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PROJECT: 52378

CONTRACT NO: DA00712



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HYDE COUNTY

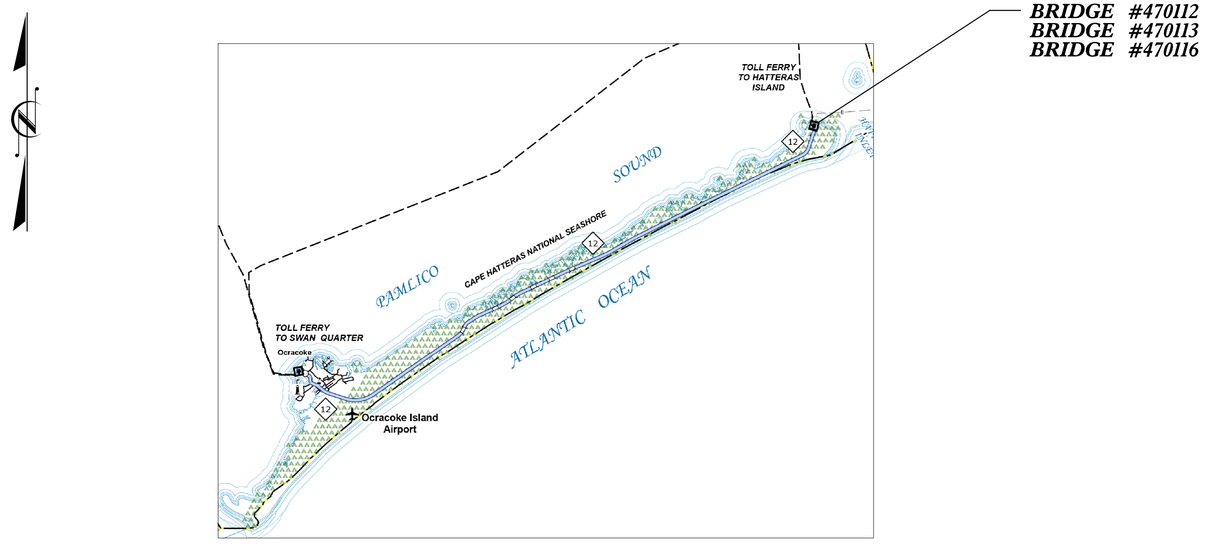
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	—	1	49

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
—	—	—
—	—	—

LOCATION: OCRACOKE ISLAND

STRUCTURE NO. 470112 (FERRY RAMP) ON NC 12 AT THE OCRACOKE–HATTERAS SOUTHDOCK FERRY TERMINAL
STRUCTURE NO. 470113 (FERRY RAMP) ON NC 12 AT THE OCRACOKE–HATTERAS SOUTHDOCK FERRY TERMINAL
STRUCTURE NO. 470116 (FERRY RAMP) ON NC 12 AT THE OCRACOKE–HATTERAS SOUTHDOCK FERRY TERMINAL

TYPE OF WORK: ***STRUCTURE REHABILITATION – SUPERSTRUCTURE REPAIR AND METALLIZATION, BEARING REPLACEMENT, STEEL PILE REPAIRS, PAINTING EXISTING STRUCTURE, SUBSTRUCTURE REPAIR, FRP PILE JACKETS, EPOXY COATING CORED SLABS AND BENT CAPS***



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA ☆ DEPARTMENT OF TRANSPORTATION ☆

DESIGN DATA
HYDE COUNTY

#470112 ADT	2018	=	1,300
#470113 ADT	2022	=	1,800
#470116 ADT	2022	=	4,100

PROJECT LENGTH
HYDE COUNTY

#470112 ADT	=	0.01	MILE
#470113 ADT	=	0.01	MILE
#470116 ADT	=	0.01	MILE

GFT

GFT Infrastructure, Inc.
One Glenwood Avenue, Suite 900
Raleigh, NC 27603
919-420-7660
NC Lic. No. F-0270

2024 STANDARD SPECIFICATIONS

LETTING DATE: ___ _, 2026

ERIC B. NELSON, P.E.
PROJECT ENGINEER



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HYDE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	—	1A	49

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
—	—	—
—	—	—

LOCATION: OCRACOKE ISLAND

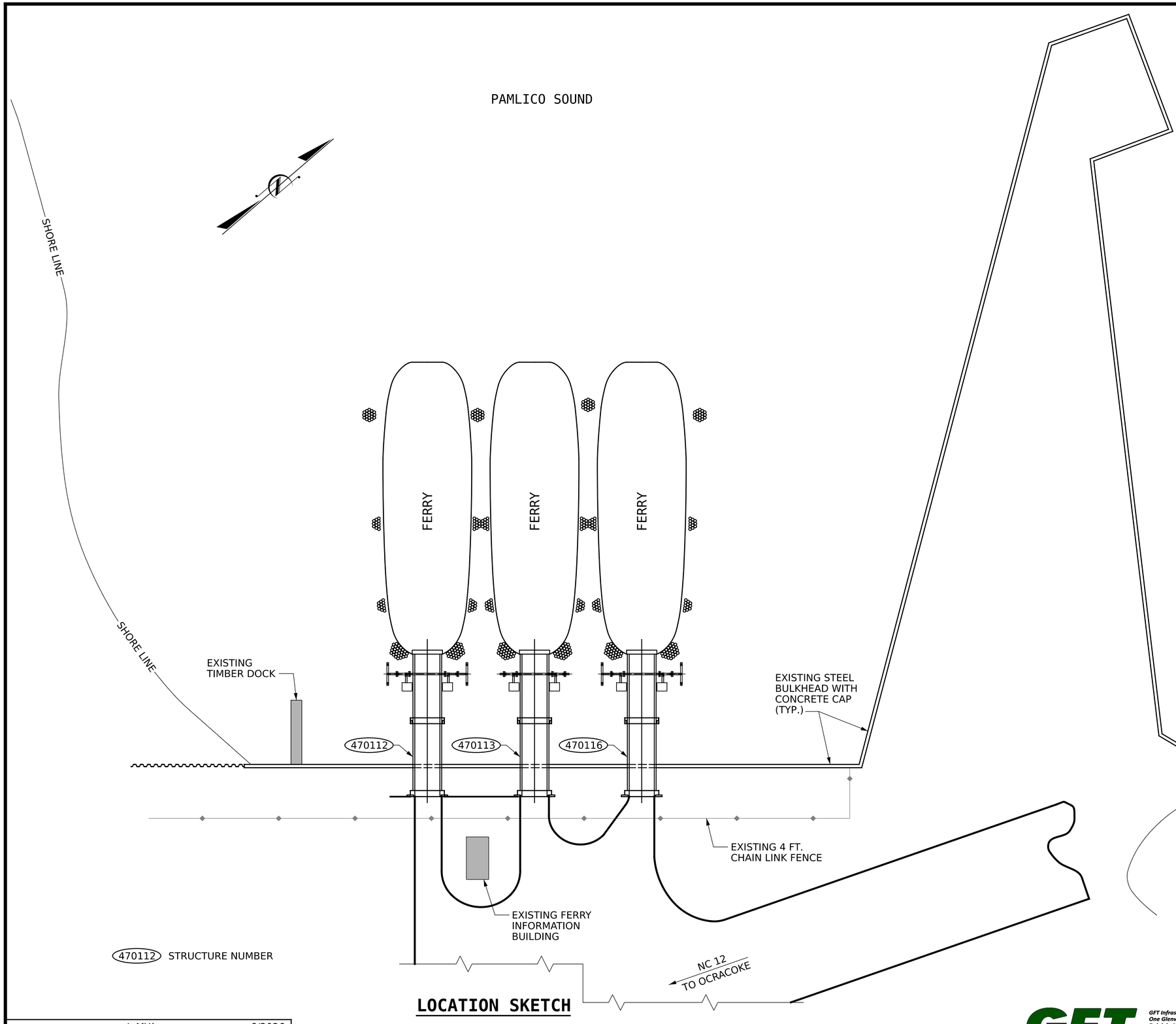
STRUCTURE NO. 470112 (FERRY RAMP) ON NC 12 AT THE OCRACOKE–HATTERAS SOUTHDOCK FERRY TERMINAL
STRUCTURE NO. 470113 (FERRY RAMP) ON NC 12 AT THE OCRACOKE–HATTERAS SOUTHDOCK FERRY TERMINAL
STRUCTURE NO. 470116 (FERRY RAMP) ON NC 12 AT THE OCRACOKE–HATTERAS SOUTHDOCK FERRY TERMINAL

TYPE OF WORK: STRUCTURE REHABILITATION – SUPERSTRUCTURE REPAIR AND METALLIZATION, BEARING REPLACEMENT, STEEL PILE REPAIRS, PAINTING EXISTING STRUCTURE, SUBSTRUCTURE REPAIR, FRP PILE JACKETS, EPOXY COATING CORED SLABS AND BENT CAPS

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
1A	INDEX OF DRAWINGS
S–1	LOCATION SKETCH
S–2	GENERAL NOTES AND TOTAL BILL OF MATERIAL
	STRUCTURE NO. 470112
S1–1	GENERAL DRAWING
S1–2 TO S1–3	PLAN OF SPANS AND TYPICAL SECTION
S1–4	PIVOT POINT
S1–5 TO S1–7	LIFT BENT
S1–8 TO S1–10	ACCESS PLATFORM DETAILS
	STRUCTURE NO. 470113
S2–1	GENERAL DRAWING
S2–2 TO S2–3	PLAN OF SPANS AND TYPICAL SECTION
S2–4 TO S2–5	PIVOT POINT
S2–6 TO S2–8	LIFT BENT
S2–9 TO S2–11	ACCESS PLATFORM DETAILS
	STRUCTURE NO. 470116
S3–1	GENERAL DRAWING
S3–2 TO S3–3	PLAN OF SPANS AND TYPICAL SECTION
S3–4	STEEL BEAM REPAIR DETAILS
S3–5	PIVOT POINT
S3–6 TO S3–7	LIFT BENT
S3–8 TO S3–10	ACCESS PLATFORM DETAILS
	STANDARD DETAILS
SD–1	GUARDRAIL DETAILS
SD–2 TO SD–10	LIFT RAMP DETAILS
SD–11	TYPICAL CAP AND COLUMN REPAIR DETAILS
SD–12	FRP PILE JACKET DEATILS
SD–13	LIFT BENT REPAIR DETAILS
SD–14	ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER
SN	STANDARD NOTES

CONTRACT NO: DA00712 PROJECT: 52378



NOTES

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

STRUCTURE COORDINATES

STRUCTURE NO.	LATITUDE	LONGITUDE
470112	35°-11'-23.78"	75°-46'-48.31"
470113	35°-11'-23.06"	75°-46'-48.11"
470116	35°-11'-22.52"	75°-46'-48.40"

LOCATION SKETCH

DRAWN BY : J. MYA DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

Signed by: John Yannaccone
4EF9BB90B730424...
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE
10/14/2026

GFT Infrastructure, Inc.
One Glenwood Avenue, Suite 900
Raleigh, NC 27603
919-420-7660
NC Lic. No. F-0270

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PROJECT NO. 52378
HYDE COUNTY
BRIDGE: 470112,470113
470116

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCH

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-01
1			3			TOTAL SHEETS
2			4			49

GENERAL NOTES

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT DUE TO THE NATURE OF PRESERVATION PROJECTS, THE EXTENT OF WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO COMMENCEMENT OF WORK. REPAIR LOCATIONS AND ESTIMATES OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS.

EXISTING DIMENSIONS AND STRUCTURE CONDITIONS ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

WORK ON THE RAMPS SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USES PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES TO CATCH THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE CONTRACT DOCUMENTS.

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE RAMPS AND/OR TRAFFIC.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50 AND PAINTED IN ACCORDANCE WITH SYSTEM 3 OF THE STRUCTURAL STEEL SHOP COATINGS PROGRAM AND SECTION 442-8 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

ALL LIFT BENT STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED UP TO THE LIMITS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL SCHEDULE CLEANING AND REPAINTING OPERATIONS SUCH THAT THE STEEL PILE REPAIR IS PERFORMED AFTER THE STEEL HAS BEEN CLEANED AND PREPARED, PRIMER COAT HAS BEEN APPLIED, AND BEFORE SUBSEQUENT PAINT COATS HAVE BEEN APPLIED. AFTER STEEL PILE REPAIRS HAVE BEEN COMPLETED, THE REPAIRS SHALL BE BLAST-CLEANED ACCORDING TO THE SPECIAL PROVISIONS. AND APPROPRIATE STEPS SHALL BE FOLLOWED TO PROVIDE THE COMPLETE PAINT SYSTEM 3 ON ALL STEEL COMPONENTS.

FOR PAINTING CONTAINMENT AND POLLUTION CONTROL, SEE PAINTING EXISTING LIFT BENTS SPECIAL PROVISION.

FOR PAINTING EXISTING LIFT BENTS, SEE SPECIAL PROVISIONS.

ALL METALLIZED SURFACES SHALL RECEIVE A SEAL COATING AS SPECIFIED IN TABLE 2 OF THE DEPARTMENT'S THERMAL SPRAYED COATINGS (METALLIZATION) PROGRAM. FOR THERMAL SPRAYED COATINGS, SEE SPECIAL PROVISIONS.

FOR CONSTRUCTION PROCEDURES, SEE SPECIAL PROVISIONS.

FOR COORDINATION WITH THE FERRY DIVISION, SEE SPECIAL PROVISIONS.

FOR WORK IN, OVER OR ADJACENT TO NAVIGABLE WATER, SEE SPECIAL PROVISIONS.

FOR SECURING OF VESSEL, SEE SPECIAL PROVISIONS.

FOR FIELD MEASURING, SEE SPECIAL PROVISIONS.

FOR REHABILITATION OF EXISTING LIFT RAMPS, SEE SPECIAL PROVISIONS.

FOR BEAM REPAIR CUT-OUT, SEE SPECIAL PROVISIONS.

FOR EPOXY FINISH PAINT FOR METALLIZED STRUCTURES, SEE SPECIAL PROVISIONS.

FOR SKID RESISTANT COATING, SEE SPECIAL PROVISIONS.

FOR ACCESS PLATFORMS, SEE SPECIAL PROVISIONS.

FOR GUARDRAIL ANCHORAGE POSTS, SEE SPECIAL PROVISIONS.

FOR CONCRETE COUNTERWEIGHTS, SEE SPECIAL PROVISIONS.

FOR STEEL PILE REPAIRS, SEE SPECIAL PROVISIONS.

FOR FRP PILE JACKETS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

FOR STEEL STRUCTURE WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR ASBESTOS ASSESSMENT, SEE SPECIAL PROVISIONS.

FOR CONCRETE WASHOUT, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

STRUCTURE NO.	STEEL BEAM GUARDRAIL	ASBESTOS ASSESSMENT	*CONCRETE REPAIRS	EPOXY RESIN INJECTION	FIELD MEASURING	CLEANING AND REPAINTING OF LIFT BENT AT STRUCTURE #_	POLLUTION CONTROL	PAINTING CONTAINMENT FOR LIFT BENT AT STRUCTURE #_	REHABILITATION OF EXISTING LIFT RAMP FOR STRUCTURE #_	ACCESS PLATFORMS FOR STUCTURE #_	BEAM REPAIR CUT-OUT	STEEL PILE REPAIRS	EPOXY COATING	GUARDRAIL ANCHORAGE POSTS	CONCRETE COUNTERWEIGHT	FRP PILE JACKETS
	LIN. FT.	LUMP SUM	CU. FT.	LIN. FT.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LBS.	LBS.	SQ. FT.	EA.	EA.	EA.
470112	164.7	LUMP SUM	5.4	---	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	---	10	317	14	1	4
470113	164.7	LUMP SUM	8.4	3.0	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	---	35	321	14	1	2
470116	164.7	LUMP SUM	3.0	---	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	3,125	135	317	14	---	---
TOTAL	494.1	LUMP SUM	17.0	3.0	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	3,125	180	955	42	2	6

* 3.0 CUBIC FOOT OF CONCRETE REPAIR HAS BEEN ADDED FOR CONCRETE WORK REQUIRED FOR INSPECTION AT THE PILE/PILE JACKET INTERFACE. IF ADDITIONAL CONCRETE IS REQUIRED AS DIRECTED BY THE ENGINEER, THE ADDITIONAL COST WILL BE PAID AT THE CONTRACT UNIT PRICE FOR "CONCRETE REPAIRS".

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112, 470113
470116

Signed by: John Yannaccone 4EF9BB90B73942...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL NOTES AND TOTAL BILL OF MATERIAL

DRAWN BY : J. MYA DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

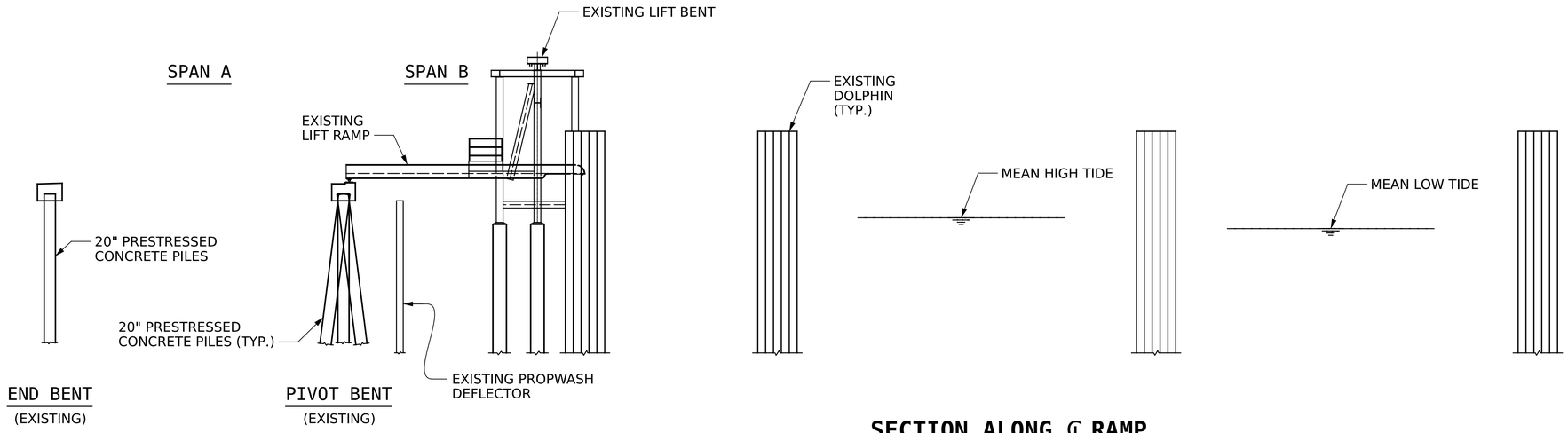
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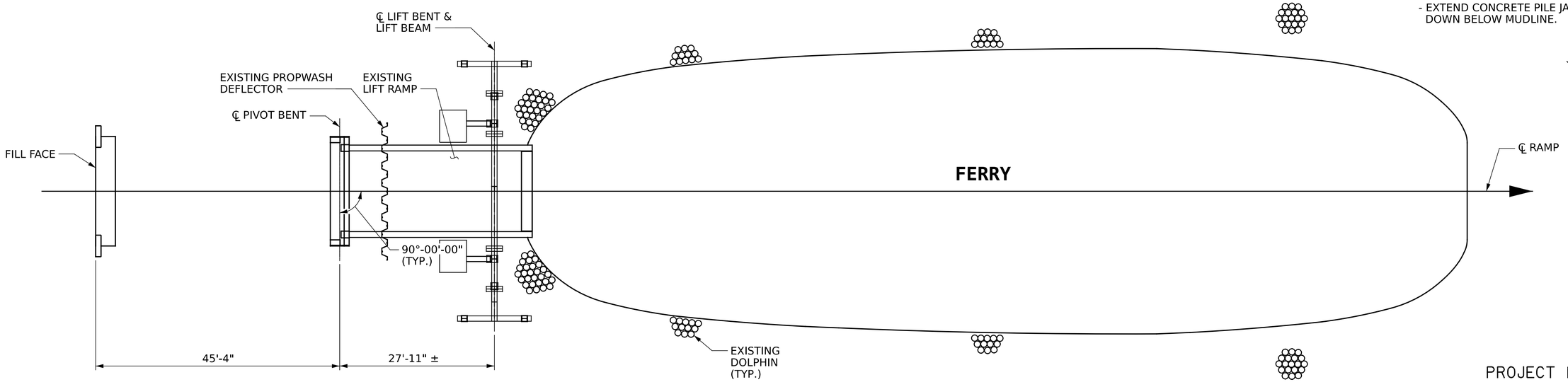
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2			4		

SHEET NO. S-02

TOTAL SHEETS 49



SECTION ALONG ℄ RAMP



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 04/21/2026.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

SCOPE OF WORK

- CLEAN, REPAIR AND PAINT EXISTING STRUCTURAL STEEL BEAMS AND PILES ON LIFT BENT.
- REPLACE CONCRETE COUNTERWEIGHT AND COUNTERWEIGHT RODS.
- DISASSEMBLE EXISTING LIFT RAMP. CLEAN AND METALLIZE RAMP COMPONENTS AND REASSEMBLE LIFT RAMP.
- CLEAN AND METALLIZE EXISTING STEEL BEARINGS.
- REPLACE CORRODED CORRUGATED GUARDRAIL AND GUARDRAIL ANCHORAGE POSTS ON CORED SLAB UNITS.
- APPLY EPOXY COATING TO TOP AND SIDES OF EXTERIOR CORED SLAB UNITS.
- REPLACE HANDRAIL ON LIFT RAMP.
- INSTALL ACCESS PLATFORMS.
- PROPERLY PREPARE SPALLED AREAS IN EXISTING BENTS AND PERFORM CONCRETE REPAIRS.
- REMOVE DEBRIS FROM TOP OF EXISTING BENT CAPS AND APPLY EPOXY COATING.
- EXTEND CONCRETE PILE JACKETS ON LIFT BENT DOWN BELOW MUDLINE.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112

Signed by: John Yannaccone
4EF98B90B739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR FERRY RAMP ON NC 12 AT THE OCRACOKE-HATTERAS SOUTHDOCK FERRY TERMINAL

DRAWN BY : J. MYA DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

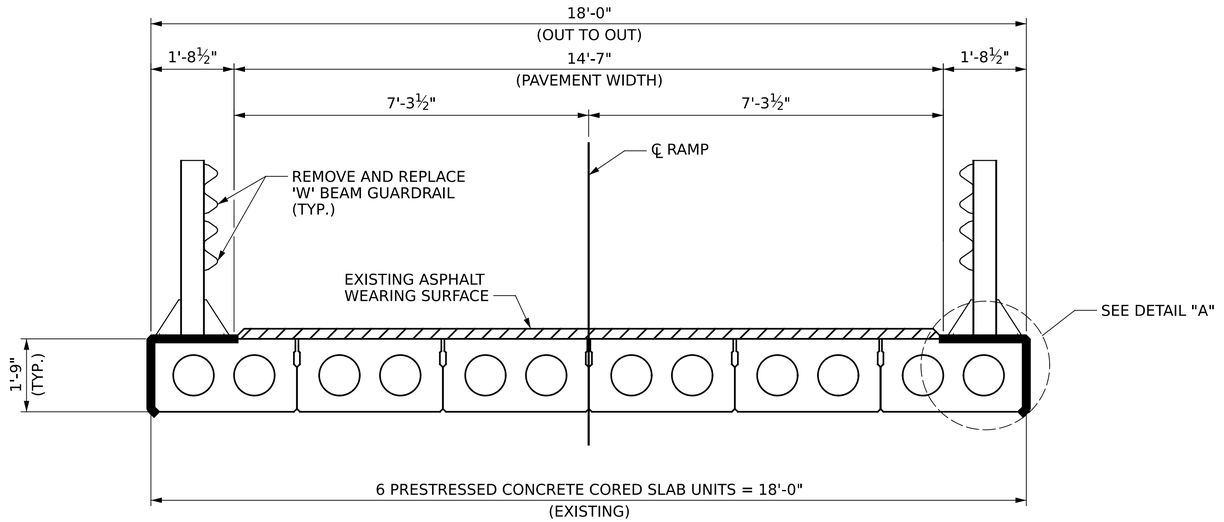
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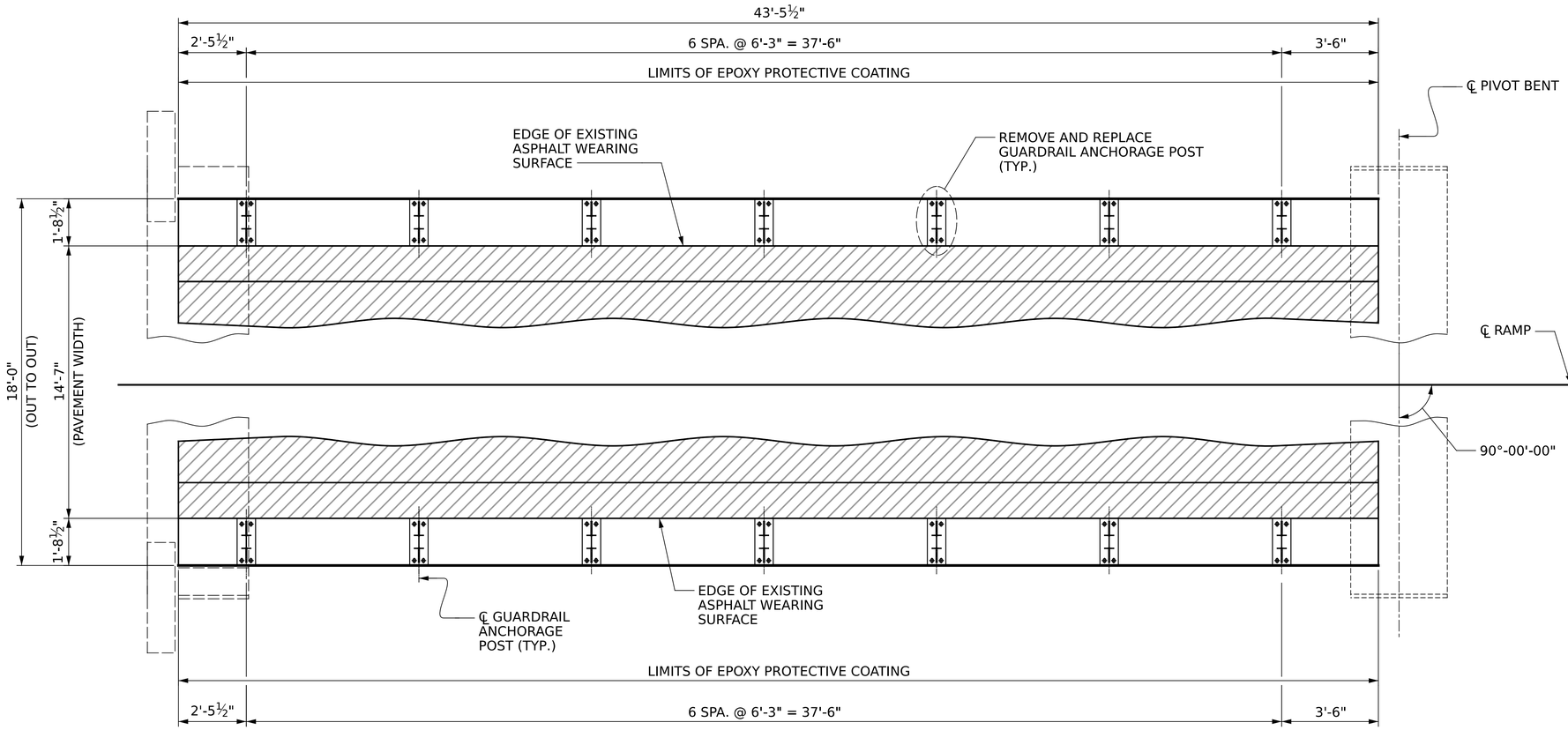
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1			3		
2			4		

SHEET NO. S1-01

TOTAL SHEETS 49



TYPICAL SECTION



PLAN OF SPAN A

SUMMARY OF QUANTITIES	
STEEL BEAM GUARDRAIL	164.7 LIN. FT.
GUARDRAIL ANCHORAGE POSTS	14 EA.
EPOXY COATING	285 SQ. FT.

NOTES

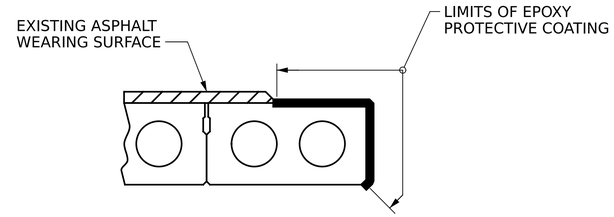
FOR GUARDRAIL DETAILS, SEE "GUARDRAIL DETAILS" SHEET.

THE EPOXY PROTECTIVE COATING SHALL NOT BE APPLIED TO THE AREA UNDER THE GUARDRAIL ANCHRORAGE POSTS.

FOR GUARDRAIL ANCHORAGE POSTS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

THE TERMINAL END SECTIONS AT THE END BENT AND THE TYPICAL END SHOES AT THE PIVOT BENT WILL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR “STEEL BEAM GUARDRAIL”.



DETAIL "A"

(RIGHT EXTERIOR SHOWN. LEFT EXTERIOR SIMILAR.)
(GUARDRAIL ANCHORAGE POST NOT SHOWN FOR CLARITY)

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS
SPAN A

Signed by: John Yannaccone
4EF9BB9D8739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

DRAWN BY : J. HARRIS/ J. MYA DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

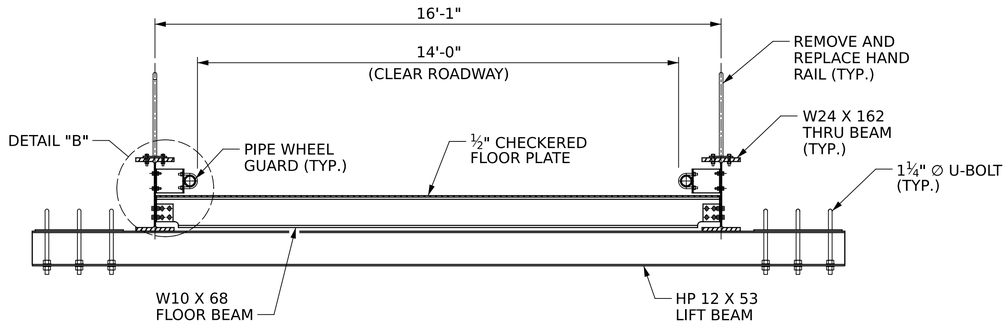
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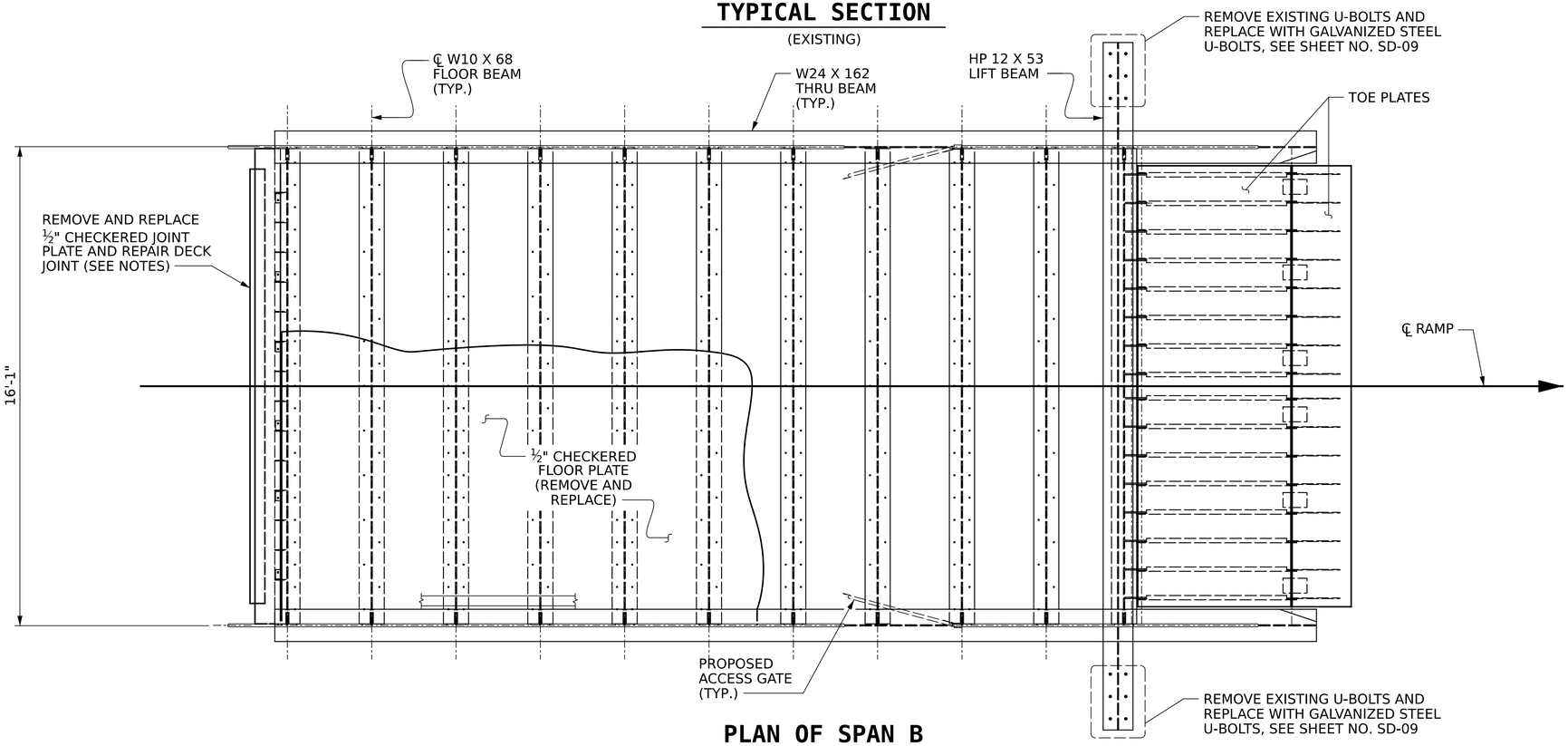
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SHEET NO. S1-02
TOTAL SHEETS 49

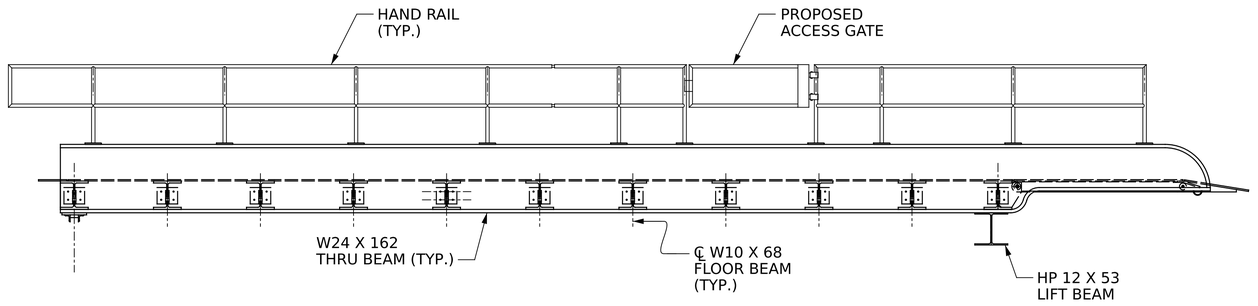


TYPICAL SECTION

(EXISTING)



PLAN OF SPAN B



ELEVATION

SUMMARY OF QUANTITIES

STRUCTURAL STEEL (CHECKERED FLOOR P̸'S)	9,390 LBS.
STRUCTURAL STEEL (FLOOR BEAMS)	0 LBS.
STRUCTURAL STEEL (TOE PLATES)	0 LBS.
BEAM CUT-OUT REPAIRS	0 LBS.
HANDRAIL	69.3 LIN. FT.

NOTES

THE CONTRACTOR SHALL REMOVE THE FLOOR PLATE AND COMPLETELY DISASSEMBLE THE RAMP ASSEMBLY INCLUDING THE THRU BEAMS, FLOOR BEAMS, LIFT BEAM, PIPE WHEEL GUARDS, METAL RAILING AND TOE PLATES. THE COMPONENTS SHALL BE TRANSPORTED TO A FACILITY FOR REPAIRS AND METALLIZATION. WHEN THE REPAIRS, METALLIZATION, FINISH COAT, AND ALL OTHER WORK HAVE BEEN COMPLETED, THE CONTRACTOR SHALL TRANSPORT THE COMPONENTS BACK TO THE JOB SITE AND REASSEMBLE THE RAMP AS SHOWN IN THE PLANS.

FOR THERMAL SPRAYED COATINGS (METALLIZATION), SEE SPECIAL PROVISIONS.

ALL METALLIZED SURFACES SHALL RECEIVE A FINISH COATING AS SPECIFIED IN THE SPECIAL PROVISION FOR EPOXY FINISH PAINT FOR METALLIZED STRUCTURES.

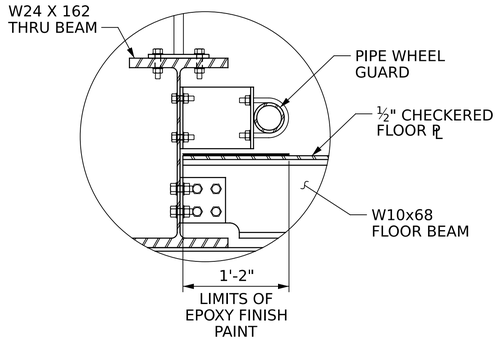
FOR FURTHER DIMENSIONS AND INFORMATION ON THE RAMP, SEE “LIFT RAMP DETAILS” SHEETS.

FOR SKID RESISTANT COATING, SEE SPECIAL PROVISIONS.

FOR REHABILITATION OF EXISTING LIFT RAMPS, SEE SPECIAL PROVISIONS.

REPAIR DECK JOINT AT THE PIVOT BENT IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEET NO. SD-03.

THE PROPOSED ACCESS GATES SHALL OPEN INWARD TOWARDS THE CENTERLINE OF THE RAMP. THE GATES SHALL HAVE A LATCH TO ENSURE THAT THE GATES ARE CLOSED SECURELY.



DETAIL "B"

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS
SPAN B

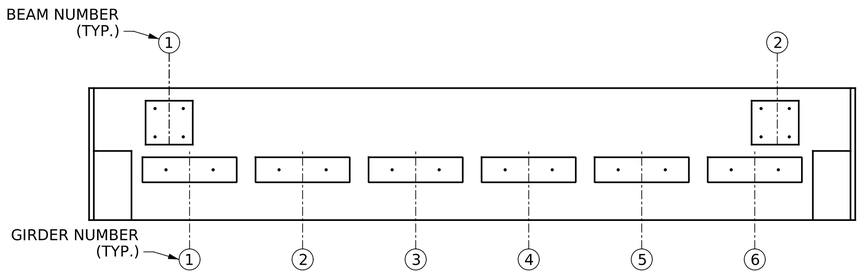
Signed by: John Yannaccone 4EF9BB9C8739424...
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN R. YANNACCONE
10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

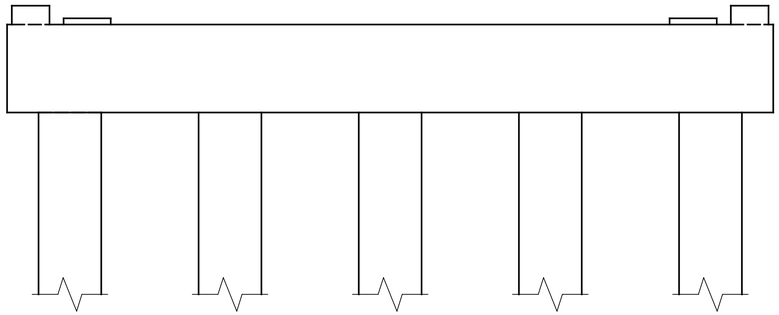
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-03
1			3			TOTAL SHEETS
2			4			49

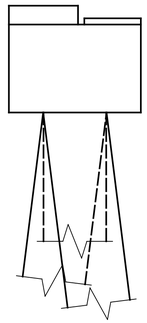


TOP OF CAP

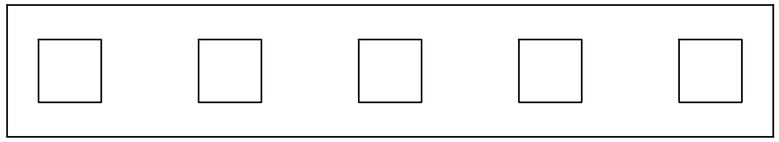


ELEVATION

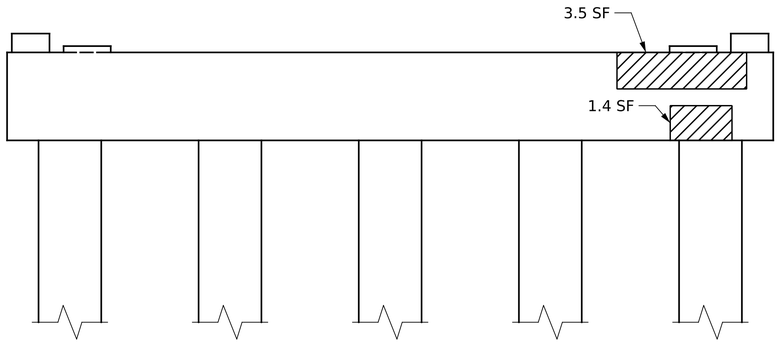
(SPAN A SIDE)



END VIEW

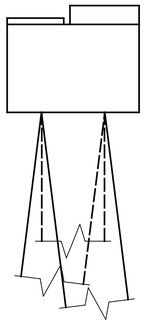


BOTTOM OF CAP



ELEVATION

(SPAN B SIDE)



END VIEW

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AT BENT 1 AND THE END BENTS, AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAPS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAPS BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

THE EXISTING PIVOT BEARINGS SHALL BE REMOVED, CLEANED, METALLIZED AND RESET.

THE EXISTING ANCHOR BOLTS SHALL REMAIN IN PLACE. REMOVE AND REPLACE THE EXISTING NUTS AND WASHERS.

NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

PAYMENT FOR THE REMOVAL, CLEANING, METALLIZATION AND RESETTING OF THE PIVOT BEARINGS WILL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "REHABILITATION OF EXISTING LIFT RAMP FOR STRUCTURE #470112".

