

INDEX OF SHEETS:
SEE SHEET 2

STATE OF VERMONT
AGENCY OF TRANSPORTATION



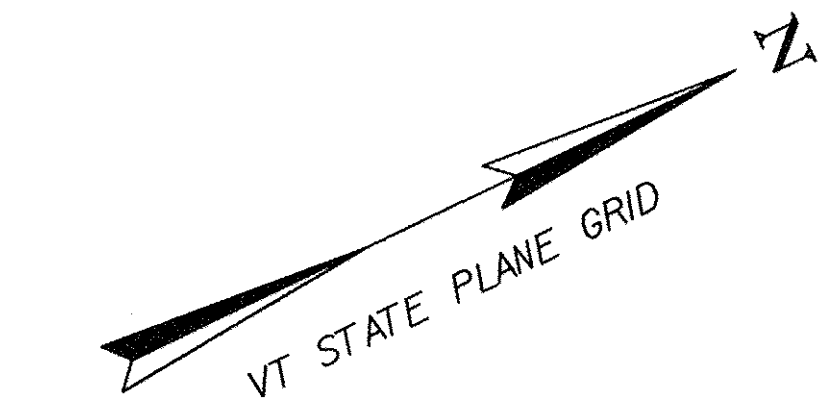
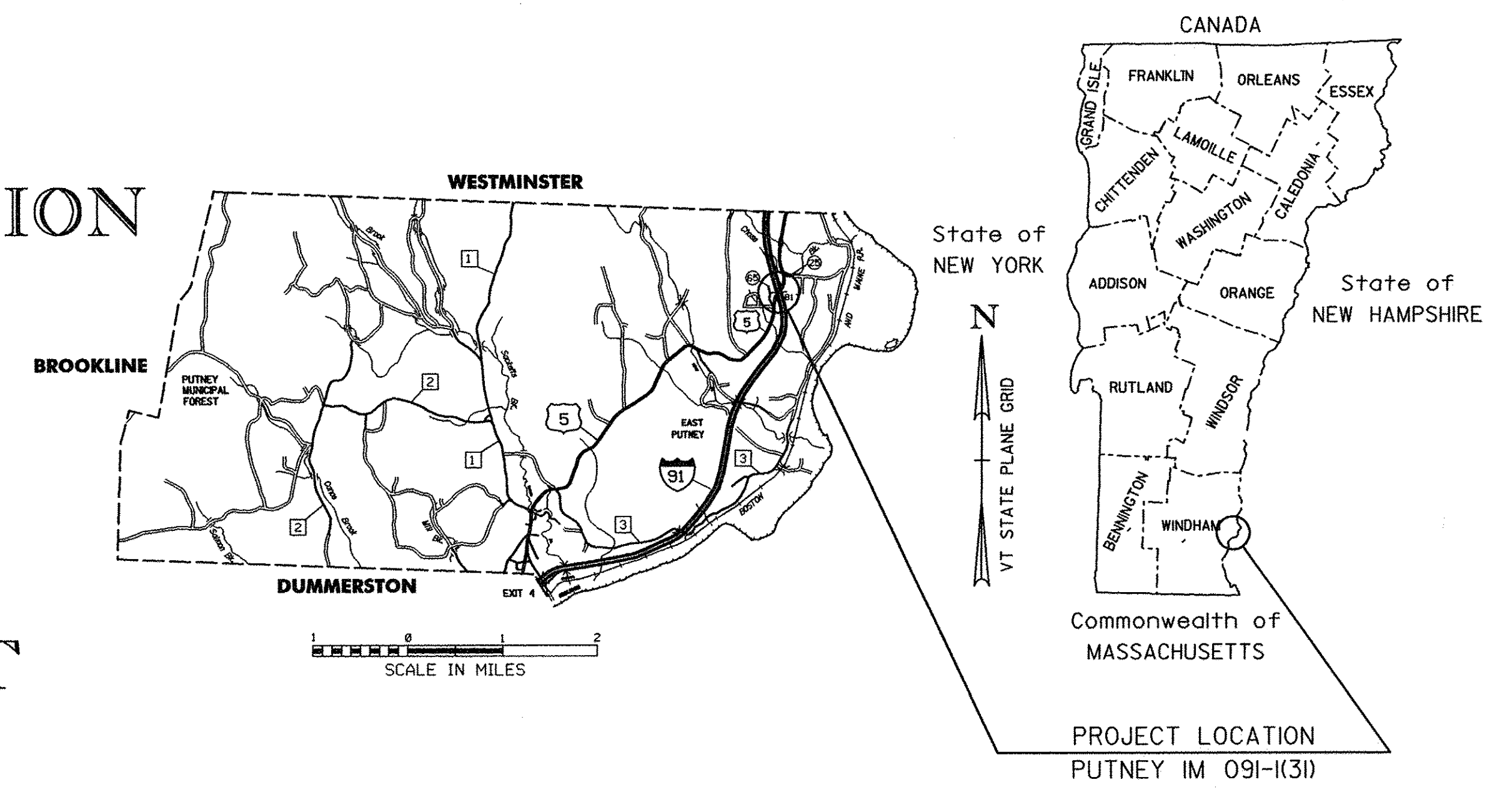
PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF PUTNEY
COUNTY OF WINDHAM

ROUTE NO.: U.S. ROUTE 5 FAS (MAJOR COLLECTOR), BRIDGE 19A

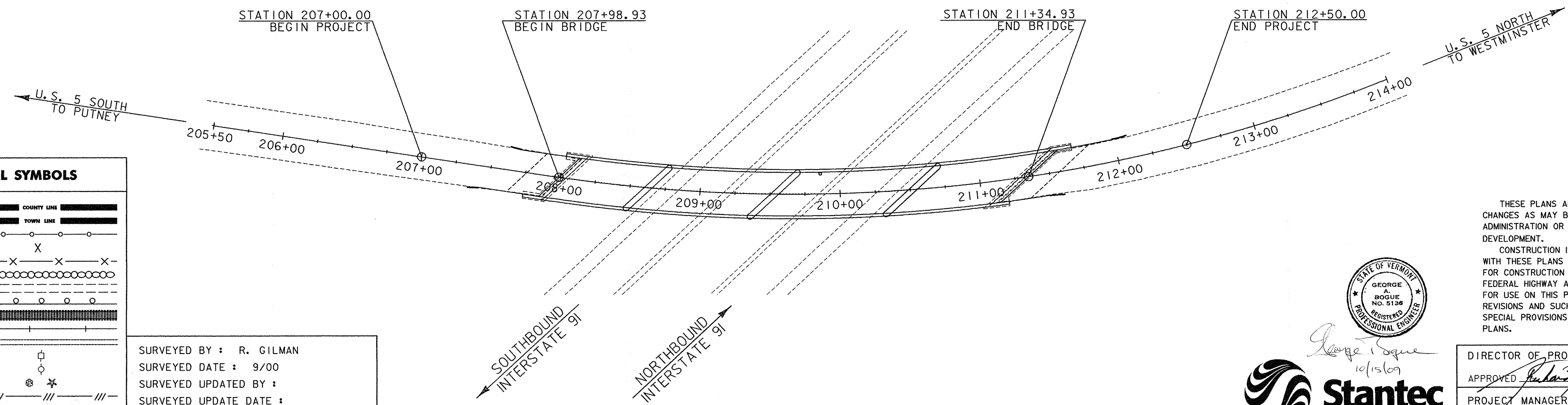
PROJECT LOCATION: BEGINNING AT A POINT ON U.S. ROUTE 5 APPROXIMATELY 0.07 MILES NORTH OF THE INTERSECTION WITH TOWN HIGHWAY 65 (TAYLOR ROAD) AND PROCEEDING NORTHERLY FOR 0.10 MILE.

PROJECT DESCRIPTION: REPLACEMENT OF THE EXISTING BRIDGE DECK, GUARDRAIL, CURB, STEEL BEAMS AND PIER CAPS INCLUDING ABUTMENT CURTAIN WALLS, BRIDGE SEATS, APPROACH SLABS AND ALL EXISTING APPROACH PAVEMENT. INSTALLATION/REMOVAL OF TEMPORARY BRIDGE AND DETOUR.

LENGTH OF STRUCTURE = 336.00 FEET
LENGTH OF ROADWAY = 214.00 FEET
LENGTH OF PROJECT = 550.00 FEET

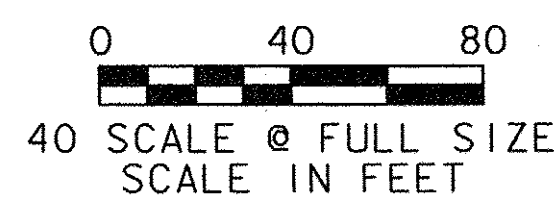


RECORD PLANS	
CONTRACTOR:	J. A. MCDONALD INC. - LYNDON CENTER, VT
RESIDENT ENGINEER:	DARYL BASSETT
CONSTRUCTION BEGAN:	MARCH 1, 2010
CONSTRUCTION COMPLETE:	JUNE 22, 2011
RECORD PLANS BY:	DARYL BASSETT & JENNA HYDE
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY	<i>D. Bassett</i> RESIDENT ENGINEER
DATE	10/2/12
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.	



CONVENTIONAL SYMBOLS	
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : R. GILMAN
SURVEYED DATE : 9/00
SURVEYED UPDATED BY :
SURVEYED UPDATE DATE :
DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (96)



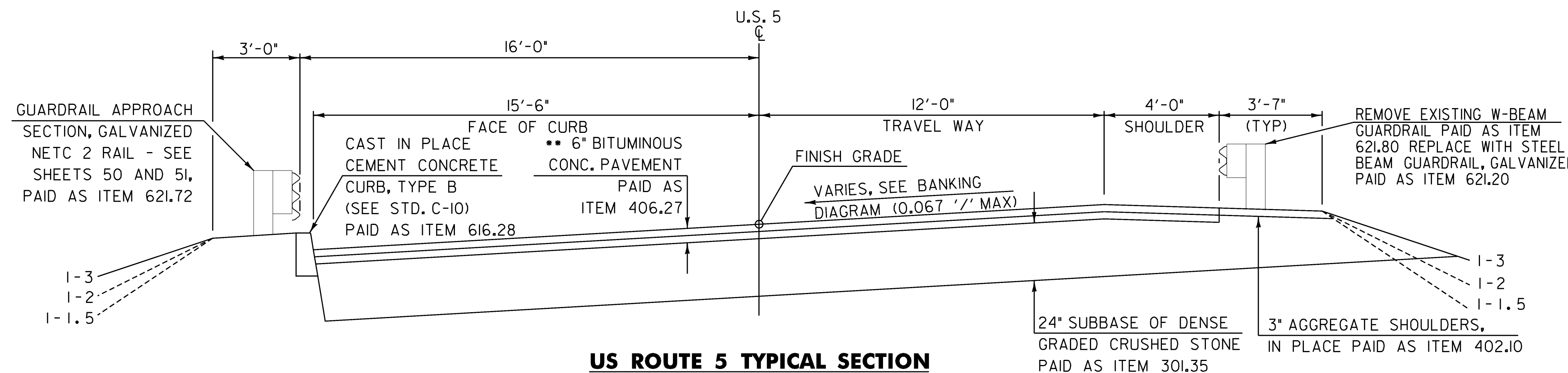
George A. Rogue
10/15/09
Stantec
Stantec Consulting Services Inc.
55 Green Mountain Drive
South Burlington VT U.S.A. 05403
Tel. 802.864.0223
Fax. 802.864.0165
www.stantec.com

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

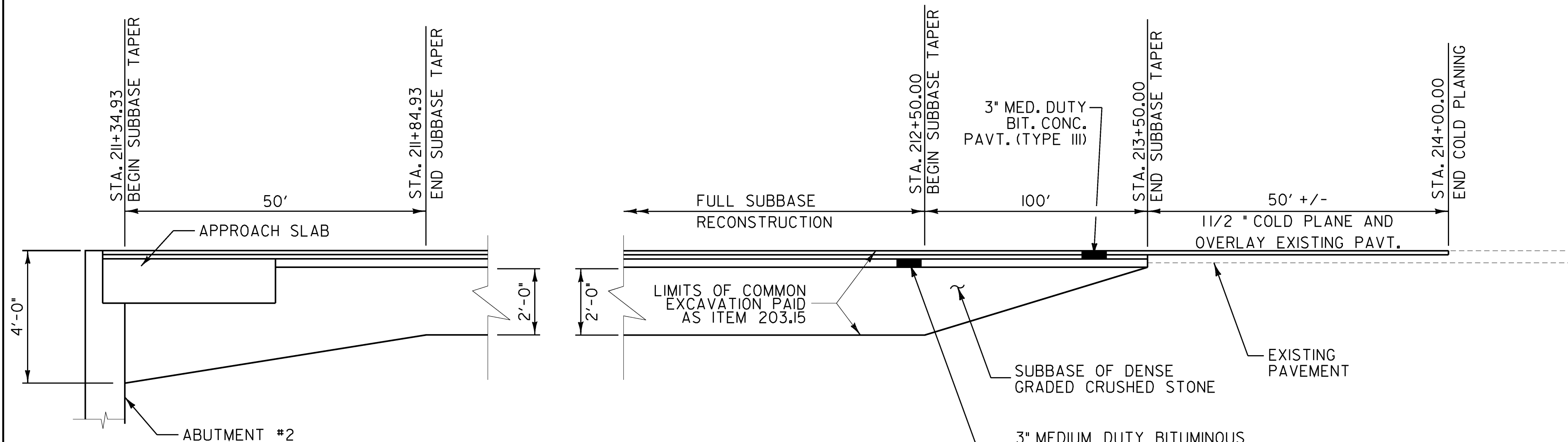
DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED *Sherward Farnsworth* DATE 10-20-09
PROJECT MANAGER : SHERWARD FARNSWORTH
PROJECT NAME : PUTNEY
PROJECT NUMBER : IM 091-1 (31)
SHEET 1 OF 75 SHEETS

TYPICAL SECTIONS

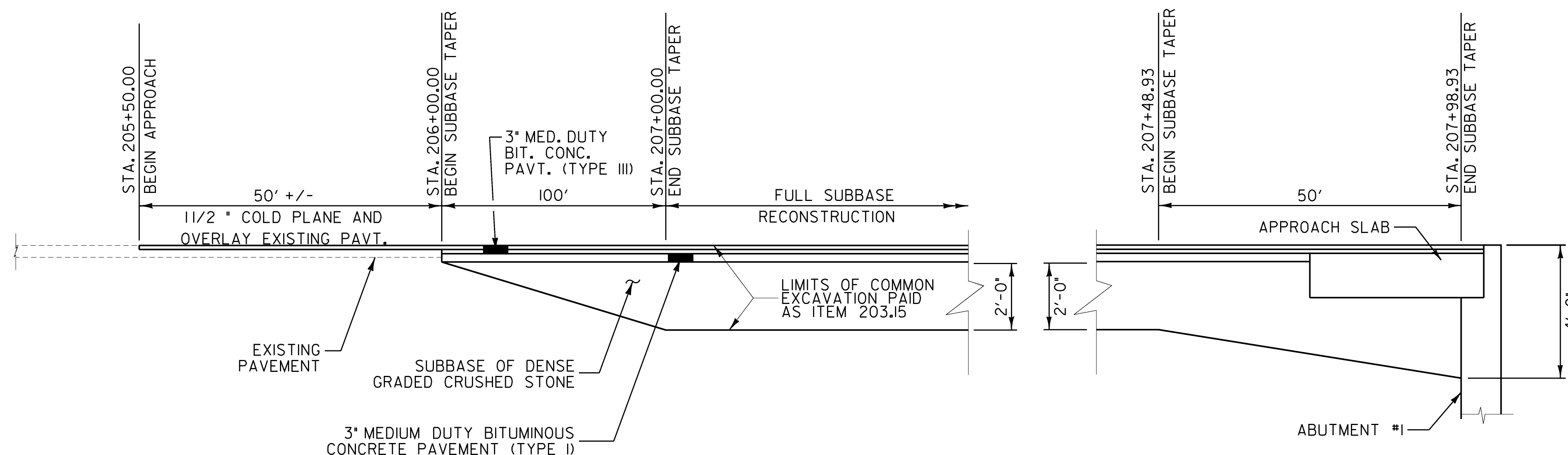
- ** 3" MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT (TWO 1 1/2" LIFTS - TYPE III)
- ** 3" MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT (ONE LIFT - TYPE I)
- 24" SUBBASE OF DENSE GRADED CRUSHED STONE



US ROUTE 5 TYPICAL SECTION
NOT TO SCALE



TYPICAL APPROACH SECTION-NORTH APPROACH
NOT TO SCALE



TYPICAL APPROACH SECTION-SOUTH APPROACH
NOT TO SCALE

MATERIAL ITEM THICKNESSES/TOLERANCE

BITUMINOUS CONCRETE PAVEMENT (TOTAL DEPTH)	+/- 1/4"
DENSE GRADED CRUSHED STONE	+/- 1"

URBAN MIX SEEDING FORMULA

% WT	LBS/A	NAME
37.5	45	CREeping RED FESCUE
31.25	37.5	KENTUCKY BLUE GRASS
31.25	37.5	WINTER HARDY, PERENNIAL RYE
100	120	

CONSERVATION MIX SEEDING FORMULA

% WT	LBS/A	NAME
35	35	CREeping RED FESCUE
23	23	KENTUCKY BLUE GRASS
15	15	ANNUAL RYE
11	11	WINTER HARDY, PERENNIAL RYE (VARIETY PENNFINE, MANHATTAN OR SIMILAR VARIETY)
6	6	WHITE CLOVER
10	10	HIGHLAND BENTGRASS
100	100	

SEEDING NOTES

- SEED MIXTURE IN LAWN AREAS AROUND DWELLINGS AND WITHIN STREET LIMITS SHALL BE URBAN MIX CONFORMING TO THE ABOVE TABLE. FOR SEEDING BETWEEN SEPTEMBER 1 AND OCTOBER 1, WINTER RYE SHALL BE USED IN ADDITION TO THE URBAN MIX AT AN APPLICATION RATE OF 120 POUNDS PER ACRE.
- SEED MIXTURE IN ALL OTHER DISTURBED AREAS SHALL BE CONSERVATION MIX CONFORMING TO THE ABOVE TABLE. FOR SEEDING BETWEEN SEPTEMBER 1 AND OCTOBER 1, WINTER RYE SHALL BE USED IN ADDITION TO THE URBAN MIX AT AN APPLICATION RATE OF 100 POUNDS PER ACRE.
- THE SEED MIXTURE SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE FROM ALL NOXIOUS SEED.
- SEED - TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.
- FERTILIZER - FORMULA 19-19-19 TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS/ACRE.
- AGRICULTURAL LIMESTONE - TO BE APPLIED AT A RATE OF 2 TONS/ACRE OR AS DIRECTED BY THE ENGINEER.
- EROSION MATTING - TO BE PLACED ON EARTH SLOPES WITH 1:3 SLOPE OR STEEPER AND IN ALL DRAINAGE DITCHES.
- HAY MULCH - TO BE PLACED ON ALL DISTURBED AREAS NOT REQUIRING EROSION MATTING AT THE RATE OF 2 TONS/ACRE OR AS DIRECTED BY THE ENGINEER.
- TOPSOIL - TO BE USED WITH SEED, AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. TOPSOIL SHALL BE PLACED AT 2" DEEP.

NOTES

- THE COLD PLANING AND PAVING SHALL MATCH THE EXISTING BY THE USE OF A VERTICAL BUTT JOINT. SEE DETAIL ON SHEET 4.
- GRASS GROWING ADJACENT TO PAVEMENT OR THROUGH CRACKS IN THE PAVEMENT WHICH MAY HAMPER THE PLACEMENT OF NEW BITUMINOUS CONCRETE SHALL BE REMOVED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK WILL NOT BE MADE DIRECTLY, BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 406.27 OR 528.11.
- EMULSIFIED ASPHALT TO BE APPLIED ON EXISTING PAVEMENT, BETWEEN ALL COURSES OF BITUMINOUS CONCRETE PAVEMENT AND ON COLD PLANED SURFACES, AT THE RATE OF 0.025 GAL/SY OR AS DIRECTED BY THE ENGINEER. THIS WILL BE PAID FOR AS ITEM 404.65.
- EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE ENGINEER, SHALL BE EXCAVATED TO A DEPTH OF 3" OR AS DIRECTED BY THE ENGINEER. EXCAVATION WILL BE PAID USING ITEM 608.15 OR 608.25.

MATERIAL REMOVED SHALL BE REPLACED WITH AGGREGATE SHOULDERS, IN PLACE ITEM 402.10 AS DIRECTED BY THE ENGINEER. COLD PLANE GRINDINGS MAY BE USED INSTEAD OF AGGREGATE SHOULDERS TO BACK UP THE NEW PAVEMENT AS DIRECTED BY THE ENGINEER. THIS WILL BE PAID UNDER ITEM 402.10.

EXCAVATED MATERIAL SHALL BE SPREAD ON THE ADJACENT SLOPES OR REMOVED FROM PROJECT, AS DIRECTED BY THE ENGINEER.

- ITEM 203.40 SHOULDER BERM REMOVAL IS APPROPRIATE ONLY IN AREAS OF RETAINED GUARDRAIL.

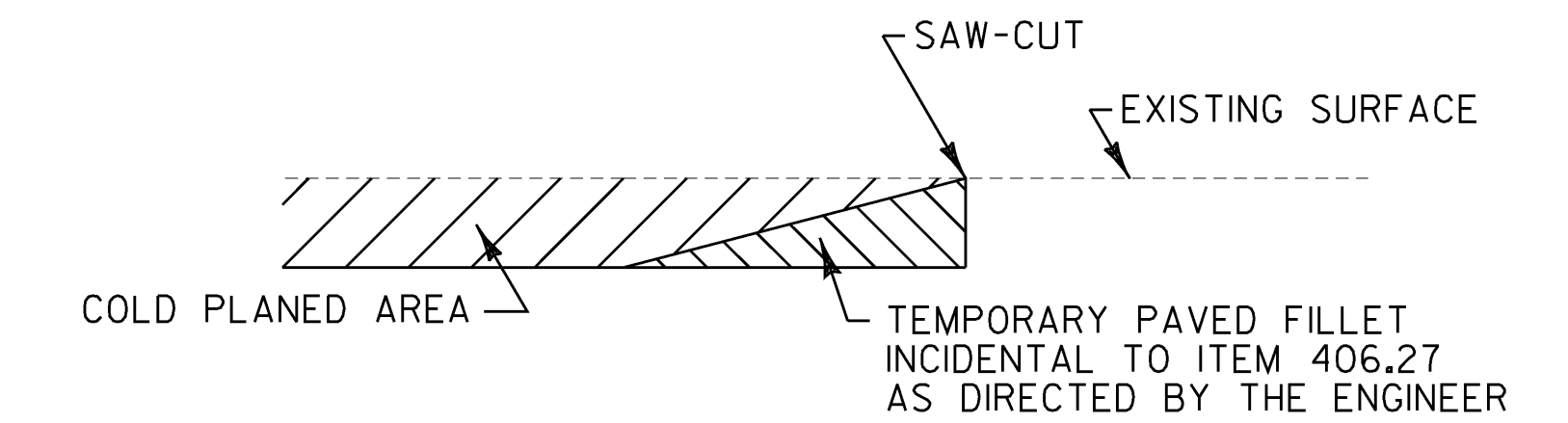
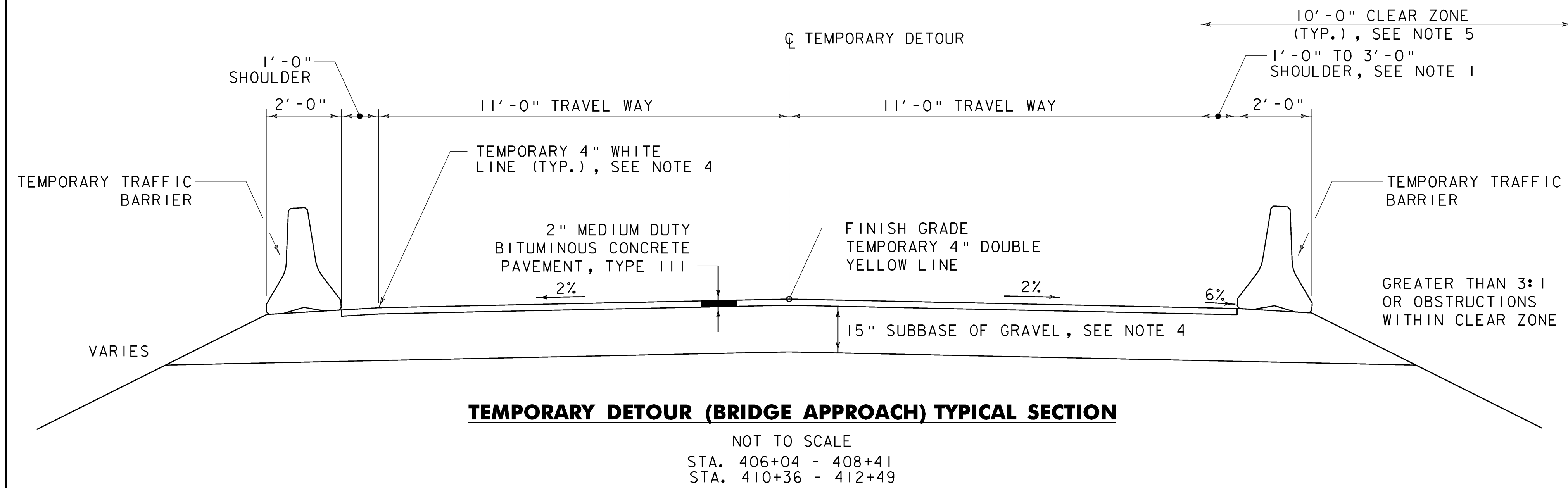
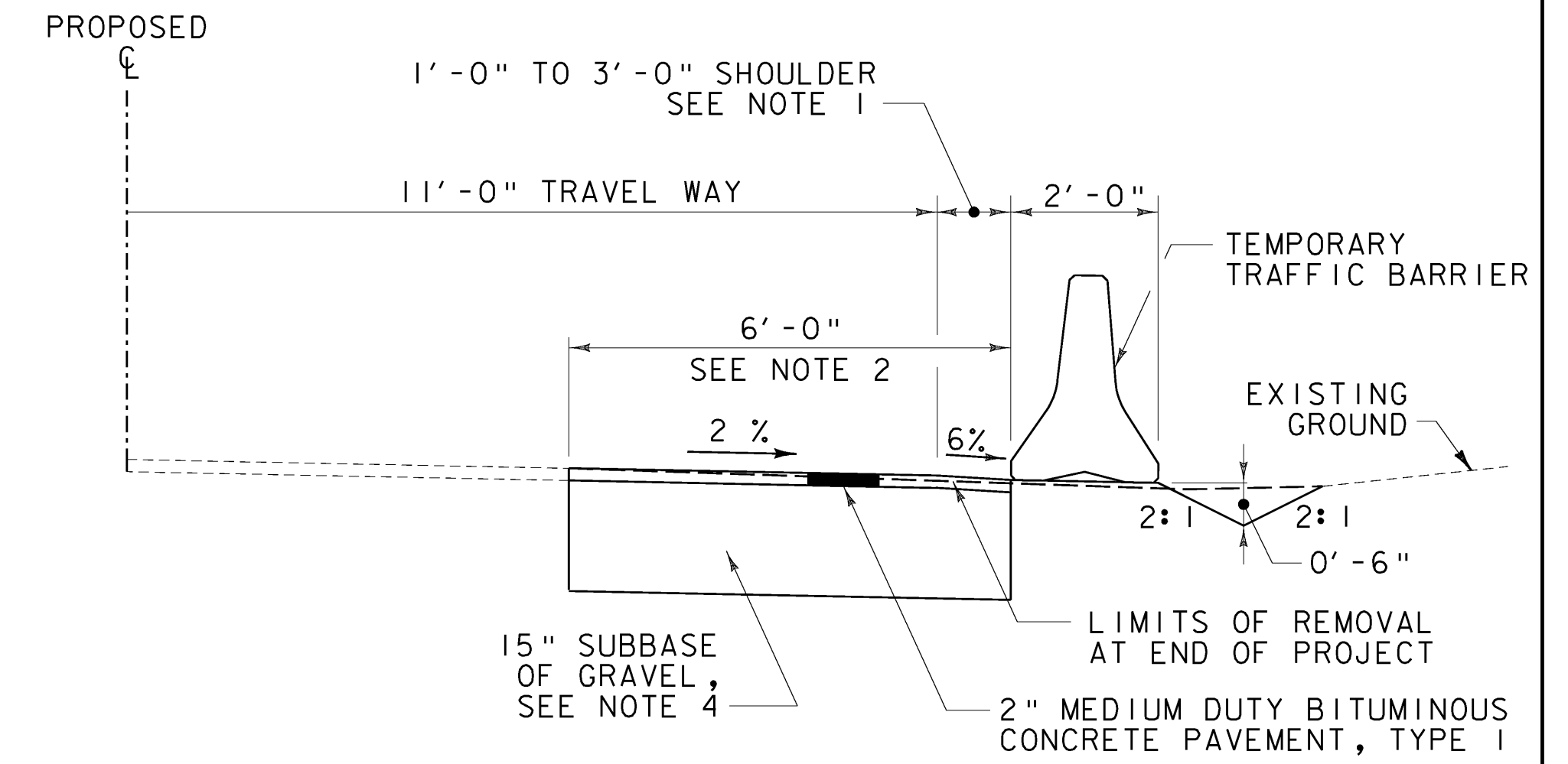
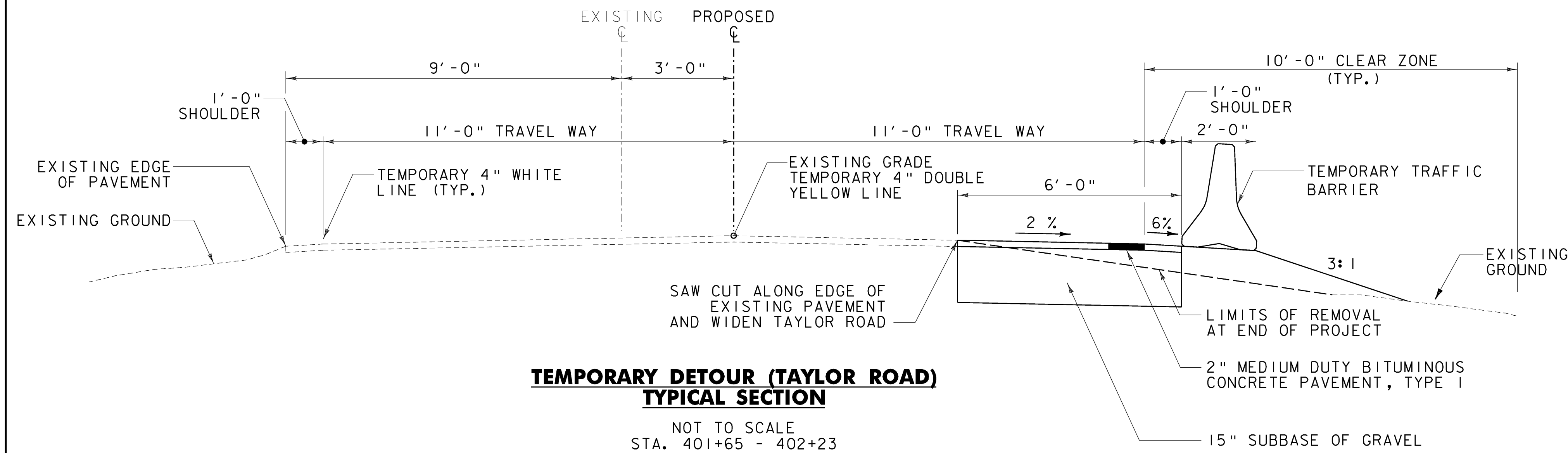
- FOR PG BINDER REQUIREMENTS, SEE SECTION 406 OF THE GENERAL SPECIAL PROVISIONS.

- TERMINAL FLARES SHALL BE CAPPED WITH AN ESTIMATED 3" DEPTH OF AGGREGATE SHOULDER MATERIAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCIDENTAL TO 621.50 MANUFACTURED TERMINAL SECTION, FLARED.

PROJECT NAME: PUTNEY
PROJECT NUMBER: IM 091-1(31)

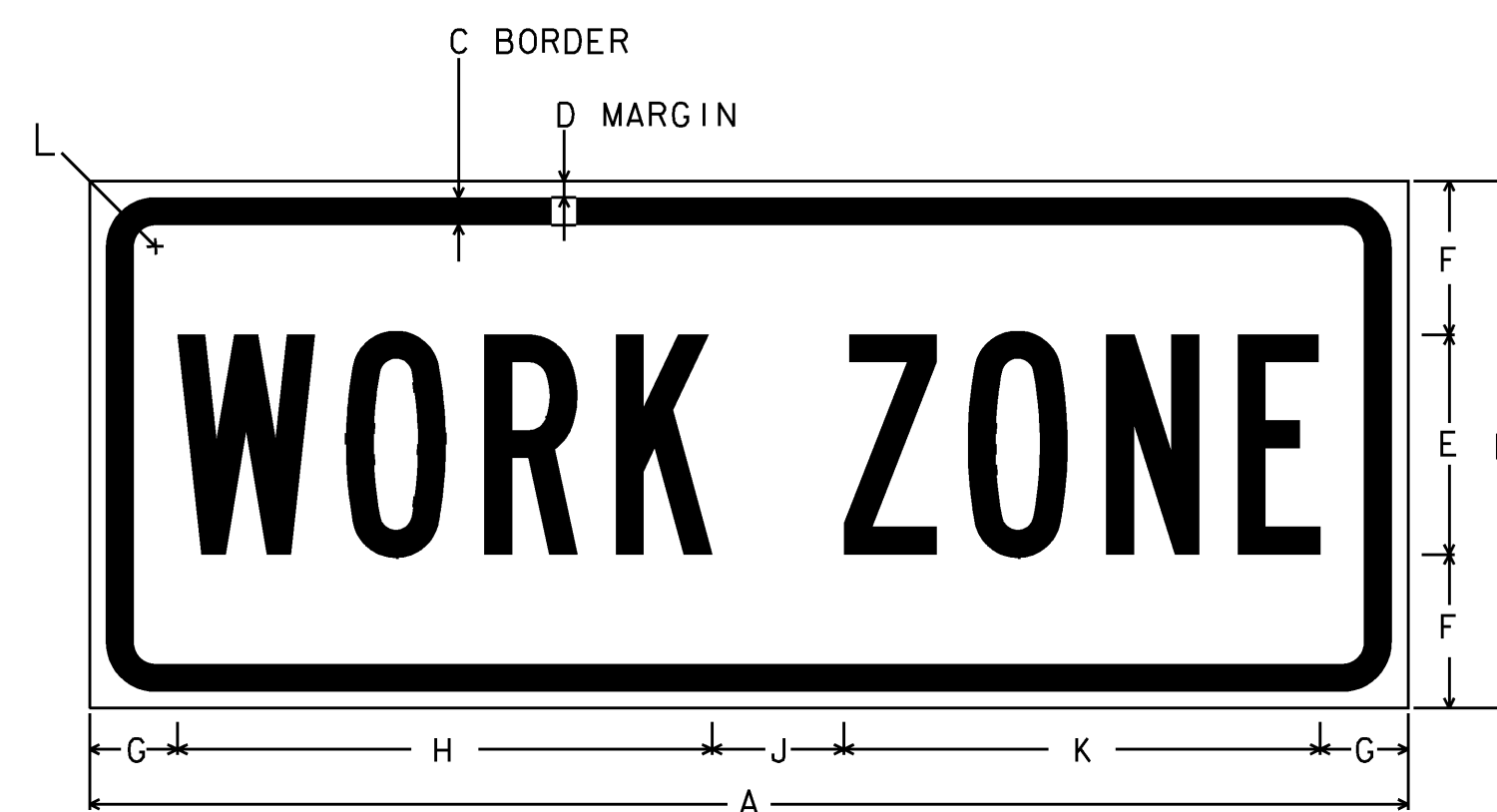
FILE NAME: ...\\03 z93a148typ roadway.p1f PLOT DATE: 10/19/2009
PROJECT LEADER: G. BOGUE DRAWN BY: R. WALKER
DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
TYPICAL SECTIONS - ROADWAY SHEET 3 OF 75





NOTES:

1. PROVIDE 3' PAVED SHOULDER FROM STATION 405+00 RT TO 407+25 RT, TAPER 50' ON EITHER END.
2. BOX CUT WIDTH TRANSITIONS FROM 6' TO FULL WIDTH TYPICAL (SEE TEMP. DETOUR (BRIDGE APPROACH) TYPICAL SECTION) FROM STA. 405+12 - 406+04.
3. SEE SHEETS 12 - 14 AND SHEET 22 FOR PROFILE, LOCATION AND ALIGNMENT OF TEMPORARY BRIDGE AND DETOUR.
4. ALL WORK REQUIRED TO CONSTRUCT TEMPORARY BRIDGE APPROACHES FROM STA. 400+00 - 412+49 INCLUDING BUT NOT LIMITED TO EARTHWORKS, BACKFILL, TEMPORARY SHEETING OR OTHER RETAINING STRUCTURES, TEMPORARY TRAFFIC BARRIER, SUBBASE, CULVERTS, DITCHES, TEMPORARY PAVEMENT AND PAVEMENT MARKINGS AND OTHER INCIDENTAL ITEMS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 528.11, TWO-WAY TEMPORARY BRIDGE.
5. THE HORIZONTAL SIGHT DISTANCE FROM STATION 405+12 TO 407+27, RT SHALL BE INCREASED TO PROVIDE ADDITIONAL HORIZONTAL SIGHT DISTANCE FOR 50 MPH DESIGN SPEED. SEE SHEET 22 FOR CLEARING LIMITS.



	DIMENSIONS (INCHES)										
	A	B	C	D	E	F	G	H	J	K	L
MIN.	24	8	0.375	0.375	4B	2	2	9.5	2	8.5	1.5
SPEC.	30	12	0.375	0.625	5B	3.5	2	12.2	3	8.5	1.5
EXPWY.	36	12	0.50	0.75	6B	3	2.5	14.8	3	8.5	1.875
FWY.	48	18	0.625	0.875	8B	4	3.5	19.1	4	8.5	2.25

NOTE: THE SIGN IS TO HAVE A BLACK LEGEND ON AN ORANGE RETROREFLECTIVE BACKGROUND THAT IS ASTM TYPE 7, 8 OR 9. THE TEXT IS TO BE "B-TYPE".



PROJECT NAME: PUTNEY
PROJECT NUMBER: IM 091-1(31)

FILE NAME: ...\\04 z93d148typ detour.ptf PLOT DATE: 10/19/2009
PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
TYPICAL SECTIONS-TEMPORARY DETOUR SHEET 4 OF 75

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
					ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
					1					1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	-	EARTHWORKS SUMMARY		
					1300					1300		CY	COMMON EXCAVATION	203.15	36	1264	CY	COMMON EXCAVATION (1264 x 1.0)
					130					130		CY	SOLID ROCK EXCAVATION	203.16	EST.	98	CY	SOLID ROCK EXCAVATION (130 (EST.) x 0.75)
					210					210		LF	SHOULDER BERM REMOVAL	203.40	7	224	CY	TRENCH EXCAVATION OF EARTH (299 x 0.75)
					300					300		CY	TRENCH EXCAVATION OF EARTH	204.20	1	1586	CY	TOTAL FILL AVAILABLE
					4					4		CY	TRENCH EXCAVATION OF ROCK	204.21	1	-29	CY	FILL REQUIRED FOR US ROUTE 5
					1					1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	EST.	1557	CY	US ROUTE 5 WASTE
								213		213		CY	STRUCTURE EXCAVATION	204.25	-			
								130		130		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	-			
					380					380		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	2			
					1170					1170		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	9			
					20					20		CY	AGGREGATE SHOULDERS, IN PLACE	402.10	2			
					10					10		CWT	EMULSIFIED ASPHALT	404.65	3			MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT
					1025			225		1250		TON	MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT	406.27	8	893	TON	US 5
					1					1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-	124	TON	TAYLOR ROAD OVERLAY
								326		326		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	-	225	TON	BRIDGE
								391000		391000		LB	STRUCTURAL STEEL, CURVED PLATE GIRDER	506.56	-	8	TON	ROUNDING
								335		335		LB	STRUCTURAL STEEL	506.60	-	1250	TON	TOTAL
					516			28000		28516		LB	REINFORCING STEEL	507.15	-	THE FOLLOWING ITEMS HAVE BEEN INCLUDED IN ROADWAY QUANTITIES FOR THE CONSTRUCTION OF CULVERT AT STATION 212+00:		
								113260		113260		LB	EPOXY COATED REINFORCING STEEL	507.17	-	516	LB	507.15 - REINFORCING STEEL
								1		1		LS	SHEAR CONNECTORS (6087 - 7/8" X 7")	508.15	-	3	CY	541.25 - CONCRETE, CLASS B
								1		1		LS	STRUCTURAL PAINTING, SHOP APPLIED	513.25	-	50	LF	601.092 - 24" CPEP
								1		1		LS	SURFACE PREPARATION, SHOP	513.40	-			
								97		97		GAL	WATER REPELLENT, SILANE	514.10	-			
								107		107		LF	BRIDGE EXPANSION JOINT, VERMONT	516.11	-			
								1150		1150		SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20	-			
								710		710		LF	REMOVAL OF EXISTING RAILING	525.10	-			
								710		710		LF	BRIDGE RAILING, GALVANIZED NETC 2 RAIL	525.33	-			
					1					1		LS	TWO-WAY TEMPORARY BRIDGE (5760 SF - EST.)	528.11	-			
								1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20	-			
								20		20		EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11	-			
								5		5		EACH	BEARING DEVICE ASSEMBLY, STEEL	531.13	-			
					3					3		CY	CONCRETE, CLASS B	541.25	-			
								15		15		SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I	580.13	EST.			
								15		15		SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II	580.14	EST.			
								3		3		CY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS III	580.15	EST.			
					60					60		LF	18" CPEP	601.0915	-			
					50					50		LF	24" CPEP	601.0920	-			
					1					1		EACH	18" CPEP ELBOW	601.5814	-			
					1					1		EACH	18" CPEPES	601.7015	-			

PROJECT NAME: PUTNEY
PROJECT NUMBER: IM 091-1(31)

FILE NAME: ... \05-07 z93a148quantity.ptf PLOT DATE: 10/19/2009
PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
QUANTITY SHEET 1 SHEET 5 OF 75



QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
					ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							135			135		LB	SEED, WINTER RYE	651.17	5			
							1570			1570		LB	FERTILIZER	651.18	10			
							6.5			6.5		TON	AGRICULTURAL LIMESTONE	651.20	0.2			
							6.5			6.5		TON	HAYMULCH	651.25	0.2			
							790			790		CY	TOPSOIL	651.35	9			
							1			1		LS	EPSC PLAN	652.10	-			
							100			100		HR	MONITORING EPSC PLAN	652.20	EST.			
							1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	-			
							7220			7220		SY	TEMPORARY EROSION MATTING	653.20	12			
							10			10		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25	1			
							40			40		CY	VEHICLE TRACKING PAD	653.35	10			
							4			4		EACH	INLET PROTECTION DEVICE, TYPE I	653.40	-			
							400			400		LF	BARRIER FENCE	653.50	-			
							2100			2100		LF	PROJECT DEMARCATION FENCE	653.55	48			
					1					1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			
								406		406		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)	900.608	-			
								1		1		LS	SPECIAL PROVISION (PUBLIC PROTECTION FOR BRIDGE PROJECTS)	900.645	-			

PROJECT NAME: PUTNEY
 PROJECT NUMBER: IM 091-1(31)
 FILE NAME: ...\\05-07 z93a148quantity.ptf PLOT DATE: 10/19/2009
 PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
 DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
QUANTITY SHEET 3 SHEET 7 OF 75



BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES										TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
		SUPER-STRUCTURE	APPROACH SLABS 1	APPROACH SLABS 2	ABUT. NO. 1	ABUT. NO. 2	PIER 1	PIER 2	PIER 3	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
					104	109				213	CY	STRUCTURE EXCAVATION	204.25			
					60	70				130	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30			
		195	15	15						225	TON	MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT	406.27			
			38	38	70	90	28	30	32	326	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			
		391000								391000	LB	STRUCTURAL STEEL, CURVED PLATE GIRDER	506.56			
					175	160				335	LB	STRUCTURAL STEEL	506.60			
					5380	6170	5100	5500	5850	28000	LB	REINFORCING STEEL	507.15			
		98800	5670	6330	1100	1360				113260	LB	EPOXY COATED REINFORCING STEEL	507.17			
		1								1	LS	SHEAR CONNECTORS (6087 - 7/8" X 7")	508.15			
		1								1	LS	STRUCTURAL PAINTING, SHOP APPLIED	513.25			
		1								1	LS	SURFACE PREPARATION, SHOP	513.40			
		40			10	10	12	12	13	97	GAL	WATER REPELLENT, SILANE	514.10			
					45	62				107	LF	BRIDGE EXPANSION JOINT, VERMONT	516.11			
		1150								1150	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20			
		710								710	LF	REMOVAL OF EXISTING RAILING	525.10			
		710								710	LF	BRIDGE RAILING, GALVANIZED NETC 2 RAIL	525.33			
		1								1	EACH	PARTIAL REMOVAL OF STRUCTURE	529.20			
					5	5	5		5	20	EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11			
								5		5	EACH	BEARING DEVICE ASSEMBLY, STEEL	531.13			
							5	5	5	15	SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I	580.13			
							5	5	5	15	SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II	580.14			
							1	1	1	3	CY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS III	580.15			
		318								318	LF	SNOW BARRIER, GALVANIZED	620.75			
					2	2				4	EACH	GUARDRAIL APPROACH SECTION, GALVANIZED NETC 2 RAIL	621.72			
		400			3	3				406	CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)	900.608			
		1								1	LS	SPECIAL PROVISION (PUBLIC PROTECTION FOR BRIDGE PROJECTS)	900.645			



GPS CONTROL POINTS

HVCTRL #1

STANDARD DISK STAMPED
Duno AZ MK

N = 184590.543
E = 1648708.176
ELEV. = 553.05

To reach from the intersection of Interstate I-91 north and Exit 4 ramp in Putney, go north along I-91 for 4.5 MI to the site of the mark on the left. The mark is set flush in the northeast corner of a 1.2 M x 1.8 M concrete pad for a drop inlet. The mark is 0.05 MI south of the US Route 5 bridge over the interstate. The mark is located 5.8 M west of the west edge of pavement of I-91 north bound lane, 7.1 M east of the east edge of pavement of I-91 south bound lane, 1.0 M north of the south edge of the concrete DI, 0.2 M south of the north edge of the concrete DI, and 0.3 M west of a fiberglass witness post.

