

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MITCHELL COUNTY

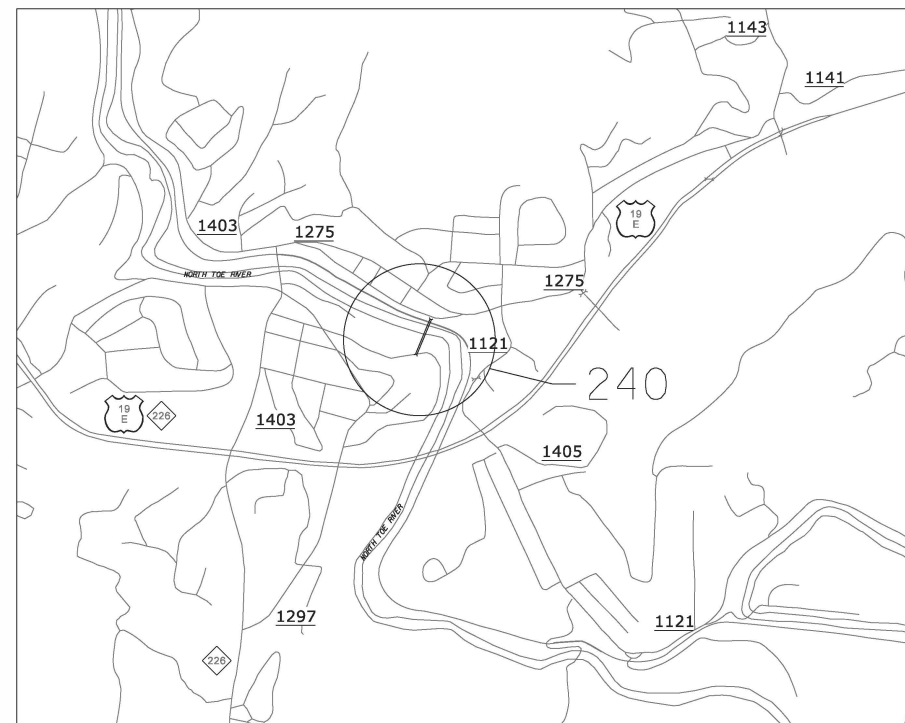


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	49282	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
49282	-	P.E.	
49282	-	CONST.	

LOCATION: MITCHELL COUNTY

BRIDGE #600240 PEDESTRIAN BRIDGE OVER NORTH TOE RIVER AND CSX RAILROAD

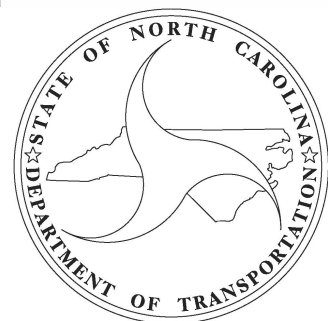
TYPE OF WORK: BRIDGE PRESERVATION - PEDESTRIAN BRIDGE PRESERVATION AND REPAIR; TIMBER DECK REPLACEMENT, RAILING REPLACEMENT, CLEAN AND PAINT STEEL MEMBERS, CONCRETE SUBSTRUCTURE REPAIRS, EPOXY COAT TOP OF CONCRETE CAPS, SILANE TREAT CONCRETE BENTS.



VICINITY MAP - MITCHELL CO.

PROJECT: 49282

CONTRACT: DM00303



DESIGN DATA

MITCHELL COUNTY
#240 ADT 2008 = N/A

PROJECT LENGTH

MITCHELL COUNTY
- #240 = 0.07 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR.
RALEIGH, N.C. 27610

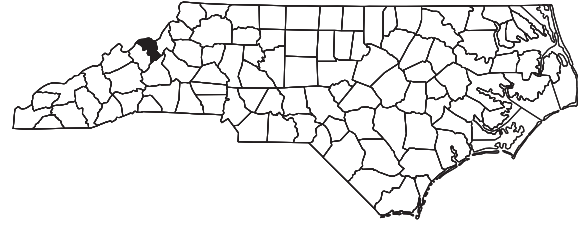
2018 STANDARD SPECIFICATIONS

LETTING DATE : MAY 3, 2023

TIMOTHY M. SHERRILL, P.E.
PROJECT ENGINEER

TIMOTHY M. SHERRILL, P.E.
PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



MITCHELL COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	49282	1A	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
49282	-	P.E.	
49282	-	CONST.	

LOCATION: MITCHELL COUNTY

PEDESTRIAN BRIDGE OVER THE NORTH TOE RIVER AND CSX RAILROAD

TYPE OF WORK: BRIDGE PRESERVATION - PEDESTRIAN BRIDGE PRESERVATION AND REPAIR; TIMBER DECK REPLACEMENT, RAILING REPLACEMENT, CLEAN AND PAINT STEEL MEMBERS, CONCRETE SUBSTRUCTURE REPAIRS, EPOXY COAT TOP OF CONCRETE CAPS, SILANE TREAT CONCRETE BENTS.

INDEX OF SHEETS

<i>1</i>	<i>TITLE SHEET</i>
<i>1A</i>	<i>INDEX OF SHEETS</i>
<i>S1-01 THRU S1-02</i>	<i>GENERAL DRAWINGS</i>
<i>S1-03</i>	<i>TOTAL BILL OF MATERIAL</i>
<i>S1-04 THRU S1-29</i>	<i>STRUCTURAL PLANS - PEDESTRIAN BRIDGE OVER NORTH TOE RIVER</i>
<i>SN</i>	<i>STANDARD NOTES AND CSX RAILROAD</i>

PROJECT: 49282

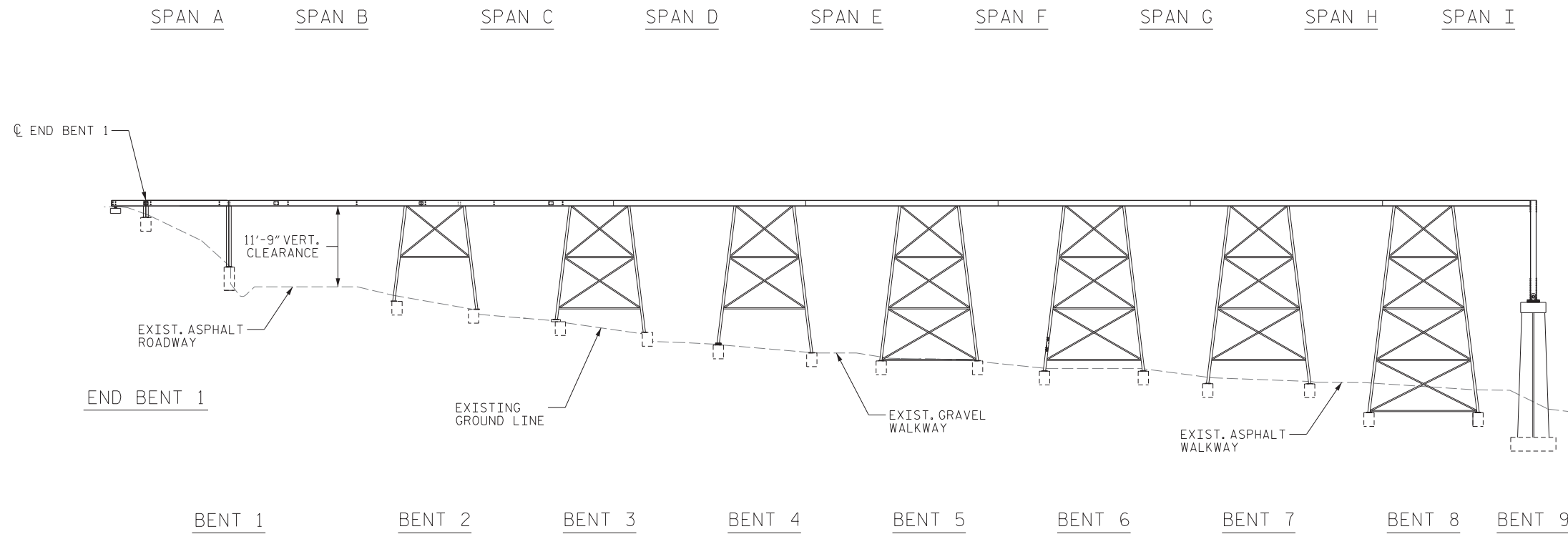
CONTRACT: DM00303

NOTES

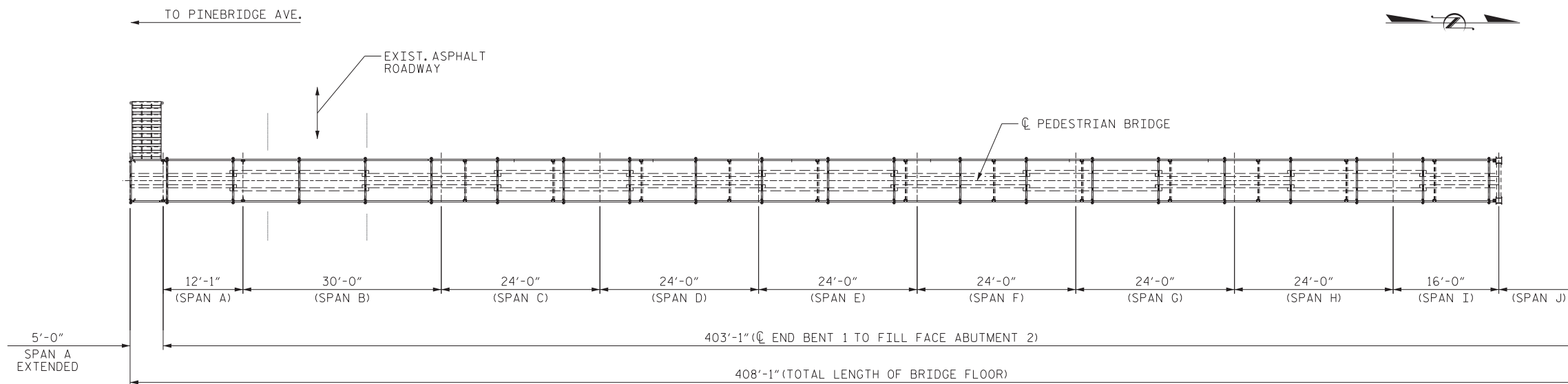
GENERAL DRAWING INFORMATION IS TAKEN FROM THE ROUTINE INSPECTION REPORT DATED 05/09/2008.

SCOPE OF WORK

- REMOVE EXISTING TIMBER DECK
- REMOVE AND REPLACE OR REPAIR DAMAGED STEEL MEMBERS
- CLEAN AND PAINT STEEL
- INSTALL NEW RAILS
- REPAIR CONCRETE WITH CONCRETE REPAIRS
- REPAIR CONCRETE CRACKS WITH SILANE TREATMENT
- EPOXY COAT CONCRETE CAPS
- INSTALL NEW TIMBER DECK



SECTION ALONG CL BRIDGE

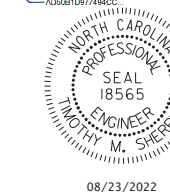


PLAN

PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 1 OF 2

DocuSigned by:
 Timothy M. Sherrill
 7D581ED7748CC



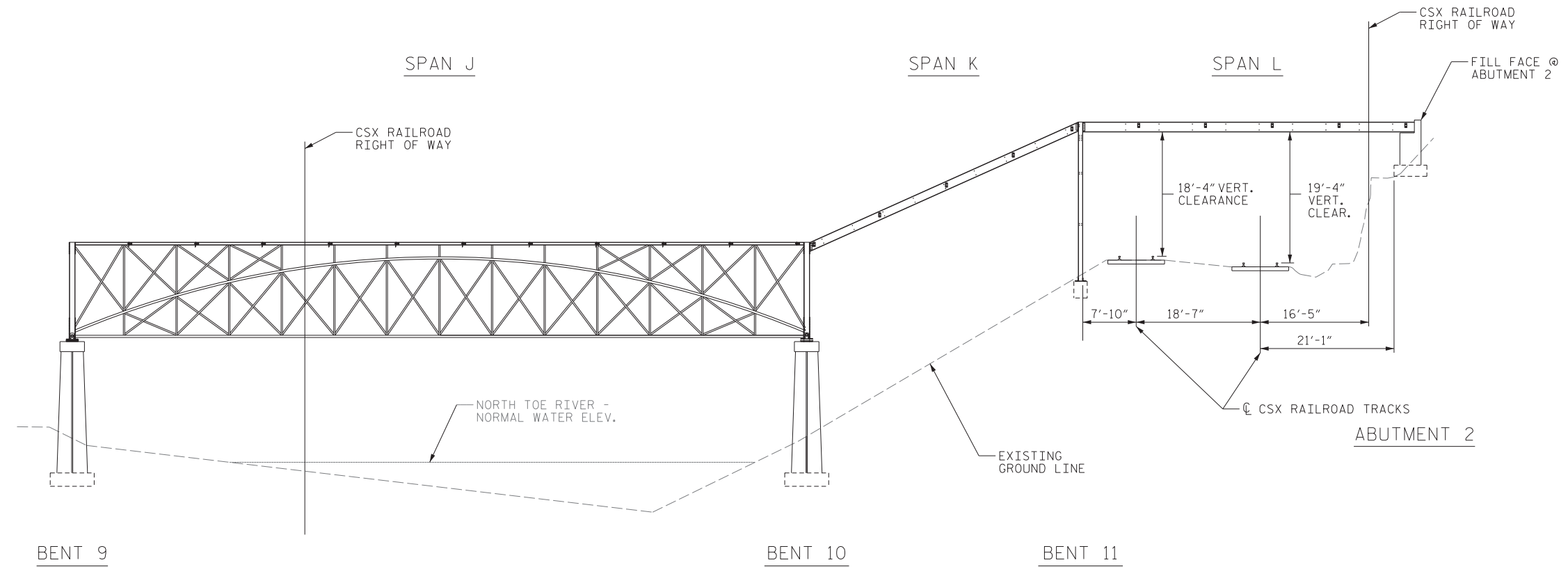
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR
 PEDESTRIAN BRIDGE
 OVER NORTH TOE RIVER
 AND CSX RAILROAD

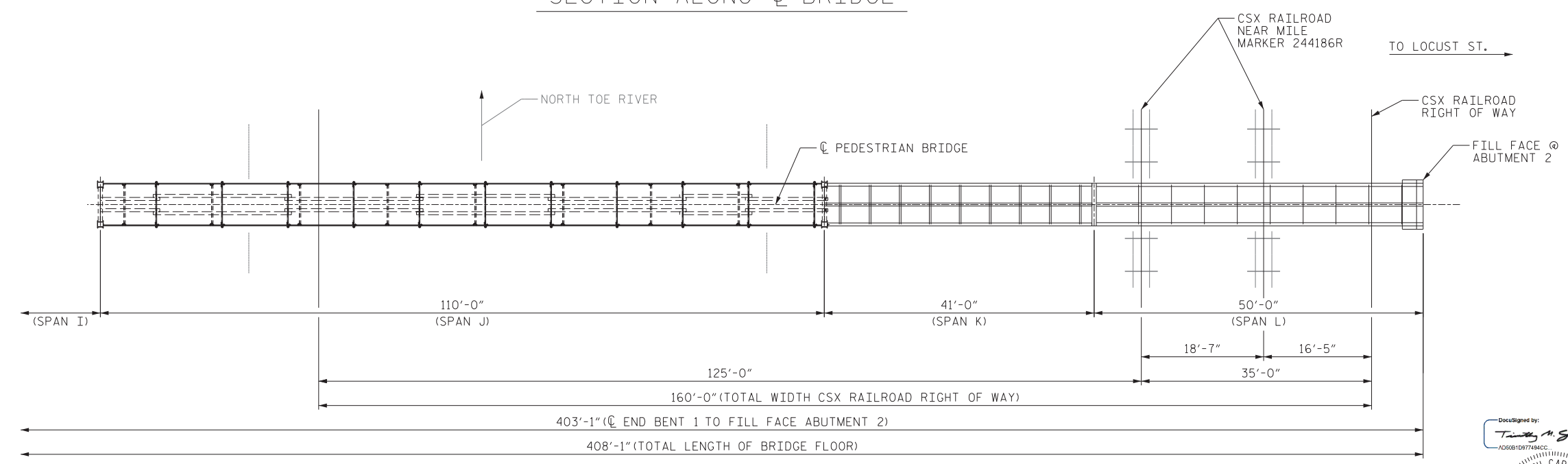
DRAWN BY : R.L.PUTEK DATE : 12/2020
 CHECKED BY : T.M.SHERRILL DATE : 12/2020

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-01
1			3			TOTAL SHEETS
2			4			29

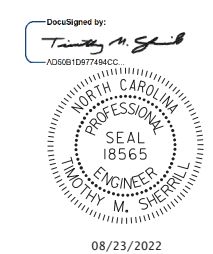


SECTION ALONG CL BRIDGE



PLAN

PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240
 SHEET 2 OF 2

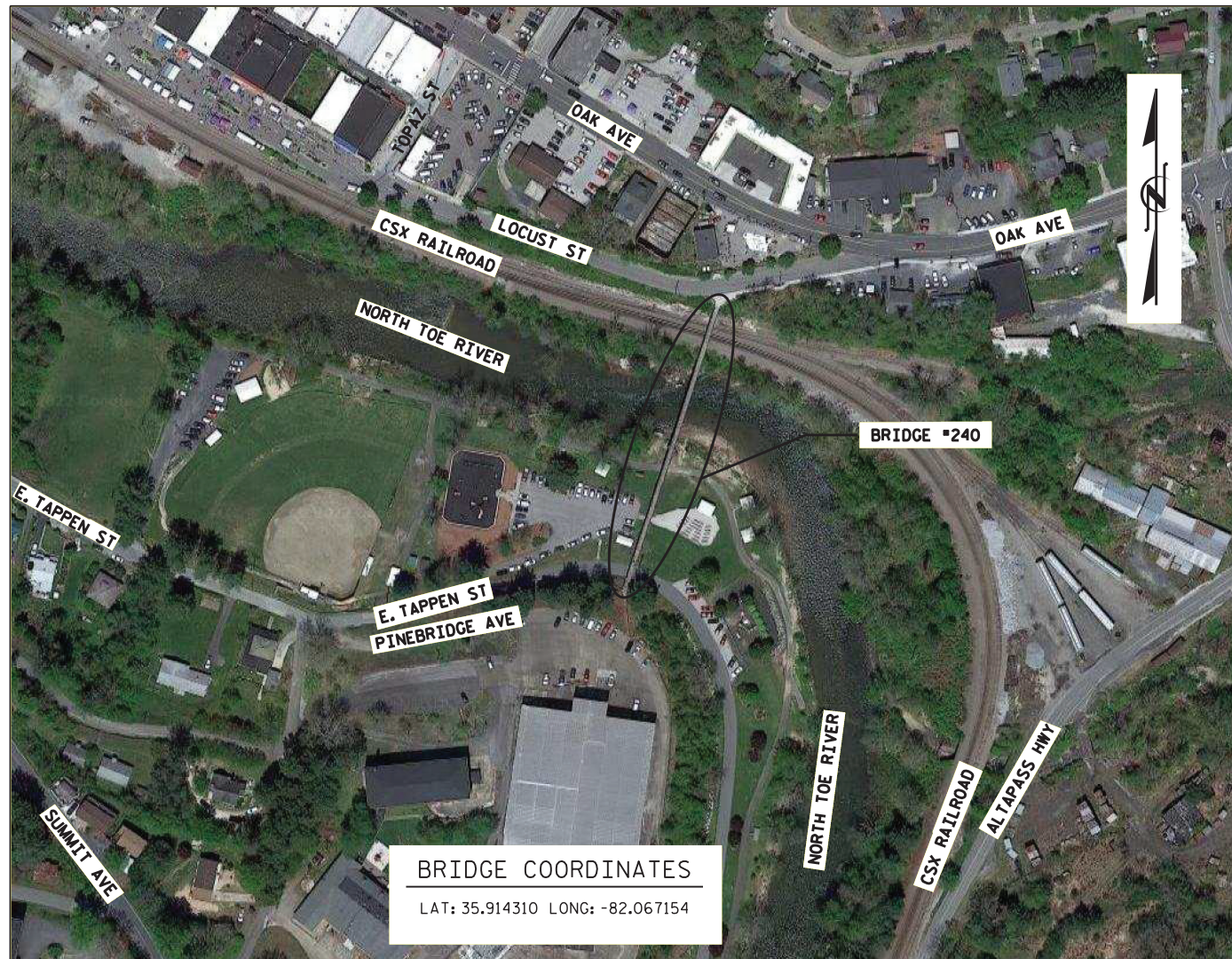


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR
 PEDESTRIAN BRIDGE
 OVER NORTH TOE RIVER
 AND CSX RAILROAD

DRAWN BY : R.L.PUTEK DATE : 12/2020
 CHECKED BY : T.M.SHERRILL DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-02
1			3			TOTAL SHEETS
2			4			29



LOCATION SKETCH

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.

NOTES

- 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 OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THAT 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 BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.
- 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 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.
- FOR TRAFFIC CONTROL AND LIMITS OF PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT SPECIAL PROVISIONS.
- FOR CLEANING AND REPAINTING OF BRIDGE, PAINTING CONTAINMENT FOR BRIDGES AND POLLUTION CONTROL, SEE PAINTING EXISTING STRUCTURE SPECIAL PROVISION.
- FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.
- FOR STEEL REPLACEMENT OR REPAIR, SEE SPECIAL PROVISIONS.
- FOR TEMPORARY SHORING, SEE SPECIAL PROVISIONS.
- FOR CONCRETE ENCASEMENT, SEE SPECIAL PROVISIONS.
- FOR NEW RAIL, SEE SPECIAL PROVISIONS.
- FOR FIELD MEASURING, SEE SPECIAL PROVISIONS.
- FOR ANTI-SLIP DECK PLATING, SEE SPECIAL PROVISIONS.
- CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL PLANS FOR TEMPORARY SHORING OF THE BRIDGE DURING UNDERPINNING REPAIRS AT BENT 1, FOR CONCRETE REPAIRS AT END BENT 2, FOR STEEL REPLACEMENT OR REPAIR, AS NECESSARY, AND FOR OTHER AS NECESSARY.
- FOR TREATED TIMBER, SEE SPECIAL PROVISIONS.
- FOR CONCRETE UNDERPINNING, SEE SPECIAL PROVISIONS.
- FOR CONCRETE REPAIRS ABUTMENT 2, SEE SPECIAL PROVISIONS.
- FOR SILANE TREATMENT OF CONCRETE SUBSTRUCTURE, SEE SPECIAL PROVISIONS.
- FOR PROTECTION OF RAILWAY INTERESTS, SEE SPECIAL PROVISIONS.
- PRIOR TO EXCAVATION OPERATIONS, THE CONTRACTOR SHALL VERIFY ANY POTENTIAL CONFLICTS, SUCH AS BURIED UTILITIES.
- AS NECESSARY TO ACCESS STRUCTURAL STEEL TO BE REPAIRED OR CLEANED AND PAINTED; TO PLACE CONCRETE FOR FOUNDATION ENCASEMENT; FOR UNDERPINNING AT BENT 1; FOR CONCRETE REPAIRS AT END BENT 2; OR FOR OTHER OPERATIONS AS NECESSARY, UNDER UNCLASSIFIED EXCAVATION (SUBARTICLE 225-3 OF STANDARD SPECIFICATIONS), EXCAVATE TO PERFORM THE WORK AS INDICATED.
- AFTER COMPLETION OF THE REQUIRED WORK, BACKFILL EXCAVATIONS AS PER SECTION 235 OF THE STANDARD SPECIFICATIONS TO THE EXISTING ELEVATIONS AND CONTOURS.
- GRADING OF THE BACKFILLED AREAS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 226 OF THE STANDARD SPECIFICATIONS. PAYMENT FOR GRADING SHALL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS.
- SEED AND MULCH DISTURBED AND GRADED SOIL AREAS IN ACCORDANCE WITH SECTION 1660 OF THE STANDARD SPECIFICATIONS. PAYMENT FOR SUCH SEEDING AND MULCHING SHALL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS.

TOTAL BILL OF MATERIAL

PEDESTRIAN BRIDGE NO. 600240	MOBILIZATION	UNCLASSIFIED EXCAVATION	CLASS A CONCRETE	REINFORCING STEEL	POLLUTION CONTROL	FIELD MEASURING	TEMPORARY SHORING	CLEANING AND PAINTING OF BRIDGE #240	PAINTING CONTAINMENT FOR BRIDGE #240	NEW RAIL	TREATED TIMBER	CONCRETE ENCASEMENT	CONCRETE UNDERPINNING	CONCRETE REPAIRS ABUTMENT 2	STEEL REPLACEMENT OR REPAIR	EPOXY COATING	SURFACE PREPARATION FOR CONCRETE SUBSTRUCTURE	SILANE SUBSTRUCTURE TREATMENT	ANTI-SLIP DECK PLATING
	LUMP SUM	CU. YDS.	CU. YDS.	LBS.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LINE FT.	MBF	CU. YDS.	CU. YDS.	CU. YDS.	LBS.	SO. FT.	SO. FT.	SO. FT.	EA.
TOTALS	LUMP SUM	80.0	0.2	25.0	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	809.21	11.9	8.0	5.1	2.0	5839.2	68	630	630	72

PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 BILL OF MATERIAL
 FOR PEDESTRIAN BRIDGE
 OVER THE NORTH TOE RIVER
 AND CSX RAILROAD

DRAWN BY : R.L.PUTEK DATE : 02/2022
 CHECKED BY : T.M.SHERRILL DATE : 02/2022

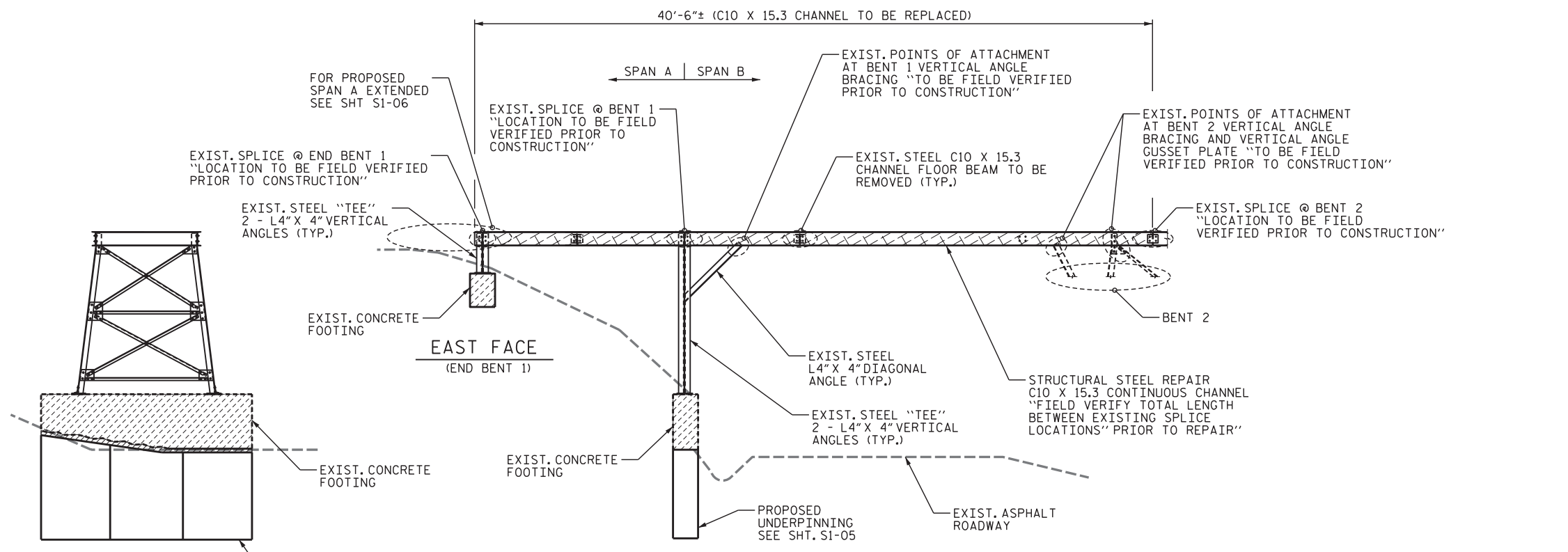
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-03
2			4			TOTAL SHEETS 29

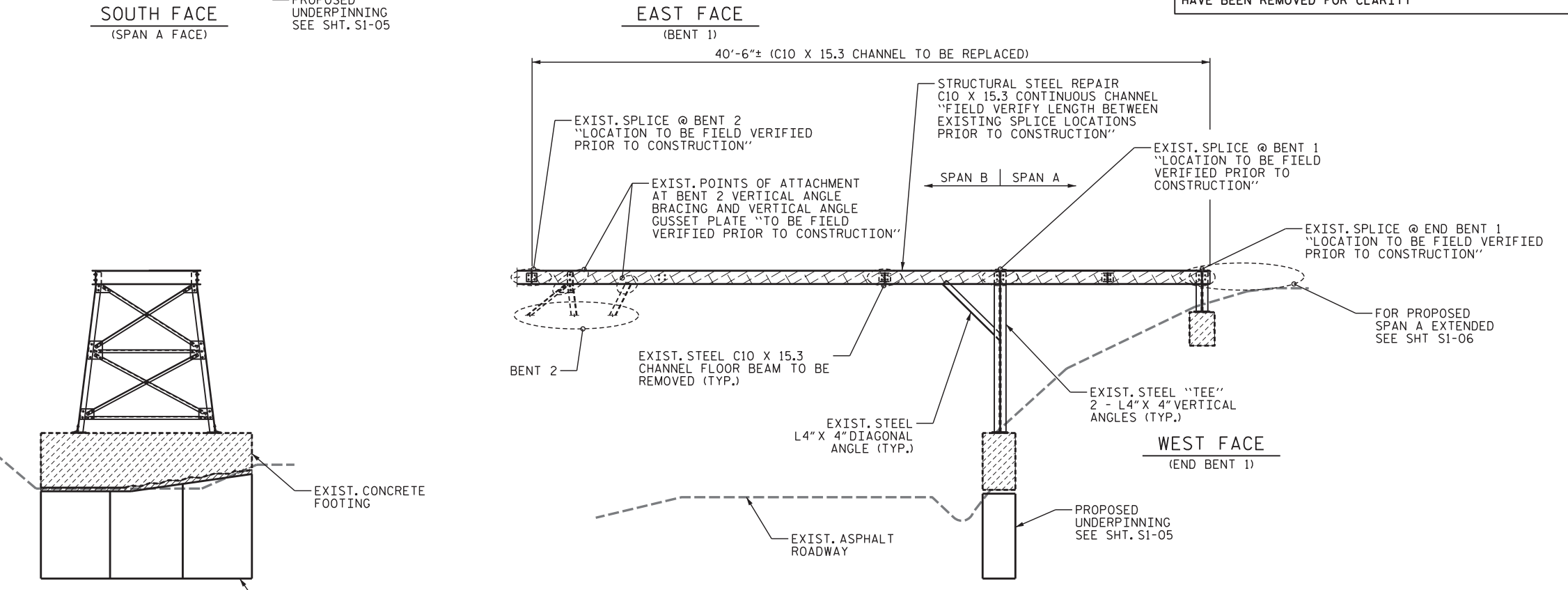
REPAIR QUANTITY TABLE	
FOR END BENT 1 AND BENT 1	
STEEL REPLACEMENT OR REPAIR	LBS. 1239

 STEEL REPLACEMENT OR REPAIR

NOTE
FOR STEEL REPLACEMENT OR REPAIR LOCATIONS, FOR SUPERSTRUCTURE MEMBERS, SEE SHEETS S1-19 AND S1-20.