AS-BUILT REPAIR QUANTITY TABLE

REPAIRS - PIVOT BENT	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0	0		
COLUMN	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	4.9	2.4		
COLUMN	0	0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0		
COLUMN		0		
EPOXY COATING		AREA SF		AREA SF
CAP		32		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CLEAR TO SAWCUT.
SEE REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

SHOTCRETE REPAIR

CONCRETE REPAIR (FORM & POUR)

EPOXY RESIN INJECTION

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112

Signed by: John Yannaccone 4EF9BB90B739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIR

PIVOT BENT

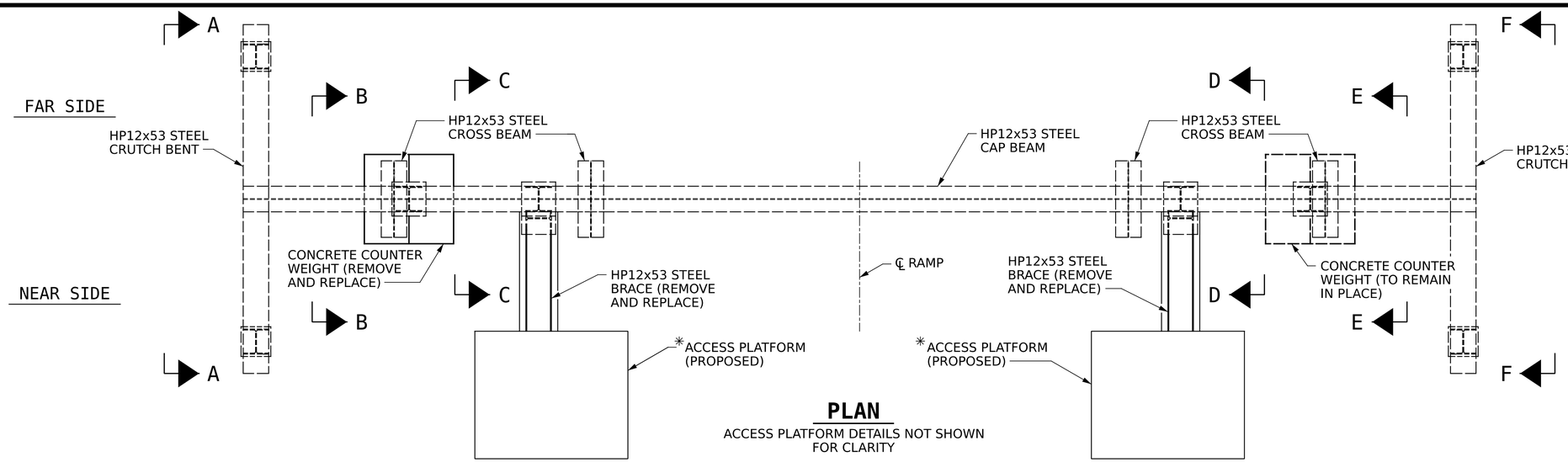
DRAWN BY : J. MYA DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

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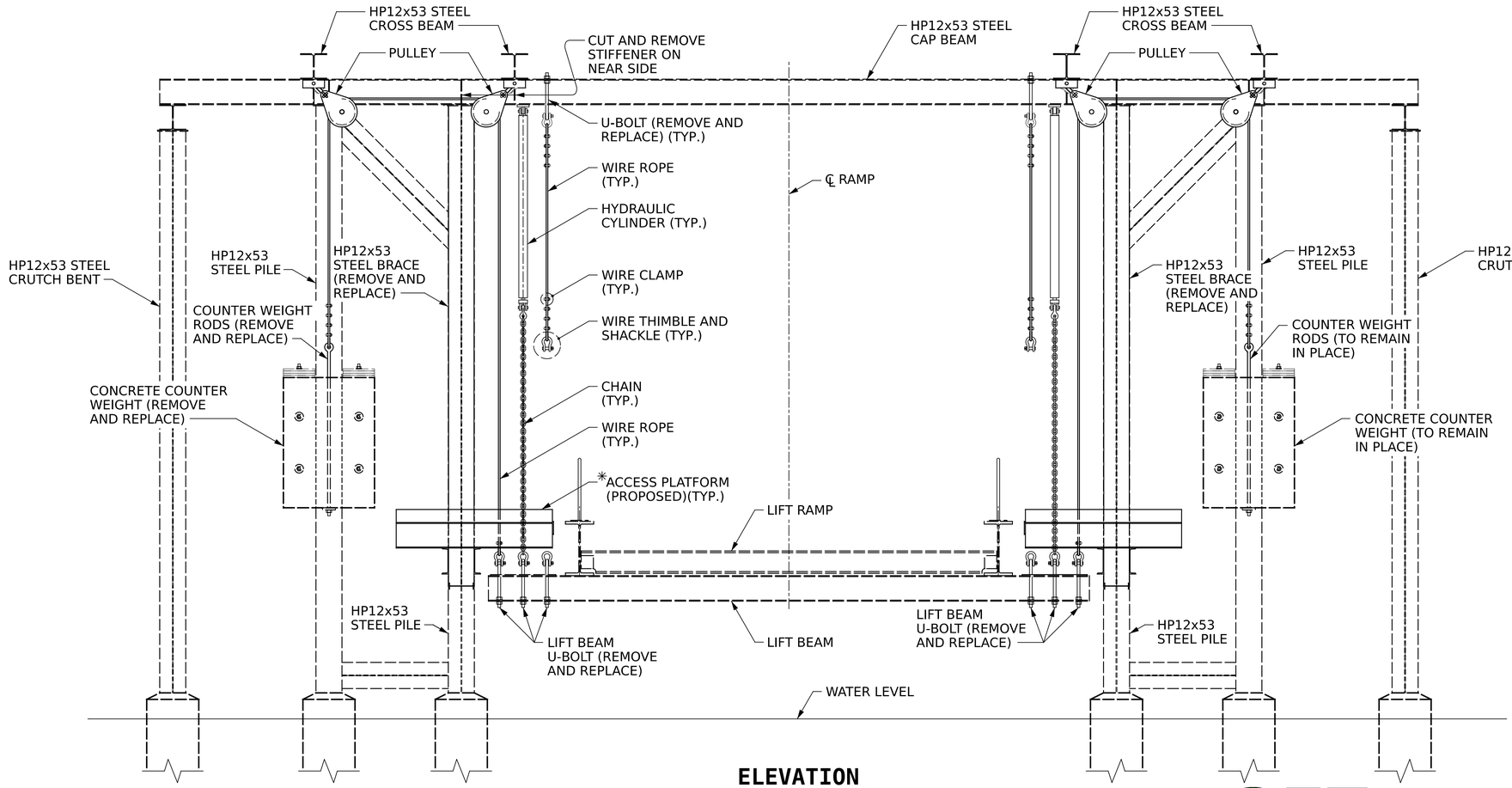
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1			3			TOTAL SHEETS
2			4			49



PLAN

ACCESS PLATFORM DETAILS NOT SHOWN FOR CLARITY



ELEVATION

EXISTING STRUCTURE AND HARDWARE SHOWN EXCEPT AS NOTED.
EXISTING LINES (ELECTRICAL, HYDRAULIC AND GREASE FITTING), RAMP LIGHTING AND ACCESS PLATFORM DETAILS NOT SHOWN FOR CLARITY.

NOTES

* FOR ACCESS PLATFORM CONFIGURATION AND DIMENSIONS, SEE "ACCESS PLATFORM DETAILS" SHEETS.

THE CONTRACTOR SHALL REMOVE AND RESET HYDRAULIC LINES, ELECTRICAL LINES, GREASE FITTING LINES AND OVERHEAD LIGHTING AS DIRECTED BY THE ENGINEER AND THE FERRY DIVISION. PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE PAY ITEM, "CLEANING AND REPAINTING OF LIFT BENT AT STRUCTURE #470112".

THE CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING SHEAVES IN THE PULLEYS. AFTER THEY HAVE BEEN CLEANED AND GALVANIZED, THE EXISTING SHEAVES SHALL BE DELIVERED TO A STORAGE AREA AS DIRECTED BY THE FERRY DIVISION. PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE PAY ITEM, “REHABILITATION OF EXISTING LIFT RAMP FOR STRUCTURE NO. 470112”.

AFTER THE STRUCTURAL STEEL HAS BEEN BLASTED AND PRIMED, THE STRUCTURAL STEEL SHALL BE INSPECTED FOR EXCESS SECTION LOSS. AREAS THAT EXHIBIT AN EXCESS OF 35% SECTION LOSS SHALL BE REVIEWED BY THE ENGINEER TO DETERMINE IF THE AREA OF SECTION LOSS SHOULD BE REPAIRED. STIFFENERS WITH LESS THAN ¼” THICKNESS REMAINING SHALL BE CUT OUT AND REPLACED EXCEPT AS NOTED IN THE PLANS.

FOR PILE JACKET DIMENSIONS AND REINFORCING, SEE "FRP PILE JACKET DETAILS" SHEET.

FOR STEEL PILE REPAIRS, SEE SPECIAL PROVISIONS.

FOR FRP PILE JACKETS, SEE SPECIAL PROVISIONS.

FOR PAINTING EXISTING LIFT BENTS, SEE SPECIAL PROVISIONS.

FOR ACCESS PLATFORMS, SEE SPECIAL PROVISIONS.

FOR INSPECTION OF STEEL PILES AT THE INTERFACE WITH THE TOP OF THE EXISTING CONCRETE PILE JACKETS, SEE THE PILE REPAIR SPECIAL PROVISION.

SUMMARY OF QUANTITIES

STRUCTURAL STEEL (STIFFENERS)	10 LBS.
STRUCTURAL STEEL (PILE REPAIRS)	0 LBS.
COUNTER WEIGHT	1 EA.
COUNTER WEIGHT RODS	2 EA.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LIFT BENT DETAILS

DRAWN BY : J. HARRIS DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

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Signed by: John Yannaccone 4EF9BB9D8739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

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SHEET NO. S1-05

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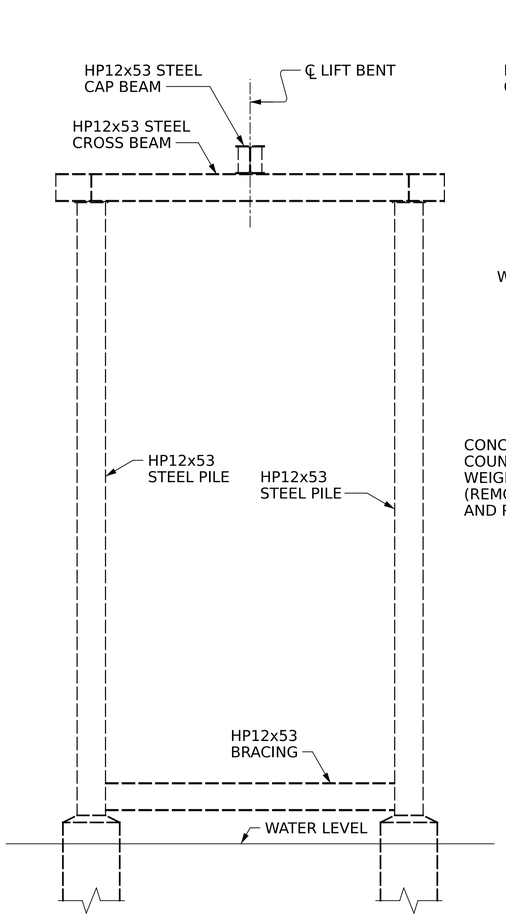
NOTES

EXISTING STRUCTURE AND HARDWARE SHOWN EXCEPT AS NOTED.

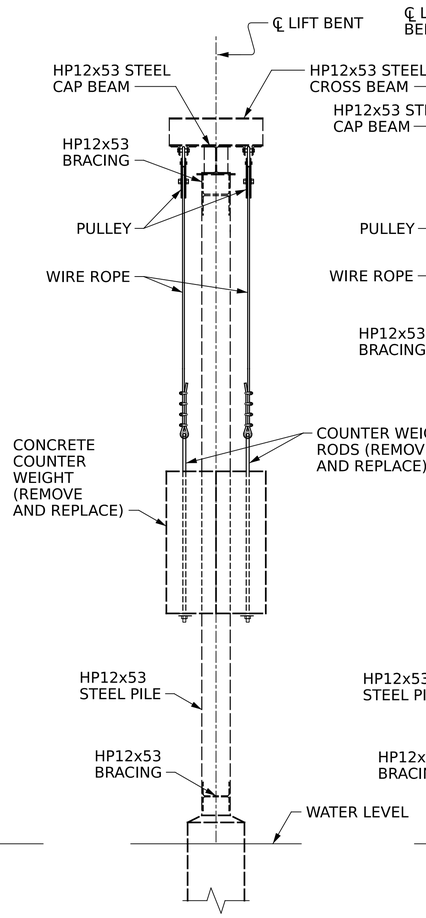
✳ FOR ACCESS PLATFORM CONFIGURATION AND DIMENSIONS, SEE ACCESS PLATFORM DETAILS SHEETS.

REPLACEMENT OF COUNTER WEIGHT RODS WILL BE INCLUDED IN THE PAY ITEM "REHABILITATION OF EXISTING LIFT RAMP FOR STRUCTURE #470112".

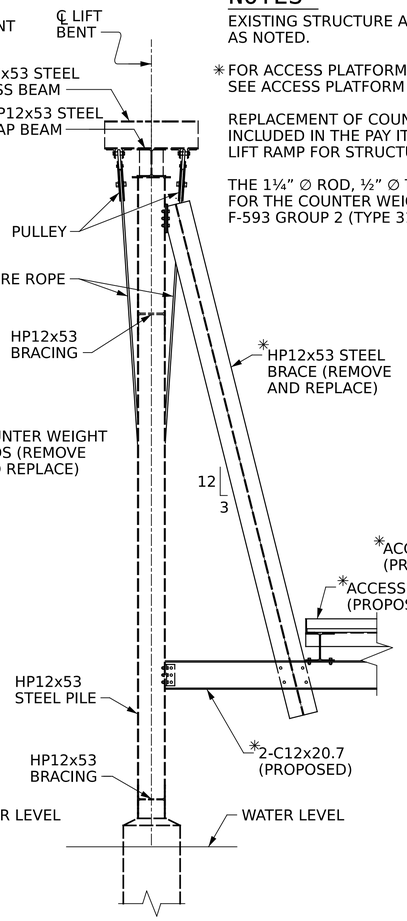
THE 1¼" ∅ ROD, ½" ∅ THREADED ROD, AND 1" ∅ BOLT FOR THE COUNTER WEIGHT SHALL COMPLY WITH ASTM F-593 GROUP 2 (TYPE 316 STAINLESS STEEL).



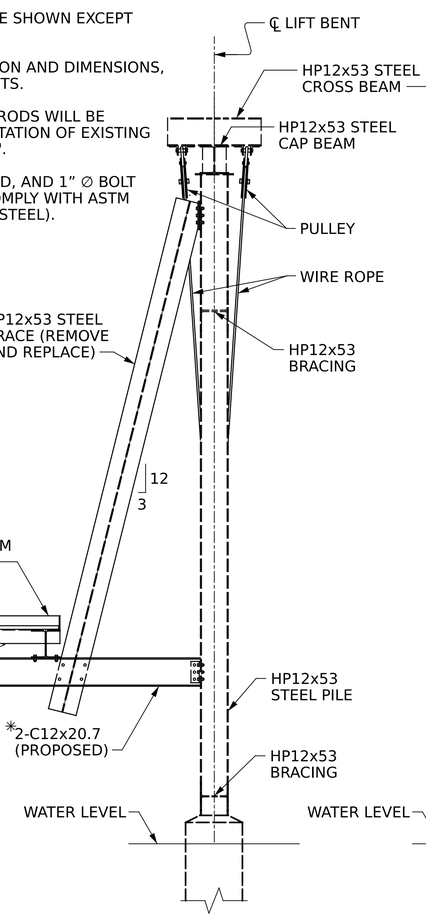
SECTION A-A



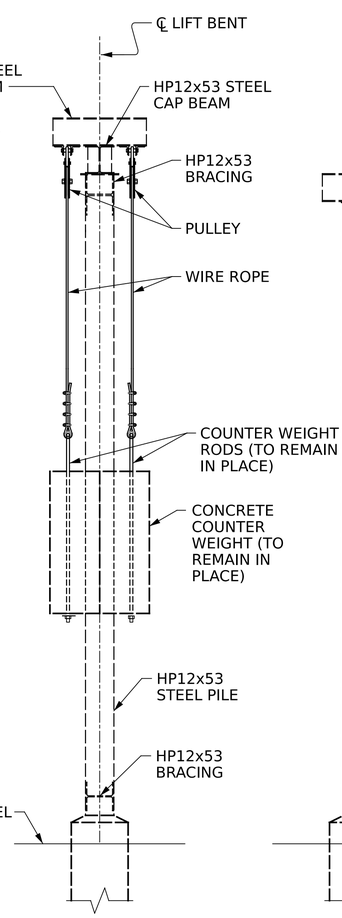
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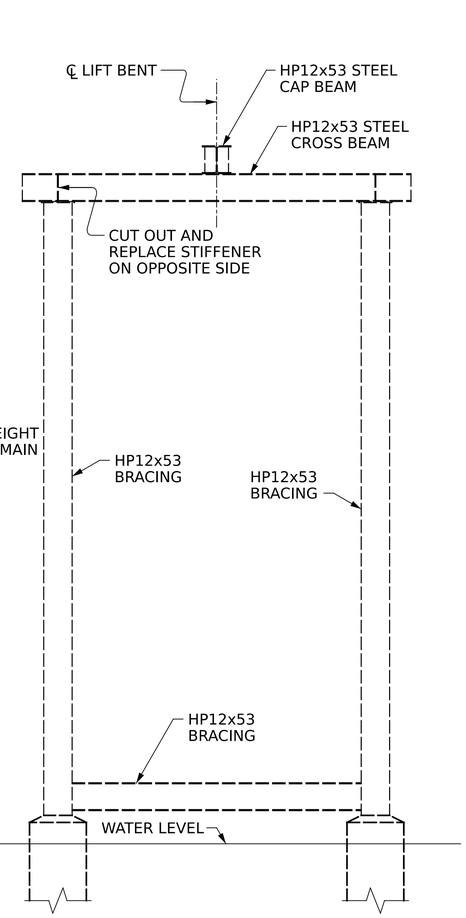
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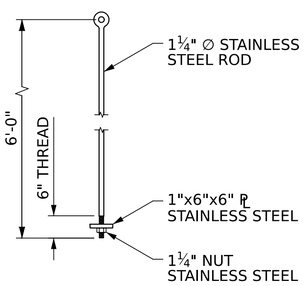
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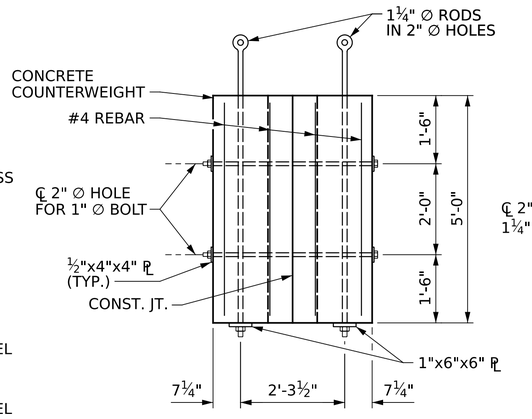
SECTION E-E



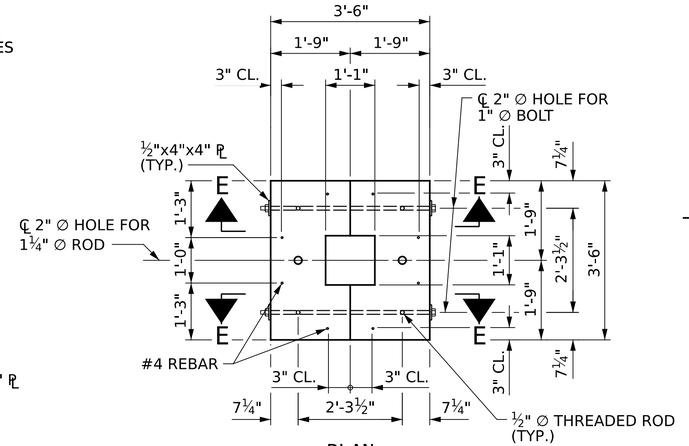
SECTION F-F



COUNTERWEIGHT ROD DETAIL

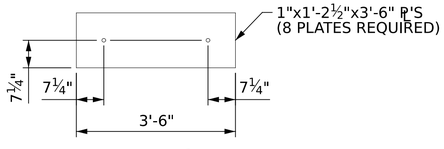


ELEVATION

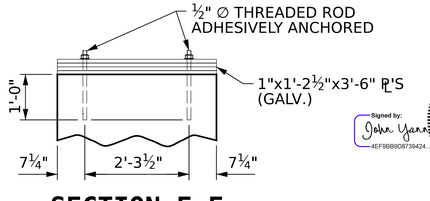


PLAN

COUNTERWEIGHT DETAIL



PLAN OF COUNTERWEIGHT PLATE



SECTION E-E

SUMMARY OF QUANTITIES (FOR ONE COUNTERWEIGHT)	
REINFORCING STEEL	25 LBS.
CLASS A CONCRETE	2.5 CU. YDS.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112

SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LIFT BENT DETAILS

Signed by: John Yannaccone 032492 4EF9B89D8739424...
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A YANNACCONE
10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

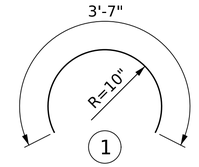
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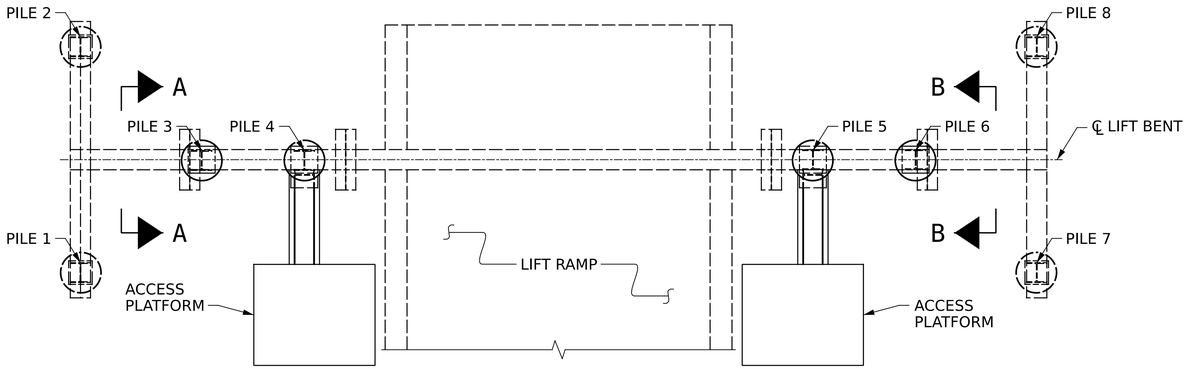
BAR TYPES



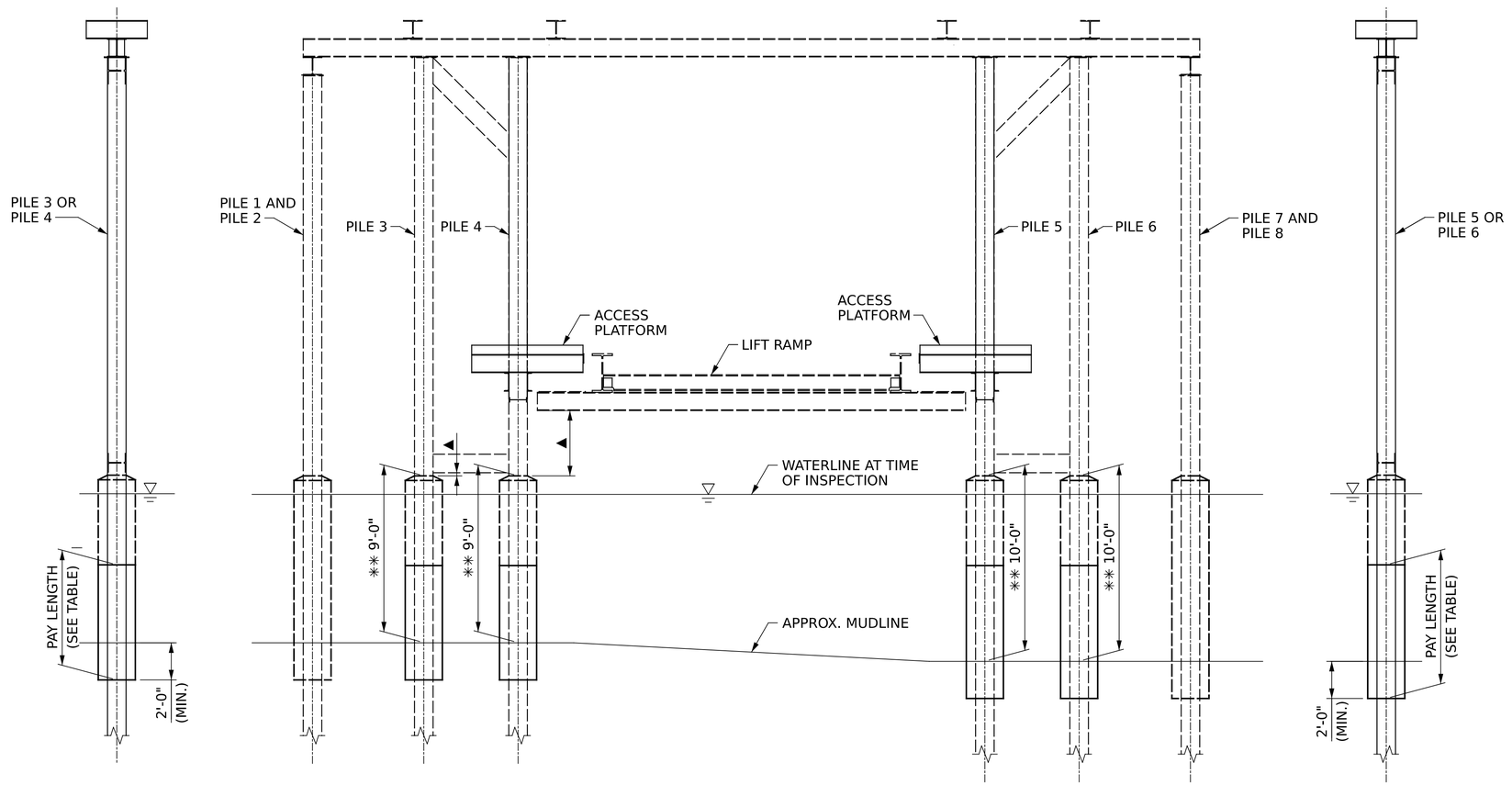
ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✳D1	26	#6	STR	1'-3"	49
✳V1	8	#6	STR	5'-8"	68
✳V2	8	#6	STR	6'-8"	80
✳S1	52	#4	1	3'-7"	124
✳ EPOXY COATED REINFORCING STEEL (LBS.)					321
CLASS A CONCRETE (CU. YDS.)					3.0
FRP PILE JACKET (LIN. FT.)					26.0



PLAN



SECTION A-A

ACCESS PLATFORM ASSEMBLY
NOT SHOWN FOR CLARITY

ELEVATION

SECTION B-B

ACCESS PLATFORM ASSEMBLY
NOT SHOWN FOR CLARITY

PILE JACKET QUANTITY TABLE

DESCRIPTION	PILE NUMBER							
	1	2	3	4	5	6	7	8
APPROX. PAY LENGTH (FT)	-	-	6'-0"	6'-0"	7'-0"	7'-0"	-	-
"V" BAR MARK	-	-	V1	V1	V2	V2	-	-
NO. OF #6D1 DOWELS	-	-	6	6	7	7	-	-
NO. OF #4S1 STIRRUP PAIRS	-	-	6	6	7	7	-	-
CONCRETE FILL (CU, YDS.)	-	-	0.7	0.7	0.8	0.8	-	-

NOTES

✳✳ SOUNDINGS TAKEN FROM UNDERWATER INSPECTION(DATED 04/08/2024) ARE PROVIDED FOR INFORMATION ONLY. CONTRACTOR SHALL FIELD VERIFY MUDLINE ELEVATIONS AND NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PERFORMING ANY REPAIR WORK.

▲ CONTRACTOR SHALL WORK WITH THE ENGINEER AND NCDOT FERRY DIVISION STAFF TO MEASURE THE LOWEST POSITION OF THE STEEL RAMP STRUCTURE DURING OPERATIONS AND SHALL SET THE TOP OF THE PILE JACKETS TO AVOID INHIBITING OPERATION OF THE STEEL RAMP TO AVOID INTERFERENCE WITH THE LIFT BENT BRACING MEMBERS.

BENT DIMENSIONS ARE APPROXIMATE AND ARE TAKEN FROM EXISTING PLANS.

EXISTING PILES ARE HP12x53 STEEL PILES.

PILE JACKETS SHALL BE EMBEDDED A MINIMUM OF 2'-0" BELOW THE MUDLINE. SEE "FRP PILE JACKET DETAILS" SHEET.

FOR FRP PILE JACKETS, SEE SPECIAL PROVISIONS.

PILE JACKET LENGTH SHALL NOT BE LESS THAN 4'-0" REGARDLESS OF MUDLINE ELEVATION.

FOR REPAIR SEQUENCE AND REINFORCING BAR PLACEMENT, SEE "FRP PILE JACKET DETAILS" SHEET.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112

SHEET 3 OF 3

Signed by: John Yannaccone 4EF9BB9D8739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIR

LIFT BENT DETAILS

DRAWN BY : J. HARRIS DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

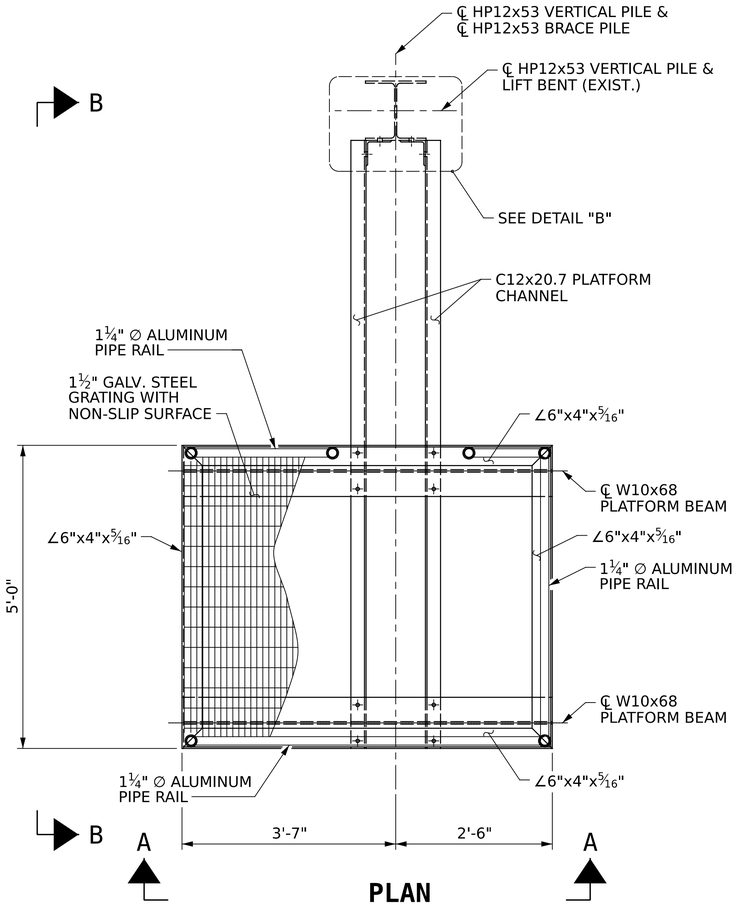
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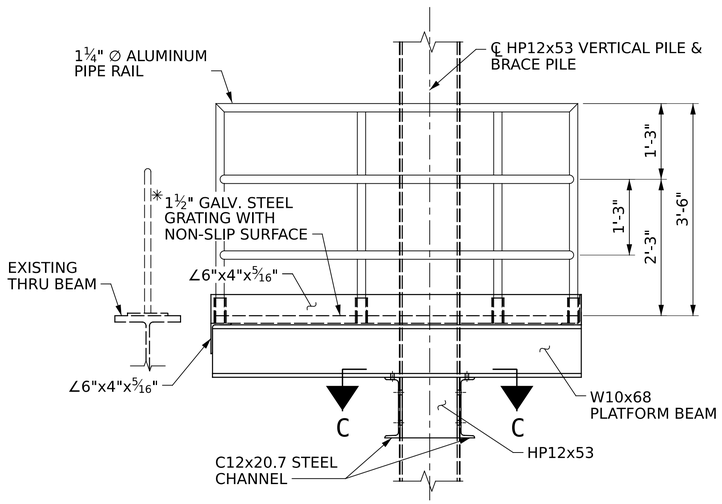
SHEET NO. S1-07

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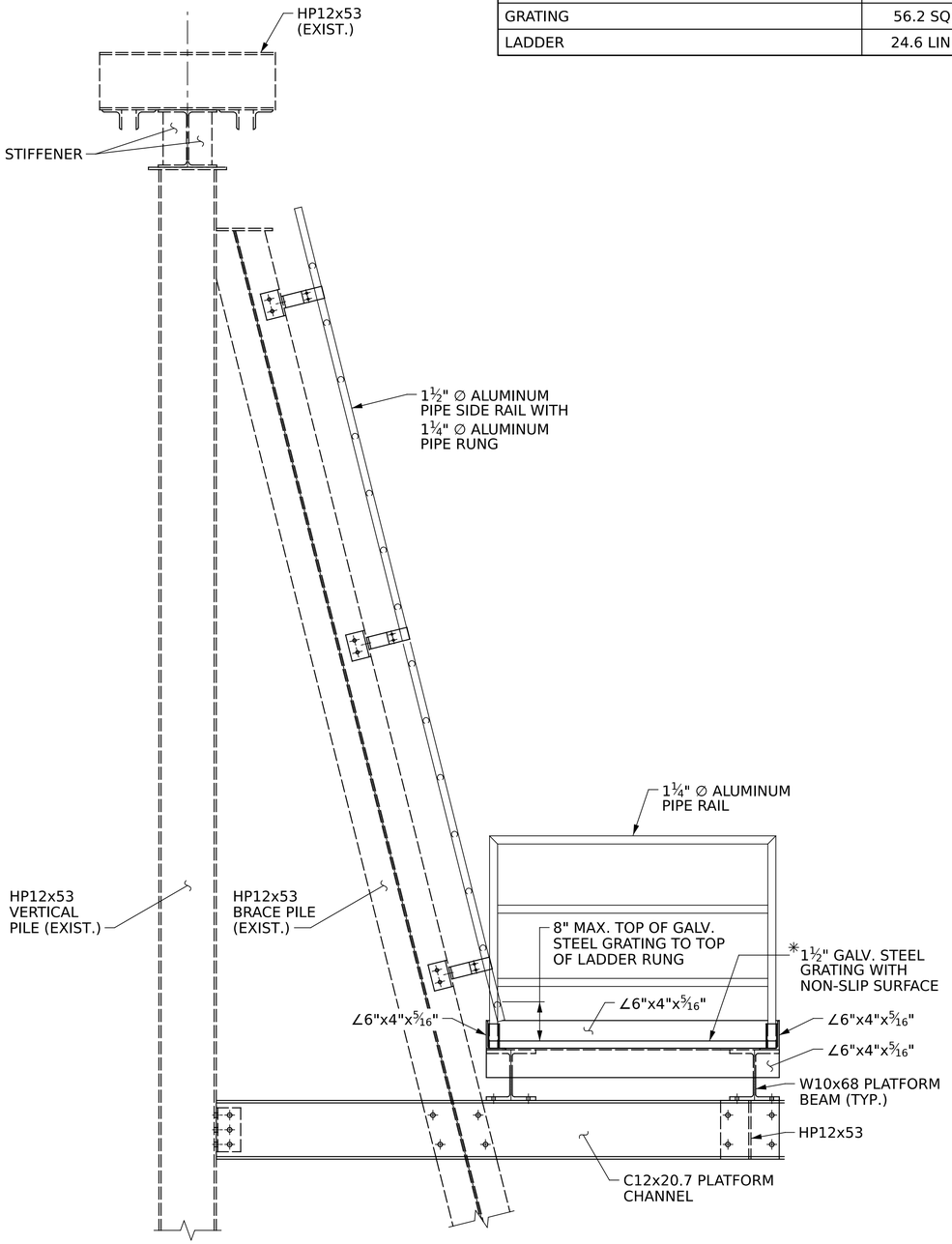
PLAN

LADDER AND BRACE PILE NOT SHOWN FOR CLARITY



VIEW A-A

LADDER NOT SHOWN FOR CLARITY



VIEW B-B

COUNTERWEIGHT NOT SHOWN FOR CLARITY

SUMMARY OF QUANTITIES

STRUCTURAL STEEL (ACCESS PLATFORMS)	4,524 LBS.
HANDRAIL	28.4 LIN. FT.
GRATING	56.2 SQ. FT.
LADDER	24.6 LIN. FT.

NOTES

ACCESS PLATFORM DETAILS ARE SHOWN FOR PLATFORM LOCATED TO THE RIGHT OF THE LIFT RAMP. ACCESS PLATFORM TO THE LEFT OF THE LIFT RAMP IS SIMILAR BUT OPPOSITE HAND.

ALL STRUCTURAL STEEL FOR THE ACCESS PLATFORMS SHALL BE AASHTO M270 GRADE 50 AND METALLIZED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

ALL WELDING AND FABRICATION SHALL BE COMPLETE BEFORE SURFACE PREPARATION BEGINS.

ALL METALLIZED SURFACES SHALL RECEIVE A SEAL COATING AS SPECIFIED IN TABLE 2 OF THE DEPARTMENT'S THERMAL SPRAYED COATINGS (METALLIZATION) PROGRAM. FOR THERMAL SPRAYED COATINGS, SEE SPECIAL PROVISIONS.

CONNECTION OF THE PLATFORM GRATING TO THE W10X68 STEEL BEAMS NOT SHOWN. CONNECTION SHALL BE PER THE GRATING MANUFACTURER'S SPECIFICATIONS AND SHALL BE APPROVED BY THE ENGINEER.

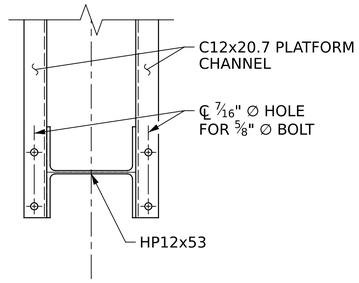
STEEL GRATING WITH NON-SLIP SURFACE SHALL BE 1½" X ⅛" 19-W-4 GALVANIZED STEEL GRATING OR APPROVED EQUAL.

AFTER CLEANING AND PAINTING OF THE LIFT BENT, THE CONTRACTOR SHALL COORDINATE WITH THE FERRY DIVISION AND THE ENGINEER WHEN REATTACHING THE HYDRAULIC, ELECTRICAL AND GREASE LINES TO THE LIFT BENT. THE LINES SHALL BE LOCATED SO AS NOT TO CAUSE A TRIP HAZARD WHILE ACCESSING OR USING THE ACCESS PLATFORM. GREASE FITTINGS SHALL BE INSTALLED AS DIRECTED BY THE FERRY DIVISION AND THE ENGINEER IN ORDER TO FACILITATE ACCESS FOR ROUTINE MAINTENANCE.

FOR ACCESS PLATFORMS, SEE SPECIAL PROVISIONS.

✳ THE CONTRACTOR SHALL INSTALL THE ACCESS PLATFORM ASSEMBLY SUCH THAT THE TOP OF THE STEEL GRATING MATCHES THE TOP OF THE TOP FLANGE OF THE LIFT RAMP THRU BEAM WHEN THE LIFT RAMP IS IN A LEVEL POSITION. FOR FIELD MEASURING, SEE SPECIAL PROVISIONS.

FOR DETAIL "A" AND DETAIL "B", SEE SHEET 2 OF 3.



