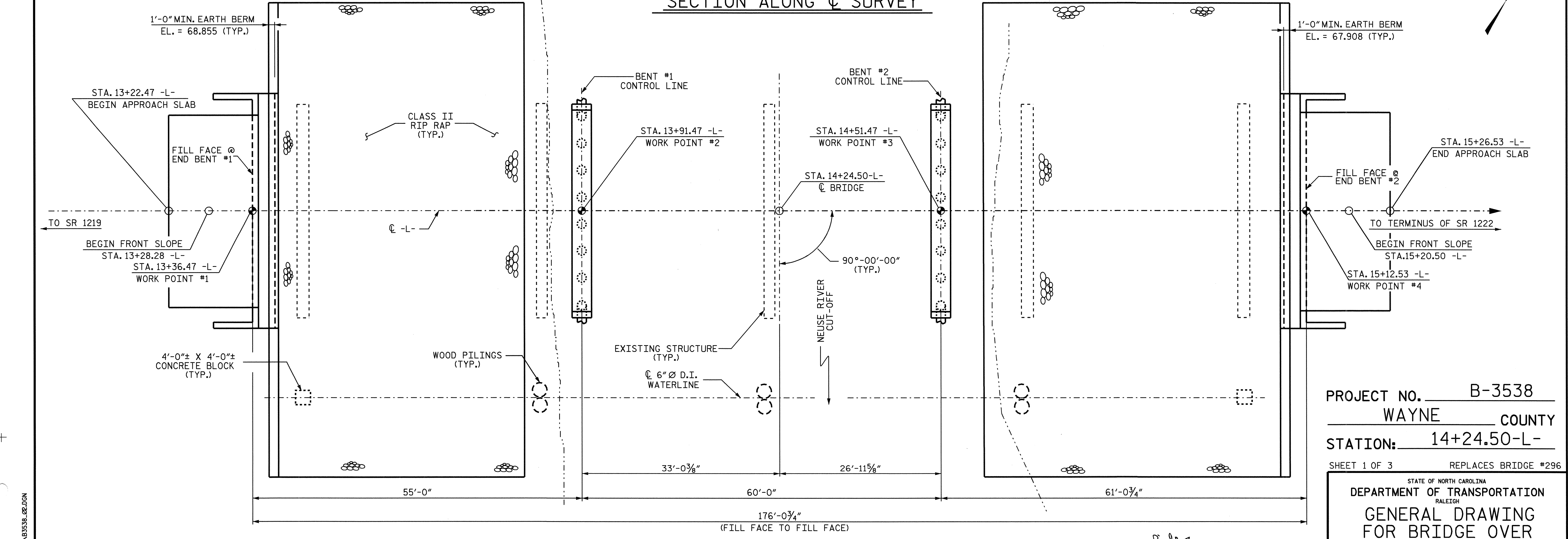


SECTION ALONG C SURVEY



PLAN

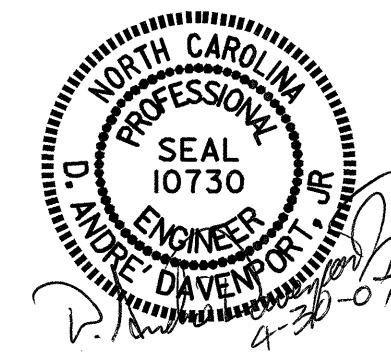
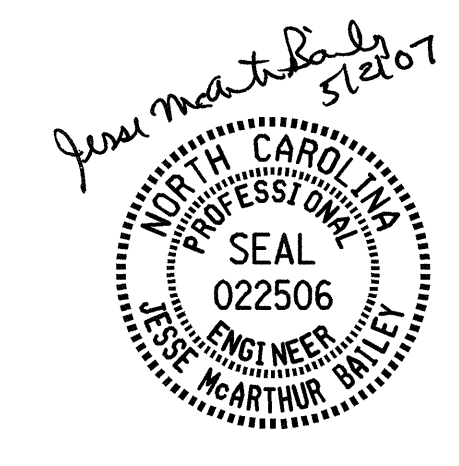
PILES @ END BENTS NOT SHOWN IN PLAN VIEW.

PROJECT NO. B-3538
 WAYNE COUNTY
 STATION: 14+24.50-L-
 SHEET 1 OF 3 REPLACES BRIDGE #296

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**GENERAL DRAWING
 FOR BRIDGE OVER
 NEUSE RIVER CUT OFF
 ON SR 1222 BETWEEN
 SR 1219 AND TERMINUS
 OF SR 1222**

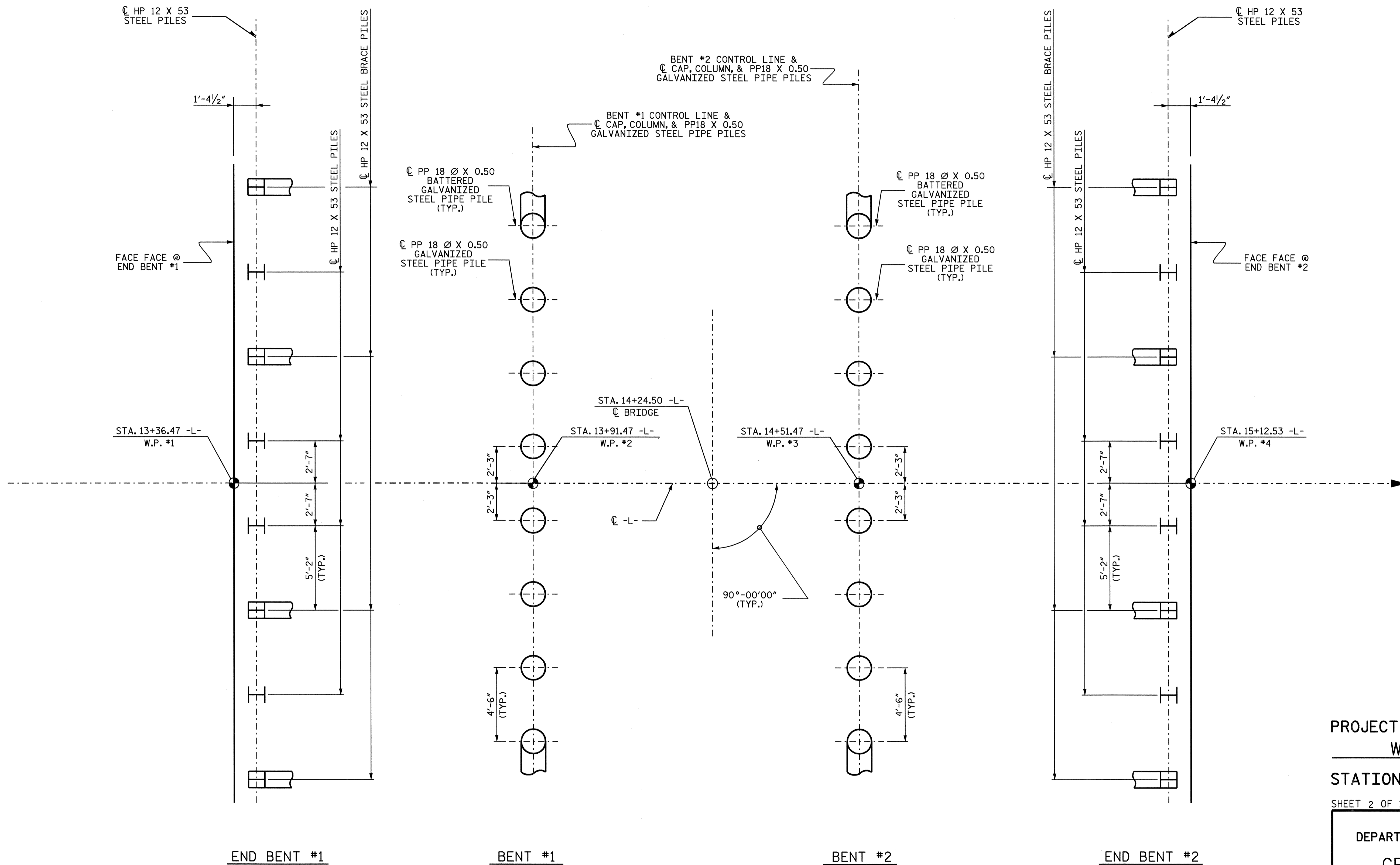
REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

S-1
 TOTAL SHEETS
 24



DRAWN BY: A. SORSENGIN DATE: 3-9-05
 CHECKED BY: H.T. BARBOUR DATE: 3-25-05

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FOUNDATION LAYOUT

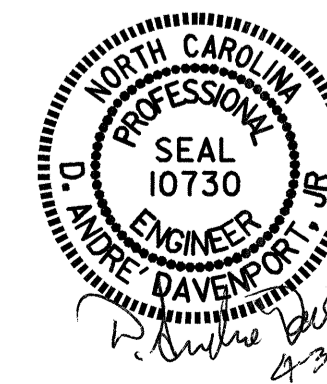
DIMENSIONS LOCATING PILES ARE SHOWN TO PILE CENTERLINE.
 BRACE PILES AT END BENT #1 AND #2 ARE BATTERED 3 : 12
 BRACE PILES AT BENT #1 AND #2 ARE BATTERED 1 1/2 : 12

PROJECT NO. B-3538
WAYNE COUNTY
 STATION: 14+24.50-L-

SHEET 2 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

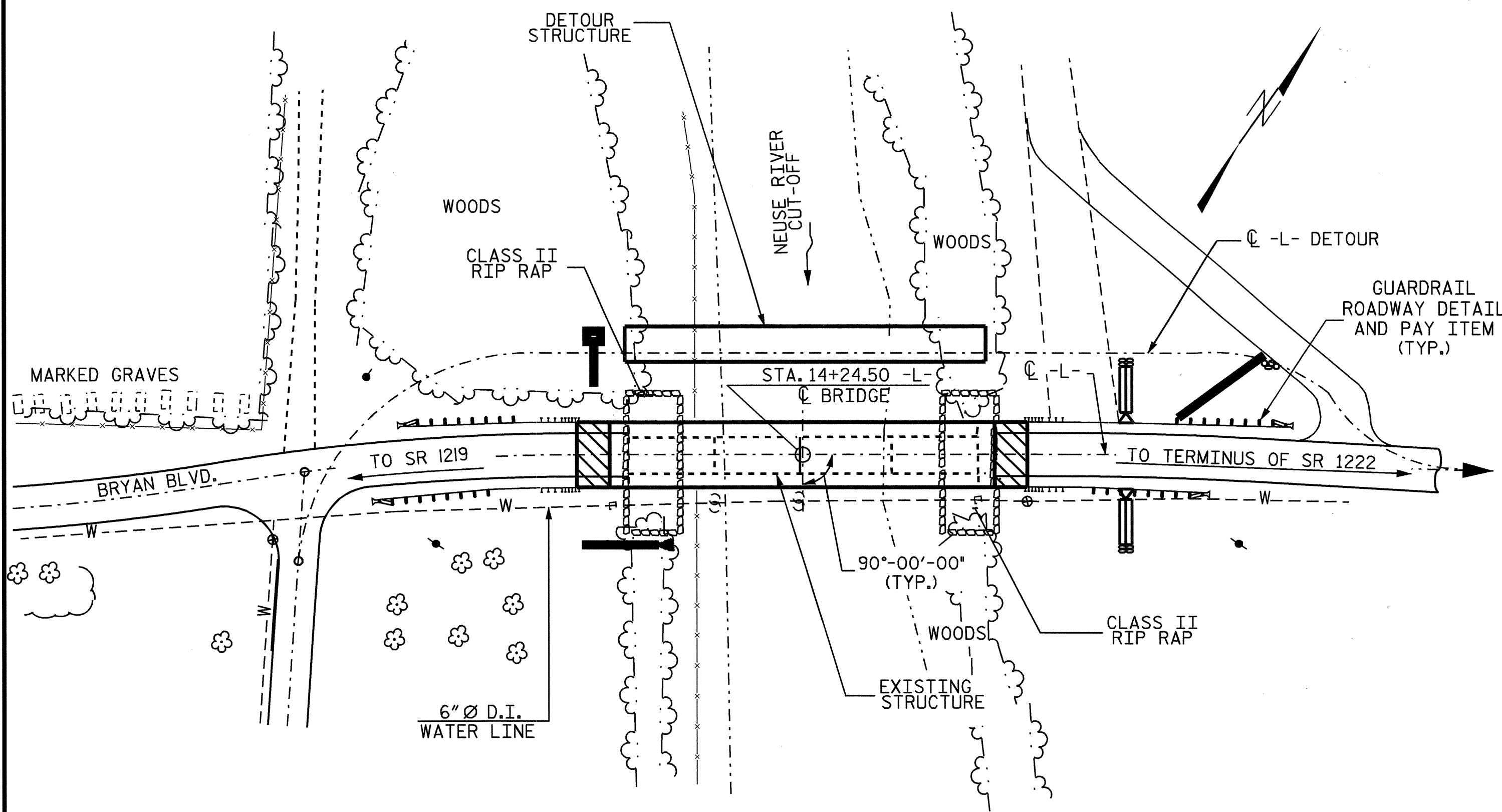
GENERAL DRAWING
 FOR BRIDGE OVER
 NEUSE RIVER CUT OFF
 ON SR 1222 BETWEEN
 SR 1219 AND TERMINUS
 OF SR 1222



DRAWN BY : A. SORSENGINH DATE : 3/10/05
 CHECKED BY : H.T. BARBOUR DATE : 3/25/05

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			24

BENCH MARK No. 10: RAILROAD SPIKE IN 30" Ø OAK TREE AT STA. 13+23.16 -L- 205.66' RIGHT EL. 67.460



HYDRAULIC DATA

DESIGN DISCHARGE	=	28,000 C.F.S.
FREQUENCY OF DESIGN FLOOD	=	25 YR.
DESIGN HIGH WATER ELEVATION	=	71.490
DRAINAGE AREA	=	2,374 SQ. MI.
BASIC DISCHARGE (Q100)	=	38,000 C.F.S.
BASIC HIGH WATER ELEVATION	=	74.250

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	=	33,000 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	=	50 YR.±
OVERTOPPING FLOOD ELEVATION	=	72.770

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

NOTES

ASSUMED LIVE LOAD = 20 OR ALTERNATE LOADING EXCEPT THAT BOX BEAM UNITS HAVE BEEN DESIGNED FOR HS 25.
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
 FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
 THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.

THE EXISTING STRUCTURE CONSISTING OF 4 SPANS 1 @ 40'-6", 2 @ 40'-0", 1 @ 40'-6" WITH A TIMBER FLOOR WITH 3.5" ASPHALT WEARING SURFACE AND CLEAR ROADWAY WIDTH OF 18'-3" ON I-BEAMS ON TIMBER CAPS AND PILES AND STEEL AND TIMBER CRUTCH BENTS LOCATED AT THE PROPOSED SITE, SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT.

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 CONTRACTOR WILL BE REQUIRED TO CONSTRUCT, MAINTAIN AND AFTERWARDS REMOVE A TEMPORARY STRUCTURE AT STATION 14+24.50-L- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. SEE SPECIAL PROVISION FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 25 FEET LEFT AND 30 FEET RIGHT 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.

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.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

PILE RESTRIKES FOR LRFD ARE REQUIRED FOR PILES AT END BENT NO. 1 OR END BENT NO. 2. SEE PILE RESTRIKES FOR LRFD SPECIAL PROVISION.

PILE RESTRIKES FOR LRFD ARE REQUIRED FOR PILES AT BENT NO. 1 OR BENT NO. 2. SEE PILE RESTRIKES FOR LRFD SPECIAL PROVISION.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL 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 14+24.50 -L-".

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

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.

DRIVE PILES AT BENT NO. 1 AND NO. 2 TO A TIP ELEVATION NO HIGHER THAN ELEVATION 19.000.

DRIVE PILES AT END BENTS NO. 1 AND NO. 2 TO A REQUIRED BEARING CAPACITY OF 100 TONS PER PILE. THE REQUIRED BEARING CAPACITY IS EQUAL TO THE ALLOWABLE BEARING CAPACITY WITH A MINIMUM FACTOR OF SAFETY OF TWO.

DRIVE PILES AT BENT NO. 1 AND BENT NO. 2 TO A REQUIRED BEARING CAPACITY OF 150 TONS PER PILE. THE REQUIRED BEARING CAPACITY IS EQUAL TO THE ALLOWABLE BEARING CAPACITY WITH A MINIMUM FACTOR OF SAFETY OF TWO PLUS ANY ADDITIONAL CAPACITY TO ACCOUNT FOR DOWN DRAG OR NEGATIVE SKIN FRICTION AND SCOUR.

THE SCOUR CRITICAL ELEVATION FOR BENTS NO. 1 AND NO. 2 IS ELEVATION 40.000. BRIDGE MAINTENANCE USES SCOUR CRITICAL ELEVATIONS TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 35,000 TO 65,000 FOOT-POUNDS PER BLOW WILL BE REQUIRED TO DRIVE THE PILES AT BENT NO. 1 AND BENT NO. 2. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM ARTICLE 450-5 OF THE STANDARD SPECIFICATIONS.

THE ALLOWABLE BEARING CAPACITY FOR PILES AT END BENTS NO. 1 AND NO. 2 IS 50 TONS PER PILE. THE ALLOWABLE BEARING CAPACITY FOR PILES AT BENT NO. 1 AND NO. 2 IS 70 TONS PER PILE.

THIS BRIDGE SHALL BE CONSTRUCTED USING TOP-DOWN CONSTRUCTION METHODS. THE USE OF A TEMPORARY CAUSEWAY OR WORK BRIDGE IS NOT PERMITTED.

TESTING THE FIRST PRODUCTION PILE WITH THE PILE DRIVING ANALYZER (PDA) DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED AT BENT NO. 1 OR BENT NO. 2. SEE PILE DRIVING ANALYZER SPECIAL PROVISION.

TESTING THE FIRST PRODUCTION PILE WITH THE PILE DRIVING ANALYZER (PDA) DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED AT END BENT NO. 1 OR END BENT NO. 2. SEE PILE DRIVING ANALYZER SPECIAL PROVISION.

PIPE PILE PLATES ARE REQUIRED FOR THE PIPE PILES AT BENT NO. 1 AND BENT NO. 2. USE PIPE PILE PLATES WITH A DIAMETER EQUAL TO THE PIPE PILE DIAMETER. SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

	CONST. MAINT. & REMOVAL OF TEMP. STRUCTURE	REMOVAL OF EXISTING STRUCTURE	PDA TESTING	PDA ASSISTANCE	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	HP 12 X 53 STEEL PILES		PP 18 X 0.50 GALVANIZED STEEL PILES		PIPE PILE PLATES	PILE REDRIVES	CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 2'-3" PRESTRESSED BOX BEAMS			
									LUMP SUM	LUMP SUM	EACH	EACH							LUMP SUM	CU. YDS.	LUMP SUM	LBS.
SUPERSTRUCTURE																347.625					33	1909.19
END BENT NO. 1						13.9		2416	8	240				7			369	410				
BENT NO. 1						10.3		1987			8	520	8	8								
BENT NO. 2						10.3		1987			8	520	8	8								
END BENT NO. 2						13.9		2422	8	320				7		405	450					
TOTAL	LUMP SUM	LUMP SUM	3	3	LUMP SUM	48.4	LUMP SUM	8812	16	560	16	1040	16	30	347.625	774	860	LUMP SUM		33	1909.19	

PROJECT NO. B-3538

WAYNE COUNTY

STATION: 14+24.50-L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**GENERAL DRAWING
 FOR BRIDGE OVER
 NEUSE RIVER CUT OFF
 ON SR 1222 BETWEEN
 SR 1219 AND TERMINUS
 OF SR 1222**



DRAWN BY : A. SORSENGINH DATE : 3-9-05
 CHECKED BY : H.T. BARBOUR DATE : 3-25-05

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

TOTAL SHEETS: 24

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 GROUDED 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 2 1/2" Ø DOWEL HOLES AT EXPANSION ENDS OF BOX BEAM SECTIONS SHALL BE FILLED WITH JOINT SEALER MATERIAL TO 1/2" ABOVE THE TOP OF DOWELS AND THEN FILLED WITH GROUT.

THE JOINT SEALER MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF TYPE SL LOW MODULUS SILICONE SEALANT. THE 2" Ø 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 4400 PSI.

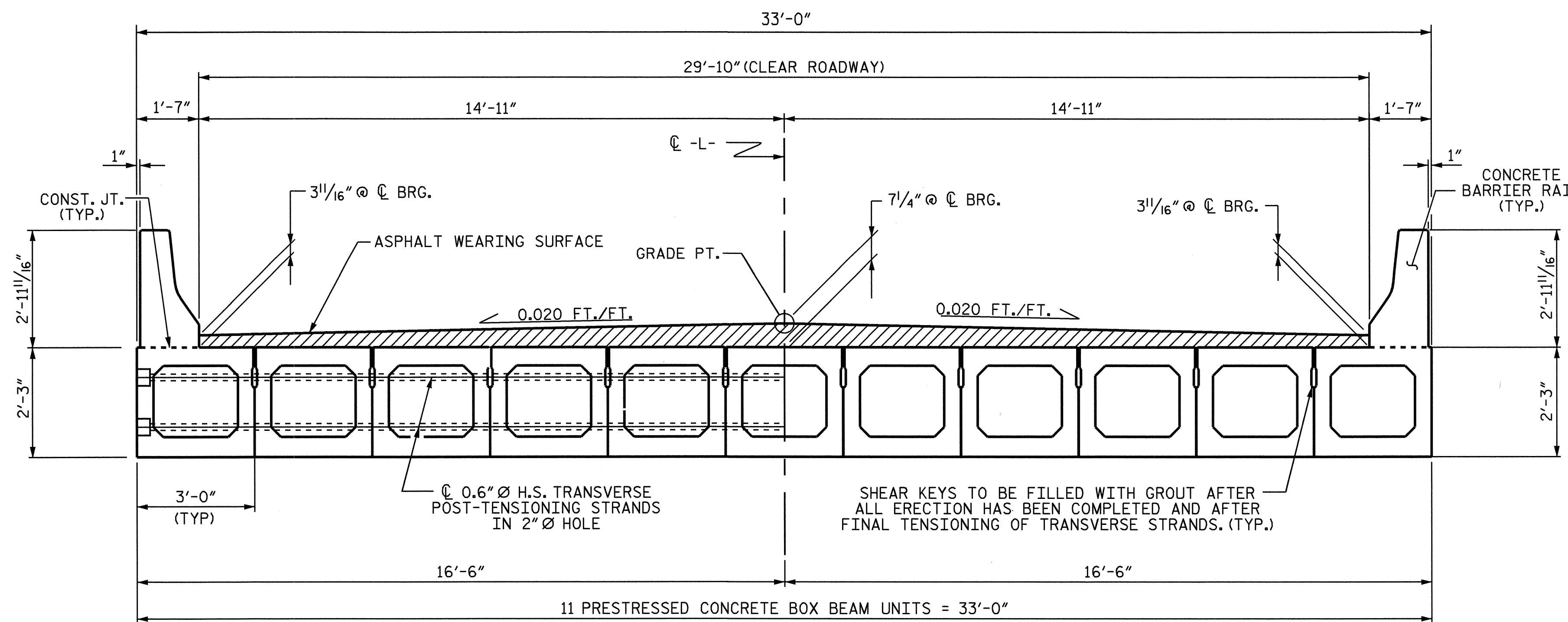
ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

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

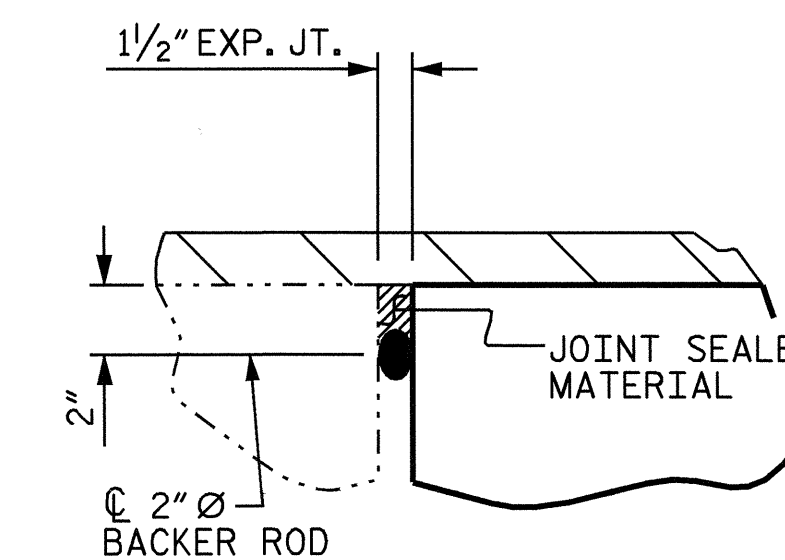
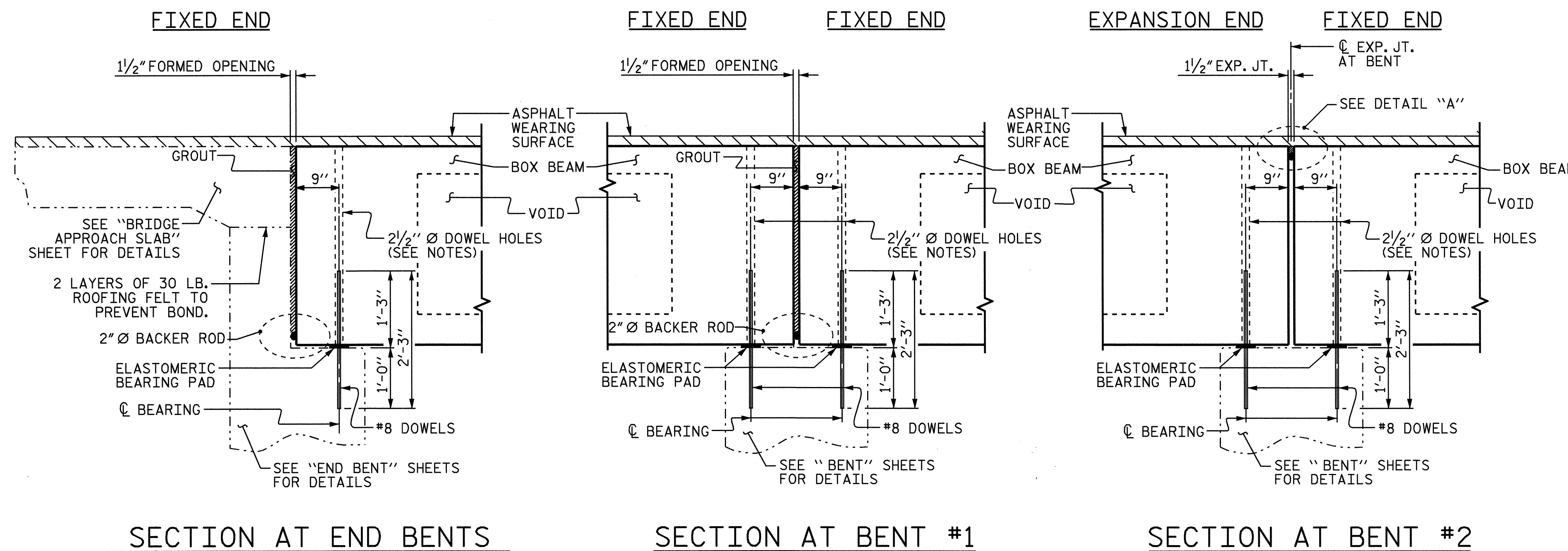
APPLY EPOXY PROTECTIVE COATING TO BOX BEAM UNIT ENDS.

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.



TYPICAL SECTION

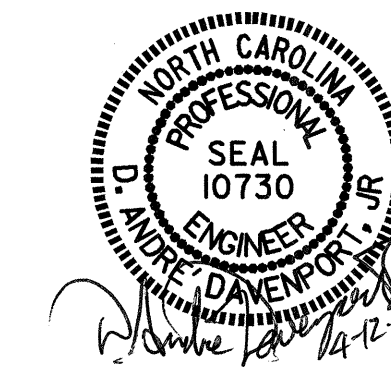


PROJECT NO. B-3538
WAYNE COUNTY
STATION: 14+24.50-L-

SHEET 1 OF 8

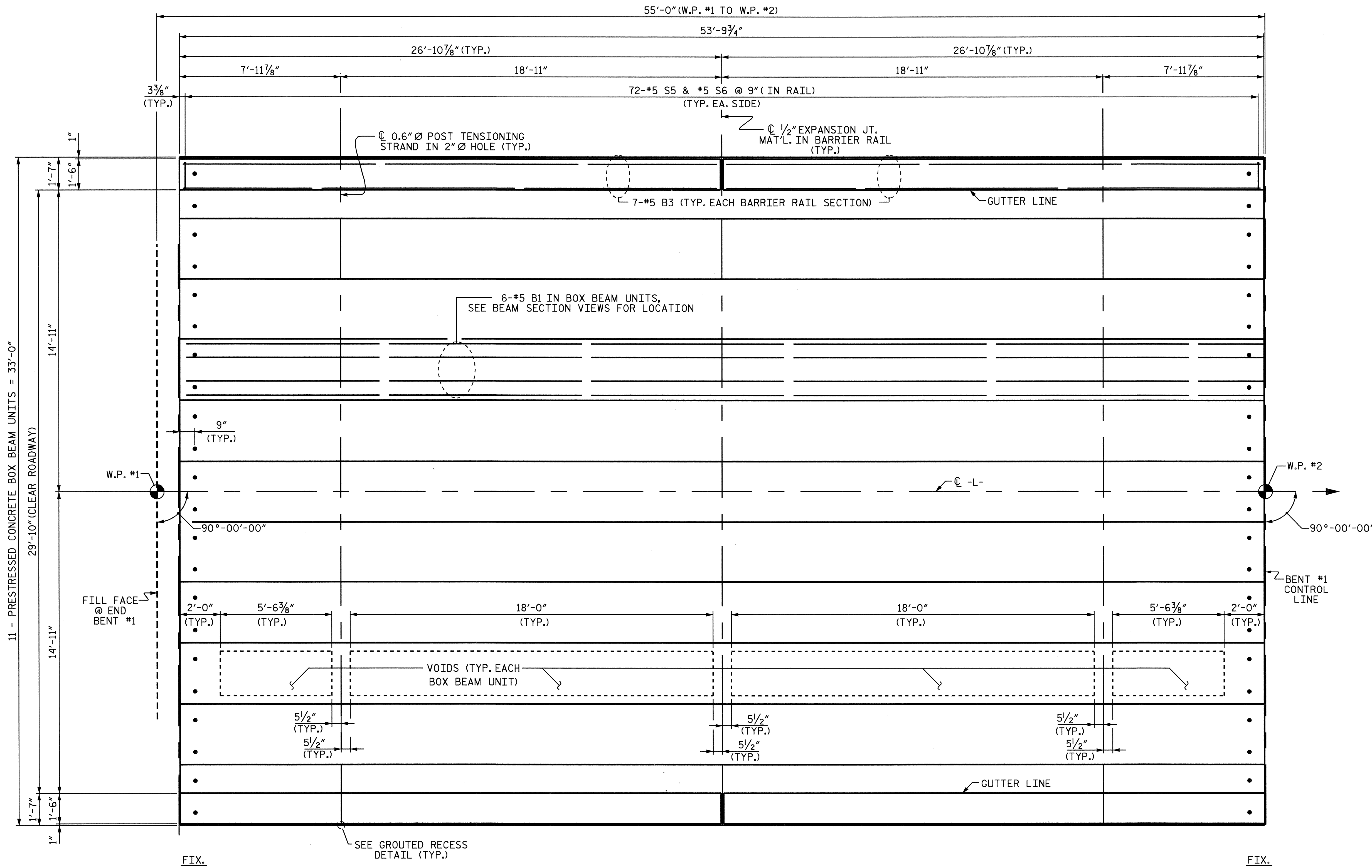
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

3'-0" X 2'-3"
PRESTRESSED CONCRETE
BOX BEAM UNIT



ASSEMBLED BY : H. T. BARBOUR DATE : 5-08-06
CHECKED BY : A. SORSENGIH DATE : 8-06
DRAWN BY : TLA 5/05 ADDED 7/11/05
CHECKED BY : GM 6/05

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			24



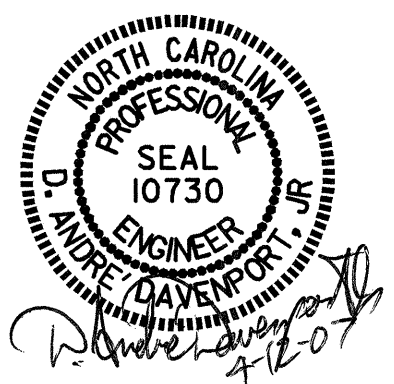
PLAN OF SPAN A

PROJECT NO. B-3538
WAYNE COUNTY
 STATION: 14+24.50-L-

SHEET 2 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

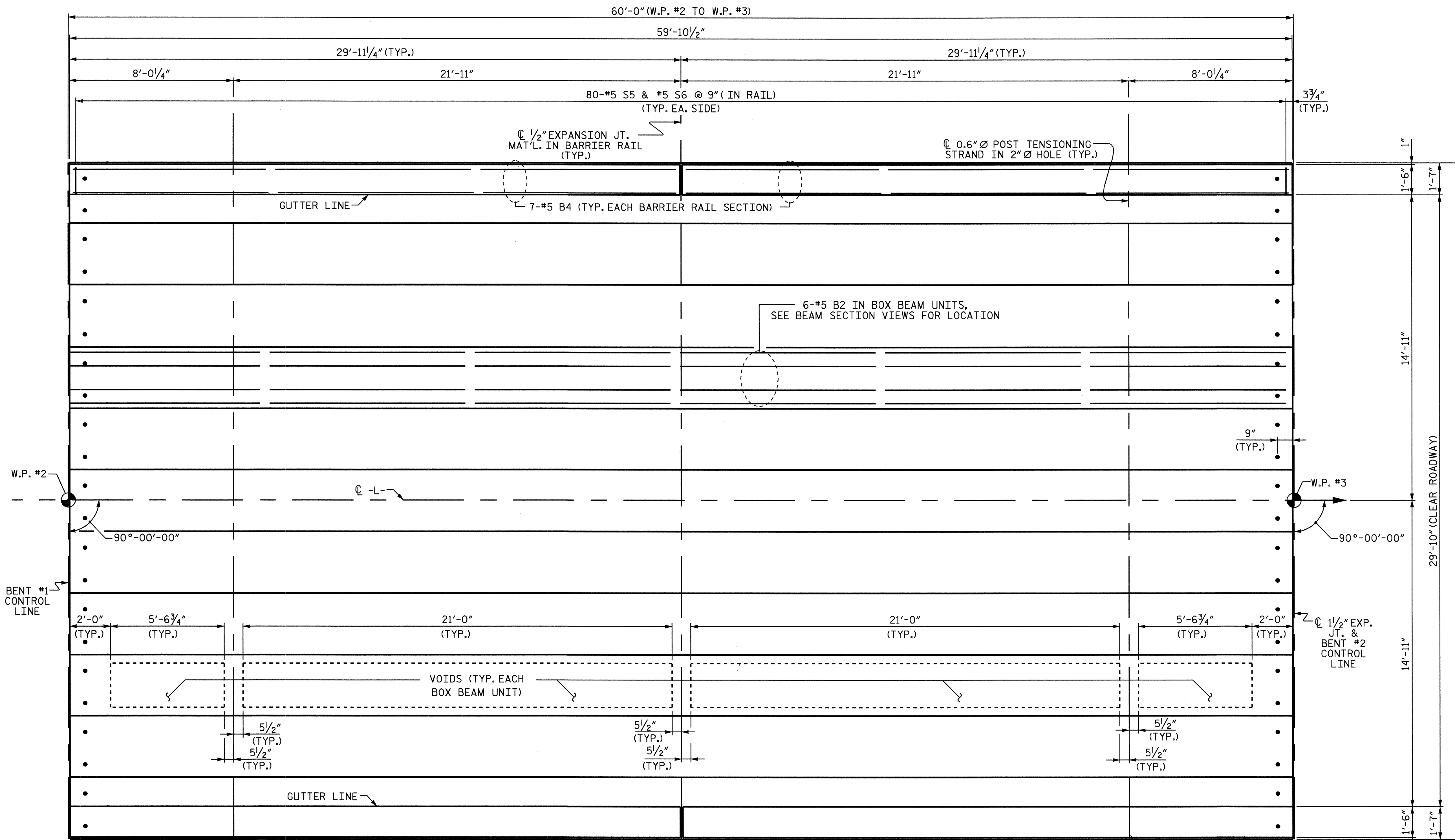
SUPERSTRUCTURE
 PLAN OF SPAN "A"



DRAWN BY : H. T. BARBOUR DATE : 5-22-06
 CHECKED BY : A. SORSENGIN DATE : 8-06

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
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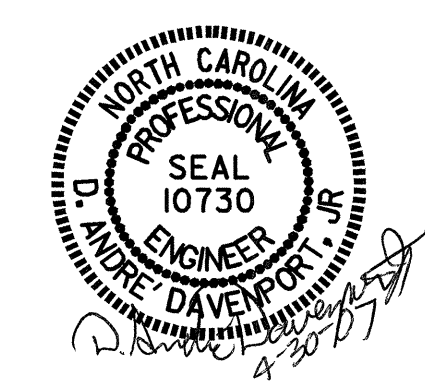
PLAN OF SPAN B

PROJECT NO. B-3538
 WAYNE COUNTY
 STATION: 14+24.50-L-

SHEET 3 OF 8

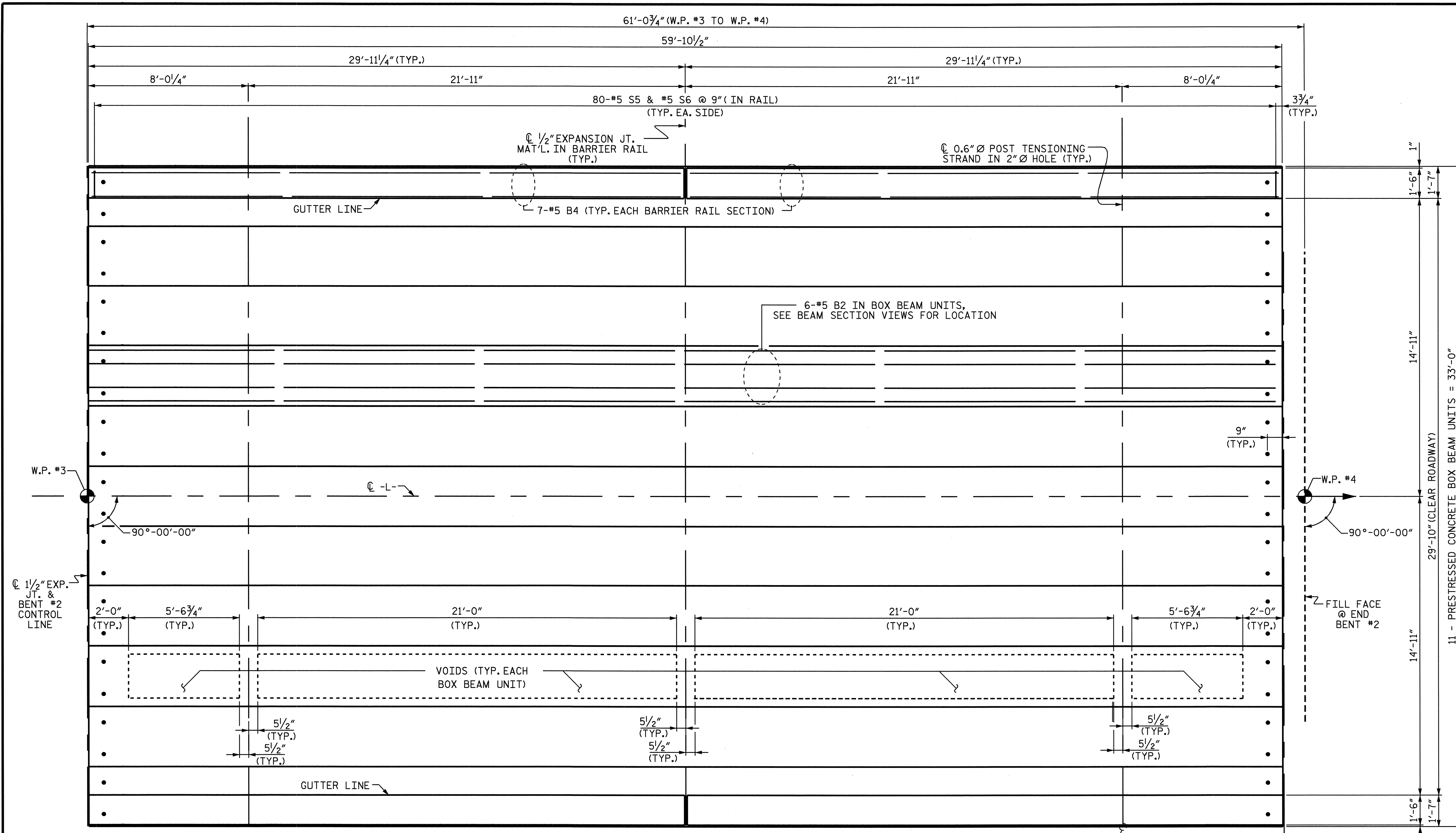
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUPERSTRUCTURE
 PLAN OF SPAN "B"**



