

PROJECT: B-5545

CONTRACT: C203130

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5545	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45528.1.1	NA	PE	
45528.3.1	NA	CONSTR.	

HARNETT COUNTY

LOCATION: BRIDGE #57 ON SR1002 OVER I-95
BRIDGE #66 ON SR1793 OVER I-95
BRIDGE #80 ON SR1808 OVER I-95

TYPE OF WORK: GIRDER REPLACEMENT, BEARING REPLACEMENT

INDEX OF SHEETS

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1A	INDEX OF SHEETS
2	SUMMARY OF QUANTITIES
	STRUCTURES
S-1 - S-7	BRIDGE #57
S-8 - S-14	BRIDGE #66
S-15 - S-21	BRIDGE #80
TMP-1 - TMP-8	TRAFFIC MANAGEMENT PLANS



Prepared For
STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR. RALEIGH, NC 27610

LETTING DATE:
SEPTEMBER 18, 2012

RICK NELSON, P.E.
PROJECT ENGINEER

ENGINEER

FARZIN ASEFNI, P.E.

FILE

TIME

DATE

08/08/99

PROJECT: B-5545

CONTRACT: C203130

25-JUL-2012 07:30
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 -msheerll

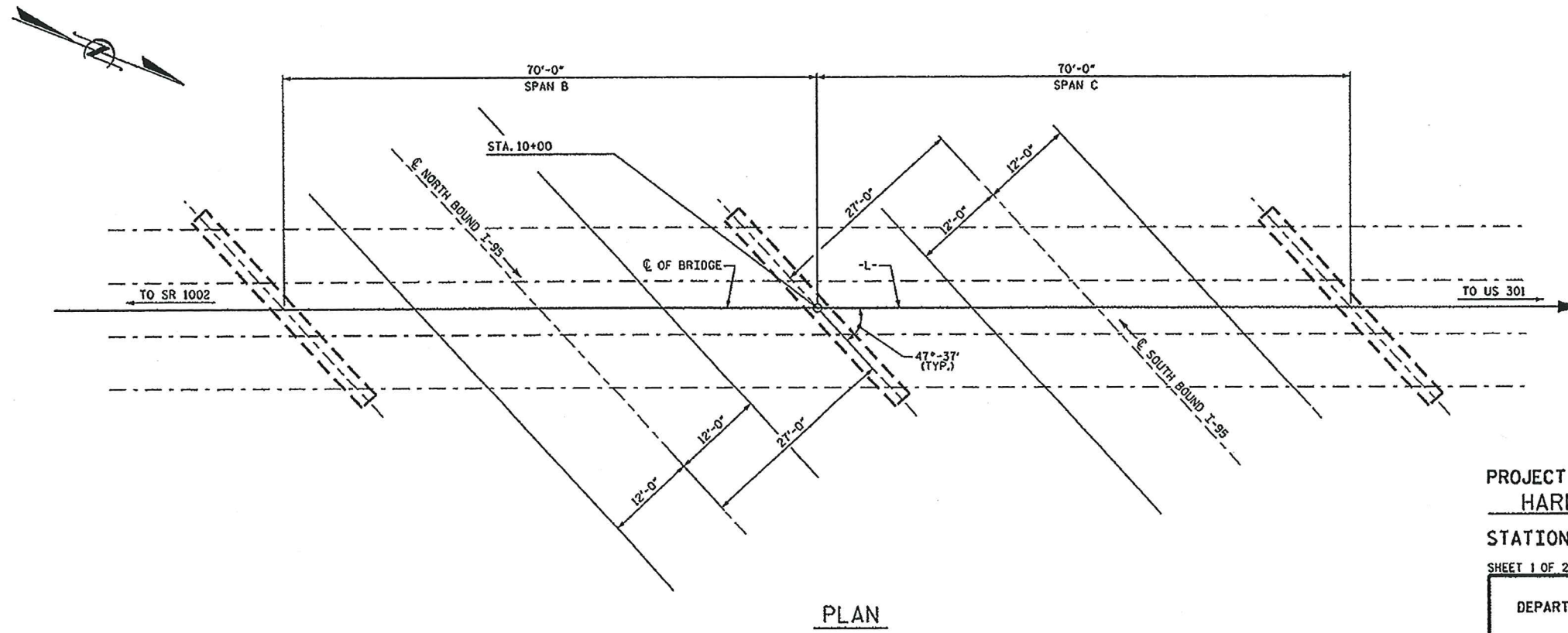
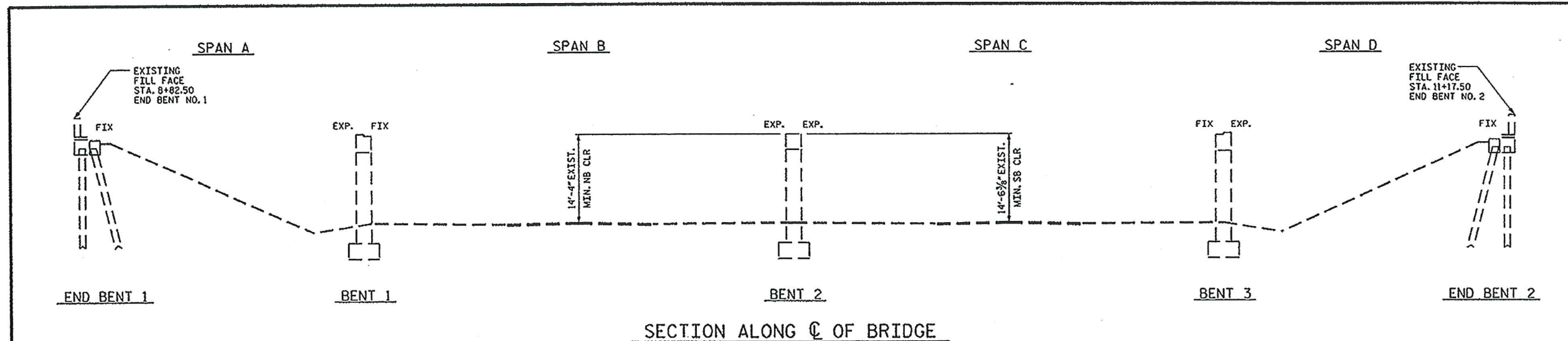
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5545	2	