SECTION C-C

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ACCESS PLATFORM DETAILS

Signed by: John Yannaccone
4EF9BB90B739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

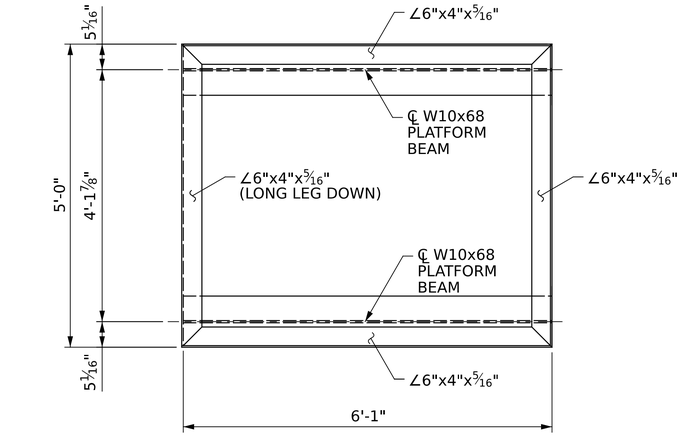
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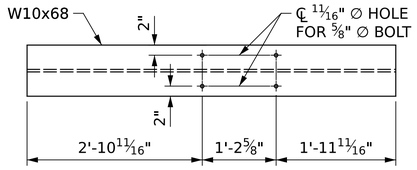
SHEET NO. S1-08

TOTAL SHEETS 49

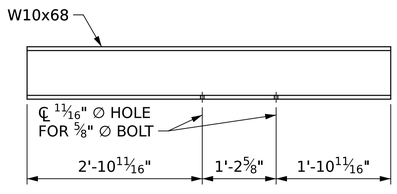


PLATFORM FRAME PLAN

ANGLES LONG LEG UP UNLESS NOTED

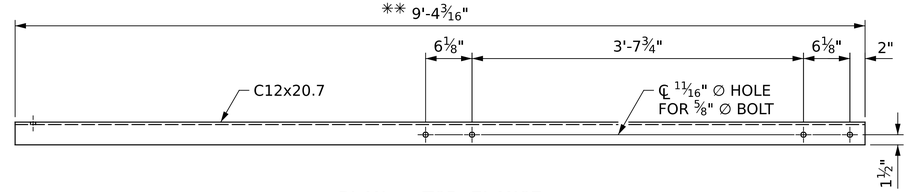


PLAN - BOTTOM FLANGE

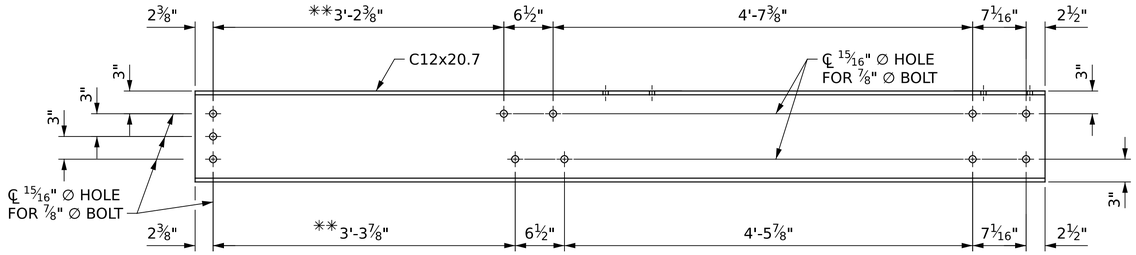


ELEVATION

PLATFORM BEAM



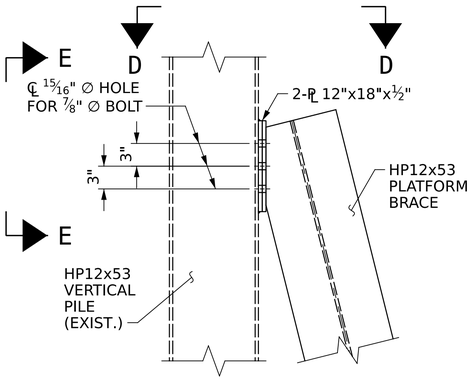
PLAN - TOP FLANGE



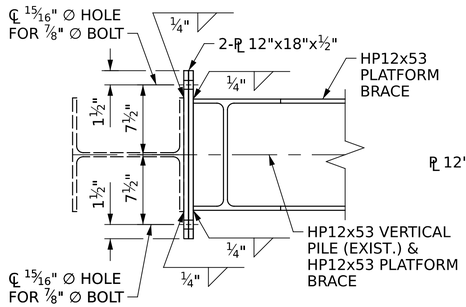
ELEVATION

PLATFORM CHANNEL

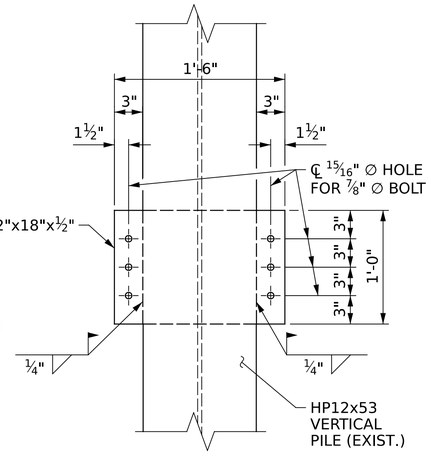
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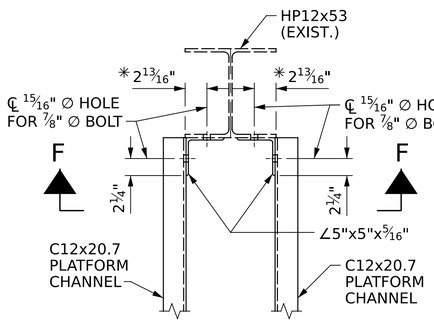
DETAIL "A"



SECTION D-D

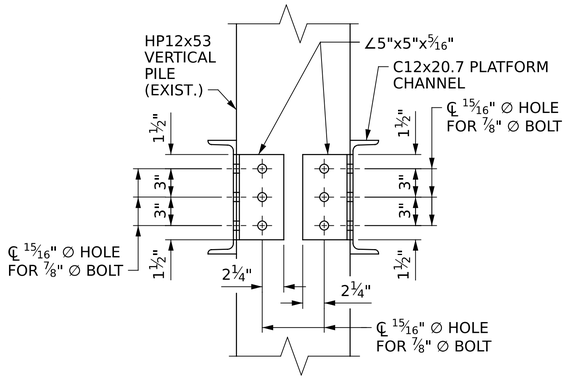


SECTION E-E

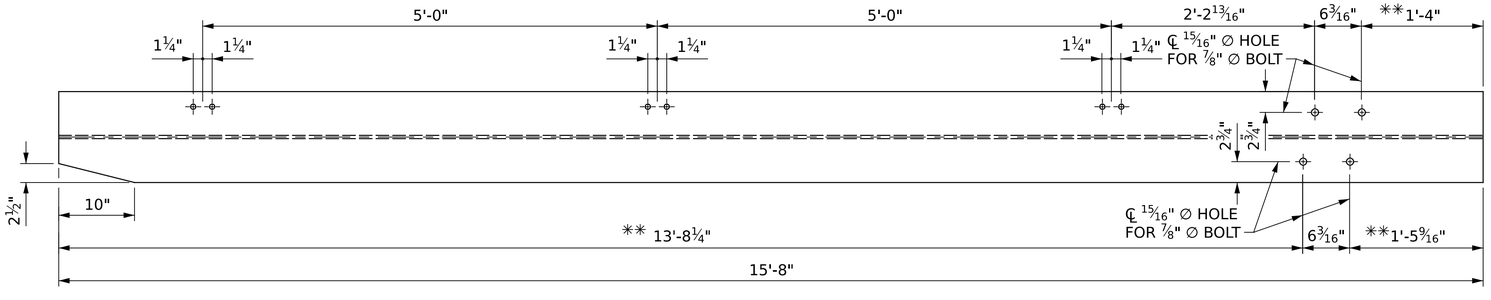


DETAIL "B"

* HOLES IN VERTICAL PILE TO BE DRILLED AFTER PLATFORM CHANNEL LOCATION IS DETERMINED



SECTION F-F



PLATFORM BRACE

** FIELD VERIFY DIMENSIONS BEFORE FABRICATION OF CHANNELS

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112

SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ACCESS PLATFORM DETAILS

Signed by: John Yannaccone
4EF98B80B739424...
10/14/2026

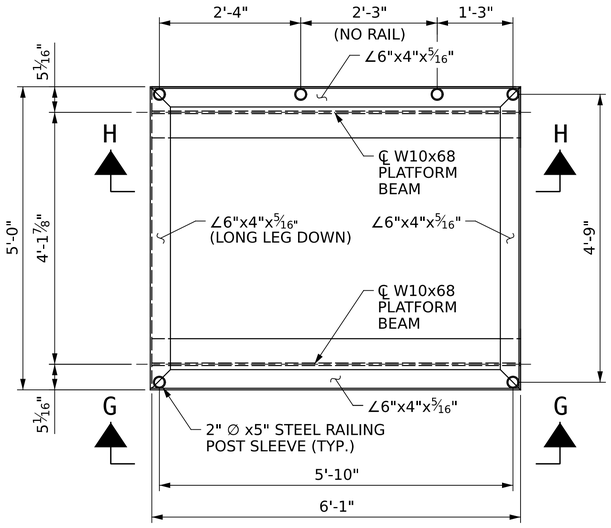
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

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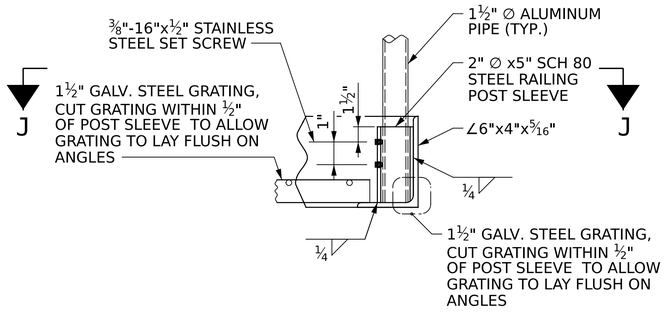
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-09
1			3			TOTAL SHEETS
2			4			49

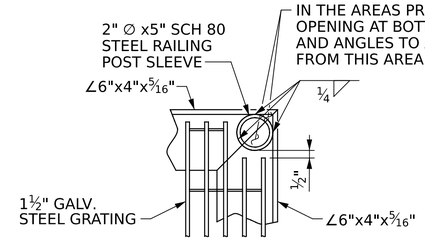


PLATFORM RAIL LAYOUT

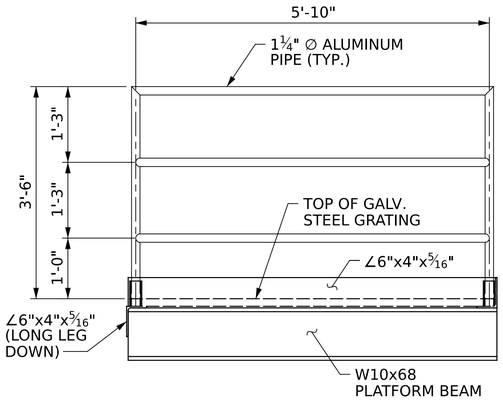
ANGLES LONG LEG UP UNLESS NOTED



DETAIL "C"

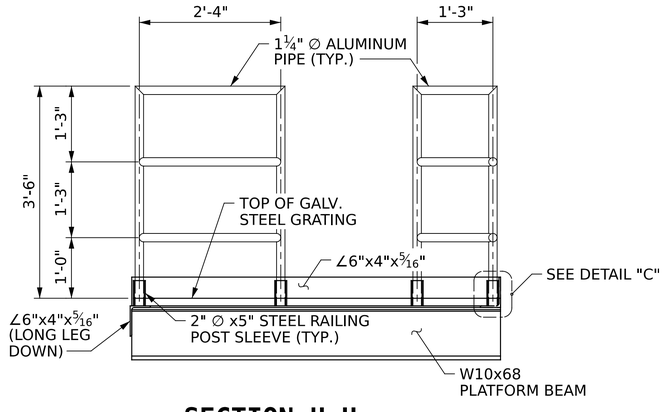


SECTION J-J



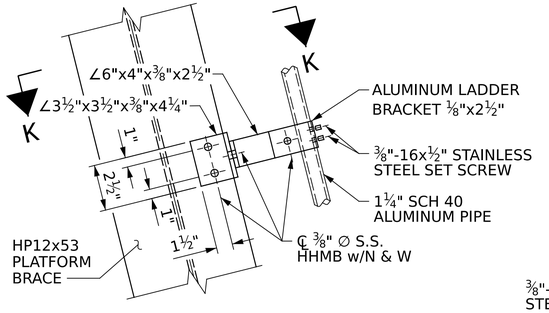
VIEW G-G

ANGLES LONG LEG UP UNLESS NOTED

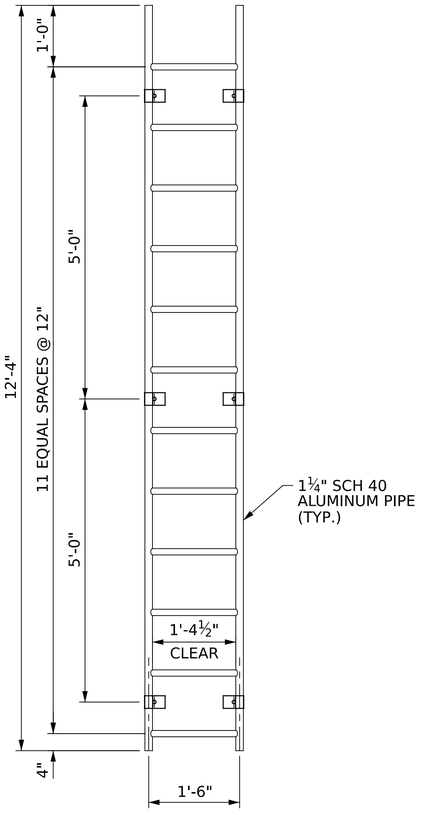


SECTION H-H

ANGLES LONG LEG UP UNLESS NOTED

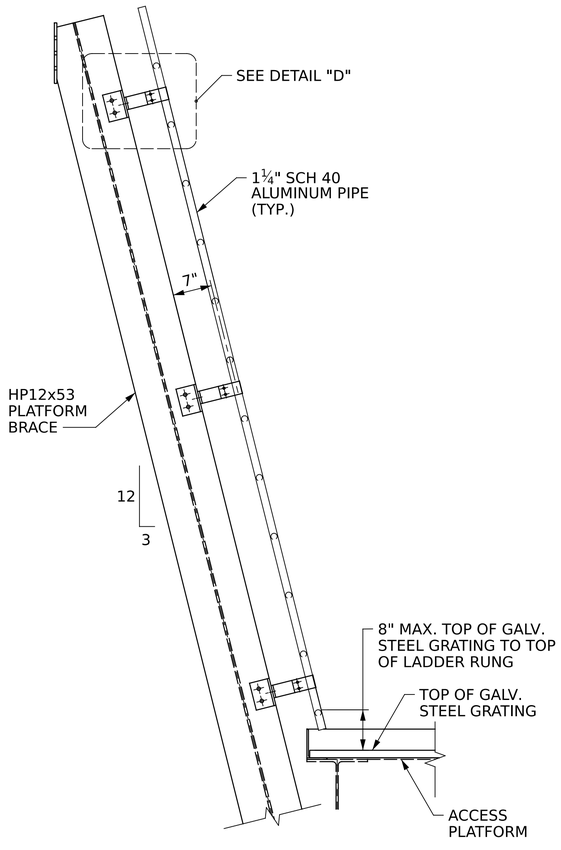


DETAIL "D"



FRONT ELEVATION

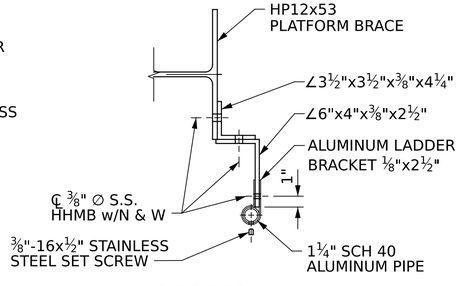
(HP12x53 PLATFORM BRACE AND ACCESS PLATFORM NOT SHOWN FOR CLARITY)



SIDE ELEVATION

ACCESS LADDER

ACCESS LADDER DETAILS SHOW MINIMUM REQUIREMENTS.
ALTERNATIVE LADDER AND BRACKET DETAILS PROPOSED BY THE
CONTRACTOR ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.



SECTION K-K

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ACCESS PLATFORM DETAILS

Signed by: John Yannaccone
4EF9BB90B739424...
10/14/2026

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

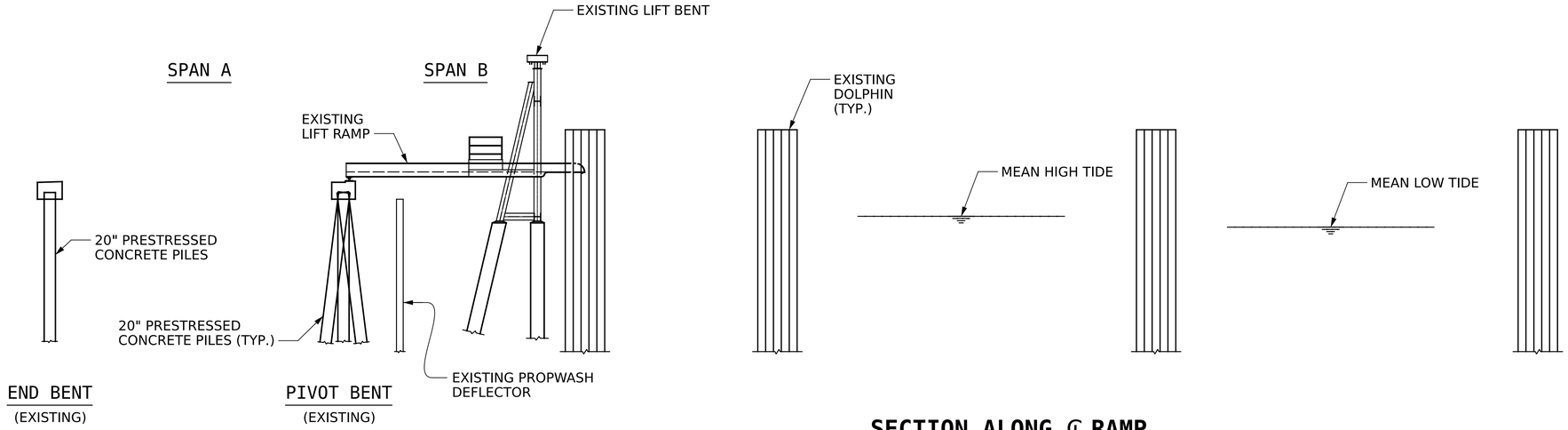
DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

GFT

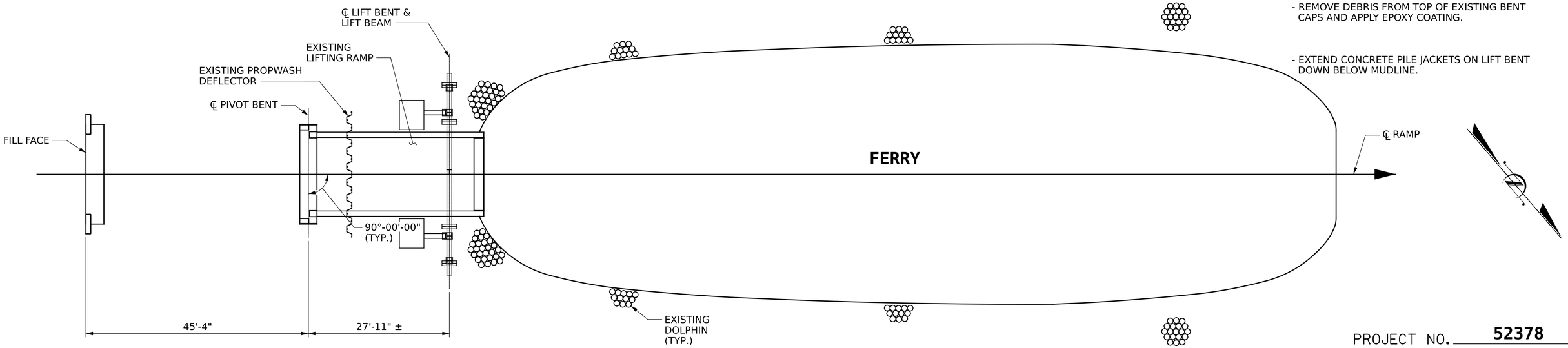
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REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			49



SECTION ALONG ℄ RAMP



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 04/21/2026.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

SCOPE OF WORK

- CLEAN, REPAIR AND PAINT EXISTING STRUCTURAL STEEL BEAMS AND PILES ON LIFT BENT.
- REPLACE CONCRETE COUNTERWEIGHT AND COUNTERWEIGHT RODS.
- DISASSEMBLE EXISTING LIFT RAMP. CLEAN AND METALLIZE RAMP COMPONENTS. REPLACE DETERIORATED FLOOR BEAMS AND REASSEMBLE LIFT RAMP.
- REMOVE AND REPLACE EXISTING STEEL BEARINGS.
- REPLACE CORRODED CORRUGATED GUARDRAIL AND GUARDRAIL ANCHORAGE POSTS ON CORED SLAB UNITS.
- APPLY EPOXY COATING TO TOP AND SIDES OF EXTERIOR CORED SLAB UNITS.
- REPLACE HANDRAIL ON LIFT RAMP.
- INSTALL ACCESS PLATFORMS.
- EPOXY RESIN INJECTION OF CONCRETE CRACKS.
- PROPERLY PREPARE SPALLED AREAS IN EXISTING BENTS AND PERFORM CONCRETE REPAIRS.
- REMOVE DEBRIS FROM TOP OF EXISTING BENT CAPS AND APPLY EPOXY COATING.
- EXTEND CONCRETE PILE JACKETS ON LIFT BENT DOWN BELOW MUDLINE.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

Signed by: John Yannaccone 4EF9BB90B73942A...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR FERRY RAMP ON NC 12 AT THE OCRACOKE-HATTERAS SOUTHDOCK FERRY TERMINAL

DRAWN BY : J. MYA DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

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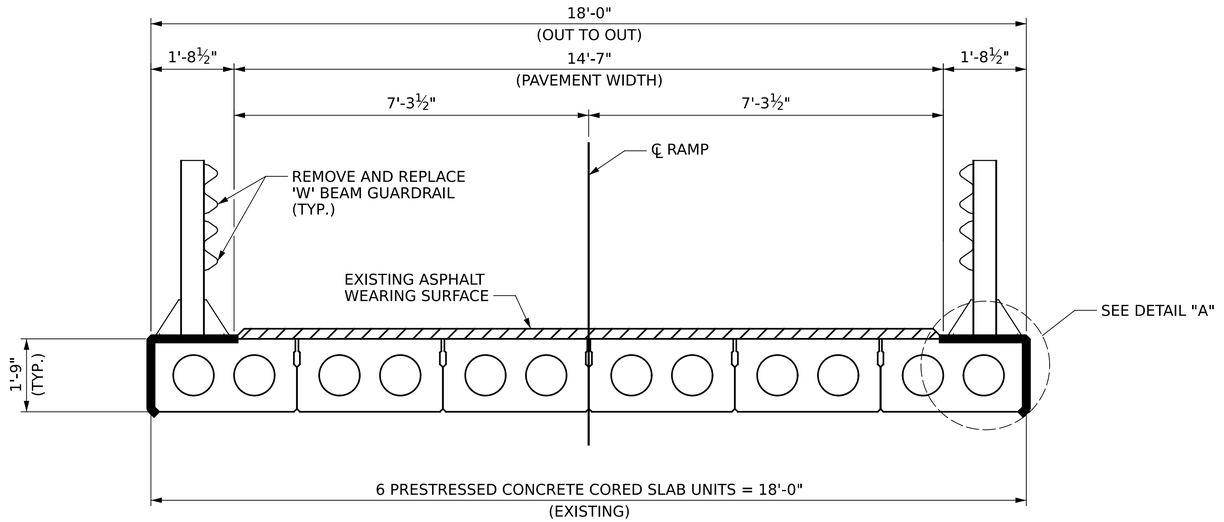
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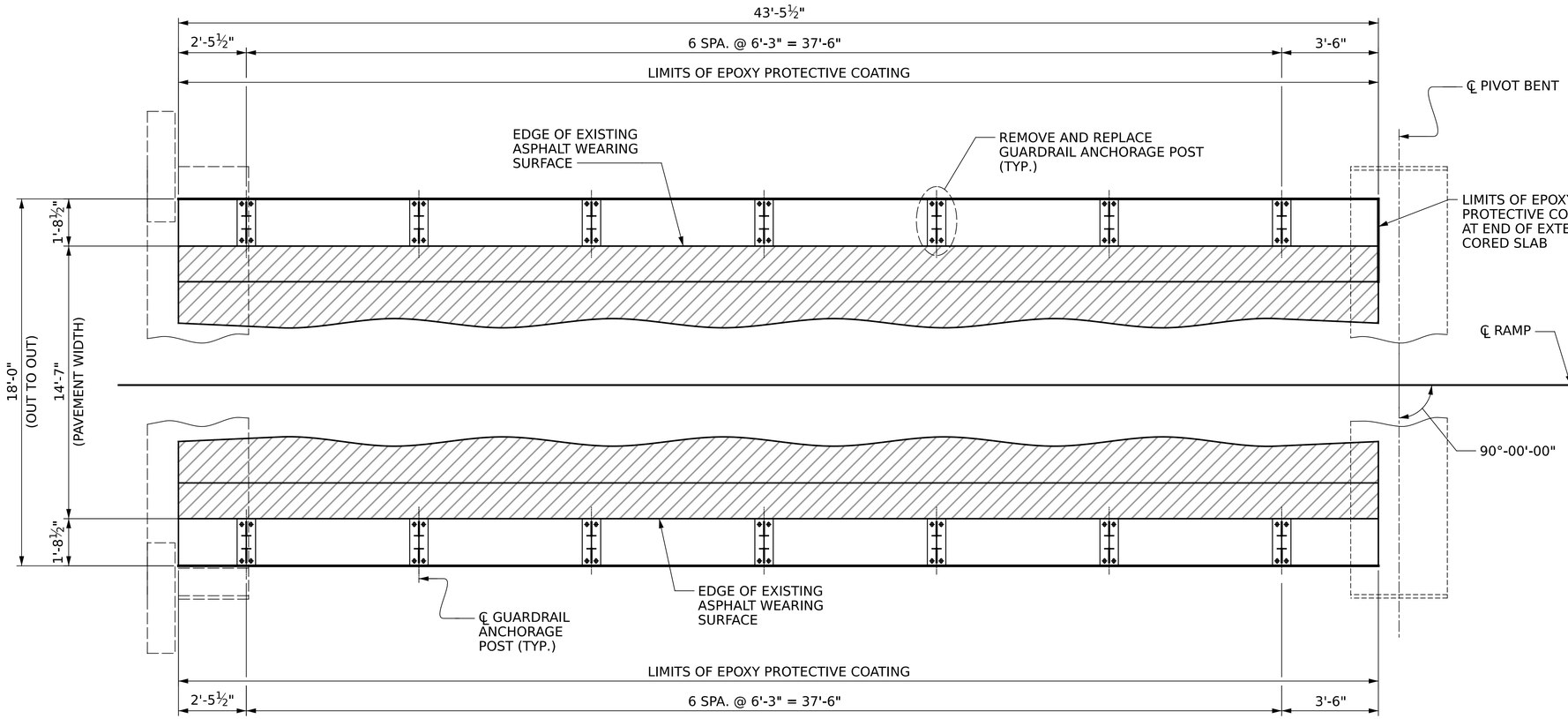
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S2-01

TOTAL SHEETS 49



TYPICAL SECTION



PLAN OF SPAN A

SUMMARY OF QUANTITIES	
STEEL BEAM GUARDRAIL	164.7 LIN. FT.
GUARDRAIL ANCHORAGE POSTS	14 EA.
EPOXY COATING	290 SQ. FT.

NOTES

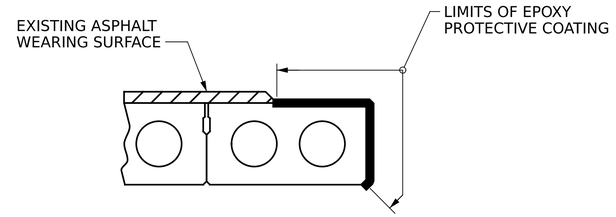
FOR GUARDRAIL DETAILS, SEE "GUARDRAIL DETAILS" SHEET.

THE EPOXY PROTECTIVE COATING SHALL NOT BE APPLIED TO THE AREA UNDER THE GUARDRAIL ANCHRORAGE POSTS.

FOR GUARDRAIL ANCHORAGE POSTS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

THE TERMINAL END SECTIONS AT THE END BENT AND THE TYPICAL END SHOES AT THE PIVOT BENT WILL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR "STEEL BEAM GUARDRAIL".



DETAIL "A"

(RIGHT EXTERIOR SHOWN. LEFT EXTERIOR SIMILAR.)
(GUARDRAIL ANCHORAGE POST NOT SHOWN FOR CLARITY)

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS
SPAN A

Signed by: John Yannaccone
4EF9BB9B087394...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

DRAWN BY : J. HARRIS/ J. MYA DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

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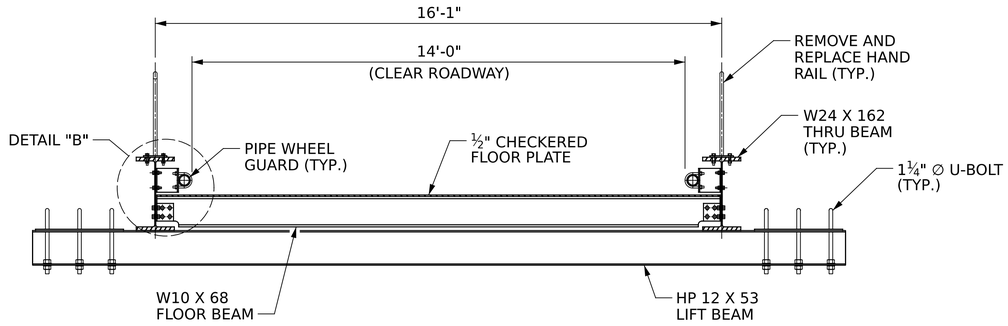
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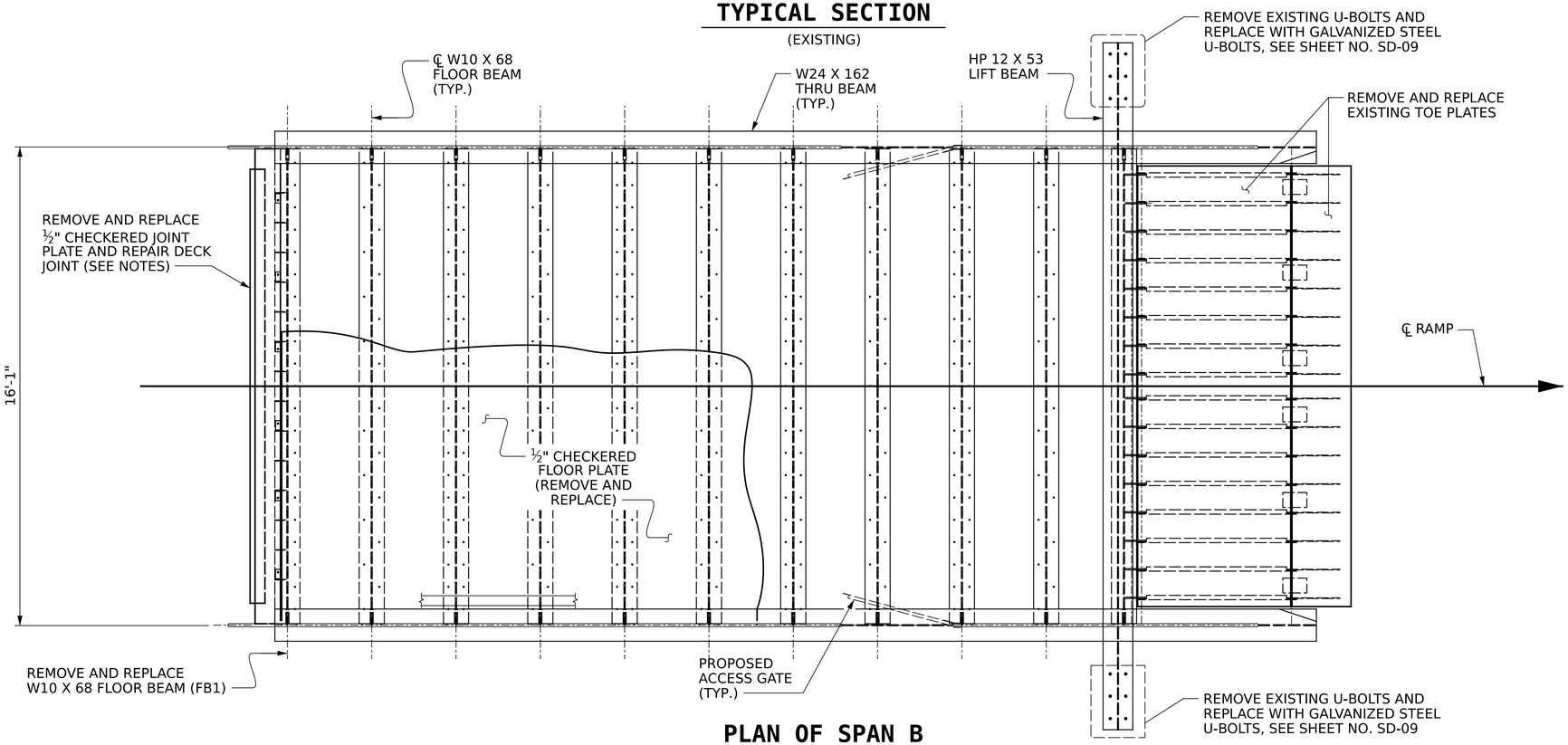
SHEET NO. S2-02

TOTAL SHEETS 48

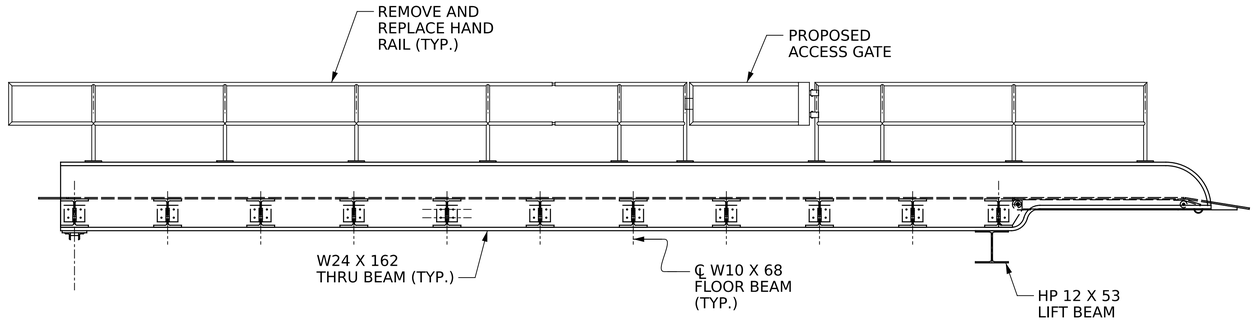


TYPICAL SECTION

(EXISTING)



PLAN OF SPAN B



ELEVATION

SUMMARY OF QUANTITIES

STRUCTURAL STEEL (CHECKERED FLOOR P'S)	9,390 LBS.
STRUCTURAL STEEL (FLOOR BEAMS)	1,085 LBS.
STRUCTURAL STEEL (TOE PLATES)	3,125 LBS.
BEAM CUT-OUT REPAIRS	0 LBS.
HANDRAIL	69.3 LIN. FT.

NOTES

THE CONTRACTOR SHALL REMOVE THE FLOOR PLATE AND COMPLETELY DISASSEMBLE THE RAMP ASSEMBLY INCLUDING THE THRU BEAMS, FLOOR BEAMS, LIFT BEAM, PIPE WHEEL GUARDS, METAL RAILING AND TOE PLATES. THE COMPONENTS SHALL BE TRANSPORTED TO A FACILITY FOR REPAIRS AND METALLIZATION. WHEN THE REPAIRS, METALLIZATION, FINISH COAT, AND ALL OTHER WORK HAVE BEEN COMPLETED, THE CONTRACTOR SHALL TRANSPORT THE COMPONENTS BACK TO THE JOB SITE AND REASSEMBLE THE RAMP AS SHOWN IN THE PLANS.

FOR THERMAL SPRAYED COATINGS (METALLIZATION), SEE SPECIAL PROVISIONS.

ALL METALLIZED SURFACES SHALL RECEIVE A FINISH COATING AS SPECIFIED IN THE SPECIAL PROVISION FOR EPOXY FINISH PAINT FOR METALLIZED STRUCTURES.

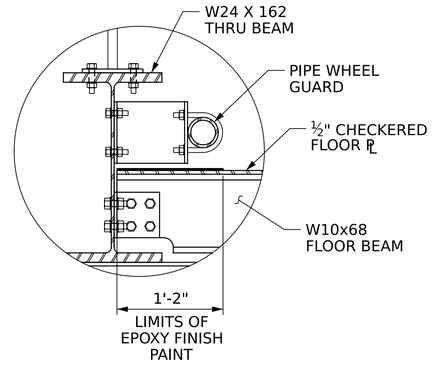
FOR FURTHER DIMENSIONS AND INFORMATION ON THE RAMP, SEE "LIFT RAMP DETAILS" SHEETS.

FOR SKID RESISTANT COATING, SEE SPECIAL PROVISIONS.

FOR REHABILITATION OF EXISTING LIFT RAMPS, SEE SPECIAL PROVISIONS.

REPAIR DECK JOINT AT THE PIVOT BENT IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEET NO. SD-03.

THE PROPOSED ACCESS GATES SHALL OPEN INWARD TOWARDS THE CENTERLINE OF THE RAMP. THE GATES SHALL HAVE A LATCH TO ENSURE THAT THE GATES ARE CLOSED SECURELY.



DETAIL "B"

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALIGH

PLAN OF SPANS
SPAN B

Signed by: John Yannaccone 4EF9BB9D6739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026

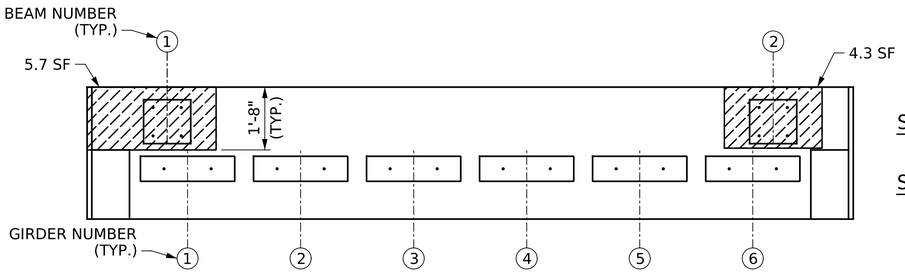
CHECKED BY : J. YANNACCONE DATE : 6/2026

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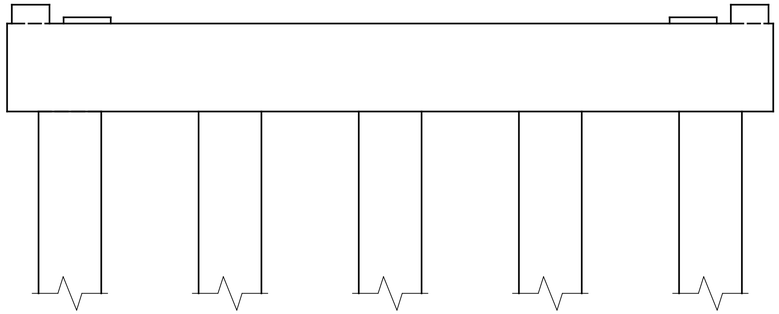
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1			3			TOTAL SHEETS
2			4			49

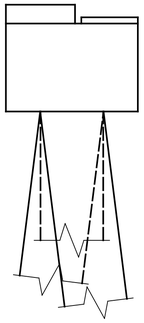


TOP OF CAP

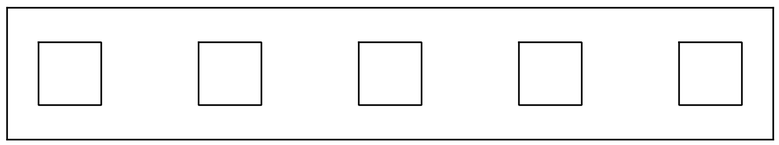


ELEVATION

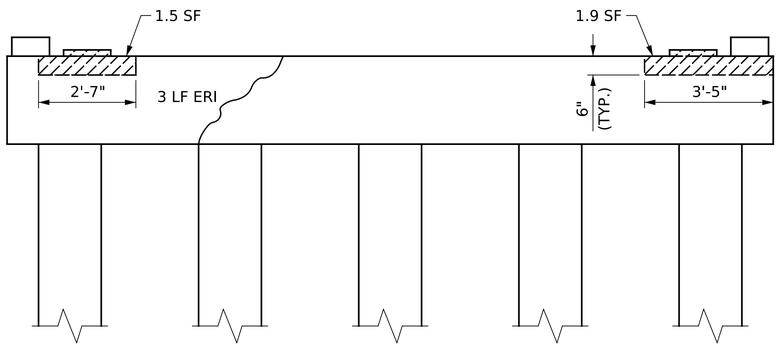
(SPAN A SIDE)



END VIEW

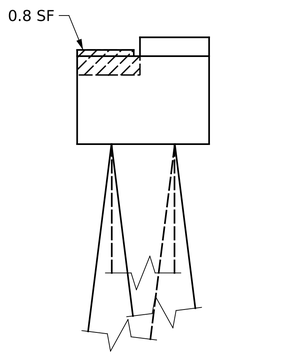


BOTTOM OF CAP



ELEVATION

(SPAN B SIDE)



END VIEW

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AT BENT 1, AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

REMOVE EXISTING PIVOT BEARINGS, AND CUT AND REMOVE INCLUDING THE ANCHOR BOLTS. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE EXISTING STEEL CAP REINFORCMENT. ANY DAMAGE SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT TO ADDITIONAL COST TO THE DEPARTMENT.

REMOVE EXISTING BEARING PLATES AND KEEPER PLATES. CUT EXISTING ANCHOR BOLTS AT LIMIT OF CONCRETE EXCAVATION.

FABRICATE, METALLIZE AND INSTALL NEW PIVOT BEARING ASSEMBLIES. INSTALL ADHESIVELY ANCHORED ANCHOR BOLTS. SEE SHEET 2 OF 2 FOR DETAILS.

ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR ANCHOR BOLTS, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

PAYMENT FOR THE FABRICATION, METALLIZATION AND INSTALLATION OF THE PIVOT BEARINGS WILL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "REHABILITATION OF EXISTING LIFT RAMP FOR STRUCTURE #470113".

ADHESIVELY ANCHORED ANCHOR BOLTS SHALL CONFORM TO SECTION 420-13 OF THE STANDARD SPECIFICATIONS. LEVEL 1 FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE ANCHOR BOLT IS 36 KIPS.

AS-BUILT REPAIR QUANTITY TABLE

REPAIRS - PIVOT BENT	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0	0		
COLUMN	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	14.2	5.6		
COLUMN	0	0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		3.0		
COLUMN		0		
EPOXY COATING		AREA SF		AREA SF
CAP		31		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CLEAR TO SAWCUT.
SEE REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

SHOTCRETE REPAIR

CONCRETE DEMOLITION

CONCRETE REPAIR (FORM & POUR)

EPOXY RESIN INJECTION

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

SHEET 1 OF 2

Signed by: John Yannaccone
4EF9BB90B0739424...
10/14/2026

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIR

PIVOT BENT
EXISTING CONDITIONS

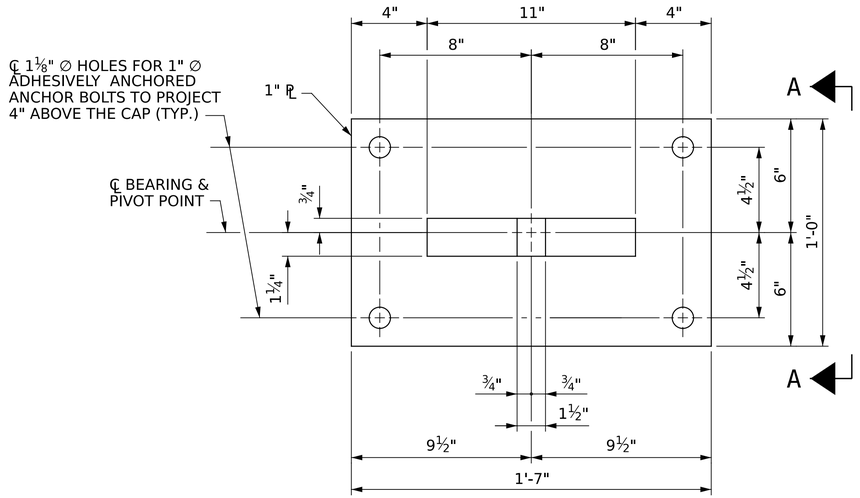
DRAWN BY : J. MYA DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

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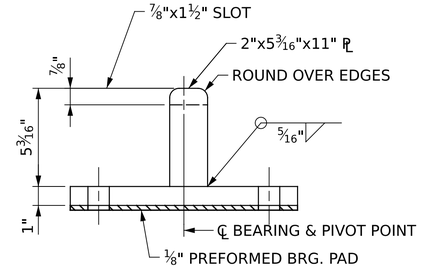
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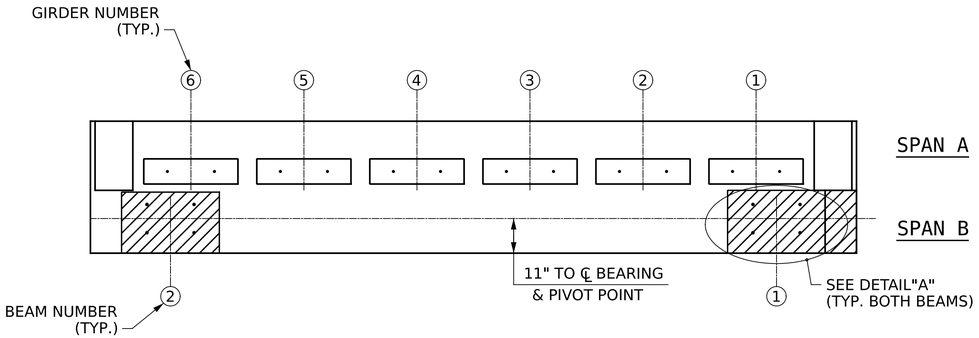
PLAN



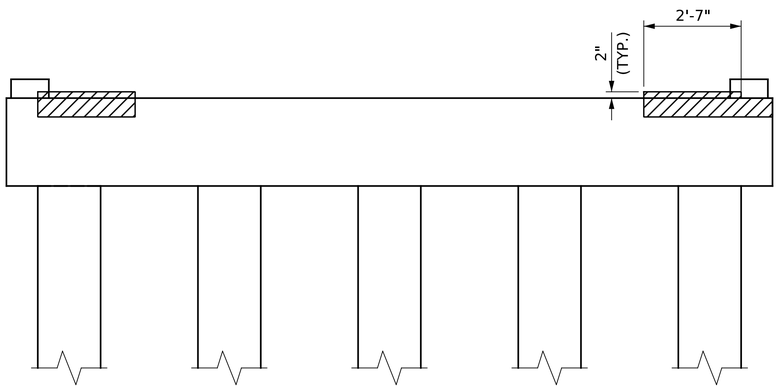
SECTION A-A

DETAIL"A"

(2 REQ'D)



TOP OF CAP



ELEVATION

(SPAN B SIDE)

- SHOTCRETE REPAIR
- CONCRETE DEMOLITION
- CONCRETE REPAIR (FORM & POUR)
- EPOXY RESIN INJECTION

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PIVOT BENT
PROPOSED CONDITIONS

Signed by: John Yannaccone
4EF9BB9D0B73424...
10/14/2026

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

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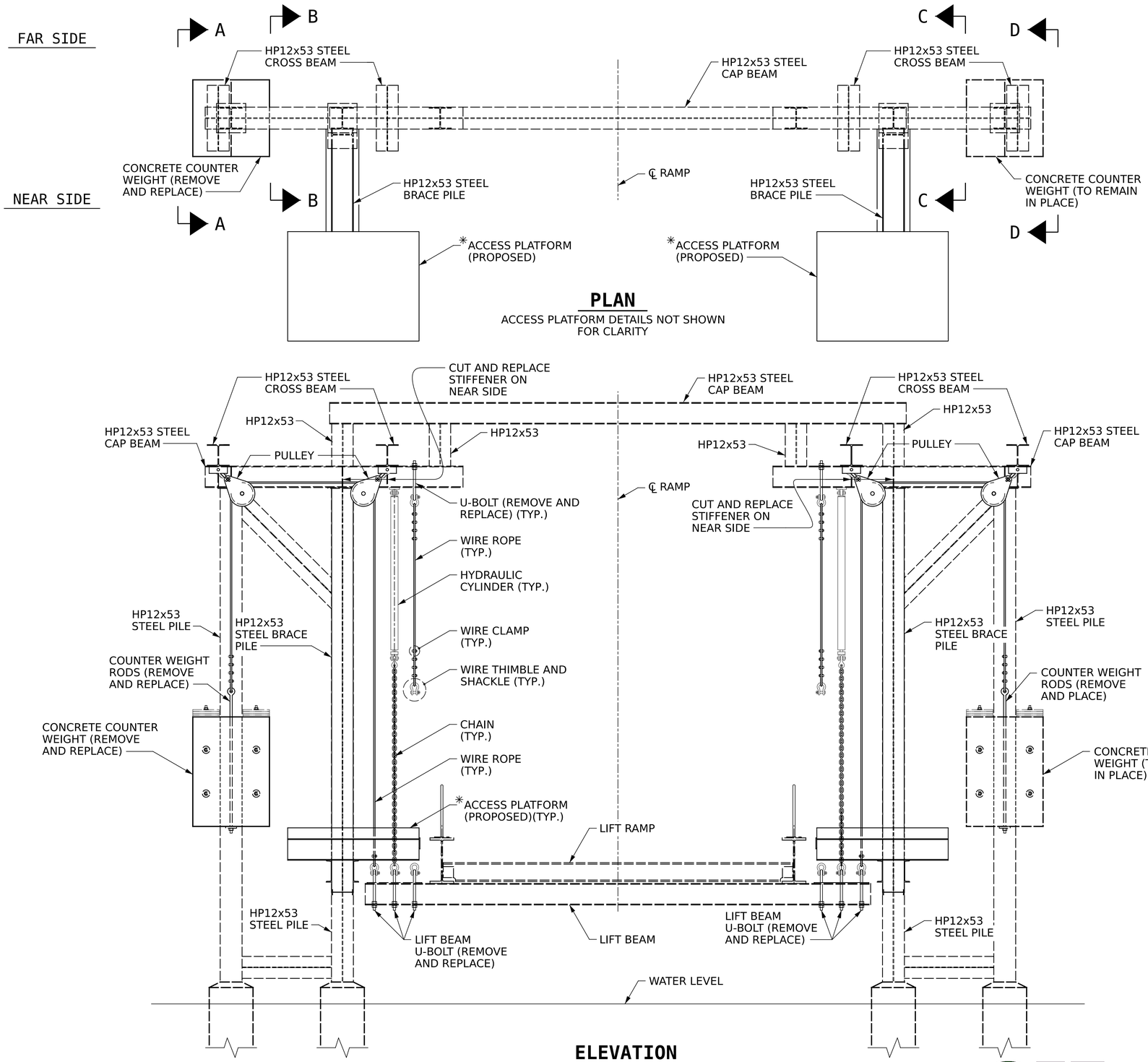
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SHEET NO. S2-05

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CHECKED BY : J. YANNACCONE DATE : 6/2026



NOTES

* FOR ACCESS PLATFORM CONFIGURATION AND DIMENSIONS, SEE "ACCESS PLATFORM DETAILS" SHEETS.