DRAWN BY : H. T. BARBOUR DATE : 5-22-06
 CHECKED BY : A. SORSENGIN DATE : 8-06

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS 24
2			4			



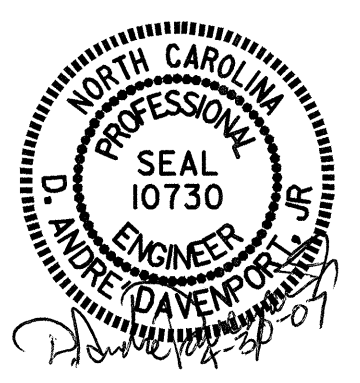
PLAN OF SPAN C

PROJECT NO. B-3538
WAYNE COUNTY
 STATION: 14+24.50-L-

SHEET 4 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

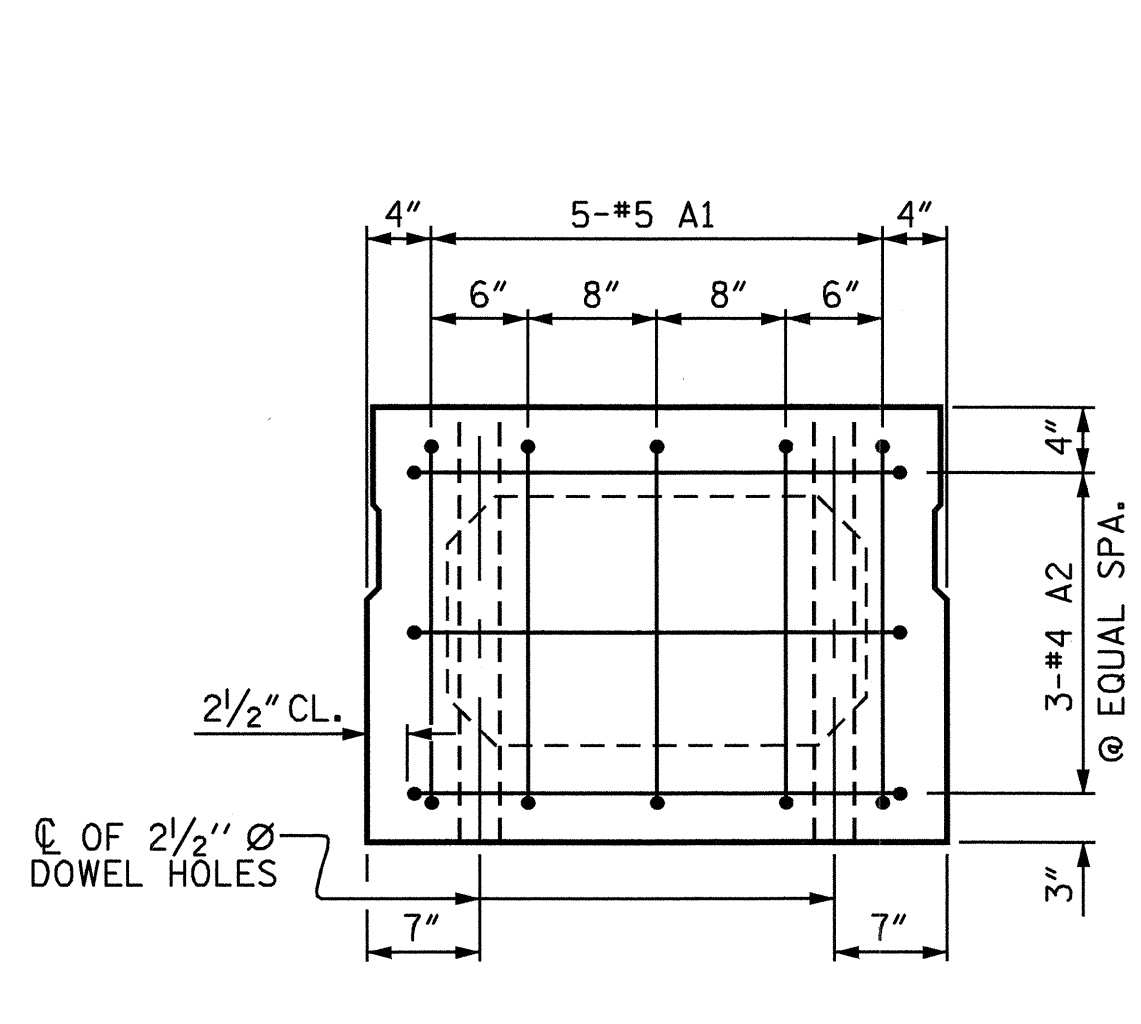
SUPERSTRUCTURE
 PLAN OF SPAN "C"



DRAWN BY : H. T. BARBOUR DATE : 5-22-06
 CHECKED BY : A. SORSENGIN DATE : 8-06

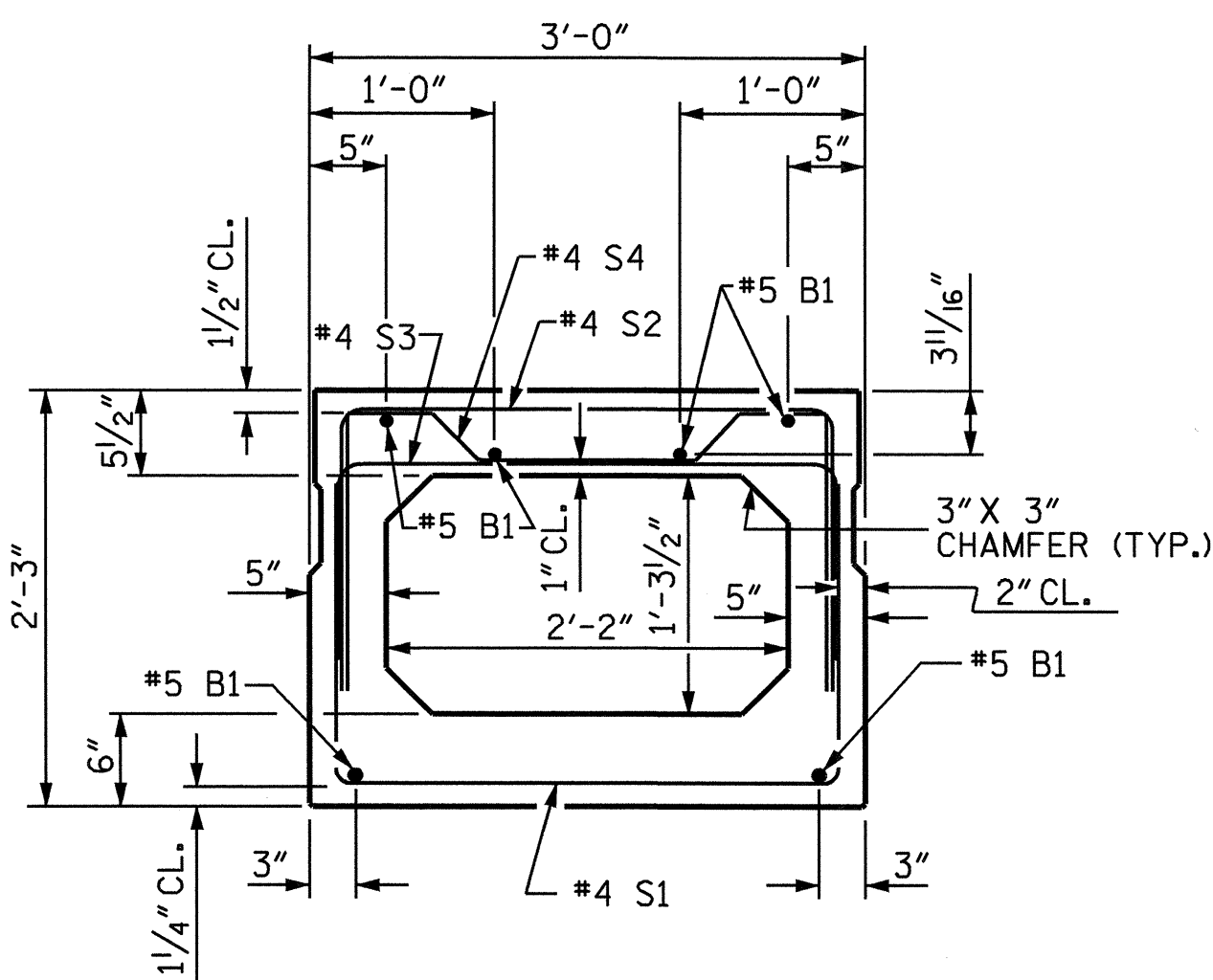
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1			3			TOTAL SHEETS
2			4			24



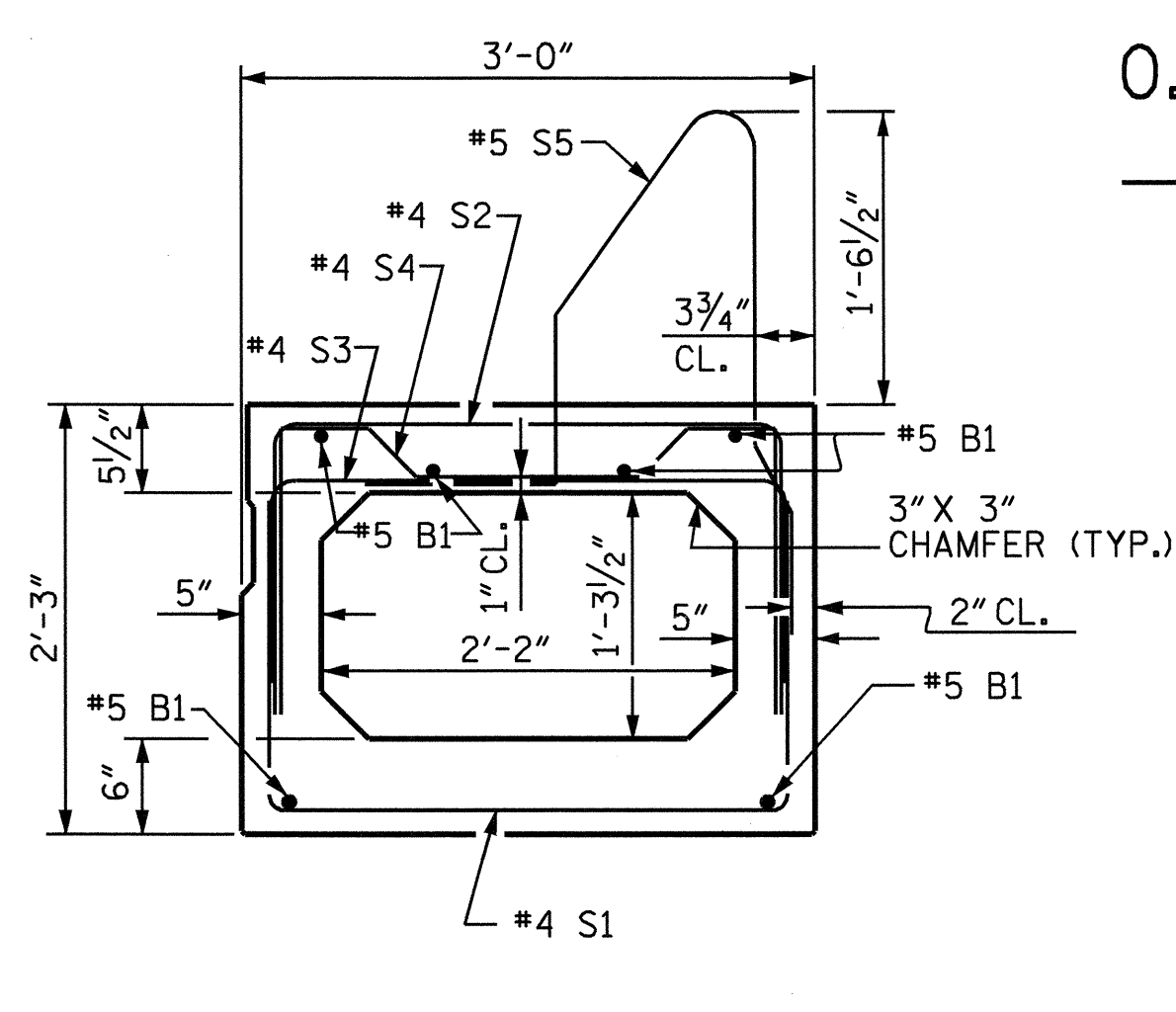
END ELEVATION

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

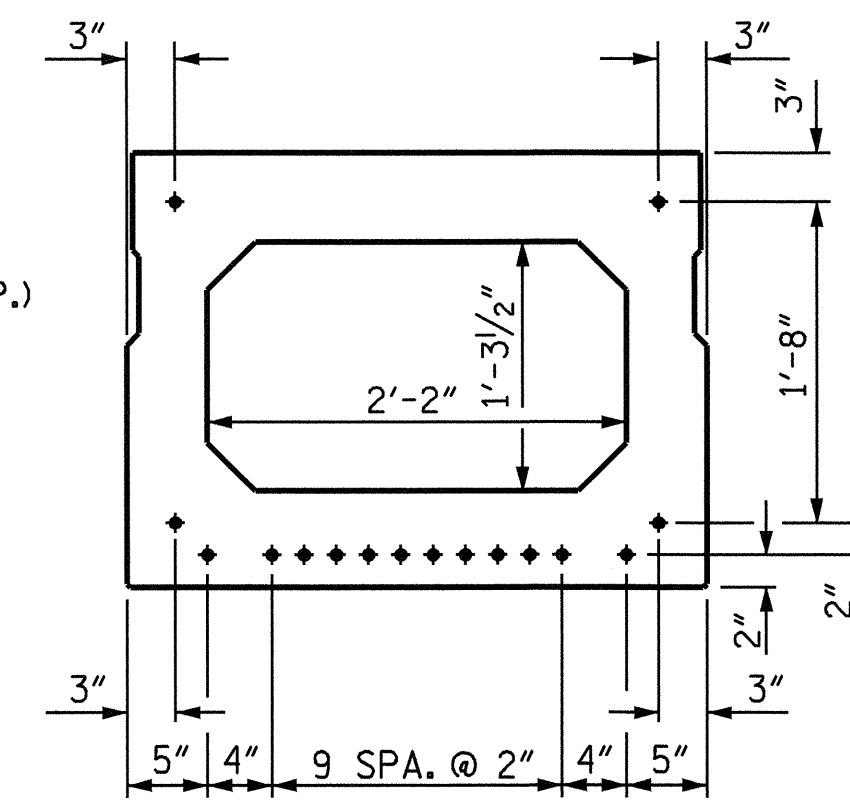
(STRAND LAYOUT NOT SHOWN)



EXTERIOR BOX BEAM SECTION

(STRAND LAYOUT NOT SHOWN)

0.6" Ø LOW RELAXATION STRAND LAYOUT



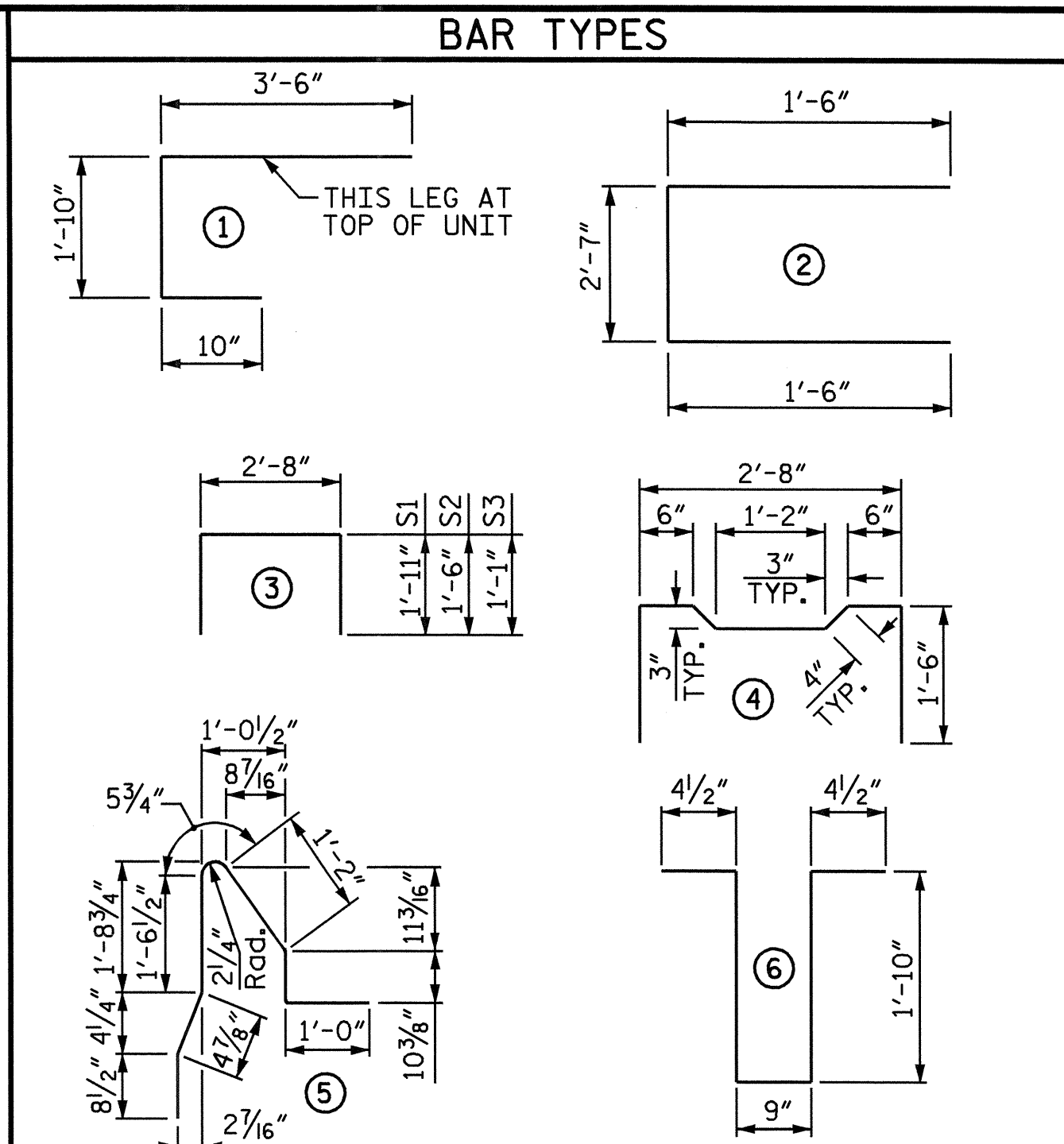
TYPICAL STRAND LOCATION

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

DEBONDING LEGEND

- FULLY BONDED STRANDS

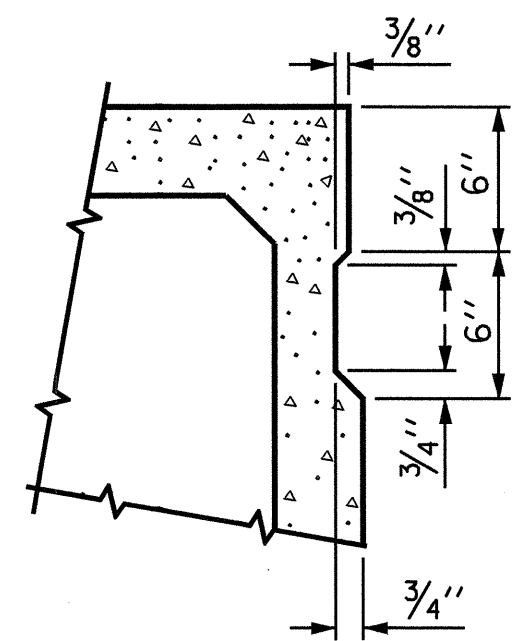
GRADE 270 STRANDS	
	0.6" Ø L.R.
AREA (SQUARE INCHES)	0.217
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950



ALL BAR DIMENSIONS ARE OUT TO OUT

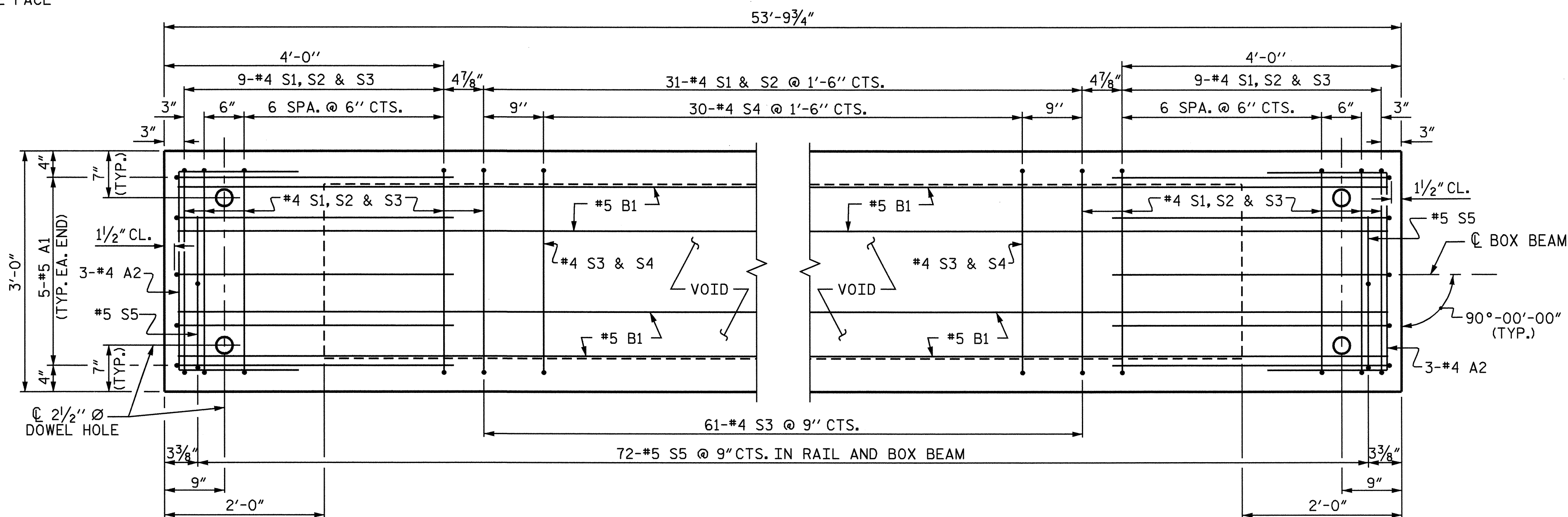
BILL OF MATERIAL FOR ONE BOX BEAM SECTION

BAR NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
			LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	6'-2"	64	6'-2"	64
A2	18	#4	5'-7"	67	5'-7"	67
B1	6	#5	53'-5"	334	53'-5"	334
K1	9	#4	5'-2"	31	5'-2"	31
K2	6	#4	2'-7"	10	2'-7"	10
S1	49	#4	6'-6"	213	6'-6"	213
S2	49	#4	5'-8"	185	5'-8"	185
S3	79	#4	4'-10"	255	4'-10"	255
S4	30	#4	5'-10"	117	5'-10"	117
* S5	72	#5	6'-2"	463	--	--
REINFORCING STEEL			1276 LBS.		1276 LBS.	
* EPOXY COATED REINF. STEEL			463 LBS.			
5500 P.S.I. CONCRETE			8.7 CU. YDS.		8.6 CU. YDS.	
0.6" Ø L.R. STRANDS			No. 16		No. 16	



SHEAR KEY DETAIL

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



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.

PROJECT NO. B-3538

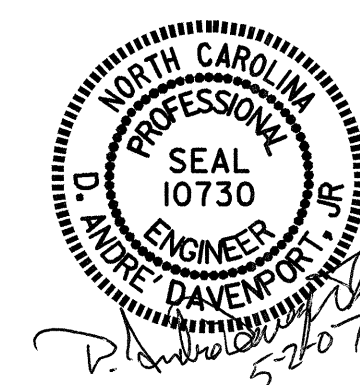
WAYNE COUNTY

STATION: 14+24.50-L-

SHEET 5 OF 8

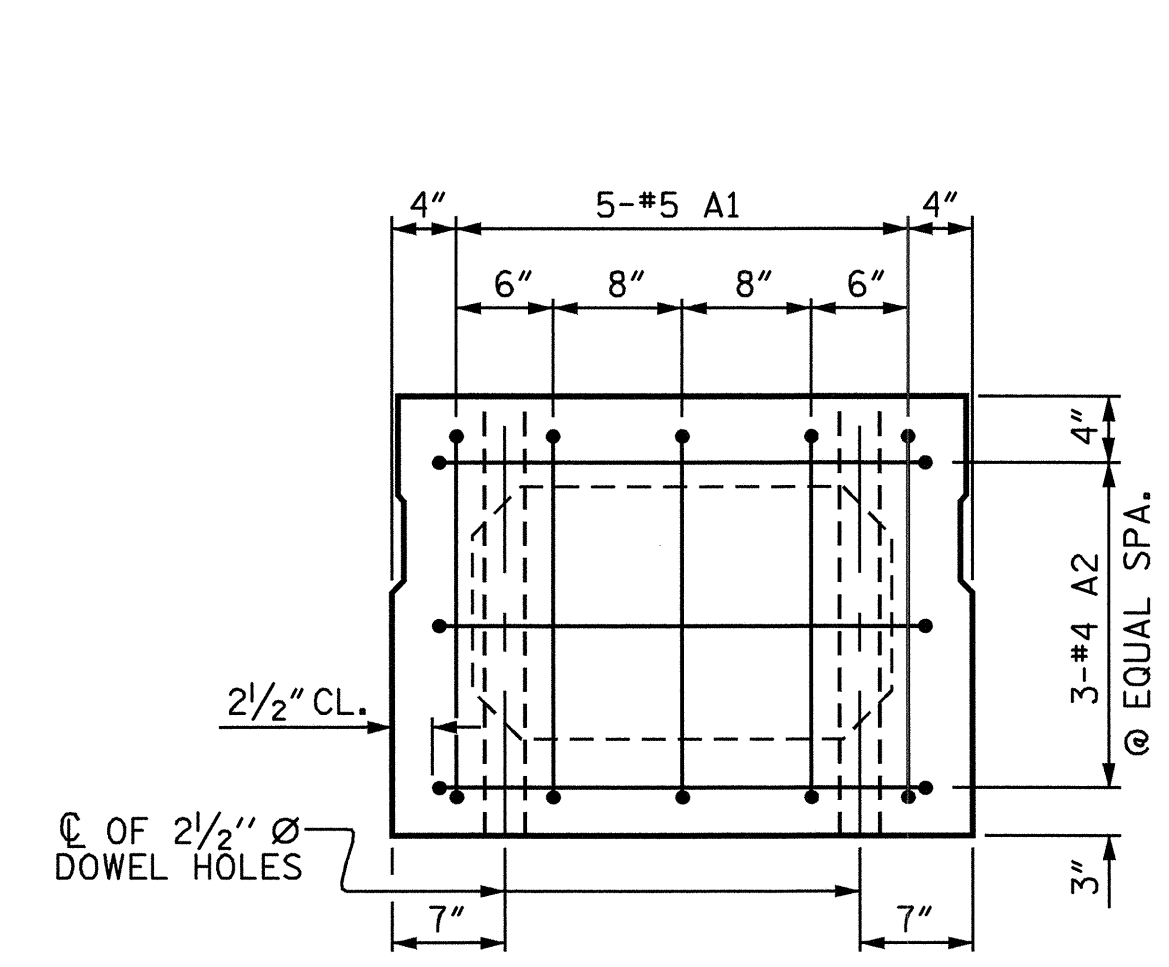
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

3'-0" X 2'-3"
PRESTRESSED CONCRETE
BOX BEAM UNIT
SPAN "A"



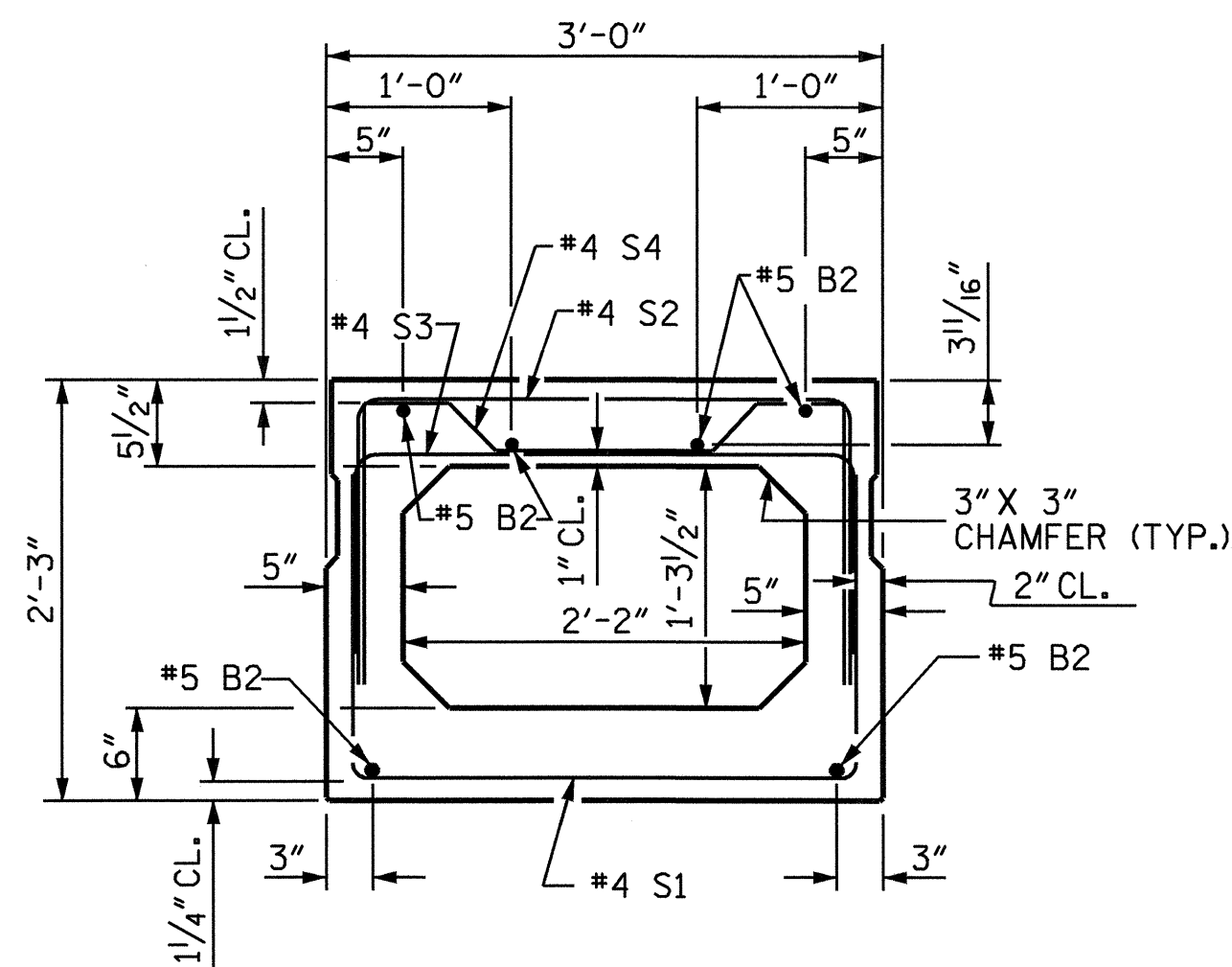
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			24

ASSEMBLED BY :	H. T. BARBOUR	DATE :	5-8-06
CHECKED BY :	A. SORSENGINH	DATE :	8-06
DRAWN BY :	TLA 5/05	ADDED	7/11/05
CHECKED BY :	GM 6/05		



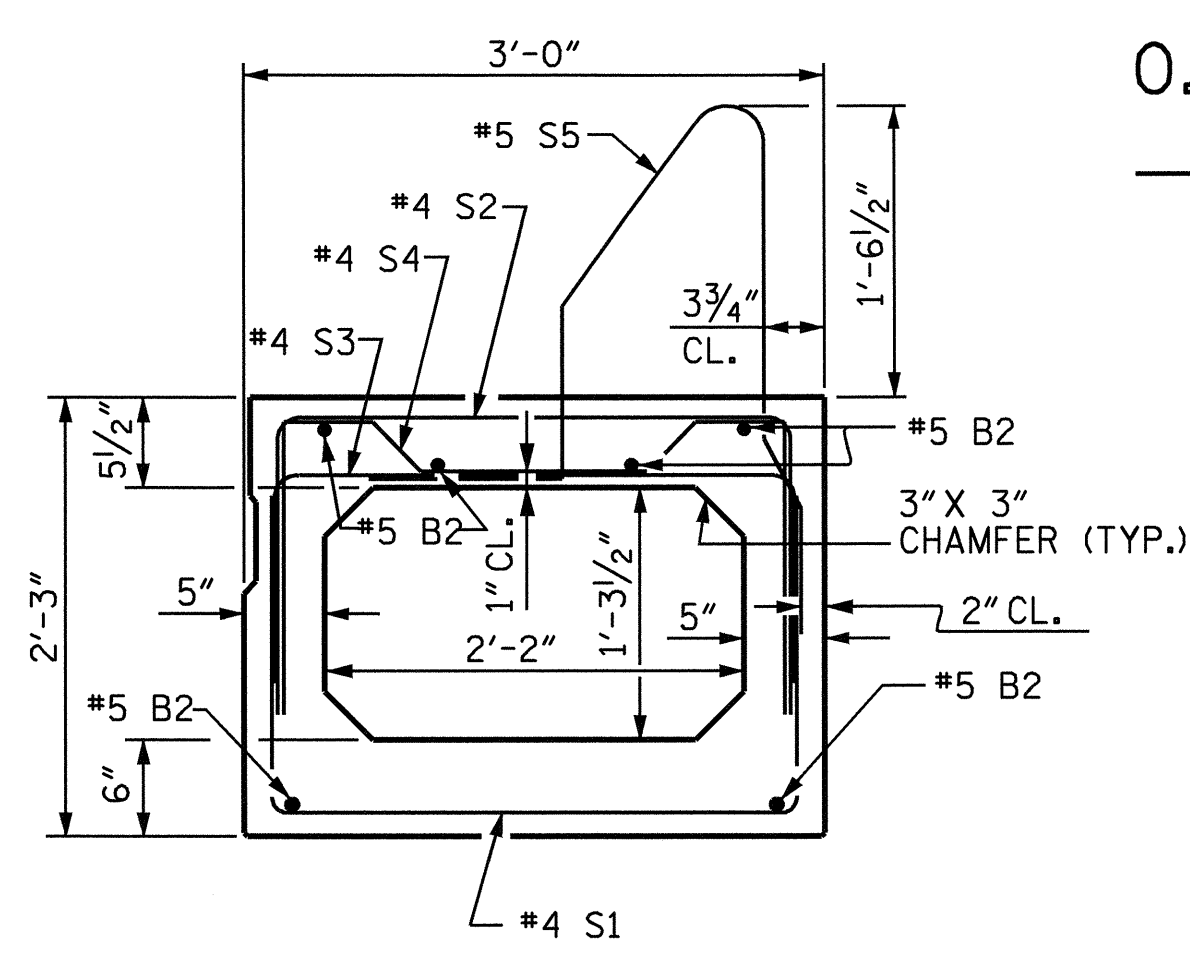
END ELEVATION

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

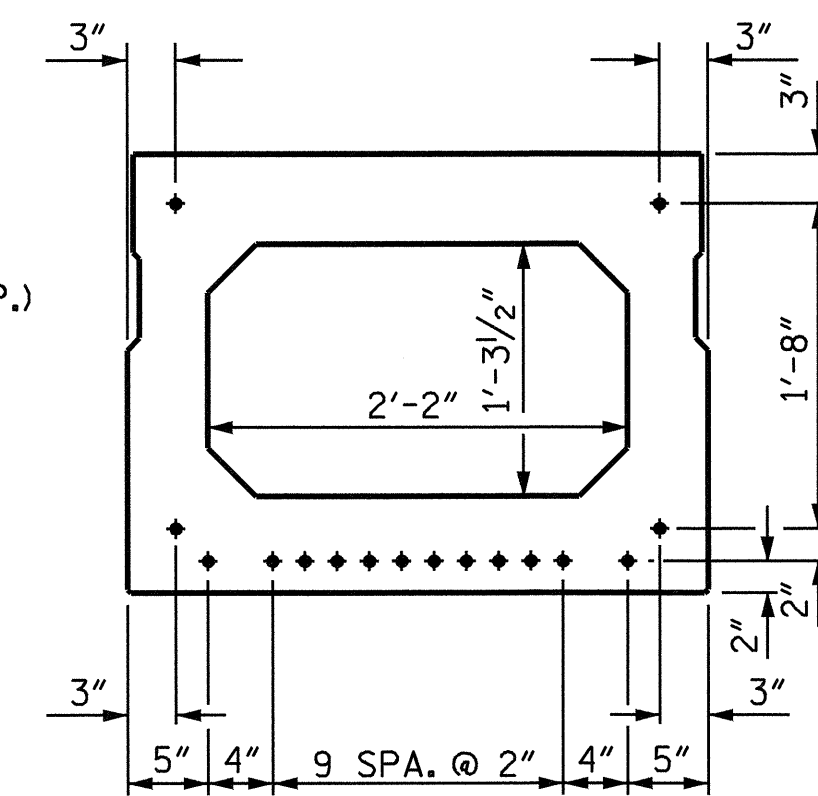
(STRAND LAYOUT NOT SHOWN)



EXTERIOR BOX BEAM SECTION

(STRAND LAYOUT NOT SHOWN)

