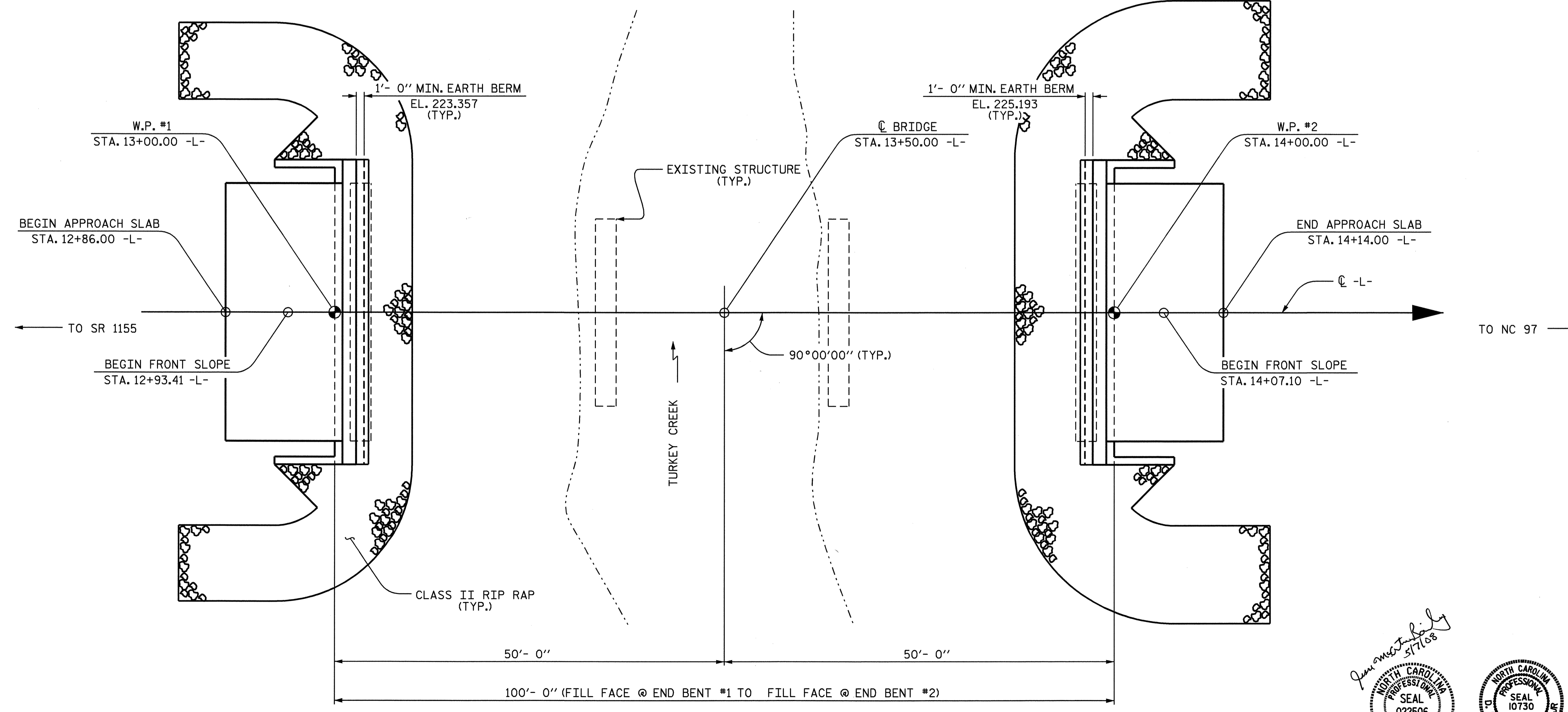


SECTION ALONG C -L-



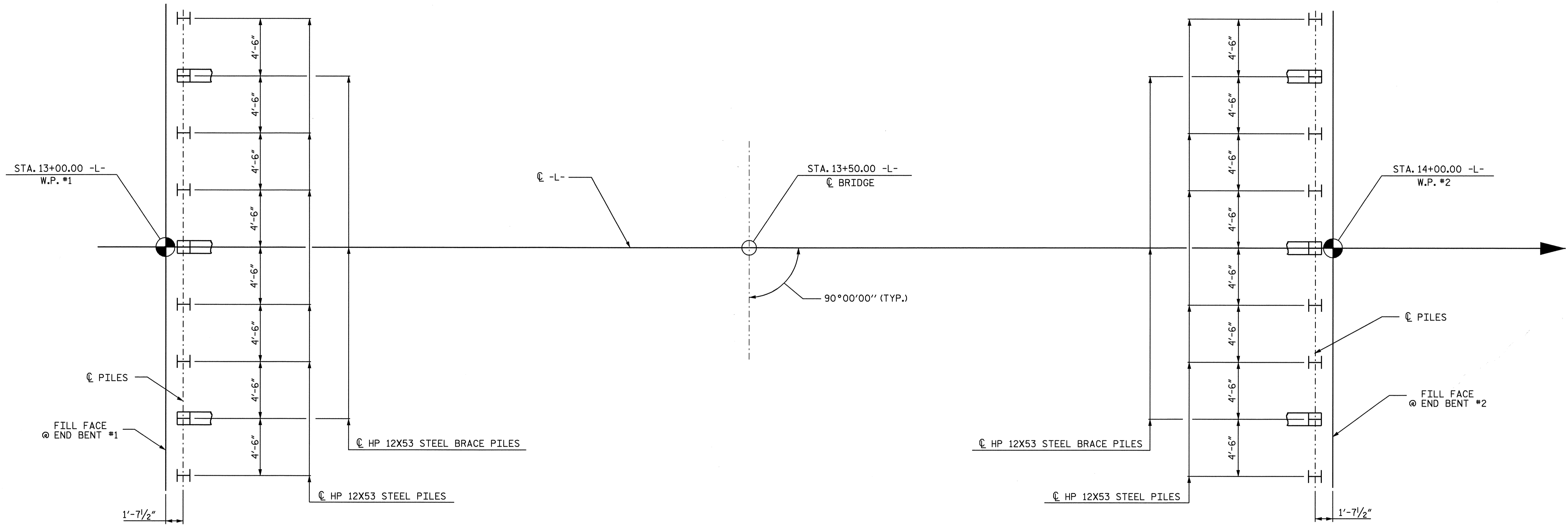
DRAWN BY : W.B. HILL DATE : 2-08
 CHECKED BY : D.A. DAVENPORT DATE : 2-08

PLAN
 PILES ARE NOT SHOWN FOR CLARITY

PROJECT NO. B-4210
 NASH COUNTY
 STATION: 13+50.00 -L-
 SHEET 1 OF 3 REPLACES BRIDGE #95

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
GENERAL DRAWING FOR BRIDGE OVER TURKEY CREEK ON SR 1151 BETWEEN NC 97 AND SR 1155					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-1					TOTAL SHEETS 18





END BENT #1

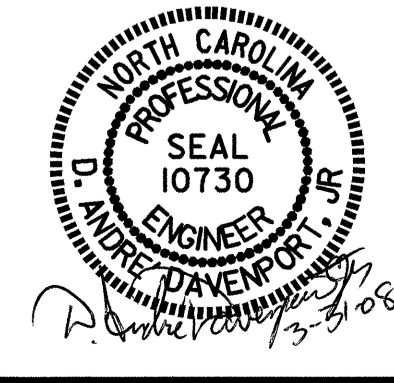
END BENT #2

PROJECT NO. B-4210
NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 2 OF 3

FOUNDATION LAYOUT

ALL DIMENSIONS LOCATING PILES ARE TO PILE CENTERLINE. HP 12X53 STEEL BRACE PILES ARE BATTERED AT 3:12.



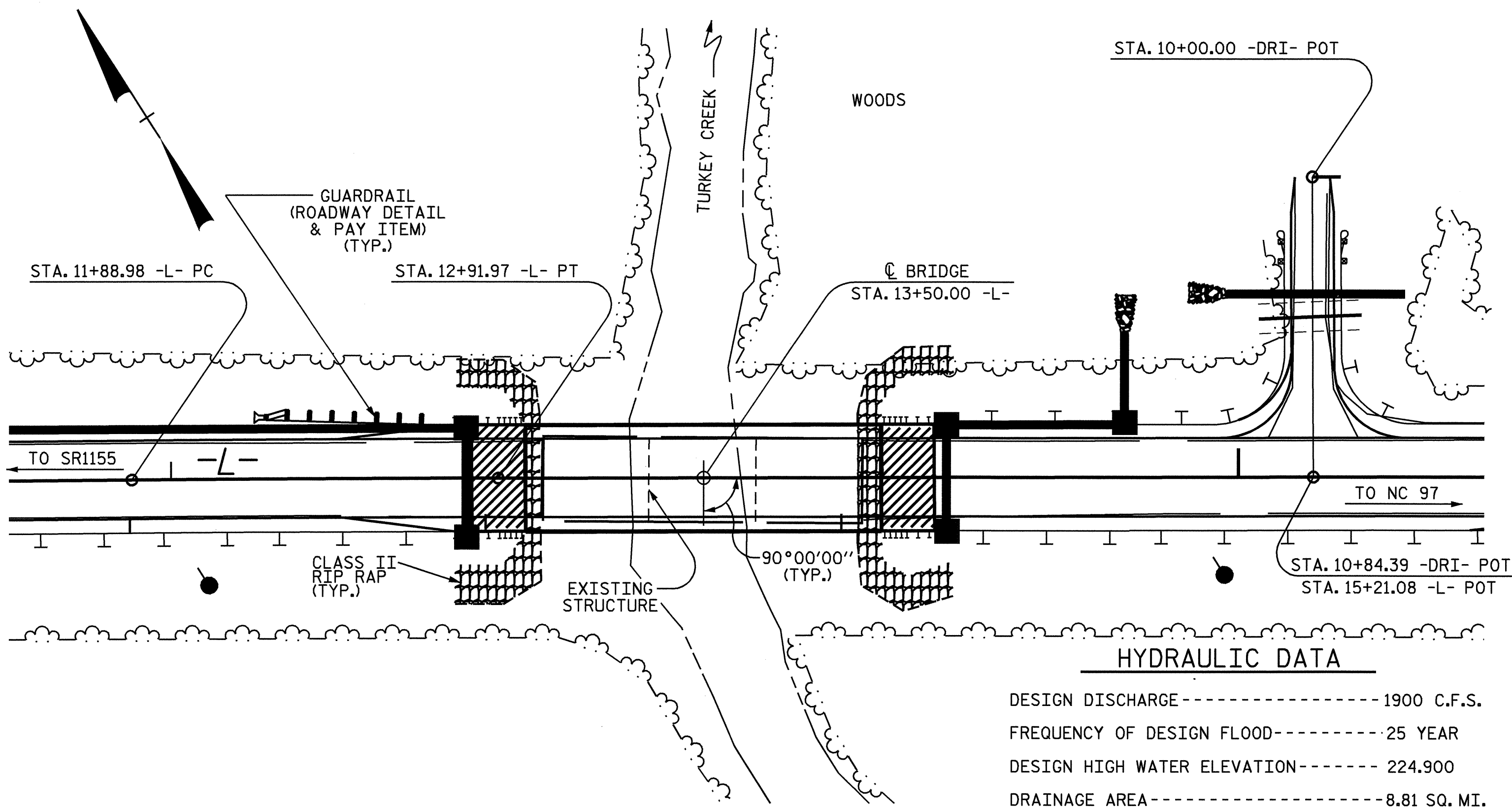
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**GENERAL DRAWING
 FOR BRIDGE OVER
 TURKEY CREEK ON
 SR 1151 BETWEEN
 NC 97 AND SR 1155**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS 18
2			4			

DRAWN BY: W. B. HILL DATE: 9/07
 CHECKED BY: D. A. DAVENPORT DATE: 2/1/08

BENCH MARK: #3 RAILROAD SPIKE IN BASE OF 14" Ø GUM 43.93' RT. OF STA. 21+19.99 -BL- EL. 242.340



LOCATION SKETCH

NOTE: FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

HYDRAULIC DATA

DESIGN DISCHARGE-----1900 C.F.S.
 FREQUENCY OF DESIGN FLOOD----- 25 YEAR
 DESIGN HIGH WATER ELEVATION----- 224.900
 DRAINAGE AREA-----8.81 SQ. MI.
 BASIC DISCHARGE(Q100)-----2900 C.F.S.
 BASIC HIGH WATER ELEVATION----- 225.900

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE-----4300 C.F.S.
 FREQUENCY OF OVERTOPPING FLOOD----- 500 YEAR
 OVERTOPPING FLOOD ELEVATION----- 228.300

NOTES

ASSUMED LIVE LOAD = HS20 OR ALTERNATE LOADING, EXCEPT THAT BOX BEAMS HAVE BEEN DESIGNED FOR HS25.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC PERFORMANCE CATEGORY A.

THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.

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

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.

FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.

THE EXISTING STRUCTURE CONSISTING OF 3 SIMPLE PRESTRESSED CONCRETE CHANNEL SPANS, 1 @ 30'-6", 1 @ 30'-0" AND 1 @ 30'-6" WITH A 4 1/2" ASPHALT WEARING SURFACE WITH A CLEAR ROADWAY WIDTH OF 24'-0" ON PRESTRESSED PRECAST CONCRETE CAPS AND TIMBER PILES AND LOCATED AT THE PROPOSED SITE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE FURTHER DETERIORATE THIS LOAD LIMITATION MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA ON S-1 SHALL BE EXCAVATED FOR A DISTANCE OF 20 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION.

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.

ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18 "EVALUATING SCOUR AT BRIDGES", MAY, 2001.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

DRIVE PILES AT END BENT NO.1 AND END BENT NO.2 TO A REQUIRED BEARING CAPACITY OF 120 TONS PER PILE. THE REQUIRED BEARING CAPACITY IS EQUAL TO THE ALLOWABLE BEARING CAPACITY WITH A MINIMUM FACTOR OF SAFETY OF TWO.

THE ALLOWABLE BEARING CAPACITY FOR PILES AT END BENT NO.1 AND END BENT NO.2 IS 60 TONS PER PILE.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING BRIDGE RAIL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 13+50.00-L-"

TOTAL BILL OF MATERIAL

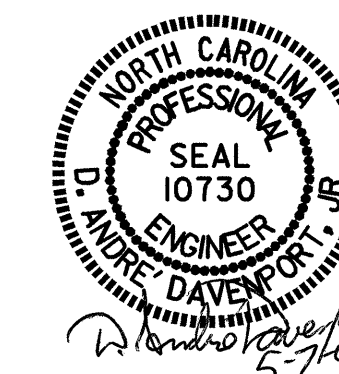
	REMOVAL OF EXISTING STRUCTURE	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	HP 12 X 53 STEEL PILES		PILE REDRIVES	CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 3'-3" PRESTRESSED CONCRETE BOX BEAMS	
						NO.	LIN.FT.						NO.	LIN.FT.
SUPERSTRUCTURE	LUMP SUM	LUMP SUM	CU. YDS.	LUMP SUM	LBS.			EACH	LIN.FT.	TONS	SQ.YDS.	LUMP SUM	NO.	LIN.FT.
END BENT NO. 1			18.8		2879	9	405		195.39	160	180	LUMP SUM		
END BENT NO. 2			18.8		2879	9	495			190	210			
TOTAL	LUMP SUM	LUMP SUM	37.6	LUMP SUM	5758	18	900	8	195.39	350	390	LUMP SUM	11	1074.62

PROJECT NO. B-4210
NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE OVER
 TURKEY CREEK ON
 SR 1151 BETWEEN
 NC 97 AND SR 1155



DRAWN BY: W. B. HTLI DATE: 9/07
 CHECKED BY: D. A. DAVENPORT DATE: 9/07

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			18

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE BOX BEAM SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE BOX BEAMS.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF BOX BEAM SECTIONS SHALL BE FILLED WITH NON-SHRINK GROUT.

THE BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE BOX BEAM UNIT SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 5200 PSI.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

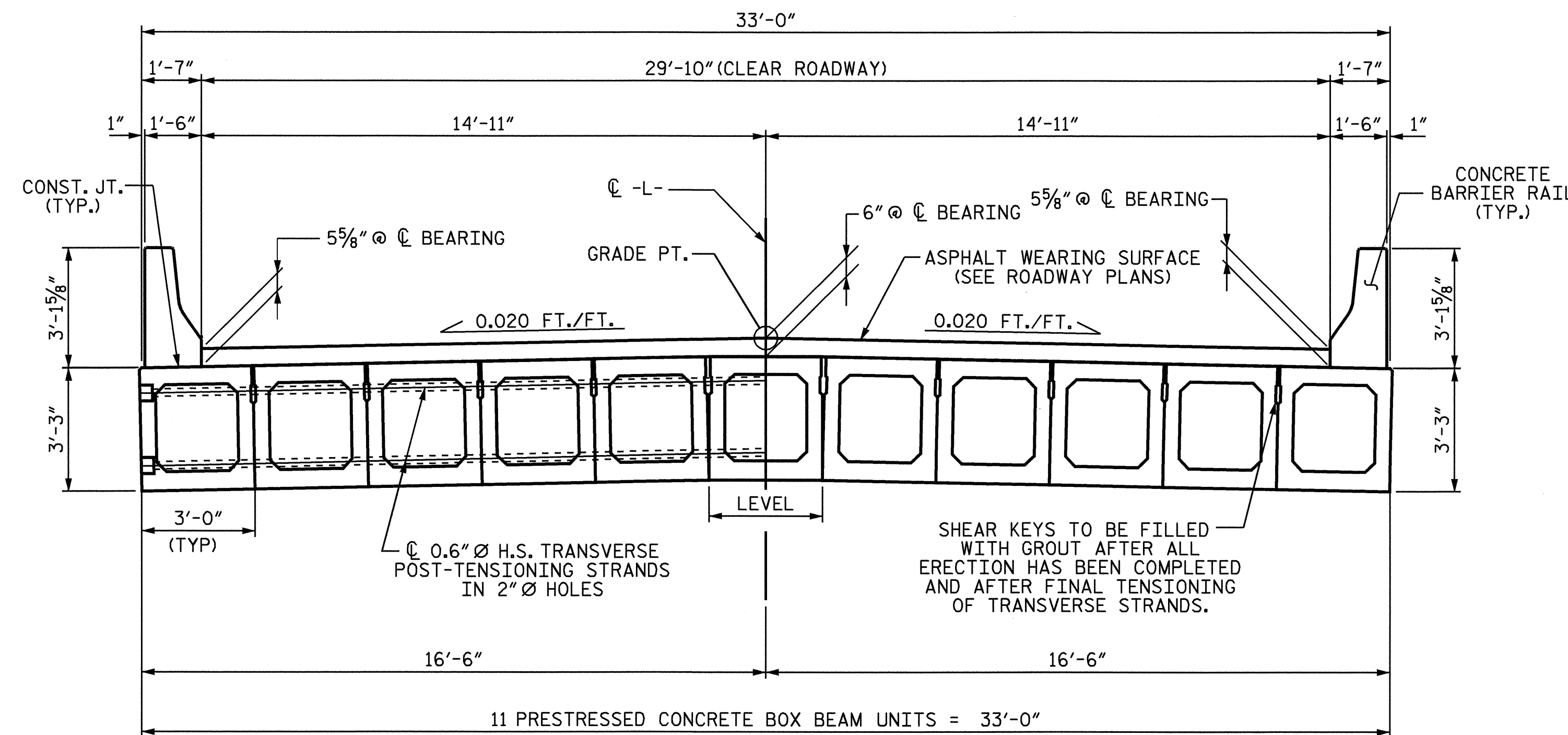
PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE BOX BEAM UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO BOX BEAM UNIT ENDS.

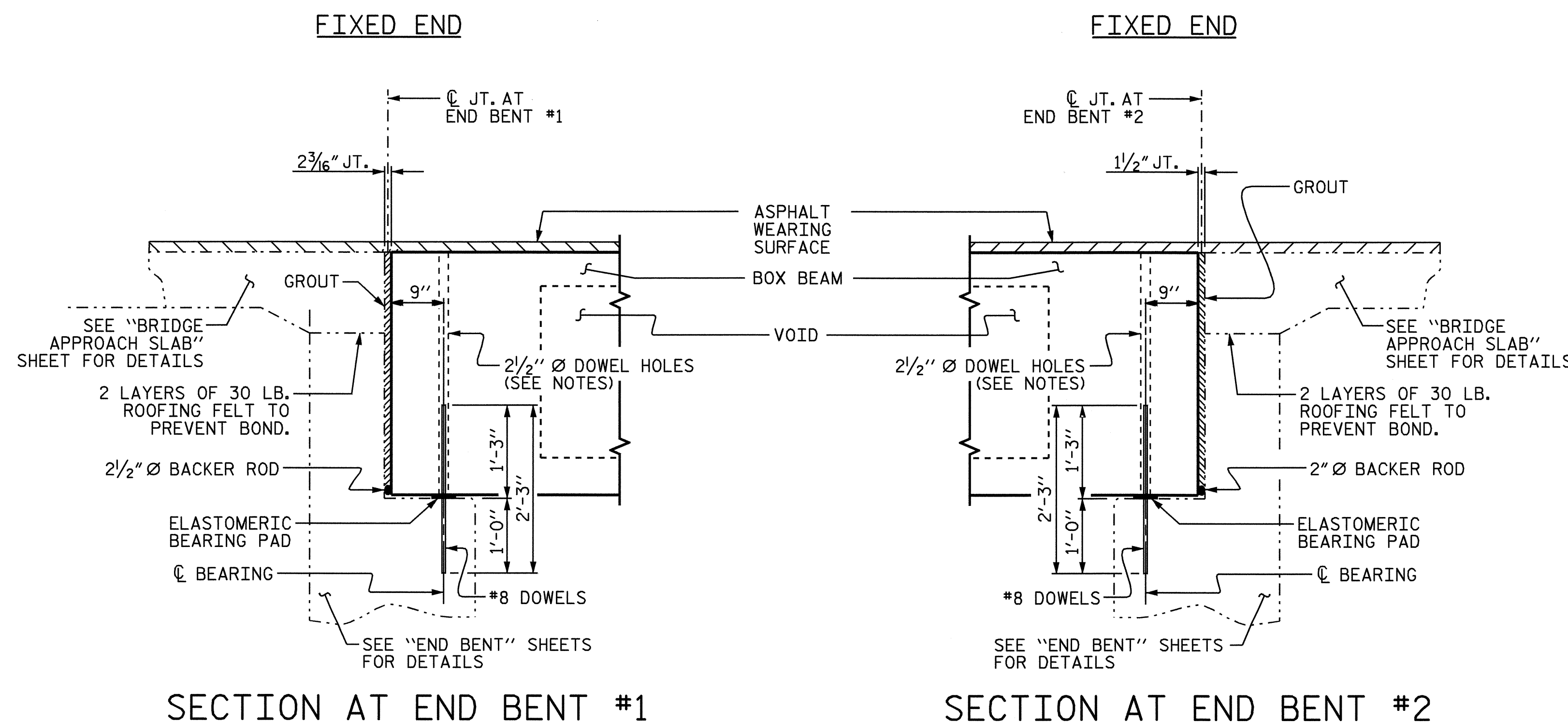
VERTICAL GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A VERTICAL CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

THE LOCATION OF THE VOID DRAINS MAY BE SHIFTED SLIGHTLY WHERE NECESSARY TO CLEAR PRESTRESSING STRANDS OR TRANSVERSE REINFORCING STEEL.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.



TYPICAL SECTION



SECTION AT END BENT #1

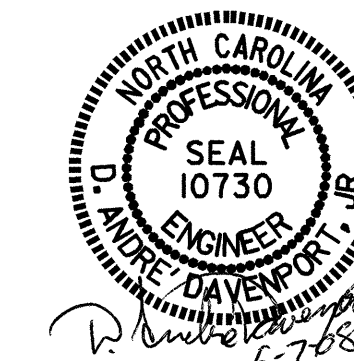
SECTION AT END BENT #2

PROJECT NO. B-4210
 NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

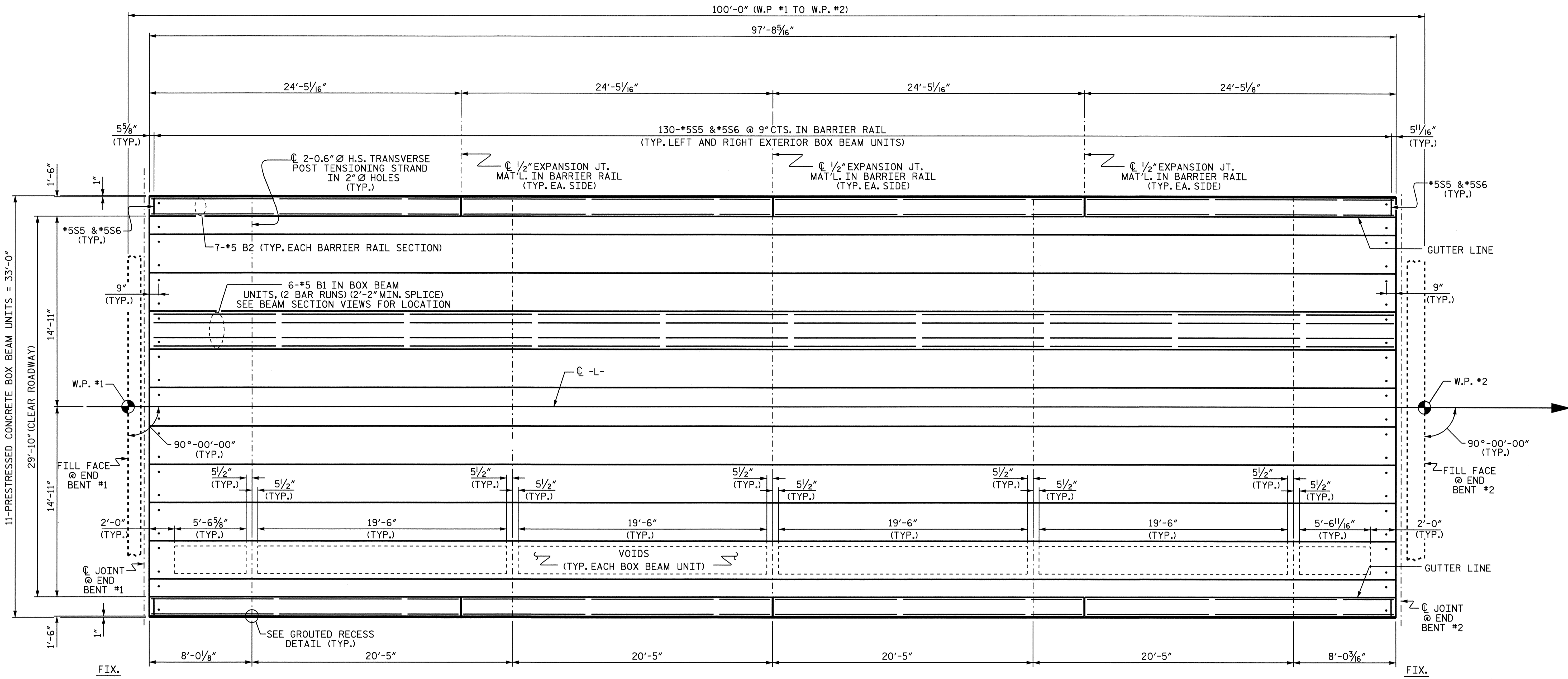
3'-0" X 3'-3"
 PRESTRESSED CONCRETE
 BOX BEAM UNIT



ASSEMBLED BY : M. G. SHAIKH DATE : 5-16-07
 CHECKED BY : D. A. GLADDEN DATE : 5-26-07
 DRAWN BY : TLA 5/05
 CHECKED BY : GM 6/05

ADDED 7/11/05R
 REV. 5/1/06 TLA/GM

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			18

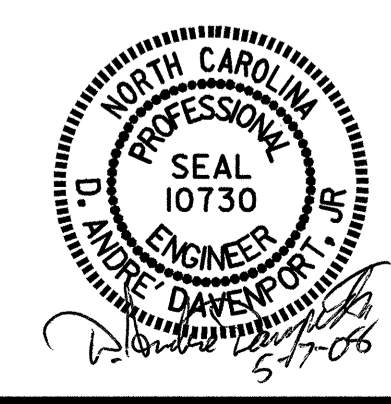


PLAN OF SPAN A

PROJECT NO. B-4210
NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 2 OF 5

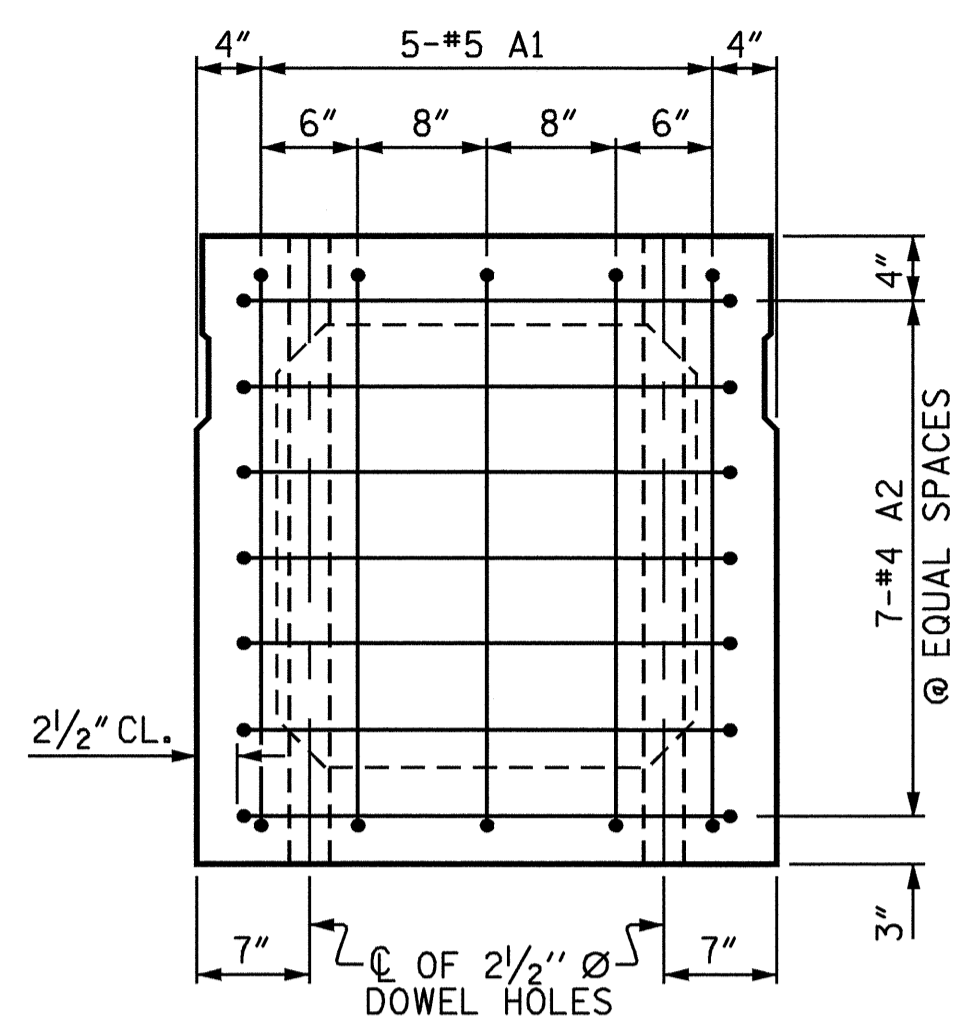
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 3'-0" x 3'-3"
 PRESTRESSED CONCRETE
 BOX BEAM UNIT