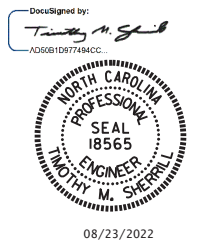


RAILING, TIMBER FLOORING, AND TIMBER STRINGERS HAVE BEEN REMOVED FOR CLARITY



PROJECT NO. 49282
MITCHELL COUNTY
BRIDGE NO. 600240

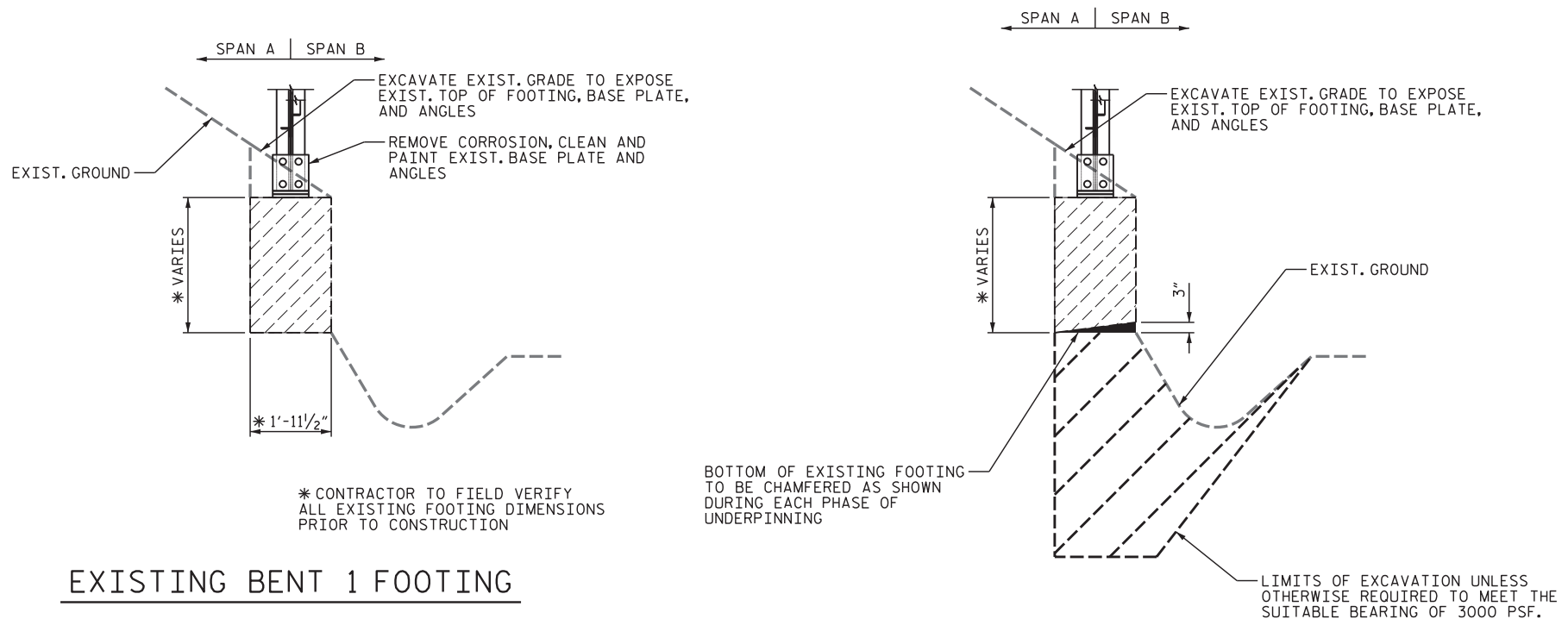
SHEET 1 OF 13
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STRUCTURAL STEEL AND FOUNDATION REPAIRS
END BENT 1 & BENT 1



DRAWN BY : R.L.PUTEK DATE : 04/2021
CHECKED BY : T.M.SHERRILL DATE : 05/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-04
1			3			TOTAL SHEETS
2			4			29

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



EXISTING BENT 1 FOOTING

UNDERPINNING BILL OF MATERIAL					
BAR TYPES			FOR BENT 1		
UNDERPINNING					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
S1	5	4	1	15'-3"	51
S2	1	4	1	15'-5"	10
S3	1	4	1	15'-9"	10
S4	1	4	1	16'-1"	11
S5	1	4	1	16'-3"	11
S6	1	4	1	16'-7"	11
S7	1	4	1	16'-11"	11
S8	1	4	1	17'-1"	11
B1	12	4	STR	4'-0"	32
B2	24	4	STR	3'-9"	60
B3	2	4	STR	3'-10"	5
U1	12	4	2	3'-2"	25
REINFORCING STEEL				LBS.	248
CLASS A CONCRETE				CU.YDS.	7.0

NOTES

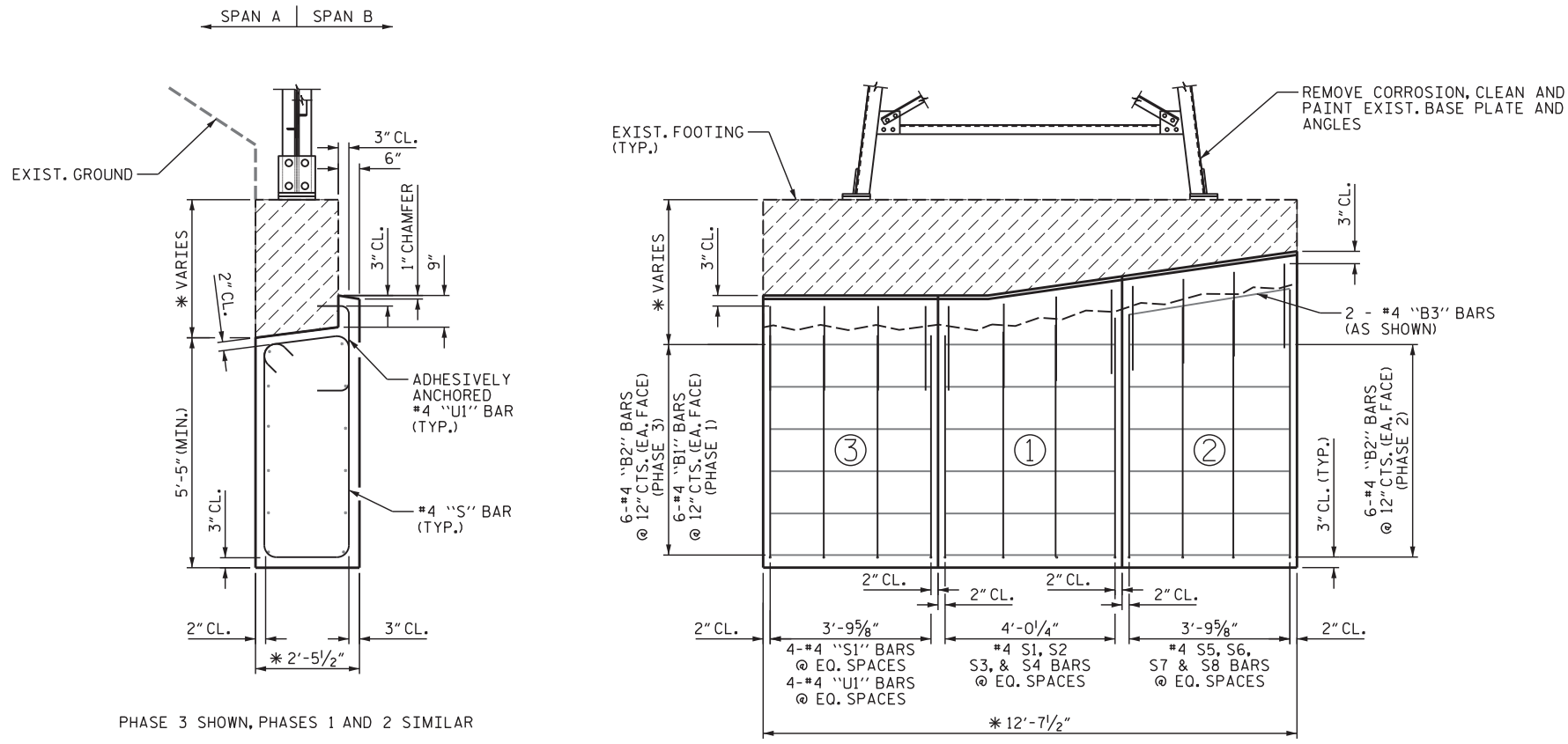
PRIOR TO EXCAVATION OPERATIONS THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS OF THE PROPOSED UNDERPINNING PROCEDURE(S) REQUIRING TEMPORARY SHORING SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA TO THE ENGINEER FOR APPROVAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED TO THE EXISTING STRUCTURE BY THE UNDERPINNING OPERATIONS AT NO ADDITIONAL COST TO THE DEPARTMENT.

EXCAVATE AS NECESSARY TO REMOVE SOIL BENEATH THE EXISTING FOOTING TO SUITABLE BEARING OF 3000 PSF AT THE APPROXIMATE ELEVATION AS INDICATED.

AFTER CHAMFERING BOTTOM OF EXISTING FOOTING, AND PRIOR TO PLACEMENT OF CONCRETE, CONTRACTOR SHALL POWERWASH AND OTHERWISE CLEAN BOTTOM OF EXISTING FOOTING AND APPLY CONCRETE BONDING AGENT.

THE REINFORCING STEEL SHOWN IN THE TABLE ABOVE AND THE EXCAVATION REQUIRED TO ACHIEVE THE SUITABLE BEARING ELEVATION SHOWN IN THE ELEVATION VIEWS ARE CONSIDERED INCIDENTAL TO THE CONCRETE UNDERPINNING PAY ITEM.

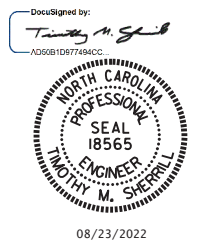


UNDERPINNING AT BENT 1

① INDICATES UNDERPINNING PHASE. ALLOW EACH PHASE TO CURE SEVEN (7) DAYS PRIOR TO PROCEEDING TO THE NEXT PHASE.

PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 2 OF 13



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STRUCTURAL STEEL
 AND
 FOUNDATION REPAIRS
 UNDERPINNING BENT 1

DRAWN BY : R.L.PUTEK DATE : 04/2021
 CHECKED BY : T.M.SHERRILL DATE : 04/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-05
1			3			TOTAL SHEETS
2			4			29

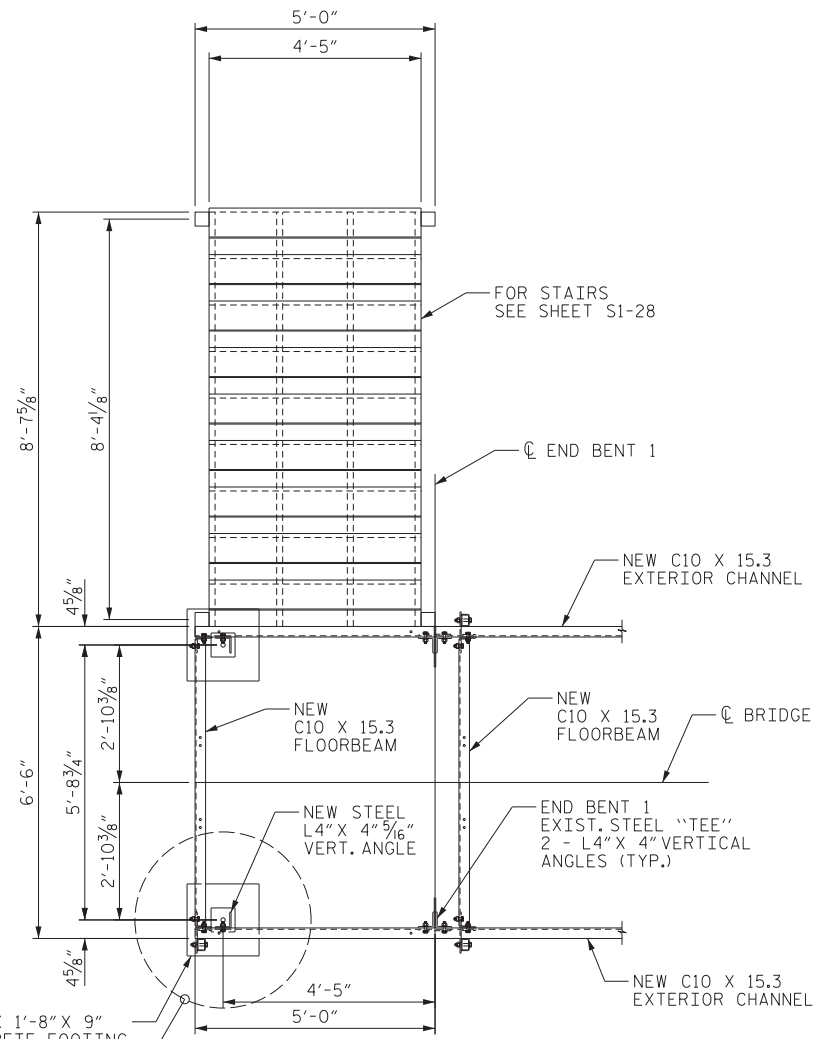
SPAN A EXTENDED FOUNDATION

BILL OF MATERIAL

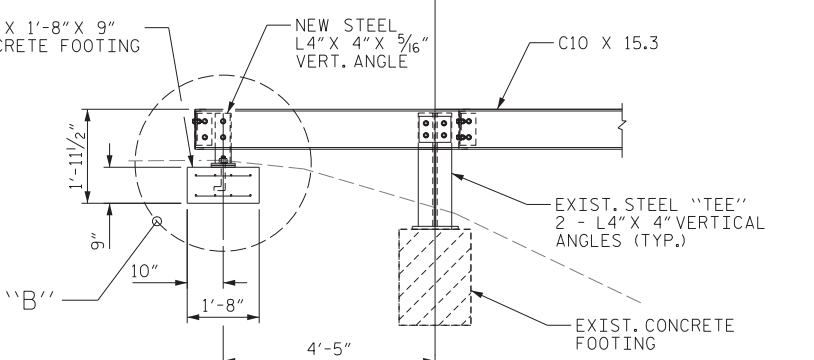
CONCRETE FOOTING (ONE SHOWN, TWO REQ'D)

BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
K1	16	4	STR	1'-2"	12

REINFORCING STEEL	LBS.	12
CLASS A CONCRETE	CU.YDS.	0.2
STEEL REPLACEMENT OR REPAIR		
4" X 4" X 5/16" VERTICAL ANGLE	LBS.	28

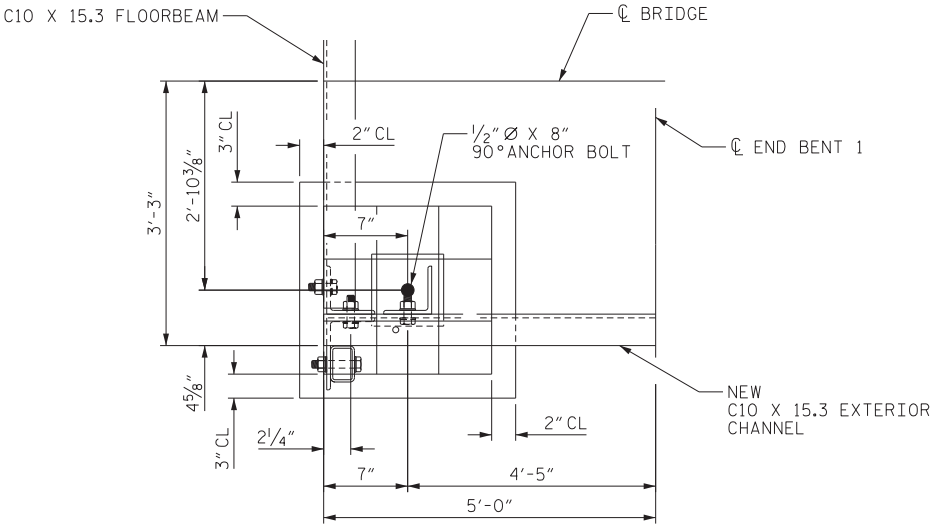


PLAN

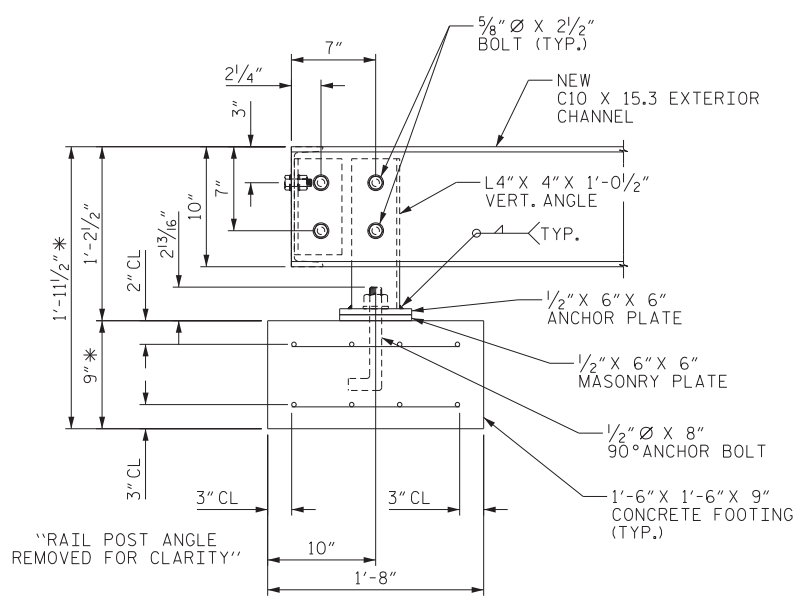


ELEVATION

SPAN A EXTENDED

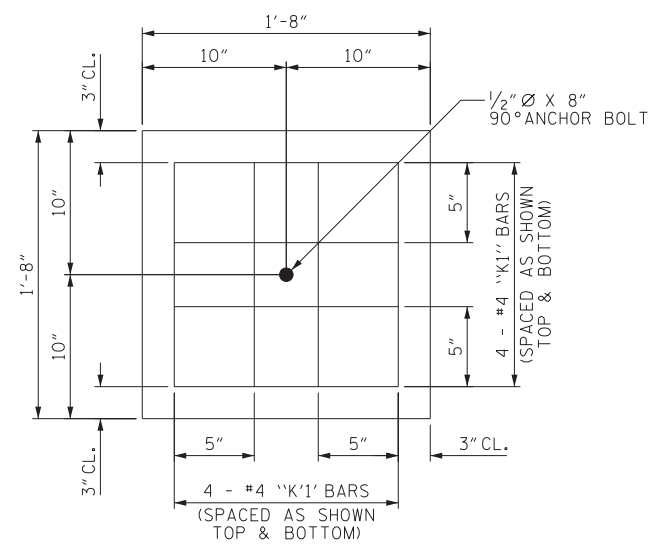


DETAIL "A"



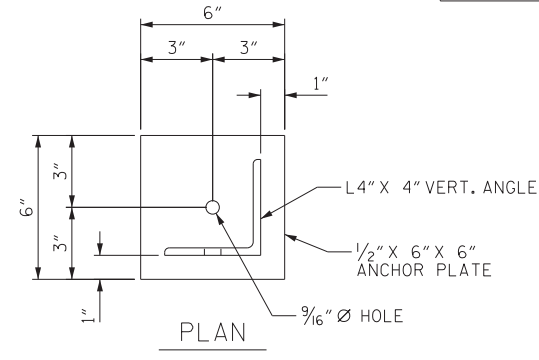
DETAIL "B"

* MAY VARY. FOOTING SHALL BE PLACED ON MINIMUM 3,000 PSF SOIL BEARING. EXTEND DEPTH OF FOOTING AS NECESSARY

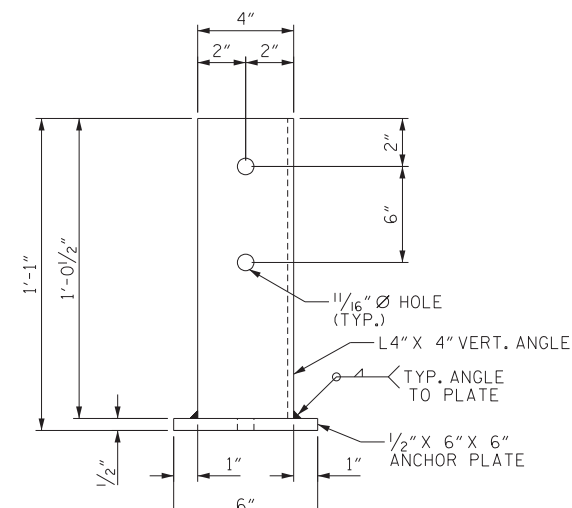


CONCRETE FOOTING

(2 REQ'D)



PLAN



ELEVATION

L4" X 4" X 5/16" VERTICAL ANGLE (RIGHT SHOWN, LEFT SIMILAR - 2 REQ'D)

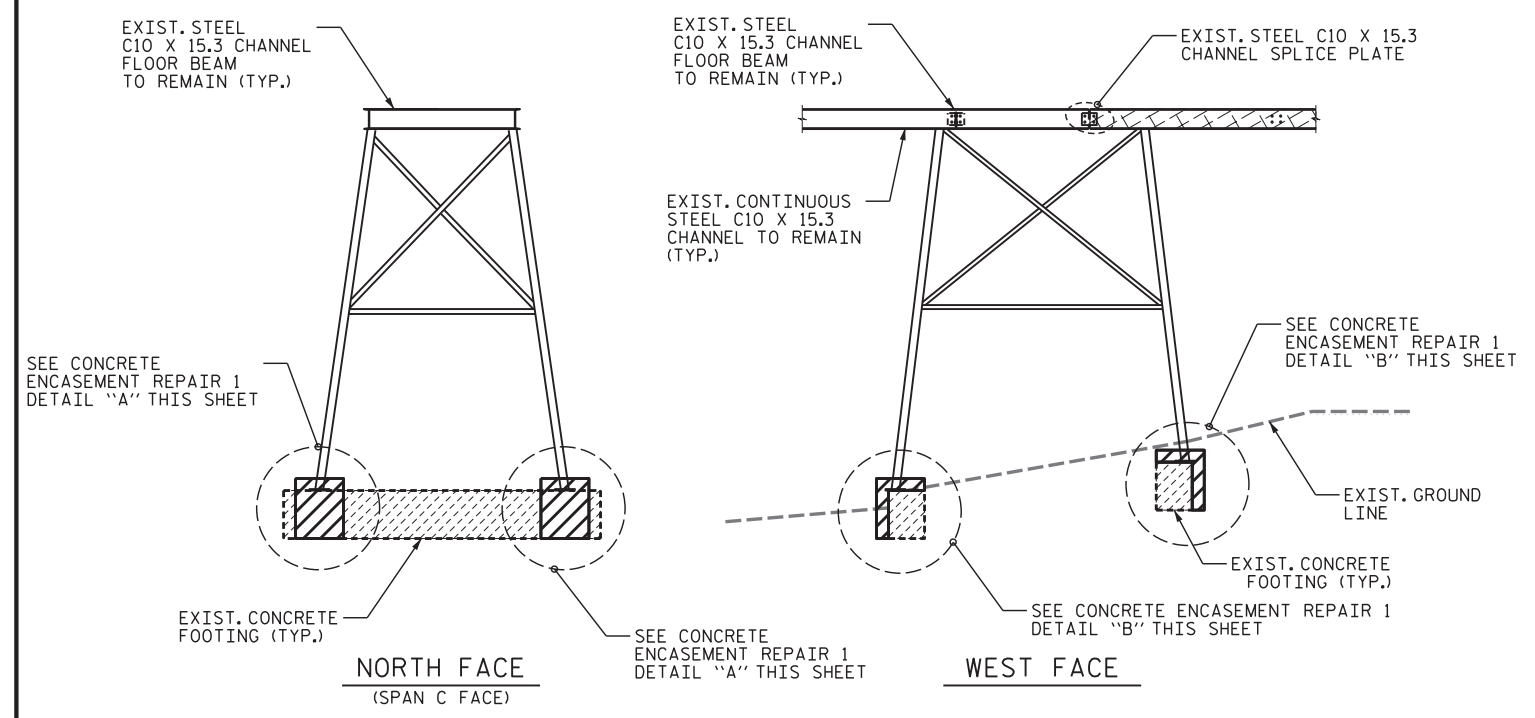
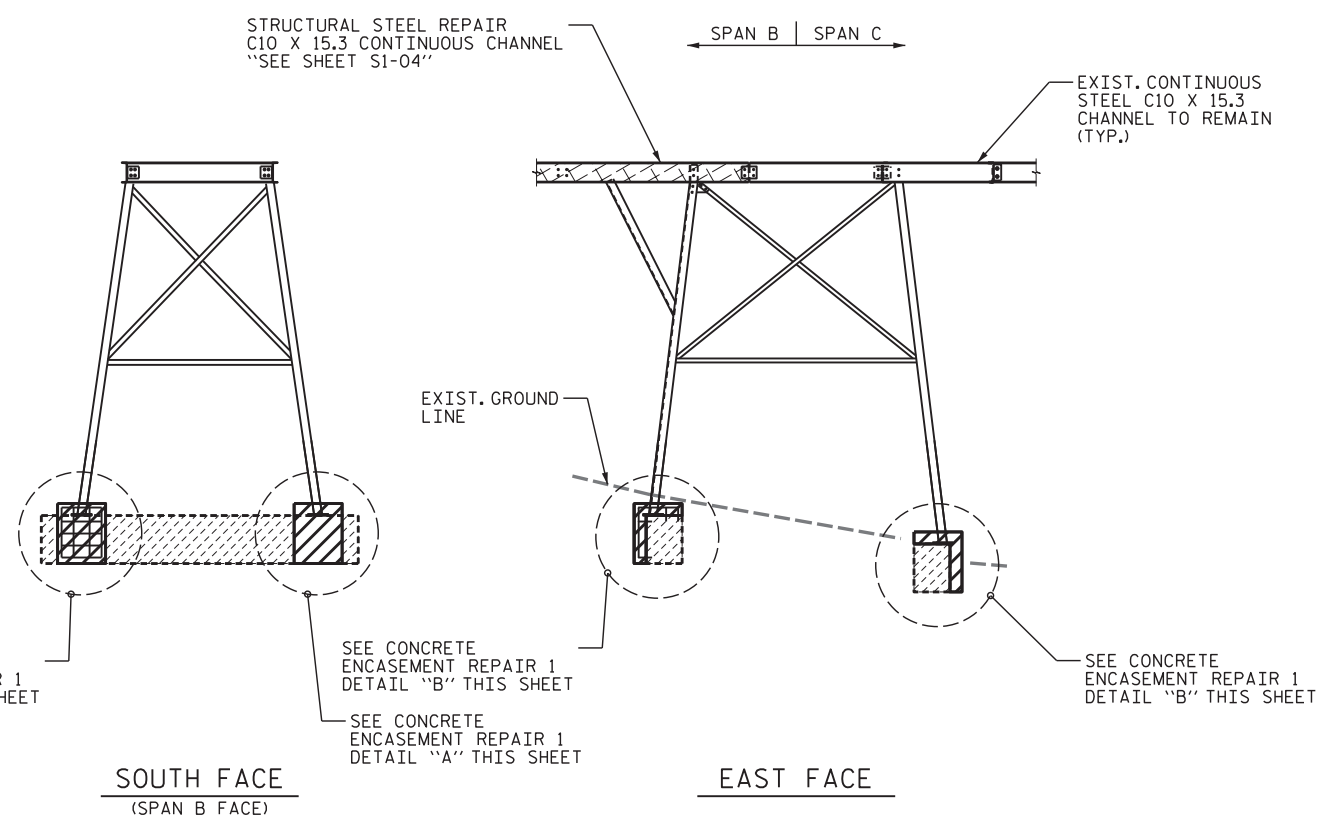
PROJECT NO. 49282
MITCHELL COUNTY
BRIDGE NO. 600240
SHEET 3 OF 13



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STRUCTURAL STEEL
AND
FOUNDATION REPAIRS
SPAN A EXTENDED

DRAWN BY : R.L.PUTEK DATE : 04/2021
CHECKED BY : T.M.SHERRILL DATE : 04/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-06
1			3			TOTAL SHEETS
2			4			29



BENT 2 ELEVATION VIEWS

REPAIR QUANTITY TABLE					
BAR TYPES			FOR BENT 2		
1 EA. SHOWN - 4 EA. REQ'D					
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
K1	4	4	1	2'-11"	8
K2	4	4	STR	1'-8"	5
V1	4	4	2	3'-9"	10
CONCRETE ENCASEMENT (CLASS A CONCRETE)					EA. 4

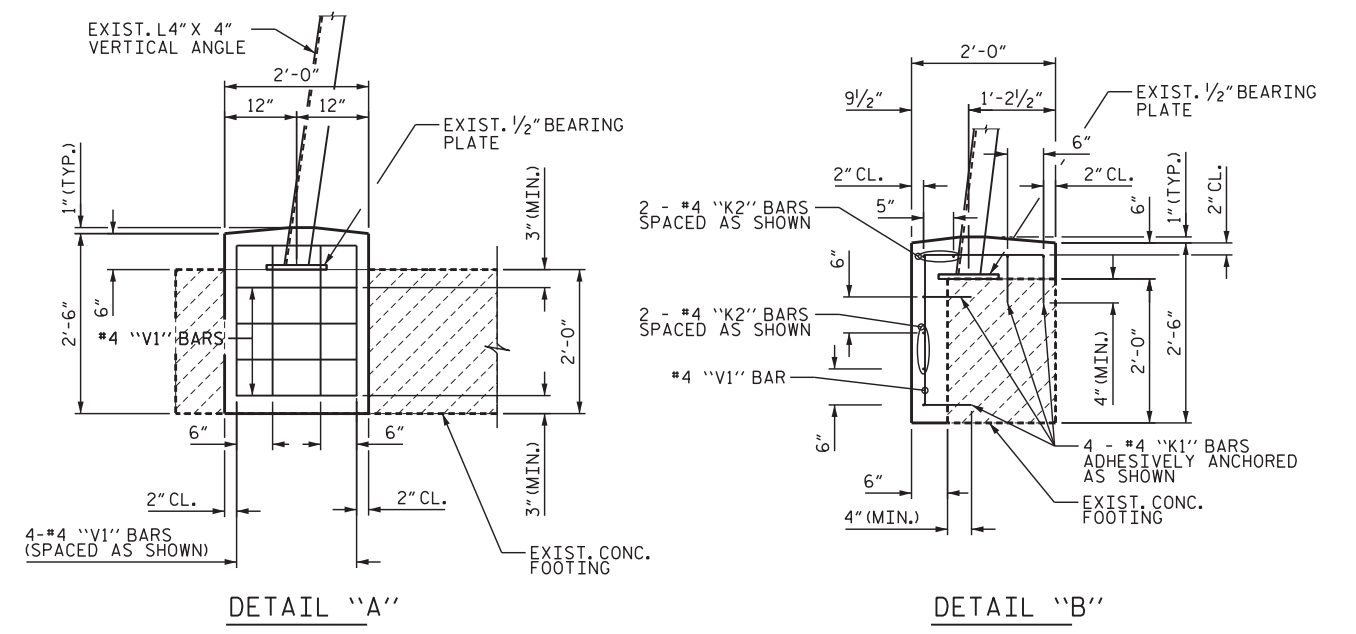
THE REINFORCING STEEL SHOWN IN THE TABLE IS CONSIDERED INCIDENTAL TO THE CONCRETE ENCASEMENT PAY ITEM.

ALL BAR DIMENSIONS ARE OUT TO OUT

NOTES

CONTRACTOR TO VERIFY DEPTH OF ALL CONCRETE FOOTINGS PRIOR TO CONSTRUCTION.