HVCTRL #2

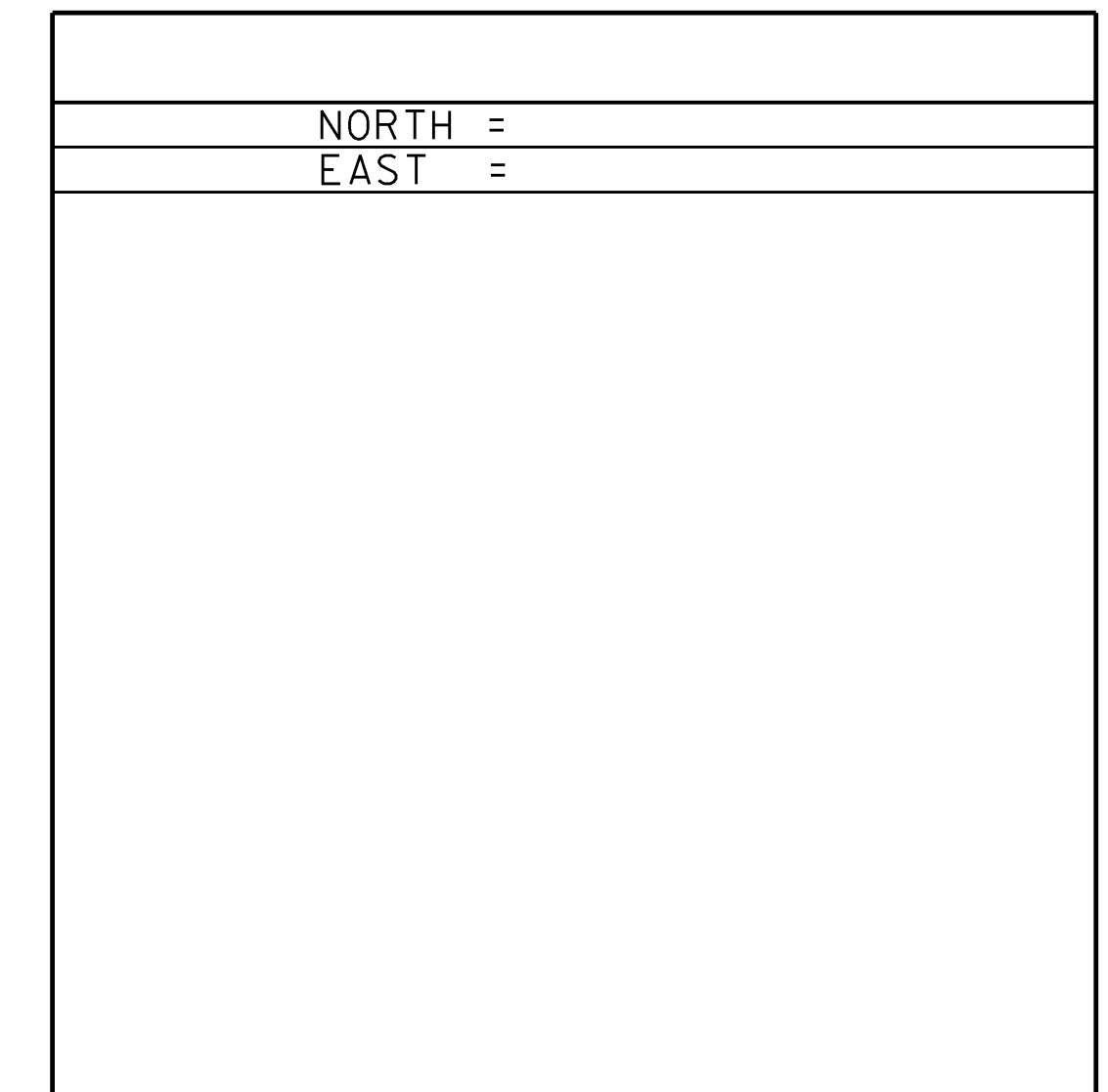
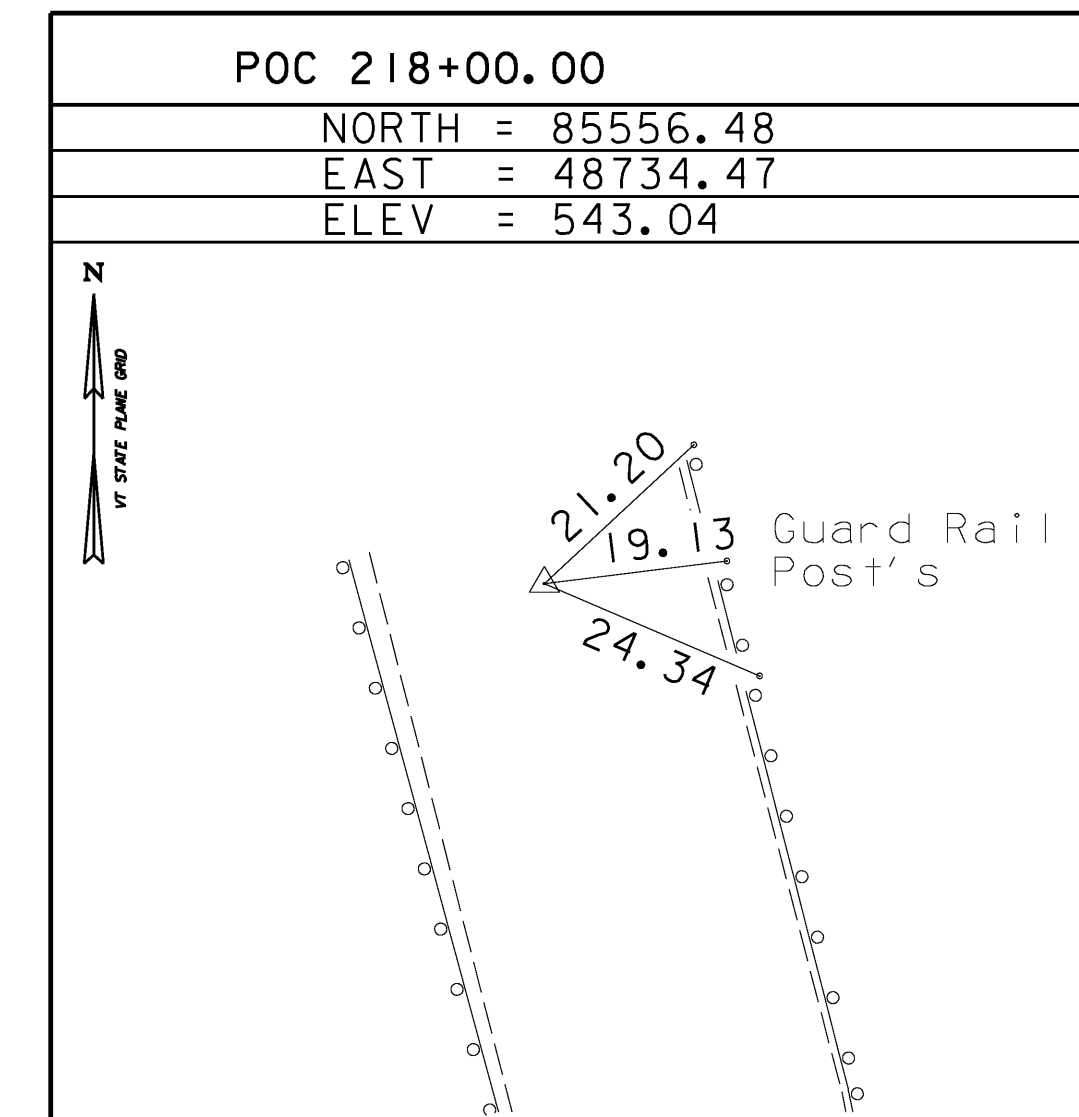
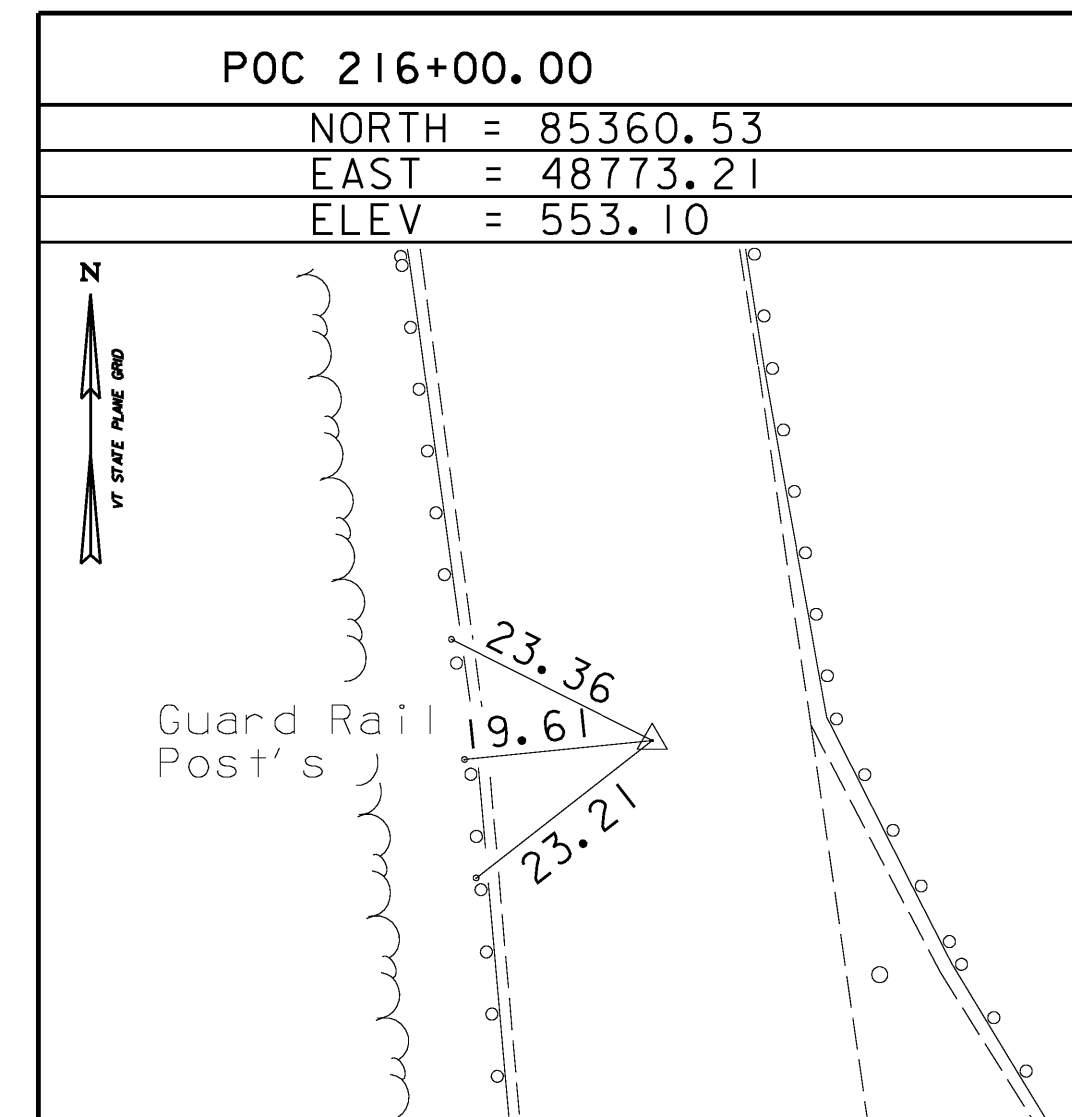
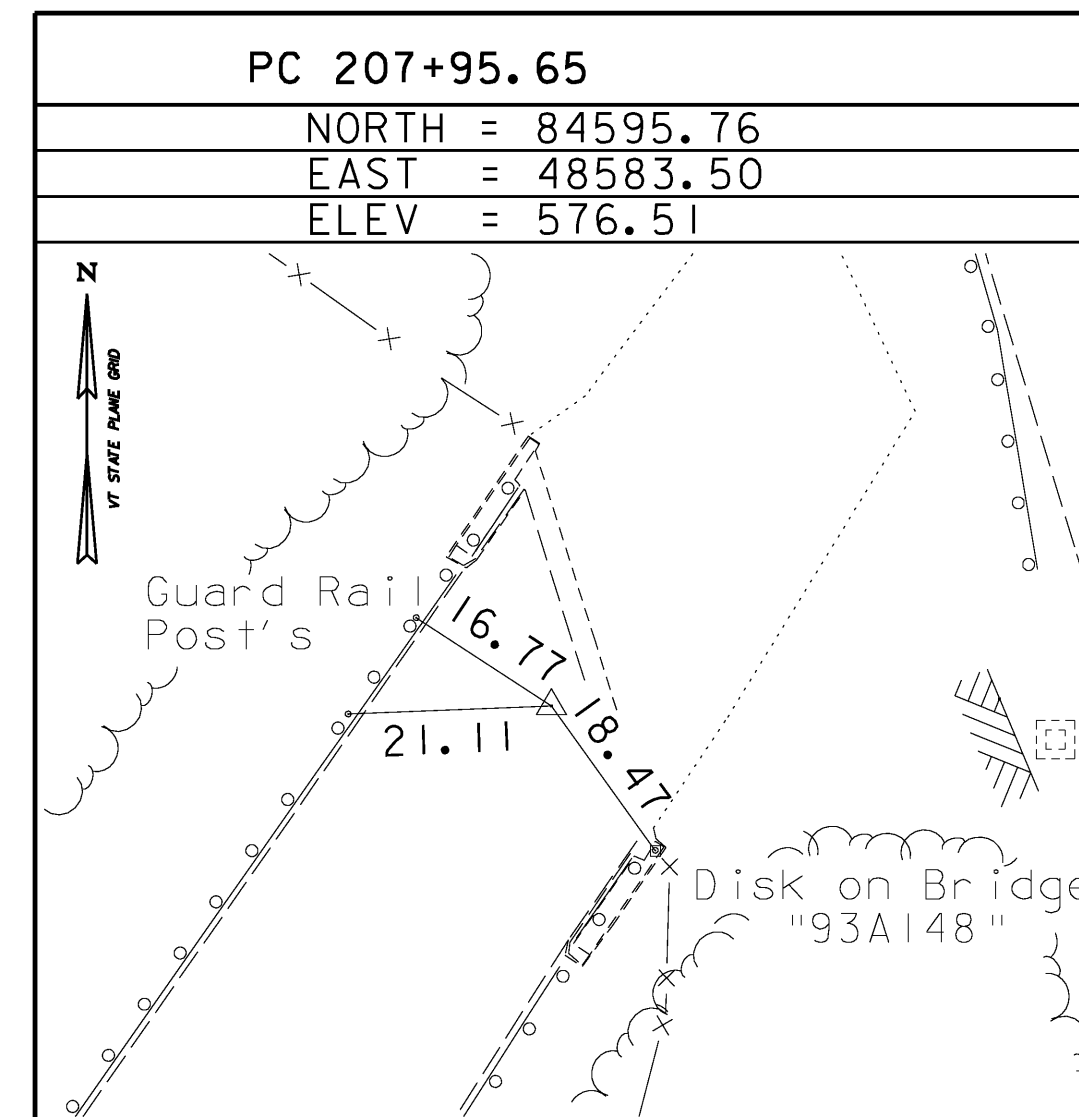
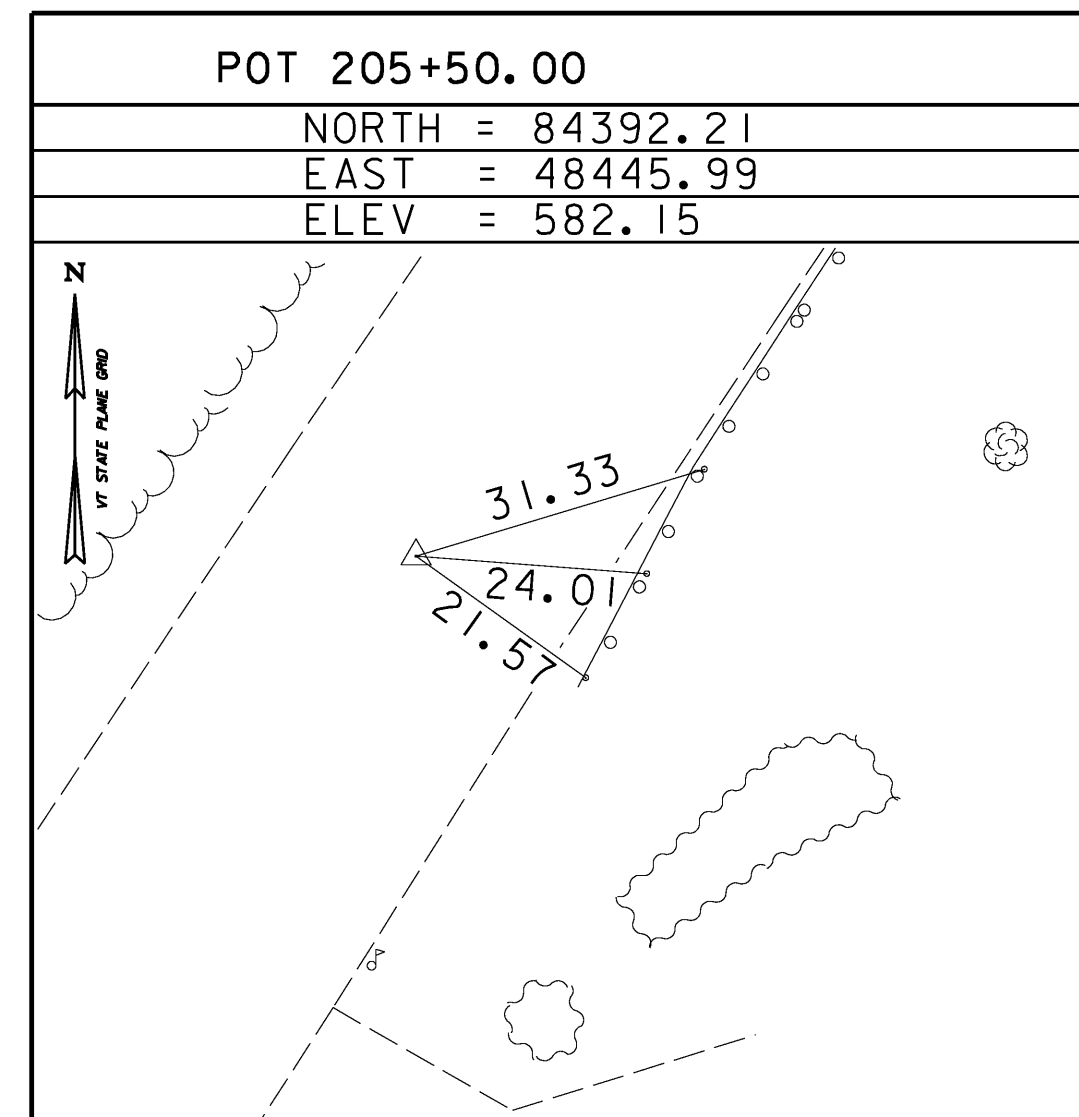
STANDARD DISK STAMPED
Duno

N = 186132.423
E = 1648229.810
ELEV. = 547.64

To reach from the intersection of Interstate I-91 north and Exit 4 ramp in Putney, go north along I-91 for 4.8 MI to the site of the mark on the left. The mark is set flush in the northeast corner of a 1.2m x 1.2m concrete pad for a drop inlet. The mark is 0.25 MI north of the US Route 5 bridge over the interstate. The mark is located 5.8 M west of and about 1m lower than the west edge of pavement of I-91 north bound lane, 7.0m east of and about 1m lower than the east edge of pavement of I-91 south bound lane, 1.1m north of the south edge of the concrete DI, 0.15m south of the north edge of the concrete DI, and 0.7m west of a fiberglass witness post.

- * NO Traverse was run: GPS control in project area 09/02/00 R. Gilman P.C. & R. Bullock
- DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT
- TO ALLOW THE STATE PLANE COORDINATES TO FIT THE AGENCY DESIGN PLANE, SUBTRACT 100,000 FROM THE NORTHING AND SUBTRACT 1,600,000 FROM THE EASTING

ALIGNMENT TIES



• ALIGNMENT STAKED 09/29/2003 by R. Gilman P.C. & P. Winters

ALIGNMENT COORDINATES

	NORTHING	EASTING
MAINLINE POB STA. 205+00.00	84350.11	48418.00
MAINLINE PC STA. 207+95.65	84595.76	48583.50
MAINLINE PT STA. 219+68.11	85713.93	48676.00
MAINLINE POE STA. 220+00.04	85742.30	48662.72

	NORTHING	EASTING
DETOUR POB STA. 400+00.00	84098.06	48276.23
DETOUR PT STA. 400+88.82	84184.12	48299.05
DETOUR PC STA. 405+12.42	84605.99	48337.26
DETOUR PT STA. 407+26.99	84788.70	48437.78
DETOUR PC STA. 410+27.81	84971.99	48676.31
DETOUR PT STA. 412+48.52	85160.82	48777.31

	NORTHING	EASTING
TAYLOR ROAD POB STA. 600+00.00	84734.94	48386.04
TAYLOR ROAD PC STA. 600+20.73	84747.81	48369.29
TAYLOR ROAD PT STA. 600+70.46	84790.89	48348.79
TAYLOR ROAD POE STA. 601+98.31	84917.90	48355.60

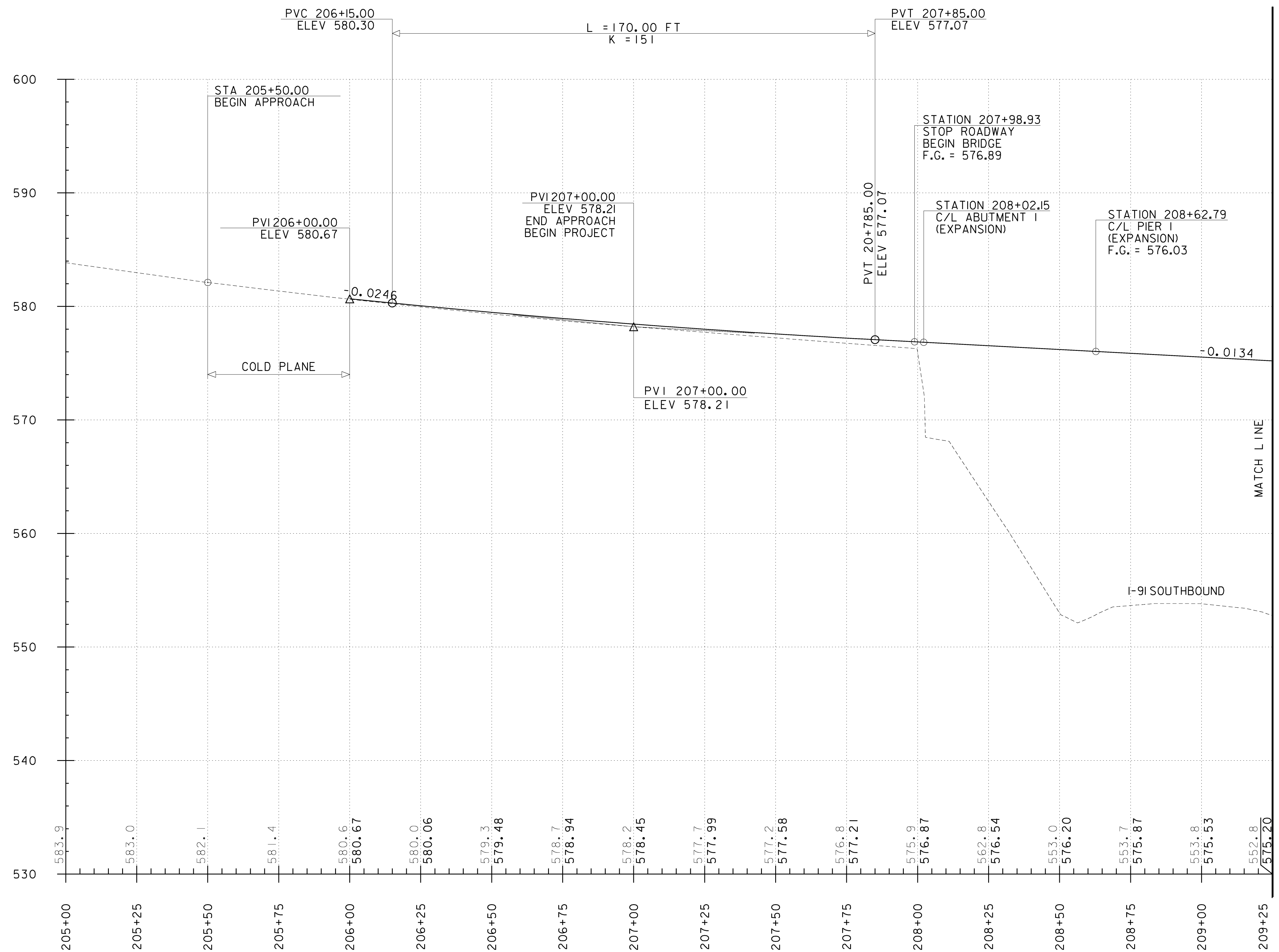
	NORTHING	EASTING
I-91 POB STA. 1198+00.00	84516.22	48728.05
I-91 POE STA. 1203+00.00	84994.01	48580.70

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (96)
ADJUSTMENT	none

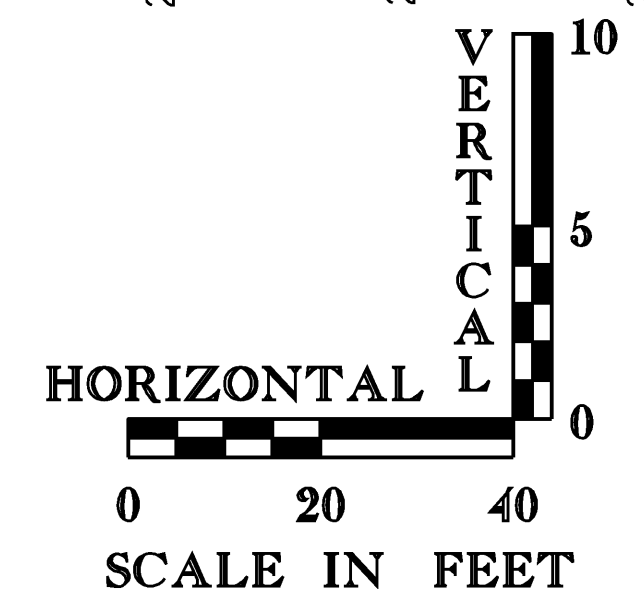
NOTES:
1. ELEVATIONS GIVEN FOR THE ALIGNMENT COORDINATES REFLECT EXISTING CONDITIONS SURVEYED ON SEPTEMBER 2000.

PROJECT NAME:	PUTNEY
PROJECT NUMBER:	IM 091-(31)
FILE NAME: ... \Plot Files\08_z93a148tie.ptf	PLOT DATE: 10/19/2009
PROJECT LEADER: G. BOGUE	DRAWN BY: R. BULLOCK
DESIGNED BY:	CHECKED BY: G. GOYETTE
TIE SHEET	SHEET 8A OF 75





MAINLINE PROFILE



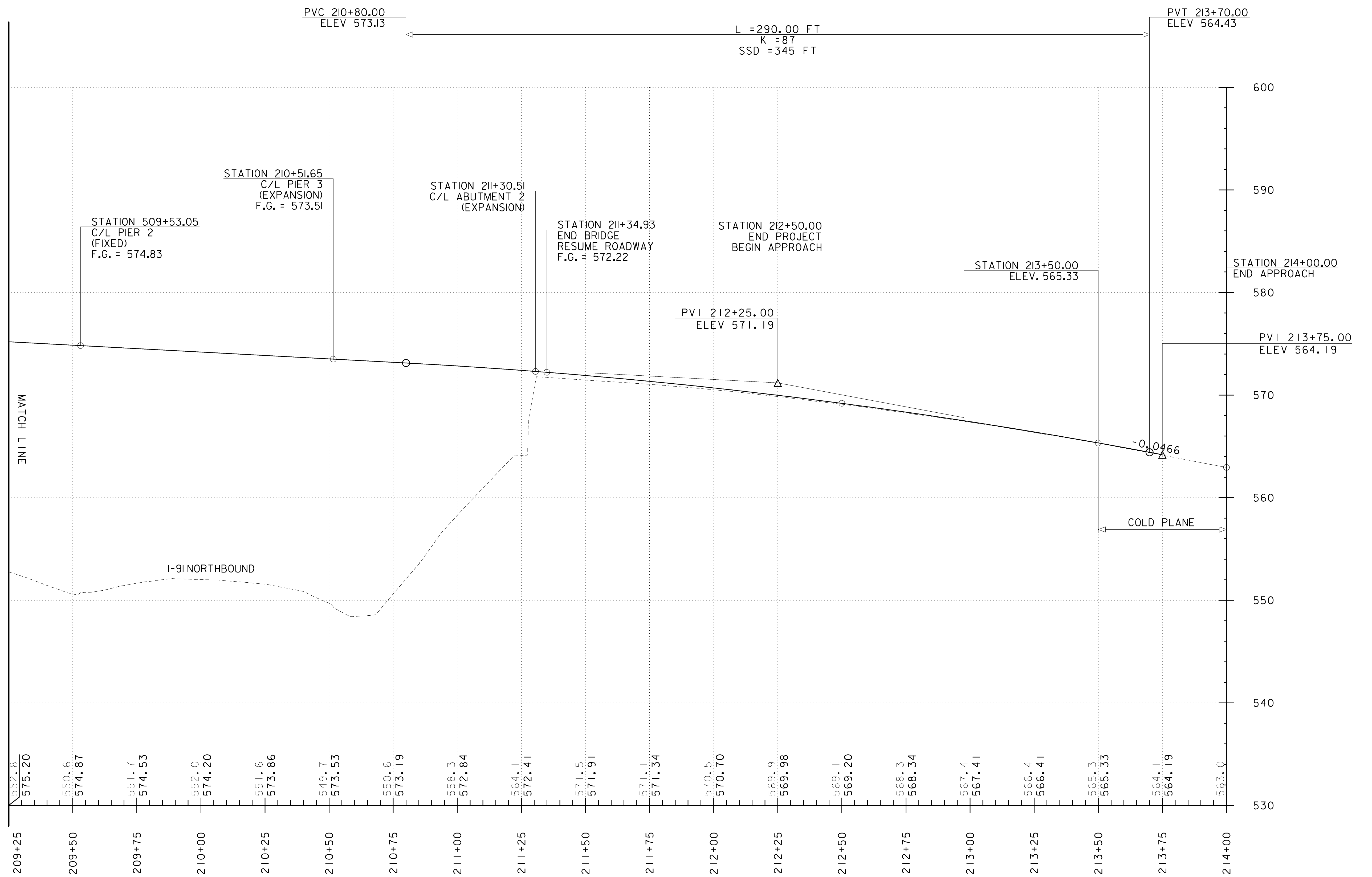
- NOTES:
 1. ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG CENTERLINE
 2. ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG CENTERLINE

PROJECT NAME: PUTNEY
 PROJECT NUMBER: IM 091-(31)

FILE NAME: ...NIO z93al48 pro l.ptf
 PROJECT LEADER: G. BOGUE
 DESIGNED BY: E. ALLING
 PLOT DATE: 10/19/2009
 DRAWN BY: E. ALLING
 CHECKED BY: G. GOYETTE
 SHEET 10 OF 75

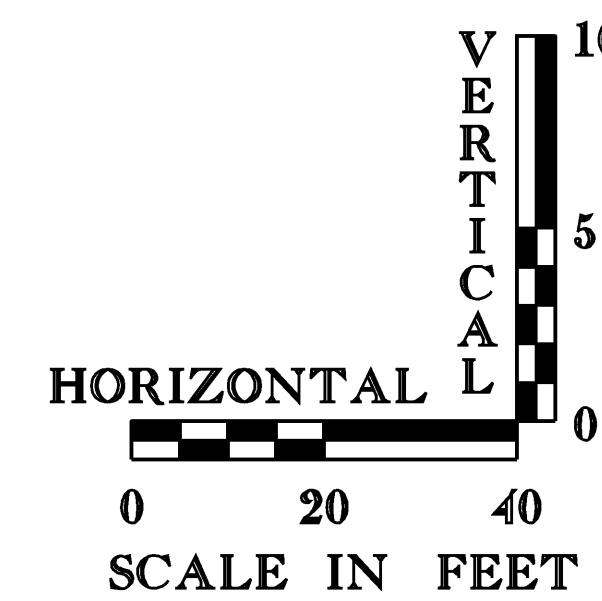


MAINLINE PROFILE 1

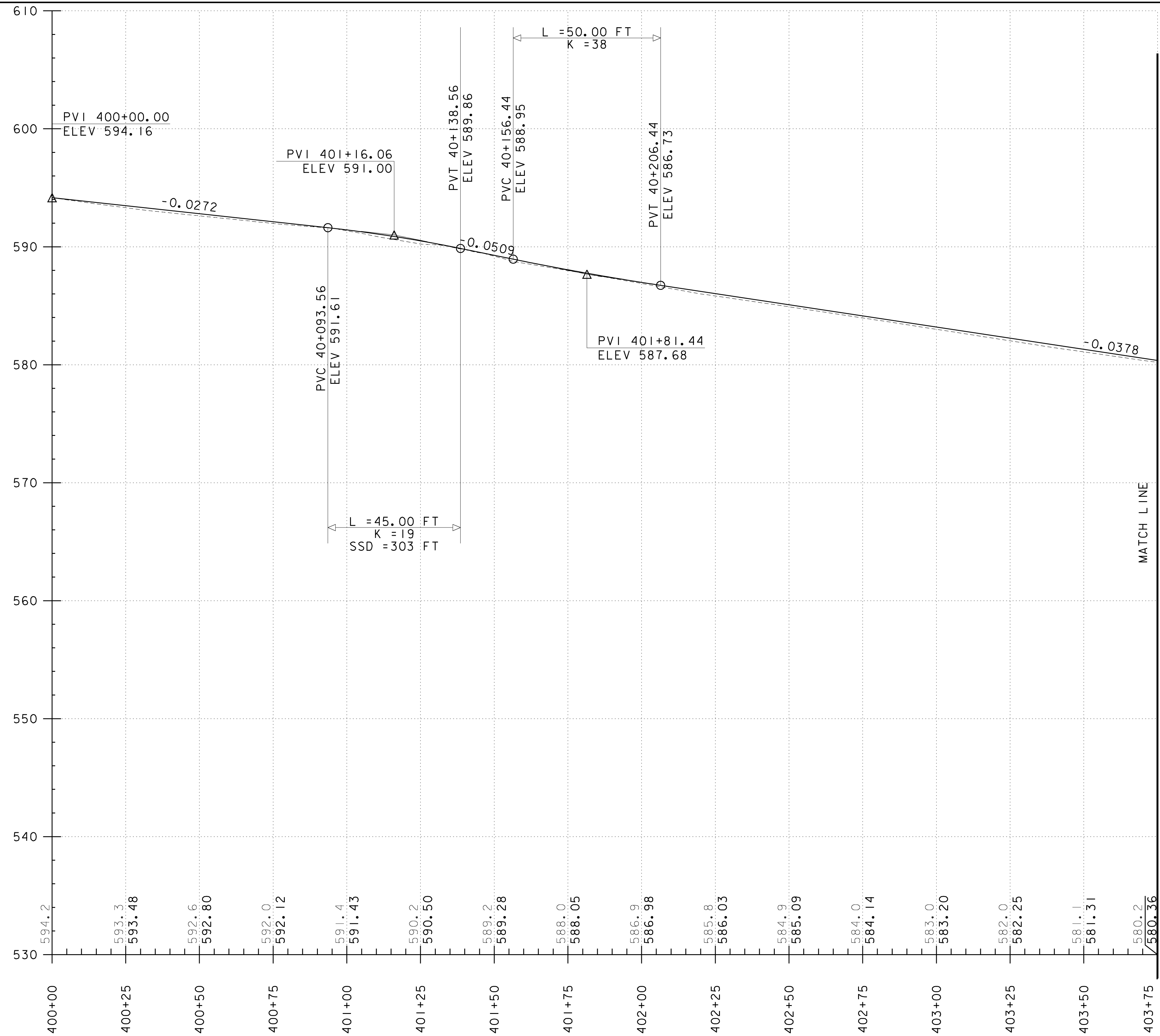


NOTES:
 1. ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG CENTERLINE
 2. ELEVATIONS SHOWN TO THE NEAREST HUNDRETH ARE FINISH GRADE ALONG CENTERLINE

MAINLINE PROFILE

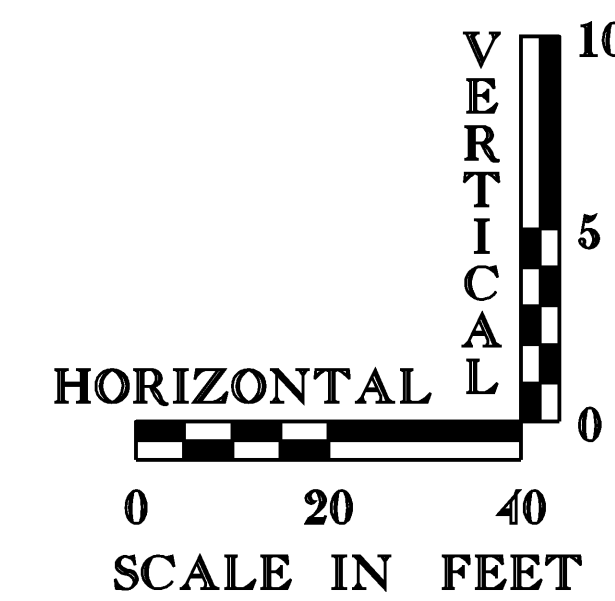


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FILE NAME: ...N1293dl48 pro 2.pptf	PLOT DATE: 10/19/2009
PROJECT LEADER: G. BOGUE	DRAWN BY: E. ALLING
DESIGNED BY: E. ALLING	CHECKED BY: G. GOYETTE
MAINLINE PROFILE 2	SHEET 11 OF 75



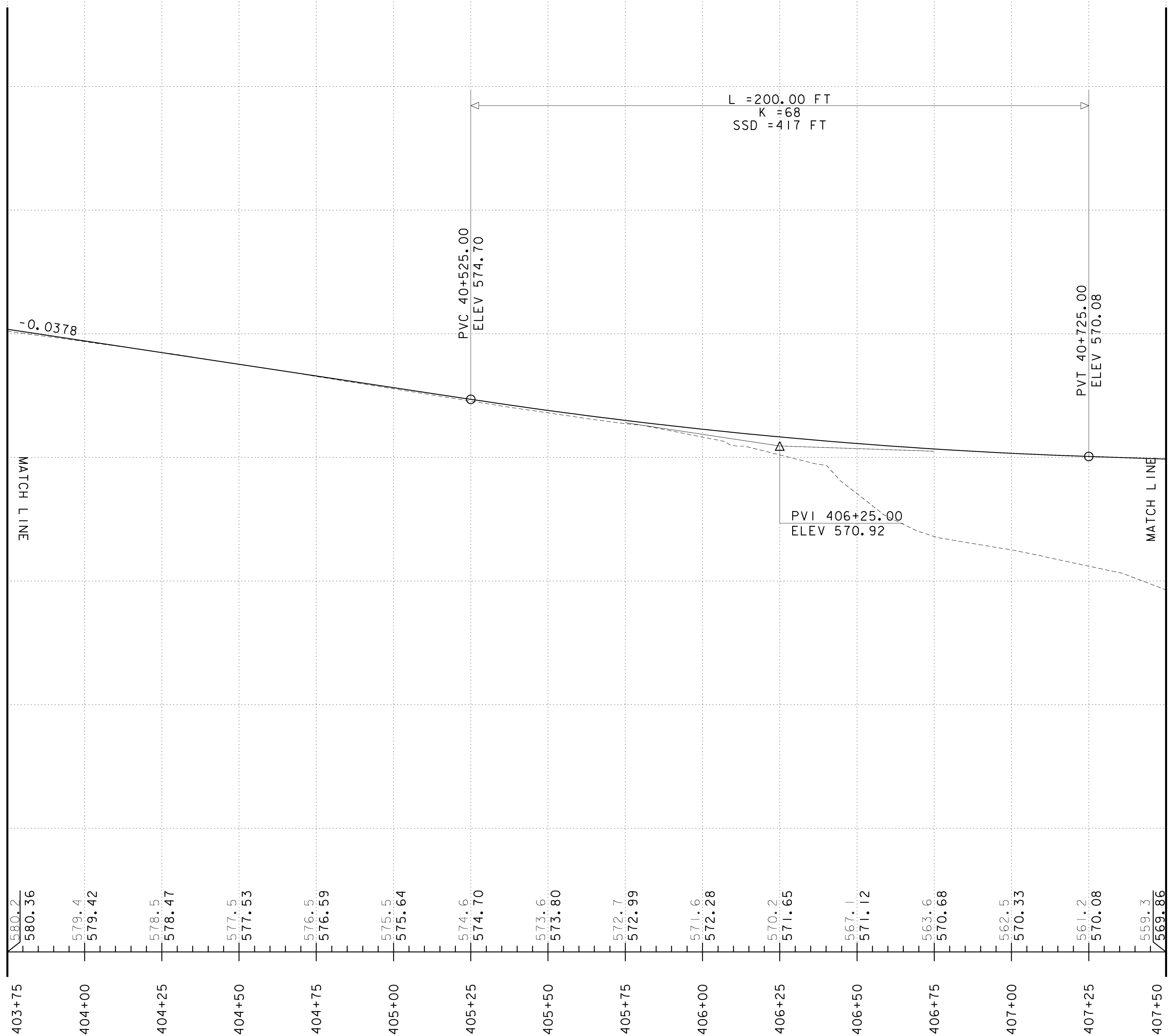
NOTES:

1. ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG CENTERLINE.
2. ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG CENTERLINE.



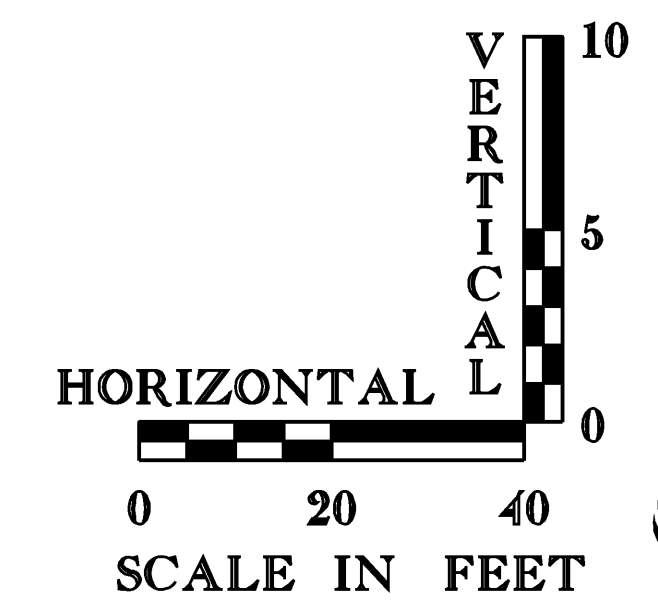
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 PROJECT NUMBER: IM 091-1(31)

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 PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
 DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
TEMPORARY DETOUR PROFILE 1 SHEET 12 OF 75

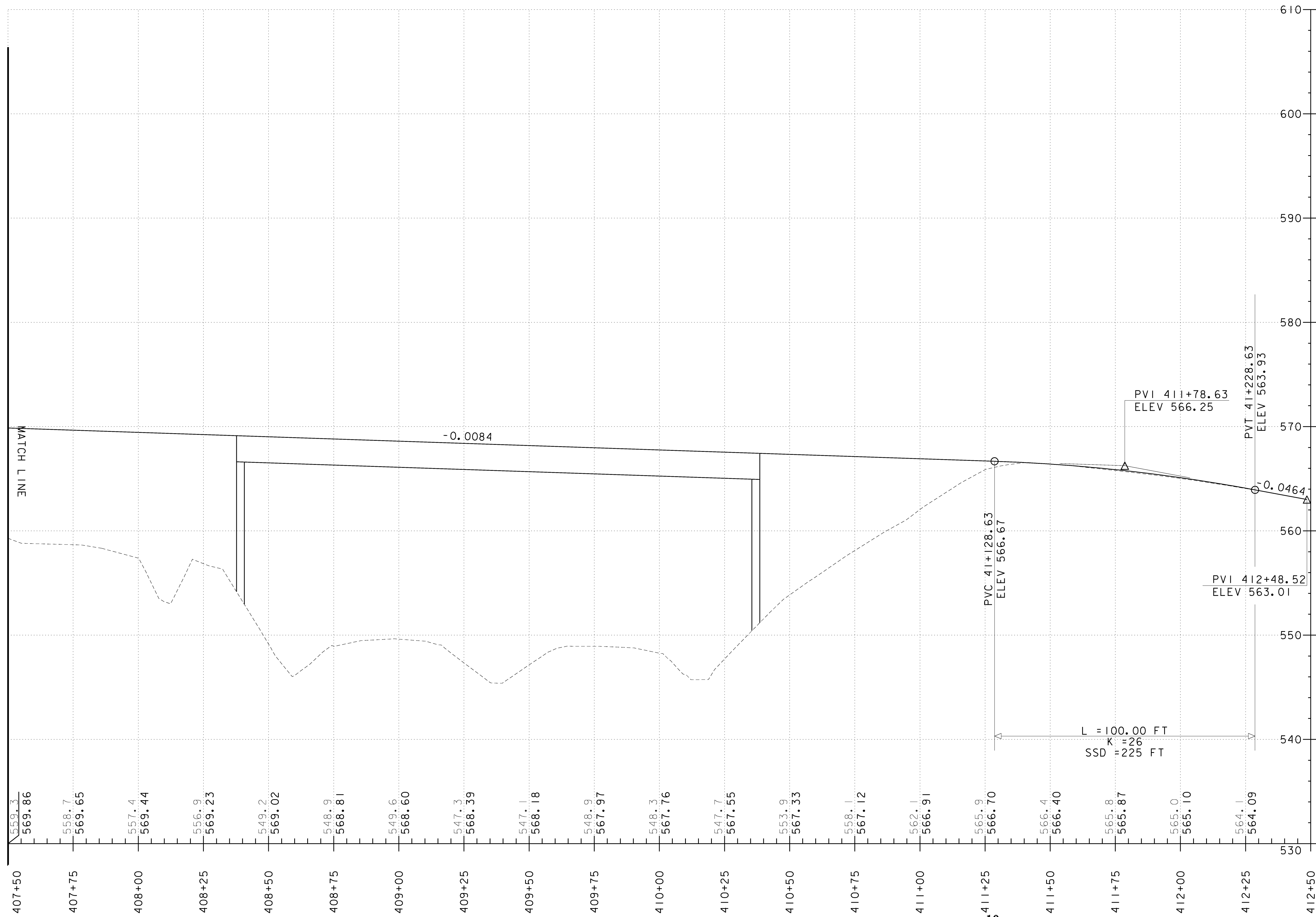


NOTES:

1. ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG CENTERLINE.
2. ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG CENTERLINE.

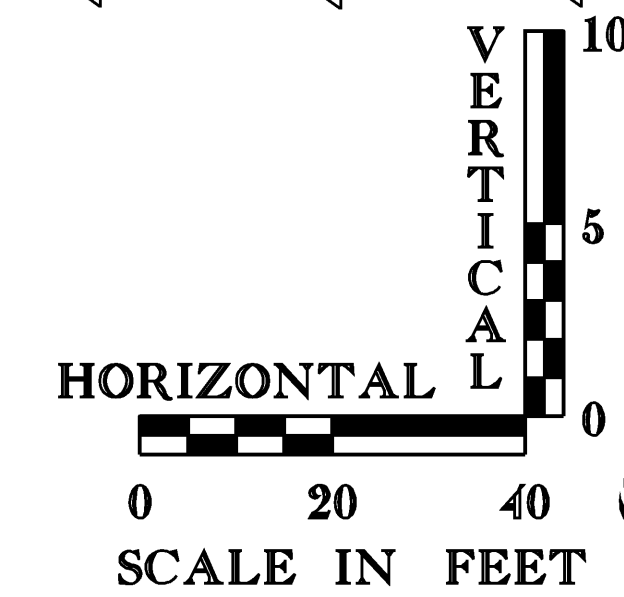


PROJECT NAME: PUTNEY	DATE: 10/19/2009
PROJECT NUMBER: IM 091-(31)	
FILE NAME: ...N3 z93ai48 pro temp_detour2.dwg	
PROJECT LEADER: G. BOGUE	DRAWN BY: E. ALLING
DESIGNED BY: E. ALLING	CHECKED BY: G. GOYETTE
TEMPORARY DETOUR PROFILE 2	SHEET 13 OF 75



NOTES:

1. ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG CENTERLINE.
2. ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG CENTERLINE.



PROJECT NAME: PUTNEY
PROJECT NUMBER: IM 091-1(31)

FILE NAME: ...N14 z93a148 pro temp.dettour 311011
PROJECT LEADER: G. BOGUE
DESIGNED BY: E. ALLING
TEMPORARY DETOUR PROFILE 3

DATE: 10/19/2009
DRAWN BY: E. ALLING
CHECKED BY: G. GOYETTE
SHEET 14 OF 75

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES REHABILITATION OF BRIDGE 19A ON U.S. ROUTE 5 OVER INTERSTATE 91 IN PUTNEY, VERMONT. IT INCLUDES REPLACEMENT OF THE EXISTING BRIDGE DECK, GUARDRAIL, CURB, STEEL BEAMS AND PIER CAPS AS WELL AS THE REPLACEMENT OF THE ABUTMENTS AND WING WALLS DOWN TO THE EXISTING FOOTINGS. THE PROJECT WILL ALSO INCLUDE THE INSTALLATION OF A TWO WAY TEMPORARY BRIDGE DETOUR LOCATED IMMEDIATELY NORTH OF THE EXISTING STRUCTURE THAT WILL REQUIRE FILLED APPROACHES AND TEMPORARY ABUTMENTS TYPICALLY UTILIZING DRIVEN SHEET PILES. THE TOTAL DISTURBED AREA (EXCLUDING OFFSITE WASTE, BORROW AND STAGING AREAS) IS 2.20 ACRES. THE SITE, BASED ON NAD 83/92, IS LOCATED AT 84516.5014 N, 48529.9546 E.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS ON-SITE WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST TWO CONSTRUCTION SEASONS WITH MINIMUM WINTER WORK.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE LONG GRADUAL CURVED ALIGNMENT HAS FILLED APPROACHES ON EACH END WITH THE FOLLOWING FEATURES:
A PRIVATE DRIVE TO A SINGLE FAMILY HOME IMMEDIATELY PRECEEDS THE SOUTHERN APPROACH AND THE FRONT LAWN FOR THIS RESIDENCE RUNS ALONG THE TOE OF THE EXISTING 2-3 FEET HIGH FILL SLOPE. ON THE OTHER SIDE OF U.S. ROUTE 5, A SMALL SEASONAL DRAINAGE DITCH RUNS ALONG THE WOODED TOE OF FILL SLOPE. THIS DITCH LINE DRAINS BACK TOWARDS INTERSTATE 91 AND IS APPROXIMATELY 2 FEET BELOW THE ROADWAY AT THE BEGIN APPROACH AND APPROXIMATELY 10 FEET BELOW THE ROADWAY AT THE WINGWALL OF ABUTMENT 1. THE TEMPORARY DETOUR WILL BE LOCATED IN THIS AREA AND THE DITCHLINE WILL REQUIRE A SLIGHT RELOCATION SIX TO EIGHT FEET OUTSIDE ITS EXISTING LOCATION TO ACCOMODATE THE SHEET PILES OR OTHER MEANS ASSOCIATED WITH THE TEMPORARY ABUTMENT. THE NORTHERN APPROACH IS COMPRISED OF HIGHER FILL SLOPES 30 FEET HIGH OR MORE ON EACH SIDE OF U.S. ROUTE 5.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THERE IS A SINGLE DROP INLET LOCATED APPROXIMATELY 75 FEET BEYOND THE BRIDGE ON THE NORTH SIDE OF THE ROADWAY. IT IS PRESUMED TO DRAIN INTO A DITCH AT THE TOE OF THE FILL SLOPE ALTHOUGH NO PIPE WAS IDENTIFIED IN THE SURVEY. THIS DITCHLINE RECEIVES WATER FROM THE OPPOSITE SIDE OF INTERSTATE 91 THROUGH A LONG CULVERT, DRAINS NORTH ALONGSIDE U.S. ROUTE 5 AND LIES WELL OUTSIDE THE PREDICTED LIMITS OF CONSTRUCTION FOR THE TEMPORARY DETOUR. HOWEVER, MEASURES WILL HAVE TO BE TAKEN TO PREVENT SEDIMENT ASSOCIATED WITH THE TEMPORARY DETOUR FROM ENTERING THIS DRAINAGE FEATURE.

1.2.3 VEGETATION

WOODS OCCUPY THE AREAS BEYOND THE TOE OF SLOPE ON THE NORTH SIDE OF U.S. ROUTE 5 AT THE SOUTHERN END OF THE PROJECT AND BOTH SIDES OF ROUTE 5 AT THE NORTHERN END OF THE PROJECT. THE WOODED AREAS CONSIST OF MIXED HARDWOOD AND SOFTWOOD.

1.2.4 SOILS

ACCORDING TO THE SOIL CONSERVATION SERVICE, THE SOIL TYPE FOR THIS AREA OF VERMONT IS CLASSIFIED AS DUMMERSTON (60"+ DEEP)-MACOMBER (20"-40"+ DEEP)-TACONIC (0"-20") AND DESCRIBED AS VERY DEEP TO SHALLOW, GENTLY SLOPING TO VERY STEEP, SOMEWHAT EXCESSIVELY DRAINED AND WELL DRAINED SOILS THAT FORMED IN LOAMY GLACIAL TILL. THE RESPECTIVE SOIL ERODIBILITY COEFFICIENTS ARE 0.32 - 0.24 - 0.24. THERE ARE NO KNOWN SENSITIVE RESOURCE AREAS WITHIN OR IMMEDIATELY OUTSIDE THE PROJECT LIMITS.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: JOINER BROOK

WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED. PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC).

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.

STONE AND BLOCK INLET PROTECTION SHALL BE USED AROUND ALL DRAINAGE INLETS IN PAVEMENT.

