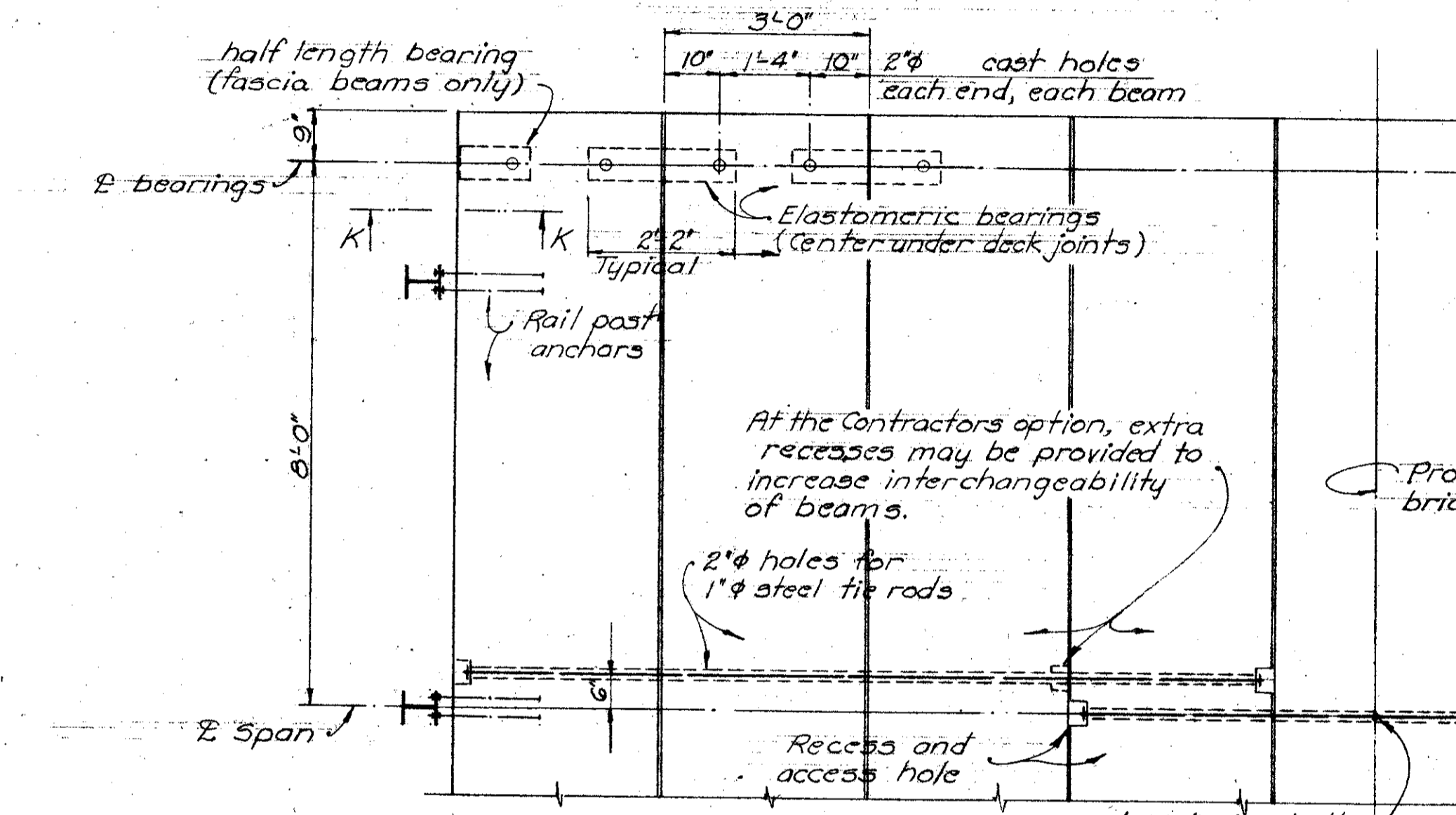


RAILING ELEVATION

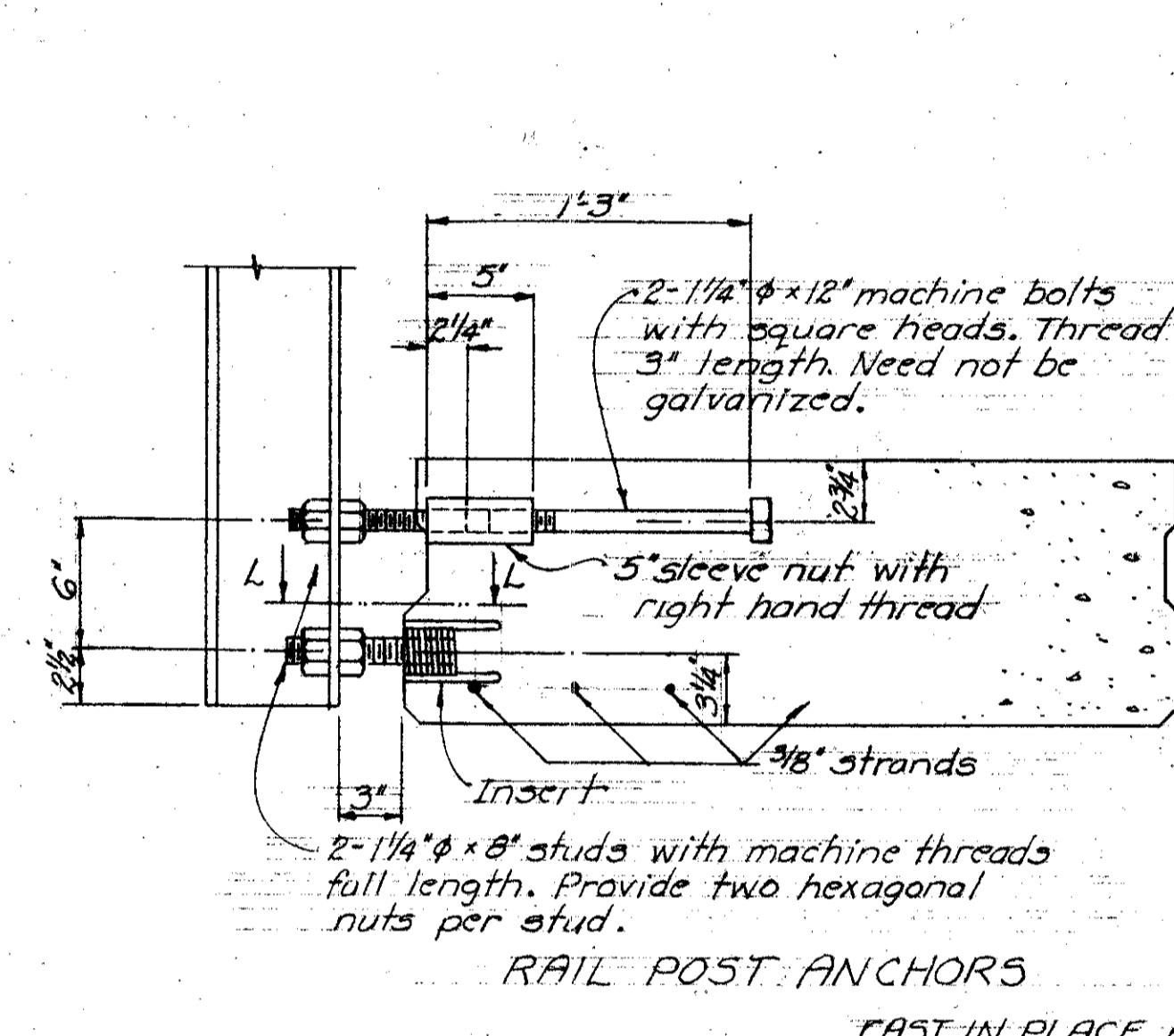
PART LONGITUDINAL SECTION

After transverse tie rods have been placed and tightened, key shall be filled with low-slump non-shrinking portland cement mortar. Mortar shall be tamped into the keyways in a manner that insures complete and solid filling.