THE CONTRACTOR SHALL REMOVE AND RESET HYDRAULIC LINES, ELECTRICAL LINES, GREASE FITTING LINES AND OVERHEAD LIGHTING AS DIRECTED BY THE ENGINEER AND THE FERRY DIVISION. PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE PAY ITEM, "CLEANING AND REPAINTING OF LIFT BENT AT STRUCTURE #470113".

THE CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING SHEAVES IN THE PULLEYS. AFTER THEY HAVE BEEN CLEANED AND GALVANIZED, THE EXISTING SHEAVES SHALL BE DELIVERED TO A STORAGE AREA AS DIRECTED BY THE FERRY DIVISION. PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE PAY ITEM, “REHABILITATION OF EXISTING LIFT RAMP FOR STRUCTURE NO. 470113”.

AFTER THE STRUCTURAL STEEL HAS BEEN BLASTED AND PRIMED, THE STRUCTURAL STEEL SHALL BE INSPECTED FOR EXCESS SECTION LOSS. AREAS THAT EXHIBIT AN EXCESS OF 35% SECTION LOSS SHALL BE REVIEWED BY THE ENGINEER TO DETERMINE IF THE AREA OF SECTION LOSS SHOULD BE REPAIRED. STIFFENERS WITH LESS THAN ¼” THICKNESS REMAINING SHALL BE CUT OUT AND REPLACED EXCEPT AS NOTED IN THE PLANS.

FOR PILE JACKET DIMENSIONS AND REINFORCING, SEE "FRP PILE JACKET DETAILS" SHEET.

FOR STEEL REPAIRS, SEE SPECIAL PROVISIONS.

FOR FRP PILE JACKETS, SEE SPECIAL PROVISIONS.

FOR PAINTING EXISTING LIFT BENTS, SEE SPECIAL PROVISIONS.

FOR ACCESS PLATFORMS, SEE SPECIAL PROVISIONS.

FOR INSPECTION OF STEEL PILES AT THE INTERFACE WITH THE TOP OF THE EXISTING CONCRETE PILE JACKETS, SEE THE PILE REPAIR SPECIAL PROVISION.

SUMMARY OF QUANTITIES

STRUCTURAL STEEL (STIFFENERS)	35 LBS.
STRUCTURAL STEEL (PILE REPAIRS)	0 LBS.
COUNTER WEIGHT	1 EA.
COUNTER WEIGHT RODS	4 EA.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LIFT BENT DETAILS

Signed by: John Yannaccone 4EF9B89D8739424...
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE
10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

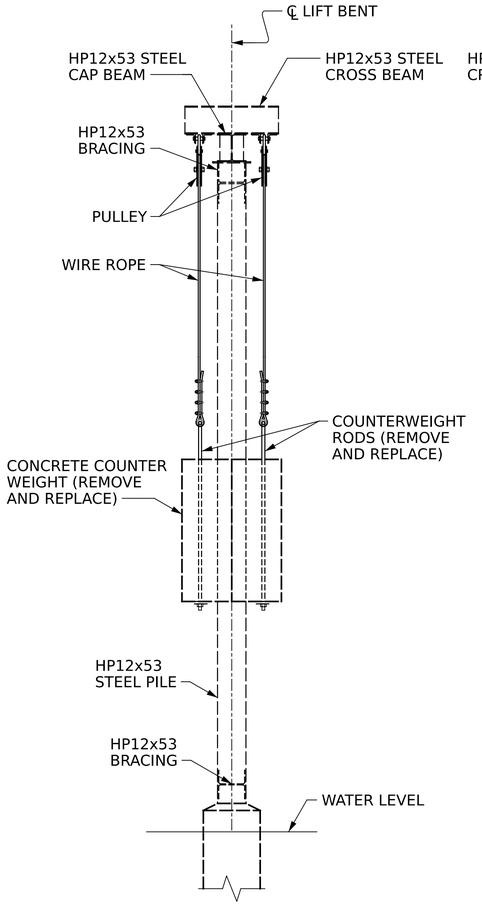
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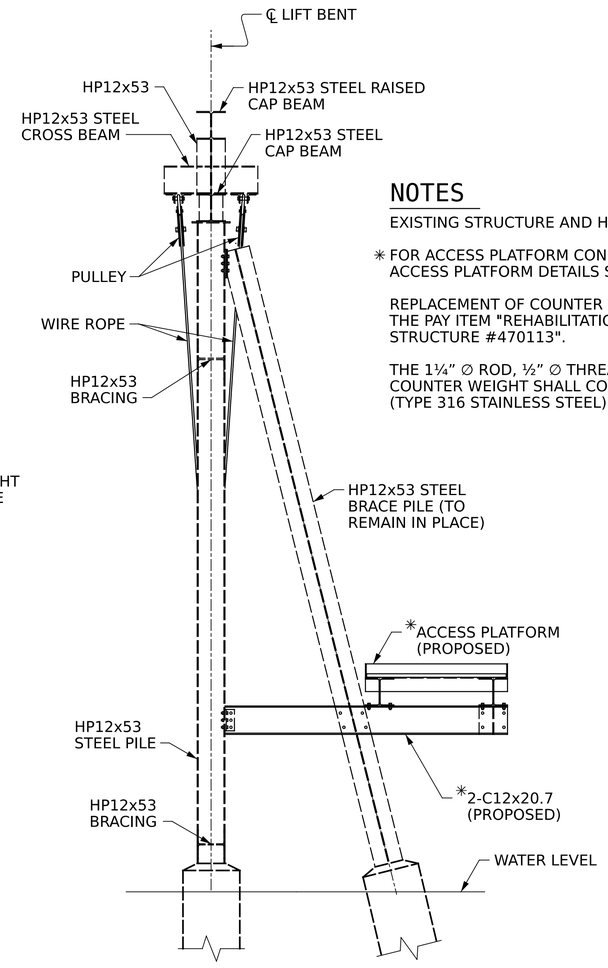
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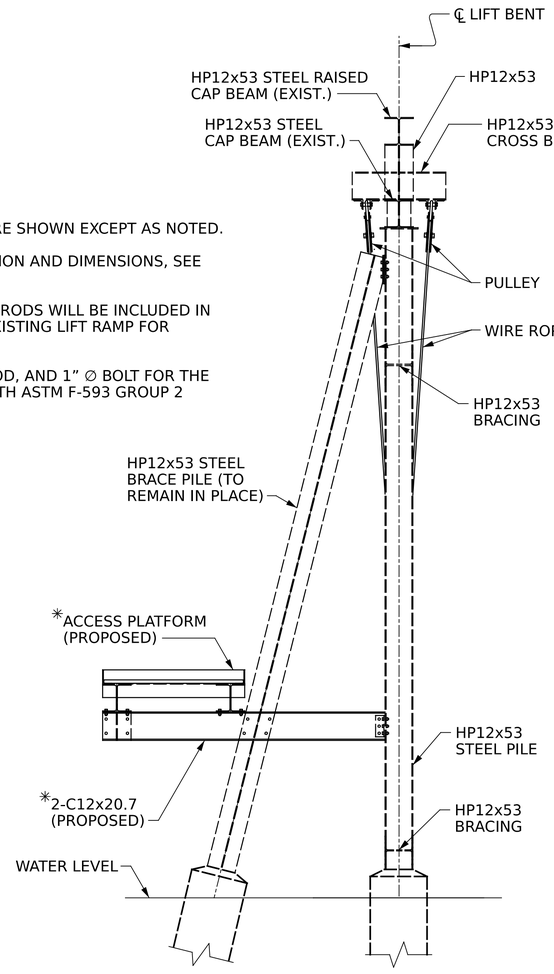
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TOTAL SHEETS 49



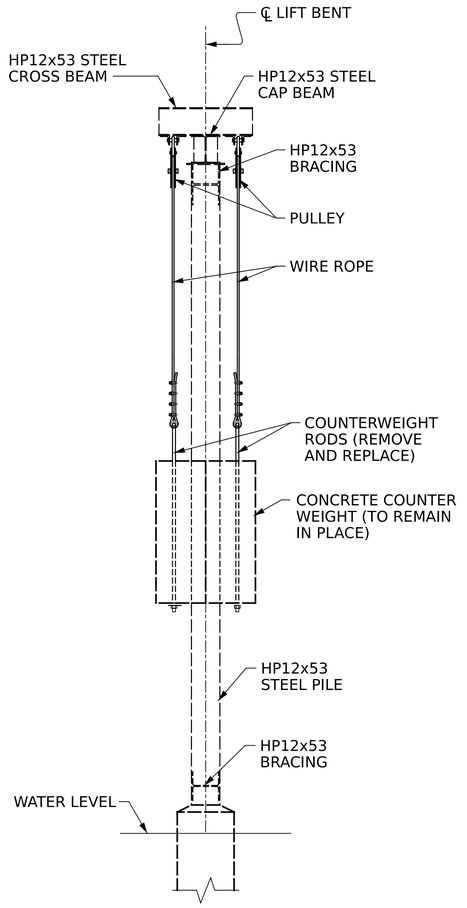
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

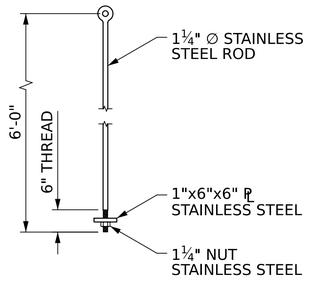
NOTES

EXISTING STRUCTURE AND HARDWARE SHOWN EXCEPT AS NOTED.

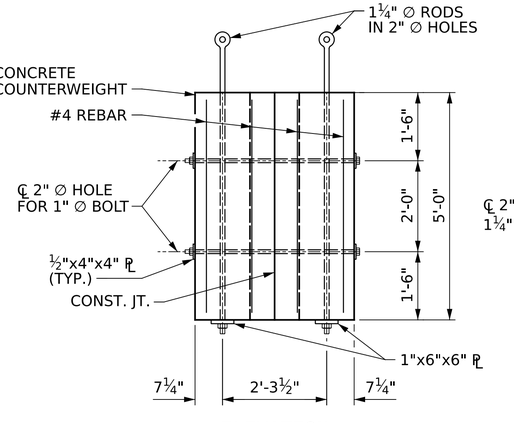
✳ FOR ACCESS PLATFORM CONFIGURATION AND DIMENSIONS, SEE ACCESS PLATFORM DETAILS SHEETS.

REPLACEMENT OF COUNTER WEIGHT RODS WILL BE INCLUDED IN THE PAY ITEM "REHABILITATION OF EXISTING LIFT RAMP FOR STRUCTURE #470113".

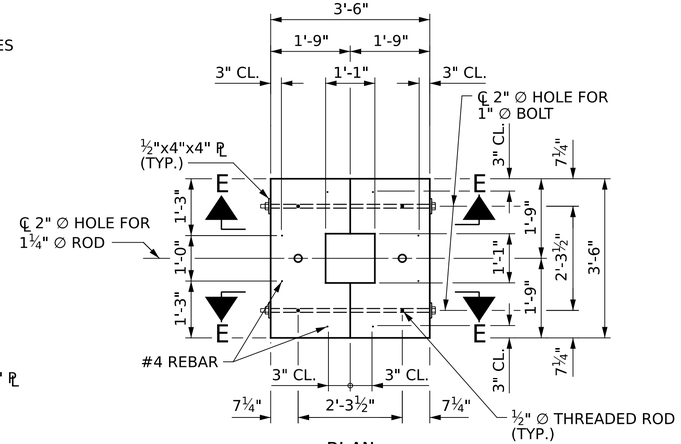
THE 1¼" ∅ ROD, ½" ∅ THREADED ROD, AND 1" ∅ BOLT FOR THE COUNTER WEIGHT SHALL COMPLY WITH ASTM F-593 GROUP 2 (TYPE 316 STAINLESS STEEL).



COUNTERWEIGHT ROD DETAIL

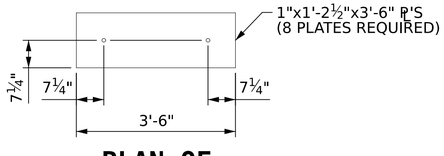


ELEVATION

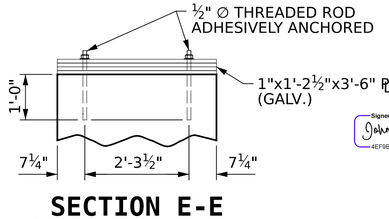


PLAN

COUNTERWEIGHT DETAIL



PLAN OF COUNTERWEIGHT PLATE



SECTION E-E

SUMMARY OF QUANTITIES (FOR ONE COUNTERWEIGHT)	
REINFORCING STEEL	25 LBS.
CLASS A CONCRETE	2.5 CU. YDS.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LIFT BENT DETAILS

Signed by: John Yannaccone
4EF9B9D8739434...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026

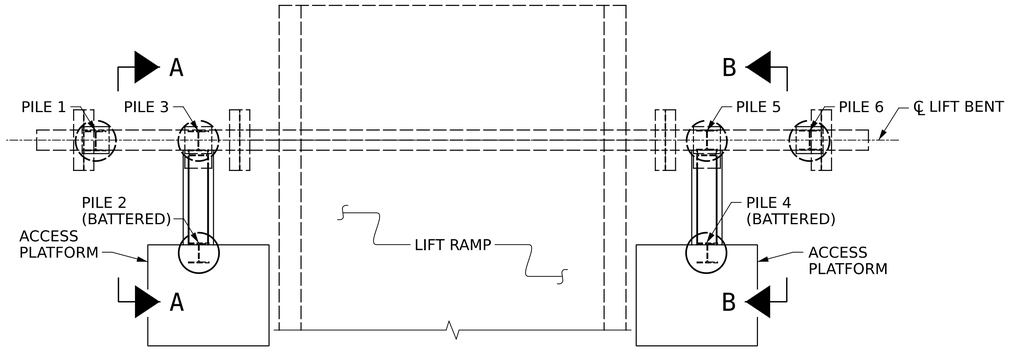
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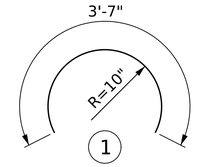
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PLAN

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✳D1	22	#6	STR	1'-3"	41
✳V3	8	#6	STR	11'-8"	140
✳V4	8	#6	STR	9'-8"	116
✳S1	44	#4	1	3'-7"	106
✳ EPOXY COATED REINFORCING STEEL (LBS.)					403
CLASS A CONCRETE (CU. YDS.)					2.6
FRP PILE JACKET (LIN. FT.)					22.0

PILE JACKET QUANTITY TABLE

DESCRIPTION	PILE NUMBER					
	1	2	3	4	5	6
APPROX. PAY LENGTH (FT)	-	12'-0"	-	10'-0"	-	-
"V" BAR MARK	-	V3	-	V4	-	-
NO. OF #6D1 DOWELS	-	12	-	10	-	-
NO. OF #4S1 STIRRUP PAIRS	-	12	-	10	-	-
CONCRETE FILL (CU, YDS.)	-	1.4	-	1.2	-	-

NOTES

✳✳ SOUNDINGS TAKEN FROM UNDERWATER INSPECTION(DATED 04/08/2024) ARE PROVIDED FOR INFORMATION ONLY. CONTRACTOR SHALL FIELD VERIFY MUDLINE ELEVATIONS AND NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PERFORMING ANY REPAIR WORK.

▲ CONTRACTOR SHALL WORK WITH THE ENGINEER AND NCDOT FERRY DIVISION STAFF TO MEASURE THE LOWEST POSITION OF THE STEEL RAMP STRUCTURE DURING OPERATIONS AND SHALL SET THE TOP OF THE PILE JACKETS TO AVOID INHIBITING OPERATION OF THE STEEL RAMP TO AVOID INTERFERENCE WITH THE LIFT BENT BRACING MEMBERS.

BENT DIMENSIONS ARE APPROXIMATE AND ARE TAKEN FROM EXISTING PLANS.

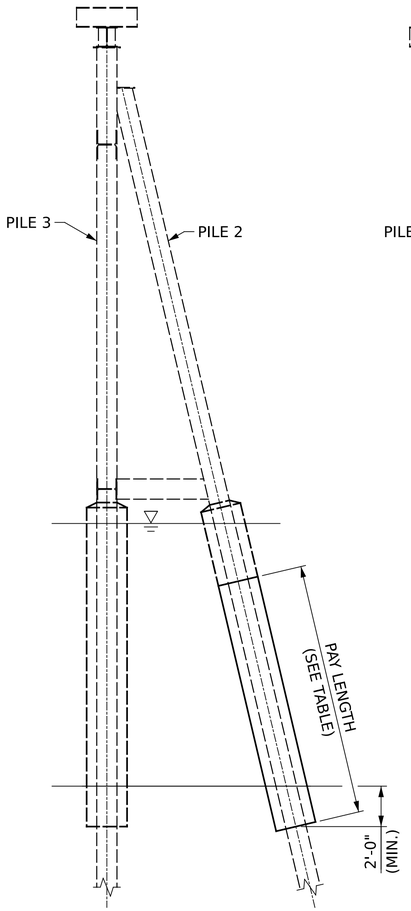
EXISTING PILES ARE HP12x53 STEEL PILES.

PILE JACKETS SHALL BE EMBEDDED A MINIMUM OF 2'-0" BELOW THE MUDLINE. SEE "FRP PILE JACKET DETAILS" SHEET.

FOR FRP PILE JACKETS, SEE SPECIAL PROVISIONS.

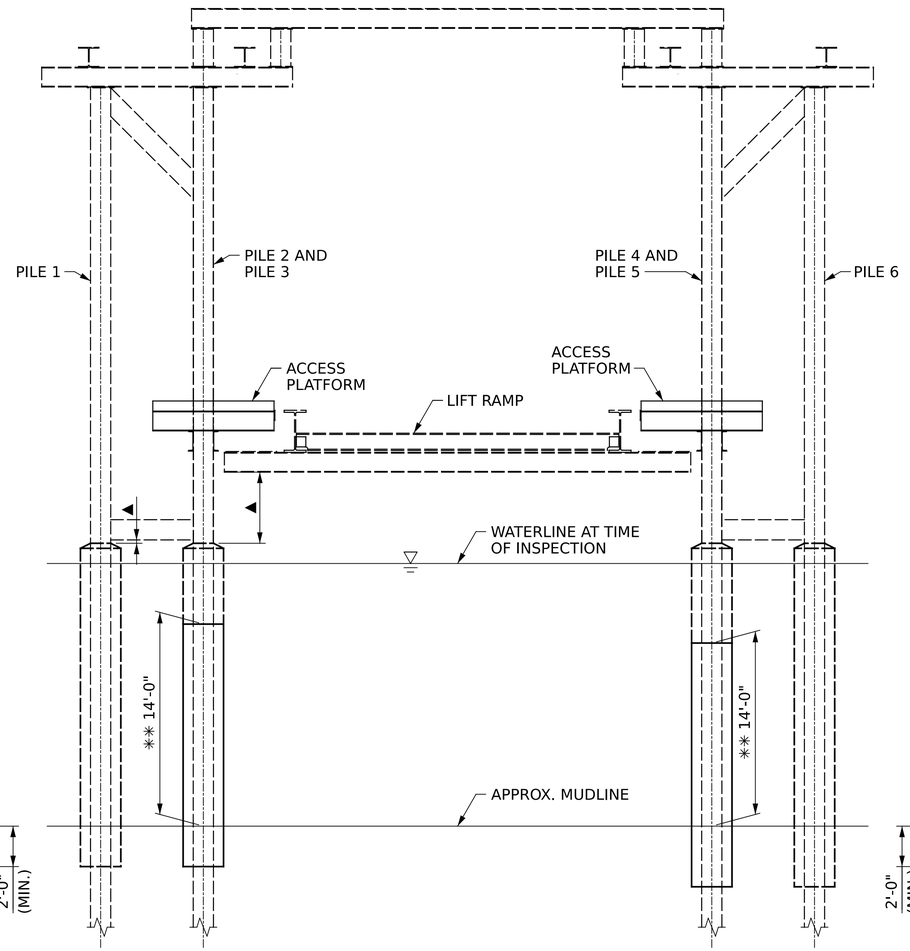
PILE JACKET LENGTH SHALL NOT BE LESS THAN 4'-0" REGARDLESS OF MUDLINE ELEVATION.

FOR REPAIR SEQUENCE AND REINFORCING BAR PLACEMENT, SEE "FRP PILE JACKET DETAILS" SHEET.

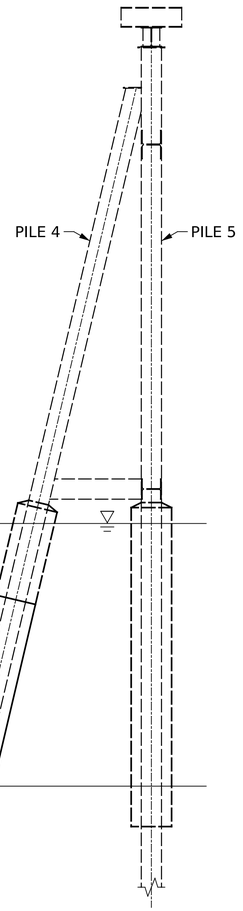


SECTION A-A

ACCESS PLATFORM ASSEMBLY
NOT SHOWN FOR CLARITY



ELEVATION



SECTION B-B

ACCESS PLATFORM ASSEMBLY
NOT SHOWN FOR CLARITY

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIR

LIFT BENT DETAILS

Signed by: John Yannaccone 4EF9BB9D8739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

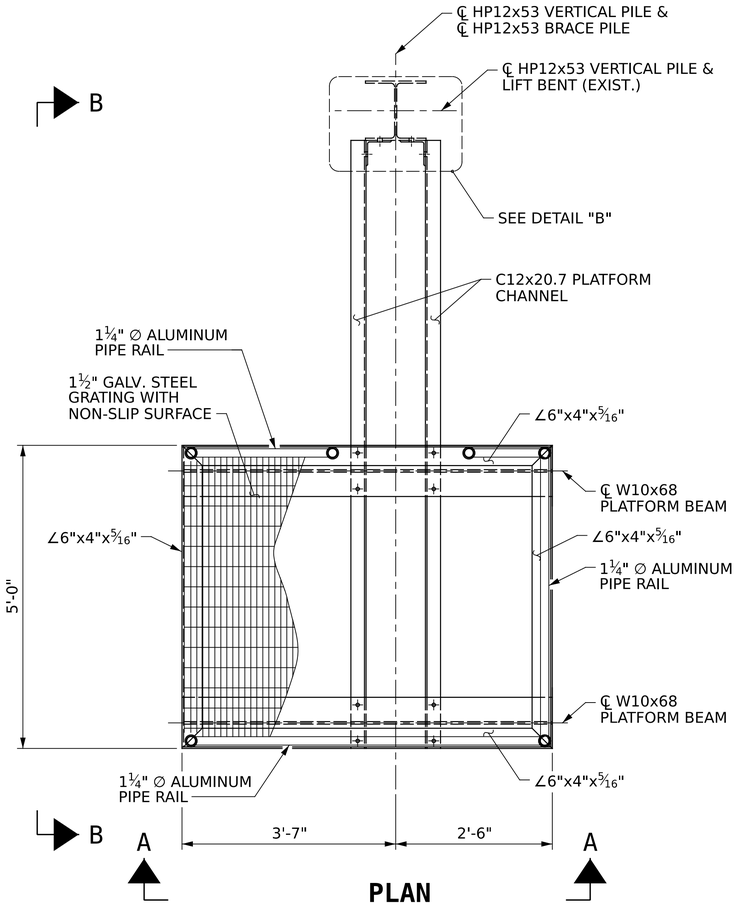
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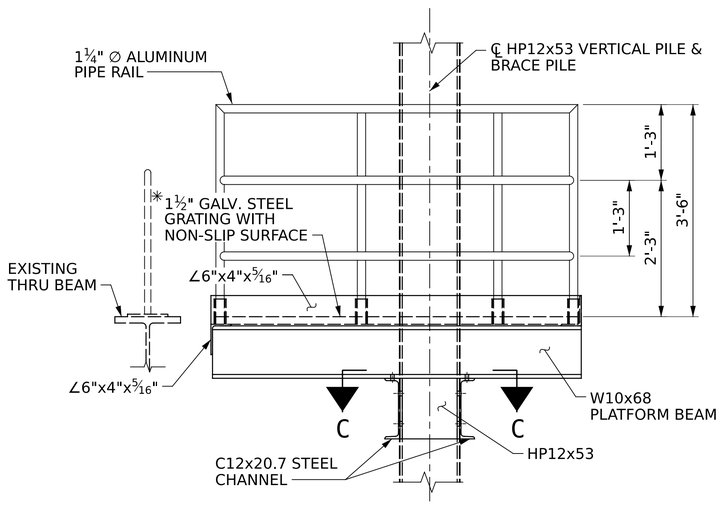
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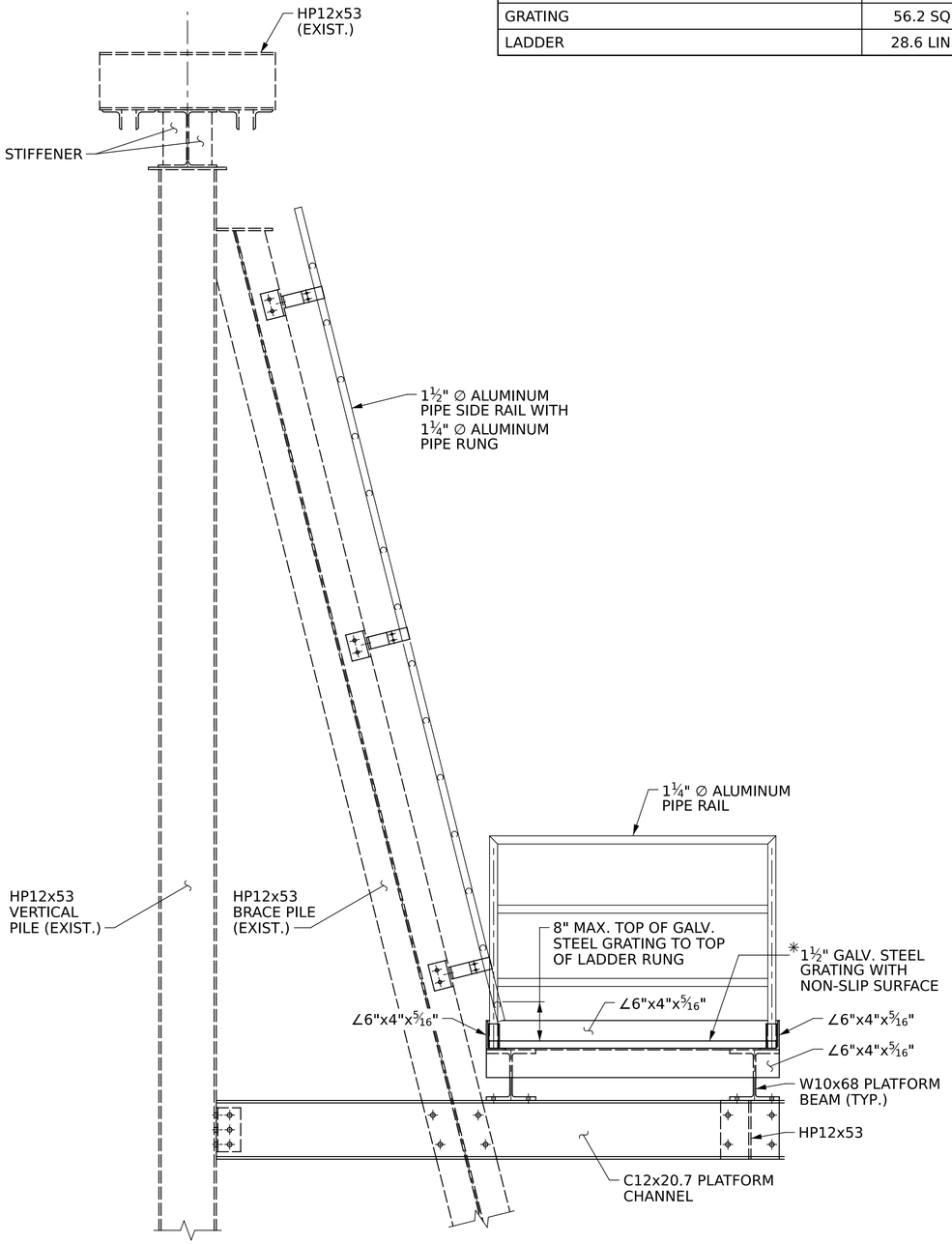
PLAN

LADDER AND BRACE PILE NOT SHOWN FOR CLARITY



VIEW A-A

LADDER NOT SHOWN FOR CLARITY



VIEW B-B

COUNTERWEIGHT NOT SHOWN FOR CLARITY

SUMMARY OF QUANTITIES	
STRUCTURAL STEEL (ACCESS PLATFORMS)	2,880 LBS.
HANDRAIL	28.4 LIN. FT.
GRATING	56.2 SQ. FT.
LADDER	28.6 LIN. FT.

NOTES

ACCESS PLATFORM DETAILS ARE SHOWN FOR PLATFORM LOCATED TO THE RIGHT OF THE LIFT RAMP. ACCESS PLATFORM TO THE LEFT OF THE LIFT RAMP IS SIMILAR BUT OPPOSITE HAND.

ALL STRUCTURAL STEEL FOR THE ACCESS PLATFORMS SHALL BE AASHTO M270 GRADE 50 AND METALLIZED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

ALL WELDING AND FABRICATION SHALL BE COMPLETE BEFORE SURFACE PREPARATION BEGINS.

ALL METALLIZED SURFACES SHALL RECEIVE A SEAL COATING AS SPECIFIED IN TABLE 2 OF THE DEPARTMENT'S THERMAL SPRAYED COATINGS (METALLIZATION) PROGRAM. FOR THERMAL SPRAYED COATINGS, SEE SPECIAL PROVISIONS.

CONNECTION OF THE PLATFORM GRATING TO THE W10X68 STEEL BEAMS NOT SHOWN. CONNECTION SHALL BE PER THE GRATING MANUFACTURER'S SPECIFICATIONS AND SHALL BE APPROVED BY THE ENGINEER.

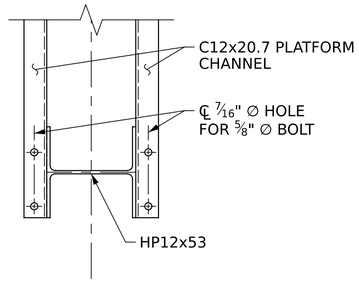
STEEL GRATING WITH NON-SLIP SURFACE SHALL BE 1½" X ⅛" 19-W-4 GALVANIZED STEEL GRATING OR APPROVED EQUAL.

AFTER CLEANING AND PAINTING OF THE LIFT BENT, THE CONTRACTOR SHALL COORDINATE WITH THE FERRY DIVISION AND THE ENGINEER WHEN REATTACHING THE HYDRAULIC, ELECTRICAL AND GREASE LINES TO THE LIFT BENT. THE LINES SHALL BE LOCATED SO AS NOT TO CAUSE A TRIP HAZARD WHILE ACCESSING OR USING THE ACCESS PLATFORM. GREASE FITTINGS SHALL BE INSTALLED AS DIRECTED BY THE FERRY DIVISION AND THE ENGINEER IN ORDER TO FACILITATE ACCESS FOR ROUTINE MAINTENANCE.

FOR ACCESS PLATFORMS, SEE SPECIAL PROVISIONS.

✳ THE CONTRACTOR SHALL INSTALL THE ACCESS PLATFORM ASSEMBLY SUCH THAT THE TOP OF THE STEEL GRATING MATCHES THE TOP OF THE TOP FLANGE OF THE LIFT RAMP THRU BEAM WHEN THE LIFT RAMP IS IN A LEVEL POSITION. FOR FIELD MEASURING, SEE SPECIAL PROVISIONS.

FOR DETAIL "A" AND DETAIL "B", SEE SHEET 2 OF 3.



SECTION C-C

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

SHEET 1 OF 3

Signed by: John Yannaccone
4EF9BB9D873042A...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ACCESS PLATFORM DETAILS

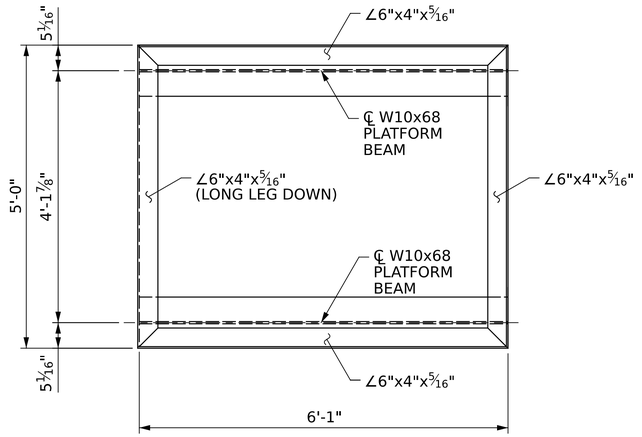
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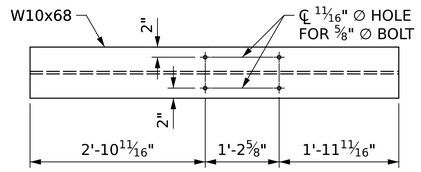
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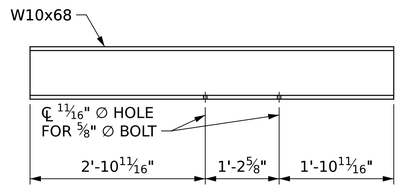


PLATFORM FRAME PLAN

ANGLES LONG LEG UP UNLESS NOTED

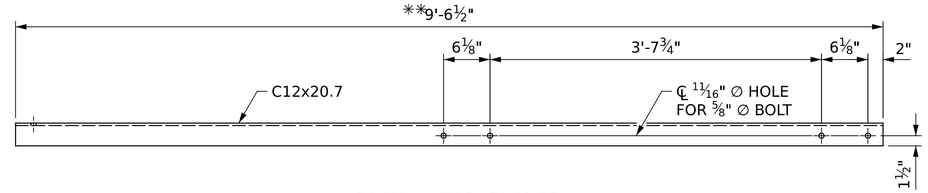


PLAN - BOTTOM FLANGE

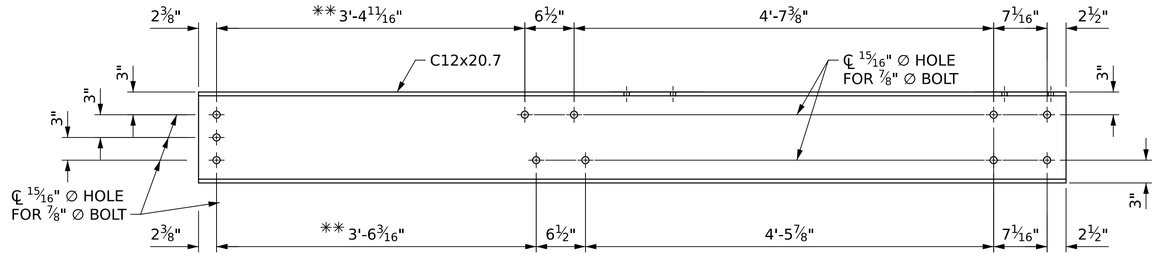


ELEVATION

PLATFORM BEAM



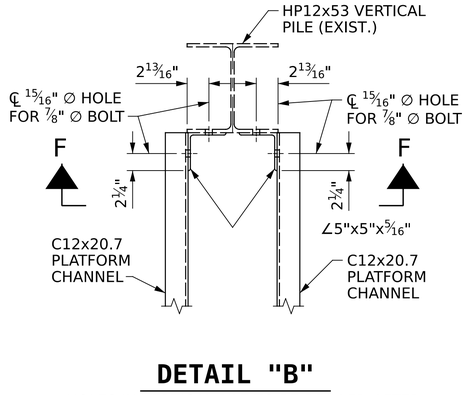
PLAN - TOP FLANGE



ELEVATION

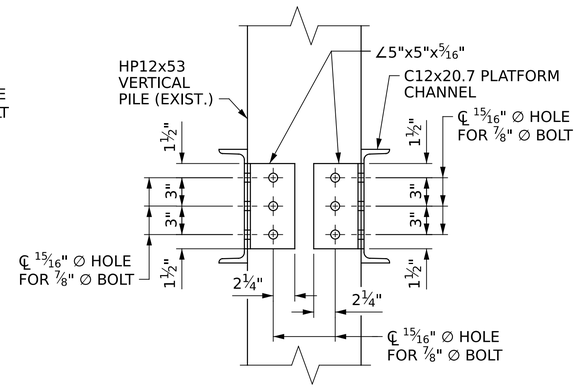
PLATFORM CHANNEL

** FIELD VERIFY DIMENSIONS BEFORE FABRICATION OF CHANNEL



DETAIL "B"

* HOLES IN VERTICAL PILE TO BE DRILLED AFTER PLATFORM CHANNEL LOCATION IS DETERMINED



SECTION F-F

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ACCESS PLATFORM DETAILS

Signed by: John Yannaccone 4EF9BB9DB739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

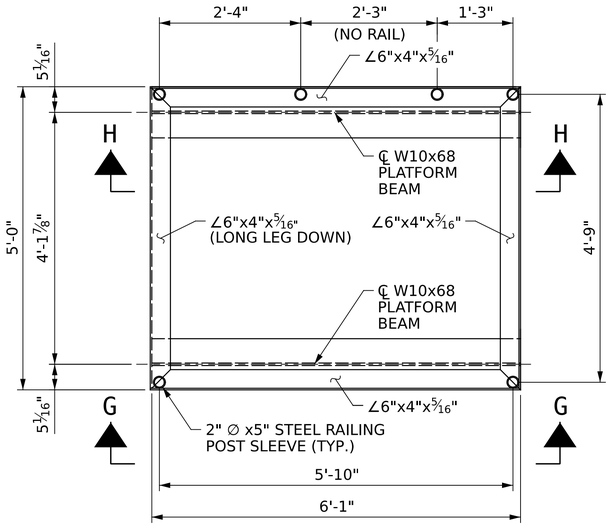
DRAWN BY : J. HARRIS DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

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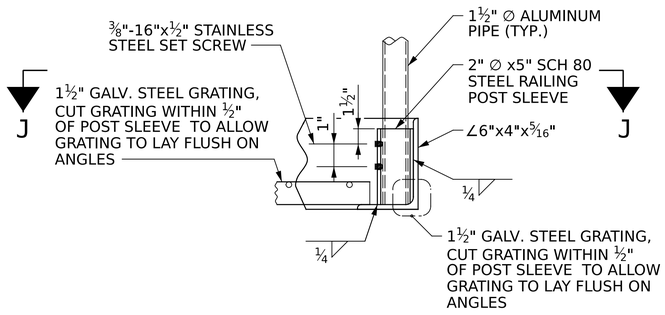
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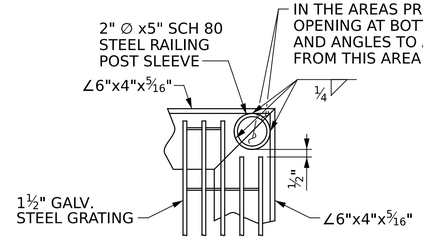


PLATFORM RAIL LAYOUT

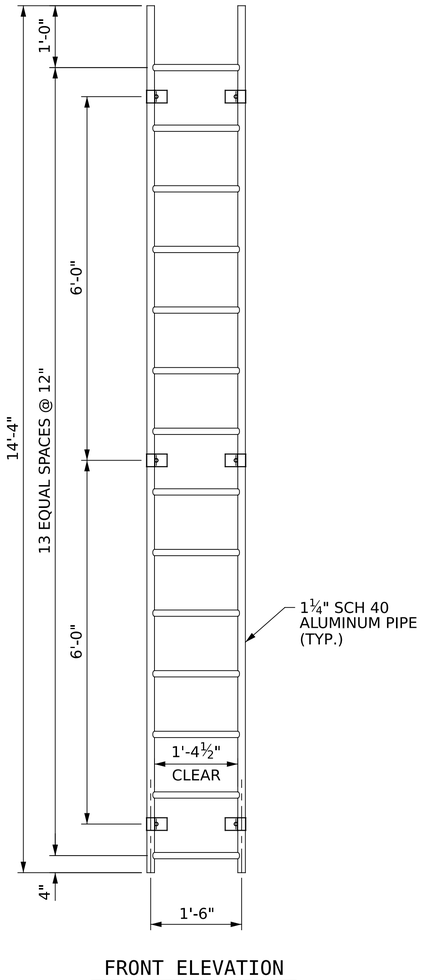
ANGLES LONG LEG UP UNLESS NOTED



DETAIL "C"

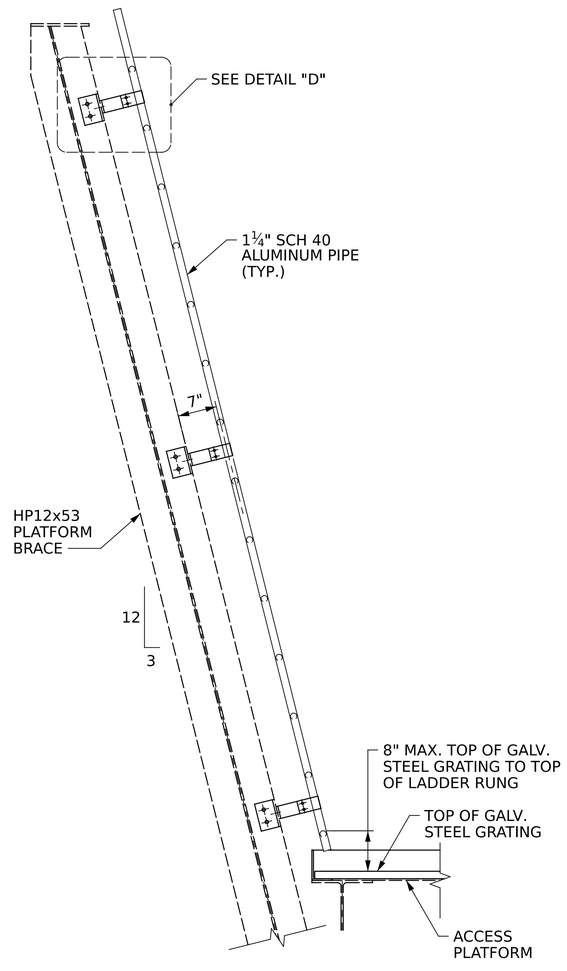


SECTION J-J



FRONT ELEVATION

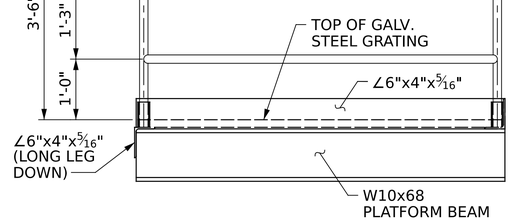
(HP12x53 PLATFORM BRACE AND ACCESS PLATFORN NOT SHOWN FOR CLARITY)



SIDE ELEVATION

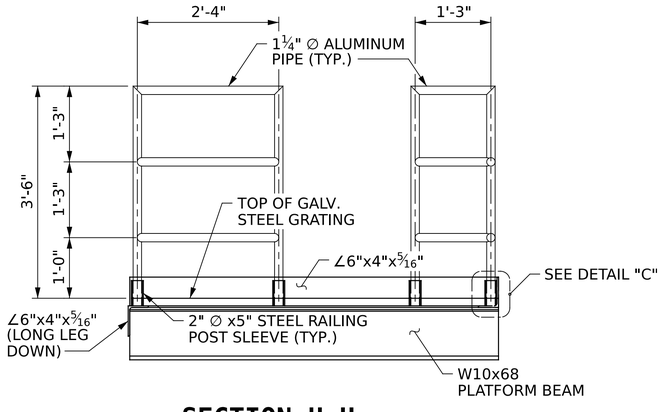
ACCESS LADDER

ACCESS LADDER DETAILS SHOW MINIMUM REQUIREMENTS.
ALTERNATIVE LADDER AND BRACKET DETAILS PROPOSED BY THE
CONTRACTOR ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.