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203130

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
4400000000-E	1110	778	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	352	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	60	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4415000000-N	1115	4	EA	FLASHING ARROW BOARD
4420000000-N	1120	5	EA	PORTABLE CHANGEABLE MESSAGE SIGN
4430000000-N	1130	500	EA	DRUMS
4435000000-N	1135	41	EA	CONES
4445000000-E	1145	256	LF	BARRICADES (TYPE III)
4455000000-N	1150	96	DAY	FLAGGER
4480000000-N	1165	2	EA	TMA
4510000000-N	SP	1,728	HR	LAW ENFORCEMENT
4795000000-E	1205	60	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (24") (IV)
4810000000-E	1205	3,200	LF	PAINT PAVEMENT MARKING LINES (4")
8280000000-E	440	1	LS	APPROX LBS STRUCTURAL STEEL
8657000000-N	430	Lump Sum		ELASTOMERIC BEARINGS
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PARTIAL REMOVAL OF EXT STRUCTURES AT BRIDGE #057
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PARTIAL REMOVAL OF EXT STRUCTURES AT BRIDGE #066
8860000000-N	SP	Lump Sum		GENERIC STRUCTURE ITEM PARTIAL REMOVAL OF EXT STRUCTURES AT BRIDGE #080



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HARNETT COUNTY
 STATION: 10+00 -L-
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

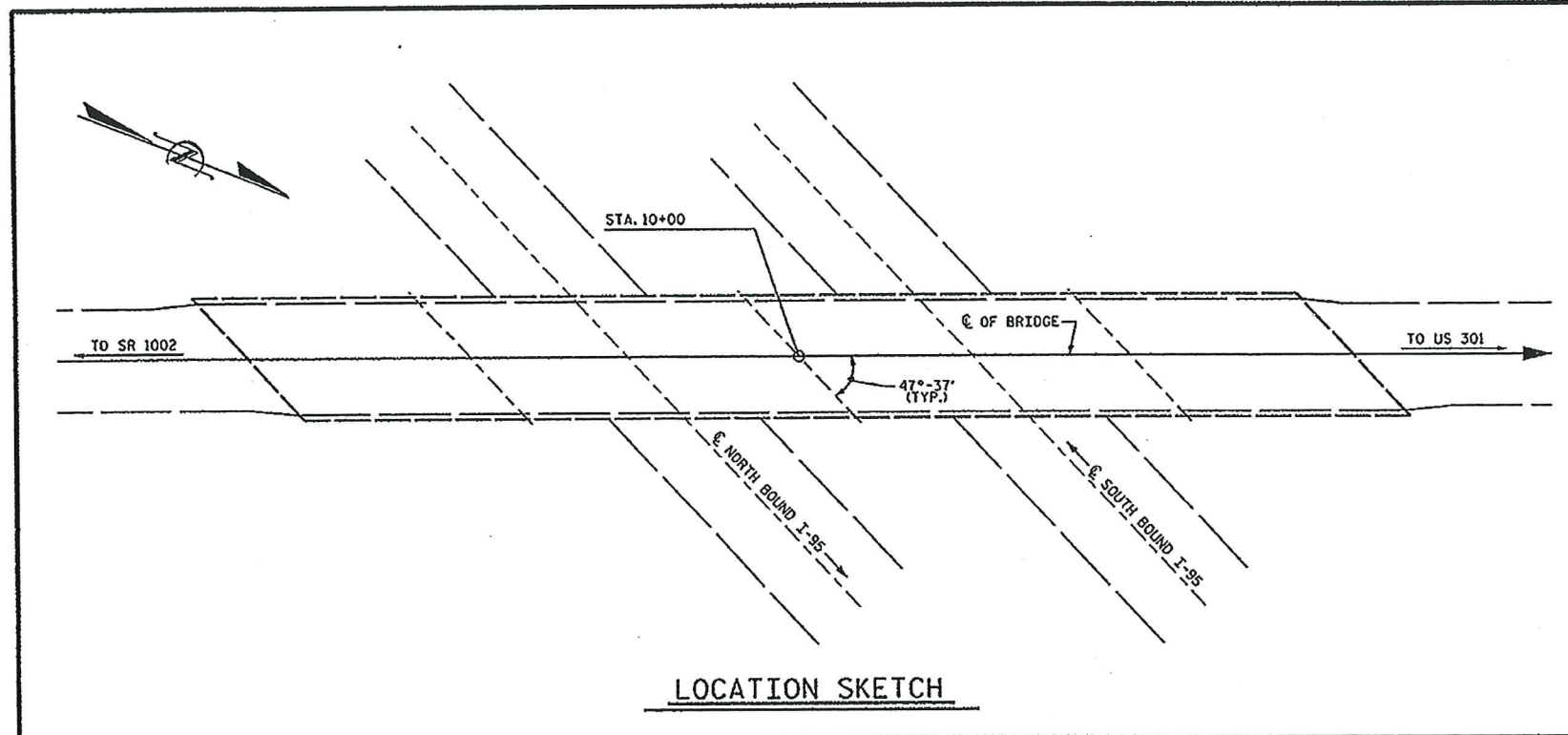
GENERAL DRAWING
 BRIDGE NO. 66 OVER I-95
 ON SR 1793 BETWEEN
 SR 1002 AND US 301