DRAWN BY : M. G. SHAIKH DATE : 5-18-07
 CHECKED BY : D. A. GLADDEN DATE : 5-26-07

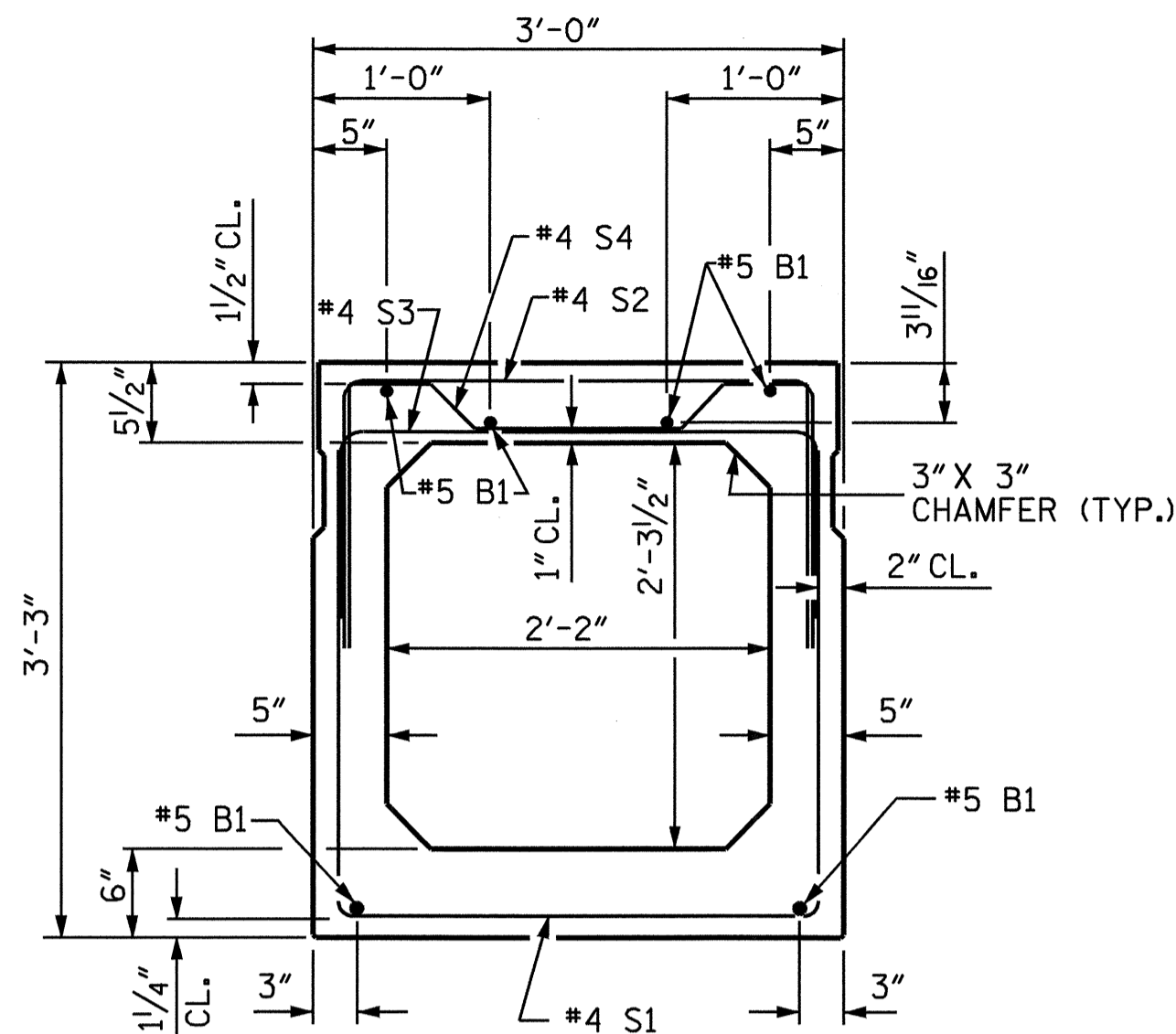
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS 18
2			4			

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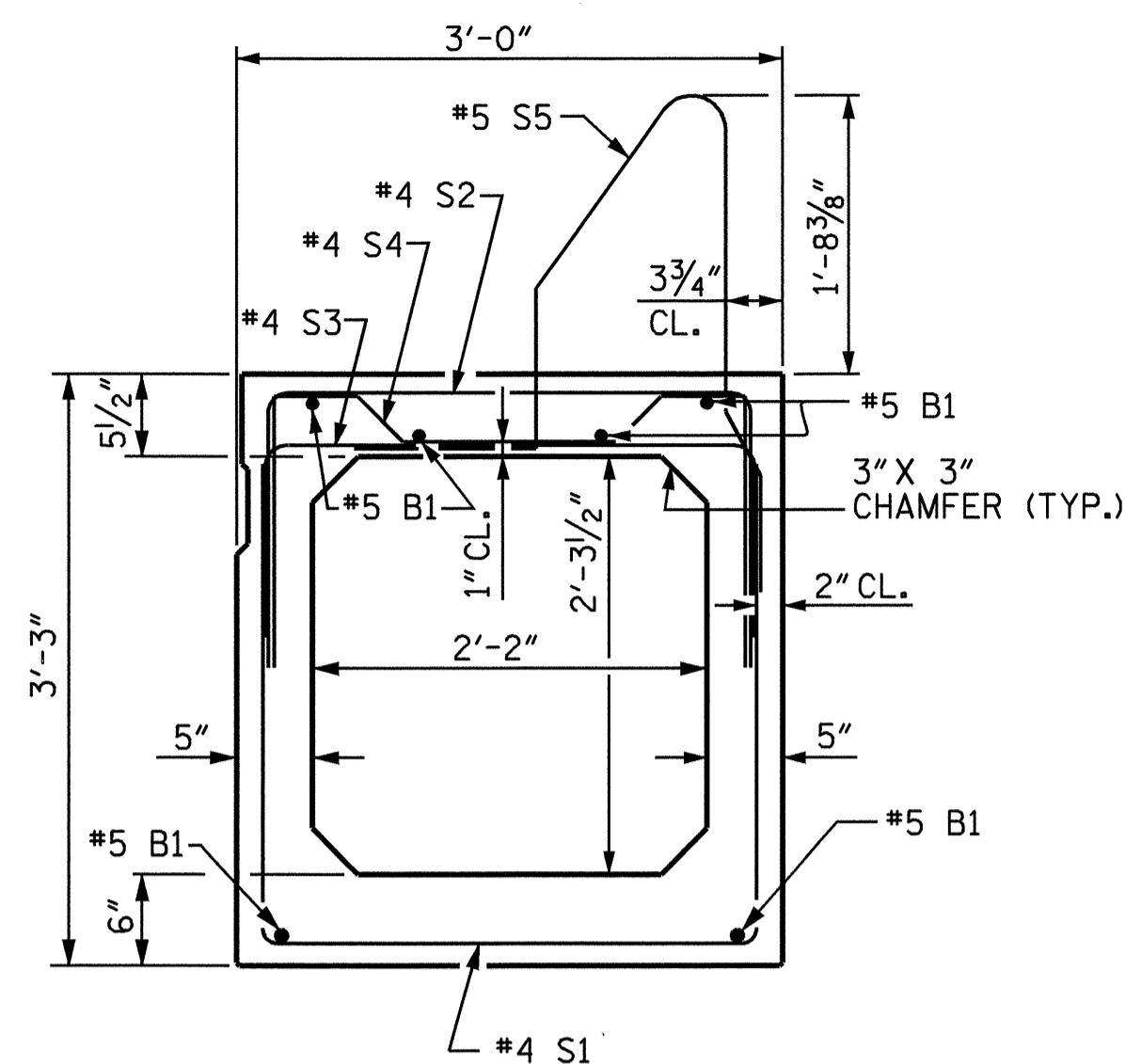
END ELEVATION

SHOWING PLACEMENT OF #5 & #4 "A" BARS AND LOCATION OF DOWEL HOLES. (INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION. STRAND LAYOUT NOT SHOWN.)



INTERIOR BOX BEAM SECTION

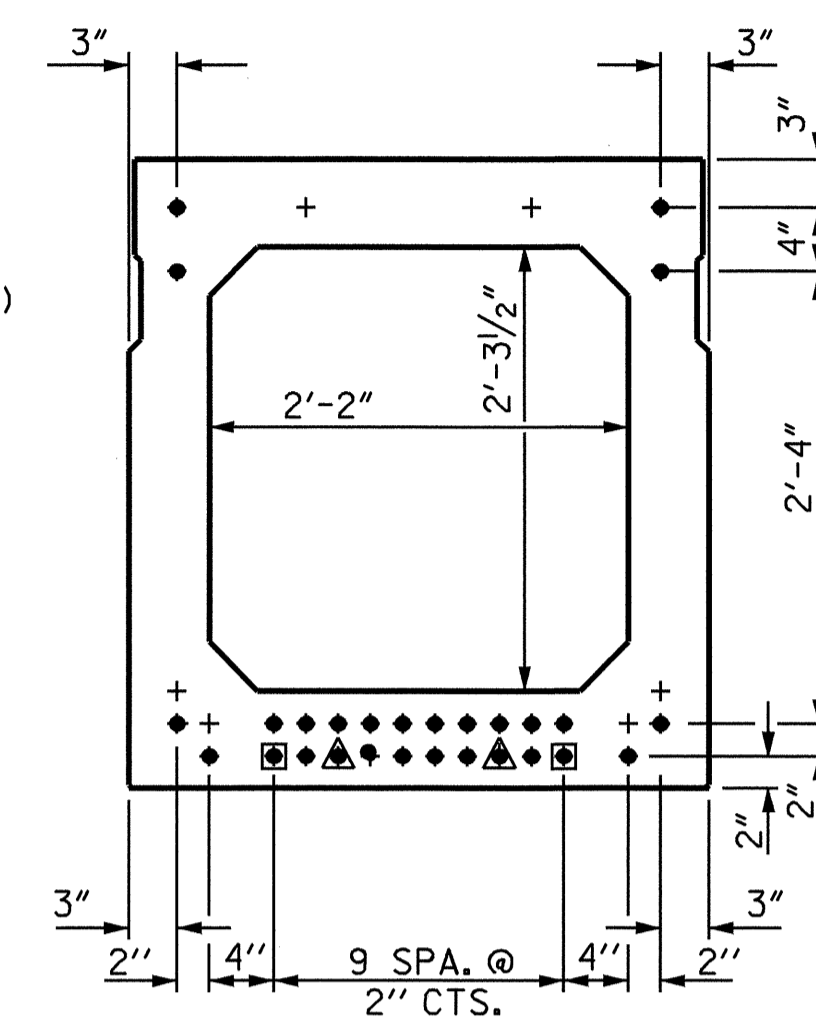
(STRAND LAYOUT NOT SHOWN)



EXTERIOR BOX BEAM SECTION

(STRAND LAYOUT NOT SHOWN)

0.6" Ø LOW RELAXATION STRAND LAYOUT



TYPICAL STRAND LOCATION

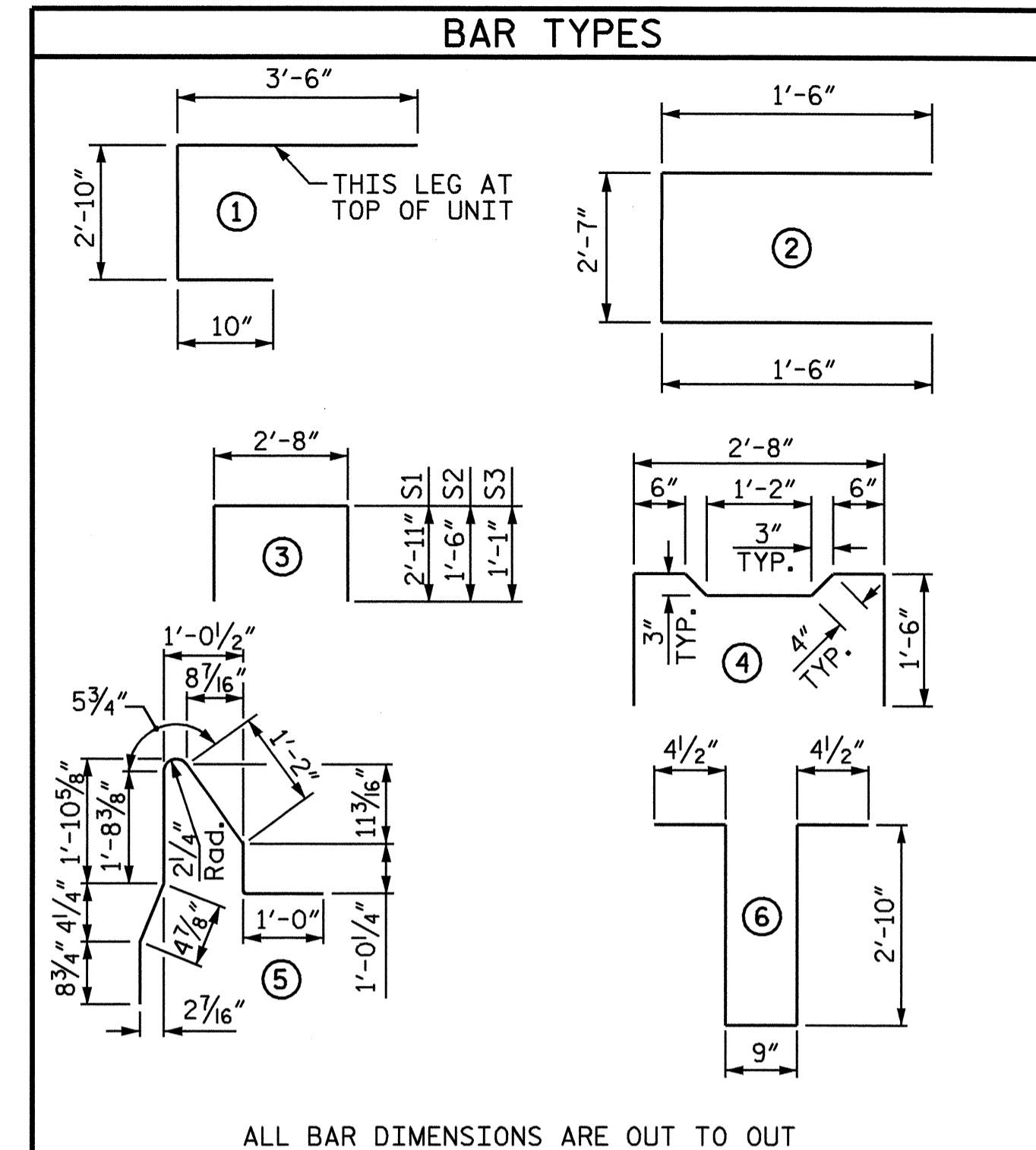
(28 STRANDS REQUIRED)

(INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION)

DEBONDING LEGEND

- FULLY BONDED STRANDS
- ◐ STRANDS DEBONDED FOR 4'-9" FROM END OF GIRDER
- ◑ STRANDS DEBONDED FOR 8'-9" FROM END OF GIRDER

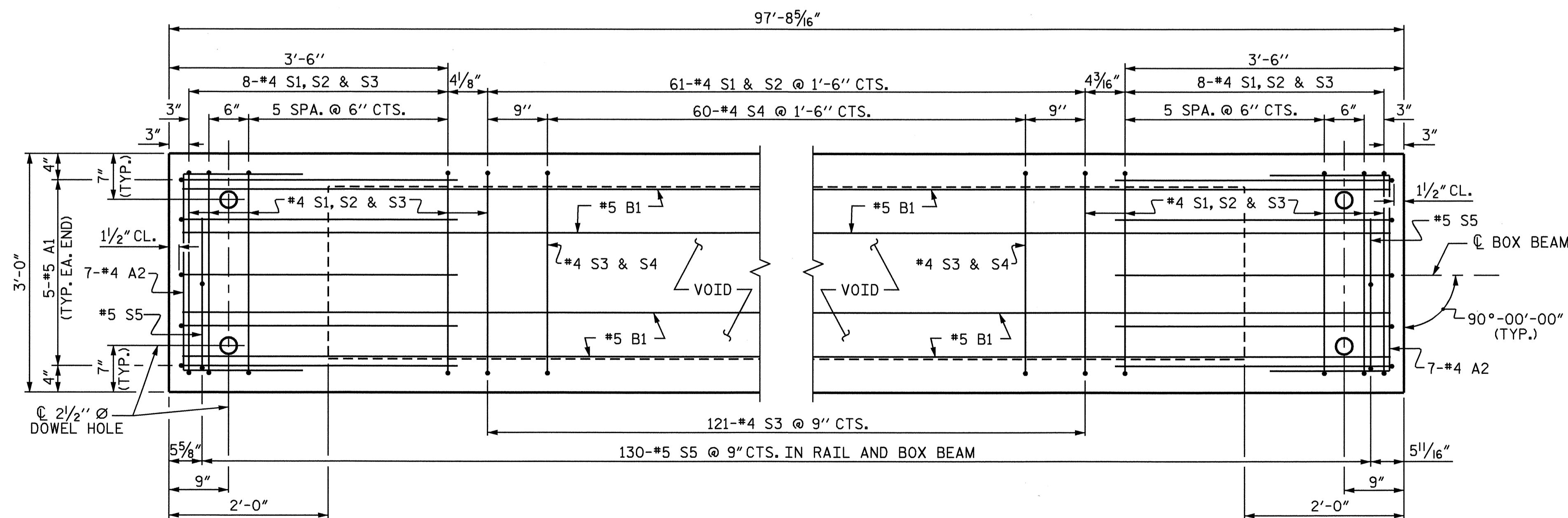
GRADE 270 STRANDS	
	0.6" Ø L.R.
AREA (SQUARE INCHES)	0.217
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950



ALL BAR DIMENSIONS ARE OUT TO OUT

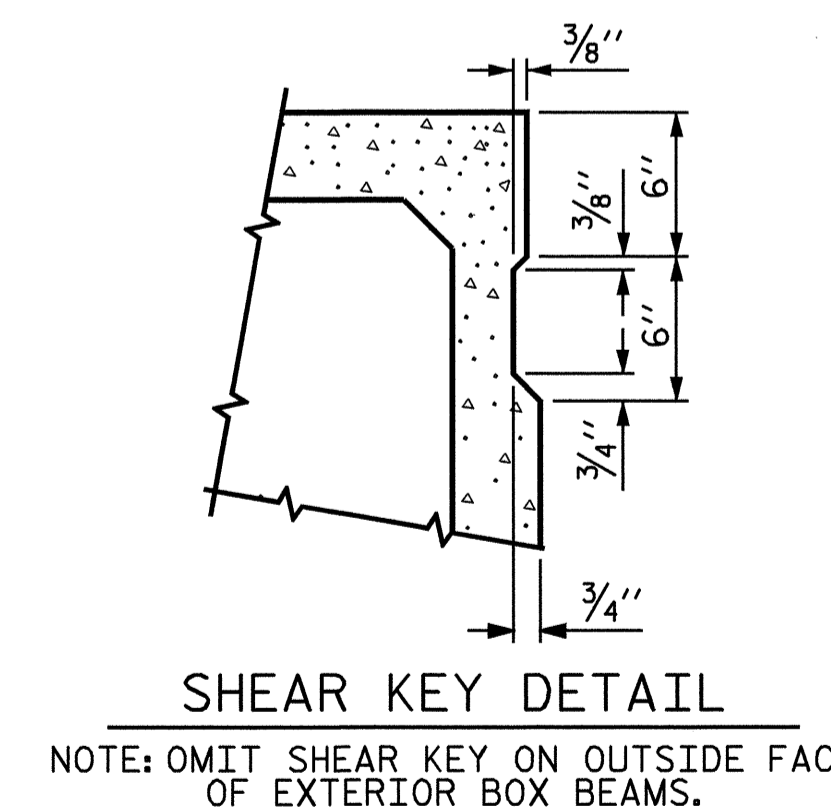
BILL OF MATERIAL FOR ONE BOX BEAM SECTION

BAR NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT		
			LENGTH	WEIGHT	LENGTH	WEIGHT	
A1	10	#5	7'-2"	75	7'-2"	75	
A2	44	#4	5'-7"	164	5'-7"	164	
B1	12	#5	STR	49'-10"	624	49'-10"	624
K1	15	#4	6	72	7'-2"	72	
K2	10	#4	STR	2'-7"	17	2'-7"	17
S1	77	#4	3	437	8'-6"	437	
S2	77	#4	3	291	5'-8"	291	
S3	137	#4	3	442	4'-10"	442	
S4	60	#4	4	234	5'-10"	234	
* S5	130	#5	5	881	--	--	
REINFORCING STEEL				2356	LBS.	2356	LBS.
* EPOXY COATED REINF. STEEL				881	LBS.		
6500 P.S.I. CONCRETE				19.1	CU. YDS.	18.9	CU. YDS.
0.6" Ø L.R. STRANDS				No.	28	No.	28



PLAN OF BOX BEAM

EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS. FOR LOCATION OF DIAPHRAGMS, SEE PLAN OF SPANS. FOR REINFORCING STEEL IN DIAPHRAGMS, SEE DIAPHRAGM DETAILS.



SHEAR KEY DETAIL

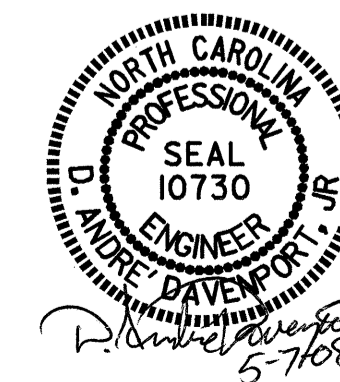
NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR BOX BEAMS.

PROJECT NO. B-4210
NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 3 OF 5

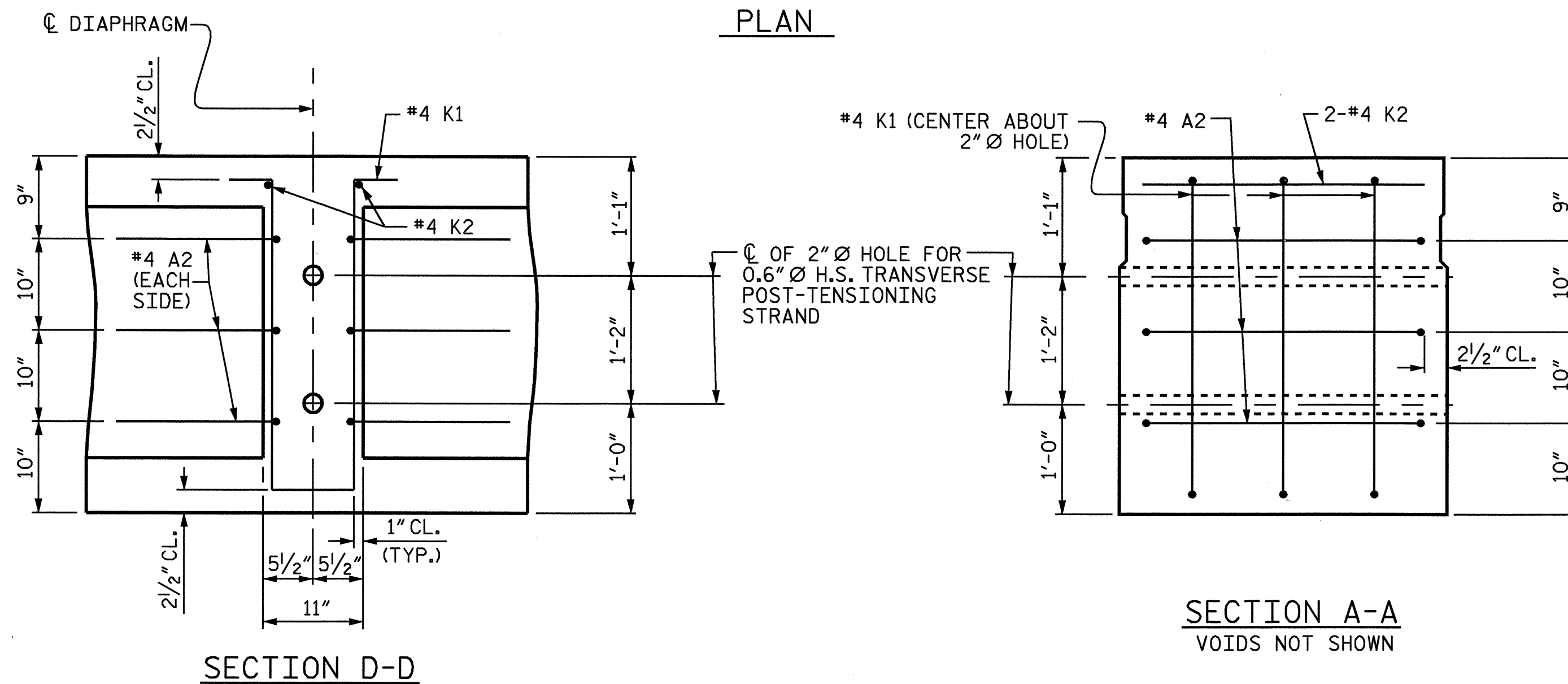
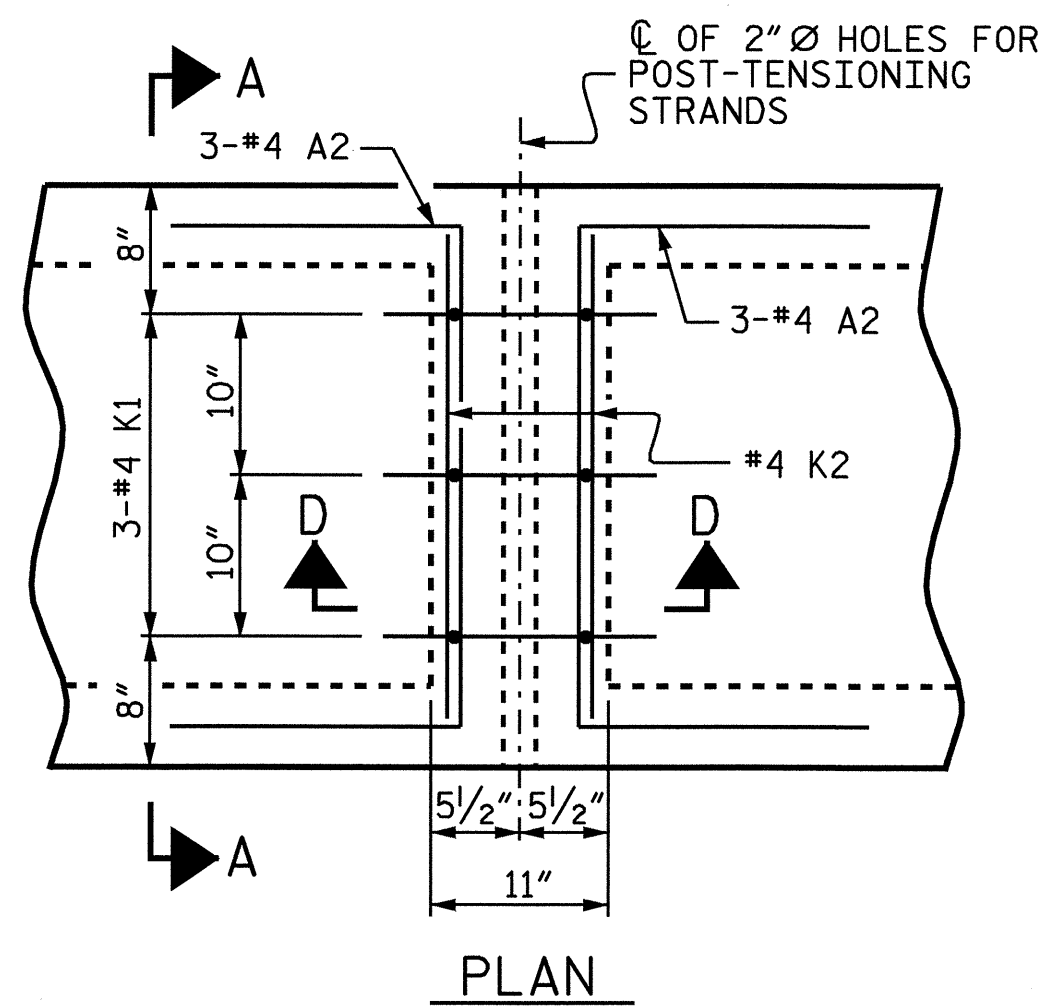
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