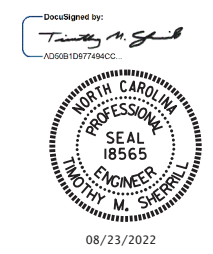
- STRUCTURAL STEEL REPAIR
- CONCRETE ENCASEMENT
- EXISTING FOOTING



CONCRETE ENCASEMENT REPAIR 1
"6 REQ'D"

PROJECT NO. 49282
MITCHELL COUNTY
BRIDGE NO. 600240

SHEET 4 OF 13

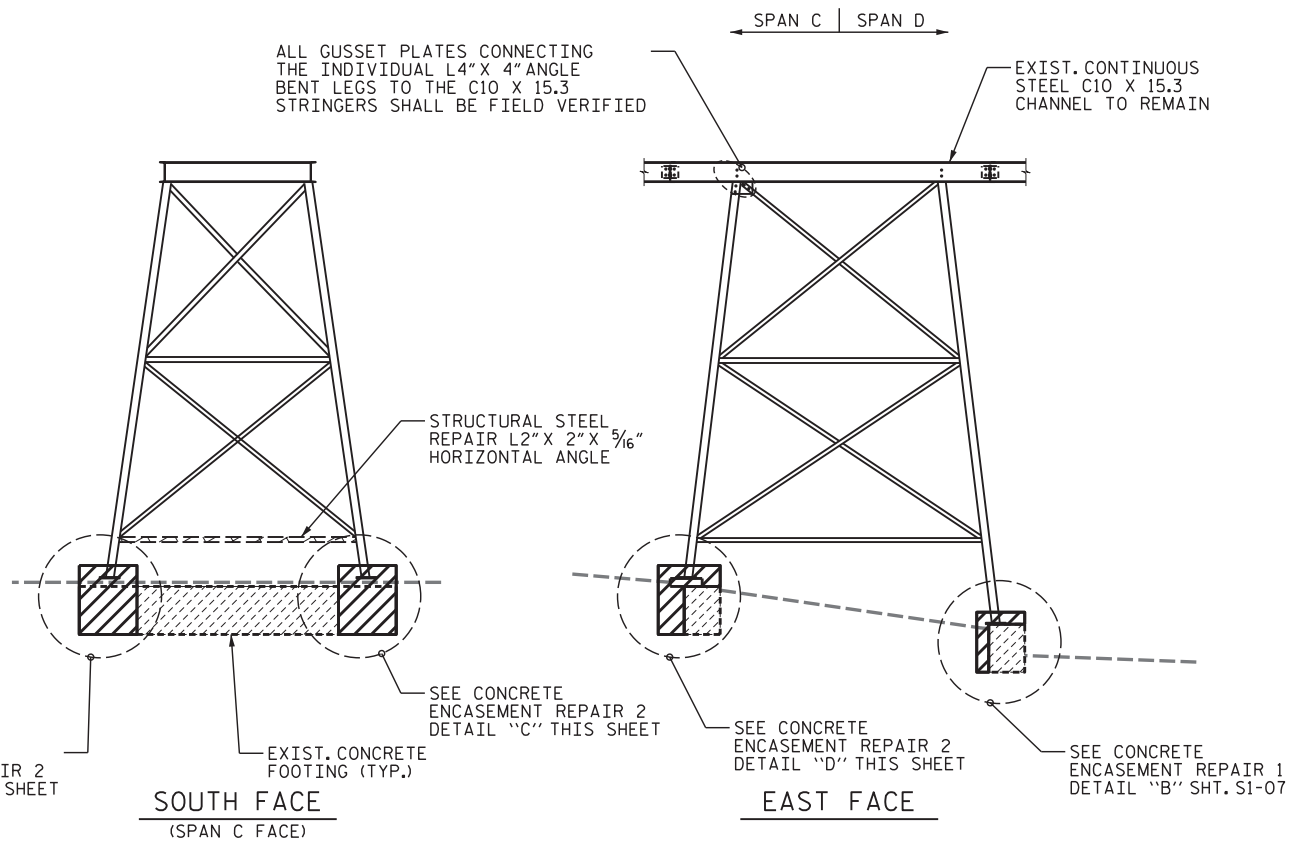


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**STRUCTURAL STEEL
AND
FOUNDATION REPAIRS**
BENT 2

DRAWN BY : R.L.PUTEK DATE : 03/2021
CHECKED BY : T.M.SHERRILL DATE : 05/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-07
1			3			TOTAL SHEETS
2			4			29

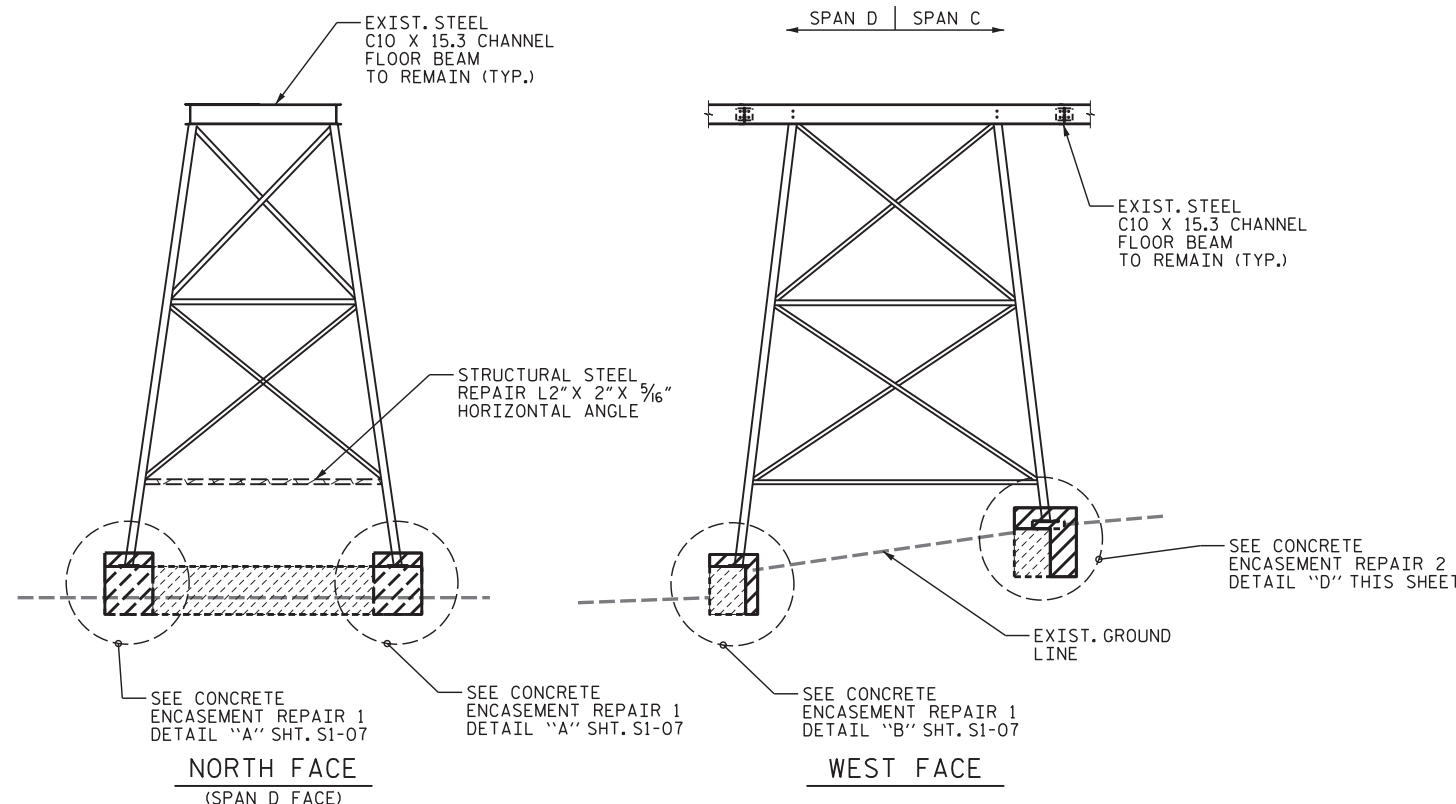
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



SEE CONCRETE ENCASEMENT REPAIR 2 DETAIL "C" THIS SHEET

SOUTH FACE
(SPAN C FACE)

EAST FACE



SEE CONCRETE ENCASEMENT REPAIR 1 DETAIL "A" SHT. S1-07

NORTH FACE
(SPAN D FACE)

WEST FACE

BENT 3 ELEVATION VIEWS

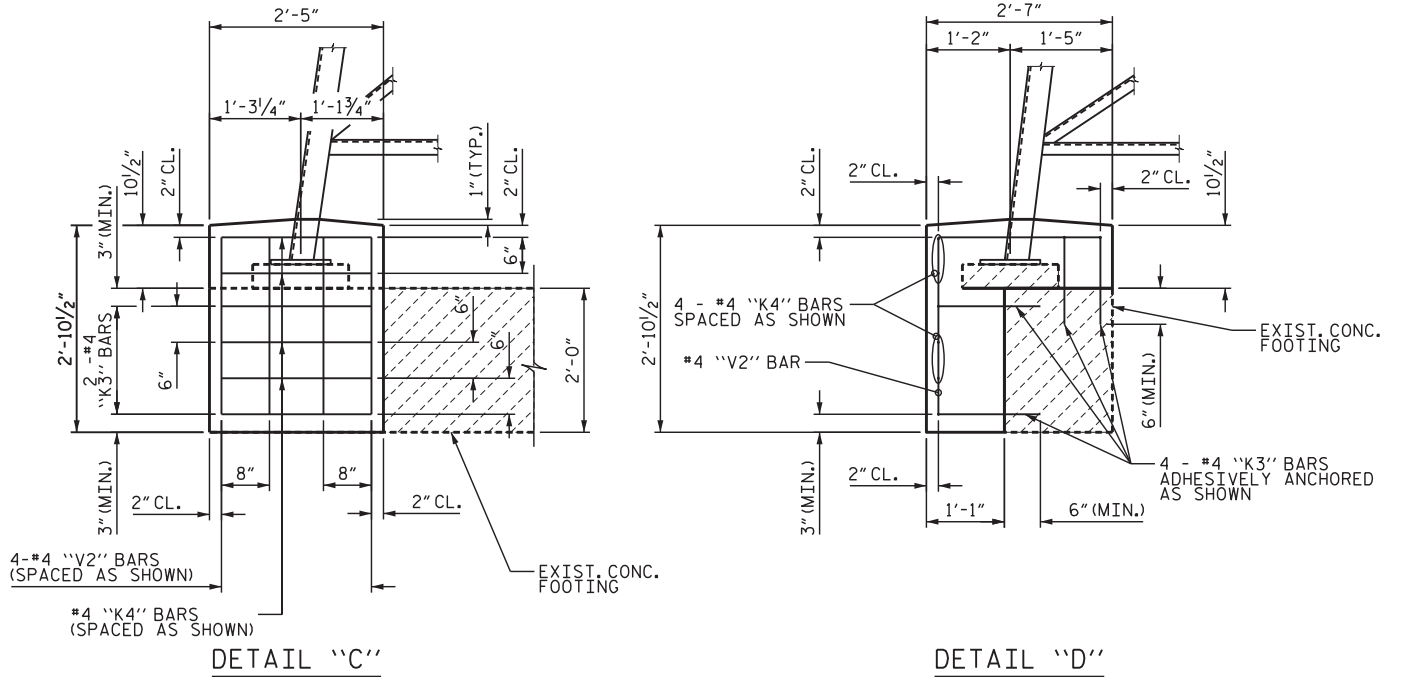
REPAIR QUANTITY TABLE					
BAR TYPES			FOR BENT 3		
1 EA. SHOWN - 2 EA. REQ'D					
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
K1	4	4	2'-11"	8	
K2	4	4	STR 1'-8"	5	
K3	4	4	1	3'-11"	11
K4	4	4	STR 2'-1"	6	
V1	4	4	2	3'-9"	10
V2	4	4	2	4'-8"	13
CONCRETE ENCASEMENT (CLASS A CONCRETE)				EA. 4	
STEEL REPLACEMENT OR REPAIR				LBS. 82	

THE REINFORCING STEEL SHOWN IN THE TABLE IS CONSIDERED INCIDENTAL TO THE CONCRETE ENCASEMENT PAY ITEM.

ALL BAR DIMENSIONS ARE OUT TO OUT

NOTES

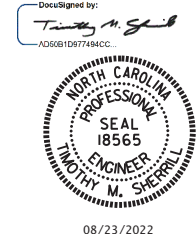
CONTRACTOR TO VERIFY DEPTH OF ALL CONCRETE FOOTINGS PRIOR TO CONSTRUCTION.



CONCRETE ENCASEMENT REPAIR 2
"2 REQ'D"

PROJECT NO. 49282
MITCHELL COUNTY
BRIDGE NO. 600240

SHEET 5 OF 13



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STRUCTURAL STEEL AND FOUNDATION REPAIRS
BENT 3

DRAWN BY: R.L.PUTEK DATE: 03/2021
CHECKED BY: T.M.SHERRILL DATE: 05/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

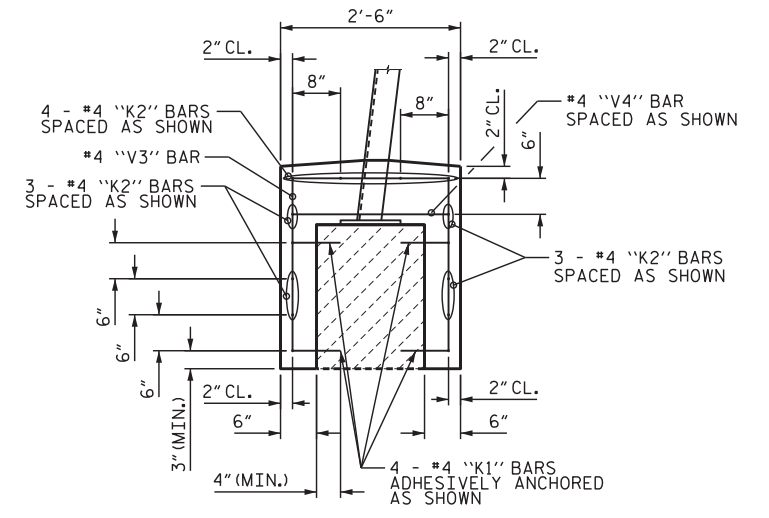
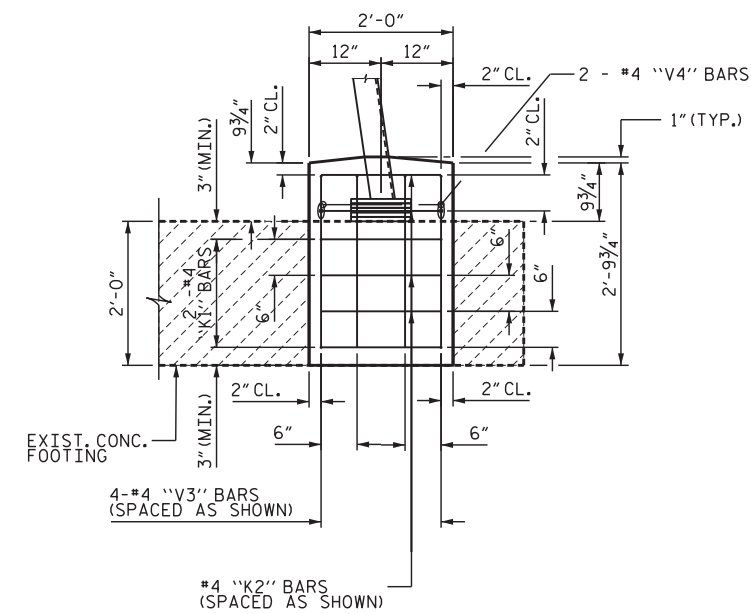
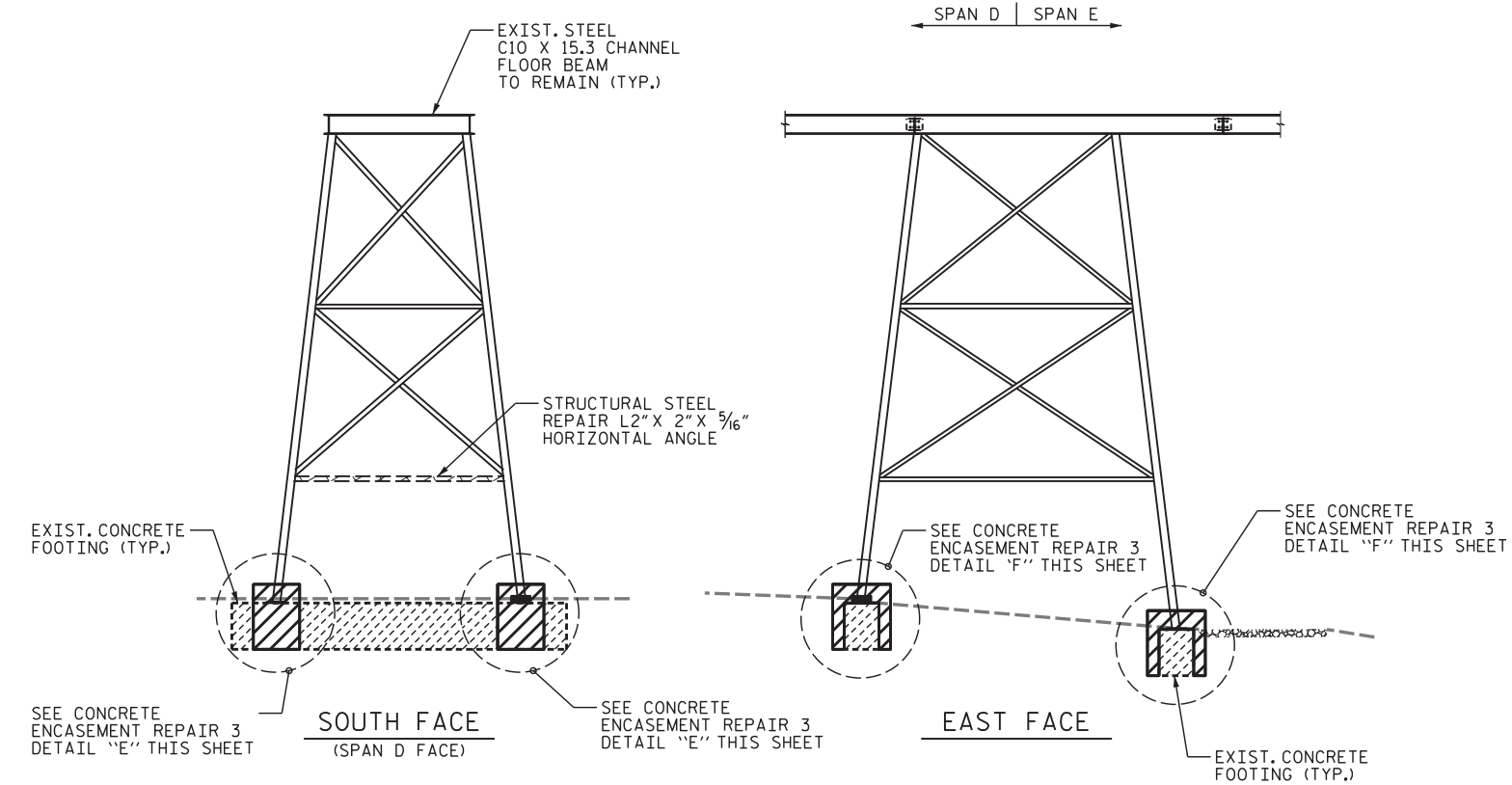
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-08
1			3			TOTAL SHEETS
2			4			29

REPAIR QUANTITY TABLE					
BAR TYPES		FOR BENT 4			
 ①		1 EA. SHOWN			
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
K1	4		2'-11"	8	
K2	10	4	STR 1'-8"	11	
V3	4	4	3	6'-11"	18
V4	2	4	STR 2'-1"	3	
CONCRETE ENCASEMENT (CLASS A CONCRETE)					EA. 4
STEEL REPLACEMENT OR REPAIR					LBS. 124

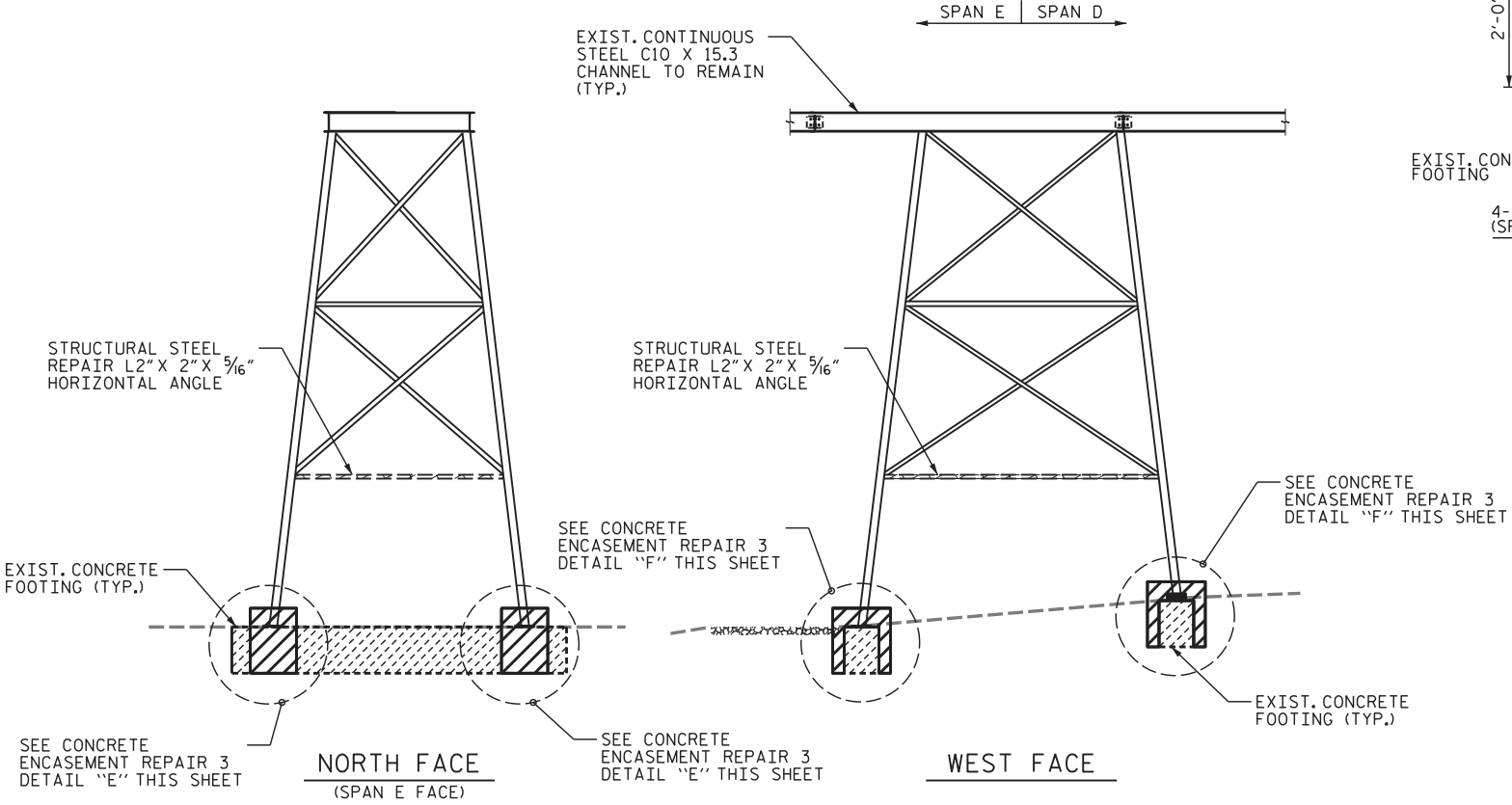
THE REINFORCING STEEL SHOWN IN THE TABLE IS CONSIDERED INCIDENTAL TO THE CONCRETE ENCASEMENT PAY ITEM.

NOTES
 CONTRACTOR TO VERIFY DEPTH OF ALL CONCRETE FOOTINGS PRIOR TO CONSTRUCTION.

STRUCTURAL STEEL REPAIR
 CONCRETE ENCASEMENT
 EXISTING FOOTING

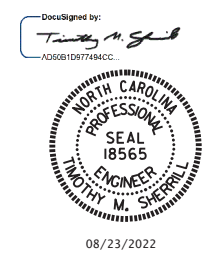


CONCRETE ENCASEMENT REPAIR 3
 "20 REQ'D"



BENT 4 ELEVATION VIEWS

PROJECT NO. 49282
MITCHELL COUNTY
 BRIDGE NO. 600240
 SHEET 6 OF 13



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STRUCTURAL STEEL REPAIRS
 BENT 4

DRAWN BY : R.L. PUTEK DATE : 03/2021
 CHECKED BY : T.M. SHERRILL DATE : 05/2021

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NO.	BY:	DATE:	NO.	BY:	DATE:	S1-09
1			3			TOTAL SHEETS
2			4			29

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


REPAIR QUANTITY TABLE

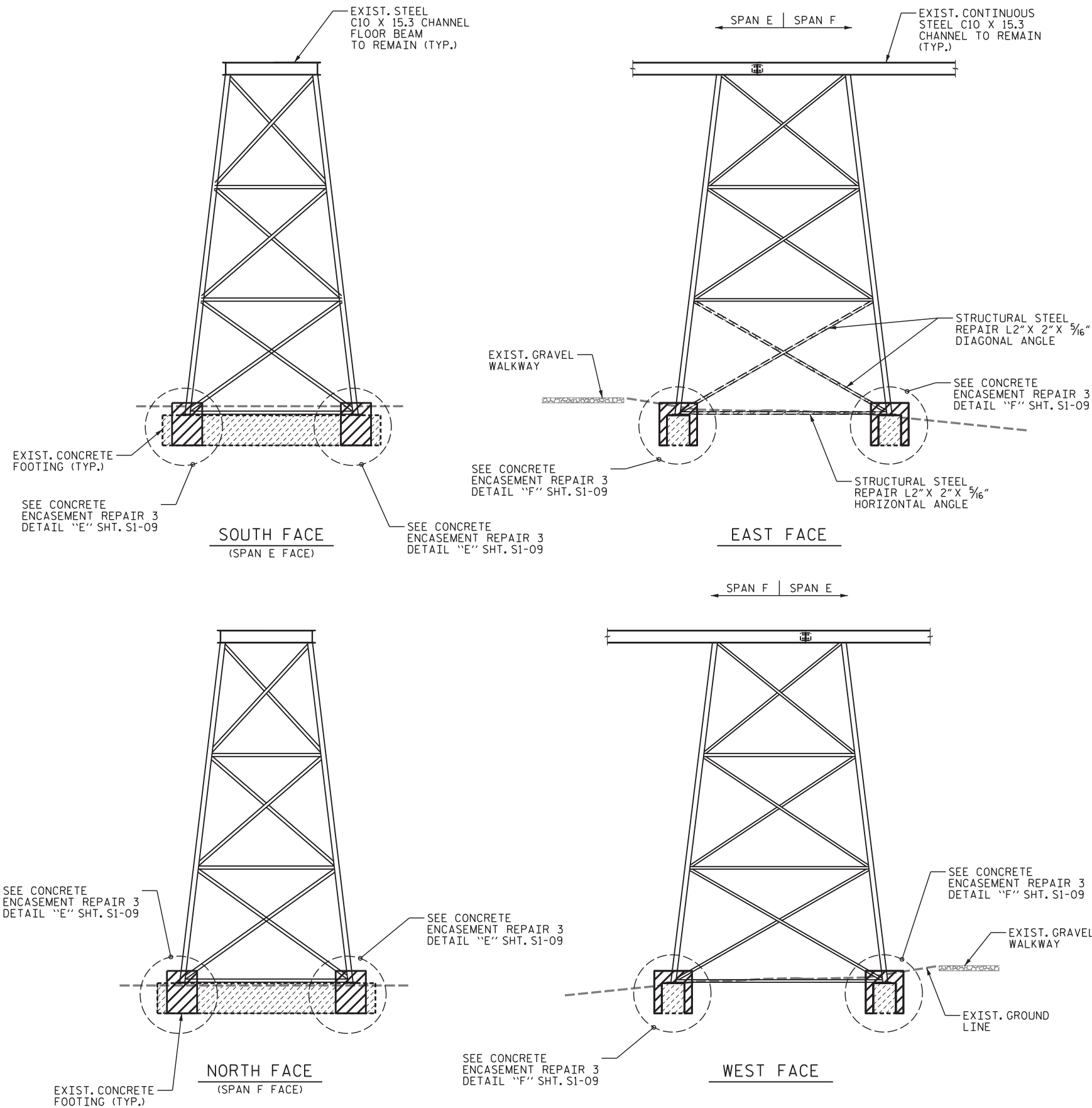
FOR BENT 5

STEEL REPLACEMENT OR REPAIR	LBS.	173
CONCRETE ENCASEMENT (CLASS A CONCRETE)	EA.	4

NOTES

CONTRACTOR TO VERIFY DEPTH OF ALL CONCRETE FOOTINGS PRIOR TO CONSTRUCTION.

-  STRUCTURAL STEEL REPAIR
-  CONCRETE ENCASEMENT
-  EXISTING FOOTING



BENT 5 ELEVATION VIEWS

PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 7 OF 13

DocuSigned by: *Timothy M. Sherrill*
 AD0001D97749CC...



08/23/2022

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**STRUCTURAL STEEL
 AND
 FOUNDATION REPAIRS**
 BENT 5

DRAWN BY : R.L.PUTEK DATE : 03/2021
 CHECKED BY : T.M.SHERRILL DATE : 05/2021




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1			3			TOTAL SHEETS
2			4			28

REPAIR QUANTITY TABLE

FOR BENT 6

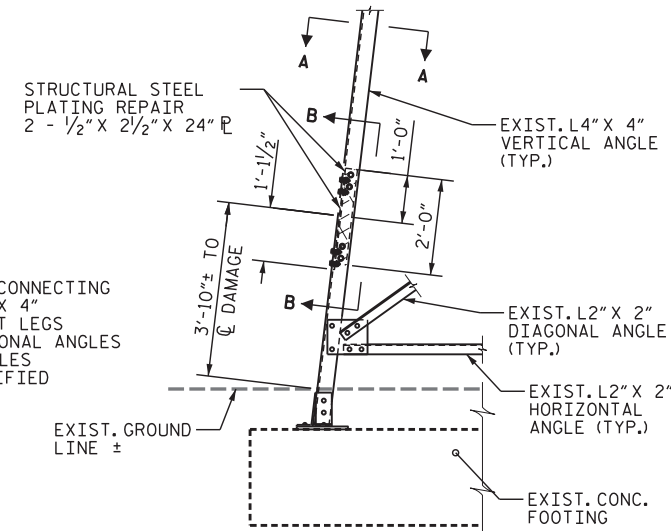
STEEL REPLACEMENT OR REPAIR	LBS.	324
CONCRETE ENCASEMENT (CLASS A CONCRETE)	EA.	4

-  STRUCTURAL STEEL REPAIR
-  CONCRETE ENCASEMENT
-  EXISTING FOOTING

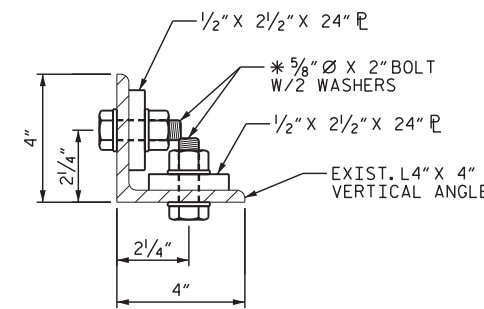
NOTES

CONDITION OF ALL GUSSET PLATES CONNECTING THE INDIVIDUAL L4" X 4" VERTICAL ANGLE BENT LEGS TO THE L2" X 2" DIAGONAL ANGLES AND L2" X 2" HORIZONTAL ANGLES SHALL BE FIELD VERIFIED PRIOR TO FABRICATION FOR STRUCTURAL STEEL REPAIRS.

CONTRACTOR TO VERIFY DEPTH OF ALL CONCRETE FOOTINGS PRIOR TO CONSTRUCTION.