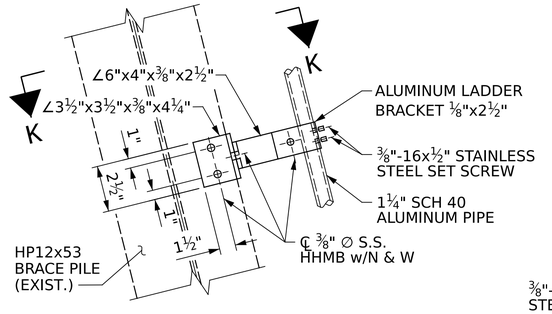
VIEW G-G

ANGLES LONG LEG UP UNLESS NOTED

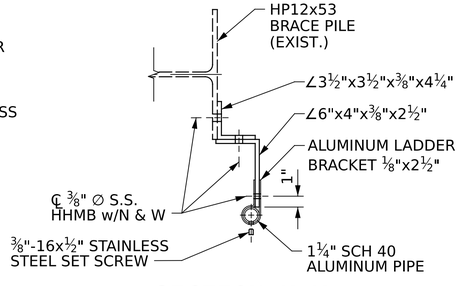


SECTION H-H

ANGLES LONG LEG UP UNLESS NOTED



DETAIL "D"



SECTION K-K

Signed by: John Yannaccone 4EF9BB9DB739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470113

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ACCESS PLATFORM DETAILS

DRAWN BY : J. HARRIS DATE : 6/2026

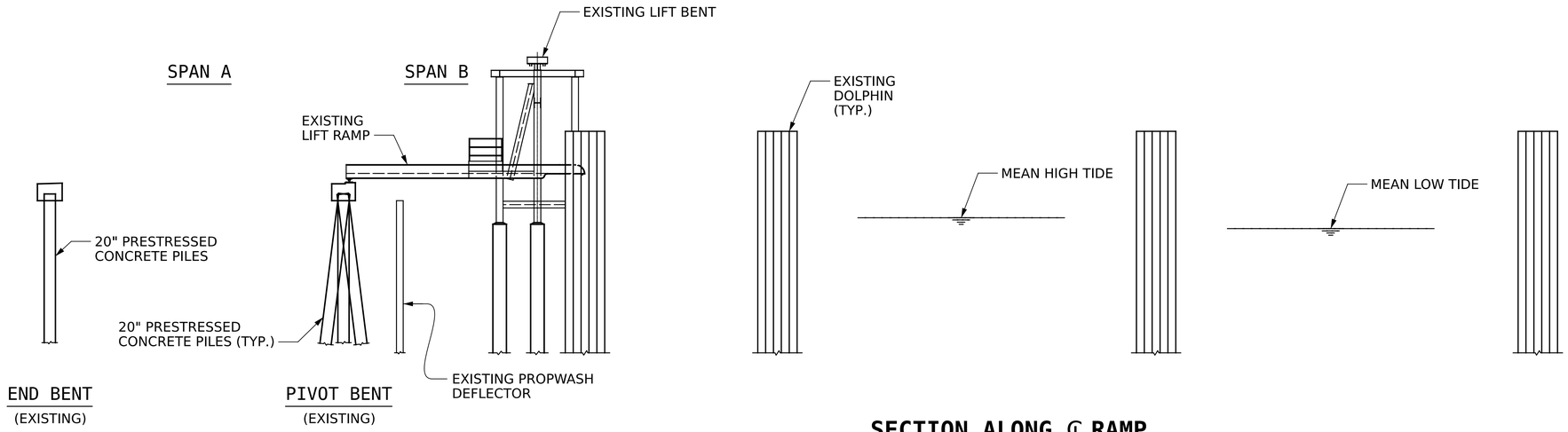
CHECKED BY : J. YANNACCONE DATE : 6/2026

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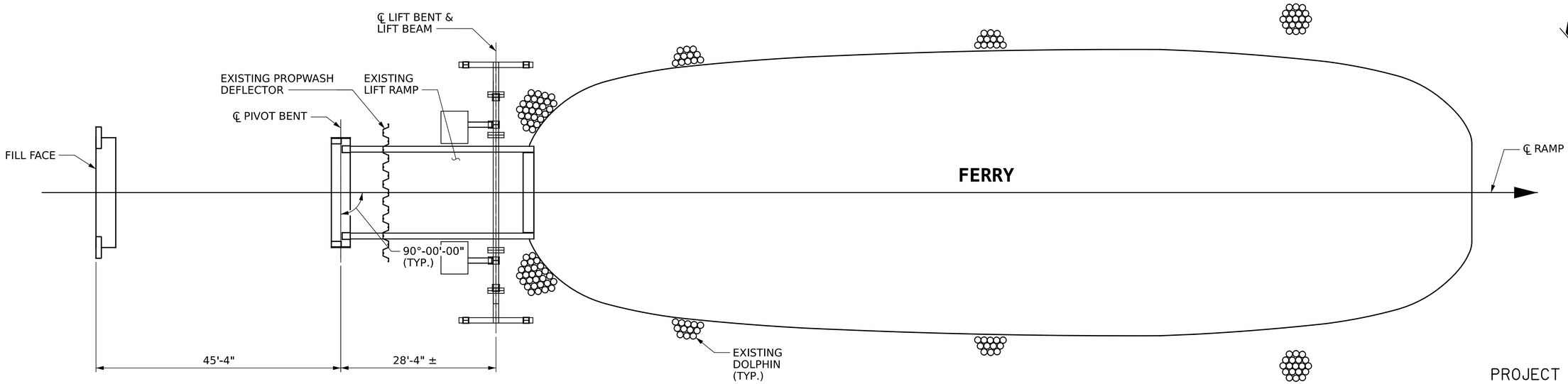
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SECTION ALONG ℄ RAMP



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 04/20/2026.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

SCOPE OF WORK

- CLEAN, REPAIR AND PAINT EXISTING STRUCTURAL STEEL BEAMS AND PILES ON LIFT BENT.
- REPLACE COUNTERWEIGHT RODS.
- DISASSEMBLE EXISTING LIFT RAMP. CLEAN AND METALLIZE RAMP COMPONENTS. REPLACE DETERIORATED FLOOR BEAMS AND REASSEMBLE LIFT RAMP.
- PERFORM BEAM CUT-OUT REPAIRS ON THRU BEAM.
- CLEAN AND METALLIZE EXISTING STEEL BEARINGS.
- REPLACE CORRODED CORRUGATED GUARDRAIL AND GUARDRAIL ANCHORAGE POSTS ON CORED SLAB UNITS.
- APPLY EPOXY COATING TO TOP AND SIDES OF EXTERIOR CORED SLAB UNITS.
- REPLACE HANDRAIL ON LIFT SPAN.
- REMOVE DEBRIS FROM TOP OF EXISTING BENT CAPS AND APPLY EPOXY COATING.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470116

Signed by: John Yannaccone
4EF9BB90B730424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR FERRY RAMP ON NC 12 AT THE OCRACOKE-HATTERAS SOUTHDOCK FERRY TERMINAL

DRAWN BY : J. MYA DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

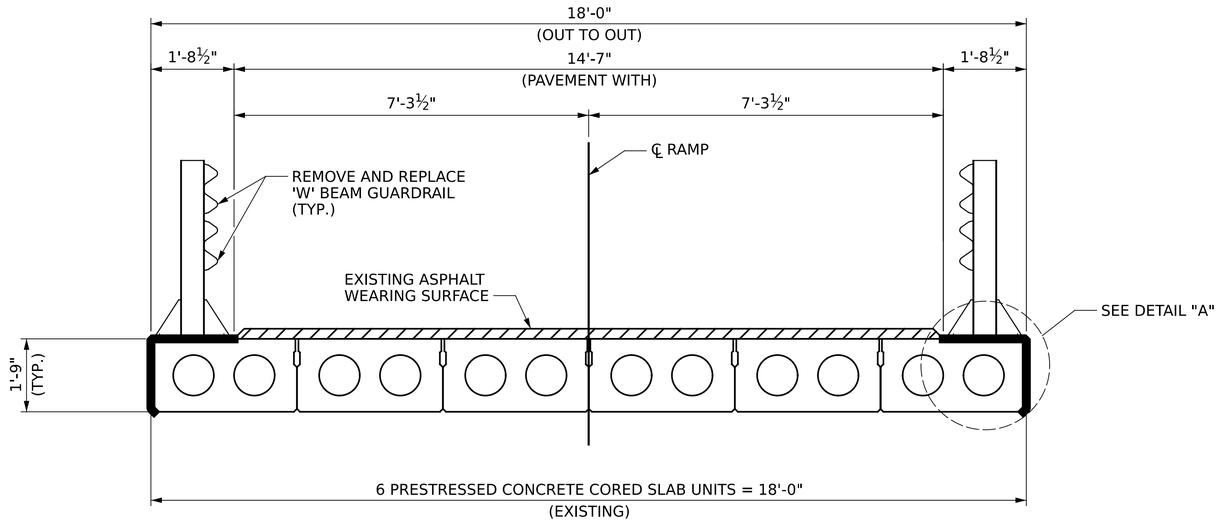
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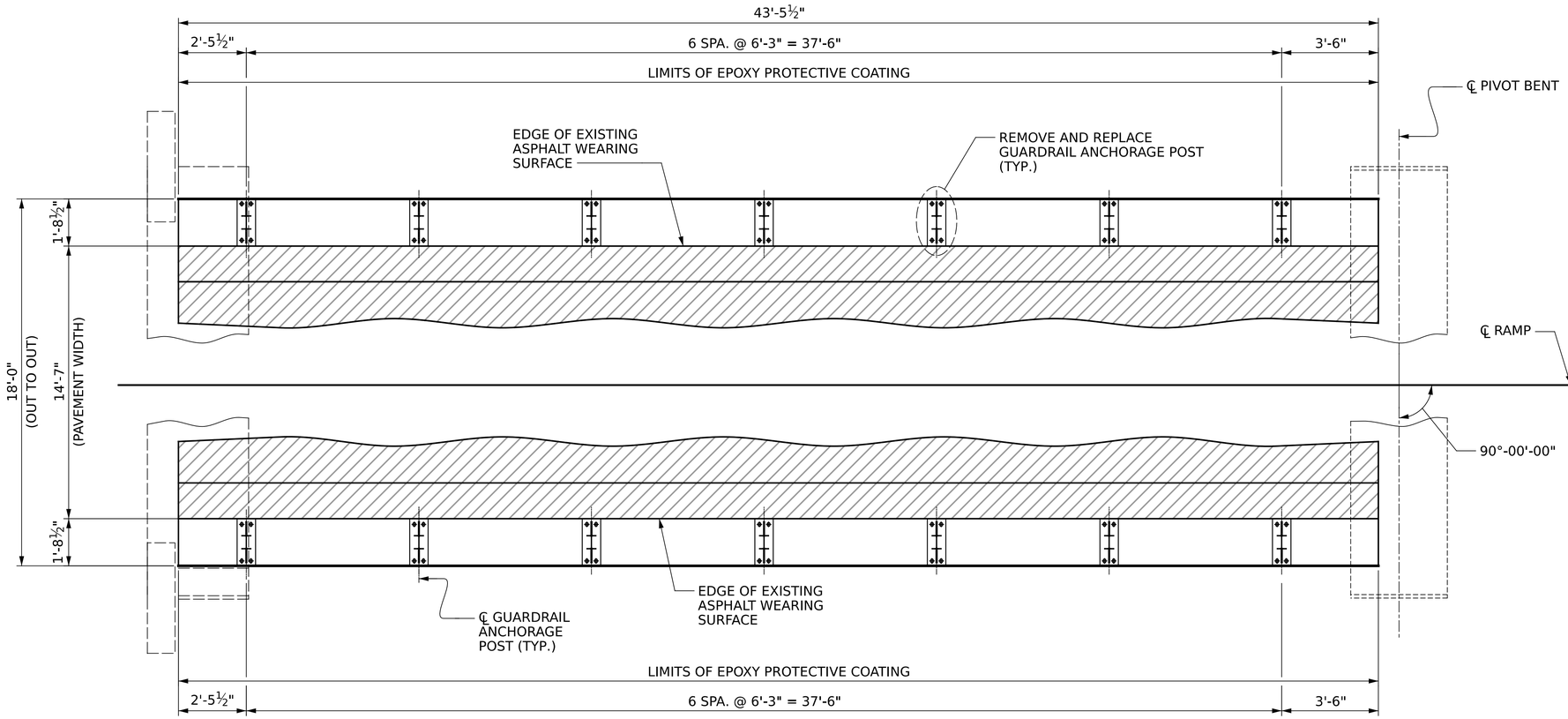
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SHEET NO. S3-01
TOTAL SHEETS 49



TYPICAL SECTION



PLAN OF SPAN A

SUMMARY OF QUANTITIES	
STEEL BEAM GUARDRAIL	164.7 LIN. FT.
GUARDRAIL ANCHORAGE POSTS	14 EA.
EPOXY COATING	285 SQ. FT.

NOTES

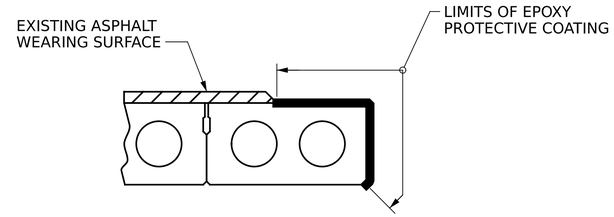
FOR GUARDRAIL DETAILS, SEE "GUARDRAIL DETAILS" SHEET.

THE EPOXY PROTECTIVE COATING SHALL NOT BE APPLIED TO THE AREA UNDER THE GUARDRAIL ANCHORAGE POSTS.

FOR GUARDRAIL ANCHORAGE POSTS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

THE TERMINAL END SECTIONS AT THE END BENT AND THE TYPICAL END SHOES AT THE PIVOT BENT WILL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR "STEEL BEAM GUARDRAIL".



DETAIL "A"

(RIGHT EXTERIOR SHOWN. LEFT EXTERIOR SIMILAR.)
(GUARDRAIL ANCHORAGE POST NOT SHOWN FOR CLARITY)

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470116

SHEET 1 OF 2

Signed by: John Yannaccone 4EF9BB9DB739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS
SPAN A

DRAWN BY : J. HARRIS/ J. MYA DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

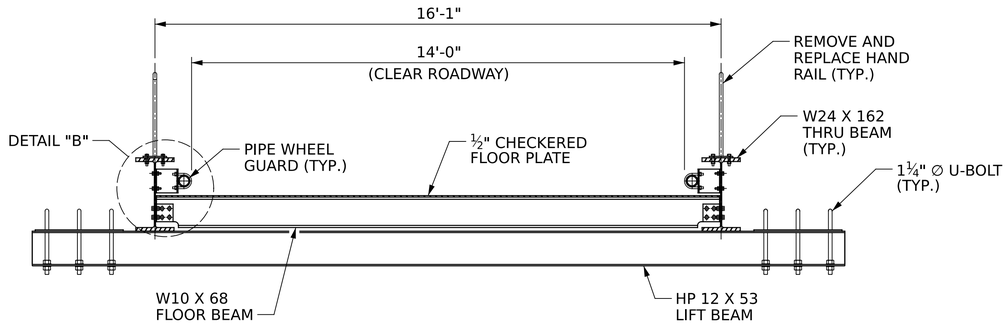
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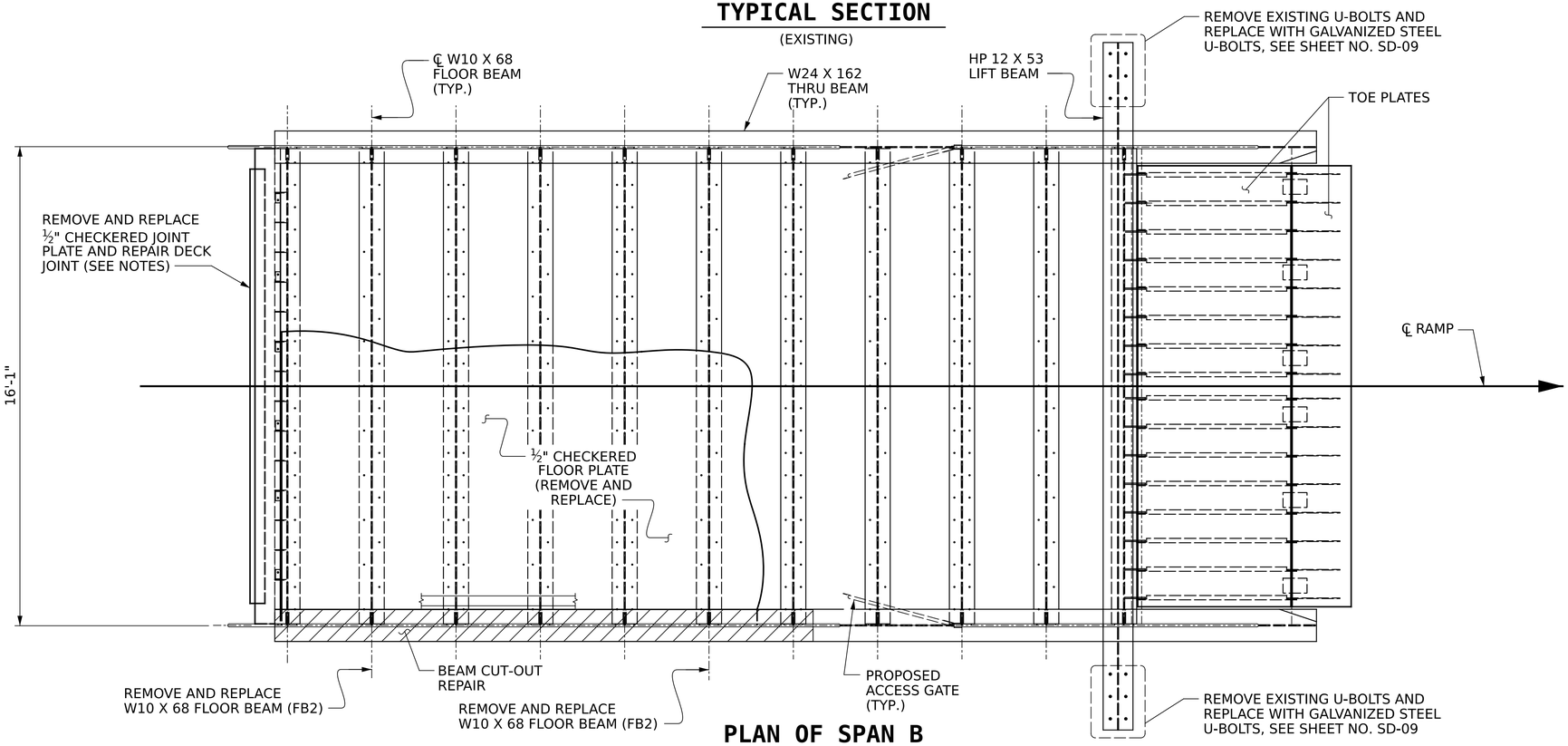
SHEET NO. S3-02

TOTAL SHEETS 49

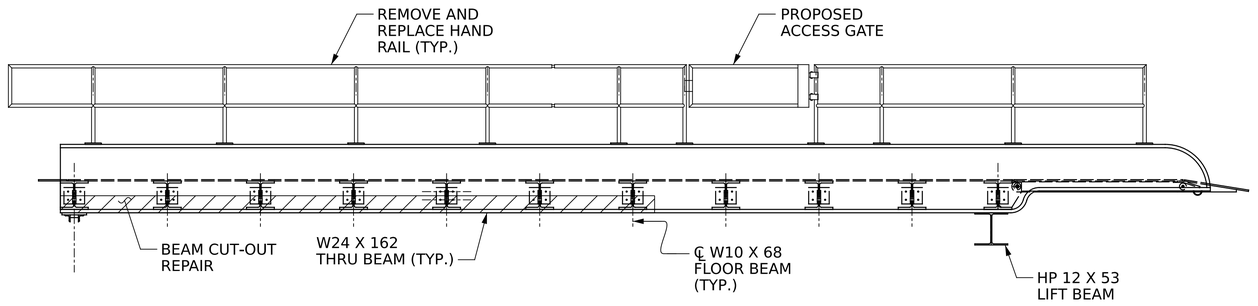


TYPICAL SECTION

(EXISTING)



PLAN OF SPAN B



SPAN B - ELEVATION

SUMMARY OF QUANTITIES

STRUCTURAL STEEL (CHECKERED FLOOR P℄'S)	9,390 LBS.
STRUCTURAL STEEL (FLOOR BEAMS)	2,171 LBS.
STRUCTURAL STEEL (TOE PLATES)	0 LBS.
BEAM CUT-OUT REPAIRS	3,125 LBS.
HANDRAIL	69.3 LIN. FT.

NOTES

THE CONTRACTOR SHALL REMOVE THE FLOOR PLATE AND COMPLETELY DISASSEMBLE THE RAMP ASSEMBLY INCLUDING THE THRU BEAMS, FLOOR BEAMS, LIFT BEAM, PIPE WHEEL GUARDS, METAL RAILING AND TOE PLATES. THE COMPONENTS SHALL BE TRANSPORTED TO A FACILITY FOR REPAIRS AND METALLIZATION. WHEN THE REPAIRS, METALLIZATION, FINISH COAT, AND ALL OTHER WORK HAVE BEEN COMPLETED, THE CONTRACTOR SHALL TRANSPORT THE COMPONENTS BACK TO THE JOB SITE AND REASSEMBLE THE RAMP AS SHOWN IN THE PLANS.

FOR THERMAL SPRAYED COATINGS (METALLIZATION), SEE SPECIAL PROVISIONS.

ALL METALLIZED SURFACES SHALL RECEIVE A SEAL COATING AS SPECIFIED IN THE SPECIAL PROVISION FOR EPOXY FINISH PAINT FOR METALLIZED STRUCTURES.

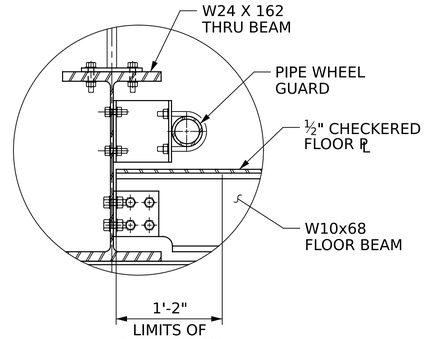
FOR FURTHER DIMENSIONS AND INFORMATION ON THE RAMP, SEE “LIFT RAMP DETAILS” SHEETS.

FOR SKID RESISTANT COATING, SEE SPECIAL PROVISIONS.

FOR REHABILITATION OF EXISTING LIFT RAMPS, SEE SPECIAL PROVISIONS.

REPAIR DECK JOINT AT THE PIVOT BENT IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEET NO. SD-03.

THE PROPOSED ACCESS GATES SHALL OPEN INWARD TOWARDS THE CENTERLINE OF THE RAMP. THE GATES SHALL HAVE A LATCH TO ENSURE THAT THE GATES ARE CLOSED SECURELY.



DETAIL "B"

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470116

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS
SPAN B

Signed by: John Yannaccone 4EF9BB9D873942A...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

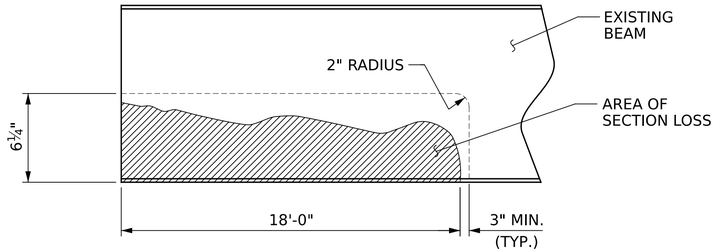
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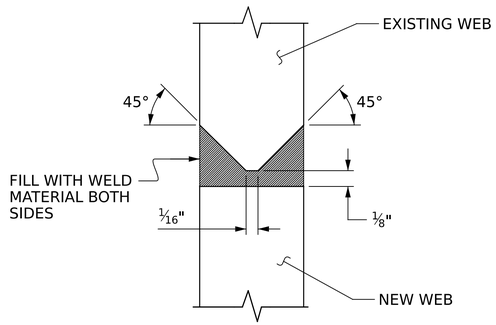
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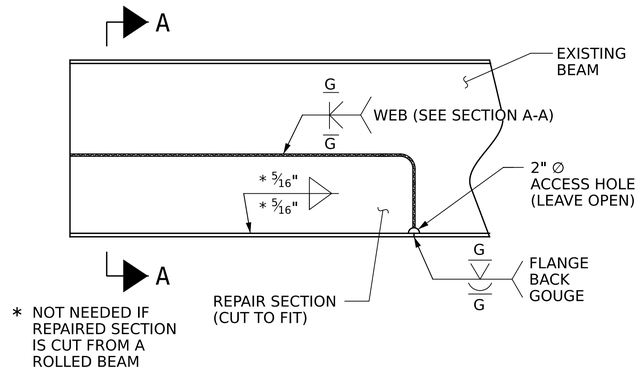
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SECTION LOSS REMOVAL



SECTION A-A



SECTION REPAIR

BOLT HOLES FOR STEEL CHANNEL CONNECTORS NOT SHOWN FOR CLARITY

BEAM END REPAIR SEQUENCE

COORDINATE RAMP CLOSURE WITH THE FERRY DIVISION AND THE ENGINEER.

COORDINATE WITH MATERIALS AND TEST UNIT AT LEAST 4 DAYS PRIOR TO ANTICIPATED WORK.

DISASSEMBLE LIFT RAMP AND TRANSPORT COMPONENTS TO REPAIR FACILITY.

CUT OUT BY APPROPRIATE MEANS THE DAMAGED BEAM AREA.

CLEAN RUST, SCALE AND EXISTING PAINT IN ACCORDANCE WITH THE "THERMAL SPRAYED COATINGS (METALLIZATION) SPECIAL PROVISION.

INSTALL THE CUT-TO-FIT SECTION. FULLY WELD ALONG TOP AND SIDES OF PLATE AS SHOWN.

ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS.

ALL WELDS SHALL BE INSPECTED AND TESTED BY THE NCDOT MATERIALS AND TESTS UNIT IN ACCORDANCE WITH THE CURRENT AWS BRIDGE WELDING CODE AND NCDOT STANDARD SPECIFICATIONS.

DRILL HOLES FOR STEEL ANGLE CONNECTION PLATES.

ONCE THE REPAIR IS COMPLETE, GRIND ALL WELDS FLUSH, ANY GOUGES OR INDENTATIONS FROM IMPACT ON GIRDERS SHALL BE GROUND SMOOTH. CLEAN AREA TO REMOVE DEBRIS AND OILS FROM REPAIR PROCESS PRIOR TO CLEANING AND METALLIZATION.

PERFORM METALLIZATION AND APPLY EPOXY FINISH PAINT.

TRANSPORT BEAM AND OTHER RAMP COMPONENTS BACK TO WORK SITE, AND REASSEMBLE RAMP.

RETURN TRAFFIC TO NORMAL PATTERN.

NOTES

AFTER THE STRUCTURAL STEEL HAS BEEN CLEANED, THE STRUCTURAL STEEL AND BEARING SHALL BE INSPECTED FOR EXCESSIVE SECTION LOSS. AREAS THAT EXHIBIT AN EXCESS OF 35% SECTION LOSS SHALL BE REVIEWED BY THE ENGINEER TO DETERMINE IF AREA OF SECTION LOSS SHOULD BE REPAIRED.

FOR FIELD MEASURING, SEE SPECIAL PROVISIONS.

AS DETERMINED BY THE ENGINEER, AREAS WITH EXCESSIVE SECTION LOSS OR AREAS WITH TEMPORARY REPAIRS SHALL BE REMOVED AND THE GIRDERS SHALL BE REPAIRED AS INDICATED ON THIS PLAN SHEET. CONTRACTOR AND ENGINEER TO DETERMINE ACTUAL DIMENSIONS OF AREA TO BE REMOVED AND REPLACED.

AREAS OF EXCESSIVE SECTION LOSS, IN ADDITION TO THOSE INDICATED ON PLAN SHEETS, MIGHT BE ENCOUNTERED. THE CONTRACTOR SHALL HAVE ADDITIONAL REPAIR MATERIALS ON HAND OR READILY AVAILABLE, SO ADDITIONAL AREAS OF EXCESSIVE SECTION LOSS MAY BE REPAIRED IN A TIMELY MANNER.

PAYMENT FOR THE SECTION REPAIR SHALL BE BASED ON THAT AMOUNT OF REPAIR ACTUALLY PERFORMED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

PROVIDE RUN-OFF WELD TABS, WHERE APPLICABLE, TO PROVIDE PROPER WELD START AND TERMINATION. SEE NCDOT M&T FIELD WELD MANUAL AND AWS D1.5 SECTION 3.12.

STEEL FOR GIRDER REPAIR PLATE SHALL BE GRADE A36 STEEL.

FOR BEAM REPAIR CUT-OUT, SEE SPECIAL PROVISIONS.

FOR THERMAL SPRAYED COATINGS (METALLIZATION), SEE SPECIAL PROVISIONS.

FOR EPOXY FINISH PAINT FOR METALLIZED STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470116

Signed by: John Yannaccone 4EF9BB90B73942A...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BEAM REPAIR CUT-OUT DETAILS

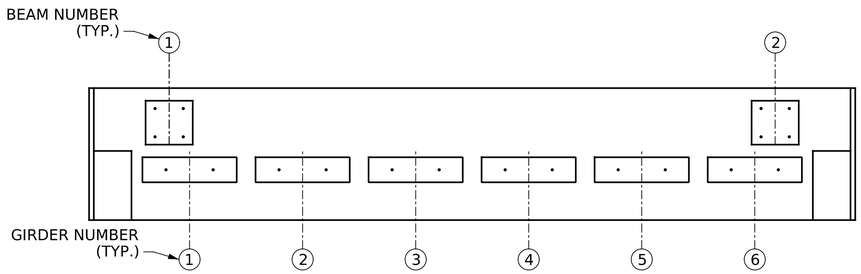
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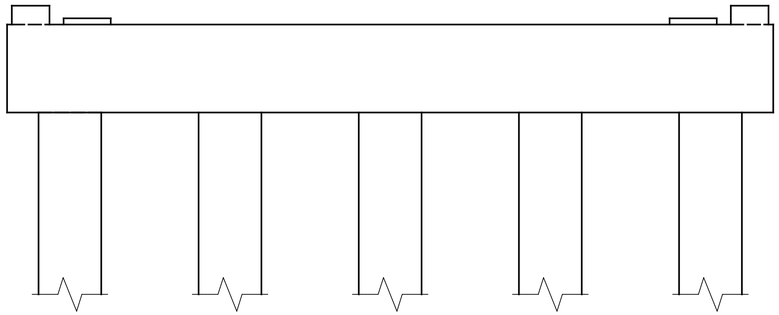
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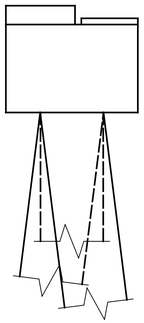
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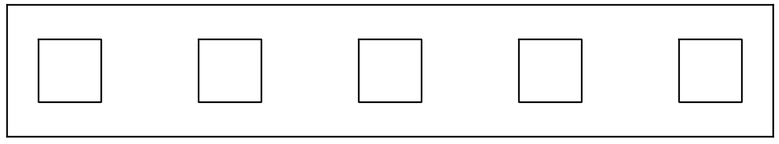
TOP OF CAP



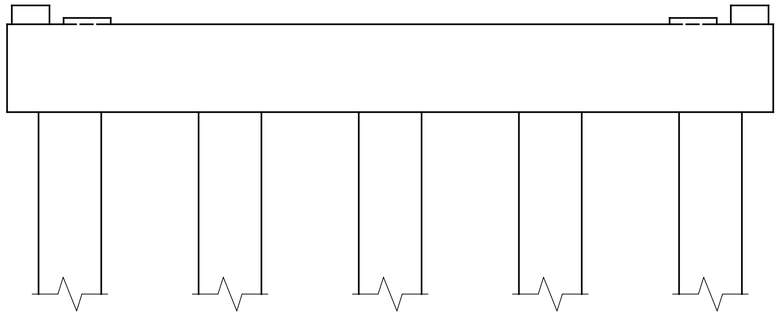
ELEVATION
(SPAN A SIDE)



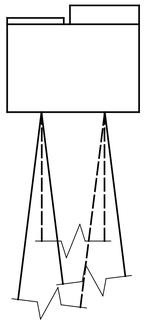
END VIEW



BOTTOM OF CAP



ELEVATION
(SPAN B SIDE)



END VIEW

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AT BENT 1 AND THE END BENTS, AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAPS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAPS BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

THE EXISTING PIVOT BEARINGS SHALL BE REMOVED, CLEANED, METALLIZED AND RESET.

THE EXISTING ANCHOR BOLTS SHALL REMAIN IN PLACE. REMOVE AND REPLACE THE EXISTING NUTS AND WASHERS.

NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

PAYMENT FOR THE REMOVAL, CLEANING, METALLIZATION AND RESETTING OF THE PIVOT BEARINGS WILL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "REHABILITATION OF EXISTING LIFT RAMP FOR STRUCTURE #470116".

AS-BUILT REPAIR QUANTITY TABLE

REPAIRS - PIVOT BENT	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0	0		
COLUMN	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0	0		
COLUMN	0	0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0		
COLUMN		0		
EPOXY COATING		AREA SF		AREA SF
CAP		32		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CLEAR TO SAWCUT.
SEE REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NO REPAIRS WERE NOTED FOR BENT 1 DURING FIELD SCOPING. THE CONTRACTOR AND ENGINEER SHALL INSPECT BENT 1 PRIOR TO BEGINNING WORK.

SHOTCRETE REPAIR

CONCRETE REPAIR (FORM & POUR)

EPOXY RESIN INJECTION

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470116

Signed by: John Yannaccone 4EF9BB90B739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

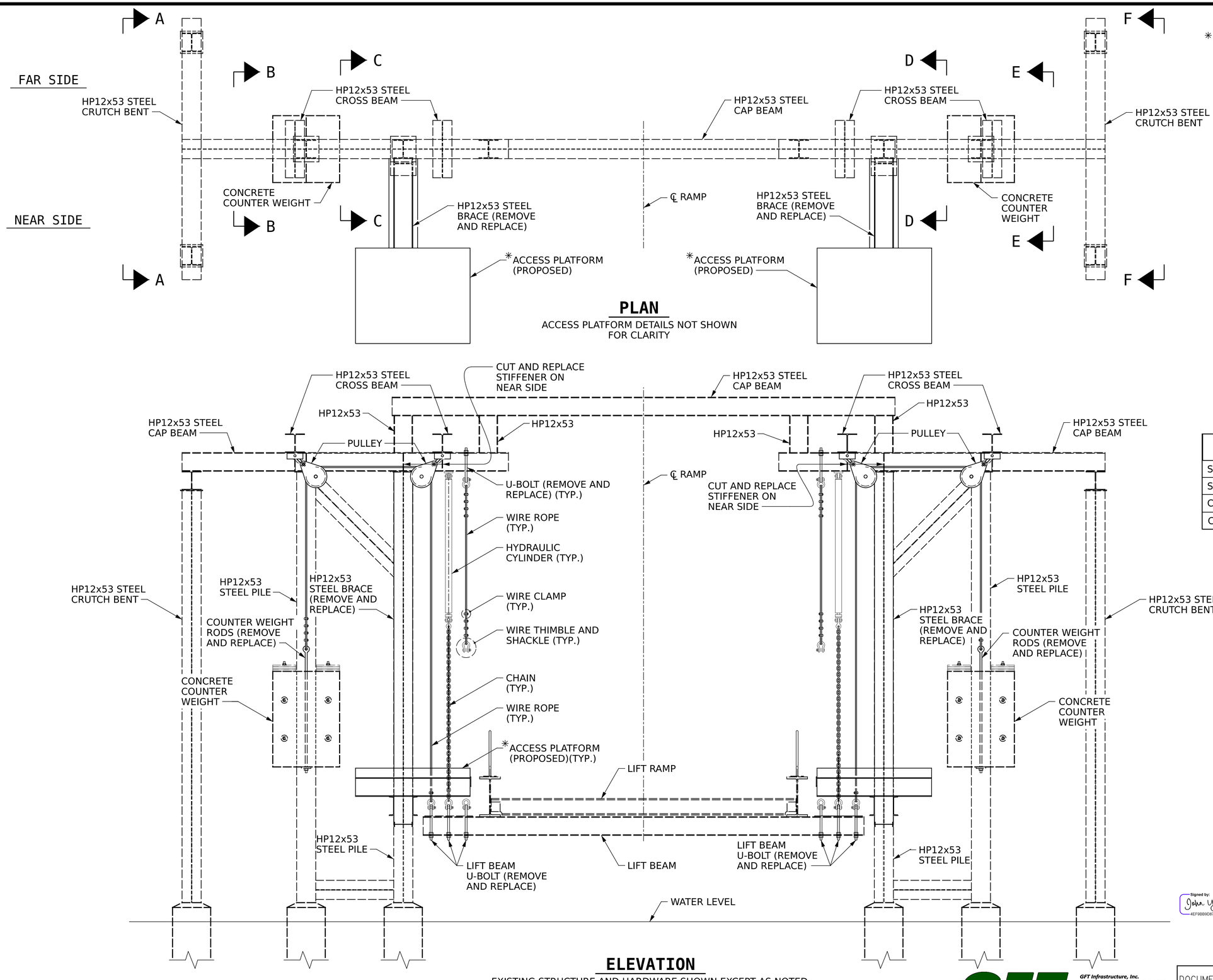
SUBSTRUCTURE REPAIR
PIVOT BENT

DRAWN BY : J. MYA DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

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REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			49



PLAN

ACCESS PLATFORM DETAILS NOT SHOWN FOR CLARITY

ELEVATION

EXISTING STRUCTURE AND HARDWARE SHOWN EXCEPT AS NOTED.
EXISTING LINES (ELECTRICAL, HYDRAULIC AND GREASE FITTING), RAMP LIGHTING AND ACCESS PLATFORM NOT SHOWN FOR CLARITY.

NOTES

* FOR ACCESS PLATFORM CONFIGURATION AND DIMENSIONS, SEE "ACCESS PLATFORM DETAILS" SHEETS.

THE CONTRACTOR SHALL REMOVE AND RESET HYDRAULIC LINES, ELECTRICAL LINES, GREASE FITTING LINES AND OVERHEAD LIGHTING AS DIRECTED BY THE ENGINEER AND THE FERRY DIVISION. PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE PAY ITEM, "CLEANING AND REPAINTING OF LIFT BENT AT STRUCTURE #470116".

THE CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING SHEAVES IN THE PULLEYS. AFTER THEY HAVE BEEN CLEANED AND GALVANIZED, THE EXISTING SHEAVES SHALL BE DELIVERED TO A STORAGE AREA AS DIRECTED BY THE FERRY DIVISION. PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE PAY ITEM, "REHABILITATION OF EXISTING LIFT RAMP FOR STRUCTURE NO. 470116".

AFTER THE STRUCTURAL STEEL HAS BEEN BLASTED AND PRIMED, THE STRUCTURAL STEEL SHALL BE INSPECTED FOR EXCESS SECTION LOSS. AREAS THAT EXHIBIT AN EXCESS OF 35% SECTION LOSS SHALL BE REVIEWED BY THE ENGINEER TO DETERMINE IF THE AREA OF SECTION LOSS SHOULD BE REPAIRED. STIFFENERS WITH LESS THAN ¼" THICKNESS REMAINING SHALL BE CUT OUT AND REPLACED EXCEPT AS NOTED IN THE PLANS.

FOR STEEL PILE REPAIRS, SEE SPECIAL PROVISIONS.

FOR PAINTING EXISTING LIFT BENTS, SEE SPECIAL PROVISIONS.

FOR ACCESS PLATFORMS, SEE SPECIAL PROVISIONS.

FOR INSPECTION OF STEEL PILES AT THE INTERFACE WITH THE TOP OF THE EXISTING CONCRETE PILE JACKETS, SEE THE PILE REPAIR SPECIAL PROVISION.

SUMMARY OF QUANTITIES

STRUCTURAL STEEL (STIFFENERS)	35 LBS.
STRUCTURAL STEEL (PILE REPAIRS)	100 LBS.
COUNTER WEIGHT	0 EA.
COUNTER WEIGHT RODS	4 EA.