3'-0" X 3'-3"
PRESTRESSED CONCRETE
BOX BEAM UNIT



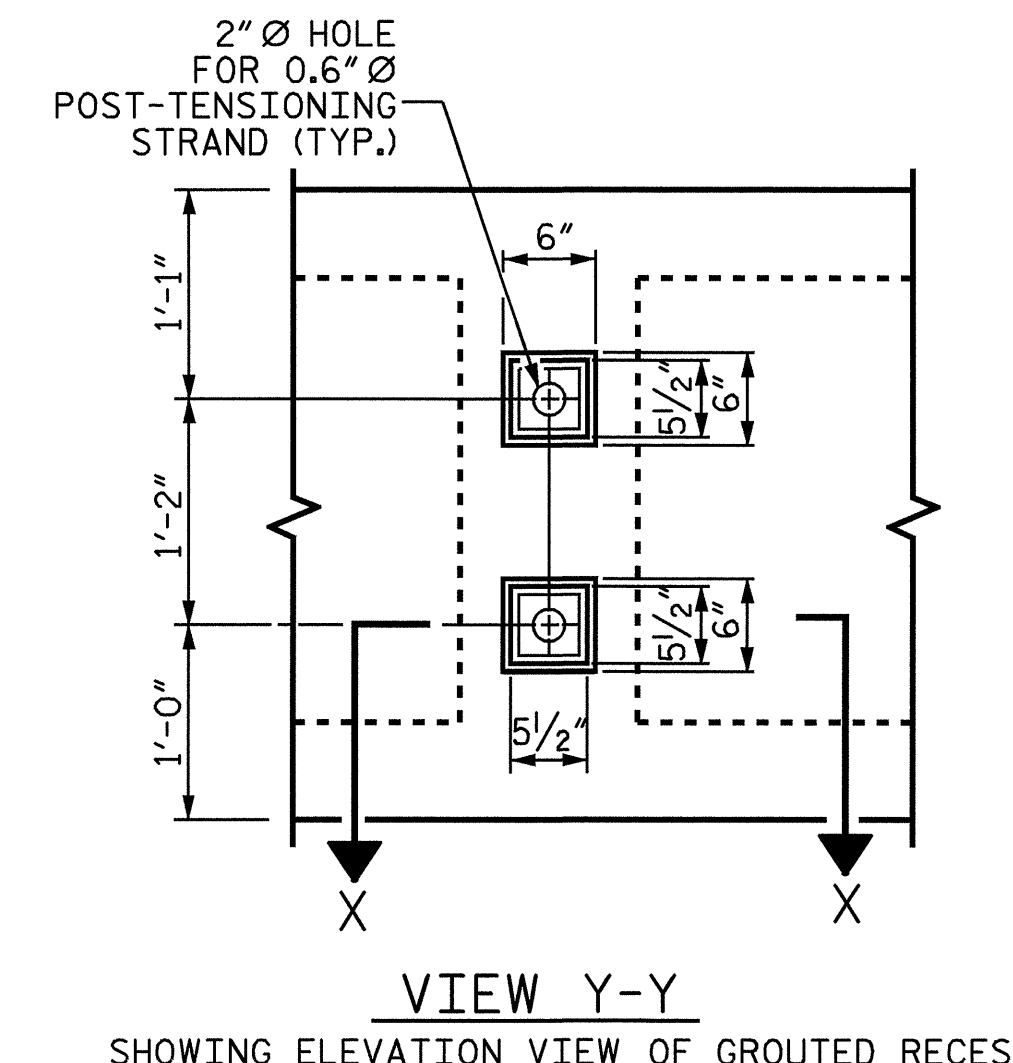
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			18

ASSEMBLED BY :	M. G. SHAIKH	DATE :	5-18-07
CHECKED BY :	D. A. GLADDEN	DATE :	5-26-07
DRAWN BY :	TLA 5/05	ADDED :	7/11/05
CHECKED BY :	GM 6/05	REV. :	5/1/06

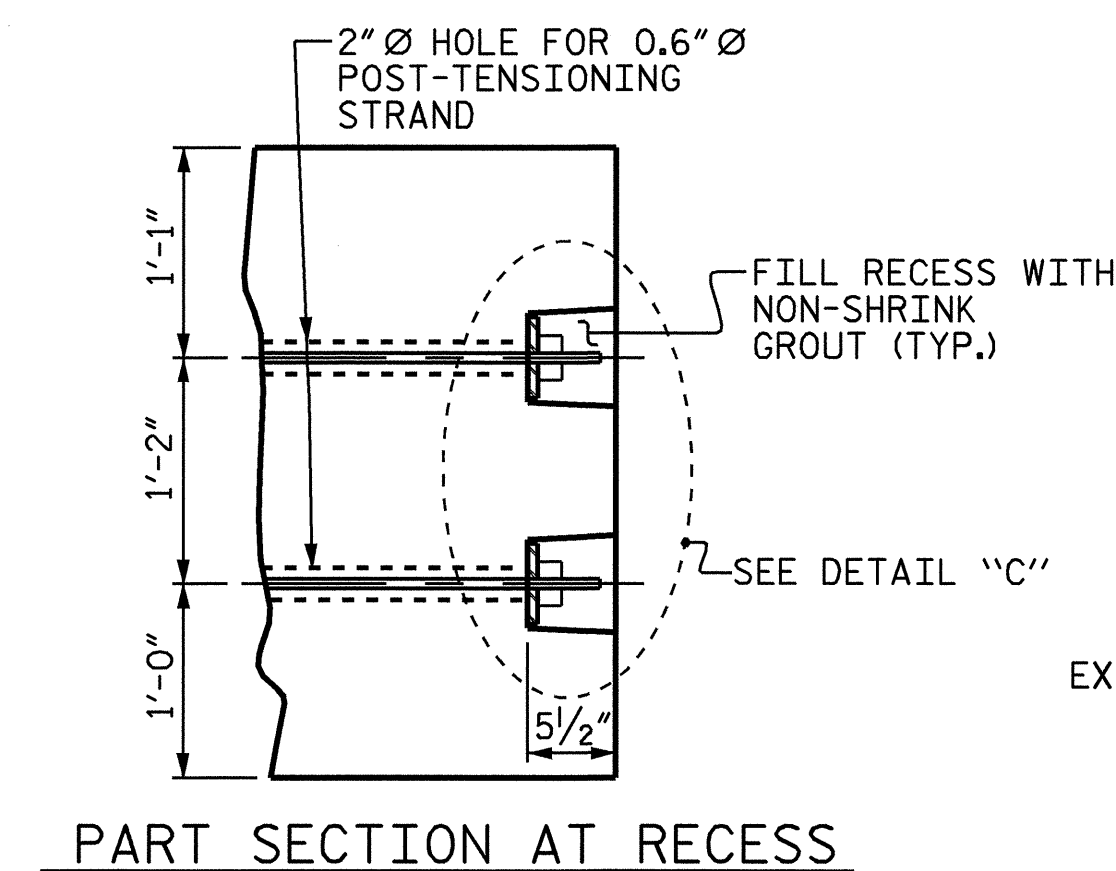
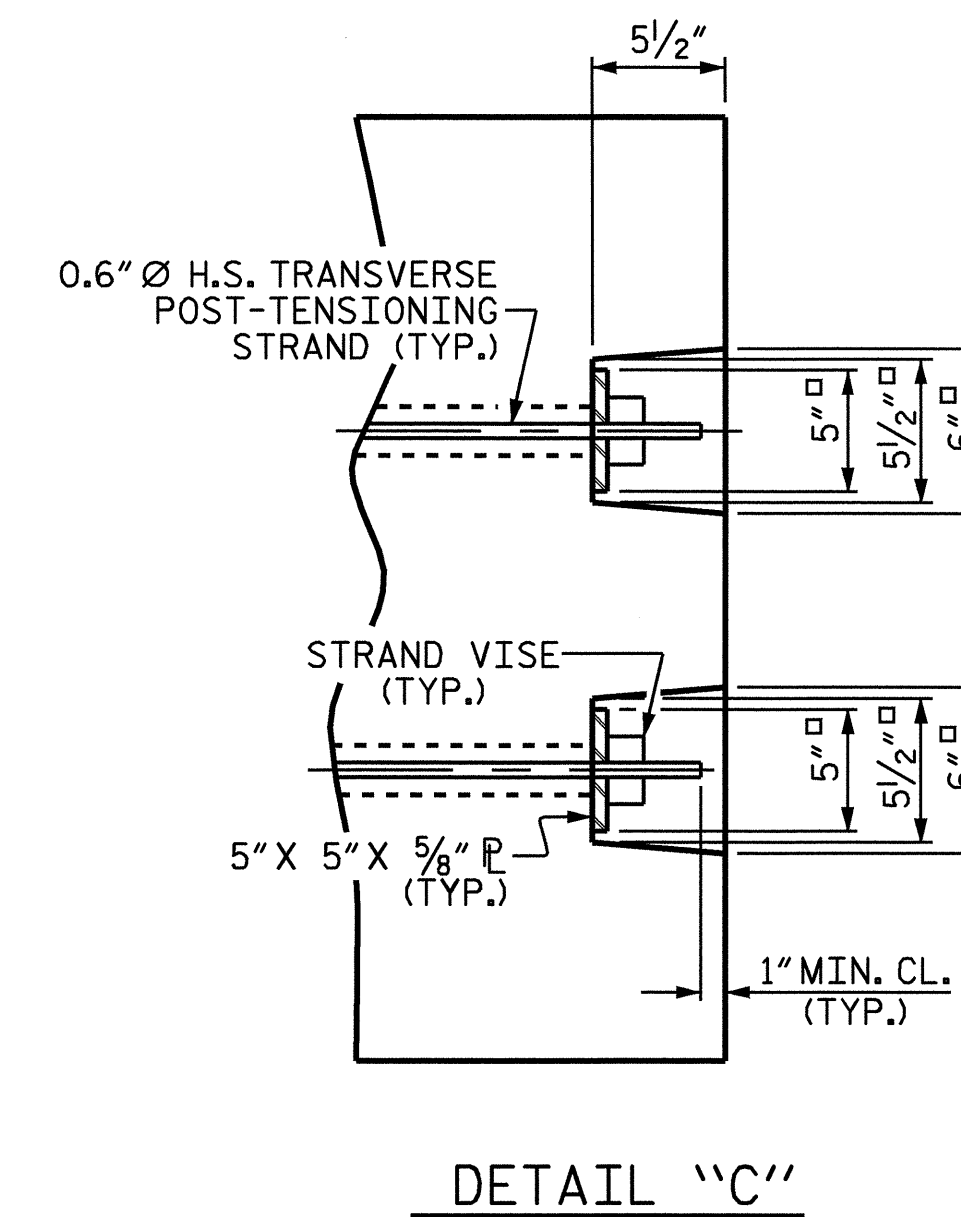


DOUBLE DIAPHRAGM DETAILS

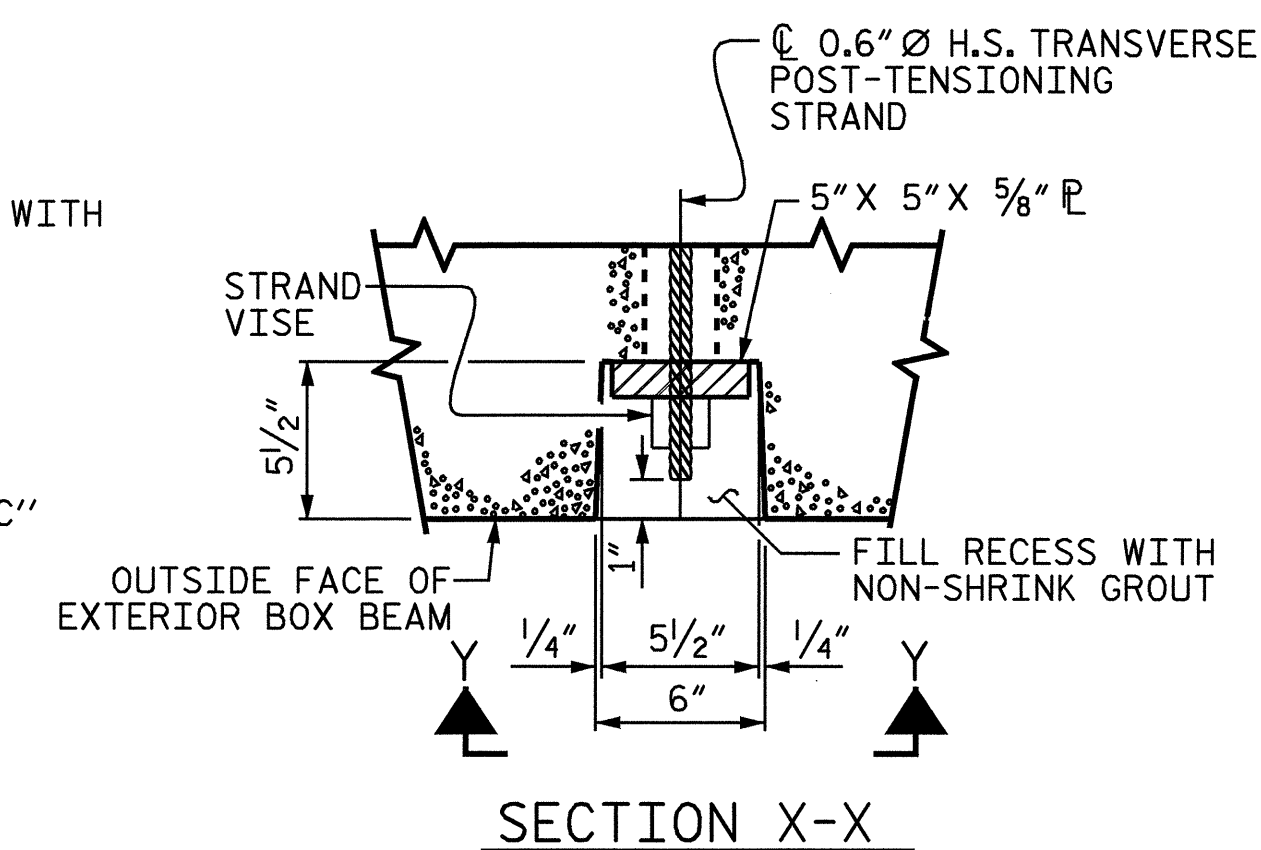
#4 "S" BARS NOT SHOWN. #4 "S" BARS MAY BE SHIFTED SLIGHTLY TO CLEAR 2" Ø HOLE.



SHOWING ELEVATION VIEW OF GROUDED RECESS

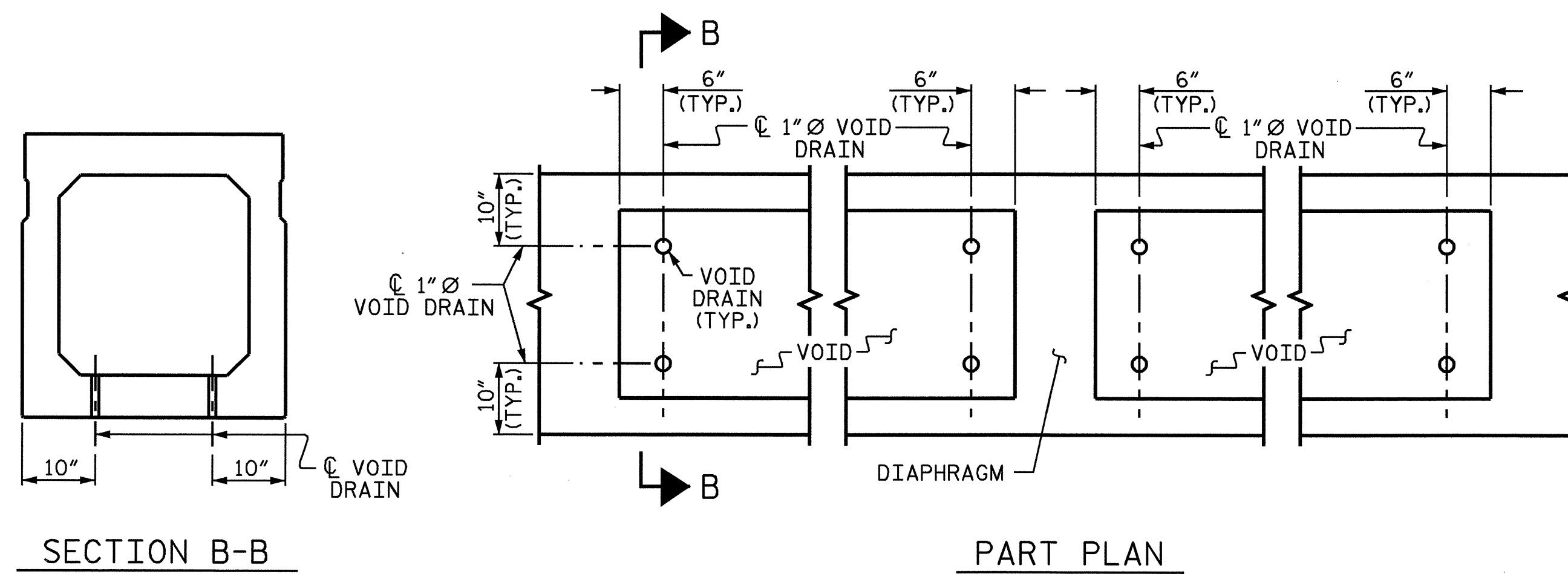


PART SECTION AT RECESS



SECTION X-X

GROUDED RECESS DETAIL AT END OF POST-TENSIONED STRANDS OF EXTERIOR BOX BEAM



VOID DRAIN DETAILS

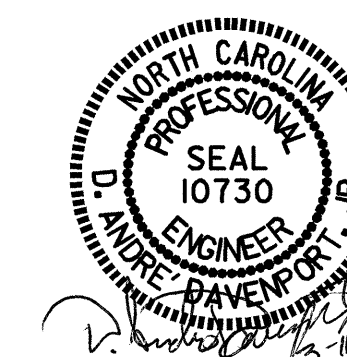
(DIMENSIONS SHOWN ARE TYPICAL FOR EACH VOID)

DEAD LOAD DEFLECTION AND CAMBER	
	3'-0" x 3'-3"
	0.6" Ø L.R. STRAND
	SPAN "A"
CAMBER (BEAM ALONE IN PLACE)	↑ 3"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	↓ 3/4"
FINAL CAMBER	↑ 2 1/4"

** INCLUDES FUTURE WEARING SURFACE

PROJECT NO. B-4210
NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 4 OF 5



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

3'-0" X 3'-3"
 PRESTRESSED CONCRETE
 BOX BEAM UNIT

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

S-7
 TOTAL SHEETS 18

ASSEMBLED BY : M. G. SHAIKH DATE : 5-18-07
 CHECKED BY : D. A. GLADDEN DATE : 5-26-07
 DRAWN BY : TLA 5/05
 CHECKED BY : GM 6/05

ADDED 7/11/05
 REV. 5/1/06 TLA/GM

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 4 - 7/8" Ø BOLTS WITH NUTS AND WASHERS, RUBRAIL, AND ADHESIVELY ANCHORED BOLTS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M11.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

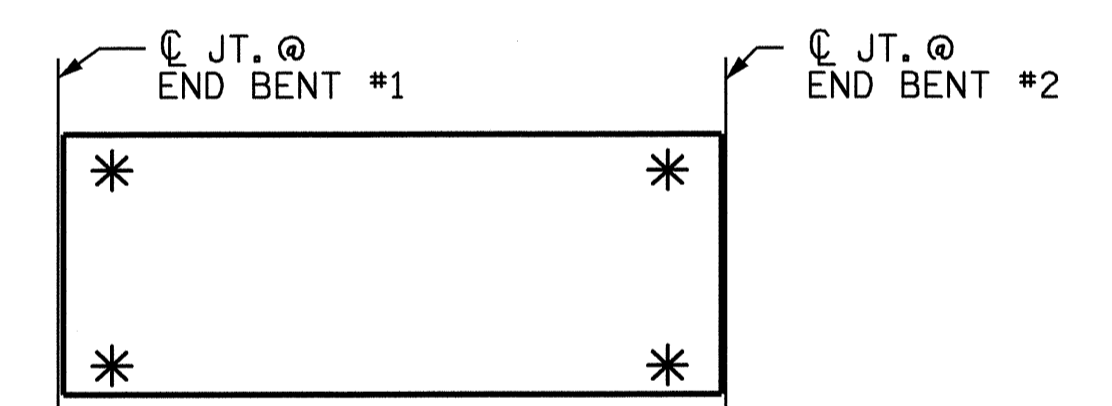
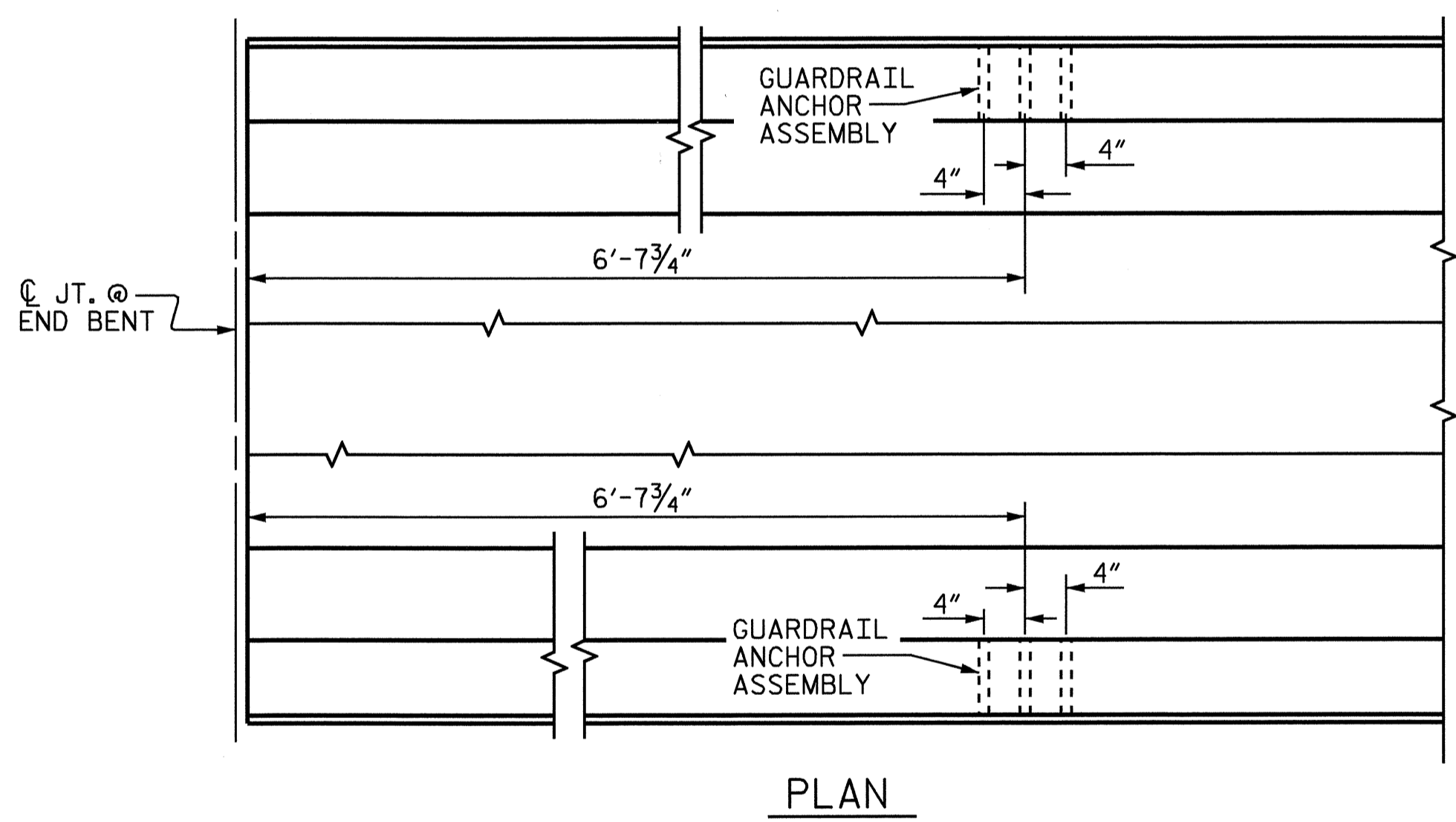
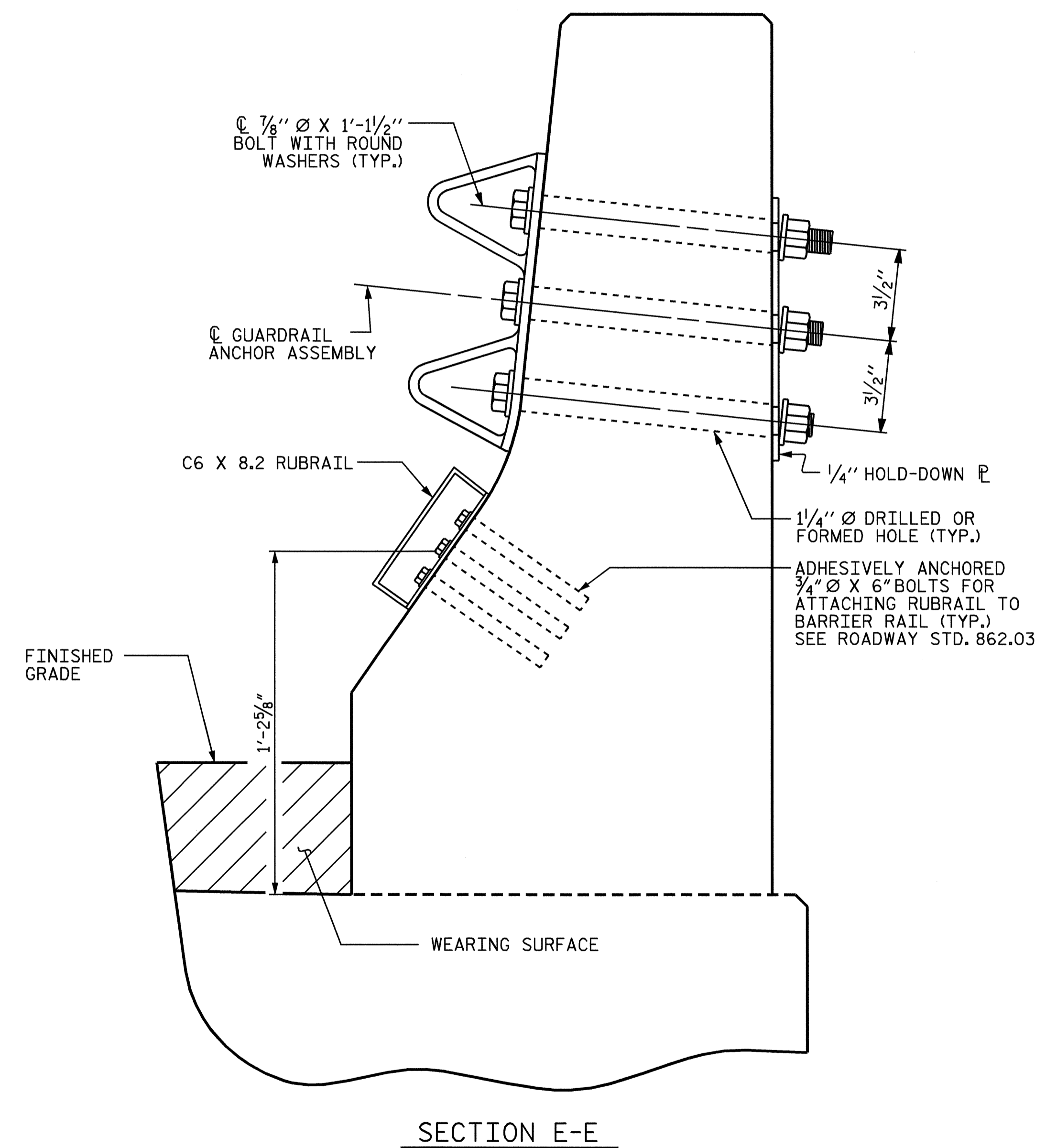
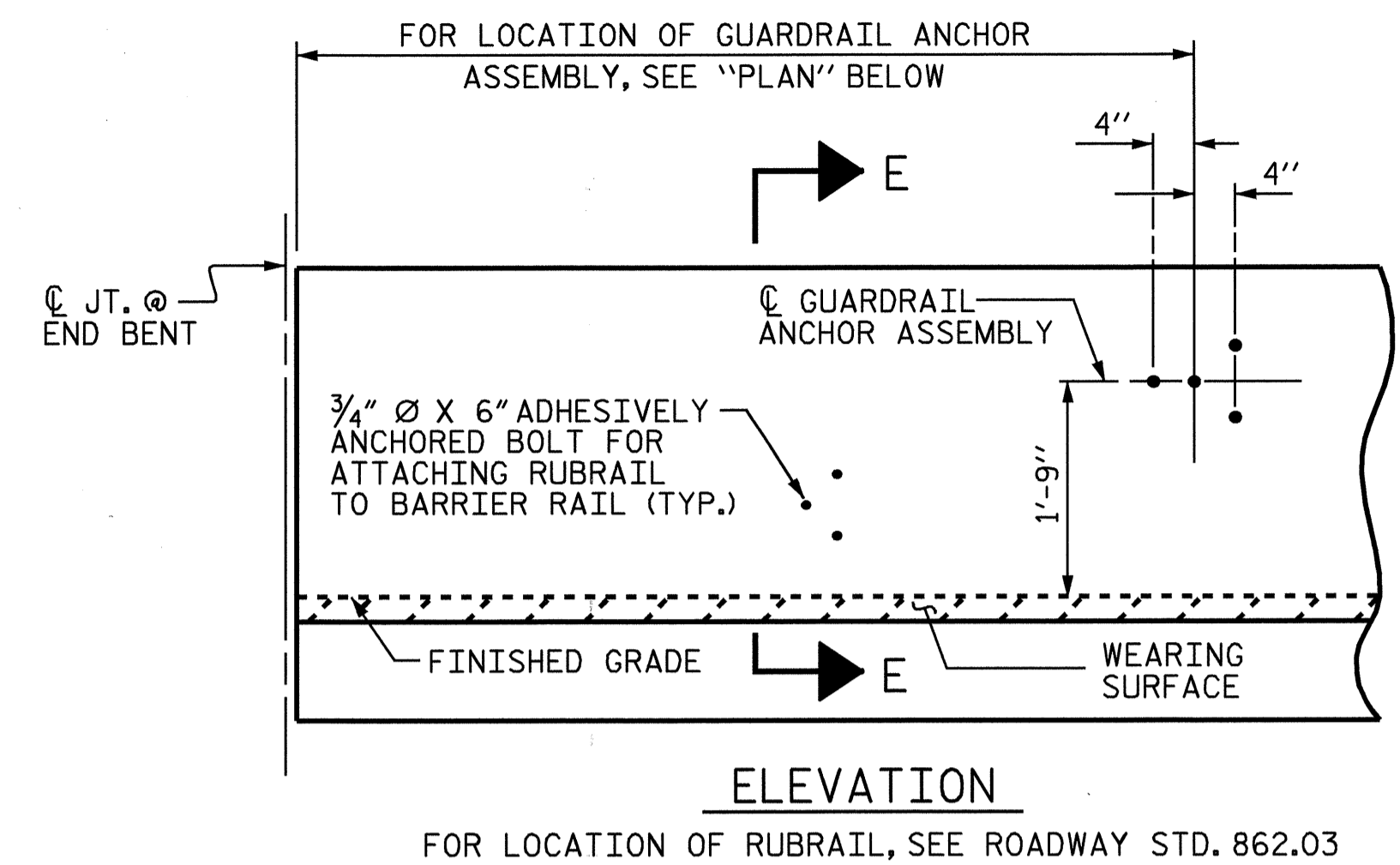
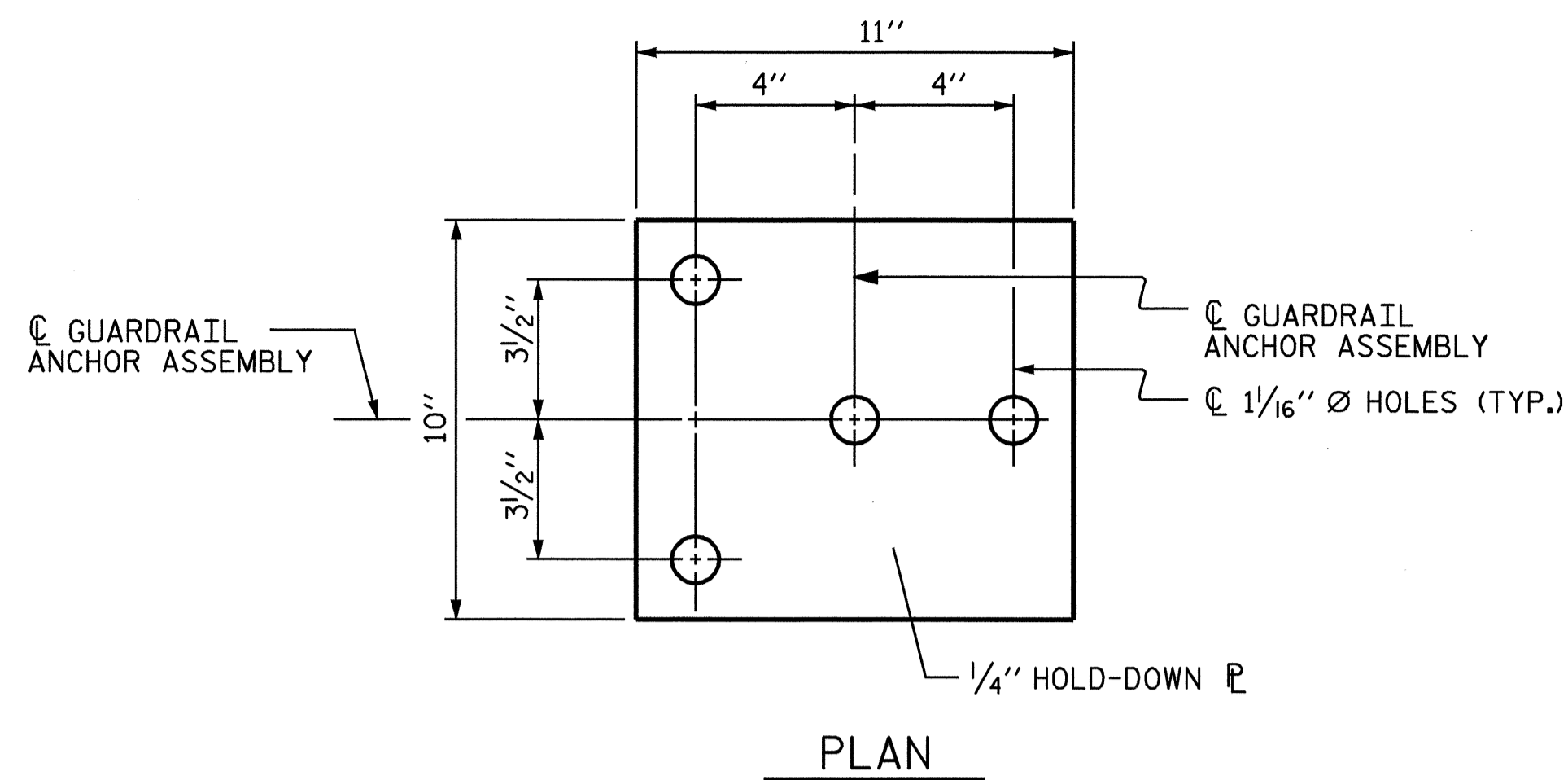
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CONCRETE BARRIER RAIL.