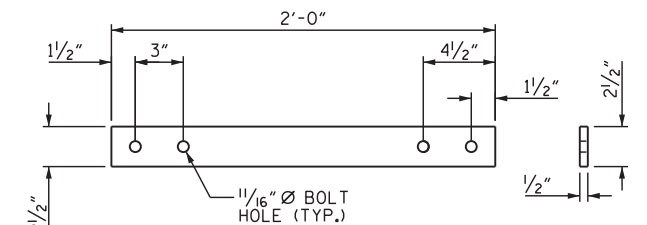


INSERT "A"



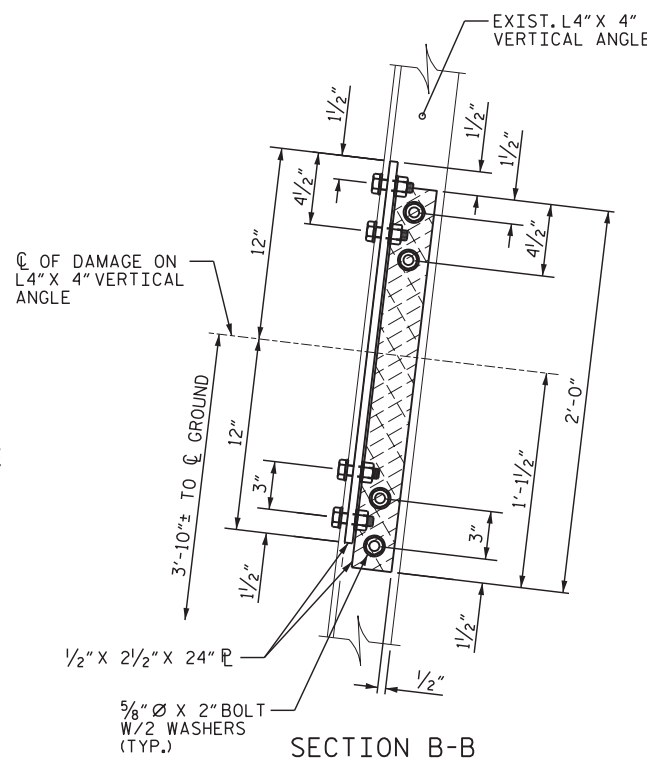
SECTION A-A

(* BOLTS SHALL BE INSTALLED AS SHOWN)

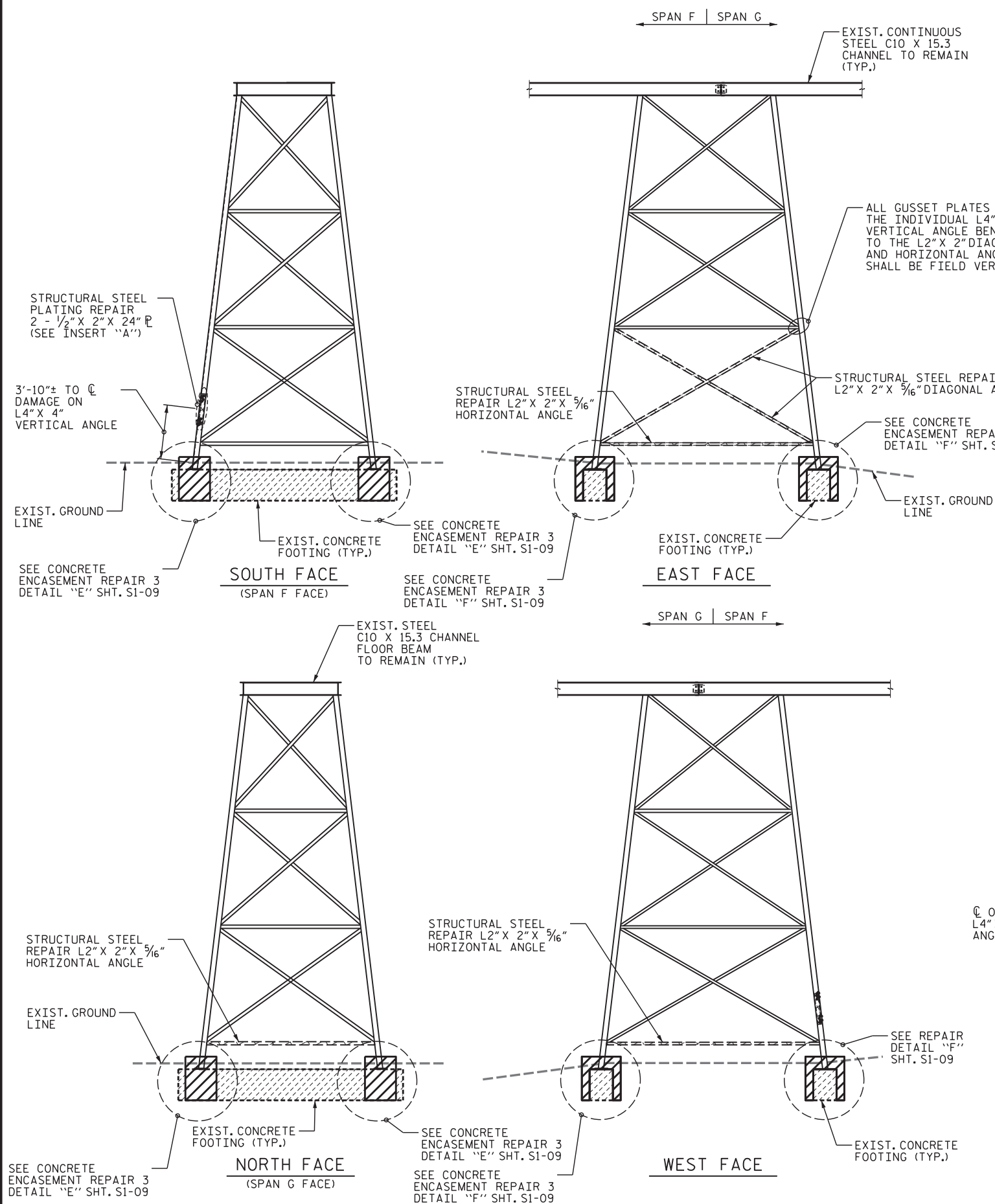


1/2" X 2 1/2" X 24" PLATE DETAIL

(2 REQUIRED)



SECTION B-B



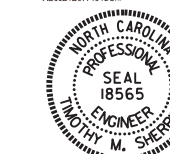
BENT 6 ELEVATION VIEWS

DRAWN BY : R.L.PUTEK DATE : 01/2021
 CHECKED BY : T.M.SHERRILL DATE : 05/2021

PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 8 OF 13

DocuSigned by: Timothy M. Sherrill



08/23/2022



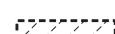
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STRUCTURAL STEEL
 AND
 FOUNDATION REPAIRS
 BENT 6

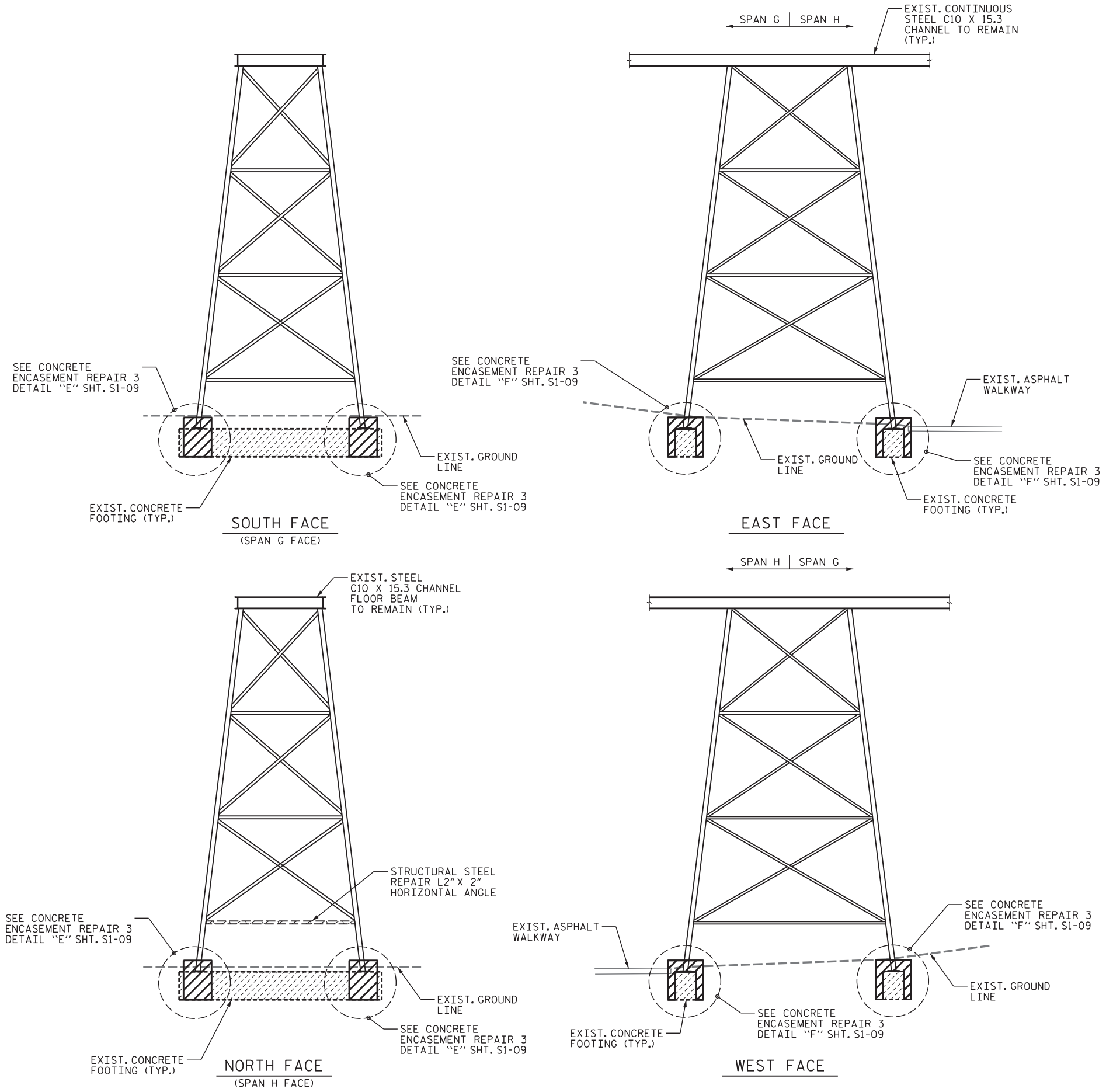
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-11
1			3			TOTAL SHEETS
2			4			29

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 SIGNATURES COMPLETED

REPAIR QUANTITY TABLE		
FOR BENT 7		
STEEL REPLACEMENT OR REPAIR	LBS.	40
CONCRETE ENCASEMENT (CLASS A CONCRETE)	EA.	4

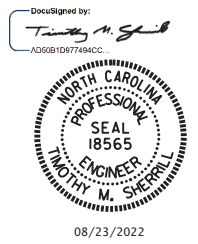
NOTES
 CONTRACTOR TO VERIFY DEPTH OF ALL CONCRETE FOOTINGS PRIOR TO CONSTRUCTION.

-  STRUCTURAL STEEL REPAIR
-  CONCRETE ENCASEMENT
-  EXISTING FOOTING



BENT 7 ELEVATION VIEWS

PROJECT NO. 49282
MITCHELL COUNTY
 BRIDGE NO. 600240
 SHEET 9 OF 13



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**STRUCTURAL STEEL
 AND
 FOUNDATION REPAIRS**
 BENT 7




DRAWN BY : R.L.PUTEK DATE : 03/2021
 CHECKED BY : T.M.SHERRILL DATE : 05/2021

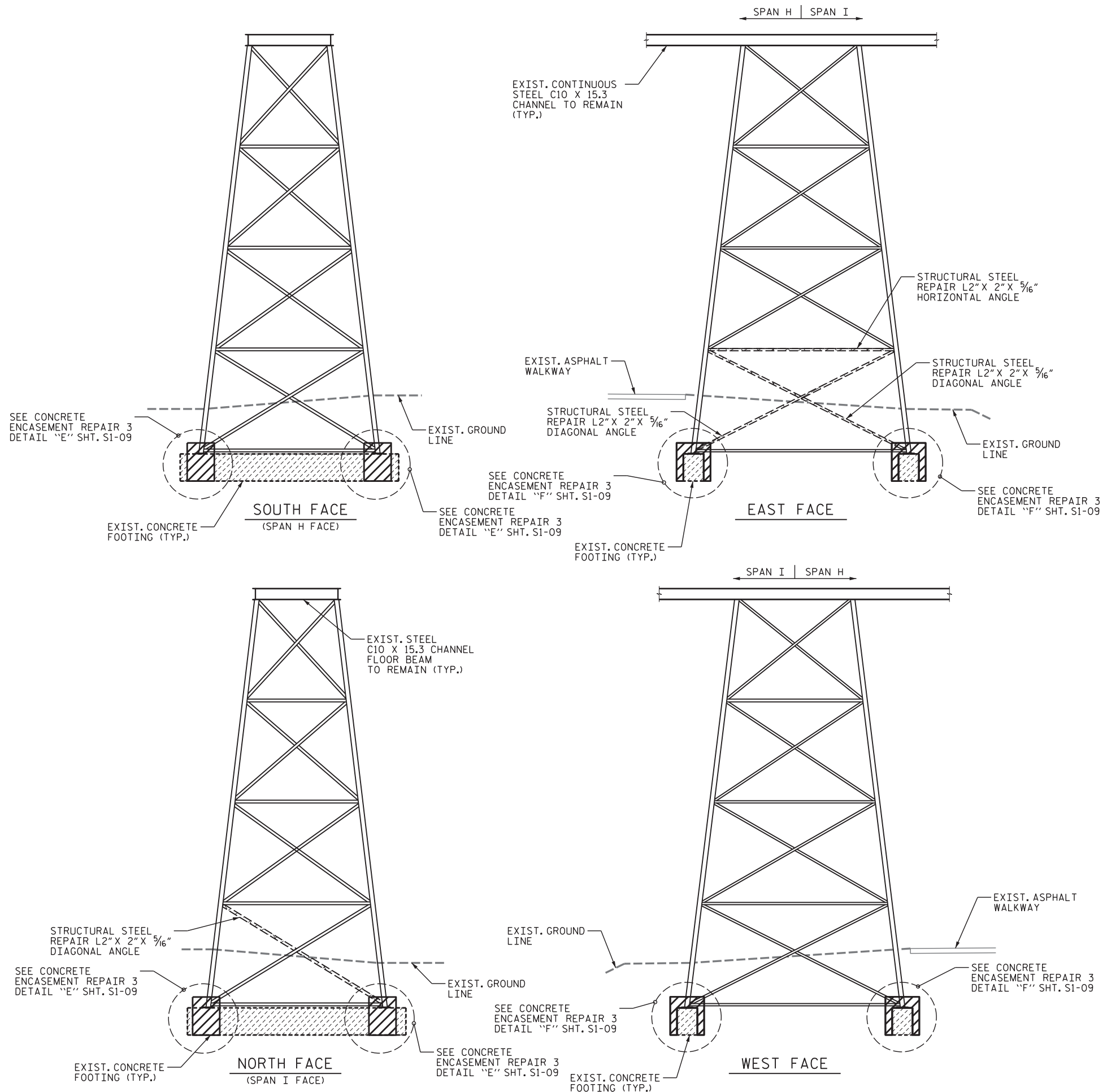
NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S1-12
2			4	TOTAL SHEETS 29

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REPAIR QUANTITY TABLE	
FOR BENT 8	
STEEL REPLACEMENT OR REPAIR	LBS. 232
CONCRETE ENCASEMENT (CLASS A CONCRETE)	EA. 4

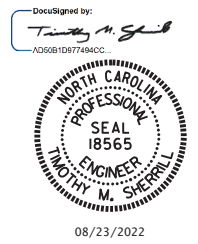
NOTES
 CONTRACTOR TO VERIFY DEPTH OF ALL CONCRETE FOOTINGS PRIOR TO CONSTRUCTION.

-  STRUCTURAL STEEL REPAIR
-  CONCRETE ENCASEMENT
-  EXISTING FOOTING



BENT 8 ELEVATION VIEWS

PROJECT NO. 49282
MITCHELL COUNTY
 BRIDGE NO. 600240
 SHEET 10 OF 13



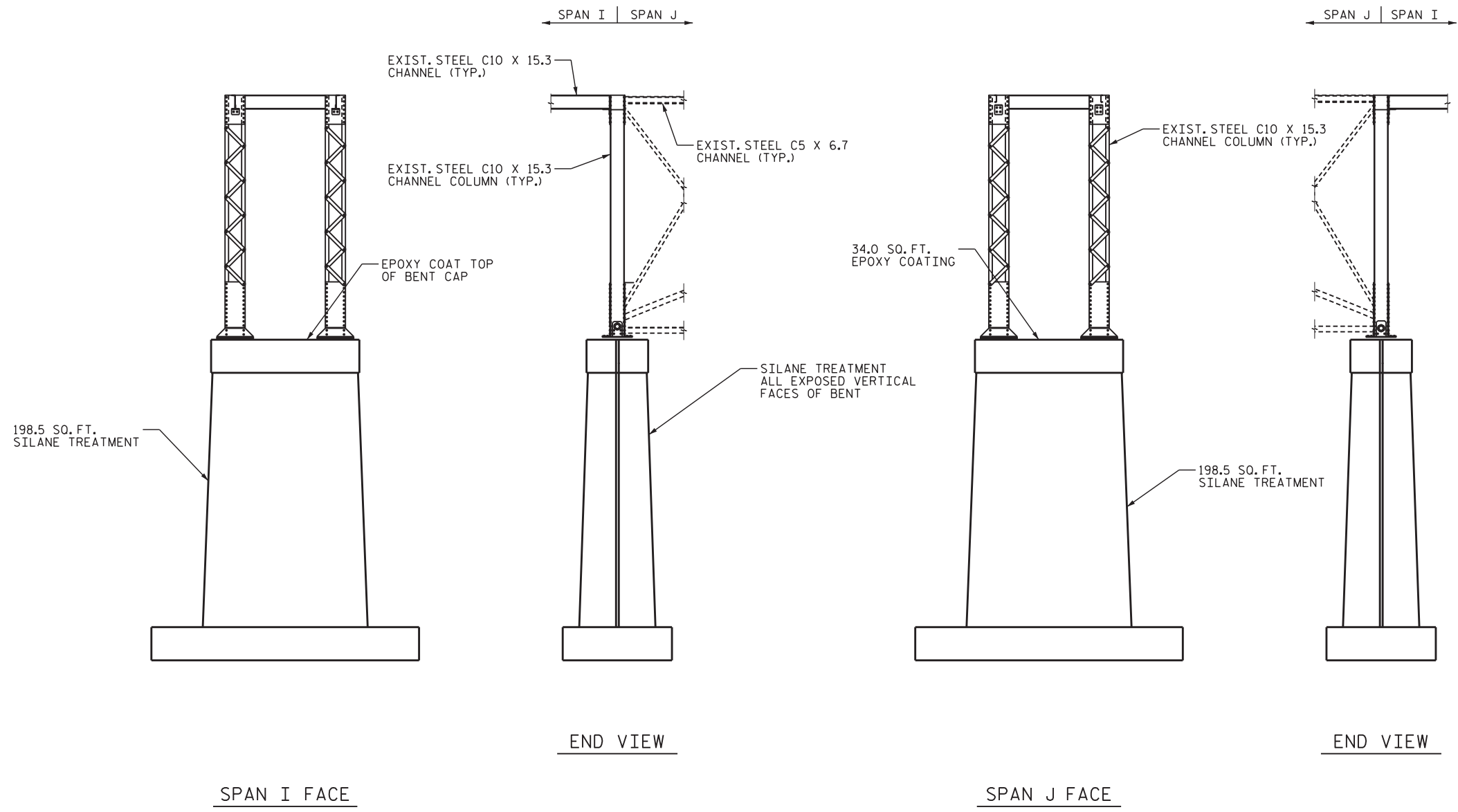
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
STRUCTURAL STEEL REPAIRS
 BENT 8

DRAWN BY : R.L.PUTEK DATE : 03/2021
 CHECKED BY : T.M.SHERRILL DATE : 05/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S1-13
2			4	TOTAL SHEETS 29

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REPAIR QUANTITY TABLE	
FOR BENT 9	
EPOXY COATING	SO. FT. 34.0
SILANE TREATMENT	SO. FT. 397.0



BENT 9

PROJECT NO. 49282
MITCHELL COUNTY
BRIDGE NO. 600240

SHEET 11 OF 13



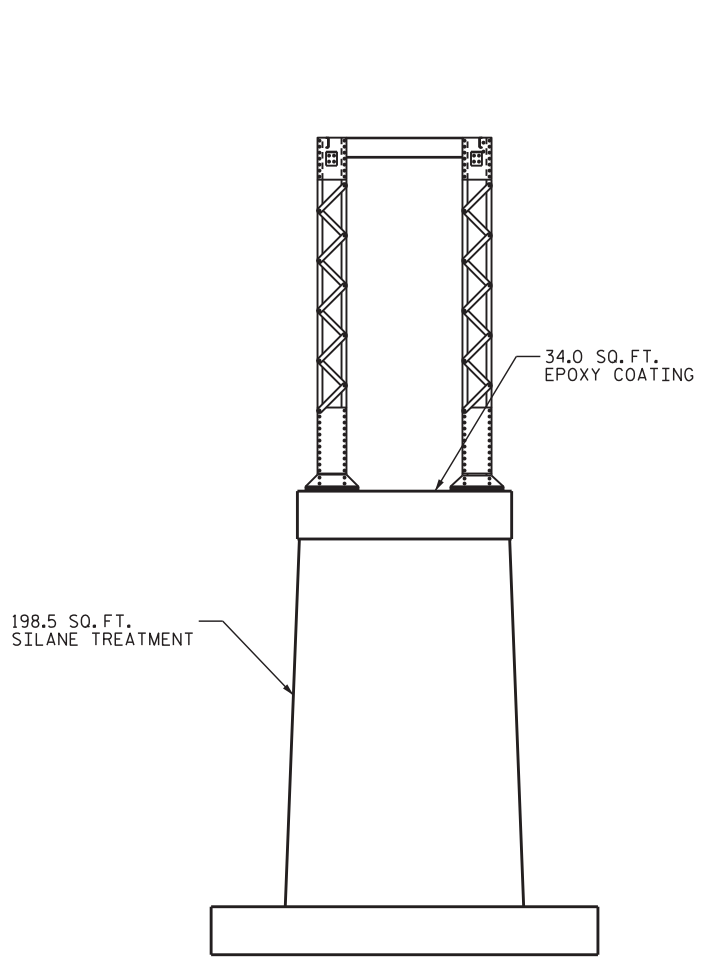
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**STRUCTURAL STEEL
AND
FOUNDATION REPAIRS**
BENT 9

DRAWN BY : R.L.PUTEK DATE : 04/2021
CHECKED BY : T.M.SHERRILL DATE : 05/2021

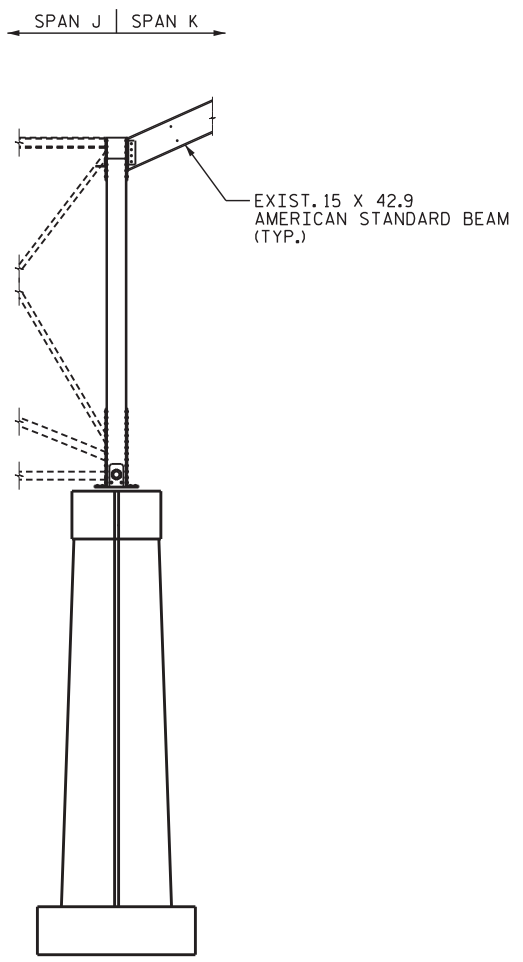
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-14
1			3			TOTAL SHEETS
2			4			29

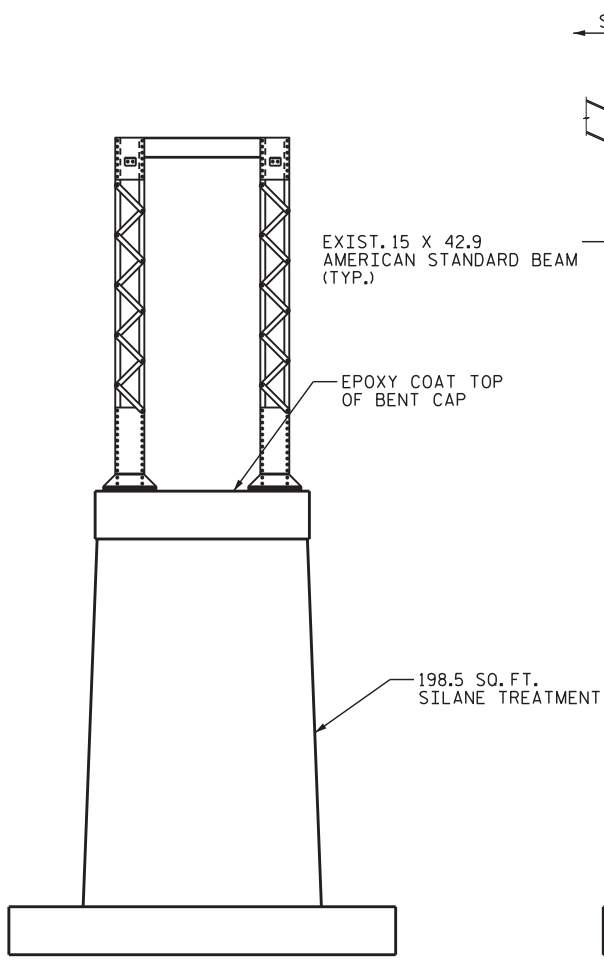
REPAIR QUANTITY TABLE	
FOR BENT 10	
EPOXY COATING	SO. FT. 34.0
SILANE TREATMENT	SO. FT. 397.0



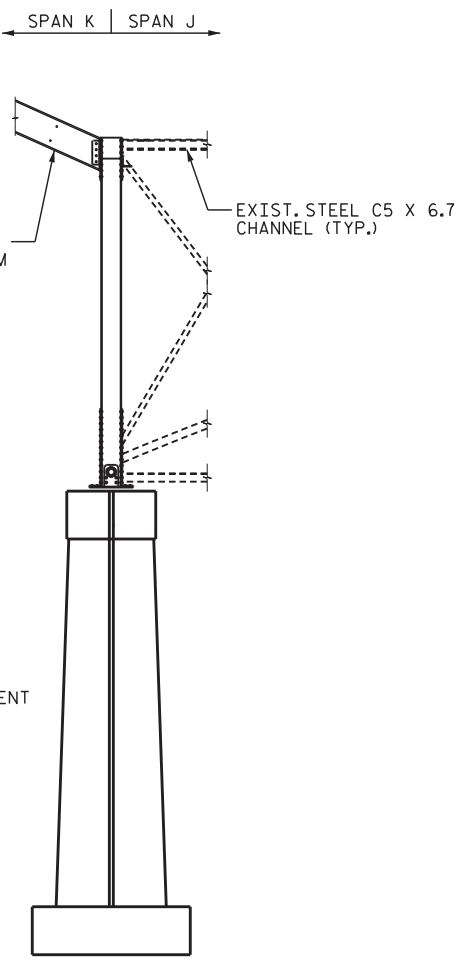
SPAN J FACE



END VIEW



SPAN K FACE

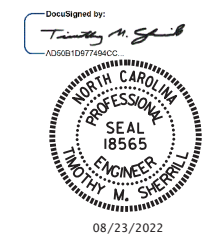


END VIEW

BENT 10

PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 11 OF 12



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STRUCTURAL STEEL
 AND
 FOUNDATION REPAIRS
 BENT 10

DRAWN BY : R.L.PUTEK DATE : 04/2021
 CHECKED BY : T.M.SHERRILL DATE : 05/2021

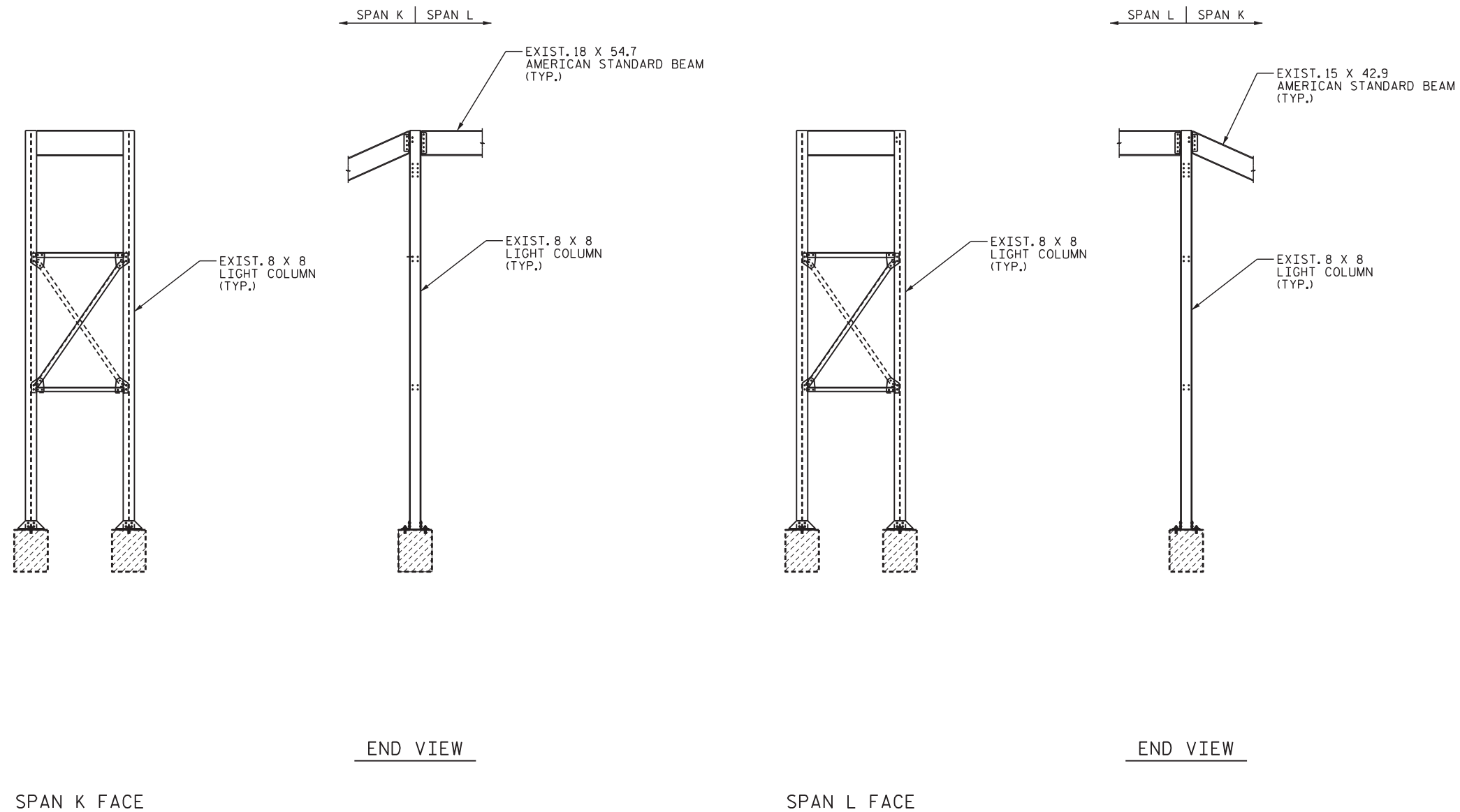
DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-15
1			3			TOTAL SHEETS
2			4			29

NOTES

PRIOR TO CLEANING AND PAINTING, CONTRACTOR SHALL REMOVE SHALLOW BALLAST MATERIAL AROUND BENT 11 VERTICAL LEGS AND ON TOP OF BENT 11 FOOTINGS.

AFTER CLEANING AND PAINTING IS COMPLETE, BALLAST SHALL BE REPLACED TO THE EXISTING ELEVATION PRIOR TO CLEANING AND PAINTING.



BENT 11

PROJECT NO. 49282
MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 13 OF 13



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**STRUCTURAL STEEL
 AND
 FOUNDATION REPAIRS**
 BENT 11

DRAWN BY : R.L.PUTEK DATE : 04/2021
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-16
1			3			TOTAL SHEETS
2			4			29

NOTES

CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO DEMOLITION AND RE-CONSTRUCTION.

CONTRACTOR TO FIELD VERIFY EXISTING ANCHOR BOLTS, MASONRY PLATES, SOLE PLATE DIMENSIONS, LOCATIONS, AND CONDITION PRIOR TO CONSTRUCTION.

CONTRACTOR TO VERIFY DIMENSIONS, GIRDER LOCATIONS, AND ANCHOR BOLT LOCATIONS PRIOR TO DEMOLITION LIMITS SHOWN OF ABUTMENT.