PROJECT NO. 52378
HYDE COUNTY
BRIDGE: 470116

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LIFT BENT DETAILS

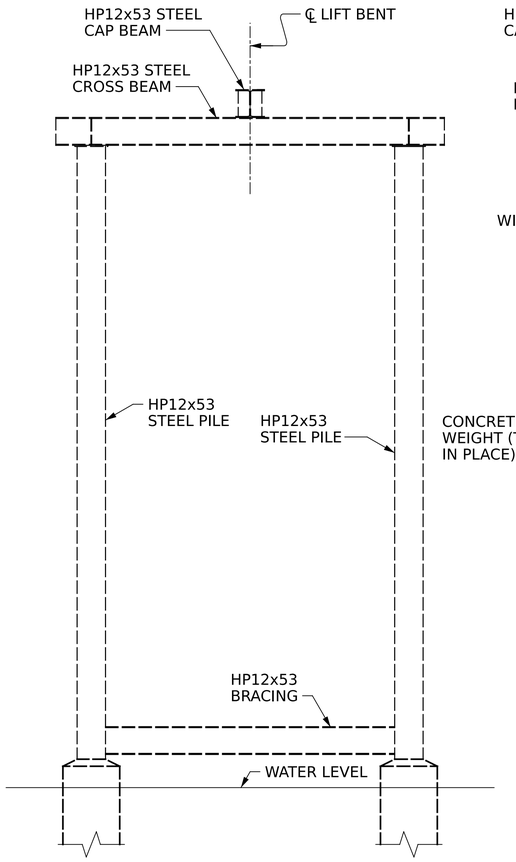
Signed by: John Yannaccone 4EF98B90B739424...
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE
10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

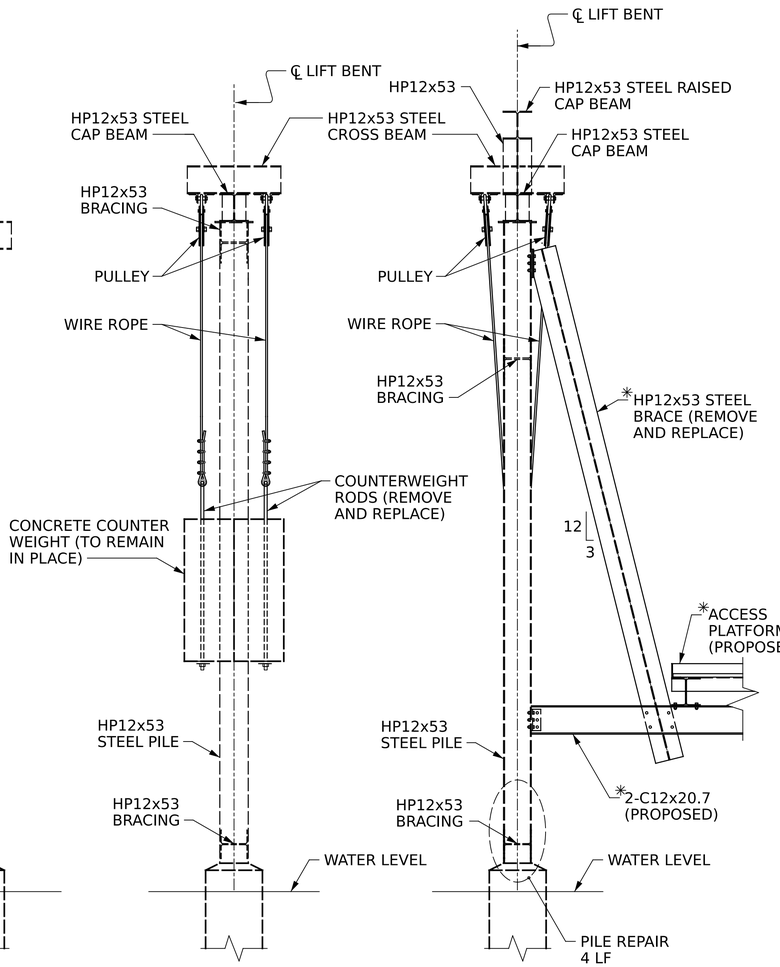
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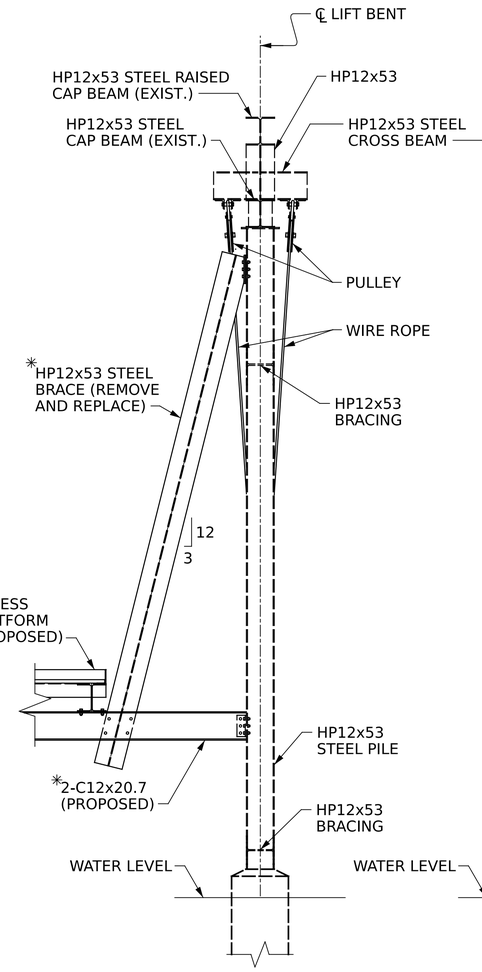


SECTION A-A

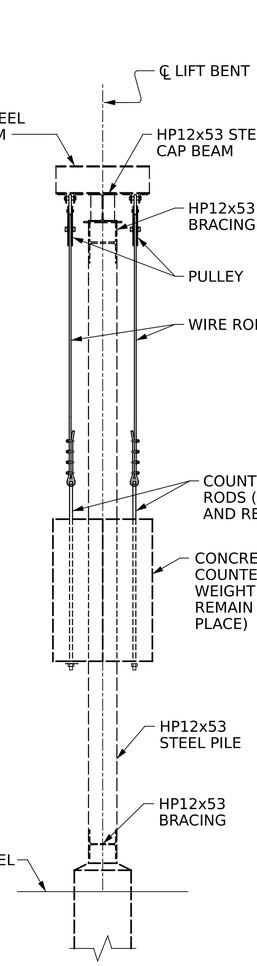


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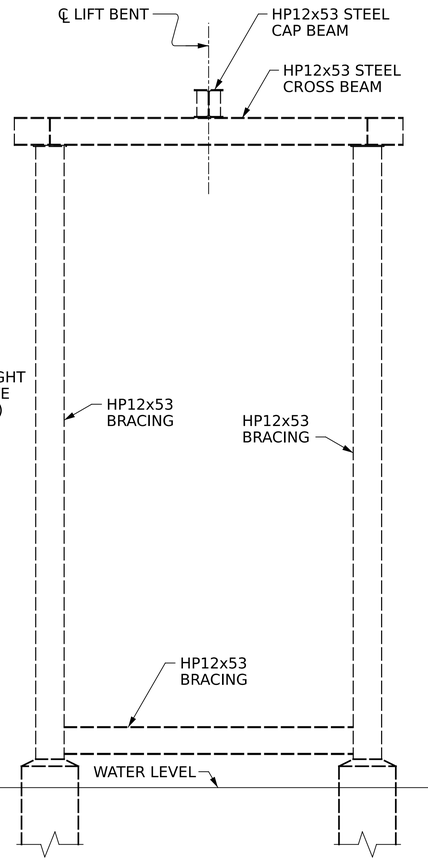
SECTION C-C



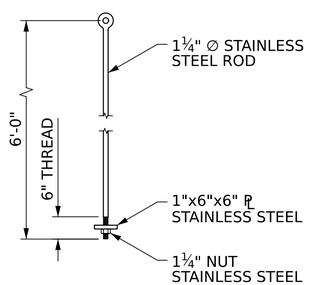
SECTION D-D



SECTION E-E



SECTION F-F



COUNTERWEIGHT ROD DETAIL

DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

NOTES

EXISTING STRUCTURE AND HARDWARE SHOWN EXCEPT AS NOTED.

✳ FOR ACCESS PLATFORM CONFIGURATION AND DIMENSIONS, SEE ACCESS PLATFORM DETAILS SHEETS.

REPLACEMENT OF COUNTER WEIGHT RODS WILL BE INCLUDED IN THE PAY ITEM "REHABILITATION OF EXISTING LIFT RAMP FOR STRUCTURE #470116".

THE 1¼" ∅ ROD FOR THE COUNTER WEIGHT SHALL COMPLY WITH ASTM F-593 GROUP 2 (TYPE 316 STAINLESS STEEL).

FOR PILE REPAIRS, SEE LIFT BENT REPAIR DETAILS SHEET.

Signed by: John Yannaccone 4EF9BB9D8739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

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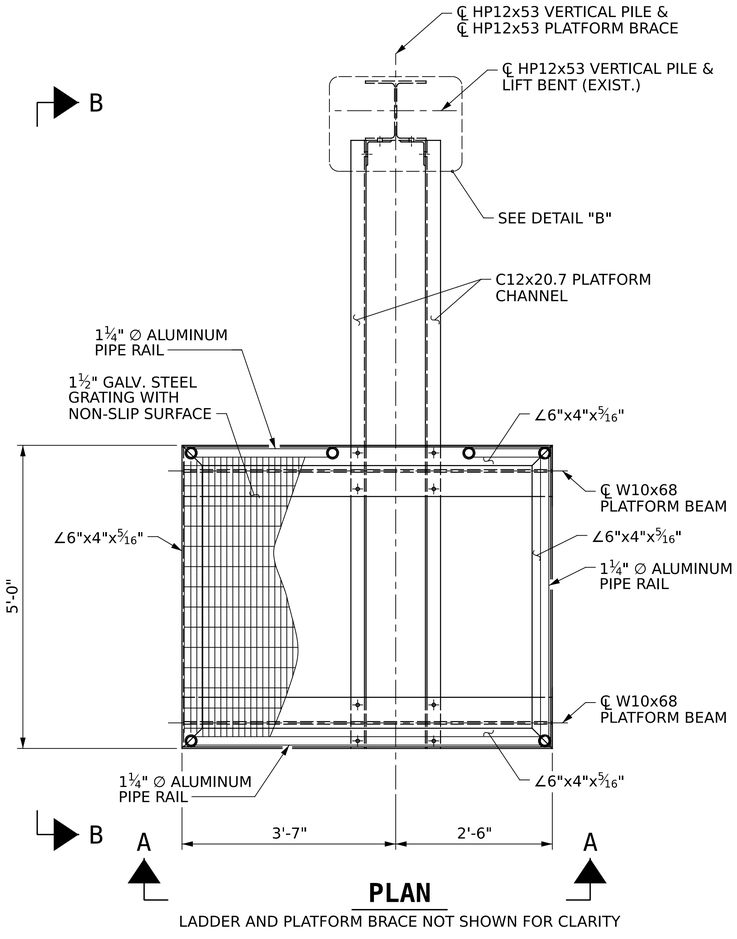
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PROJECT NO. 52378
HYDE COUNTY
BRIDGE: 470116
SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

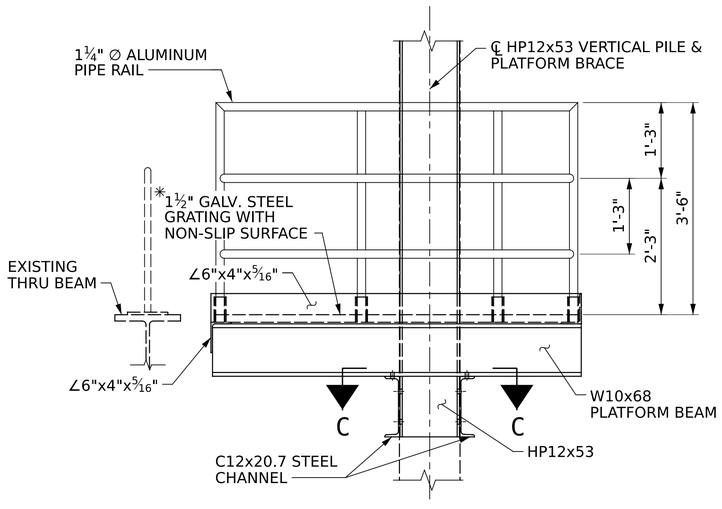
LIFT BENT DETAILS

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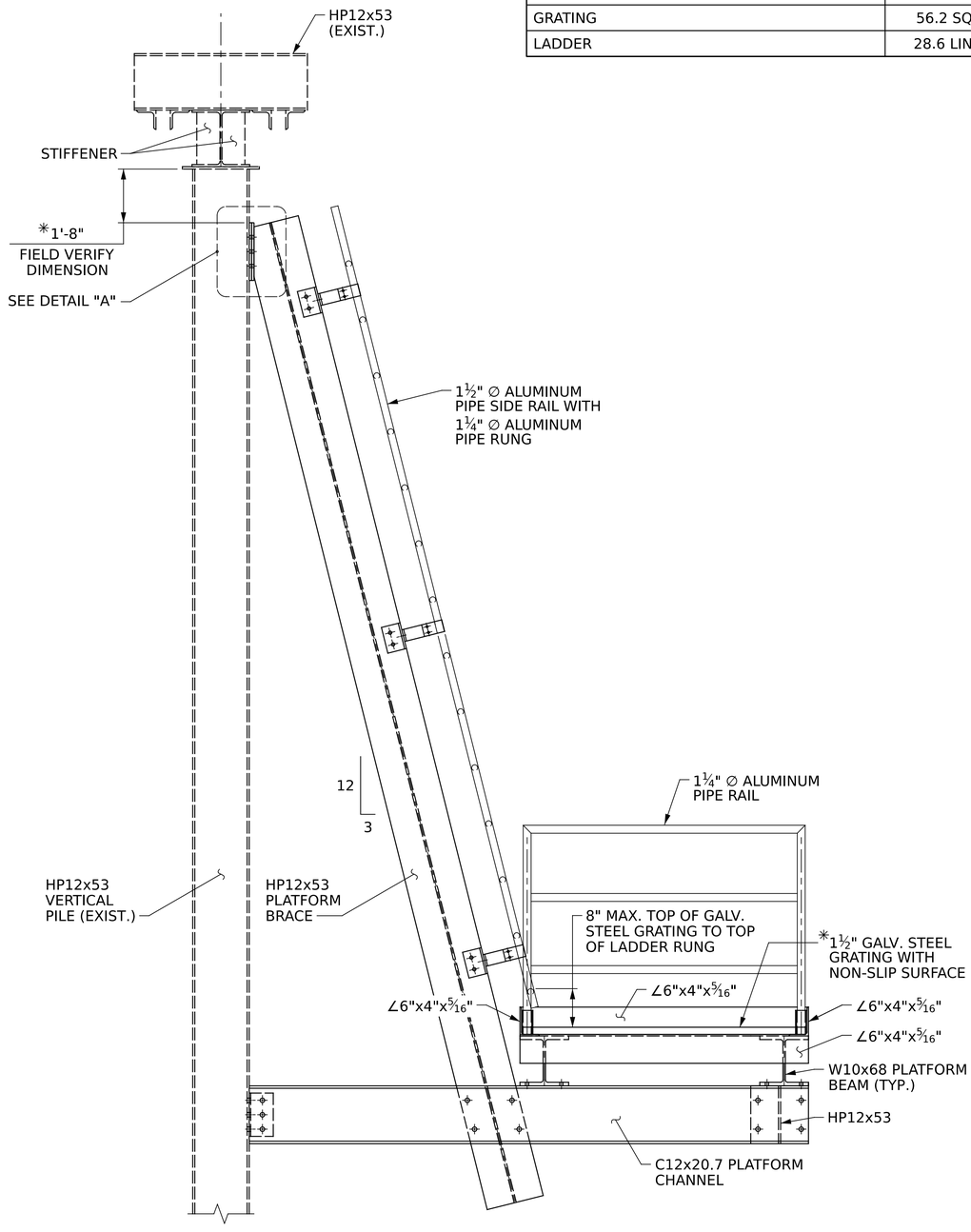
PLAN

LADDER AND PLATFORM BRACE NOT SHOWN FOR CLARITY



SECTION A-A

LADDER NOT SHOWN FOR CLARITY



VIEW B-B

COUNTERWEIGHT NOT SHOWN FOR CLARITY

SUMMARY OF QUANTITIES	
STRUCTURAL STEEL (ACCESS PLATFORMS)	4,692 LBS.
HANDRAIL	28.4 LIN. FT.
GRATING	56.2 SQ. FT.
LADDER	28.6 LIN. FT.

NOTES

ACCESS PLATFORM DETAILS ARE SHOWN FOR PLATFORM LOCATED TO THE RIGHT OF THE LIFT RAMP. ACCESS PLATFORM TO THE LEFT OF THE LIFT RAMP IS SIMILAR BUT OPPOSITE HAND.

ALL STRUCTURAL STEEL FOR THE ACCESS PLATFORMS SHALL BE AASHTO M270 GRADE 50 AND METALLIZED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

ALL WELDING AND FABRICATION SHALL BE COMPLETE BEFORE SURFACE PREPARATION BEGINS.

ALL METALLIZED SURFACES SHALL RECEIVE A SEAL COATING AS SPECIFIED IN TABLE 2 OF THE DEPARTMENT'S THERMAL SPRAYED COATINGS (METALLIZATION) PROGRAM. FOR THERMAL SPRAYED COATINGS, SEE SPECIAL PROVISIONS.

CONNECTION OF THE PLATFORM GRATING TO THE W10X68 STEEL BEAMS NOT SHOWN. CONNECTION SHALL BE PER THE GRATING MANUFACTURER'S SPECIFICATIONS AND SHALL BE APPROVED BY THE ENGINEER.

STEEL GRATING WITH NON-SLIP SURFACE SHALL BE 1½" X ⅛" 19-W-4 GALVANIZED STEEL GRATING OR APPROVED EQUAL.

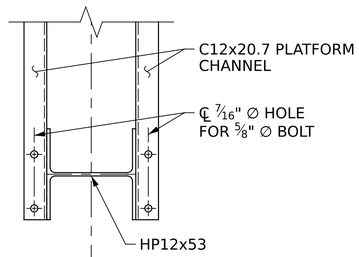
AFTER CLEANING AND PAINTING OF THE LIFT BENT, THE CONTRACTOR SHALL COORDINATE WITH THE FERRY DIVISION AND THE ENGINEER WHEN REATTACHING THE HYDRAULIC, ELECTRICAL AND GREASE LINES TO THE LIFT BENT. THE LINES SHALL BE LOCATED SO AS NOT TO CAUSE A TRIP HAZARD WHILE ACCESSING OR USING THE ACCESS PLATFORM. GREASE FITTINGS SHALL BE INSTALLED AS DIRECTED BY THE FERRY DIVISION AND THE ENGINEER IN ORDER TO FACILITATE ACCESS FOR ROUTINE MAINTENANCE.

FOR ACCESS PLATFORMS, SEE SPECIAL PROVISIONS.

✳ THE CONTRACTOR SHALL INSTALL THE ACCESS PLATFORM ASSEMBLY SUCH THAT THE TOP OF THE STEEL GRATING MATCHES THE TOP OF THE TOP FLANGE OF THE LIFT RAMP THRU BEAM WHEN THE LIFT RAMP IS IN A LEVEL POSITION. FOR FIELD MEASURING, SEE SPECIAL PROVISIONS.

FOR DETAIL "A" AND DETAIL "B", SEE SHEET 2 OF 3.

FOR INSPECTION OF STEEL PILES AT THE INTERFACE WITH THE TOP OF THE EXISTING CONCRETE PILE JACKETS, SEE THE PILE REPAIR SPECIAL PROVISION.



SECTION C-C

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470116

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ACCESS PLATFORM DETAILS

Signed by: John Yannaccone 4EF9BB8D8739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

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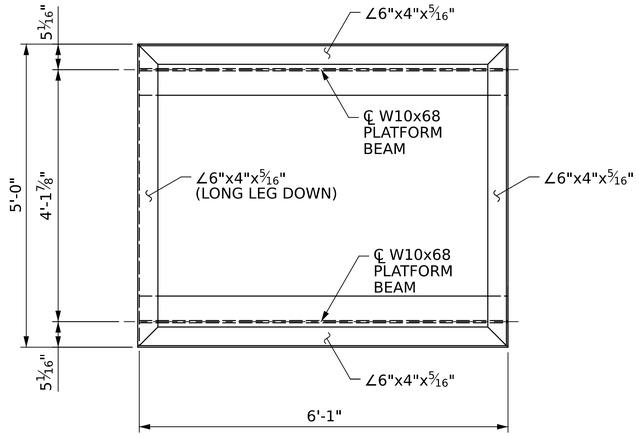
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2			4		

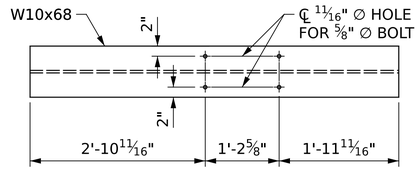
SHEET NO. S3-08

TOTAL SHEETS 49

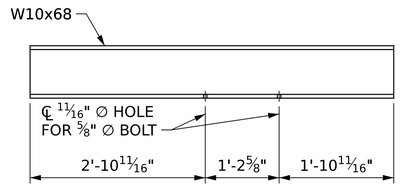


PLATFORM FRAME PLAN

ANGLES LONG LEG UP UNLESS NOTED

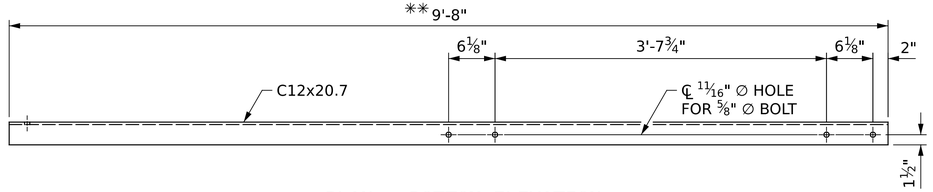


PLAN - BOTTOM ELEVATION

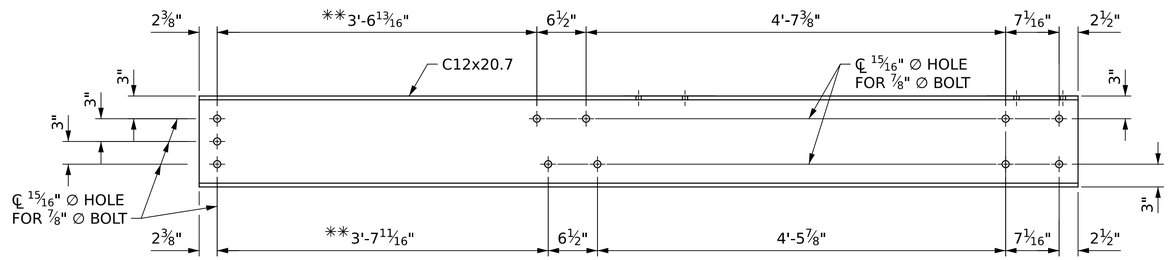


ELEVATION

PLATFORM BEAM



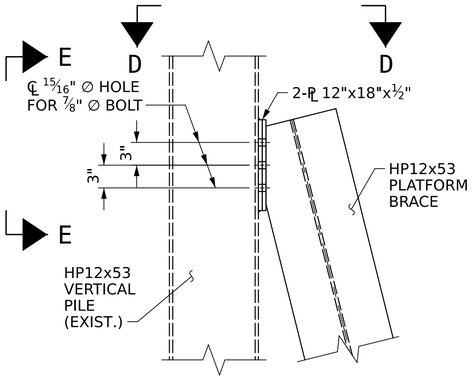
PLAN - BOTTOM ELEVATION



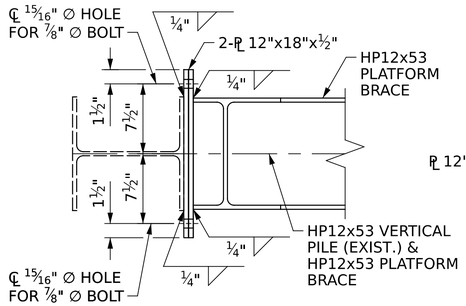
ELEVATION

PLATFORM CHANNEL

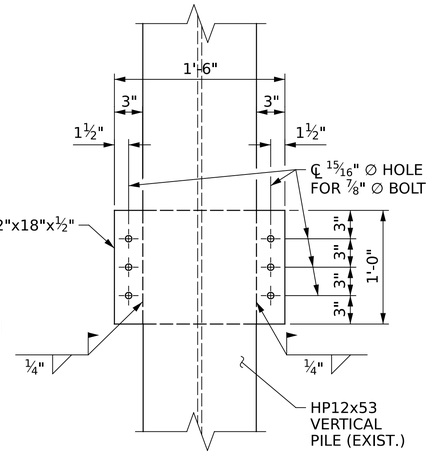
** FIELD VERIFY DIMENSIONS BEFORE FABRICATION OF CHANNEL



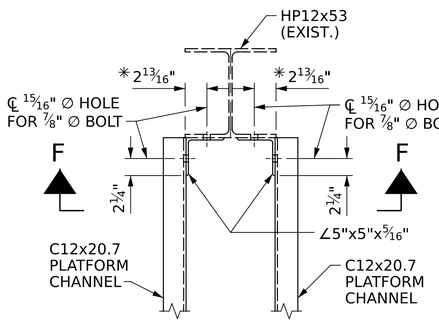
DETAIL "A"



SECTION D-D

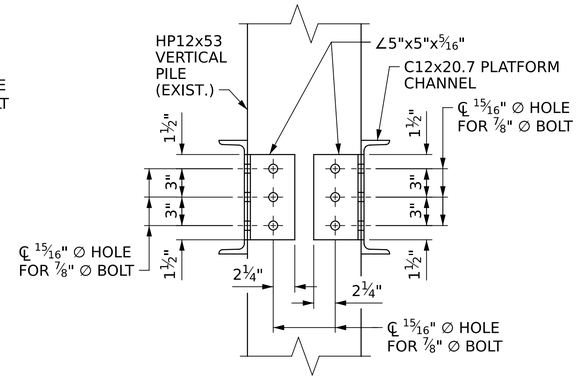


SECTION E-E

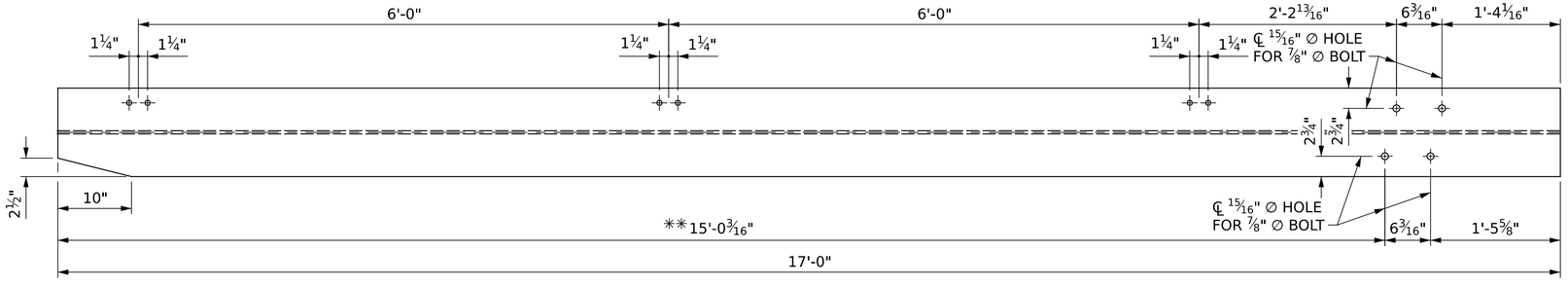


DETAIL "B"

* HOLES IN VERTICAL PILE TO BE DRILLED AFTER PLATFORM CHANNEL LOCATION IS DETERMINED



SECTION F-F



PLATFORM BRACE

** FIELD VERIFY DIMENSIONS BEFORE FABRICATION OF CHANNELS

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470116

SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ACCESS PLATFORM DETAILS

Signed by: John Yannaccone 4EF98B80B0739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026

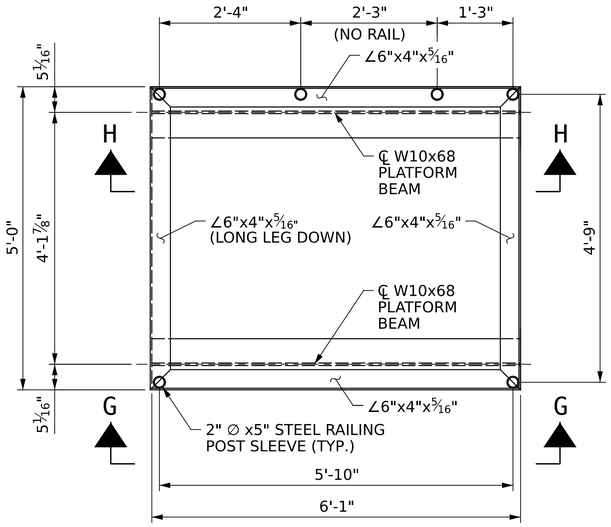
CHECKED BY : J. YANNACCONE DATE : 6/2026

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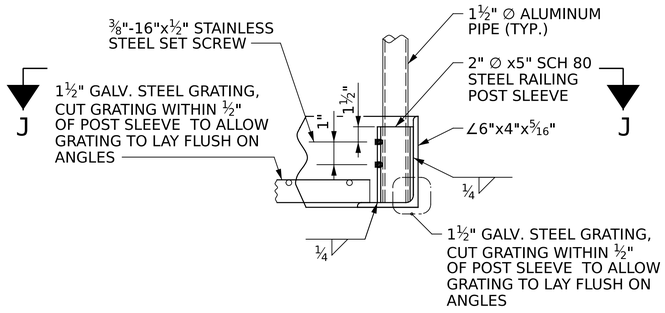
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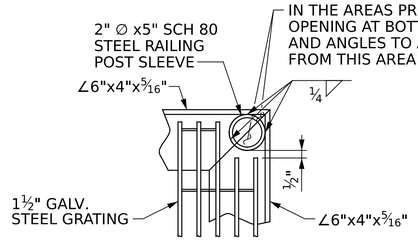


PLATFORM RAIL LAYOUT

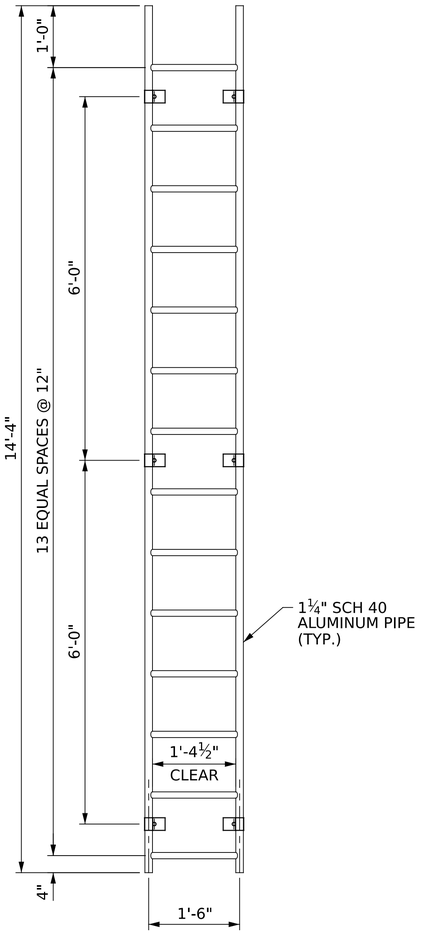
ANGLES LONG LEG UP UNLESS NOTED



DETAIL "C"

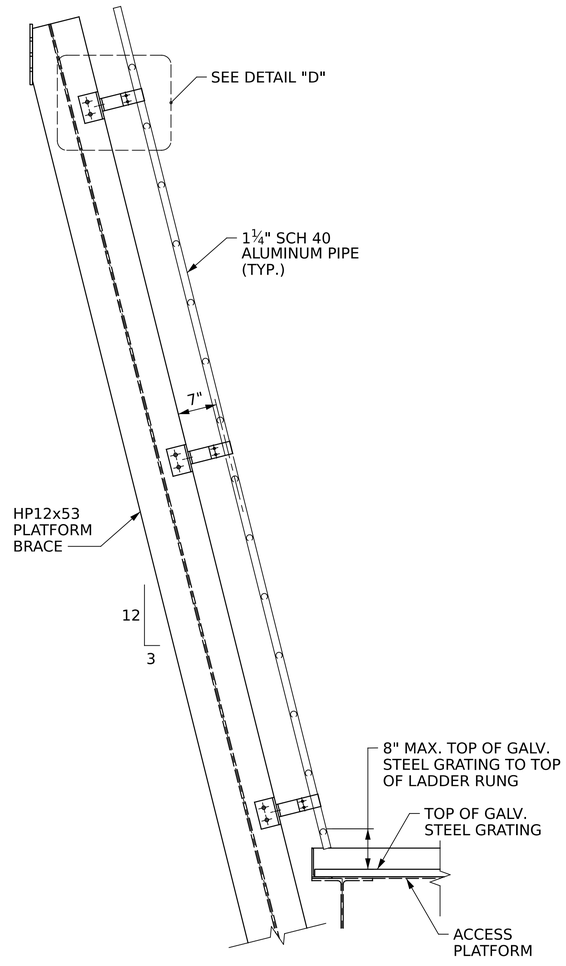


SECTION J-J



FRONT ELEVATION

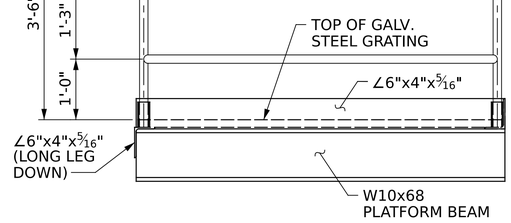
(HP12x53 PLATFORM BRACE AND ACCESS PLATFORM NOT SHOWN FOR CLARITY)



SIDE ELEVATION

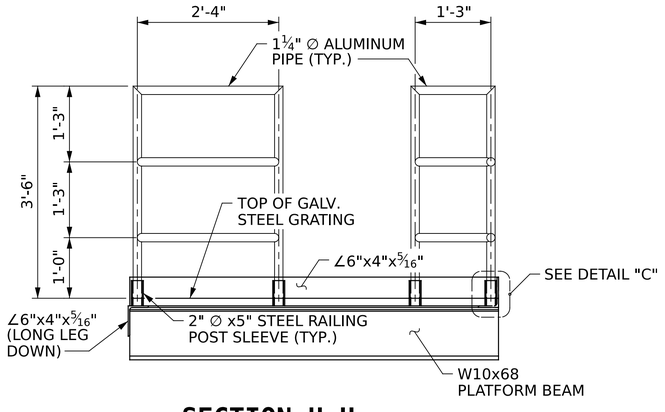
ACCESS LADDER

ACCESS LADDER DETAILS SHOW MINIMUM REQUIREMENTS.
ALTERNATIVE LADDER AND BRACKET DETAILS PROPOSED BY THE
CONTRACTOR ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.



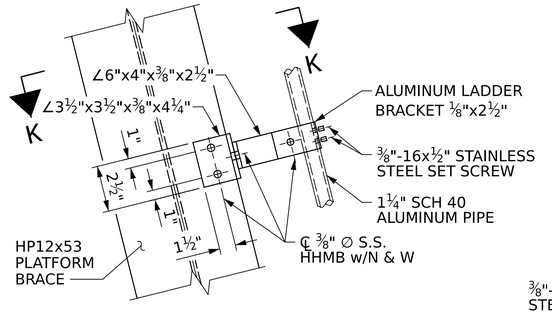
VIEW G-G

ANGLES LONG LEG UP UNLESS NOTED

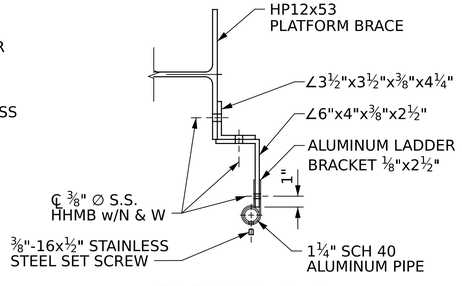


SECTION H-H

ANGLES LONG LEG UP UNLESS NOTED



DETAIL "D"



SECTION K-K

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470116

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ACCESS PLATFORM DETAILS

Signed by: John Yannaccone 4EF9BB90B739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

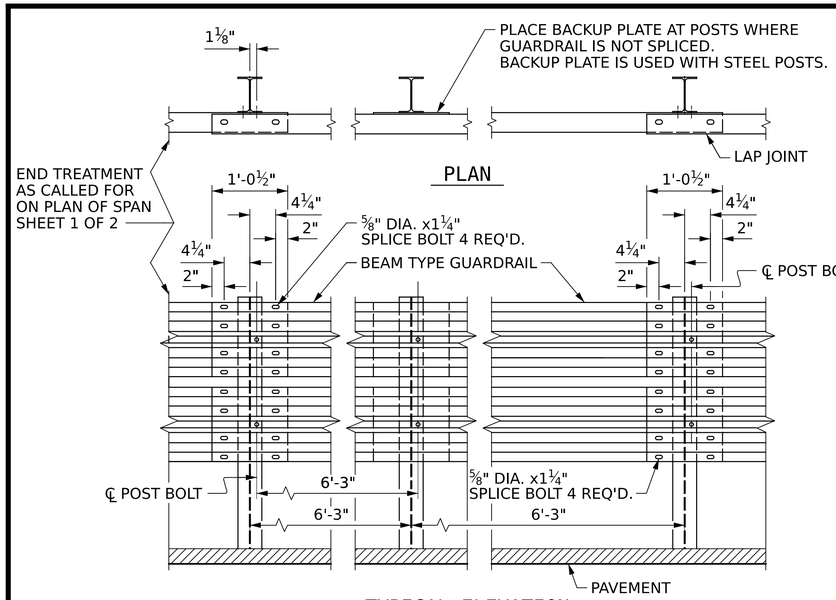
DRAWN BY : J. HARRIS DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

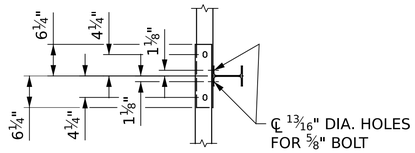
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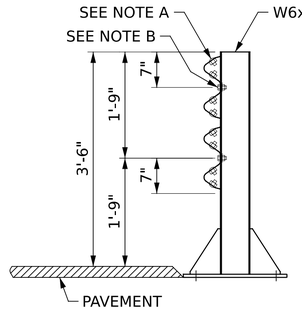
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S3-10
1			3			TOTAL SHEETS
2			4			49



TYPICAL ELEVATION



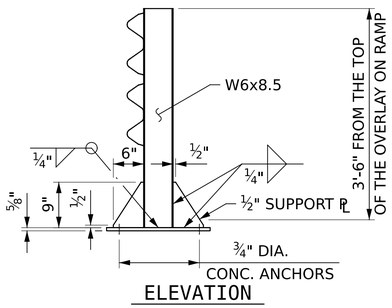
PLAN
OF W6 STEEL POST



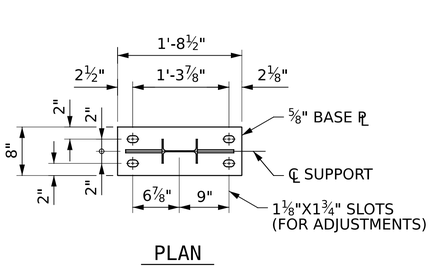
ELEVATION
DOUBLE FACE G.R.

TYPICAL GUARDRAIL AND GUARDRAIL POST ALTERNATIVES

NOTE: A - ⅝" DIAMETER x 1¼" STD. BUTTON HEAD SPLICE BOLT. EIGHT () REQUIRED PER JOINT.
B - ⅝" DIAMETER x 2" STD. BUTTON HEAD POST BOLT.
D - FIELD PUNCHING OF HOLES IN GUARDRAIL SHALL BE AS DIRECTED BY THE ENGINEER.



ELEVATION



PLAN

NOTES FOR GUARDRAIL POST ANCHORED TO STRUCTURE:

POST AND POST BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. M270 GRADE 36 AND SHALL BE GALVANIZED AFTER FABRICATION TO CONFORM TO THE REQUIREMENTS OF A.S.T.M. A-123.

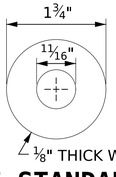
THE CONTRACTOR ATTENTION IS CALLED TO THE FACT THAT THE HOLES IN W6 STEEL POST MAY NEED TO BE ADJUSTED TO KEEP THE 3'-6" DIMENSION CONSTANT DUE TO THE CAMBER IN THE CORED SLAB. FIELD DRILLED HOLES IN THE W6 POST MAY BE NECESSARY.

DRILL OUT THE EXISTING ANCHOR BOLTS AND INSTALL STAINLESS STEEL ANCHORS INTO THE CORED HOLES. FOR GUARDRAIL ANCHORAGE POSTS, SEE SPECIAL PROVISIONS.

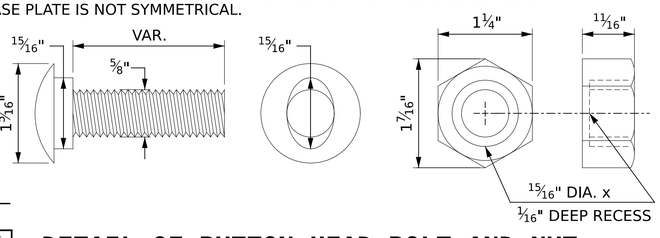
THE EXISTING ANCHOR BOLTS SHALL BE DRILLED OUT. THE PROPOSED ANCHOR BOLTS SHALL BE ADHESIVELY ANCHORED PER THE MANUFACTURER'S RECOMMENDATIONS AND PROJECT 4" ABOVE THE TOP OF THE EXISTING CORED SLAB. THE CONTRACTOR SHALL EXERCISE CARE NOT TO DAMAGE THE EXISTING CORED SLAB. ANY DAMAGE SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

ANCHORAGE FOR GUARDRAIL POST ON CORED SLAB BRIDGE

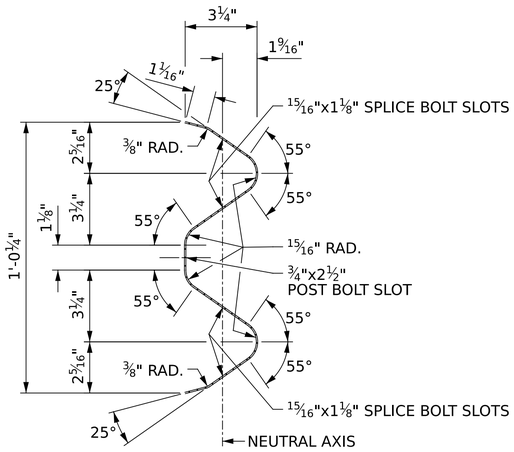
NOTE: THE CONTRACTOR'S ATTENTION IS DRAWN TO THE FACT THAT THE BOLT SPACING IN THE BASE PLATE IS NOT SYMMETRICAL.



