

15+50

16+00

16+50

NOTES :

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

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

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

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

FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.

THE EXISTING STRUCTURE CONSISTING OF 1 @ 35'-2" TIMBER FLOOR ON I-BEAM SPAN WITH A CLEAR ROADWAY WIDTH OF 19'-2" ON TIMBER CAP & TIMBER POST & SILL SUBSTRUCTURE AND LOCATED 25' UPSTREAM FROM PROPOSED STRUCTURE 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 SHALL BE EXCAVATED FOR A DISTANCE OF 25 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. SEE ROADWAY PLANS FOR EXCAVATION DETAILS. THIS WORK WILL BE MEASURED AND PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

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

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 15+98.00 -L-".

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR PILES, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CURING CONCRETE, SEE SPECIAL PROVISIONS.

FOR PLACING LOAD ON STRUCTURE MEMBERS, SEE SPECIAL PROVISIONS.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT BRIDGES IN THE VICINITY OF THIS PROJECT ARE POSTED BELOW THE LEGAL LOAD LIMIT, SEE STANDARD SPECIFICATION 105-15.

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

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.

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 END BENT No. 1 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 IS 60 TONS PER PILE.

DRIVE PILES AT 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. 2 IS 60 TONS PER PILE.

FOR VERTICAL CONCRETE BARRIER RAIL, SEE SPECIAL PROVISIONS.

PROJECT NO. B-4043

BURKE COUNTY

STATION: 15+98.00 -L-

SHEET 1 OF 2 REPLACES BRIDGE #51

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

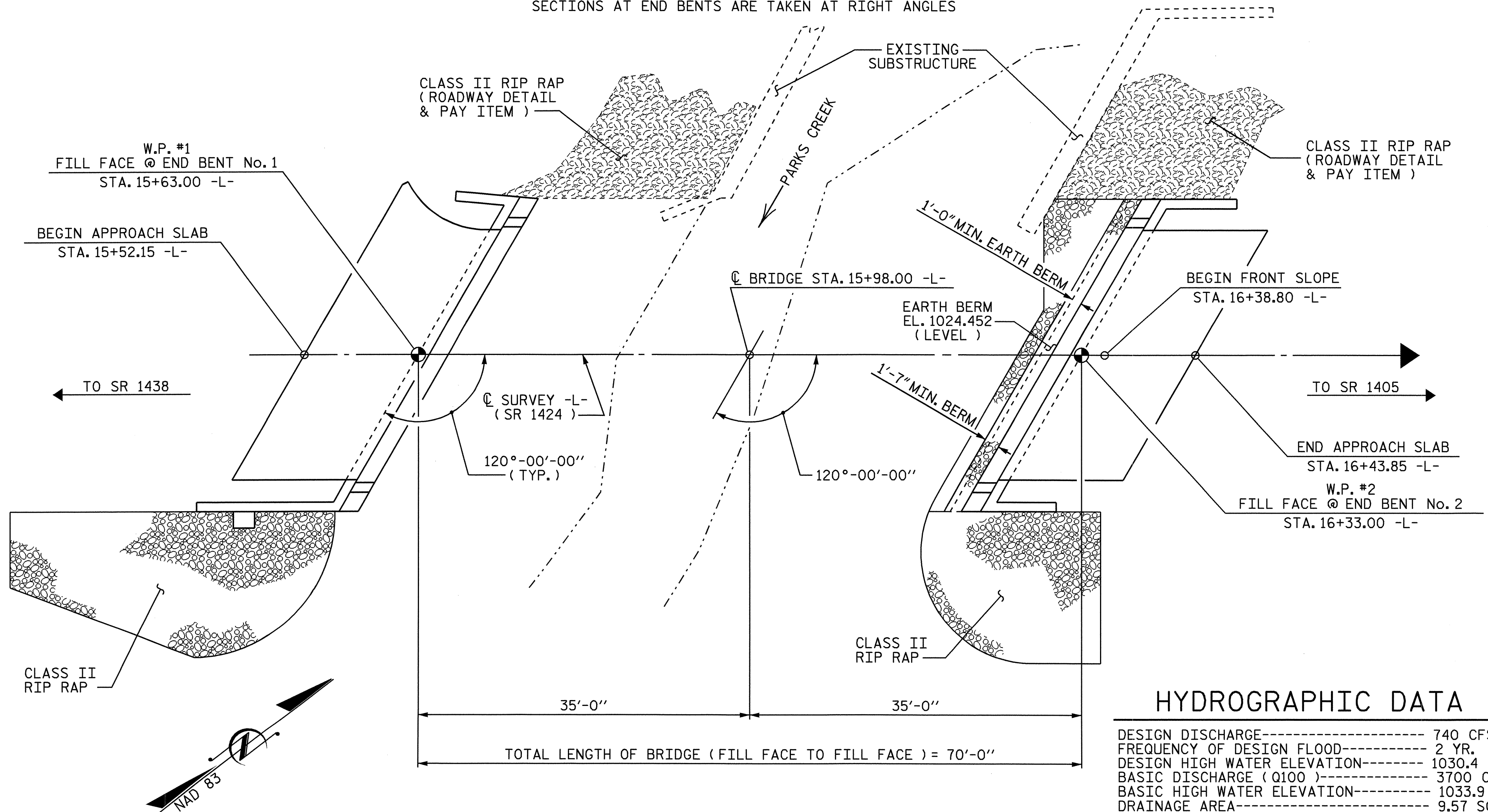
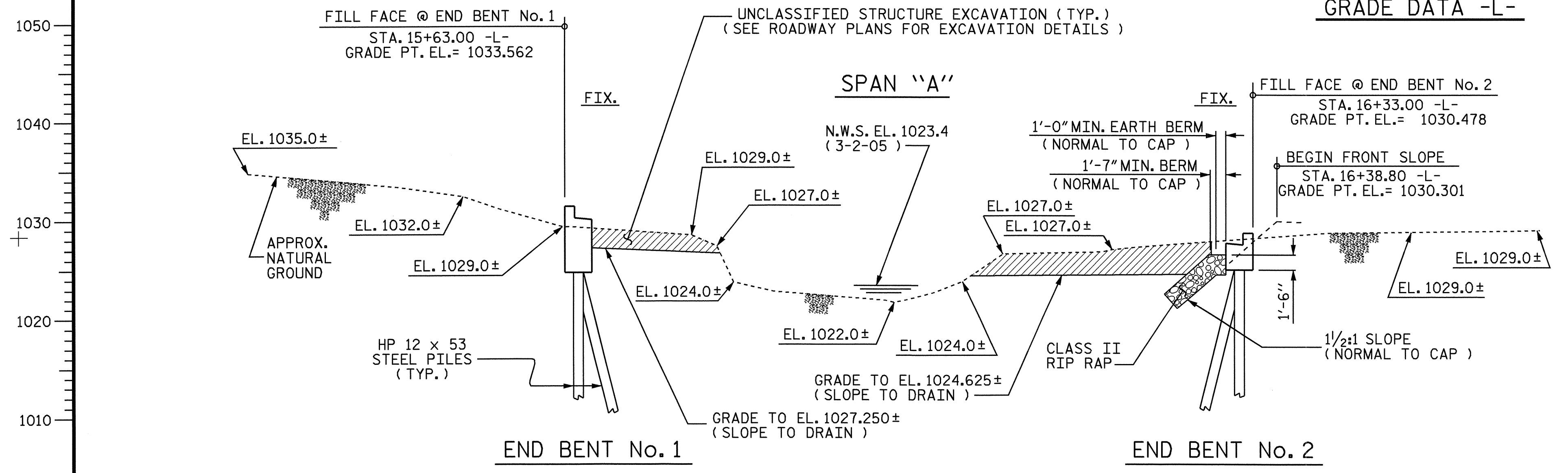
BRIDGE ON SR 1424
(JOHN'S RIVER RD.)
OVER PARKS CREEK BETWEEN
SR 1438 AND SR 1405

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

GRADE DATA -L-

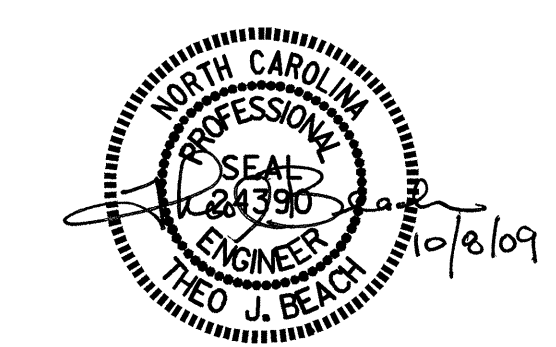
PI = 16+50.00 -L-
EL. = 1027.21
VC = 250'

-7.0059% +1.8996%



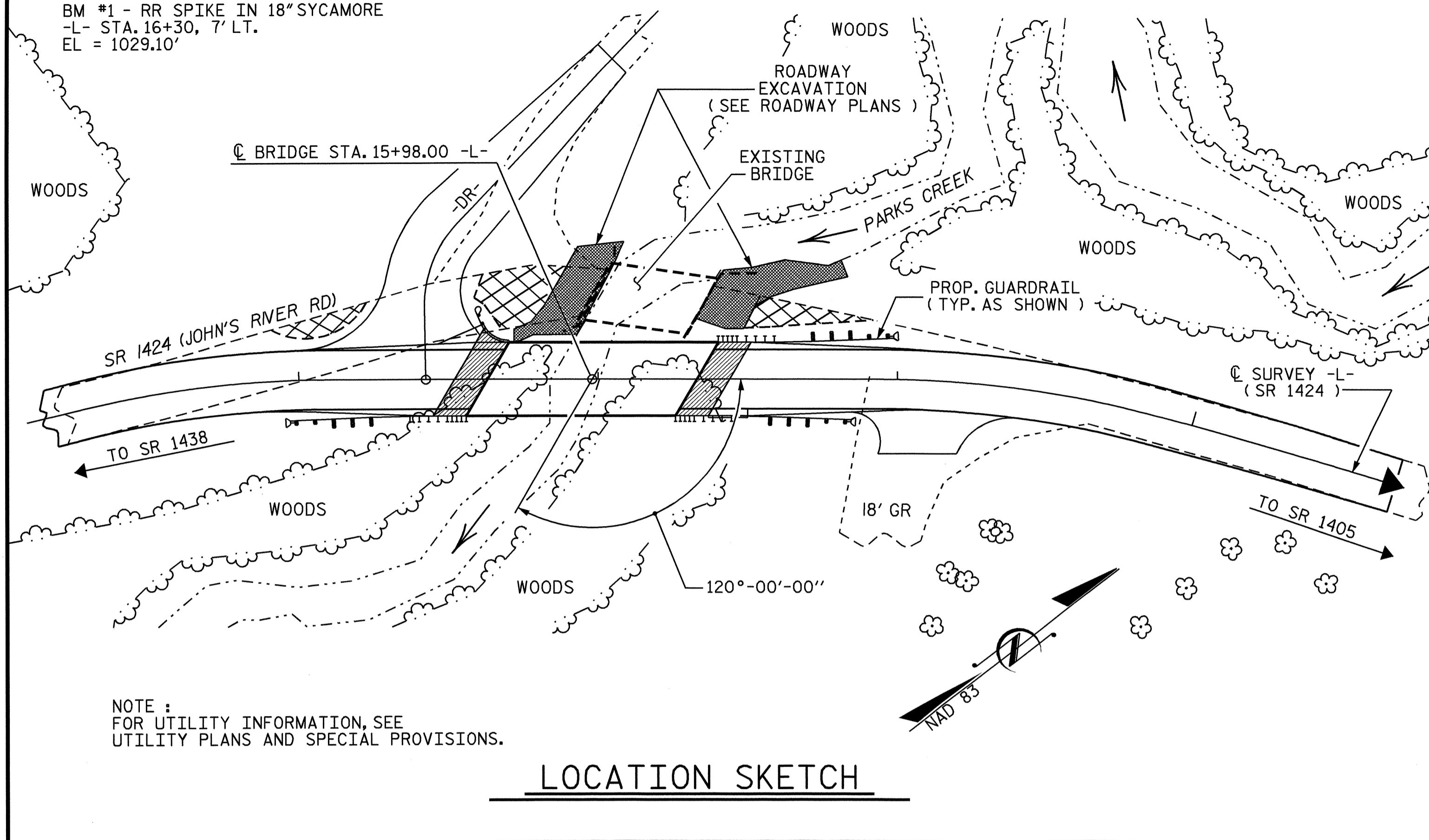
HYDROGRAPHIC DATA

DESIGN DISCHARGE-----	740 CFS.
FREQUENCY OF DESIGN FLOOD-----	2 YR.
DESIGN HIGH WATER ELEVATION-----	1030.4
BASIC DISCHARGE (Q100)-----	3700 CFS.
BASIC HIGH WATER ELEVATION-----	1033.9
DRAINAGE AREA-----	9.57 SQ. MI.
OVERTOPPING FLOOD DATA	
OVERTOPPING DISCHARGE-----	840 CFS.
FREQUENCY OF OVERTOPPING FLOOD-----	2+ YRS.
OVERTOPPING FLOOD ELEVATION-----	1029.3



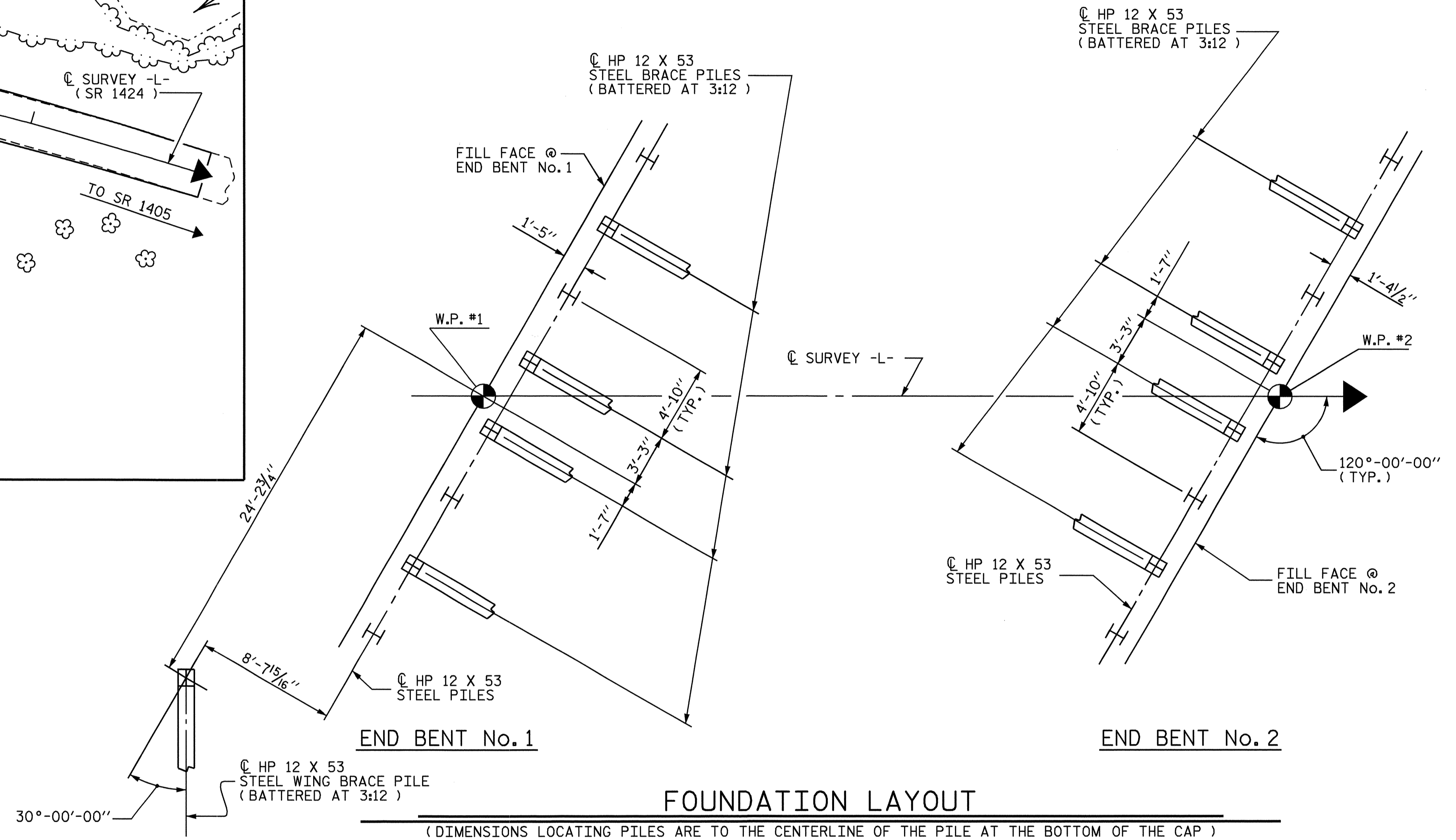
DRAWN BY : MIKE BRITT DATE : 4-16-09
CHECKED BY : T.J. BEACH DATE : 8-26-09

BM #1 - RR SPIKE IN 18" SYCAMORE
 -L- STA. 16+30, 7' LT.
 EL = 1029.10'



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

LOCATION SKETCH



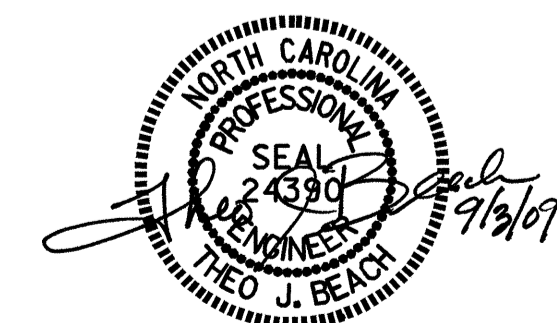
FOUNDATION LAYOUT

(DIMENSIONS LOCATING PILES ARE TO THE CENTERLINE OF THE PILE AT THE BOTTOM OF THE CAP)

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		VERTICAL CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 2'-3" PRESTRESSED CONCRETE BOX BEAMS	
	LUMP SUM	LUMP SUM	CU. YDS.	LUMP SUM	LBS.	No.	LIN.FT.	LIN.FT.	TONS	SQ.YDS.	LUMP SUM	No.	LIN.FT.
SUPERSTRUCTURE				LUMP SUM				134.73			LUMP SUM	9	606.28
END BENT No. 1			30.7		3852	9	160		55	61			
END BENT No. 2			15.3		2483	8	140		47	52			
TOTAL	LUMP SUM	LUMP SUM	46.0	LUMP SUM	6335	17	300	134.73	102	113	LUMP SUM	9	606.28

PROJECT NO. B-4043
 BURKE COUNTY
 STATION: 15+98.00 -L-

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

BRIDGE ON SR 1424
 (JOHN'S RIVER RD.)
 OVER PARKS CREEK BETWEEN
 SR 1438 AND SR 1405

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

DRAWN BY: MIKE BRITT DATE: 4-16-09
 CHECKED BY: T.J. BEACH DATE: 8-26-09

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 GROUT.

THE 2 1/2" Ø BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS. THE JOINT OPENING BETWEEN THE BACKWALL AND BOX BEAM UNIT SHALL BE FILLED WITH GROUT.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

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 5300 PSI.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

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

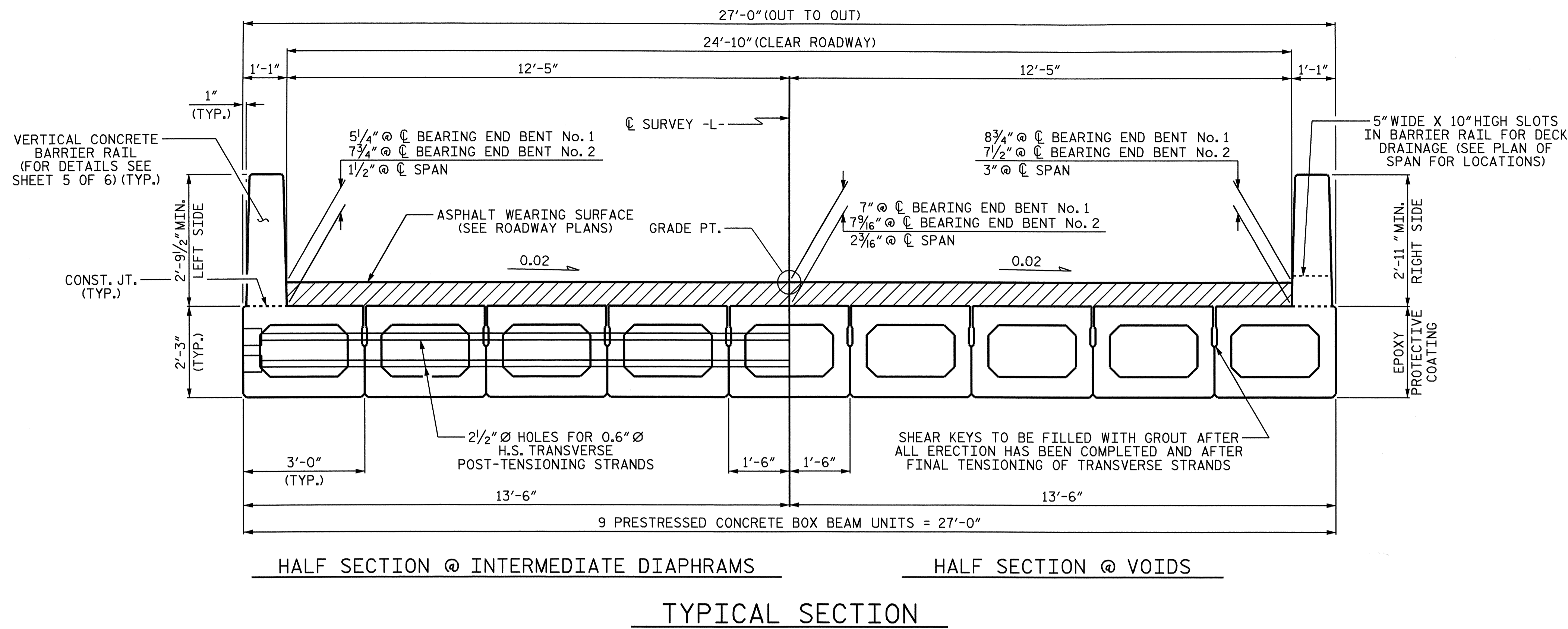
APPLY EPOXY PROTECTIVE COATING TO BOX BEAM UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO THE EXTERIOR FACE OF THE RIGHT EXTERIOR BOX BEAM.

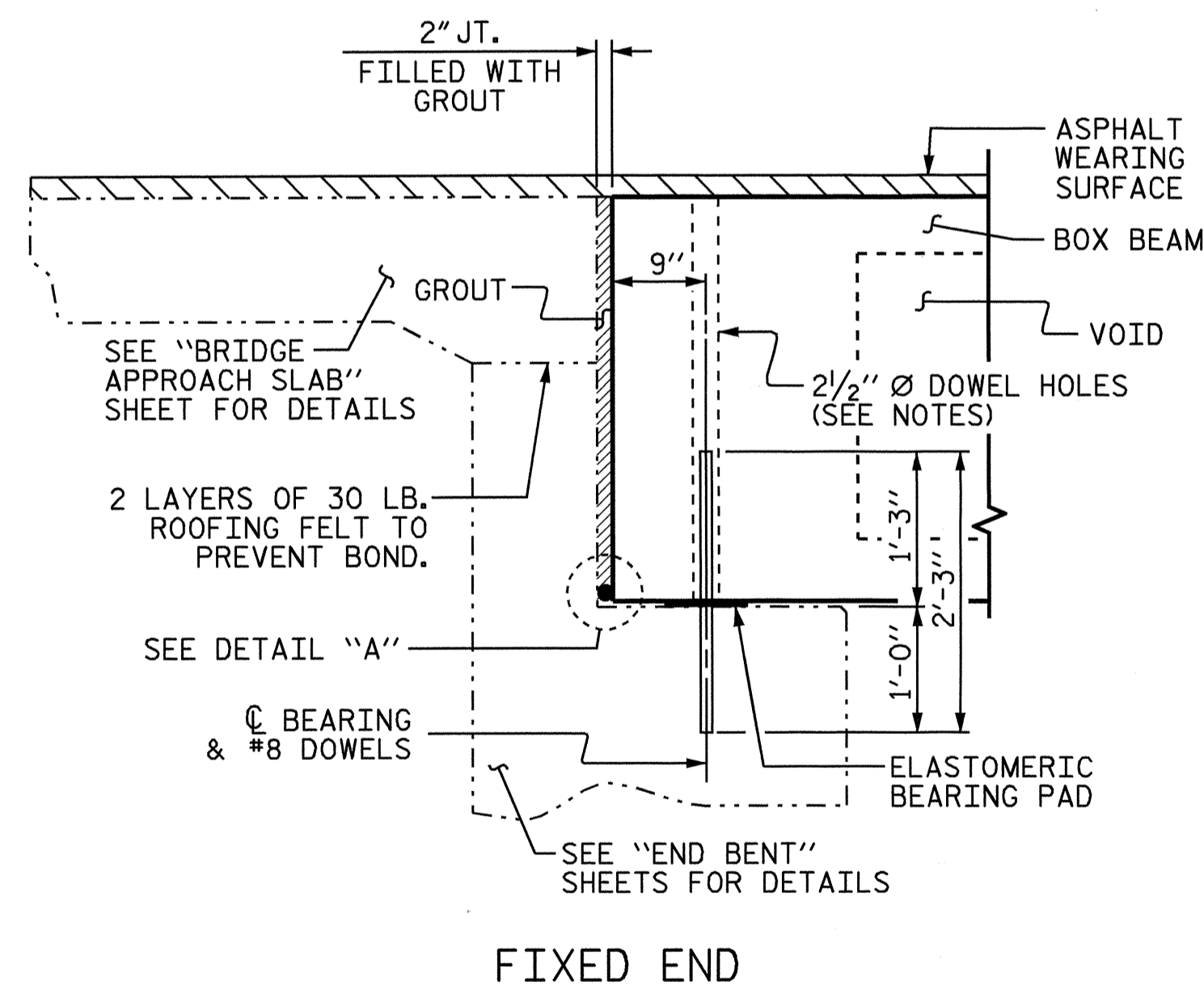
VERTICAL GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A VERTICAL CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION 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.