THE 1/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

THE C6 X 8.2 RUBRAIL IS TO BE ADHESIVELY ANCHORED TO THE RAIL USING THREE 3/4" Ø X 6" BOLTS WITH WASHERS. LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE 3/4" Ø BOLT IS 12 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. SEE ROADWAY STANDARD 862.03 FOR DETAILS AND LOCATION OF THE RUBRAIL.

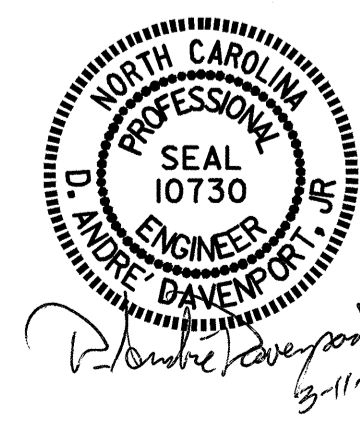


SKETCH SHOWING POINTS OF ATTACHMENTS
* DENOTES GUARDRAIL ANCHOR ASSEMBLY

LOCATION OF ANCHORS FOR GUARDRAIL
END BENT #1 SHOWN, END BENT #2 SIMILAR.

GUARDRAIL ANCHOR ASSEMBLY DETAILS

PROJECT NO. B-4210
NASH COUNTY
STATION: 13+50.00 -L-



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GUARDRAIL ANCHORAGE
FOR BARRIER RAIL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS 18
2			4			

ASSEMBLED BY : A. SORSENGINH DATE : 9/20/07
CHECKED BY : D. A. DAVENPORT DATE : 01/10/08
DRAWN BY : TLA 5/06 ADDED 5/1/06R KMM/GM
CHECKED BY : GM 5/06

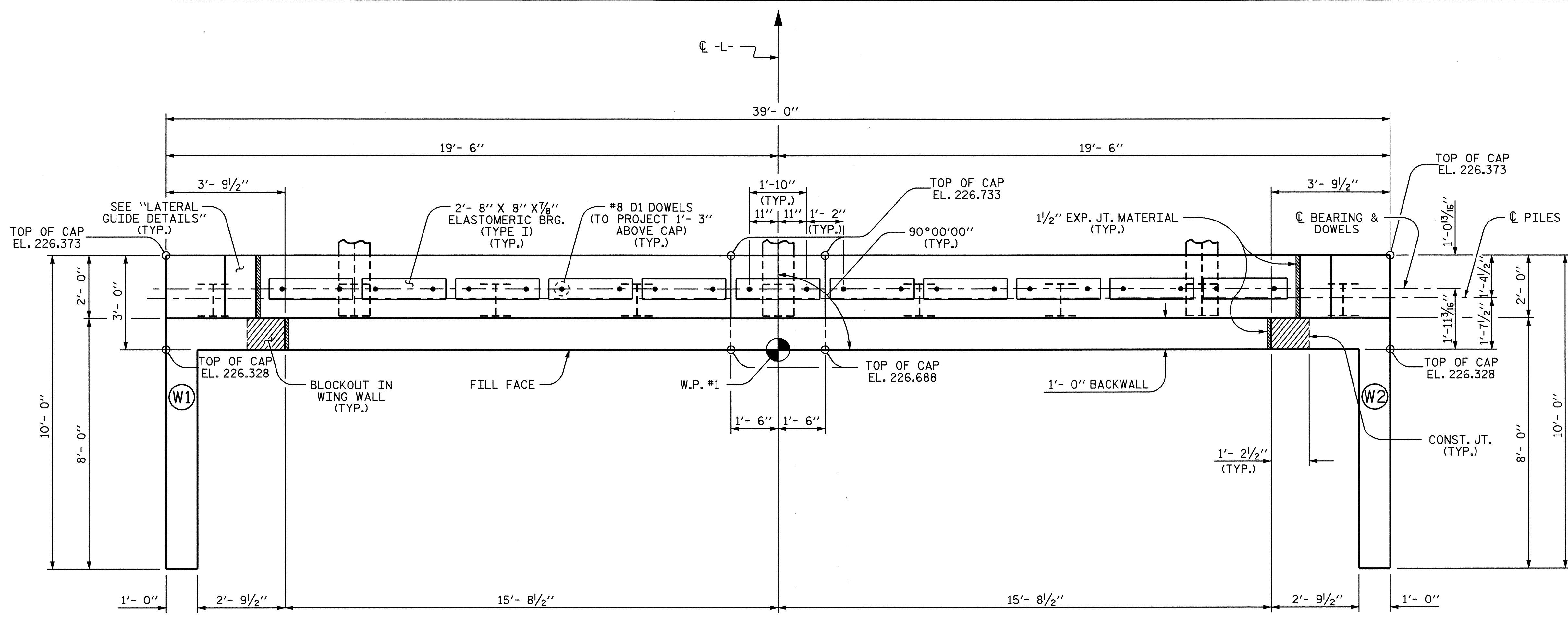
NOTES

THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE BARRIER RAILS ARE CAST IF SLIP FORMING IS USED.

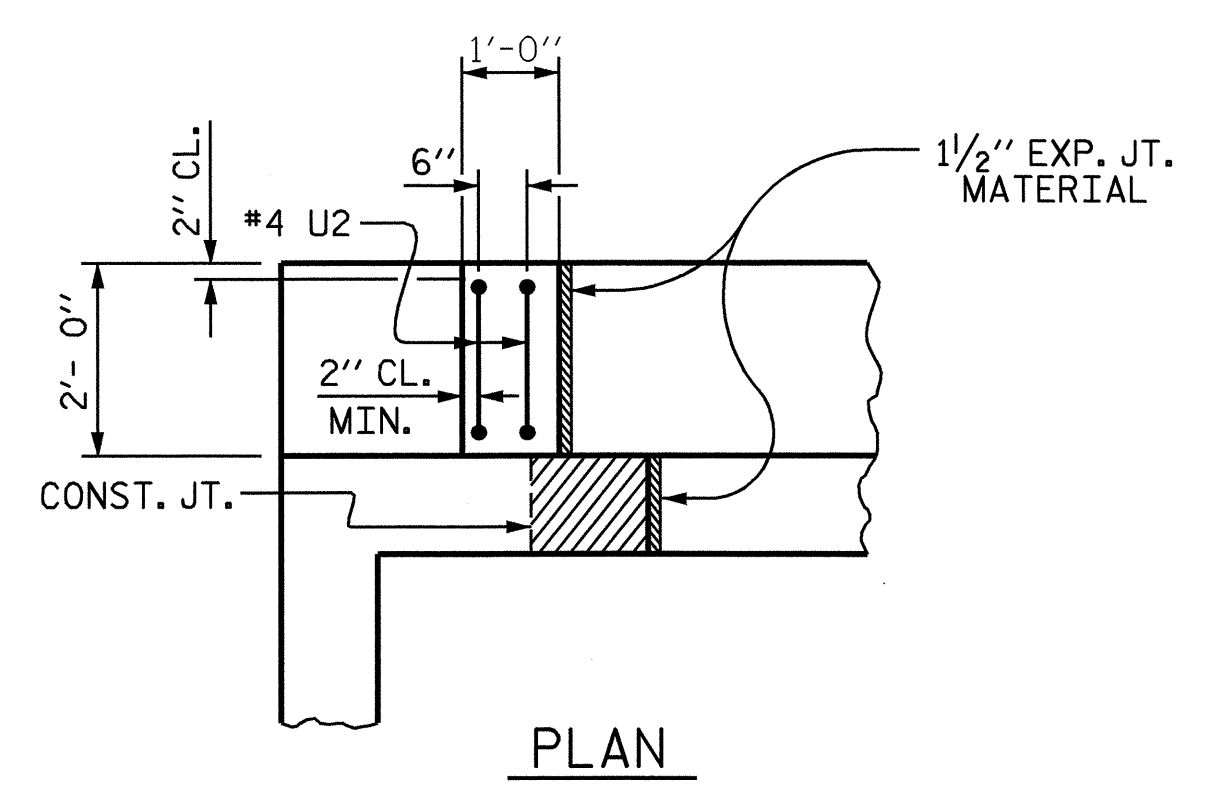
THE CONTRACTOR SHALL PROVIDE FOR INSTALLATION OF THE 4" DIAMETER DRAIN PIPE THROUGH THE WING WALL AS REQUIRED FOR REINFORCED BRIDGE APPROACH FILLS. SEE THE ROADWAY PLANS. REINFORCING STEEL IN THE WING WALL MAY BE SHIFTED AS NECESSARY TO CLEAR THE DRAIN PIPE.

THE LATERAL GUIDE AT EACH END OF THE END BENT CAP IS NOT TO BE POURED UNTIL AFTER BOX BEAM UNITS ARE IN PLACE.

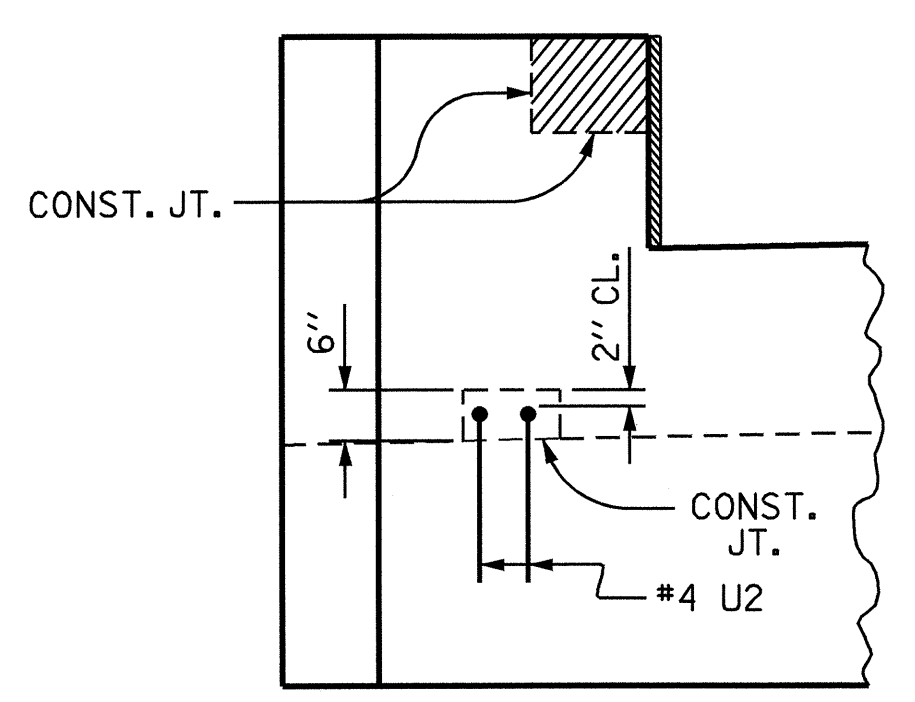
STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR #8 D1 DOWELS.



PLAN



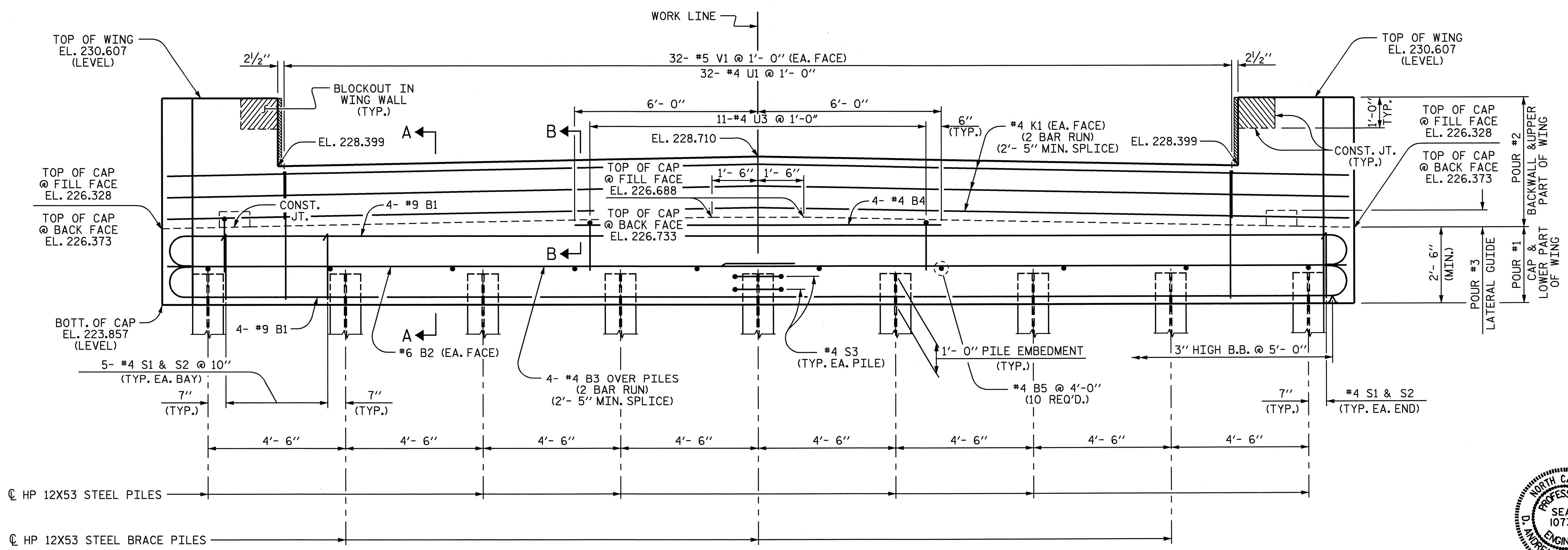
PLAN



ELEVATION

LATERAL GUIDE DETAILS

(EACH END SIMILAR)

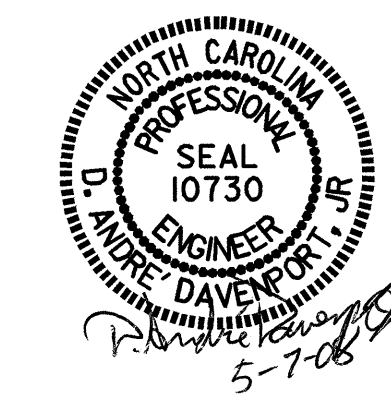


ELEVATION

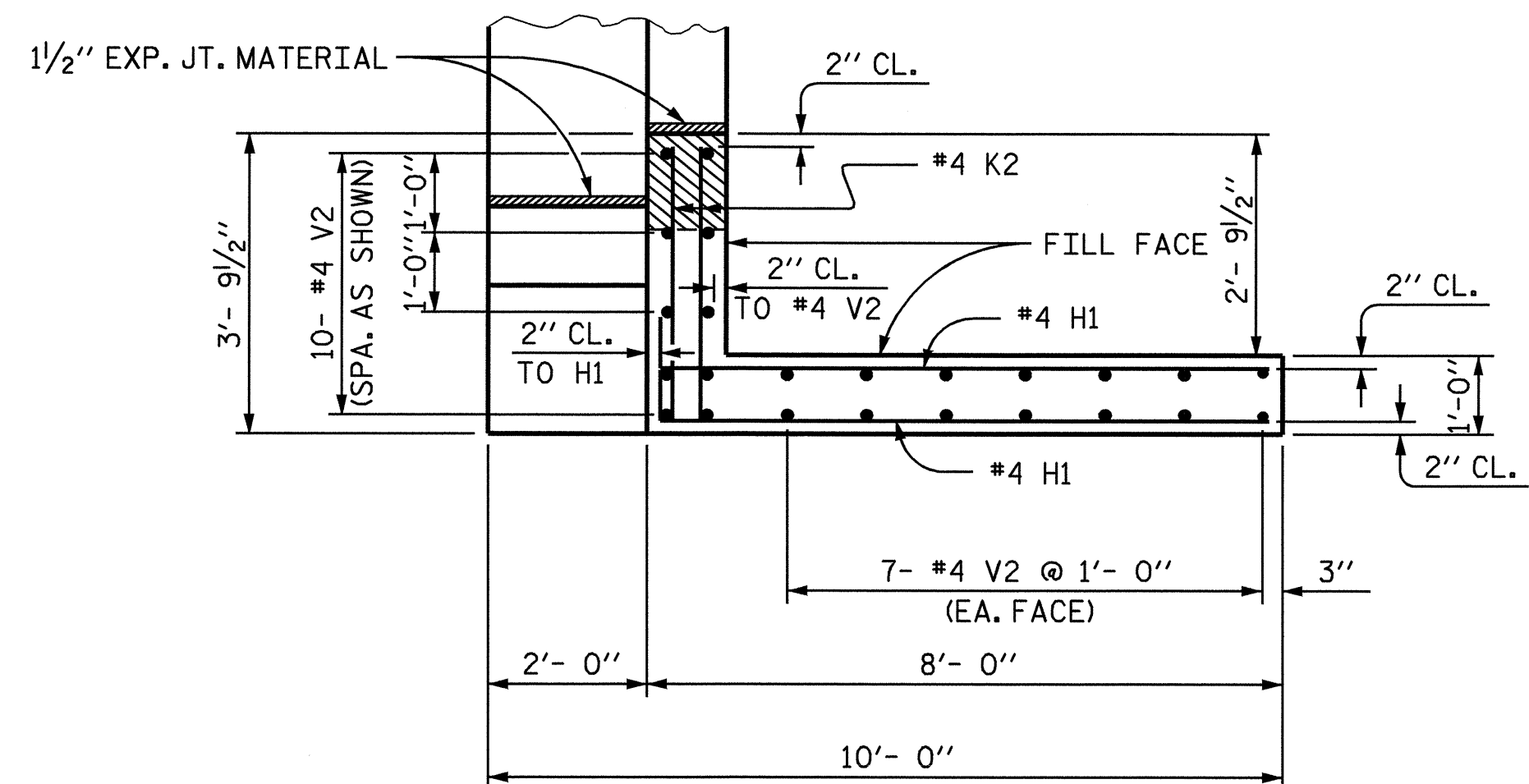
PROJECT NO. B-4210
NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 1 OF 3

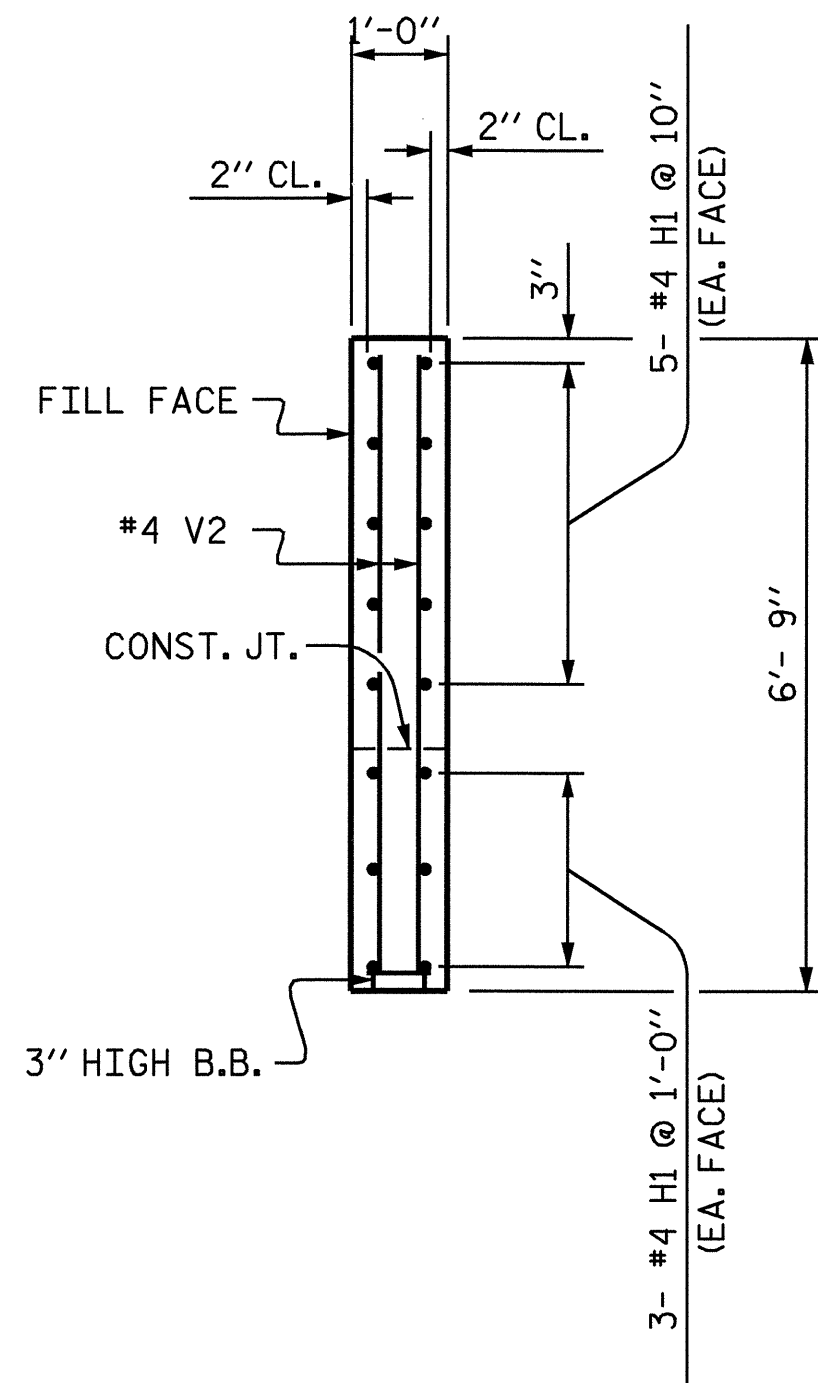
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE END BENT #1					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-10
					TOTAL SHEETS 18