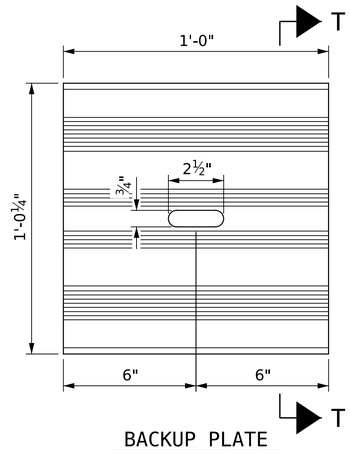
DETAIL OF STANDARD WASHER



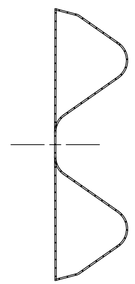
DETAIL OF BUTTON HEAD BOLT AND NUT



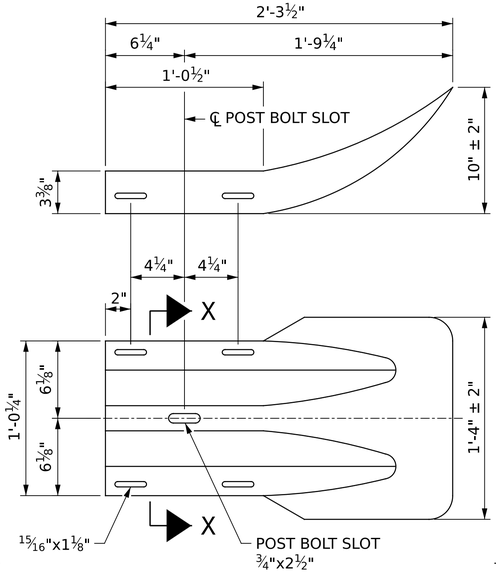
SECTION THRU RAIL ELEMENT



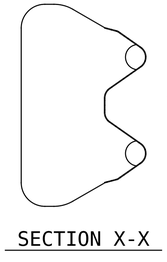
BACKUP PLATE



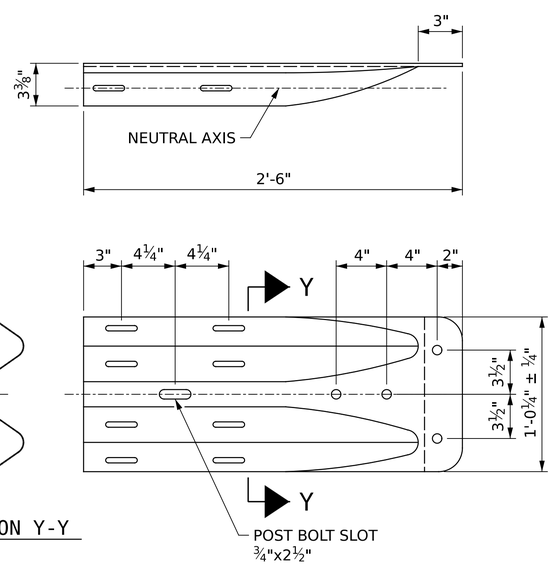
SECTION T-T



TYPICAL END SECTION
4 REQ'D @ END BENT

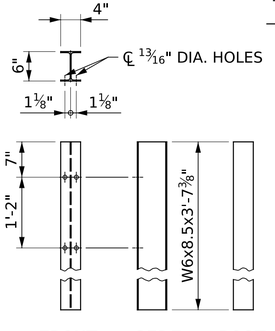


SECTION X-X



SECTION Y-Y

TYPICAL END SHOE
4 REQ'D @ PIVOT BENT



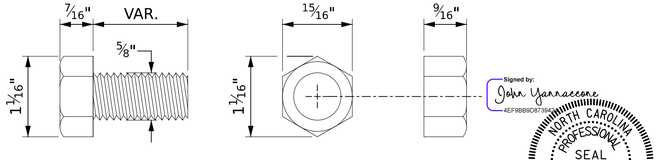
FRONT - SIDE - POST

DETAIL OF "W" STEEL POST

SYSTEM PARTS

(STEEL POSTS)

SYSTEM PARTS - GENERAL USE



DETAIL OF STANDARD HEX BOLT AND NUT

Signed by: John Yannaccone
4EF9BB9C8735...
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE
10/14/2026

PROJECT NO. 52378
HYDE COUNTY
BRIDGE: 470112,470113
470116

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

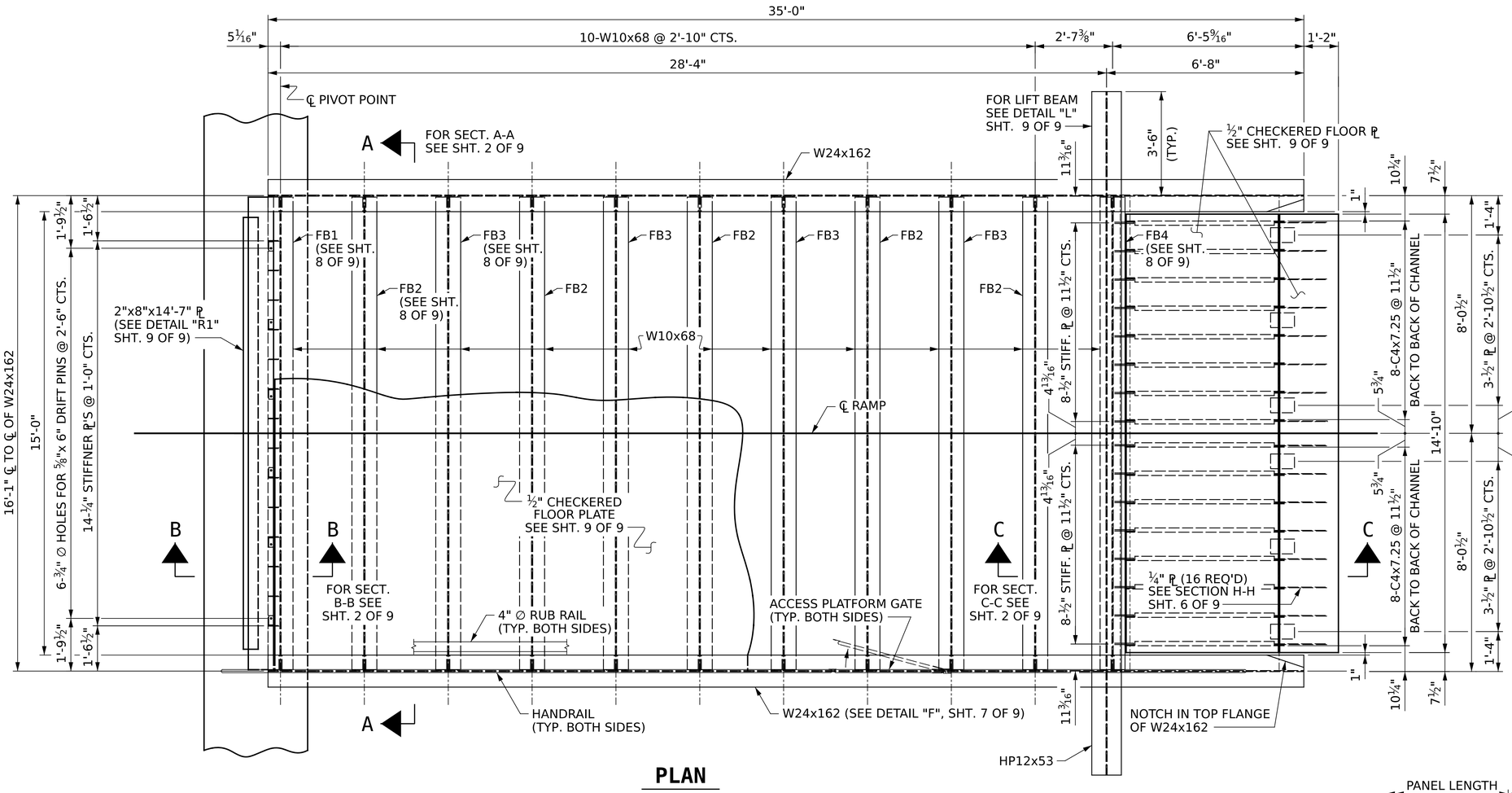
GUARDRAIL DETAILS

DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

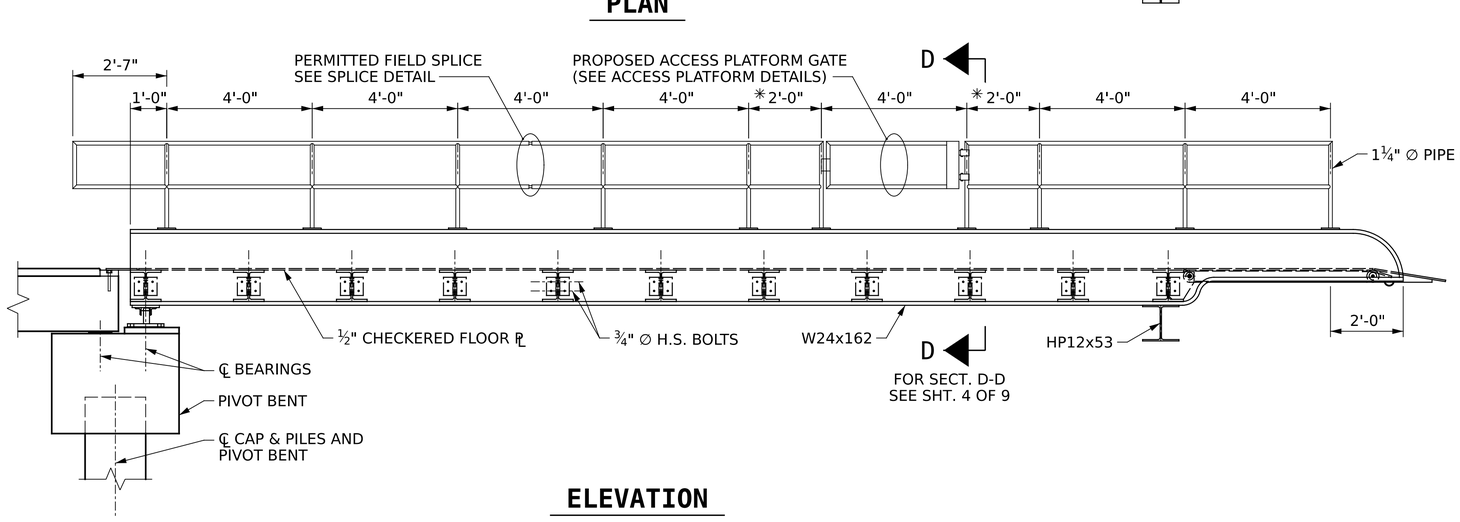
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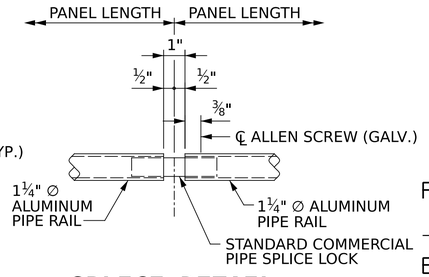
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NO.	BY:	DATE:	NO.	BY:	DATE:	SD-01
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2			4			49



PLAN



ELEVATION



SPLICE DETAIL

NOTES

ALL BOLTS, WASHERS, NUTS, AND OTHER HARDWARE TO BE GALVANIZED.

ALL BOLTS TO BE HIGH STRENGTH (A325) UNLESS NOTED OTHERWISE.

DECK BOLTS TO BE A307 CARRIAGE BOLTS, SQUARE NECK WITH WASHER, NUT, AND JAM NUT.

ALL DECK PLATES TO BE METALLIZED AFTER FABRICATION. ALL WELDING REQUIRED ON END RAMPS TO BE COMPLETED BEFORE METALLIZING.

ALL STEEL A36 UNLESS NOTED OTHERWISE.

ALL GIRDERS, BEAMS, ANGLES, CHANNELS, PLATES, RODS, AND PIPES TO BE METALLIZED.

ALL DIMENSIONS SHOWN ARE HORIZONTAL OR VERTICAL, UNLESS OTHERWISE NOTE.

AT FIXED POINTS OF SUPPORT. NUTS FOR ANCHOR BOLTS SHALL BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1/2 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

DECK PLATES SHALL RECEIVE AN EPOXY SKID RESISTANT OVERLAY.

FOR EPOXY SKID RESISTANT OVERLAY, SEE SPECIAL PROVISION.

CHARPY V-NOTCH TEST REQUIRED FOR W24x162 GIRDERS AND W10x68 FLOOR BEAMS.

ALL METALLIZED CONTACT SURFACES IN BOLTED CONNECTIONS USING HIGH STRENGTH BOLTS SHALL BE FREE OF OIL OR OTHER COATINGS AND SHALL BE ROUGHENED BY A LIGHT SANDBLASTING PRIOR TO ASSEMBLY. THE SANDBLASTING SHALL BE A LIGHT "BRUSH OFF" WHICH WILL PRODUCE A LIGHT GRAY APPEARANCE. THE SANDBLASTING SHALL NOT BE SEVERE ENOUGH TO PRODUCE ANY BREAK OR DISCONTINUITY IN THE METALLIZED SURFACE.

✳ DIMENSION SHALL BE DETERMINED IN THE FIELD. LOCATE ACCESS GATE SO THAT IT IS CENTERED UP WITH THE ACCESS PLATFORM.

FOR THERMAL SPRAYED COATINGS (METALLIZATION), SEE SPECIAL PROVISIONS.

FOR EPOXY FINISH PAINT FOR METALLIZED STRUCTURES, SEE SPECIAL PROVISIONS.

FOR SKID RESISTANT COATINGS, SEE SPECIAL PROVISIONS.

IN LIEU OF THE TURN OF THE NUT METHOD, TENSION ON A325 BOLTS MAY BE CALIBRATED USING DIRECT TENSION INDICATOR WASHERS. FOR TENSION INDICATORS, SEE STANDARD SPECIFICATIONS.

PROJECT NO. 52378
HYDE COUNTY
BRIDGE: 470112,470113
470116
SHEET 1 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

LIFT RAMP DETAILS
RAMP LAYOUT

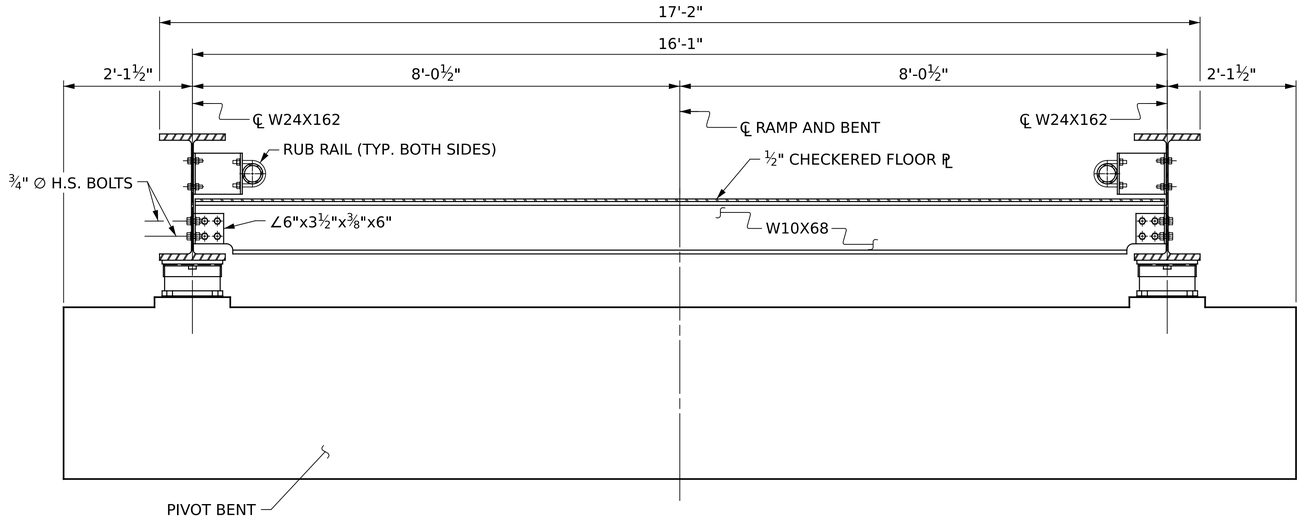
Signed by: John Yannaccone 4EF9BB9D8739424...
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE
10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

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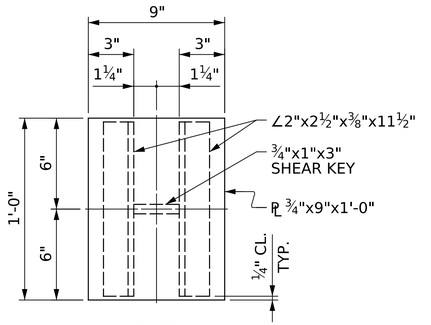
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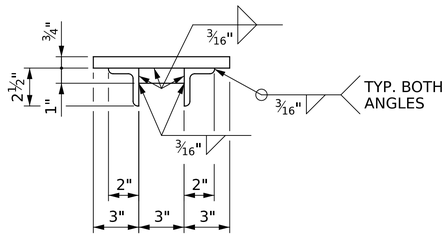


SECTION A-A

(PILES NOT SHOWN FOR CLARITY)

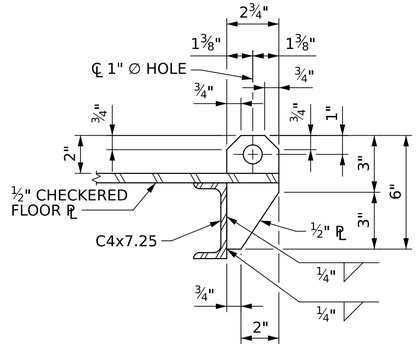


PLAN



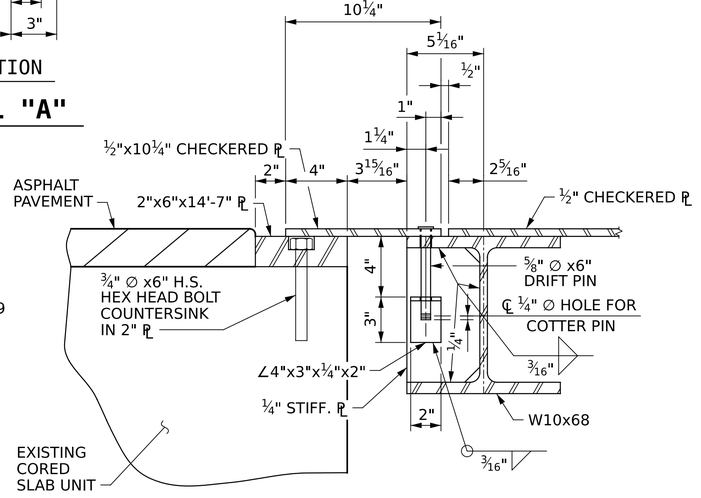
ELEVATION

DETAIL "A"

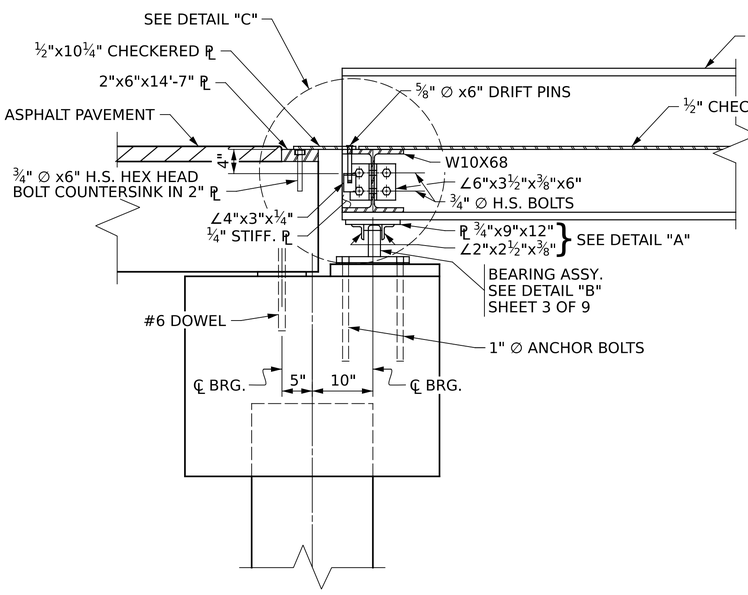


SECTION C1-C1

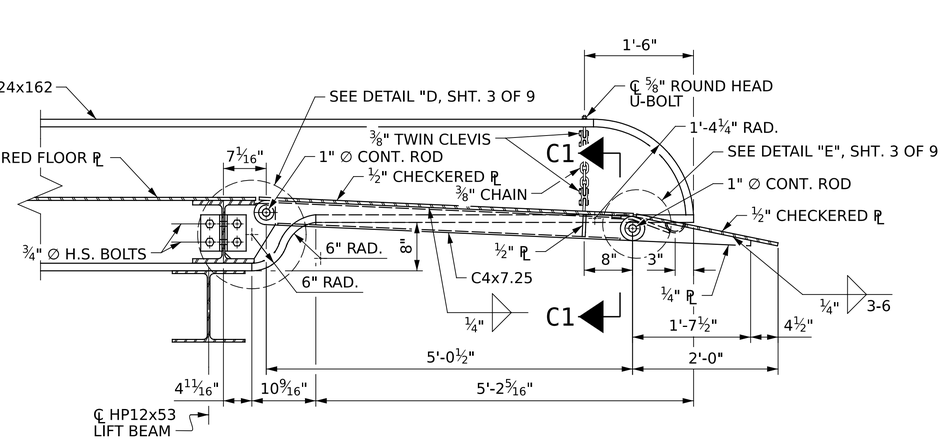
NOTE: ½" PL ON END CHANNELS ONLY



DETAIL "C"



SECTION B-B



SECTION C-C

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112,470113
470116

SHEET 2 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

LIFT RAMP DETAILS
CROSS SECTIONS

Signed by: John Yannaccone 4EF9BB8D8739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

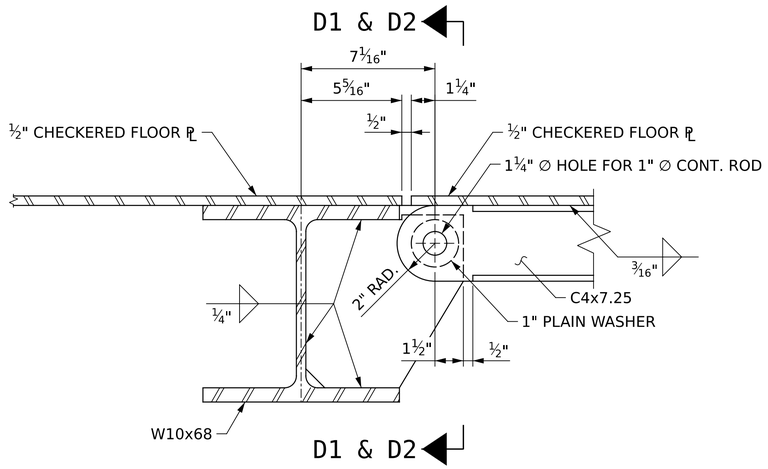
DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

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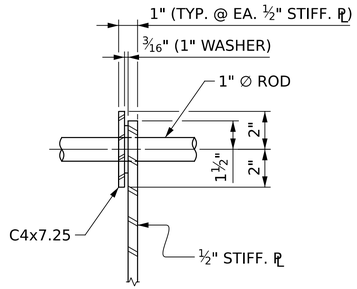
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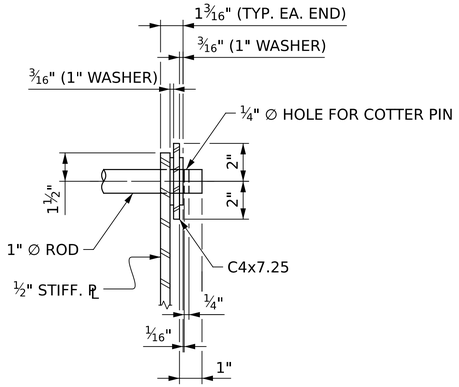


DETAIL"D"



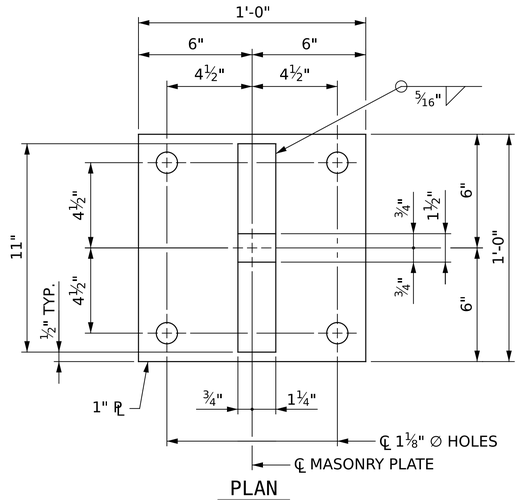
DETAIL D1-D1

(SHOWN @ INTERIOR APPRON CHANNELS)

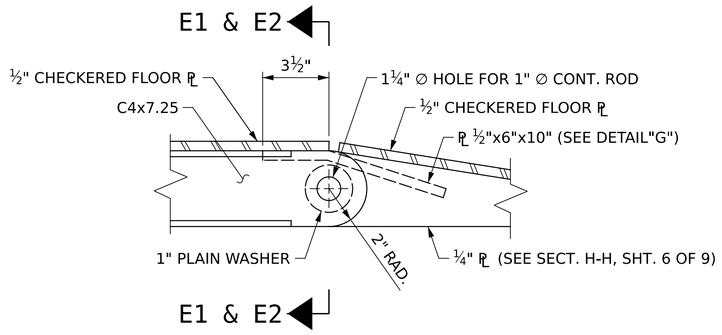


SECTION D2-D2

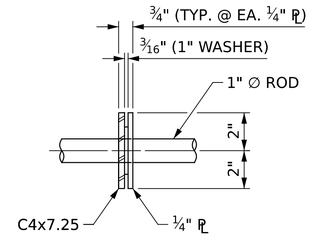
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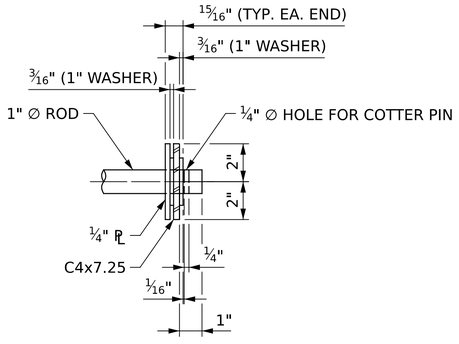
PLAN



DETAIL"E"

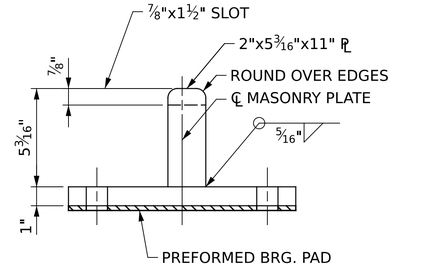


DETAIL E1-E1



SECTION E2-E2

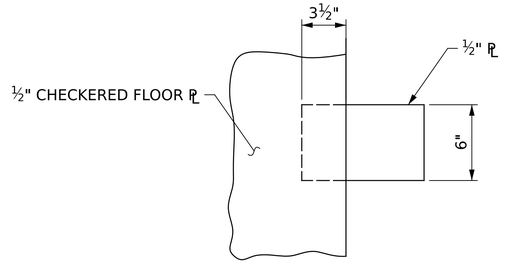
(FAR SIDE END SHOWN)



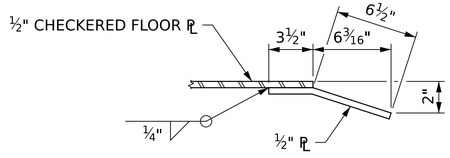
ELEVATION

DETAIL"B"

(FOR STRUCTURE #470112 & #470116 ONLY)



PLAN



ELEVATION

DETAIL"G"

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112,470113 470116

SHEET 3 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

LIFT RAMP DETAILS
MISCELLANEOUS DETAILS

Signed by: John Yannaccone 4EF98B9D8739424...
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE
10/14/2026

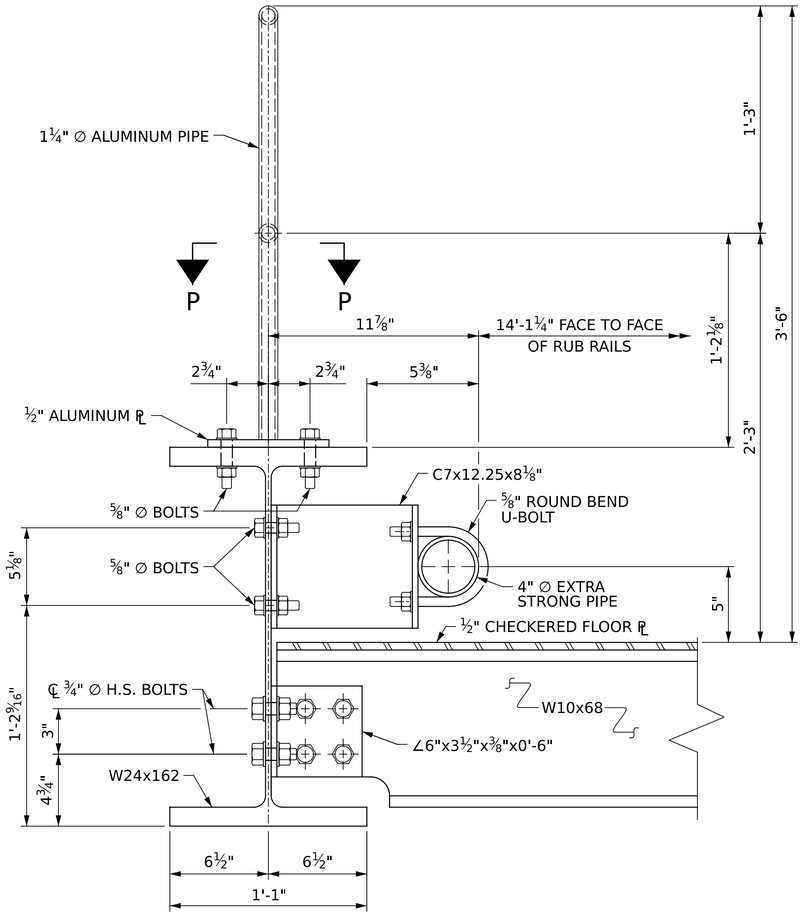
DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

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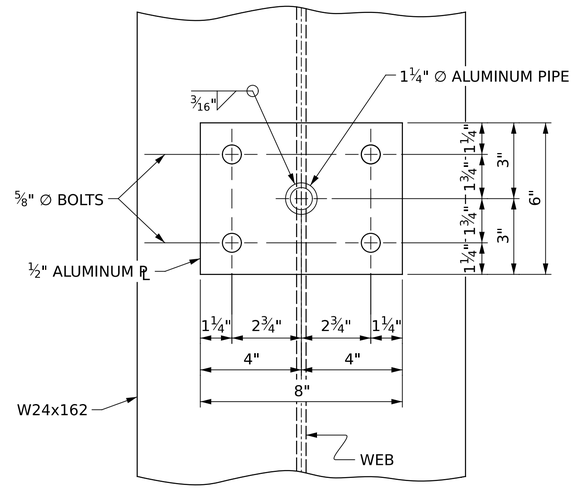
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2			4			49



SECTION D-D



VIEW P-P

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112,470113
470116

SHEET 4 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

LIFT RAMP DETAILS
THRU BEAM AND HANDRAIL

Signed by: John Yannaccone
4EF9BB9D8739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

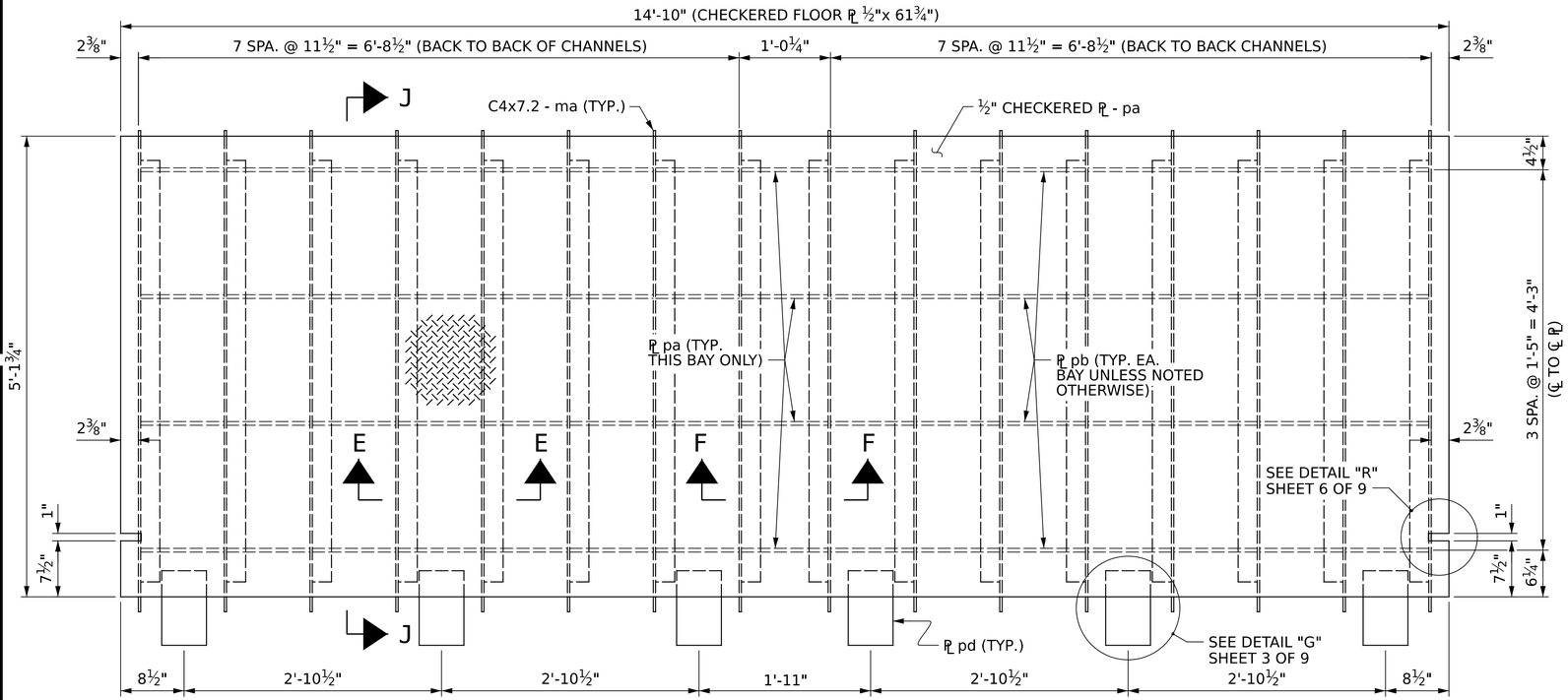
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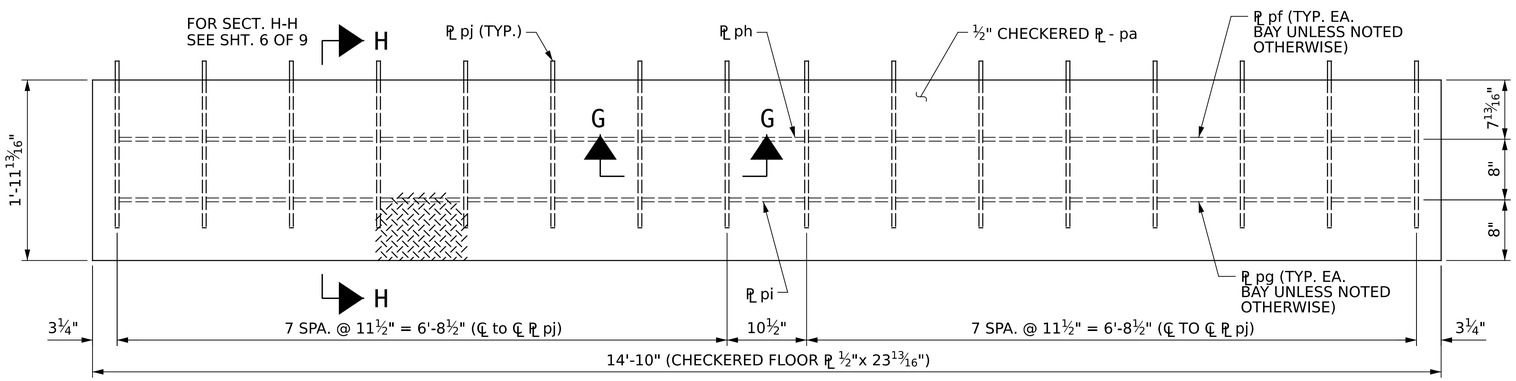
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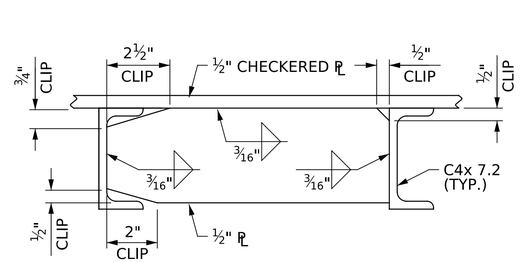
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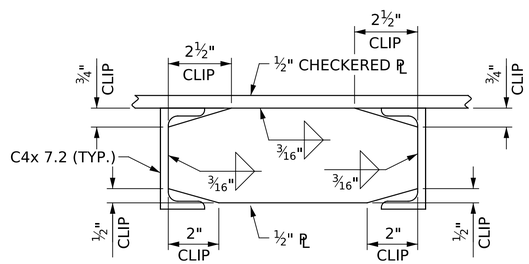




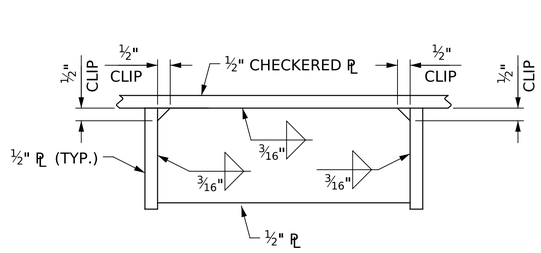
RAMP APRON ASSEMBLIES



SECTION E-E



SECTION F-F



SECTION G-G

NOTES

ALL PLATES, CHANNELS, AND RODS OF APRON ASSEMBLIES SHALL BE METALLIZED AFTER FABRICATION.

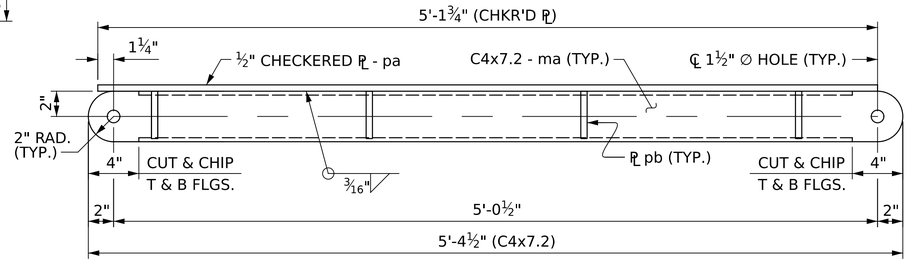
SEAL ALL WELDS PRIOR TO METALLIZING.

VERIFY DIMENSIONS IN FIELD PRIOR TO FABRICATION TO ENSURE A PROPER FIT. FOR FIELD MEASURING, SEE SPECIAL PROVISIONS.

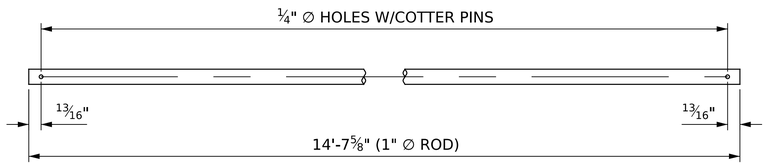
BILL OF MATERIAL

(FOR ONE RAMP APRON)

PIECE	QTY.	SHAPE	LENGTH
pa	1	CK. PL. ½"x 61¾"	14'-10"
pb	56	PL. ½"x 3¾"	0'-11 3/16"
pc	4	PL. ½"x 3¾"	0'-11⅝"
pd	6	PL. ½"x 6"	0'-10"
pe	1	CK. PL. ½"x 23 13/16"	14'-10"
pf	14	PL. ½"x 2"	0'-11"
pg	14	PL. ½"x 1"	0'-11"
ph	1	PL. ½"x 2"	0'-10"
pi	1	PL. ½"x 1"	0'-10"
pj	16	PL. ½"x 4"	1'-9½"
pk	2	PL. ½"x 2⅜"	0'-6"
ma	16	C4 x 7.2	5'-4½"
mb	36	1" STD. WASHERS	-
mc	4	¼" COTTER PINS	-
ra	2	1" ∅ ROD	14'-7⅝"



SECTION J-J



1" ∅ RODS

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112,470113 470116

SHEET 5 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

APRON DETAILS

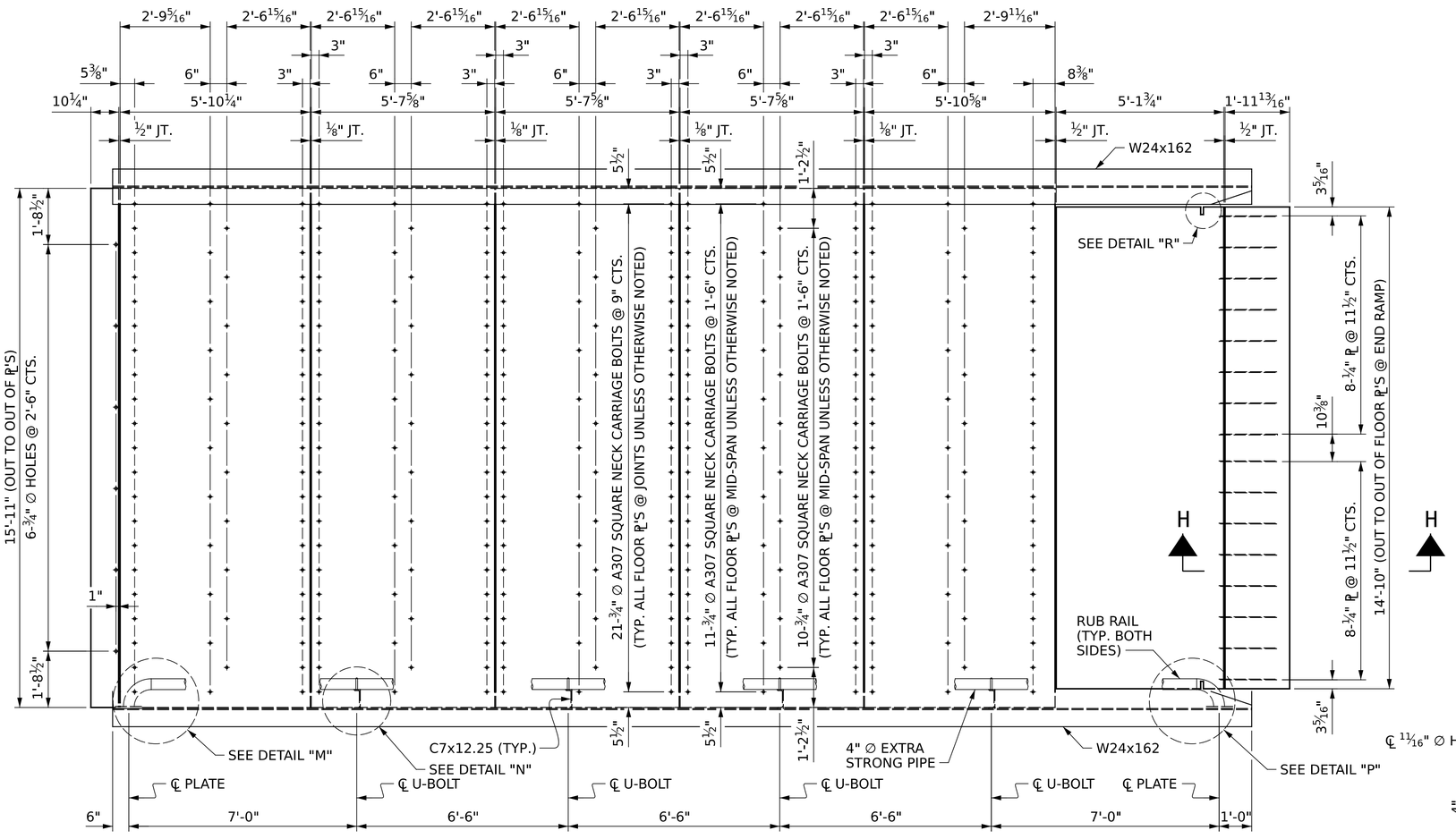
Signed by: John Yannaccone 032492
4EF9BB9D8739424...
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE
10/14/2026

DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

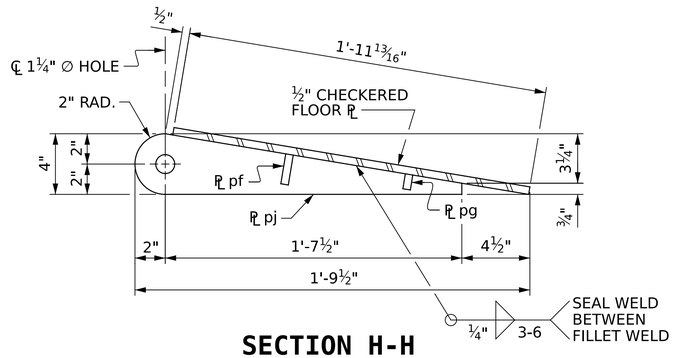
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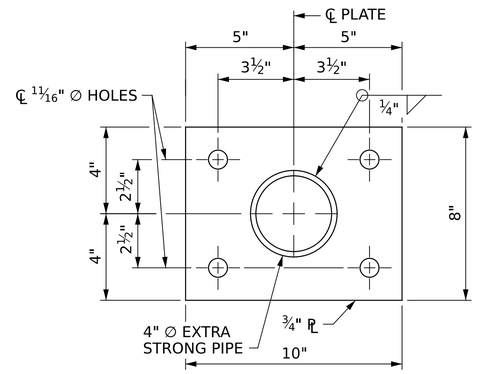
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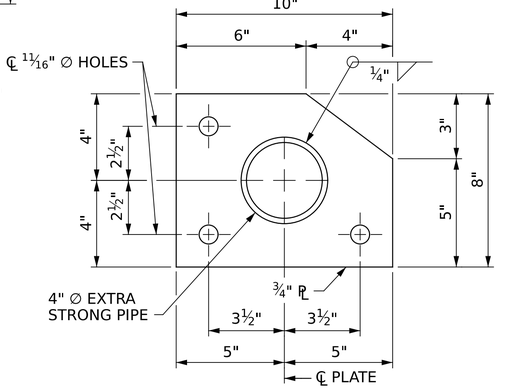
FLOOR PLATE AND RUB RAIL LAYOUT



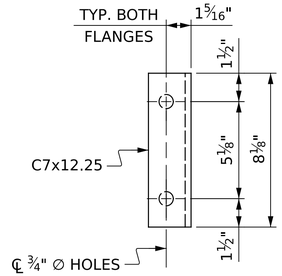
SECTION H-H



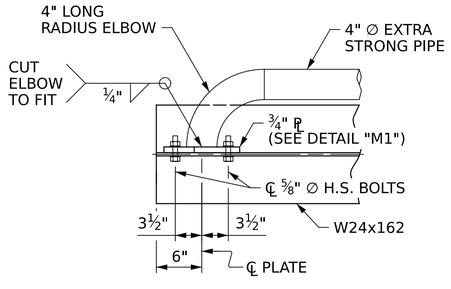
DETAIL "M1"



DETAIL "P1"

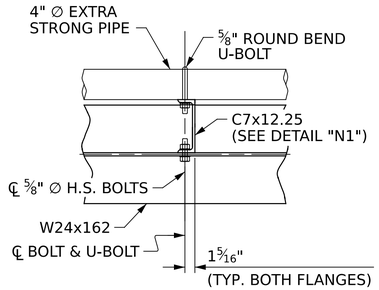


DETAIL "N1"



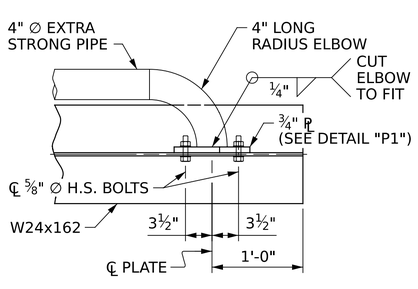
DETAIL "M"

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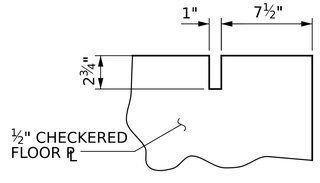
DETAIL "N"

(TOP FLANGE NOT SHOWN FOR CLARITY)



DETAIL "P"

(TOP FLANGE NOT SHOWN FOR CLARITY)



DETAIL "R"

(TYP. BOTH SIDES OF ℄)

Signed by: John Yannaccone
4EF9B89D8739424...
NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE
10/14/2026

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112,470113
470116

SHEET 6 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

LIFT RAMP DETAILS

CHECKERD FLOOR PLATE & RUB RAIL LAYOUT

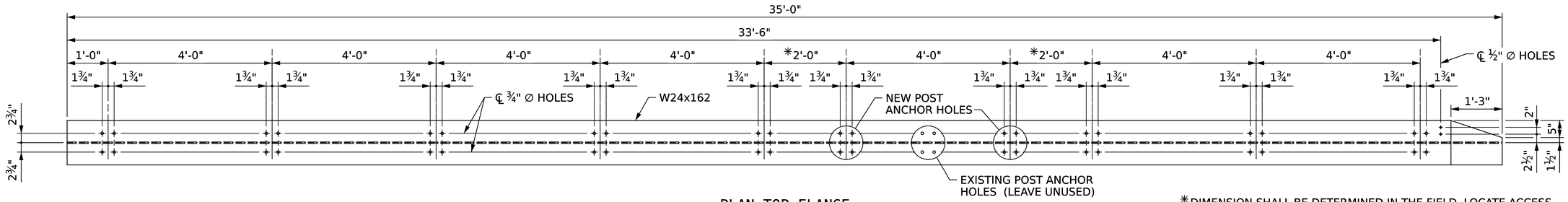
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CHECKED BY : J. YANNACCONE DATE : 6/2026

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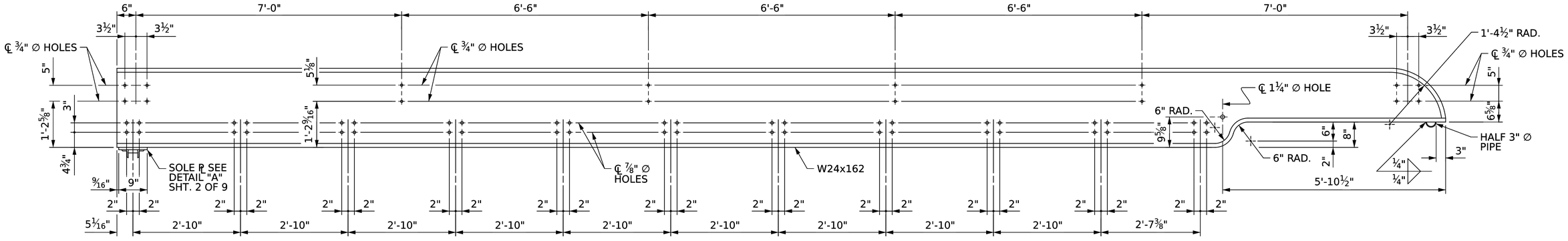
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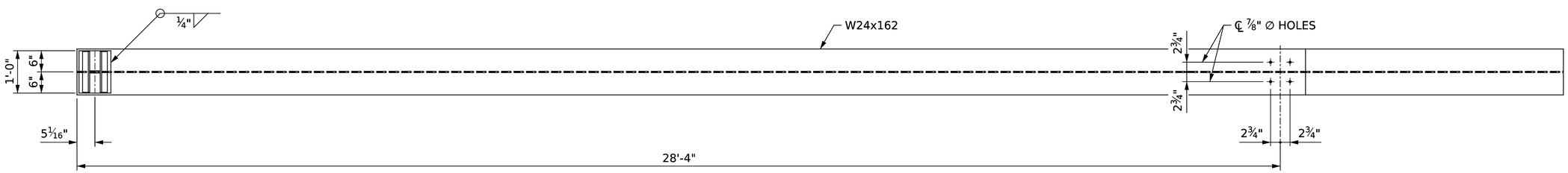
PLAN-TOP FLANGE

(SHOWING EXISTING POST ANCHOR HOLES EXCEPT AS NOTED)

*DIMENSION SHALL BE DETERMINED IN THE FIELD. LOCATE ACCESS GATE SO THAT IT IS CENTERED UP WITH THE ACCESS PLATFORM.