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-8
1			2			TOTAL SHEETS
2			4			21



DRAWN BY: D.V. JOYNER DATE: 6/12
 CHECKED BY: F. ASEFNIA DATE: 7/12

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NOTES:

- REMOVAL OF THE EXISTING GIRDERS SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE ROADWAY.
- THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.
- THE ANCHOR BOLTS SHALL BE BASED ON A MINIMUM OF 9" EMBEDMENT INTO EXISTING CONCRETE CAP AND SHALL BE INSTALLED BASED ON MANUFACTURER'S RECOMMENDATIONS.
- EXISTING ANCHOR BOLTS ARE TO BE CUT FLUSH WITH THE EXISTING CAP. BOLTS ENDS SHALL BE COATED WITH AN APPROVED EPOXY PAINT.
- FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL		
	APPROXIMATE LBS. STRUCTURAL STEEL	ELASTOMERIC BEARING
SUPERSTRUCTURE	LBS.	LUMP SUM
TOTAL	73,304	LUMP SUM

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HARNETT COUNTY
 STATION: 10+00 -L-

SHEET 2 OF 2

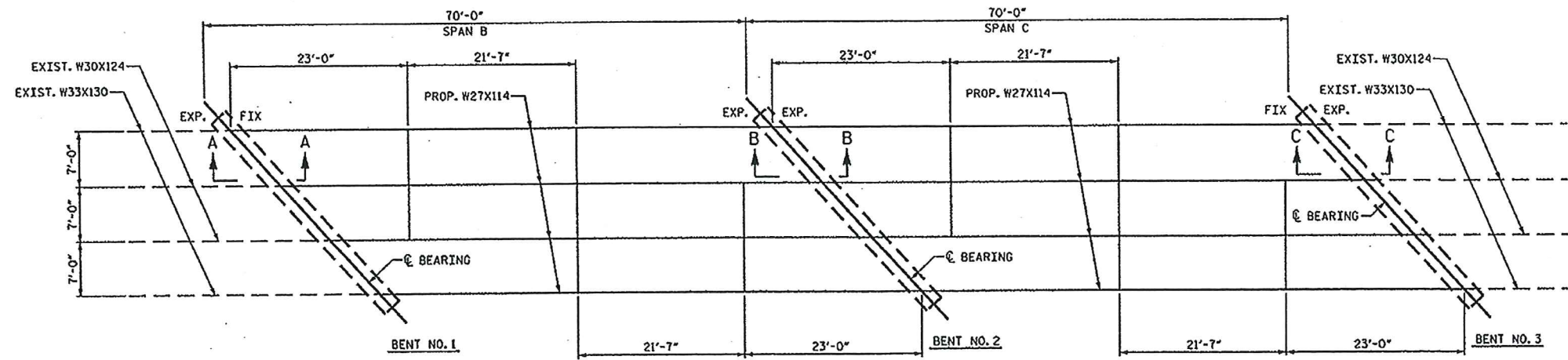
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE NO. 66 OVER I-95
 ON SR 1793 BETWEEN
 SR 1002 AND US 301