FILTER FABRIC INLET PROTECTION SHALL BE USED AROUND ALL DRAINAGE INLETS IN VEGETATED AREAS.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSION POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN, AT A MINIMUM.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER WILL BE NECESSARY WHEN THE PROJECT EXTENDS INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

TREATMENT OF DEWATERING COFFERDAM IS ANTICIPATED. A LOCATION FOR TREATMENT HAS BEEN PROPOSED AND IS SHOWN ON THE PLANS. HOWEVER THE SPECIFIC MEANS FOR TREATMENT OF DISCHARGE SHALL BE PROVIDED BY THE CONTRACTOR.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

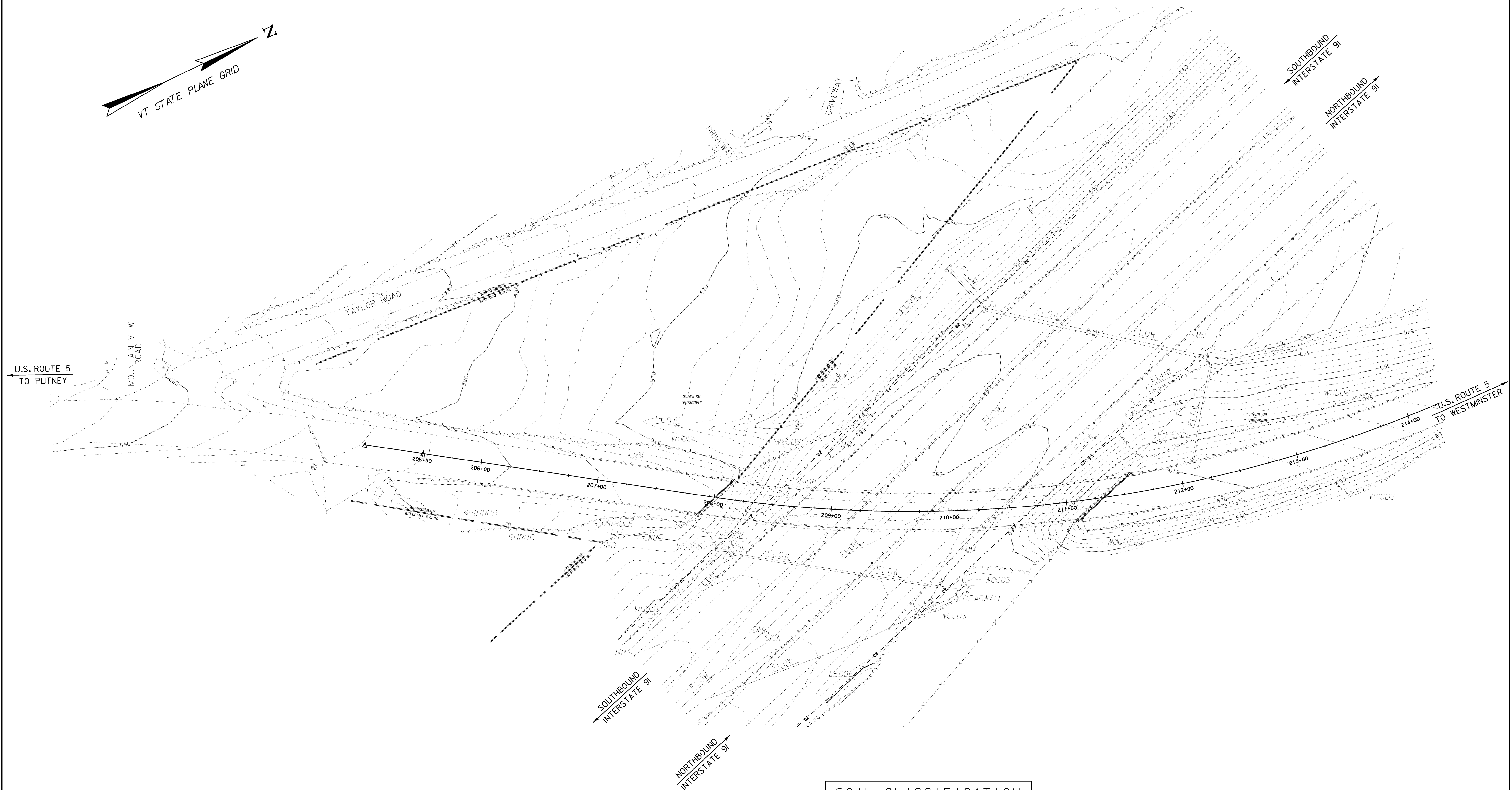
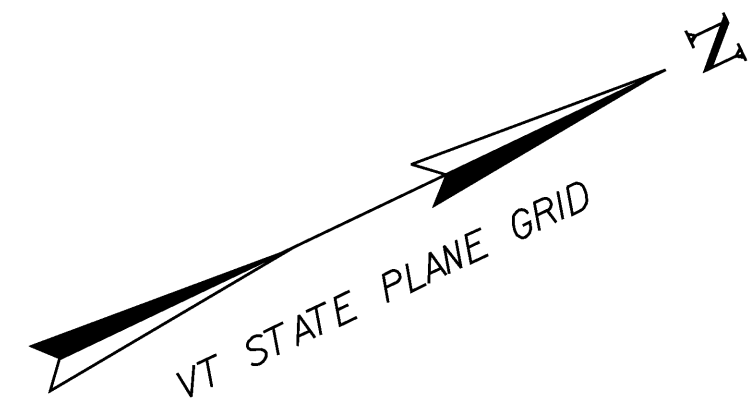
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

1.5.3 UPDATES



PROJECT NAME: PUTNEY
PROJECT NUMBER: IM 091-1(31)

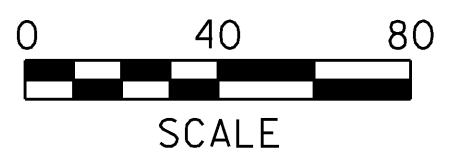
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PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
EPSC NARRATIVE SHEET 15 OF 75



SOIL CLASSIFICATION
 DUMMERSTON SILT LOAM
 VERY STONY
 8 - 15% SLOPES
 "K FACTOR" 0.28
 CLASSIFIED HIGHLY ERODIBLE

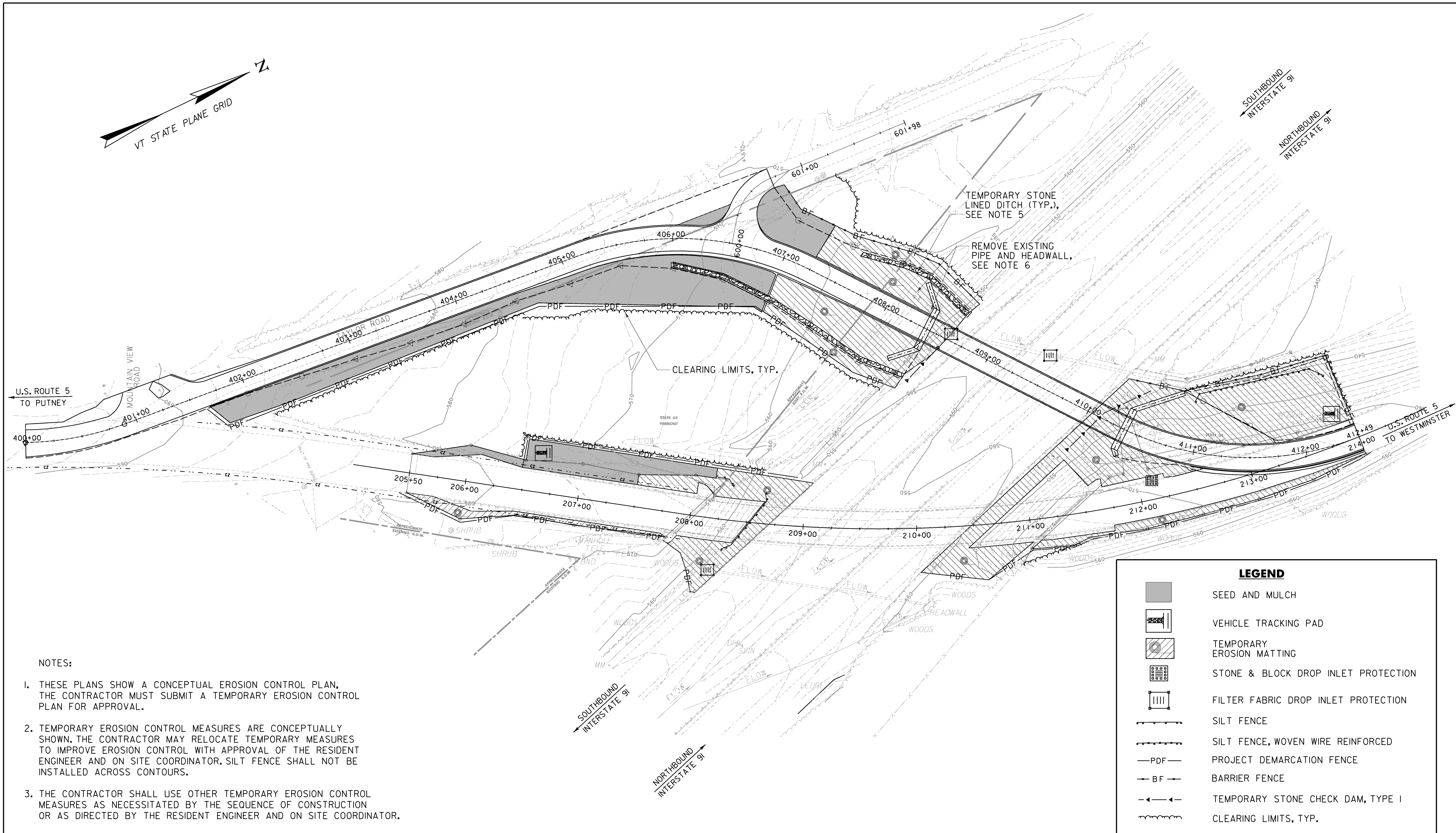
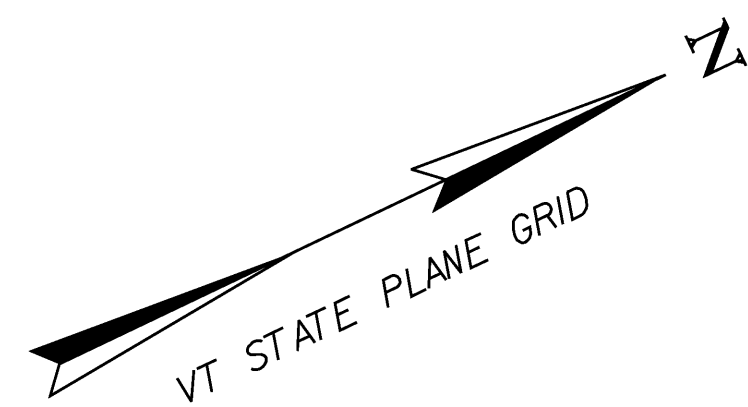
EPSC EXISTING CONDITIONS SITE PLAN

PROJECT NAME: PUTNEY
 PROJECT NUMBER: IM-091-1(31)
 FILE NAME: ...\\Plot Files\15 z93a148ero l.ptfPLOT DATE: 10/19/2009
 PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
 DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
EPSC EXISTING CONDITIONS SITE PLAN SHEET 16 OF 75



THIS SHEET IS FOR EROSION PREVENTION AND SEDIMENT CONTROL ONLY





NOTES:

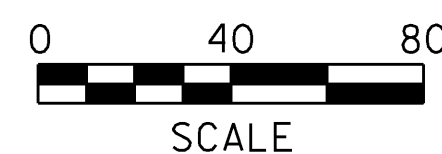
1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL.
2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON SITE COORDINATOR.
4. REFER TO TEMPORARY EROSION CONTROL DETAIL SHEETS FOR ADDITIONAL DETAILS.
5. SEE TEMPORARY DETOUR CROSS-SECTIONS FOR TEMPORARY STONE LINED DITCH DETAILS. PAYMENT SHALL BE INCIDENTAL TO 528.II, TWO WAY TEMPORARY BRIDGE.
6. PAYMENT TO REMOVE PIPE AND HEADWALL FOR CONSTRUCTION OF TEMPORARY BRIDGE APPROACH SHALL BE INCIDENTAL TO ITEM 528.II.

LEGEND	
	SEED AND MULCH
	VEHICLE TRACKING PAD
	TEMPORARY EROSION MATTING
	STONE & BLOCK DROP INLET PROTECTION
	FILTER FABRIC DROP INLET PROTECTION
	SILT FENCE
	SILT FENCE, WOVEN WIRE REINFORCED
	PROJECT DEMARCATION FENCE
	BARRIER FENCE
	TEMPORARY STONE CHECK DAM, TYPE I
	CLEARING LIMITS, TYP.

EPSC CONSTRUCTION SITE PLAN

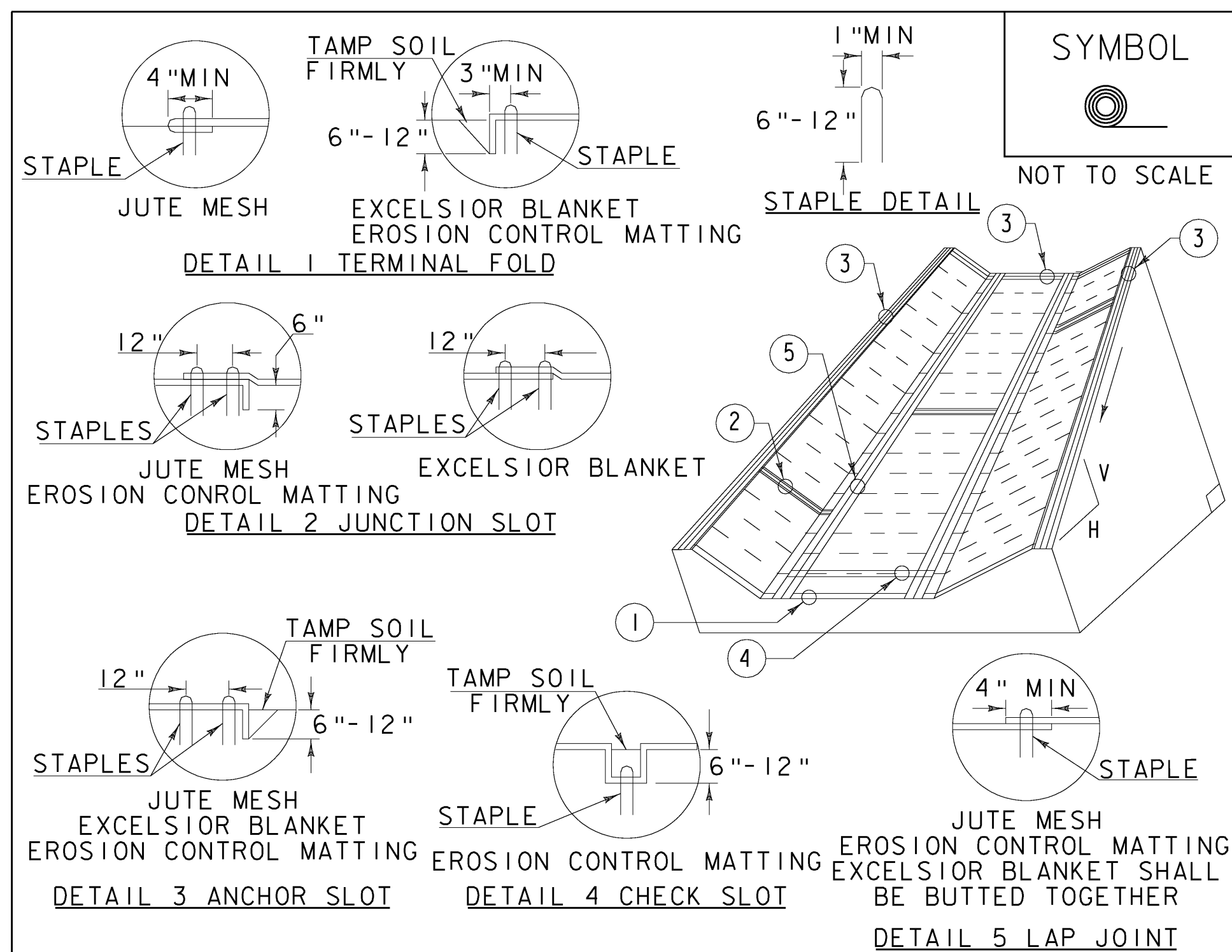
PROJECT NAME: PUTNEY
 PROJECT NUMBER: IM-091-I(31)

FILE NAME: ...NPlot Files\16 z93a148ero 2.p+PLOT DATE: 10/19/2009
 PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
 DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
EPSC CONSTRUCTION SITE PLAN SHEET 17 OF 75



THIS SHEET IS FOR EROSION PREVENTION AND SEDIMENT CONTROL ONLY





CONSTRUCTION SPECIFICATIONS

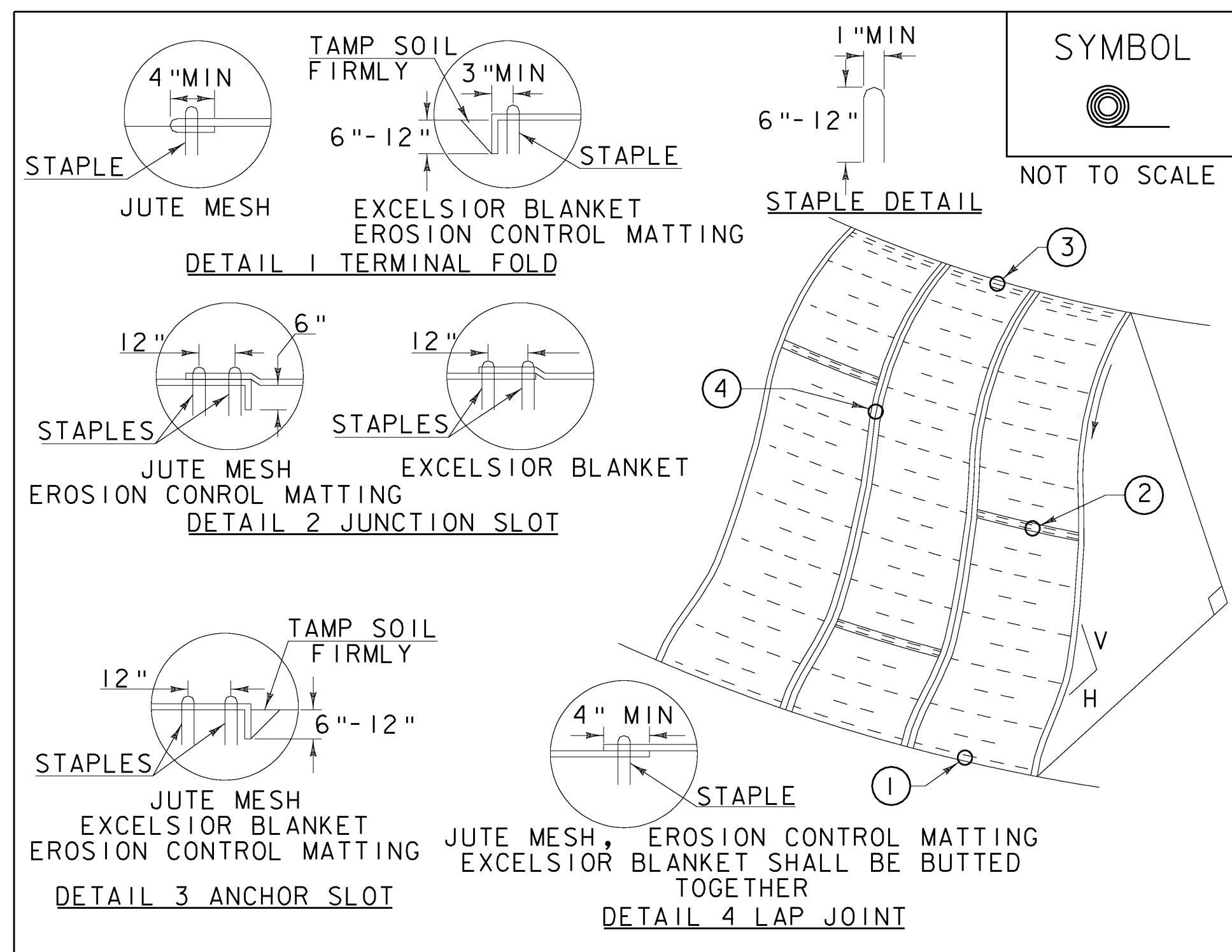
1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS		
MARCH 8, 2007	JMF	
APRIL 16, 2007	WHF	
JANUARY 13, 2009	WHF	



CONSTRUCTION SPECIFICATIONS

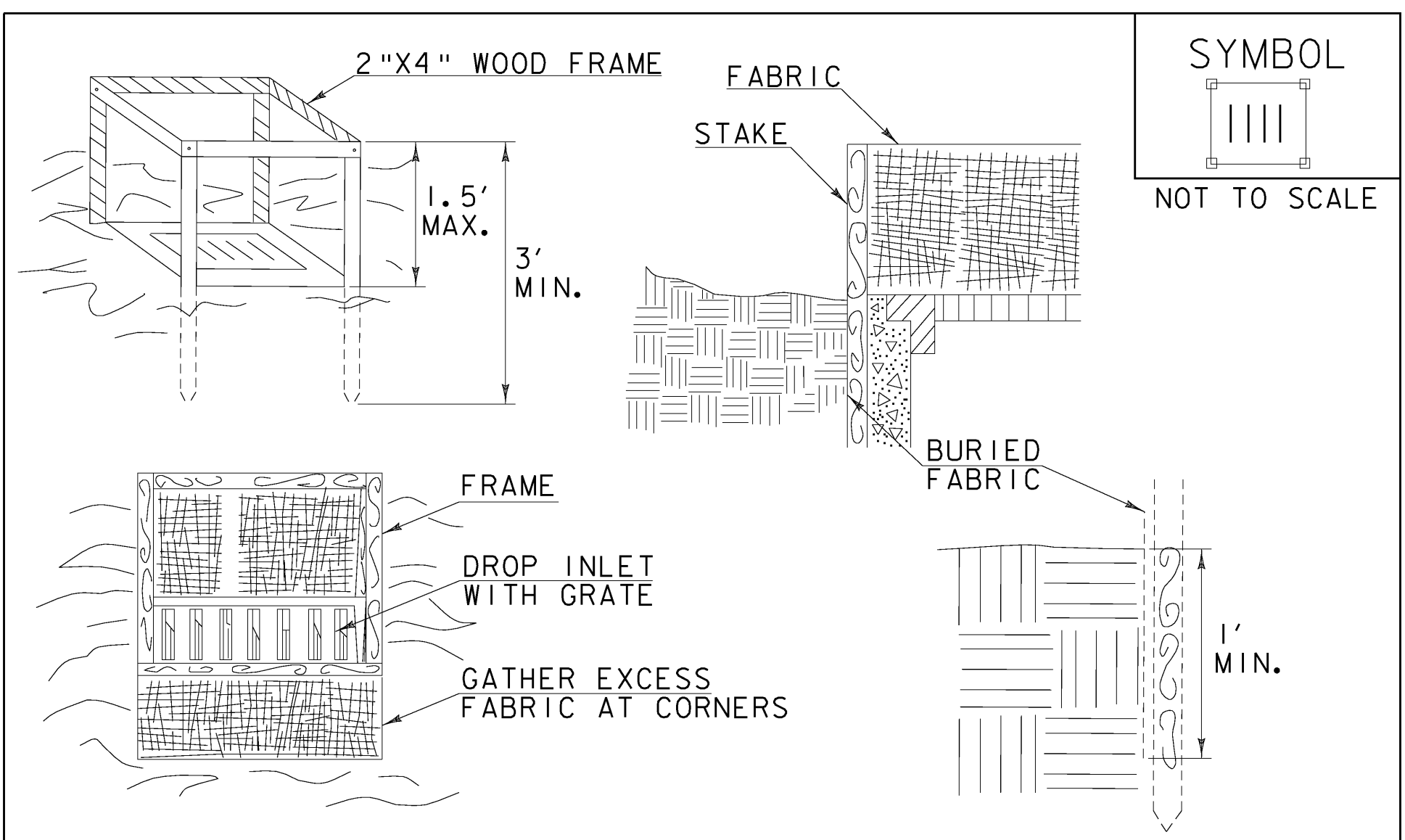
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS		
APRIL 16, 2007	JMF	
JANUARY 13, 2009	WHF	



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2"x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3'.
4. SPACE STAKES EVENLY AROUND INLET 3' APART AND DRIVE A MINIMUM 18" DEEP. SPANS GREATER THAN 3' MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1' MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
7. MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FILTER FABRIC DROP INLET PROTECTION

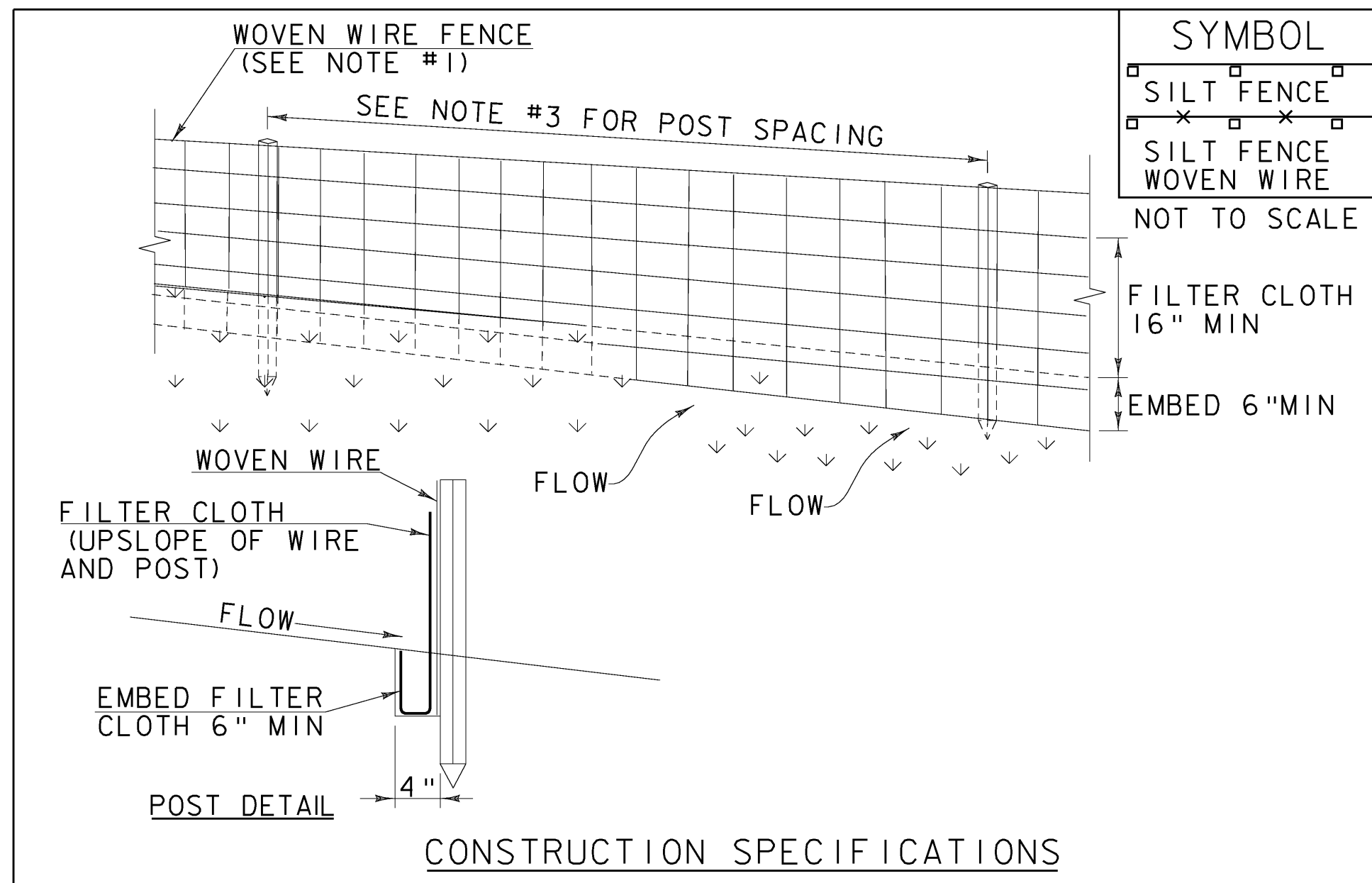
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS		
MARCH 7, 2008	WHF	
JANUARY 13, 2009	WHF	

EPSC DETAIL SHEETS

PROJECT NAME: PUTNEY	PROJECT NUMBER: IM-091-(31)
FILE NAME: ...N18 z93a148erodet.pdf	PLOT DATE: 10/19/2009
PROJECT LEADER: G. BOGUE	DRAWN BY: VTRANS
DESIGNED BY: VTRANS	CHECKED BY:
EPSC DETAILS SHEET - 1	SHEET 19 OF 75





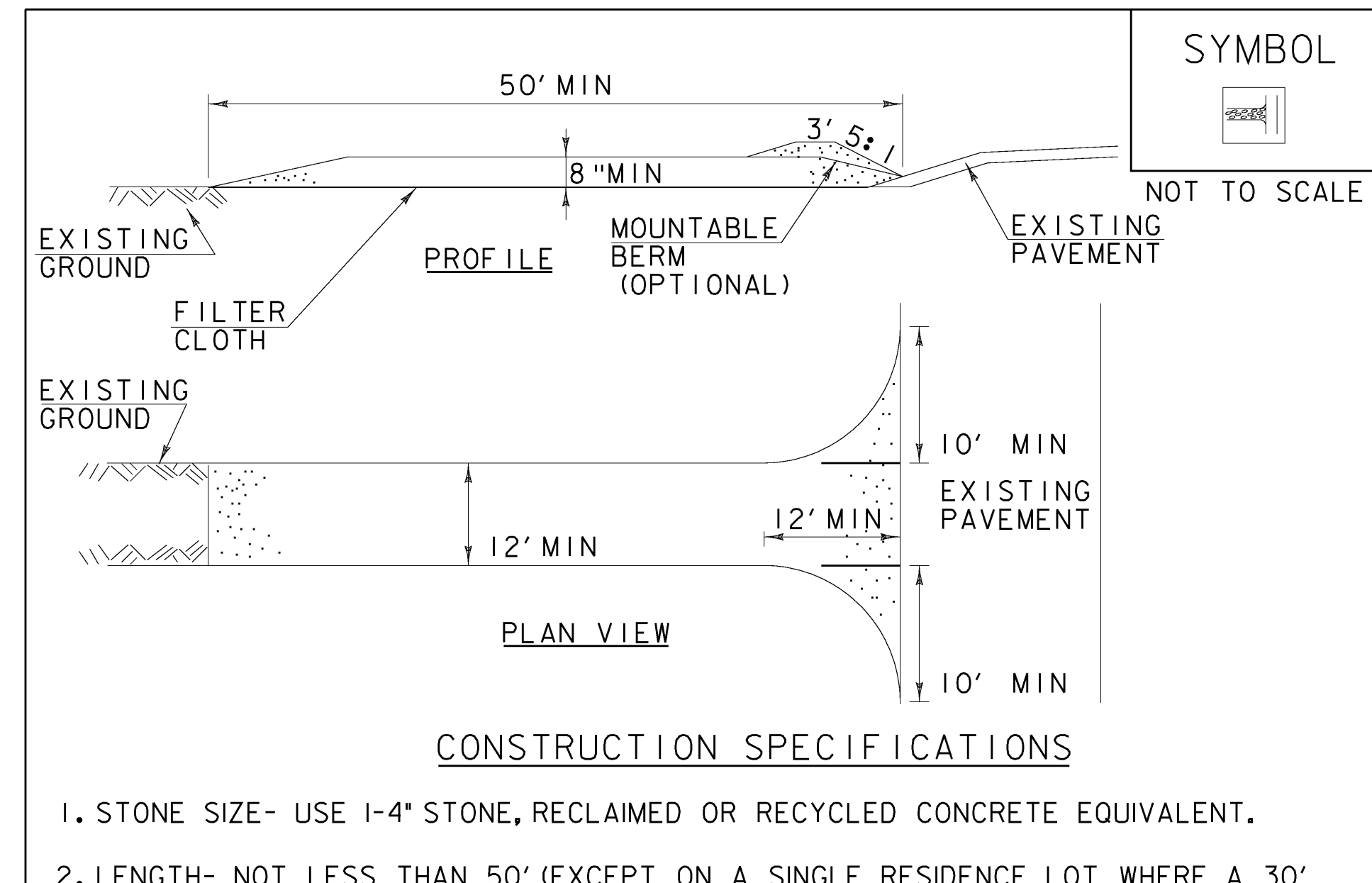
- CONSTRUCTION SPECIFICATIONS**
- WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
 - FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
 - POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
 - WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
 - PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.5) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).



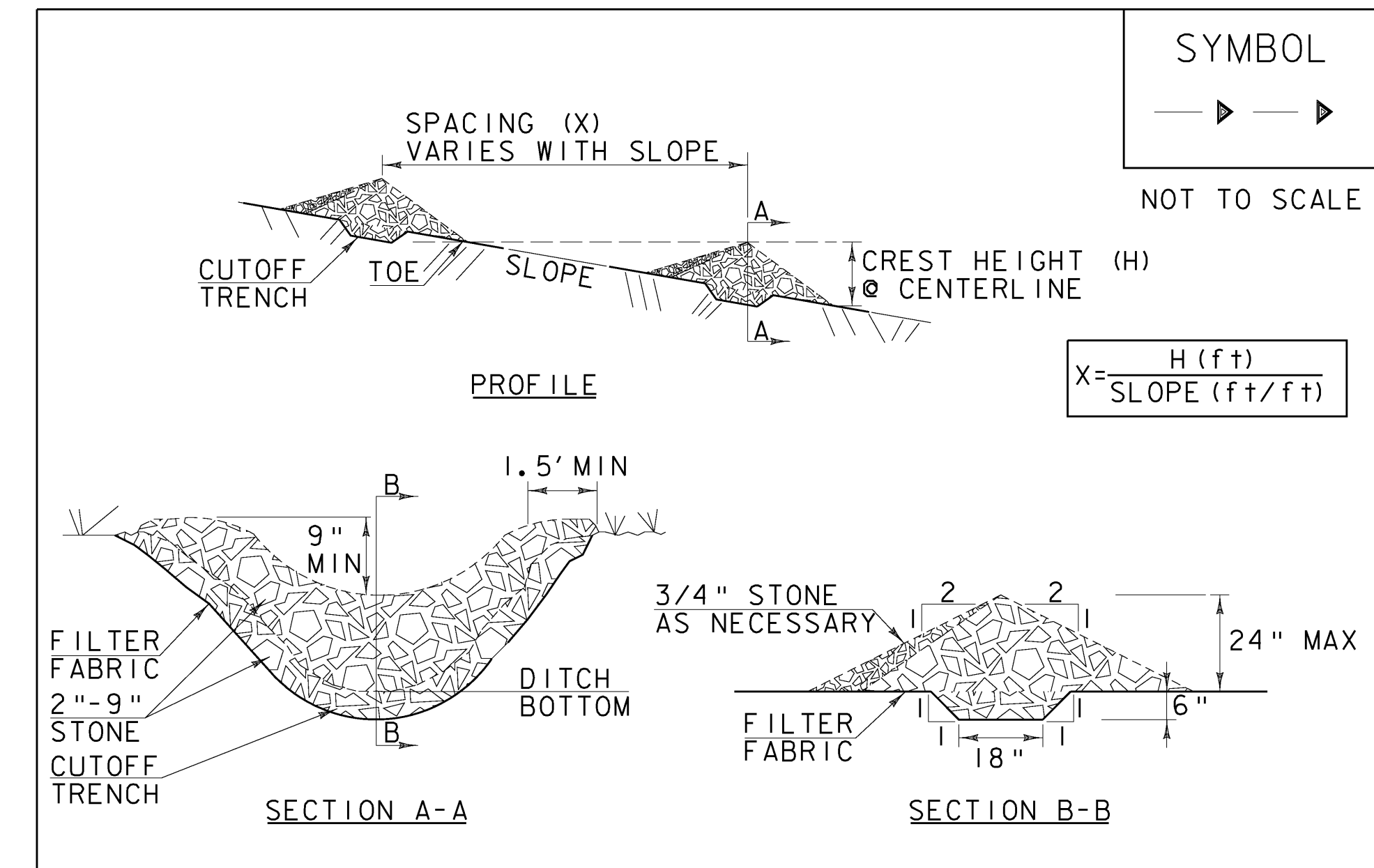
- CONSTRUCTION SPECIFICATIONS**
- STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 - LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
 - THICKNESS- NOT LESS THAN 8".
 - WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
 - GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
 - SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 - MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.



- CONSTRUCTION SPECIFICATIONS**
- STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
 - CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
 - 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
 - EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
 - PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
 - ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
 - MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

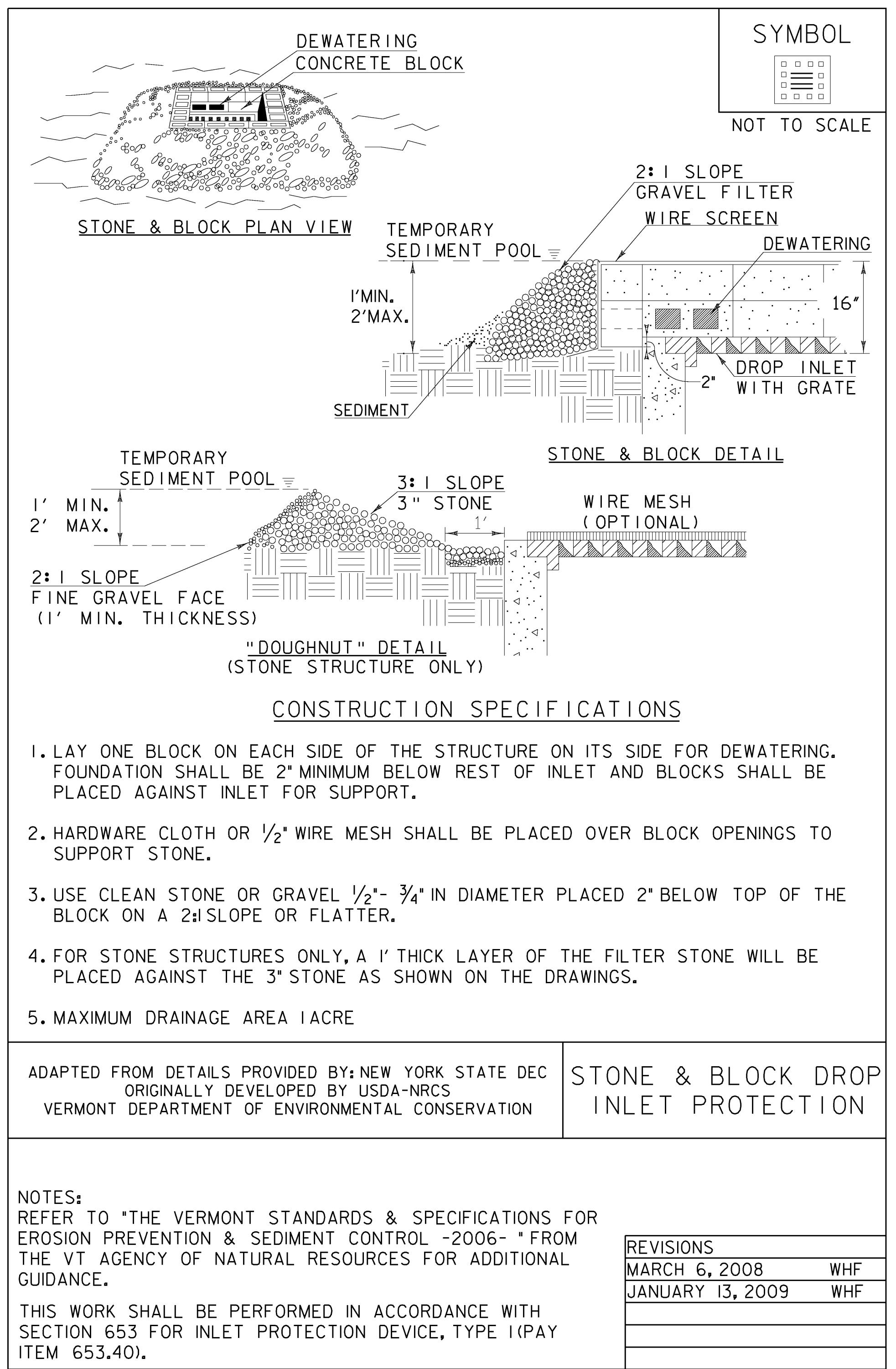
REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

EPSC DETAIL SHEETS

PROJECT NAME: PUTNEY	PROJECT NUMBER: IM-091-1(31)
FILE NAME: ...N19 z93a148erode+ 2.pft	PLOT DATE: 10/19/2009
PROJECT LEADER: G. BOGUE	DRAWN BY: VTRANS
DESIGNED BY: VTRANS	CHECKED BY:
EPSC DETAILS SHEET - 2	SHEET 20 OF 75





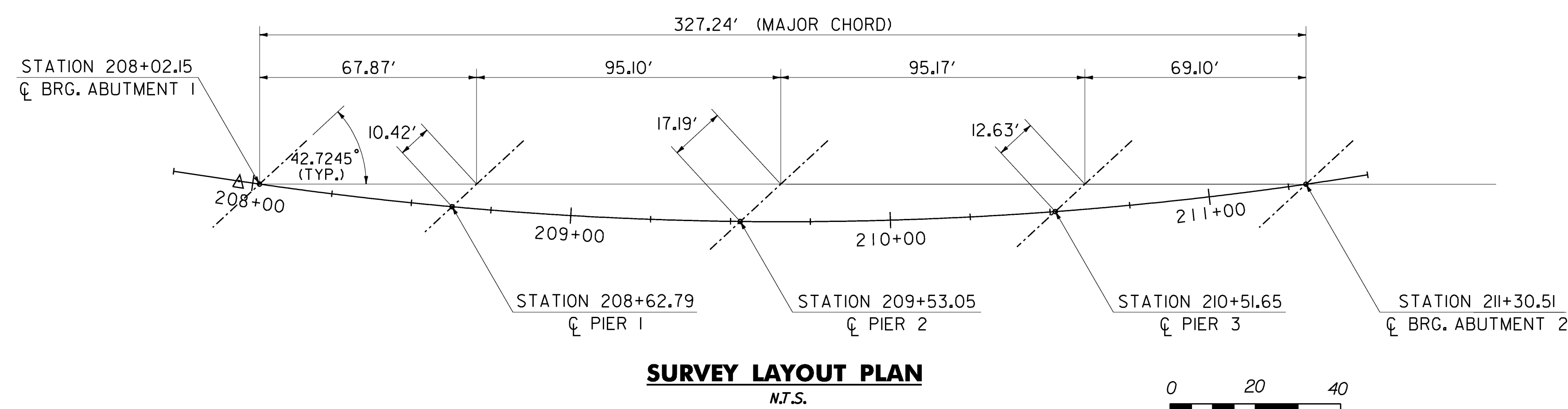
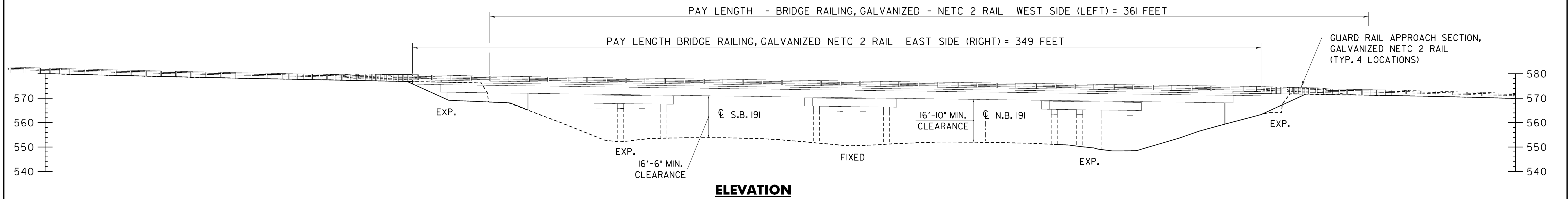
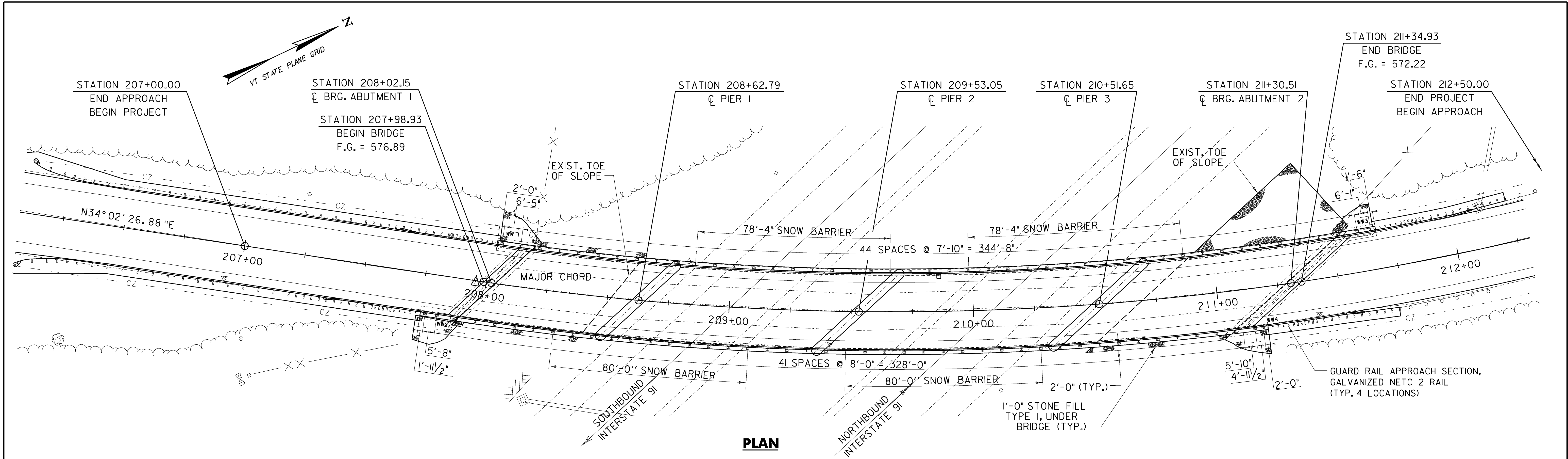
PROJECT NAME: PUTNEY	PLOT DATE: 10/19/2009
PROJECT NUMBER: IM-091-1(31)	DRAWN BY: VTRANS
FILE NAME: ...N20 z93d48erodet 3.ppf	CHECKED BY:
PROJECT LEADER: G. BOGUE	SHEET 21 OF 75
DESIGNED BY: VTRANS	
EPSC DETAILS SHEET - 3	

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PROJECT NAME: PUTNEY
PROJECT NUMBER: IM-091-(31)

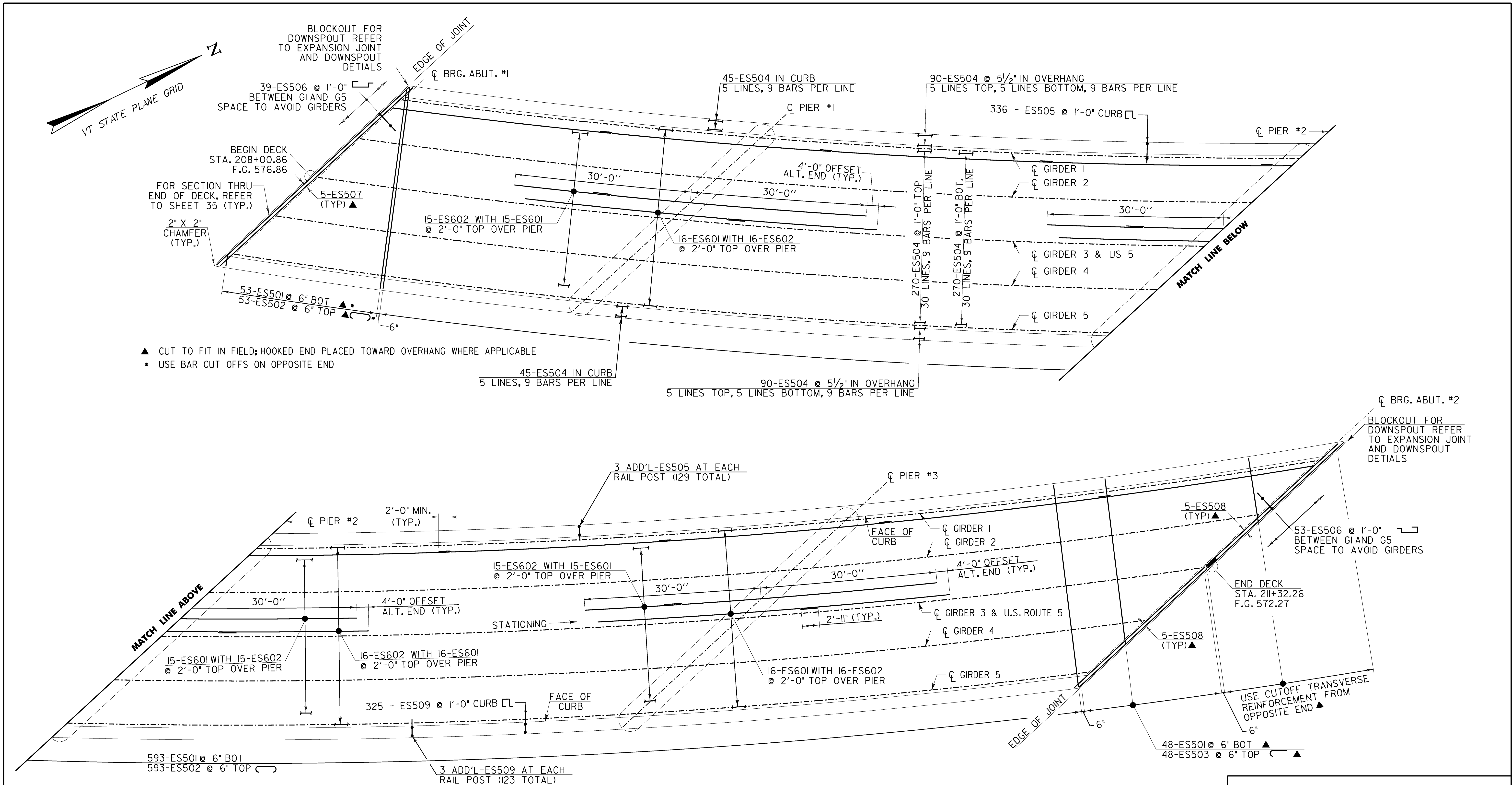


FILE NAME: ...\\plot_files\23_z93a148blank.plt PLOT DATE: 10/19/2009
PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
BLANK SHEET SHEET 23 OF 75



STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	PUTNEY	Bridge No. 19A
Highway No.	U.S. ROUTE 5	Log Sta.
		Surv. Sta.
U.S. ROUTE 5 OVER I-91		
PLAN AND ELEVATION		
Designed By	T. KNIGHT	Drawn By R. WALKER
Checked By	T. KNIGHT	Bridge Design Supervisor
Date	07/09	Date 07/09
PROJECT	PUTNEY	PROJECT NO. IM 091-(131)
CAD Drawing Name:	...\\Plot Files\24 z938108p.dwg 10/19/2009	
Bridge Sheet No.	Sheet 24 of 75	





- ▲ CUT TO FIT IN FIELD; HOOKED END PLACED TOWARD OVERHANG WHERE APPLICABLE
- USE BAR CUT OFFS ON OPPOSITE END

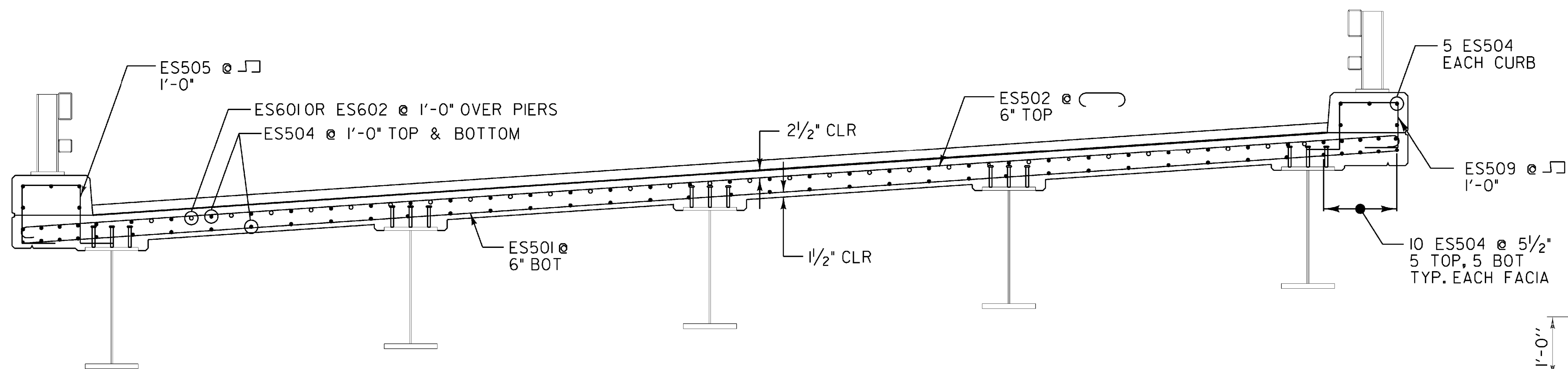
DECK REINFORCEMENT PLAN

SCALE 1/8" = 1'-0"
10 2 4 6 8

- NOTES:**
- FOR TYPICAL REINFORCEMENT SECTION, REFER TO SHEET 27.
 - FOR DECK PLACEMENT SEQUENCE, REFER TO SHEET 27.