0.6" Ø LOW RELAXATION STRAND LAYOUT



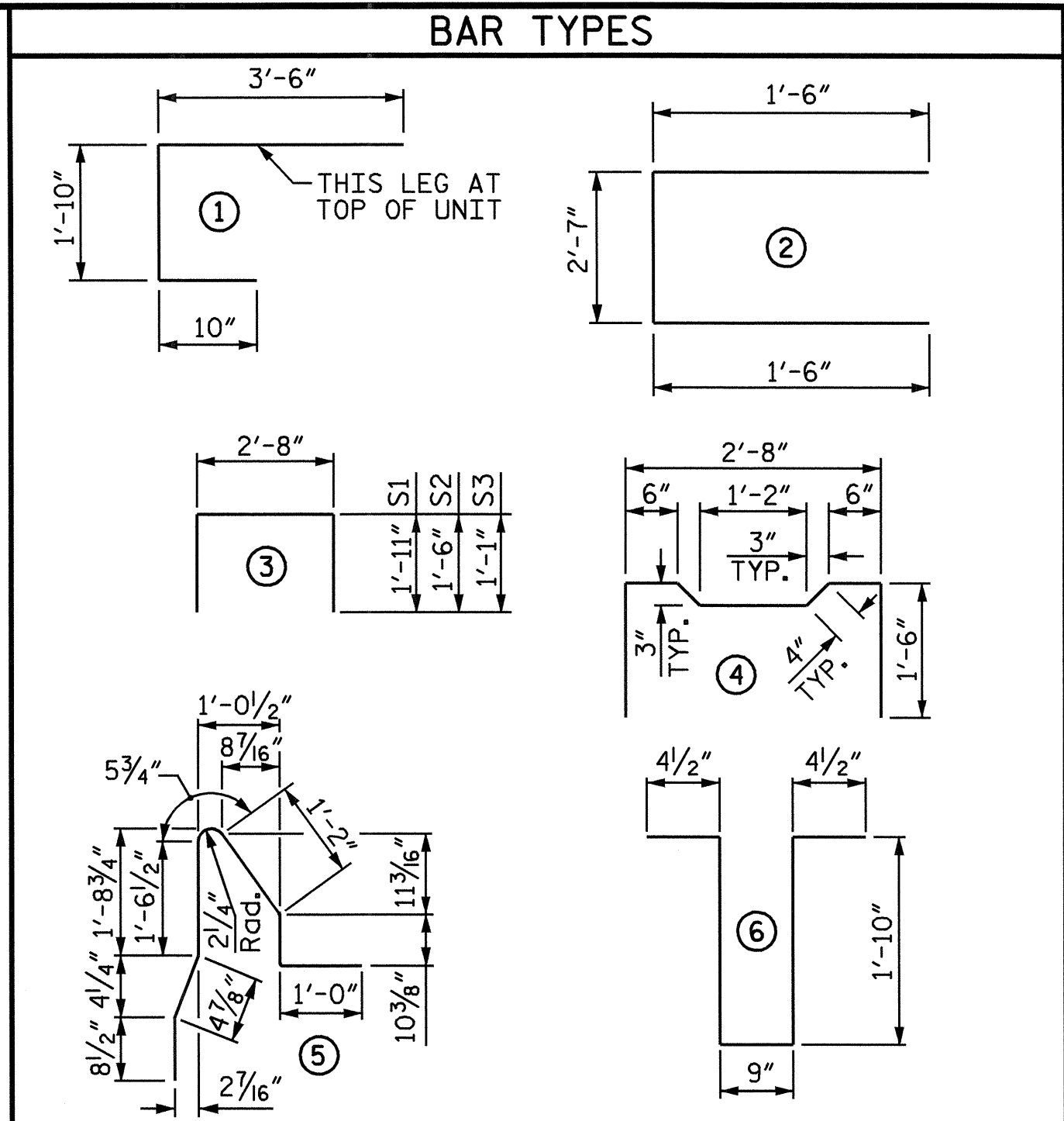
TYPICAL STRAND LOCATION

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

DEBONDING LEGEND

- FULLY BONDED STRANDS

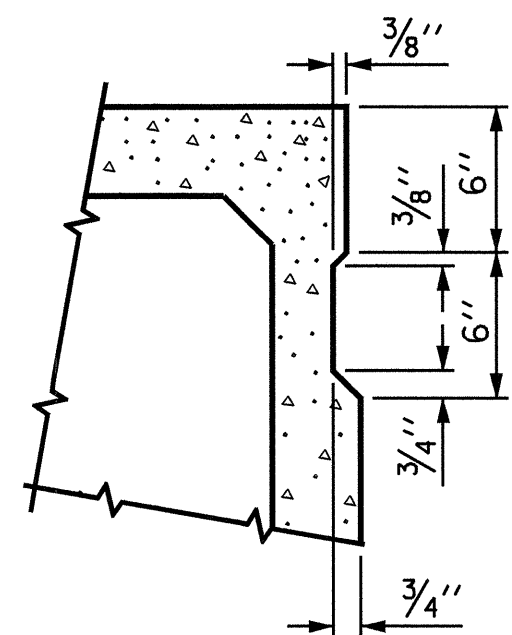
GRADE 270 STRANDS	
	0.6" Ø L.R.
AREA (SQUARE INCHES)	0.217
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950



ALL BAR DIMENSIONS ARE OUT TO OUT

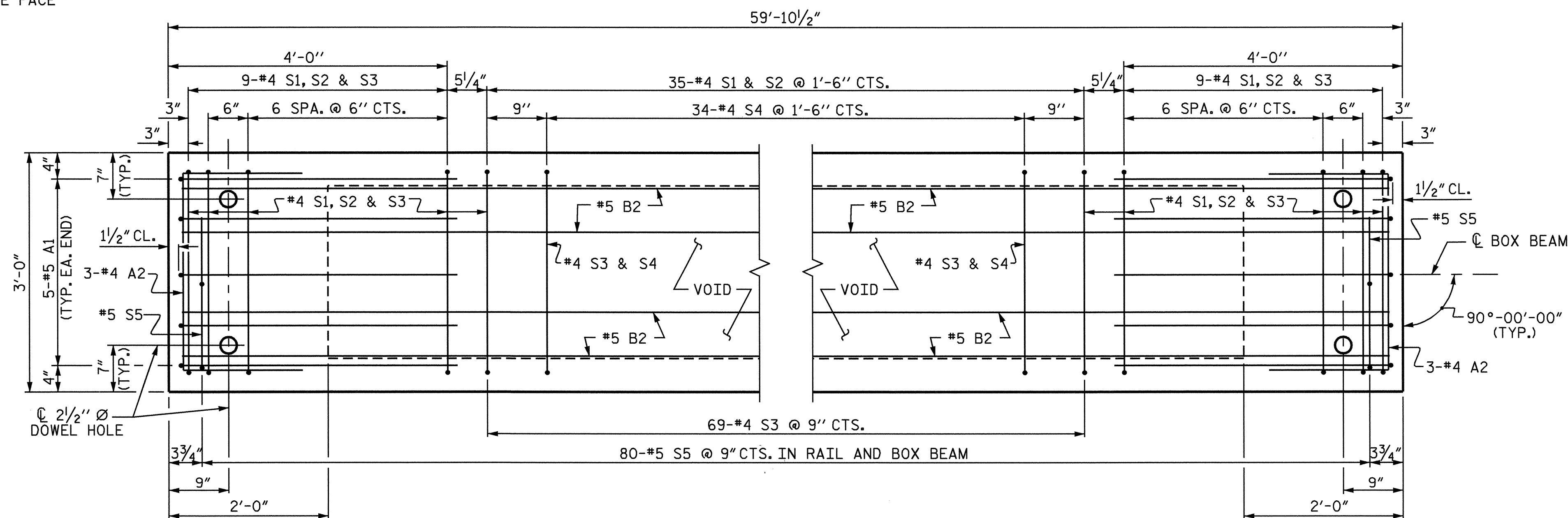
BILL OF MATERIAL FOR ONE BOX BEAM SECTION

BAR NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
			LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	6'-2"	64	6'-2"	64
A2	18	#4	5'-7"	67	5'-7"	67
B2	6	#5 STR	59'-6"	372	59'-6"	372
K1	9	#4	5'-2"	31	5'-2"	31
K2	6	#4 STR	2'-7"	10	2'-7"	10
S1	53	#4	6'-6"	230	6'-6"	230
S2	53	#4	5'-8"	201	5'-8"	201
S3	87	#4	4'-10"	281	4'-10"	281
S4	34	#4	5'-10"	132	5'-10"	132
* S5	80	#5	6'-2"	515	--	--
REINFORCING STEEL			1388 LBS.		1388 LBS.	
* EPOXY COATED REINF. STEEL			515 LBS.		515 LBS.	
5500 P.S.I. CONCRETE			9.6 CU. YDS.		9.5 CU. YDS.	
0.6" Ø L.R. STRANDS			No. 16		No. 16	



SHEAR KEY DETAIL

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



PLAN OF BOX BEAM

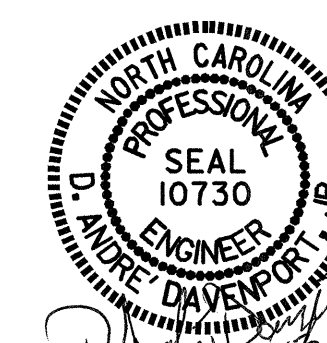
EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS. FOR LOCATION OF DIAPHRAGMS, SEE PLAN OF SPANS. FOR REINFORCING STEEL IN DIAPHRAGMS, SEE DIAPHRAGM DETAILS.

PROJECT NO. B-3538
WAYNE COUNTY
STATION: 14+24.50-L-

SHEET 6 OF 8

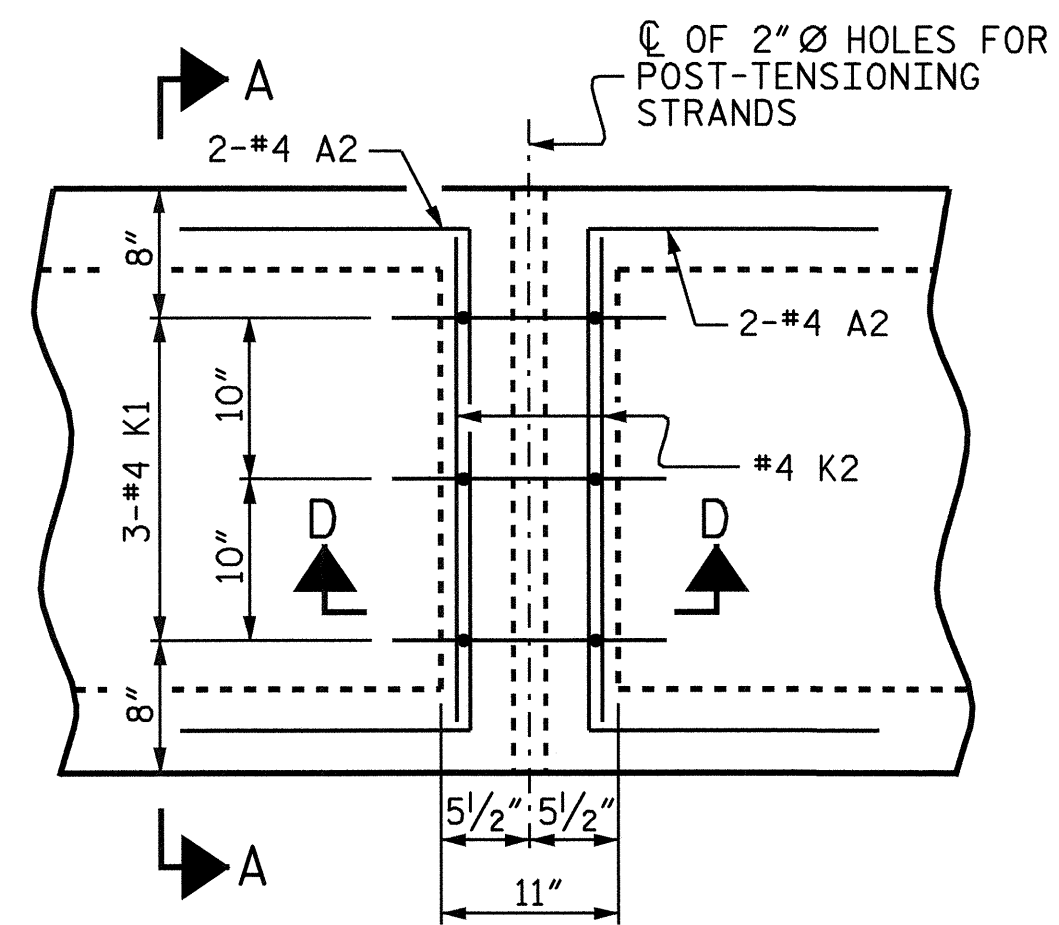
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

3'-0" X 2'-3"
PRESTRESSED CONCRETE
BOX BEAM UNIT
SPANS "B" & "C"

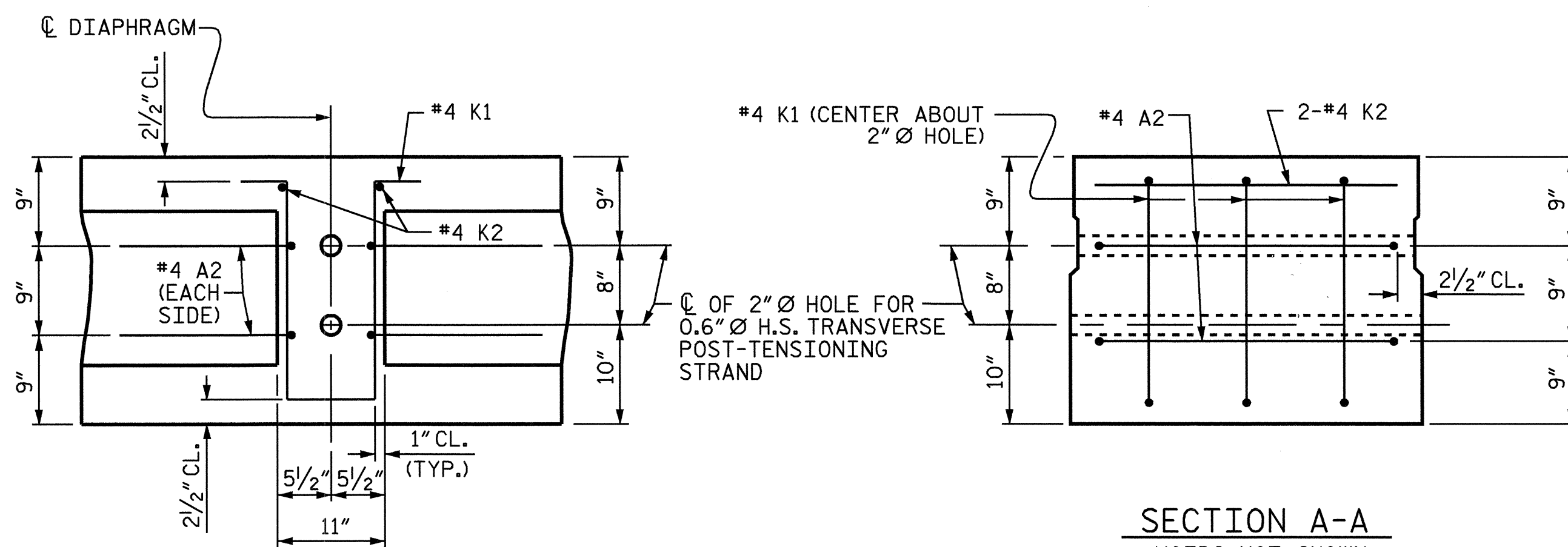


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
2			4			24

ASSEMBLED BY :	H. T. BARBOUR	DATE :	5-8-06
CHECKED BY :	A. SORSENGINH	DATE :	8-06
DRAWN BY :	TLA 5/05	ADDED :	7/11/05
CHECKED BY :	GM 6/05		



PLAN

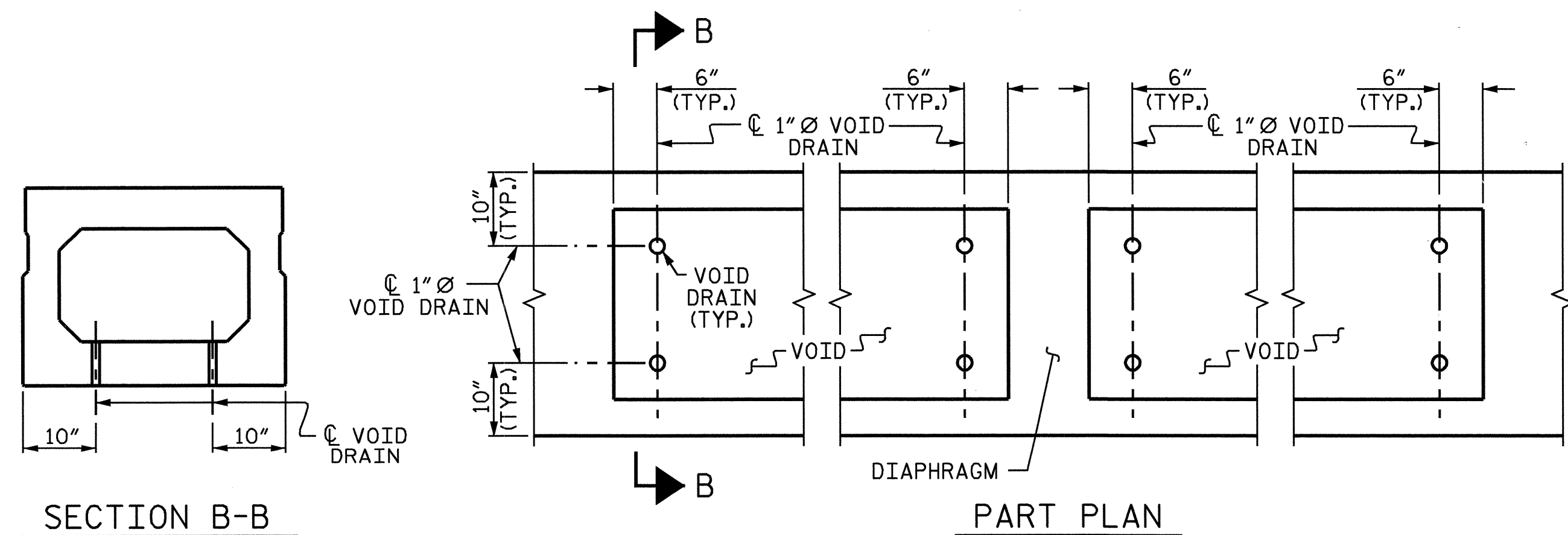


SECTION D-D

SECTION A-A
VOIDS NOT SHOWN

DOUBLE DIAPHRAGM DETAILS

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

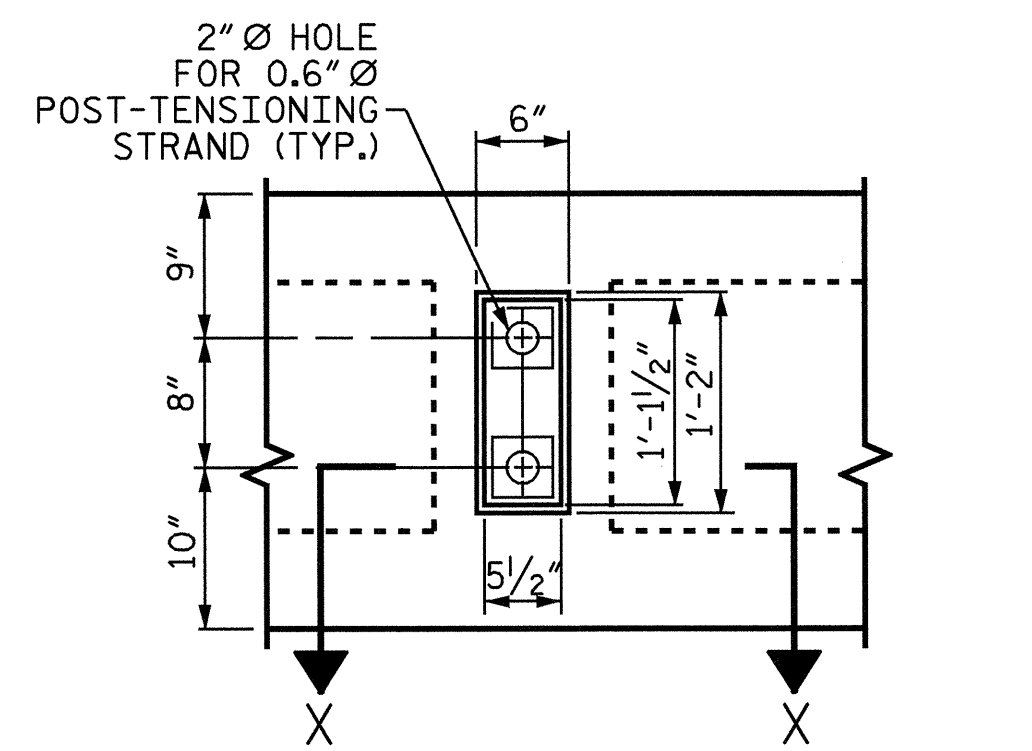


SECTION B-B

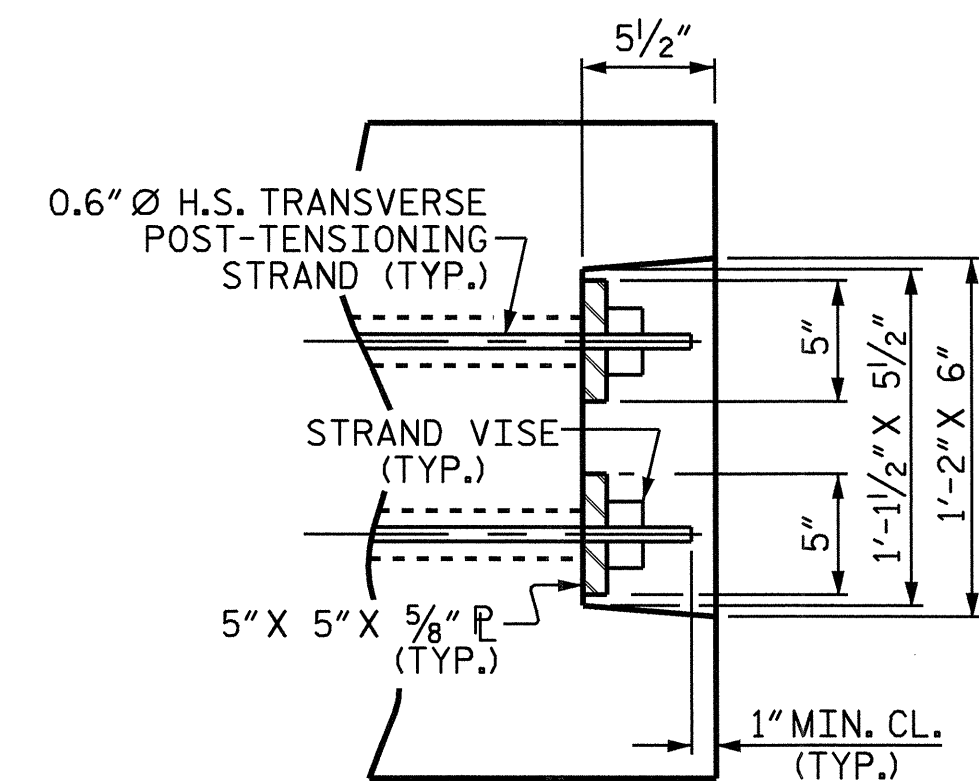
PART PLAN

VOID DRAIN DETAILS

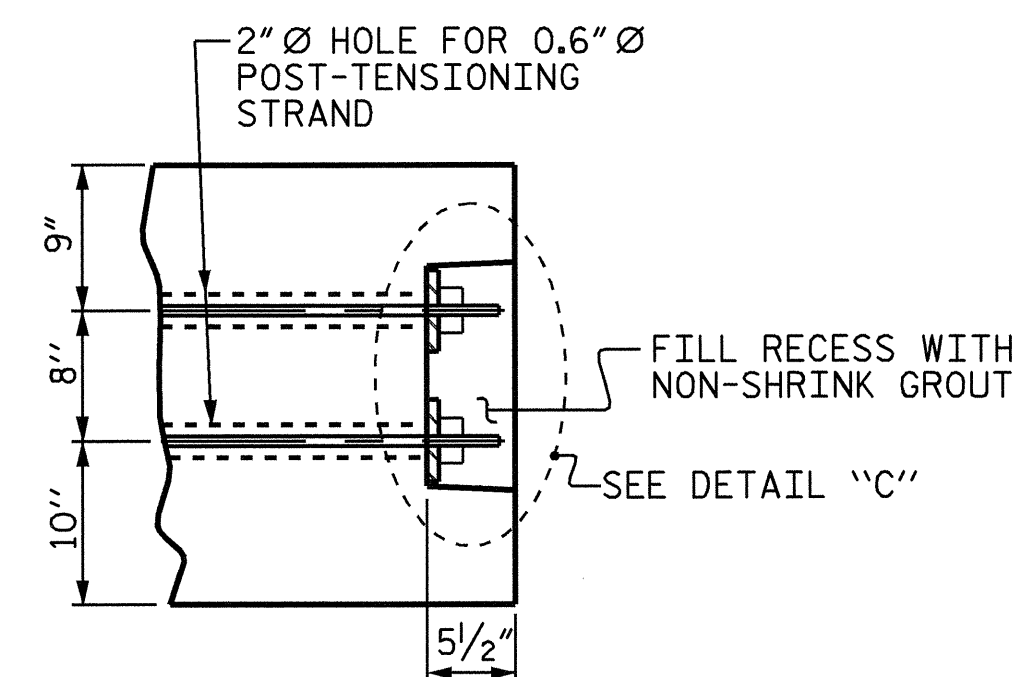
(DIMENSIONS SHOWN ARE TYPICAL FOR EACH VOID)



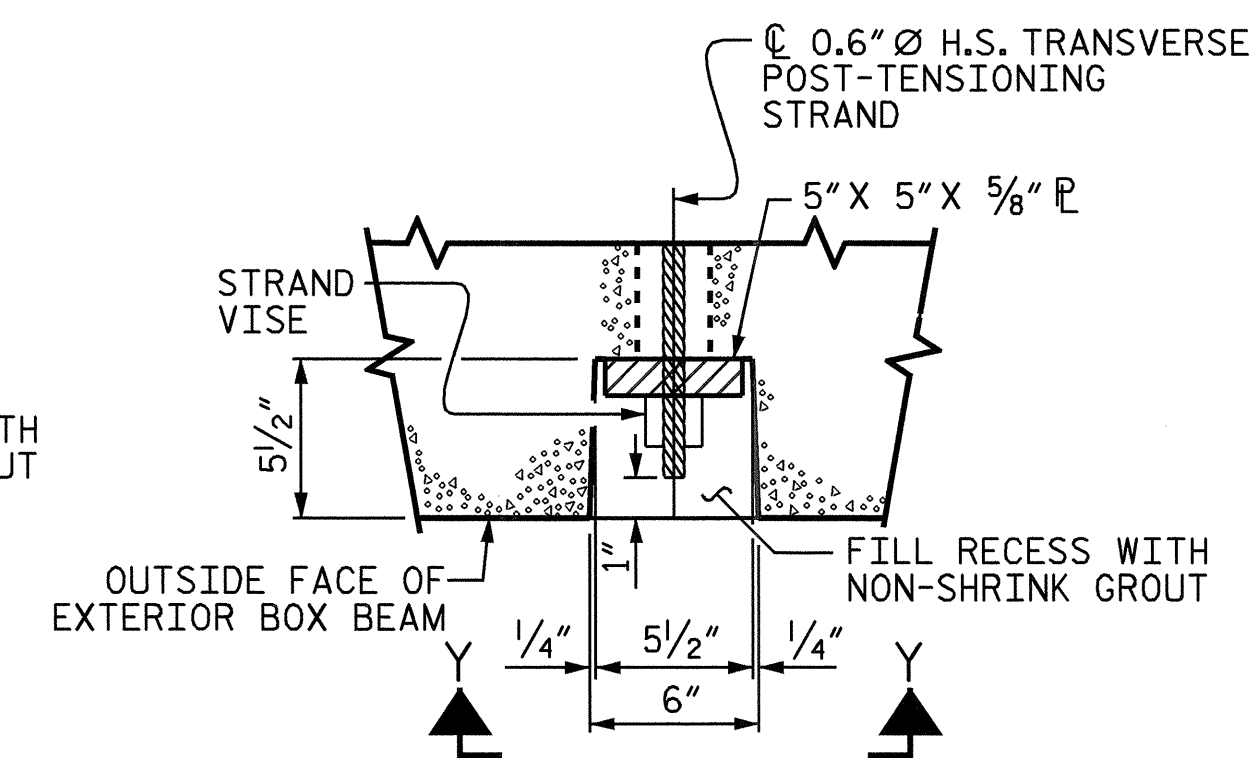
VIEW Y-Y
SHOWING ELEVATION VIEW OF GROUDED RECESS



DETAIL "C"



PART SECTION AT RECESS



SECTION X-X
SHOWING PLAN VIEW OF GROUDED RECESS

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

DEAD LOAD DEFLECTION AND CAMBER		
	3'-0" x 2'-3"	3'-0" x 2'-3"
	0.6" Ø L.R. STRAND	0.6" Ø L.R. STRAND
	SPAN "A"	SPANS "B" & "C"
CAMBER (BEAM ALONE IN PLACE)	↑ 1 1/8"	↑ 2"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOADS **	↓ 1/4"	↓ 3/8"
FINAL CAMBER	↑ 1 5/8"	↑ 1 5/8"

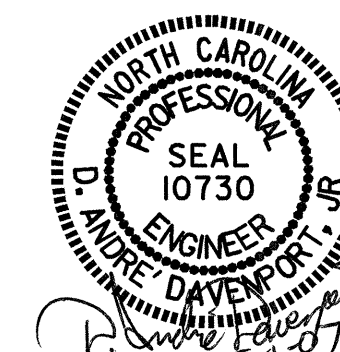
** INCLUDES FUTURE WEARING SURFACE

PROJECT NO. B-3538
WAYNE COUNTY
STATION: 14+24.50-L-

SHEET 7 OF 8

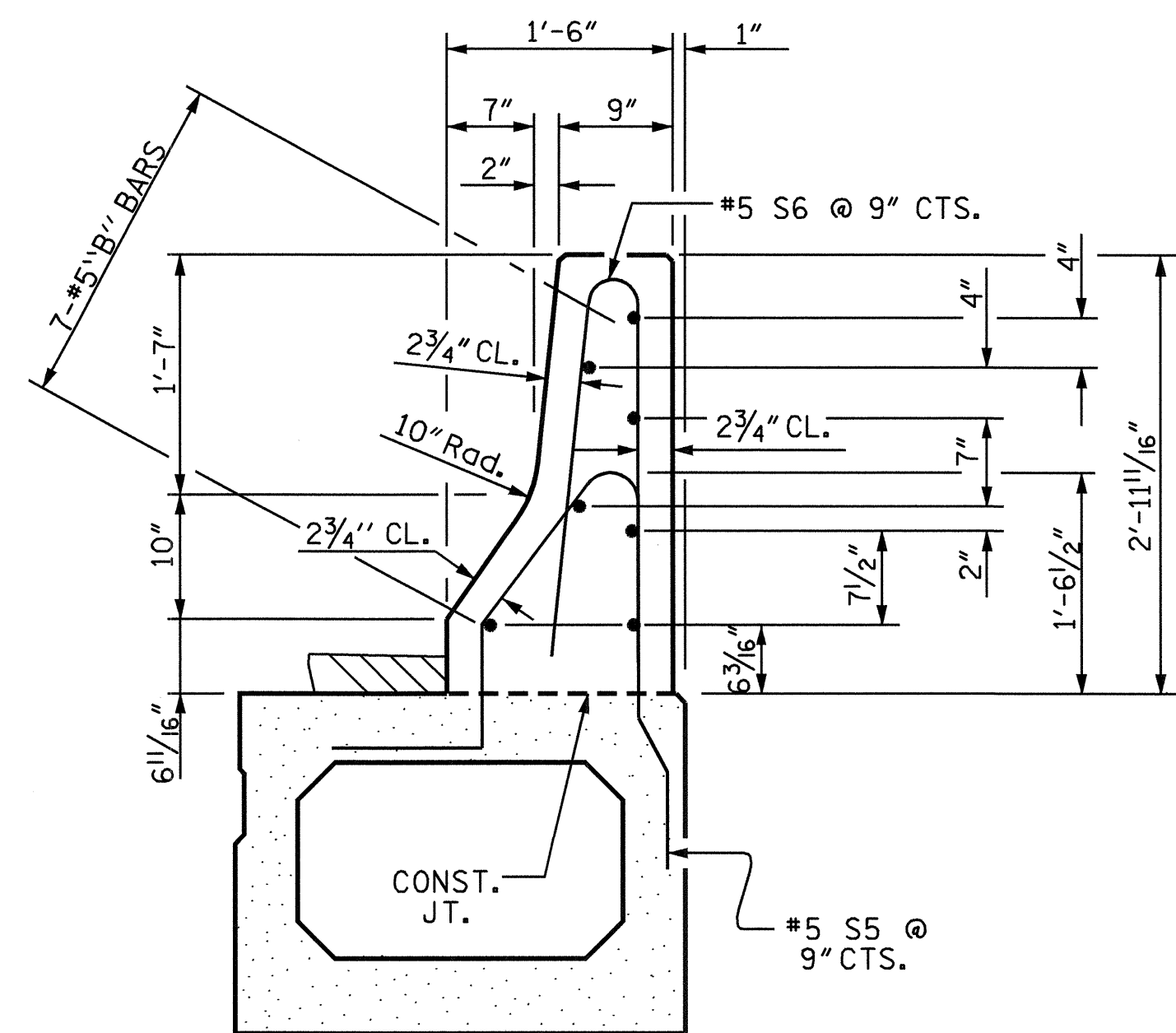
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

3'-0" X 2'-3"
PRESTRESSED CONCRETE
BOX BEAM UNIT



ASSEMBLED BY : H. T. BARBOUR DATE : 5-8-06
CHECKED BY : A. SORSENGINH DATE : 8-06
DRAWN BY : TLA 5/05 ADDED 7/11/05
CHECKED BY : GM 6/05

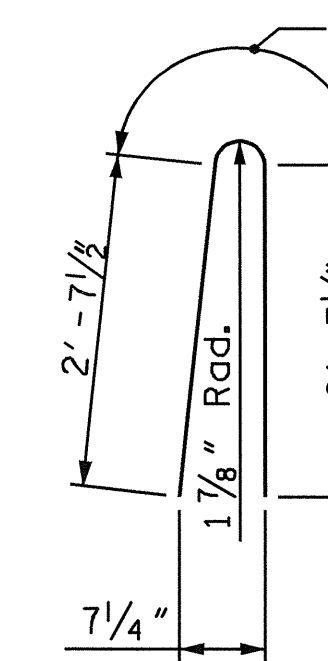
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
1			3			TOTAL SHEETS
2			4			24



SECTION THRU RAIL

BARRIER RAIL DETAILS

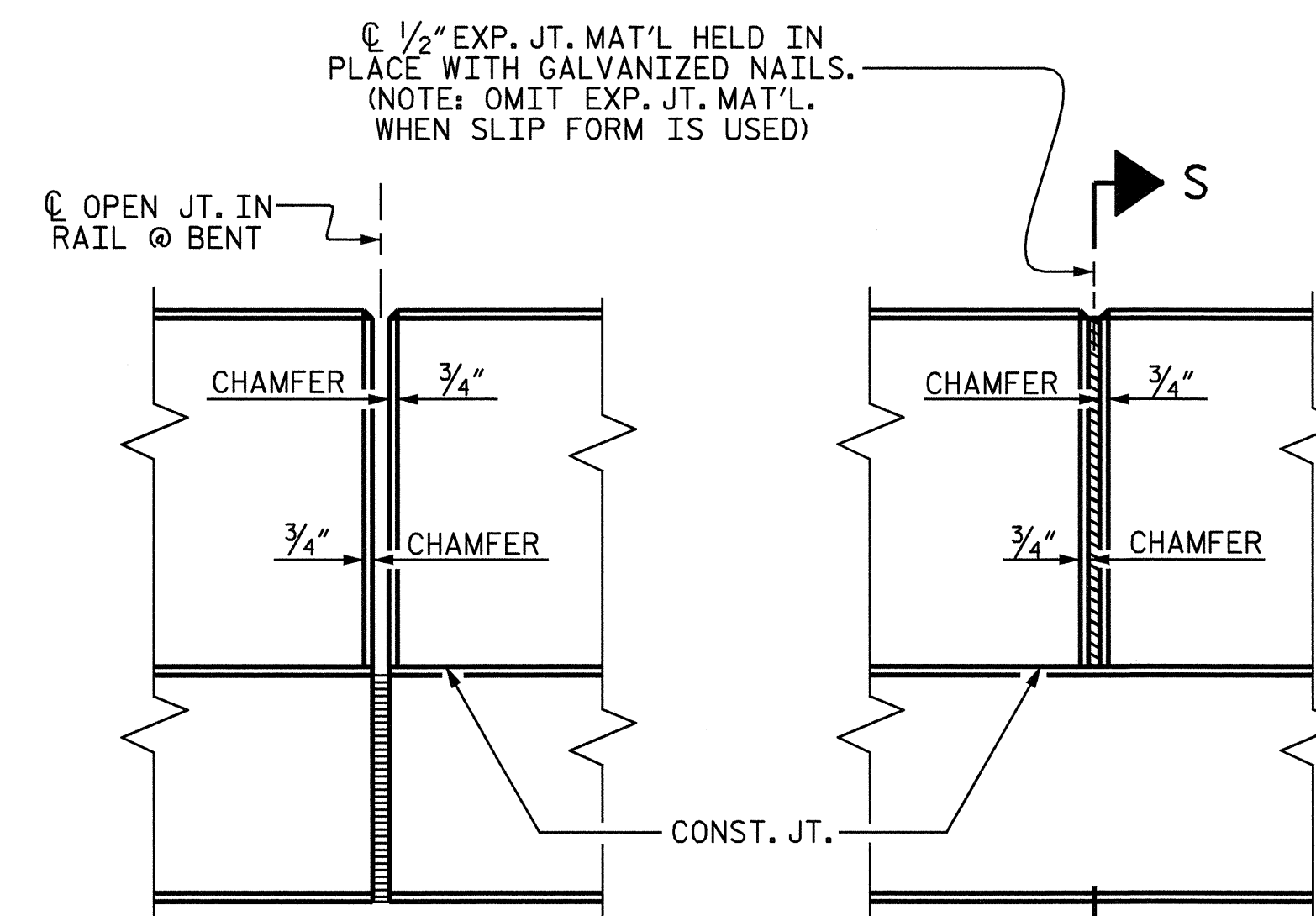
BILL OF MATERIAL FOR CONCRETE BARRIER RAIL								
BAR	BARS PER SPAN			TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
	SPAN A	SPAN B	SPAN C					
*B3	28			28	#5	STR	26'-6"	774
*B4		28	28	56	#5	STR	29'-7"	1728
*S6	144	160	160	464	#5	10	5'-9"	2783
* EPOXY COATED REINFORCING STEEL				LBS. 5285				
CLASS AA CONCRETE				CU.YDS. 40.7				
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL								347.625