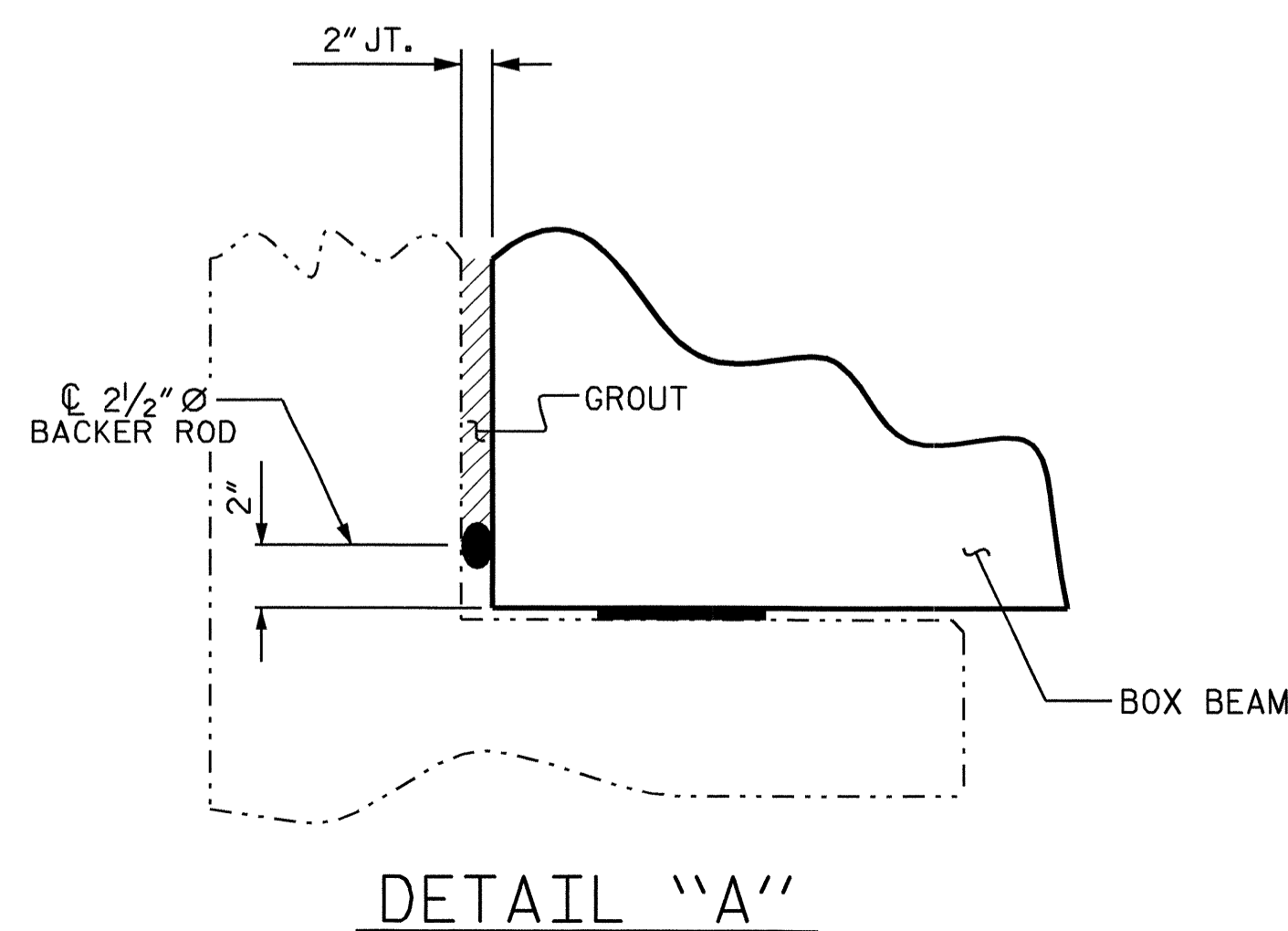
THE MINIMUM HEIGHTS OF THE BARRIER RAIL ARE SHOWN. THE HEIGHT OF THE BARRIER RAIL VARIES WHILE THE TOP OF THE RAIL FOLLOWS THE PROFILE OF THE GUTTERLINE.



HALF SECTION @ INTERMEDIATE DIAPHRAMS HALF SECTION @ VOIDS
TYPICAL SECTION



SECTION AT END BENT
(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR)



DETAIL "A"

PROJECT NO. B-4043
BURKE COUNTY
STATION: 15+98.00 -L-

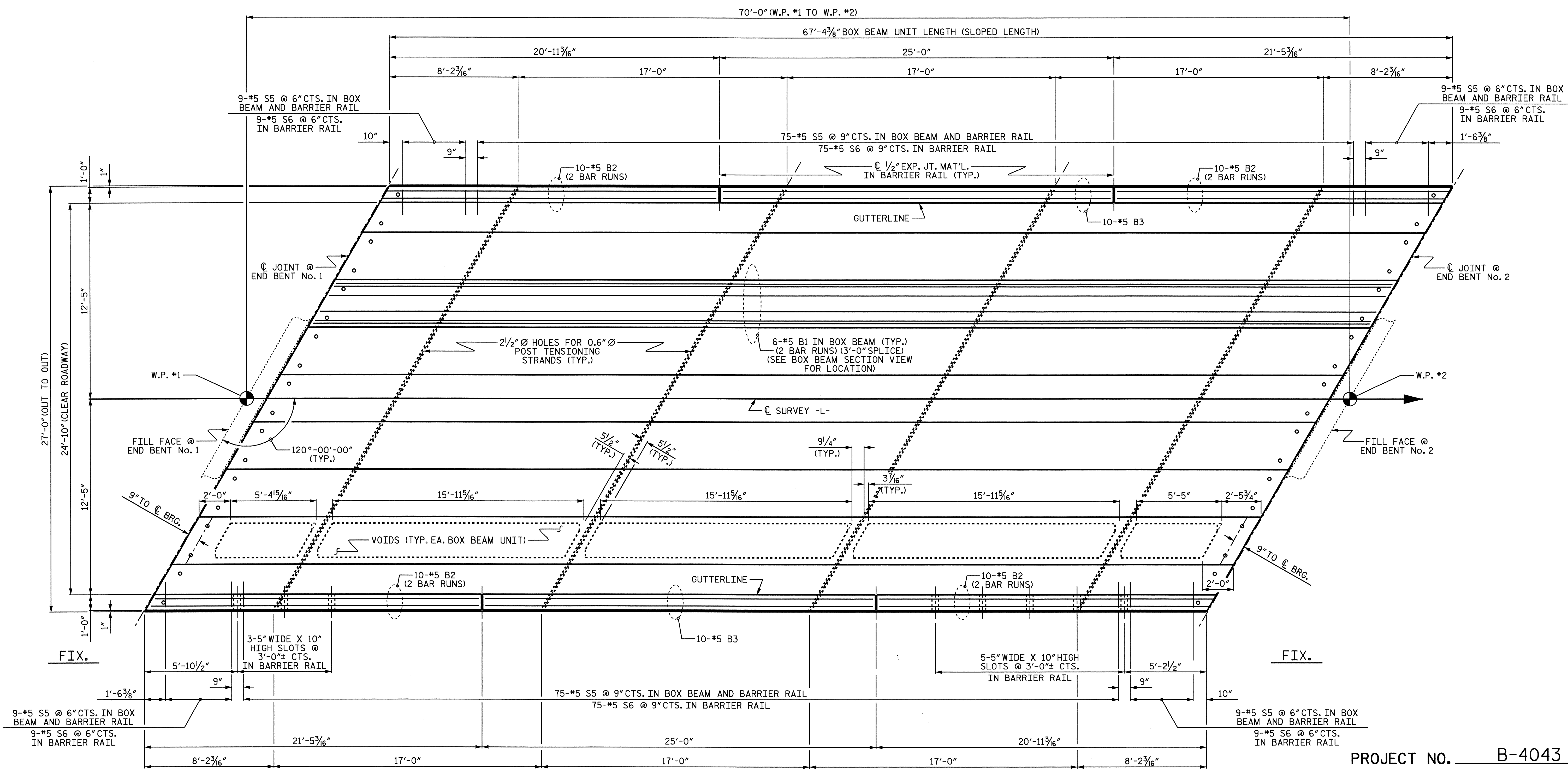
SHEET 1 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
3'-0" X 2'-3"
PRESTRESSED CONCRETE
BOX BEAM UNIT



ASSEMBLED BY : T. BANKOVICH DATE : 8-2008
CHECKED BY : T.N. CARROLL DATE : 9-2008
DRAWN BY : TLA 5/05 ADDED 7/11/05R
CHECKED BY : GM 6/05 REV. 5/1/06R KMM/GM

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



PLAN OF SPAN "A"

PROJECT NO. B-4043
BURKE COUNTY
 STATION: 15+98.00 -L-

SHEET 2 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE

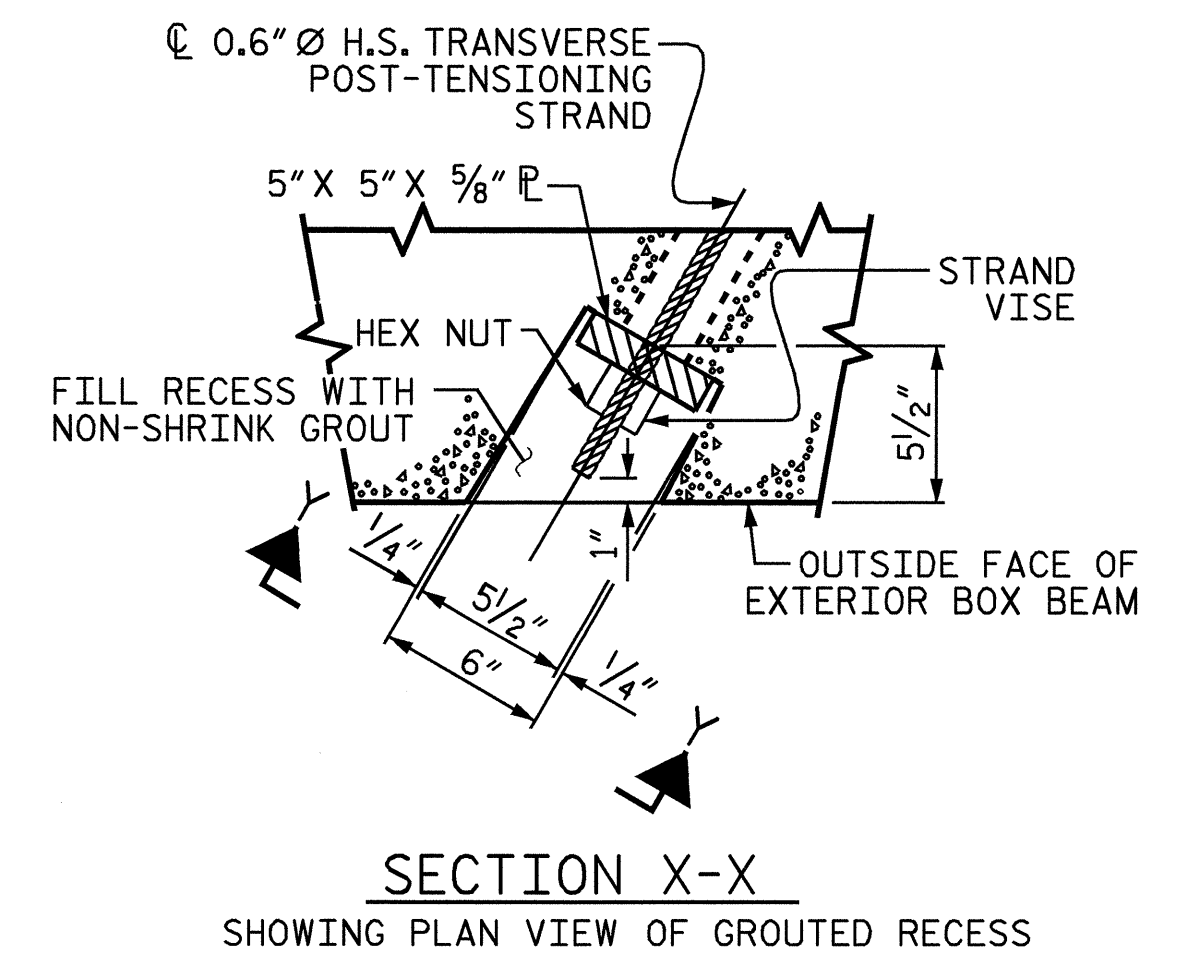
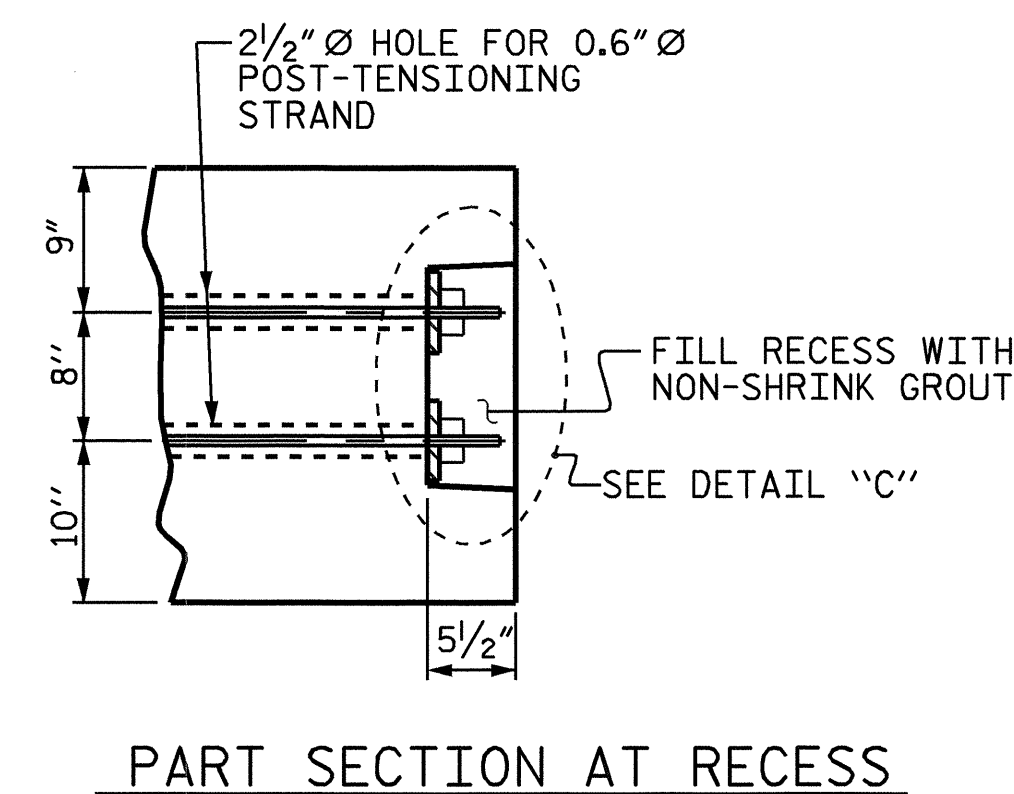
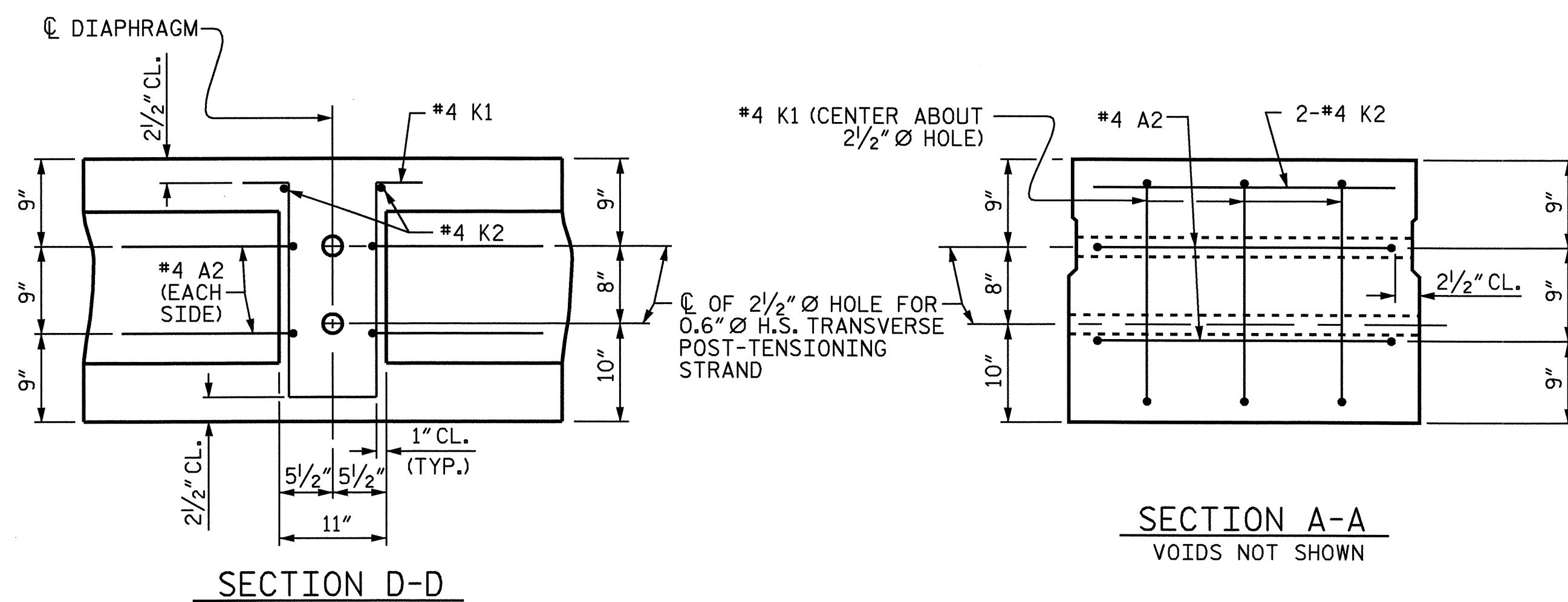
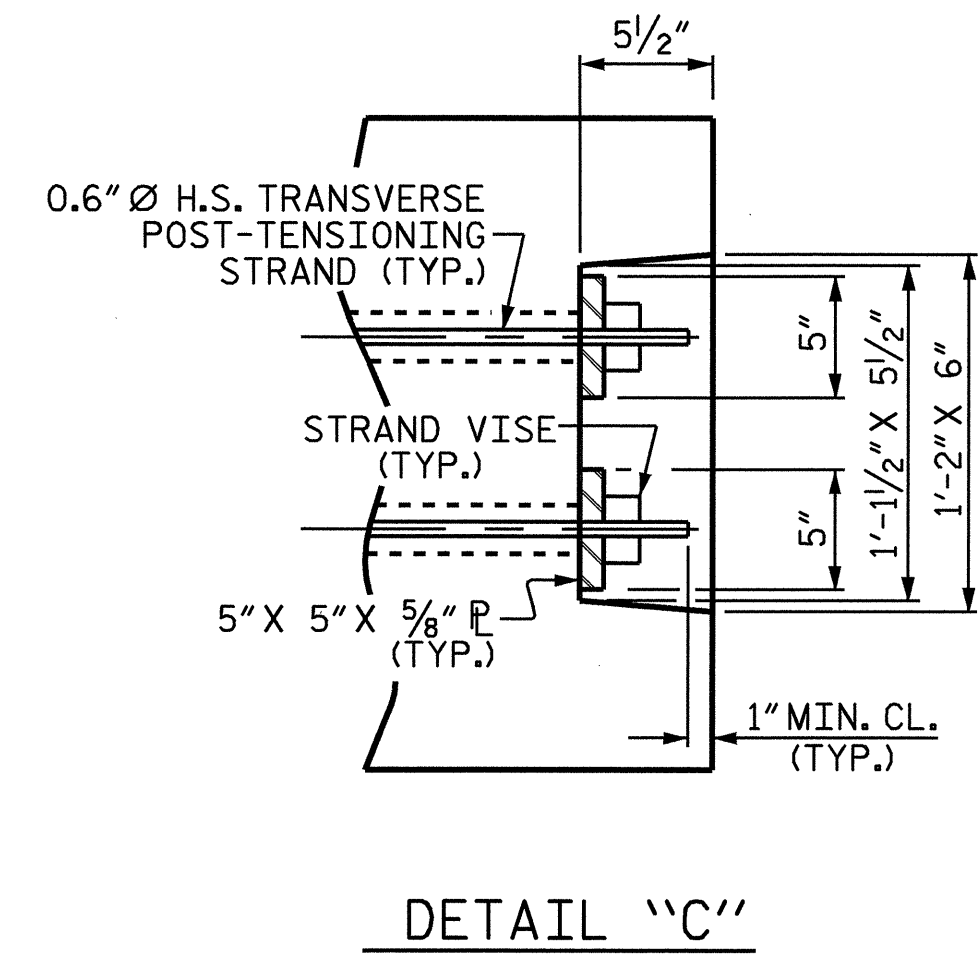
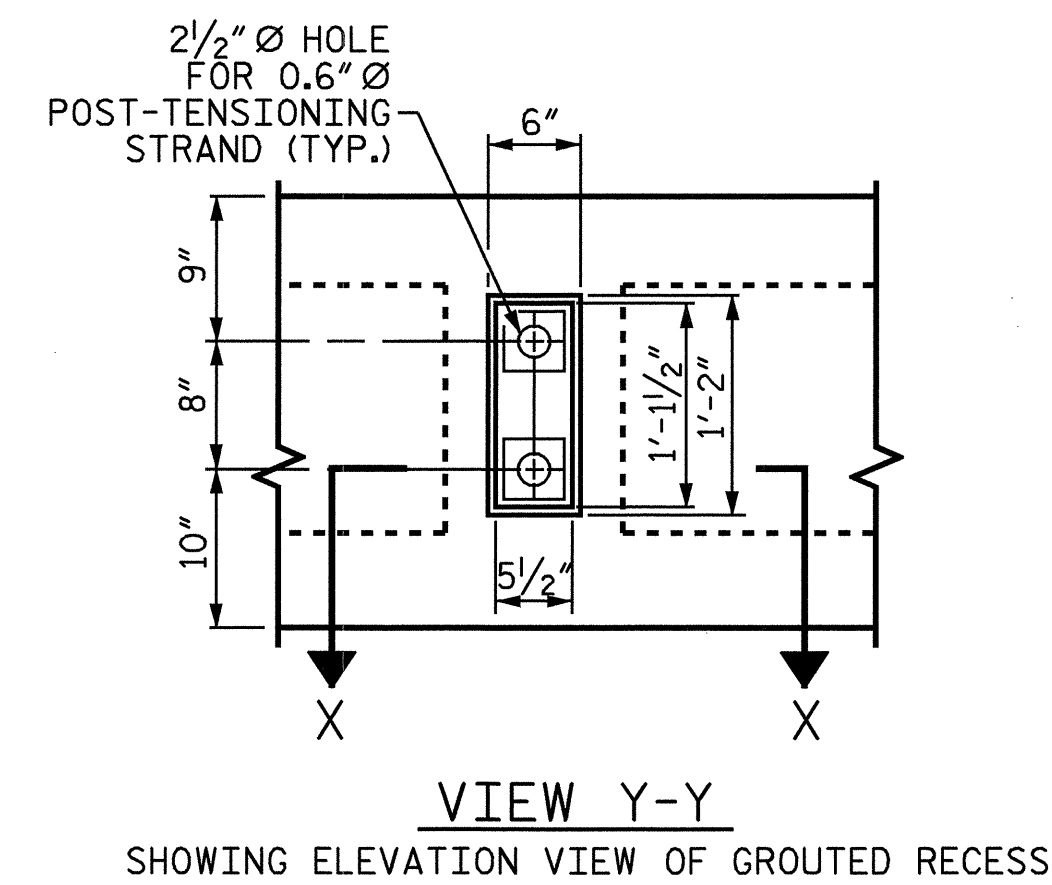
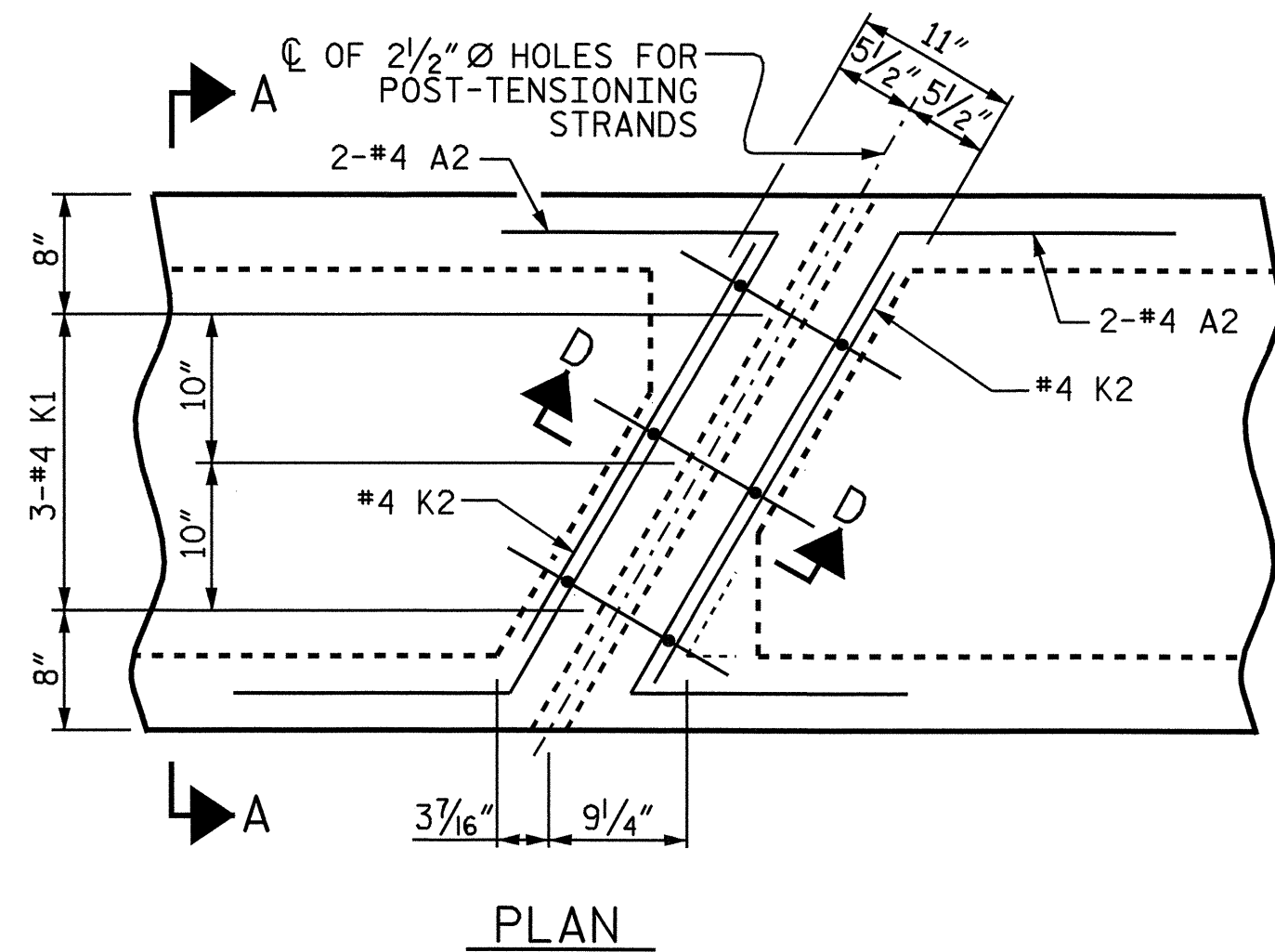
PLAN OF SPAN "A"



DRAWN BY : T. BANKOVICH DATE : 9-2008
 CHECKED BY : T.N. CARROLL DATE : 9-2008

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 sbwilliams

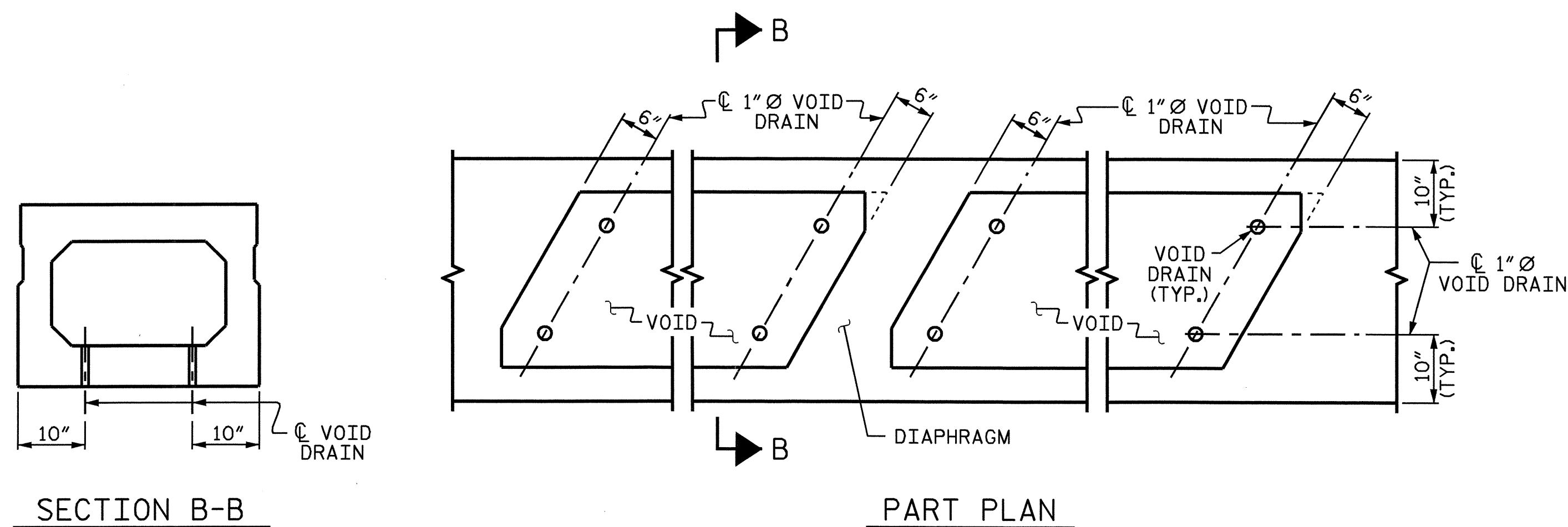
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4	
1			3			TOTAL SHEETS	
2			4			17	



DOUBLE DIAPHRAGM DETAILS

#4 "S" BARS NOT SHOWN. #4 "S" BARS MAY BE SHIFTED SLIGHTLY TO CLEAR 2 1/2" Ø HOLE.