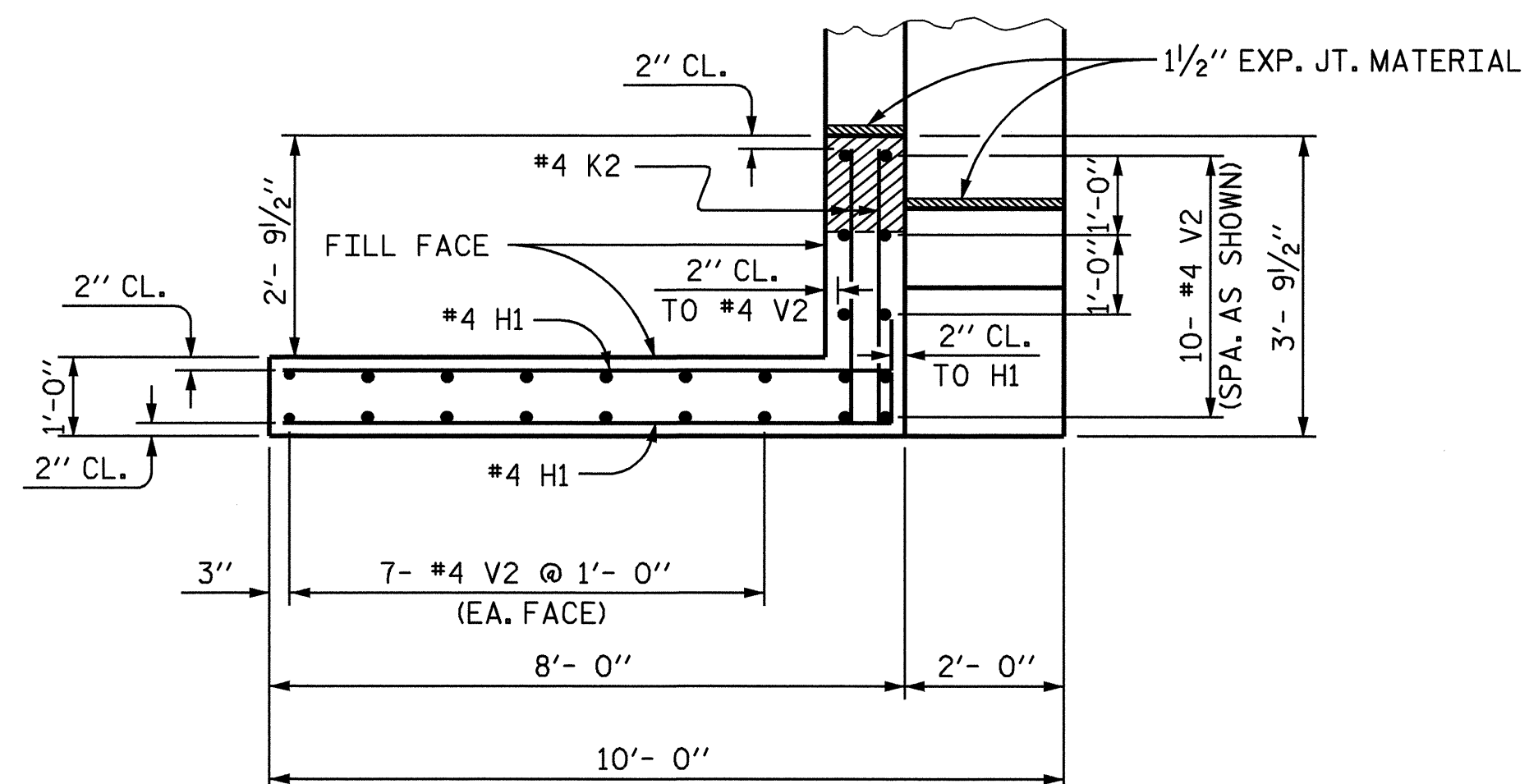
DRAWN BY: D. A. GLADDEN DATE: 1-15-08
 CHECKED BY: A. DAVENPORT DATE: 2-1-08



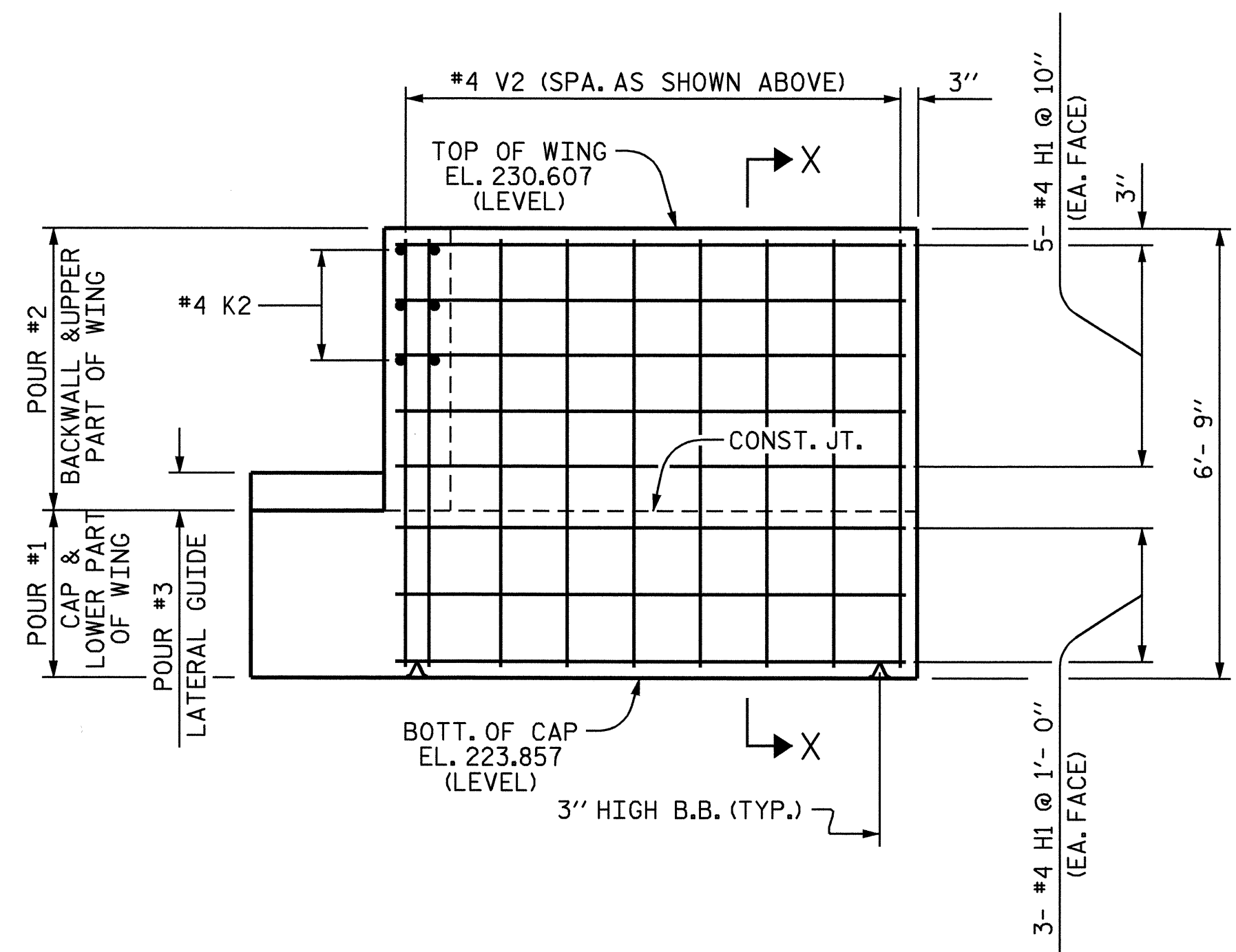
(W1) PLAN OF LEFT WING



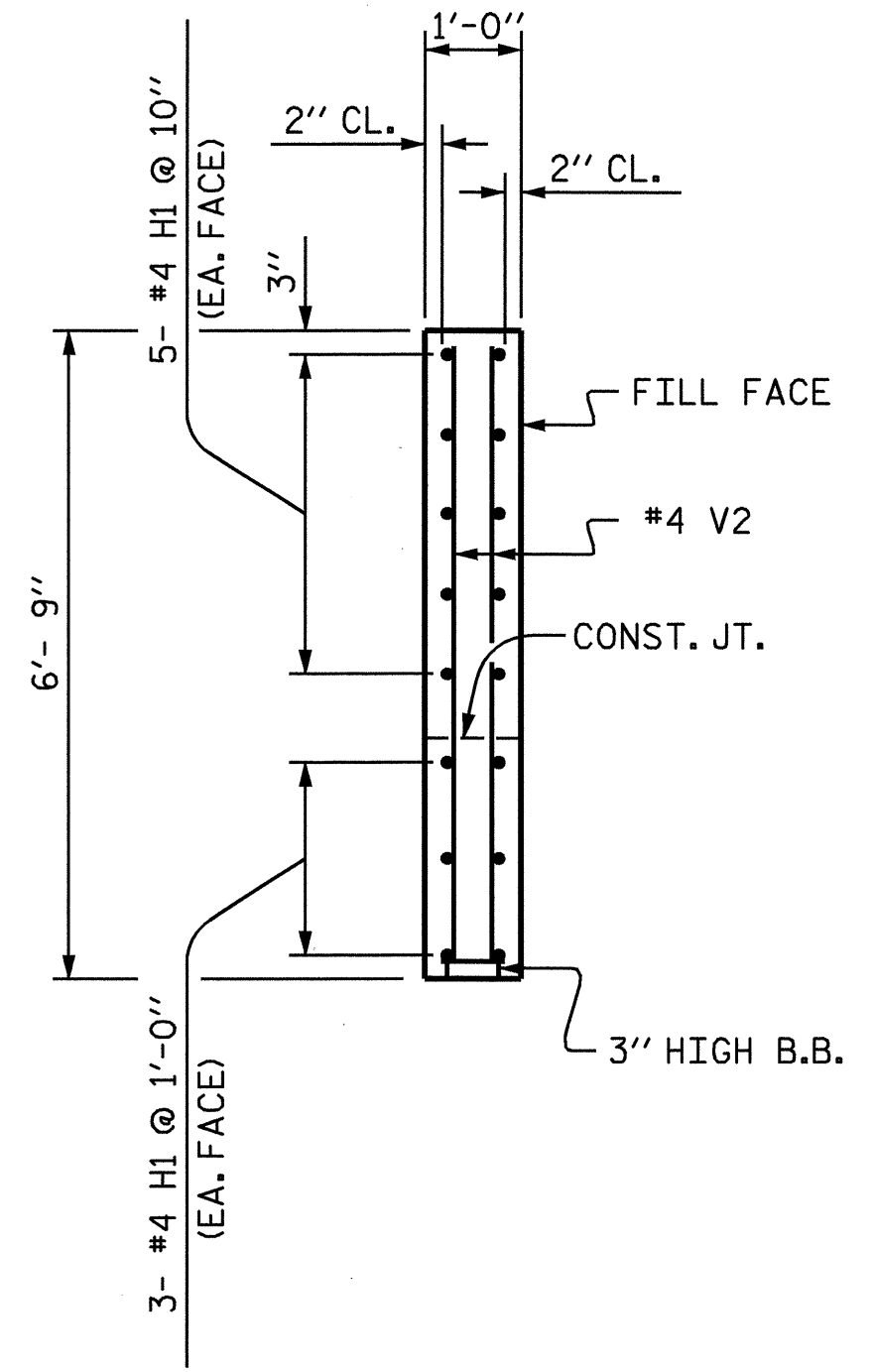
SECTION X-X



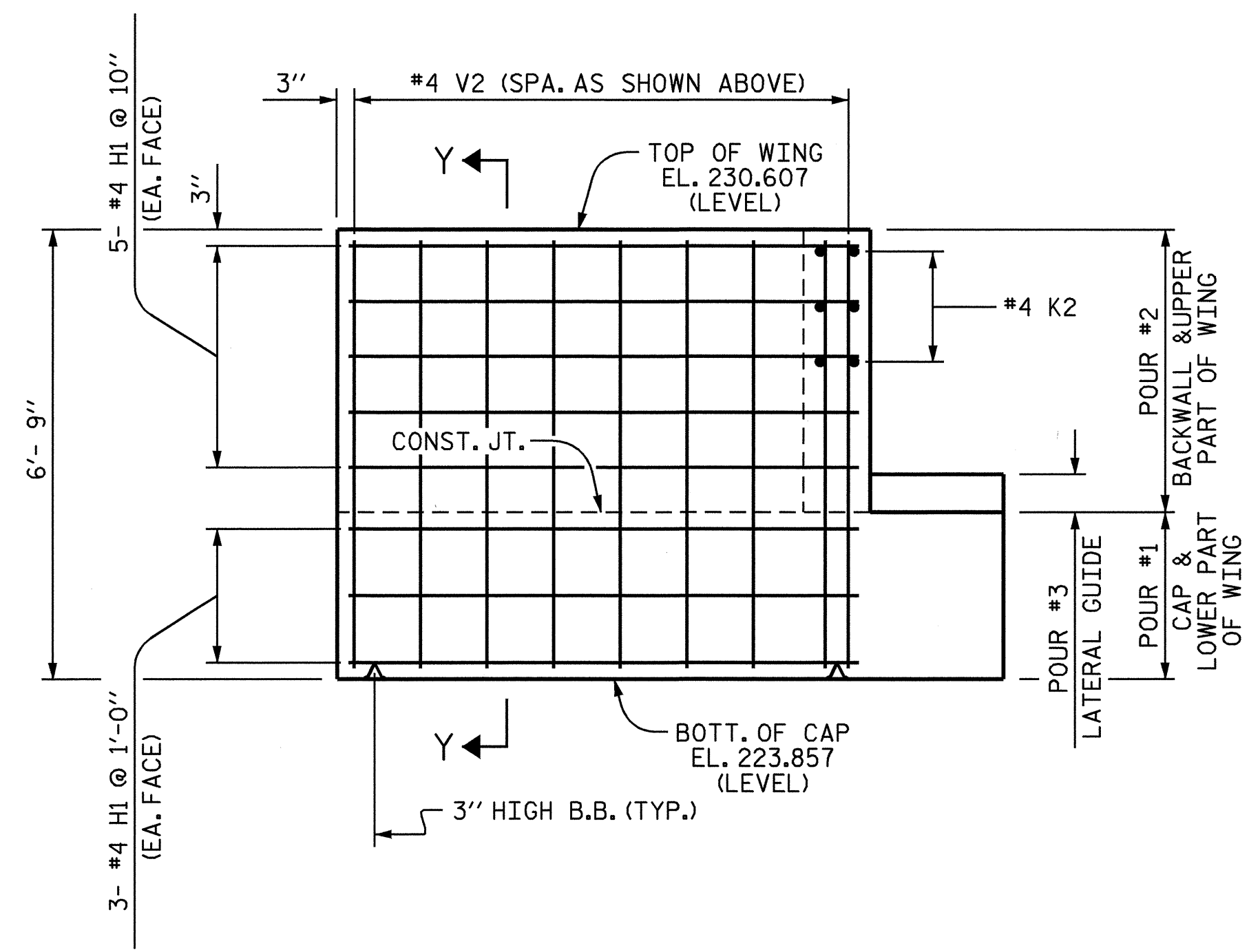
(W2) PLAN OF RIGHT WING



(W1) ELEVATION OF LEFT WING



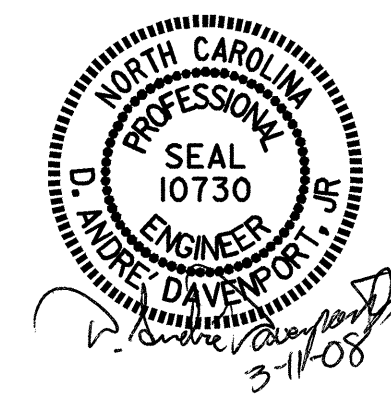
SECTION Y-Y



(W2) ELEVATION OF RIGHT WING

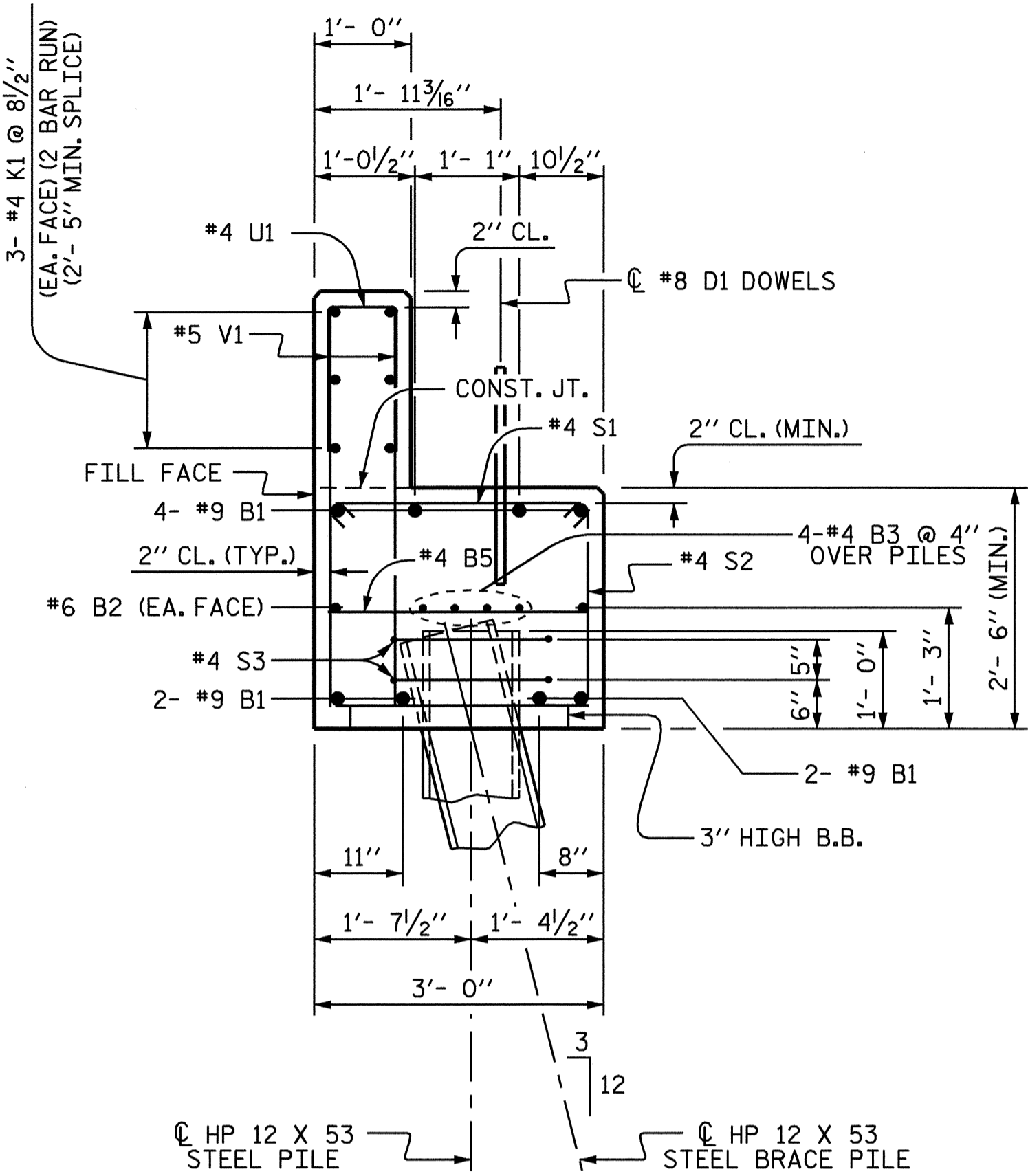
PROJECT NO. B-4210
 NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 2 OF 3
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 END BENT #1

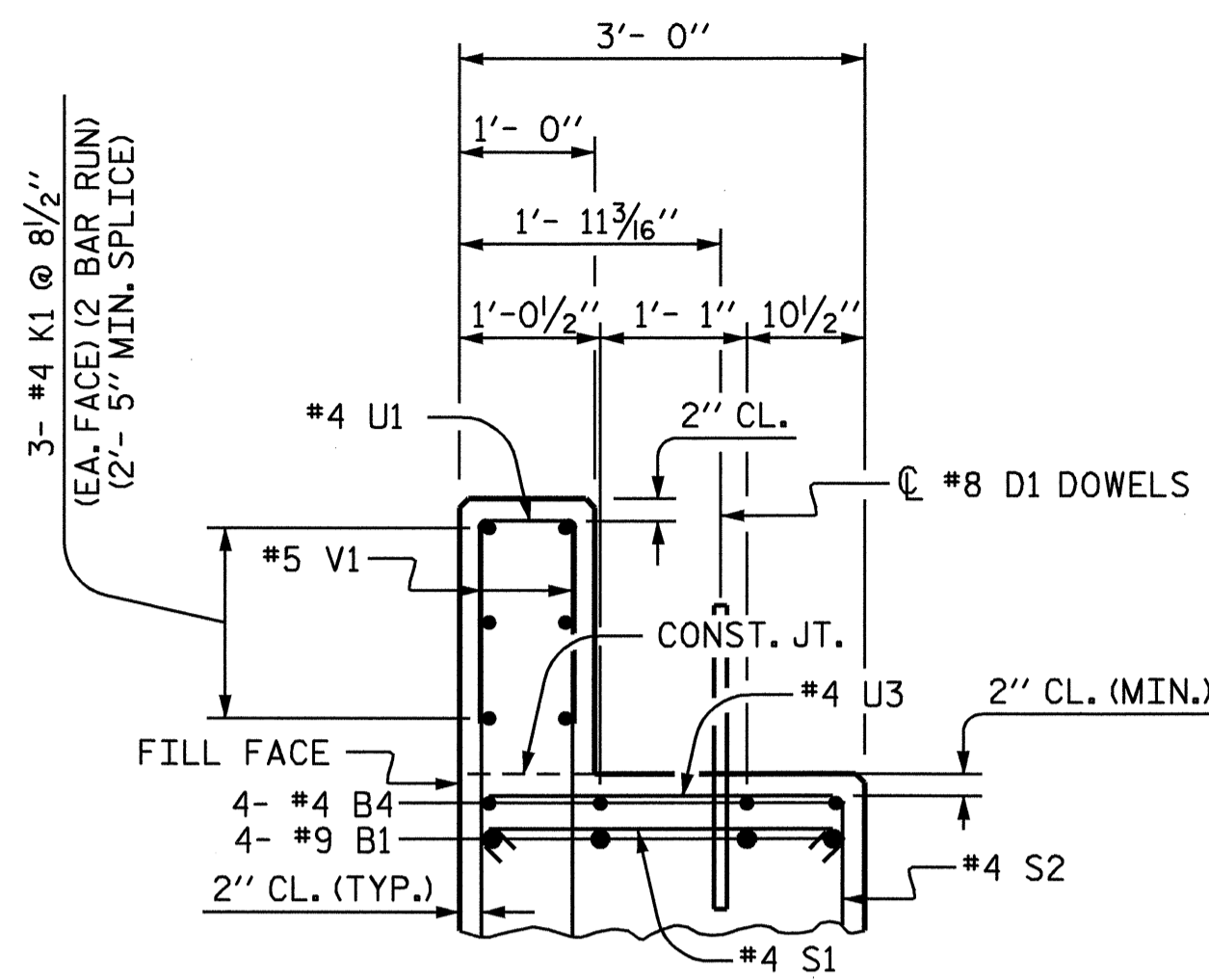


DRAWN BY: D. A. GLADDEN DATE: 1-15-08
 CHECKED BY: A. DAVENPORT DATE: 2-1-08

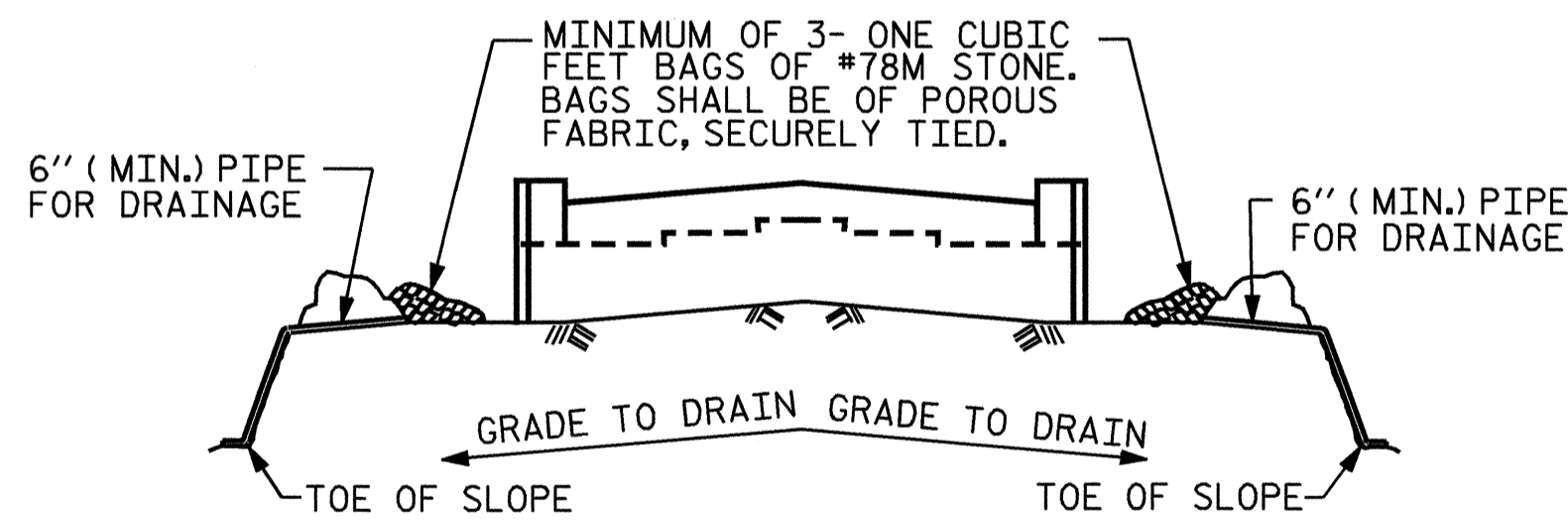
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS
2			4			18



SECTION A-A



SECTION B-B

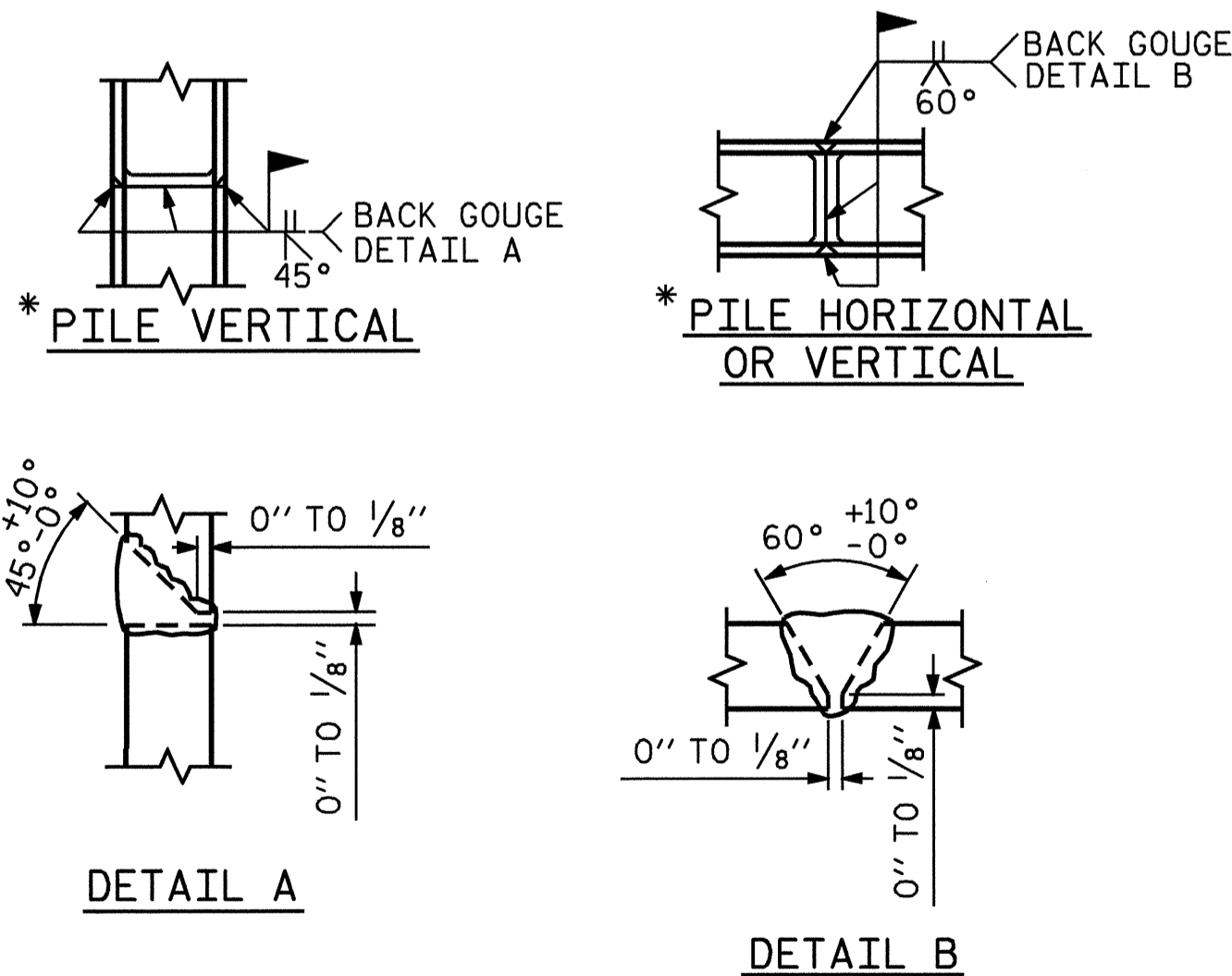


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETRIORATED AND LOST THEIR EFFECTIVENESS.

NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE FOR THE SEVERAL PAY ITEMS.