ALL SOLE PLATES AND MASONRY PLATES ARE TO BE CLEANED AND REUSED. ALL DIMENSIONS OF SAID PLATES TO BE VERIFIED PRIOR TO CONSTRUCTION.

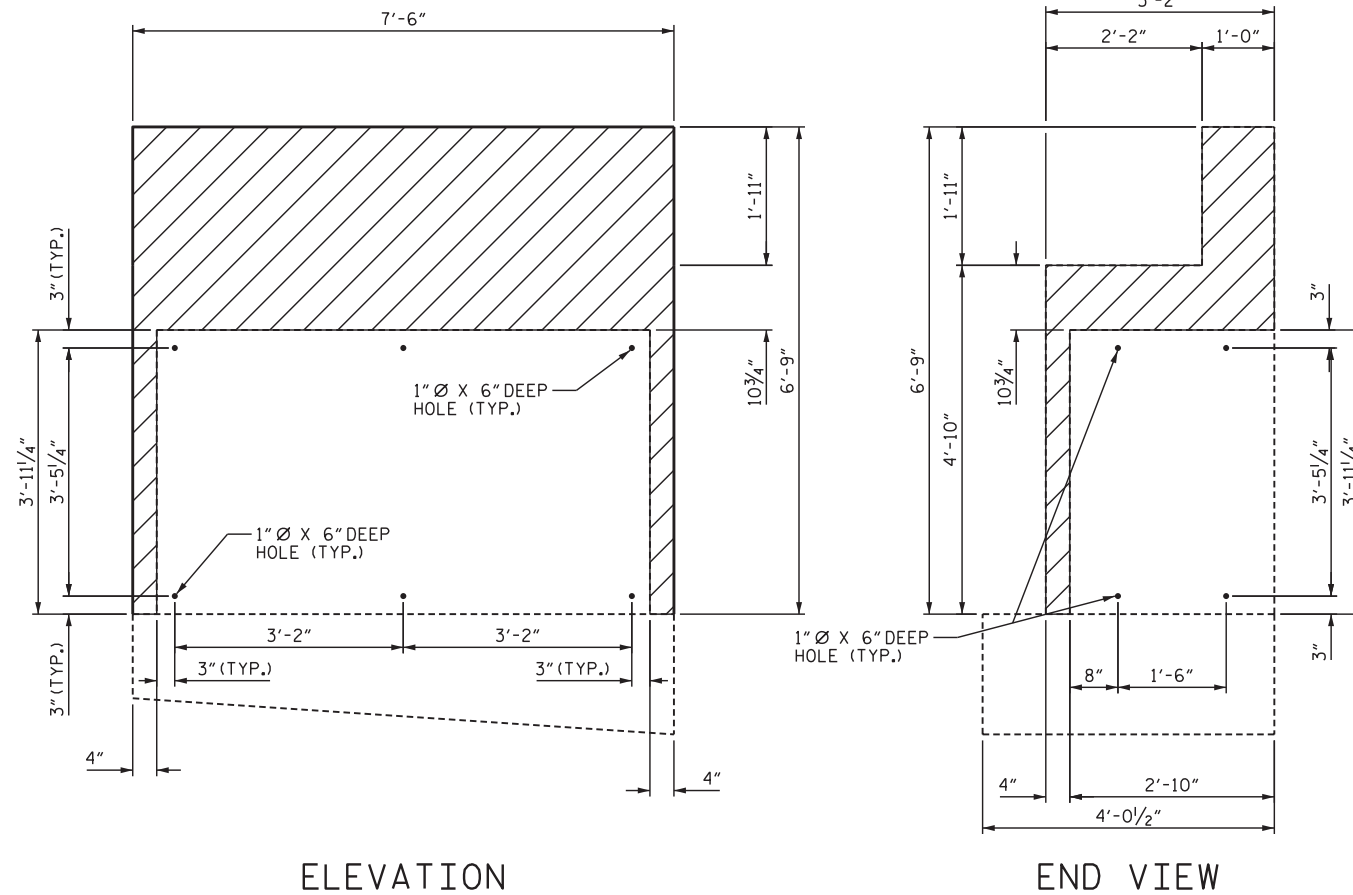
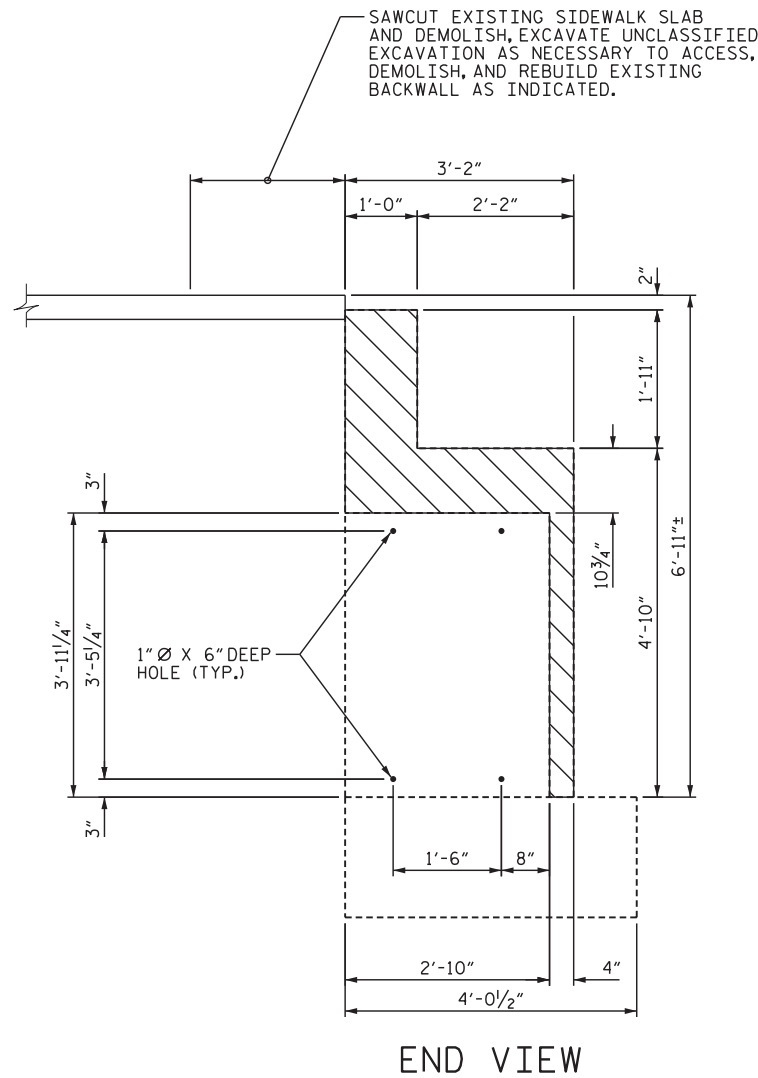
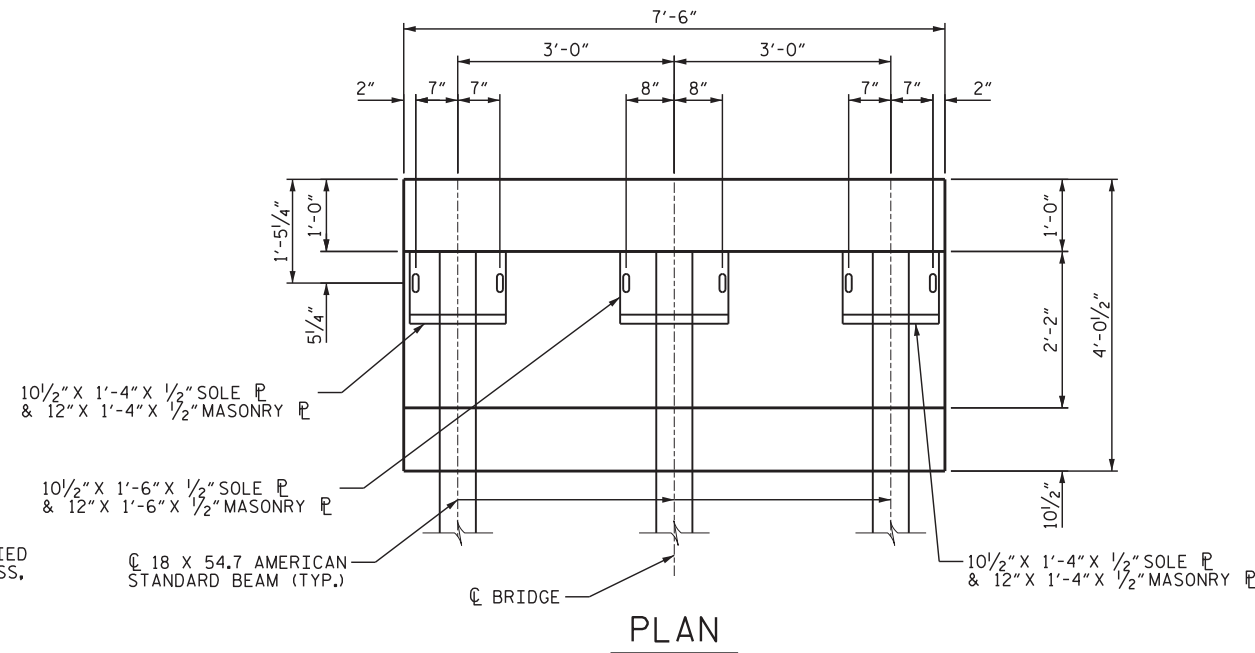
NEW PLAIN ELASTOMERIC BEARING PADS SHALL BE 50 DUROMETER SHORE HARDNESS.

ALL EXIST. REINFORCING STEEL EXPOSED DURING DEMOLITION SHALL BE RETAINED AND CLEANED TO REMOVE CORROSION AND DELETERIOUS MATERIAL THAT MAY PREVENT CONCRETE BOND.

PRIOR TO DEMOLITION OPERATIONS THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS OF THE PROPOSED TEMPORARY SHORING SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA TO THE ENGINEER FOR APPROVAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED TO THE EXISTING STRUCTURE BY THE UNDERPINNING OPERATIONS AT NO ADDITIONAL COST TO THE DEPARTMENT.

EXISTING UTILITIES SHALL BE TEMPORARILY REMOVED OR MOVED AS NECESSARY DURING CONCRETE REPAIRS AND SHALL BE REPLACED AND REPAIRED AS NECESSARY TO RESTORE SERVICE AFTER CONCRETE REPAIRS ARE COMPLETE. COSTS FOR SUCH SHALL BE INCIDENTAL TO OTHER PAY ITEMS FOR THE PROJECT.



PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 1 OF 2



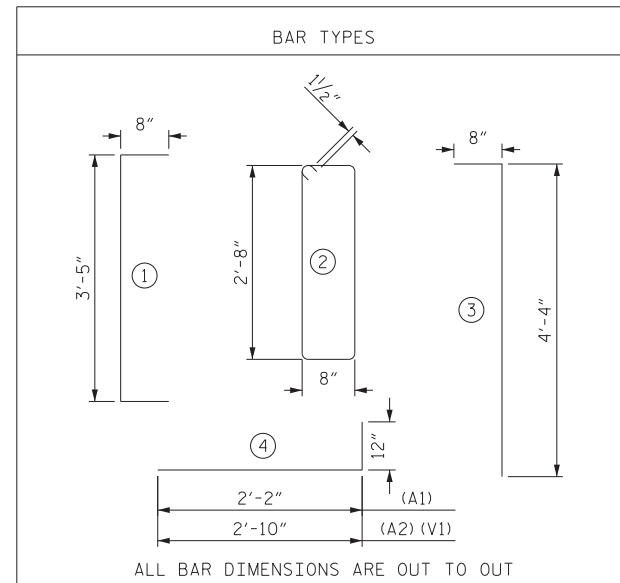
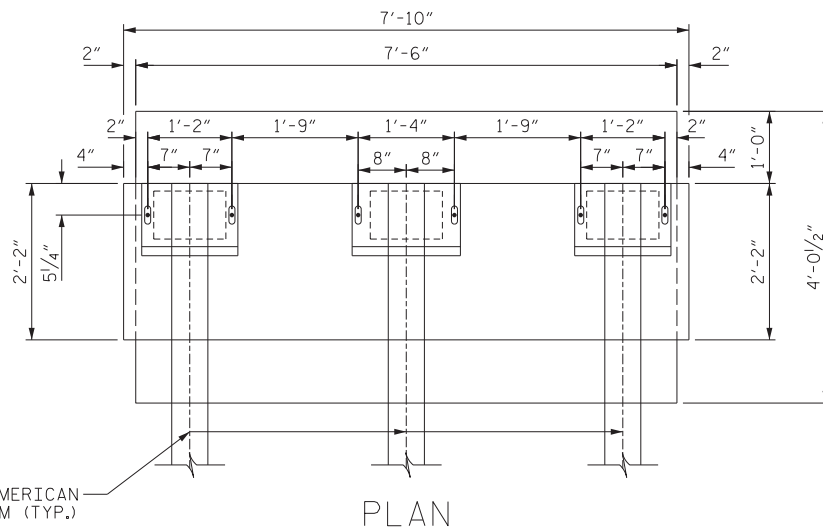
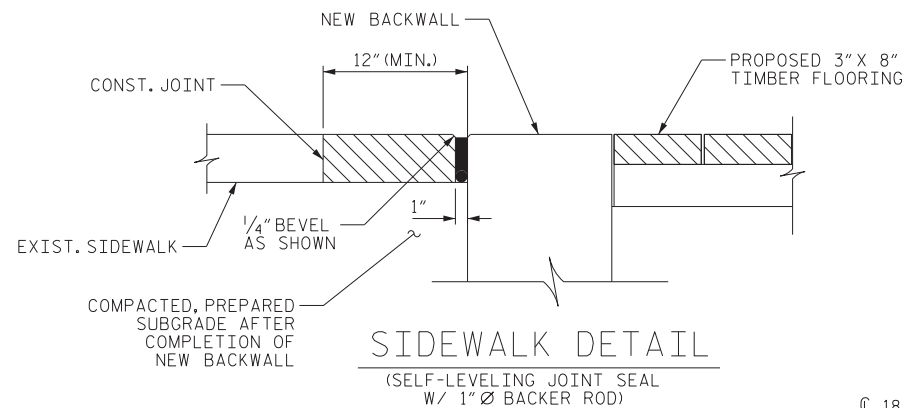
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

CONCRETE REPAIRS
 ABUTMENT 2

DRAWN BY : R.L.PUTEK DATE : 03/2021
 CHECKED BY : T.M.SHERRILL DATE : 05/2021

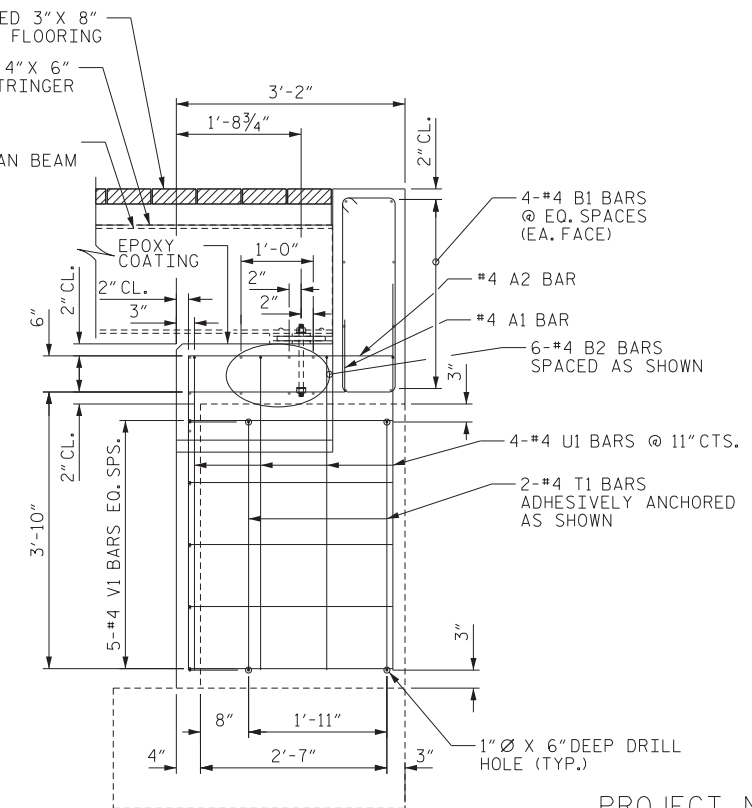
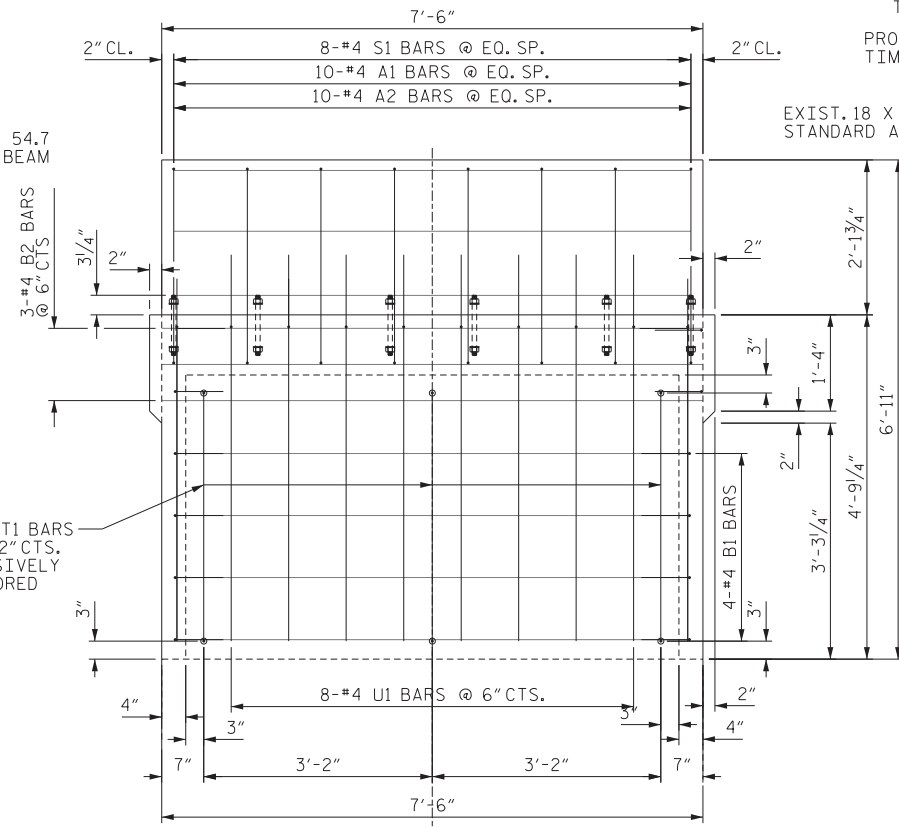
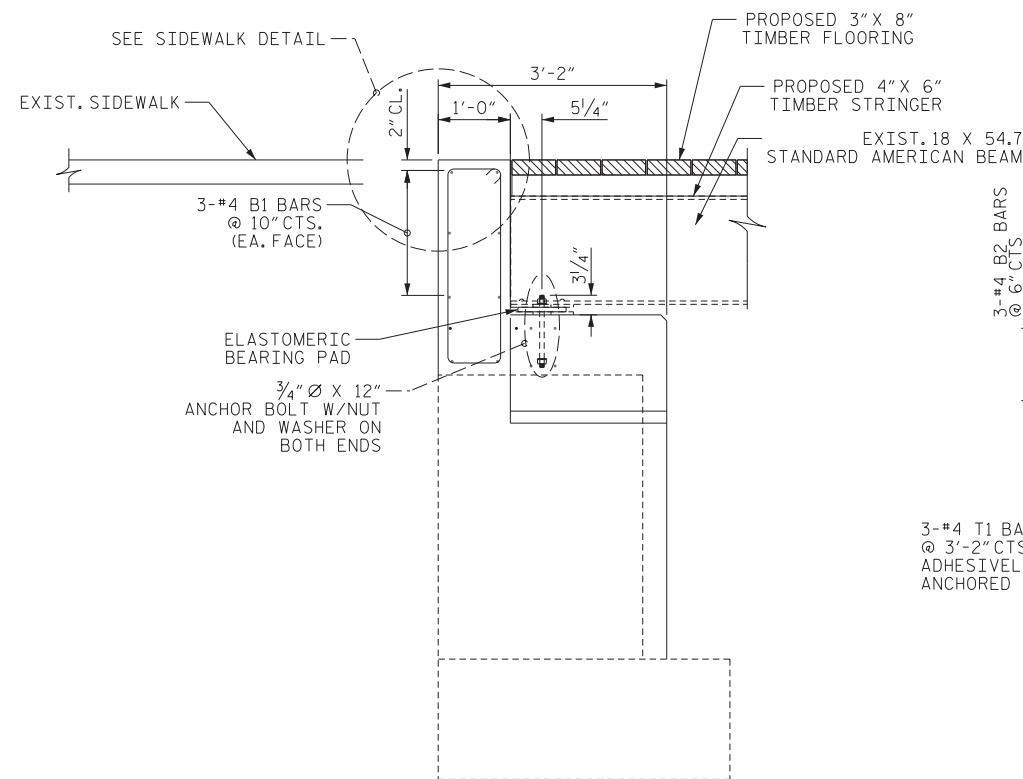
DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-17
1			3			TOTAL SHEETS
2			4			29



BILL OF MATERIAL					
(QUANTITIES FOR ABUTMENT 2)					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A1	10	#4	4	3'-2"	21
A2	10	#4	4	3'-10"	26
B1	10	#4	STR	7'-2"	48
B2	10	#4	STR	7'-6"	50
S1	8	#4	2	6'-3"	33
T1	7	#4	1	4'-9"	22
U1	16	#4	3	5'-0"	53
V1	10	#4	4	3'-6"	23

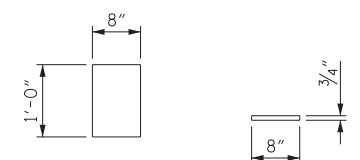
REINFORCING STEEL 276 LBS.
 CLASS A CONCRETE 2.0 CU. YDS.
 EPOXY COATING 17.0 SQ. FT.
 ELASTOMERIC BEARING PAD 3 EA.
 CONCRETE SIDEWALK 1.0 SQ. YDS.



END VIEW
(TYPICAL EACH END)

ELEVATION

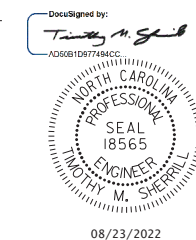
END VIEW
(TYPICAL EACH END)



BEARING PAD
(8" X 12" X 3/4" ELASTOMERIC BEARING PAD - 3 REQ'D)

PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 2 OF 2



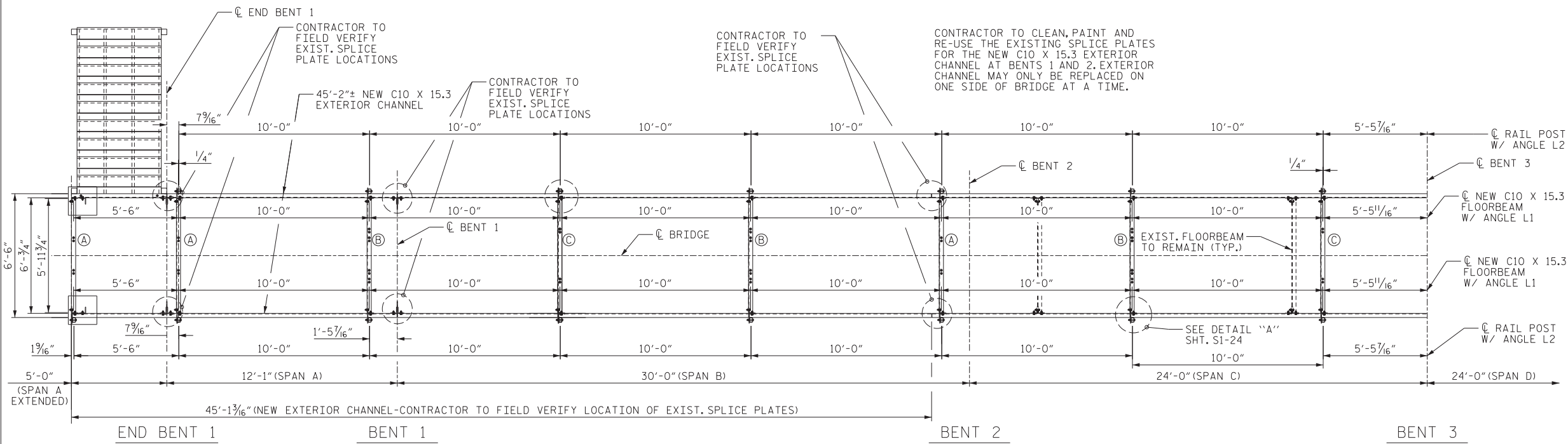
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

CONCRETE REPAIRS
 ABUTMENT 2

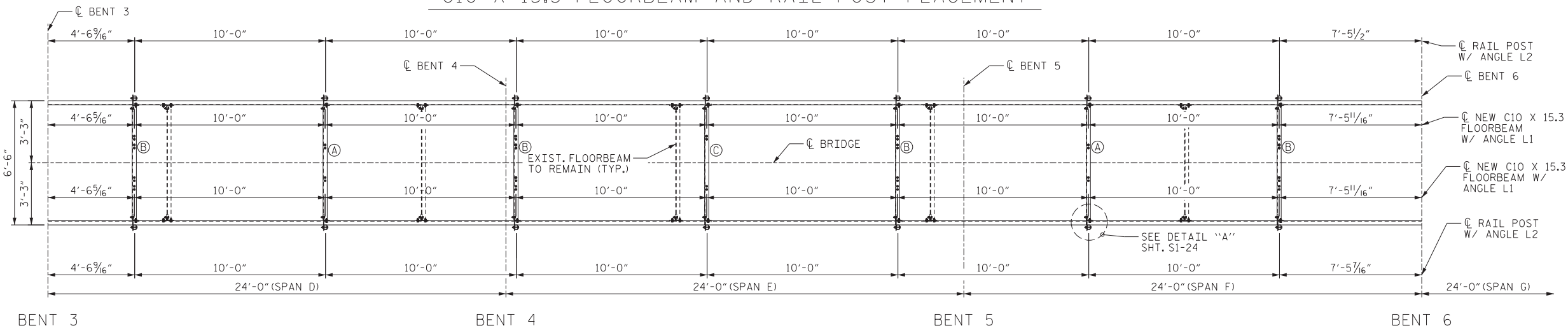
DRAWN BY: R.L.PUTEK DATE: 03/2021
 CHECKED BY: T.M.SHERRILL DATE: 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
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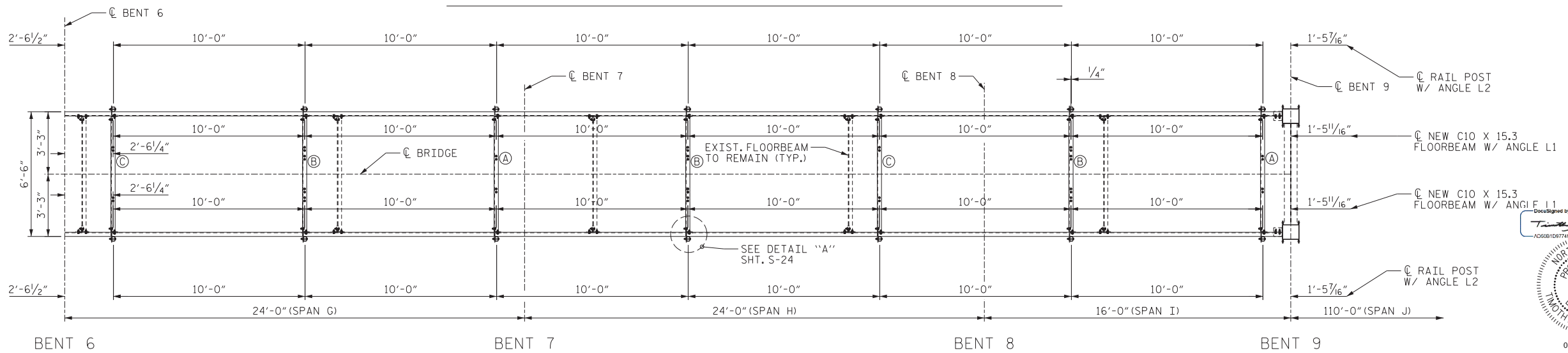
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-18
1			3			TOTAL SHEETS
2			4			29



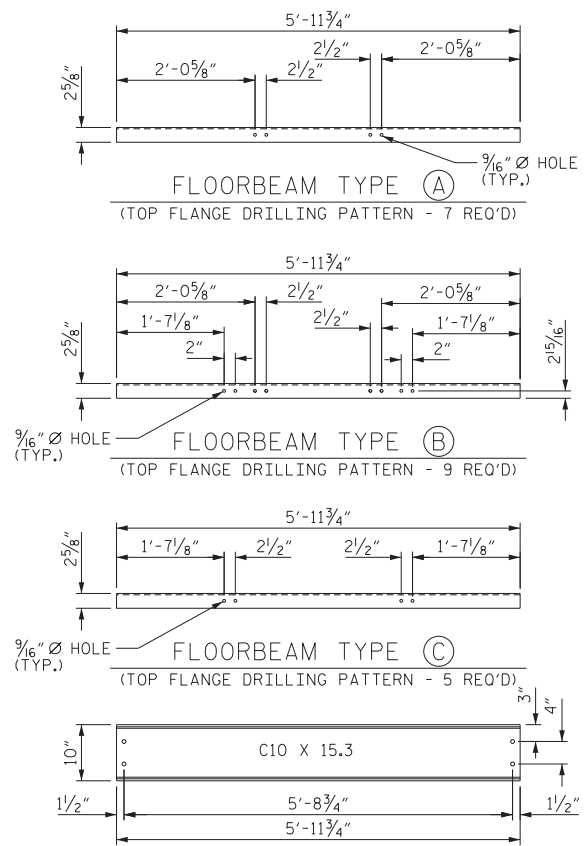
C10 X 15.3 FLOORBEAM AND RAIL POST PLACEMENT



C10 X 15.3 FLOORBEAM AND RAIL POST PLACEMENT



C10 X 15.3 FLOORBEAM AND RAIL POST PLACEMENT



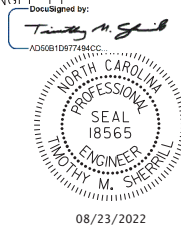
C10 X 15.3 FLOORBEAM
(WEB DRILLING PATTERN FOR ALL FLOORBEAM TYPES)
C10 X 15.3 FLOORBEAM
(SPANS A-I)

NOTES
FOR TYPICAL SECTIONS A-C, SEE SHEET S1-21

DRAWN BY : R.L.PUTEK DATE : 03/2021
CHECKED BY : T.M.SHERRILL DATE : 04/2021

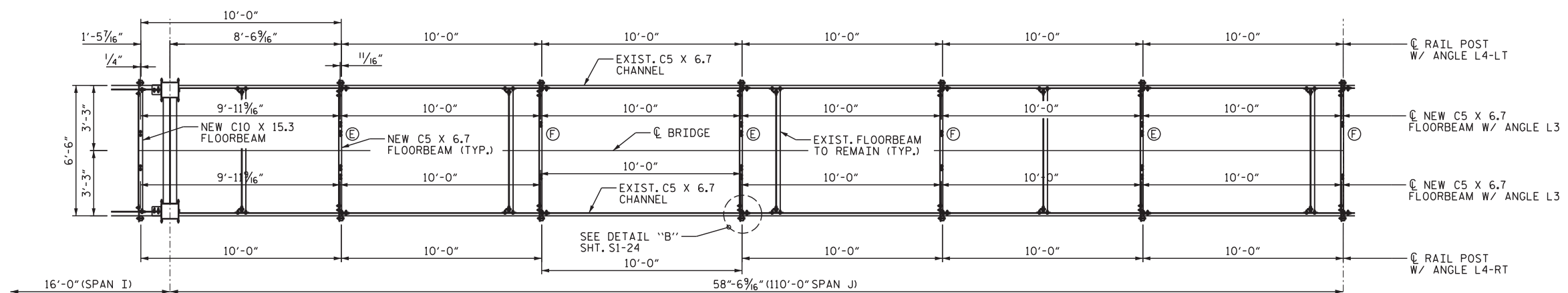
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-19
1			3			TOTAL SHEETS
2			4			29