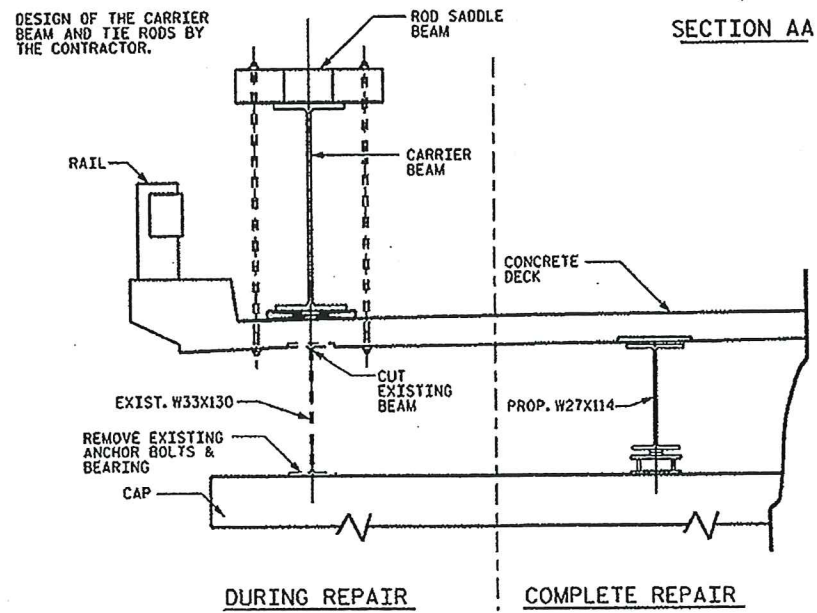
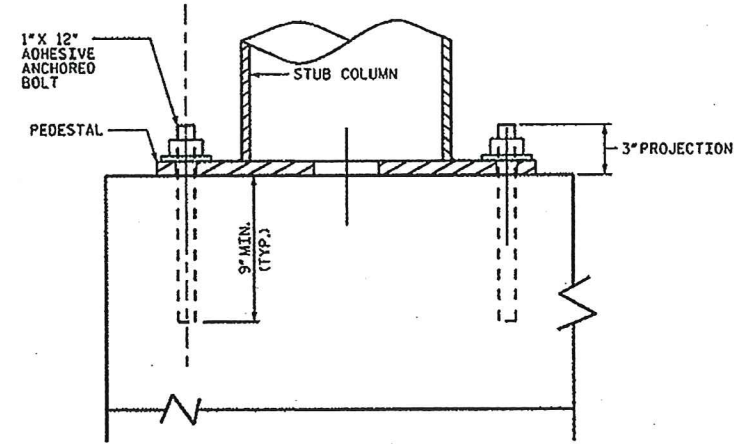
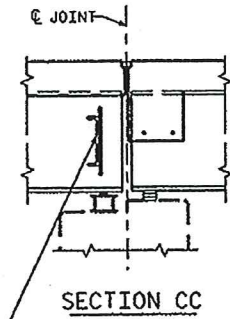
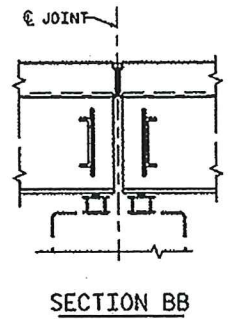
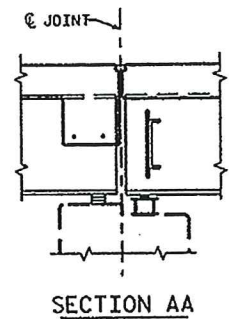
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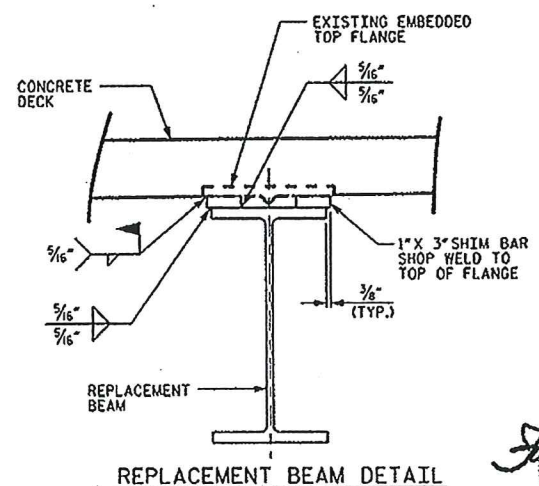
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 CHECKED BY: F. ASEFNIA DATE: 7/12



NOTE: EXIST. W33X130'S TO BE REPLACED WITH W27X114'S IN SPAN'S B AND C.



PROPOSED NEW BENT DIAPHRAGM (TYP.)



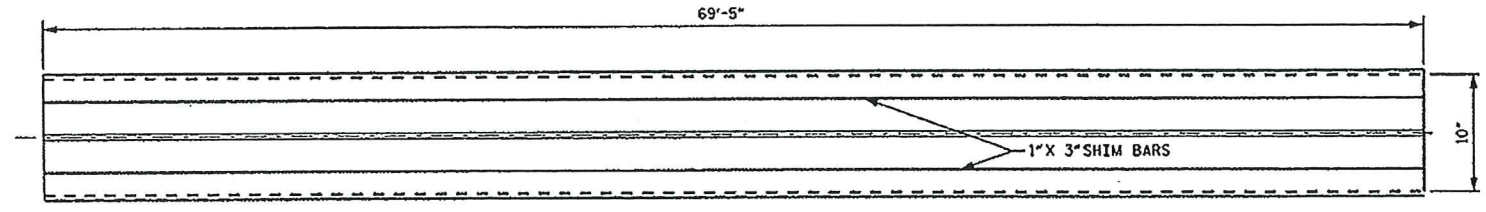
PROJECT NO. B-5545
 HARNETT COUNTY
 STATION: 10+00 -L-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 EXISTING SUPERSTRUCTURE
 FRAMING PLAN
 TYPICAL SECTIONS
 BRIDGE NO. 66