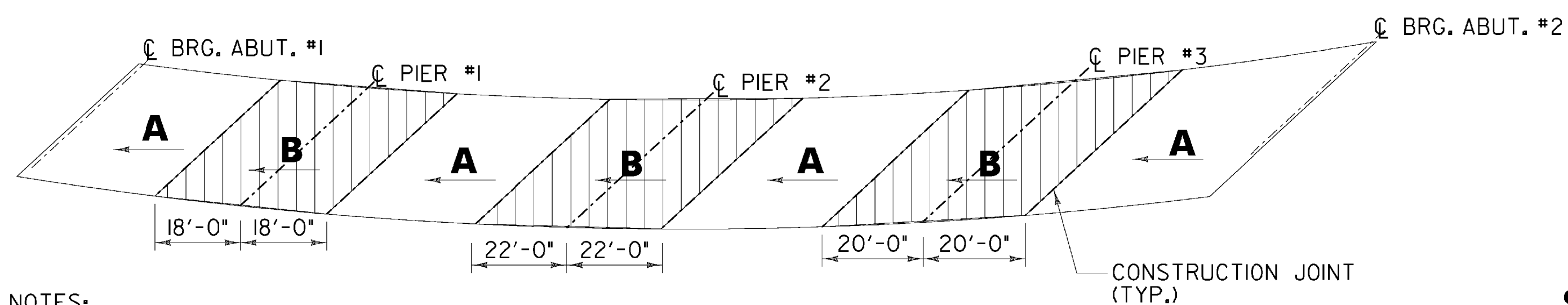
STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
DECK REINFORCEMENT PLAN			
Designed By	T. KNIGHT	Drawn By	E. ALLING
Checked By	T. KNIGHT	Bridge Design Supervisor	G. BOGUE
Date	06/09	Date	06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(131)
CAD Drawing Name:	... \Plot Files\26 z9308r\Bdp#10/19/2009		
Bridge Sheet No.	Sheet 26 of 75		





TYPICAL DECK REINFORCEMENT SECTION

SCALE 1/2" = 1'-0"

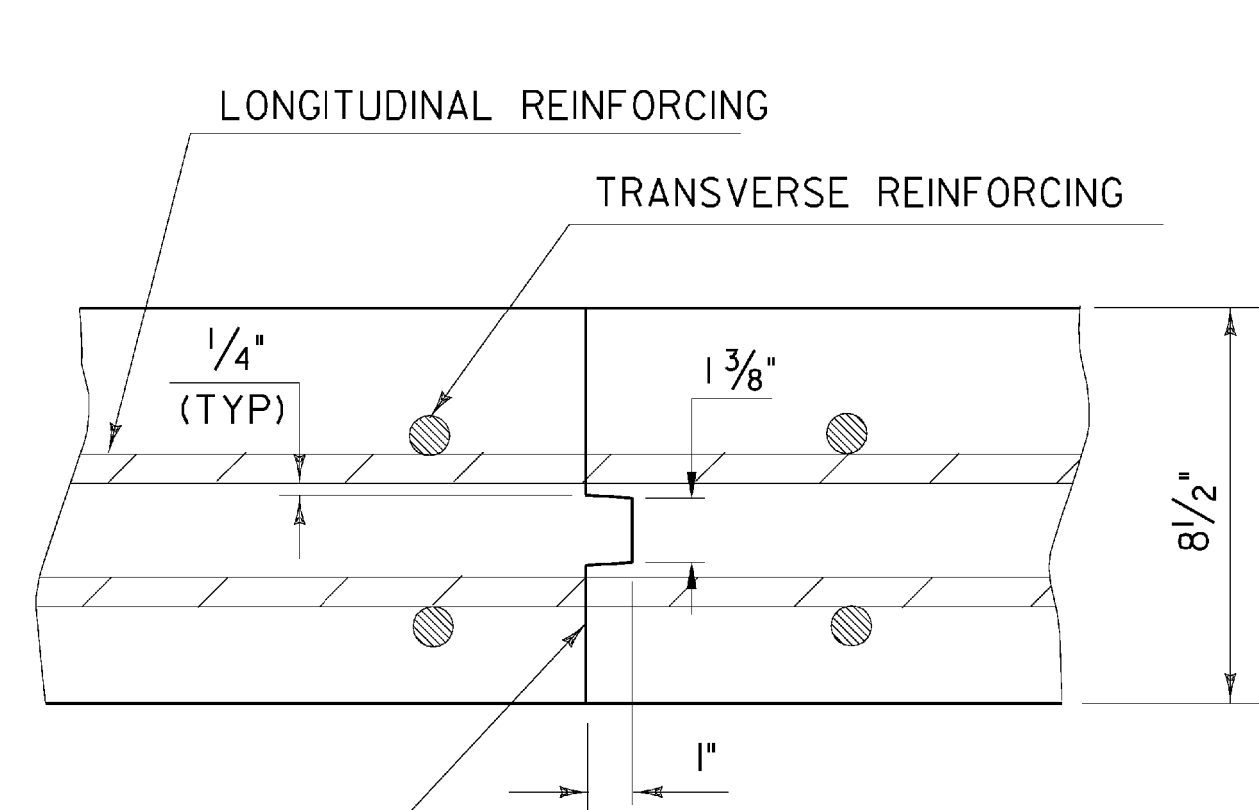


NOTES:

- IT IS MANDATORY THAT THE DECK CONCRETE BE PLACED FIRST IN THE POSITIVE MOMENT REGIONS MARKED **A**. CONCRETE SHALL BE PLACED CONTINUOUSLY WITH THE CONCRETE REMAINING PLASTIC THROUGH OUT THE PLACEMENT.
- ALL AREAS MARKED **A** SHALL BE PLACED DURING THE SAME WORK PERIOD.
- THE CONCRETE SHALL BE DEPOSITED PARALLEL TO THE CENTERLINE OF BEARING SO AS TO LOAD THE GIRDERS EQUALLY, ARROWS INDICATE THE DIRECTION OF PLACEMENT.
- TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINTS, AS SHOWN ON THIS SHEET, SHALL BE USED BETWEEN ADJACENT DECK PLACEMENTS.
- A NINETY-SIX (96) HOUR DELAY BETWEEN THE COMPLETION OF PLACEMENT **A** SHALL BE OBSERVED BEFORE PLACEMENT **B**.
- THE CONTRACTOR MAY SUBMIT, IN WRITING, AN ALTERNATE PLACEMENT SEQUENCE TO THE ENGINEER FOR REVIEW AND APPROVAL.

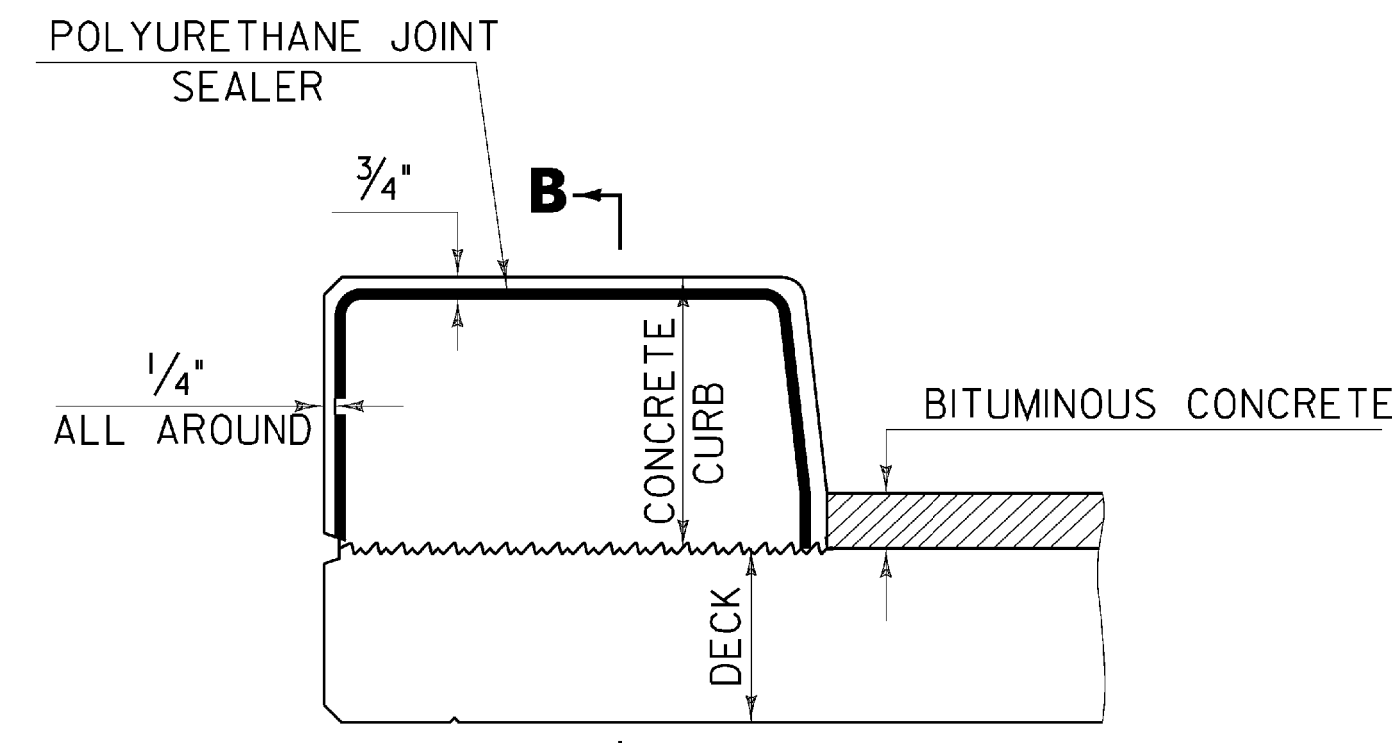
**DECK PLACED IN ONE POUR
DECK PLACEMENT SEQUENCE**

NOT TO SCALE



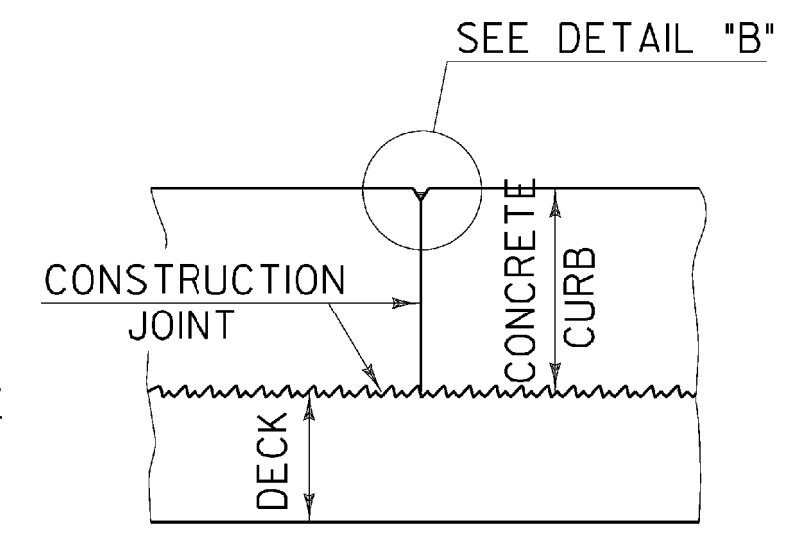
**TRANSVERSE BRIDGE SLAB
CONSTRUCTION JOINT DETAILS**

NOT TO SCALE



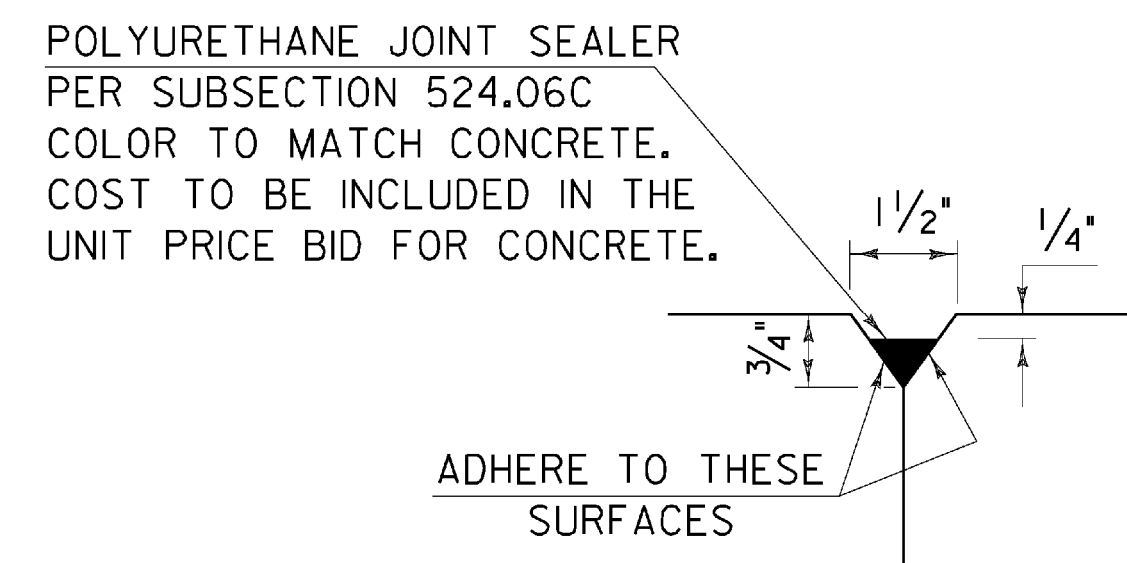
TYPICAL CURB JOINT

NOT TO SCALE



SECTION B - B

NOT TO SCALE

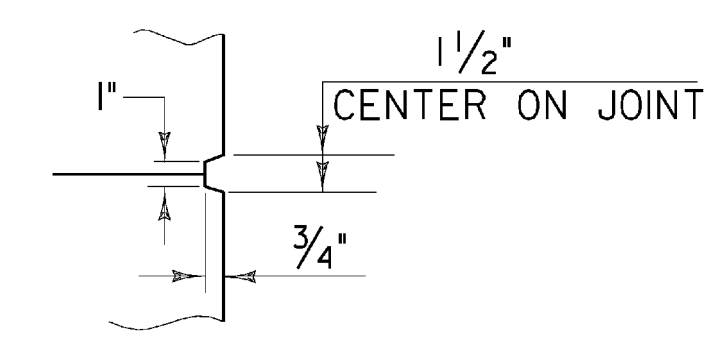


DETAIL "B"

NOT TO SCALE

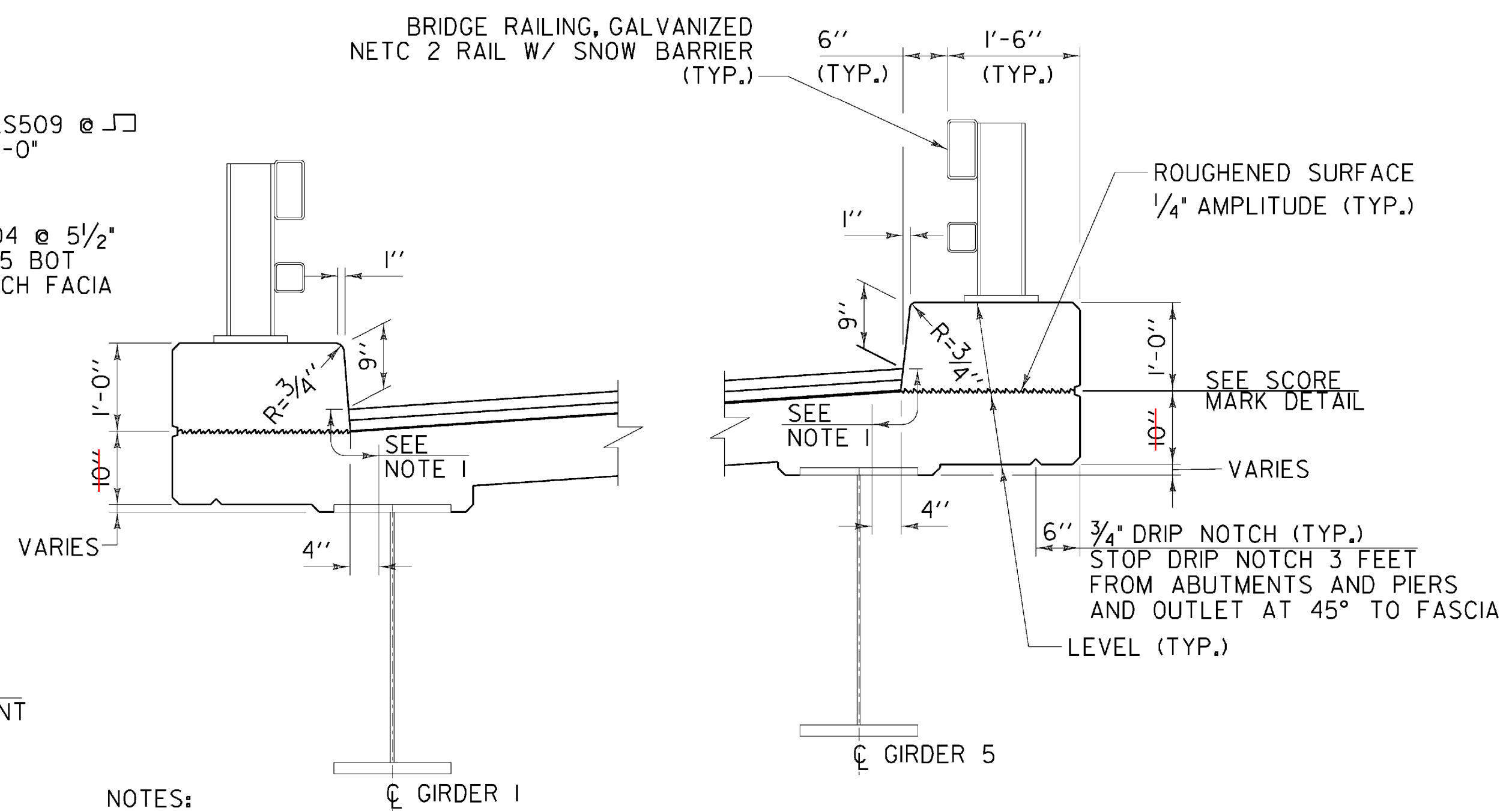
NOTES:

- CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE SPACED MAXIMUM 15'-0" CENTER TO CENTER AND SHALL BE 1'-6" MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.
- LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.
- THE CURB POUR SEQUENCE SHALL FOLLOW THE ORDER OF THE DECK POUR SEQUENCE. THE ENTIRE DECK SHALL BE POURED PRIOR TO THE CURB.



SCORE MARK DETAIL

NOT TO SCALE



TYPICAL CURB SECTION

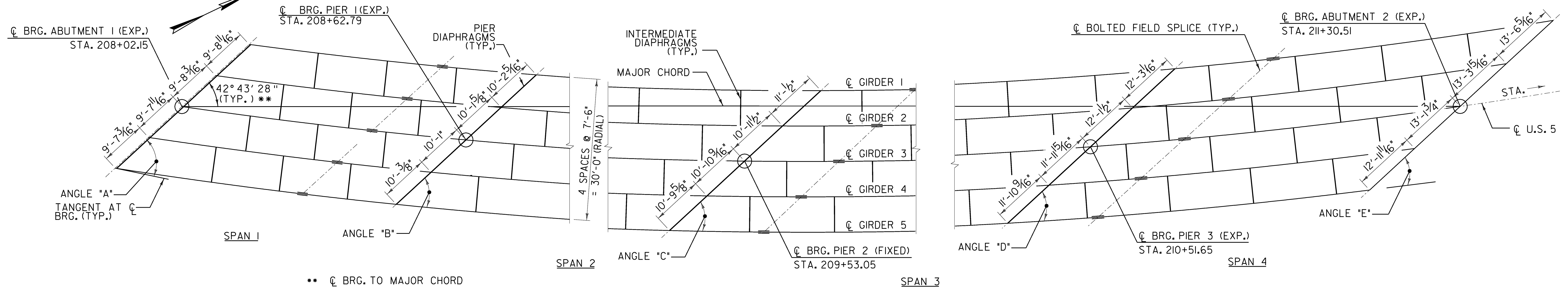
SCALE 3/4" = 1'-0"

NOTES:

- INDICATES AREA ALONG THE DECK AND UP THE FACE OF THE CURB FOR PLACEMENT OF 2 COATS OF POLYURETHANE MEMBRANE.
- POLYURETHANE MEMBRANE AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SHEET MEMBRANE WATERPROOFING, TORCH APPLIED.
- SHEET MEMBRANE WATERPROOFING, TORCH APPLIED SHALL EXTEND TO THE FACE OF THE CURB AS SHOWN.
- BLAST CLEAN 3 FEET FROM THE FACE OF THE CURB AND 3 INCHES UP THE CURB FACE PRIOR TO PLACING MEMBRANE.
- ALL CONCRETE IN THE CURB SHALL BE ITEM 900.608 SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT).



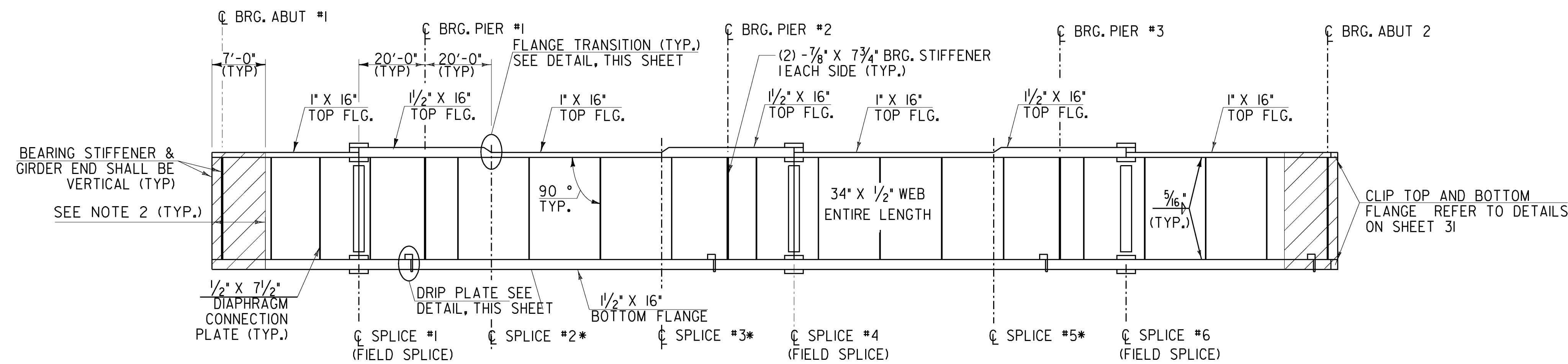
STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
DECK REINFORCEMENT SECTION			
Designed By	T. KNIGHT	Drawn By	E. ALLING
Checked By	Date	Bridge Design Supervisor	
T. KNIGHT	06/09	G. BOGUE	Date 06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-K(3)
CAD Drawing Name:	... \27 z93a148rel.dd.Btbf	Date:	10/19/2009
Bridge Sheet No.		Sheet	27 of 75



FRAMING PLAN

SCALE 3/32" = 1'-0"
 10 4 8 12 16

GIRDER NO.	ANGLE "A"	ANGLE "B"	ANGLE "C"	ANGLE "D"	ANGLE "E"
1	51° 31' 55"	48° 34' 01"	44° 09' 58"	39° 22' 53"	35° 34' 40"
2	51° 14' 07"	48° 14' 14"	43° 46' 52"	38° 55' 31"	35° 03' 13"
3	50° 56' 01"	47° 54' 05"	43° 23' 19"	38° 27' 31"	34° 30' 56"
4	50° 37' 35"	47° 33' 34"	42° 59' 16"	37° 58' 51"	33° 57' 46"
5	50° 18' 50"	47° 12' 40"	42° 34' 42"	37° 29' 29"	33° 23' 40"



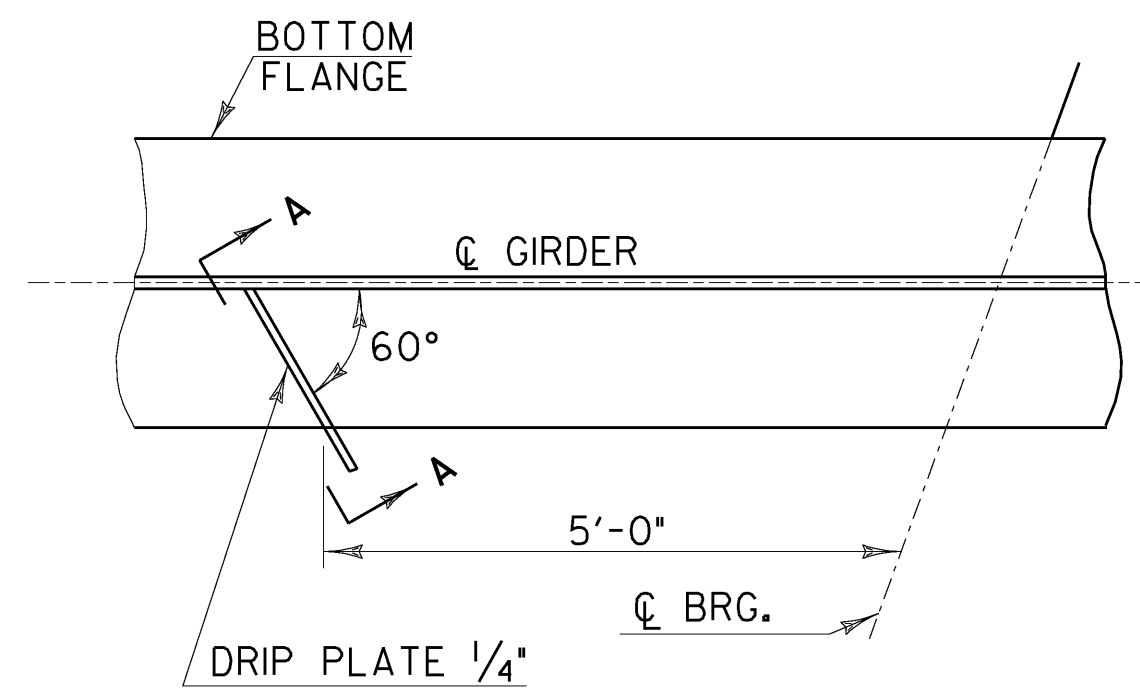
GIRDER PLATE SIZES

NOT TO SCALE

*OPTIONAL FIELD SPLICE, SEE NOTE 4

NOTES:

- FOR DIAPHRAGM LAYOUT AND GIRDER DIMENSIONS REFER TO SHEET 29.
- ALL STRUCTURAL STEEL INCLUDING, GIRDERS, CROSS FRAMES, BEARING PLATES AND GUSSET PLATES WITHIN A DISTANCE OF 7 FEET FROM THE END OF THE GIRDERS WILL BE COATED WITH A PROTECTIVE PAINT SYSTEM AND GREASE RUSTPROOFING COMPOUND. THE FINAL PAINT COAT TO BE DARK BROWN, FEDERAL COLOR CHIP NO. 20059. THIS WORK SHALL BE PAID FOR UNDER ITEM 513.25, "STRUCTURAL PAINTING, SHOP APPLIED" AND 513.40, "SURFACE PREPARATION". SEE SECTION 513 OF THE STANDARD SPECIFICATIONS.
- FOR BOLTED FIELD SPLICE DETAILS, REFER TO SHEET 30. SPLICES #2, #3 AND #5 ARE OPTIONAL FIELD SPLICES. THE CONTRACTOR MAY ELECT TO PROVIDE A BOLTED FIELD SPLICE AT THESE LOCATIONS IN PLACE OF SPLICES #1, #4 AND #6. A MAXIMUM OF THREE FIELD SPLICES PER GIRDER WILL BE ALLOWED.
- FOR RANGES OF TENSION, REFER TO SHEET 29. ALL FLANGE AND WEB PLATES WITHIN THE RANGE OF TENSION SHALL BE CHARPY V NOTCH TESTED.
- ALL DIAPHRAGM MEMBERS SHALL BE CHARPY V NOTCH TESTED. FOR DIAPHRAGM DETAILS REFER TO SHEET 31.
- FOR CAMBER AND DEAD LOAD DEFLECTION DIAGRAM, SEE SHEET 30.
- THE ENDS OF GIRDERS AND BEARING STIFFENERS SHALL BE VERTICAL UNDER DEAD LOAD.

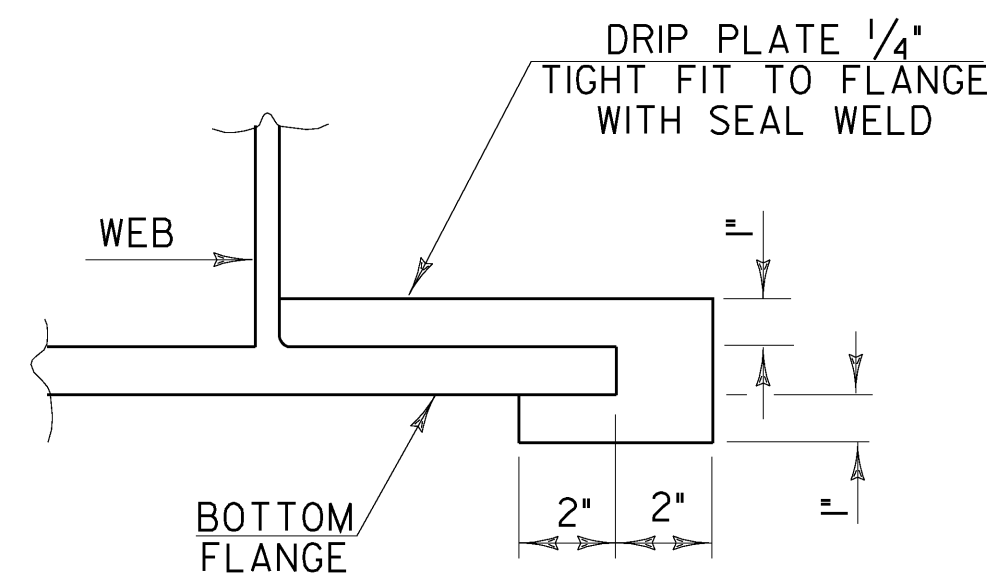


PLAN

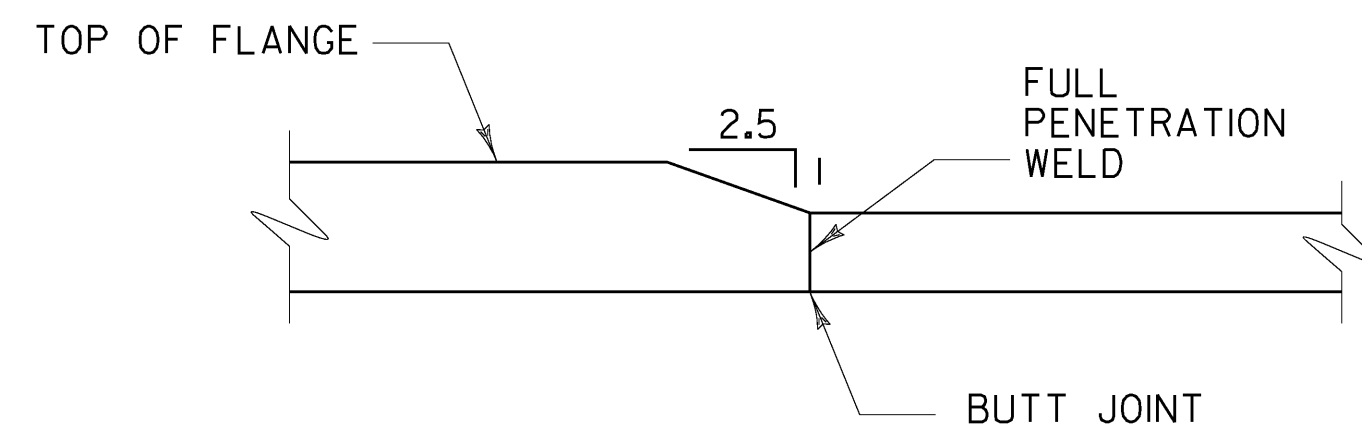
NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS.

DRIP PLATE DETAIL

NOT TO SCALE



SECTION A - A



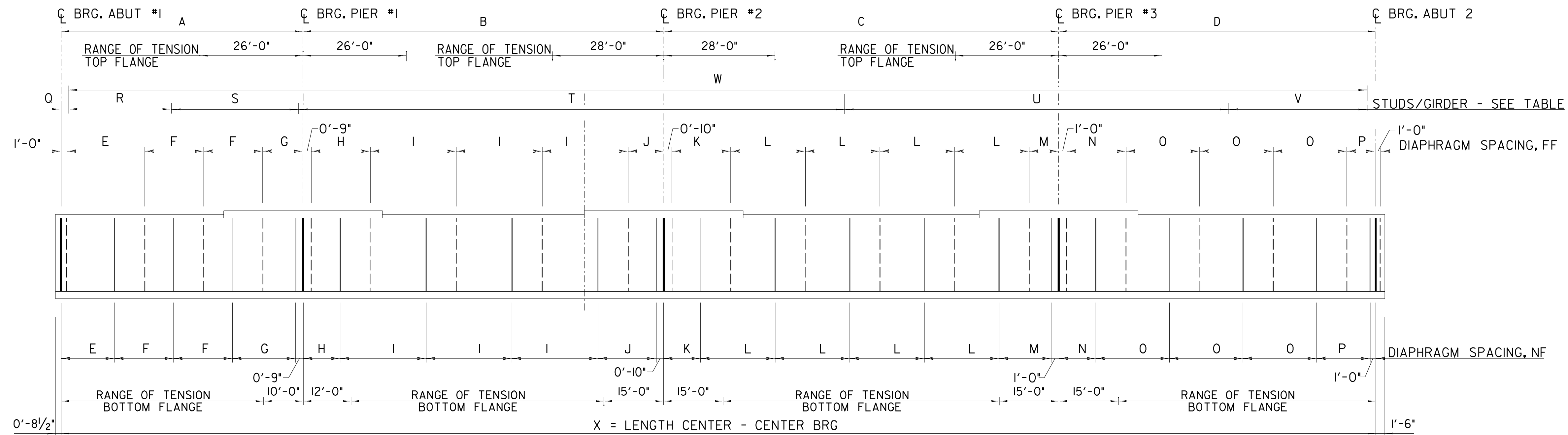
FLANGE THICKNESS TRANSITION DETAIL

NOT TO SCALE

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
FRAMING PLAN			
Designed By	G. BOGUE	Drawn By	T. KNIGHT
Checked By	Date	Bridge Design Supervisor	
G. BOGUE	06/09	G. BOGUE	Date 07/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(31)
CAD Drawing Name:	... \Plot Files\28 2938108\FB.dwg 10/19/2009		
Bridge Sheet No.	Sheet 28 of 75		

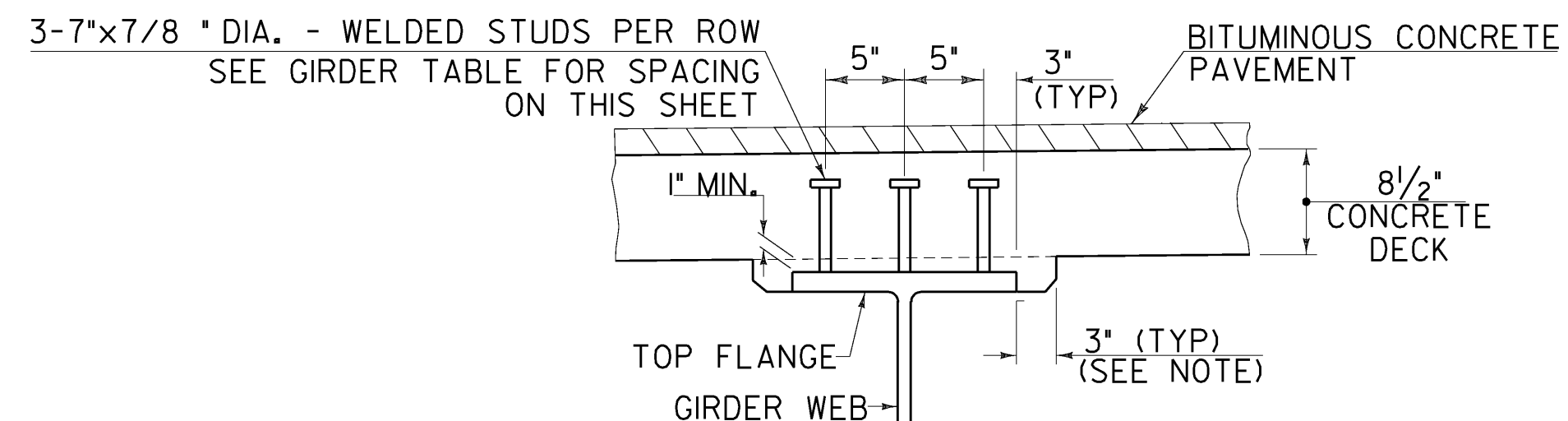




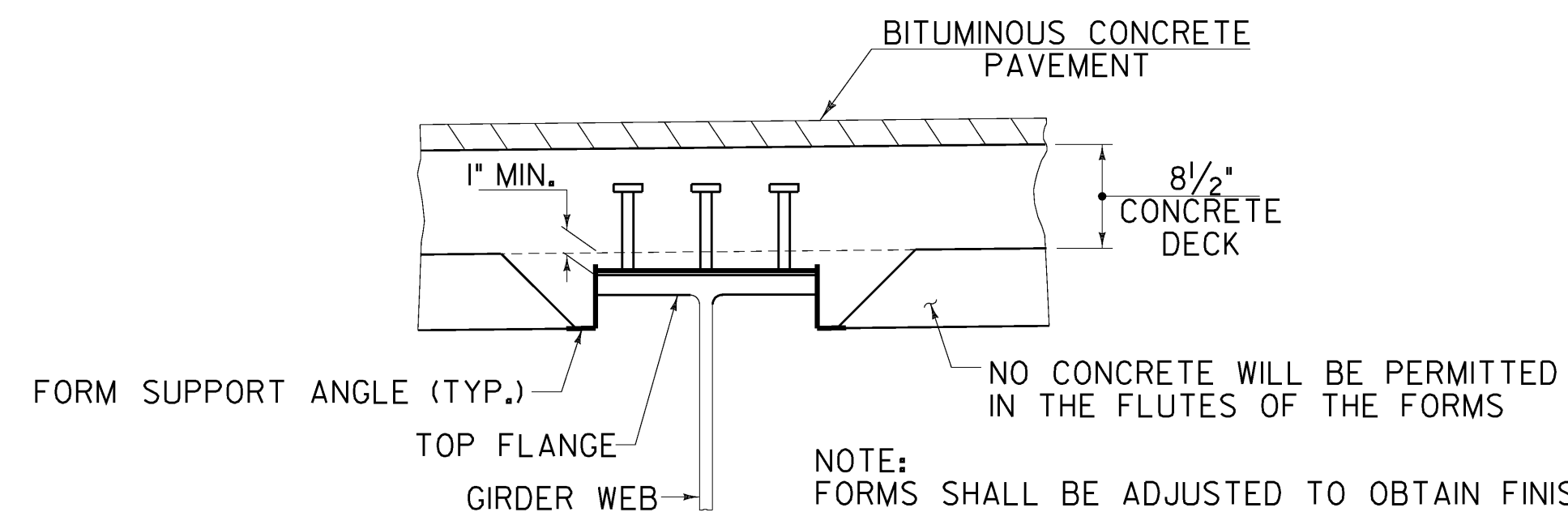
NOTE:
NF = NEAR FACE
FF = FAR FACE

	GIRDER 1		GIRDER 2		GIRDER 3		GIRDER 4		GIRDER 5	
	G1 - NF	G2 - FF	G2 - NF	G3 - FF	B3 - NF	G4 - FF	G4 - NF	G5 - FF		
C.C. BRG										
A	61'-2 5/8"	60'-11 1/4"		60'-7 1/8"		60'-4 1/4"		60'-0 5/8"		
B	91'-5 1/4"	90'-10 1/8"		90'-3 1/8"		89'-8 7/8"		89'-2"		
C	100'-4 5/8"	99'-5 1/8"		98'-7 3/8"		97'-9 1/8"		96'-11 3/8"		
D	80'-10 1/8"	79'-10"		78'-10 5/8"		77'-11 1/4"		77'-0 1/8"		
E	-	14'-9 3/8"	20'-1 1/8"	14'-7 1/2"	19'-10 1/4"	14'-7 1/8"	19'-9 3/4"	14'-6"	19'-7 3/8"	-
F	-	14'-9"	14'-10 3/8"	14'-8"	14'-9 3/8"	14'-6"	14'-7 1/8"	14'-5"	14'-6 1/8"	-
G	-	16'-2 3/8"	10'-1 1/8"	16'-2 3/4"	10'-3 1/8"	16'-3"	10'-4 1/4"	16'-3 1/4"	10'-5 3/8"	-
H	-	9'-11 5/8"	16'-2 1/2"	9'-10 1/4"	16'-0 1/8"	10'-3 3/8"	16'-4 1/8"	10'-2 3/8"	16'-2 3/8"	-
I	-	21'-6"	21'-7 1/8"	21'-4"	21'-5 1/8"	21'-0"	21'-1 5/8"	20'-10"	20'-11 5/8"	-
J	-	16'-1 5/8"	8'-11 1/2"	16'-1 5/8"	9'-0 5/8"	16'-1 5/8"	9'-2 1/2"	16'-2 1/8"	9'-3 3/8"	-
K	-	8'-8 1/4"	16'-0 3/8"	8'-9 3/8"	16'-0 5/8"	8'-11 3/8"	16'-0 3/4"	9'-1 3/8"	16'-1 3/4"	-
L	-	18'-8"	18'-9 1/2"	18'-5"	18'-6 1/8"	18'-2"	18'-3 3/8"	17'-11"	18'-0 3/8"	-
M	-	16'-0 1/8"	7'-5 3/8"	16'-0 3/8"	7'-7 1/8"	16'-0"	7'-8 3/8"	15'-11 1/8"	7'-10 1/8"	-
N	-	7'-1 5/8"	15'-11 1/4"	7'-1 1/8"	15'-9 1/8"	7'-6 3/8"	15'-11 3/4"	7'-7 3/8"	15'-11 1/8"	-
O	-	18'-5"	18'-6 1/8"	18'-2"	18'-3 1/8"	17'-10"	17'-11 3/8"	17'-7"	17'-8 3/8"	-
P	-	17'-5 1/2"	7'-3 1/8"	17'-2 3/8"	7'-2 5/8"	16'-9 5/8"	7'-1 3/8"	16'-6 1/8"	7'-0 5/8"	-
Q	4 1/4"	3 1/2"		1 1/8"		5 3/8"		3"		
R	24 SP. @ 1'-3" = 30'-0"	29 SP. @ 1'-3" = 36'-3"		28 SP. @ 1'-3" = 35'-0"		28 SP. @ 1'-3" = 35'-0"		28 SP. @ 1'-3" = 35'-0"		
S	64 SP. @ 6" = 32'-0"	50 SP. @ 6" = 25'-0"		50 SP. @ 6" = 25'-0"		50 SP. @ 6" = 25'-0"		50 SP. @ 6" = 25'-0"		
T	165 SP. @ 10" = 137'-6"	174 SP. @ 10" = 145'-0"		173 SP. @ 10" = 144'-2"		172 SP. @ 10" = 143'-4"		171 SP. @ 10" = 142'-6"		
U	129 SP. @ 9" = 96'-9"	107 SP. @ 9" = 80'-3"		108 SP. @ 9" = 81'-0"		106 SP. @ 9" = 79'-6"		127 SP. @ 9" = 95'-3"		
V	37 SP. @ 12" = 37'-0"	44 SP. @ 12" = 44'-0"		43 SP. @ 12" = 43'-0"		42 SP. @ 12" = 42'-0"		25 SP. @ 12" = 25'-0"		
W	420 ROWS X 3 STUDS PER ROW = 1260 STUDS	405 ROWS X 3 STUDS PER ROW = 1215 STUDS		403 ROWS X 3 STUDS PER ROW = 1209 STUDS		399 ROWS X 3 STUDS PER ROW = 1197 STUDS		402 ROWS X 3 STUDS PER ROW = 1206 STUDS		
RADIUS	1130'-11"	1138'-5"		1145'-11"		1153'-5"		1160'-11"		
X	333'-11 1/8"	331'-1 1/8"		328'-4 1/8"		325'-9"		323'-3 1/8"		

GIRDER DIMENSION TABLE



NOTE: THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. SYSTEMS SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURES ENGINEER. ANY VOIDS RESULTING FROM THIS FORMING SYSTEM SHALL BE FILLED WITH MORTAR, TYPE IV OR AN EQUIVALENT PRODUCT FROM THE APPROVED PRODUCTS LIST (SEE SUBSECTION 707.03).



NOTE:
FORMS SHALL BE ADJUSTED TO OBTAIN FINISH GRADES REQUIRED ON PLANS. SEE SECTION 501 OF THE GENERAL SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

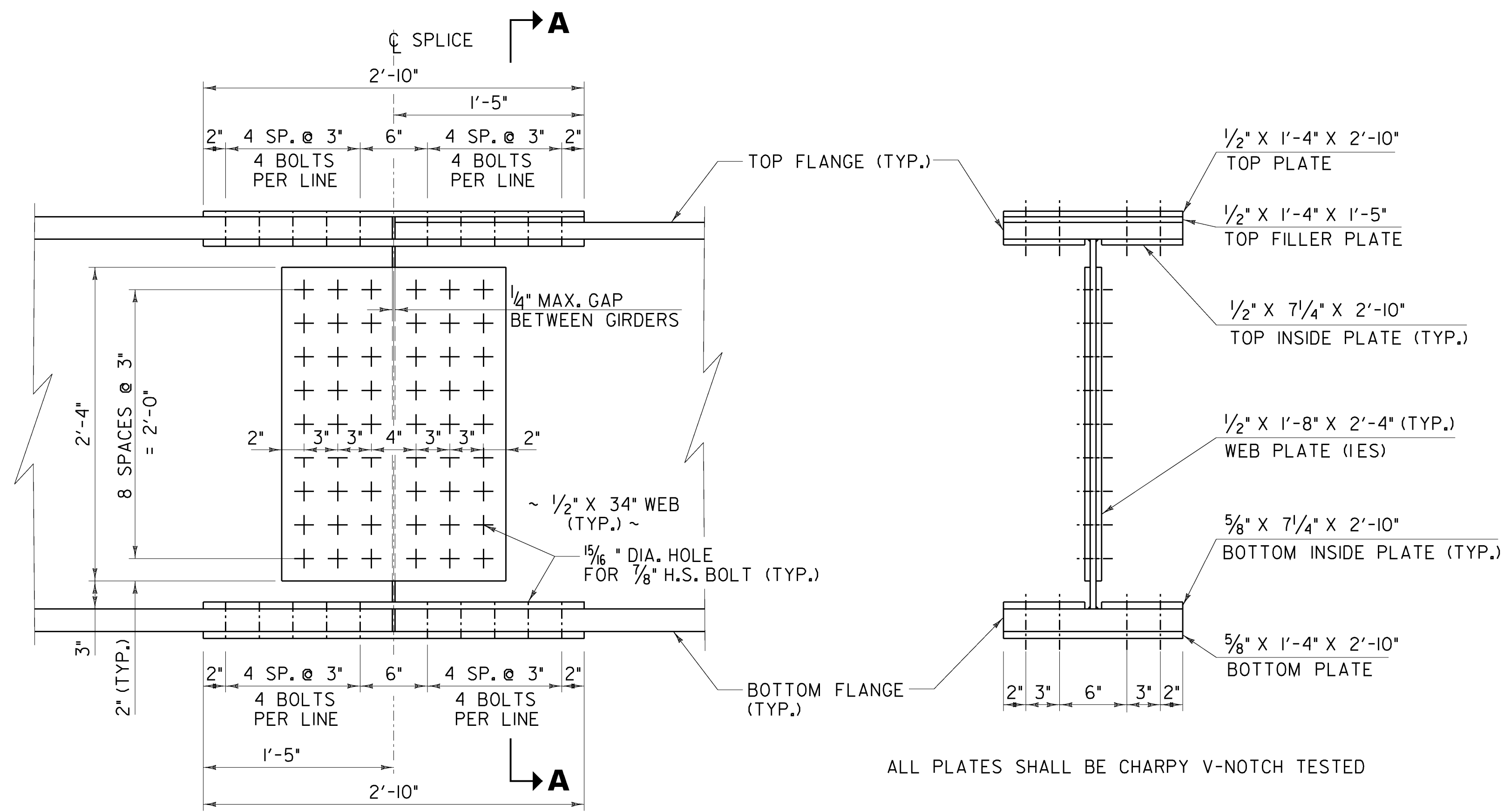
NOTES:

- GIRDER DIMENSIONS ARE GIVEN ALONG CENTERLING OF GIRDER.
- FOR ADDITIONAL NOTES REFER TO SHEET 28.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
GIRDER DETAILS I			
Designed By	G. BOGUE	Drawn By	T. KNIGHT
Checked By	G. BOGUE	Date	06/09
		Bridge Design Supervisor	G. BOGUE Date 07/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(131)
CAD Drawing Name:	... \Plot Files\29 z9381480.dwg Date: 10/19/2009		
Bridge Sheet No.	Sheet 29 of 75		

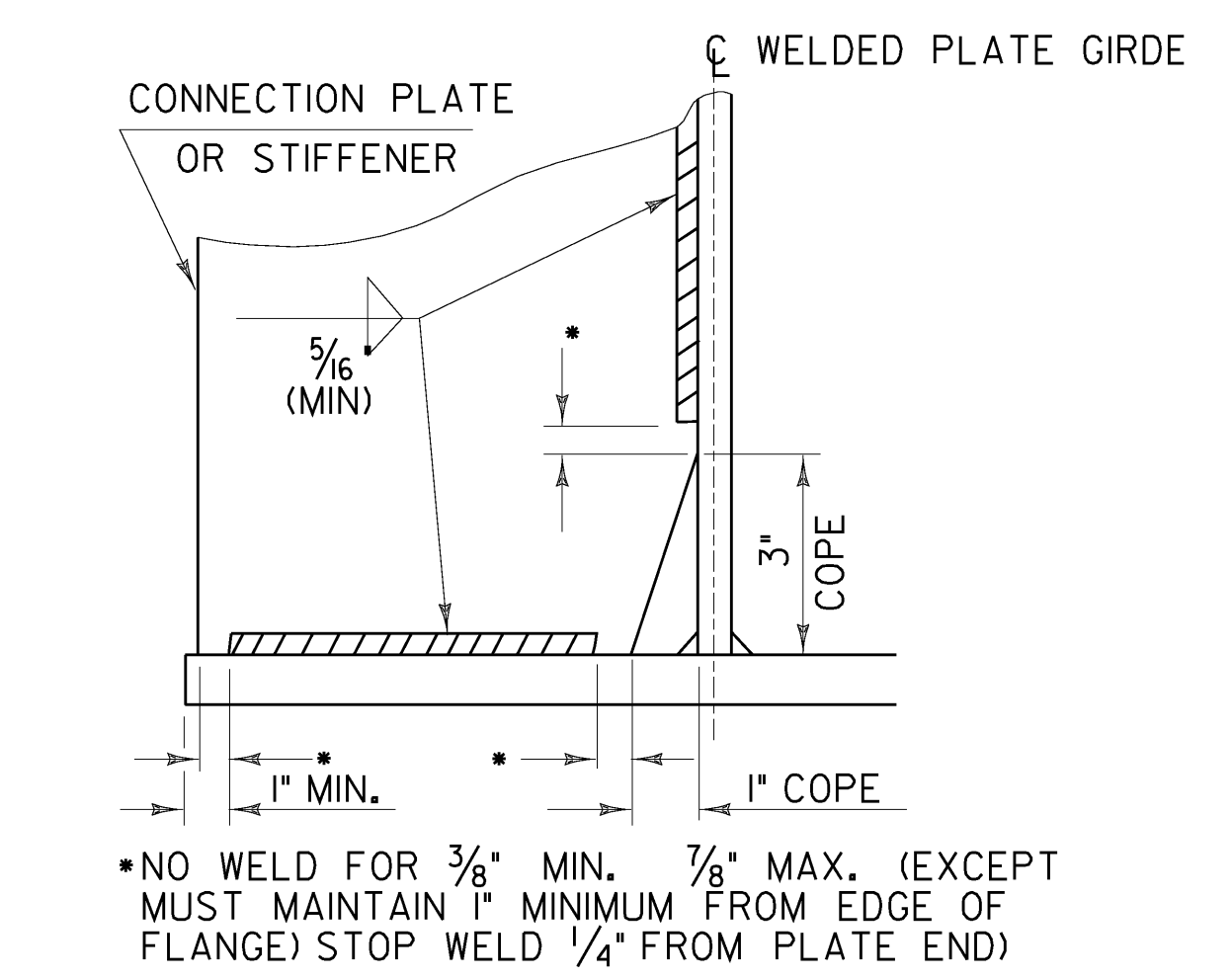




ELEVATION

SECTION A-A

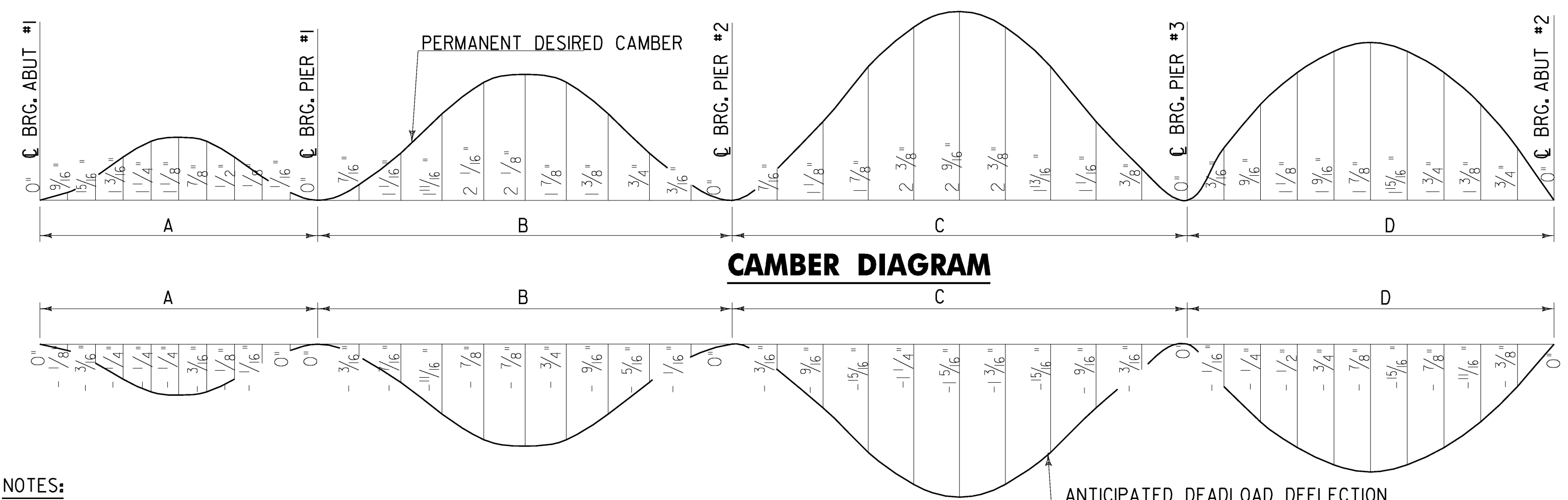
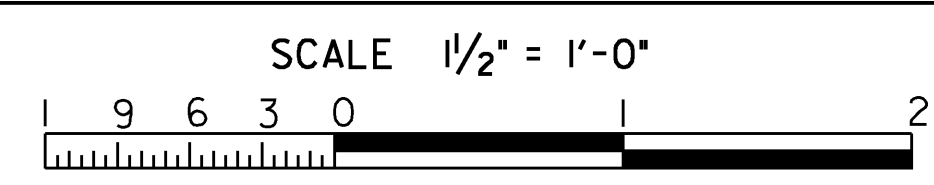
ALL PLATES SHALL BE CHARPY V-NOTCH TESTED