10

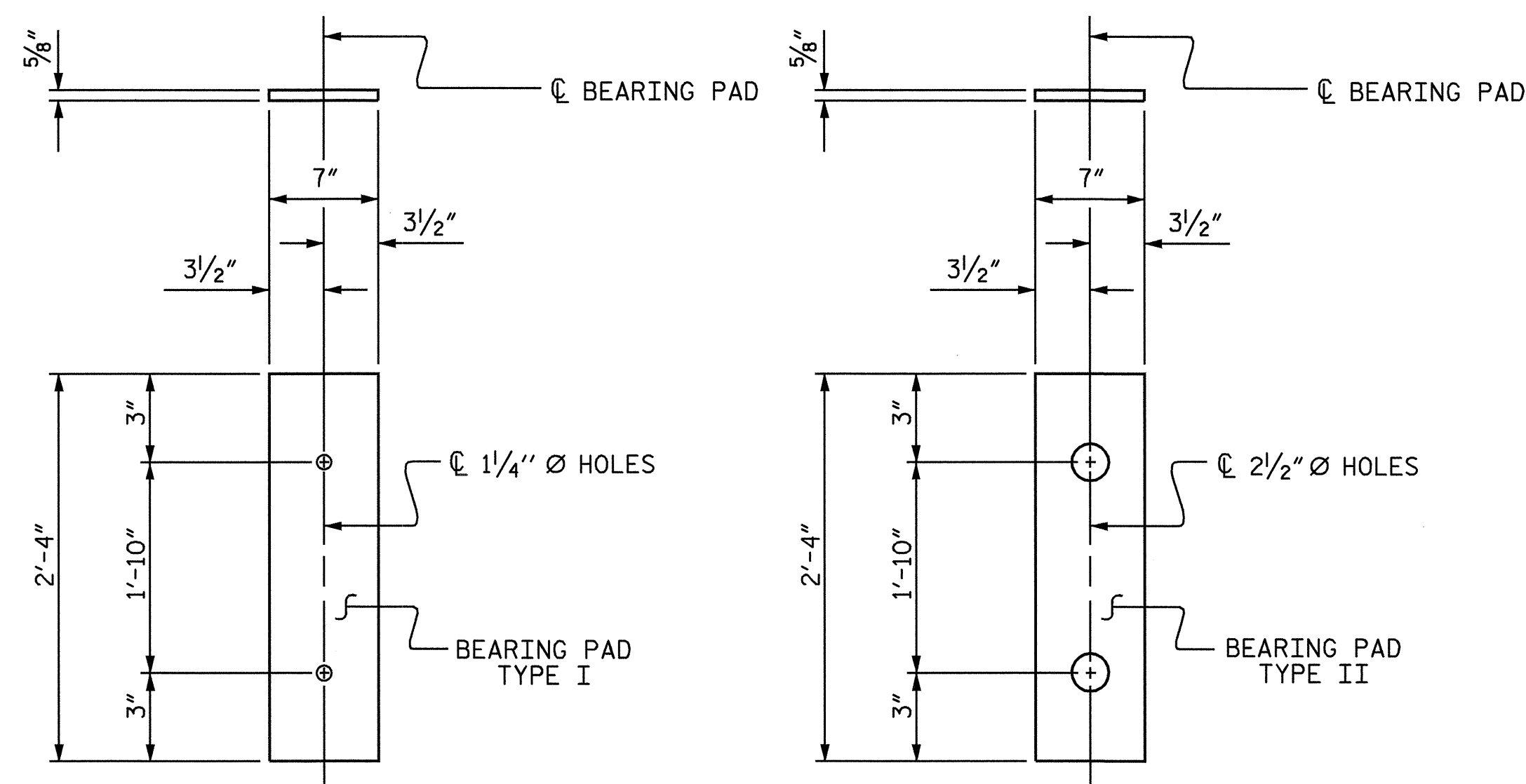
BAR TYPE

BAR DIMENSIONS ARE OUT TO OUT



ELEVATION AT EXPANSION JOINTS

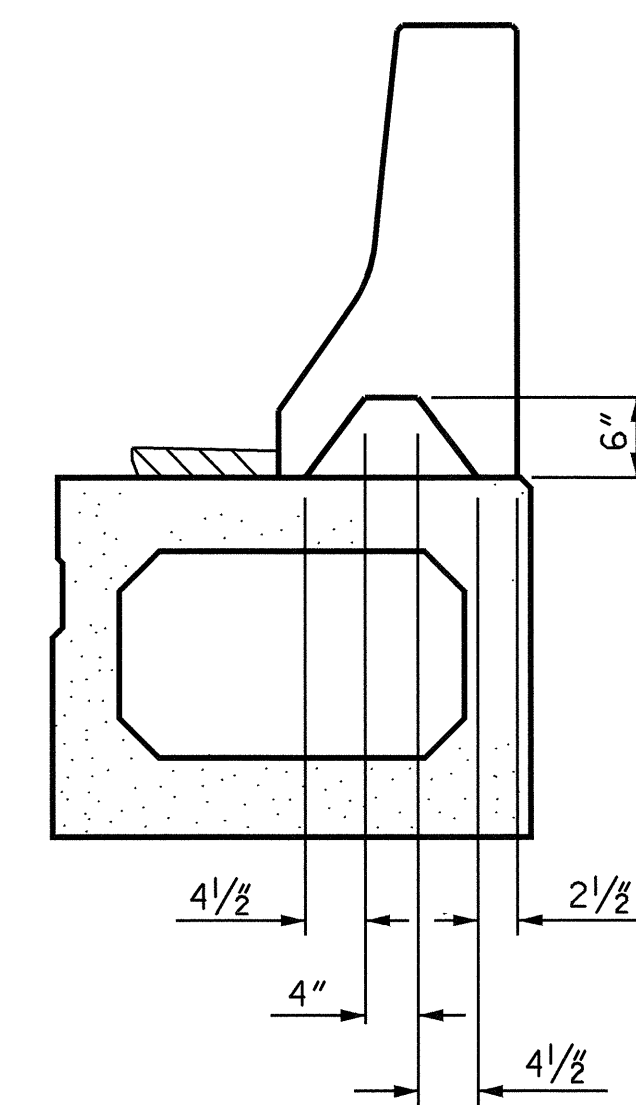
BOX BEAM UNITS REQUIRED			
	NUMBER	LENGTH	TOTAL LENGTH
SPAN A	11	53'-9 3/4"	591'-11 1/4"
SPAN B	11	59'-10 1/2"	658'-7 1/2"
SPAN C	11	59'-10 1/2"	658'-7 1/2"
TOTAL	33		1909'-2 1/4"



FIXED END
(TYPE I - 55 REQ'D)

EXPANSION END
(TYPE II - 11 REQ'D)

ELASTOMERIC BEARING DETAILS



SECTION S-S

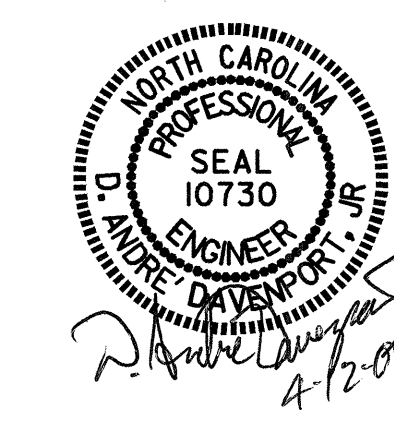
AT DAM IN OPEN JOINT
(THIS IS TO BE USED ONLY
WHEN SLIP FORM IS USED)

PROJECT NO. B-3538
WAYNE COUNTY
STATION: 14+24.50-L-

SHEET 8 OF 8

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

3'-0" X 2'-3"
PRESTRESSED
CONCRETE BOX BEAM
UNIT DETAILS



REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11	
1			3			TOTAL SHEETS	
2			4			24	

DRAWN BY : H. T. BARBOUR DATE : 5-10-06
CHECKED BY : A. SORSENGINH DATE : 8-06

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 4 - 1/8" 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 M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM 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 1/8" 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.)

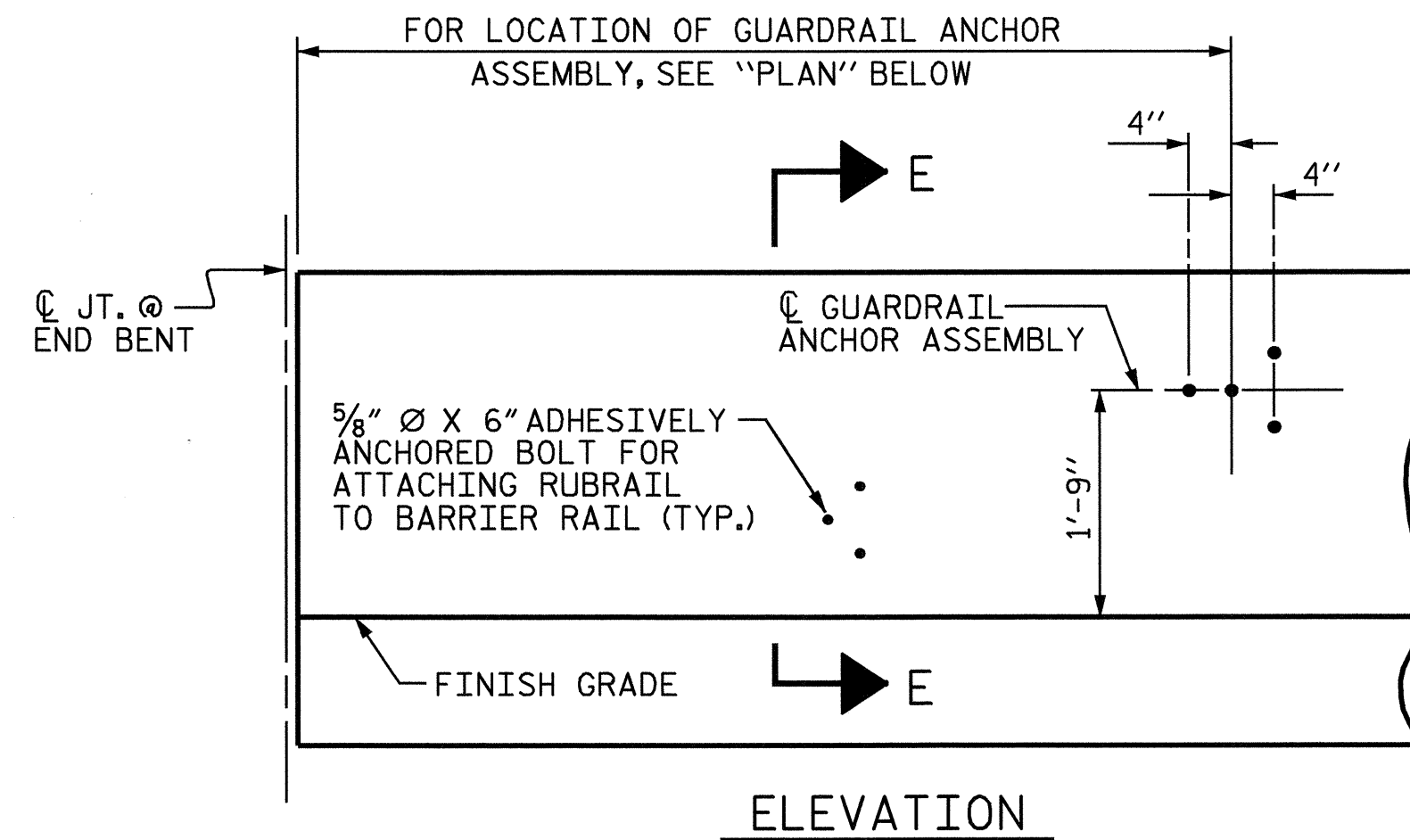
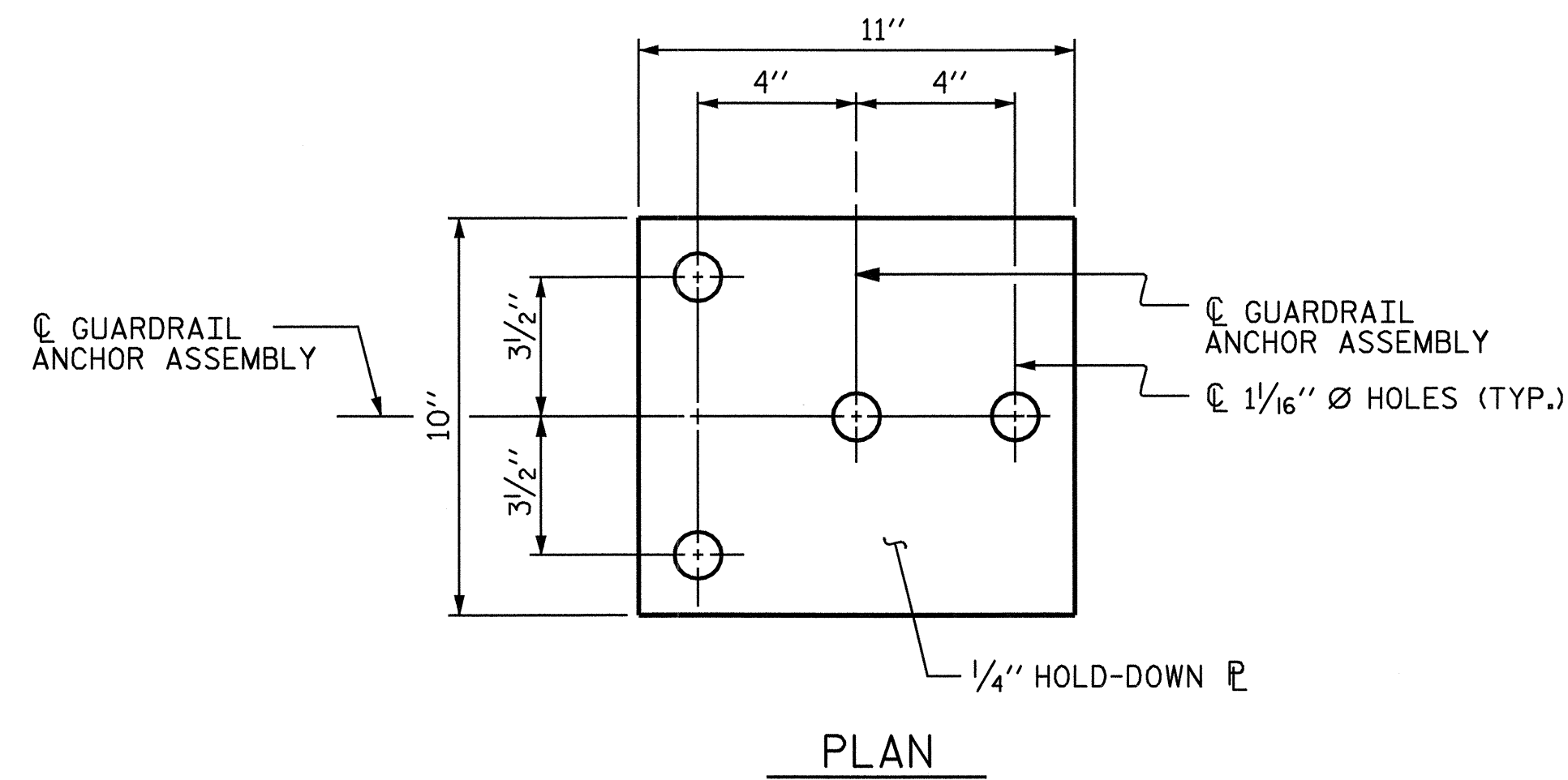
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

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

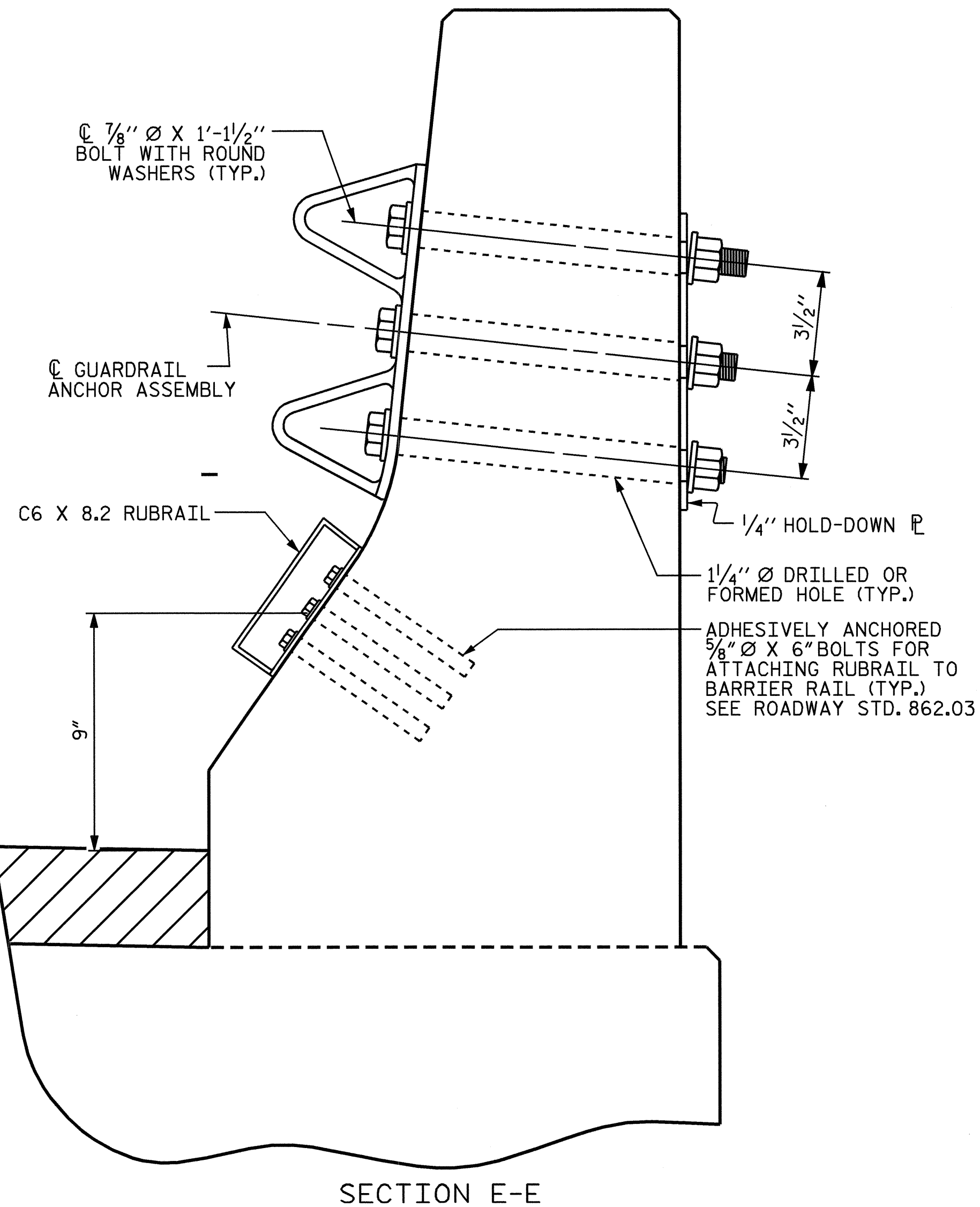
THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CONCRETE BARRIER RAIL.

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.

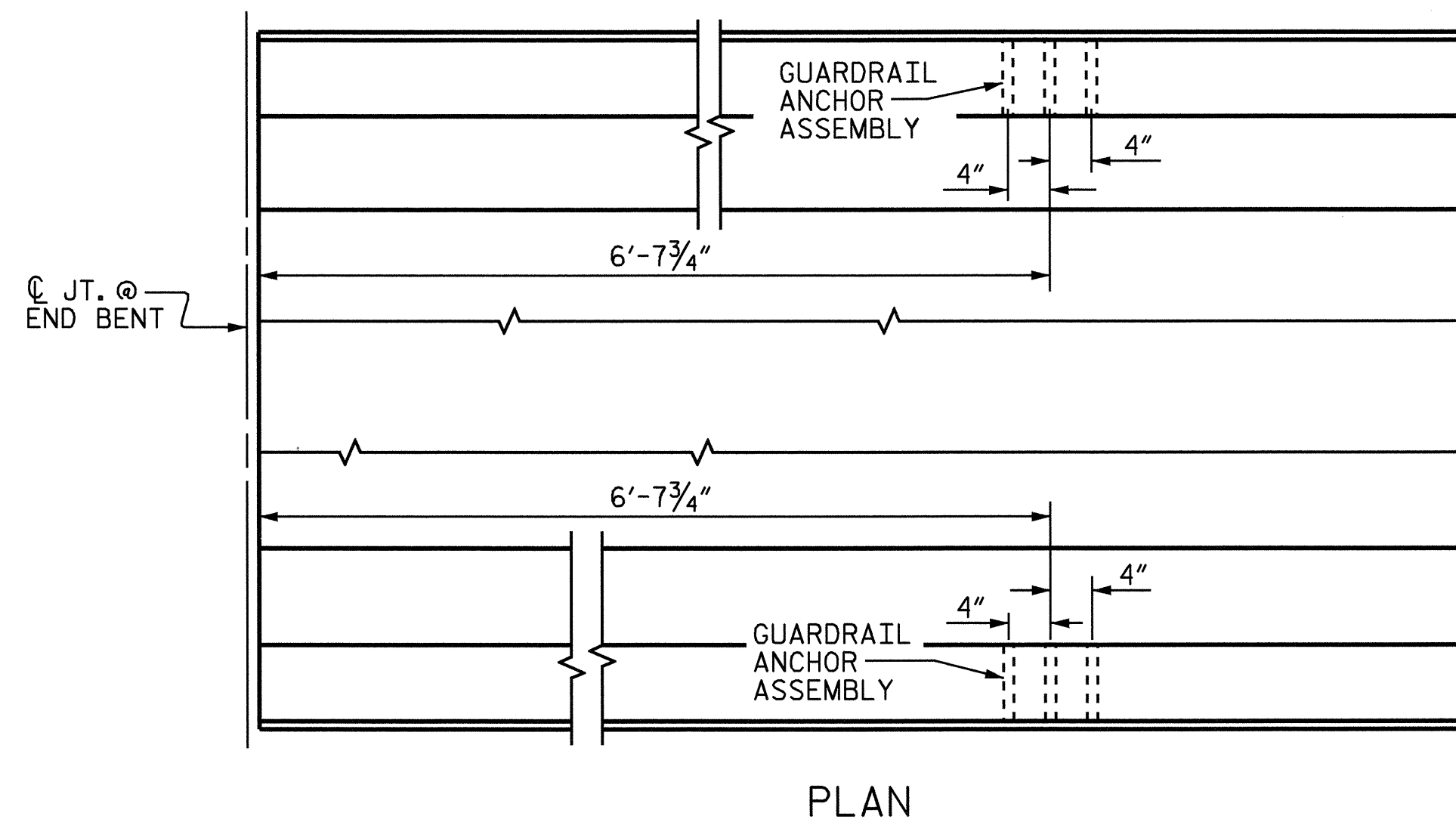
THE C6 X 8.2 RUBRAIL IS TO BE ADHESIVELY ANCHORED TO THE RAIL USING THREE 5/8" Ø X 6" BOLTS WITH WASHERS. SEE ROADWAY STANDARD 862.03 FOR DETAILS AND LOCATION OF THE RUBRAIL.



FOR LOCATION OF RUBRAIL, SEE ROADWAY STD. 862.03

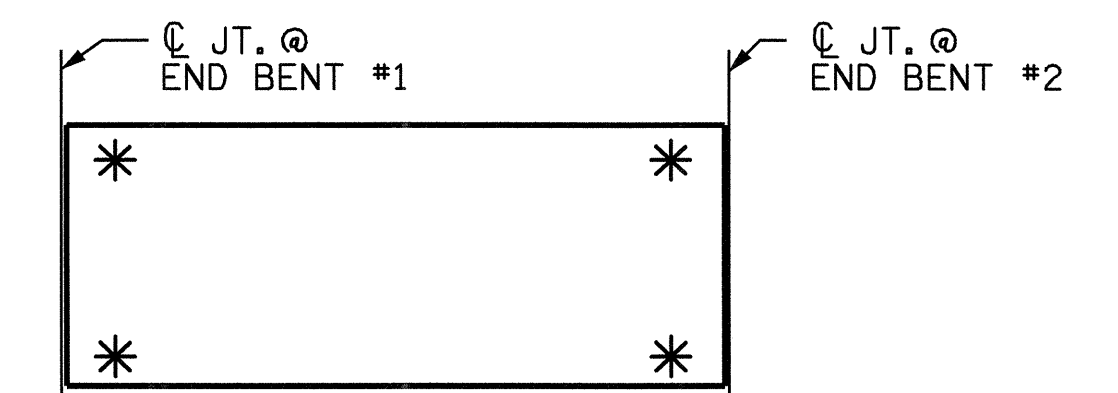


GUARDRAIL ANCHOR ASSEMBLY DETAILS



LOCATION OF ANCHORS FOR GUARDRAIL

END BENT #1 SHOWN, END BENT #2 SIMILAR.

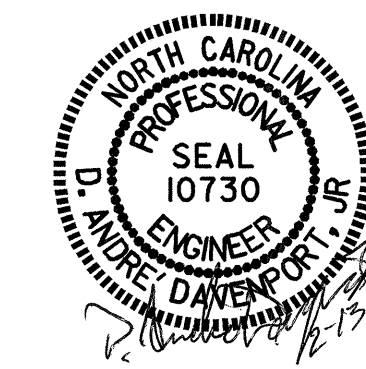


SKETCH SHOWING POINTS OF ATTACHMENTS

* DENOTES GUARDRAIL ANCHOR ASSEMBLY

PROJECT NO. B-3538
WAYNE COUNTY
STATION: 14+24.50-L-

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD GUARDRAIL ANCHORAGE FOR BARRIER RAIL					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-12
TOTAL SHEETS					24



ASSEMBLED BY : H. T. BARBOUR	DATE : 1-16-07
CHECKED BY : A. DAVENPORT	DATE : 1-07
DRAWN BY : TLA 5/06	ADDED 5/1/06
CHECKED BY : GM 5/06	

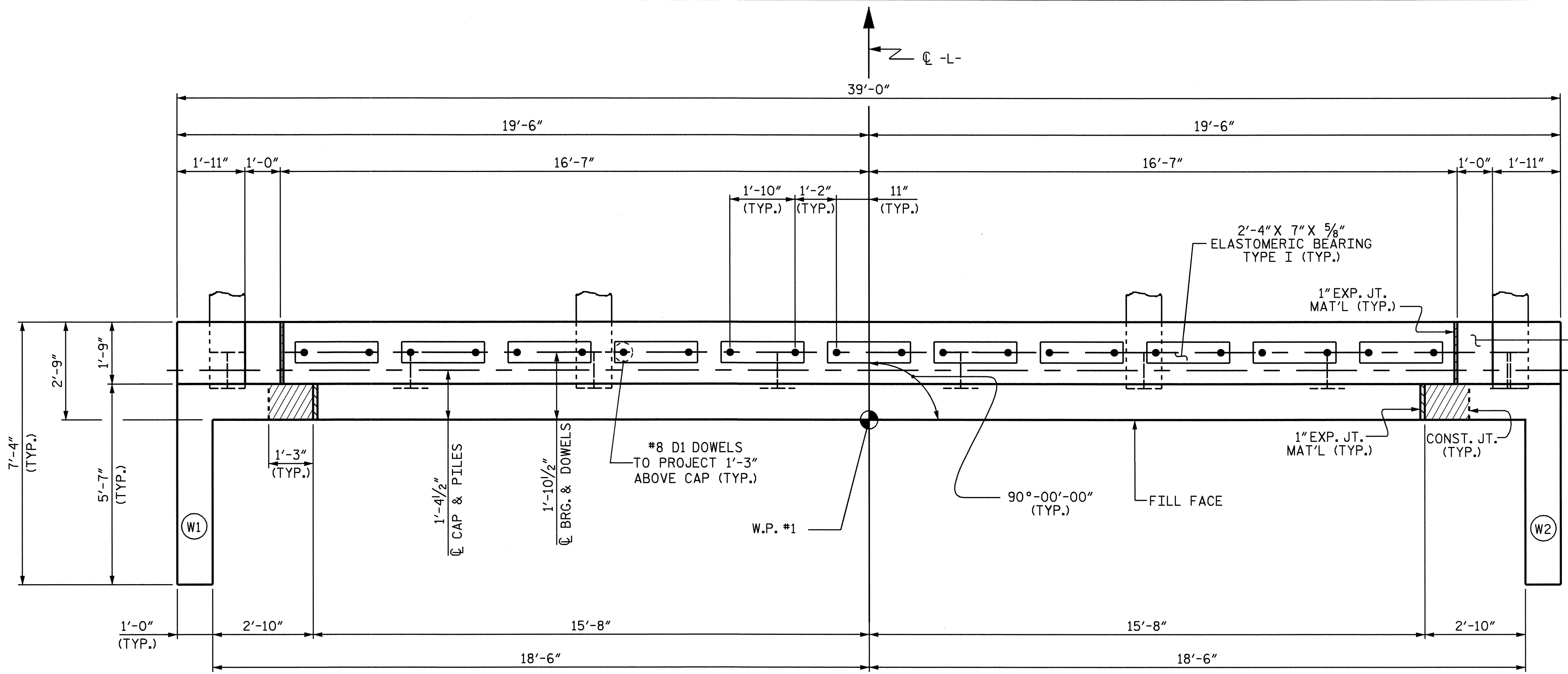
NOTES

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

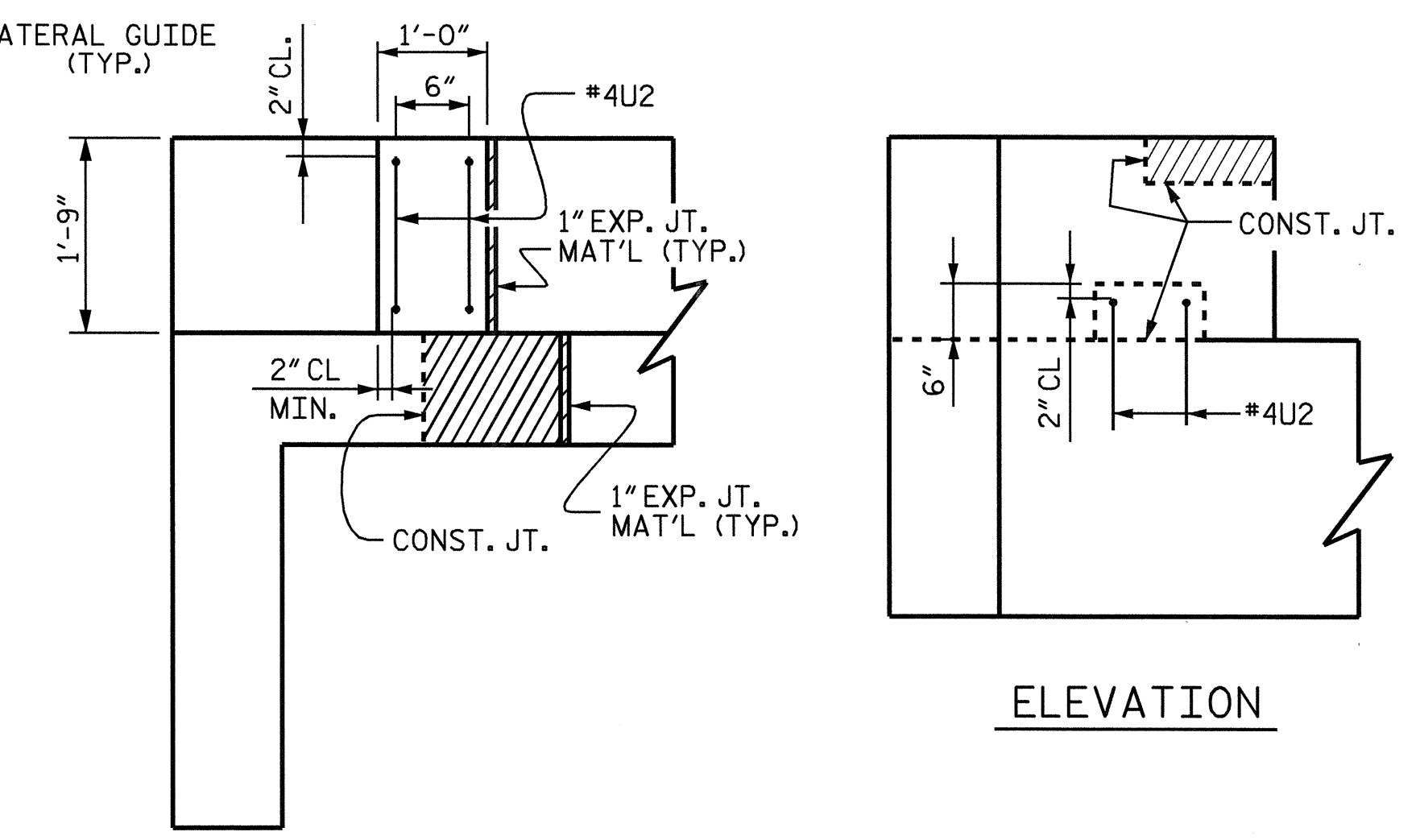
THE CONTRACTOR SHALL PROVIDE FOR INSTALLATION OF THE 4" DIAMETER DRAIN PIPE THROUGH THE WING WALL AS REQUIRED FOR REINFORCED BRIDGE APPROACH FILLS, SEE THE ROADWAY PLANS. REINFORCING STEEL IN THE WING WALL MAY BE SHIFTED AS NECESSARY TO CLEAR THE DRAIN PIPE.

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

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



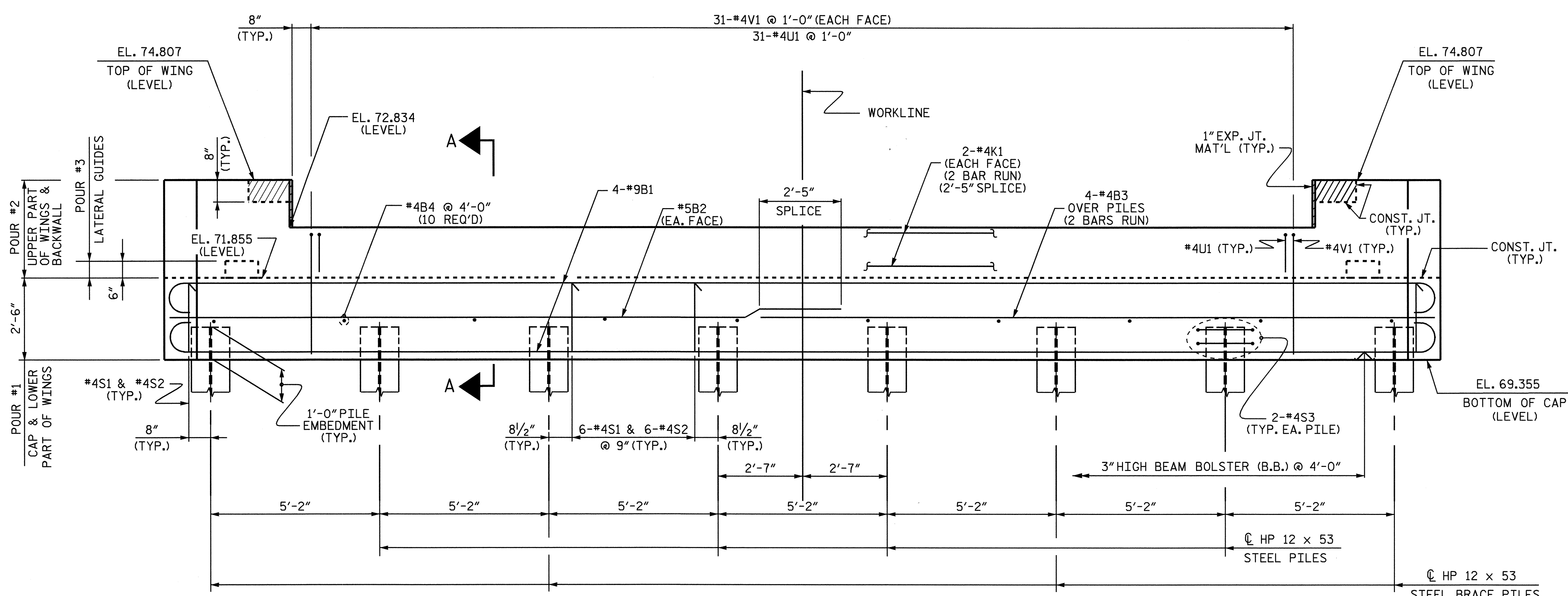
PLAN



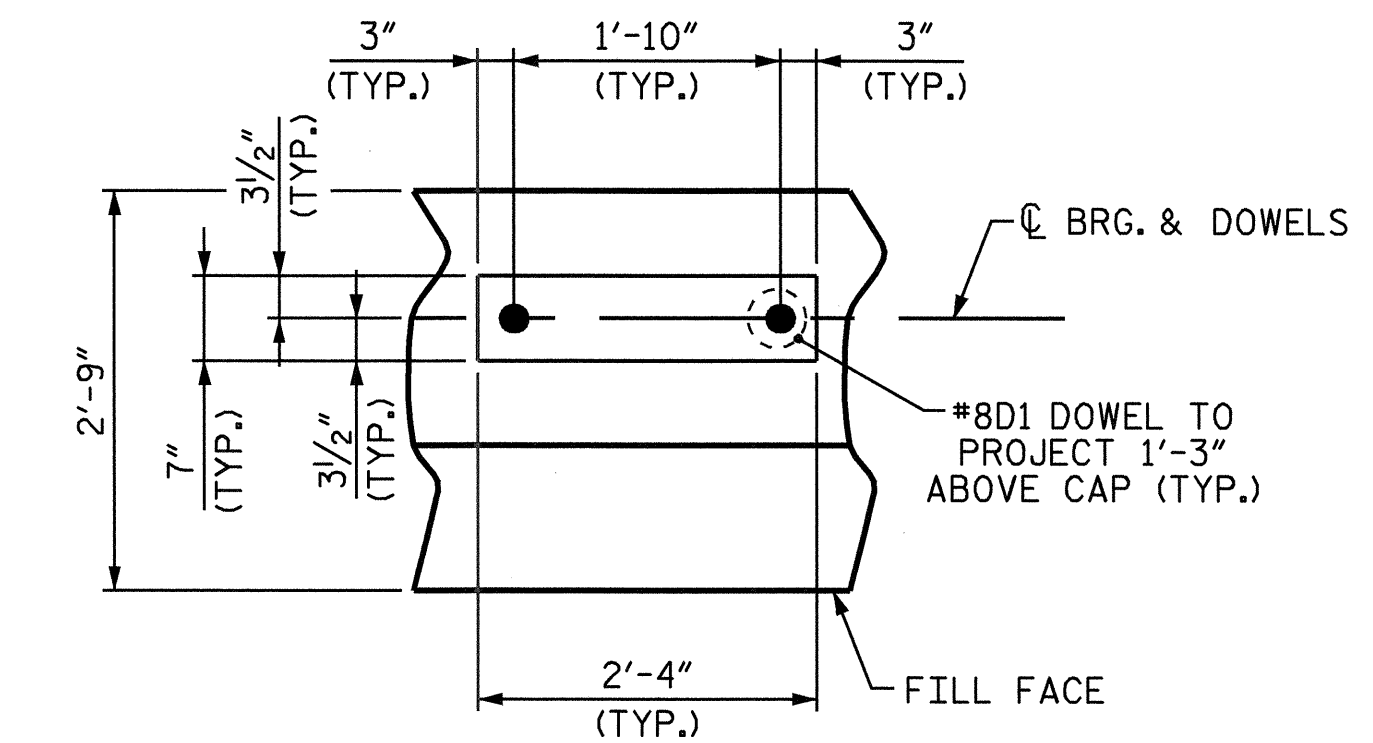
PLAN

LATERAL GUIDE

(EACH END SIMILAR)