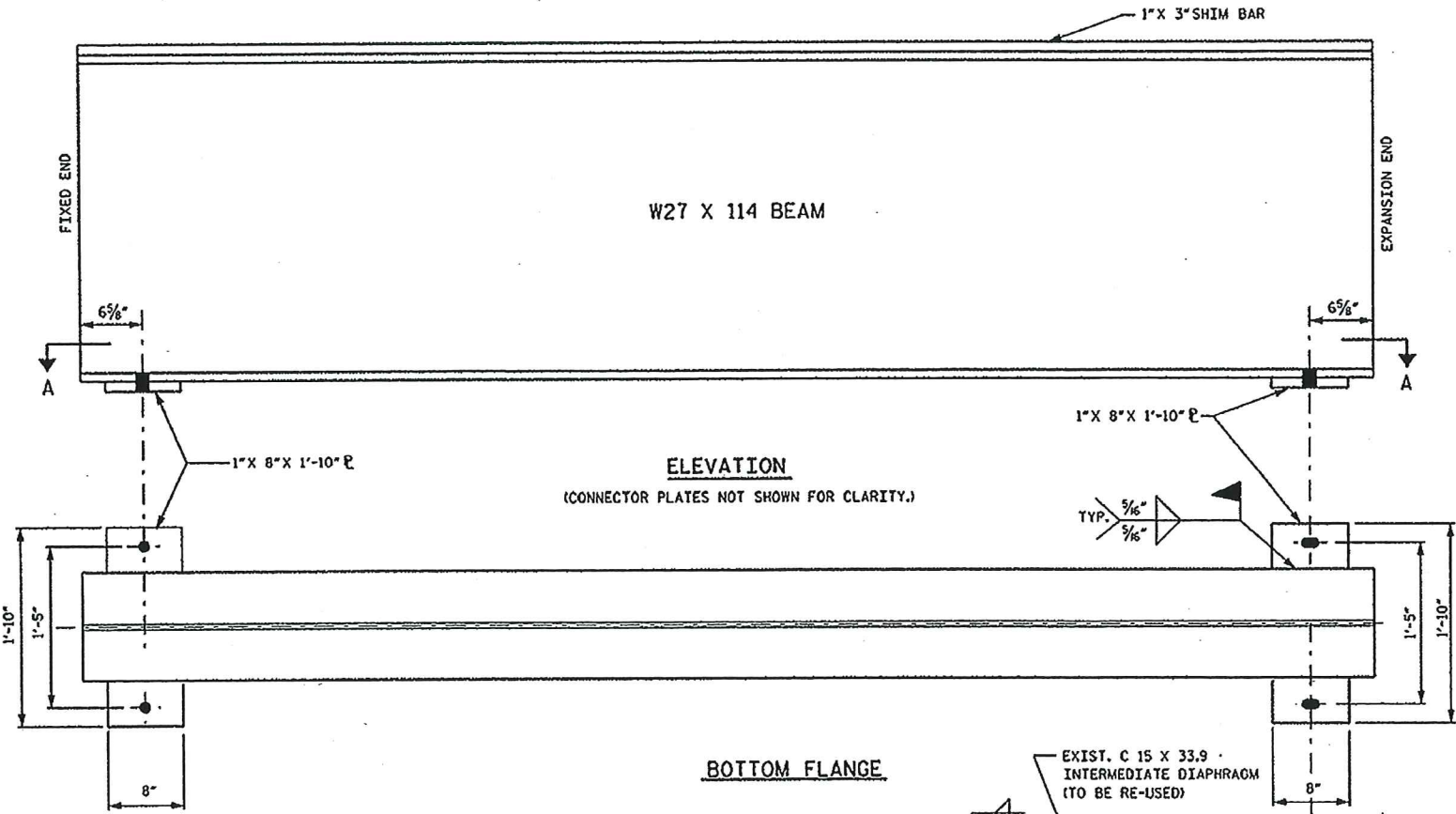
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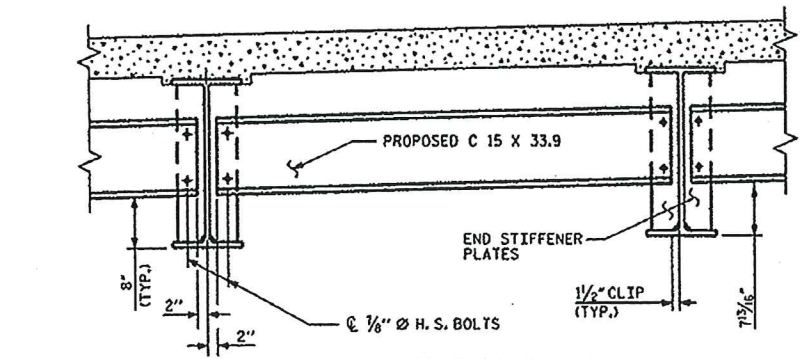
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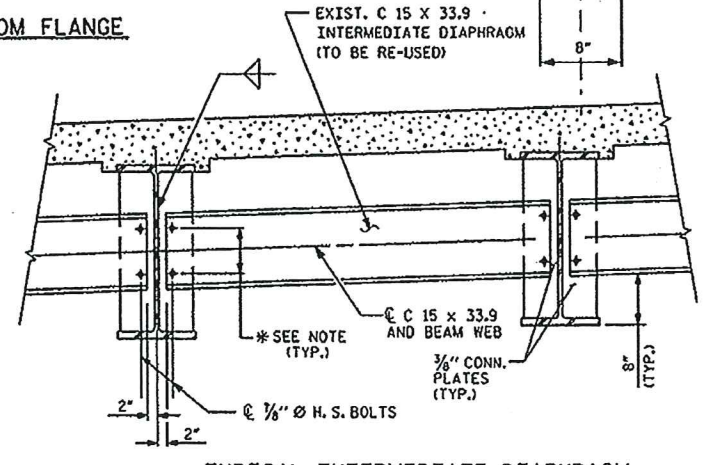
TOP FLANGE



ELEVATION
(CONNECTOR PLATES NOT SHOWN FOR CLARITY.)