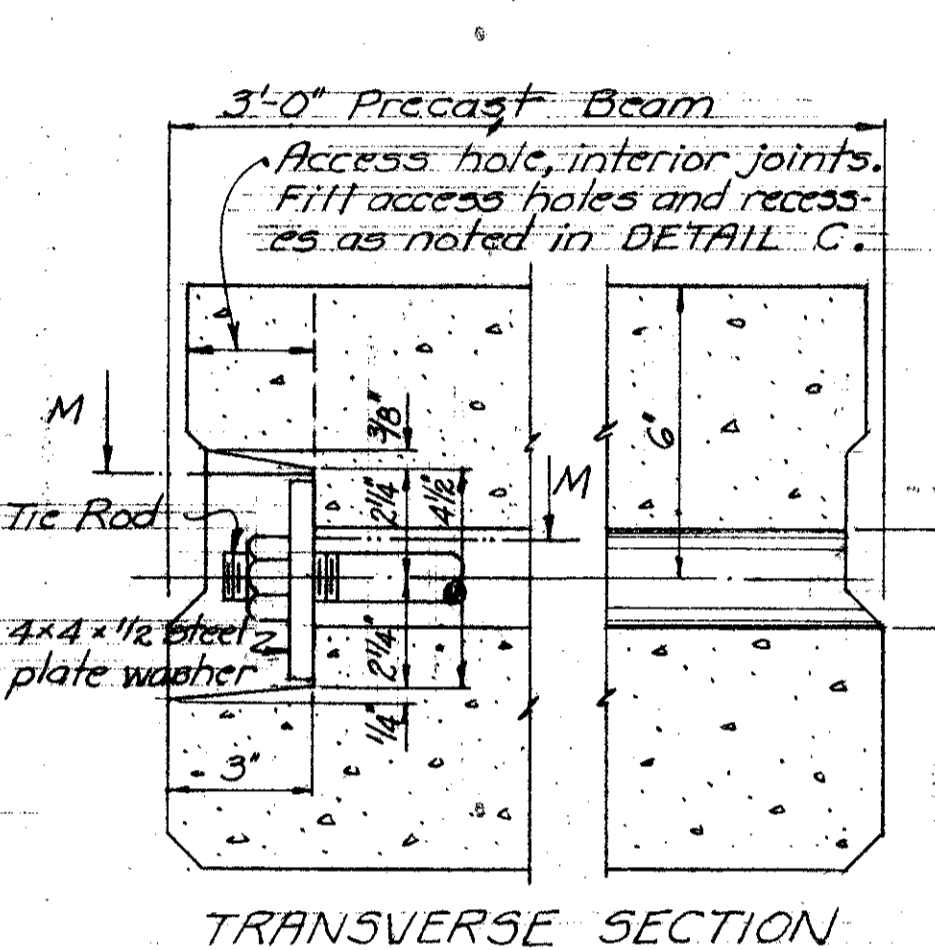
DETAIL C
Beam Shear Key



PART DECK PLAN

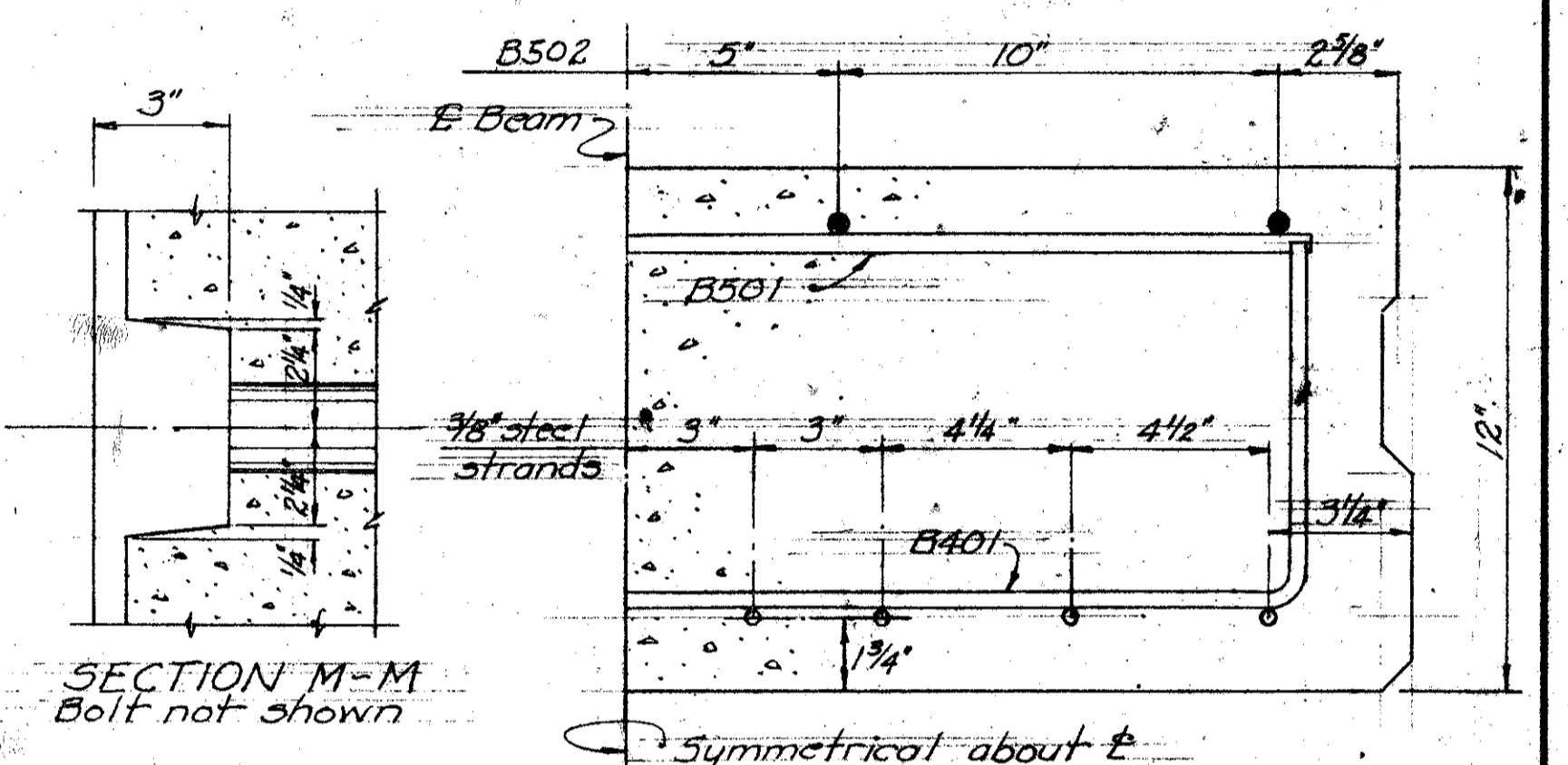


RAIL POST ANCHORS

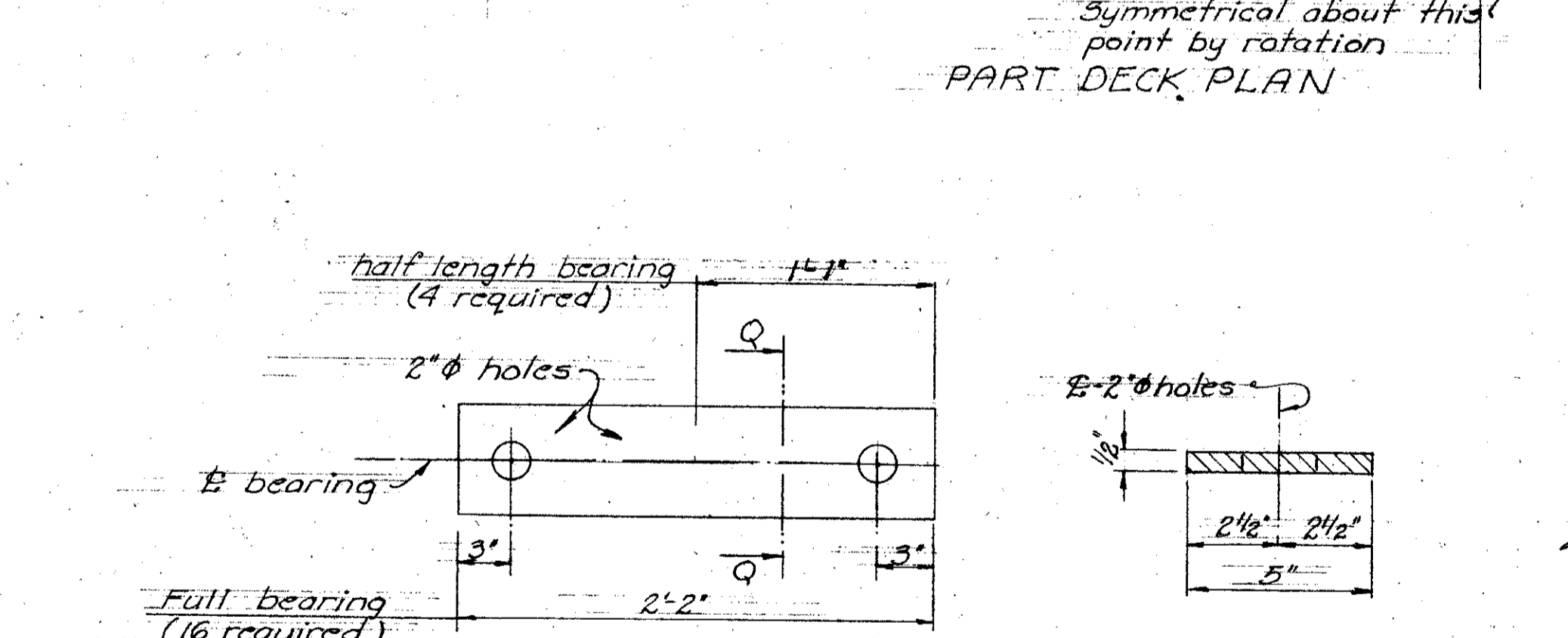


TRANSVERSE SECTION

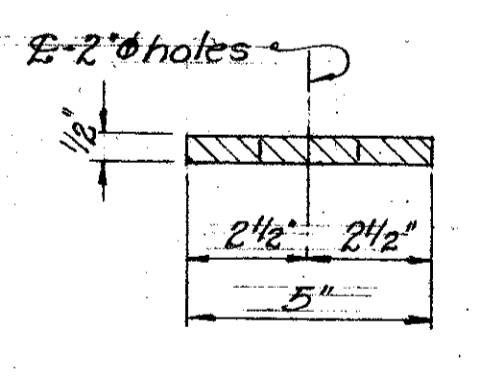
TIE ROD ANCHORAGE RECESSES



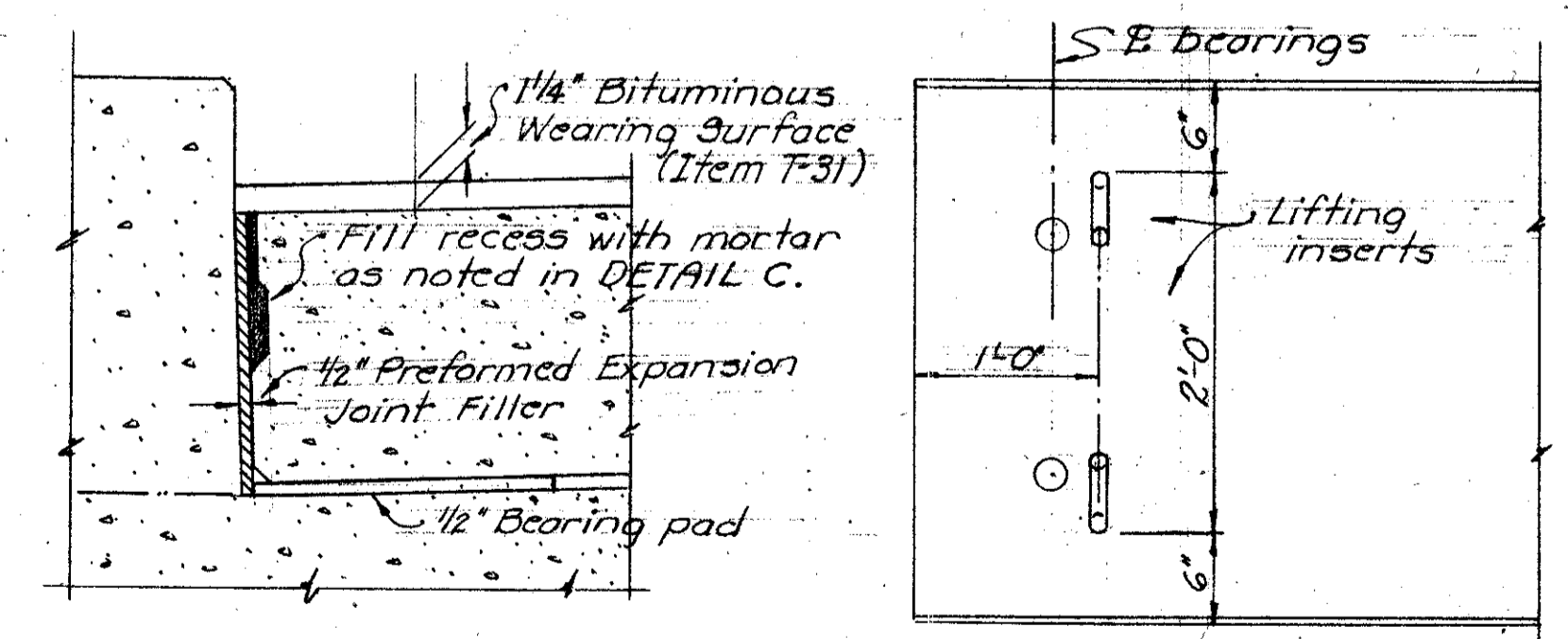
PART TRANSVERSE SECTION



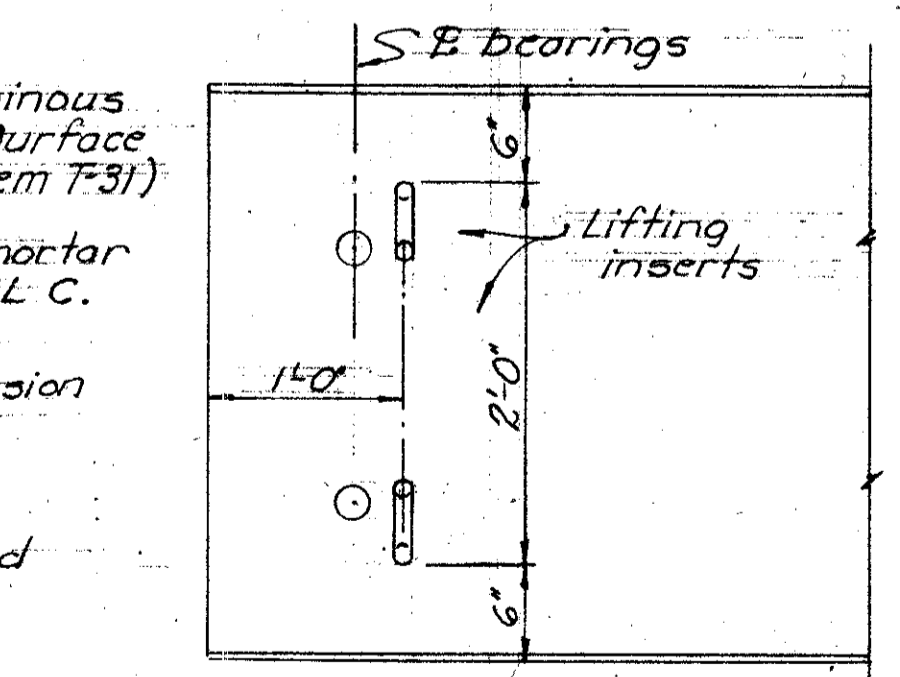