ELEVATION



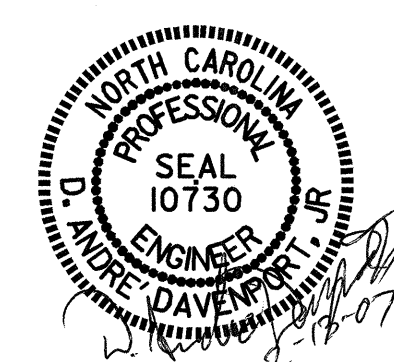
BEARING DETAIL

PROJECT NO. B-3538
WAYNE COUNTY
 STATION: 14+24.50 -L-

SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

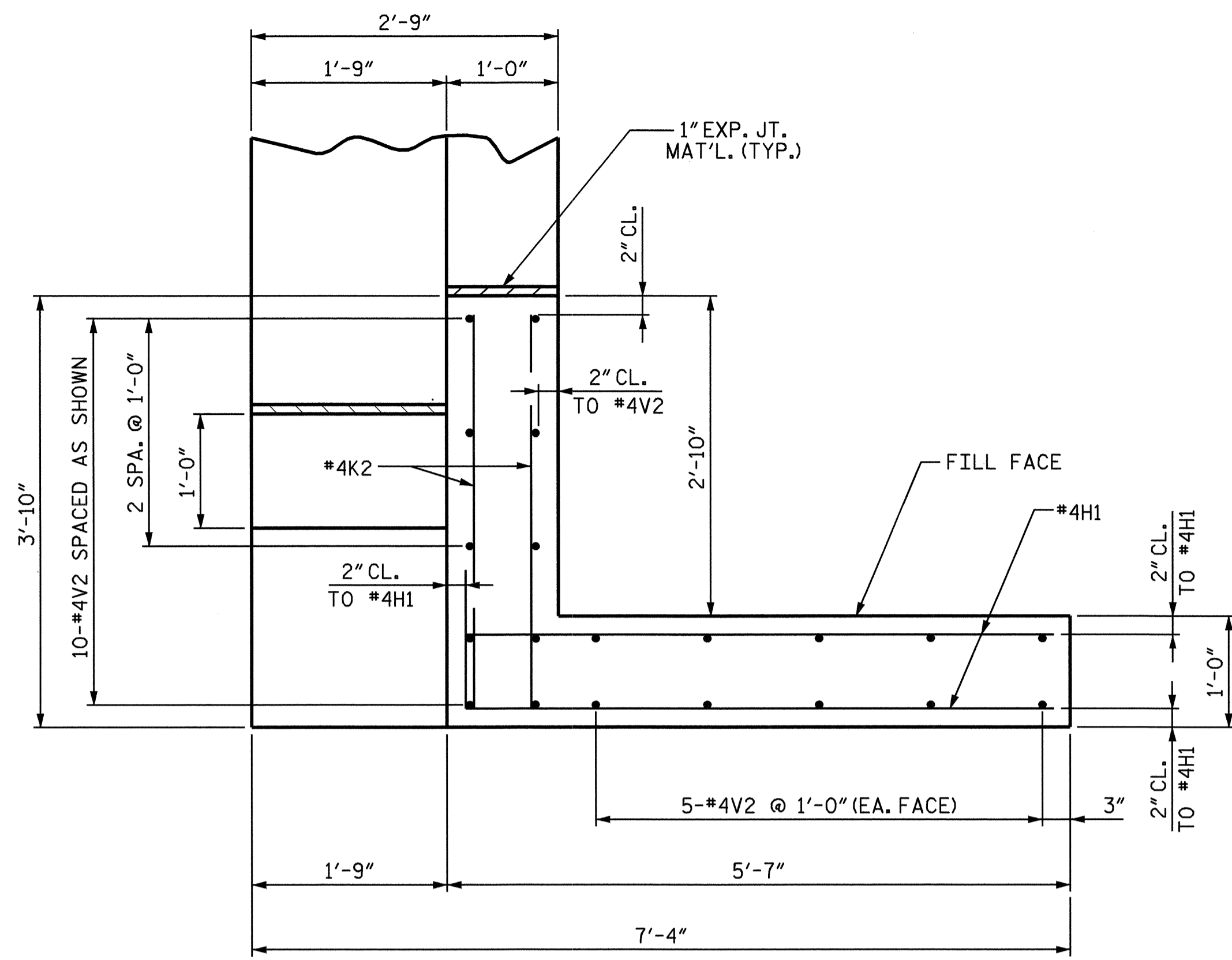
**SUBSTRUCTURE
 END BENT #1**



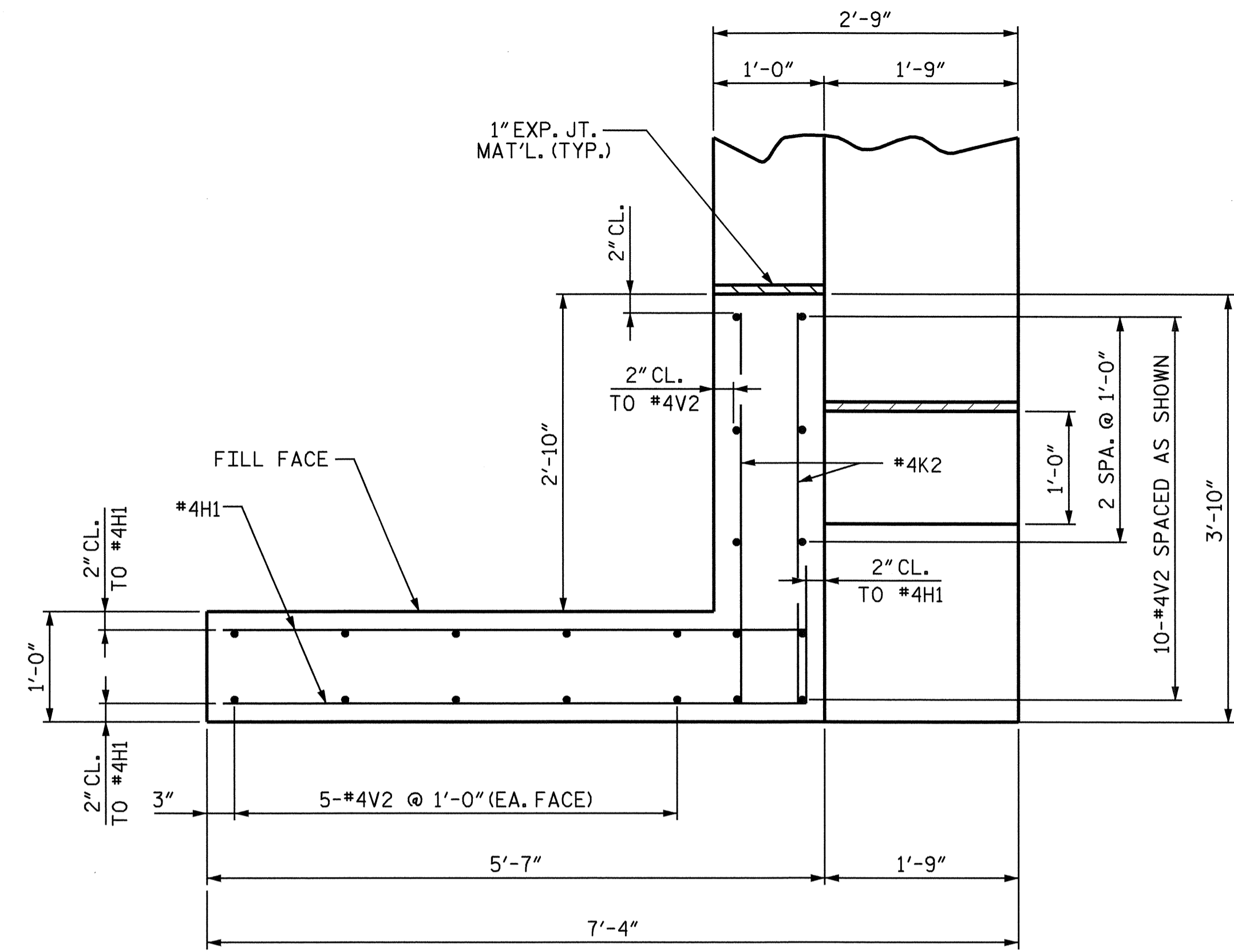
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
1			3			TOTAL SHEETS
2			4			24

DRAWN BY : H. T. BARBOUR DATE : 8-16-06
 CHECKED BY : A. SORSENGIH DATE : 8-23-06

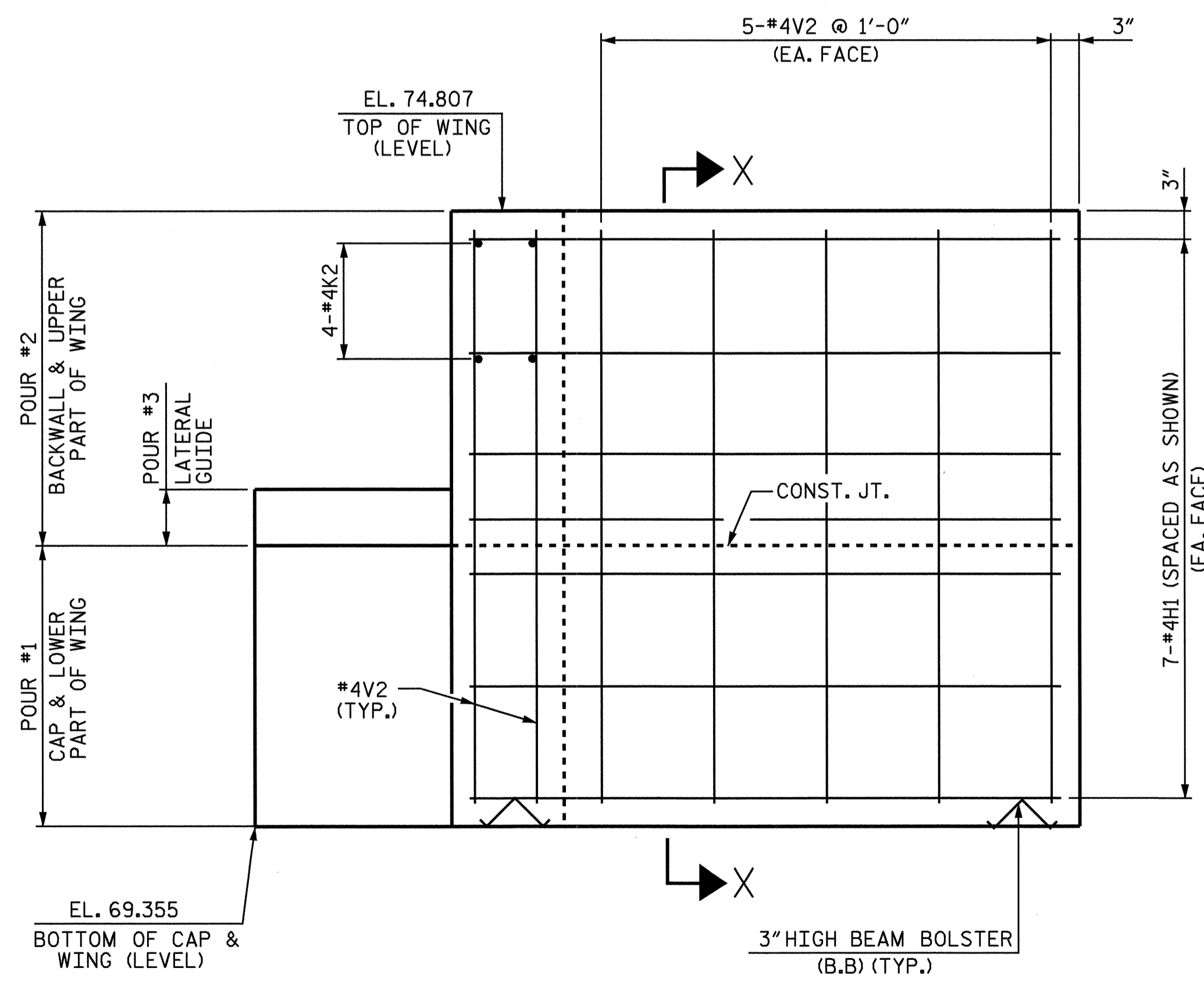
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 adavenport



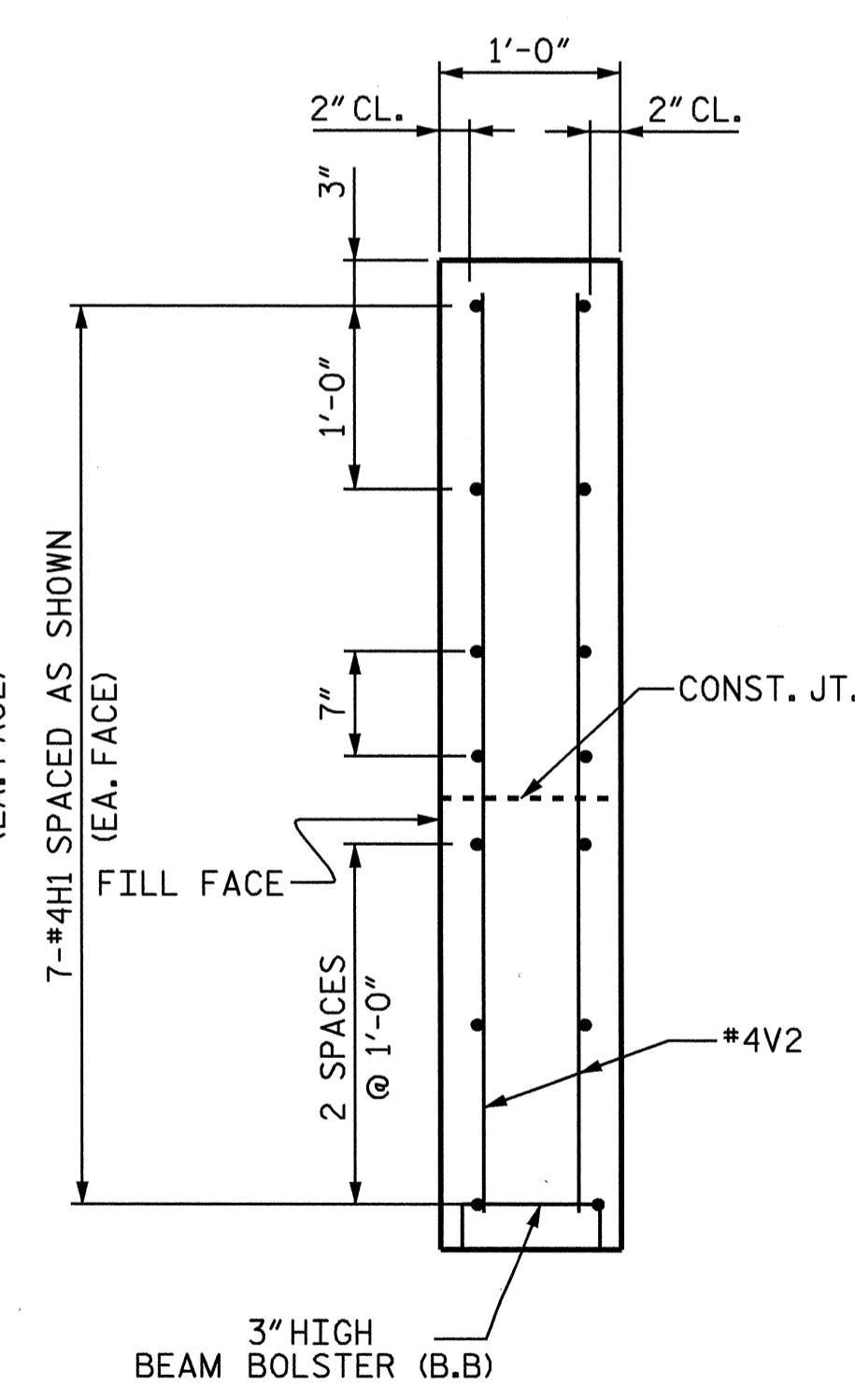
PLAN OF LEFT WING (W1)



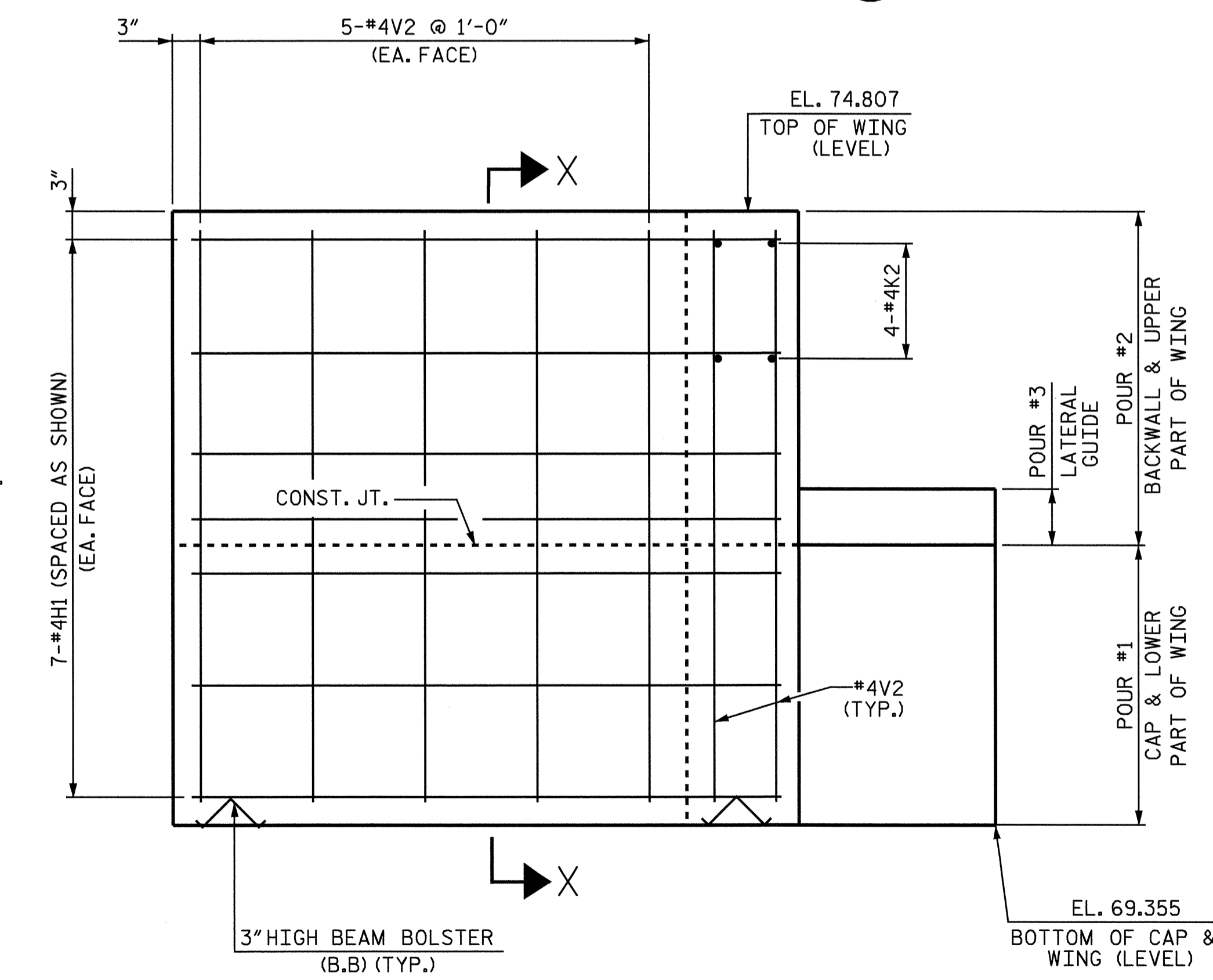
PLAN OF RIGHT WING (W2)



ELEVATION OF LEFT WING (W1)



SECTION X-X



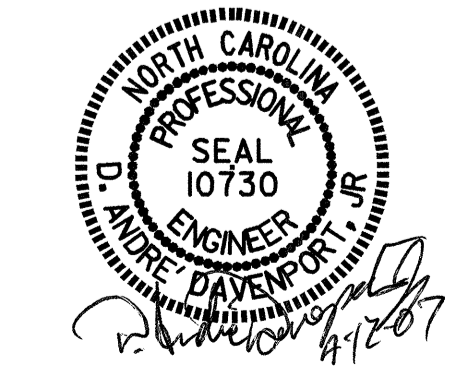
ELEVATION OF RIGHT WING (W2)

PROJECT NO. B-3538
 WAYNE COUNTY
 STATION: 14+24.50 -L-

SHEET 2 OF 3

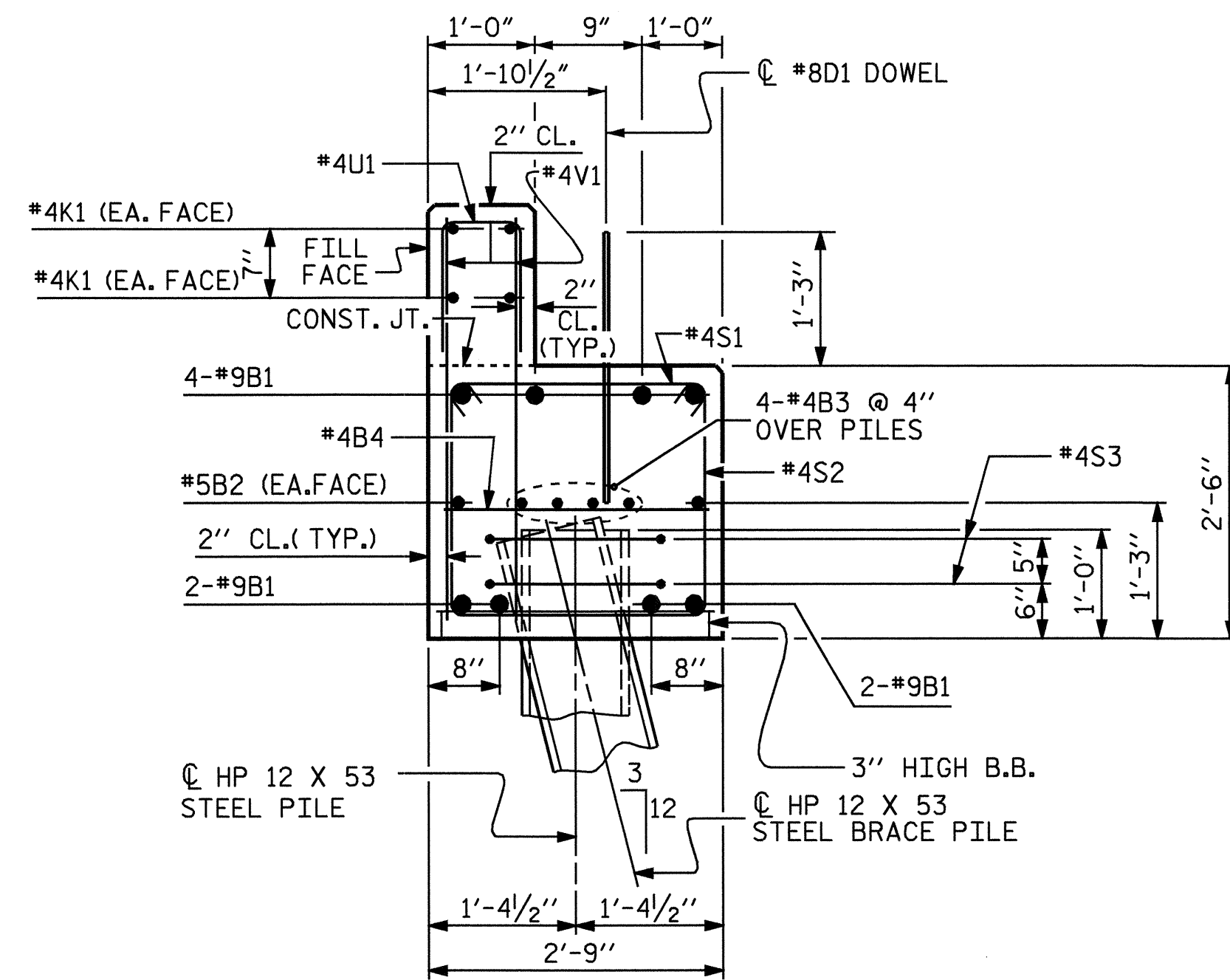
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT #1

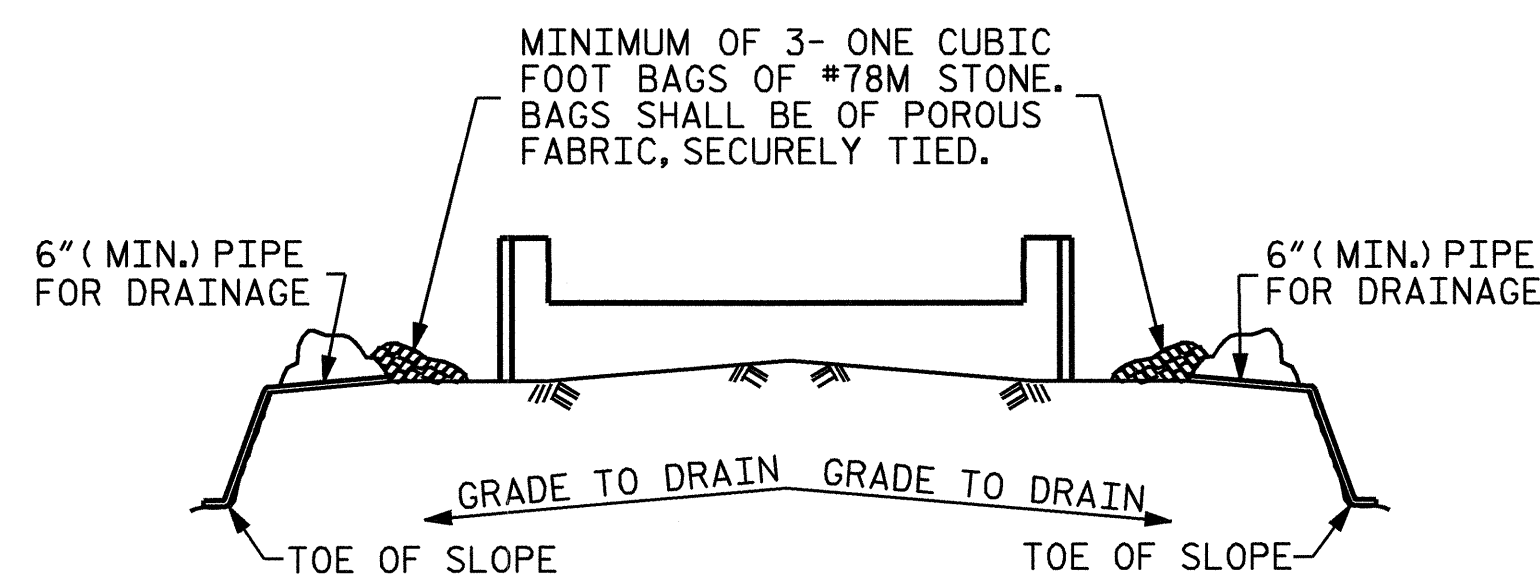


DRAWN BY: H.T. BARBOUR DATE: 8-17-06
 CHECKED BY: A. SORSENGINH DATE: 8-23-06

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-14
1			3			TOTAL SHEETS
2			4			24



SECTION A-A



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.

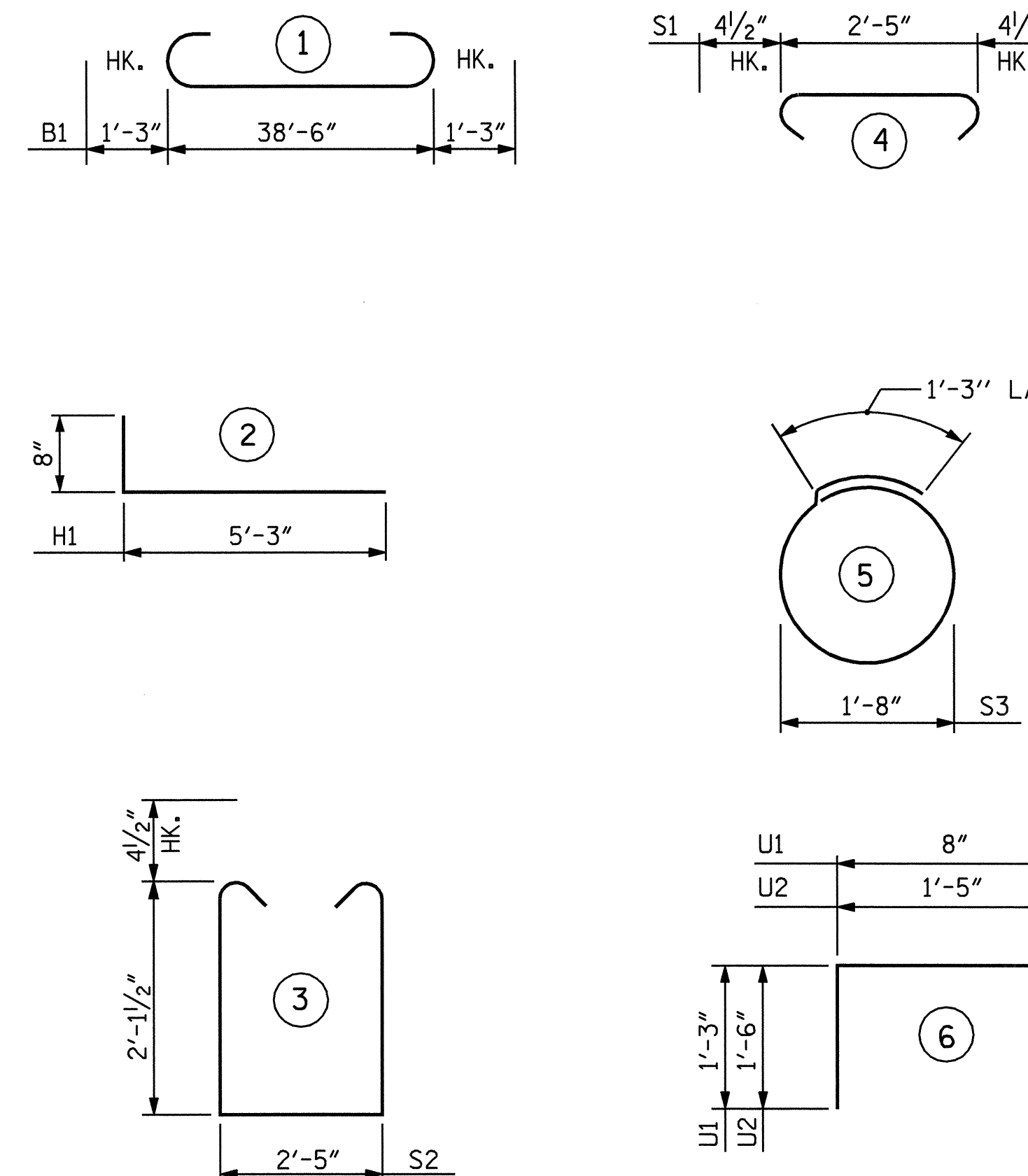
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR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

TEMPORARY DRAINAGE AT END BENT

DRAWN BY : H.T. BARBOUR DATE : 8-18-06
 CHECKED BY : A. SORSENGINH DATE : 8-23-06

12-APR-2007 11:51
 R:\STRUCT\barbour\Mcrostation\B-3538_sd.E*dgn
 adavenport

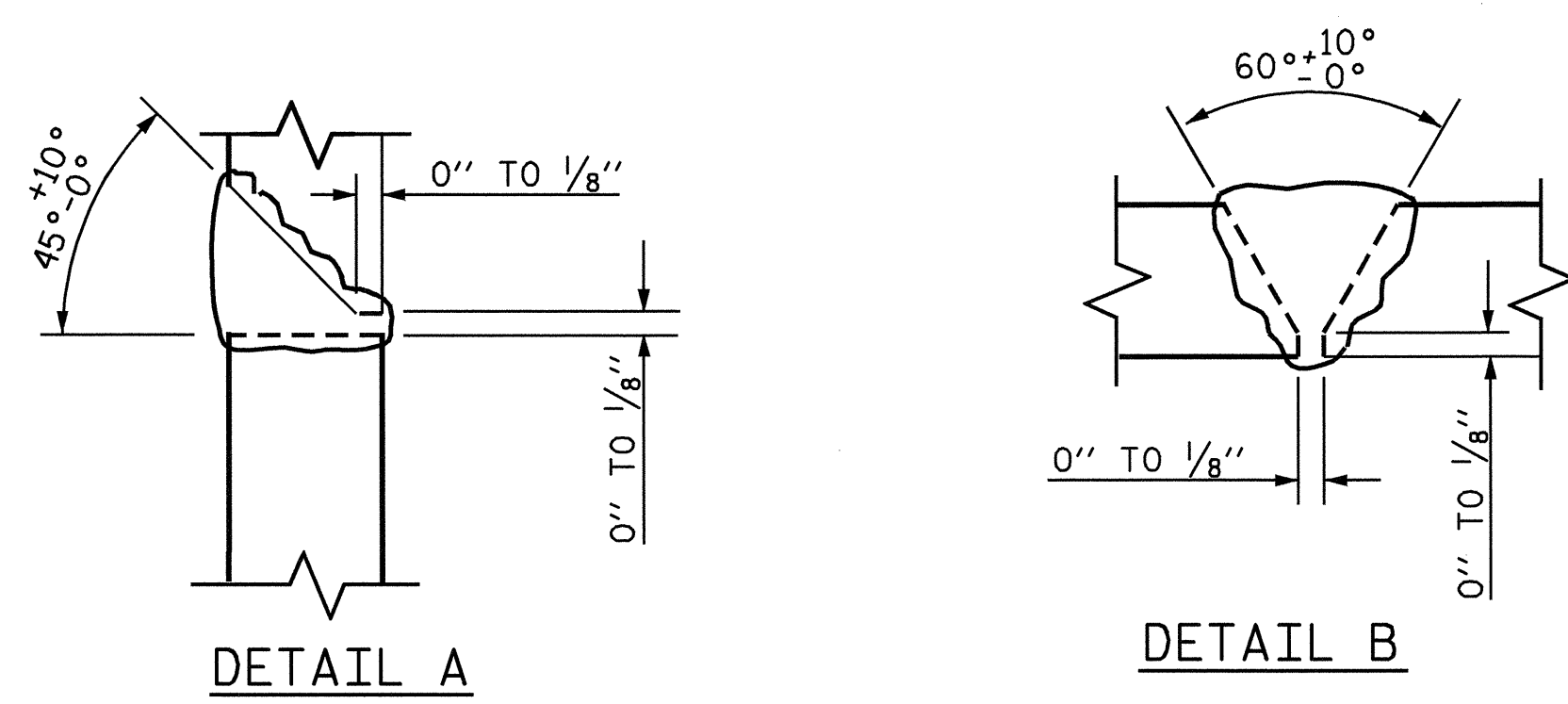
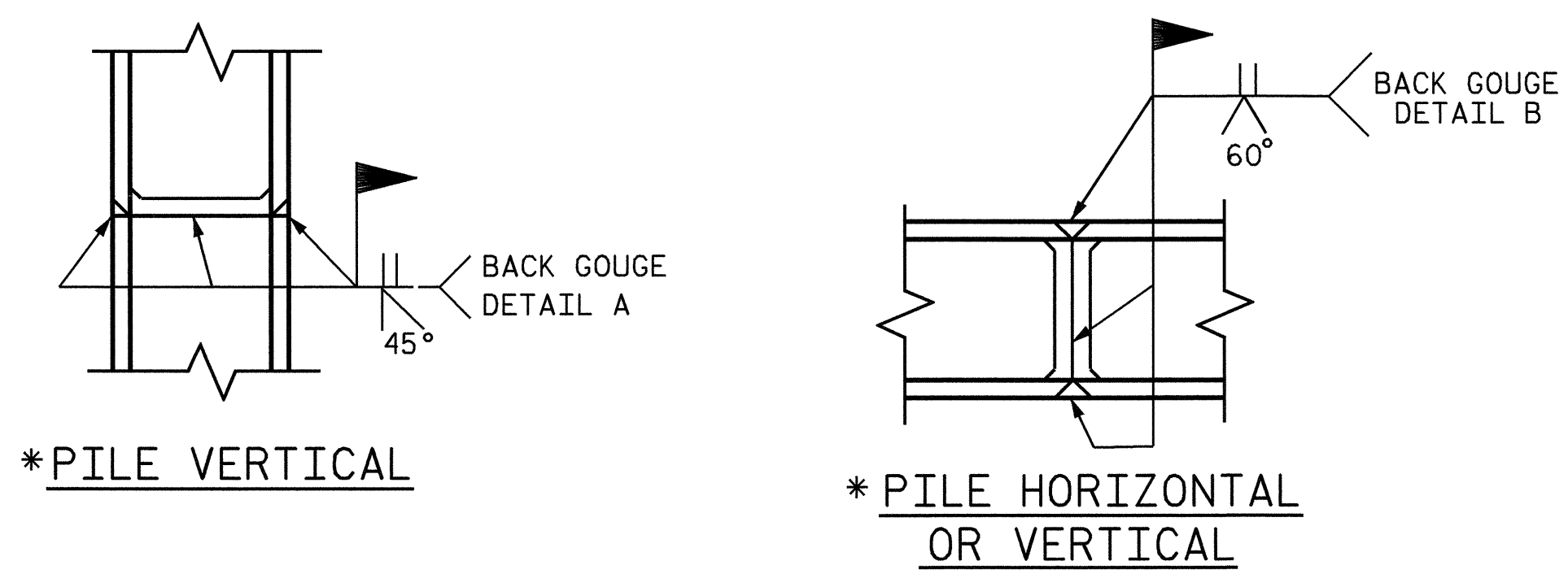


ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

END BENT #1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9	1	41'-0"	1115
B2	2	#5	STR.	38'-8"	81
B3	8	#4	STR.	20'-7"	110
B4	10	#4	STR.	2'-5"	16
D1	22	#8	STR.	2'-3"	132
H1	28	#4	2	5'-11"	111
K1	8	#4	STR.	20'-7"	110
K2	8	#4	STR.	3'-6"	19
S1	44	#4	4	3'-2"	93
S2	44	#4	3	7'-5"	218
S3	16	#4	5	6'-6"	69
U1	31	#4	6	3'-2"	66
U2	4	#4	6	4'-5"	12
V1	62	#4	STR.	3'-1"	128
V2	40	#4	STR.	5'-1"	136
REINFORCING STEEL					= 2416 LBS

CLASS A CONCRETE BREAKDOWN
 POUR #1 CAP & LOWER PART OF WINGS
 C.Y. 10.8
 POUR #2 UPPER PART OF WINGS & BACKWALL
 C.Y. 3.0
 POUR #3 LATERAL GUIDES
 C.Y. 0.1
 TOTAL CLASS A CONCRETE
 C.Y. 13.9
 HP 12 X 53 STEEL PILES
 No. 8 LIN. FT. 240



PILE SPlice DETAILS

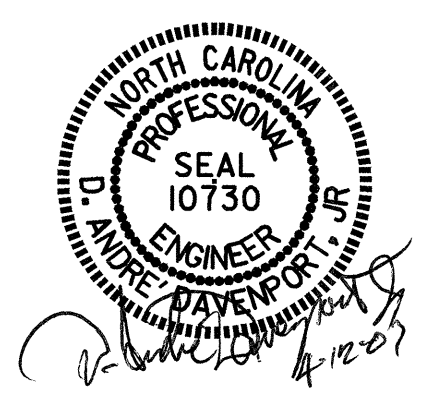
* POSITION OF PILE DURING WELDING.