**WELD TERMINATION AND COPING
DETAILS FOR STEEL MEMBERS**

NOT TO SCALE

BOLTED FIELD SPLICE DETAILS



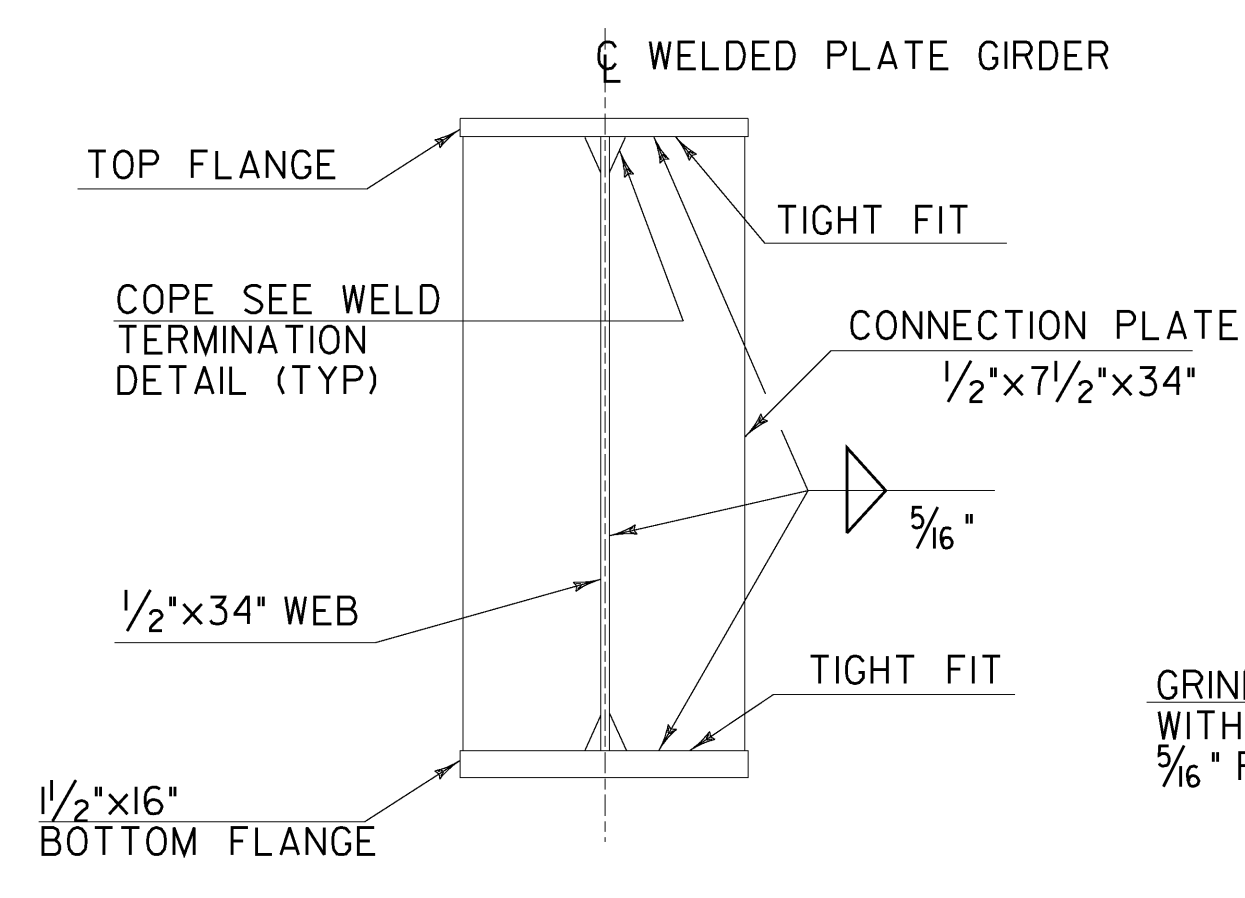
CAMBER DIAGRAM

DEAD LOAD DEFLECTION

NOT TO SCALE

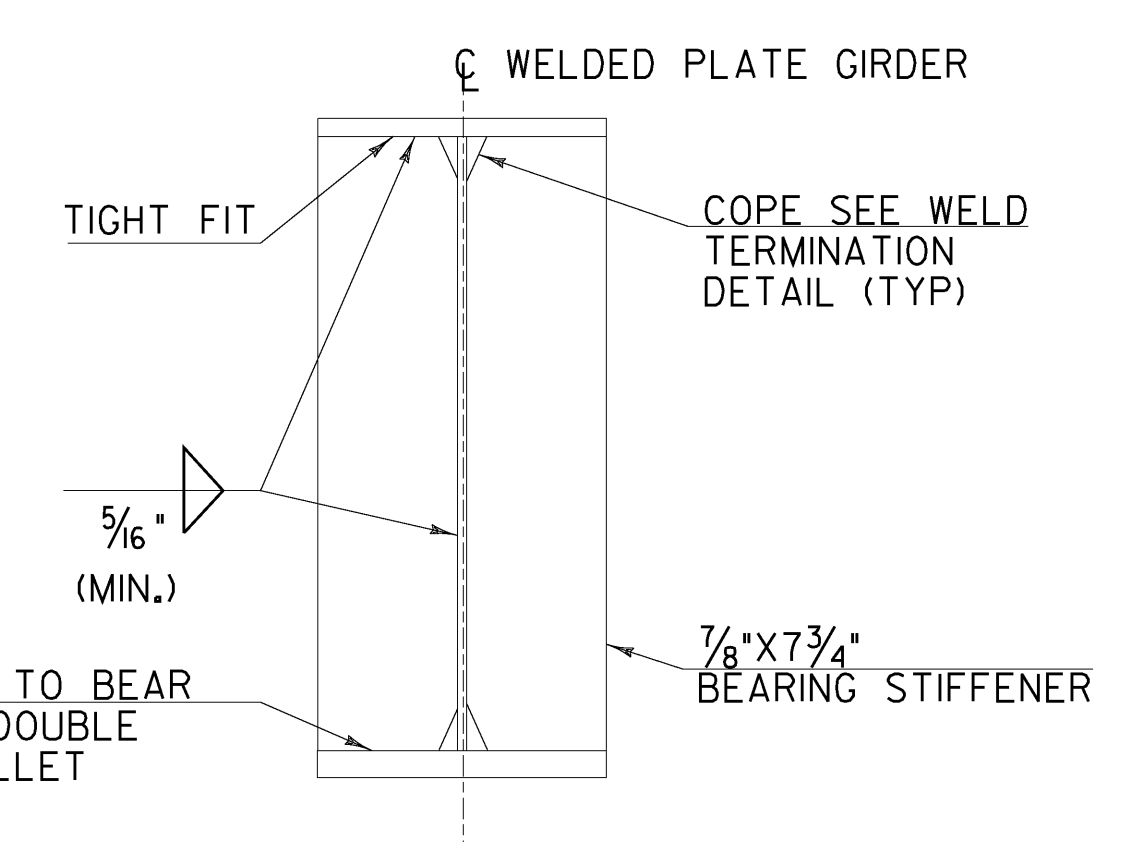
NOTES:

- CAMBER AND DEAD LOAD MEASUREMENTS ARE GIVEN IN INCHES AT SPAN TENTH POINTS.
- DEAD LOAD DEFLECTIONS SHOWN ARE FOR ALL DEAD LOADS AND SUPERIMPOSED DEAD LOADS INCLUDING GIRDER AND DIAPHRAGM WEIGHTS. DESIGN DEAD LOAD DEFLECTIONS SHOWN ARE BASED ON THE AVERAGE OF GIRDERS 1 THRU 5.
- CAMBER DIAGRAM INCLUDES RESIDUAL CAMBER, WHICH EXCEEDS THE VERTICAL CURVE CORRECTION. ADDITIONAL CORRECTION FOR VERTICAL CURVATURE IS NOT REQUIRED.



INTERMEDIATE CONNECTION PLATES

NOT TO SCALE



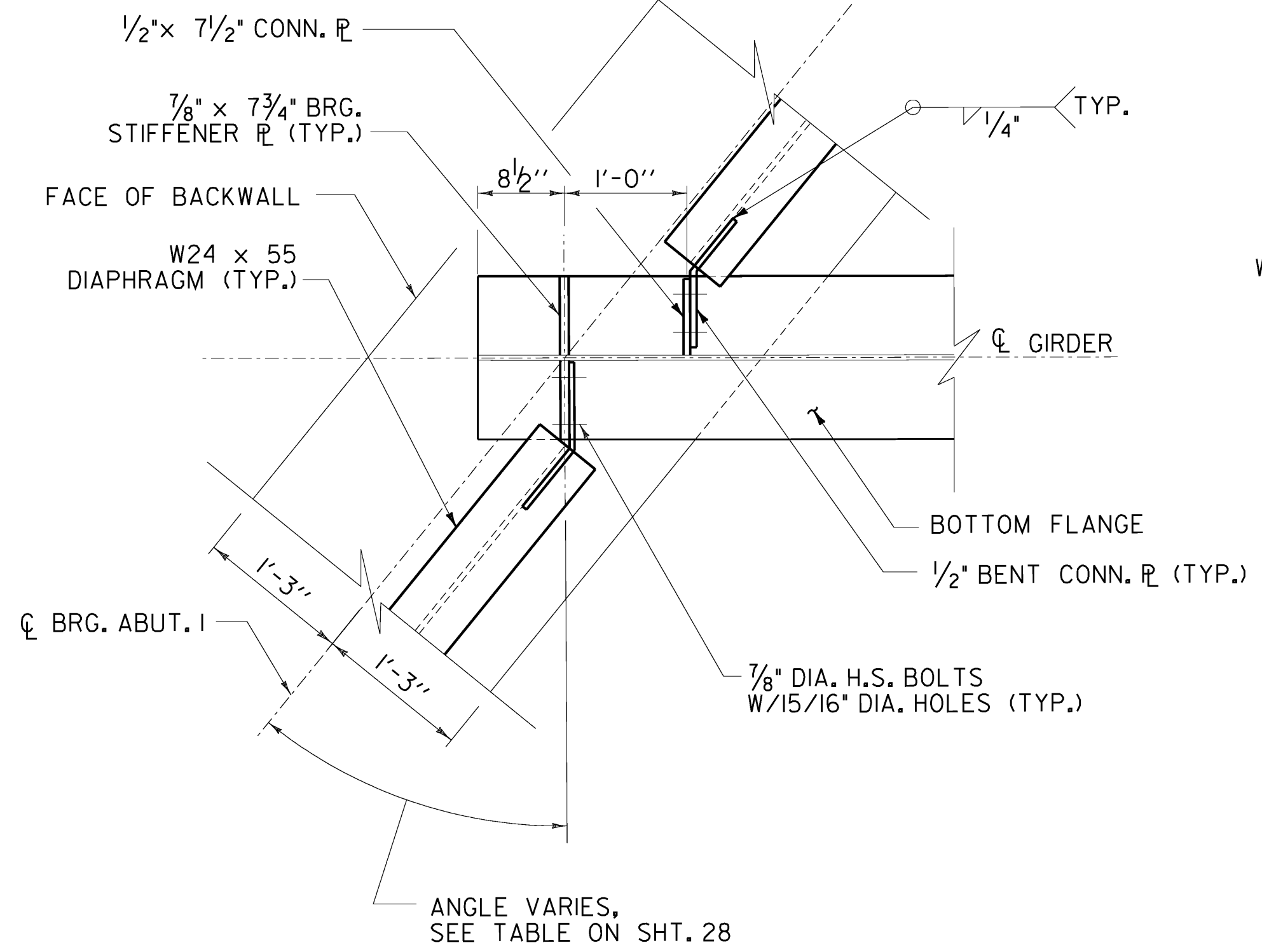
BEARING STIFFENERS

NOT TO SCALE

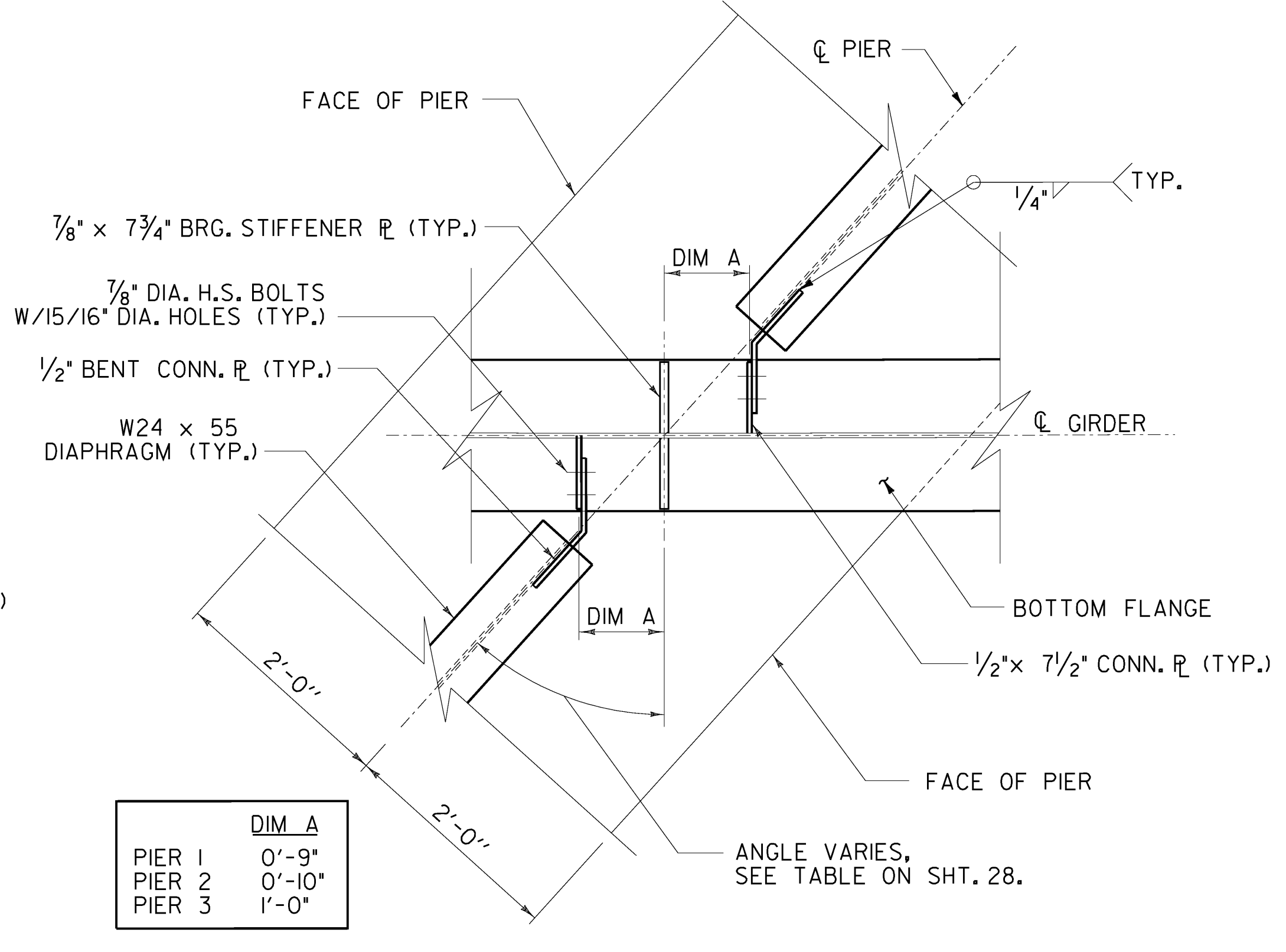
**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
GIRDER DETAILS 2			
Designed By	G. BOGUE	Drawn By	E. ALLING
Checked By	G. BOGUE	Date	06/09
		Bridge Design Supervisor	G. BOGUE
		Date	07/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(31)
CAD Drawing Name:	... \Plot Files\30 z932480.dwg 10/19/2009		
Bridge Sheet No.		Sheet	30 of 75



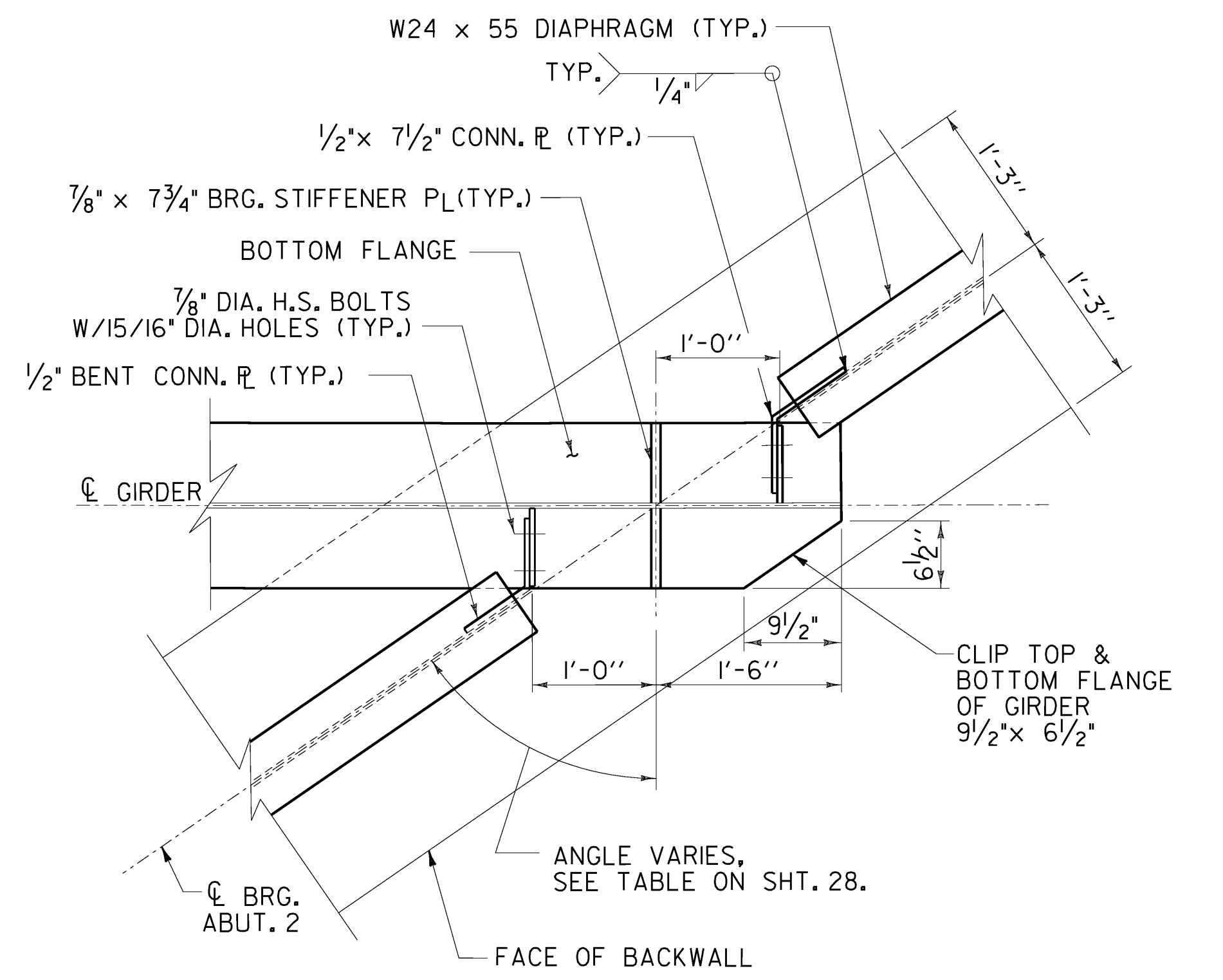


PARTIAL PLAN ABUT. 1 DIAPHRAGM
1" = 1'-0"

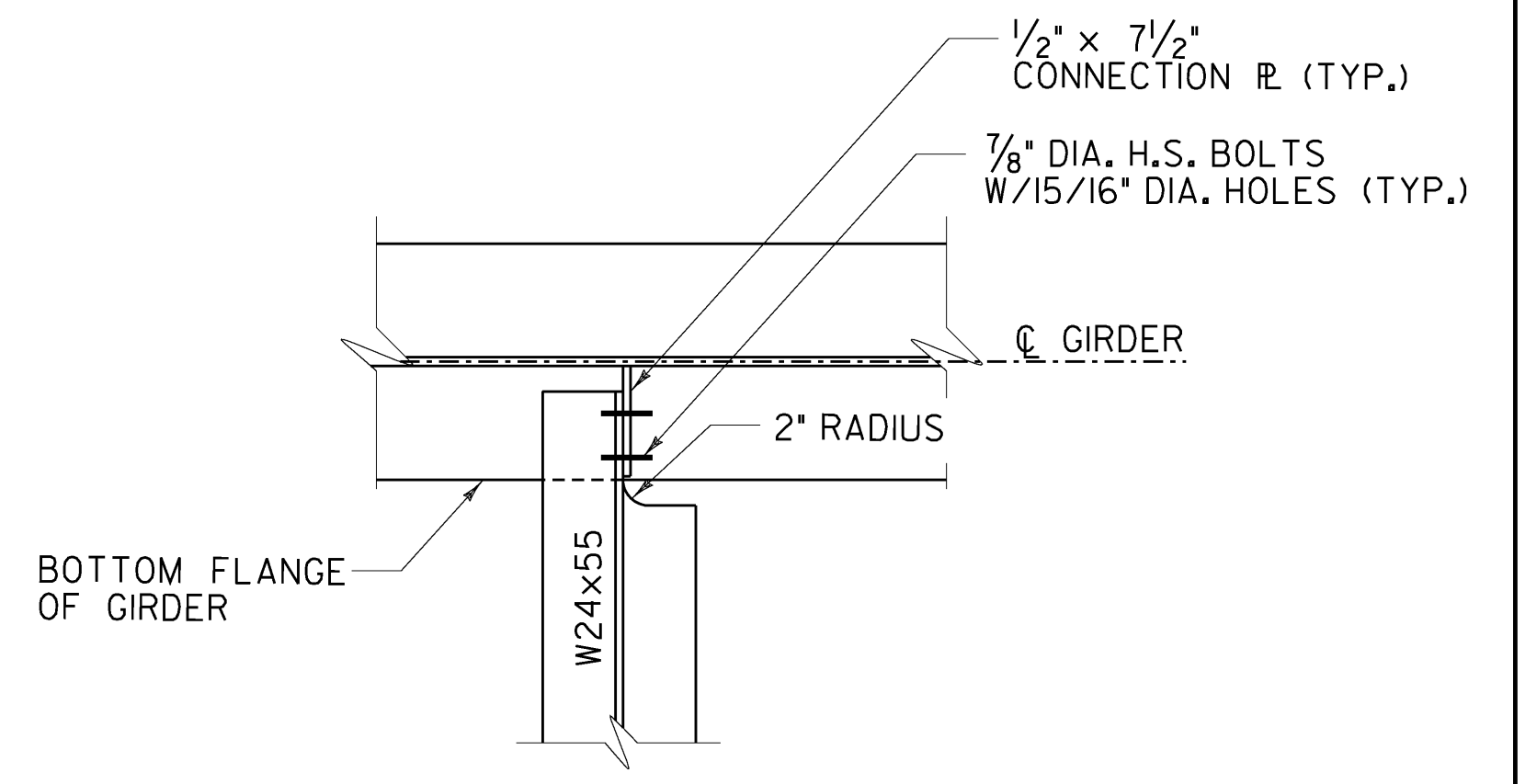


PARTIAL PLAN PIER DIAPHRAGM
1" = 1'-0"

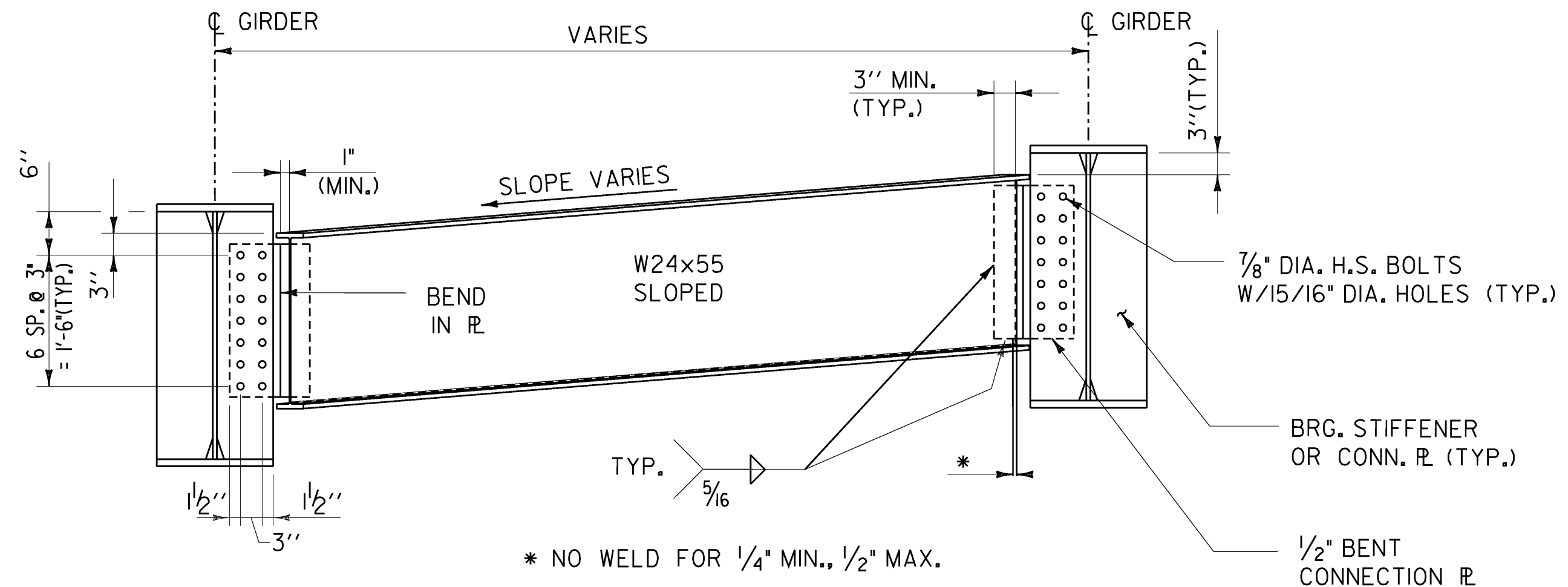
	DIM. A
PIER 1	0'-9"
PIER 2	0'-10"
PIER 3	1'-0"



PARTIAL PLAN ABUT. 2 DIAPHRAGM
1" = 1'-0"

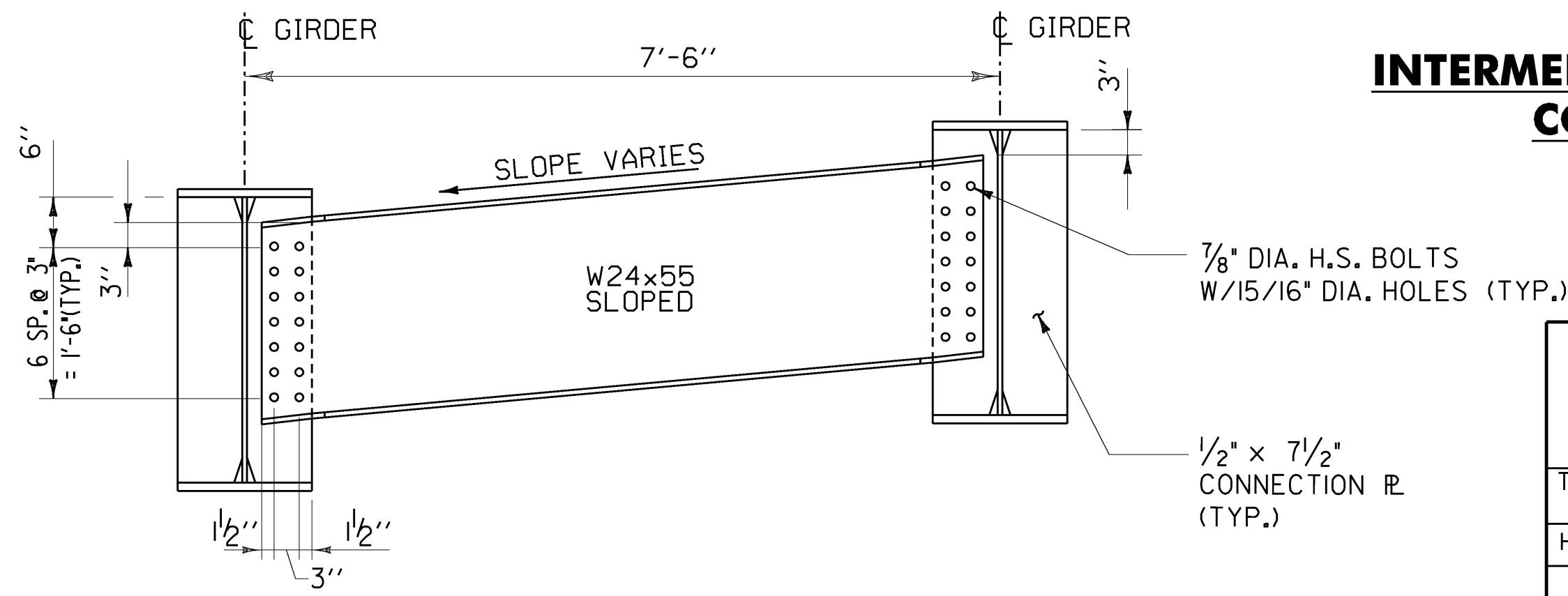


INTERMEDIATE DIAPHRAGM CONNECTION
1" = 1'-0"



ABUTMENT AND PIER DIAPHRAGM
3/4" = 1'-0"

* NO WELD FOR 1/4" MIN., 1/2" MAX.



INTERMEDIATE DIAPHRAGM
3/4" = 1'-0"

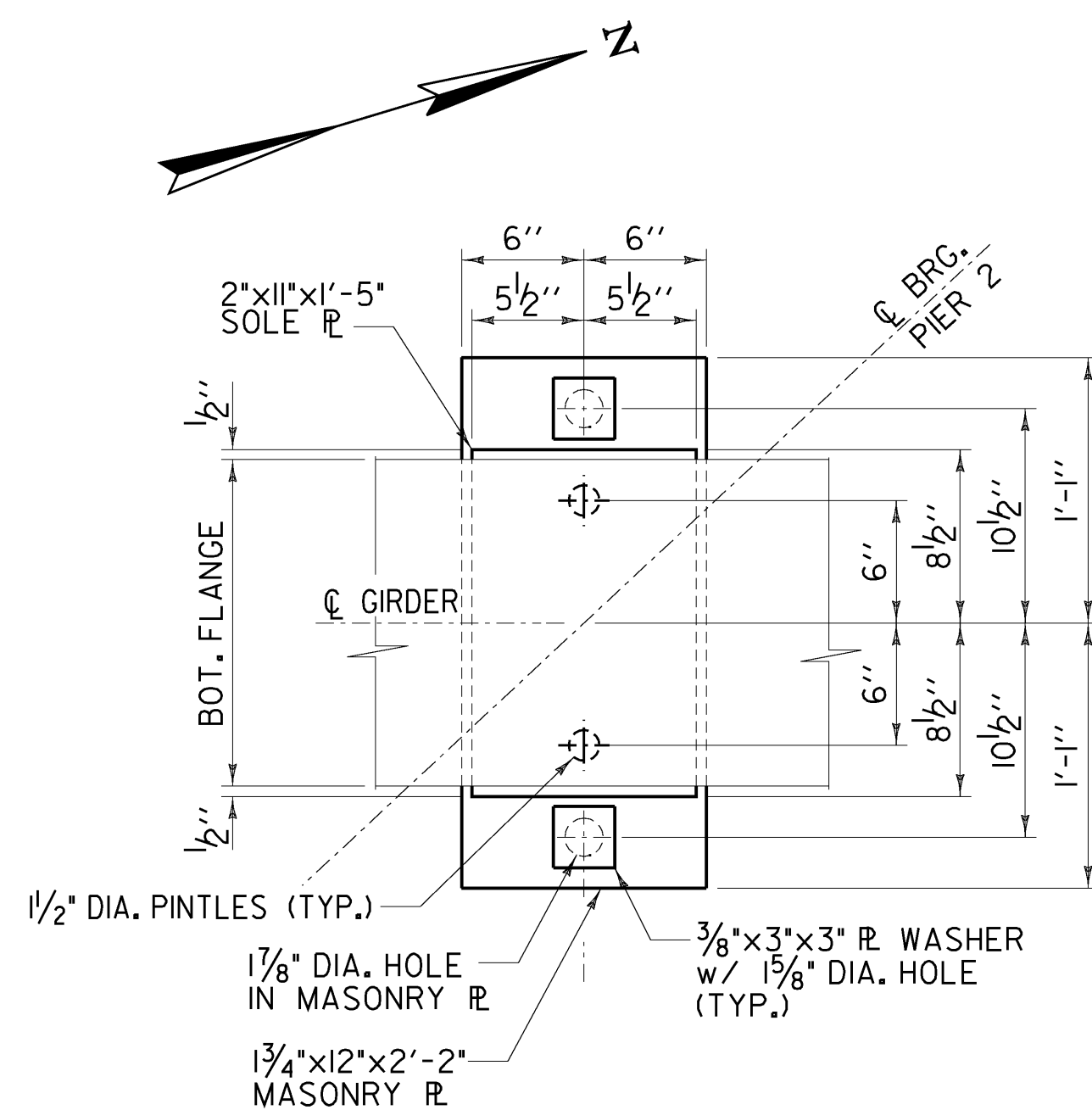
**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			

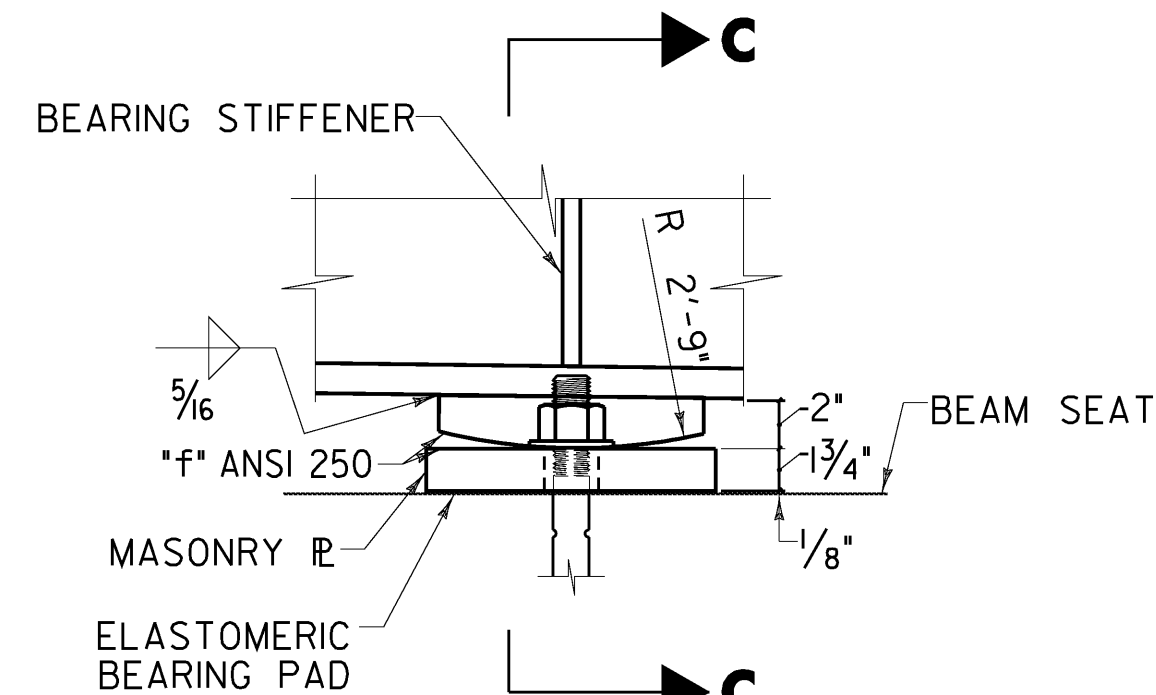
GIRDER DETAILS 3			
Designed By	G. BOGUE	Drawn By	R. WALKER
Checked By	T. KNIGHT	Date	06/09
		Bridge Design Supervisor	G. BOGUE
		Date	06/09

PROJECT	PUTNEY	PROJECT NO.	IM 091-(131)
CAD Drawing Name:	... \Plot Files\31 z93a\000\091-10/19/2009		
Bridge Sheet No.		Sheet	31 of 75

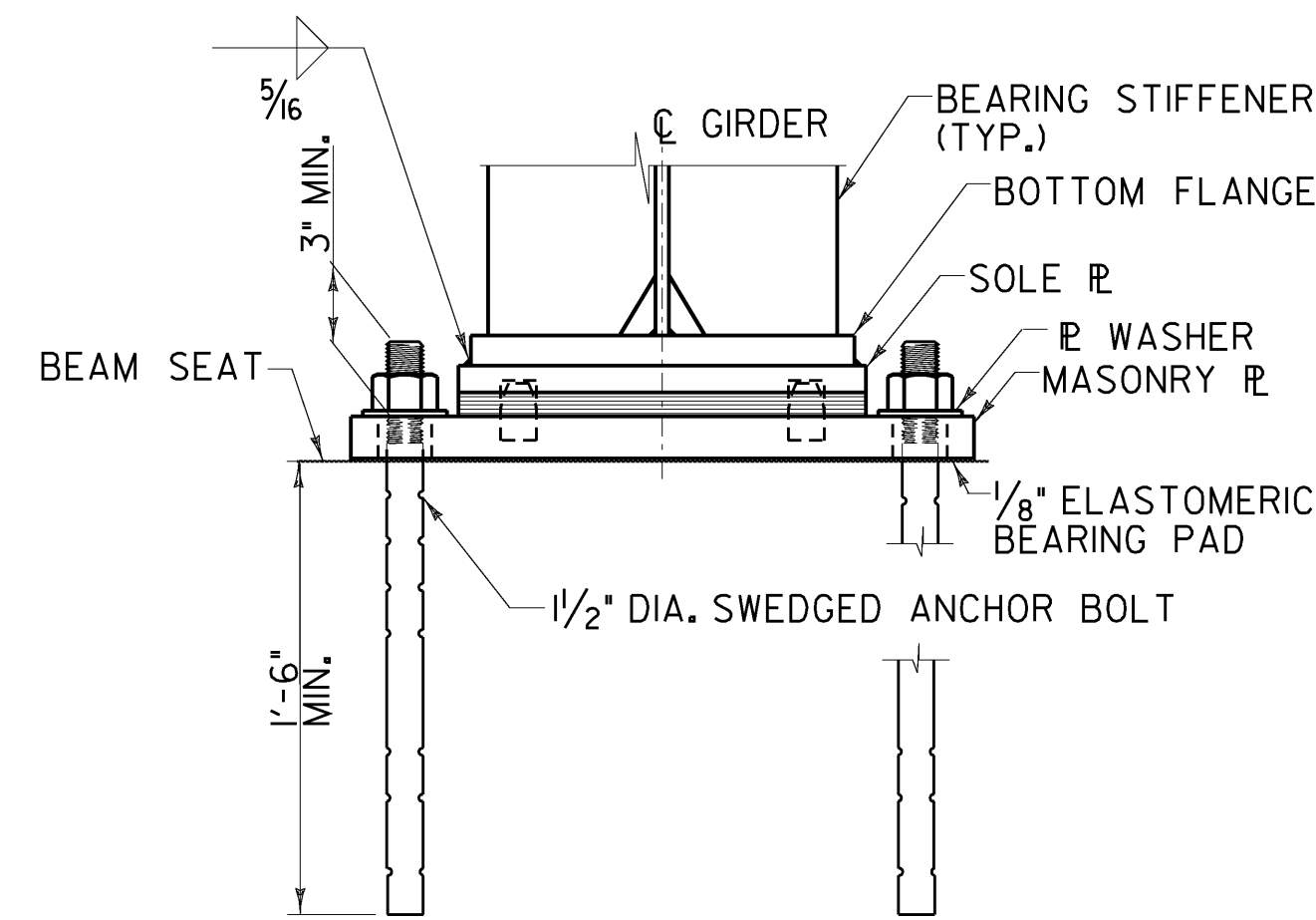




PLAN



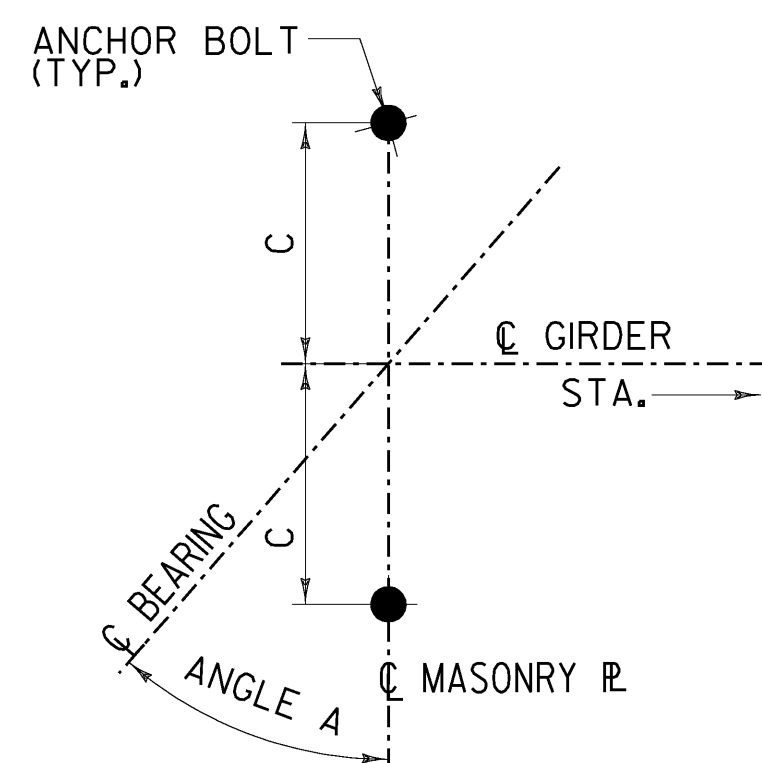
ELEVATION



SECTION C-C

STEEL FIXED BEARINGS - PIER 2

SCALE: 1/2" = 1'-0"

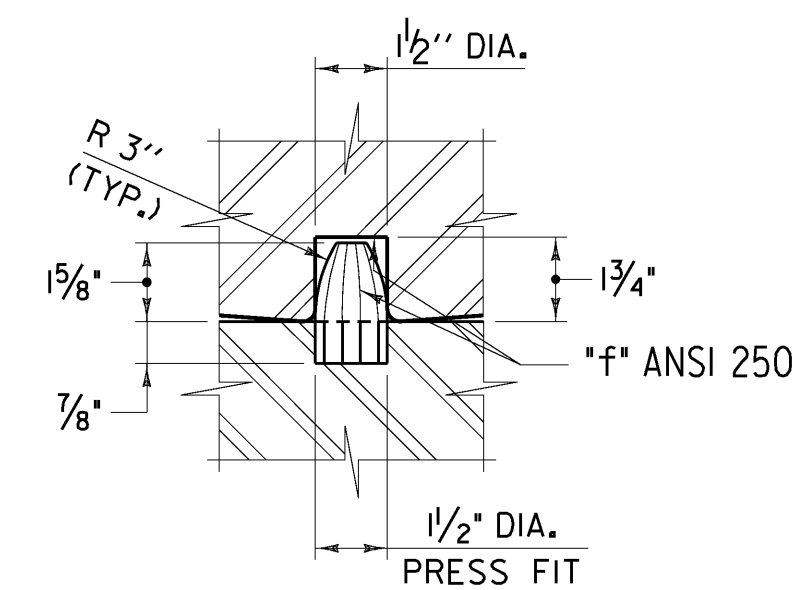


ANCHOR BOLT LAYOUT PLAN

NOT TO SCALE

ANCHOR BOLT LAYOUT TABLE - ANGLE A

LOCATION:	ABUT. 1.	PIER 1	PIER 2	PIER 3	ABUT. 2
DIM C:	10"	11"	10 1/2"	11"	10"
GIRDER 1	38° 28' 5"	41° 25' 59"	45° 50' 2"	50° 37' 7"	54° 25' 20"
GIRDER 2	38° 45' 53"	41° 45' 46"	46° 13' 8"	51° 4' 29"	54° 56' 47"
GIRDER 3	39° 3' 59"	42° 5' 55"	46° 36' 41"	51° 32' 29"	55° 29' 4"
GIRDER 4	39° 22' 25"	42° 26' 26"	47° 0' 44"	52° 1' 9"	56° 2' 14"
GIRDER 5	39° 41' 10"	42° 47' 20"	47° 25' 18"	52° 30' 31"	56° 36' 20"



PINTLE DETAIL
NOT TO SCALE

BEARING NOTES:

- BEARINGS SHALL CONFORM TO APPLICABLE SUBSECTIONS OF THE STANDARD SPECIFICATION SECTIONS 531 AND 731.
- FIXED AND EXPANSION BEARINGS SHALL BE PAID FOR UNDER THE ITEMS 531.13 AND ITEM 531.11 RESPECTIVELY.
- FABRICATION DRAWINGS CONFORMING TO STANDARD SPECIFICATION SUBSECTION 531.03 SHALL BE SUBMITTED TO INCLUDE WELDING AND VULCANIZING PROCEDURES.
- THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.
- ELASTOMERIC BEARINGS SHALL BE VIRGIN NATURAL RUBBER, HARDNESS (SHORE "A" DUROMETER) OF 60, GRADE 3 CONFORMING TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (DIVISION II) TABLE 18.4.5.1-1B.
- STEEL REINFORCED ELASTOMERIC BEARING DESIGN METHOD = B. BEARINGS SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS FOR STEEL REINFORCED ELASTOMERIC BEARINGS OF THE AASHTO STANDARD SPECIFICATIONS DIVISION II, SECTION 18.7.
- ELASTOMERIC BEARING DESIGN CRITERIA:
 - ABUTMENT 1 AND 2 BEARINGS
 - A. MASONRY PLATE TO CONCRETE DESIGN PRESSURE = 1050 P.S.I. MAXIMUM.
 - B. DESIGN DEAD LOAD REACTION = 145 KIPS/BEARING
 - C. DESIGN LIVE LOAD REACTION = 94 KIPS/BEARING
 - D. LATERAL DESIGN LOAD = 29 KIPS/BEARING
 - PIER 1 AND 3 BEARINGS
 - A. MASONRY PLATE TO CONCRETE DESIGN PRESSURE = 1050 P.S.I. MAXIMUM.
 - B. DESIGN DEAD LOAD REACTION = 46 KIPS/BEARING
 - C. DESIGN LIVE LOAD REACTION = 71 KIPS/BEARING
 - D. LATERAL DESIGN LOAD = 9.2 KIPS/BEARING
- ALL STEEL IN BEARING DEVICES SHALL BE AASHTO M 270M/M 270, (ASTM A-709) GRADE 36 (MIN.).
- ANCHOR BOLTS SHALL HAVE A MINIMUM OF 1'-6" EMBEDMENT INTO THE CONCRETE AND SHALL CONFORM TO STANDARD SPECIFICATION SUBSECTION 714.08.
- ALL ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ALL WASHERS SHALL BE 3/8" PLATE (MINIMUM). PAYMENT FOR ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE BEARINGS.
- BEARING DEVICES SHALL BE GALVANIZED OR METALIZED AS PER STANDARD SPECIFICATION SUBSECTIONS 531.04(b) AND 506.15(a) AND (b). AREAS OF DAMAGED GALVANIZING SHALL BE COATED IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 513. AREAS OF DAMAGED METALIZING SHALL BE COATED WITH THE SAME SEALANT USED BY THE BEARING SUPPLIER.
- THE TEMPERATURE SETTING RANGE FOR INSTALLATION OF THE ELASTOMERIC BEARINGS WITHOUT THE NEED FOR ADJUSTMENT IS 20 TO 70 F.°
- BEARING SURFACES MARKED "F" SHALL BE FINISHED IN ACCORDANCE WITH AASHTO DIVISION II, SECTION 11.4.6.
- DRILLING TO INSTALL ANCHOR BOLTS IN PIER CAPS WILL NOT BE ALLOWED.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	