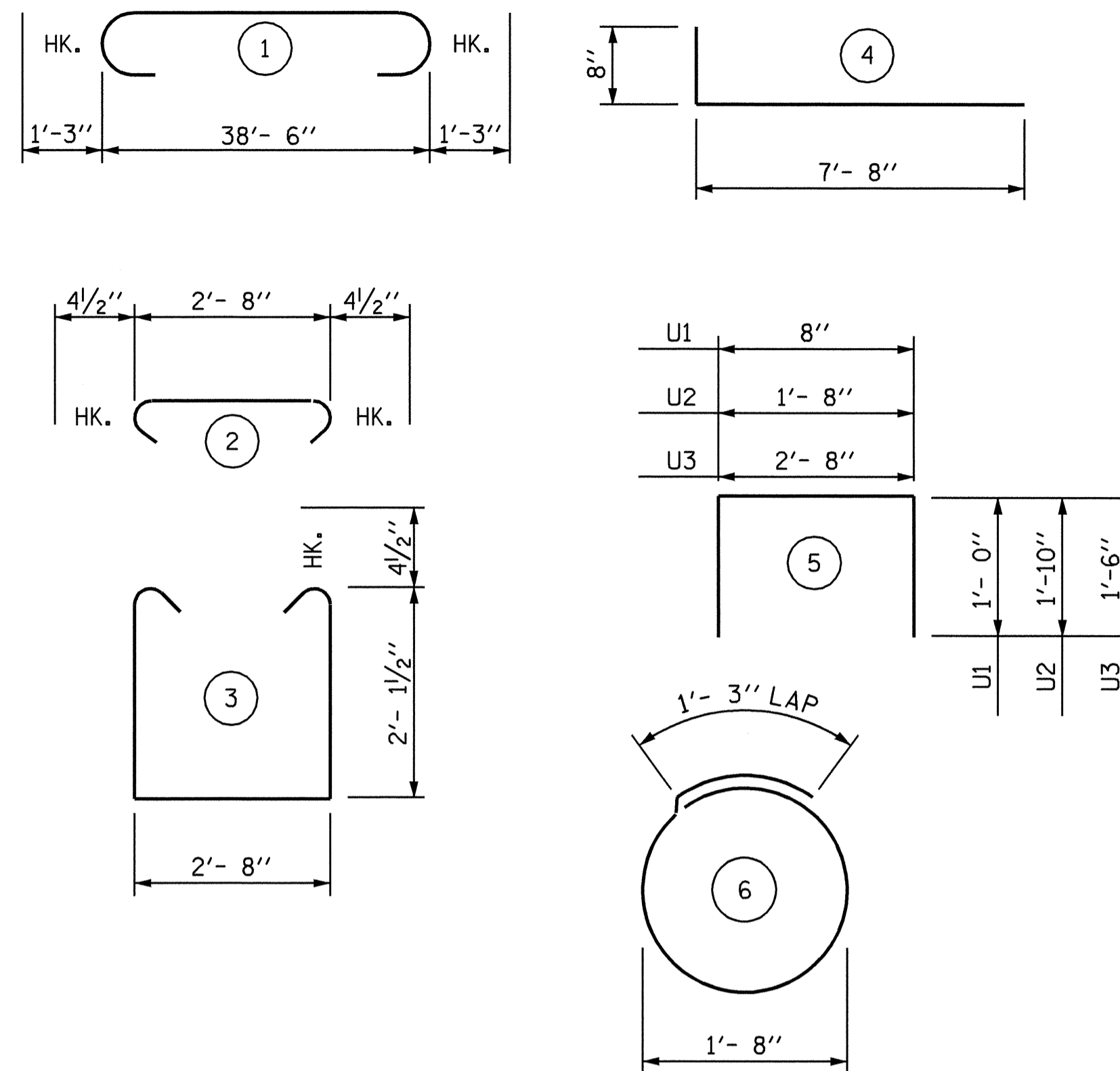
TEMPORARY DRAINAGE AT END BENT



* POSITION OF PILE DURING WELDING.

PILE SPLICE DETAILS

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	#9	1	41'-0"	1115
B2	#6	STR	38'-8"	116
B3	#4	STR	20'-7"	110
B4	#4	STR	12'-0"	32
B5	#4	STR	2'-8"	18
D1	#8	STR	2'-3"	132
H1	#4	4	8'-4"	178
K1	#4	STR	20'-7"	165
K2	#4	STR	3'-5"	27
S1	#4	2	3'-5"	96
S2	#4	3	7'-8"	215
S3	#4	6	6'-6"	78
U1	#4	5	2'-8"	57
U2	#4	5	5'-4"	14
U3	#4	5	5'-8"	42
V1	#5	STR	4'-2"	278
V2	#4	STR	6'-5"	206

REINFORCING STEEL = 2879 LBS

CLASS A CONCRETE BREAKDOWN

POUR #1 (CAP & LOWER PART OF WINGS)	13.0 C. Y.
POUR #2 (BACKWALL & UPPER PART OF WINGS)	5.7 C. Y.
POUR #3 (LATERAL GUIDES)	0.1 C. Y.
CLASS A CONCRETE TOTAL	18.8 C. Y.

HP 12 X 53 STEEL PILES	
NO. 9	LIN. FT. 405

PROJECT NO. B-4210
NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 3 OF 3

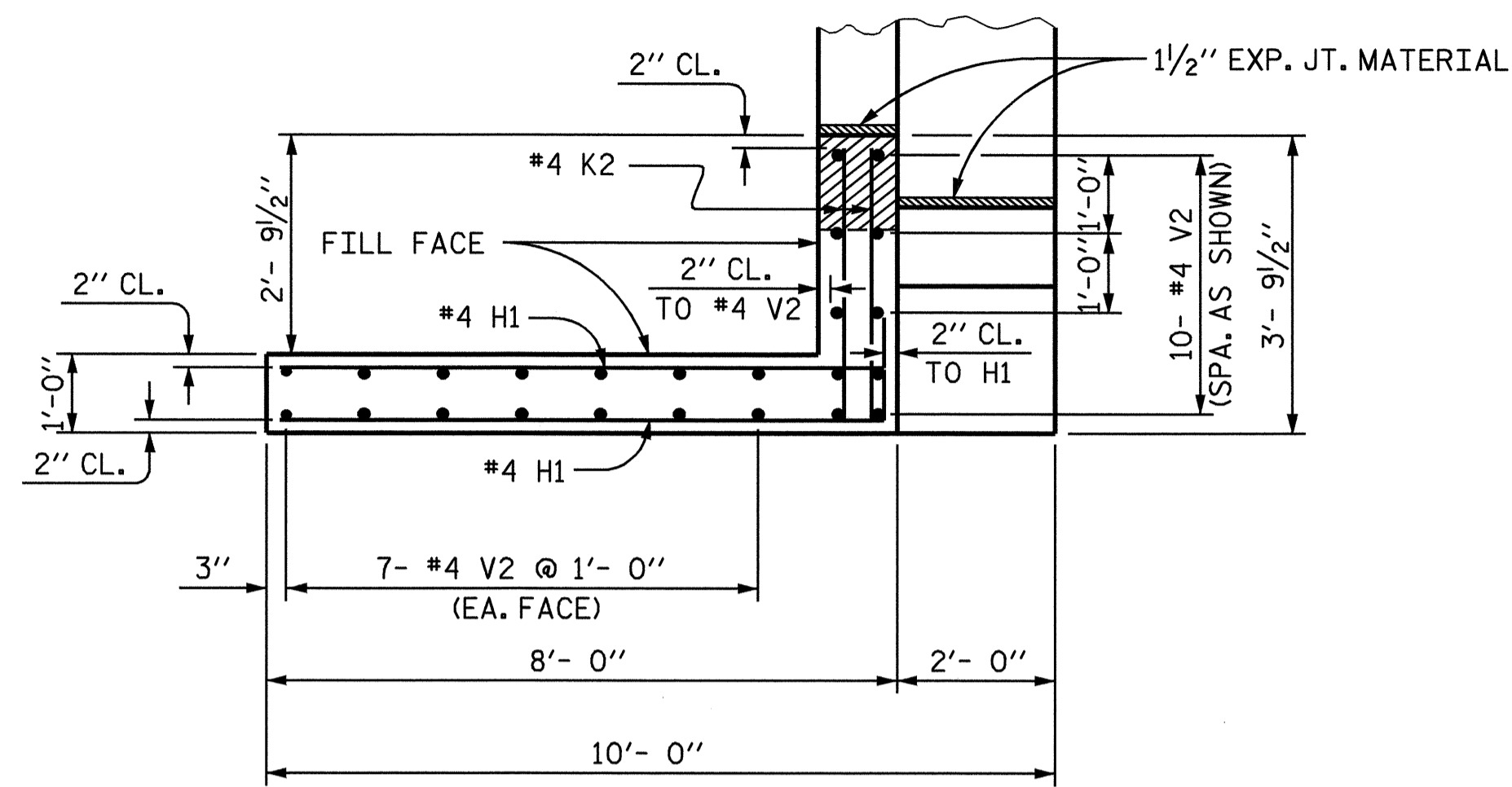
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 END BENT #1**

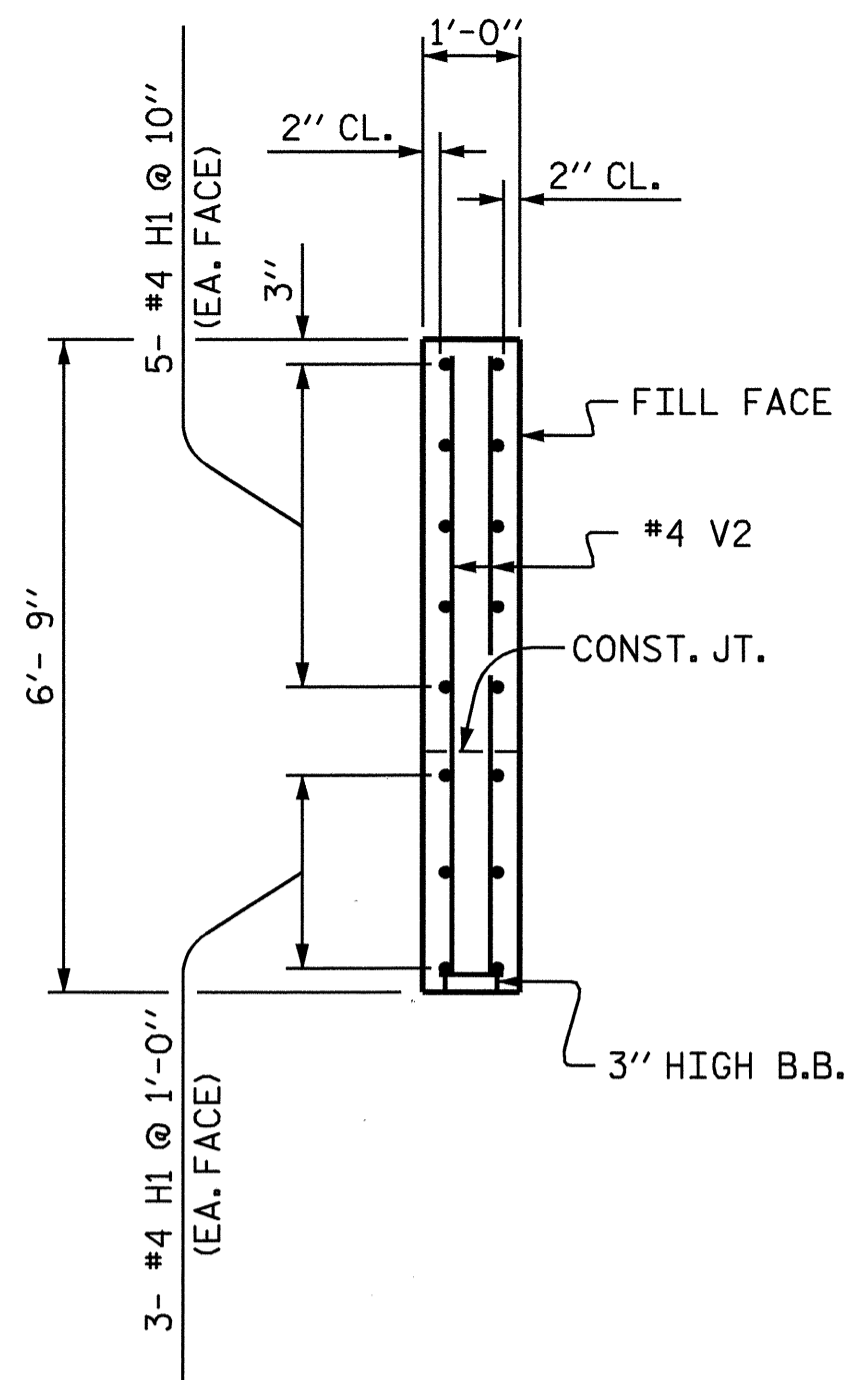


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-12
1			3			TOTAL SHEETS
2			4			18

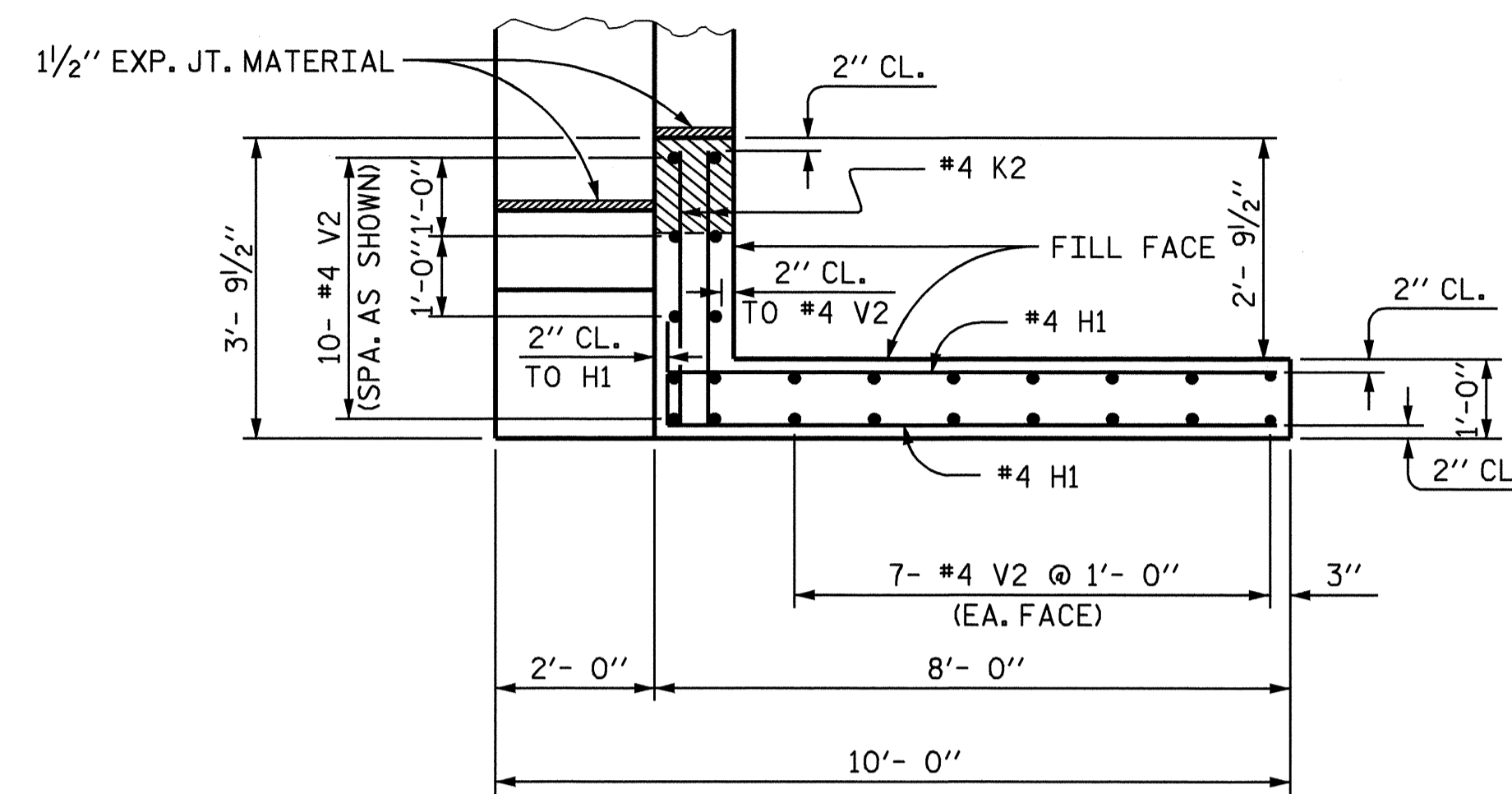
DRAWN BY : D. A. GLADDEN DATE : 1-15-08
 CHECKED BY : A. DAVENPORT DATE : 2-1-08



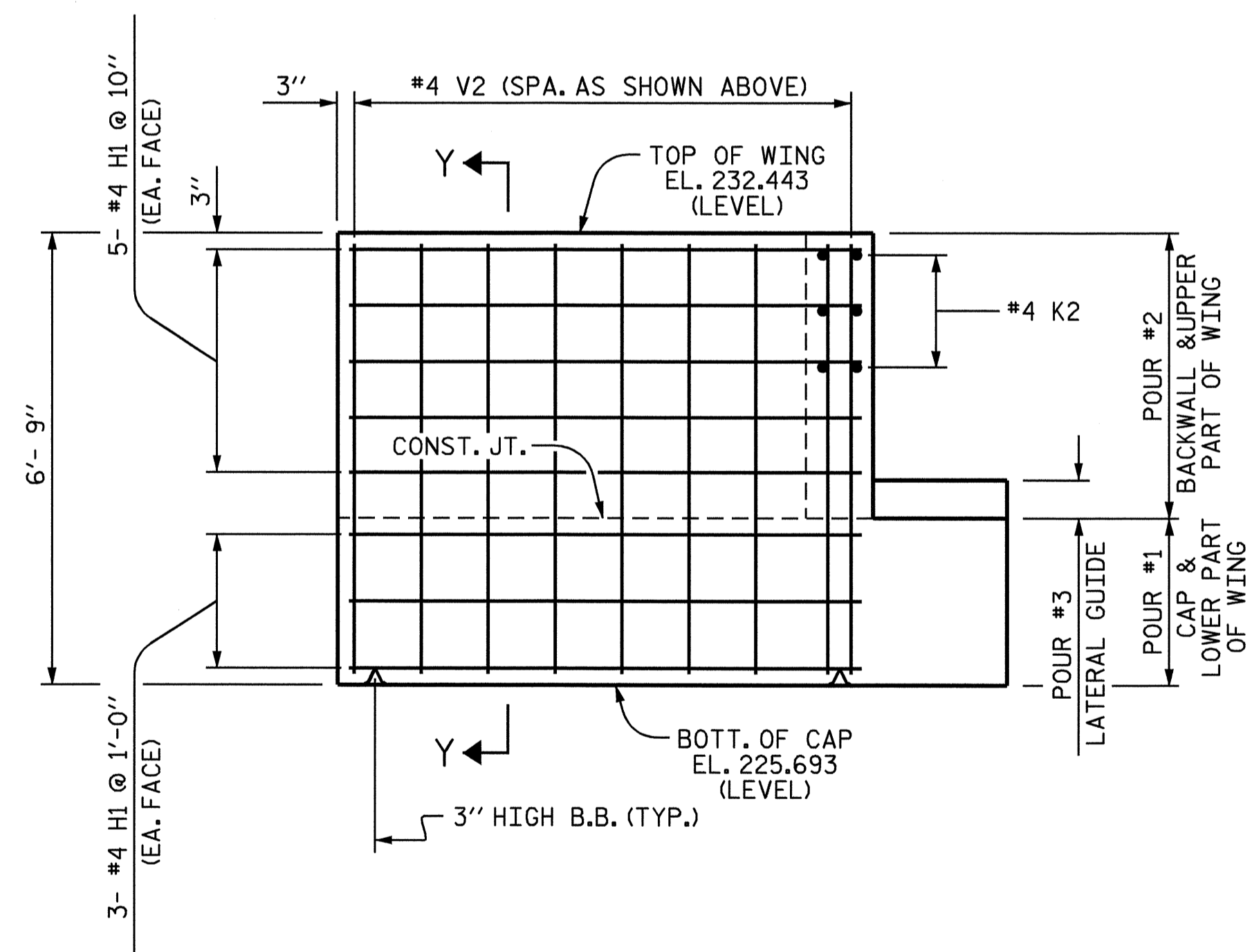
W1 PLAN OF LEFT WING



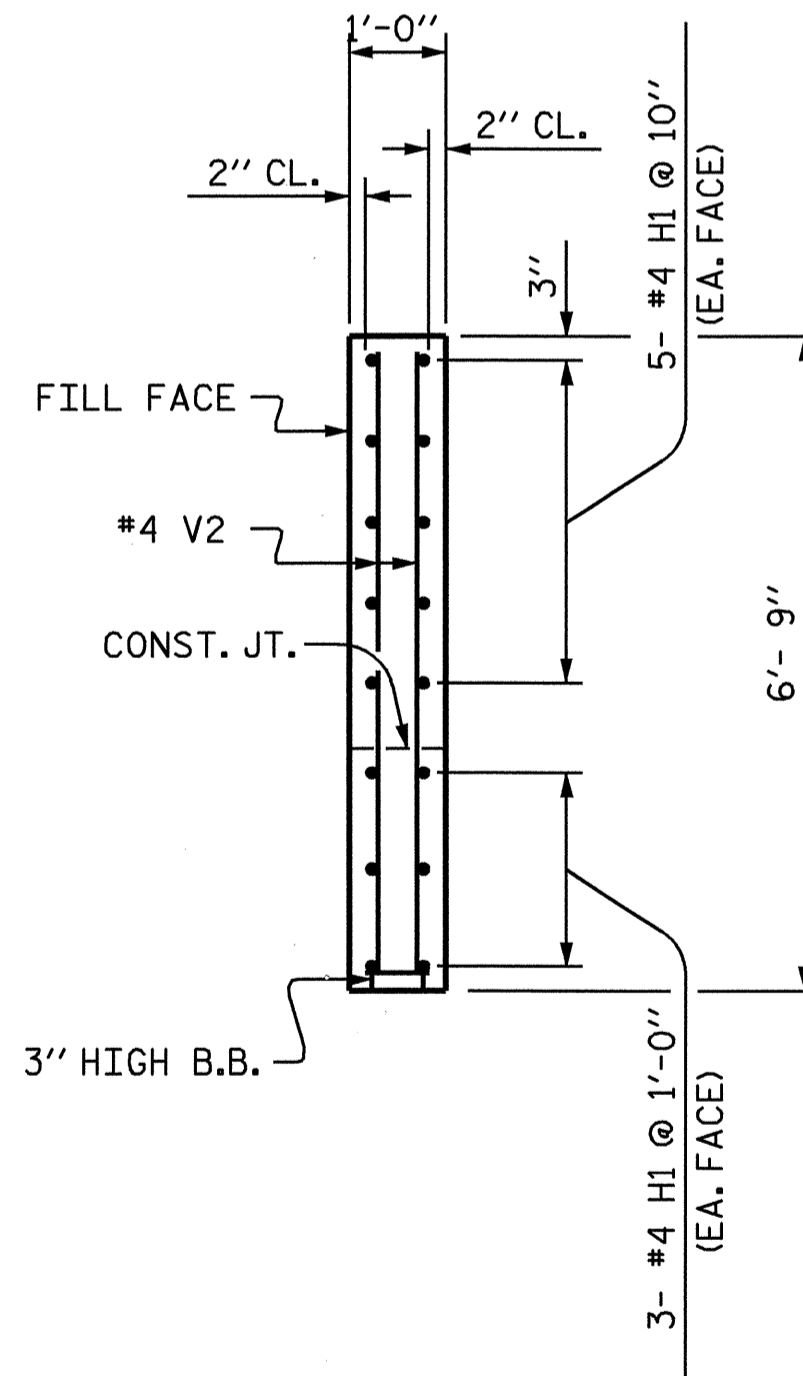
SECTION Y-Y



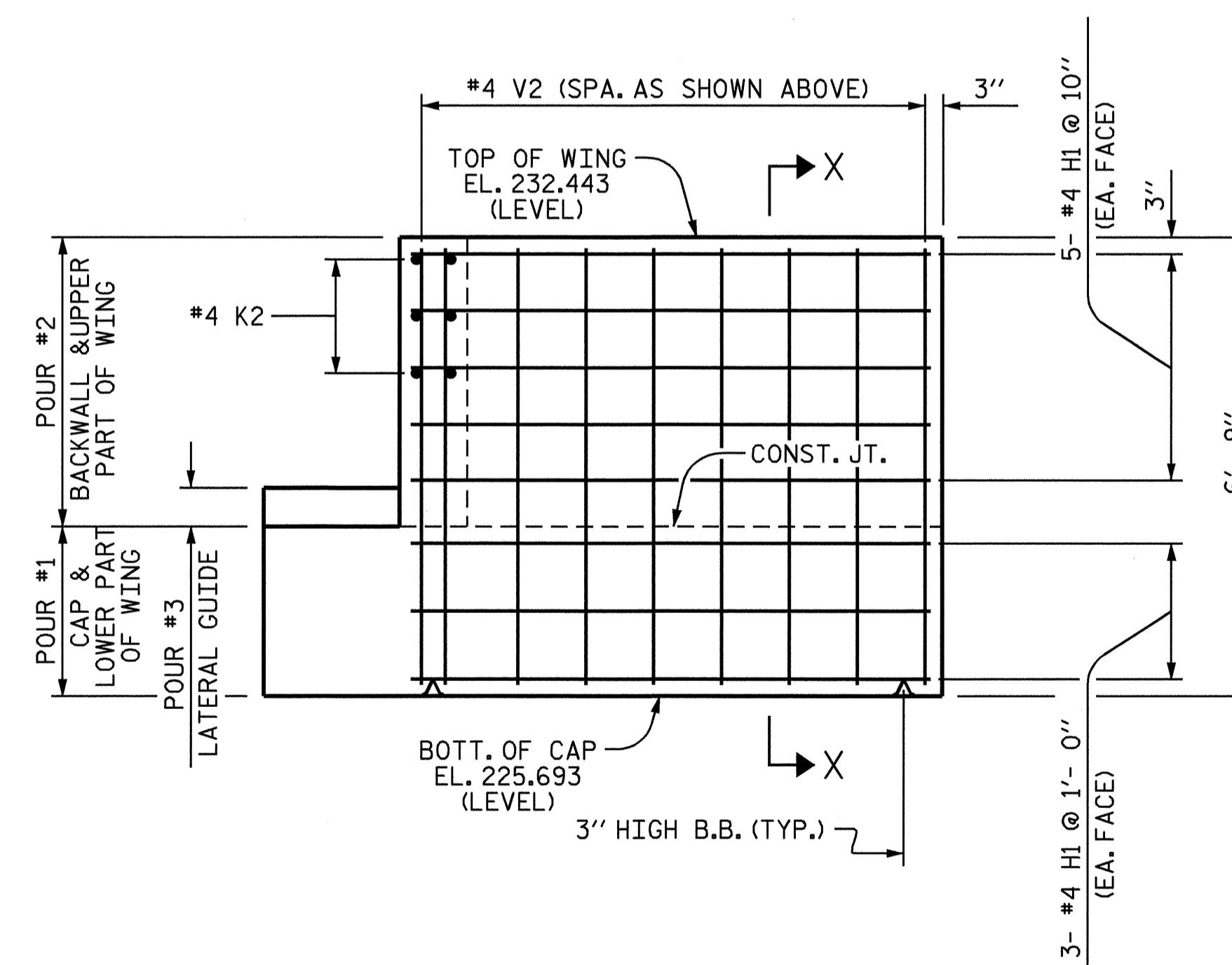
W2 PLAN OF RIGHT WING



W1 ELEVATION OF LEFT WING



SECTION X-X



W2 ELEVATION OF RIGHT WING

PROJECT NO. B-4210
NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 2 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