PROJECT NO. B-3538
 WAYNE COUNTY
 STATION: 14+24.50 -L-

SHEET 3 OF 3

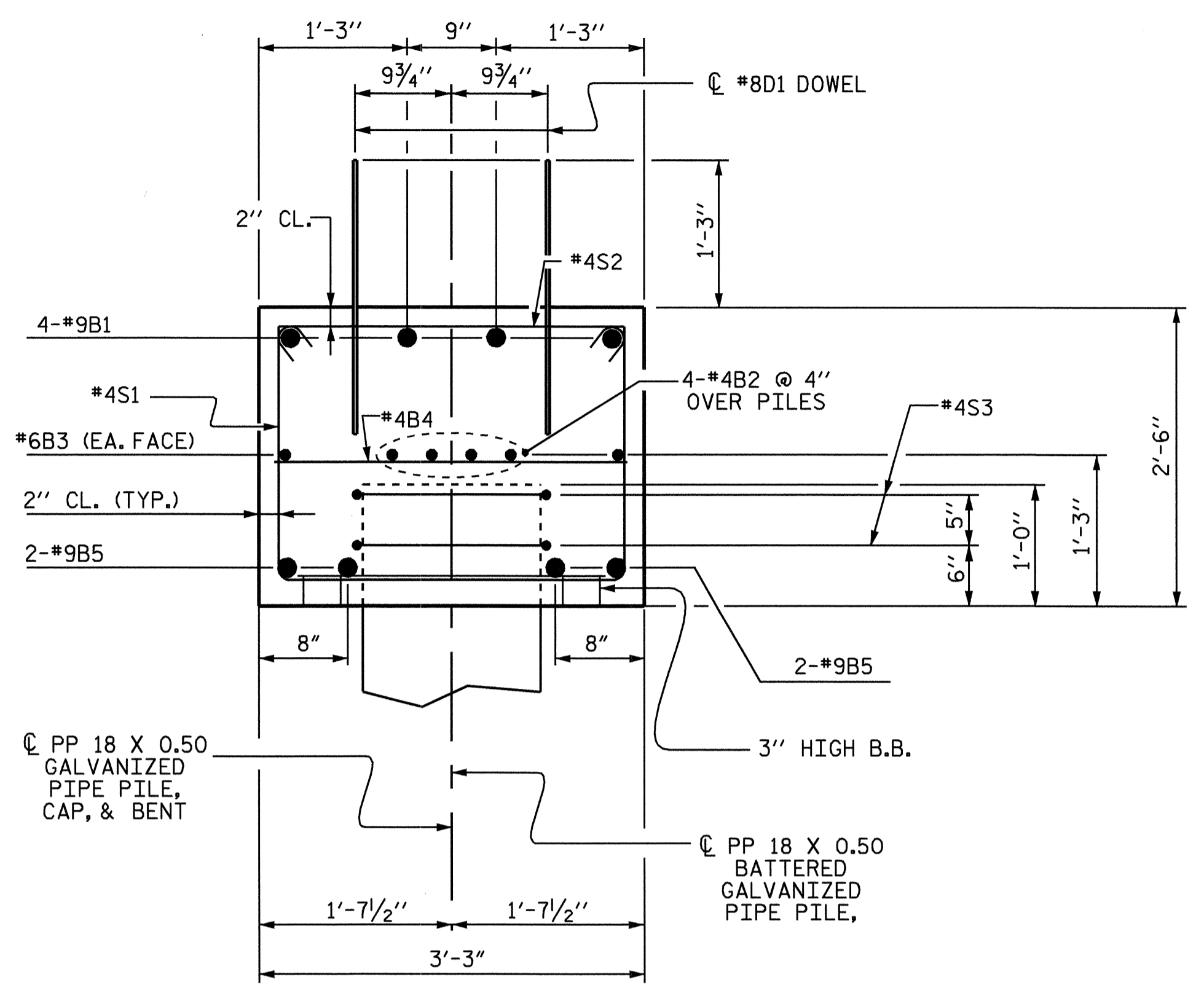
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 END BENT #1**



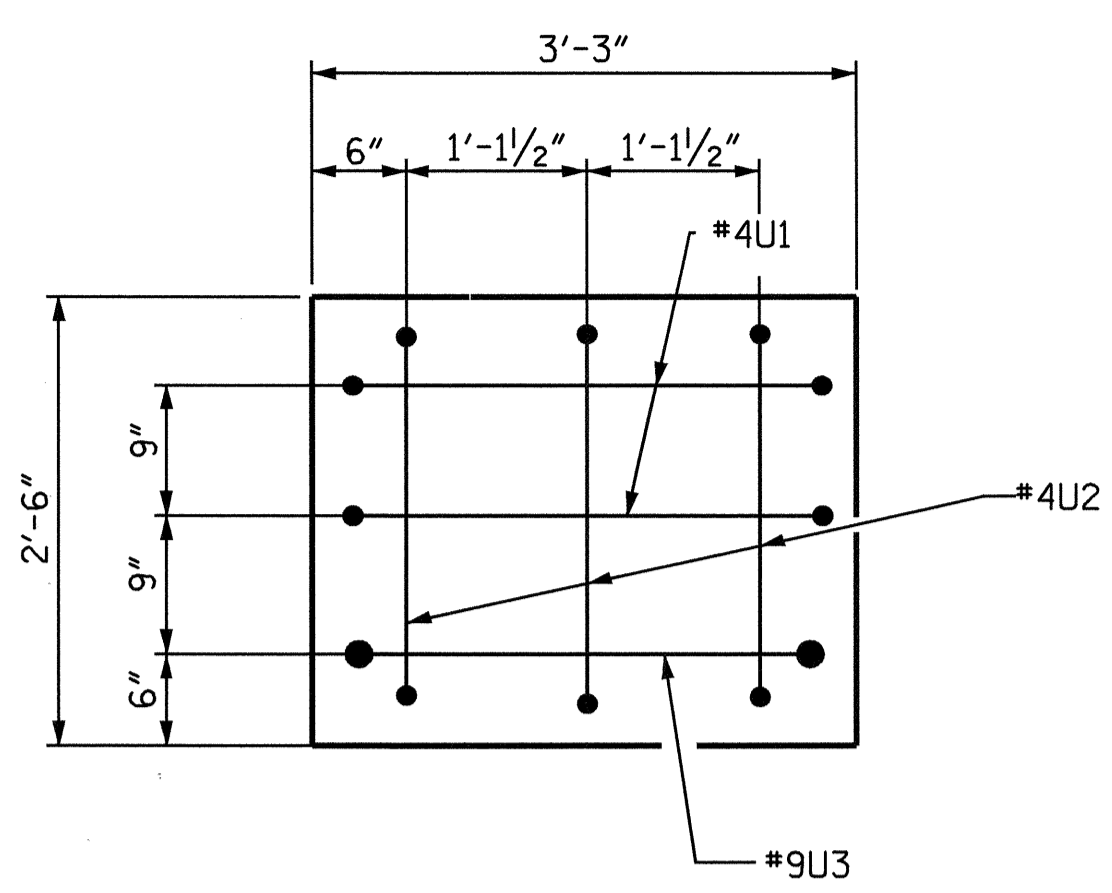
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-15
1			3			TOTAL SHEETS
2			4			24

NC006



SECTION A-A

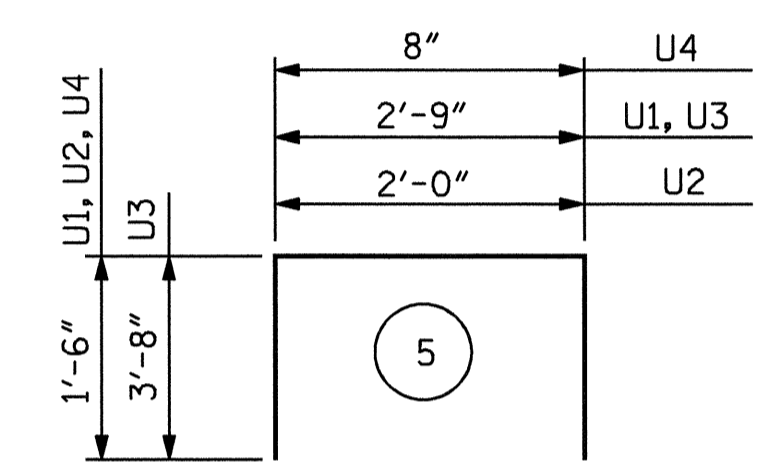
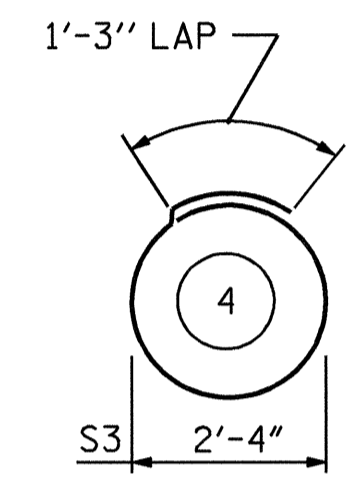
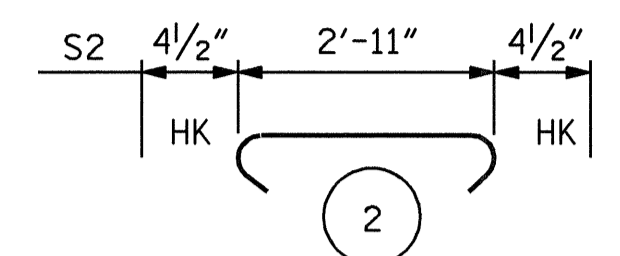
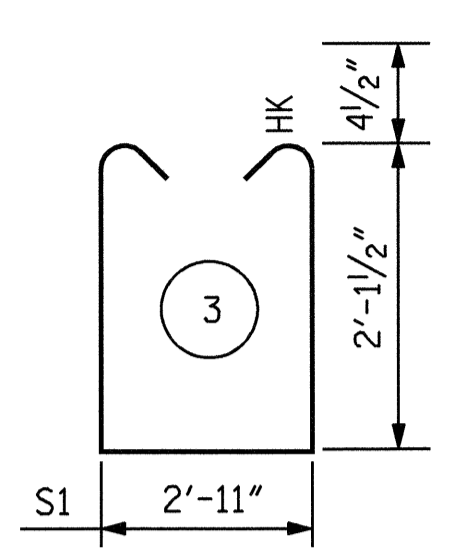
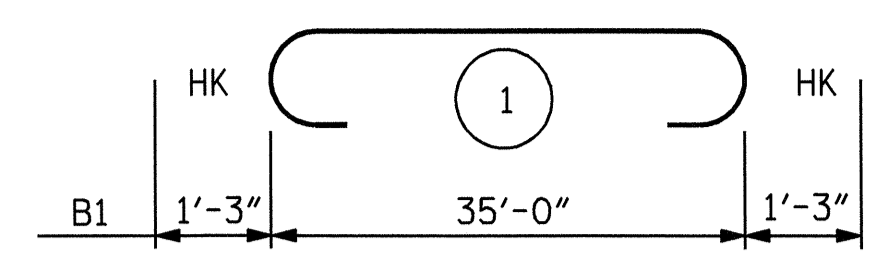
STEEL IN PIPE PILE NOT SHOWN FOR CLARITY.



END VIEW

2" MIN. CONCRETE COVER FROM END OF CAP REQUIRED FOR ALL #4U1, #4U2 AND #9U3 BARS.

#4U1 AND #4U2 MAY BE SHIFTED UP TO 2" TO CLEAR "B" BARS.



ALL BAR DIMENSIONS ARE OUT TO OUT.

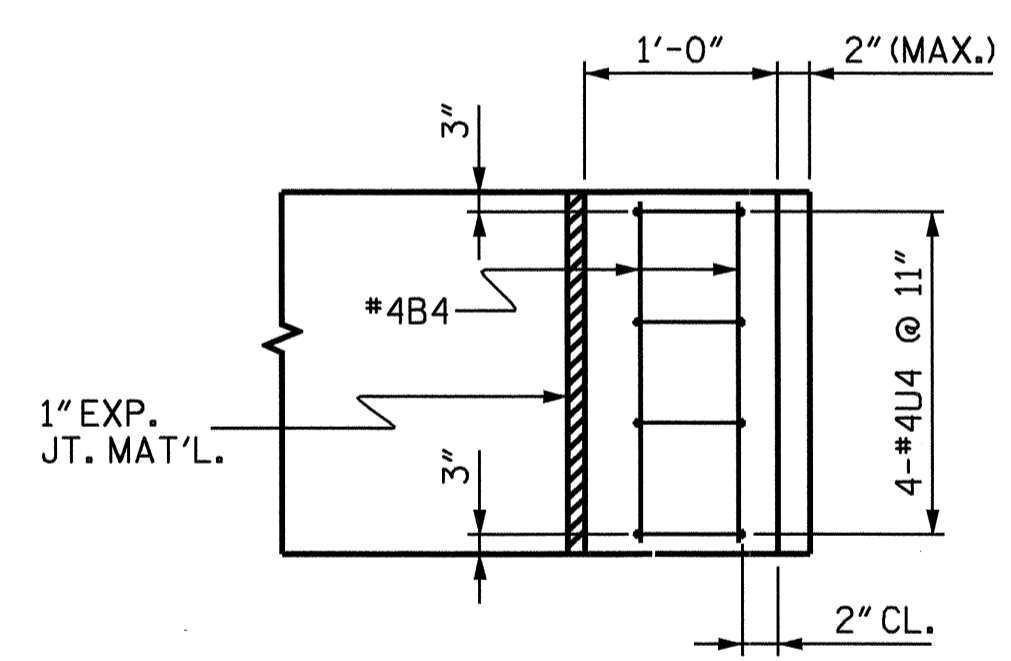
BILL OF MATERIAL FOR ONE BENT (2 REQUIRED)

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	4	#9	1	37'-6"	510
B2	8	#4	STR	18'-10"	101
B3	2	#6	STR	35'-2"	106
B4	13	#4	STR	2'-11"	25
B5	4	#9	STR	35'-2"	478
D1	44	#8	STR	2'-3"	264
S1	37	#4	3	7'-11"	196
S2	37	#4	2	3'-8"	91
S3	16	#4	4	8'-7"	92
U1	4	#4	5	5'-9"	15
U2	6	#4	5	5'-0"	20
U3	2	#9	5	10'-1"	69
U4	8	#4	5	3'-8"	20

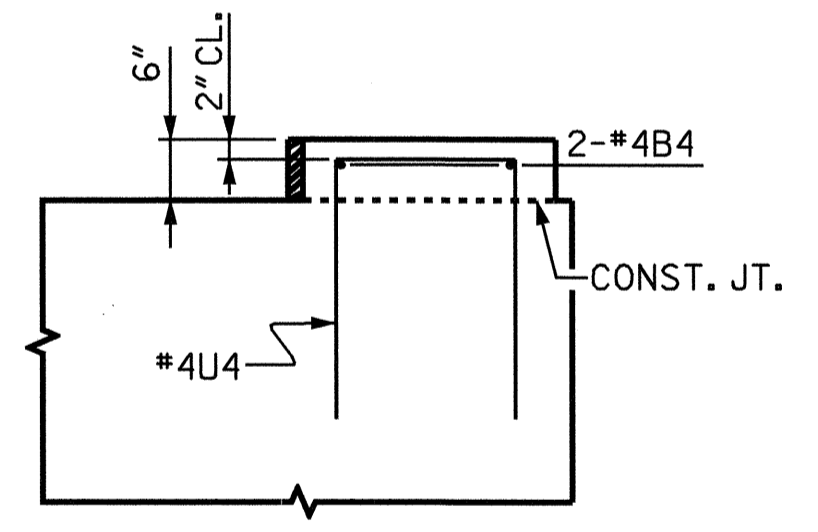
REINFORCING STEEL = 1987 LBS

CLASS A CONCRETE
 POUR #1 CAP CU. YDS. 10.2
 POUR #2 LATERAL GUIDE CU. YDS. 0.1
 TOTAL CLASS A CONCRETE CU. YDS. 10.3

BENT #1
 PP 18 X 0.50 GALVANIZED STEEL PIPE PILES NO. 8 LIN. FT. 520
 BENT #2
 PP 18 X 0.50 GALVANIZED STEEL PIPE PILES NO. 8 LIN. FT. 520



PLAN



ELEVATION

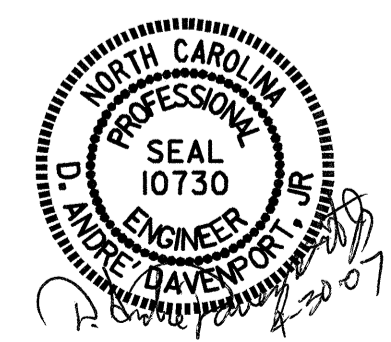
LATERAL GUIDE DETAIL

PROJECT NO. B-3538
WAYNE COUNTY
 STATION: 14+24.50 -L-

SHEET 2 OF 2

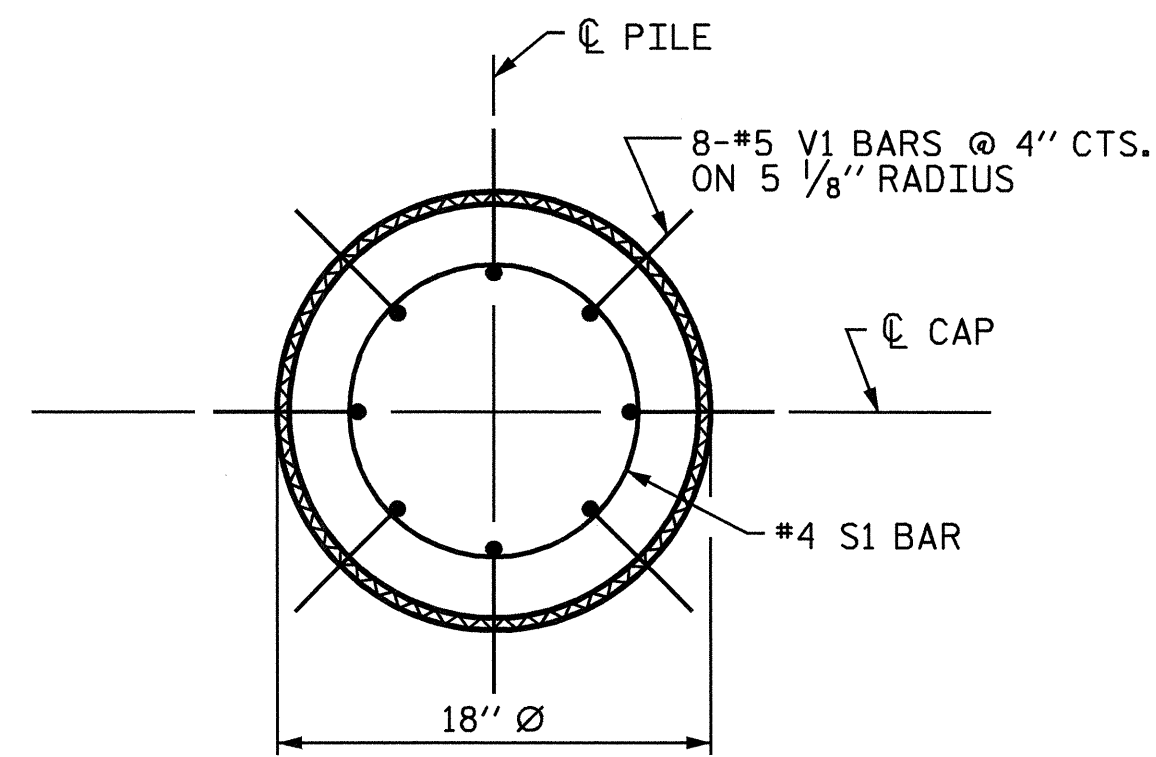
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE BENT #1 & #2

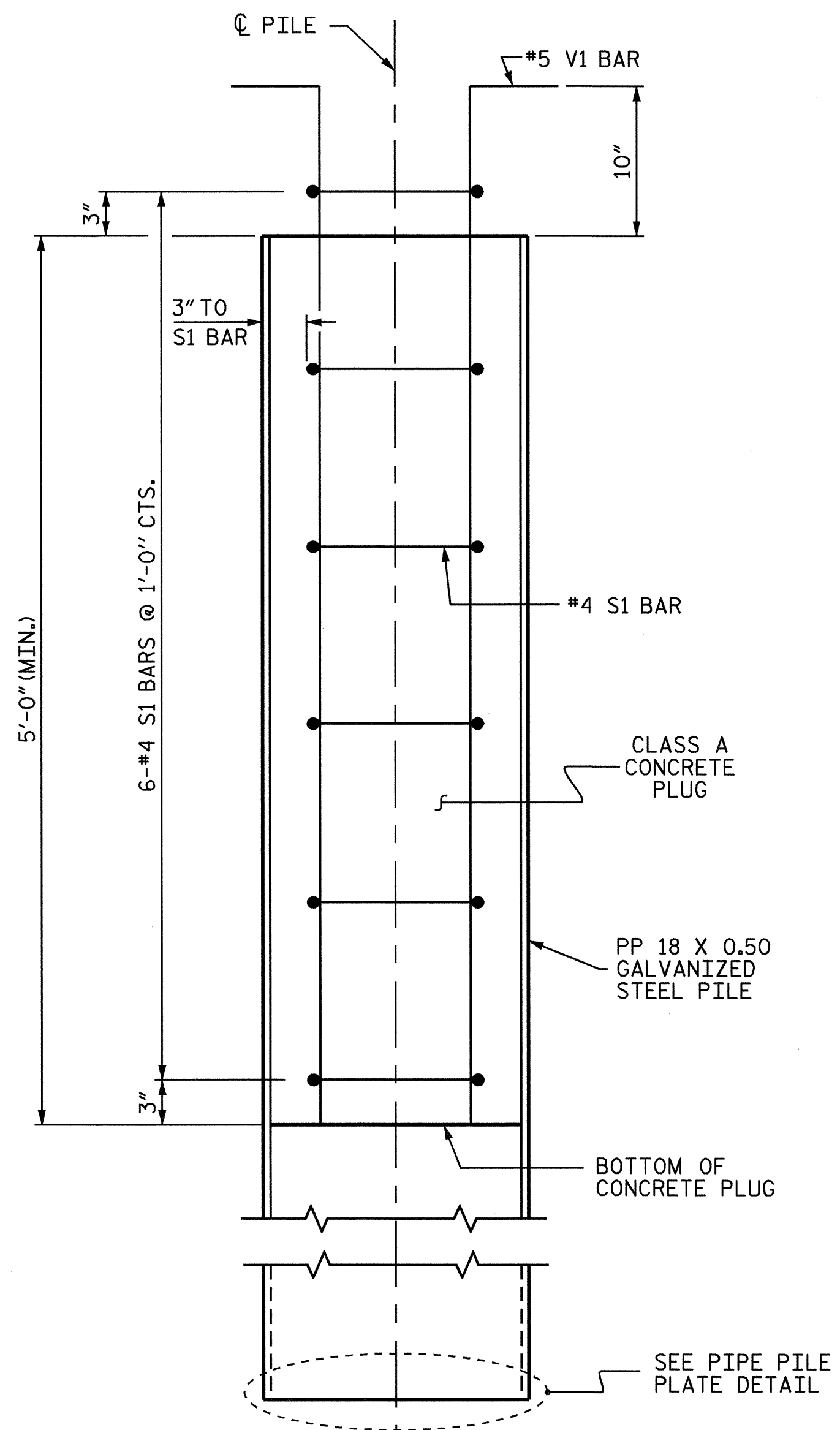


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-17
1			3			TOTAL SHEETS
2			4			24

DRAWN BY : H. T. BARBOUR DATE : 9-08-06
 CHECKED BY : A. SORSENGINH DATE : 9-11-06



PLAN



ELEVATION

PP 18 X 0.50 GALVANIZED STEEL PILE
(CLOSED END)

NOTES

STEEL PIPE PILES SHALL BE OF UNIFORM DIAMETER AND MEET THE REQUIREMENTS OF ASTM A252, GRADE 3 MODIFIED (50,000 PSI YIELD STRENGTH).

GALVANIZE STEEL PIPE PILES IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS UNLESS METALLIZING IS REQUIRED. GALVANIZING OR METALLIZING PIPE PILE PLATES IS NOT REQUIRED.

REMOVE AND REPLACE OR REPAIR TO THE SATISFACTION OF THE ENGINEER PILES THAT ARE DAMAGED, DEFORMED OR COLLAPSED DURING INSTALLATION OR DRIVING.

PILE SPLICES SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND AWS D1.1.

FOR CLOSED END PIPE PILES, REMOVE ALL SOIL AND WATER FROM INSIDE THE PILES JUST PRIOR TO PLACING REINFORCING STEEL AND CONCRETE FOR THE CONCRETE PLUG.

FORM THE CONCRETE PLUG SUCH THAT THE REINFORCING STEEL OR CONCRETE DOES NOT MOVE AND THE CLEARANCE FROM THE REINFORCING STEEL TO THE INSIDE OF THE PILE IS MAINTAINED AFTER CONCRETE PLACEMENT. DO NOT PLACE CONCRETE IN THE BENT CAP UNTIL THE CONCRETE PLUG HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI.

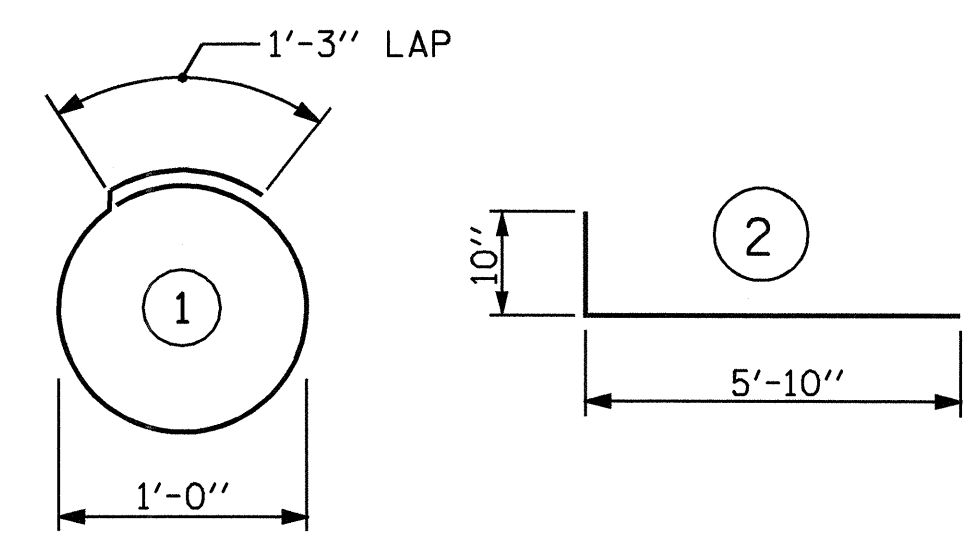
THE REINFORCING STEEL, CLASS A CONCRETE, GALVANIZING, AND THE PIPE PILE PLATES, IF REQUIRED, ARE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR PP 18 X 0.50 GALVANIZED STEEL PILES.

BILL OF MATERIAL FOR ONE
PP 18 X 0.50 GALVANIZED STEEL PILE

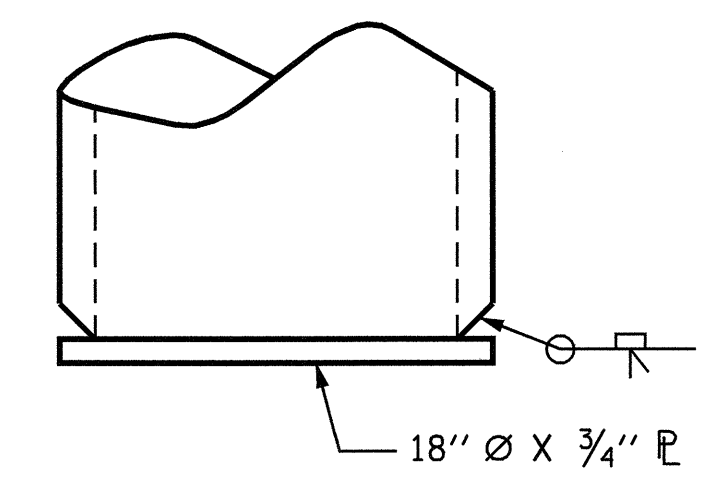
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
S1	6	#4	1	4'-5"	18
V1	8	#5	2	6'-8"	56
REINFORCING STEEL =				74	lbs

CLASS A CONCRETE
5'-0" MINIMUM PLUG 0.3 CY

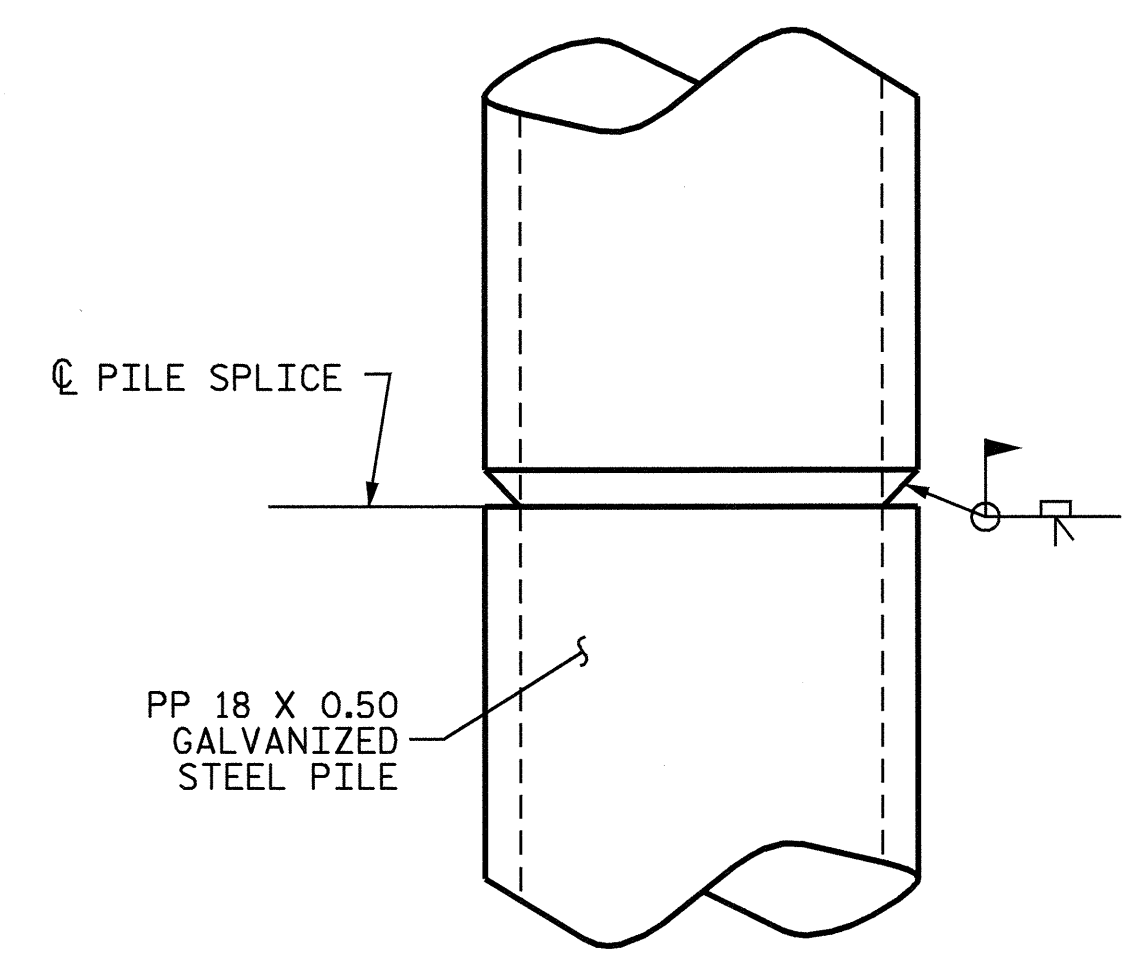
BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.



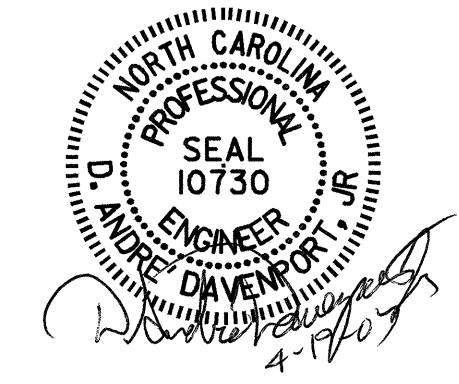
PIPE PILE PLATE DETAIL



PIPE PILE SPLICE DETAILS

PROJECT NO. B-3538
WAYNE COUNTY
STATION: 14+24.50 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
18" GALVANIZED
STEEL PIPE PILE



ASSEMBLED BY : H. T. BARBOUR	DATE : 9-08-06
CHECKED BY : A. SORSENGINH	DATE : 9-11-06
DRAWN BY : RWW 1/01	REV. 5/7/03 RWW/JTE
CHECKED BY : LES 1/01	REV. 10/1/05 LBG/TLA
	REV. 5/1/06 TLA/GM

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-18
1			3			TOTAL SHEETS
2			4			24

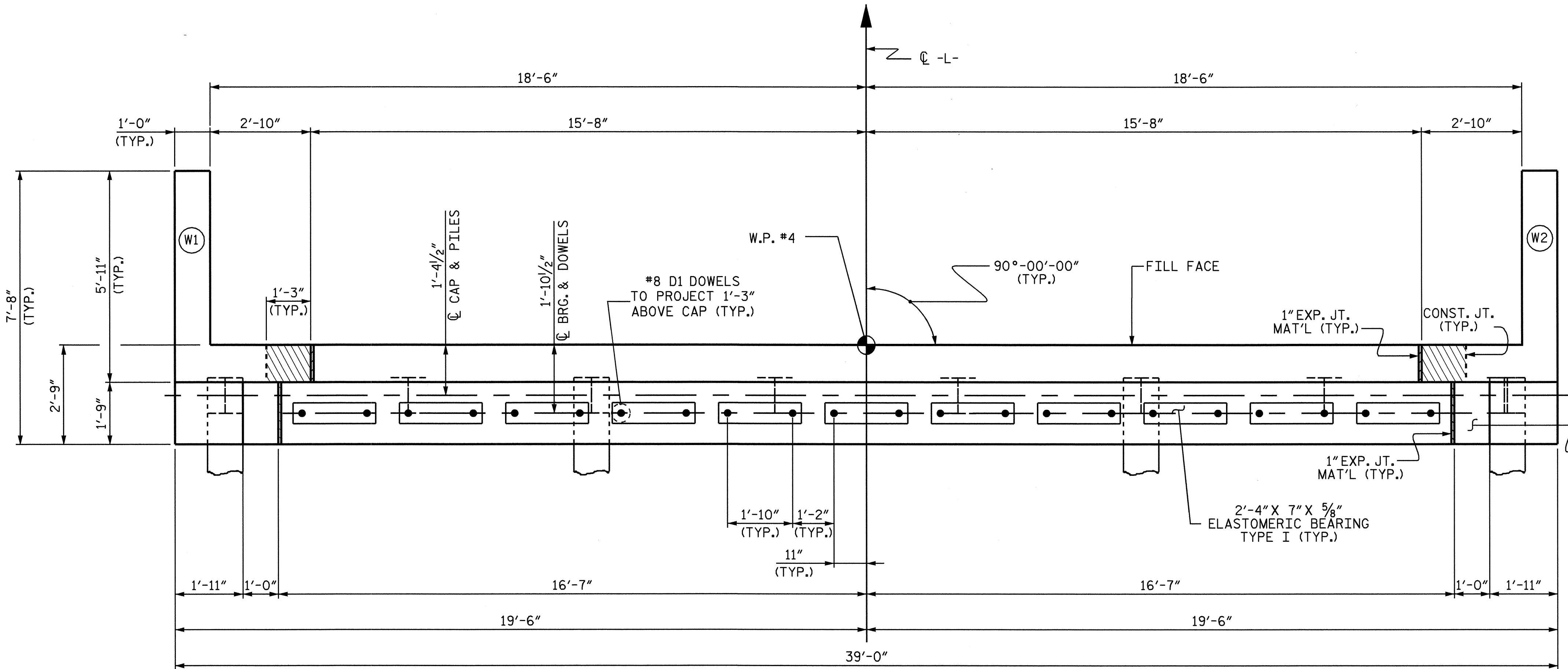
NOTES

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

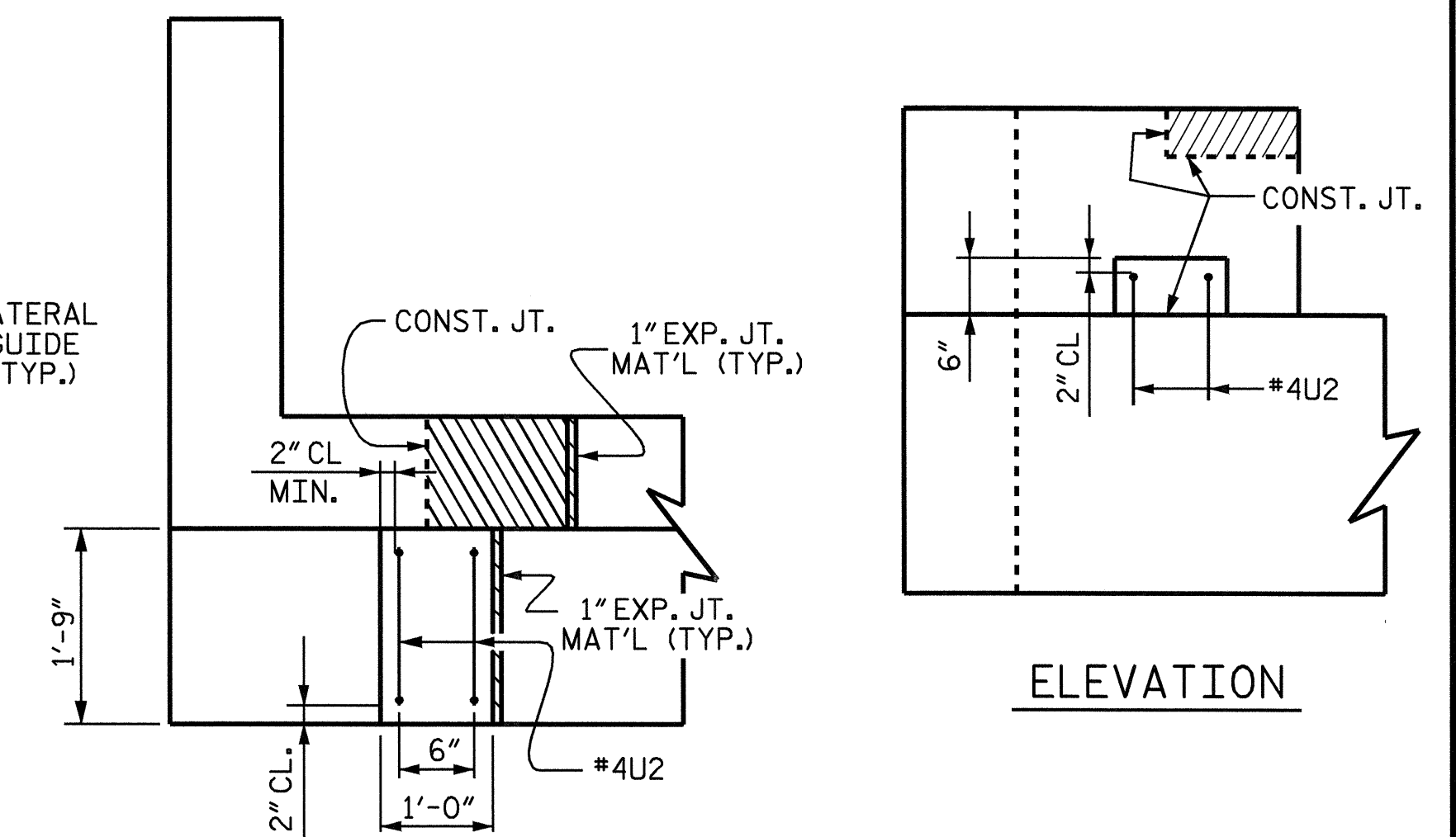
THE CONTRACTOR SHALL PROVIDE FOR INSTALLATION OF THE 4" DIAMETER DRAIN PIPE THROUGH THE WING WALL AS REQUIRED FOR REINFORCED BRIDGE APPROACH FILLS, SEE THE ROADWAY PLANS. REINFORCING STEEL IN THE WING WALL MAY BE SHIFTED AS NECESSARY TO CLEAR THE DRAIN PIPE.