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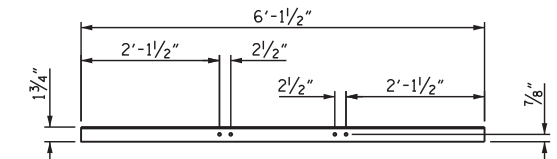


PROJECT NO. 49282
MITCHELL COUNTY
BRIDGE NO. 600240
SHEET 1 OF 2

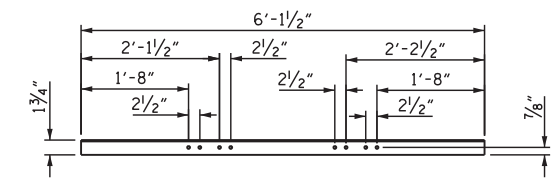
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
FLOORBEAM AND RAIL POST PLACEMENT



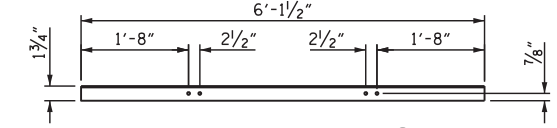
C5 X 6.7 FLOORBEAM AND RAIL POST PLACEMENT



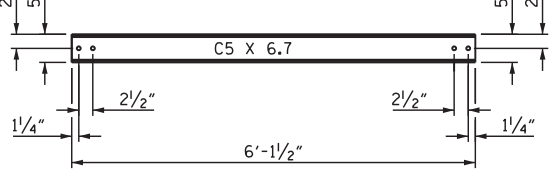
FLOORBEAM TYPE (D)
(TOP FLANGE DRILLING PATTERN - 2 REQ'D)



FLOORBEAM TYPE (E)
(TOP FLANGE DRILLING PATTERN - 6 REQ'D)

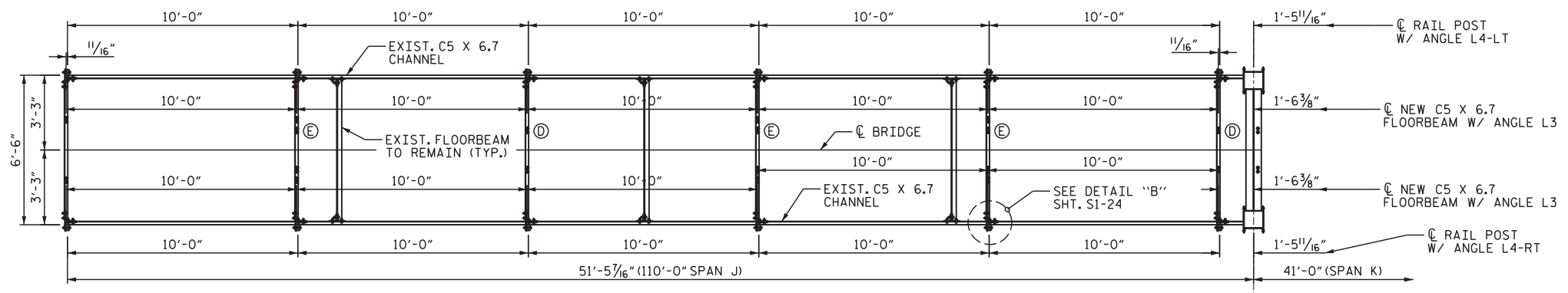


FLOORBEAM TYPE (F)
(TOP FLANGE DRILLING PATTERN - 3 REQ'D)



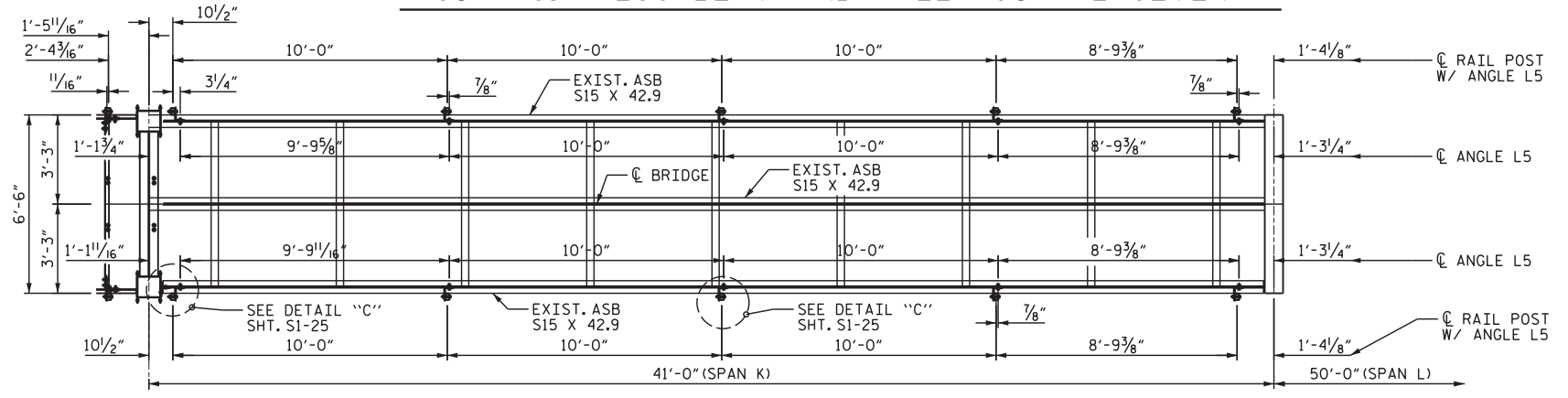
C5 X 6.7 FLOORBEAM
(WEB DRILLING PATTERN FOR ALL FLOORBEAM TYPES)

C5 X 6.7 FLOORBEAM
(SPAN J)



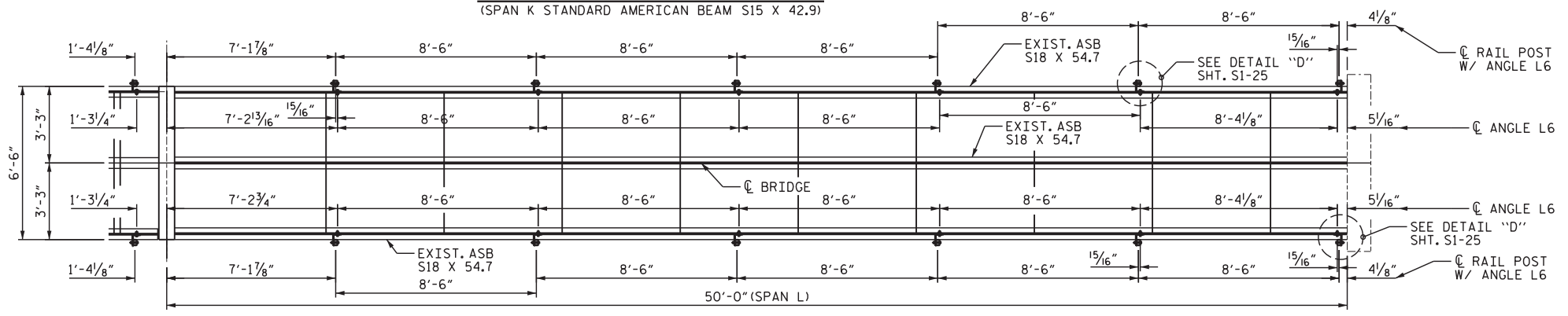
C5 X 6.7 FLOORBEAM AND RAIL POST PLACEMENT

BENT 10



RAIL POST PLACEMENT
(SPAN K STANDARD AMERICAN BEAM S15 X 42.9)

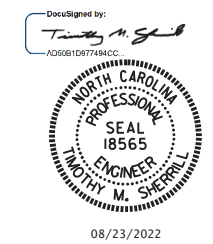
BENT 11



RAIL POST PLACEMENT
(SPAN L STANDARD AMERICAN BEAM S18 X 54.7)

ABUTMENT 2

PROJECT NO. 49282
MITCHELL COUNTY
 BRIDGE NO. 600240
 SHEET 2 OF 2

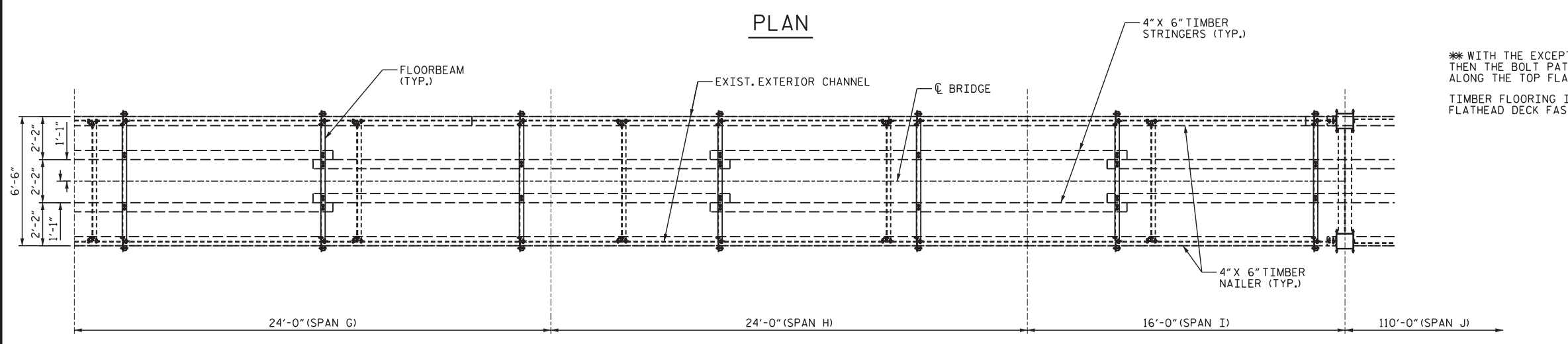
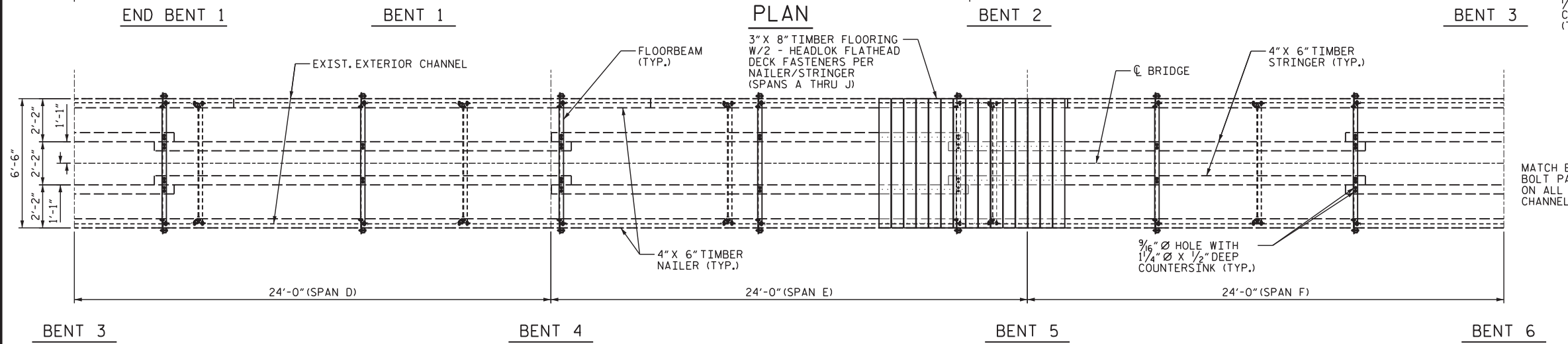
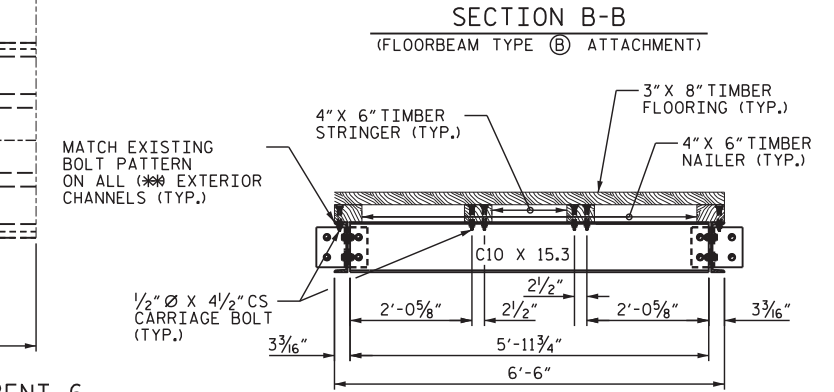
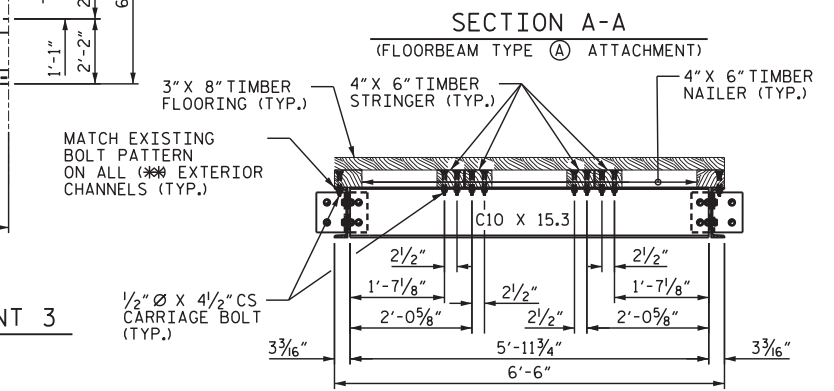
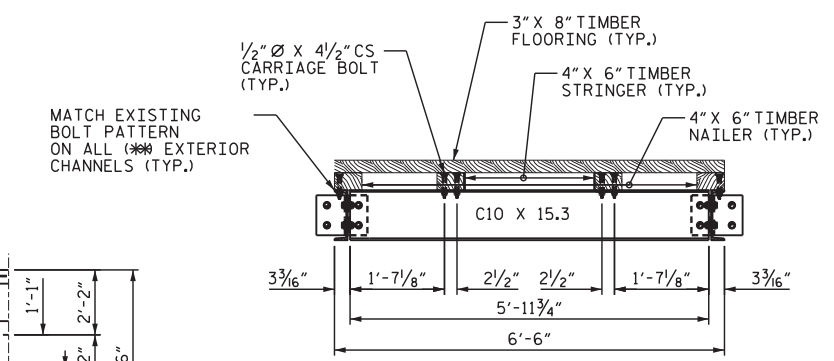
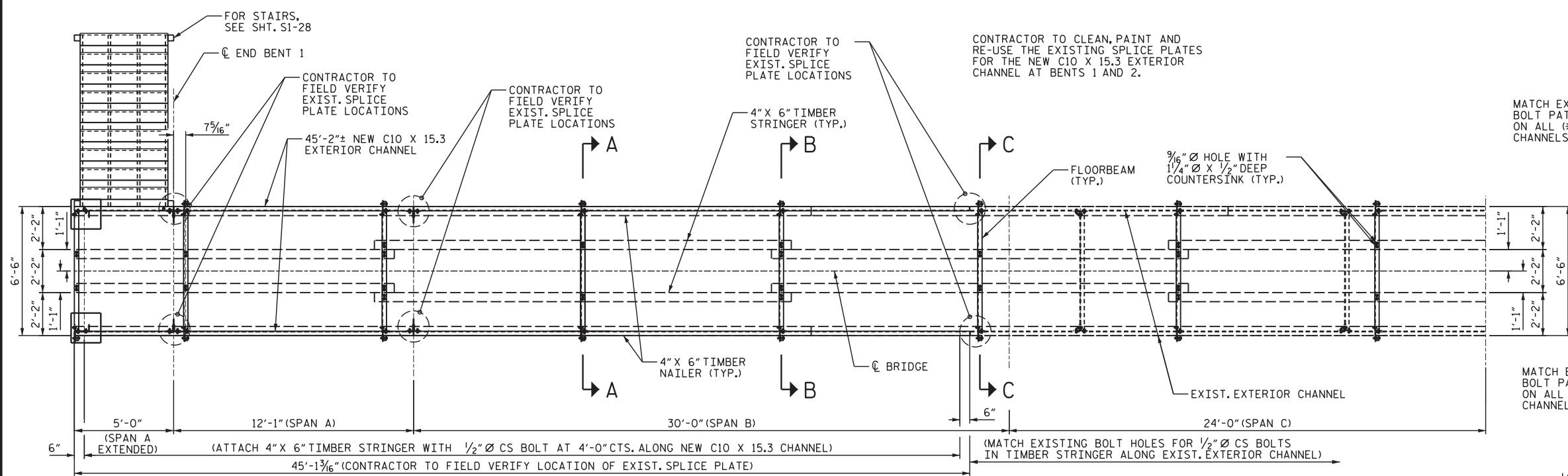


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FLOORBEAM AND RAIL POST PLACEMENT

DRAWN BY : R.L.PUTEK DATE : 03/2021
 CHECKED BY : T.M.SHERRILL DATE : 04/2021

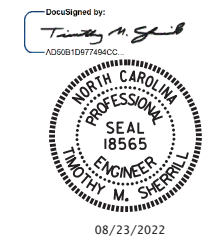
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-20
1			3			TOTAL SHEETS
2			4			29



** WITH THE EXCEPTION OF ANY EXTERIOR CHANNEL BEING REPLACED, THEN THE BOLT PATTERN SHALL BE A 3/16" Ø BOLT HOLE @ 4'-0" INTERVALS ALONG THE TOP FLANGE OF THE REPLACEMENT CHANNEL.
 TIMBER FLOORING IS ATTACHED WITH TWO (2) HEADLOK FLATHEAD DECK FASTENERS PER NAILER/STRINGER.

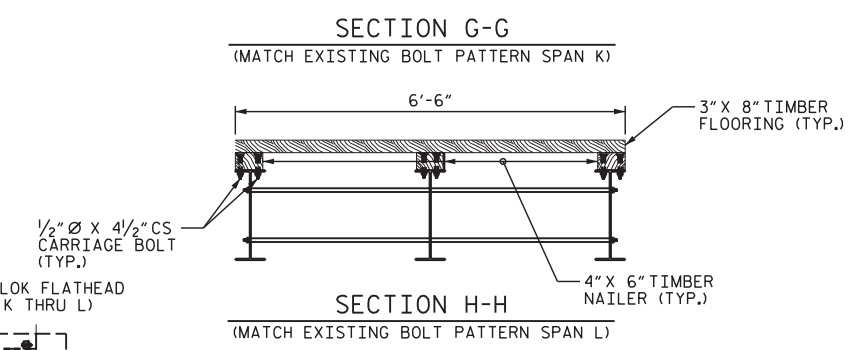
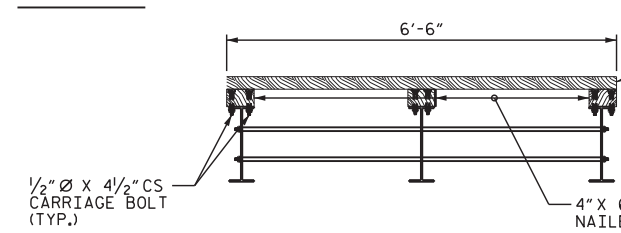
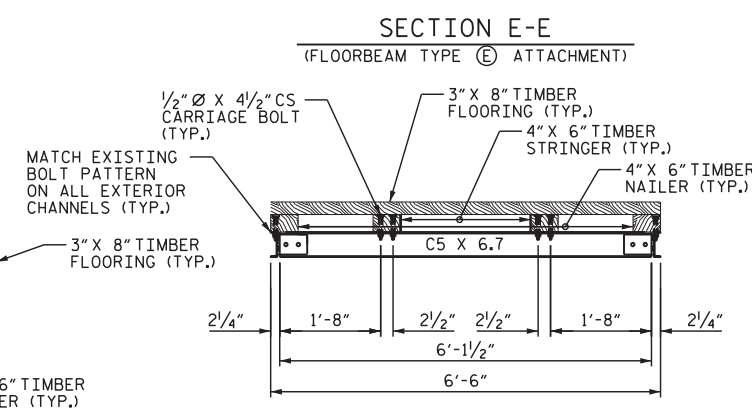
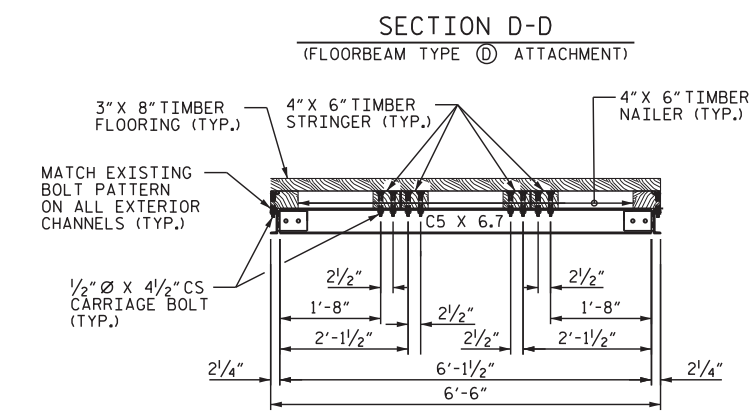
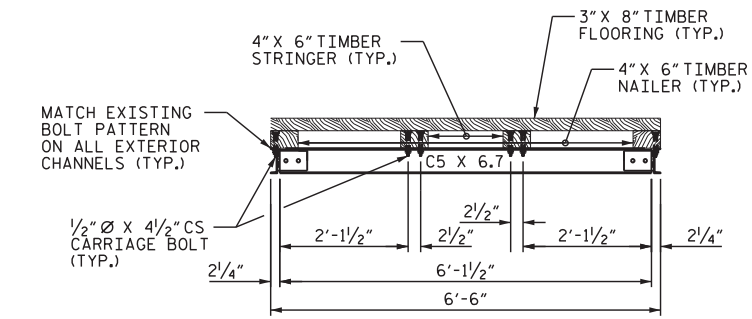
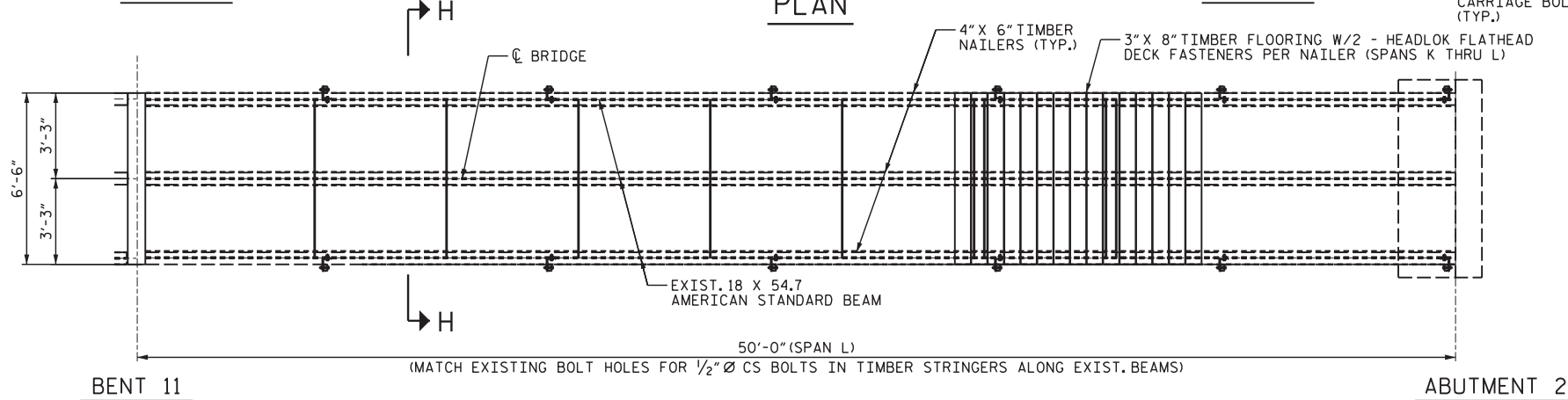
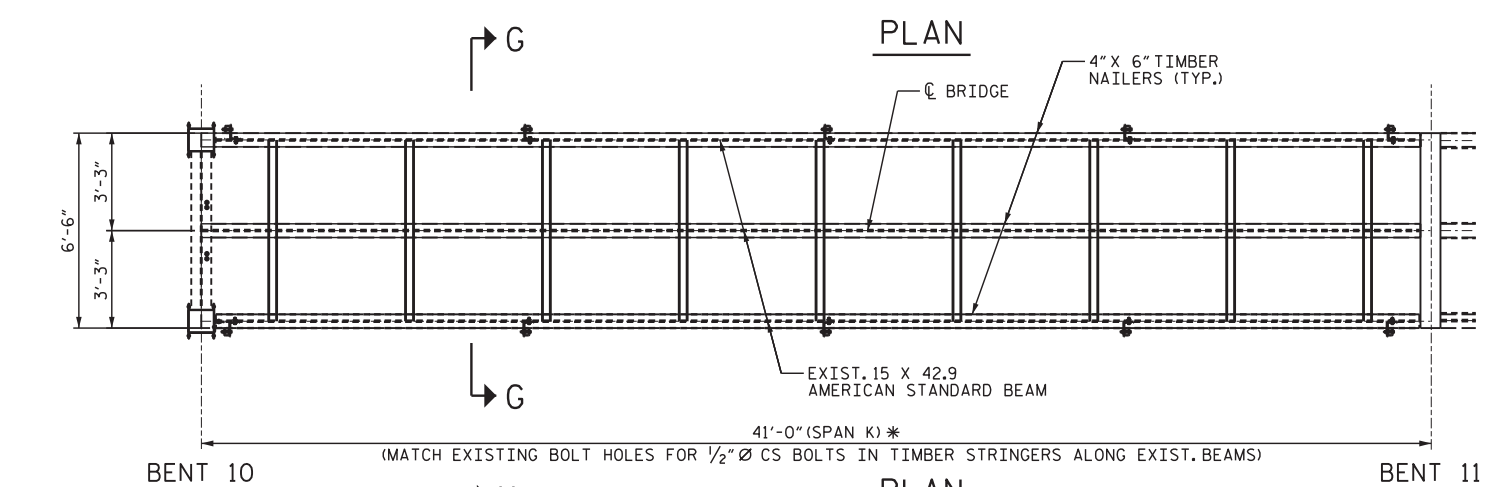
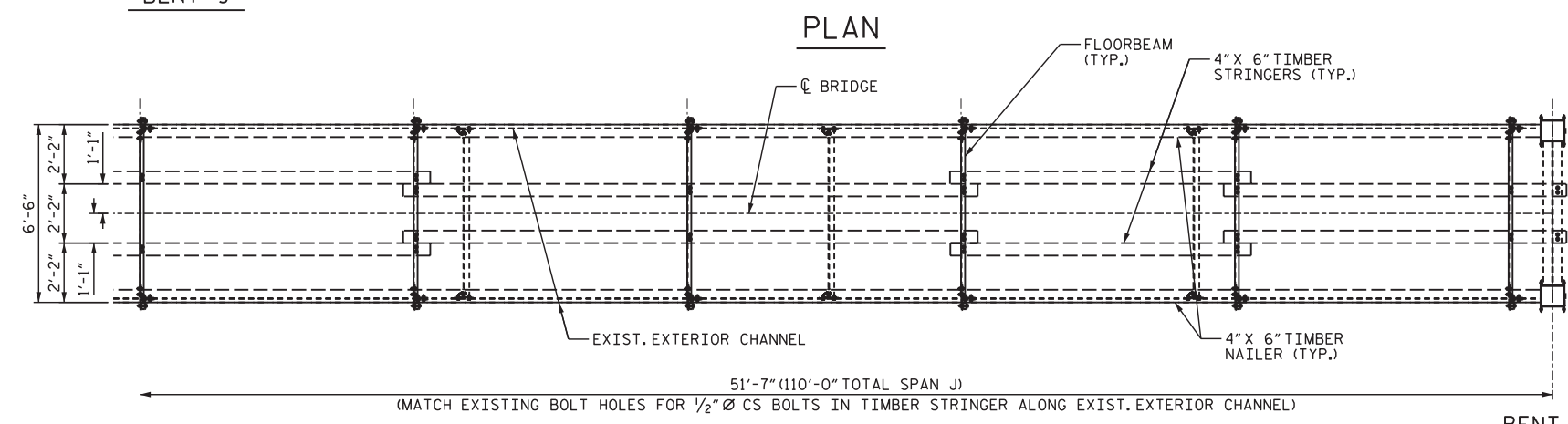
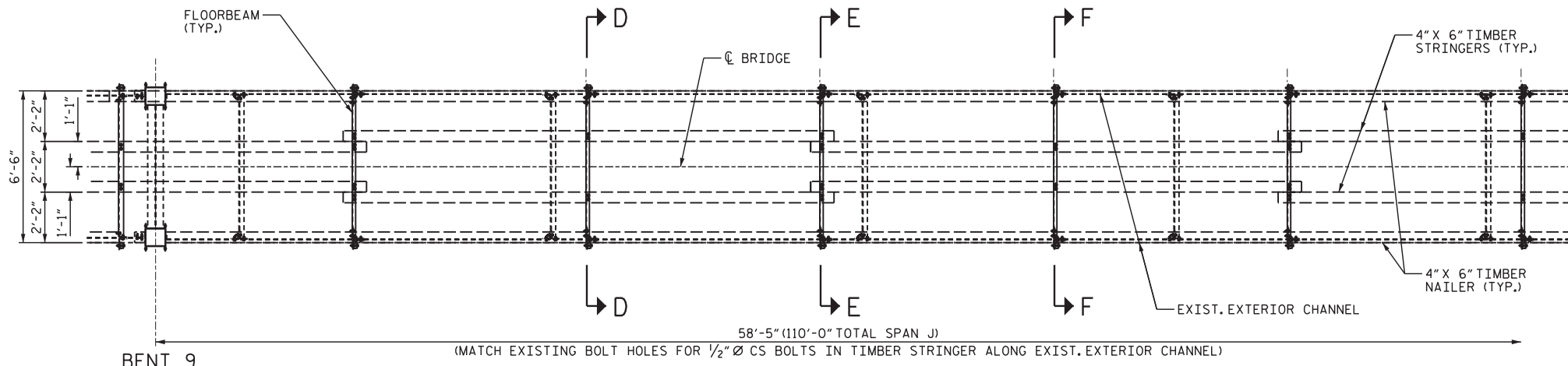
PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 1 OF 3
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 TIMBER NAILERS,
 TIMBER STRINGERS,
 AND
 TIMBER FLOORING

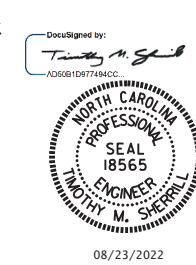


DRAWN BY : R.L.PUTEK DATE : 03/2021
 CHECKED BY : T.M.SHERRILL DATE : 04/2021

REVISIONS						SHEET NO.
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2			4			29



TIMBER FLOORING IS ATTACHED WITH TWO (2) HEADLOK FLATHEAD DECK FASTENERS PER NAILER/STRINGER.
 * SPAN K FLOORING SHALL HAVE 4" ANTI-SLIP DECK PLATING INSTALLED ON EACH BOARD



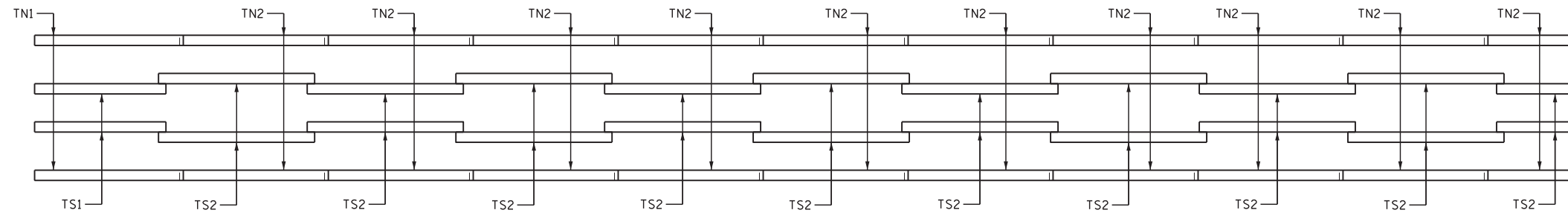
PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 2 OF 3
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 TIMBER NAILERS,
 TIMBER STRINGERS,
 AND
 TIMBER FLOORING

DRAWN BY: R.L. PUTEK DATE: 04/2021
 CHECKED BY: T.M. SHERRILL DATE: 04/2021

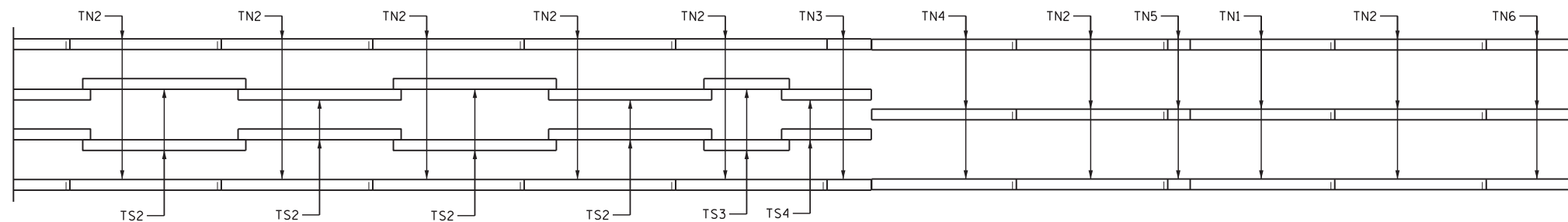
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NO.	BY:	DATE:	NO.	BY:	DATE:	S1-22
1			3			TOTAL SHEETS
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LOCATION PLAN FOR TIMBER NAILERS AND TIMBER STRINGERS

(SPANS A THRU I)



LOCATION PLAN FOR TIMBER NAILERS AND TIMBER STRINGERS

(SPANS J THRU L)

NOTES

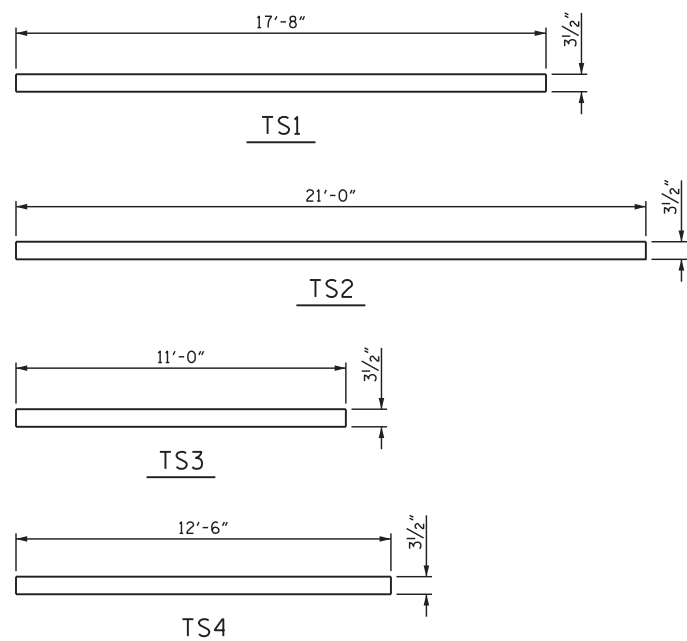
TIMBER NAILERS AND STRINGERS SHALL NOT BE PLACED UNTIL THE CLEANING AND PAINTING OPERATIONS OF STEEL MEMBERS IS COMPLETED.
 PRIOR TO ATTACHING TIMBER NAILERS AND STRINGERS TO STEEL MEMBERS, PLACE A SELF-ADHERED RUBBERIZED ASPHALT ADHESIVELY BACKED POLYETHYLENE FLASHING TO THE MATING SURFACE OF THE STEEL MEMBERS.