U.S. ROUTE 5 OVER I-91

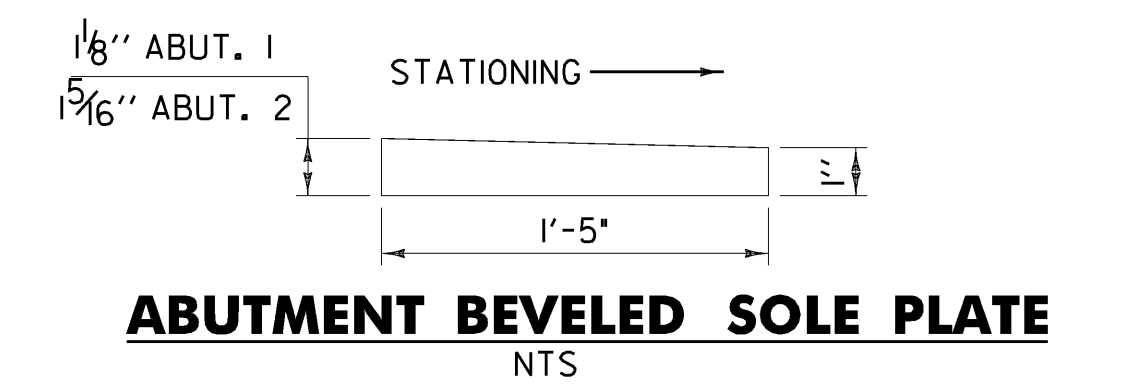
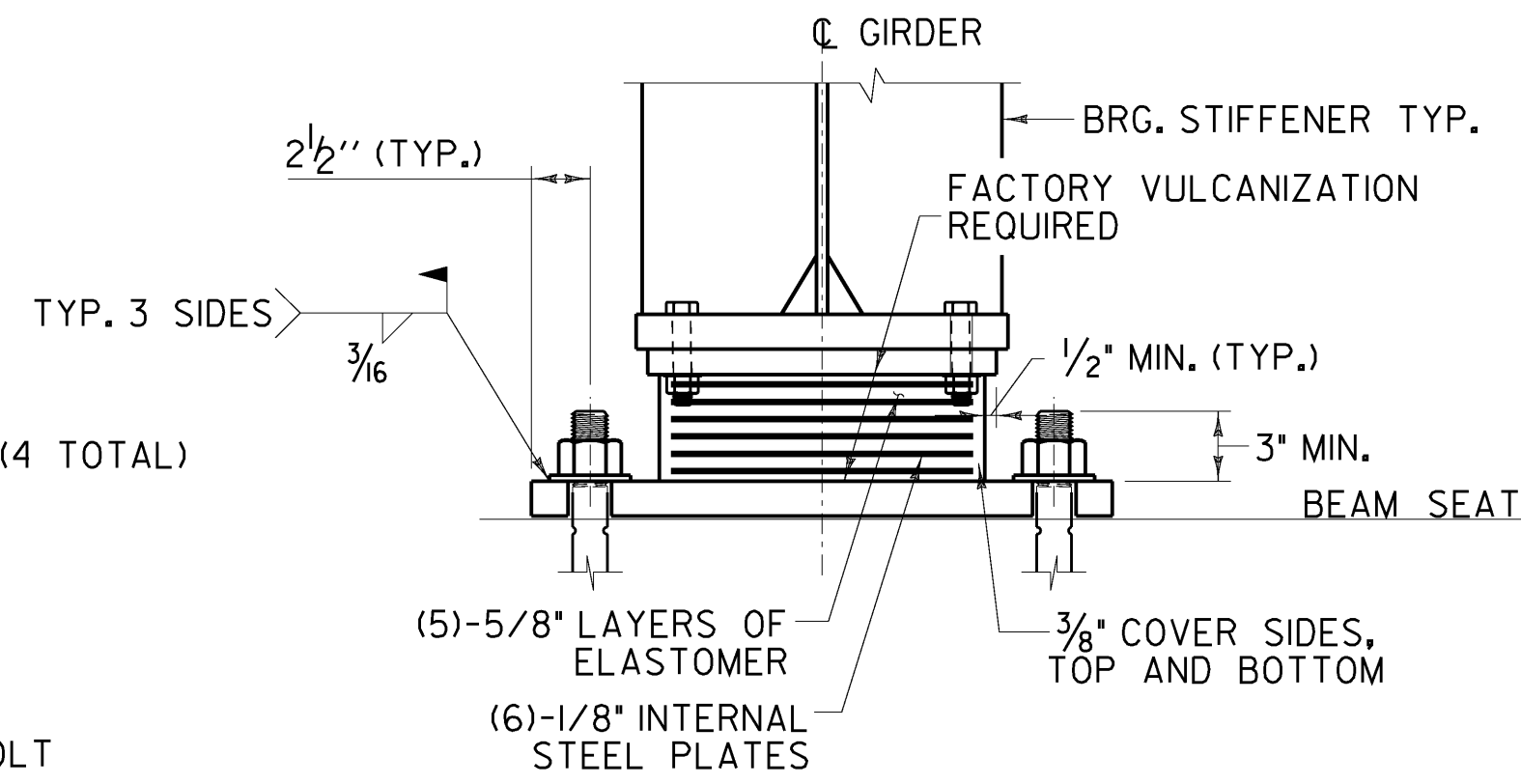
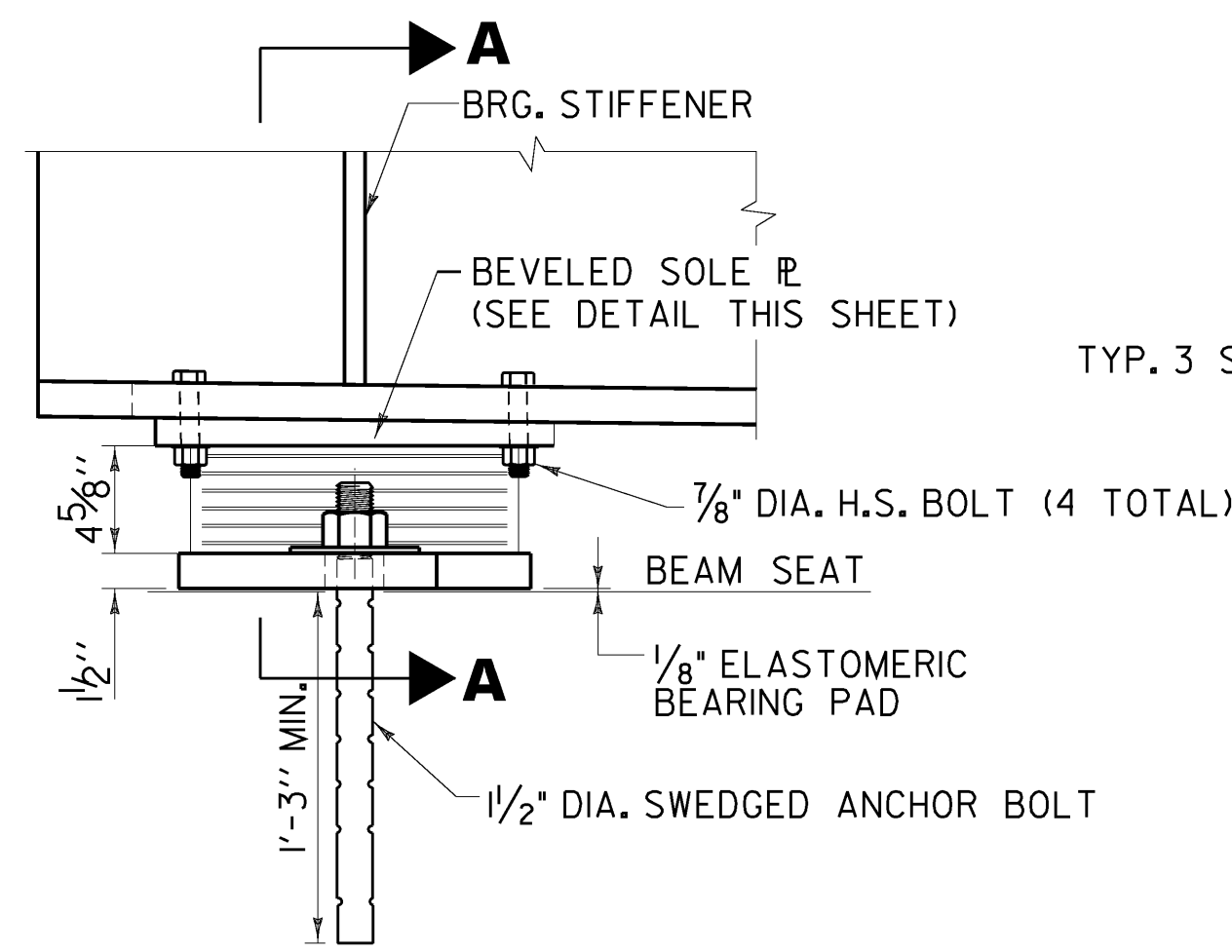
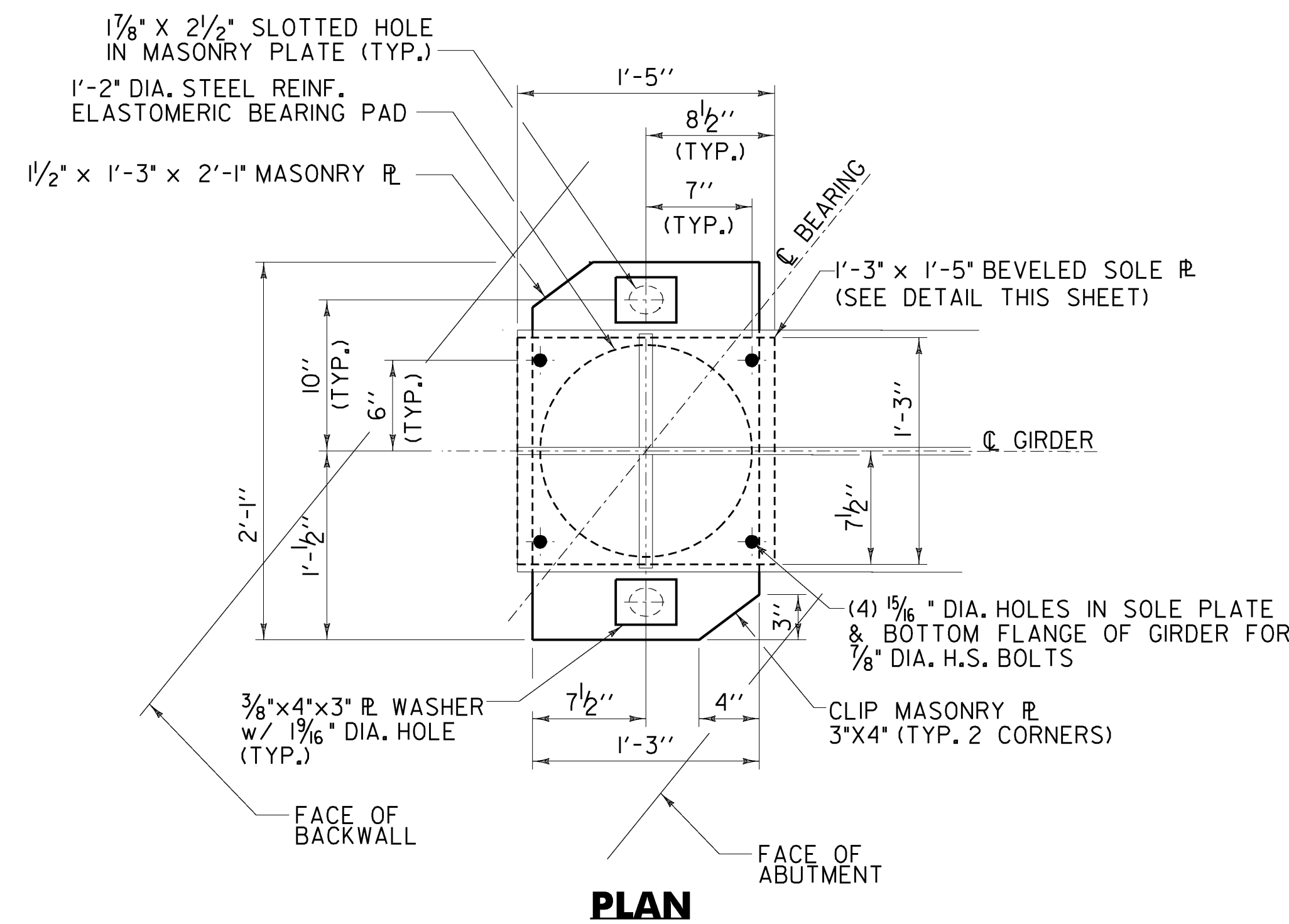
FIXED BEARING DETAILS

Designed By	T. KNIGHT	Drawn By	T. KNIGHT
Checked By	Date	Bridge Design Supervisor	
G. BOGUE	06/09	G. BOGUE	Date 06/09

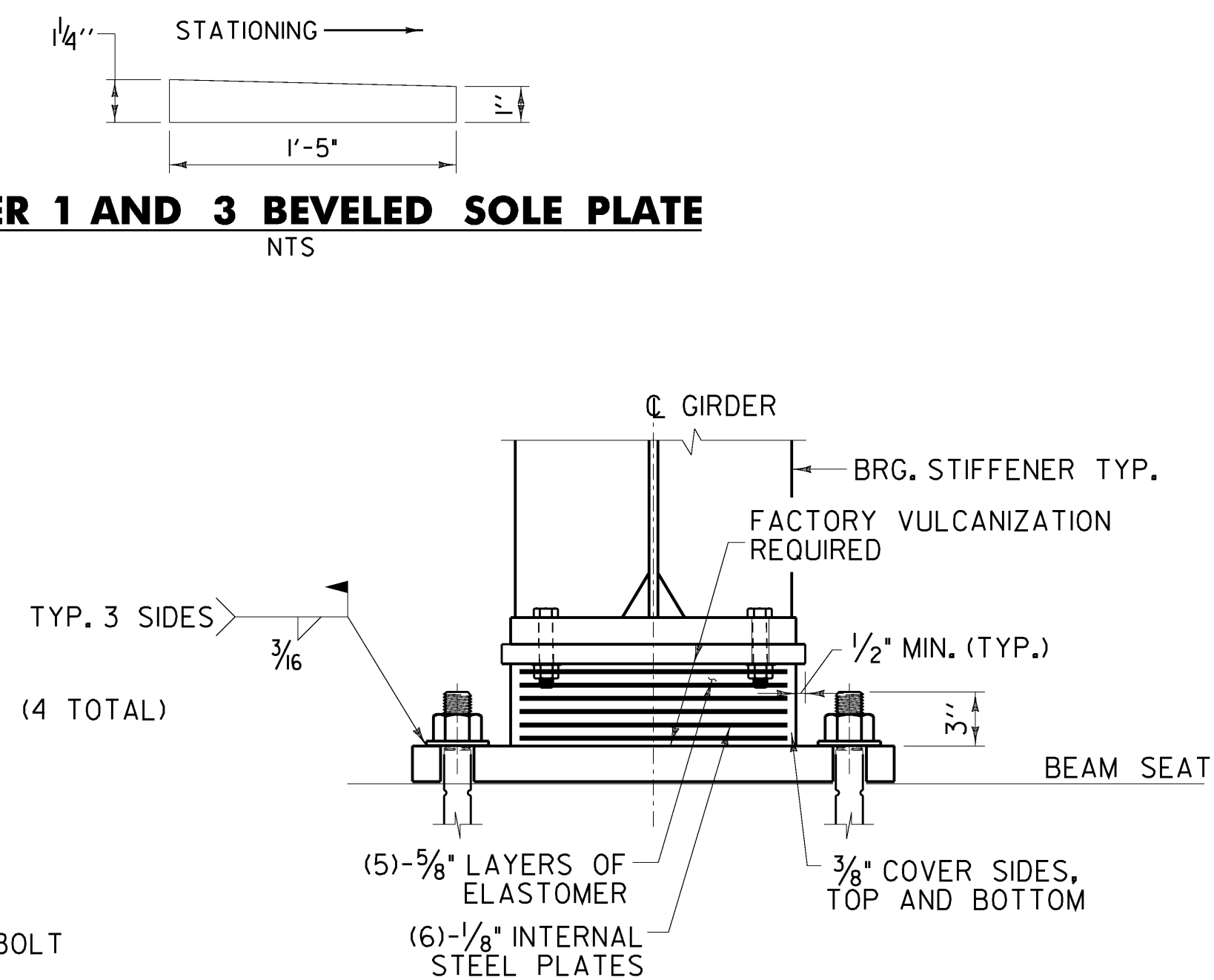
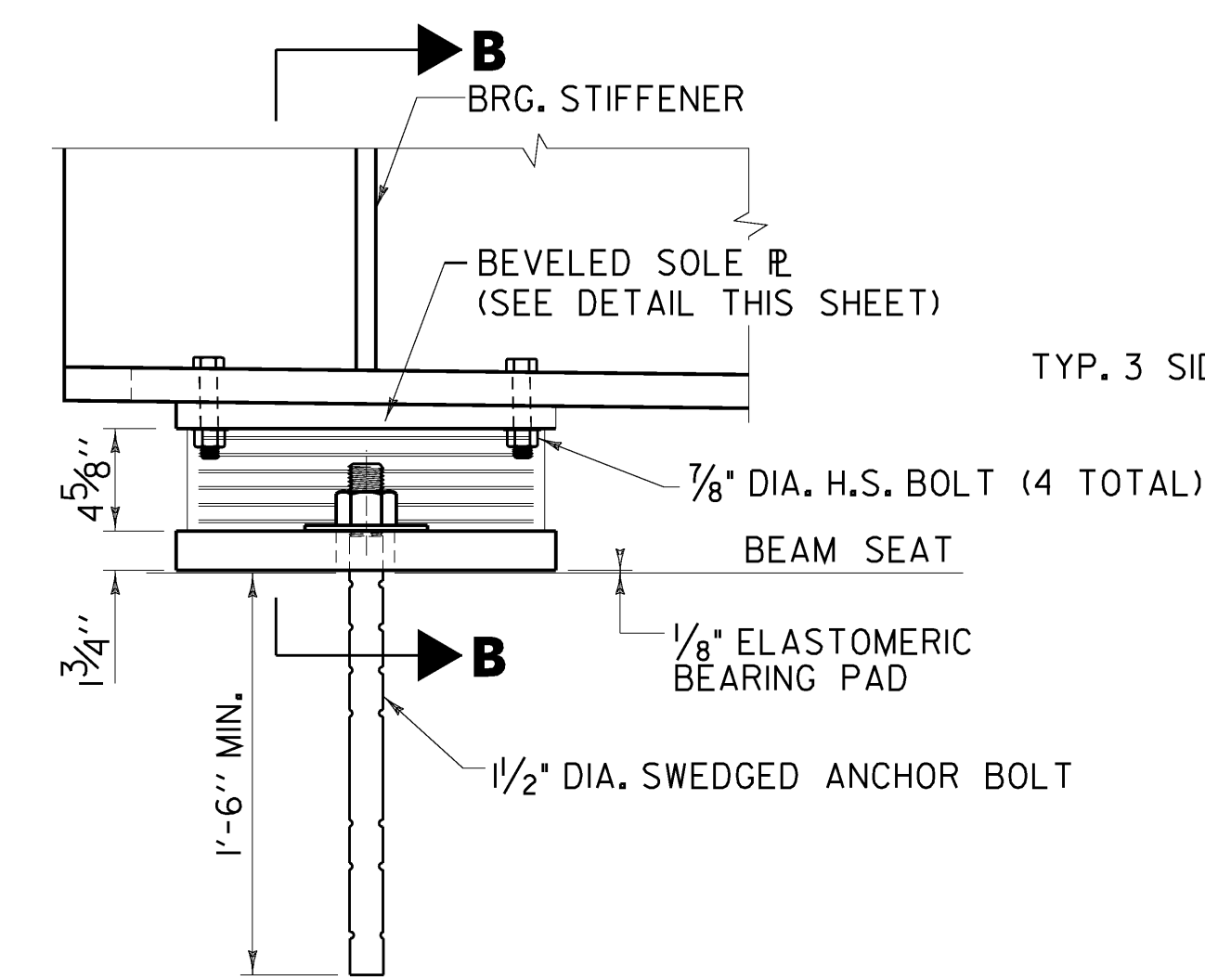
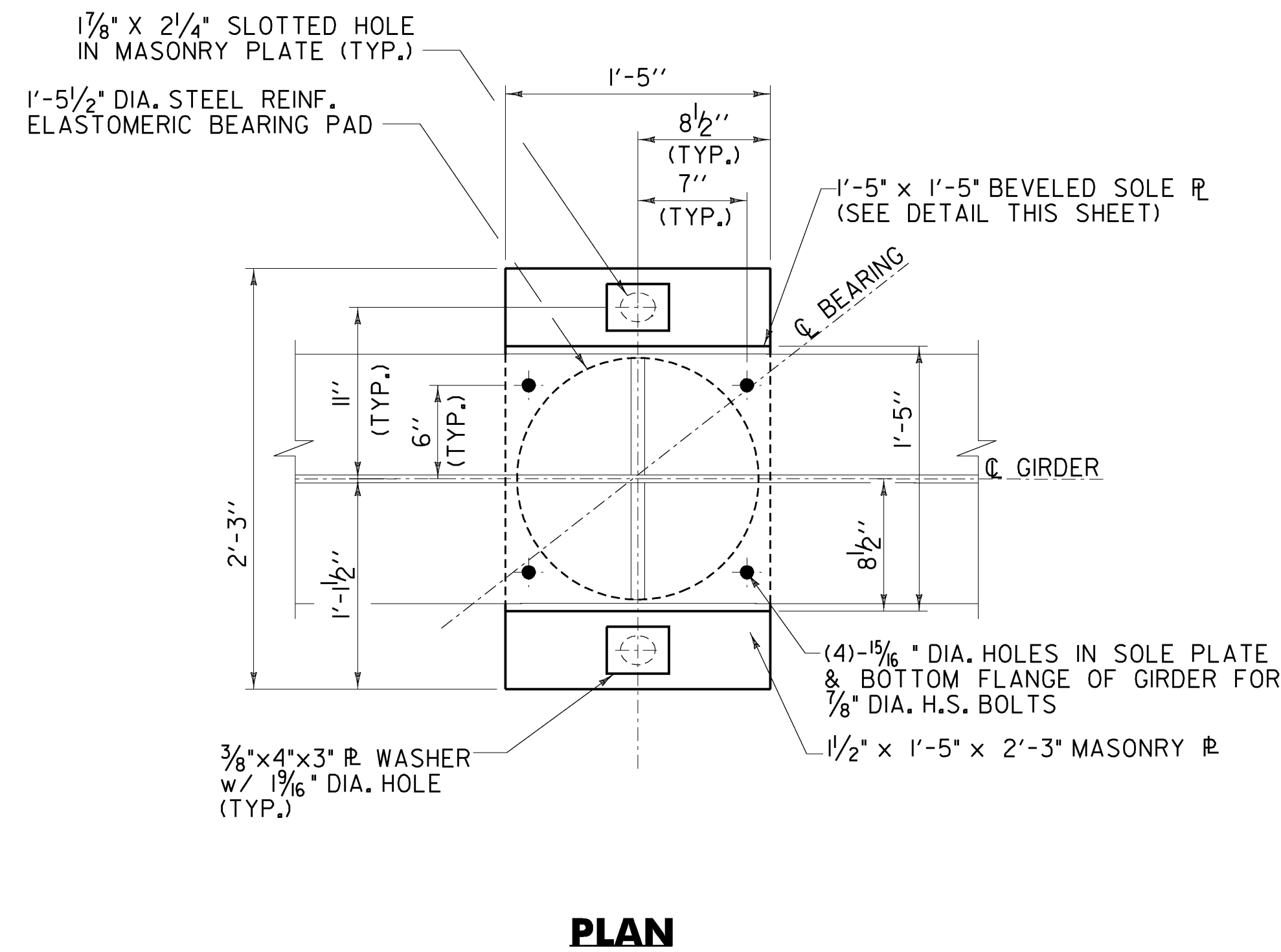
PROJECT	PUTNEY	PROJECT NO.	IM 091-(131)
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CAD Drawing Name:	... \32 z93a148brgs.dwg	Date:	10/19/2009
Bridge Sheet No.		Sheet	32 of 75





EXPANSION BEARINGS - ABUTMENTS
 ABUT. 1 SHOWN (ABUT. 2 SIMILAR)



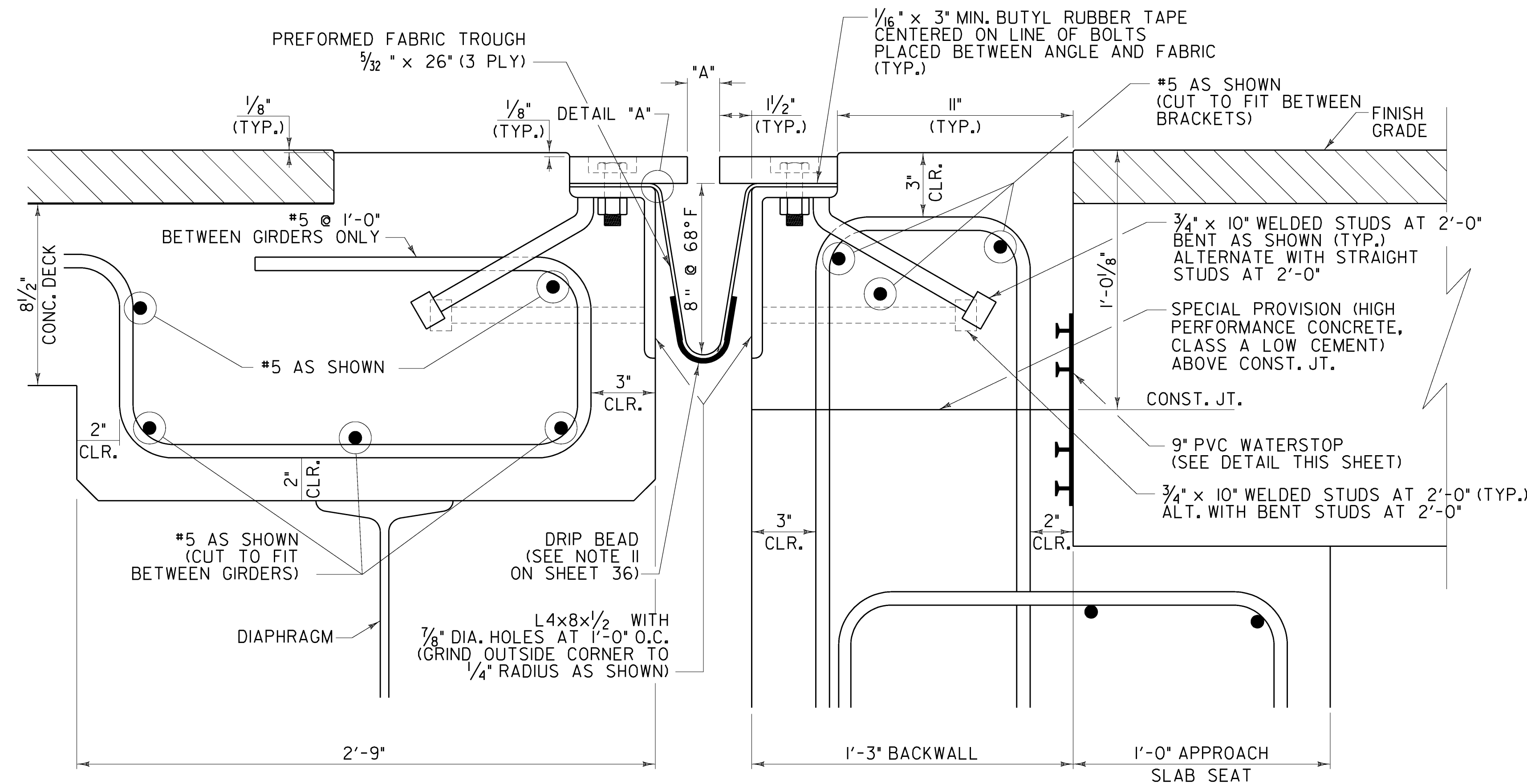
PIER 1 AND 3 BEVELED SOLE PLATE
 NTS

EXPANSION BEARINGS - PIERS 1 AND 3
 PIER 3 SHOWN (PIER 1 SIMILAR)

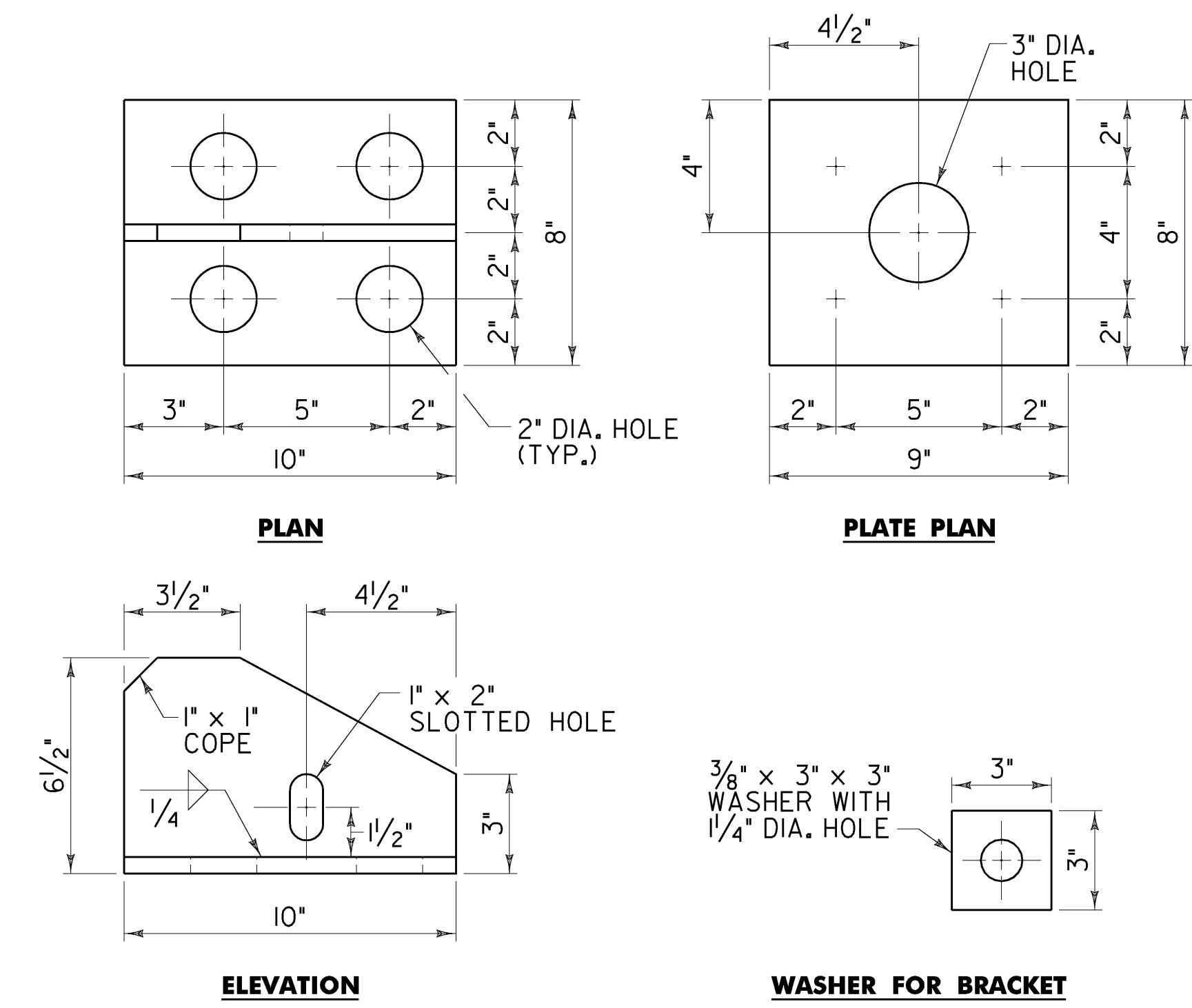
NOTES:
 1. FOR BEARING NOTES, REFER TO SHEET 32.
 SHEET SCALE: 1/2" = 1'-0" U.N.O.

STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	PUTNEY	Bridge No. 19A
Highway No.	U.S. ROUTE 5	Log Sta. Surv. Sta.
U.S. ROUTE 5 OVER I-91		
EXPANSION BEARING DETAILS		
Designed By	T. KNIGHT	Drawn By T. KNIGHT
Checked By	G. BOGUE	Bridge Design Supervisor
Date	06/09	Date 06/09
PROJECT	PUTNEY	PROJECT NO. IM 091-(131)
CAD Drawing Name:	... \33 z93a148brgs.d01t2.p04r: 10/19/2009	
Bridge Sheet No.	Sheet 33 of 75	

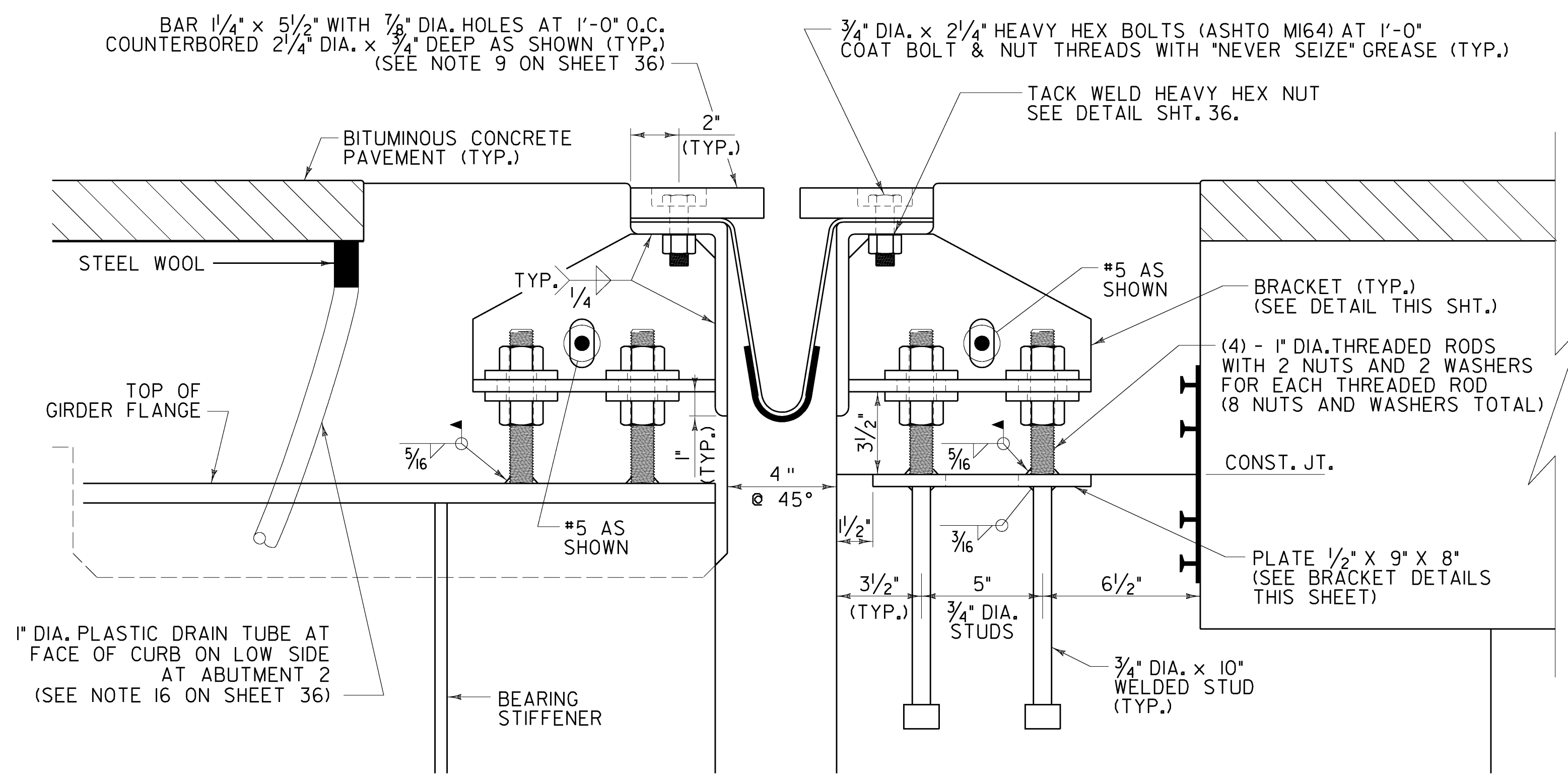




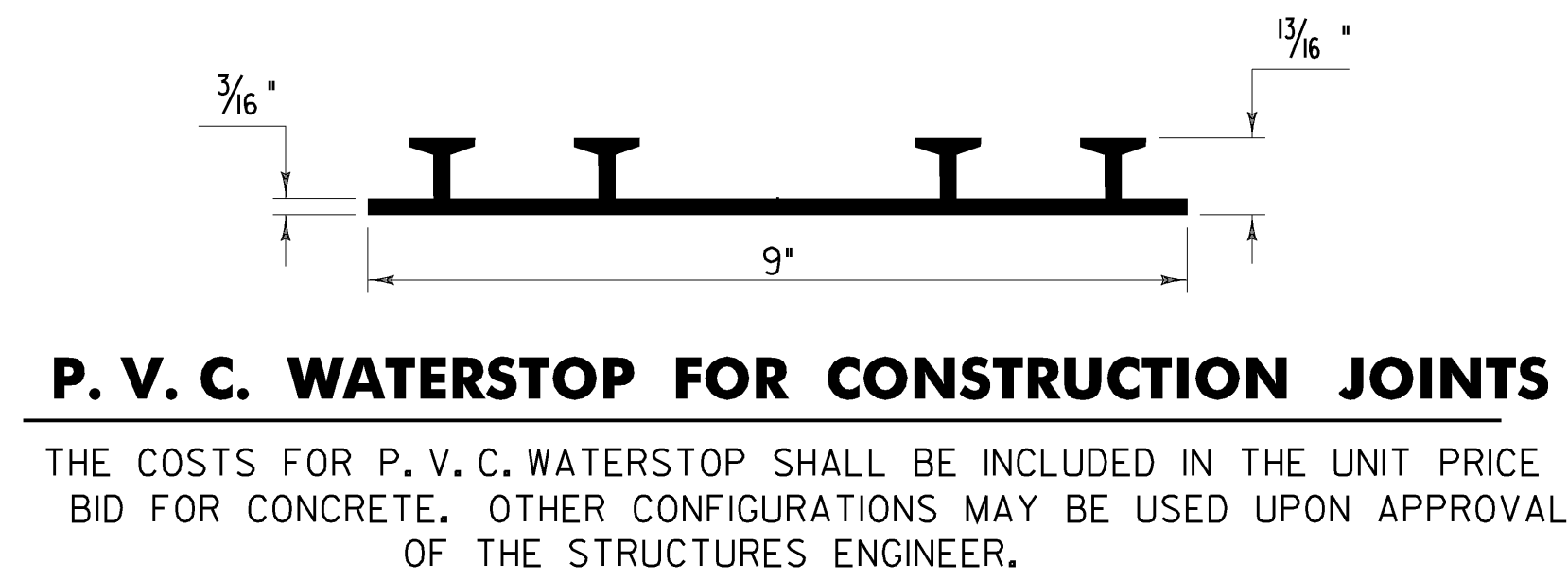
TYPICAL SECTION BETWEEN GIRDERS
(NORMAL TO CL BEARING)



NOTE: ALL PLATES SHALL BE 1/2" THICK U.N.O.
BRACKET DETAILS

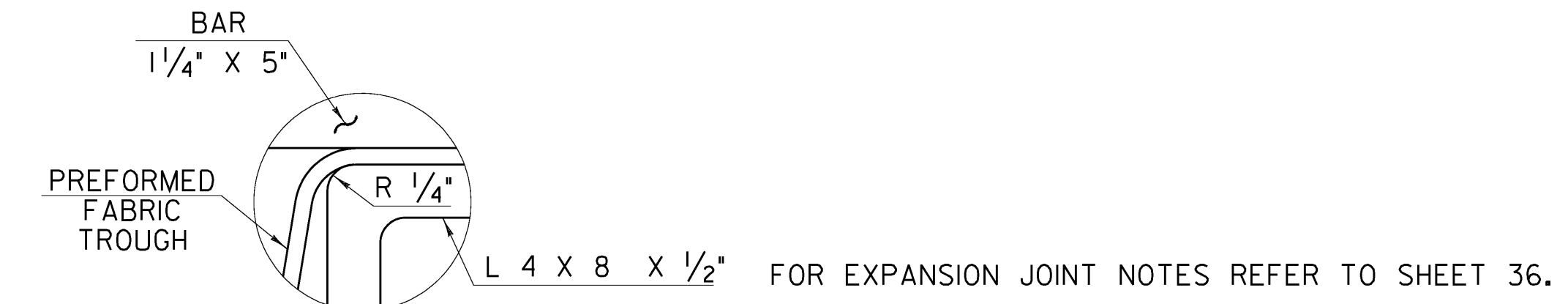


TYPICAL SECTION AT GIRDERS
(NORMAL TO CL BEARING)



P. V. C. WATERSTOP FOR CONSTRUCTION JOINTS
THE COSTS FOR P. V. C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.

TEMP	"A" DIST
0° F	1 5/8"
15° F	1 7/16"
30° F	1 3/8"
45° F	1"
60° F	13/16"
75° F	9/16"
90° F	7/8"
105° F	3/16"

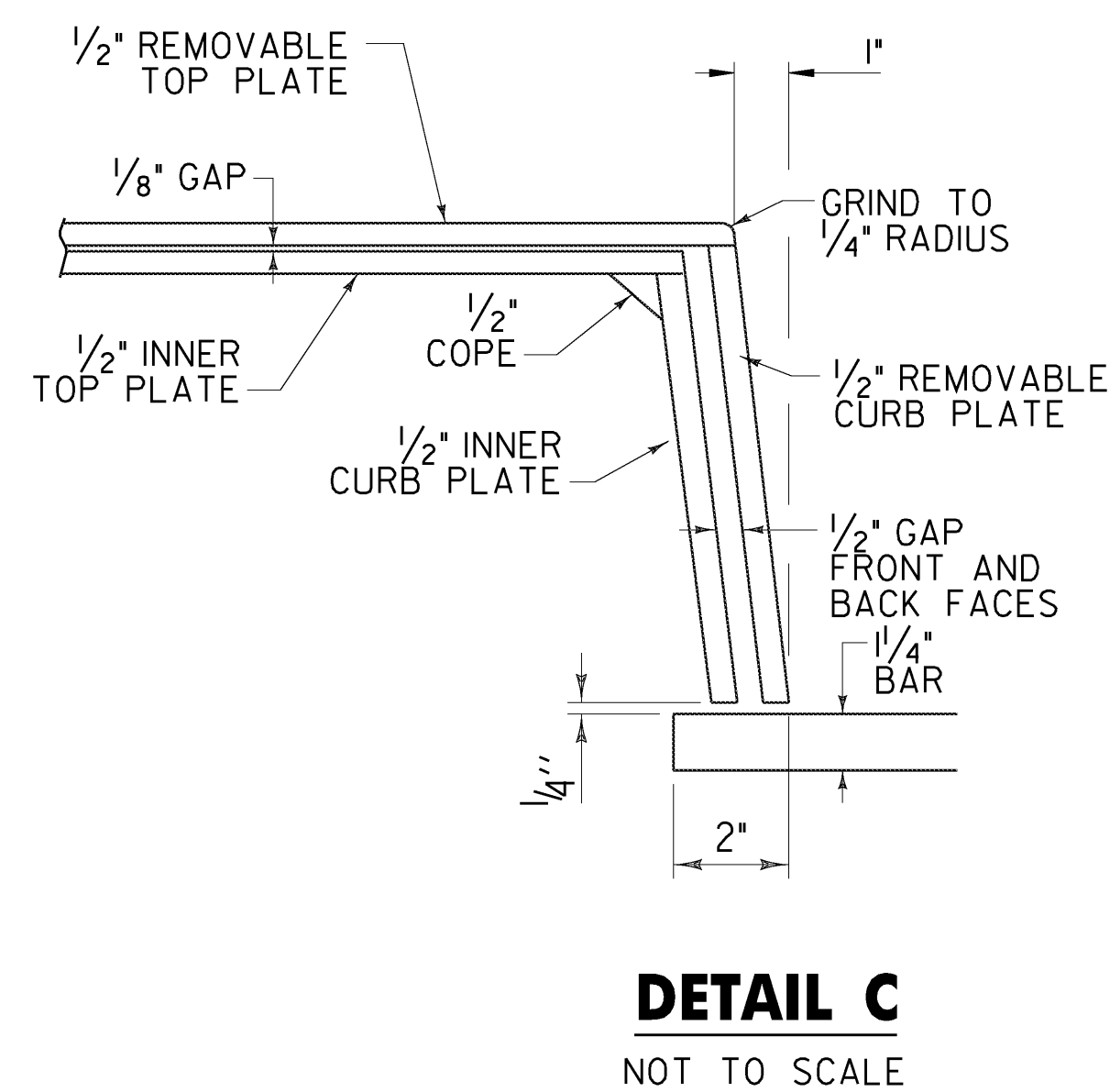
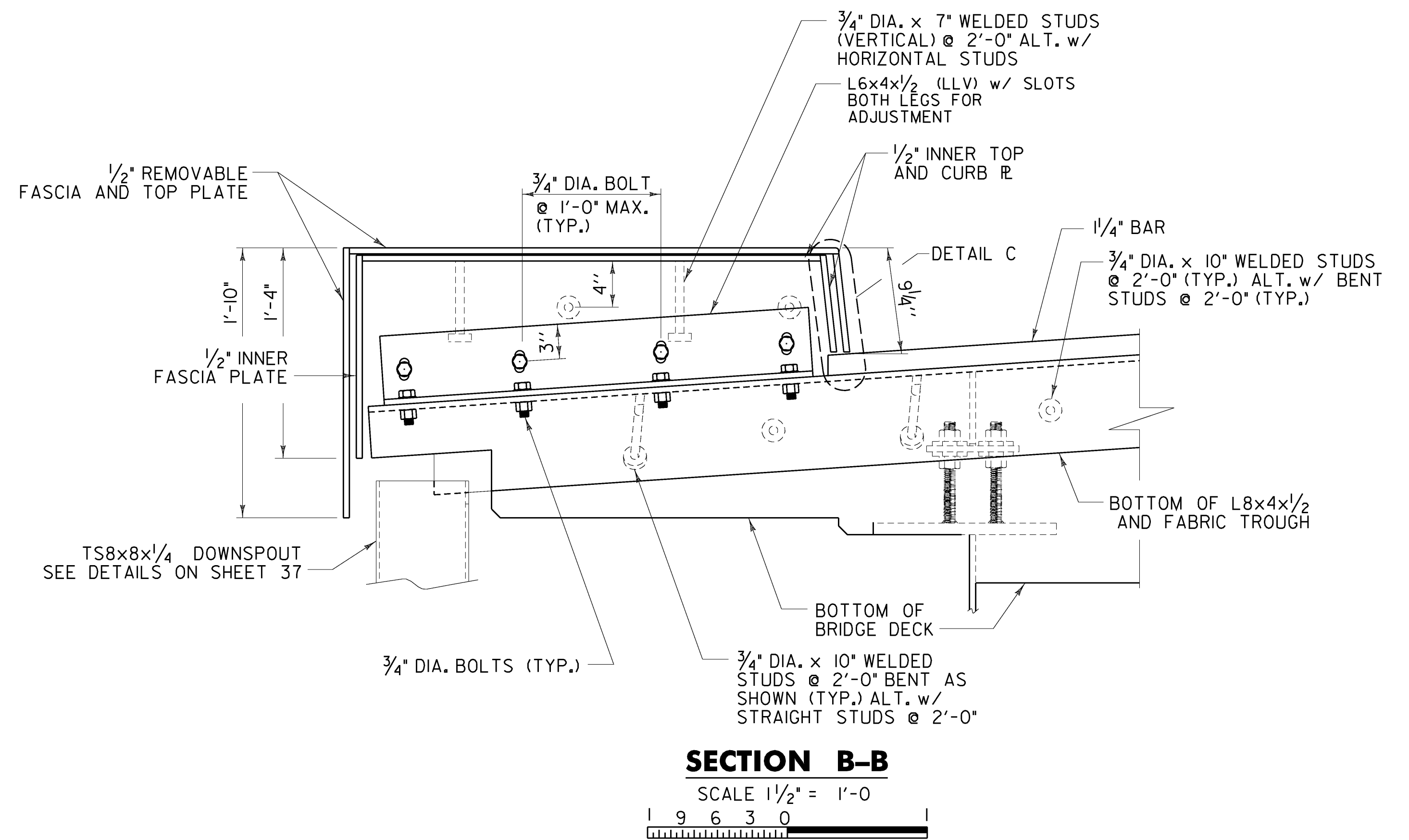
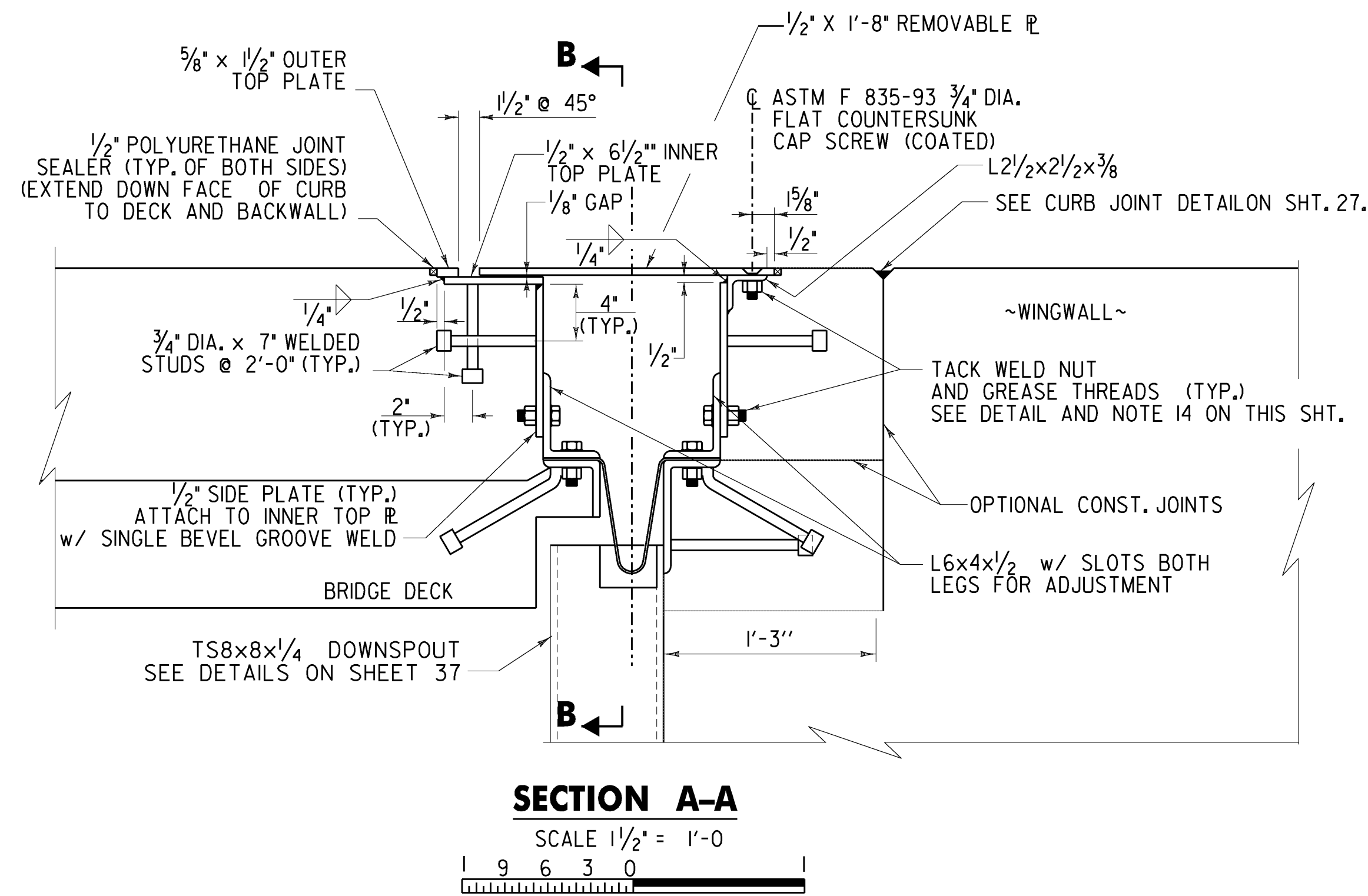


SHEET SCALE 3" = 1'-0" (UNLESS NOTED OTHERWISE)
1 9 6 3 0

STATE OF VERMONT
AGENCY OF TRANSPORTATION

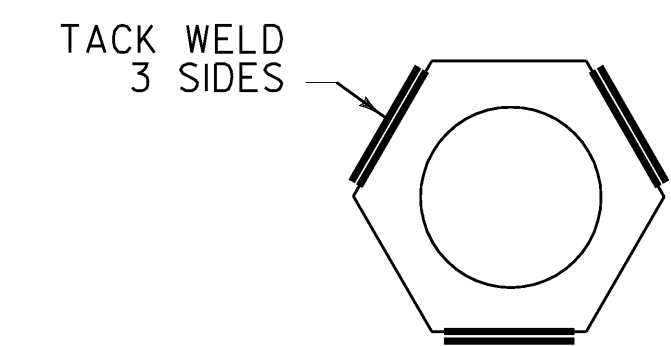
Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
EXPANSION JOINT DETAILS 1			
Designed By	T. KNIGHT	Drawn By	T. KNIGHT
Checked By	G. BOGUE	Date	06/09
		Bridge Design Supervisor	G. BOGUE
		Date	06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(31)
CAD Drawing Name:	... \35 z93a148Exp1+2.Bbf	Date:	10/19/2009
Bridge Sheet No.		Sheet	35 of 75





NOTES:

1. DETAILS ON SHEETS 34 THRU 36 ARE FOR ITEM 516.11, "BRIDGE EXPANSION JOINT, VERMONT".
2. THE PREFORMED FABRIC MATERIAL SHALL BE CONTINUOUS AND SHALL CONFORM TO SUBSECTION 707.07.
3. BUTYL RUBBER TAPE SHALL CONFORM TO SUBSECTION 707.12.
4. THE FINAL FINISH OF THE EXPANSION DEVICE SHALL BE COVERED DURING THE PLACING OF BRIDGE DECK CONCRETE.
5. ALL STEEL COMPONENTS SHALL BE AASHTO M 270M/M 270 GRADE 36 GALVANIZED OR METALIZED AS PER SUBSECTION 506.15, UNLESS OTHERWISE SPECIFIED. THREADED RODS SHALL CONFORM TO ASTM A307, GRADE C. THE NUTS FOR THE THREADED RODS SHALL BE ASTM A563.
6. THE ITEM 516.11, "BRIDGE EXPANSION JOINT, VERMONT" SHALL INCLUDE THE FABRICATION AND ERECTION OF THE COMPLETE JOINT ASSEMBLY INCLUDING ALL STEEL PLATES, BRACKETS, ANGLES, WELDED STUDS OR RODS, PREFORMED FABRIC DRAIN TROUGH MATERIAL, BUTYL RUBBER TAPE AND ANY OTHER MISCELLANEOUS MATERIAL NECESSARY TO INSTALL JOINT.
7. THE 8"x4"x1/2" ANGLES SHALL BE FURNISHED AS ONE CONTINUOUS PIECE. THE 1 1/4" X 5 1/2" BARS EACH SIDE OF THE JOINT SHALL BE PROVIDED IN FOUR EQUAL SEGMENTS.
8. COAT CONCRETE CONTACT SURFACES WITH EPOXY BONDING COMPOUND. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 516.11 "BRIDGE EXPANSION JOINT, VERMONT".
9. FILL COUNTER BORED HOLES WITH HOT POURED JOINT SEALER AFTER BOLT INSTALLATION. PAYMENT FOR THE WORK SHALL BE INCIDENTAL TO ITEM 516.11.
10. PAYMENT FOR WATERSTOP SHALL BE INCIDENTAL TO CONTRACT ITEM 501.34.
11. A DRIP BEAD OF 1/4" X 7" STRIP OF PREFORMED MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH USING AN ADHESIVE APPROVED BY THE MANUFACTURER. THE DRIP BEAD SHALL BE APPLIED 1" FROM THE DOWNSPOUT END OF THE TROUGH.
12. FABRIC TROUGH SHALL BE THOROUGHLY CLEANED AND FLUSHED AFTER THE PAVING OPERATION (INCIDENTAL TO COST OF PAVING).
13. THE EXPANSION JOINT SHALL BE SHOP ASSEMBLED AND SHIPPED AS ONE UNIT.
14. PROJECTING THREADS OF THE 3/4" BOLTS IN THE JOINT SHALL BE GREASED BY CONTRACTOR PRIOR TO PLACING ADJACENT CONCRETE. THIS WILL FACILITATE BOLT REMOVAL IF REQUIRED IN THE FUTURE.
15. ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS PRIOR TO GALVANIZING.
16. A 1" DIAMETER PLASTIC TUBE (CONFORMING TO STANDARD SPECIFICATION 740.01) SHALL BE INSTALLED AS SHOWN AT THE FACE OF THE CURB. THE UPPER END IS TO BE PLUGGED WITH STEEL WOOL AND THE LOWER END IS TO EXTEND BELOW THE BOTTOM OF THE ADJACENT GIRDER. THE DRAIN TUBES SHALL BE FASTENED TO THE GIRDERS USING A METHOD APPROVED BY THE ENGINEER.