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

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



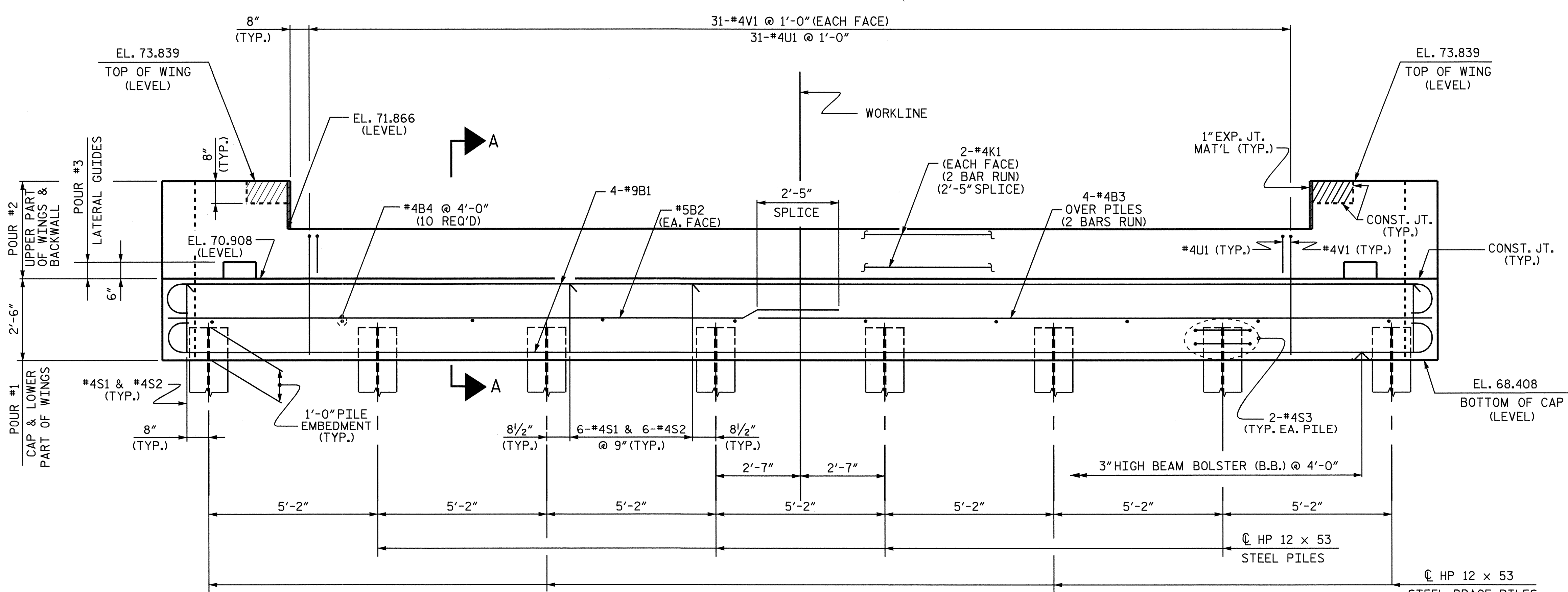
PLAN



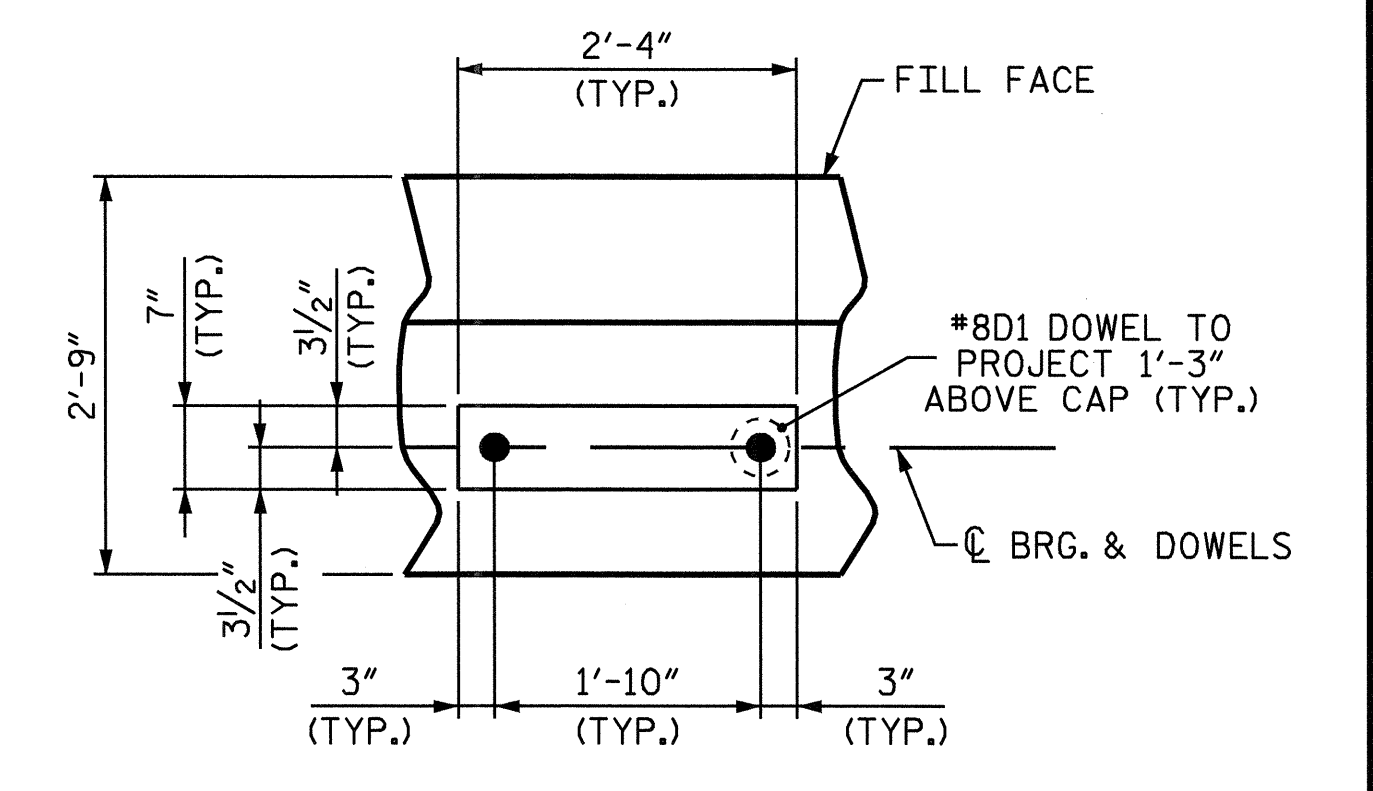
PLAN

LATERAL GUIDE

(EACH END SIMILAR)



ELEVATION



BEARING DETAIL

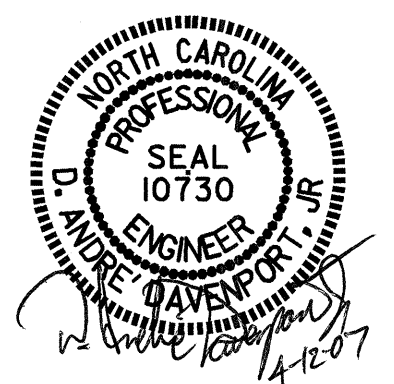
PROJECT NO. B-3538
 WAYNE COUNTY
 STATION: 14+24.50 -L-

SHEET 1 OF 3

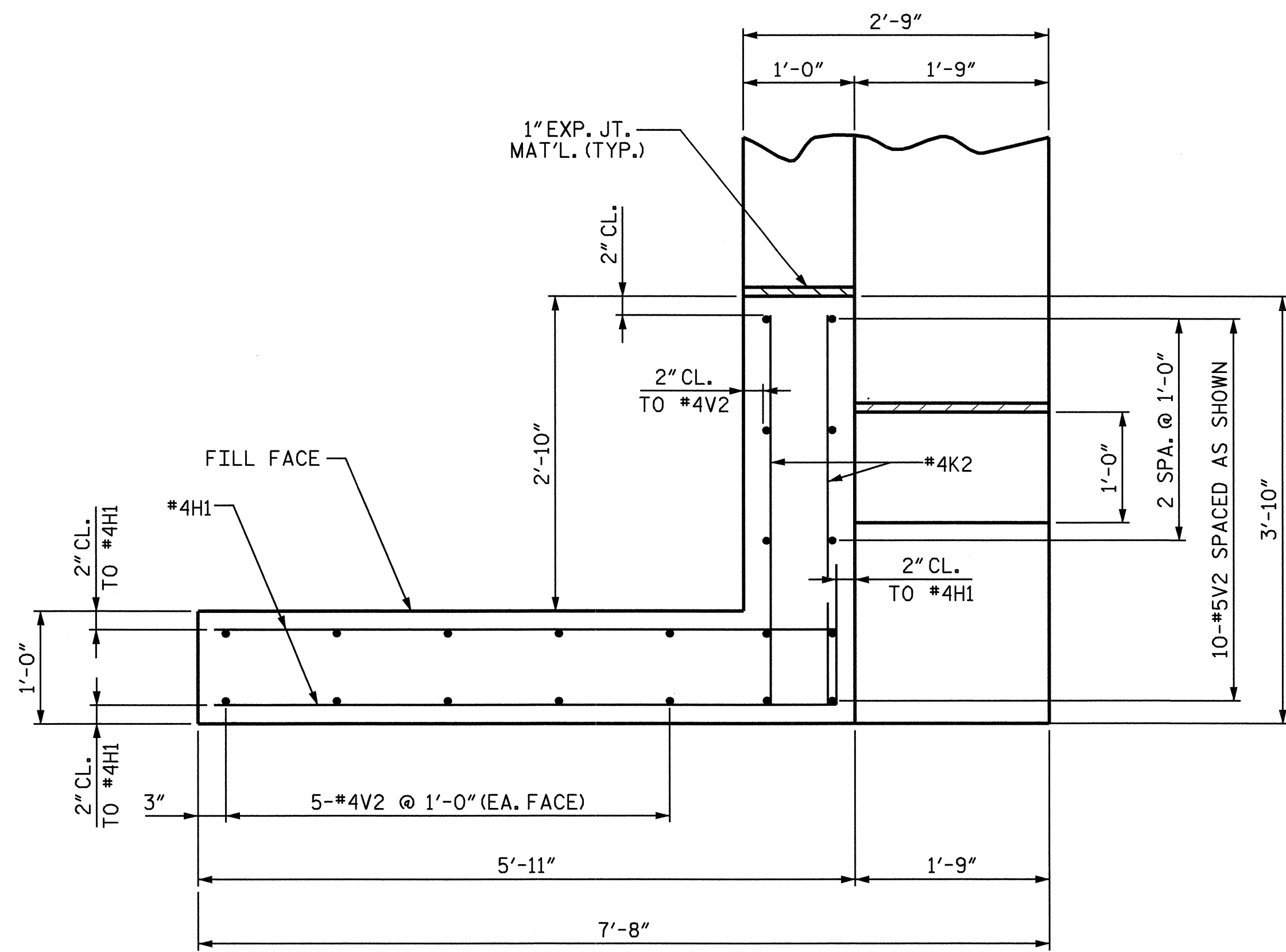
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 END BENT #2**

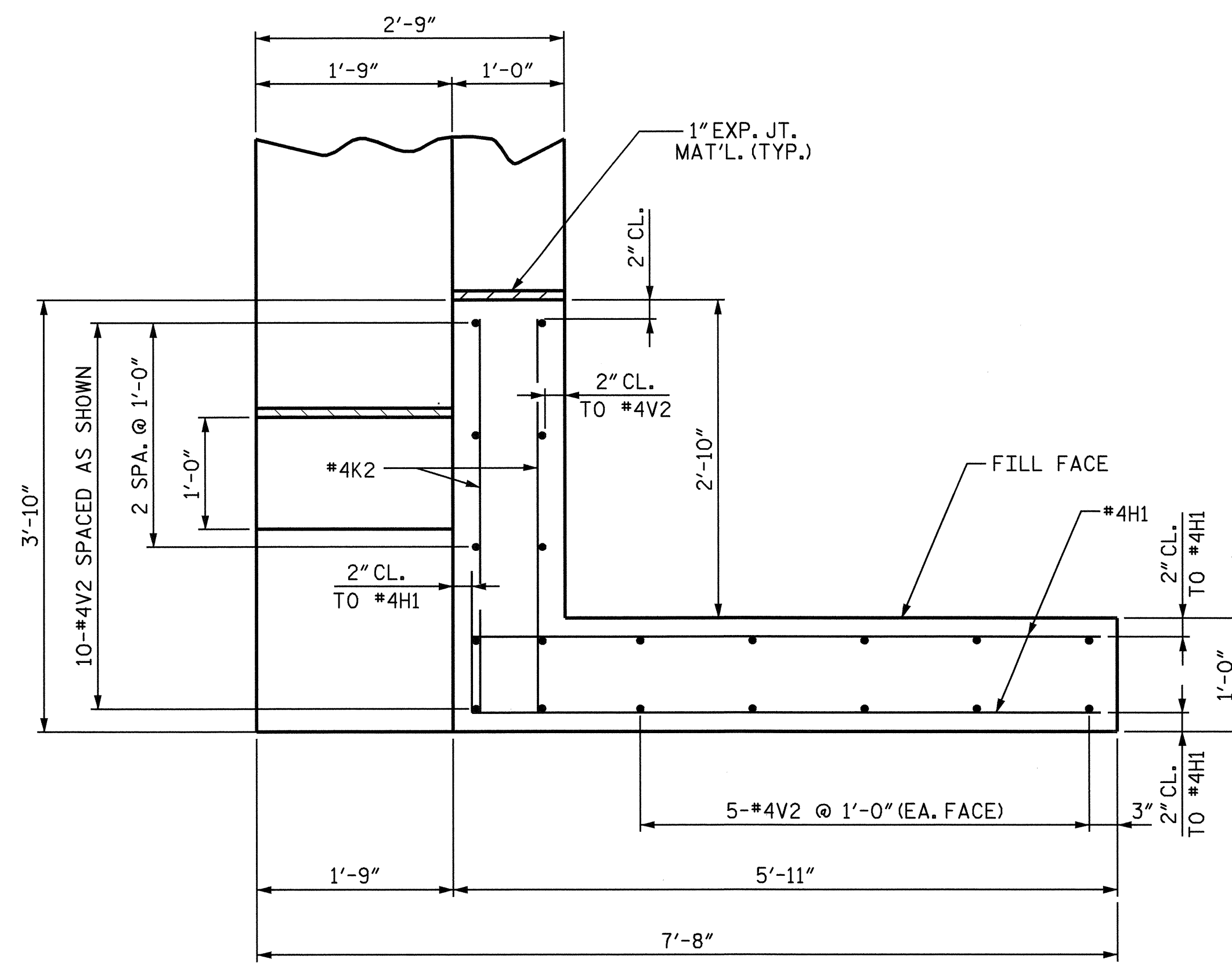
DRAWN BY : H. T. BARBOUR DATE : 8-16-06
 CHECKED BY : A. SORSENGINH DATE : 8-23-06



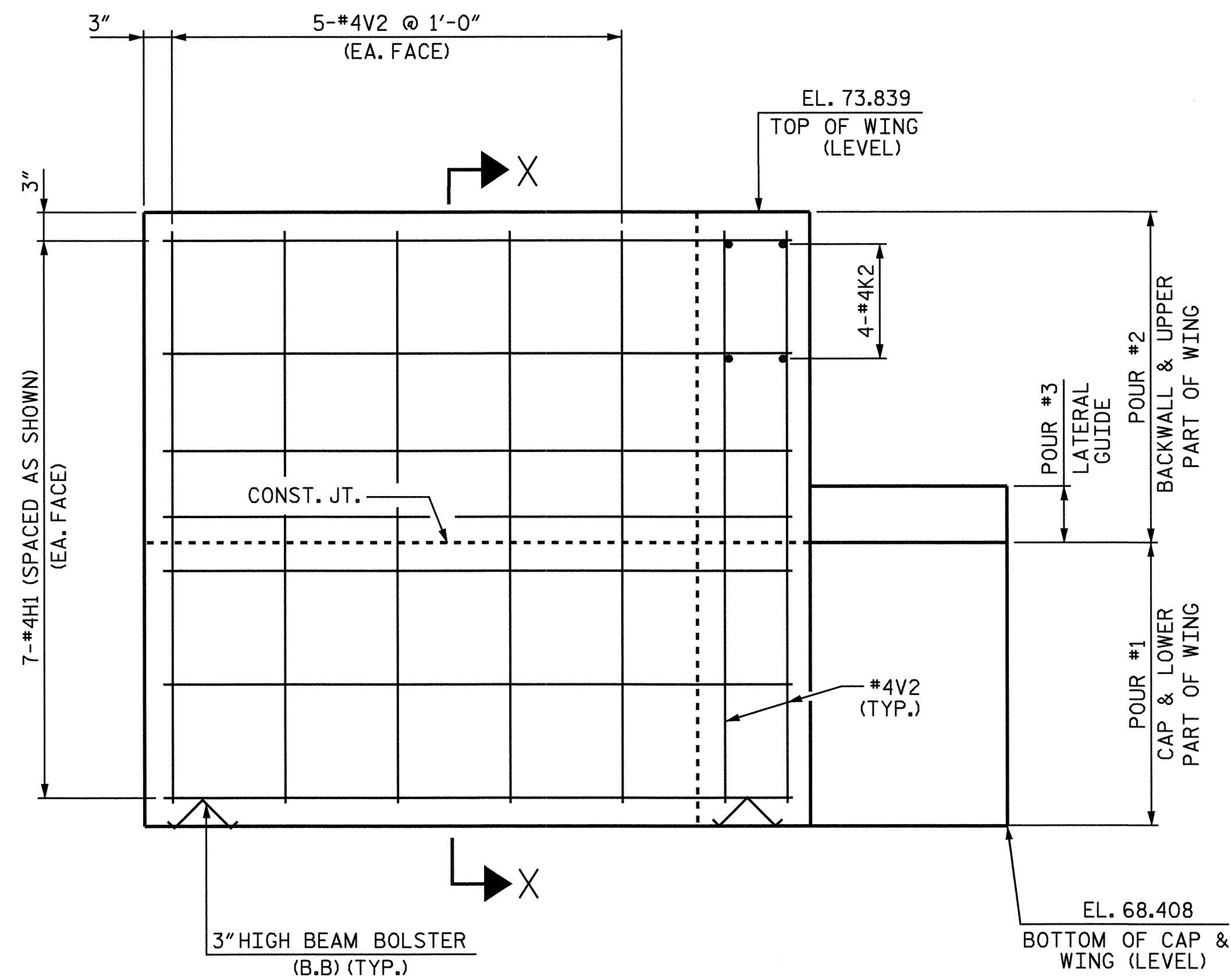
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-19
1			3			TOTAL SHEETS
2			4			24



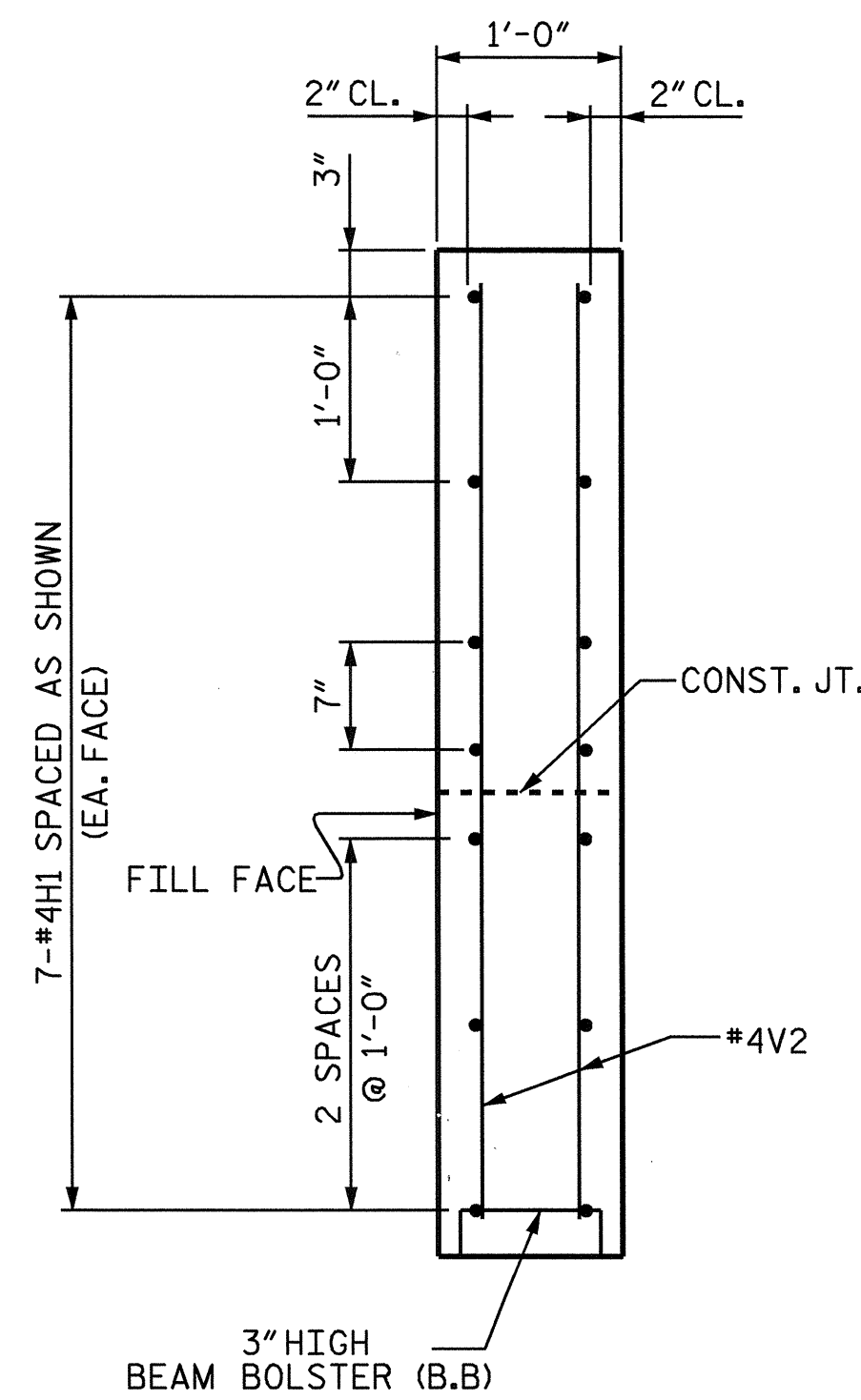
PLAN OF LEFT WING (W1)



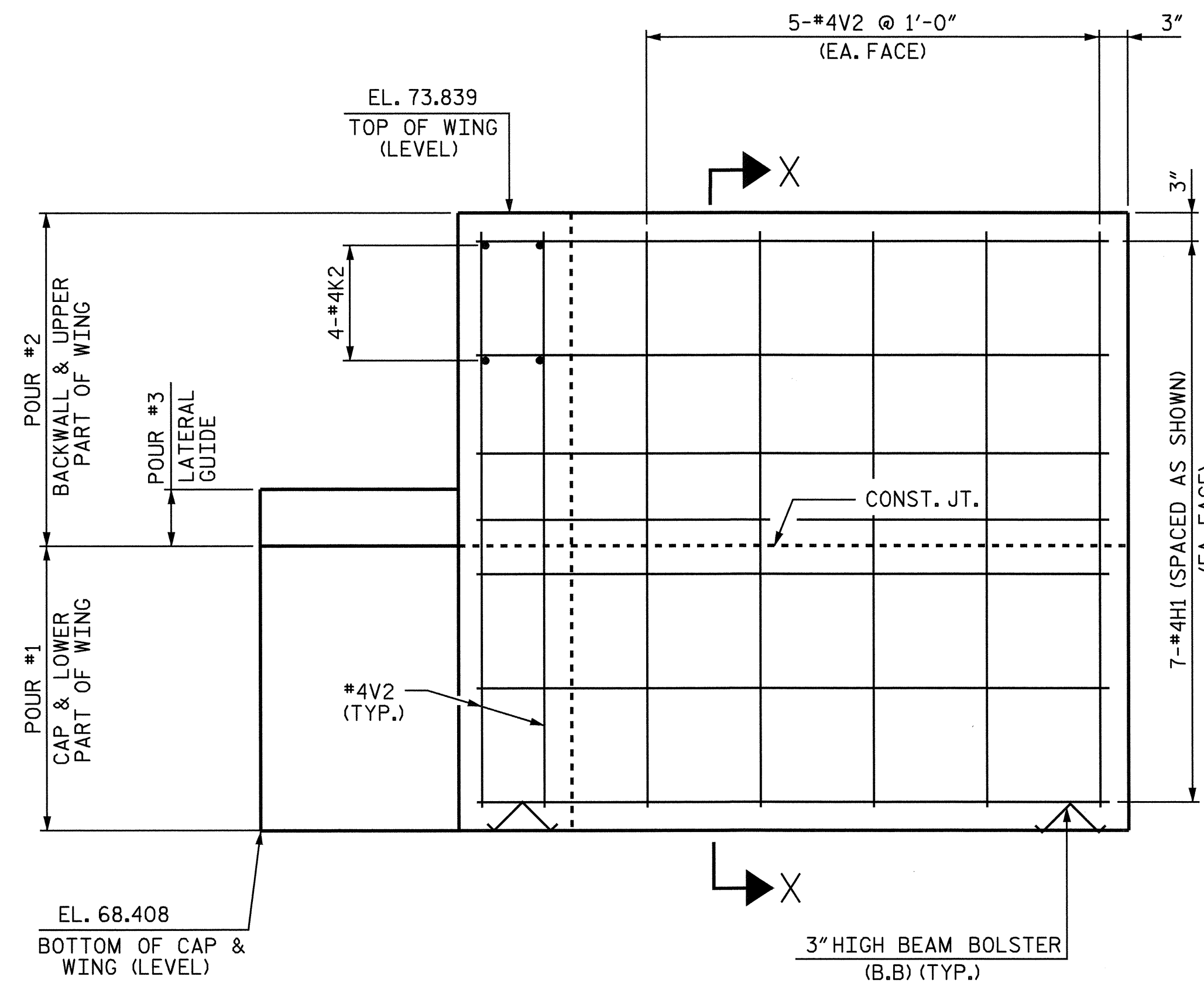
PLAN OF RIGHT WING (W2)



ELEVATION OF LEFT WING (W1)



SECTION X-X



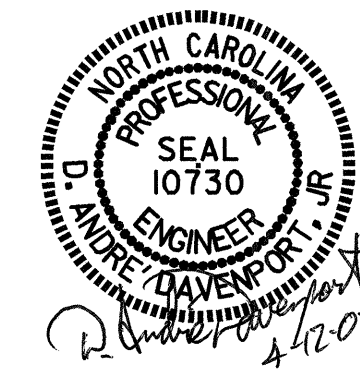
ELEVATION OF RIGHT WING (W2)

PROJECT NO. B-3538
 WAYNE COUNTY
 STATION: 14+24.50 -L-

SHEET 2 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

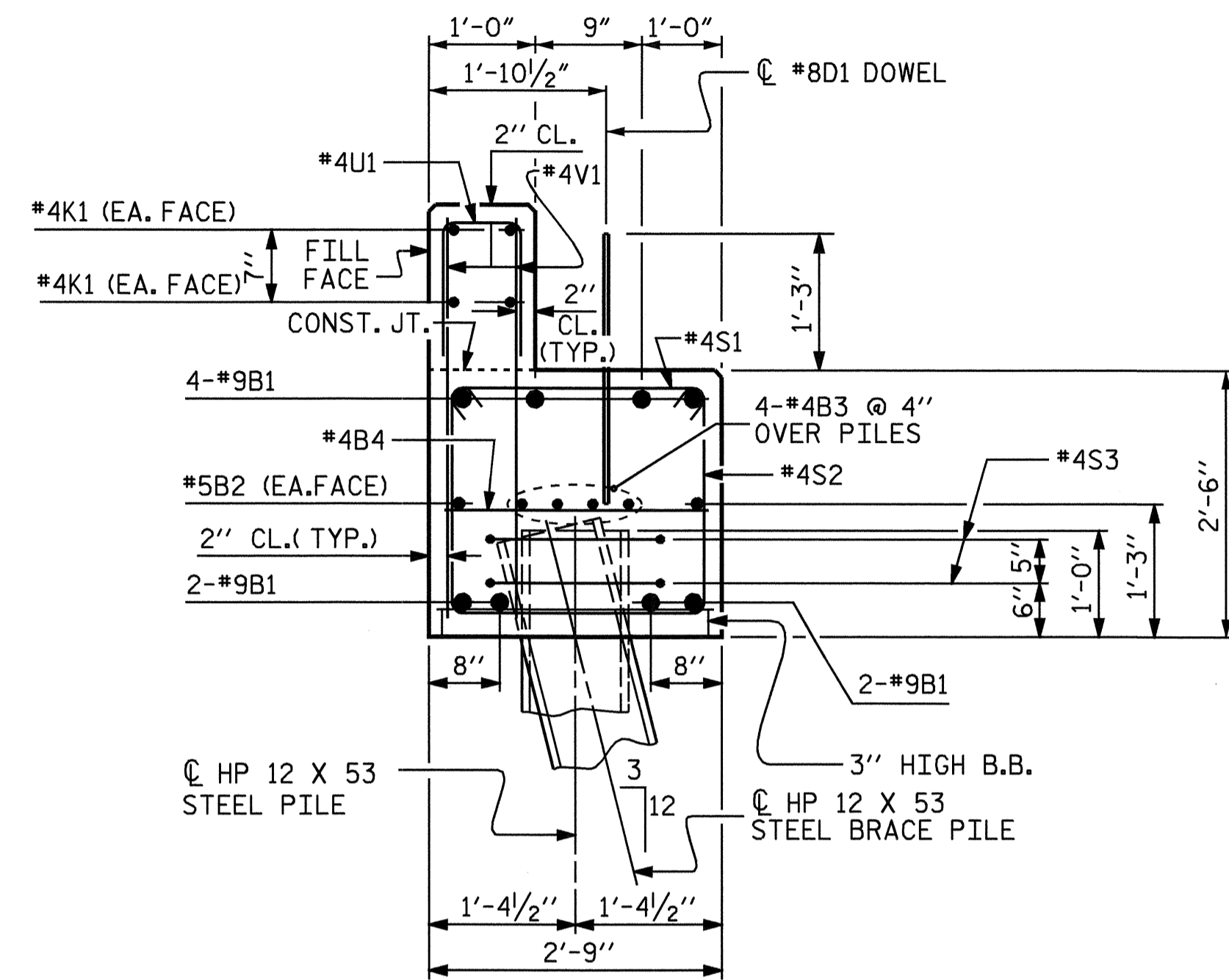
SUBSTRUCTURE
 END BENT #2



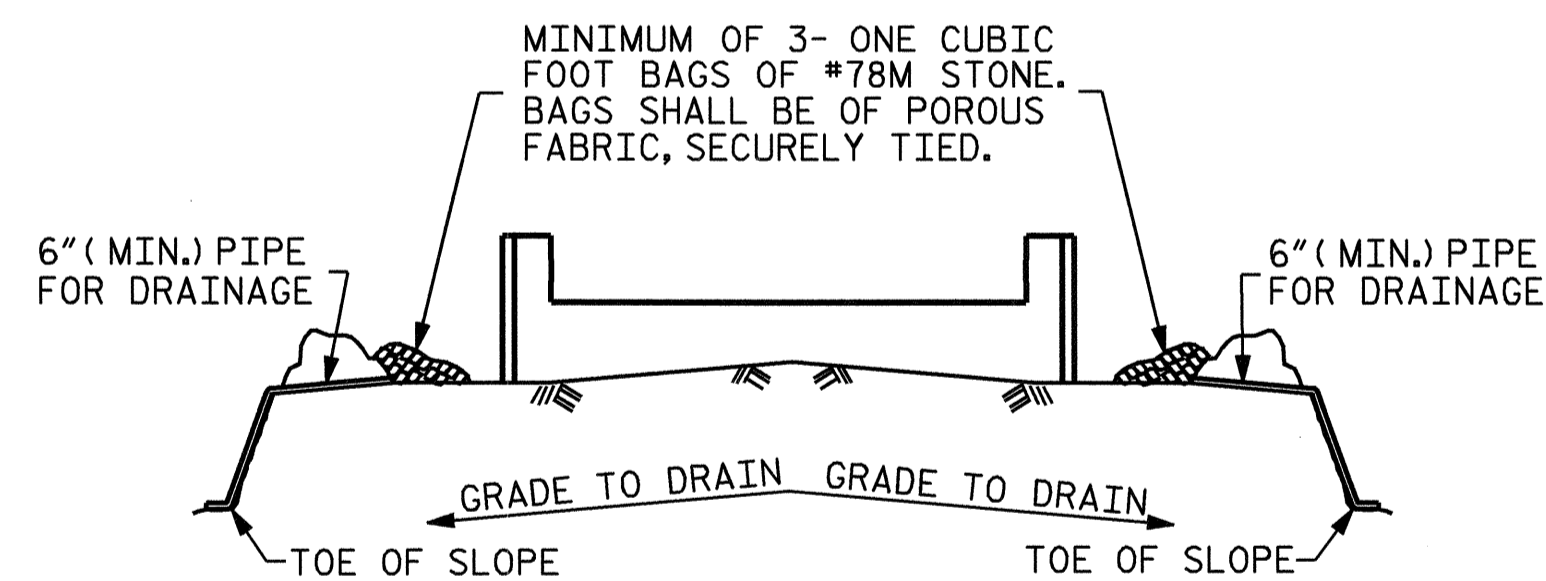
DRAWN BY: H.T. BARBOUR DATE: 8-17-06
 CHECKED BY: A. SORSENGINH DATE: 8-23-06

12-APR-2007 11:03
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 adavenport

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-20
1			3			TOTAL SHEETS
2			4			24



SECTION A-A



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 DETERIORATED AND LOST THEIR EFFECTIVENESS.

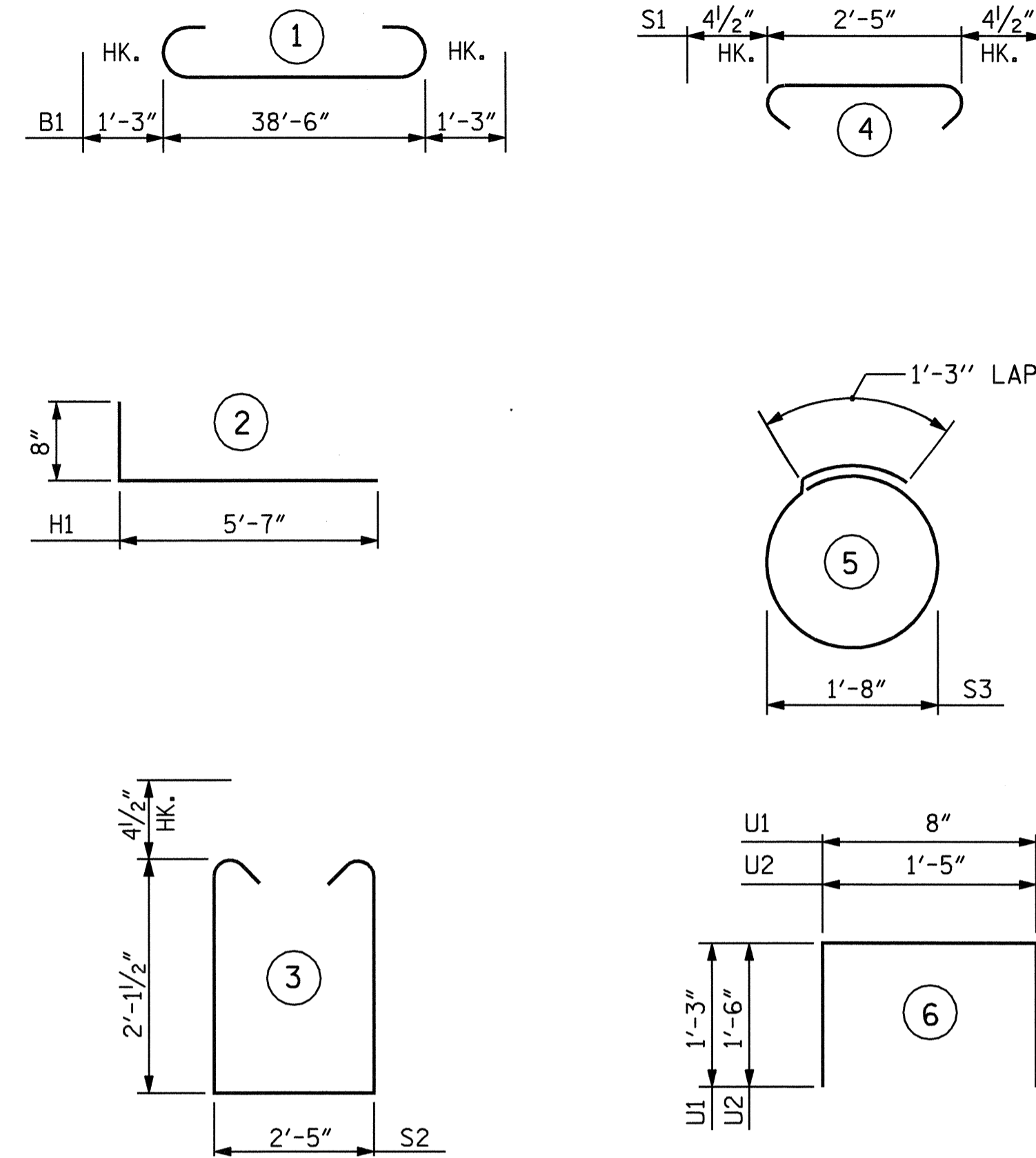
NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

TEMPORARY DRAINAGE AT END BENT

DRAWN BY : H.T. BARBOUR DATE : 8-18-06
 CHECKED BY : A. SORSENGINH DATE : 8-23-06

12-APR-2007 11:04
 RA:STRUCT\T\barbour\l\orostation\B-3538.sd.E*.dgn
 cadavenport

BAR TYPES

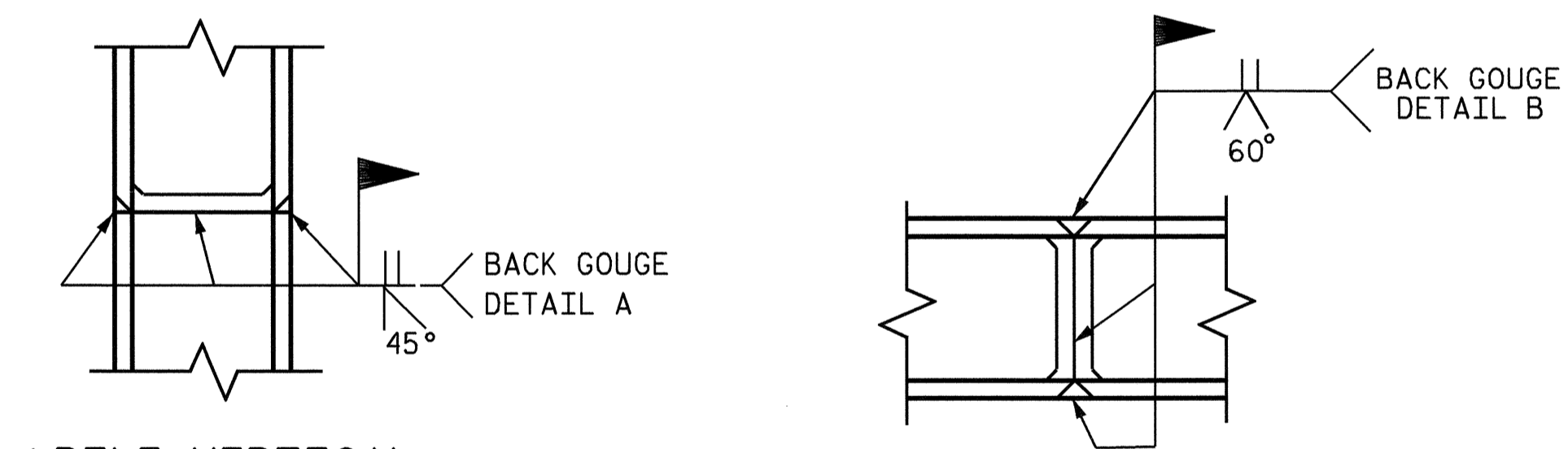


ALL BAR DIMENSIONS ARE OUT TO OUT.