TREAT ALL FRESHLY DRILLED OR NEWLY EXPOSED HOLES IN TIMBER MEMBERS BY PUMPING COAL-TAR ROOFING CEMENT MEETING ASTM D5643 INTO HOLE USING A GREASE GUN OR SIMILAR DEVICE.

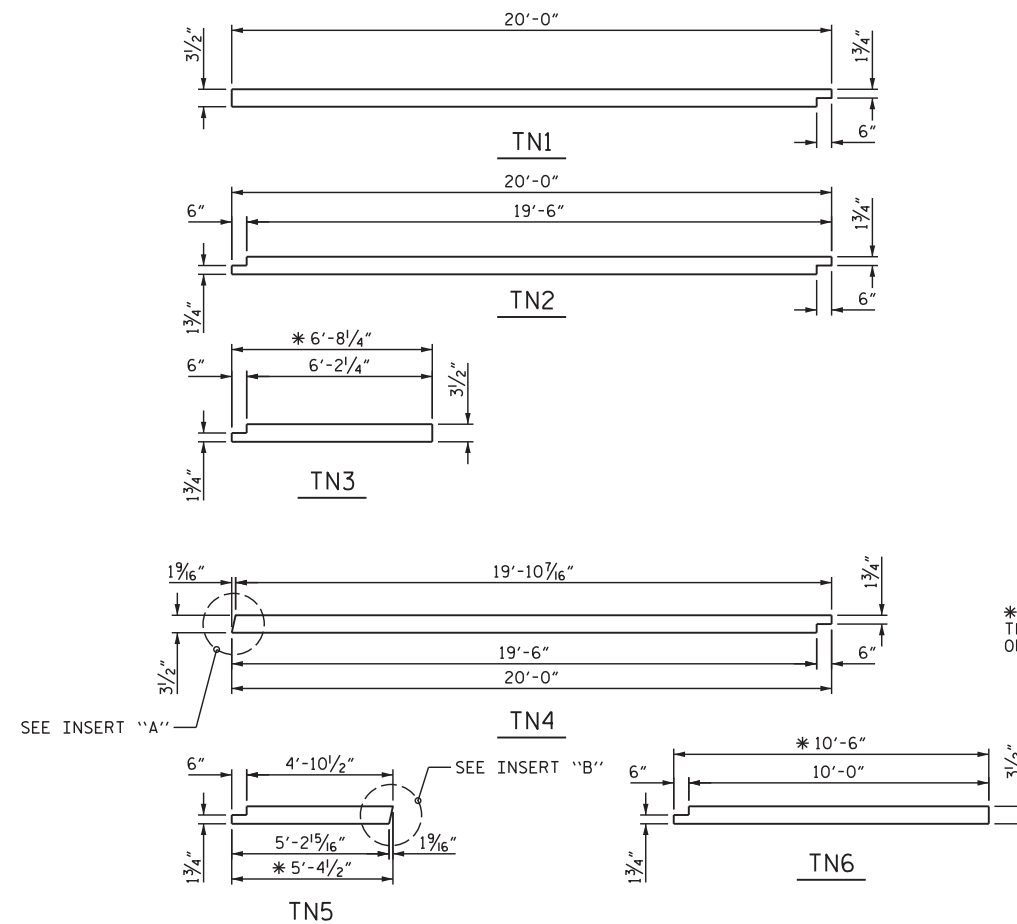
TREAT ALL FRESHLY CUT OR NEWLY EXPOSED TIMBER MEMBER SURFACES WITH AN GREEN WOOD INSECTICIDAL PRESERVATIVE OR EQUIVALENT AWPAC PRODUCT.

PRIOR TO ATTACHING TIMBER FLOORING, PLACE A SELF-ADHERED RUBBERIZED ASPHALT ADHESIVELY BACKED POLYETHYLENE FLASHING TO THE MATING SURFACE OF THE TIMBER NAILERS AND STRINGERS.

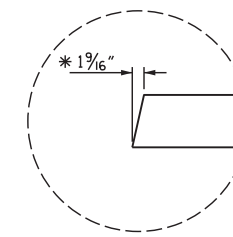
TO ATTACH TIMBER FLOORING TO TIMBER NAILERS/STRINGERS, USE SELF-TAPPING FLAT HEAD STRUCTURAL SCREWS SUCH AS HEADLOK OR APPROVED EQUIVANT FOR TREATED TIMBERS.



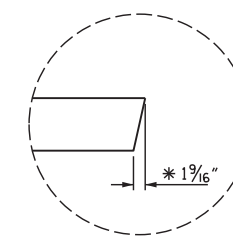
4" X 6" TIMBER STRINGER DETAILS



4" X 6" TIMBER NAILER DETAILS



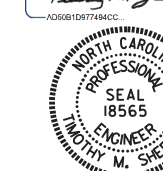
INSERT "A"



INSERT "B"

* CONTRACTOR TO FIELD VERIFY THESE DIMENSIONS PRIOR TO MILLING OF TIMBER NAILERS AND TIMBER STRINGERS

Designed by: *Timothy M. Sherrill*



08/23/2022

PROJECT NO. 49282
MITCHELL COUNTY
 BRIDGE NO. 600240

SHEET 3 OF 3

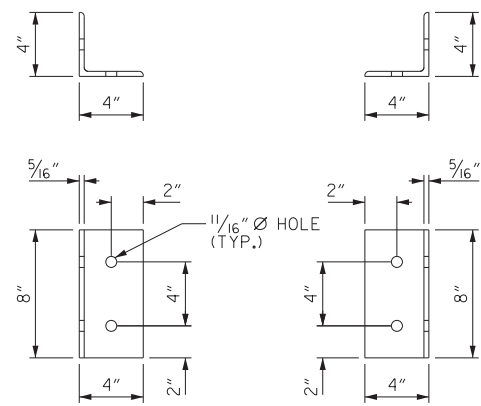
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TIMBER NAILER AND TIMBER STRINGER DETAILS

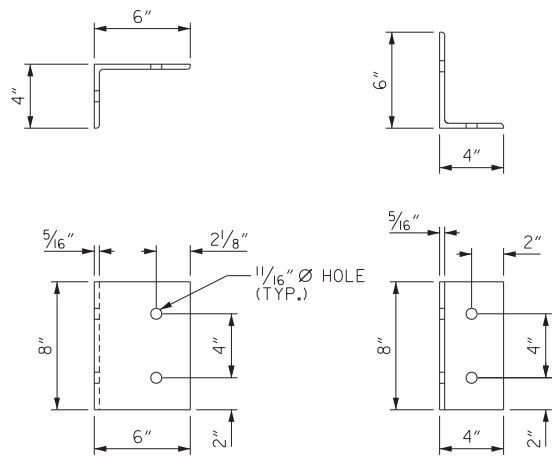
DRAWN BY : R.L.PUTEK DATE : 06/2021
 CHECKED BY : T.M.SHERRILL DATE : 06/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

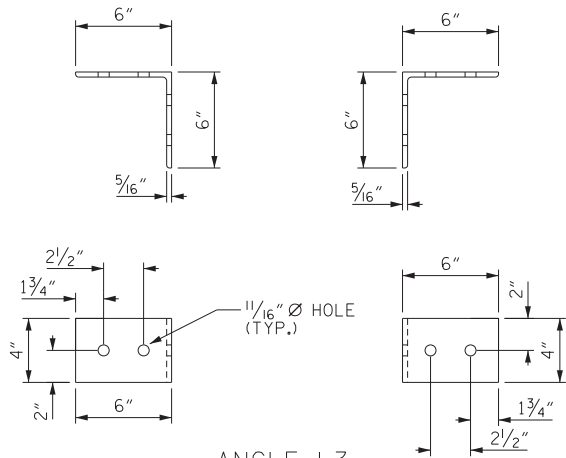
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NO.	BY:	DATE:	NO.	BY:	DATE:	S1-23
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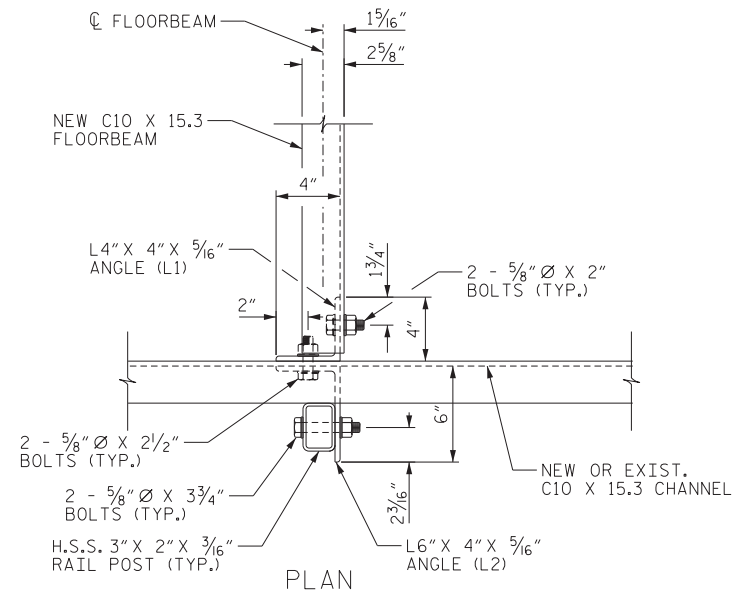
ANGLE L1
L4" X 4" X 5/16" ANGLE
SPANS A THRU I (44 REQ'D)



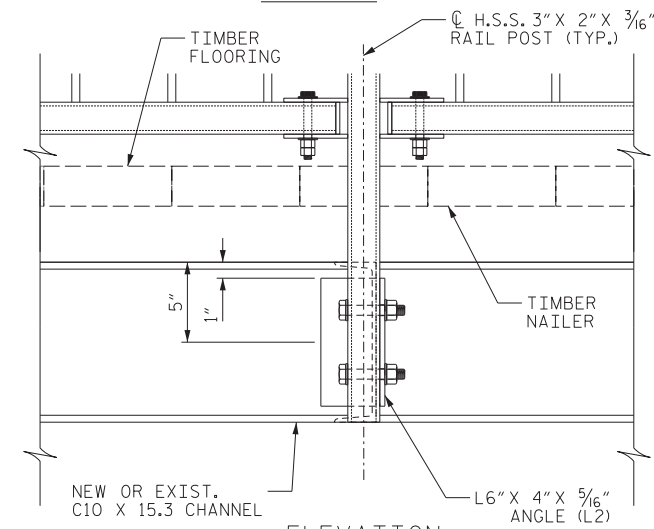
ANGLE L2
L6" X 4" X 5/16" ANGLE
SPANS A THRU I (43 REQ'D = 21LT/22RT)



ANGLE L3
L6" X 6" X 5/16" ANGLE
SPAN J (24 REQ'D)



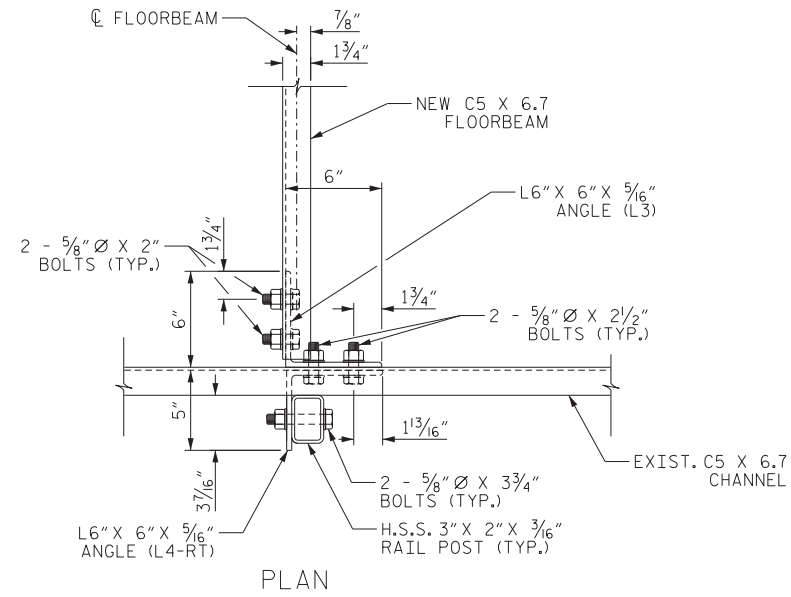
PLAN



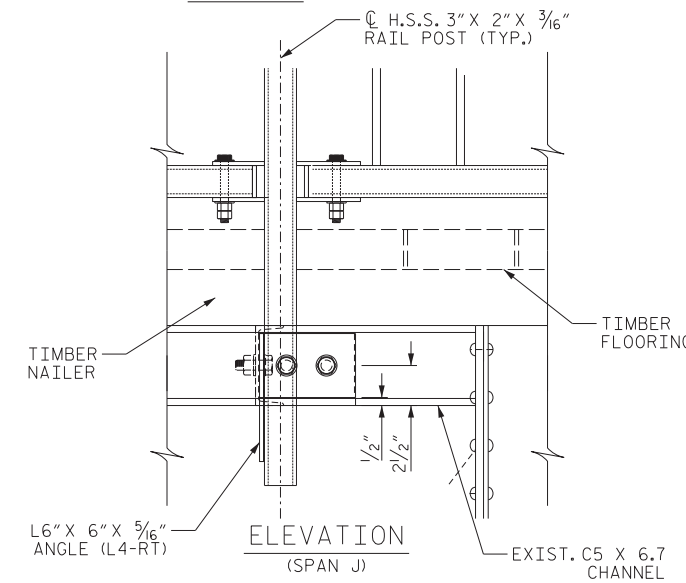
ELEVATION

DETAIL "A"

(RIGHT SIDE SHOWN, LEFT SIDE SIMILAR)



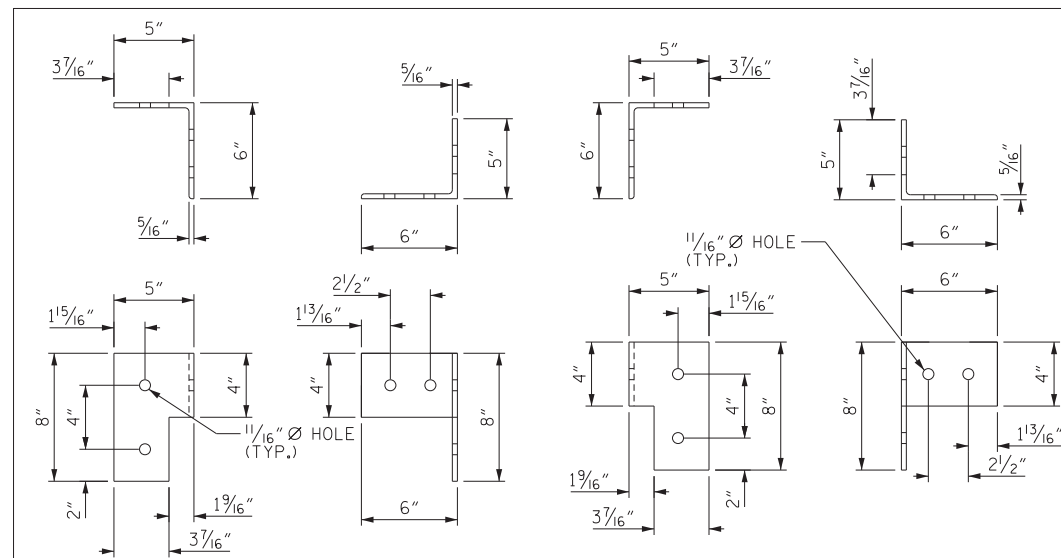
PLAN



ELEVATION

DETAIL "B"

(RIGHT SIDE SHOWN, LEFT SIDE SIMILAR)



ANGLE L4-LT

L6" X 6" X 5/16" ANGLE
SPAN J (12 REQ'D)

ANGLE L4-RT

L6" X 6" X 5/16" ANGLE
SPAN J (12 REQ'D)

DRAWN BY : R.L.PUTEK DATE : 12/2020
CHECKED BY : T.M.SHERRILL DATE : 04/2021

NOTES

- ALL TUBING SHALL BE ASTM A 500 GRADE B.
- ALL STEEL ANGLE AND OTHER SHAPES SHALL BE AASHTO M270 GRADE 50.
- ALL BOLTS SHALL BE ASTM F3125 GRADE 325.
- ALL NUTS SHALL BE ASTM A194.
- ALL WASHERS SHALL BE ASTM F436.
- ALL DIRECT TENSION INDICATORS SHALL BE ASTM F959.
- ALL STEEL RAIL MEMBERS, BOLTS, NUTS, WASHERS, AND DIRECT TENSION INDICATORS SHALL BE GALVANIZED AS PER NCDOT STANDARD SPECIFICATIONS.
- DIRECT TENSION INDICATORS SHALL BE USED ON ALL BOLTS TO VERIFY CORRECT TENSIONING.
- ALL WELDING, FABRICATION, AND INSTALLATION SHALL BE PERFORMED IN ACCORDANCE WITH THE NCDOT STANDARD SPECIFICATIONS.
- CONNECTION AND SPACING OF RAIL POSTS TO BRIDGE CHANNELS SHALL BE AS INDICATED. HOWEVER, CONTRACTOR MAY PROPOSE ALTERNATE POST AND RAIL DESIGN. DESIGN SHALL MEET AASHTO GEOMETRY, DIMENSION, LOADING, AND OTHER APPROPRIATE DESIGN REQUIREMENTS. ALTERNATE POST AND RAIL DESIGN AND CALCULATIONS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN NORTH CAROLINA AND SHALL BE SUBMITTED FOR REVIEW.

POSTS SHALL BE FABRICATED AND INSTALLED PLUMB, +/-1" TOLERANCE WHEN MEASURED AT TOP OF POSTS FROM TOP OF TIMBER FLOORING. AT ALL LOCATIONS, THE MAXIMUM ON CENTER BETWEEN POSTS SHALL BE MEASURED HORIZONTAL AT THE SPACING SHOWN ON THE PLANS.

PICKETS SHALL BE FABRICATED PARALLEL TO THE POSTS AND SHALL BE SPACED HORIZONTALLY AS SHOWN ON THE PLANS.

THE RAILING SHALL BE FABRICATED AND INSTALLED PLUMB LONGITUDINALLY AND VERTICALLY TRANSVERSELY.

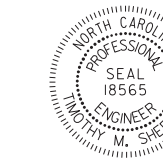
THE TOP AND BOTTOM RAILS SHALL RUN PARALLEL TO THE TOP OF THE TIMBER FLOORING THROUGHOUT THE LENGTH OF THE BRIDGE.

THE TOP OF THE RAIL SHALL BE AT A CONSTANT DISTANCE OF 3'-6" FROM THE TOP OF THE TIMBER FLOORING.

PROJECT NO. 49282
MITCHELL COUNTY
BRIDGE NO. 600240

SHEET 1 OF 4

DocuSigned by:
Timothy M. Sherrill
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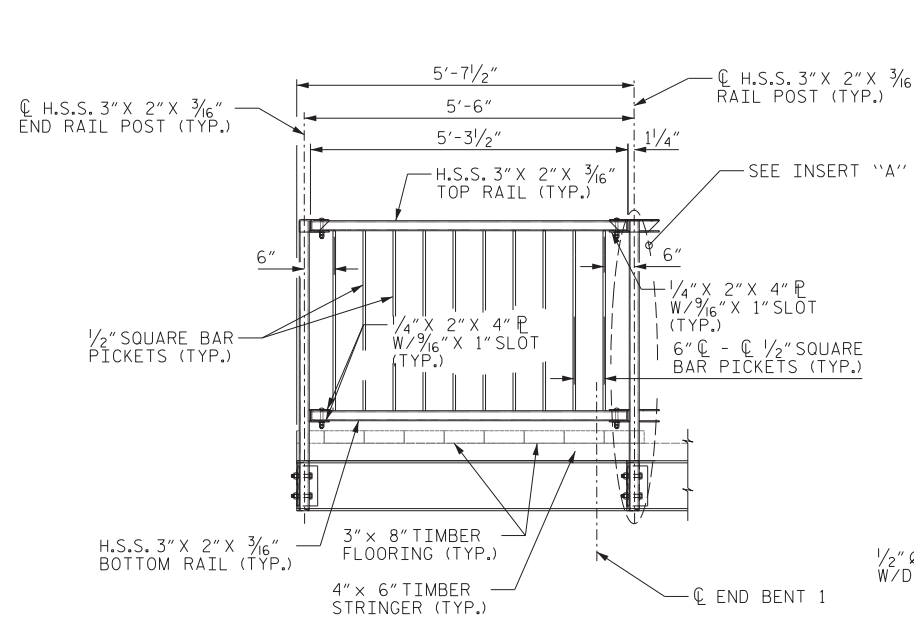
08/23/2022

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

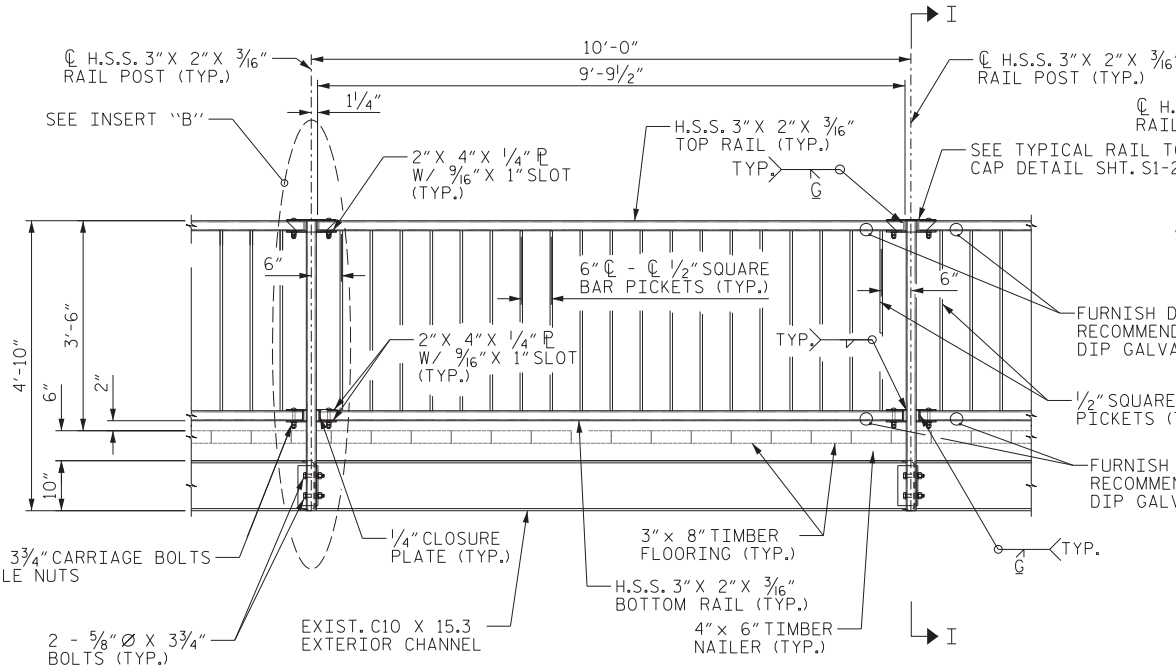
RAIL DETAILS

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			29

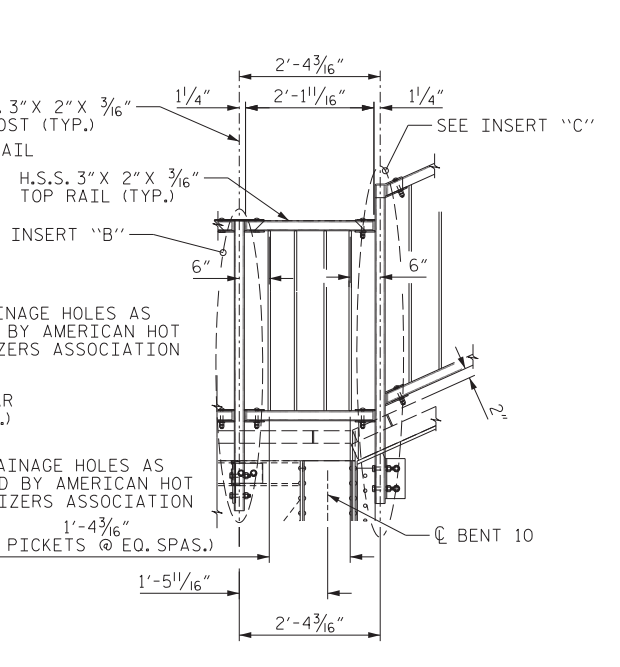
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



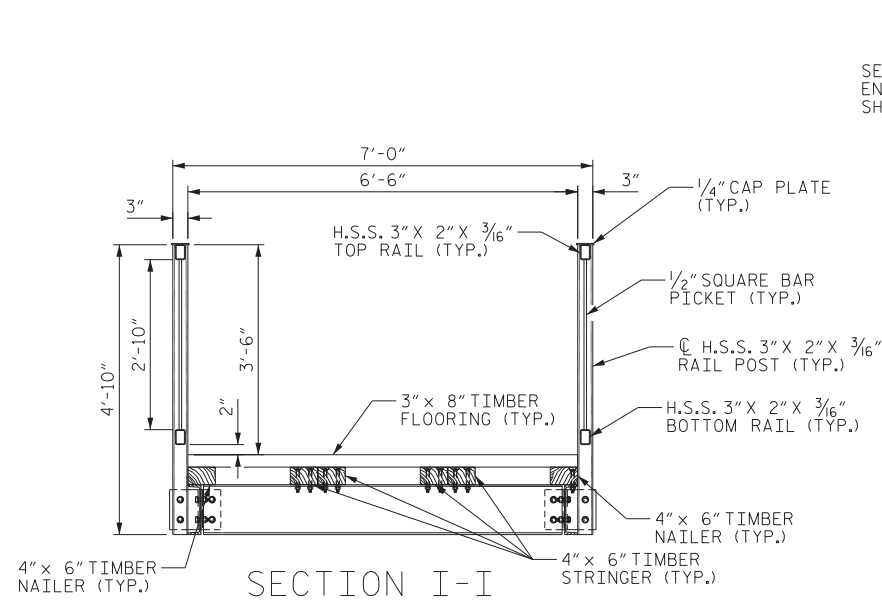
5'-3 1/2" RAIL SECTION
(SPAN A EXTENDED 1 REQ'D)



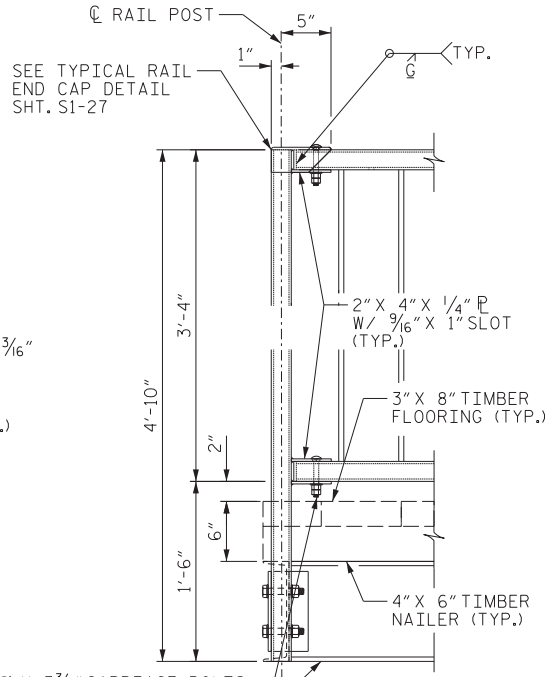
TYPICAL 9'-9 1/2" RAIL SECTION
(SPANS A THRU J - 63 REQ'D)



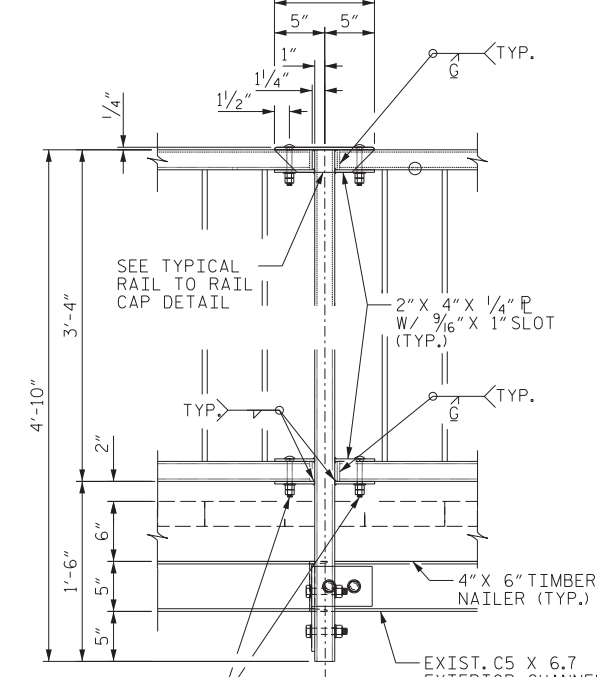
TYPICAL 2'-1 11/16" RAIL SECTION
(SPAN J - 2 REQ'D)