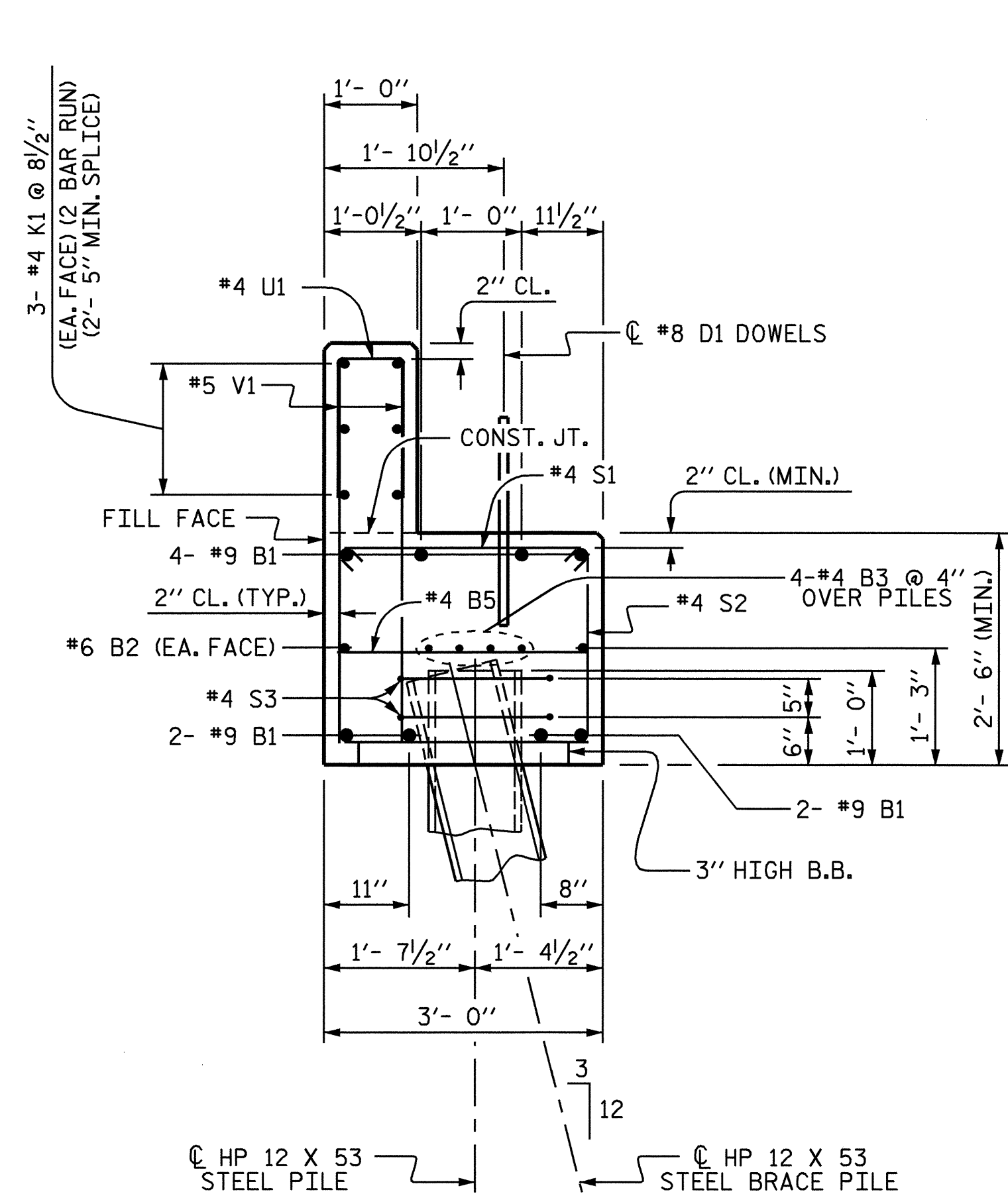
SUBSTRUCTURE
 END BENT #2



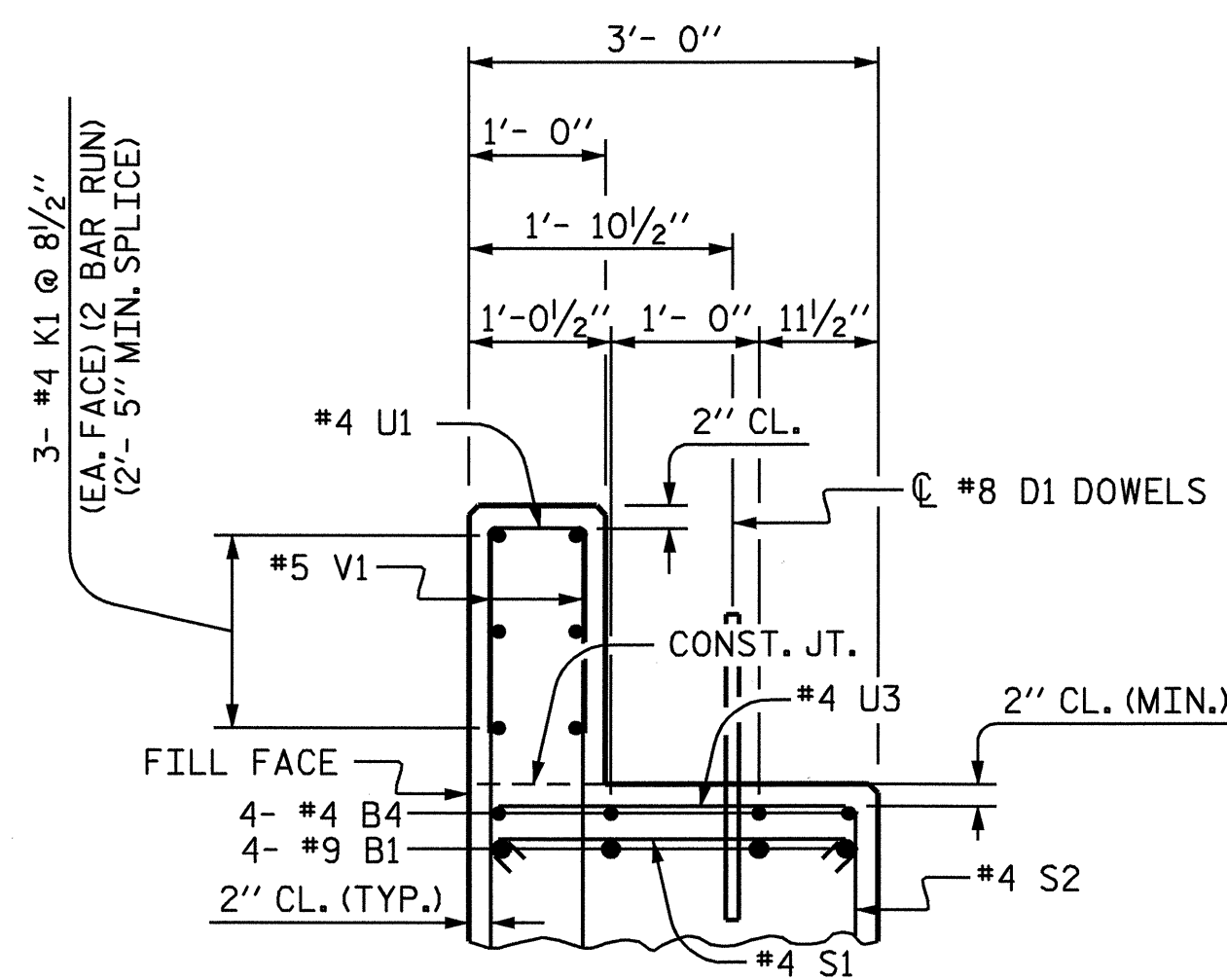
DRAWN BY: D. A. GLADDEN DATE: 1-15-08
 CHECKED BY: A. DAVENPORT DATE: 2-1-08

11-MAR-2008 14:35
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 adavenport

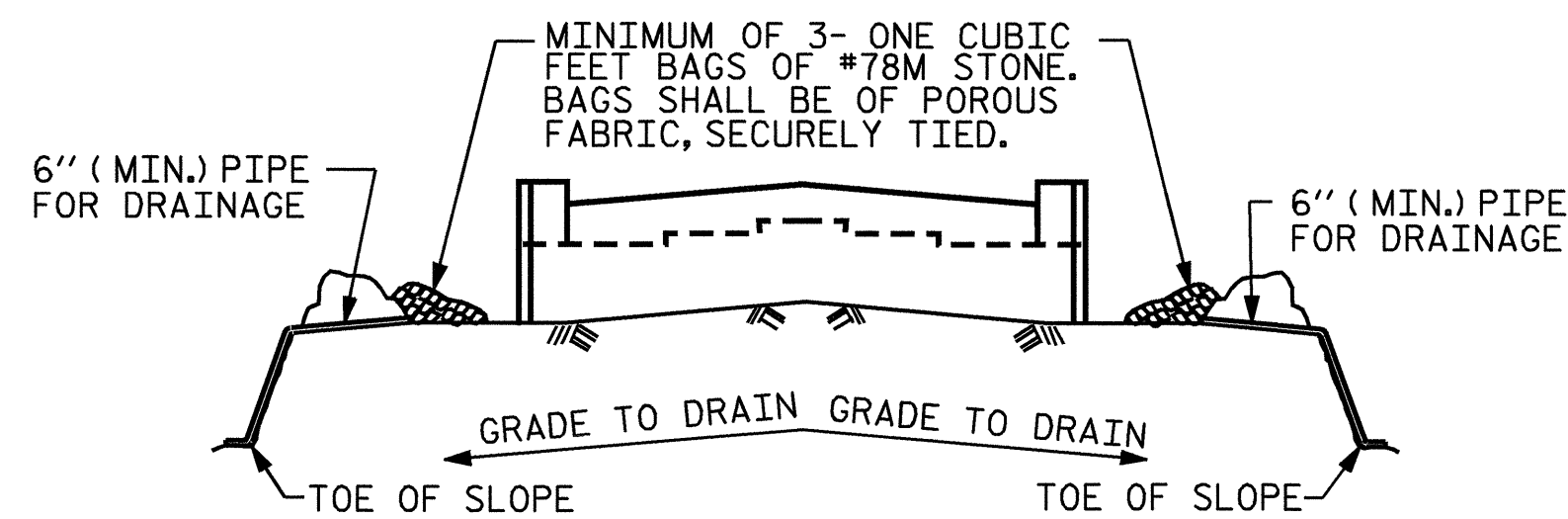
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-14
1			3			TOTAL SHEETS
2			4			18



SECTION A-A



SECTION B-B

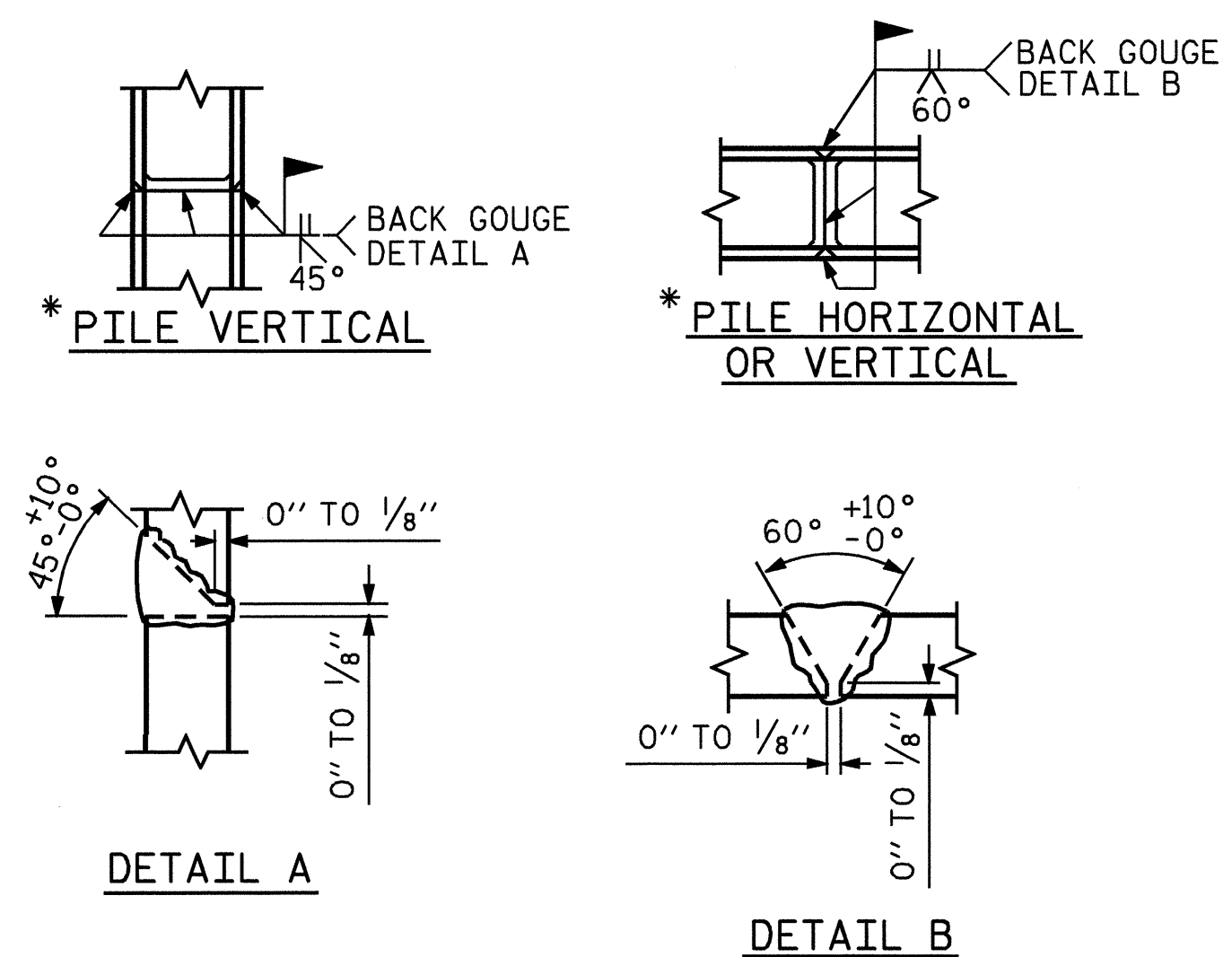


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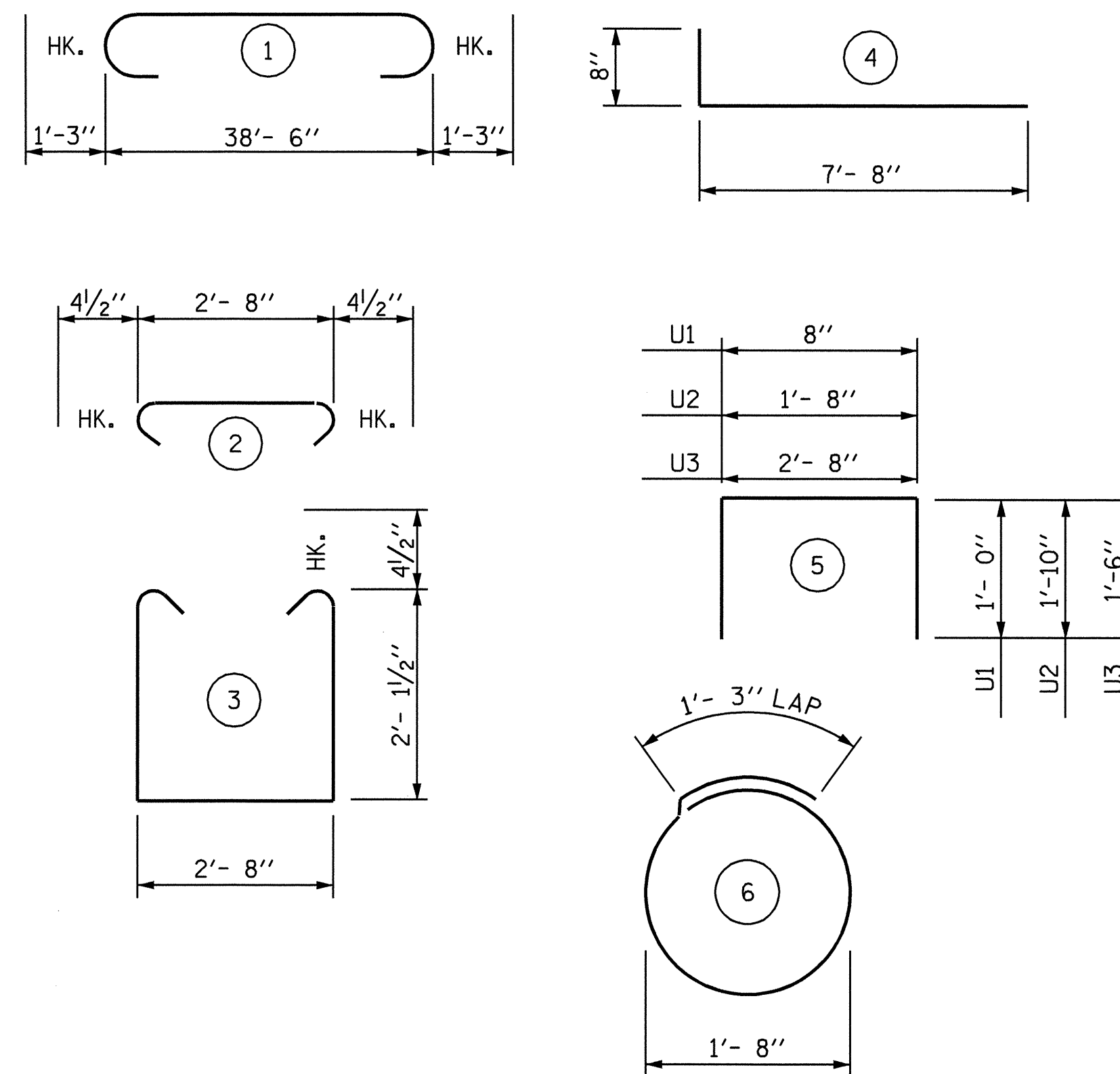
TEMPORARY DRAINAGE AT END BENT



* POSITION OF PILE DURING WELDING.

PILE SPLICE DETAILS

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	#9	1	41'-0"	1115
B2	#6	STR	38'-8"	116
B3	#4	STR	20'-7"	110
B4	#4	STR	12'-0"	32
B5	#4	STR	2'-8"	18
D1	#8	STR	2'-3"	132
H1	#4	4	8'-4"	178
K1	#4	STR	20'-7"	165
K2	#4	STR	3'-5"	27
S1	#4	2	3'-5"	96
S2	#4	3	7'-8"	215
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U1	#4	5	2'-8"	57
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V1	#5	STR	4'-2"	278
V2	#4	STR	6'-5"	206

REINFORCING STEEL = 2879 LBS

CLASS A CONCRETE BREAKDOWN

POUR #1 (CAP & LOWER PART OF WINGS)	13.0 C. Y.
POUR #2 (BACKWALL & UPPER PART OF WINGS)	5.7 C. Y.
POUR #3 (LATERAL GUIDES)	0.1 C. Y.
CLASS A CONCRETE TOTAL	18.8 C. Y.

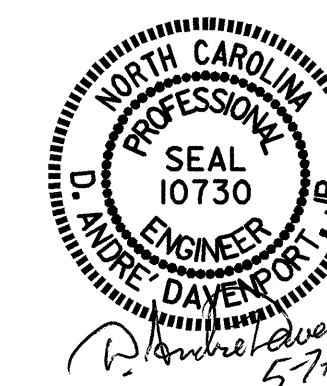
HP 12 X 53 STEEL PILES	
NO. 9	LIN. FT. 495

PROJECT NO. B-4210
NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 END BENT #2**

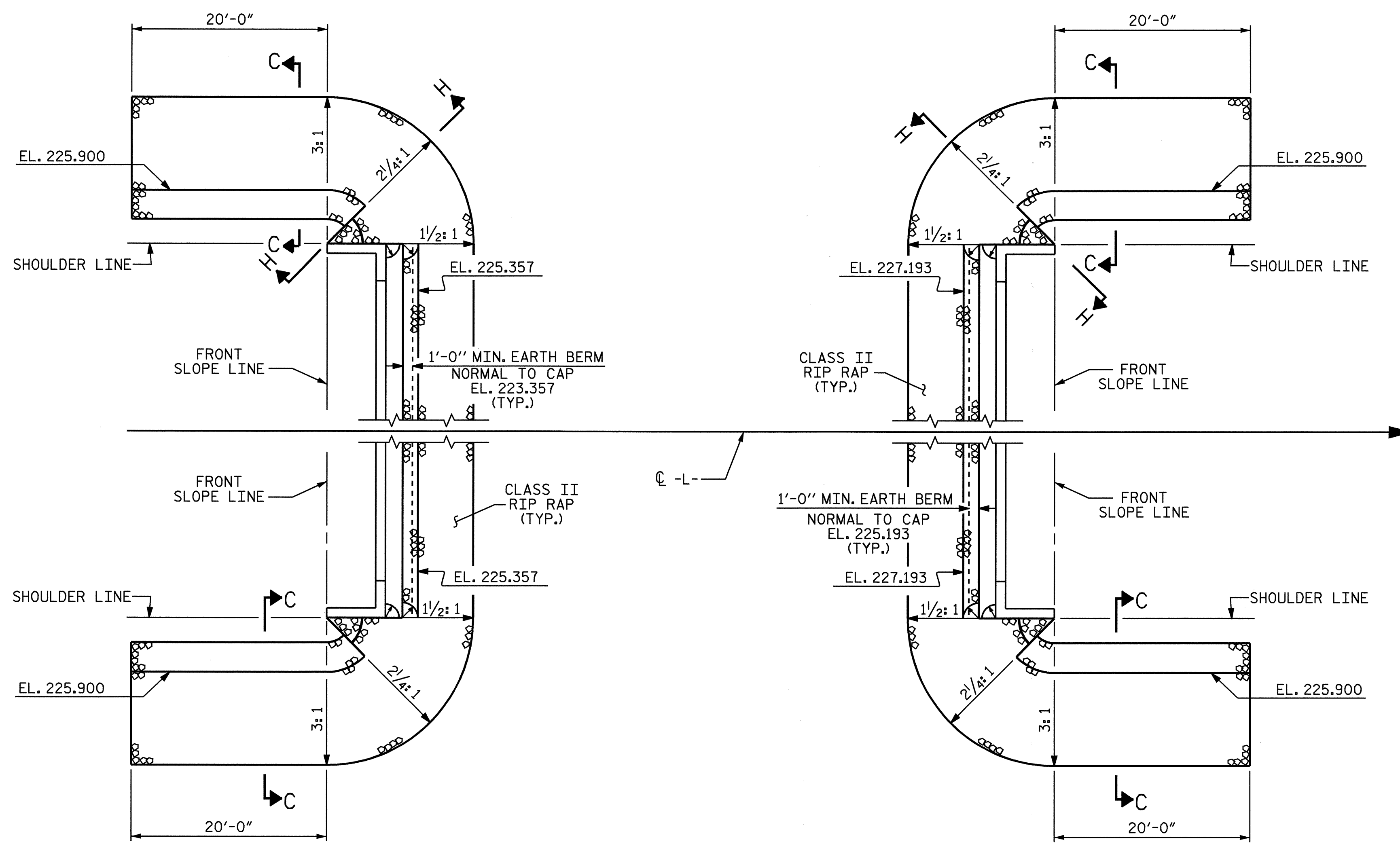


REVISIONS

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

SHEET NO.
S-15
TOTAL SHEETS 18

DRAWN BY: D. A. GLADDEN DATE: 1-15-08
 CHECKED BY: A. DAVENPORT DATE: 2-1-08

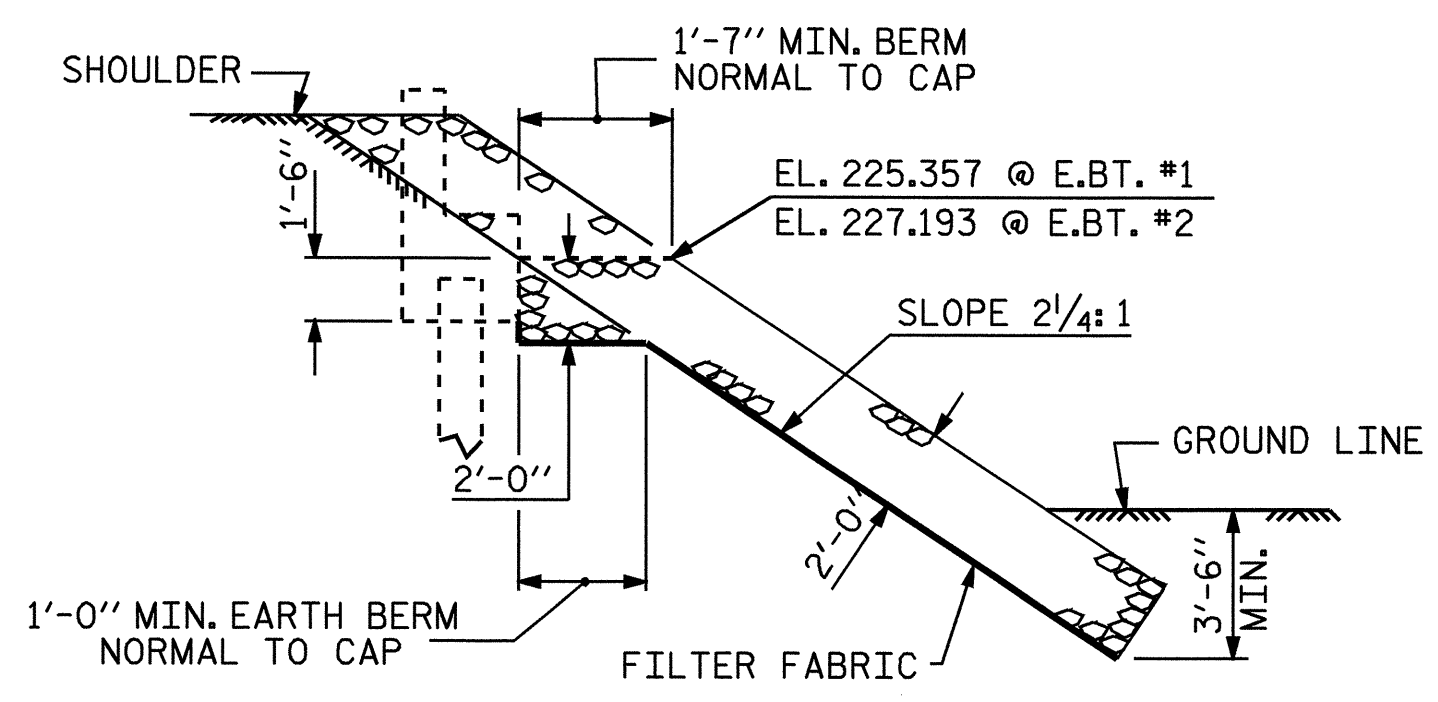


END BENT #1

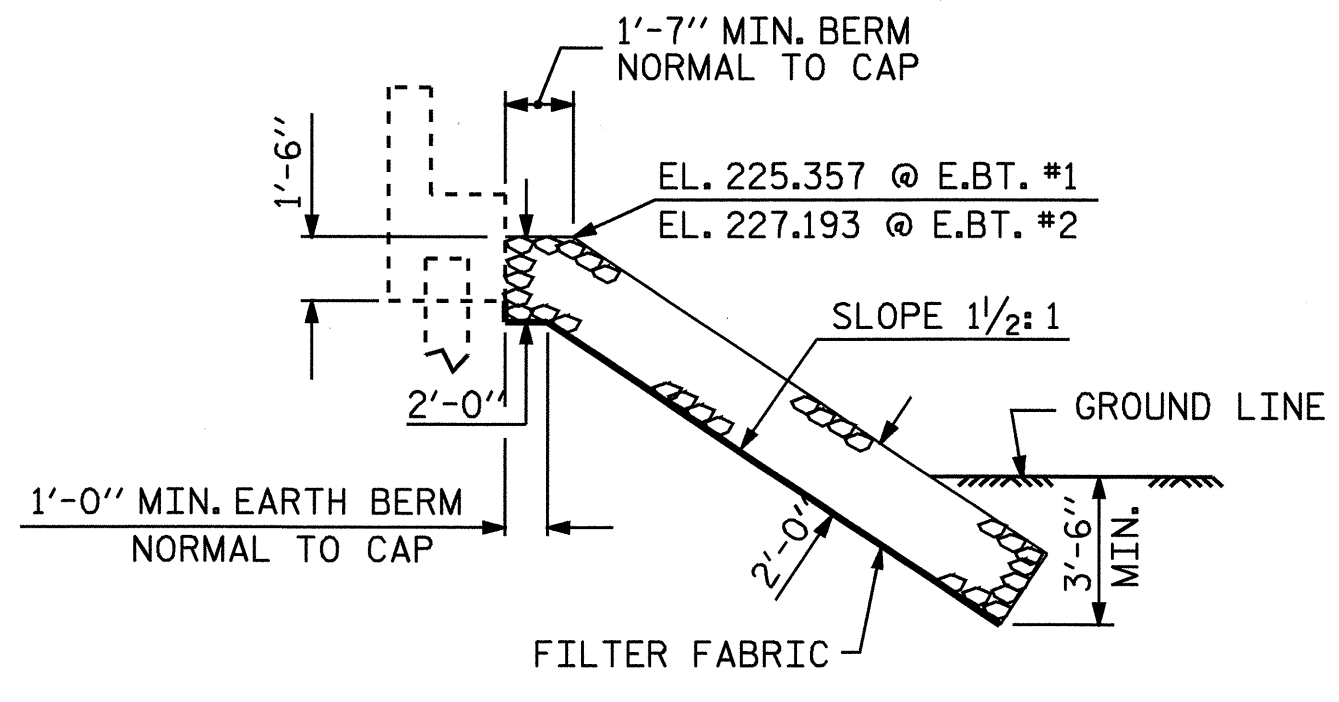
END BENT #2

PLAN

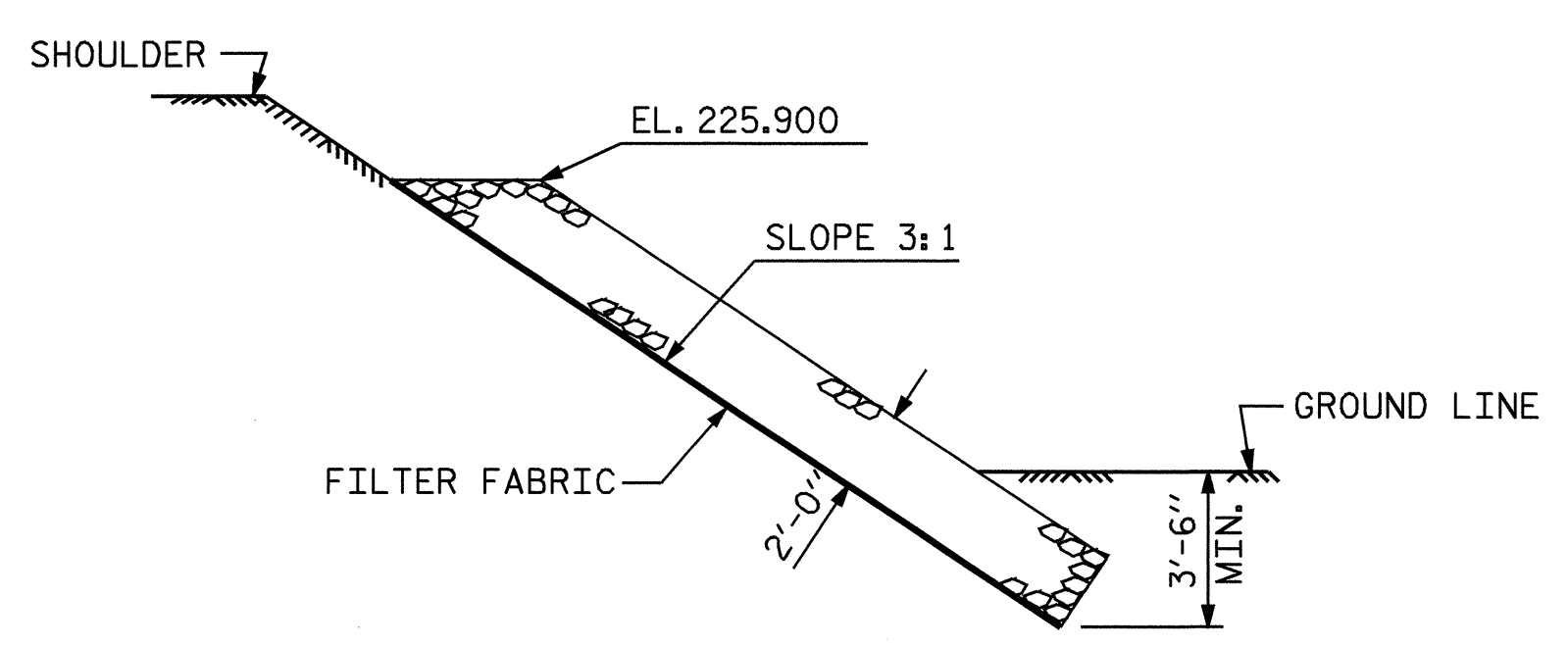
ESTIMATED QUANTITIES		
BRIDGE @ STA. 13+50.00 -L-	RIP RAP CLASS II	FILTER FABRIC FOR DRAINAGE
	TONS	SQUARE YARDS
END BENT 1	160	180
END BENT 2	190	210
TOTAL	350	390