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



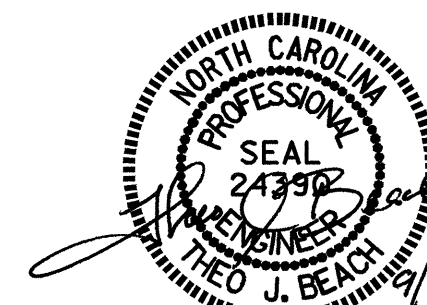
VOID DRAIN DETAILS
(DIMENSIONS SHOWN ARE TYPICAL FOR EACH VOID)

DEAD LOAD DEFLECTION AND CAMBER	
	3'-0" X 2'-3"
	0.6" Ø L.R. STRAND
	SPAN "A"
CAMBER (BEAM ALONE IN PLACE)	3/2"
DEFLECTION DUE TO SUPERIMPOSED DEADLOAD **	0 1/16"
FINAL CAMBER	2 3/16"

** INCLUDES FUTURE WEARING SURFACE

PROJECT NO. B-4043
BURKE COUNTY
 STATION: 15+98.00 -L-

SHEET 4 OF 6



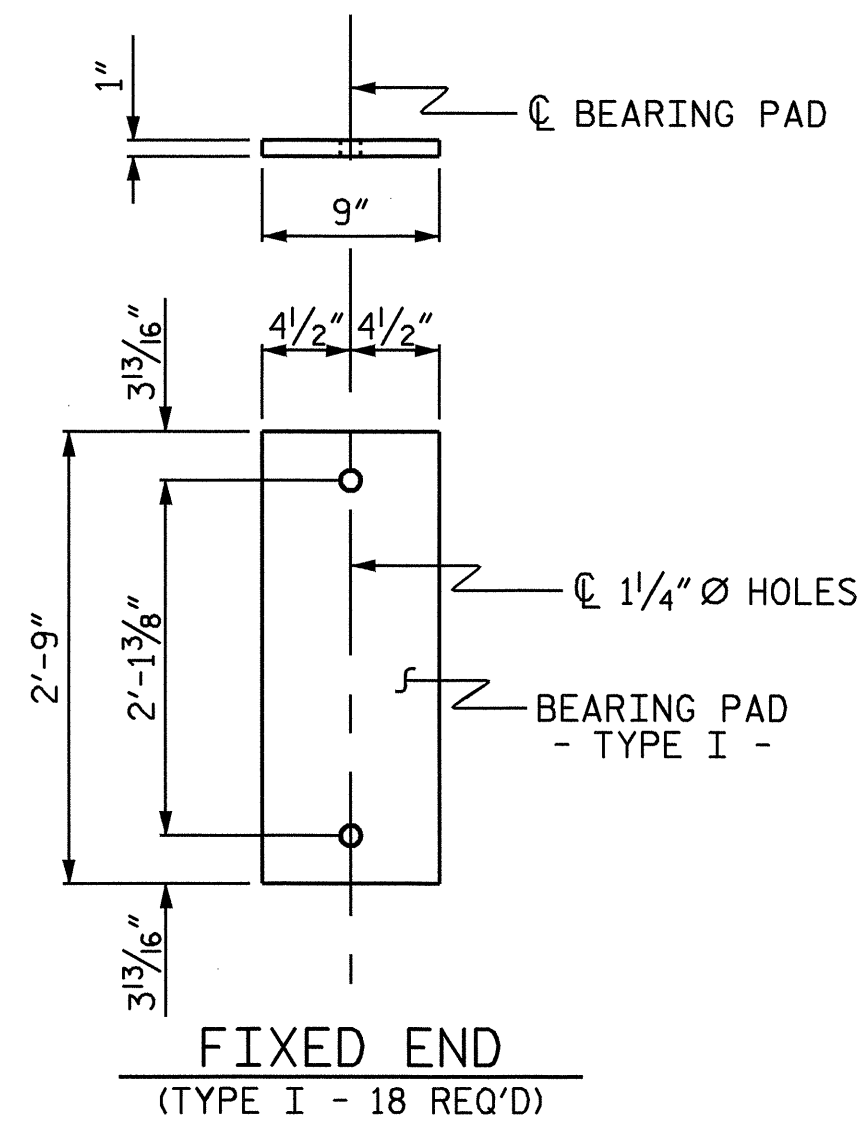
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD 3'-0" X 2'-3" PRESTRESSED CONCRETE BOX BEAM UNIT					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-6
TOTAL SHEETS 17

ASSEMBLED BY : T. BANKOVICH DATE : 9-2008
 CHECKED BY : T.N. CARROLL DATE : 9-2008
 DRAWN BY : TLA 5/05
 CHECKED BY : GM 6/05

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

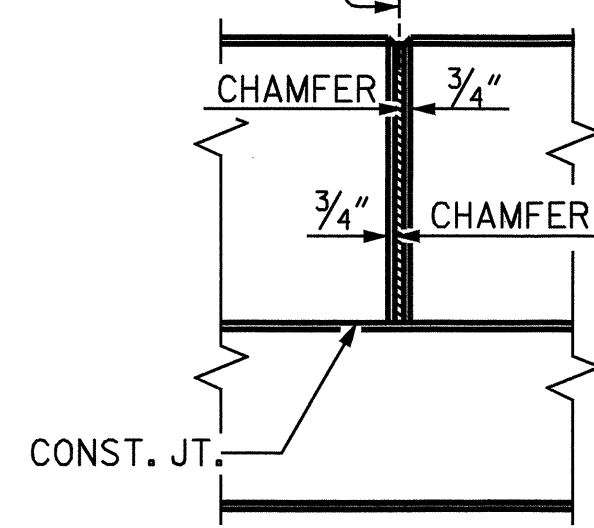
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 sbwilliams



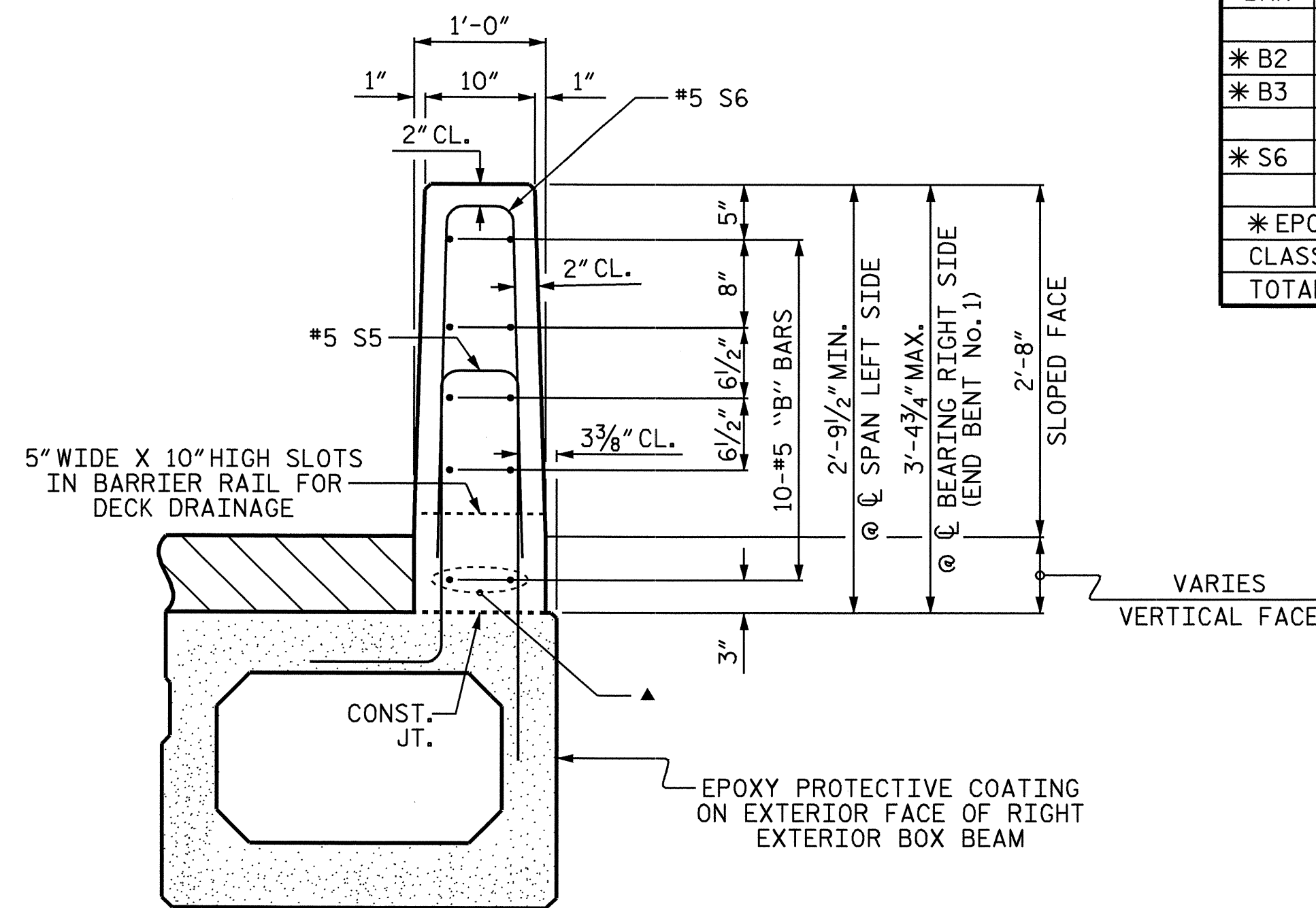
ELASTOMERIC BEARING DETAILS

60 DUROMETER HARDNESS

1/2" EXP. JT. MAT'L HELD IN PLACE WITH GALVANIZED NAILS. (NOTE: OMIT EXP. JT. MAT'L WHEN SLIP FORM IS USED)



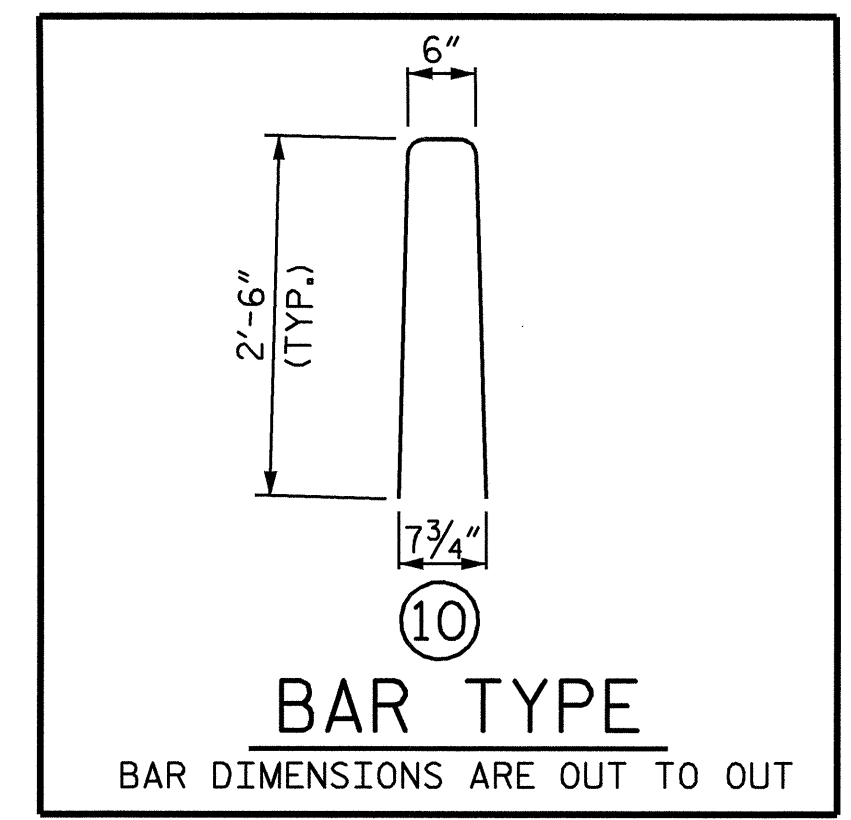
ELEVATION AT EXPANSION JOINTS



SECTION THRU RAIL

BARRIER RAIL DETAILS

▲ THESE "B" BARS MAY BE FIELD CUT 2" CLEAR OF DRAINAGE SLOTS TO AVOID INTERFERENCE



BOX BEAM UNITS REQUIRED			
	NUMBER	LENGTH	TOTAL LENGTH
SPAN A			
EXTERIOR B.B.	2	67'-4 3/8"	134'-8 3/4"
INTERIOR B.B.	7	67'-4 3/8"	471'-6 5/8"
TOTAL	9		606.28'

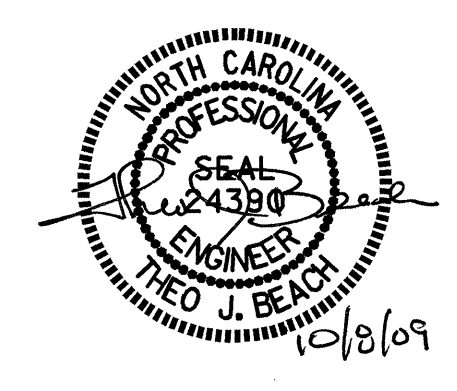
BILL OF MATERIAL FOR CONCRETE BARRIER RAIL					
BAR	BARS PER SPAN	SIZE	TYPE	LENGTH	WEIGHT
SPAN "A"					
* B2	80	#5	STR	12'-3"	1022
* B3	20	#5	STR	24'-7"	513
* S6	186	#5	10	5'-6"	1067
* EPOXY COATED REINFORCING STEEL					2602 LBS.
CLASS AA CONCRETE					14.6 CU. YDS.
TOTAL LIN. FT. OF CONCRETE BARRIER RAIL					134.73'

PROJECT NO. B-4043
BURKE COUNTY
 STATION: 15+98.00 -L-

SHEET 5 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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



ASSEMBLED BY : T. BANKOVICH DATE : 9-2008
 CHECKED BY : T.N. CARROLL DATE : 9-2008
 DRAWN BY : TLA 5/05 ADDED 7/11/05R
 CHECKED BY : GM 6/05 REV. 5/1/06 TLA/GM

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			17

NOTES

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

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.

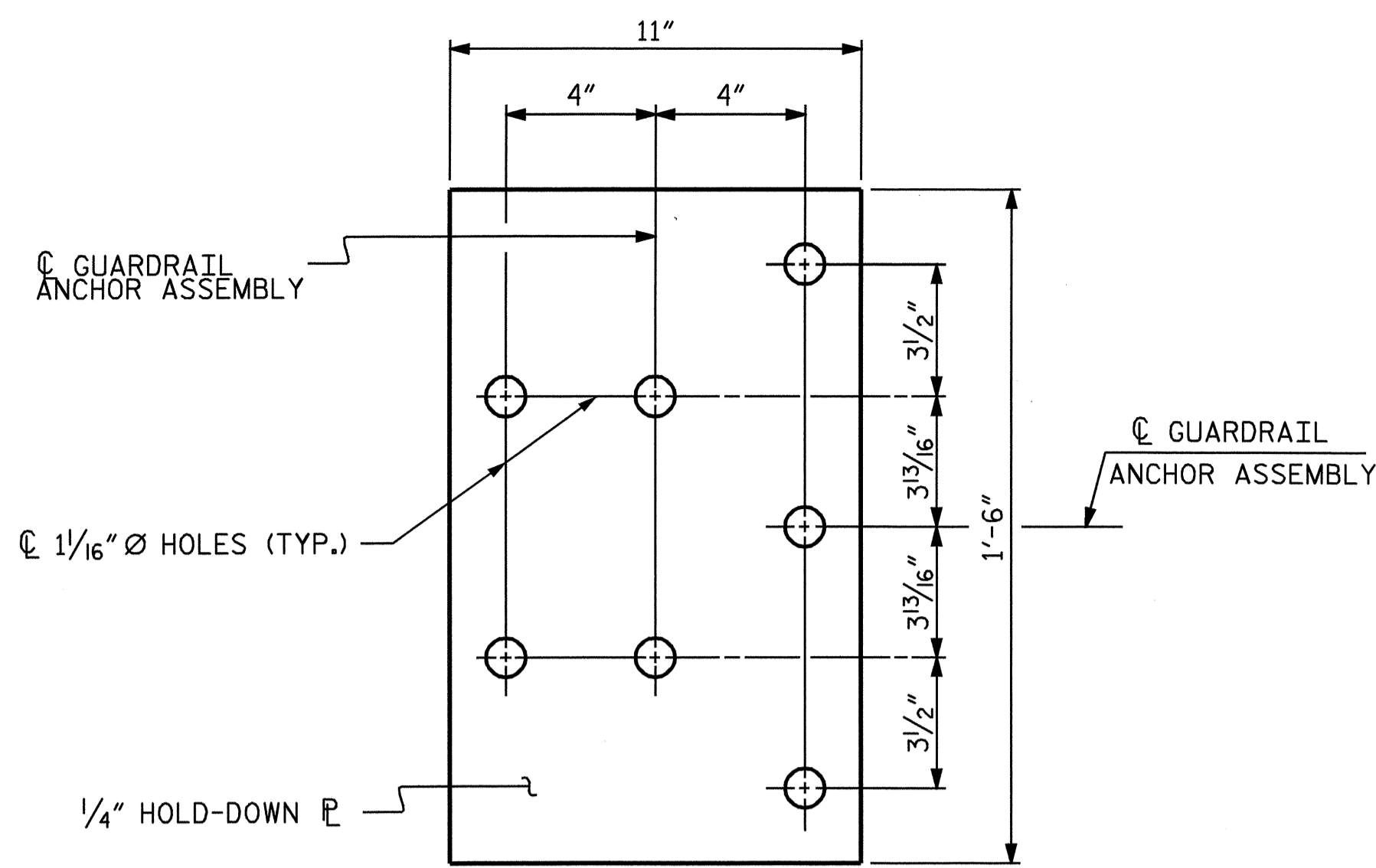
BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS.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

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

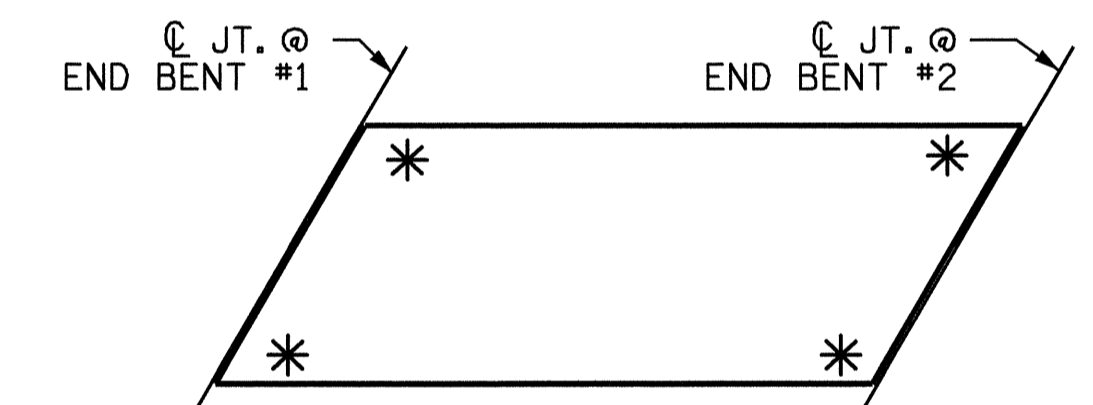
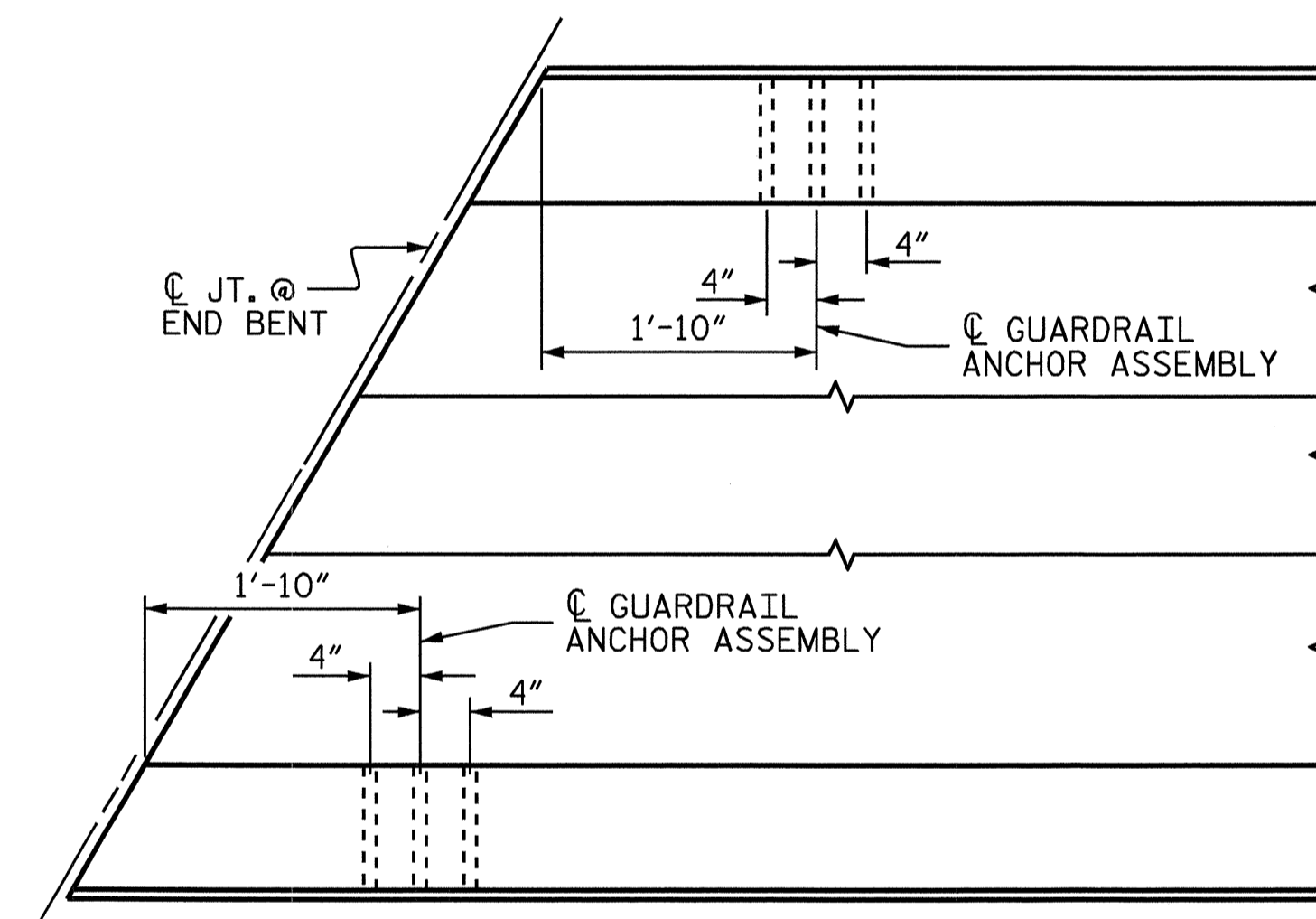
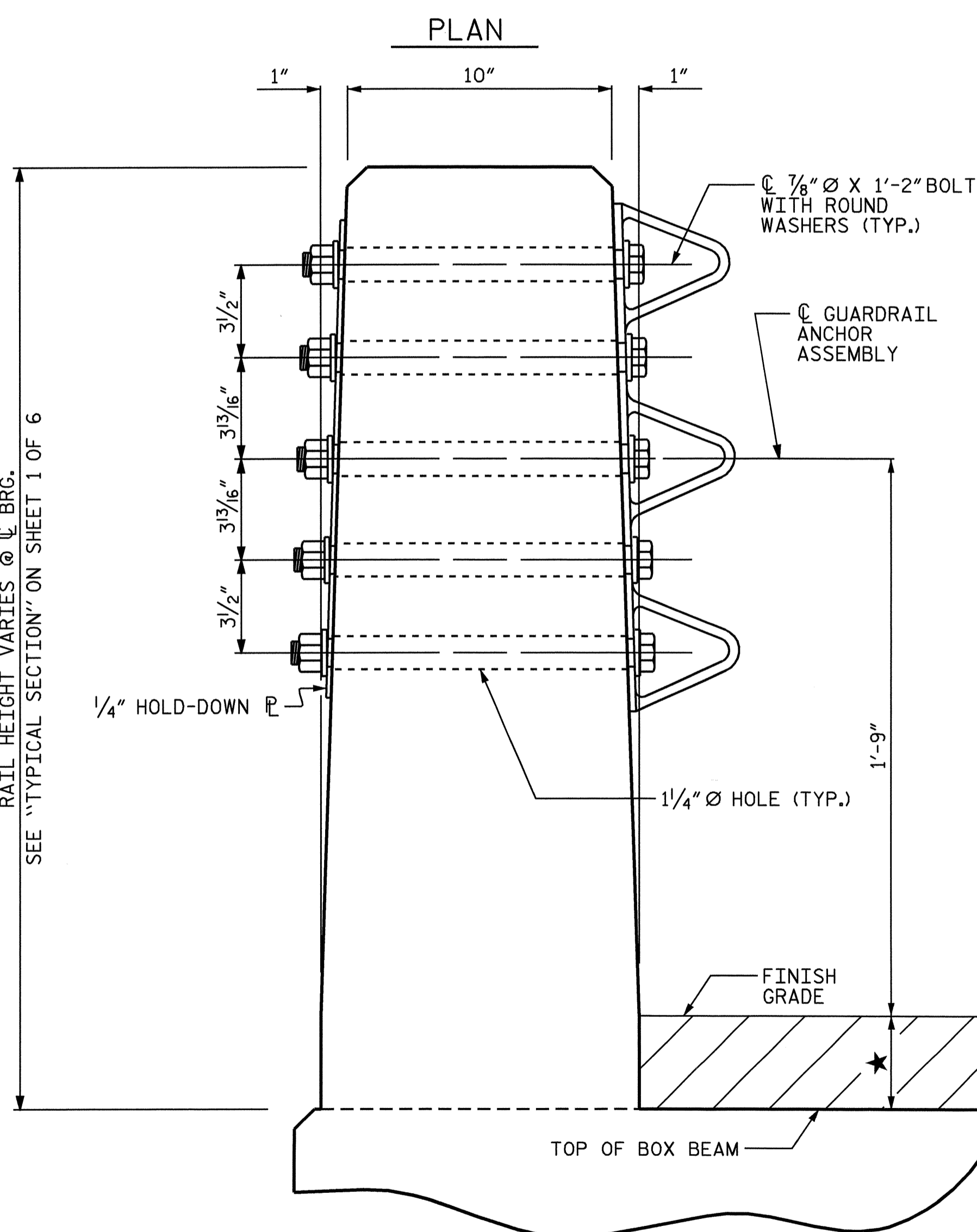
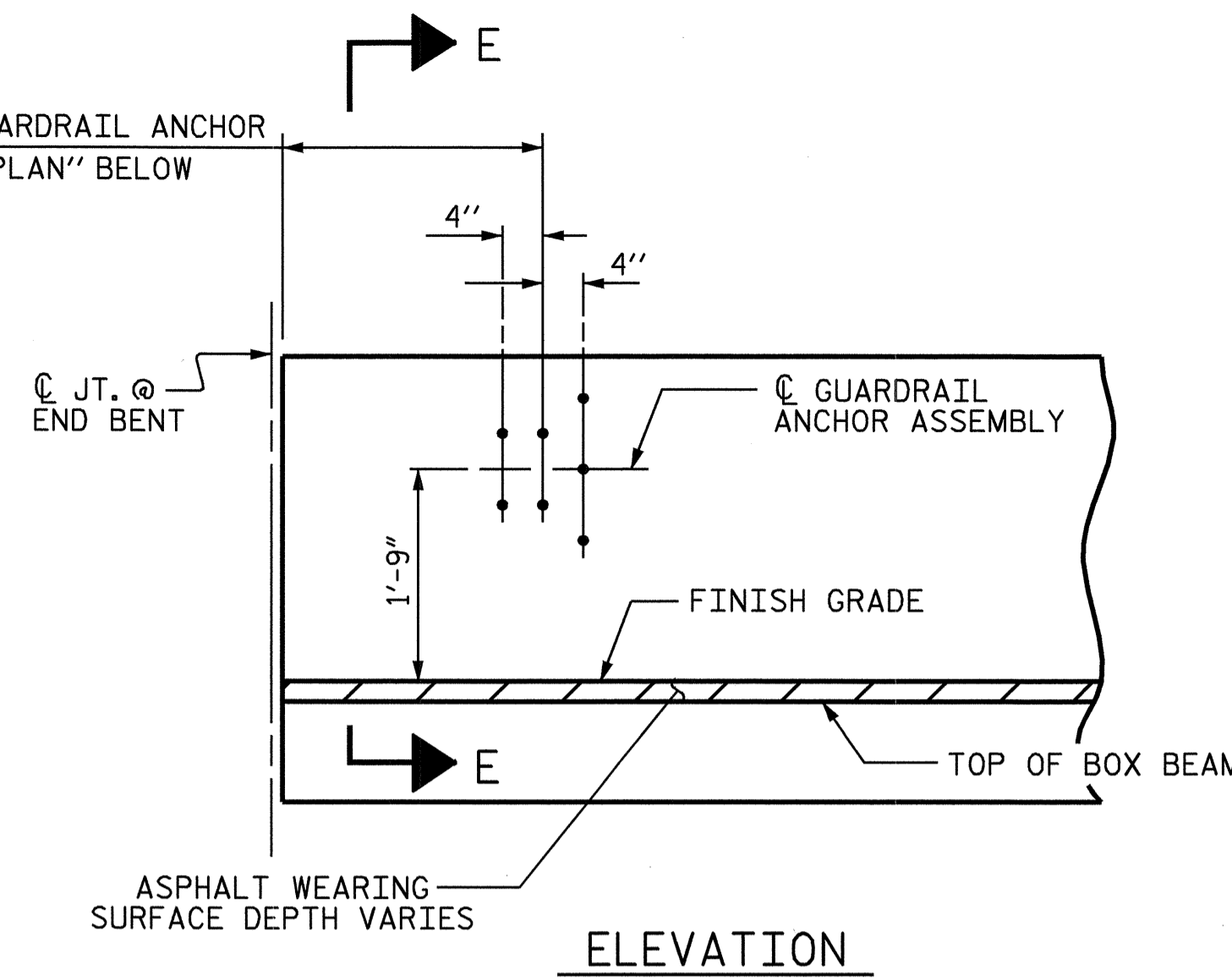
THE COST OF THE GUARDRAIL ANCHOR ASSEMBLIES WITH BOLTS, NUTS AND WASHERS COMPLETE IN PLACE, SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS.

THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE VERTICAL CONCRETE BARRIER RAIL TO CLEAR ASSEMBLY BOLTS.

THE 1 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.



FOR LOCATION OF GUARDRAIL ANCHOR ASSEMBLY, SEE "PLAN" BELOW



SKETCH SHOWING POINTS OF ATTACHMENTS

* DENOTES GUARDRAIL ANCHOR ASSEMBLY

PLAN

LOCATION OF ANCHORS FOR GUARDRAIL

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

SECTION E-E
GUARDRAIL ANCHOR ASSEMBLY DETAILS

★ ASPHALT WEARING SURFACE DEPTH VARIES AT EACH ATTACHMENT LOCATION, SEE "TYPICAL SECTION" ON SHEET 1 OF 6.

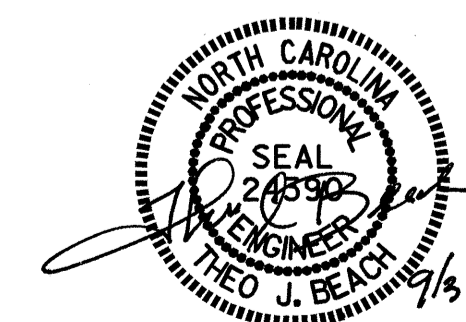
ASSEMBLED BY : T. BANKOVICH	DATE : 9-2008
CHECKED BY : T.N. CARROLL	DATE : 9-2008
DRAWN BY : MAA 12/06	ADDED 12/15/06
CHECKED BY : GM 12/06	

01-SEP-2009 09:03
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sbwilliams

PROJECT NO. B-4043
BURKE COUNTY
STATION: 15+98.00 -L-

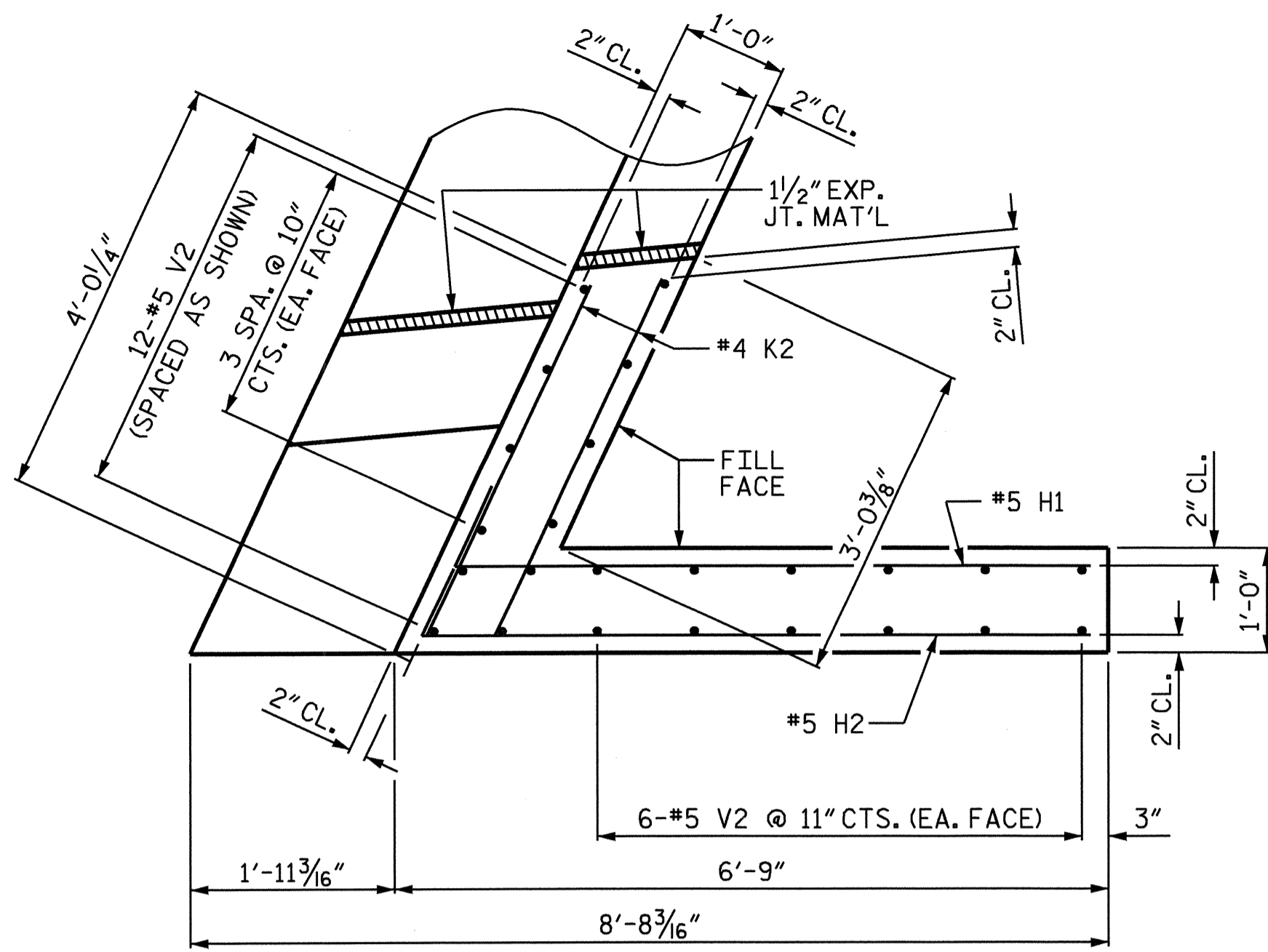
SHEET 6 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
GUARDRAIL ANCHORAGE
FOR VERTICAL CONCRETE
BARRIER RAIL

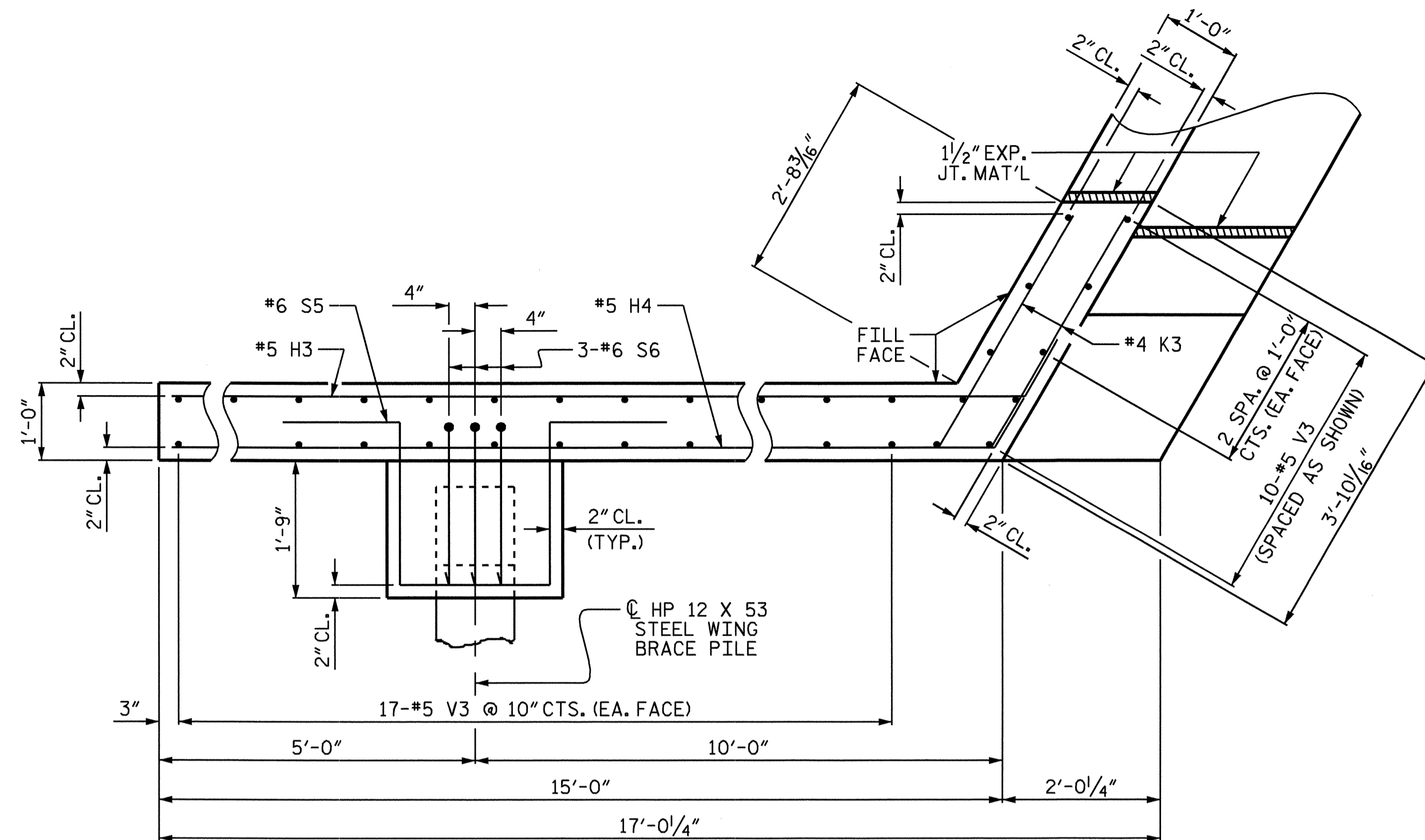


REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8	
1			3			TOTAL SHEETS	
2			4			17	

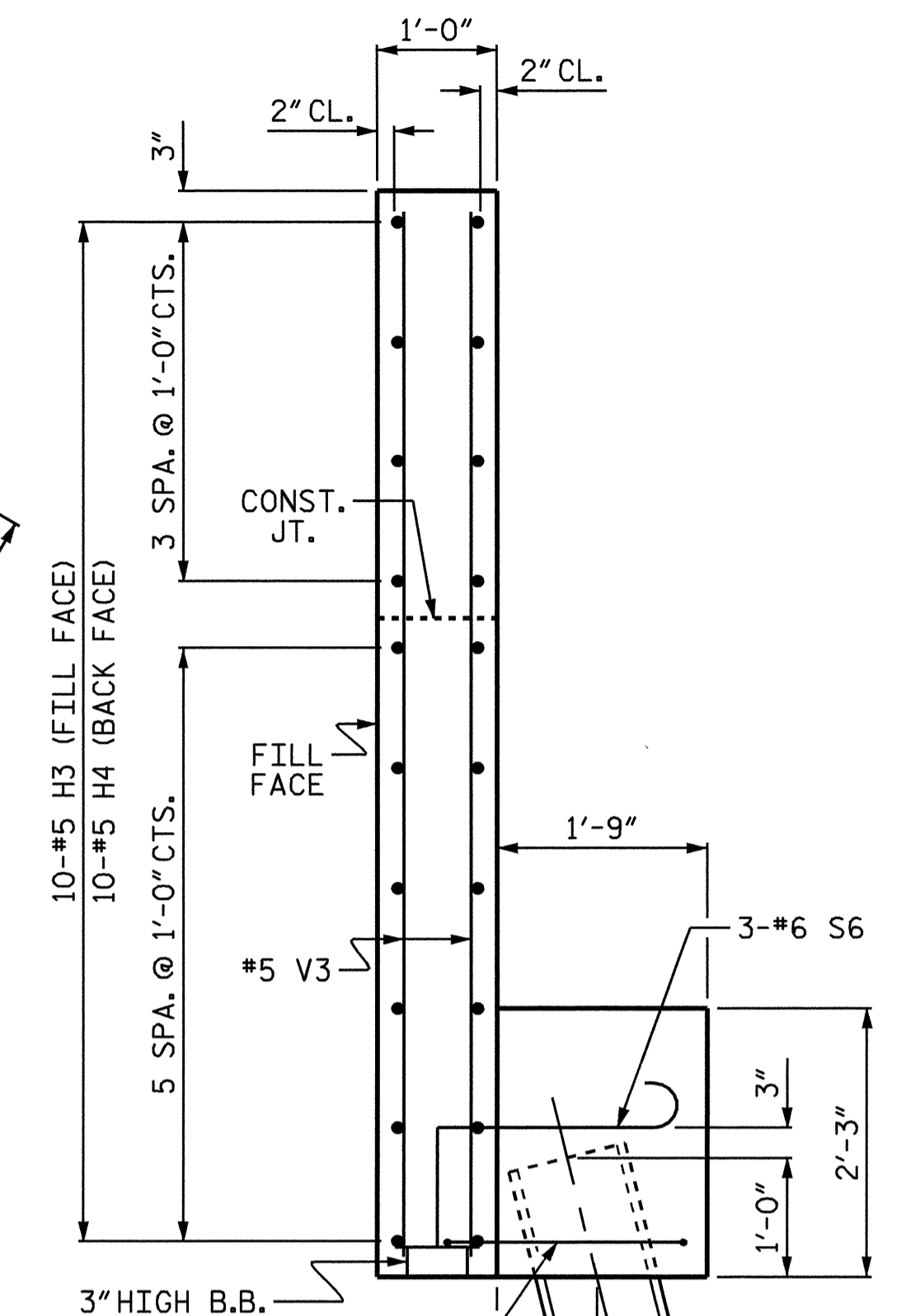
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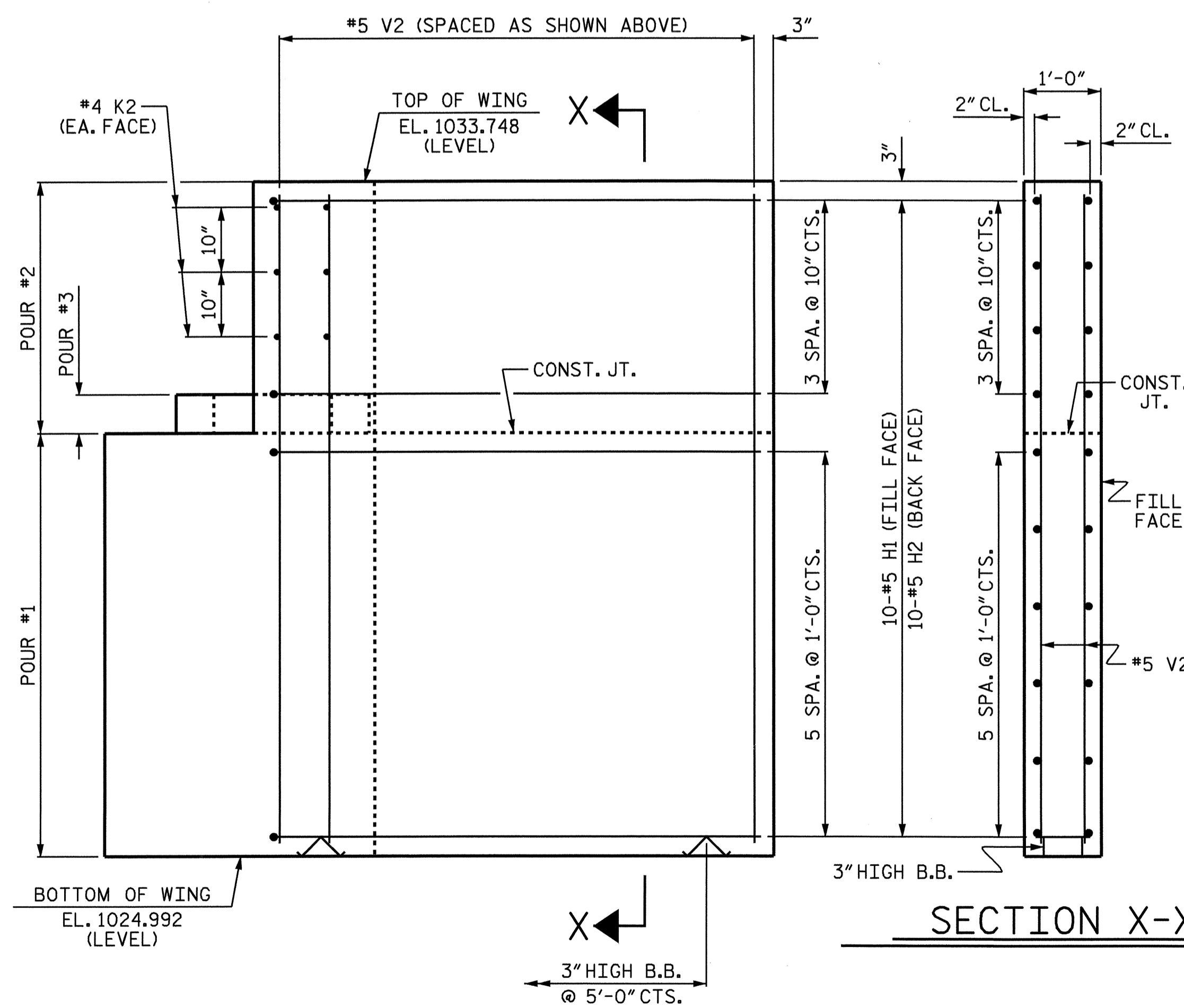
PLAN OF WING (W1)



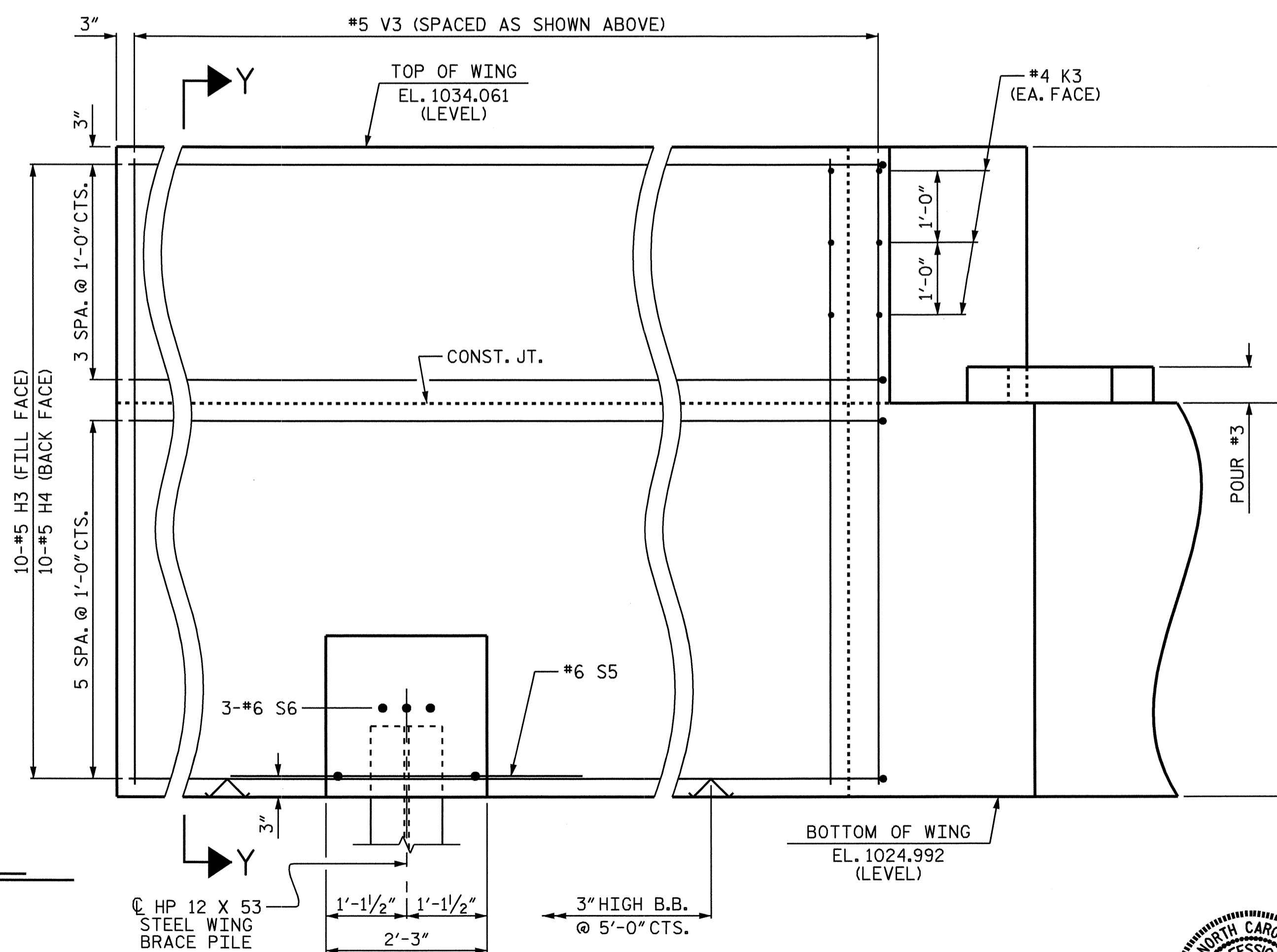
PLAN OF WING (W2)



SECTION Y-Y



ELEVATION OF WING (W1)

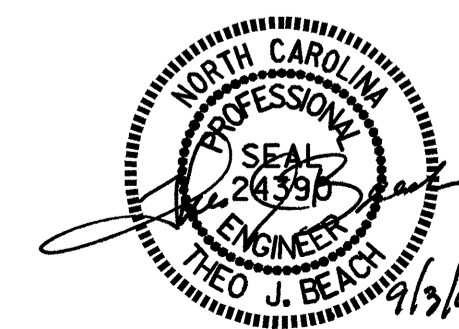


ELEVATION OF WING (W2)

PROJECT NO. B-4043
 BURKE COUNTY
 STATION: 15+98.00 -L-
 SHEET 2 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE

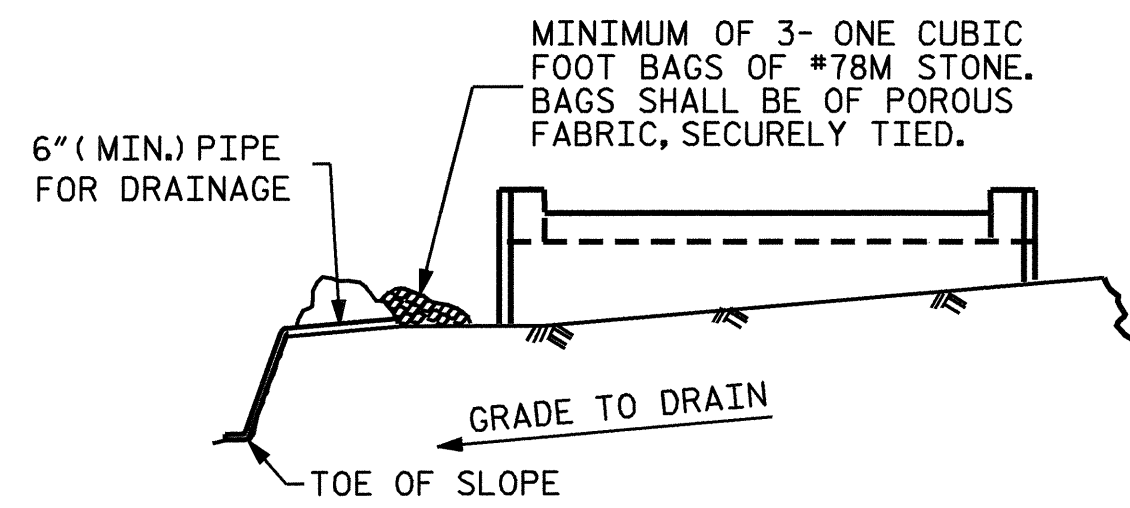
END BENT No. 1



DRAWN BY: T. BANKOVICH DATE: 2-2009
 CHECKED BY: D.G. ELY DATE: 2-2009

01-SEP-2009 09:03
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 sbwilliams