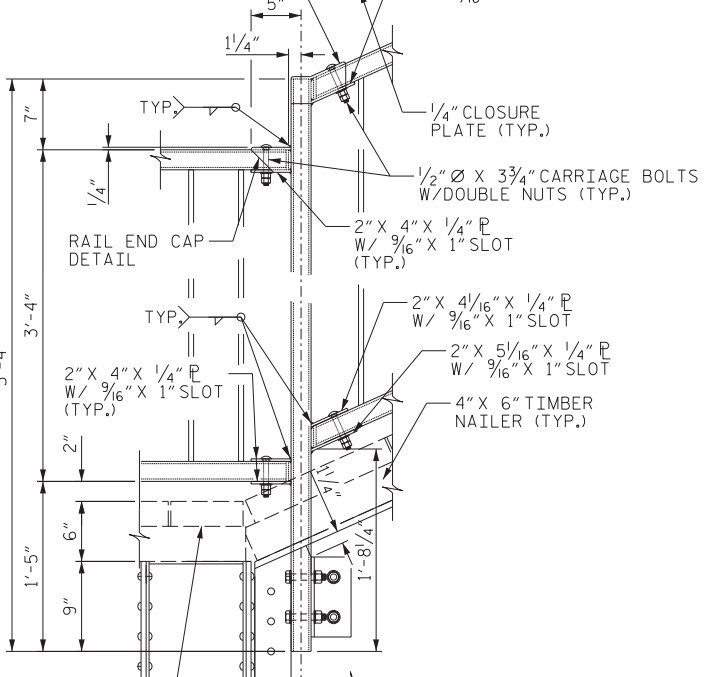
SECTION I-I



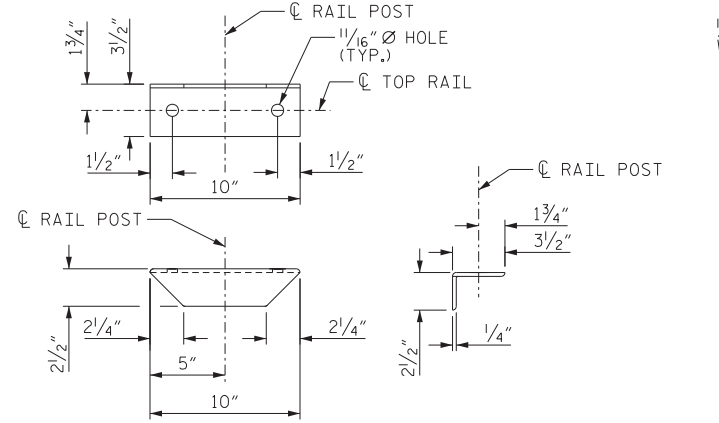
INSERT "A"



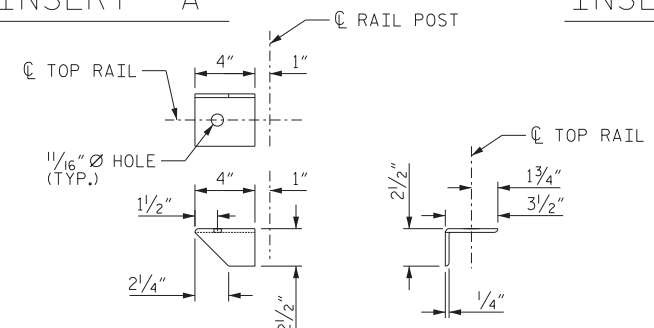
INSERT "B"



INSERT "C"

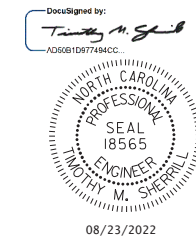


TYPICAL RAIL TO RAIL CAP DETAIL
(73 REQ'D. LEFT SHOWN, RIGHT SIMILAR)



RAIL END CAP DETAIL
(SPAN J - 2 REQ'D. LEFT SHOWN, RIGHT SIMILAR)

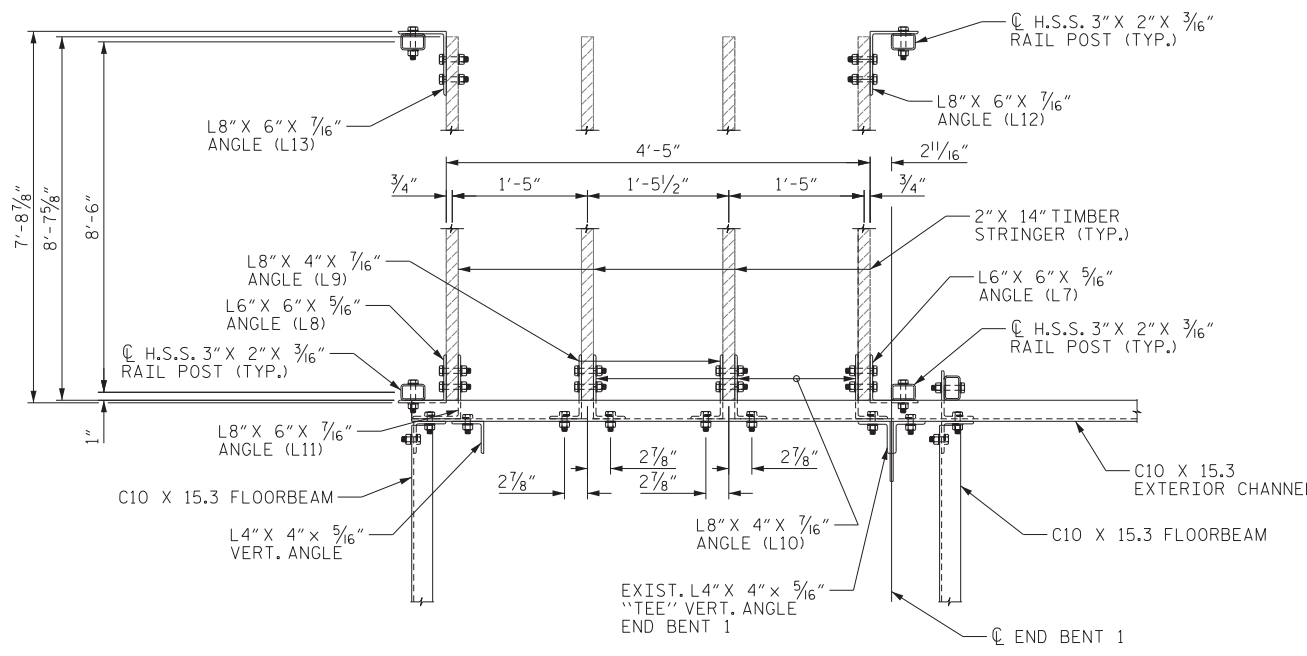
PROJECT NO. 49282
MITCHELL COUNTY
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SHEET 3 OF 4



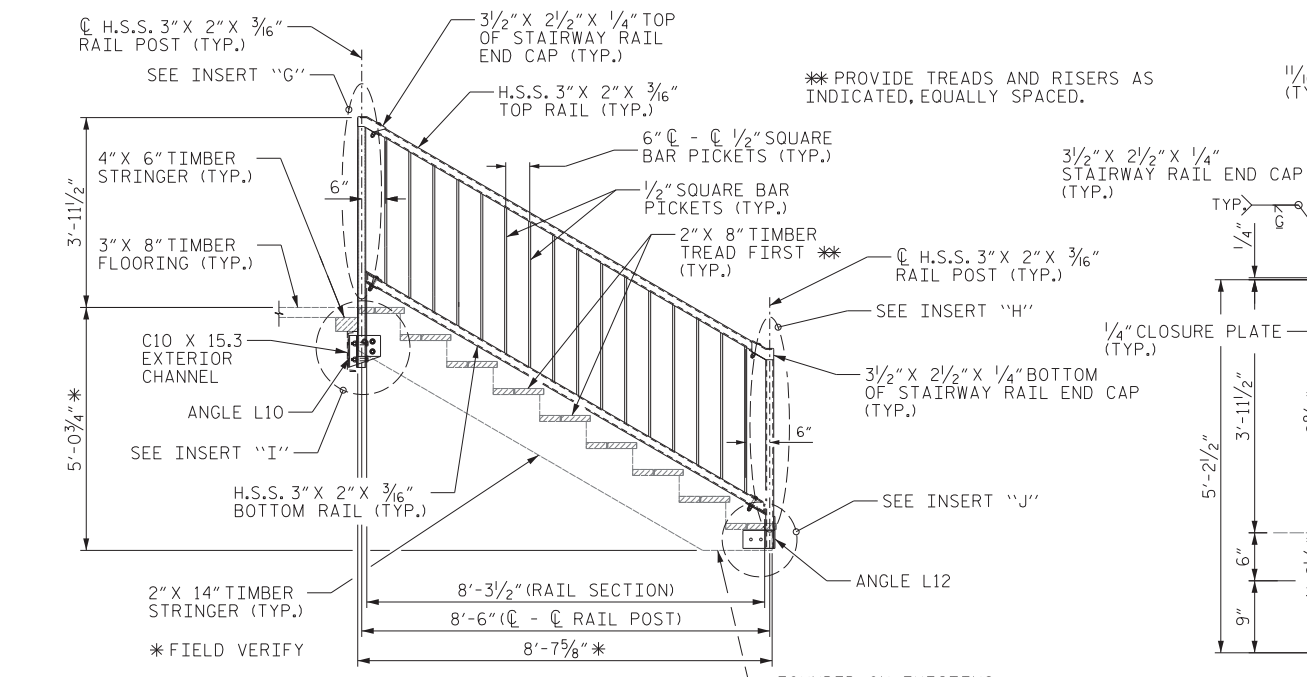
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
RAIL DETAILS

DRAWN BY: R.L.PUTEK DATE: 07/2021
CHECKED BY: T.M.SHERRILL DATE: 07/2021

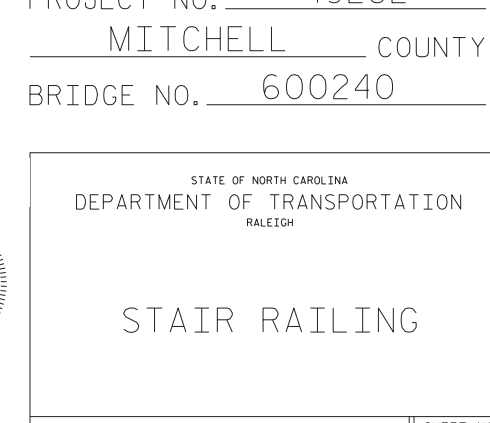
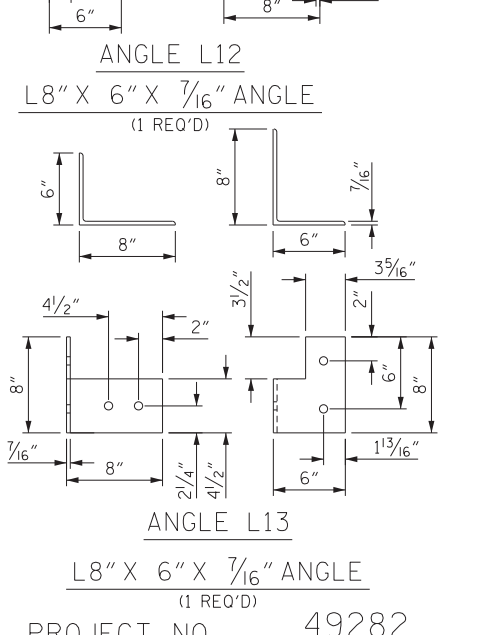
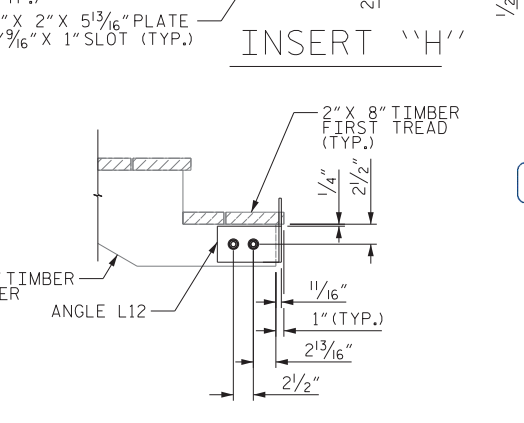
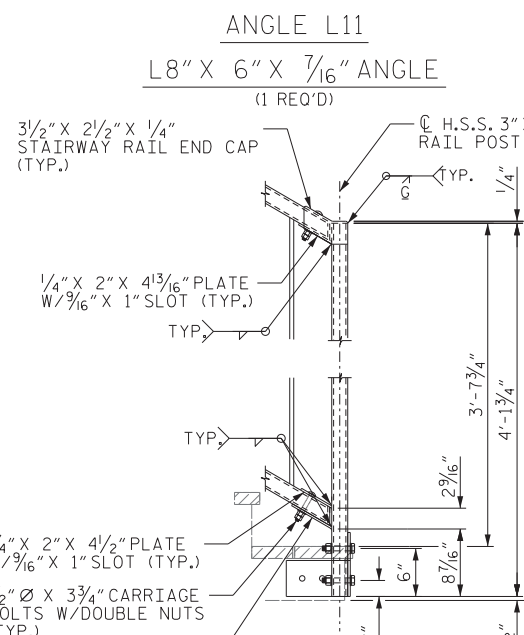
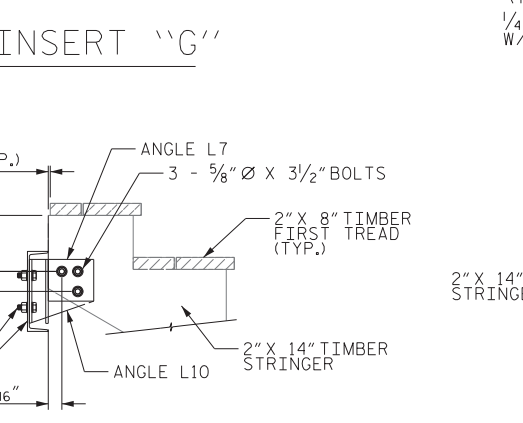
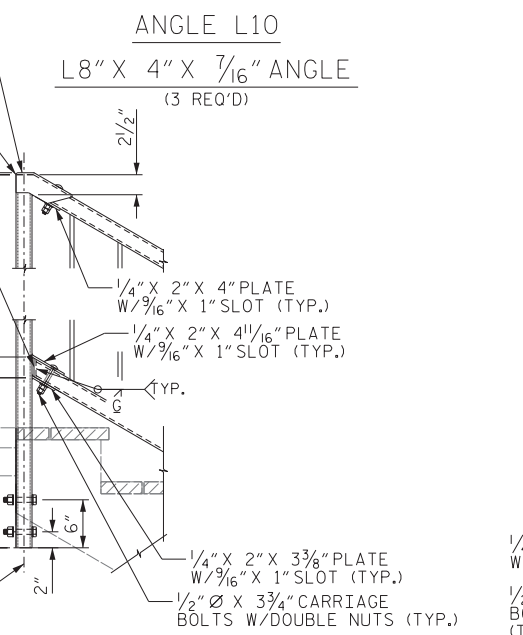
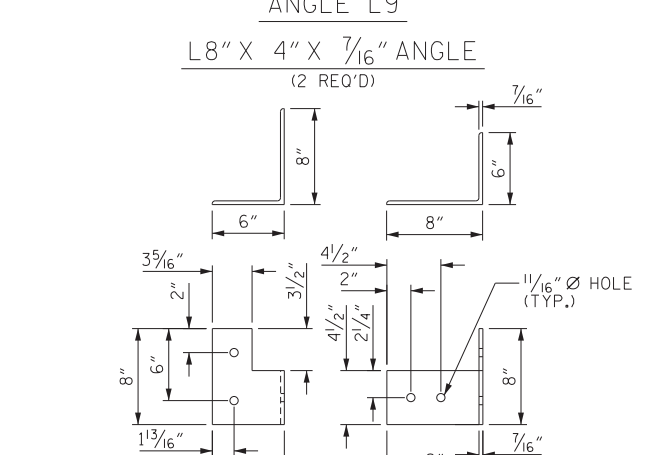
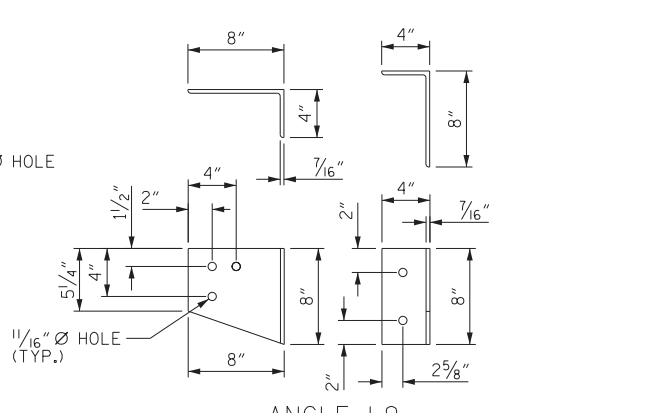
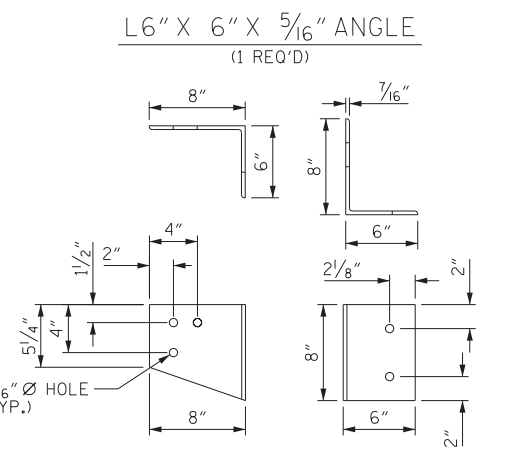
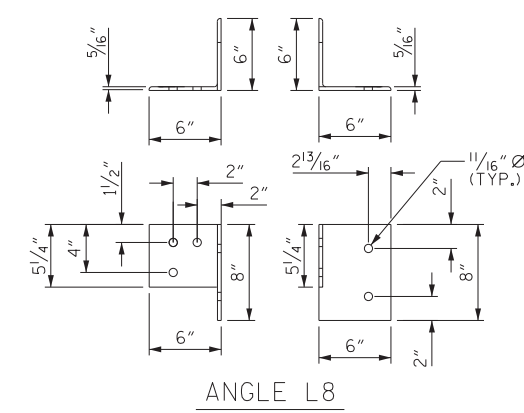
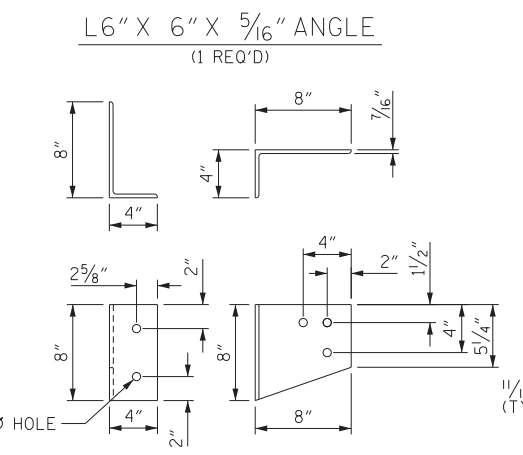
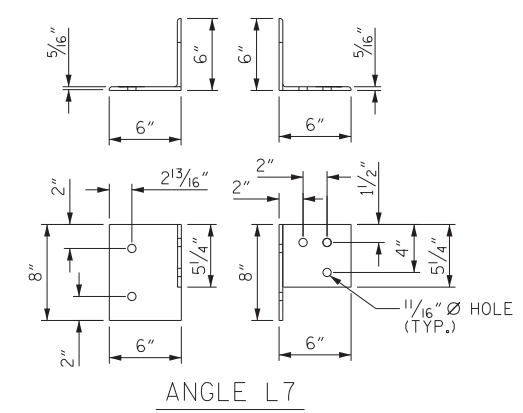
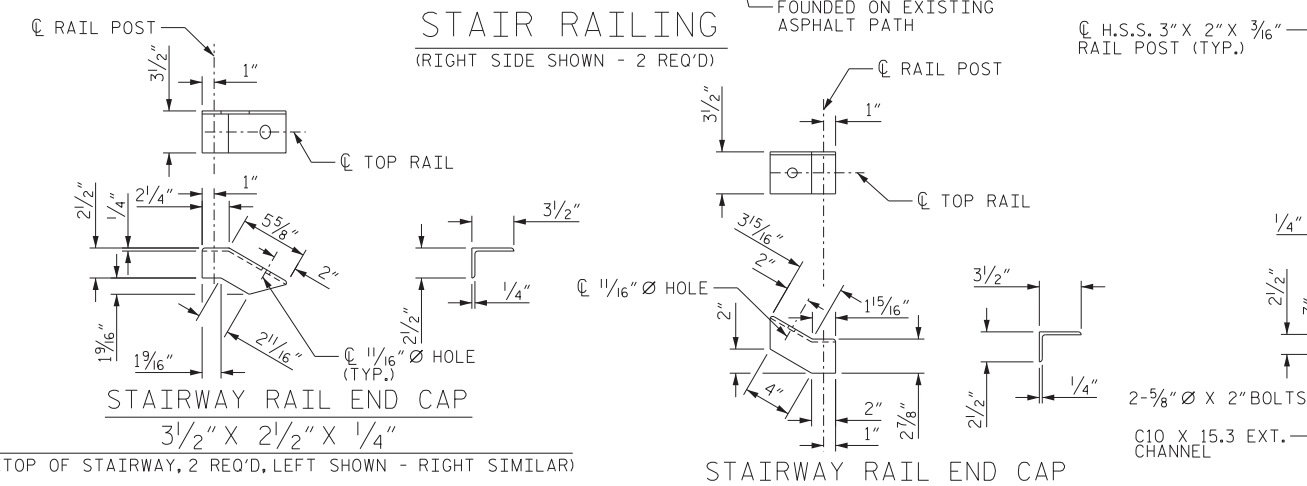
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-26
1			3			TOTAL SHEETS
2			4			29



2" X 14" TIMBER STRINGER INSTALLATION



STAIR RAILING
(RIGHT SIDE SHOWN - 2 REQ'D)



DRAWN BY: R.L.PUTEK DATE: 04/2021
 CHECKED BY: T.M.SHERRILL DATE: 04/2021

STAIRWAY RAIL END CAP
 3/2" X 2/2" X 1/4"
 (BOTTOM OF STAIRWAY, 2 REQ'D, LEFT SHOWN - RIGHT SIMILAR)

INSERT 'I'

INSERT 'J'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

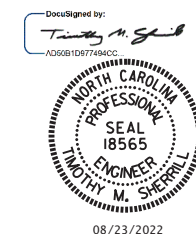
STAIR RAILING

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-28
1			3			TOTAL SHEETS
2			4			29

ESTIMATED MATERIAL BREAKDOWN

STEEL REPLACEMENT OR REPAIR				TREATED TIMBER						UNDERPINNING BENT 1	
SUPER STRUCTURAL STEEL				ITEM	NO.	SIZE	SURFACE TO	LENGTH	MBF	ITEM	QUANTITIES
ITEM	NO.	LENGTH	WEIGHT	TIMBER NAILER - TN1	4	4" X 6"	SAS 3/2" X 5/2"	20'-0"	0.16	REINFORCING STEEL	135 LBS.
C10 X 15.3 EXTERIOR CHANNEL	4	20'-6"	1254.6	TIMBER NAILER - TN2	36	4" X 6"	SAS 3/2" X 5/2"	20'-0"	1.44	CLASS AA CONCRETE	5.1 CU.YDS.
C10 X 15.3 EXTERIOR CHANNEL	2	5'-6"	168.3	TIMBER NAILER - TN3	2	4" X 6"	SAS 3/2" X 5/2"	6'-8 1/4"	0.03	NON-SHRINK GROUT	4.2 CU.FT.
C10 X 15.3 CHANNEL FLOORBEAM	22	5'-11 3/4"	2012.6	TIMBER NAILER - TN4	3	4" X 6"	SAS 3/2" X 5/2"	20'-0"	0.12	CONCRETE ENCASEMENT REPAIR	
C5 X 6.7 CHANNEL FLOORBEAM	11	6'-1 1/2"	451.4	TIMBER NAILER - TN5	3	4" X 6"	SAS 3/2" X 5/2"	5'-4 1/2"	0.03	ITEM	QUANTITIES
L4" X 4" X 5/16" ANGLE - L1	44	0'-8"	239.4	TIMBER NAILER - TN6	3	4" X 6"	SAS 3/2" X 5/2"	10'-6"	0.06	CONCRETE ENCASEMENT REPAIR 1	6 EA.
L6" X 4" X 5/16" ANGLE - L2	43	0'-8"	292.4	TIMBER STRINGER - TS1	2	4" X 6"	SAS 3/2" X 5/2"	17'-8"	0.07	CONCRETE ENCASEMENT REPAIR 2	2 EA.
L6" X 4" X 5/16" ANGLE - L5	10	0'-8"	68.0	TIMBER STRINGER - TS2	28	4" X 6"	SAS 3/2" X 5/2"	21'-0"	1.12	CONCRETE ENCASEMENT REPAIR 3	20 EA.
L6" X 4" X 5/16" ANGLE - L6	12	0'-8"	81.6	TIMBER STRINGER - TS3	2	4" X 6"	SAS 3/2" X 5/2"	11'-0"	0.04	CONCRETE REPAIRS ABUTMENT 2	
L6" X 6" X 5/16" ANGLE - L3	24	0'-4"	100.0	TIMBER STRINGER - TS4	2	4" X 6"	SAS 3/2" X 5/2"	12'-6"	0.05	ITEM	QUANTITIES
L6" X 6" X 5/16" ANGLE - L4-LT	12	0'-8"	61.2	TIMBER FLOORING	660	3" X 8"	SAS 2 1/2" X 7 1/4"	6'-6"	8.58	REINFORCING STEEL	276.0 LBS.
L6" X 6" X 5/16" ANGLE - L4-RT	12	0'-8"	61.2	TIMBER STRINGER	4	2" X 14"	SAS 1 1/2" X 13 1/4"	12'-6"	0.06	CLASS AA CONCRETE	2.0 CU.YDS.
L6" X 6" X 5/16" ANGLE - L7	1	0'-8"	6.9	TIMBER FLOORING	9	2" X 8"	SAS 1 1/2" X 7 1/4"	6'-6"	0.08	3/4" Ø X 12" ANCHOR BOLTS	6 EA.
L6" X 6" X 5/16" ANGLE - L8	1	0'-8"	6.9	TIMBER FLOORING	9	2" X 6"	SAS 1 1/2" X 5 1/4"	6'-6"	0.06	ELASTOMERIC BEARING PAD	3 EA.
L8" X 4" X 1/16" ANGLE - L9	2	0'-8"	20.5	TOTAL TREATED TIMBER MBF = 11.90						EPOXY COATING	17.0 SQ.FT.
L8" X 4" X 1/16" ANGLE - L10	3	0'-8"	30.7	GALVANIZED HARDWARE						SELF LEVELING JOINT SEAL	6.5 LIN.FT.
L8" X 6" X 1/16" ANGLE - L11	1	0'-8"	12.2	ITEM	NO.	SIZE	LENGTH	WEIGHT	CONCRETE SIDEWALK	1.0 SQ.YDS.	
L8" X 6" X 1/16" ANGLE - L12	1	0'-8"	9.2	CARRIAGE BOLT	394	1/2" Ø	4 1/2"	113.7			
L8" X 6" X 1/16" ANGLE - L13	1	0'-8"	9.2	FLAT WASHERS	394	FOR 1/2" Ø BOLTS		15.8			
TOTAL SUPER STRUCTURAL STEEL LBS. = 4886.3				HEADLOK FLATHEAD FASTENERS	144		4"	4.8			
SUB STRUCTURAL STEEL				HEADLOK FLATHEAD FASTENERS	4988		5"	293.4			
ITEM	NO.	LENGTH	WEIGHT	TOTAL TREATED TIMBER GALVANIZED HARDWARE LBS. = 427.7							
L2" X 2" X 5/16" ANGLE - BENT 3	2	10'-7"	83.4	NEW RAIL							
L2" X 2" X 5/16" ANGLE - BENT 4	2	9'-8"	76.2	ITEM	NO.	LENGTH	TOTAL LIN.FT.				
L2" X 2" X 5/16" ANGLE - BENT 4	1	12'-6"	49.3	END RAIL POST - SPAN A	2	4'-10"					
L2" X 2" X 5/16" ANGLE - BENT 5	2	15'-2"	119.5	RAIL POST - SPANS A - J	63	4'-10"					
L2" X 2" X 5/16" ANGLE - BENT 5	1	14'-2"	56.0	RAIL POST - SPAN K	6	5'-3 1/4"					
L2" X 2" X 5/16" ANGLE - BENT 6	2	15'-2"	119.5	END RAIL POST - SPAN K	4	5'-4"					
L2" X 2" X 5/16" ANGLE - BENT 6	2	14'-6"	114.3	RAIL POST - SPAN L	10	4'-10"					
L2" X 2" X 5/16" ANGLE - BENT 6	1	11'-3"	44.3	END RAIL POST - SPAN L	2	4'-10"					
L2" X 2" X 5/16" ANGLE - BENT 7	1	11'-2"	44.3	RAIL SECTION - SPAN A EXTENDED	1	5'-3 1/2"	5.29				
L2" X 2" X 5/16" ANGLE - BENT 8	2	14'-4"	113.0	RAIL SECTION - SPANS A - J	62	9'-9 1/2"	607.09				
L2" X 2" X 5/16" ANGLE - BENT 8	2	17'-0"	119.5	RAIL SECTION - SPAN J	2	2'-11 1/16"	4.28				
1/2" X 2" PLATE - BENT 6	2	2'-0"	13.6	SLOPED RAIL SECTION - SPAN K	6	9'-9 1/2"	58.75				
TOTAL SUB STRUCTURAL STEEL LBS. = 952.9				SLOPED RAIL SECTION - SPAN K	2	8'-6 7/8"	17.15				
GALVANIZED HARDWARE				RAIL SECTION - SPAN L	12	8'-3 1/2"	99.5				
ITEM	NO.	SIZE	LENGTH	WEIGHT	TOTAL LIN.FT. RAIL SECTION LIN.FT. = 809.21						
BOLT	212	5/8" Ø	2"	78.4	GALVANIZED HARDWARE						
BOLT	224	5/8" Ø	2 1/2"	93.4	ITEM	NO.	SIZE	LENGTH	WEIGHT		
BOLT	6	5/8" Ø	3 1/2"	3.0	BOLT	224	5/8" Ø	3 3/4"	117.6		
FLAT WASHERS	442	FOR 5/8" Ø BOLTS		52.8	FLAT WASHERS	224	FOR 5/8" Ø BOLTS		26.7		
TOTAL SUPER & SUB GALVANIZED HARDWARE LBS. = 227.6				CARRIAGE BOLT	206	1/2" Ø	3 3/4"	50.9			
				FLAT WASHERS	206	FOR 1/2" Ø BOLTS		8.2			
				HEX NUTS	206	FOR 1/2" Ø BOLTS		7.7			
				TOTAL RAIL GALVANIZED HARDWARE LBS. = 211.1							

PROJECT NO. 49282
 MITCHELL COUNTY
 BRIDGE NO. 600240



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
ESTIMATED MATERIAL BREAKDOWN

DRAWN BY : R.L.PUTEK DATE : 02/2022
 CHECKED BY : T.M.SHERRILL DATE : 02/2022

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-29
2			4			TOTAL SHEETS 29

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	--	20,000 LBS. PER SQ. IN.
	--	27,000 LBS. PER SQ. IN.
	--	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 A.A.S.H.T.O.
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 2018 "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 $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO $1\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A $\frac{1}{4}$ " 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 $\frac{1}{4}$ " 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 $\frac{7}{8}$ " \emptyset SHEAR STUDS FOR THE $\frac{3}{4}$ " \emptyset STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF $\frac{7}{8}$ " \emptyset STUDS ALONG THE BEAM AS SHOWN FOR $\frac{3}{4}$ " \emptyset STUDS BASED ON THE RATIO OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset 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 $\frac{5}{16}$ " 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 $\frac{1}{16}$ " INCH 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.

ENGLISH

JANUARY, 1990

STD. NO. SN