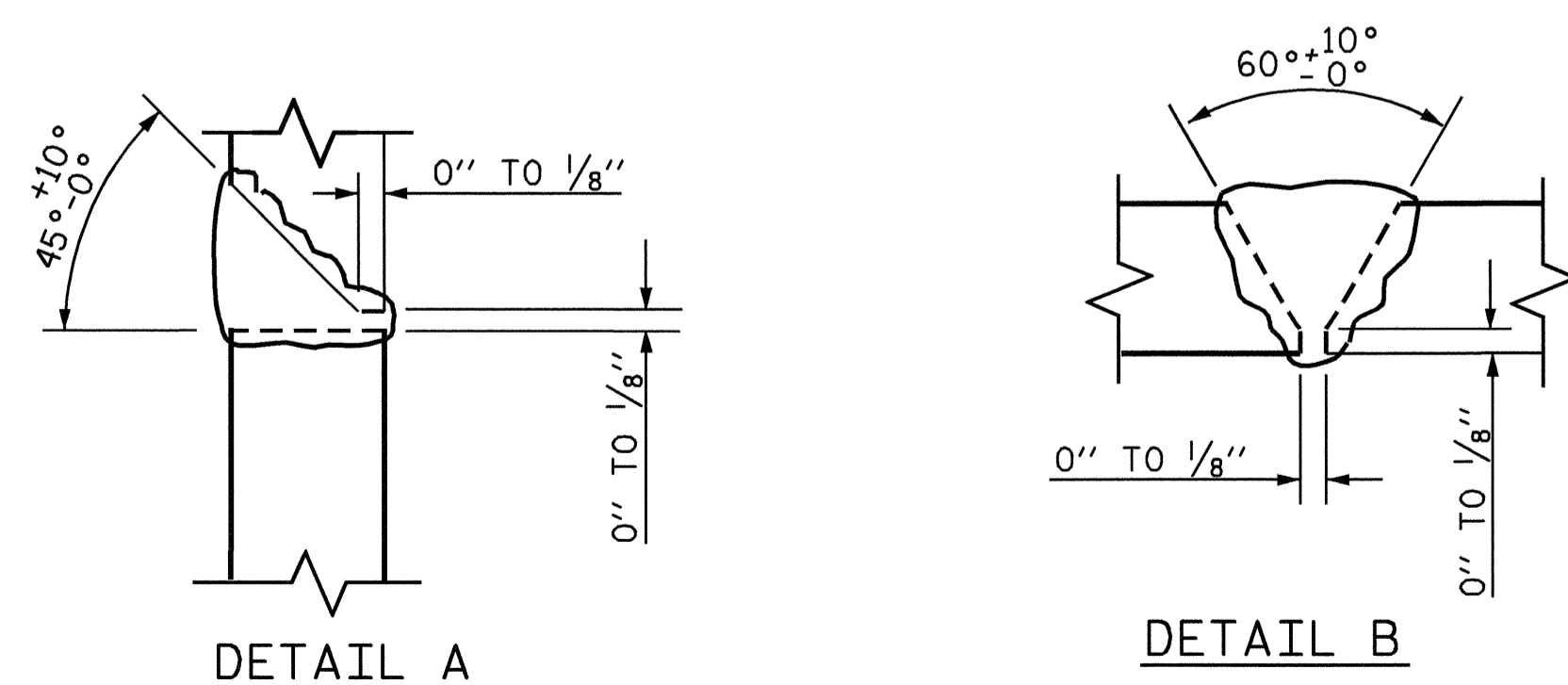
BILL OF MATERIAL

END BENT #2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9		41'-0"	1115
B2	2	#5	STR.	38'-8"	81
B3	8	#4	STR.	20'-7"	110
B4	10	#4	STR.	2'-5"	16
D1	22	#8	STR.	2'-3"	132
H1	28	#4	2	6'-3"	117
K1	8	#4	STR.	20'-7"	110
K2	8	#4	STR.	3'-6"	19
S1	44	#4	4	3'-2"	93
S2	44	#4	3	7'-5"	218
S3	16	#4	5	6'-6"	69
U1	31	#4	6	3'-2"	66
U2	4	#4	6	4'-5"	12
V1	62	#4	STR.	3'-1"	128
V2	40	#4	STR.	5'-1"	136
REINFORCING STEEL					= 2422 LBS

CLASS A CONCRETE BREAKDOWN		
POUR #1 CAP & LOWER PART OF WINGS	C.Y.	10.8
POUR #2 UPPER PART OF WINGS & BACKWALL	C.Y.	3.0
POUR #3 LATERAL GUIDES	C.Y.	0.1
TOTAL CLASS A CONCRETE	C.Y.	13.9
HP 12 X 53 STEEL PILES	LIN. FT.	320



***PILE VERTICAL**
***PILE HORIZONTAL OR VERTICAL**



DETAIL A
DETAIL B

PILE SPlice DETAILS

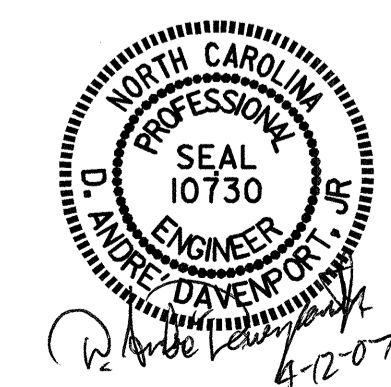
* POSITION OF PILE DURING WELDING.

PROJECT NO. B-3538
 WAYNE COUNTY
 STATION: 14+24.50 -L-

SHEET 3 OF 3

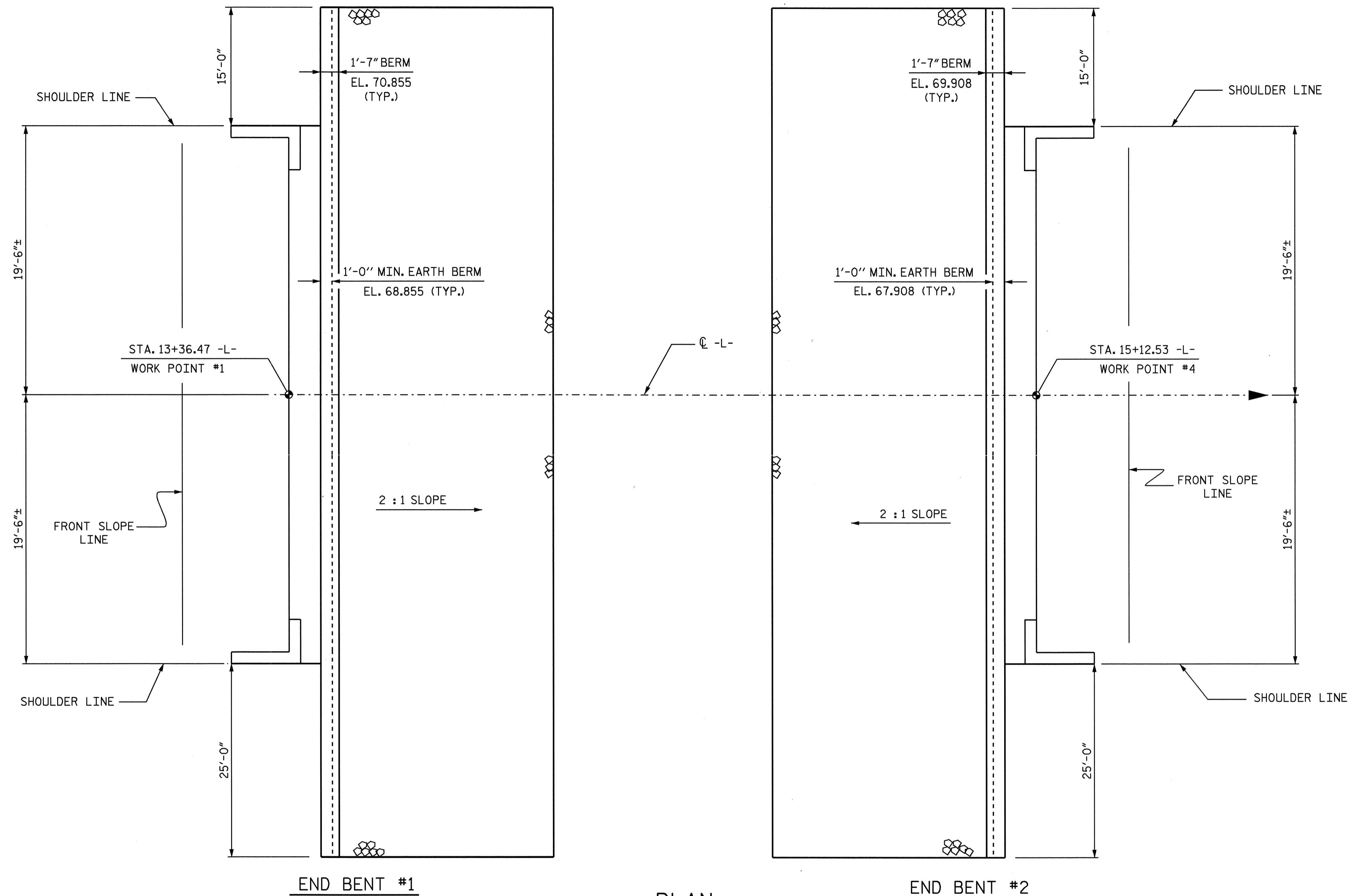
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 END BENT #2**



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-21
1			3			TOTAL SHEETS
2			4			24

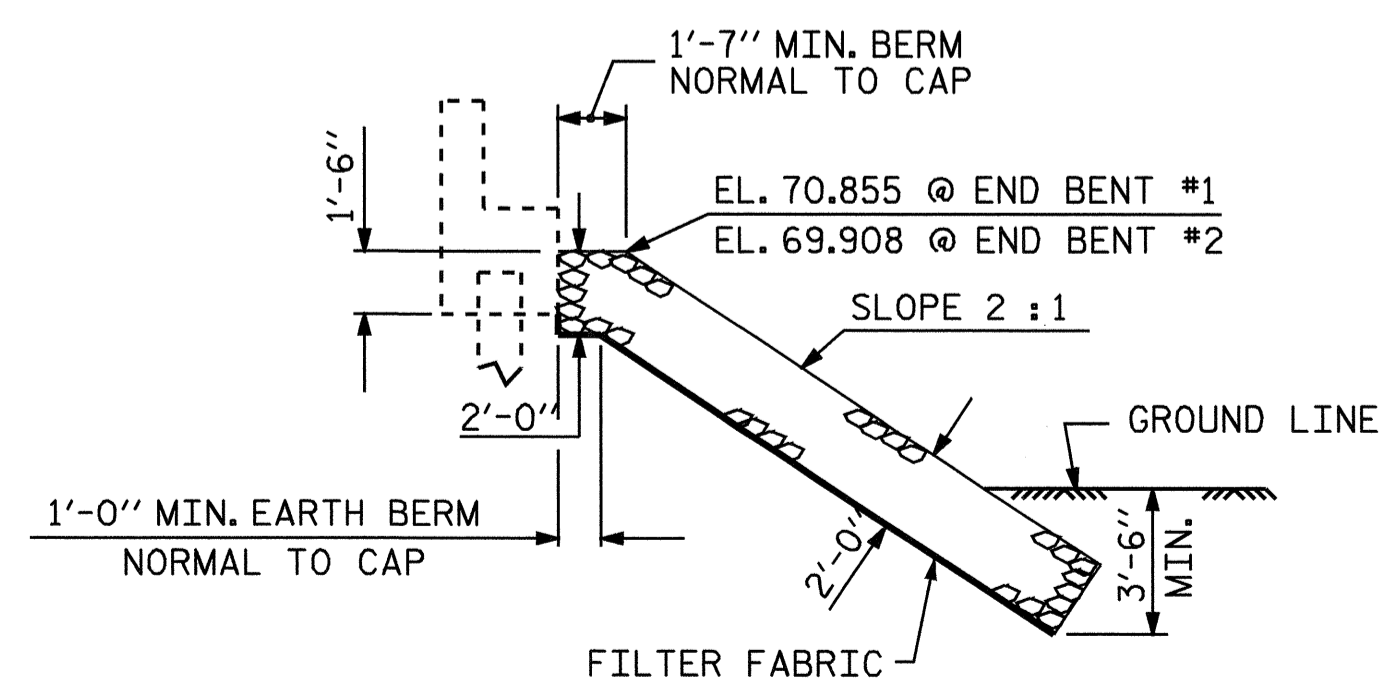
NC005



END BENT #1

END BENT #2

PLAN

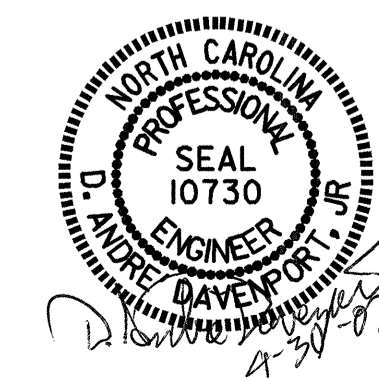


SECTION

BERM RIP RAPPED

ESTIMATED QUANTITIES		
BRIDGE @ STA. 14+24.50 -L-	RIP RAP CLASS II	FILTER FABRIC FOR DRAINAGE
	TONS	SQUARE YARDS
END BENT 1	369	410
END BENT 2	405	450
TOTAL	774	860

PROJECT NO. B-3538
WAYNE COUNTY
 STATION: 14+24.50 -L-

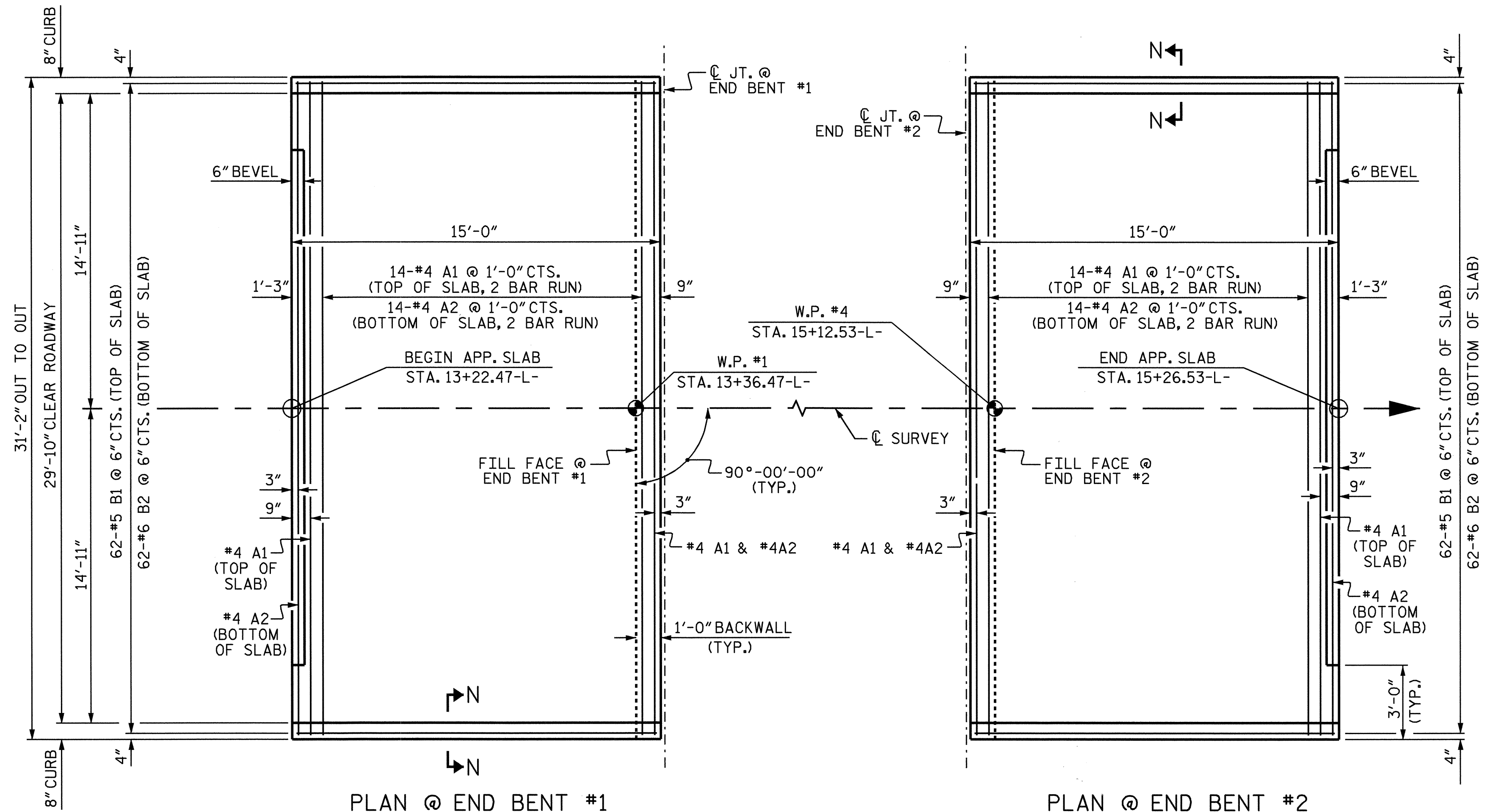


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 — RIP RAP DETAILS —

ASSEMBLED BY: A. SORSENGINH DATE: 12-16-04
 CHECKED BY: H.T. BARBOUR DATE: 1-21-05
 DRAWN BY: FCJ 2/88
 CHECKED BY: ARB 8/88

REV. 7/17/98 REK/RWW
 REV. 8/16/99 RWW/LES
 REV. 10/17/00 RWW/LES

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-22
1			3			TOTAL SHEETS
2			4			24



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 EXTEND 10'-0" BEYOND THE END OF THE APPROACH SLAB AND 1'-0" OUTSIDE OF EACH EDGE OF 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 EXTEND 1'-0" BEYOND THE END OF THE APPROACH SLAB AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB.

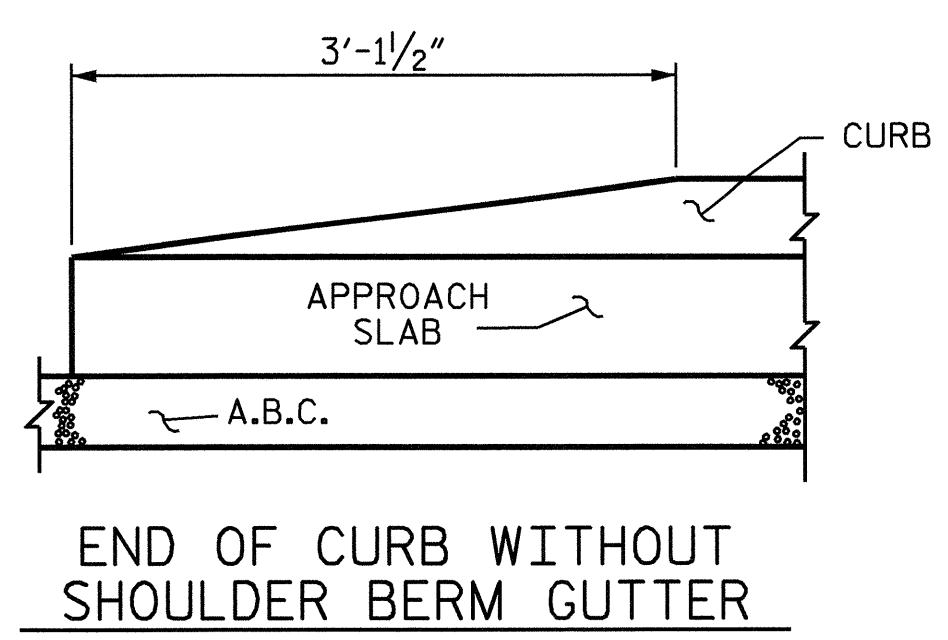
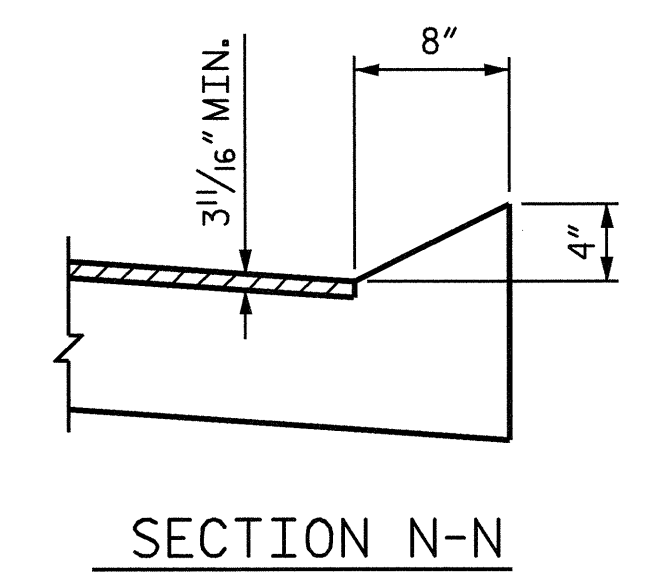
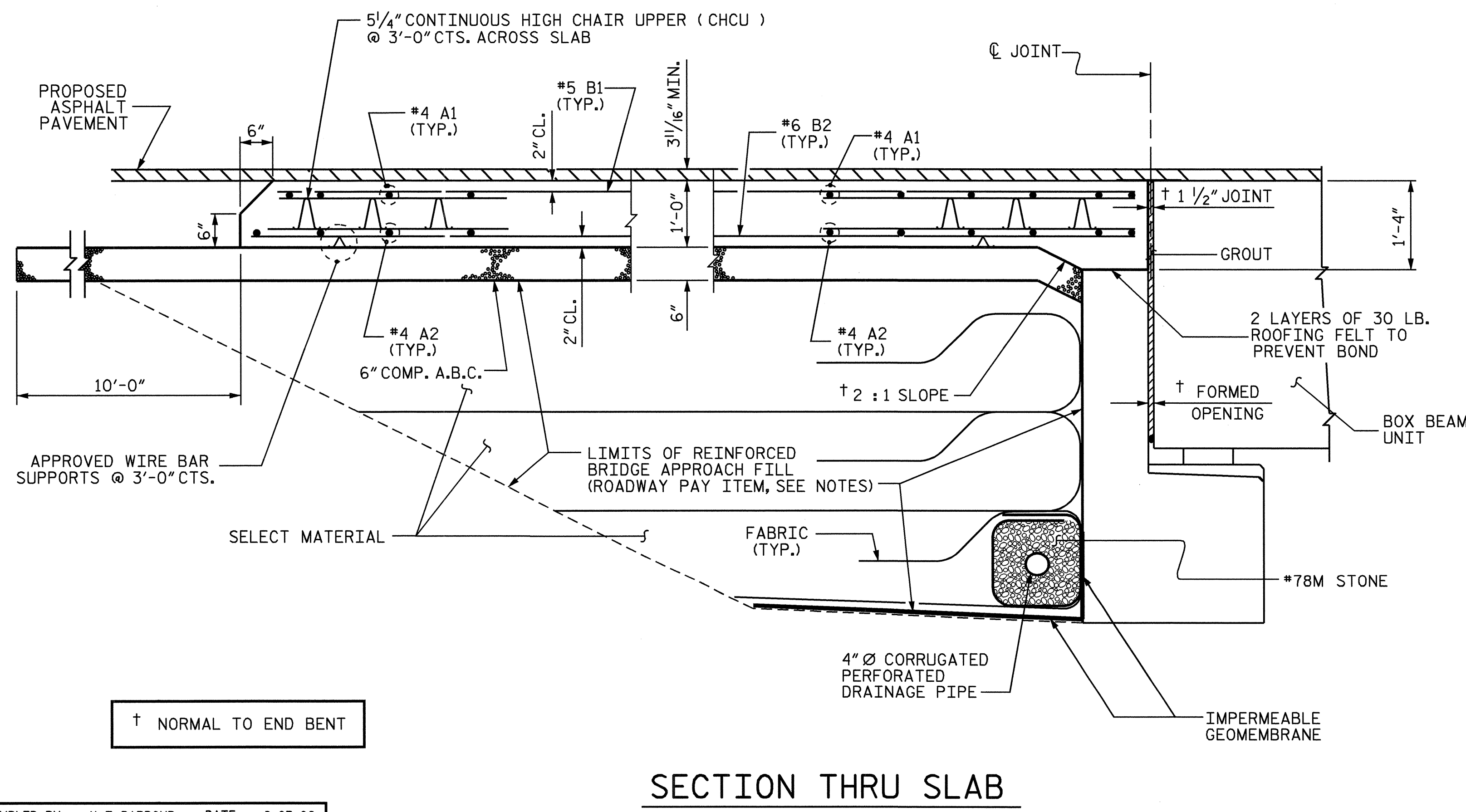
THE CONTRACTOR MAY USE 5" CLASS "A" CONCRETE BASE IN LIEU OF 6" COMP. A.B.C. IF THIS OPTION IS USED, THE CONCRETE BASE SHALL EXTEND 1'-0" BEYOND THE END OF THE APPROACH SLAB AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB. THE CONCRETE SHALL BE FINISHED TO A SMOOTH SURFACE AND A LAYER OF 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 BOX BEAM UNIT" SHEETS.

THE JOINT AT THE END BENT SHALL BE SEALED 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'-3"	921
B2	62	#6	STR	14'-8"	1366
REINFORCING STEEL				LBS.	1715
*EPOXY COATED REINFORCING STEEL				LBS.	1272
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'-3"	921
B2	62	#6	STR	14'-8"	1366
REINFORCING STEEL				LBS.	1715
*EPOXY COATED REINFORCING STEEL				LBS.	1272
CLASS AA CONCRETE				C. Y.	17.9



PROJECT NO. B-3538
WAYNE COUNTY
 STATION: 14+24.50 -L-

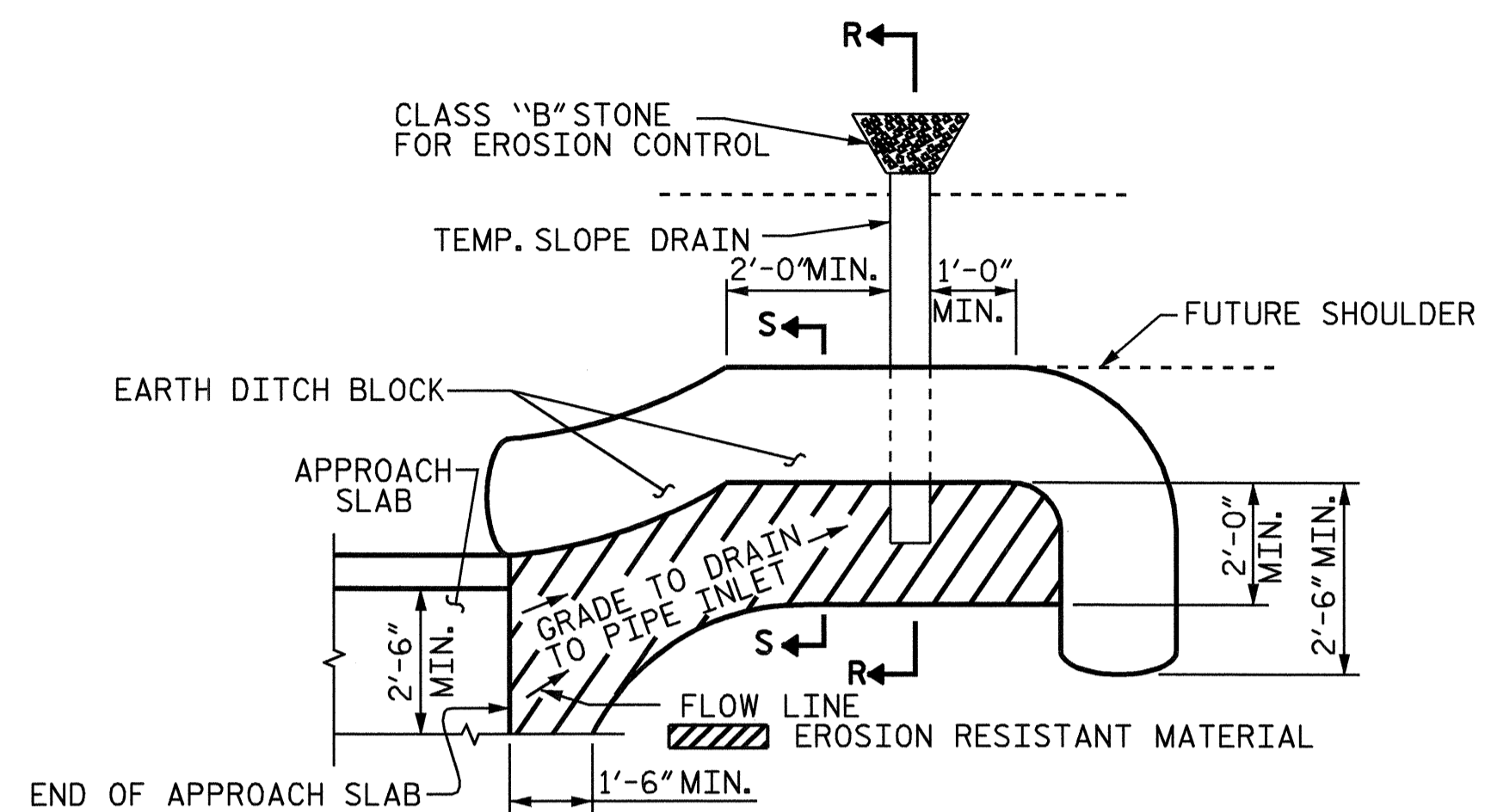
SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BRIDGE APPROACH SLAB
 FOR FLEXIBLE PAVEMENT

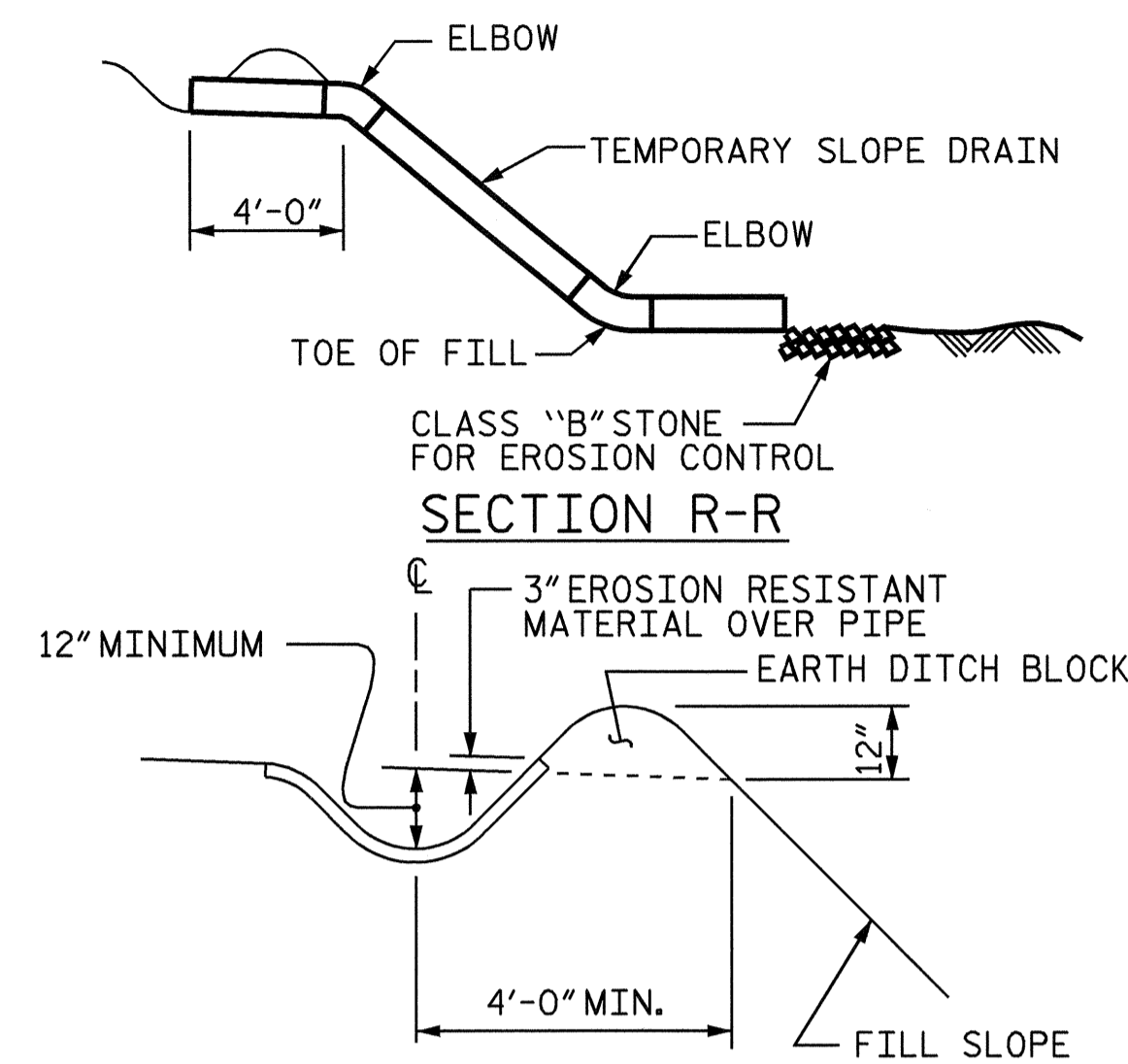
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			24
2			4			

ASSEMBLED BY : H. T. BARBOUR DATE : 8-03-06
 CHECKED BY : D. A. DAVENPORT DATE : 8-06
 DRAWN BY : EEM 3/95 REV. 7/10/01 LES/RDR
 CHECKED BY : VAP 3/95 REV. 5/7/03R 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.

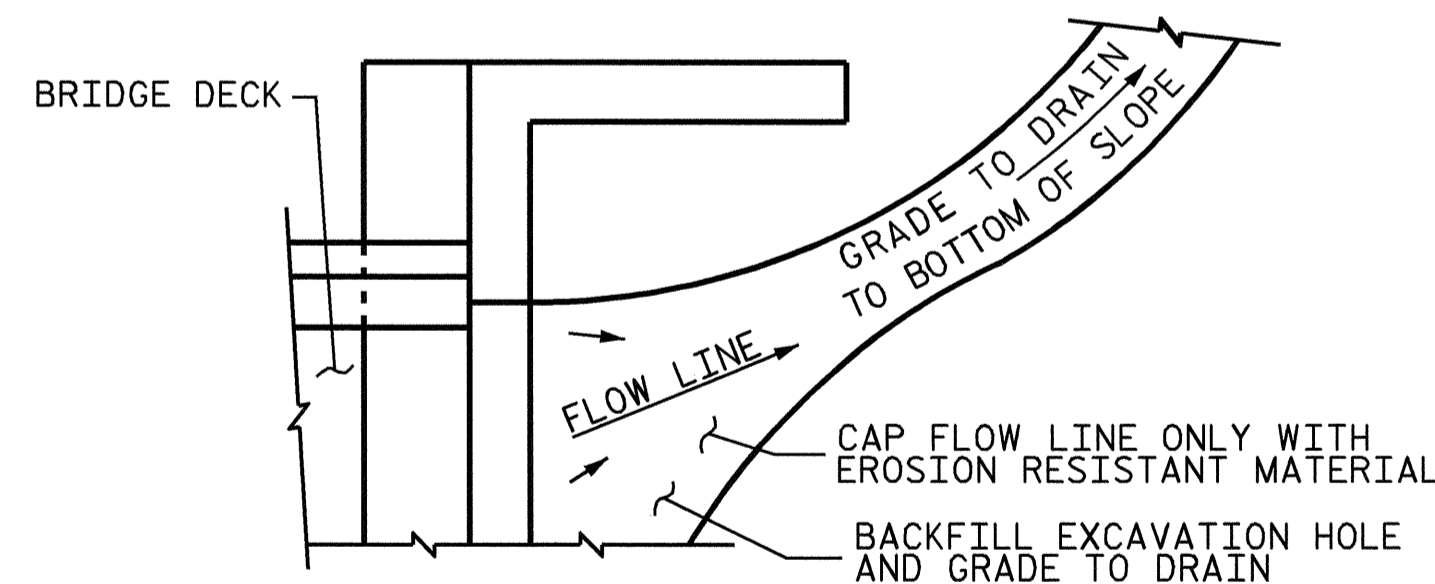
PLAN VIEW



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

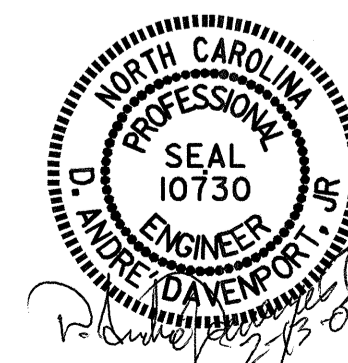
PROJECT NO. B-3538
WAYNE COUNTY
 STATION: 14+24.50 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BRIDGE APPROACH SLAB DETAILS

ASSEMBLED BY :	H. T. BARBOUR	DATE :	8-03-06
CHECKED BY :	D. A. DAVENPORT	DATE :	8-06
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-24
1			3			TOTAL SHEETS
2			4			24

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