TYPICAL BENT DIAPHRAGM



TYPICAL INTERMEDIATE DIAPHRAGM

GENERAL NOTES:

- 1) ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
- 2) ALL STEEL IS TO BE SHOP CLEANED AND SHOP PAINTED ACCORDING TO PAINT SYSTEM #1 OF SECTION 442 OF THE STANDARD SPECIFICATIONS.
DO NOT PAINT THE EXTERIOR SIDE OF 1"x3" SHIM BARS ALONG THE TOP FLANGE OF BEAMS. FIELDS WELDS AND SIDES OF SHIM BARS SHALL BE PREPARED AND FIELD PAINTED AS PER ARTICLE 1076-7 OF THE STANDARD SPECIFICATIONS.
- 3) UNLESS NOTED OTHERWISE, ALL STEEL ON THIS DRAWING SHALL MEET THE REQUIREMENTS OF AASHTO M270 (GRADE 50) AND ITS SUPPLEMENTARY LONGITUDINAL CHARPY V-NOTCH TEST REQUIREMENTS (FOR AASHTO M270 ZONE 1), ASTM A-572 (GR 50) OR A-588 (GR 50) STEEL MAY BE SUBSTITUTED AS LONG AS THE SUPPLEMENTARY REQUIREMENTS TO THE ABOVE AASHTO SPECS ARE MET.
- 4) WEB STIFFENERS AND CONNECTOR PLATES AS NECESSARY PER DESIGN.
- 5) THE CONTRACTOR SHALL USE EXISTING UNDAMAGED INTERMEDIATE DIAPHRAGMS. THESE MEMBERS SHALL BE CLEANED AND NEW HOLES SHALL BE DRILLED ON THE WELDED SIDED AFTER SPACING VERIFICATION.
- 6) WHEN FIELD WELDING THE SOLE PLATE TO THE GIRDER FLANGE, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.
- 7) REMOVE GALVANIZING OR ANY OTHER COATING AT THE LOCATION OF FIELD WELDS AND PREPARE THE WELD AREAS AS PER ARTICLE 440-7 OF THE STANDARD SPECIFICATION.
- 8) AFTER COMPLETION OF FIELD WELDING, THE WELDS AND AREAS WHERE GALVANIZING HAS BEEN REMOVED OR DAMAGED SHALL BE REPAIRED AS PER STANDARD SPECIFICATIONS.

* THE CONTRACTOR SHALL VERIFY THE BOLT SPACING PRIOR TO FABRICATION.

PROJECT NO. B-5545
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

REPLACEMENT BEAM AND DIAPHRAGMS

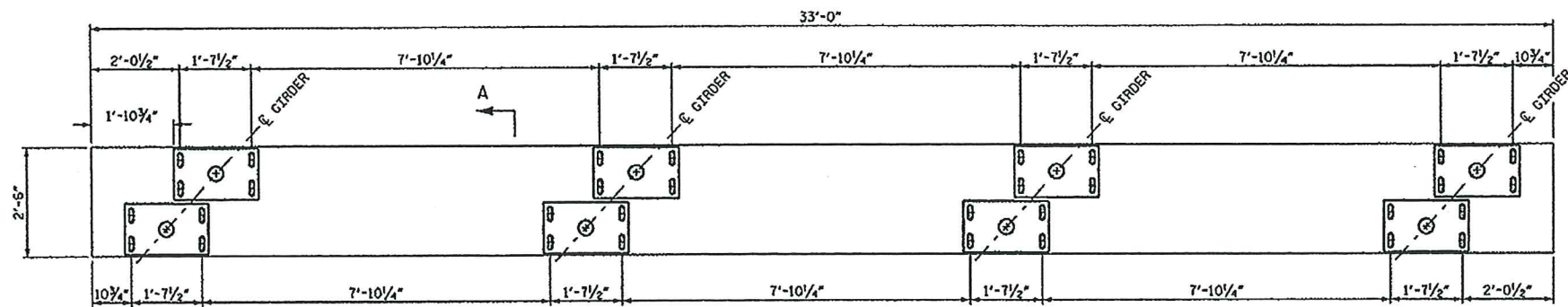
BRIDGE NO. 66

REVISIONS						SHEET NO.
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2			3			