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-10	
1			3			TOTAL SHEETS	
2			4			17	

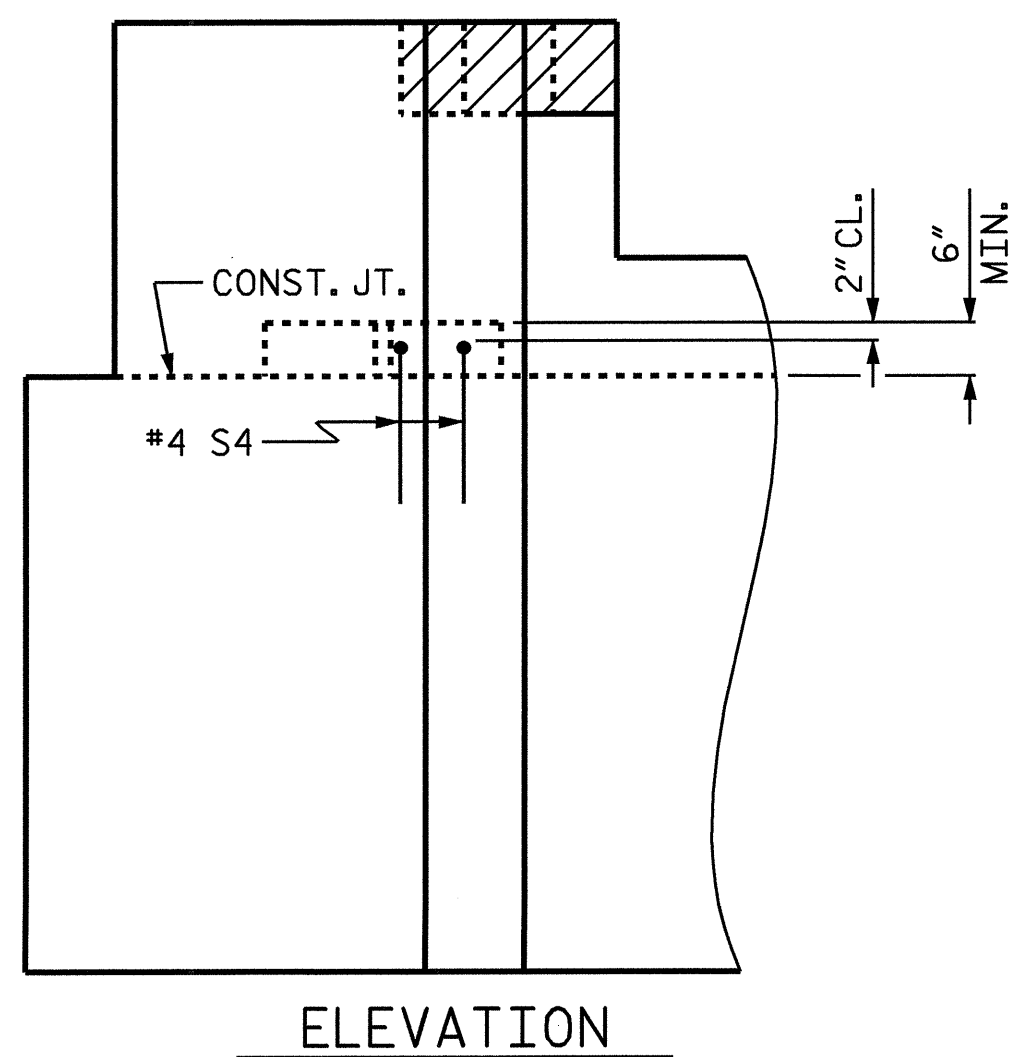
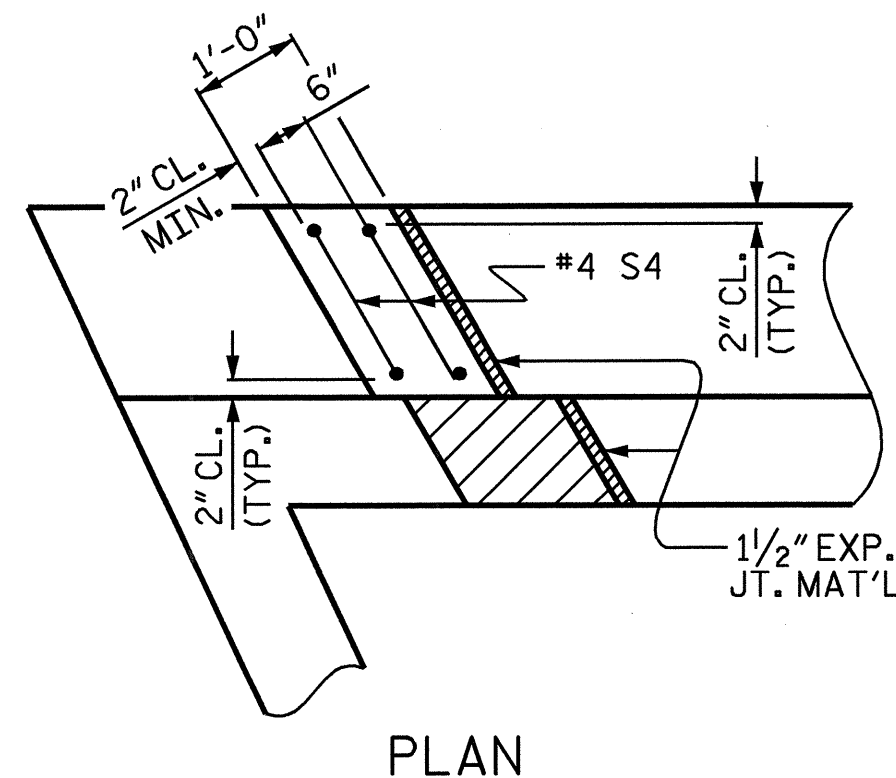


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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.

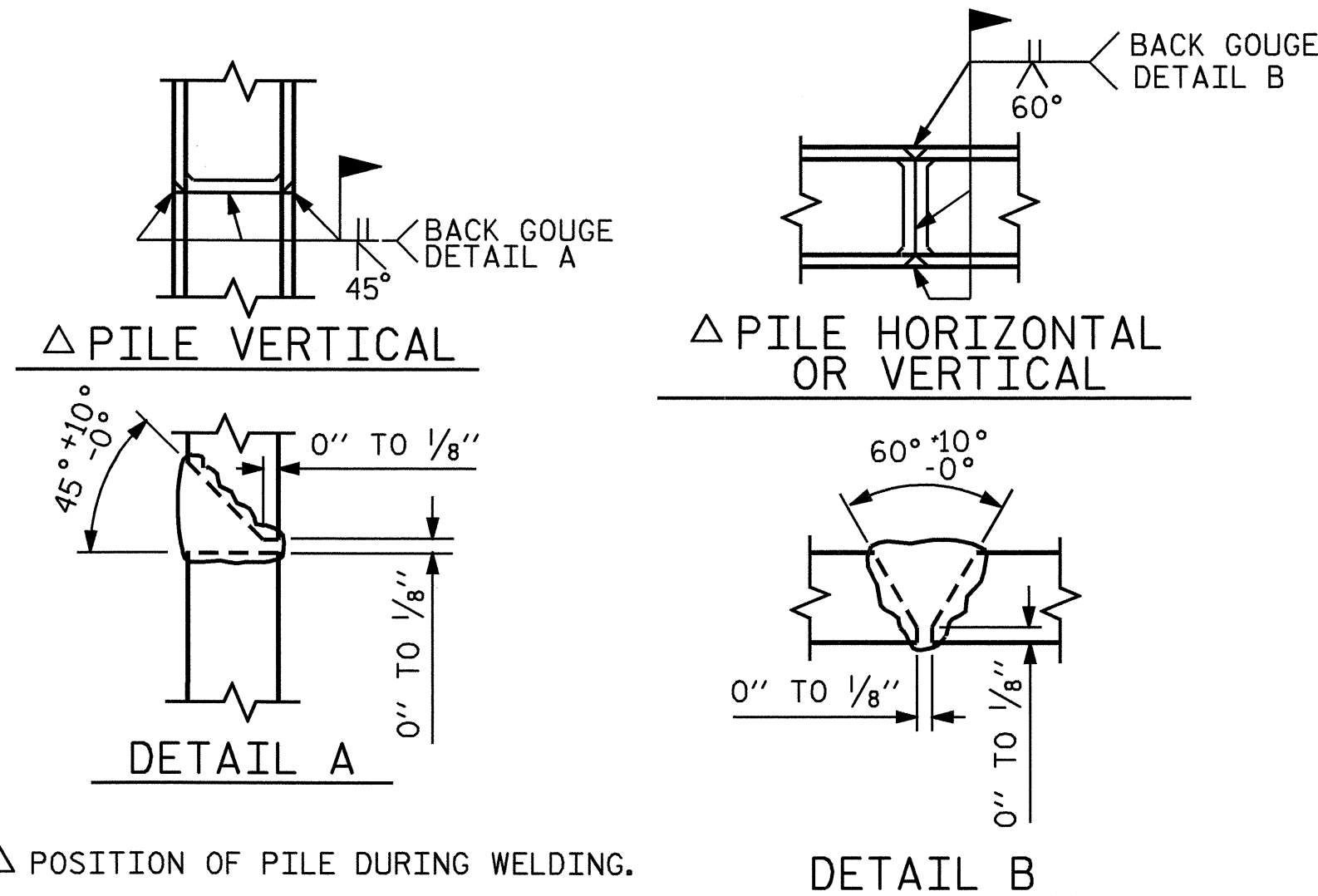
NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

TEMPORARY DRAINAGE AT END BENT

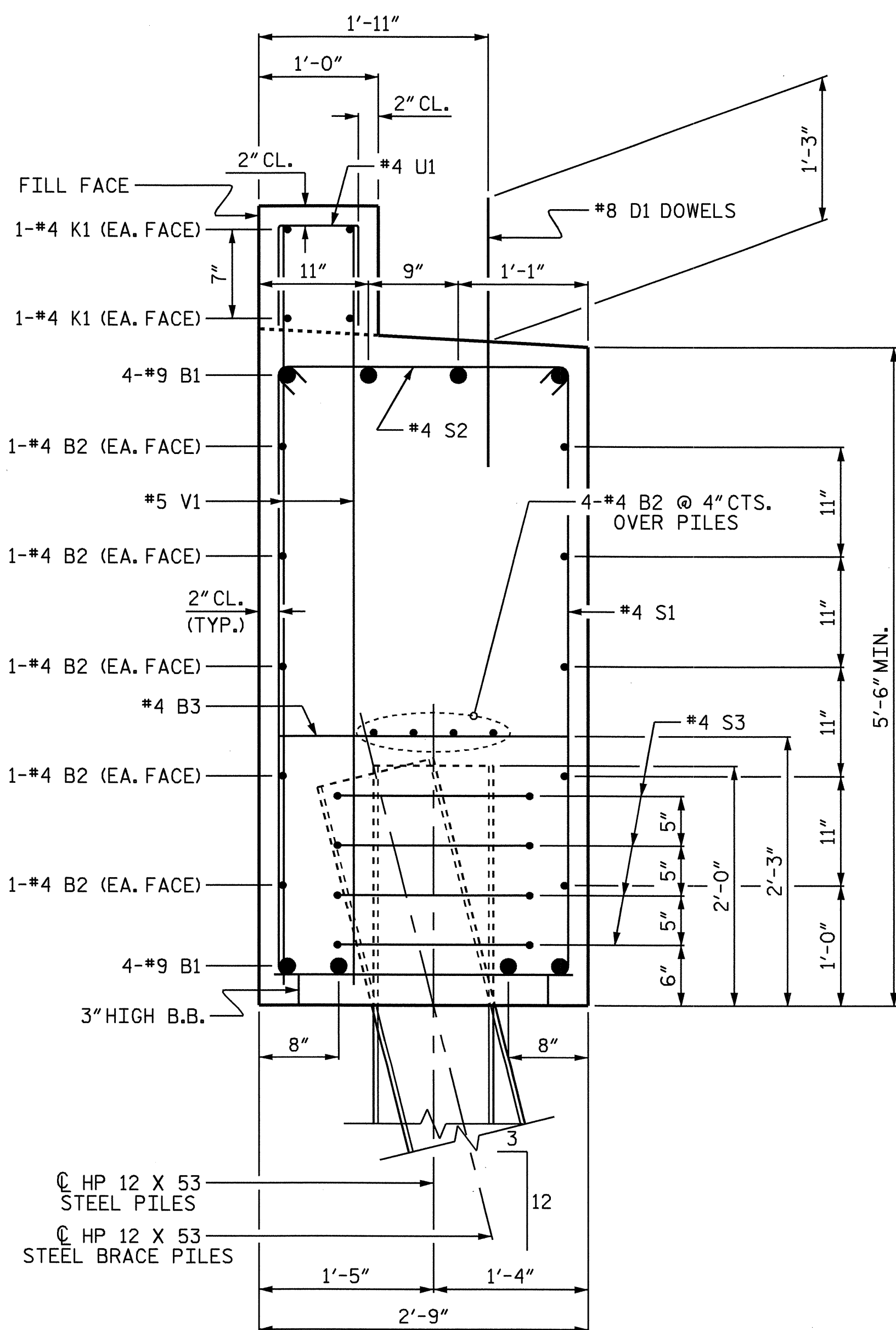


LATERAL GUIDE DETAIL

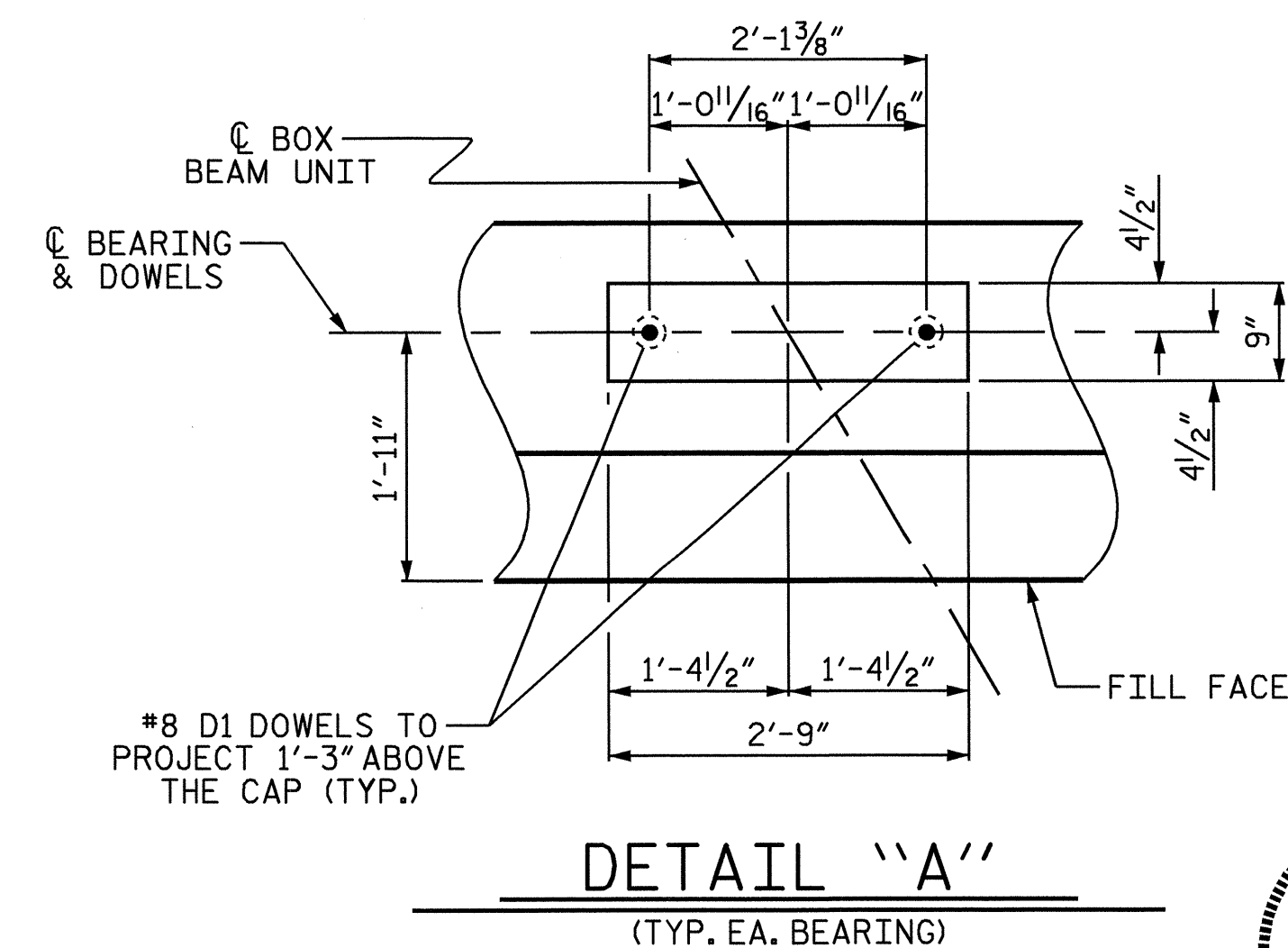
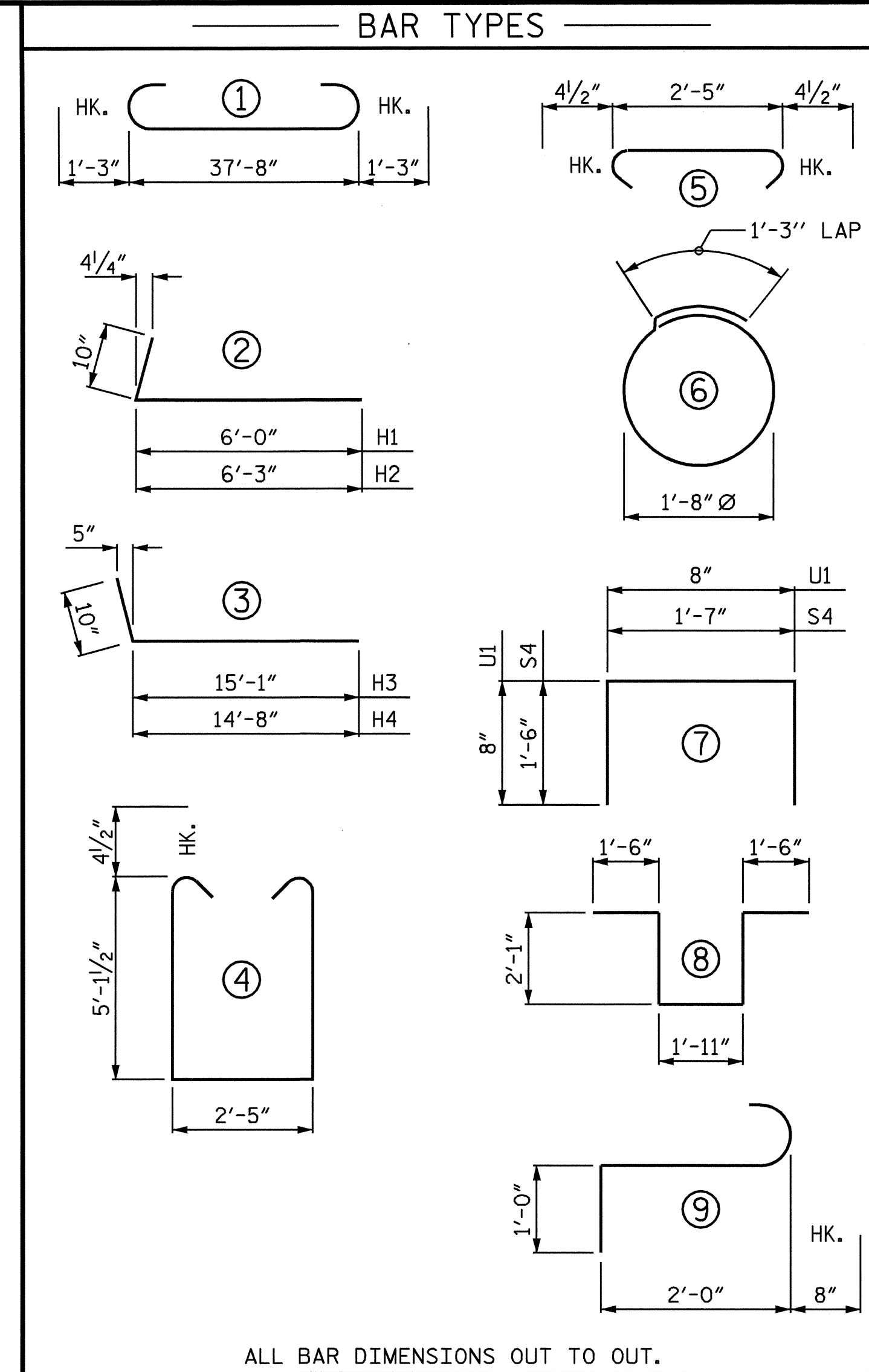
(LEFT LATERAL GUIDE SHOWN, RIGHT END SIMILAR)



PILE SPLICE DETAILS



SECTION A-A



BILL OF MATERIAL

END BENT No. 1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9	1	40'-2"	1093
B2	28	#4	STR	20'-4"	380
B3	10	#4	STR	2'-5"	16
D1	18	#8	STR	2'-3"	108
H1	10	#5	2	6'-10"	71
H2	10	#5	2	7'-1"	74
H3	10	#5	3	15'-11"	166
H4	10	#5	3	15'-6"	162
K1	8	#4	STR	20'-4"	109
K2	6	#4	STR	3'-8"	15
K3	6	#4	STR	3'-5"	14
S1	37	#4	4	13'-5"	332
S2	37	#4	5	3'-2"	78
S3	32	#4	6	6'-6"	139
S4	4	#4	7	4'-7"	12
S5	1	#6	8	9'-1"	14
S6	3	#6	9	3'-8"	17
U1	31	#4	7	2'-0"	41
V1	62	#5	STR	6'-3"	404
V2	24	#5	STR	8'-4"	209
V3	44	#5	STR	8'-8"	398

REINFORCING STEEL		3852 LBS.
CLASS A CONCRETE BREAKDOWN		
POUR #1		
CAP & LOWER WINGS & WING BRACE PILE		25.8 C.Y.
POUR #2		
BACKWALL & UPPER WINGS		4.8 C.Y.
POUR #3		
LATERAL GUIDE		0.1 C.Y.
TOTAL CLASS A CONCRETE		30.7 C.Y.
HP 12 X 53 STEEL PILES		
No. = 9		160 LIN. FT.

PROJECT NO. B-4043

BURKE COUNTY

STATION: 15+98.00 -L-

SHEET 3 OF 3

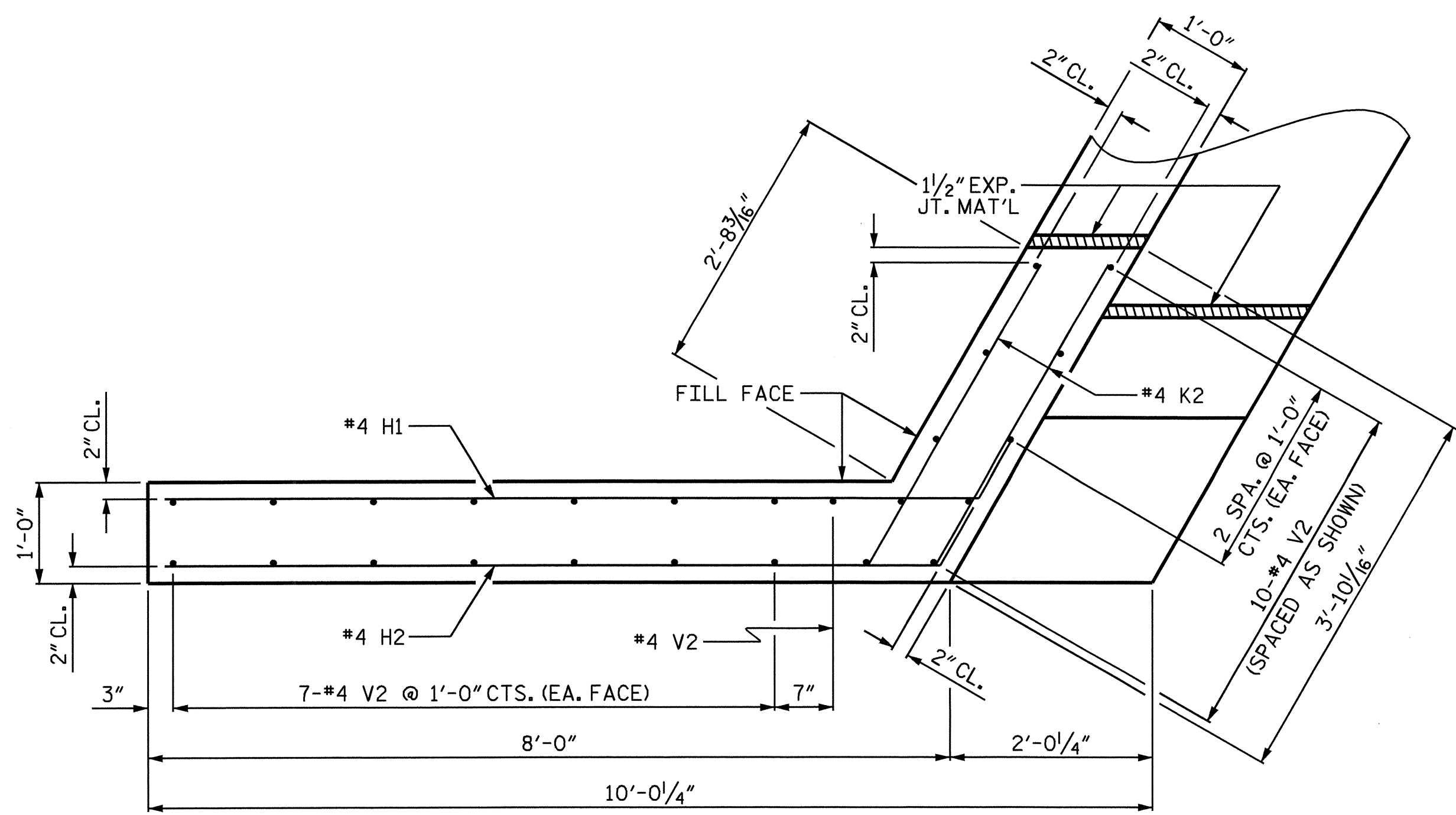
STATE OF NORTH CAROLINA					
DEPARTMENT OF TRANSPORTATION					
RALEIGH					
SUBSTRUCTURE					
END BENT No. 1					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		