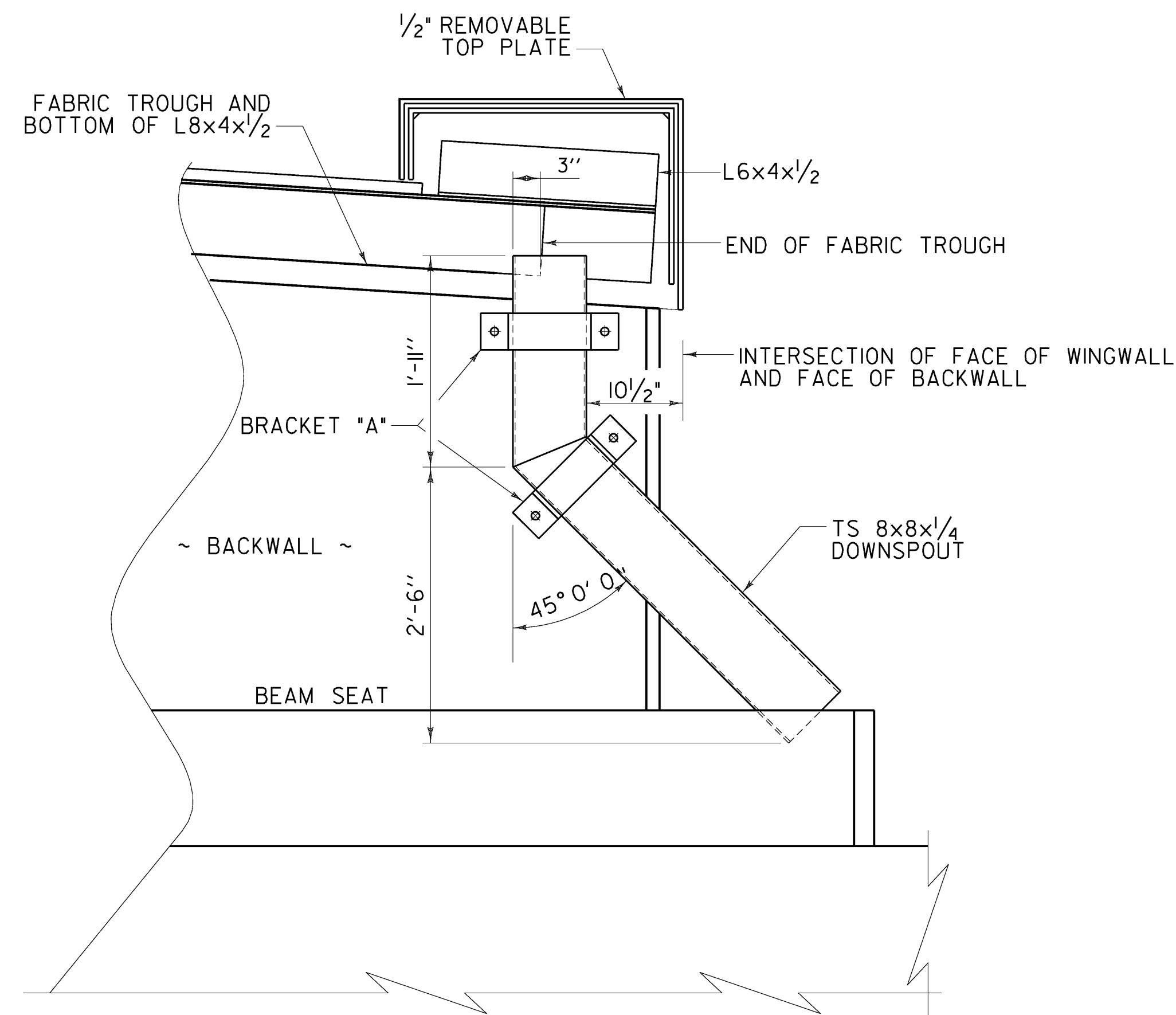


NUT WELD DETAIL
NOT TO SCALE

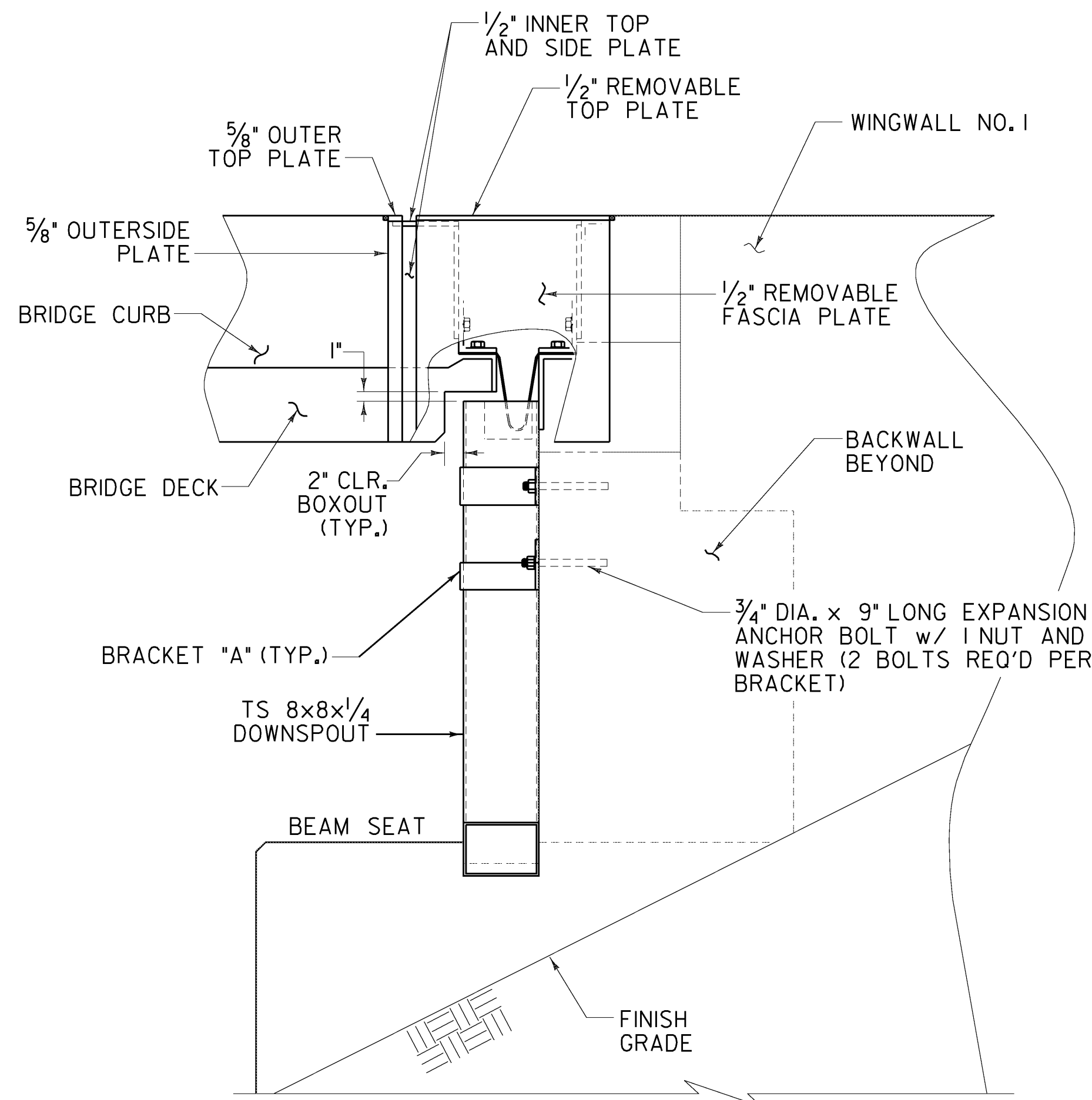
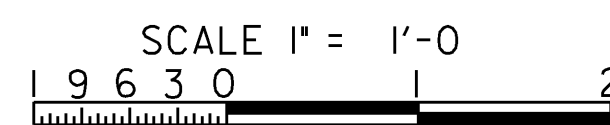
**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
EXPANSION JOINT DETAILS 2			
Designed By	T. KNIGHT	Drawn By	T. KNIGHT
Checked By	G. BOGUE	Date	06/09
		Bridge Design Supervisor	G. BOGUE Date 06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(31)
CAD Drawing Name:	...\\36 z93a148Exp1\31.dwg	Date:	10/19/2009
Bridge Sheet No.		Sheet	36 of 75

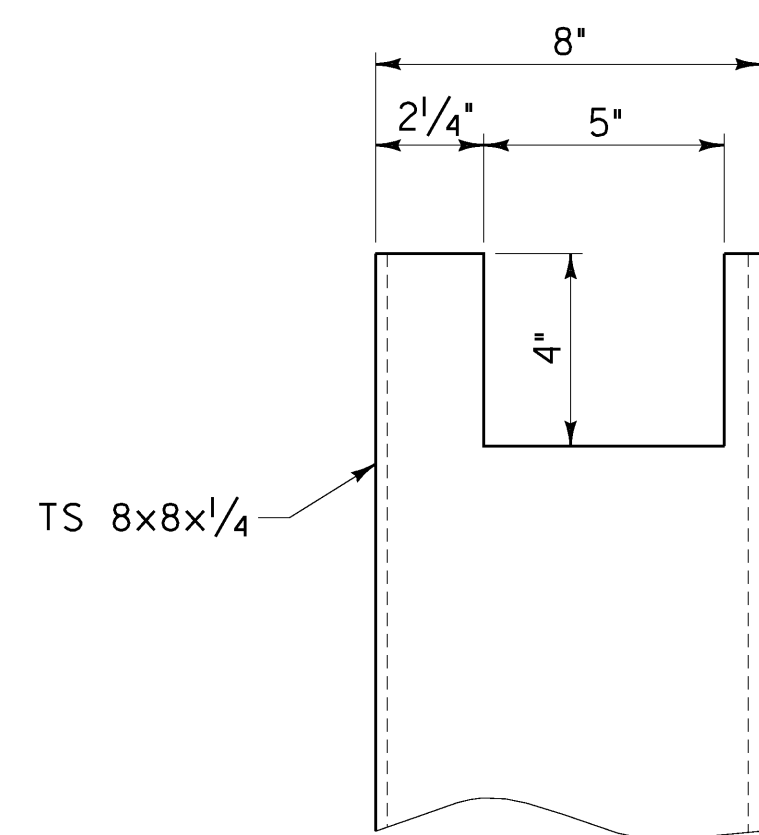
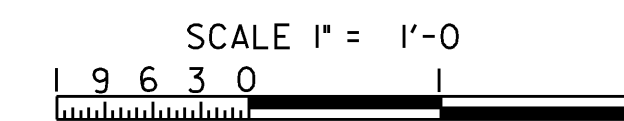




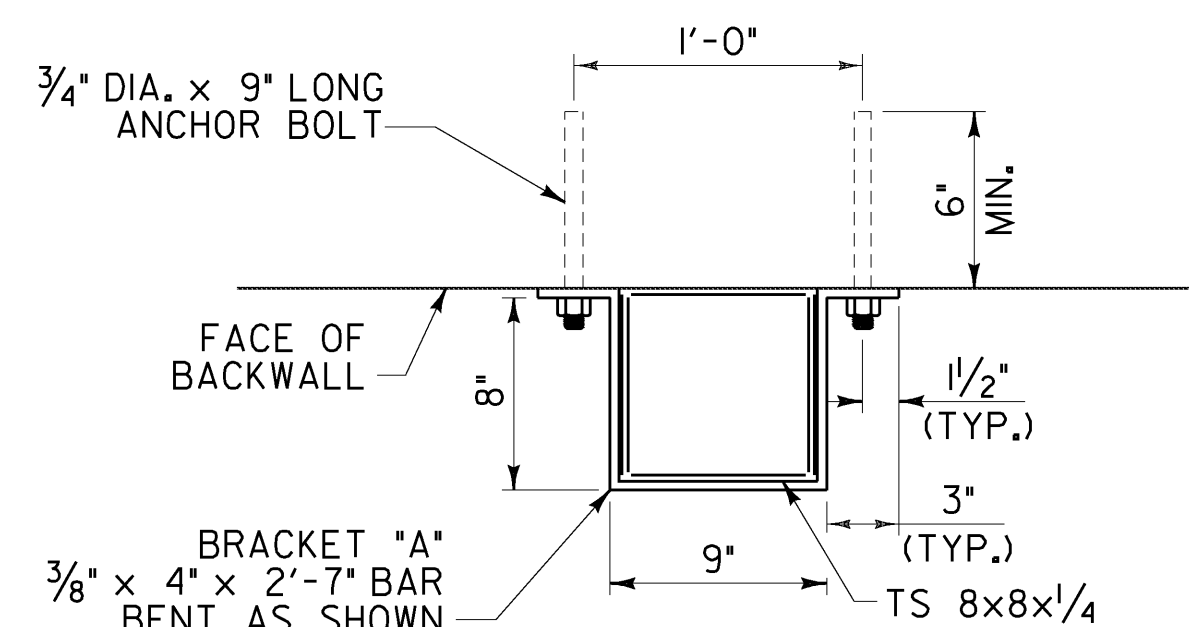
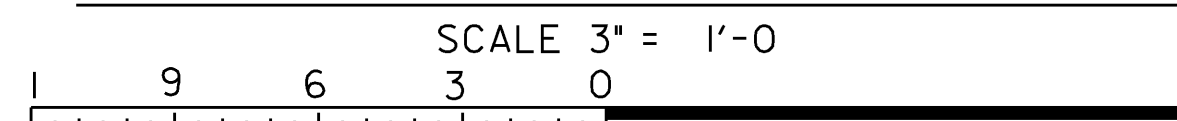
ABUTMENT 1 - DOWNSPOUT FRONT ELEVATION



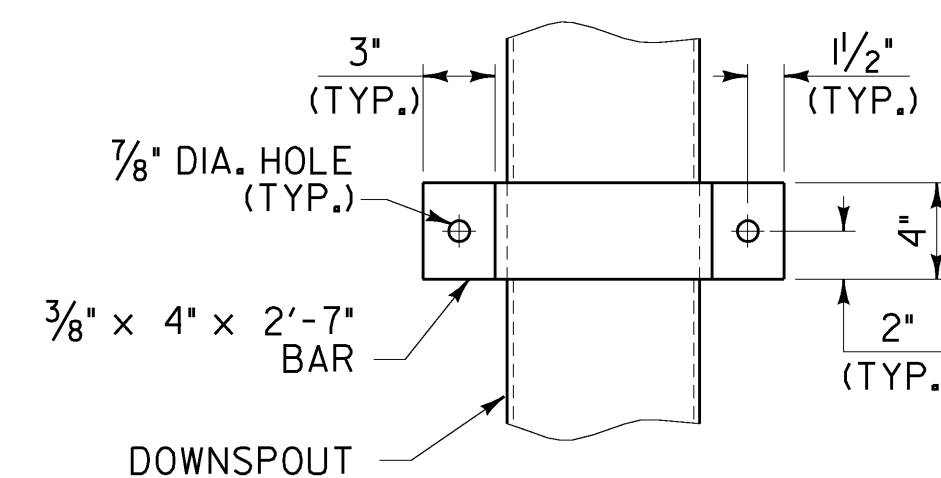
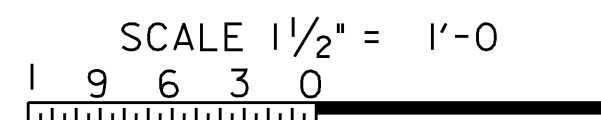
ABUTMENT 1 - DOWNSPOUT SIDE ELEVATION



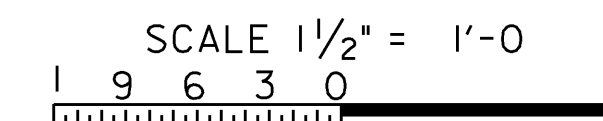
DOWNSPOUT CUTOUT FOR TROUGH



DETAIL FOR ATTACHING DOWNSPOUT TO BACKWALL



ELEVATION VIEW OF BRACKET A



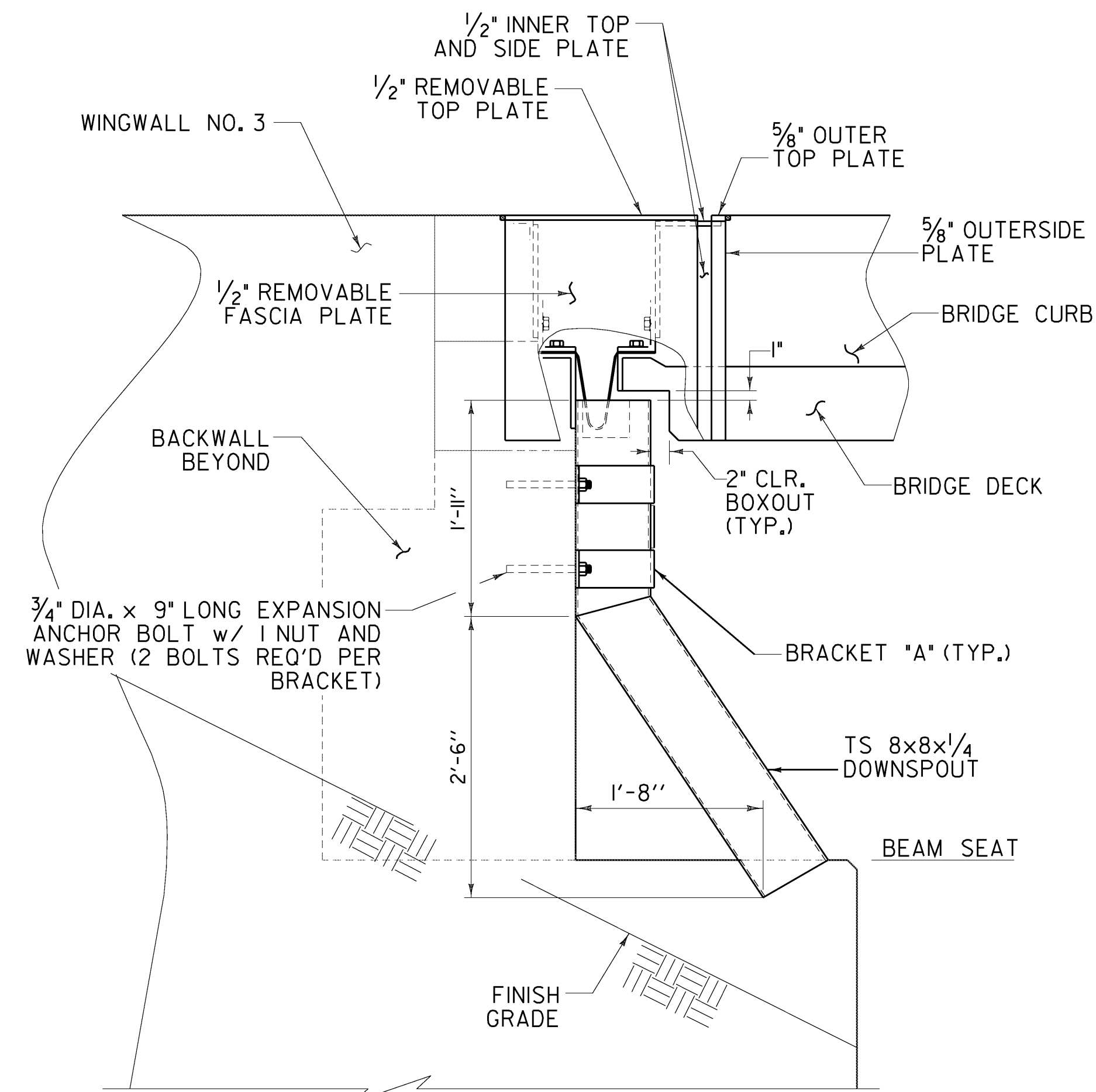
DOWNSPOUT NOTES

1. HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500 OR A501.
2. ALL PLATES, BARS, AND ANGLES SHALL CONFORM TO AASHTO M 270M/M 270 GRADE 36.
3. DOWNSPOUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123 AFTER FABRICATION.
4. ALL BOLTS AND RELATED HARDWARE SHALL BE ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A513 (AASHTO M 232M/M 232).
5. IN AREAS WHERE THE GALVANIZING HAS BEEN REMOVED FROM THE DOWNSPOUT EITHER BY CUTTING, BURNING, WELDING, PLACING, OR ANY OTHER MEANS, IT SHALL BE REPAIRED BY THOROUGHLY CLEANING THE DAMAGED AREAS WITH A WIRE BRUSH AND PAINTING THE DAMAGED AREAS WITH TWO COATS OF AN APPROVED SEALANT. PAYMENT WILL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM 506.60.
6. ALL MATERIALS AND INSTALLATION COSTS FOR THE DOWNSPOUT, INCLUDING STEEL TUBING, RELATED HARDWARE, AND ANCHOR BOLTS SHALL BE PAID FOR UNDER ITEM 506.60 "STRUCTURAL STEEL".
7. FOR ABUTMENT 2 DOWNSPOUT DETAILS REFER TO SHEET 38.

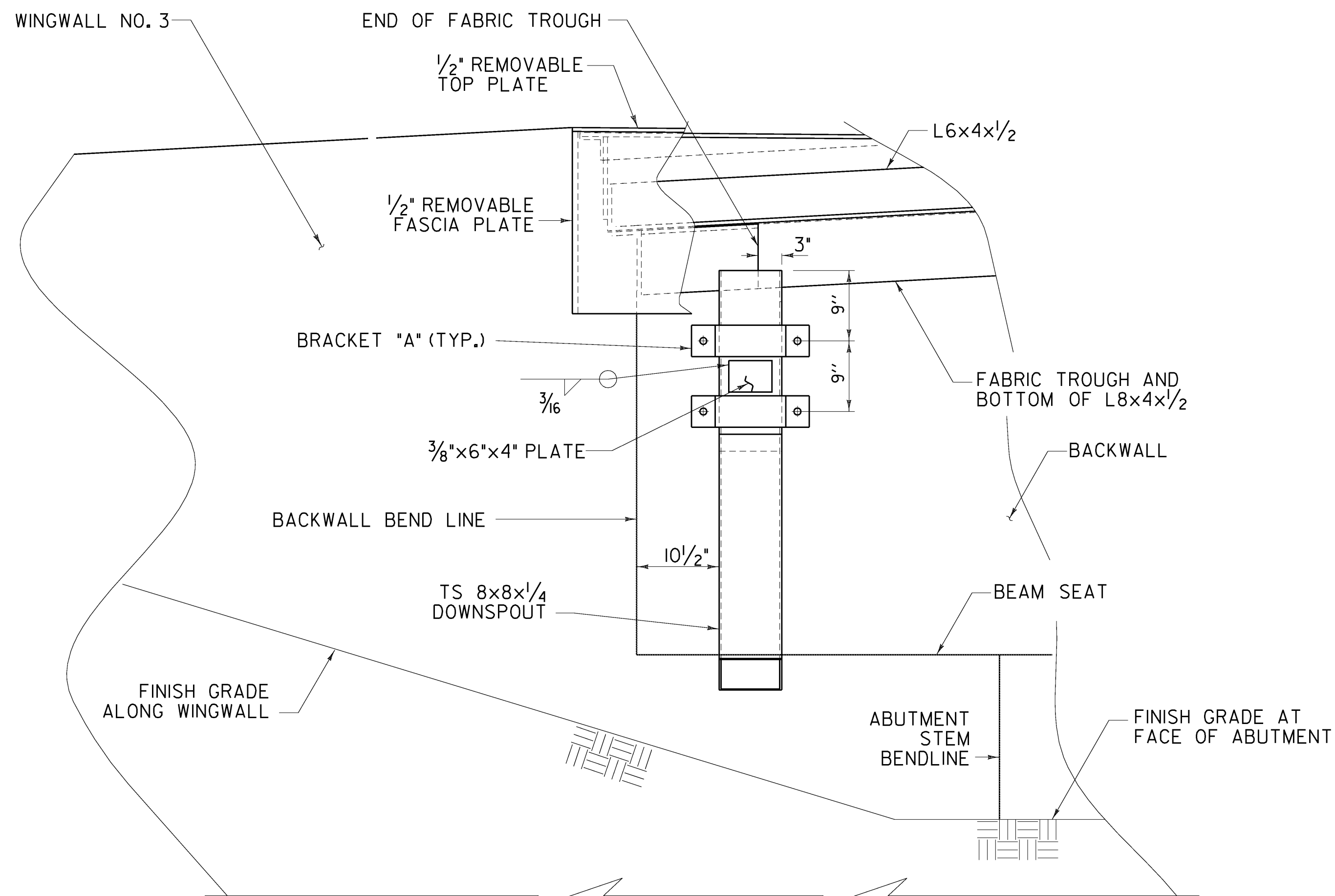
**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
DOWNSPOUT DETAILS 1			
Designed By	T. KNIGHT	Drawn By	R. WALKER
Checked By	T. KNIGHT	Date	06/09
		Bridge Design Supervisor	C. BOGUE
		Date	06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(31)
CAD Drawing Name:	...\\Plot Files\37 2938168.dwg 10/19/2009		
Bridge Sheet No.	Sheet 37 of 75		

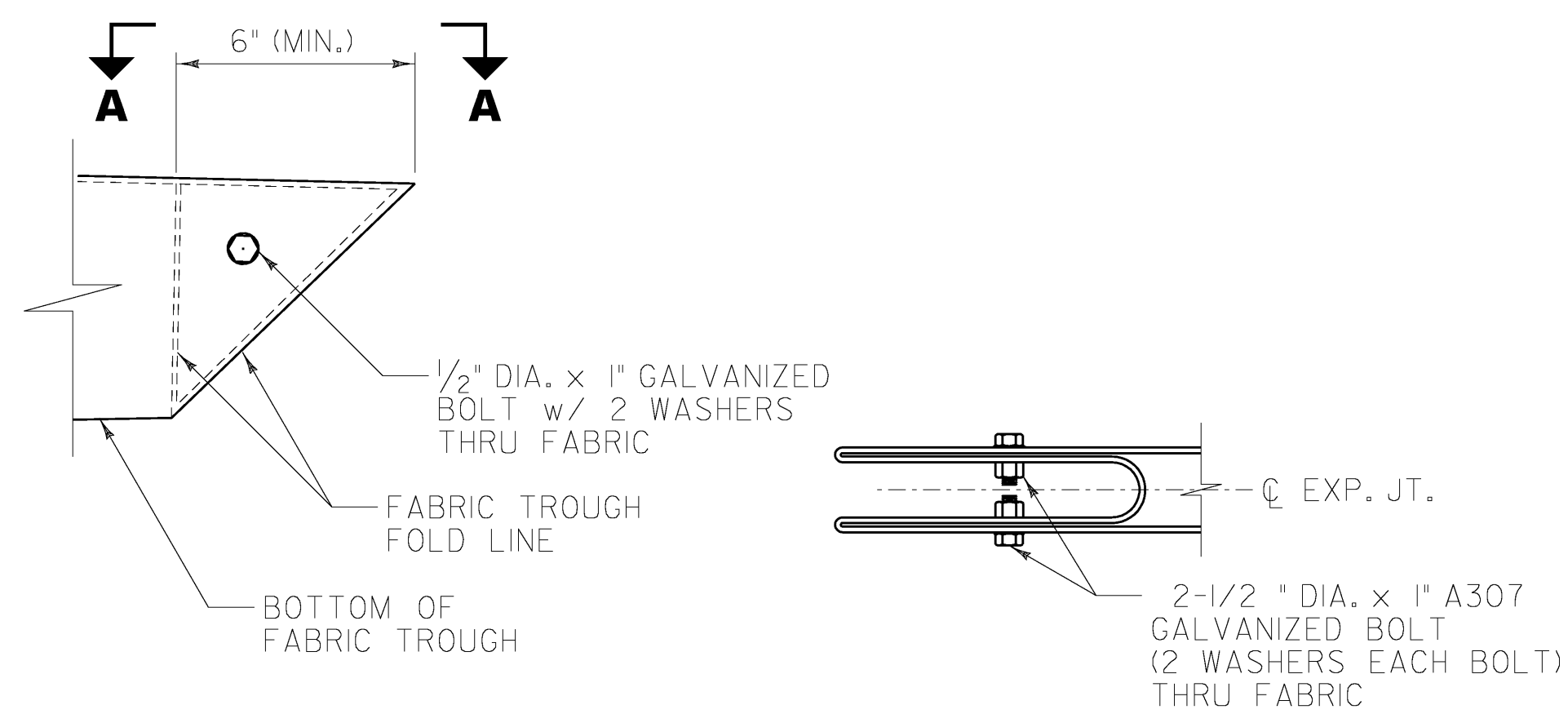
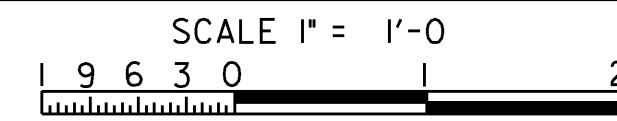




ABUTMENT 2 - DOWNSPOUT SIDE ELEVATION



ABUTMENT 2 - DOWNSPOUT FRONT ELEVATION



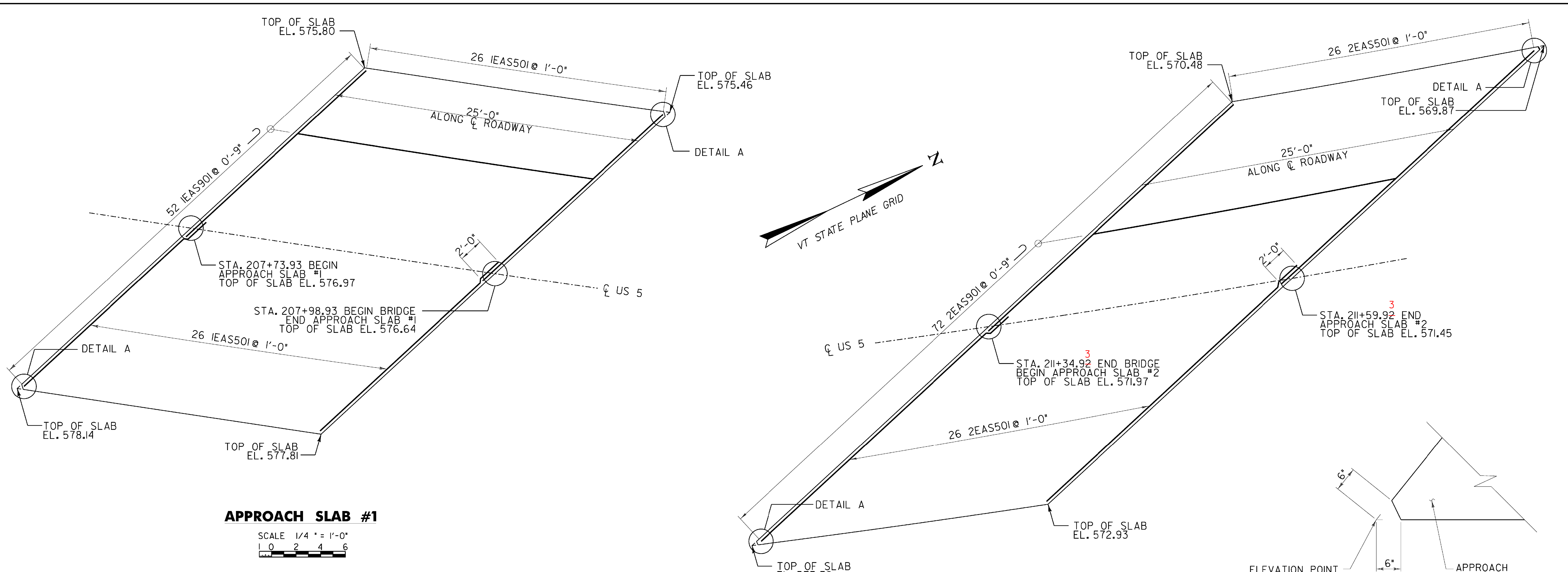
FOLDED TROUGH END DETAILS
NOT TO SCALE

NOTE:
1. FOR TROUGH CUTOUT AND BRACKET DETAILS, REFER TO SHEET 37.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
DOWNSPOUT DETAILS 2			
Designed By	T. KNIGHT	Drawn By	R. WALKER
Checked By	T. KNIGHT	Date	06/09
		Bridge Design Supervisor	G. BOGUE
		Date	06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(131)
CAD Drawing Name:	...\\Plot Files\38 29381682.dwg 10/19/2009		
Bridge Sheet No.	Sheet 38 of 75		





APPROACH SLAB #1

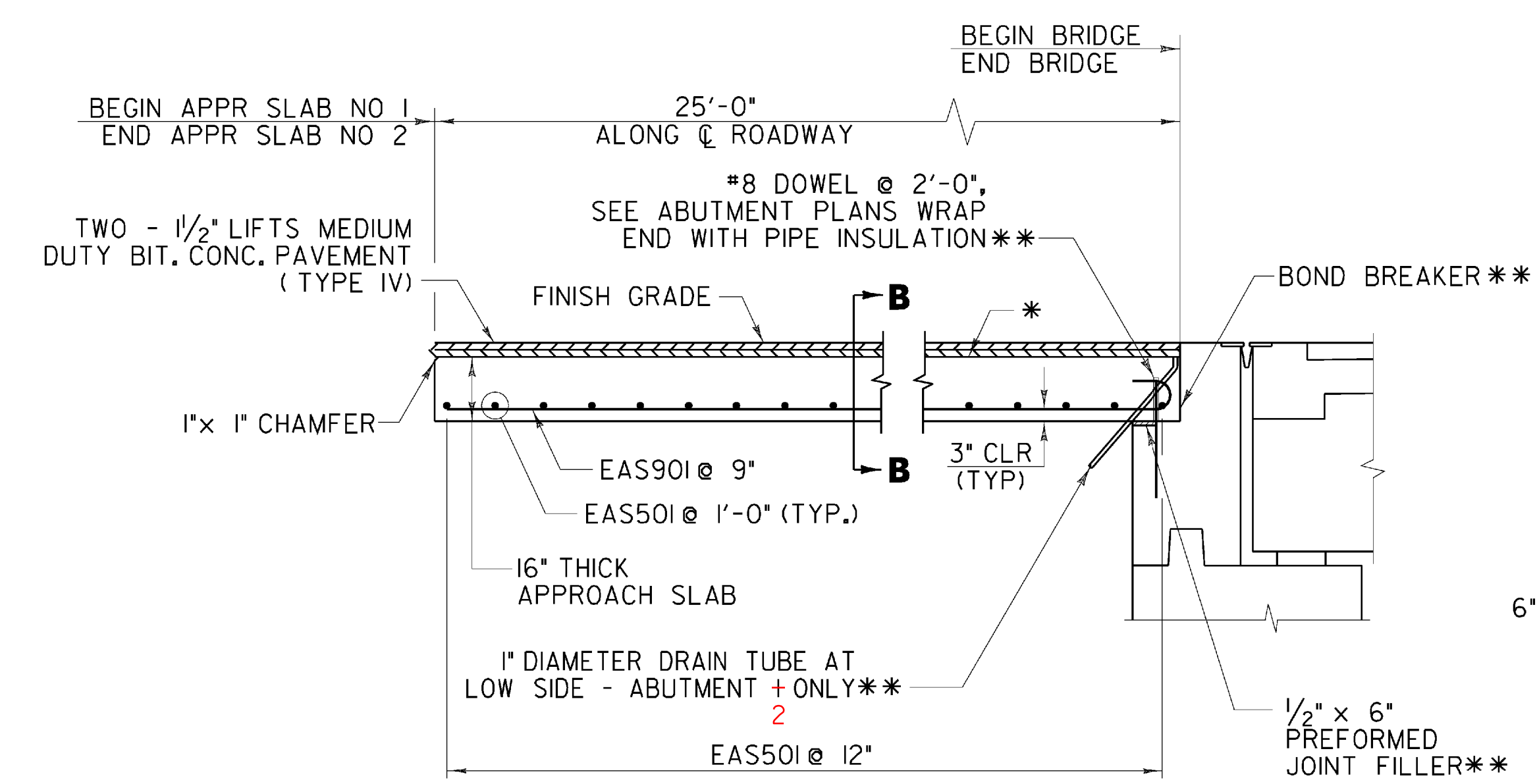
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 1 0 2 4 6

APPROACH SLAB #2

SCALE 1/4" = 1'-0"
 1 0 2 4 6

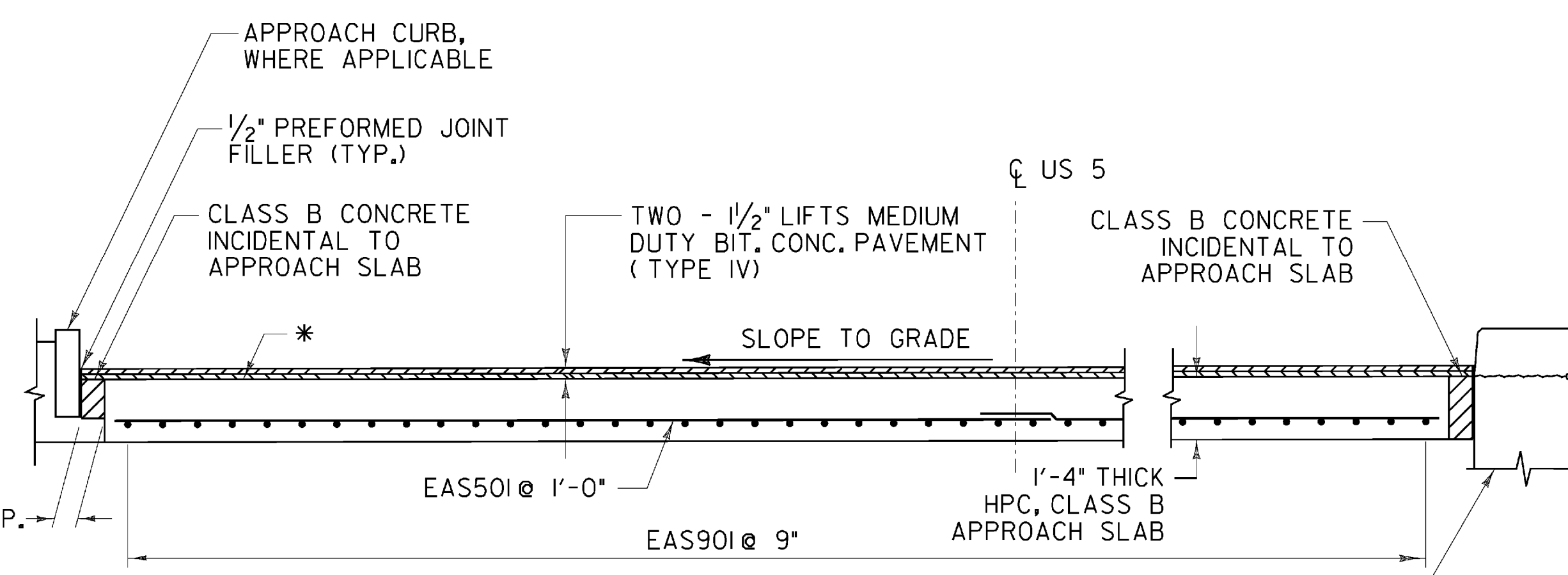
DETAIL A

NOT TO SCALE



TYPICAL APPROACH SLAB CROSS SECTION

NOT TO SCALE



SECTION B-B

NOT TO SCALE

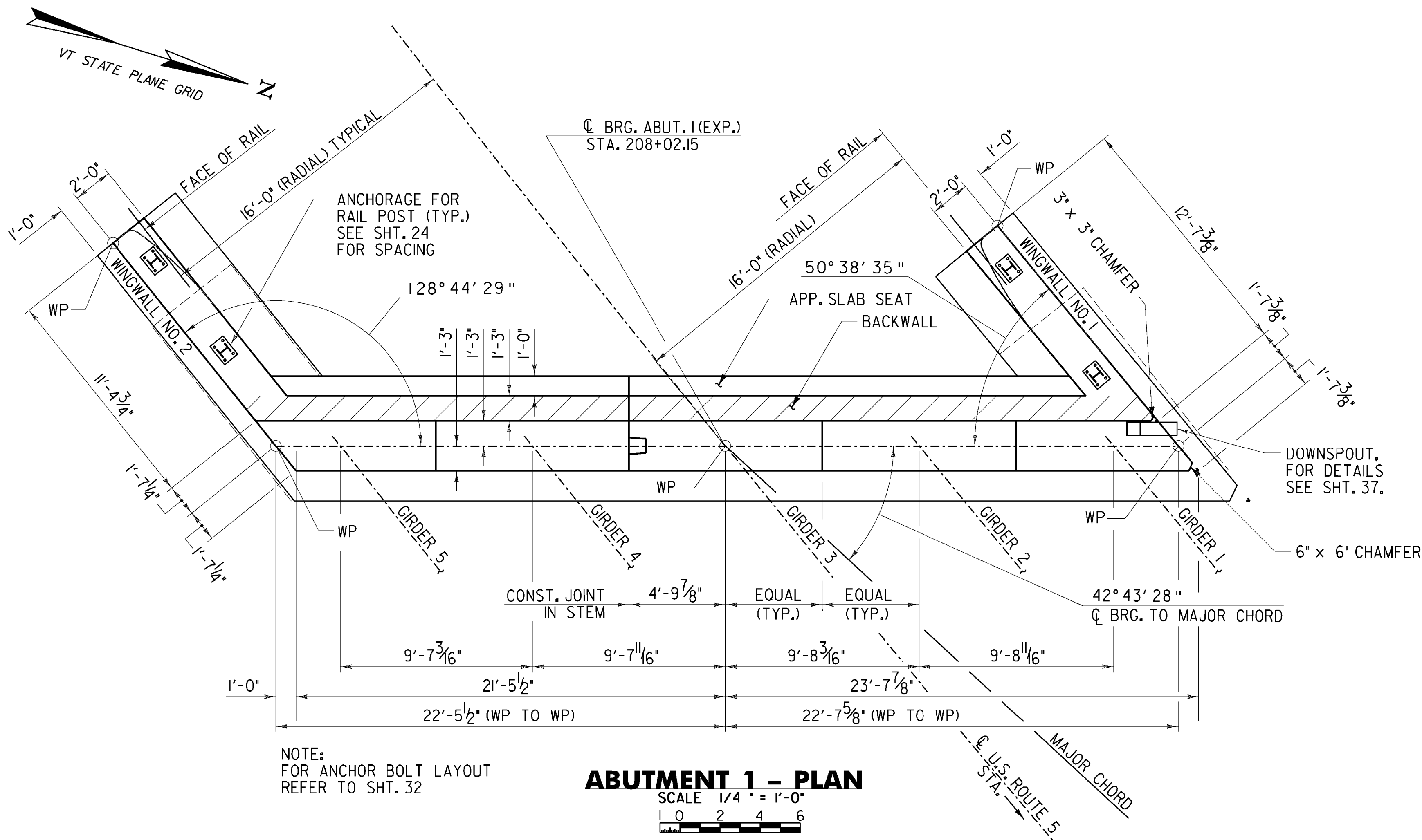
** PAYMENT INCIDENTAL TO CONTRACT ITEM 501.34.