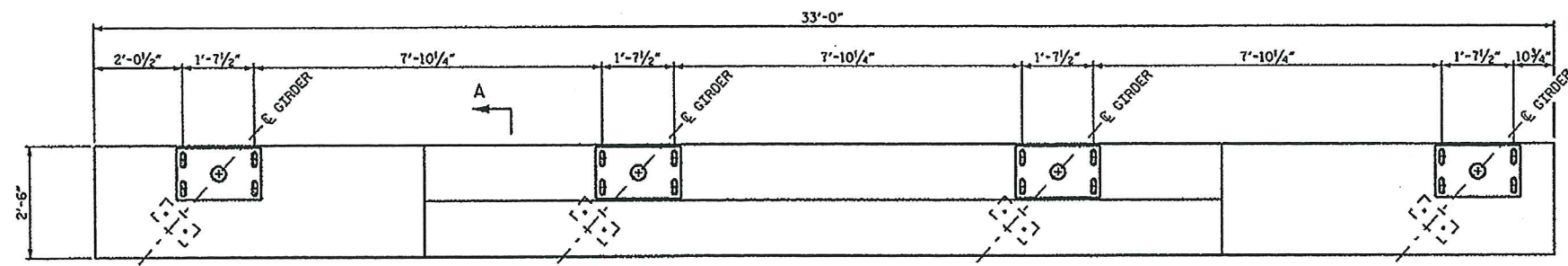


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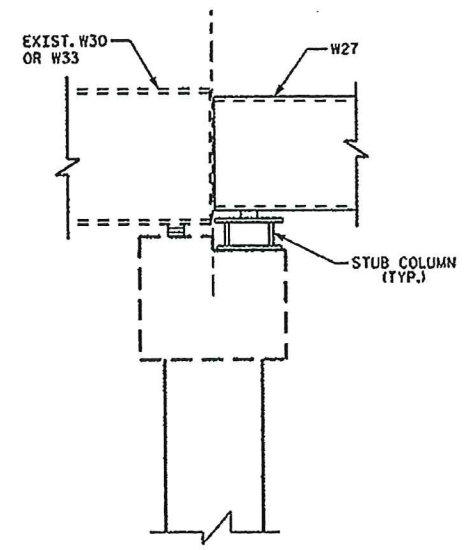
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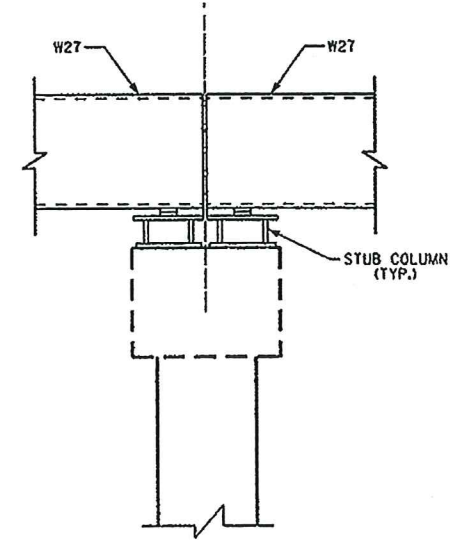
PLAN OF CAP FOR BENTS 2



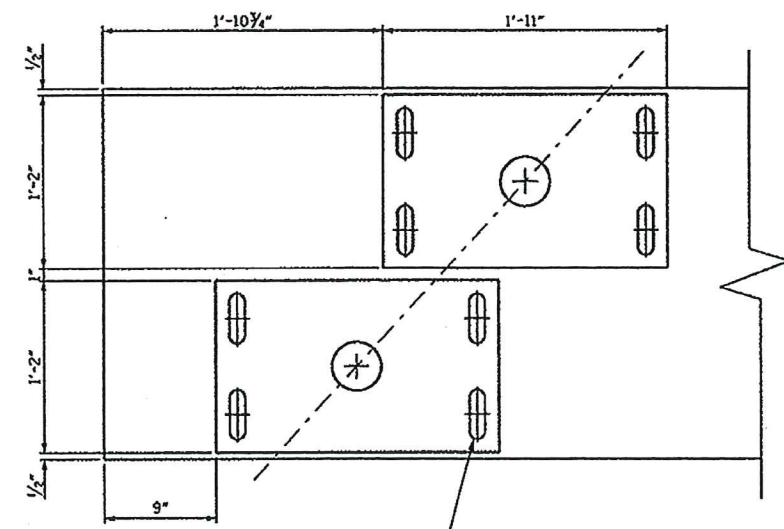
PLAN OF CAP FOR BENTS 1 & 3



SECTION A-A
BENTS 1 & 3



SECTION A-A
BENT 2



4- 1" APPROVED ADHESIVE ANCHORS WITH A MINIMUM TENSILE STRENGTH OF 6,000 LBS AND A MINIMUM SHEAR STRENGTH OF 14,000 LBS (TYP)