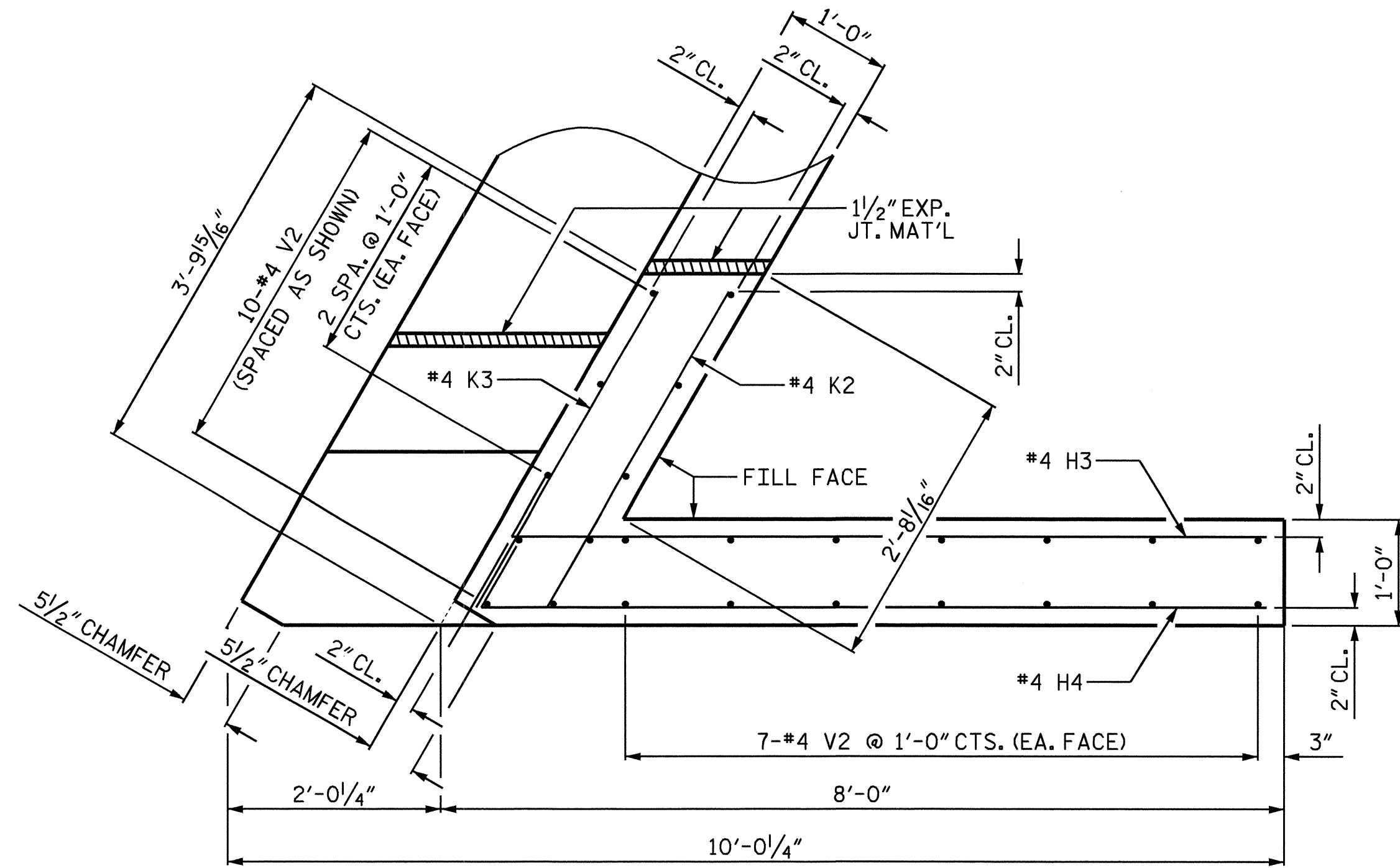
DRAWN BY: T. BANKOVICH DATE: 2-2009

CHECKED BY: D.G. ELY DATE: 2-2009

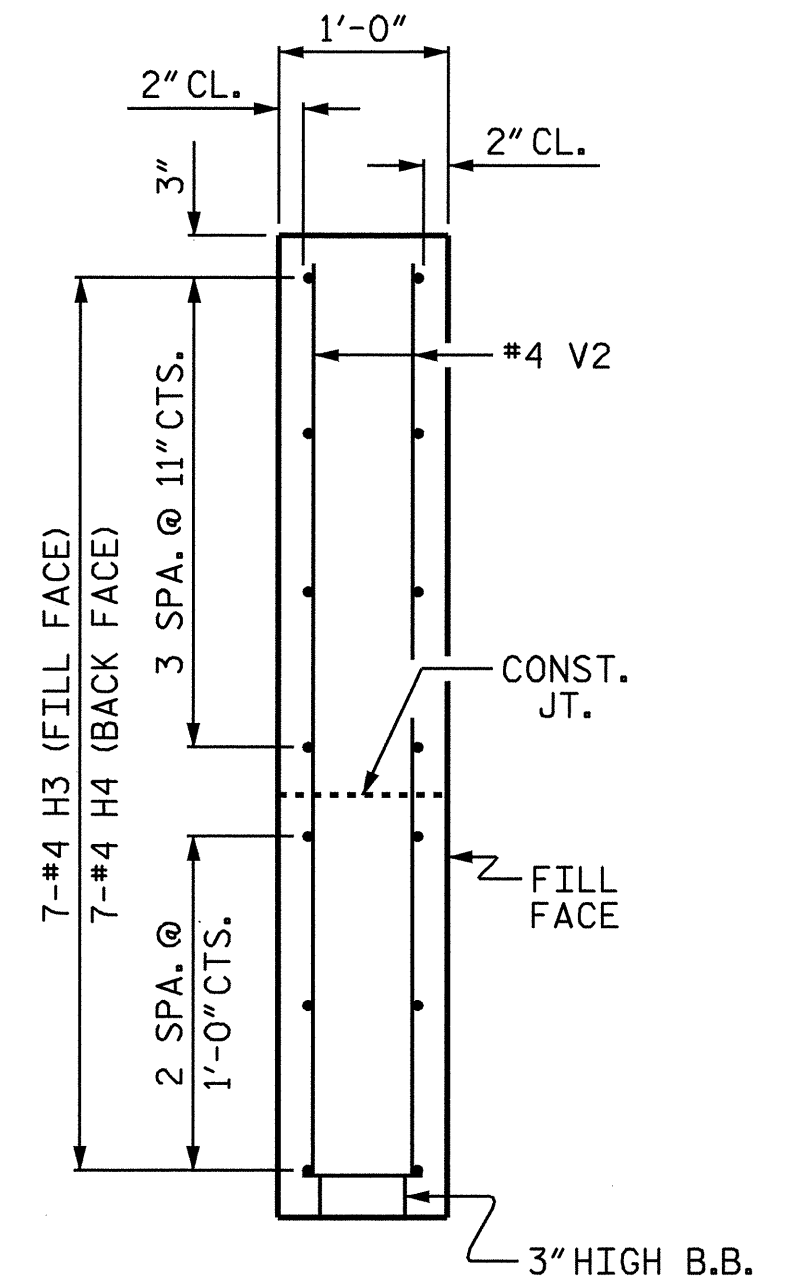
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 sbwilliams



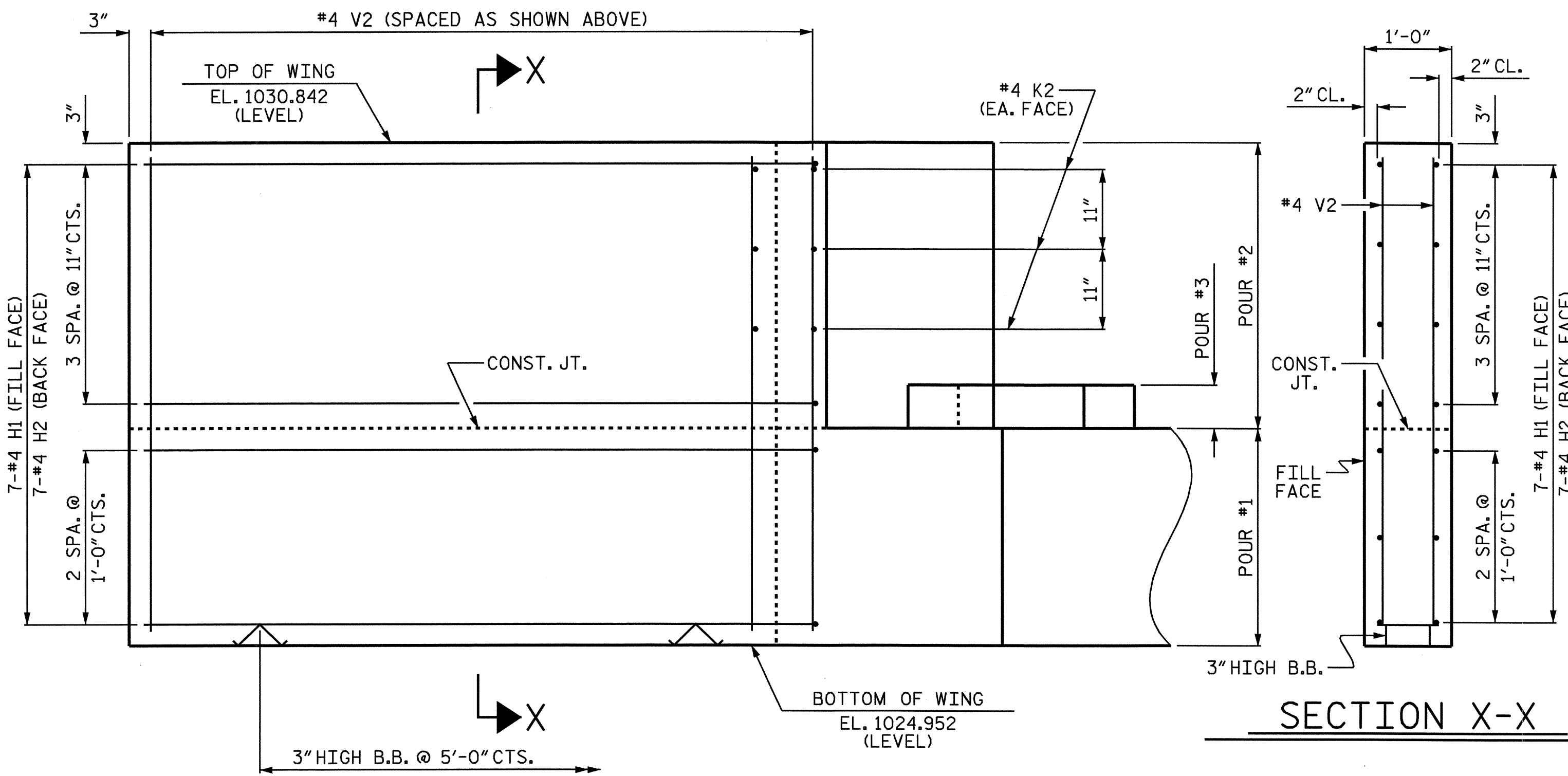
PLAN OF WING (W1)



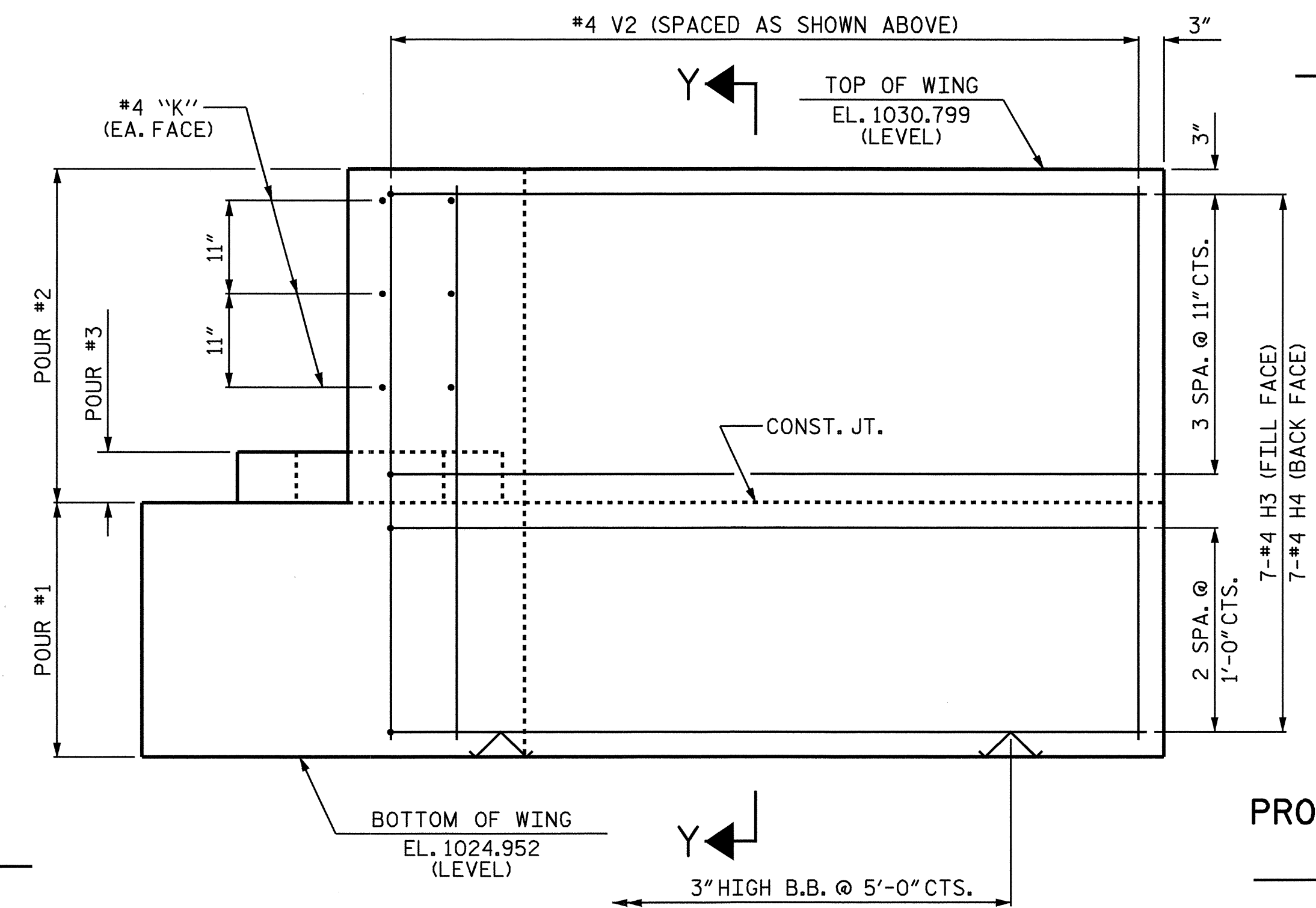
PLAN OF WING (W2)



SECTION Y-Y



ELEVATION OF WING (W1)



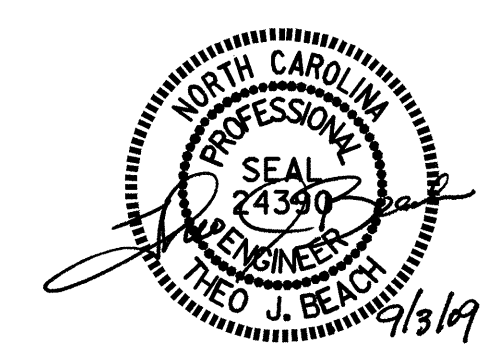
ELEVATION OF WING (W2)

PROJECT NO. B-4043
BURKE COUNTY
 STATION: 15+98.00 -L-
 SHEET 2 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE

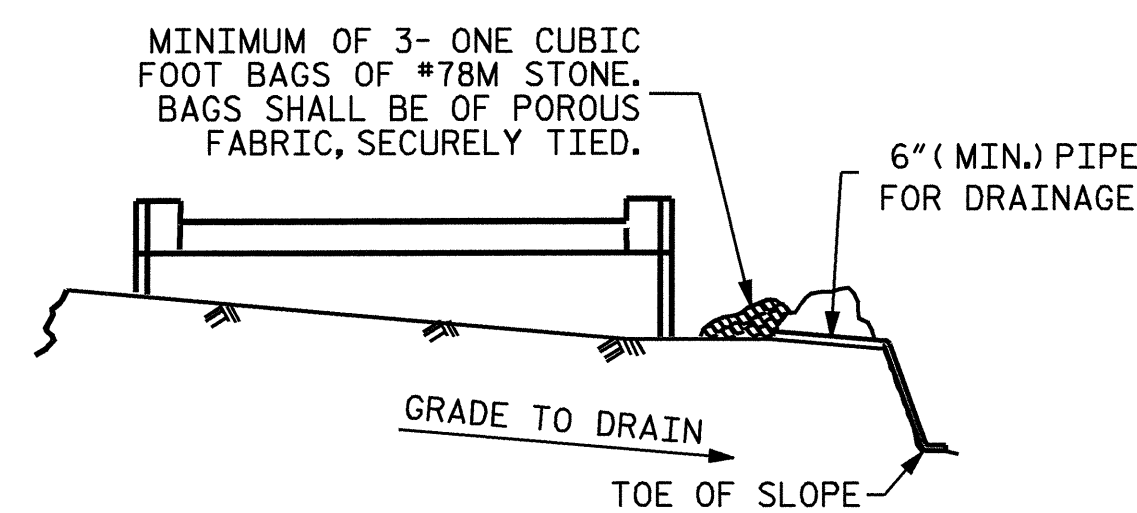
END BENT No. 2

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13	
1			3			TOTAL SHEETS	
2			4			17	



DRAWN BY : T. BANKOVICH DATE : 2-2009
 CHECKED BY : D.G. ELY DATE : 2-2009

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 sbwilliams

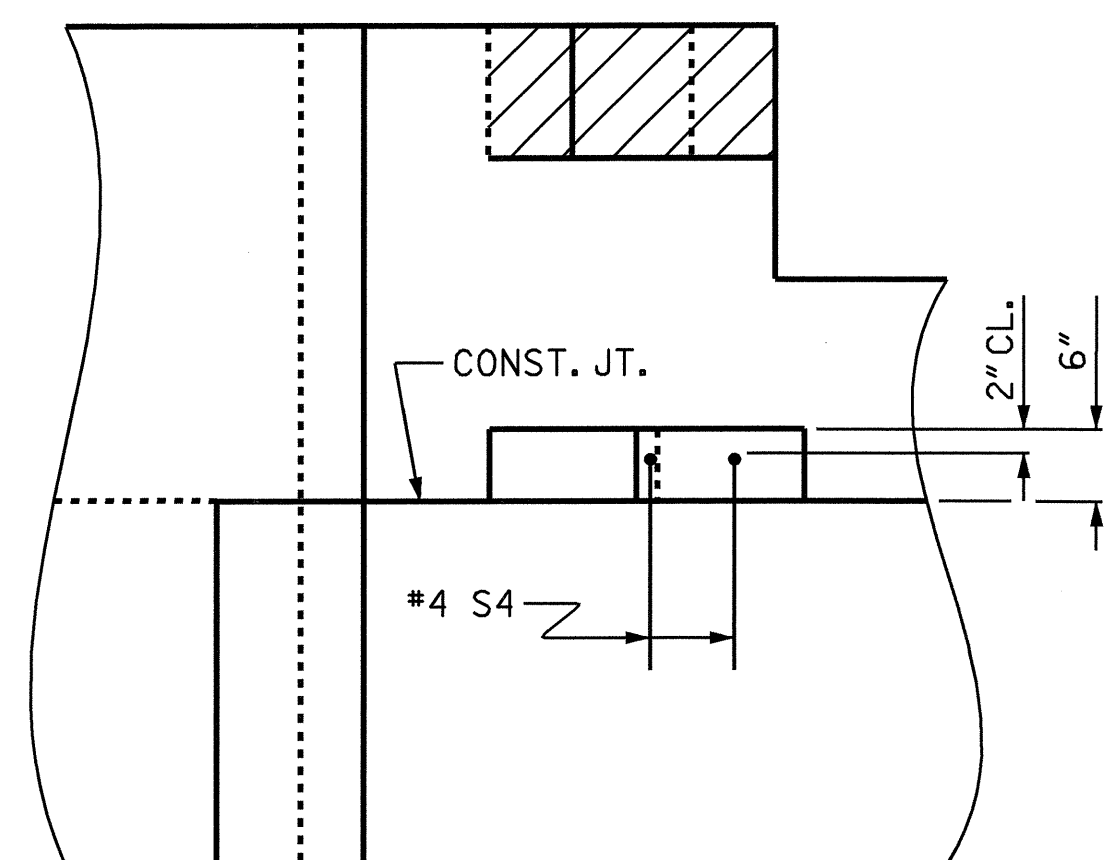
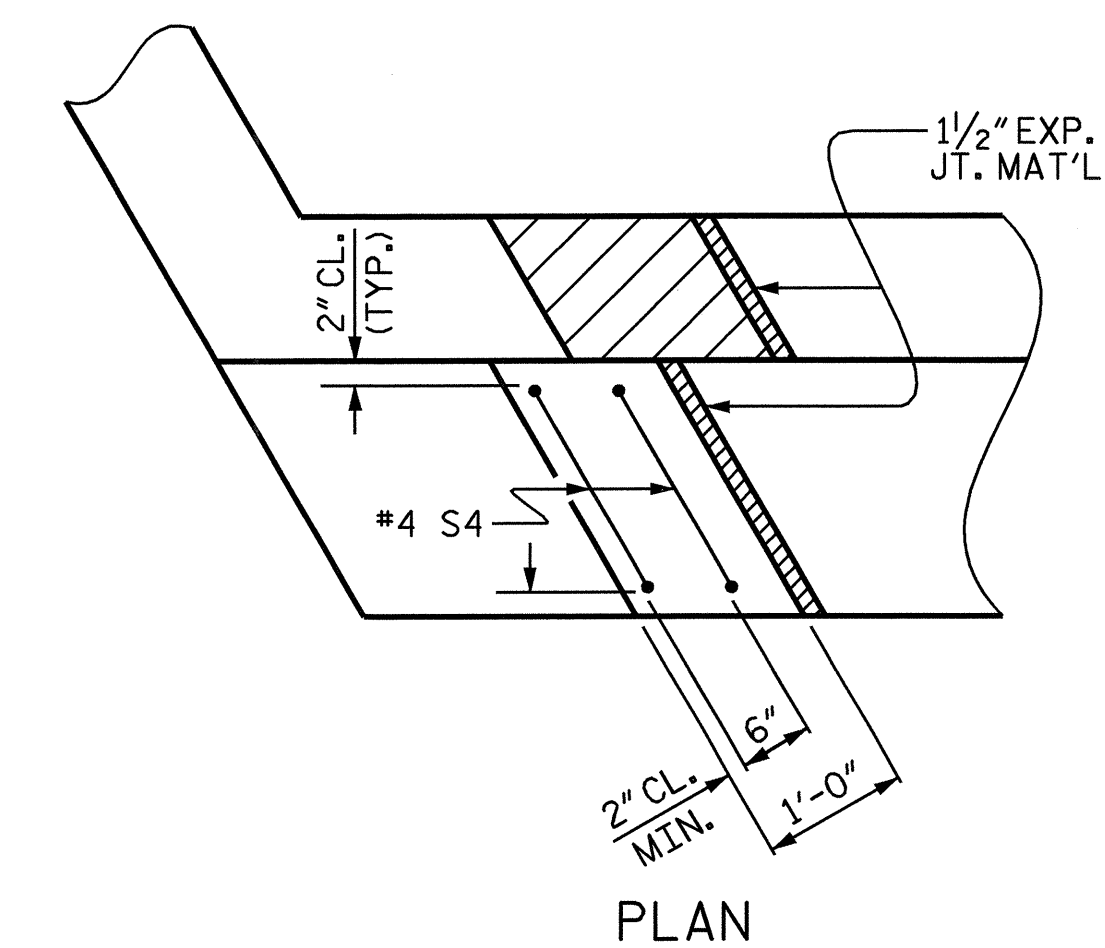


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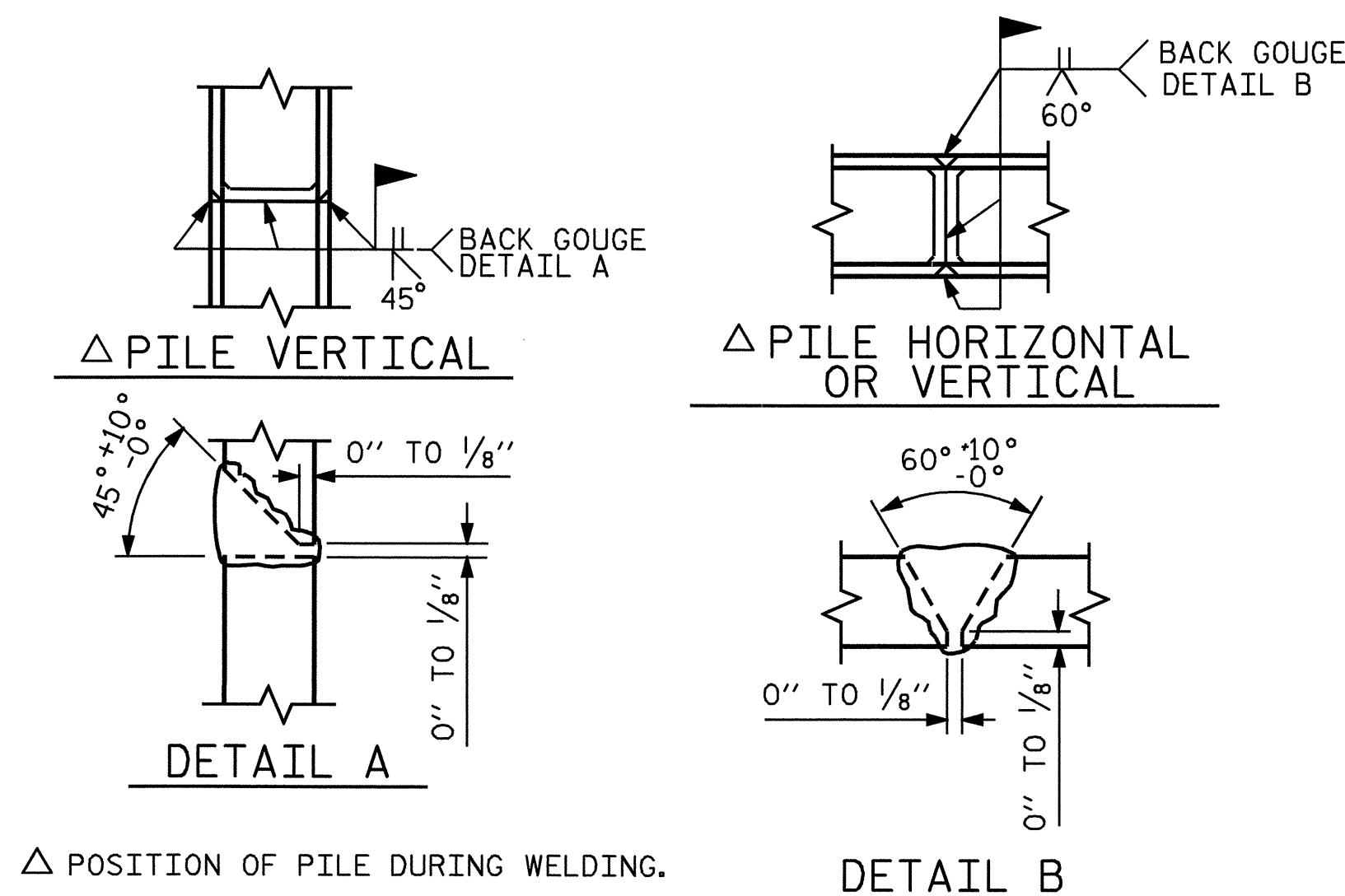
NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

TEMPORARY DRAINAGE AT END BENT



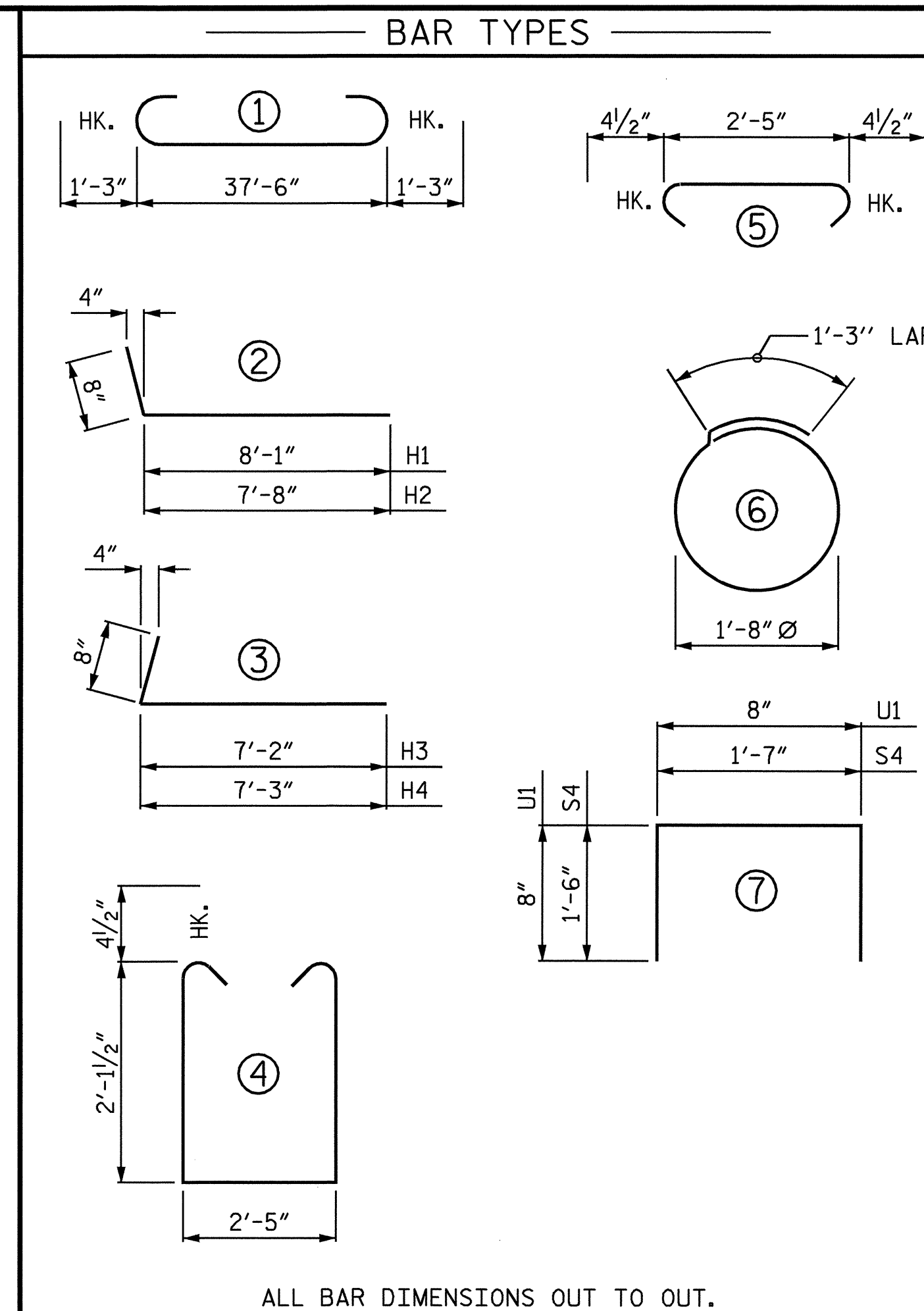
LATERAL GUIDE DETAIL

(LEFT LATERAL GUIDE SHOWN, RIGHT END SIMILAR)



PILE SPLICE DETAILS

△ POSITION OF PILE DURING WELDING.