ELEVATION



PLAN-BOTTOM FLANGE

DETAIL "F"

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112,470113 470116

SHEET 7 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

LIFT RAMP DETAILS
THRU BEAM DETAILS

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10/14/2026

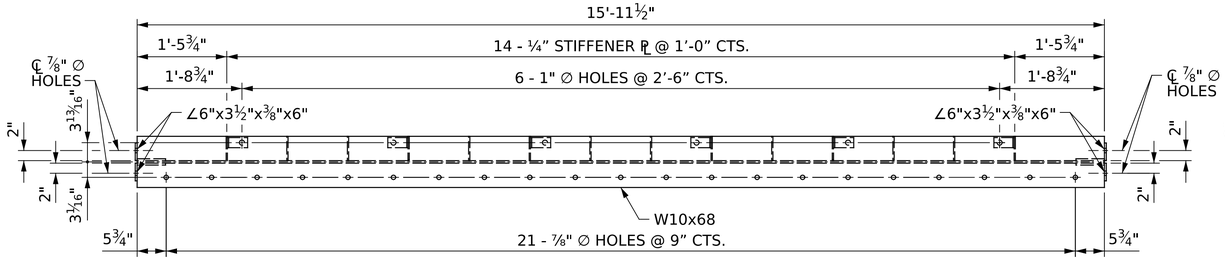
DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

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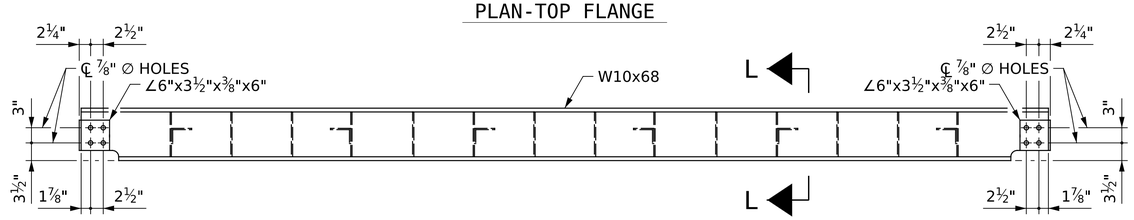
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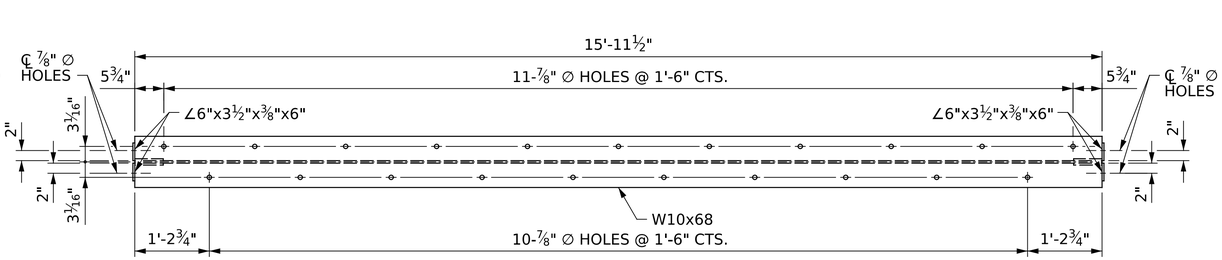
PLAN-TOP FLANGE



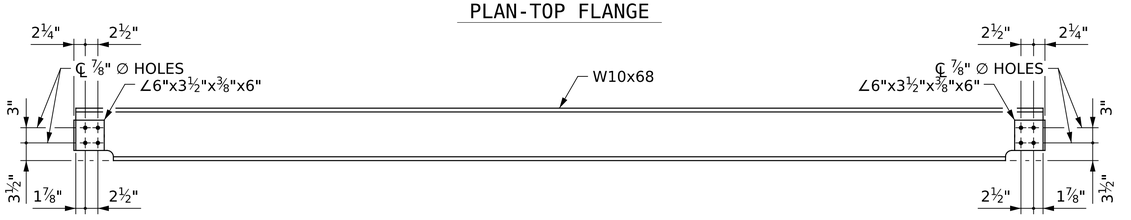
ELEVATION

FB1

(FLOOR BEAM)



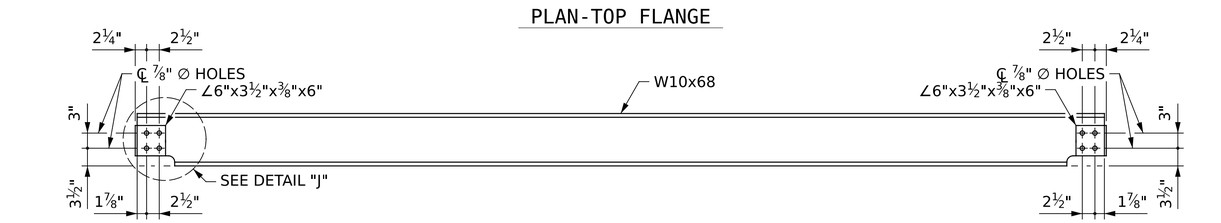
PLAN-TOP FLANGE



ELEVATION

FB2

(FLOOR BEAM)

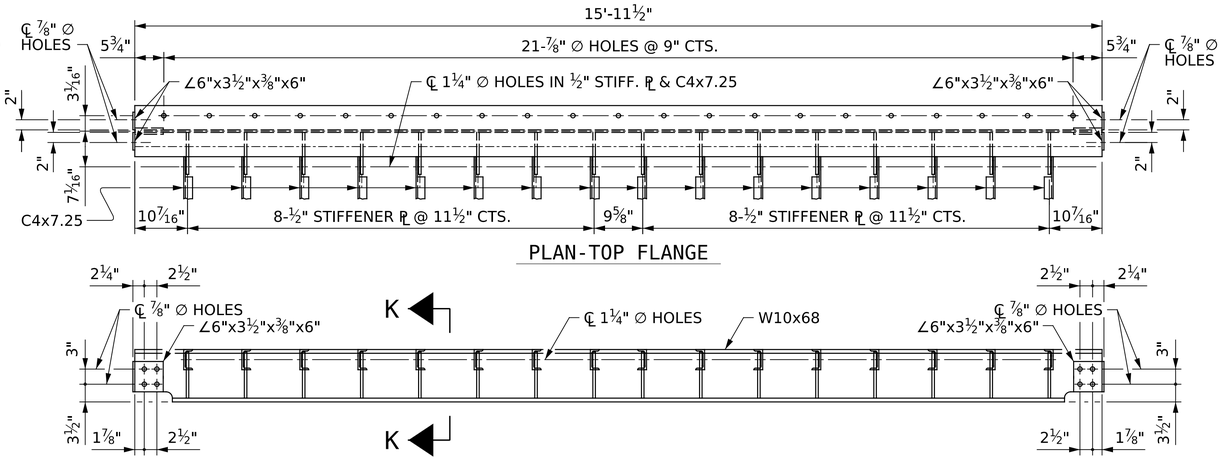


PLAN-TOP FLANGE

ELEVATION

FB3

(FLOOR BEAM)

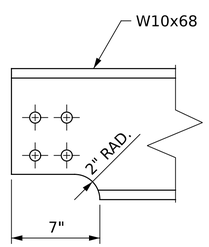


PLAN-TOP FLANGE

ELEVATION

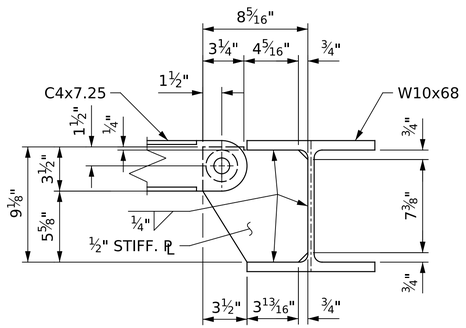
FB4

(FLOOR BEAM)

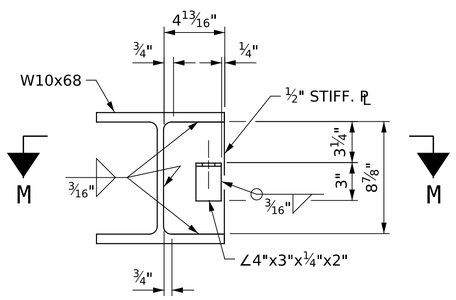


DETAIL "J"

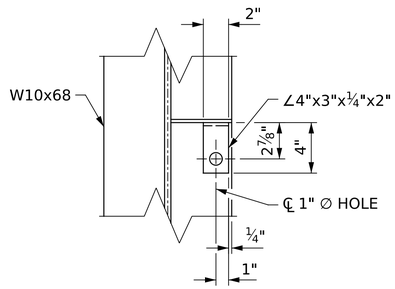
(TYP. BOTH ENDS ALL FLOOR BEAMS)



SECTION K-K



SECTION L-L



SECTION M-M

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NC Lic. No. F-0270

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4EF9BB9DC8730424...
10/14/2026

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

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DRAWN BY : J. HARRIS DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

PROJECT NO. **52378**

HYDE COUNTY

BRIDGE: **470112,470113**
470116

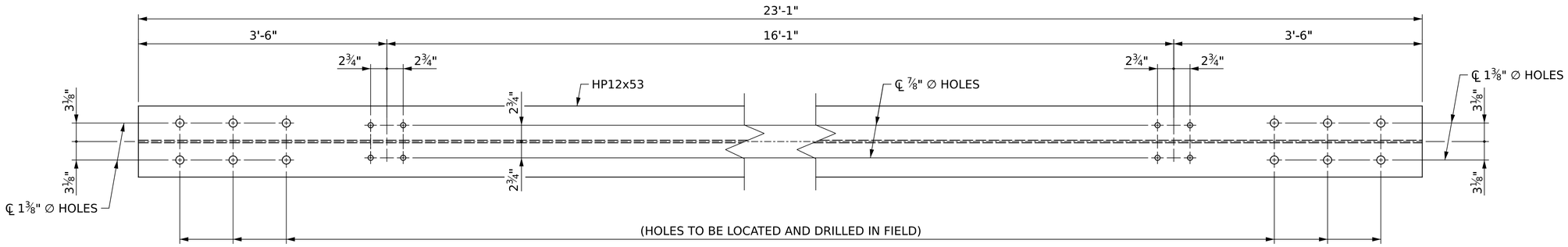
SHEET 8 OF 9

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

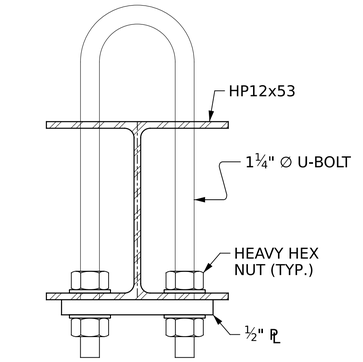
SUPERSTRUCTURE

LIFT RAMP DETAILS
FLOOR BEAM DETAILS

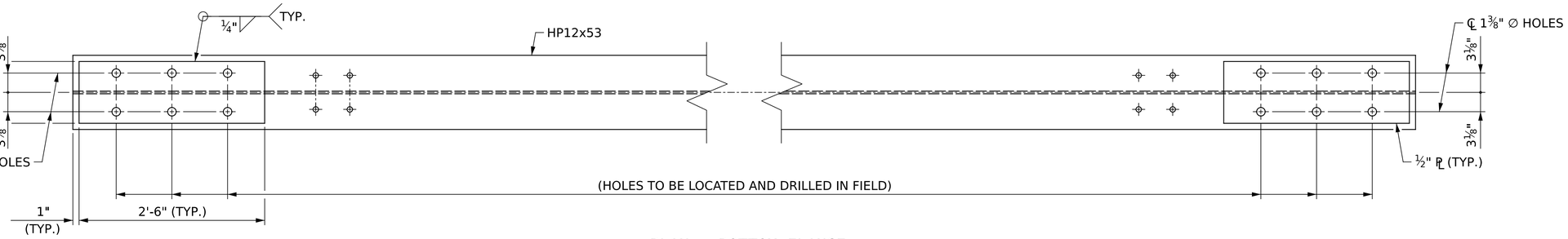
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PLAN - TOP FLANGE

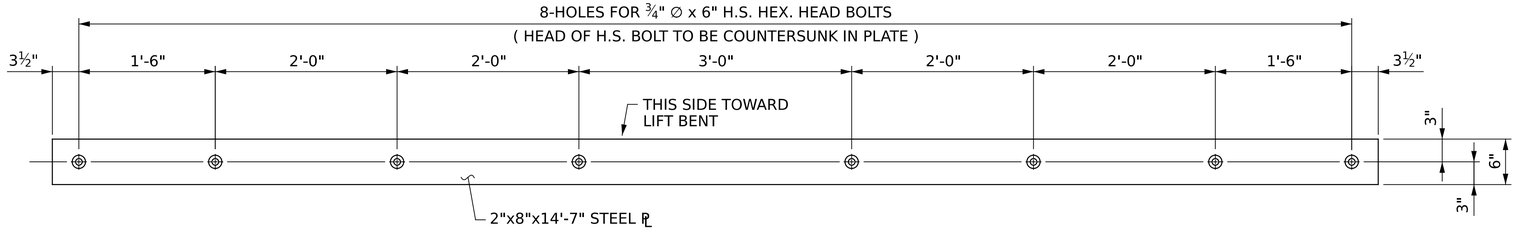


DETAIL OF U-BOLT THRU LIFT BEAM



PLAN - BOTTOM FLANGE

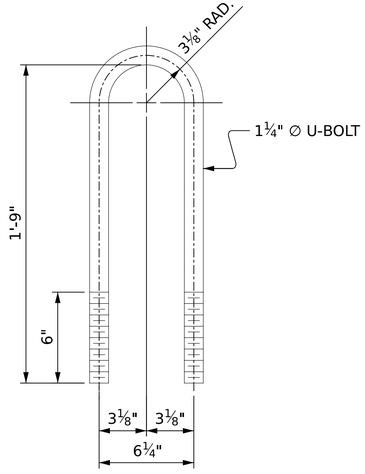
DETAIL"L"



PLAN

DETAIL"R1"

NOTE: THE CONTRACTOR SHALL USE AN ADHESIVE BONDING SYSTEM FOR ANCHORING THE 2" PLATE TO THE CORED SLAB UNITS. LEVEL 1 FIELD TESTING IS REQUIRED, AND THE REQUIRED DESIGN LOAD OF THE ¾" Φ BOLT IS 12 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.



DETAIL OF U-BOLT FOR LIFT BEAM

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112, 470113
470116

SHEET 9 OF 9

Signed by: John Yannaccone
4EF9B89D8739434...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

LIFT RAMP DETAILS

LIFT BEAM DETAILS

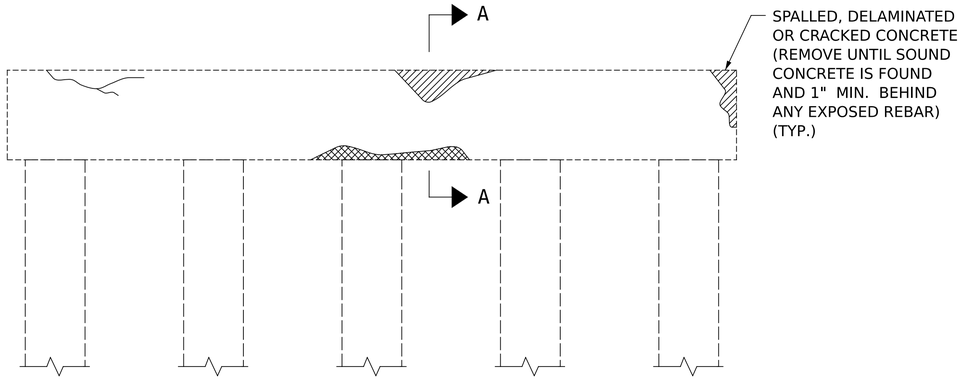
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CHECKED BY : J. YANNACCONE DATE : 6/2026

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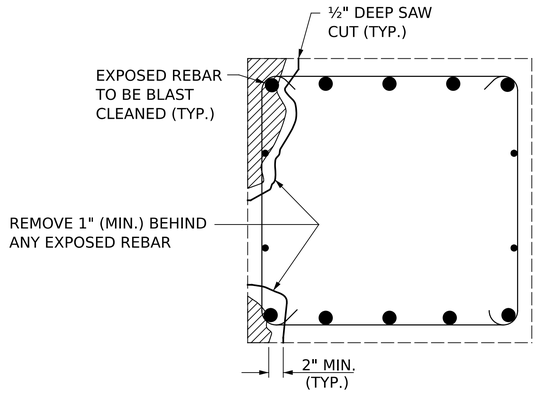
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BENT CAP REPAIRS



SECTION A-A

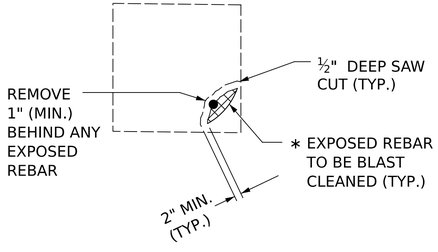
CAP REPAIR

SPLICE LENGTH TABLE	
BAR SIZE	MIN. SPLICE LENGTH
#4	2'-4"
#5	2'-9"
#6	4'-0"
#7	5'-3"
#8	6'-9"
#9	8'-6"
#10	10'-11"
#11	13'-4"

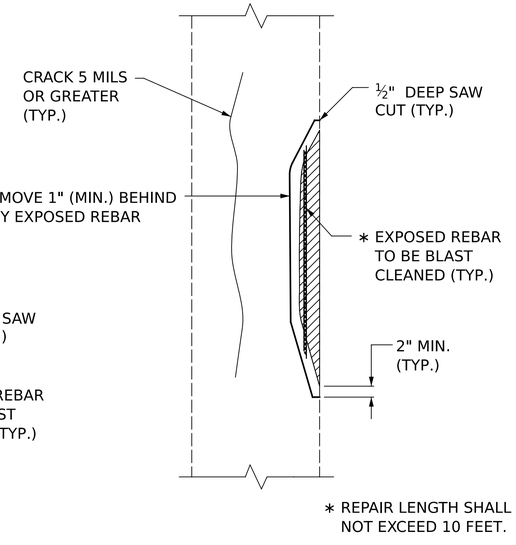
REPAIR KEY

CONCRETE REPAIR AREA (FORM AND POUR)

EPOXY RESIN INJECTION (ERI)



PLAN OF COLUMN



ELEVATION OF COLUMN

COLUMN REPAIR

NOTES

TYPICAL BENT CAP REPAIRS ARE SHOWN.

THE METHOD USED TO DELINEATE THE AREAS OF UNSOUND CONCRETE TO BE REPAIRED SHALL NOT PERMANENTLY MARK THE CONCRETE, LEAVE ANY RESIDUE AFTER REMOVAL OR REQUIRE HARSH CHEMICALS TO REMOVE.

THE CONTRACTOR SHALL REMOVE THE DETERIORATED CONCRETE IN ACCORDANCE WITH THE GUIDELINES SET IN THESE NOTES, IN THE SPECIAL PROVISIONS AND THE STANDARD SPECIFICATIONS.

REMOVE UNSOUND CONCRETE TO THE EXTENT NECESSARY, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT.

NO MORE THAN ONE-THIRD OF THE CAP OR COLUMN CROSS SECTIONAL AREA SHALL BE REMOVED AT ONE TIME. SHOULD IT BECOME NECESSARY TO REMOVE MORE THAN 30% OF A CAP OR COLUMN CROSS SECTIONAL AREA, NOTIFY THE ENGINEER PRIOR TO PROCEEDING.

SIMULTANEOUS REMOVAL OF UNSOUND CONCRETE MAY BE PERMITTED ON MORE THAN ONE FACE OF A CAP AND/OR COLUMN, IF THE AREAS OF REMOVAL ARE NOT ADJACENT TO OR DIRECTLY OPPOSITE ONE ANOTHER. IF REMOVAL EXTENDS MORE THAN 1½" BEHIND THE MAIN REINFORCING BARS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING.

REINFORCING STEEL WHICH IS DETERMINED BY THE ENGINEER TO BE REPLACED, SHALL BE REMOVED TO A POINT WHERE IT IS SOUND. THE REPAIR AREA SHALL EXTEND A SUFFICIENT DISTANCE BEYOND THIS POINT TO DEVELOP A SPLICE LENGTH SPECIFIED IN THE TABLE ON THIS SHEET.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE STANDARD SPECIFICATIONS.

COAT ALL SURFACE AREAS ON THE TOP OF CAPS, INCLUDING CHAMFERS, WITH EPOXY PROTECTIVE COATING.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112, 470113
470116

Signed by: John Yannaccone
4EF9BB9D8739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL CAP AND COLUMN REPAIR DETAILS

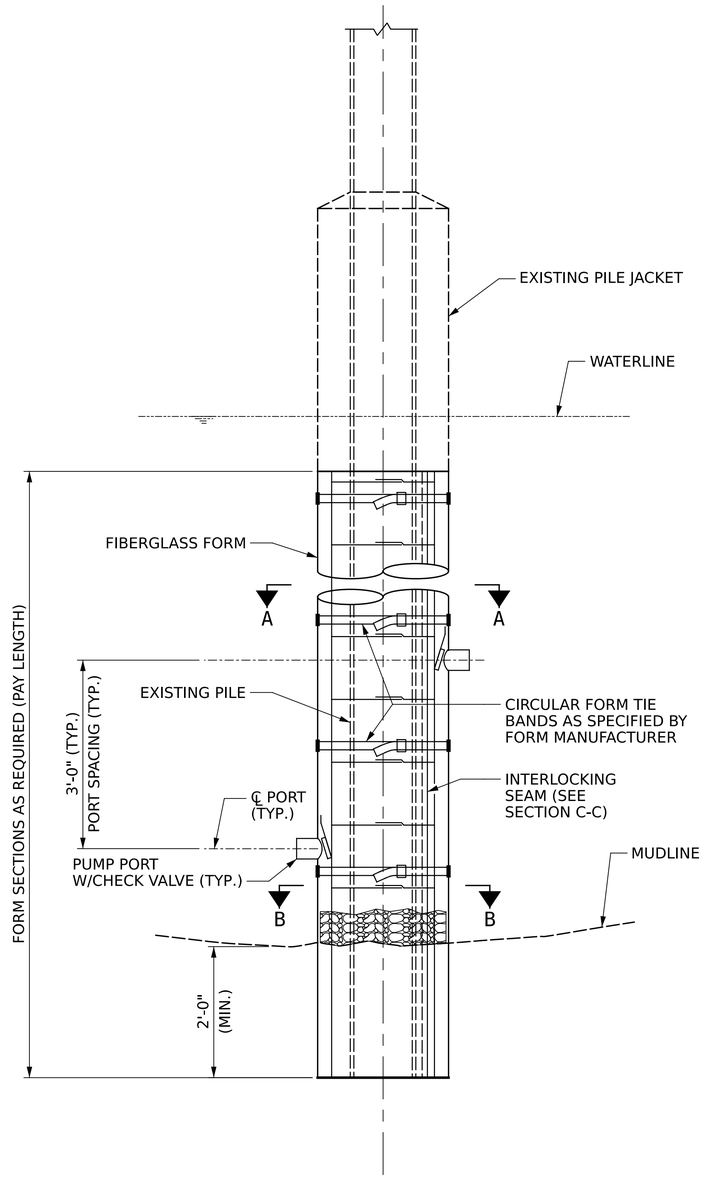
DRAWN BY : J. MYA DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

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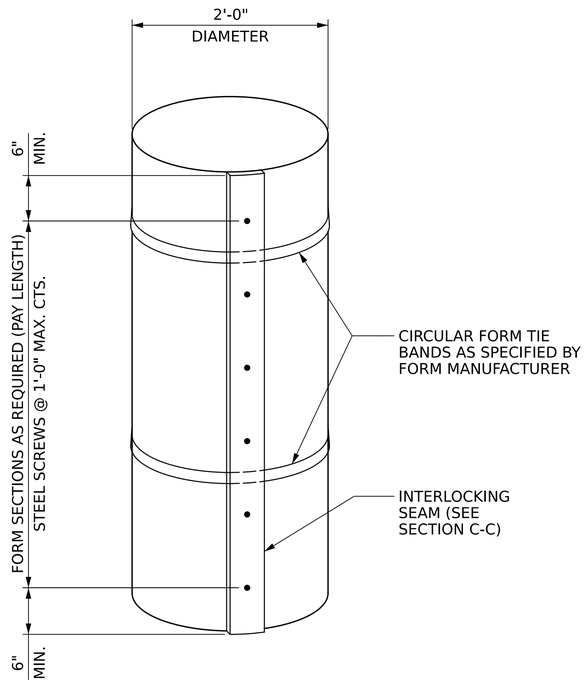
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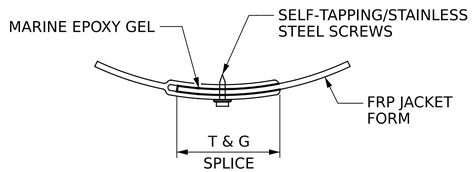
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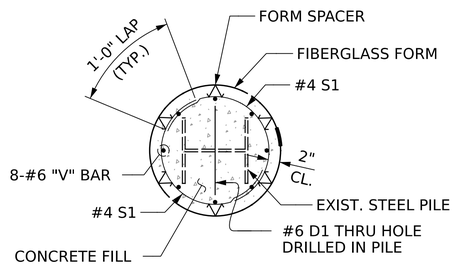
FRP PILE JACKET DETAILS



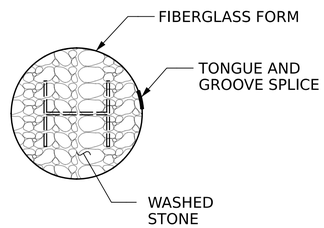
FRP PILE JACKET FORM



SECTION C-C



SECTION A-A



SECTION B-B

TEST4

JACKET NOTES

FOR FRP PILE JACKETS, SEE SPECIAL PROVISIONS.

CONCRETE AMD REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 AND SHALL BE EPOXY COATED IN ACCORDANCE WITH ASTM A775.

SURFACES OF PILES TO BE ENCASED IN CONCRETE SHALL BE CLEANED AS DESCRIBED IN SPECIAL PROVISIONS. CLEANING MUST BE DONE IMMEDIATELY BEFORE FORMS ARE INSTALLED.

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL SHOWING ALL FASTENING DETAILS, STANDOFFS, FORMS AND ANY OTHER DEVICES NECESSARY TO SECURE THE FORMS SO THAT CONCRETE MAY BE PLACED IN CONTINUOUS OPERATION COMPLETELY ENCAPSULATING THE PILES.

FORMS FOR JACKET SHALL BE INSTALLED IN ACCORDANCE WITH APPROVED SHOP DRAWINGS. BOTTOM SEAL SHALL BE WATER TIGHT.

DETAILS FOR PUMP PORTS WITH CHECK VALVE SHALL BE DETERMINED BY THE SUPPLIER.

CONCRETE AT THE TOP OF THE JACKET SHALL BE DOMED TO PREVENT PONDING. THE INTERFACE OF THE PILE AND THE CONCRETE AT THIS LOCATION SHALL BE SEALED WITH AN APPROVED SEALANT.

REPAIR SEQUENCE

1. REMOVE ALL RUST, OIL, GREASE, AND OTHER CONTAMINANTS FROM EXISTING STEEL PILE PRIOR TO JACKETING. PREPARE STEEL USING ACCEPTABLE MECHANICAL MEANS AND STEEL CLEANERS & DEGREASERS AS NECESSARY TO OBTAIN CLEAN, SOUND SURFACES. WHERE MARINE GROWTH, VISIBLE SIGNS OF CORROSION OR OTHER CONTIMANANTS EXIST, A HIGH PRESSURE WATER BLAST SHOUD BE UTILIZED TO ENSURE A CLEAN, SOUND AND CONTIMANANT-FREE SURFACE.
2. COMPLETE STEEL REPAIRS AS SHOWN ON OTHER SHEETS.
3. DETERMINE FIBERGLASS JACKET FORM HEIGHT. MINIMUM HEIGHT IS 2 FT. ABOVE AND BELOW CLEAN, SOUND AND CONTIMANANT-FREE SURFACES.
4. BUILD THE REINFORCING BAR CAGE BY PLACING THE #4 STIRRUPS AND VERTICAL REINFORCING STEEL AROUND THE PILE IN ACCORDANCE WITH THE DETAILS.
5. INSTALL FORM SPACERS TO ENSURE ADEQUATE CONCRETE AT ALL PARTS OF THE SLEEVE.
6. INSTALL THE FIBERGLASS JACKET FORMS. THE FIBERGLASS JACKET FORMS SHALL COMPLETELY ENCIRCLE THE PILES TO PROVIDE THE CONCRETE COVER AND CLEARNCES AS SHOWN IN SECTION A-A. THE FIBERGLASS JACKET FORMS SHALL BE SIZED TO INCLUDE AN OVERLAPPING FULL HEIGHT INTERLOCKING SEAM. SEE "PILE JACKET JOINT DETAIL".
7. INSERT CONCRETE PUMP HOSE THRU TOP OF JACKET AND EXTEND TO JUST ABOVE THE BOTTOM OF FIBERGLASS JACKET FORM. PUMP CONCRETE INTO FORM TO THE DESIRED FILL ELEVATION. IF SITE CONDITIONS PROHIBIT INSERTING PUMP HOSE THRU TOP OF JACKET, THEN INSTALL PUMP PORTS ALONG HEIGHT OF JACKET AS REQUIRED AND PLACE CONCRETE AS SOWN IN THE DETAILS.
8. INSTALL PUMP PORTS IN JACKET AS REQUIRED FOR UNDERWATER APPLICATIONS. PORTS SHOULD HAVE A CHECK VALVE TO PREVENT BACK FLOW OF CONCRETE ONCE PUMP NOZZLE IS REMOVED. FOR CONCRETE PLACEMENTS GRETER THAN 5 FT. HIGH USE MULTIPLE PORTS SPACED 3 FT. VERTICALLY AND ALTERNATING 180 DEGREES FROM PREVIOUS PORT. A MINIMUM OF 2 FT. OF CONCRETE HEAD IS NEEDED ABOVE PORT PRIOR TO CHANGING PORTS.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112, 470113

Signed by: John Yannaccone 4EF9BB9D87394...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FRP PILE JACKET DETAILS

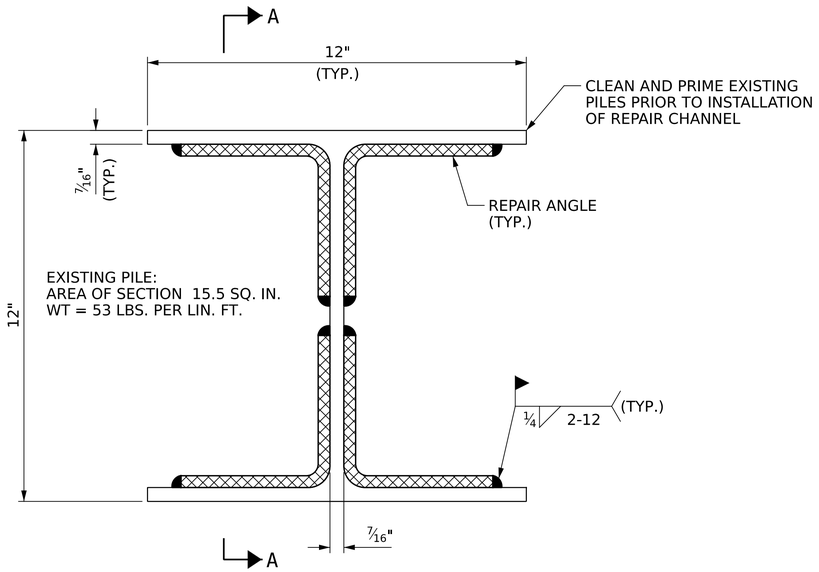
DRAWN BY : J. MYA DATE : 6/2026

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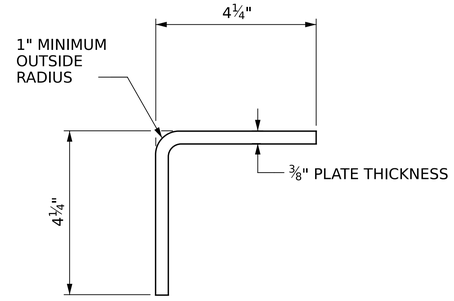
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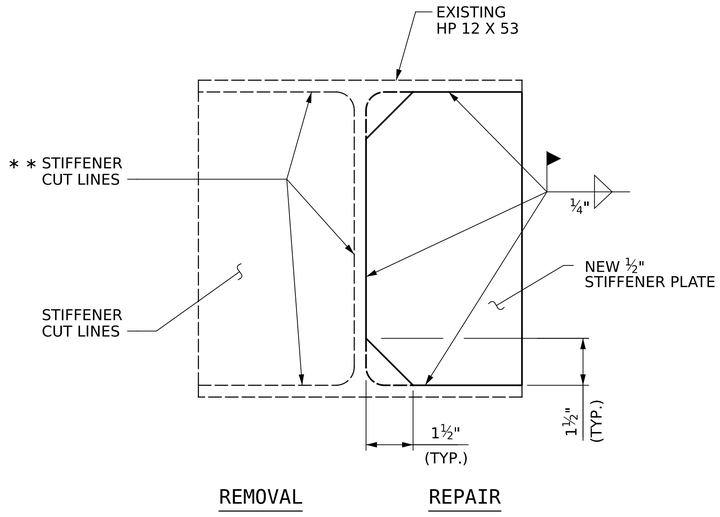


REPAIR SECTION THROUGH PILE



REPAIR ANGLE SECTION

(SEE EXISTING H-PILE & REPAIR ANGLE DIMENSIONS TABLE)



STIFFENER REPAIR DETAIL

* * GRIND SMOOTH LEAVING NO BURNT EDGES

NOTES:

THE CONTRACTOR SHALL FIELD VERIFY EXISTING PILE DIMENSIONS PRIOR TO THE FABRICATION OF ANY REPAIR ANGLES.

ALL STRUCTURAL STEEL PLATES SHALL BE AASHTO M270 GRADE 50.

AFTER COMPLETION OF PILE REPAIR, APPROPRIATE STEPS SHALL BE FOLLOWED TO PREPARE STEEL SURFACES AND PROVIDE THE COMPLETE PAINT SYSTEM 3 ON ALL STEEL COMPONENTS.

FOR CLEANING AND REPAINTING OF LIFT BENT, SEE "PAINTING EXISTING FERRY RAMP LIFT BENT" SPECIAL PROVISION.

STEEL REPAIR ANGLE SECTIONS SHALL BE SHOP PRIMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

BEND PLATE FOR REPAIR ANGLE SECTION PERPENDICULAR TO THE ROLLING DIRECTION OF THE PLATE.

FOR STEEL PILE REPAIRS, SEE SPECIAL PROVISIONS.

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112, 470113
470116

Signed by: John Yannaccone
4EF9BB90B739424...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

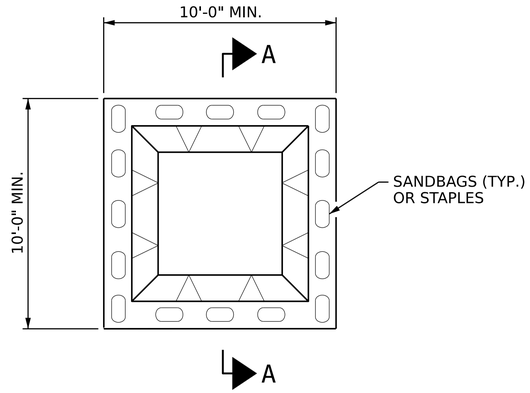
LIFT BENT REPAIR DETAILS

DRAWN BY : J. MYA DATE : 6/2026
CHECKED BY : J. YANNACCONE DATE : 6/2026

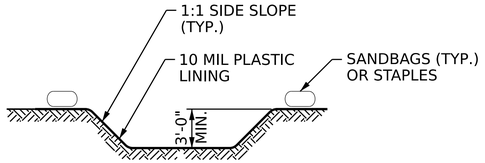
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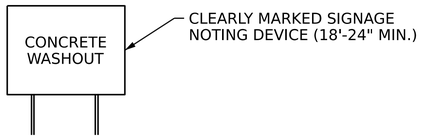
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PLAN



SECTION A-A



NOTES

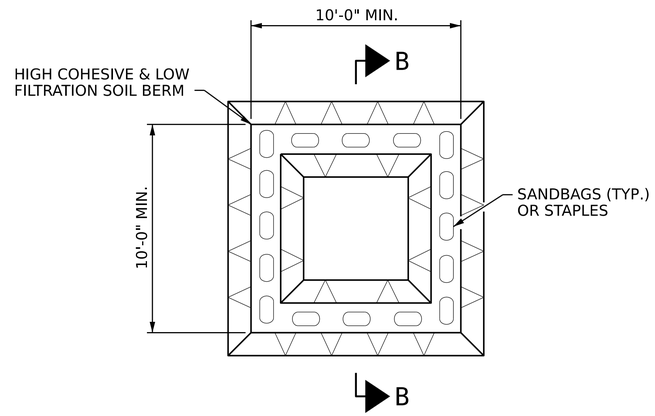
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

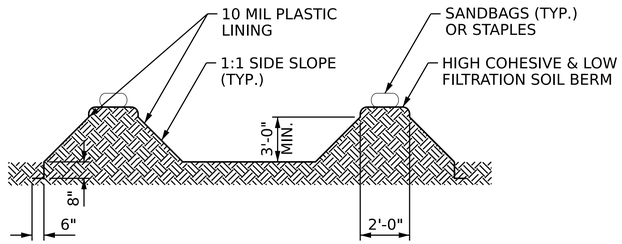
3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE

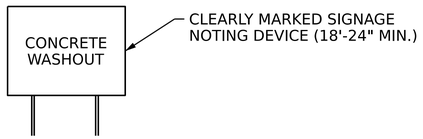
NOT TO SCALE



PLAN



SECTION B-B



NOTES

1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

Signed by: John Yannaccone 4EF90B9DB73943...

NORTH CAROLINA PROFESSIONAL SEAL 032492 ENGINEER JOHN A. YANNACCONE

10/14/2026

ABOVE GRADE WASHOUT STRUCTURE

NOT TO SCALE

PROJECT NO. 52378

HYDE COUNTY

BRIDGE: 470112, 470113
470116

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

DRAWN BY : J. HARRIS DATE : 6/2026

CHECKED BY : J. YANNACCONE DATE : 6/2026

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8/26/21

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	AASHTO (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE AASHTO
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	SEE AASHTO
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2024 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED ¾" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1½" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A ¼" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A ¼" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE ⅞" ∅ SHEAR STUDS FOR THE ¾" ∅ STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - ⅞" ∅ STUDS FOR 4 - ¾" ∅ STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF ⅞" ∅ STUDS ALONG THE BEAM AS SHOWN FOR ¾" ∅ STUDS BASED ON THE RATIO OF 3 - ⅞"∅ STUDS FOR 4 - ¾" ∅ STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16" OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.