DETAIL OF BOTTOM PLATE ORIENTATION

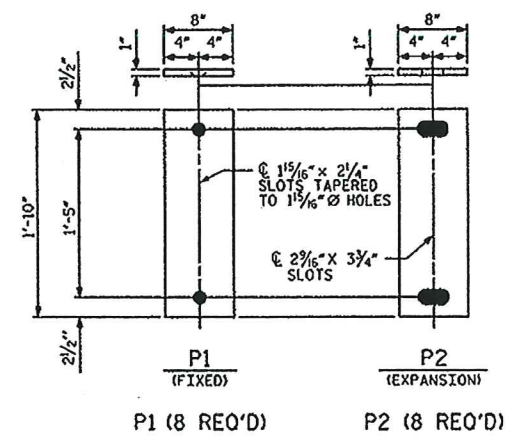
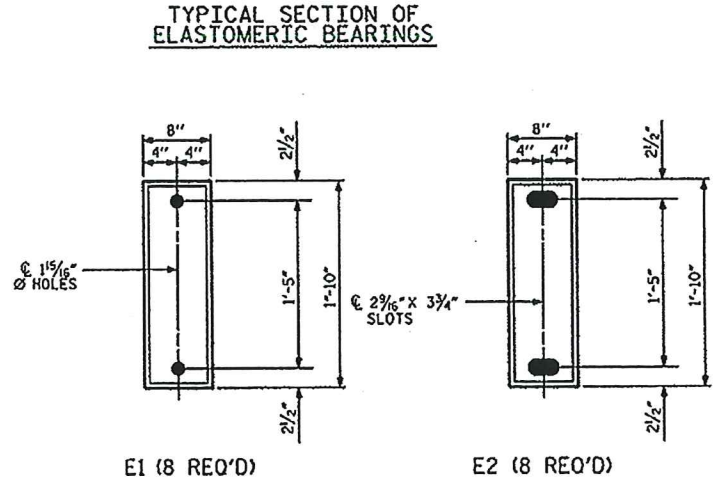
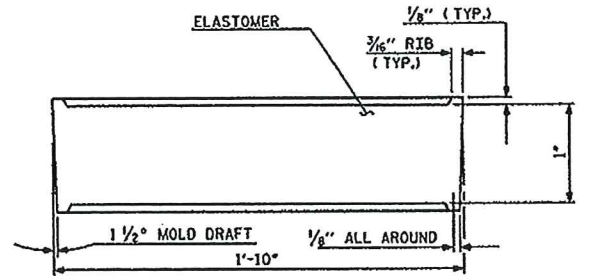
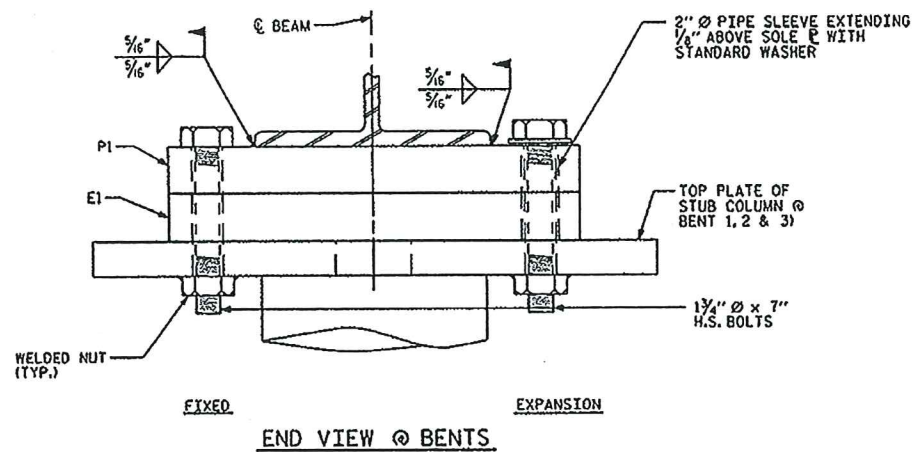
NOTES
CUT EXISTING ANCHOR BOLTS FLUSH TO THE TOP OF CONCRETE. BOLT ENDS SHALL BE COATED WITH AN APPROVED EPOXY PAINT.

PROJECT NO. B-5545
HARNETT COUNTY
STATION: 10+00 -L-

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
INTERIOR BENTS					
BRIDGE NO. 66					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			2		
2			3		
					SHEET NO. S-12
					TOTAL SHEETS 21



DRAWN BY: D.V. JOYNER DATE: 7/12
CHECKED BY: F. ASEFNIA DATE: 7/12



NOTES

AT ALL FIXED POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS ARE TO 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.

THE 2" Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PLASTIC PIPE. THE PVC PLASTIC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785.

THE PAYMENT FOR THE PIPE SLEEVES SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.

SOLE PLATES, BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS.

WHEN FIELD WELDING THE SOLE PLATE TO THE GIRDER FLANGE, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.

REMOVE GALVANIZING OR ANY OTHER COATING AT THE LOCATION OF FIELD WELDS AND PREPARE THE WELD AREAS AS PER ARTICLE 440-7 OF THE STANDARD SPECIFICATION.

AFTER COMPLETION OF FIELD WELDING, THE WELDS AND AREAS WHERE GALVANIZING HAS BEEN REMOVED OR DAMAGED SHALL BE STANDARD SPECIFICATIONS.

ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

FOR HIGH STRENGTH BOLTS, SEE STANDARD SPECIFICATIONS.

PROJECT NO. B-5545
HARNETT COUNTY
 STATION: 10+00 -L-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 DIVISION

**ELASTOMERIC BEARING
 DETAILS**

BRIDGE NO. 66

REVISIONS						SHEET NO. S-14
NO.	BY	DATE	NO.	BY	DATE	
1			2			TOTAL SHEETS 21
2			4			



DRAWN BY: M. WELDON DATE: 07/12
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