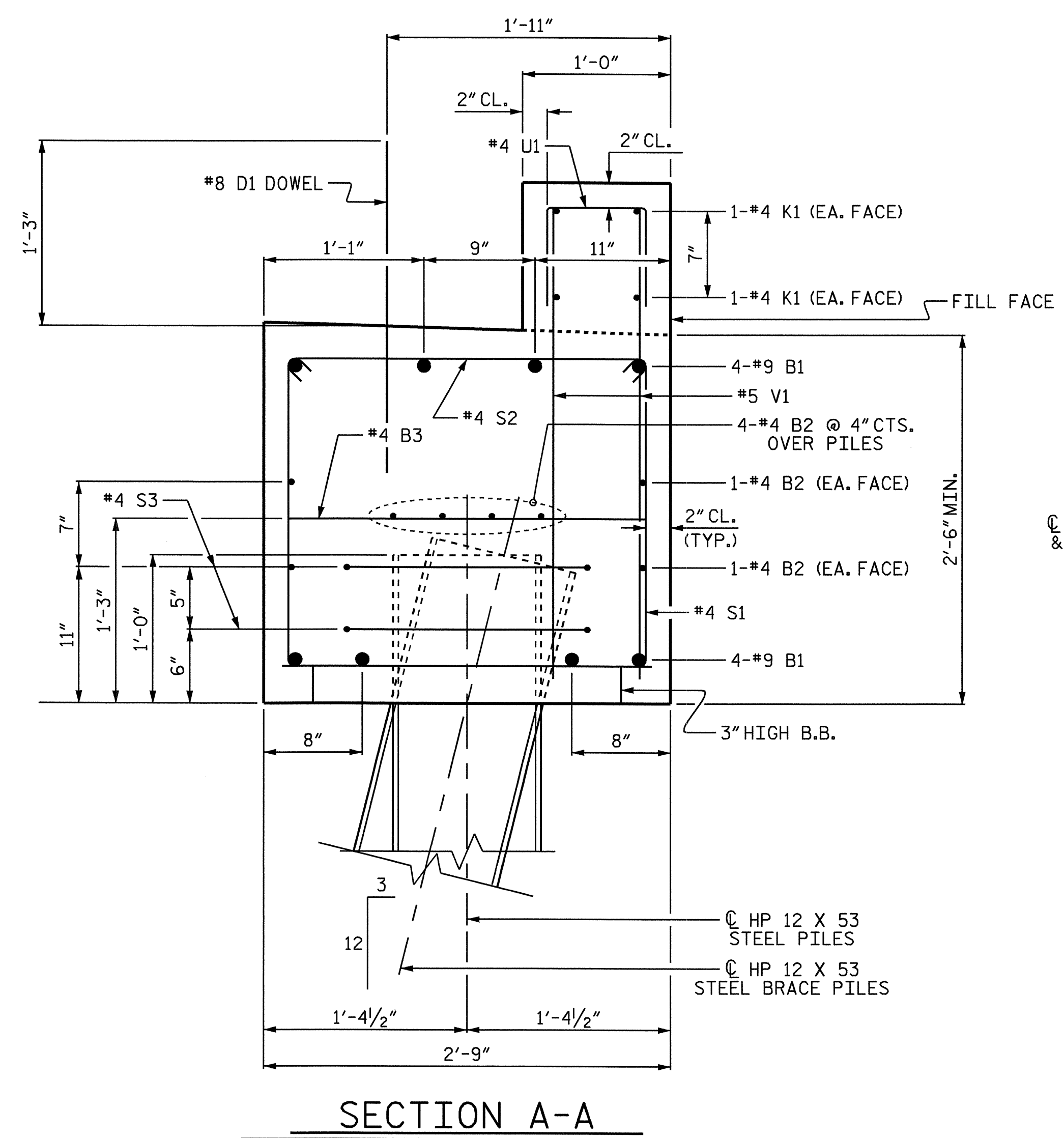
ALL BAR DIMENSIONS OUT TO OUT.

BILL OF MATERIAL

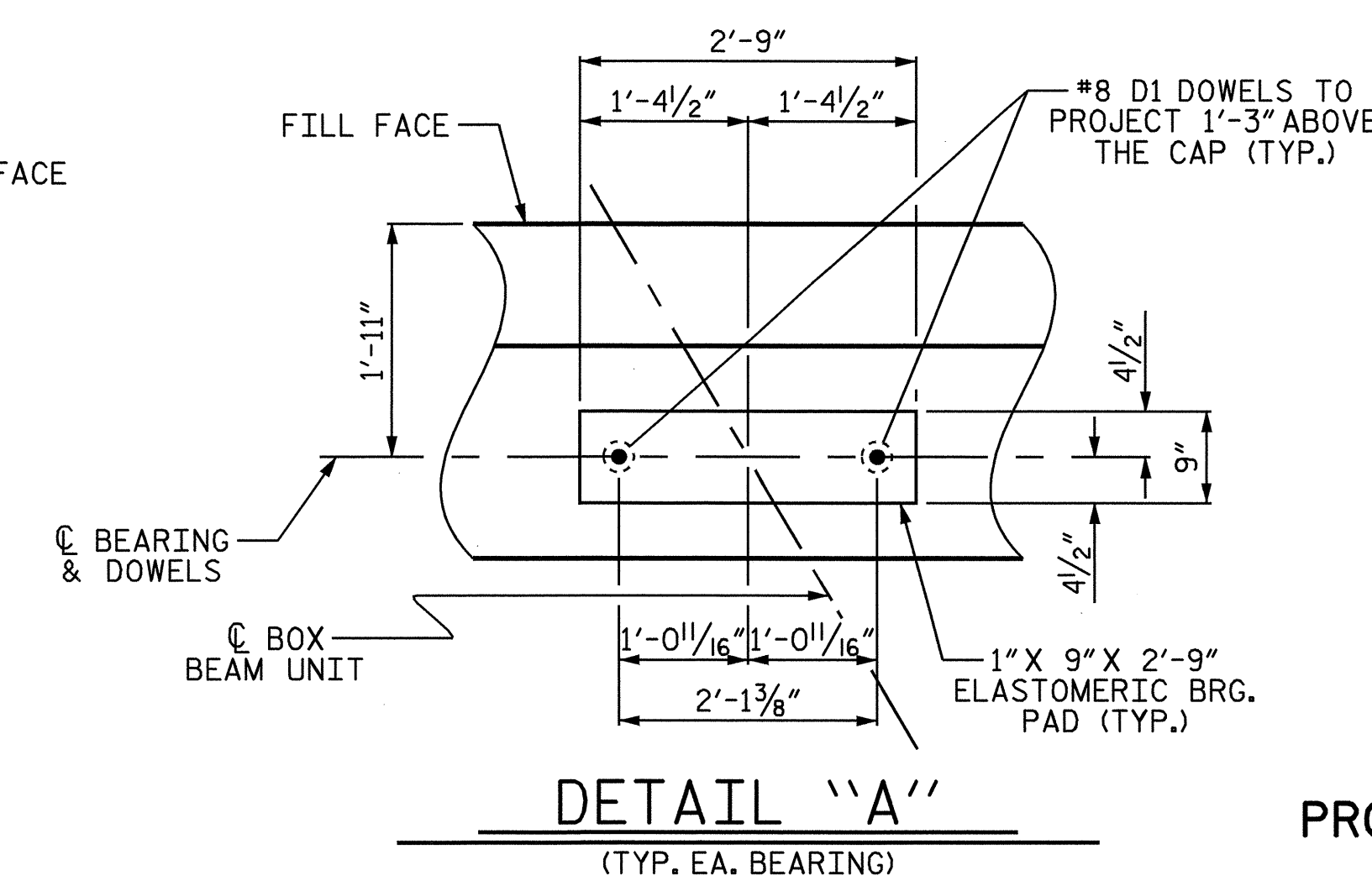
END BENT No. 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9		40'-0"	1088
B2	16	#4	STR	20'-2"	216
B3	10	#4	STR	2'-5"	16
D1	18	#8	STR	2'-3"	108
H1	7	#4		8'-9"	41
H2	7	#4		8'-4"	39
H3	7	#4		7'-10"	37
H4	7	#4		7'-11"	37
K1	8	#4	STR	20'-2"	108
K2	9	#4	STR	3'-5"	21
K3	3	#4	STR	3'-3"	7
S1	37	#4		7'-5"	183
S2	37	#4		3'-2"	78
S3	16	#4		6'-6"	69
S4	4	#4		4'-7"	12
U1	31	#4		2'-0"	41
V1	62	#5	STR	3'-2"	205
V2	49	#4	STR	5'-5"	177

REINFORCING STEEL		2483 LBS.
CLASS A CONCRETE BREAKDOWN		
POUR #1		
CAP & LOWER WINGS	11.4 C.Y.	
POUR #2		
BACKWALL & UPPER WINGS	3.8 C.Y.	
POUR #3		
LATERAL GUIDE	0.1 C.Y.	
TOTAL CLASS A CONCRETE	15.3 C.Y.	
HP 12 X 53 STEEL PILES		
No. = 8	140 LIN. FT.	



SECTION A-A

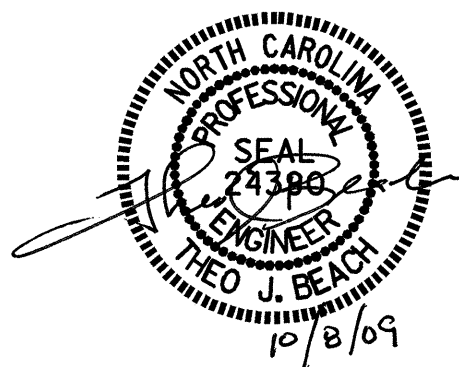


DETAIL "A"

(TYP. EA. BEARING)

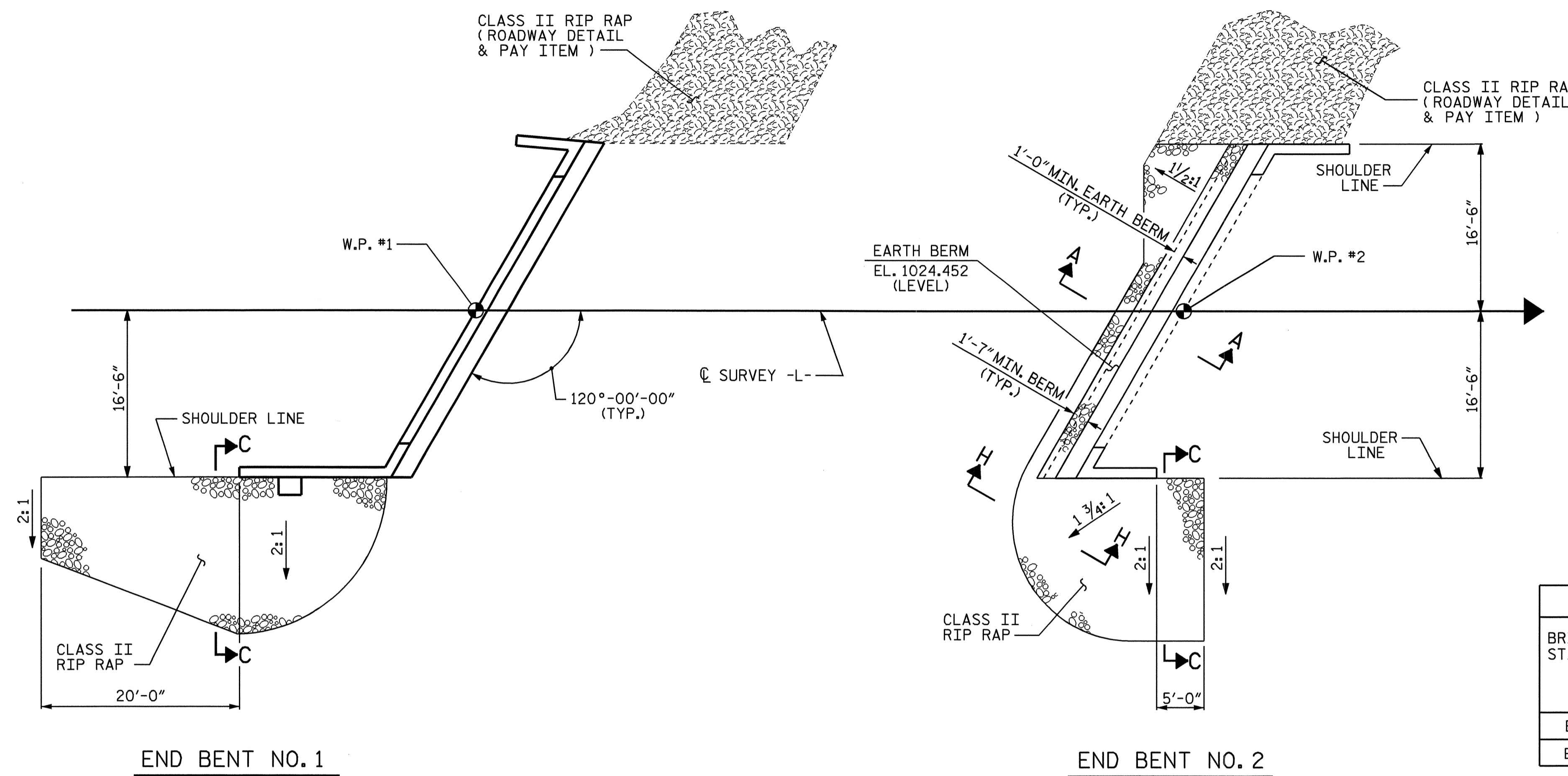
PROJECT NO. B-4043
BURKE COUNTY
 STATION: 15+98.00 -L-
 SHEET 3 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH SUBSTRUCTURE					
END BENT No. 2					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-14
					TOTAL SHEETS 17



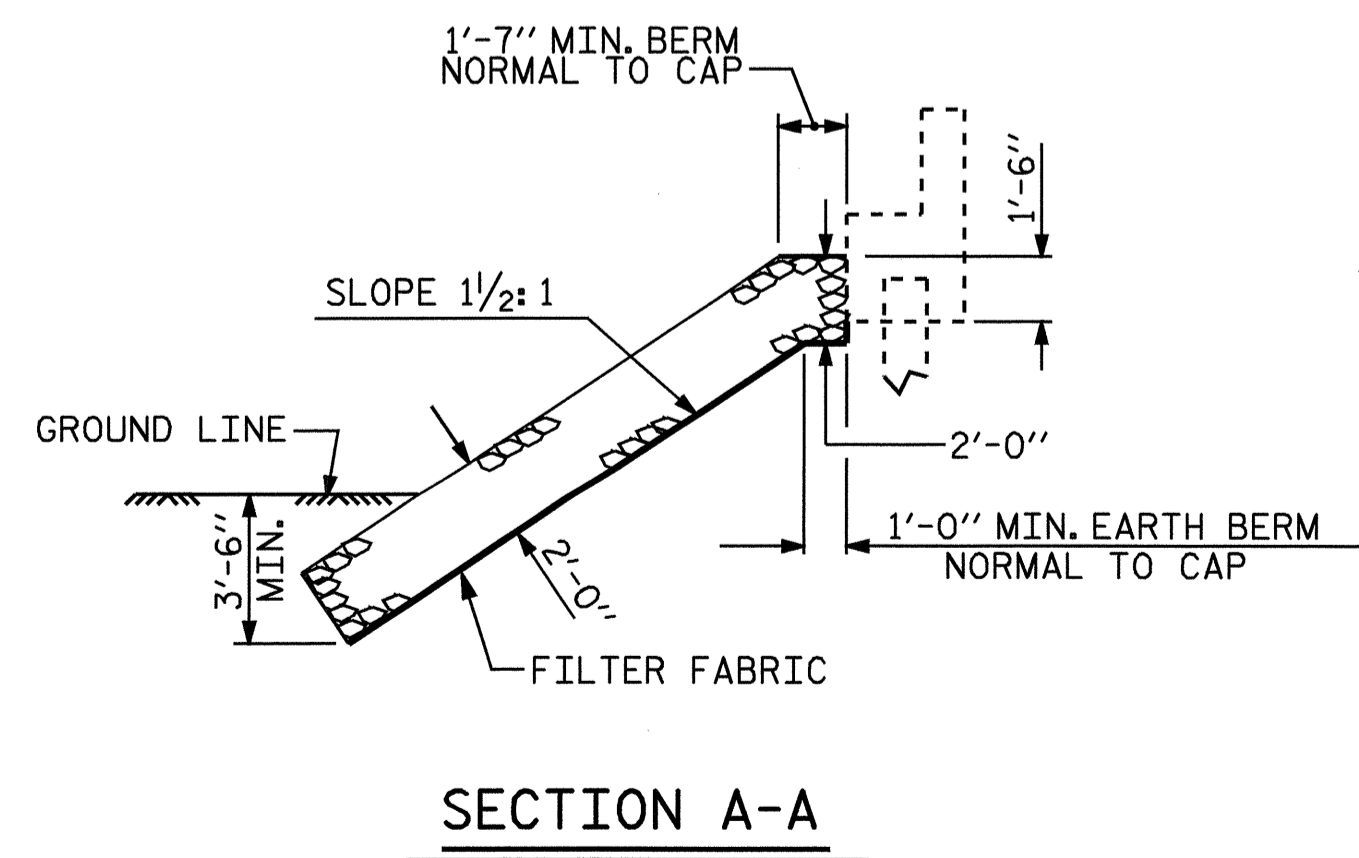
DRAWN BY: T. BANKOVICH DATE: 2-2009
 CHECKED BY: D.G. ELY DATE: 2-2009

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 sbwilliams

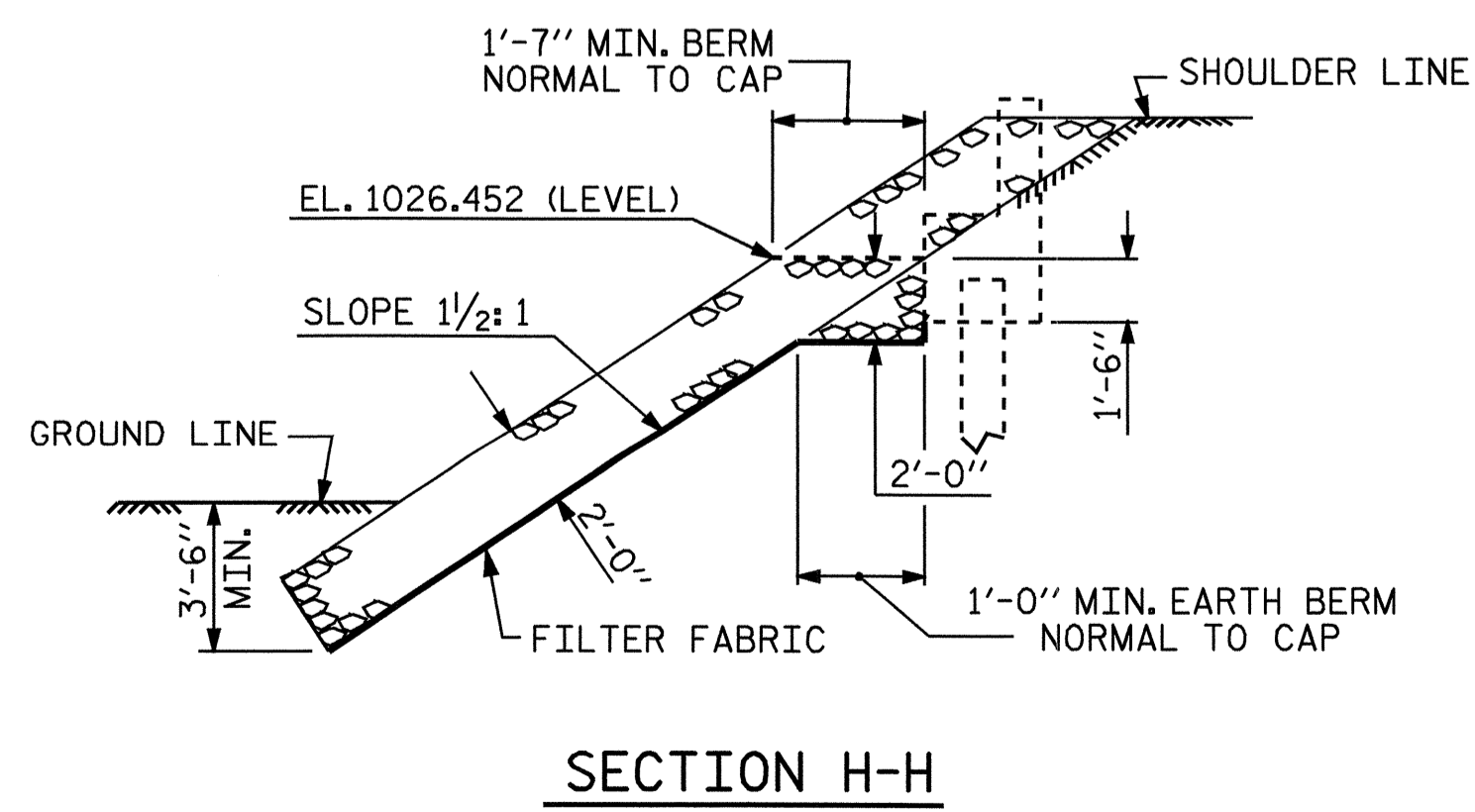


ESTIMATED QUANTITIES		
BRIDGE @ STA. 15+98.00 -L-	RIP RAP CLASS II	FILTER FABRIC FOR DRAINAGE
	TONS	SQUARE YARDS
END BENT 1	55	61
END BENT 2	47	52