SECTION H-H



SECTION C-C
BERM RIP RAPPED



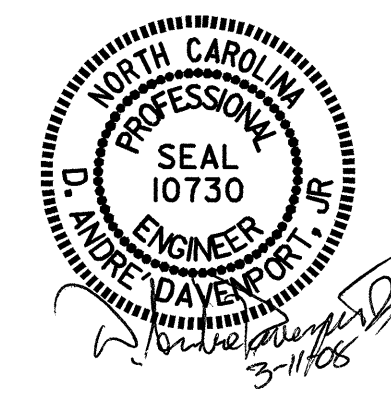
SECTION C-C

PROJECT NO. B-4210
 NASH COUNTY
 STATION: 13+50.00 -L-

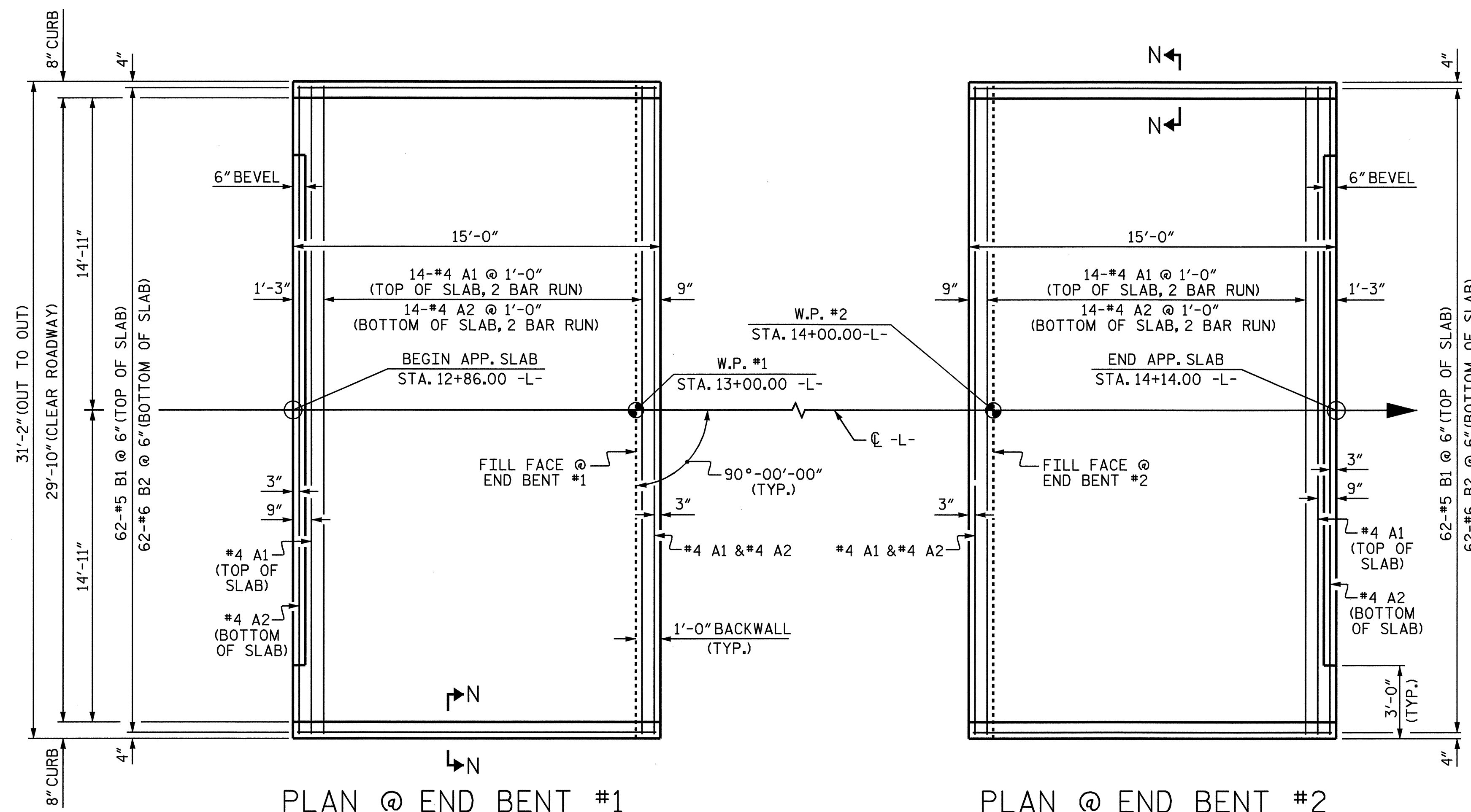
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

— RIP RAP DETAILS —

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16
1			3			TOTAL SHEETS 18
2			4			



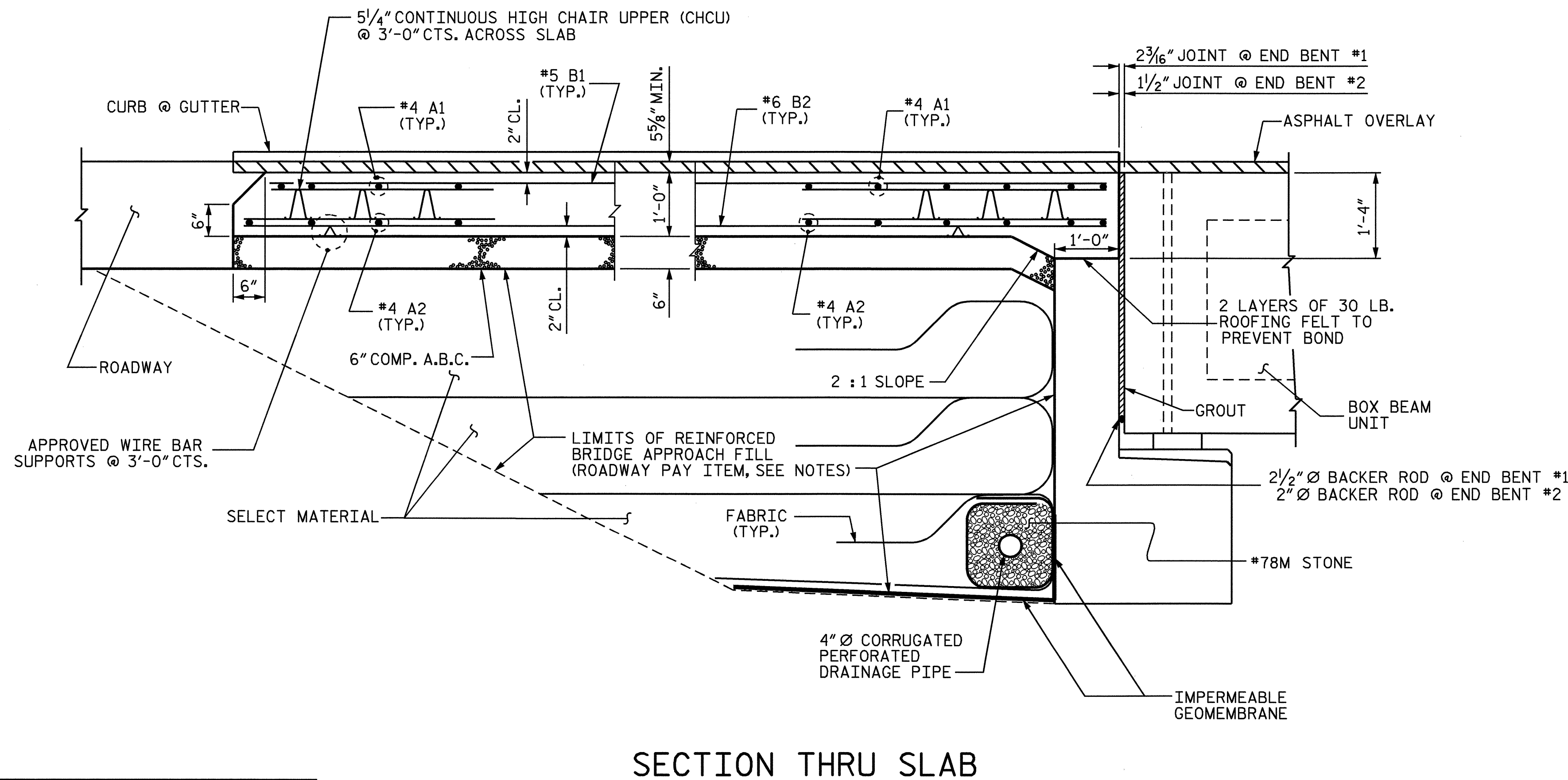
ASSEMBLED BY : M. G. SHIAKH DATE : 01-15-08
 CHECKED BY : D.A. DAVENPORT DATE : 01-08
 DRAWN BY : FCJ 2/88 REV. 8/16/99 RWW/LES
 CHECKED BY : ARB 8/88 REV. 10/17/00 RWW/LES
 REV. 5/1/06 TLA/GM



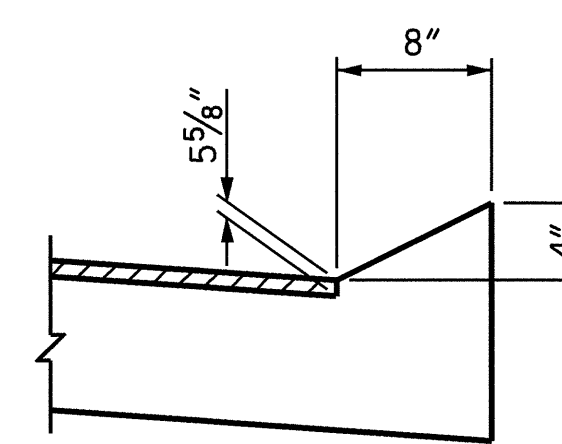
PLAN @ END BENT #1

PLAN @ END BENT #2

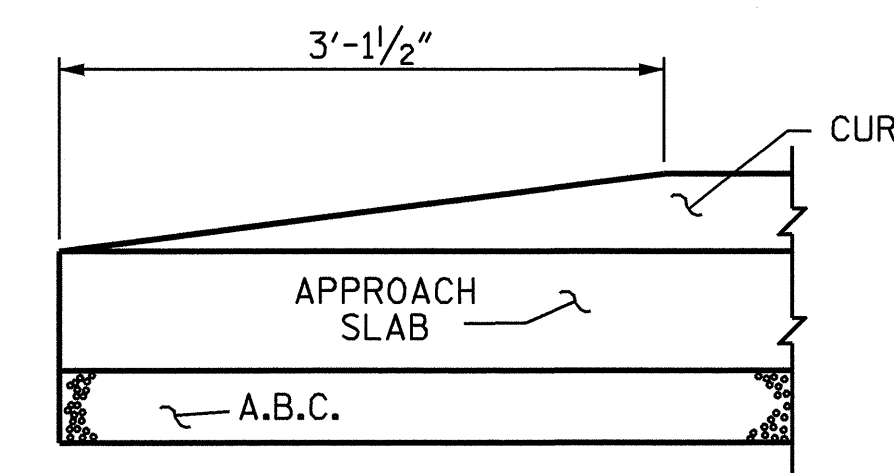
DIMENSIONS SHOWN ARE TYPICAL FOR BOTH APPROACH SLABS



SECTION THRU SLAB



SECTION N-N



END OF CURB WITHOUT SHOULDER BERM GUTTER

NOTES

APPROACH SLAB SHALL NOT BE CONSTRUCTED PRIOR TO COMPLETION OF THE BRIDGE DECK.

FOR REINFORCED BRIDGE APPROACH FILL INCLUDING FABRIC, IMPERMEABLE GEOMEMBRANE, 4" Ø DRAINAGE PIPE, #78M STONE, AND SELECT MATERIAL, SEE ROADWAY PLANS.

AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED. SEE ROADWAY PLANS.

THE 6" COMP. A.B.C. SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB AND SHALL EXTEND 1'-0" OUTSIDE OF EACH EDGE OF THE APPROACH SLAB.

THE CONTRACTOR MAY USE 4" TYPE B-25.0B ASPHALT CONCRETE BASE COURSE IN LIEU OF 6" COMP. A.B.C. IF THIS OPTION IS USED, THE BASE COURSE SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB.

THE CONTRACTOR MAY USE 5" CLASS "A" CONCRETE BASE IN LIEU OF 6" COMP. A.B.C. IF THIS OPTION IS USE, THE CONCRETE BASE SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB. THE CONCRETE SHALL BE FINISHED TO A SMOOTH SURFACE AND A LAYER OF 30 LB ROOFING FELT SHALL BE PLACED BETWEEN THE CONCRETE BASE AND THE APPROACH SLAB TO PREVENT BOND. THE APPROACH SLAB SHALL NOT BE CAST UNTIL THE CONCRETE BASE HAS REACHED AN AGE OF THREE CURING DAYS.

FOR JOINT DETAILS, SEE "PRESTRESSED CONCRETE BOX BEAM UNIT" SHEETS.

THE JOINT AT THE END BENT SHALL BE GROUTED AS SOON AS PRACTICAL AFTER THE CONSTRUCTION OF THE APPROACH SLABS.

APPROACH SLAB GROOVING IS NOT REQUIRED.

BILL OF MATERIAL						
APPROACH SLAB AT EB #1						
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
*A1	32	#4	STR	16'-5"	351	
A2	32	#4	STR	16'-4"	349	
*B1	62	#5	STR	14'-2"	916	
B2	62	#6	STR	14'-8"	1366	
REINFORCING STEEL					LBS.	1715
*EPOXY COATED REINFORCING STEEL					LBS.	1267
CLASS AA CONCRETE					C. Y.	17.9
APPROACH SLAB AT EB #2						
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
*A1	32	#4	STR	16'-5"	351	
A2	32	#4	STR	16'-4"	349	
*B1	62	#5	STR	14'-2"	916	
B2	62	#6	STR	14'-8"	1366	
REINFORCING STEEL					LBS.	1715
*EPOXY COATED REINFORCING STEEL					LBS.	1267
CLASS AA CONCRETE					C. Y.	17.9

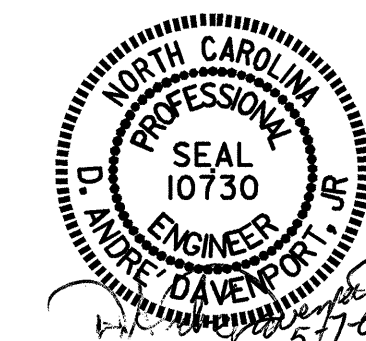
PROJECT NO. B-4210
 NASH COUNTY
 STATION: 13+50.00 -L-

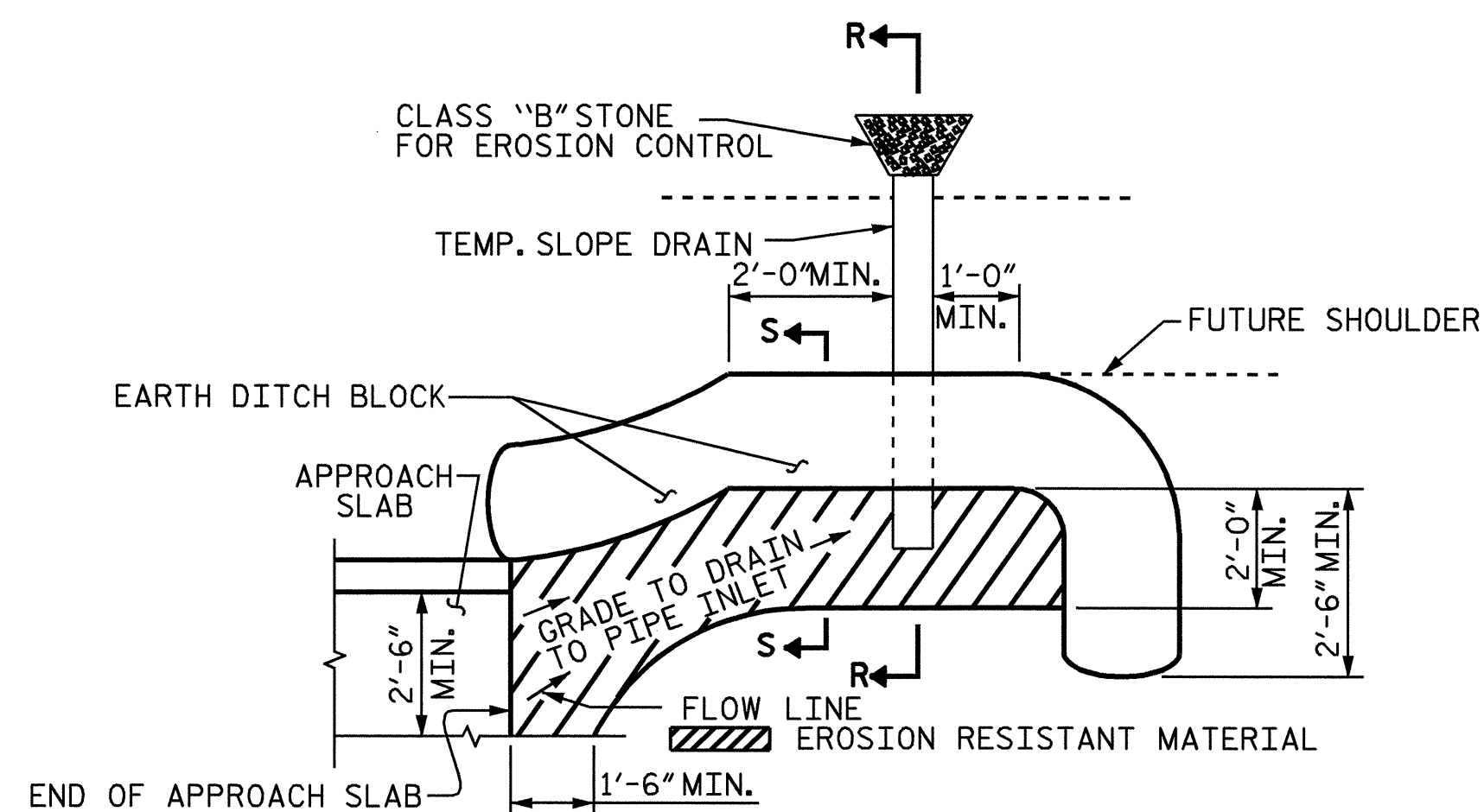
SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 BRIDGE APPROACH SLAB
 FOR FLEXIBLE PAVEMENT

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-17
1			3			TOTAL SHEETS
2			4			18

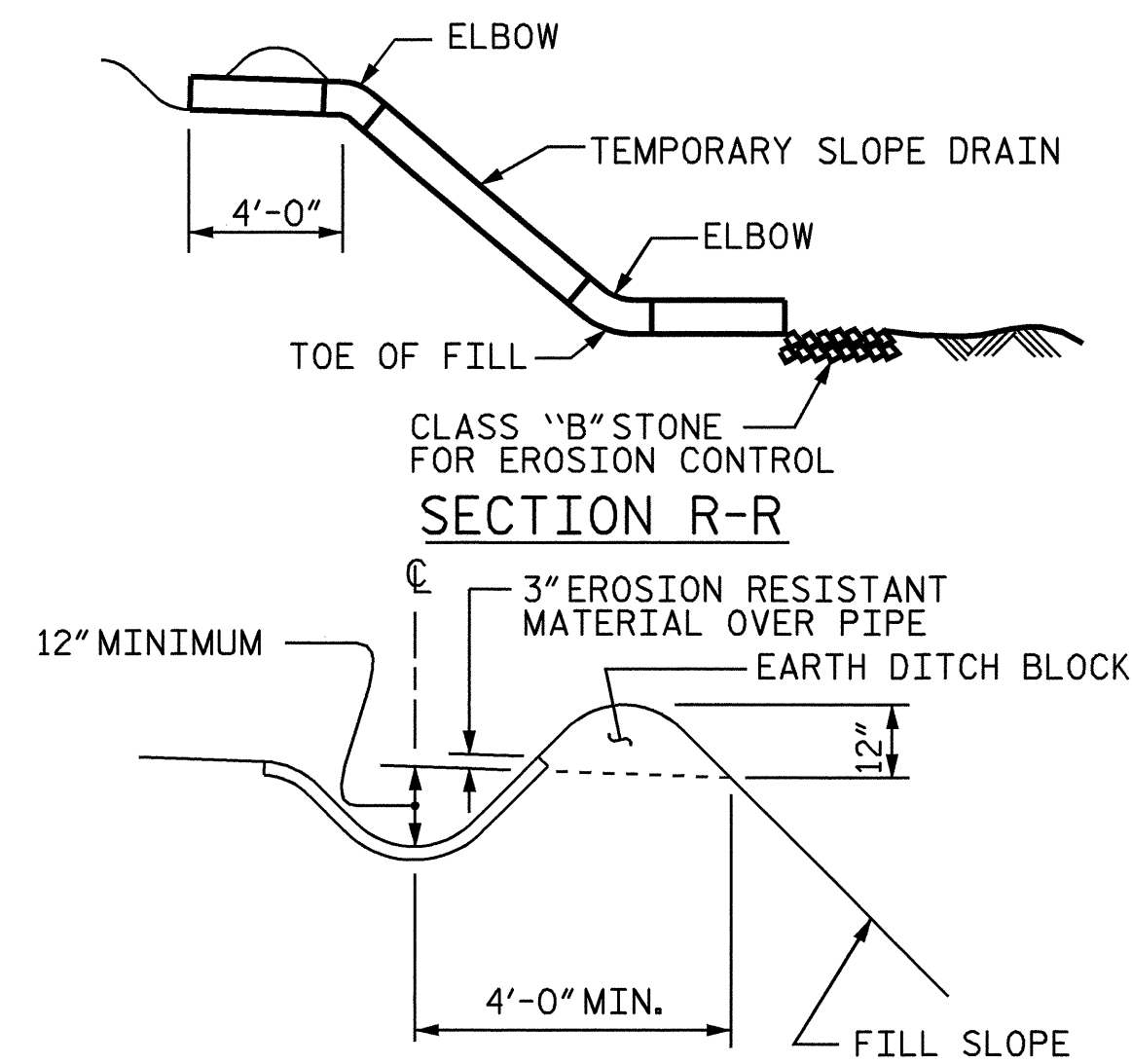
ASSEMBLED BY: M. G. SHAIKH DATE: 5-21-07
 CHECKED BY: A. SORSENGINH DATE: 5-29-07
 DRAWN BY: EEM 3/95 REV. 1/10/01 LES/RDR
 CHECKED BY: VAP 3/95 REV. 5/1/03R RWW/JTE
 REV. 5/1/06 TLA/GM





NOTE: IMMEDIATELY AFTER THE CONSTRUCTION OF THE APPROACH SLAB, THE CONTRACTOR SHALL PROVIDE TEMPORARY BERM AND SLOPE DRAIN. CONTRACTOR SHALL GRADE TO PIPE INLET AND PROVIDE EROSION RESISTANT MATERIAL AS SHOWN. THE EROSION RESISTANT MATERIAL SHALL BE EITHER 1) ASPHALT PLANT MIX, TYPE 1 OR TYPE 2, MIN. 2" DEPTH, 2) EROSION CONTROL MAT, OR 3) CONCRETE, AS DIRECTED BY THE ENGINEER. THE SLOPE DRAIN SHALL CONSIST OF A NON-PERFORATED TEMPORARY DRAINAGE PIPE, 12 INCHES IN DIAMETER.

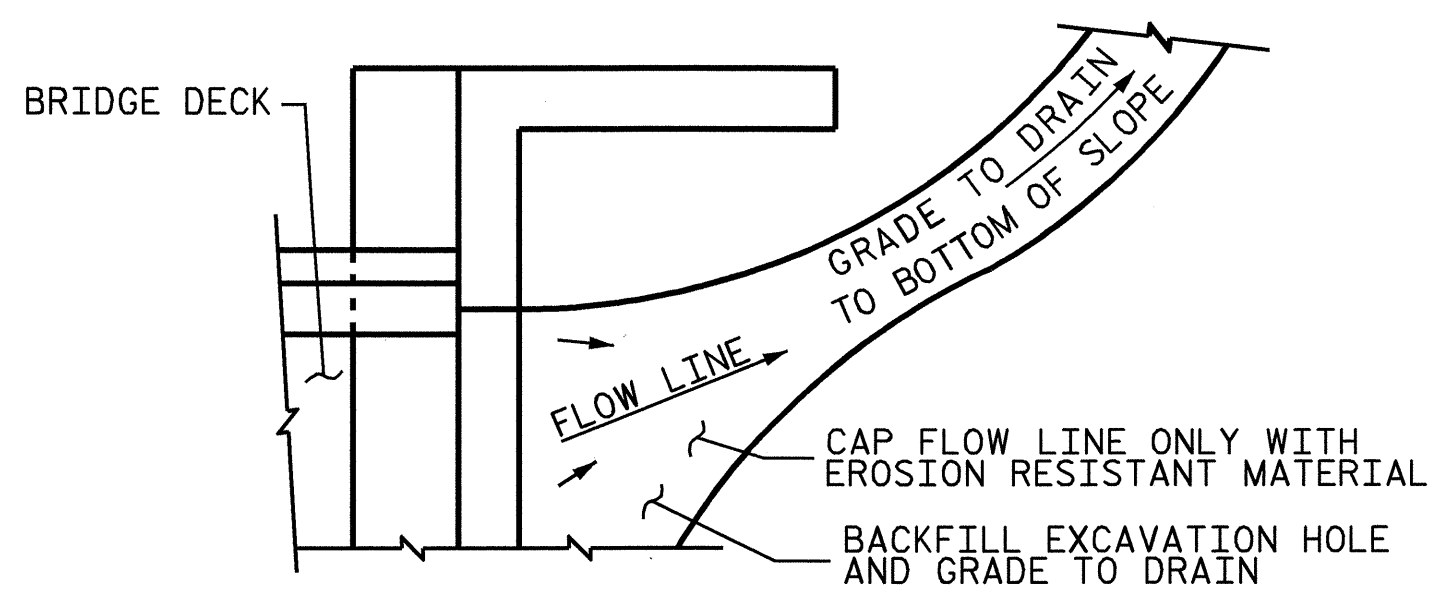
PLAN VIEW



SECTION S-S

TEMPORARY BERM AND SLOPE DRAIN DETAILS

(TO BE USED WHEN SHOULDER BERM GUTTER IS REQUIRED)



NOTE: IF THE APPROACH SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE BACKFILLING OF THE END BENT EXCAVATION, GRADE TO DRAIN TO THE BOTTOM OF THE SLOPE AND PROVIDE EROSION RESISTANT MATERIAL, SUCH AS FIBERGLASS ROVING OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL EROSION AND TO PROTECT THE AREA ADJACENT TO THE STRUCTURE. THE CONTRACTOR WILL BE REQUIRED TO REMOVE THESE MATERIALS PRIOR TO CONSTRUCTION OF THE APPROACH SLAB.

TEMPORARY DRAINAGE DETAIL

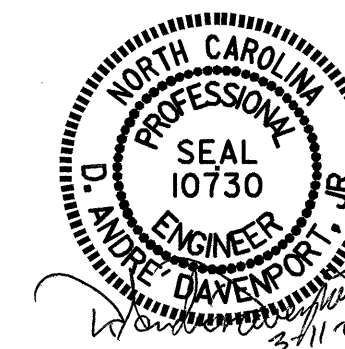
PROJECT NO. B-4210
NASH COUNTY
 STATION: 13+50.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BRIDGE APPROACH SLAB DETAILS

ASSEMBLED BY : M. G. SHAIKH DATE : 5-22-07
 CHECKED BY : A. SORSENGINH DATE : 5-29-07
 DRAWN BY : FCJ 11/88 REV. 10/17/00 RWW/LES
 CHECKED BY : ARB 11/88 REV. 5/7/03 RWW/JTE
 REV. 5/1/06 TLA/GM



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-18
1			3			TOTAL SHEETS
2			4			18

STD. NO. BAS10

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.
- 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 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 2002 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; CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP; AND CLASS S SHALL BE USED FOR UNDERWATER FOOTING SEALS.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 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 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 WITH THE EXCEPTION OF #2 BARS WHICH MAY BE FABRICATED FROM COLD DRAWN STEEL WIRE. 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 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø 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.

PLACEMENT OF BEAM OR GIRDER MEMBERS ON TRUCKS FOR HAULING SHALL BE DONE IN COMPLIANCE WITH LIMITS SHOWN ON SKETCHES PROVIDED TO THE MATERIALS AND TEST UNIT APPROVED BY THE STRUCTURE DESIGN UNIT DATED MAY 8, 1991. THESE SKETCHES PRIMARILY LIMIT THE UNSUPPORTED CANTILEVER LENGTH OF MEMBERS. WHEN THE CONTRACTOR WISHES TO PLACE MEMBERS ON TRUCKS NOT IN ACCORDANCE WITH THESE LIMITS, TO SHIP BY RAIL, TO ATTACH SHIPPING RESTRAINTS TO THE MEMBERS OR TO INVERT MEMBERS, HE SHALL SUBMIT A SKETCH FOR APPROVAL PRIOR TO SHIPPING. SEE ALSO ARTICLE 1072-11.

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 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. FINIS 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