BEARING PLAN



SECTION Q-Q



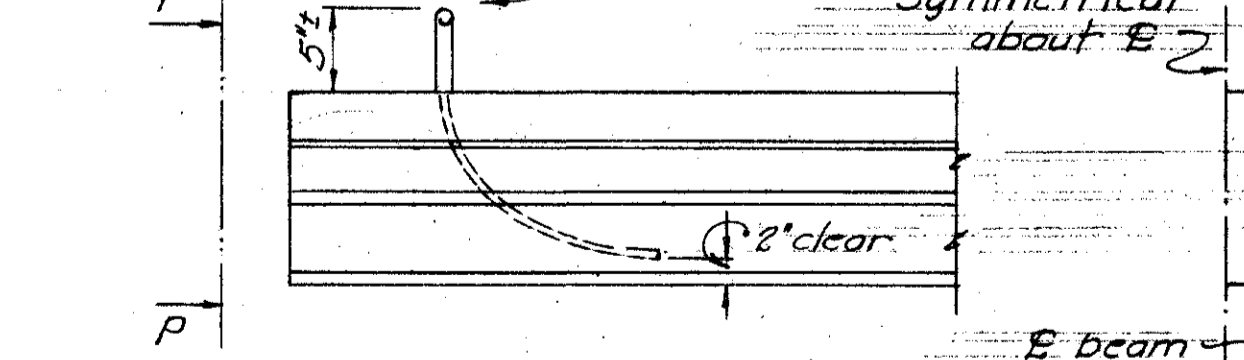
SECTION K-K



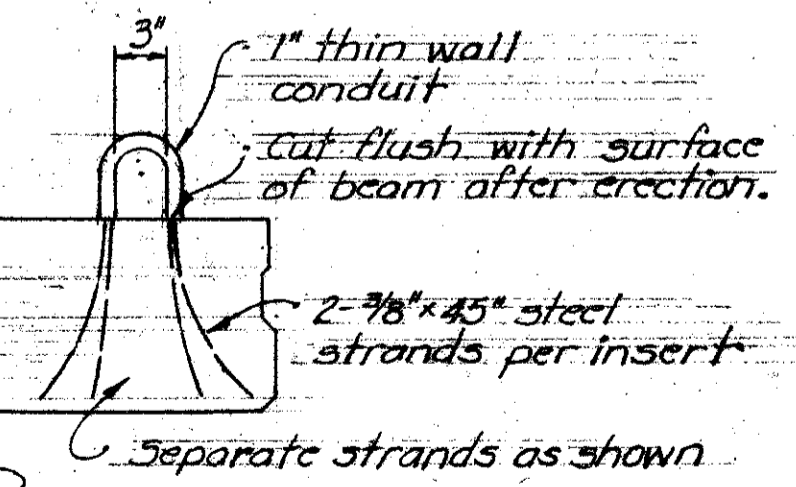
PART BEAM PLAN

Note: Lifting inserts of the Contractor's design may be used if approved by the Director.

All inserts shall be uniformly engaged during handling.



SECTION N-N

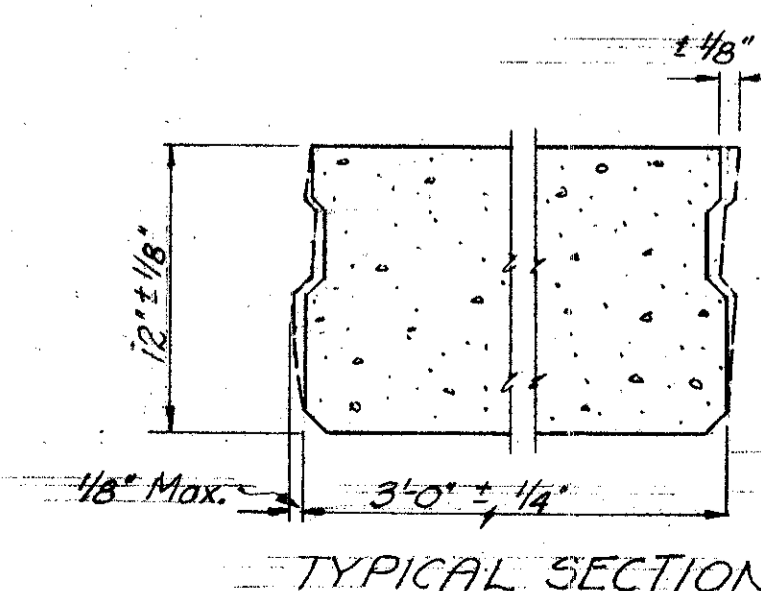


VIEW P-P

BEAM LIFTING INSERTS

BEARING NOTES
GENERAL: In addition to the requirements of Section M-10.29, bearing pads shall be subject to the following requirements:
MATERIAL: Elastomeric material shall be 30 durometer neoprene, with no reclaimed material incorporated in the finished pad.

CERTIFICATION: The Contractor shall furnish to the Director certified copies of the bearing manufacturer's test reports and a certification by the bearing manufacturer that the bearings furnished conform to all of the requirements stipulated herein.



TYPICAL SECTION

OVERALL LENGTH of any beam shall not vary more than $\pm 1/2$ inch from the 3/4 dimension shown on the plans.

STRAIGHTNESS: Allowable deviation, measured horizontally from a vertical plane connecting ends of beam, shall not exceed 1/4 inch for either side of the beam.

CAMBER variation of adjacent beams shall be not more than 1/8 inch.

REJECTION: The Engineer may reject beams not meeting these requirements.

BEAM DIMENSIONAL TOLERANCES

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
SUPERSTRUCTURE DETAILS					
BRIDGE NO OTT-357-0620 over BOAT CHANNEL					
OTTAWA COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
JFS	MPB		JFS	BFG	4-26-65