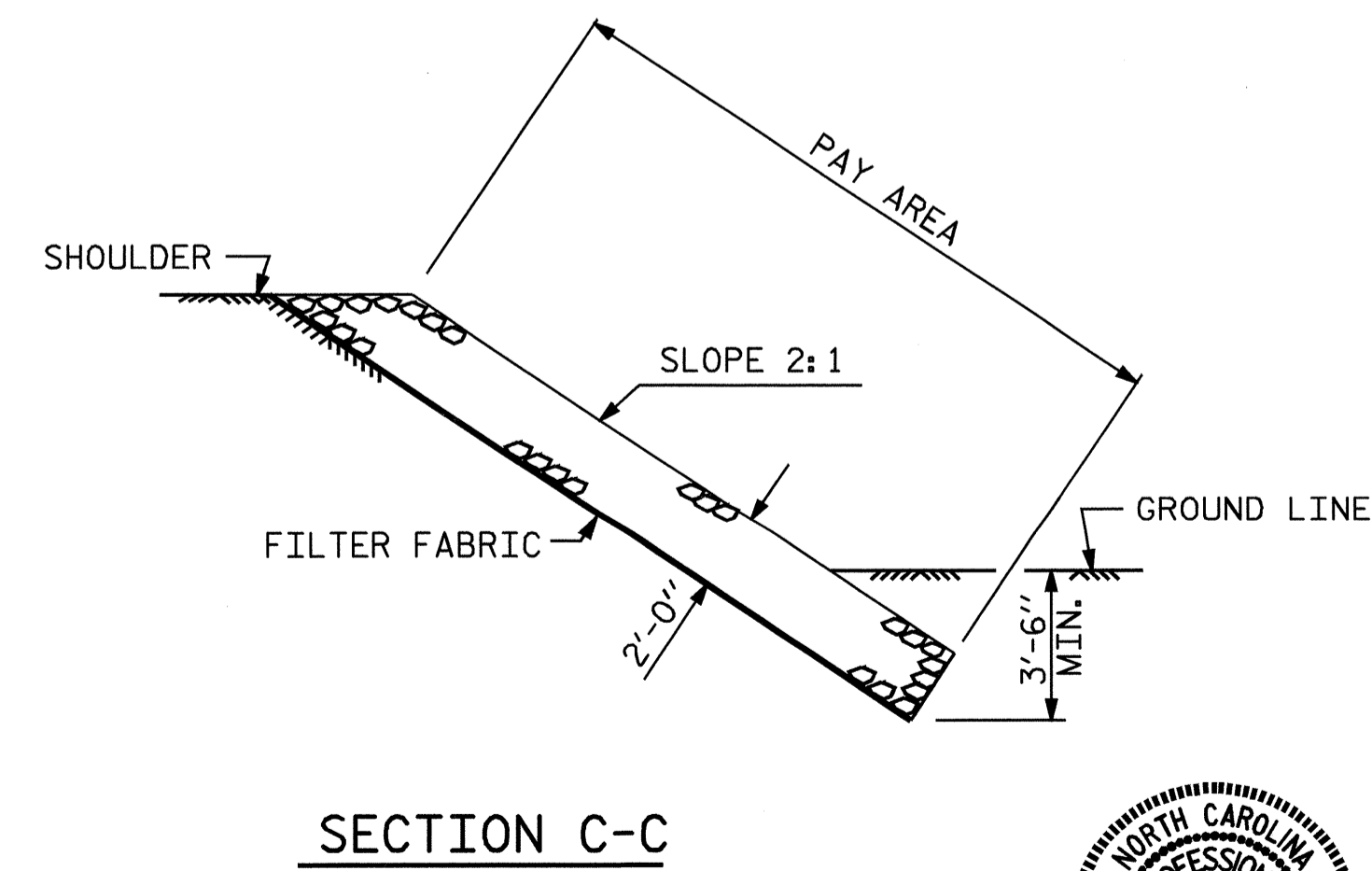
PLAN OF RIP RAP



SECTION A-A



SECTION H-H



SECTION C-C

PROJECT NO. B-4043
BURKE COUNTY
 STATION: 15+98.00 -L-

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

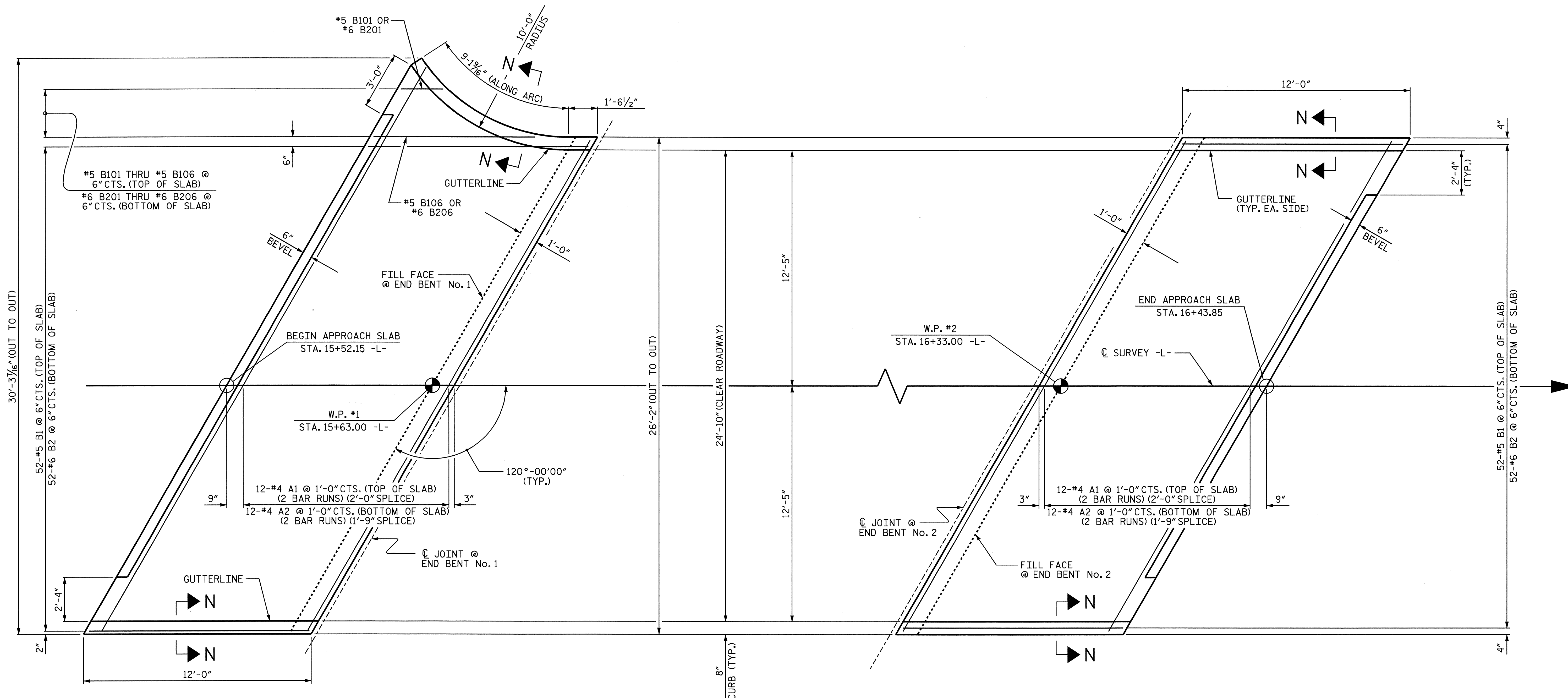
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-15	
1			3			TOTAL SHEETS	
2			4			17	



ASSEMBLED BY : S. B. WILLIAMS DATE : 1-09-09
 CHECKED BY : M. L. BROWN DATE : 1-09
 DRAWN BY : REK 1/84 REV. 8/16/99 RWW/LES
 CHECKED BY : RDU 1/84 REV. 10/17/00 RWW/LES
 REV. 5/1/06 TLA/GM

01-SEP-2009 09:05
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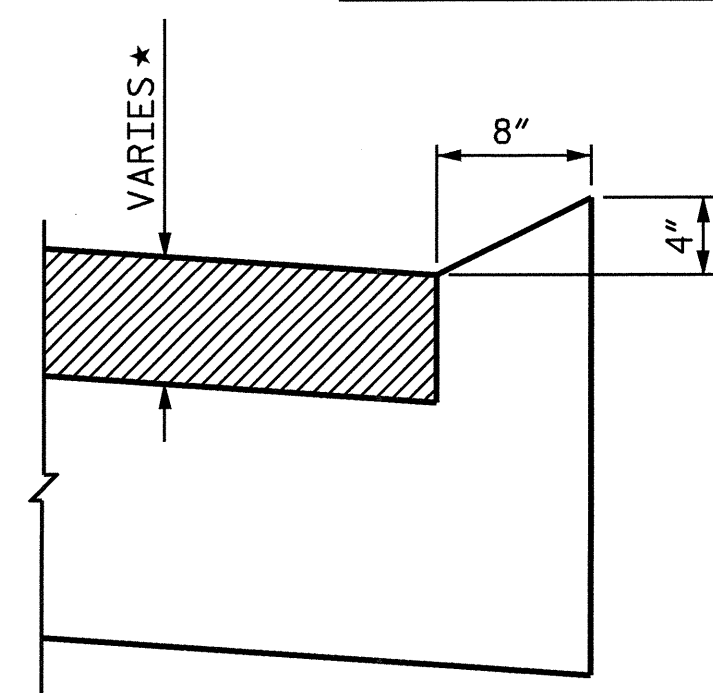
SKEW > 90° STD. NO. RR3



PLAN @ END BENT No. 1

PLAN @ END BENT No. 2

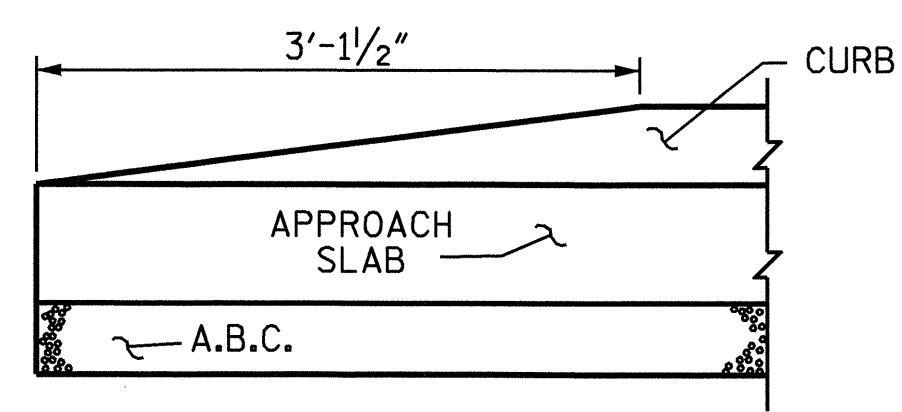
PLAN OF APPROACH SLABS



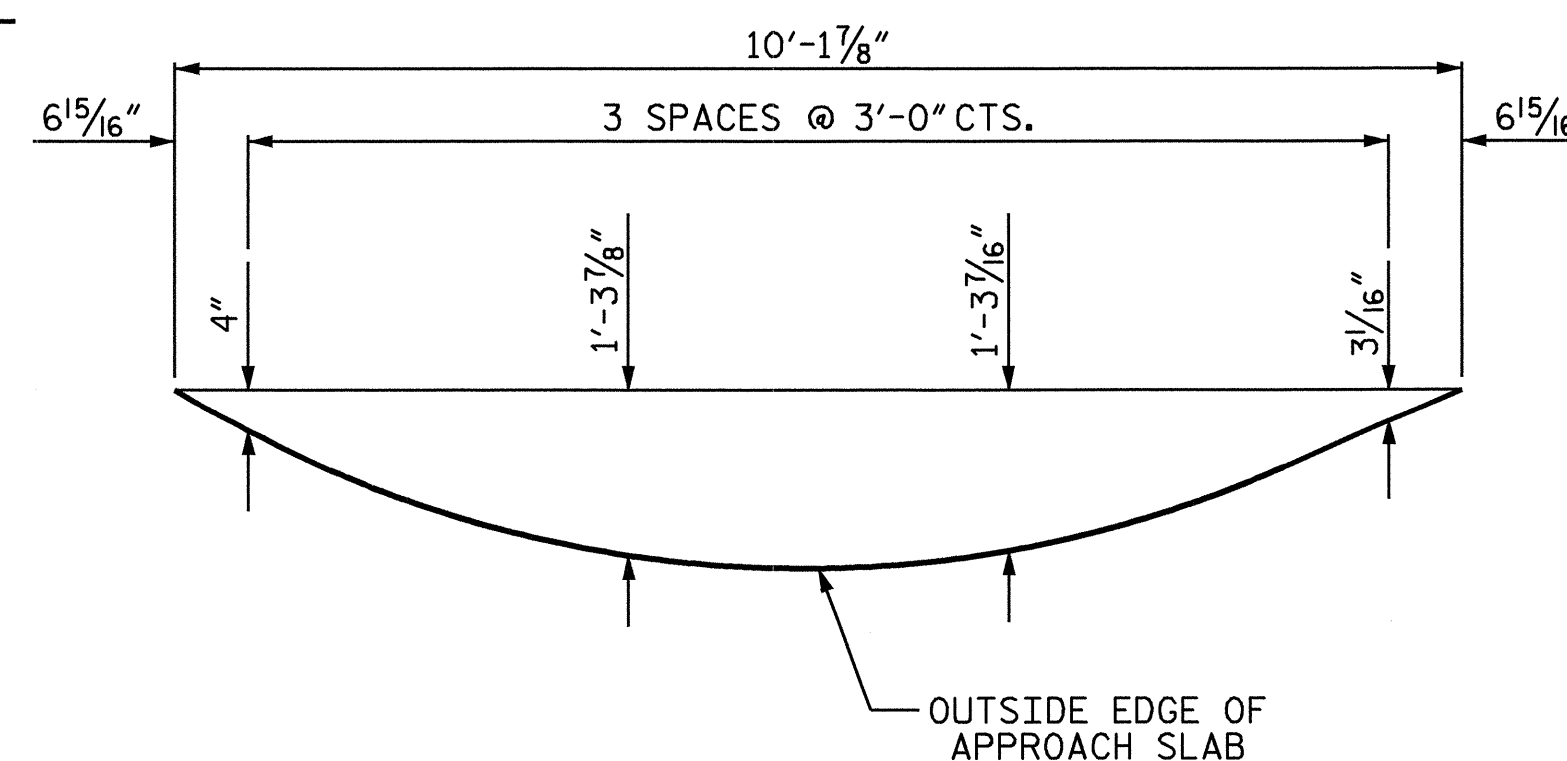
SECTION N-N

CURB DETAILS

* SEE "TYPICAL SECTION" ON SHEET S-3 FOR DEPTH OF ASHALT WEARING SURFACE



END OF CURB WITHOUT SHOULDER BERM GUTTER

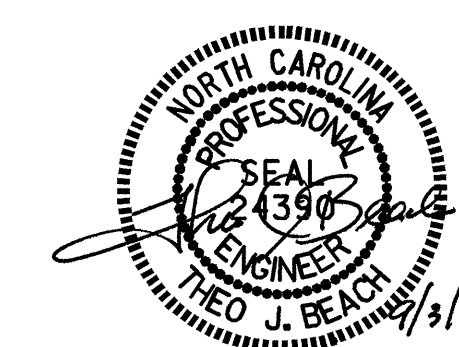


ARC OFFSETS @ END BENT No. 1

PROJECT NO. B-4043
BURKE COUNTY
 STATION: 15+98.00 -L-

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 BRIDGE APPROACH SLAB
 FOR PRESTRESSED
 CONCRETE BOX BEAM



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16
1			3			TOTAL SHEETS
2			4			17

DRAWN BY : W.G. PRICE, II DATE : 10/6/08
 CHECKED BY : T. BANKOVICH DATE : 10-2008

NOTES

FOR BRIDGE APPROACH FILL INCLUDING FABRIC, 4" Ø DRAINAGE PIPE, AND #78M STONE BACKFILL, SEE ROADWAY PLANS.

FABRIC SHALL BE TYPE 1 ENGINEERING FABRIC IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1056.

*78M STONE BACKFILL (CLASS V SELECT MATERIAL) SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 1016.

*78M STONE BACKFILL IS TO BE CONTINUOUS ALONG FILL FACE OF BACKWALL FROM OUTSIDE EDGE TO OUTSIDE EDGE OF APPROACH SLAB.

FOR THE 4" Ø DRAINAGE PIPE OUTLET(S), SEE ROADWAY STANDARD DRAWINGS.

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 USED, 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.

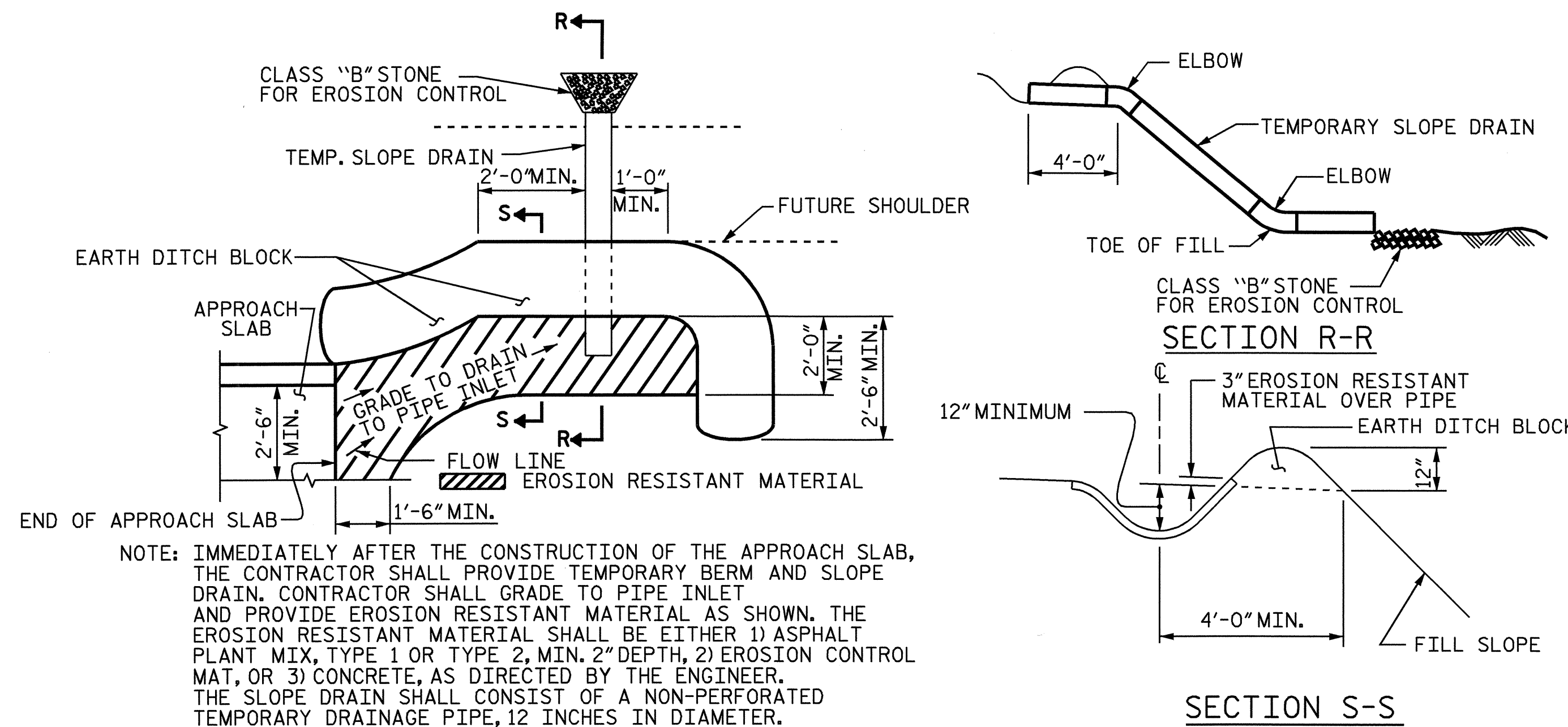
THE JOINT AT THE END BENTS SHALL BE GROUTED AS SOON AS PRACTICAL AFTER THE CONSTRUCTION OF THE APPROACH SLAB.

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

APPROACH SLAB GROOVING IS NOT REQUIRED.

BILL OF MATERIAL

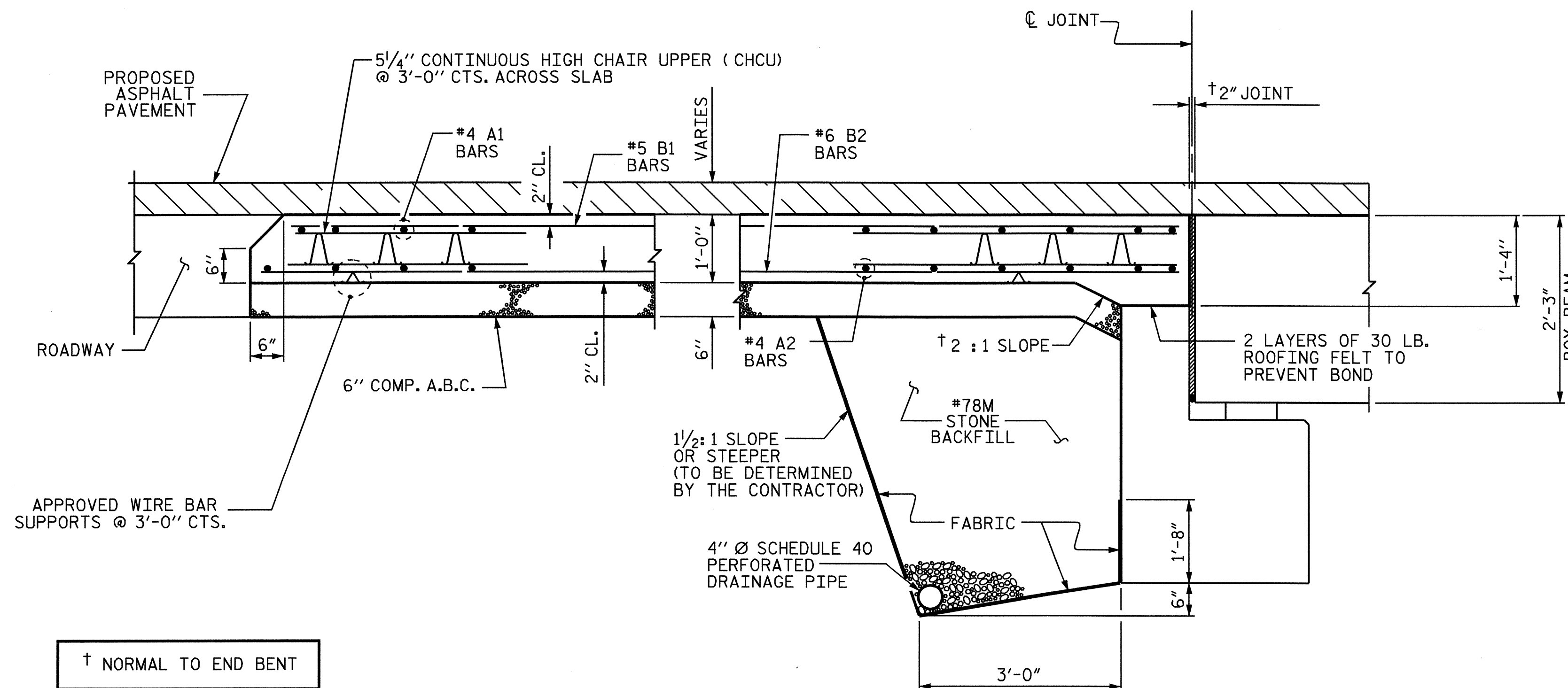
APPROACH SLAB @ END BENT No. 1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A1	24	#4	STR	18'-4"	294
A2	24	#4	STR	18'-2"	291
* B1	52	#5	STR	11'-2"	606
* B101	1	#5	STR	2'-2"	2
* B102	1	#5	STR	3'-0"	3
* B103	1	#5	STR	4'-0"	4
* B104	1	#5	STR	4'-6"	5
* B105	1	#5	STR	5'-10"	6
* B106	1	#5	STR	7'-11"	8
B2	52	#6	STR	11'-8"	911
B201	1	#6	STR	2'-2"	3
B202	1	#6	STR	3'-0"	5
B203	1	#6	STR	4'-0"	6
B204	1	#6	STR	5'-1"	8
B205	1	#6	STR	6'-5"	10
B206	1	#6	STR	8'-5"	13
REINFORCING STEEL					1247 LBS.
* EPOXY COATED					
REINFORCING STEEL					928 LBS.
CLASS AA CONCRETE					13.0 C.Y.
APPROACH SLAB @ END BENT No. 2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A1	24	#4	STR	16'-0"	257
A2	24	#4	STR	15'-10"	254
* B1	52	#5	STR	11'-2"	606
B2	52	#6	STR	11'-8"	911
REINFORCING STEEL					1165 LBS.
* EPOXY COATED					
REINFORCING STEEL					863 LBS.
CLASS AA CONCRETE					12.5 C.Y.



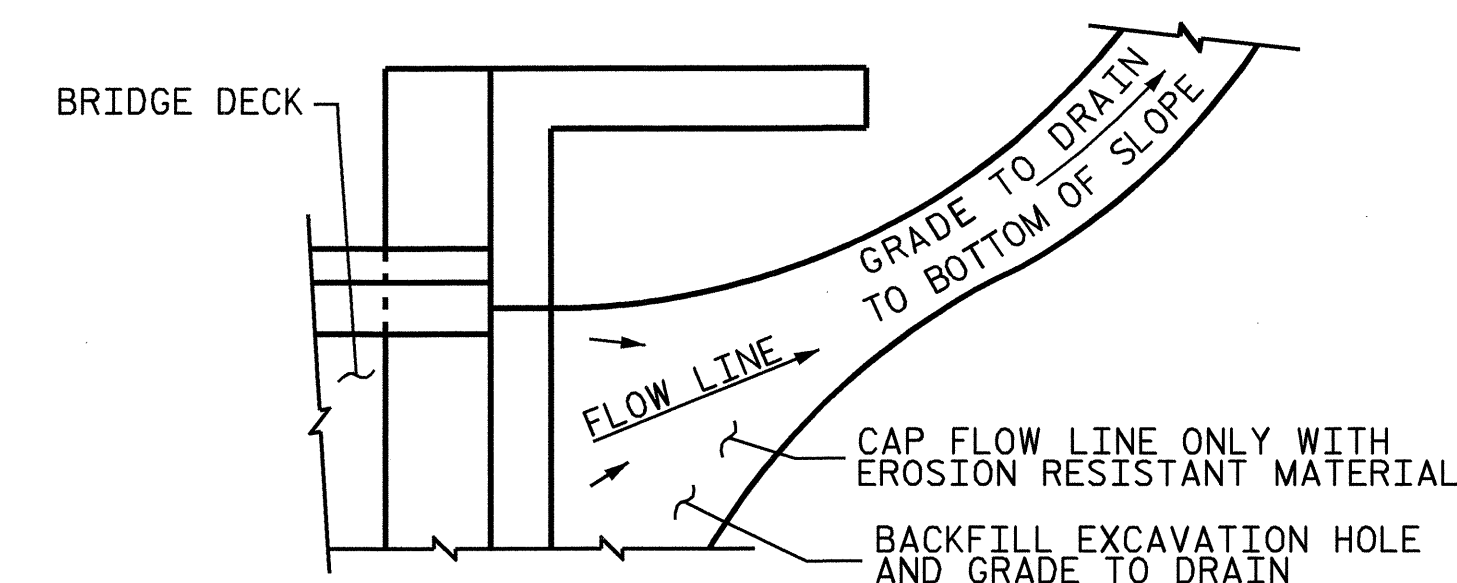
PLAN VIEW

TEMPORARY BERM AND SLOPE DRAIN DETAILS

(TO BE USED WHEN SHOULDER BERM GUTTER IS REQUIRED)



SECTION THRU SLAB



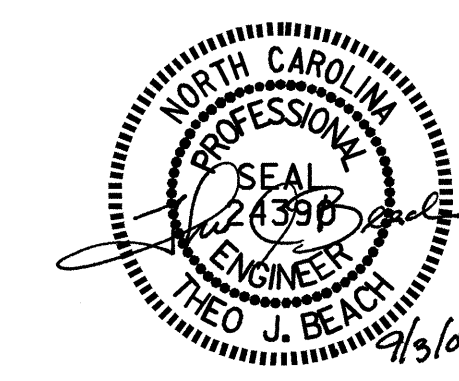
NOTE: IF THE APPROACH SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE BACKFILLING OF THE END BENT EXCAVATION, GRADE TO DRAIN TO THE BOTTOM OF THE SLOPE AND PROVIDE EROSION RESISTANT MATERIAL, SUCH AS FIBERGLASS ROVING OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL EROSION AND TO PROTECT THE AREA ADJACENT 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-4043
BURKE COUNTY
 STATION: 15+98.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA					
DEPARTMENT OF TRANSPORTATION					
RALEIGH					
STANDARD					
BRIDGE APPROACH SLAB					
FOR PRESTRESSED CONCRETE					
BOX BEAM UNIT					
(SUB-REGIONAL TIER)					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-17
TOTAL SHEETS					17



ASSEMBLED BY : W.G. PRICE, II DATE : 10-3-08
 CHECKED BY : T. BANKOVICH DATE : 10-2008
 DRAWN BY : KMM 3-08
 CHECKED BY : GM 3-08

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 2006 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N.C. DEPARTMENT OF TRANSPORTATION.

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

CONCRETE:

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

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 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. 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. 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