* EMULSIFIED ASPHALT AS DIRECTED BY ENGINEER
 DO NOT APPLY BARRIER MEMBRANE TO TOP
 OF APPROACH SLAB

**STATE OF VERMONT
 AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5 OVER I-91	Log Sta.	
		Surv. Sta.	
APPROACH SLAB PLAN AND DETAILS			
Designed By	T. KNIGHT	Drawn By	R. WALKER
Checked By	T. KNIGHT	Bridge Design Supervisor	G. BOGUE
Date	06/09	Date	06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(31)
CAD Drawing Name:	...Plot Files\39 z938168.dwg		
Bridge Sheet No.	Sheet	39	of 75

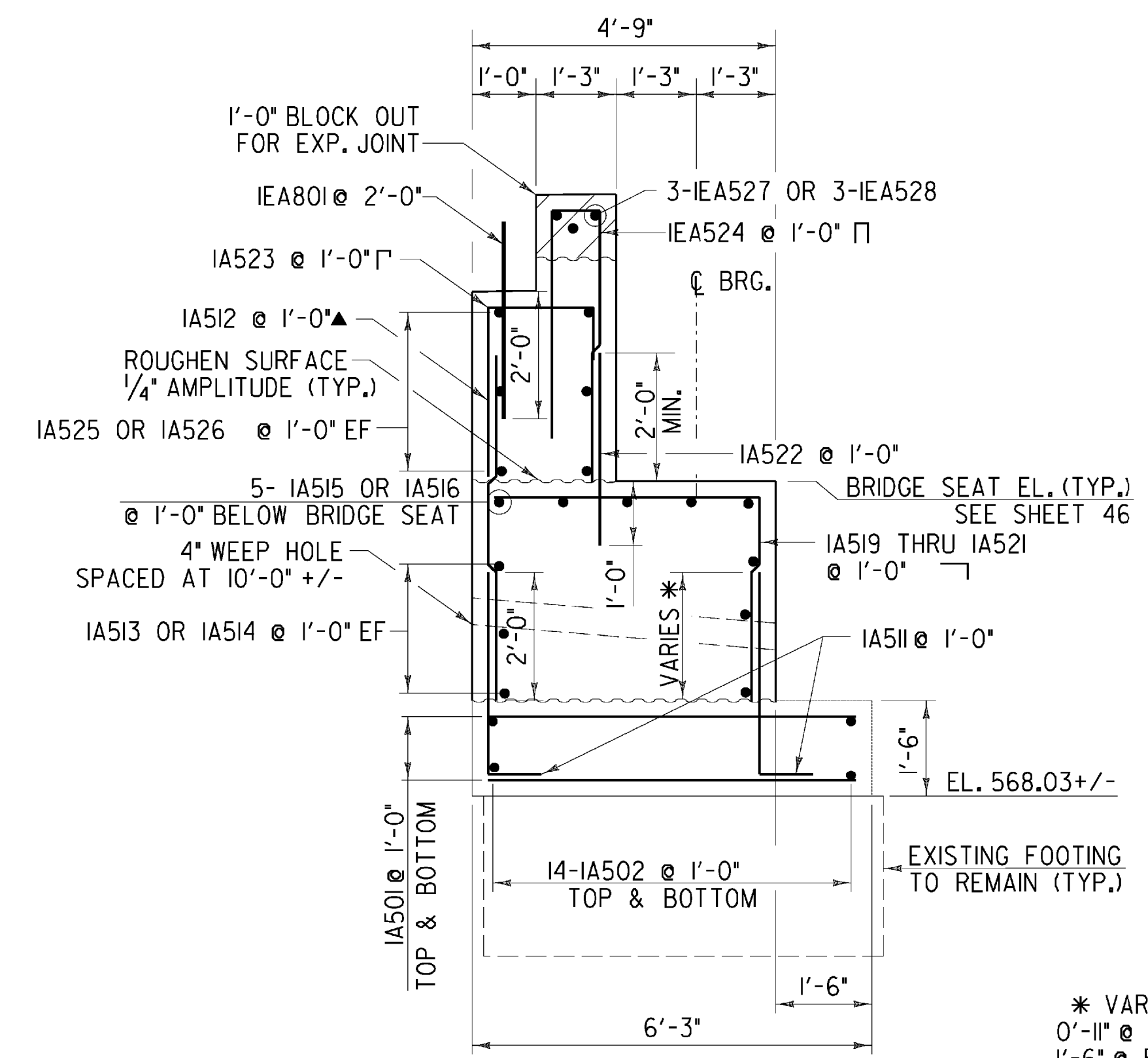




NOTE:
FOR ANCHOR BOLT LAYOUT
REFER TO SHT. 32

ABUTMENT 1 - PLAN

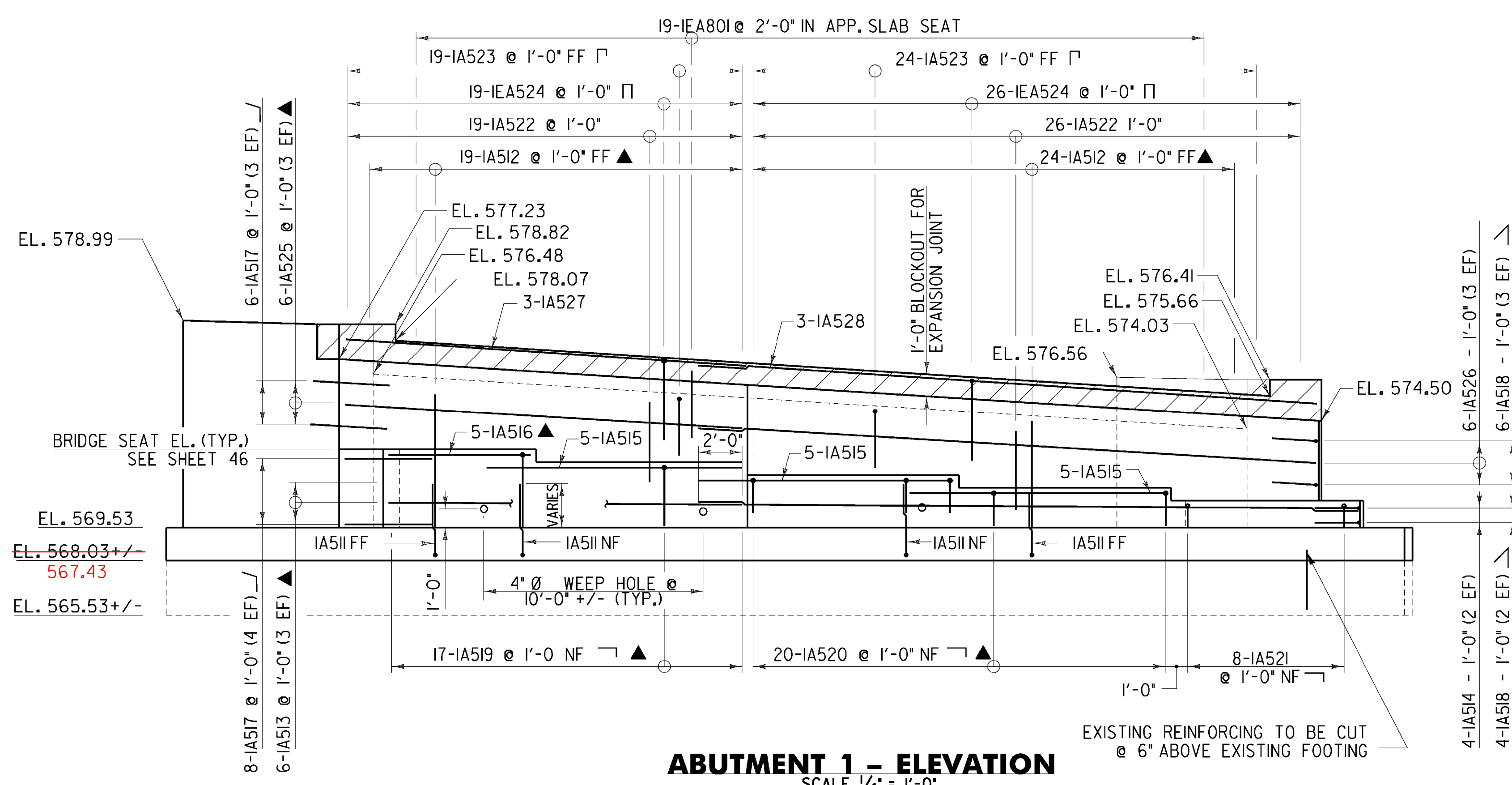
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0 2 4 6



ABUTMENT 1 TYPICAL SECTION

SCALE 1/2" = 1'-0"
0 1 2

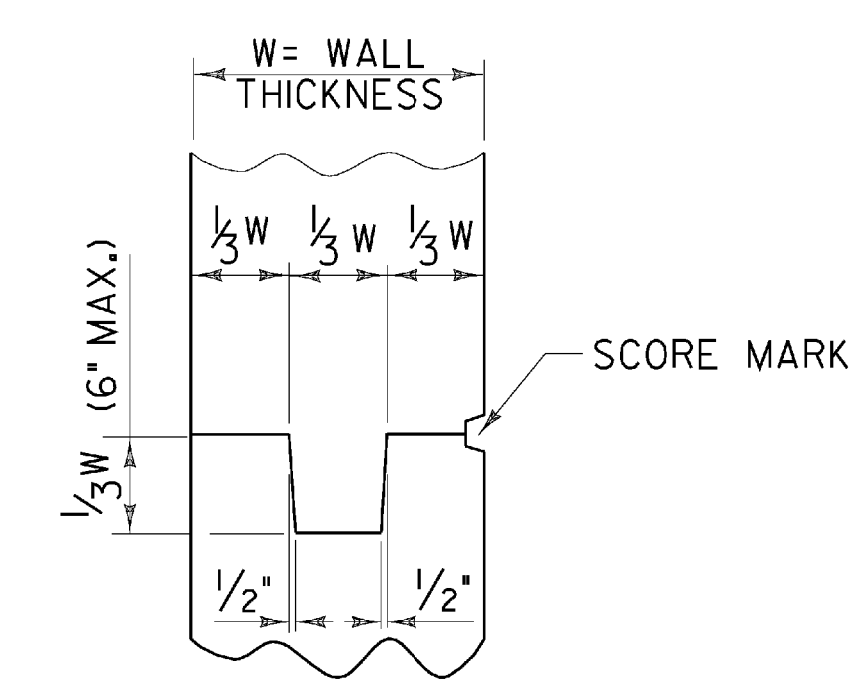
* VARIES
0'-11" @ BRIDGE SEAT 1
1'-6" @ BRIDGE SEAT 2
2'-0" @ BRIDGE SEATS 3 - 5



ABUTMENT 1 - ELEVATION

SCALE 1/4" = 1'-0"
0 2 4 6

EXISTING REINFORCING TO BE CUT
@ 6" ABOVE EXISTING FOOTING



TYPICAL CONCRETE CONSTRUCTION JOINT DETAIL

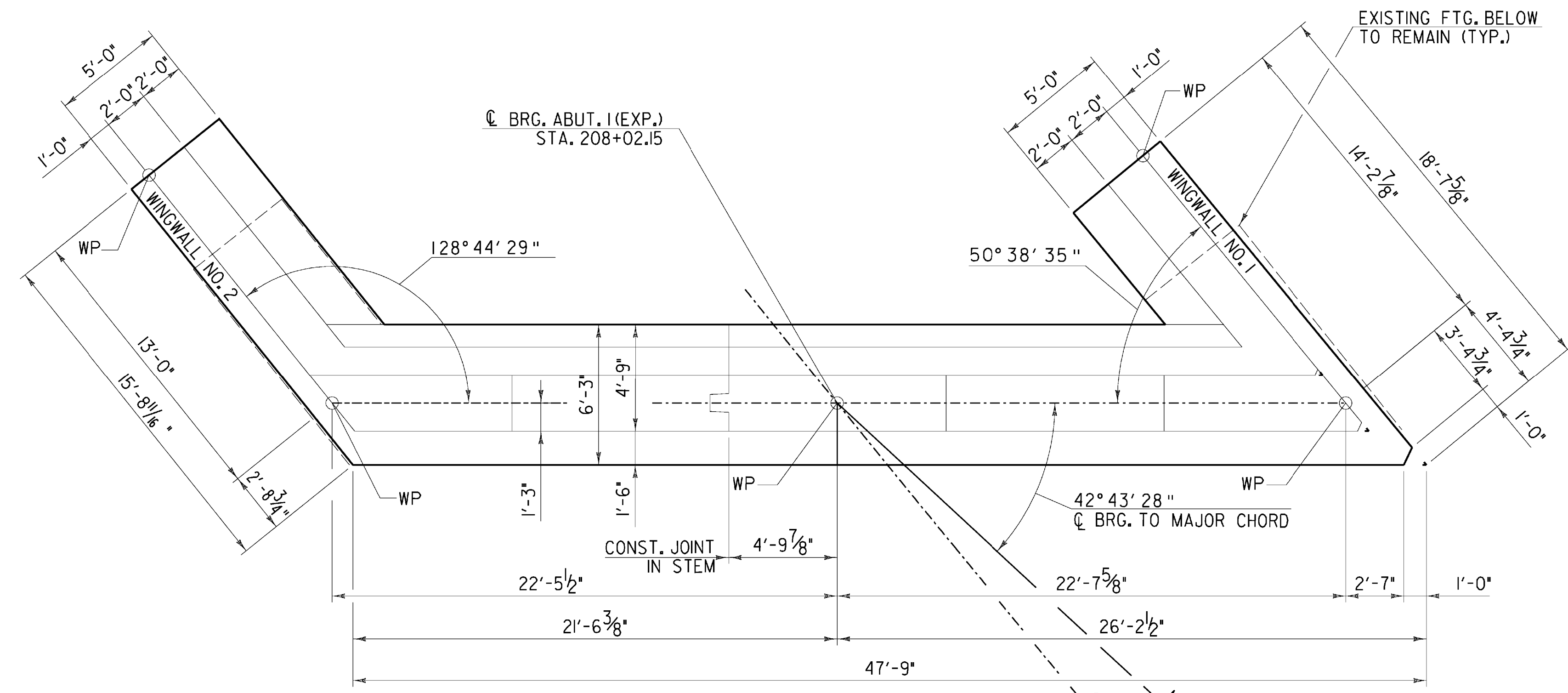
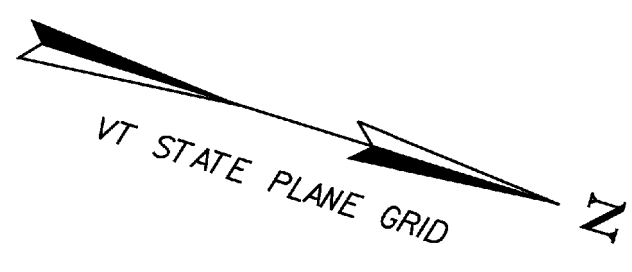
N.T.S.

NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE
SPECIFIED ON THE PLANS.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

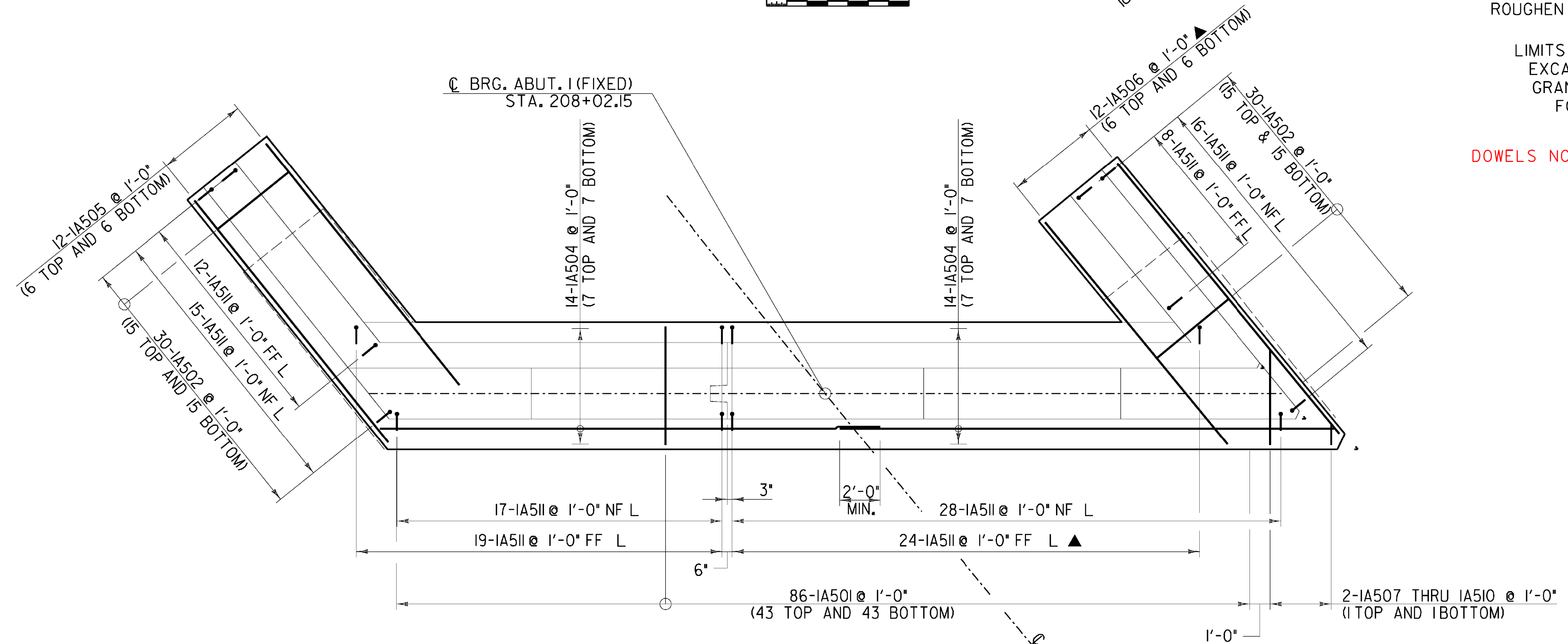
Town Of	PUTNEY	Bridge No.	19A
Highway No.		Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
ABUTMENT 1 PLAN AND ELEVATION			
Designed By	T. KNIGHT	Drawn By	R. WALKER
Checked By	Date	Bridge Design Supervisor	
T. KNIGHT	06/09	G. BOGUE	Date 06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-1(31)
CAD Drawing Name:	... \Plot Files\40 29388.dwg 10/19/2009		
Bridge Sheet No.	Sheet 40 of 75		





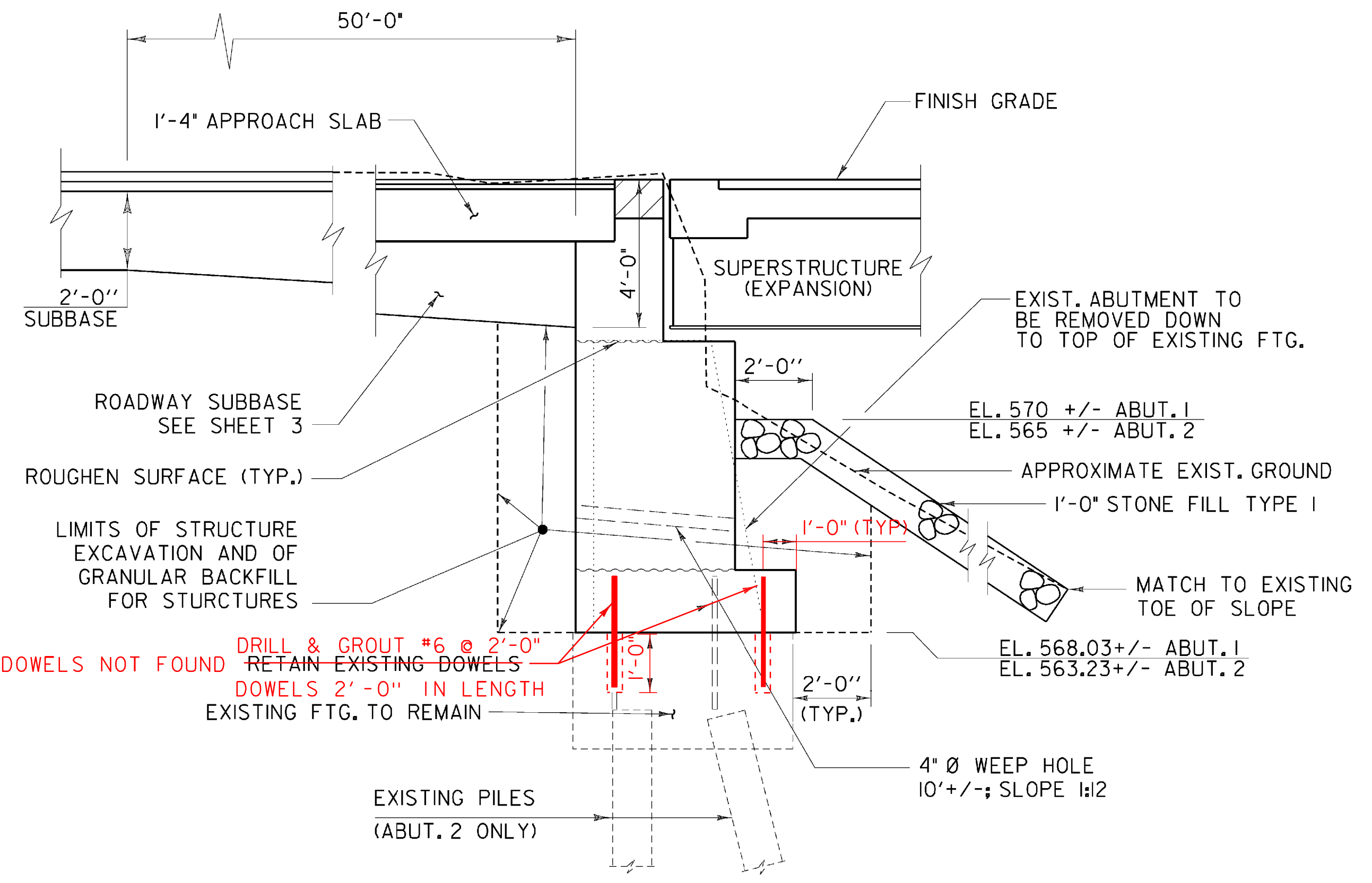
ABUTMENT 1 - FOOTING PLAN

SCALE 1/4" = 1'-0"
 0 2 4 6



ABUTMENT 1 - FOOTING REINFORCEMENT PLAN

SCALE 1/4" = 1'-0"
 0 2 4 6



TYPICAL ABUTMENT SECTION

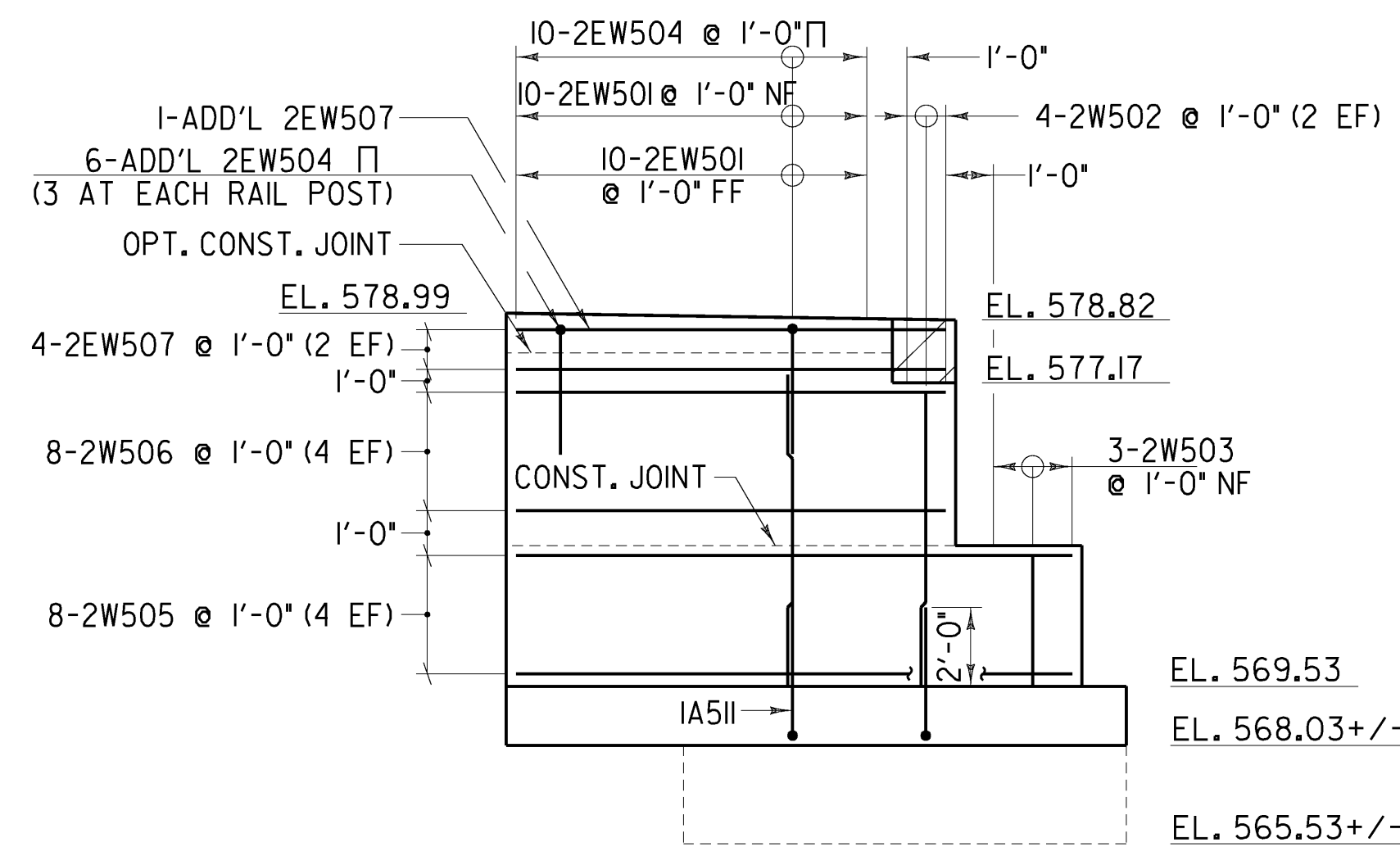
NOT TO SCALE

NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.



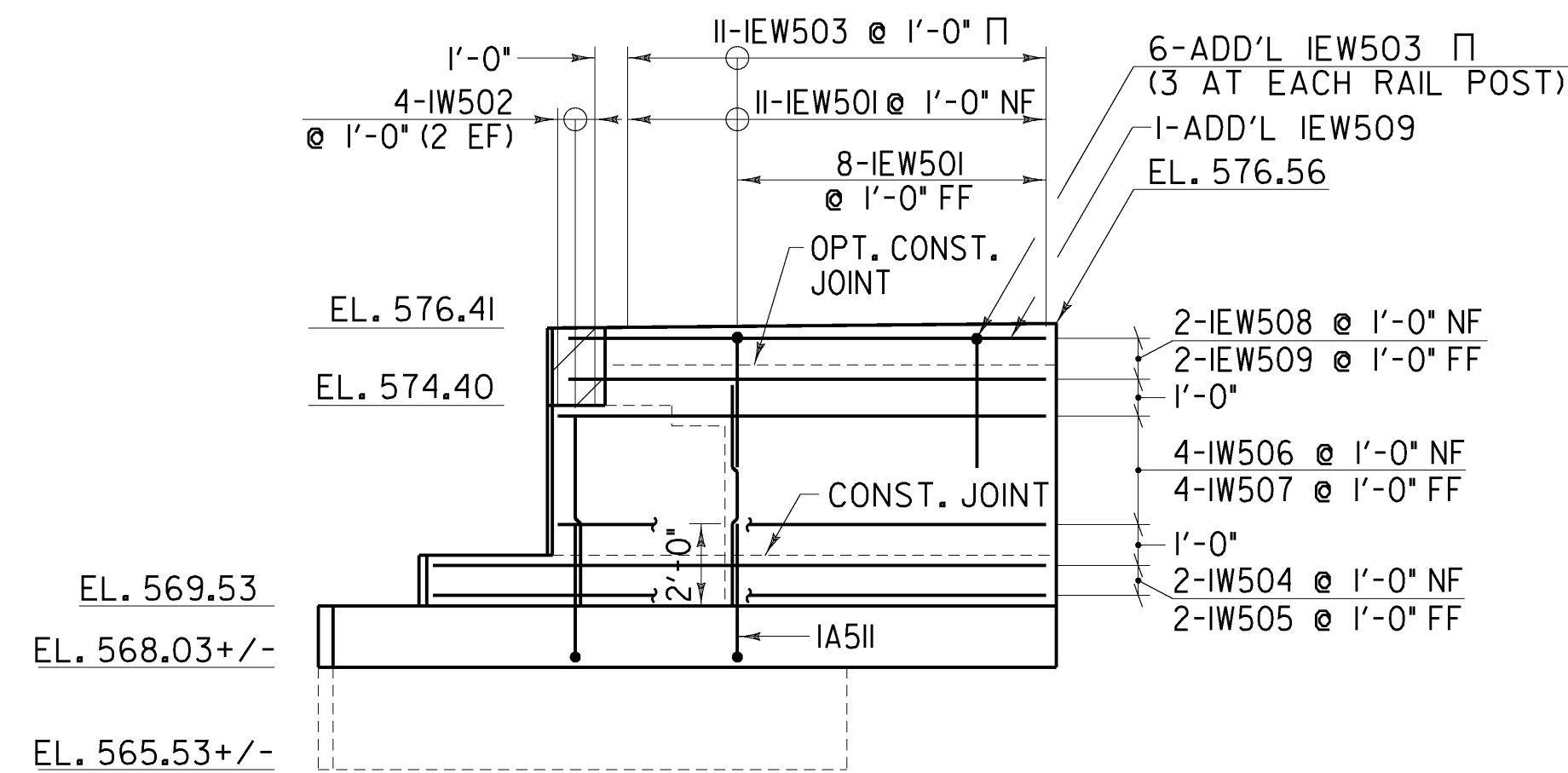
**STATE OF VERMONT
 AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.		Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
ABUTMENT 1 FOOTING			
Designed By	T. KNIGHT	Drawn By	R. WALKER
Checked By	Date	Bridge Design Supervisor	
T. KNIGHT	06/09	G. BOGUE	Date 06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-1(31)
CAD Drawing Name:	...\\41z93a148ab+ftgl.plt		
Bridge Sheet No.	Sheet 41 of 75		



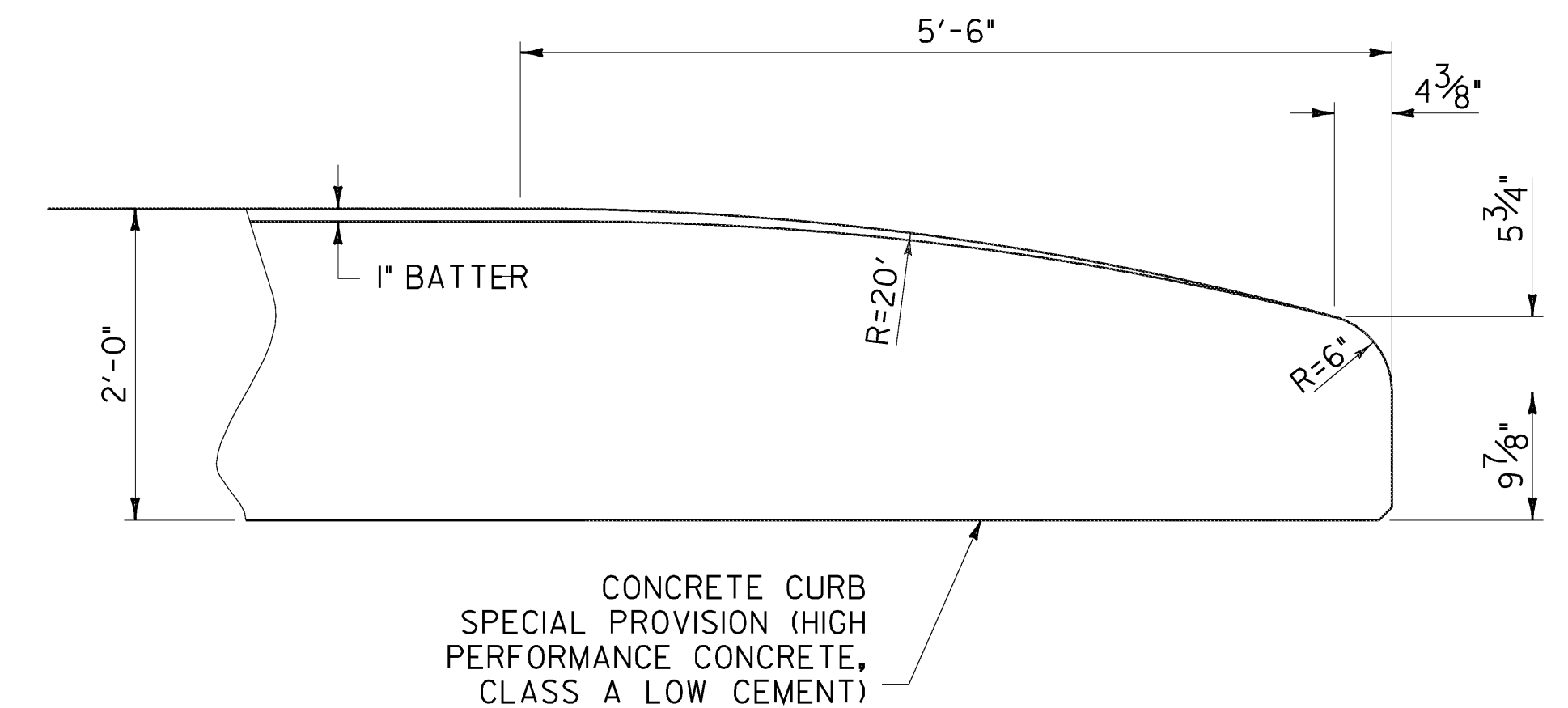
WINGWALL No. 2 ELEVATION

SCALE 1/4" = 1'-0"
1 0 2 4 6



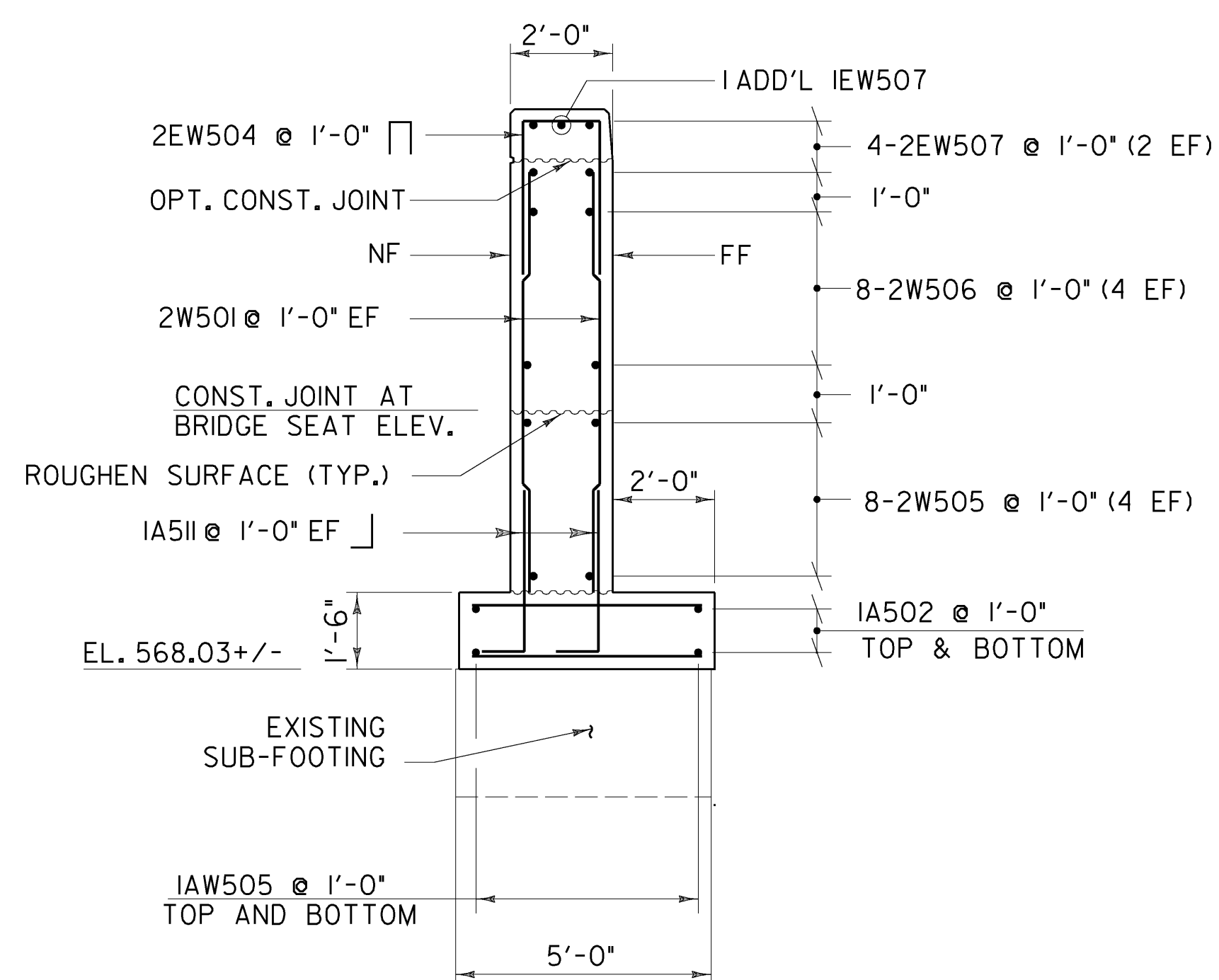
WINGWALL No. 1 ELEVATION

SCALE 1/4" = 1'-0"
1 0 2 4 6



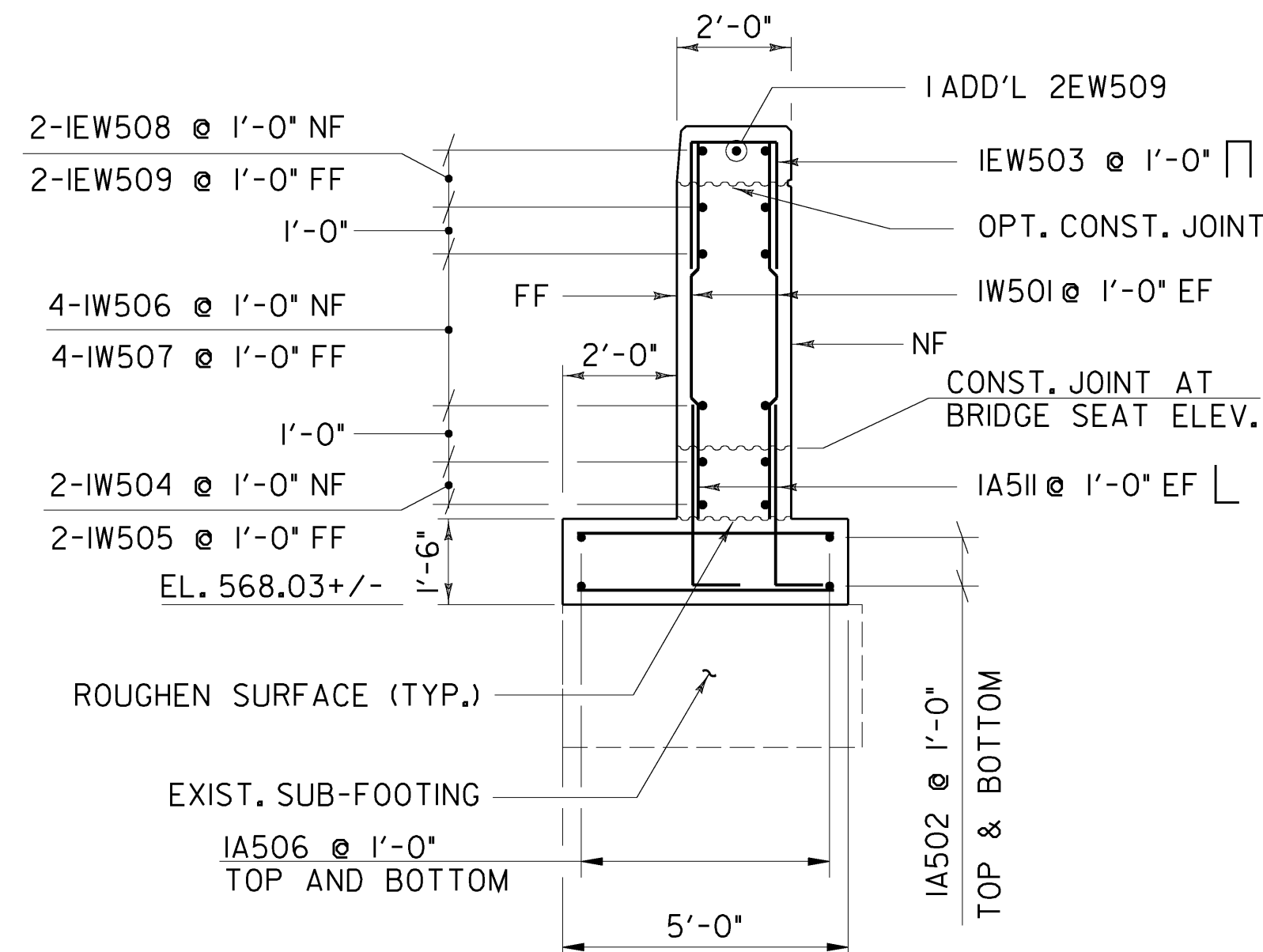
FLARED END FOR WINGWALL CURB

NOT TO SCALE



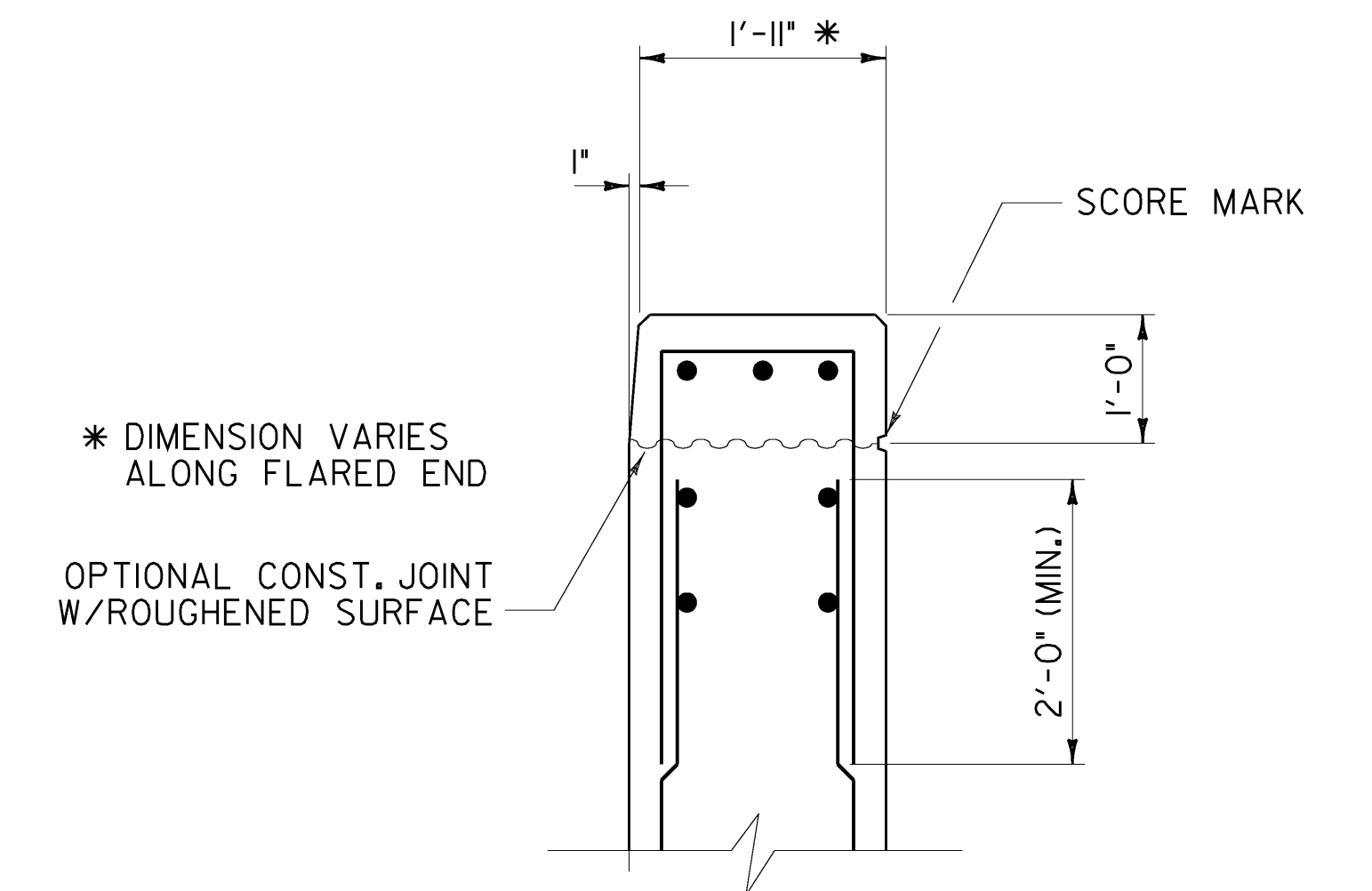
WINGWALL No. 2 SECTION

SCALE 3/8" = 1'-0"
1 0 1 2 3 4



WINGWALL No. 1 SECTION

SCALE 3/8" = 1'-0"
1 0 1 2 3 4



TOP OF WINGWALL DETAIL

N.T.S.

NOTE:

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- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.



**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.		Log Sta.	
		Surv. Sta.	

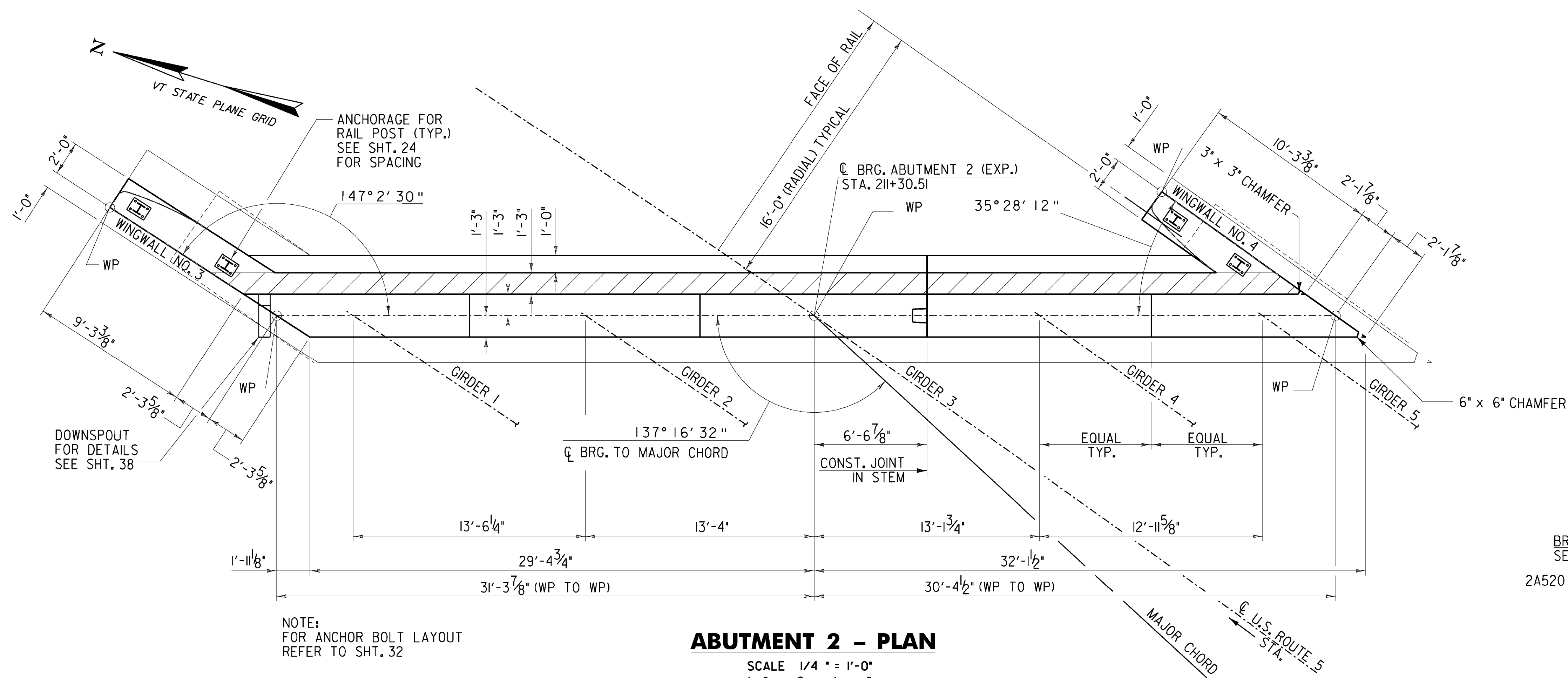
U.S. ROUTE 5 OVER I-91

ABUTMENT 1 WINGWALL DETAILS

Designed By	T. KNIGHT	Drawn By	R. WALKER
Checked By		Date	
	T. KNIGHT	06/09	G. BOGUE
		Date	06/09

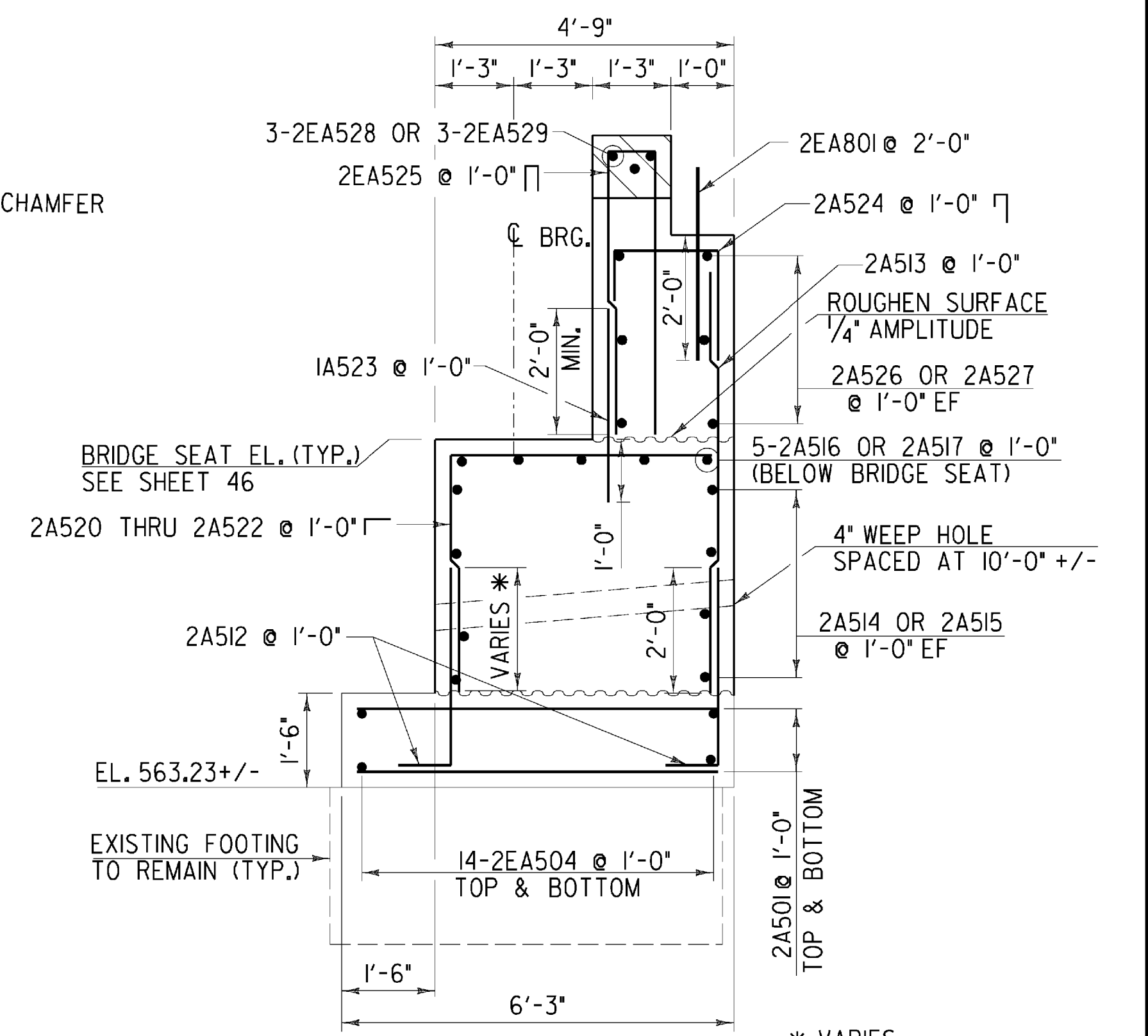
PROJECT	PUTNEY	PROJECT NO.	IM 091-(131)
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Bridge Sheet No.		Sheet	42 of 75



ABUTMENT 2 - PLAN

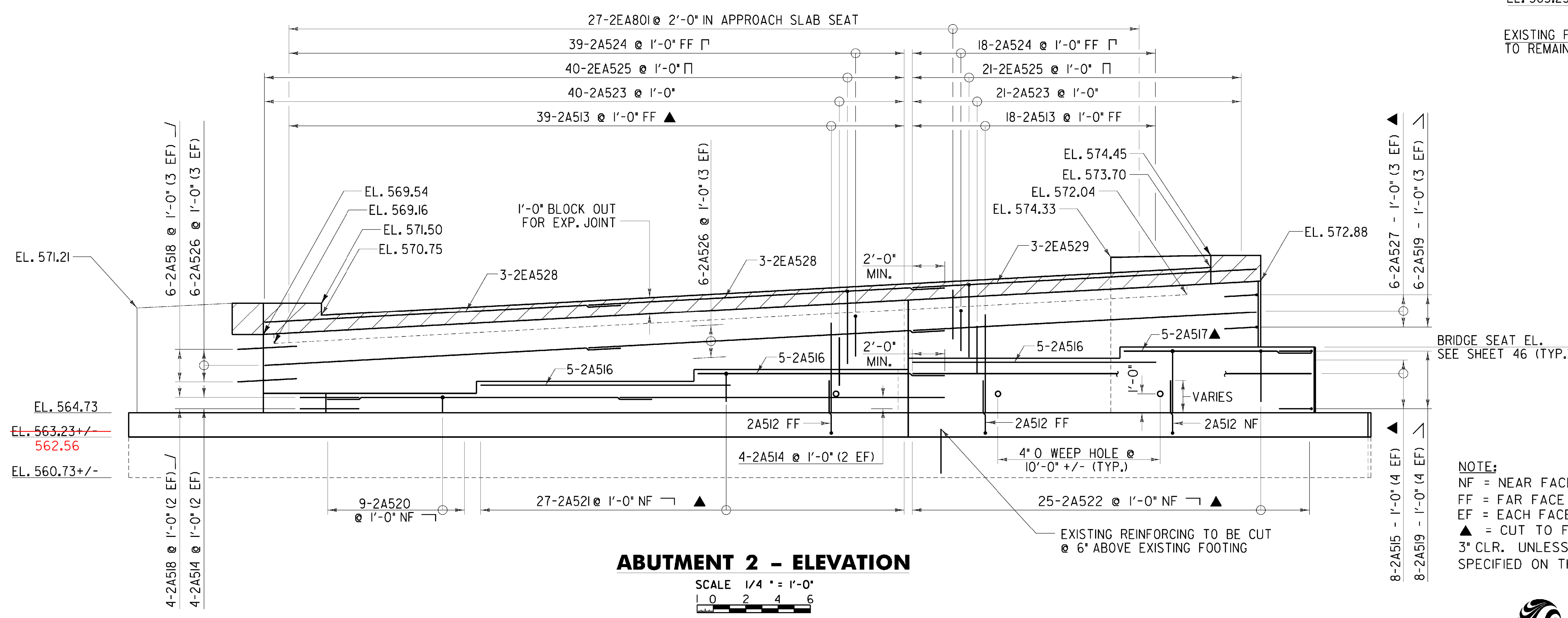
SCALE 1/4" = 1'-0"
 0 2 4 6



ABUTMENT 2 TYPICAL SECTION

SCALE 1/2" = 1'-0"
 0 1 2

* VARIES
 0'-11" @ BRIDGE SEAT 1
 1'-8" @ BRIDGE SEAT 2
 2'-0" @ BRIDGE SEATS 3 - 5



ABUTMENT 2 - ELEVATION

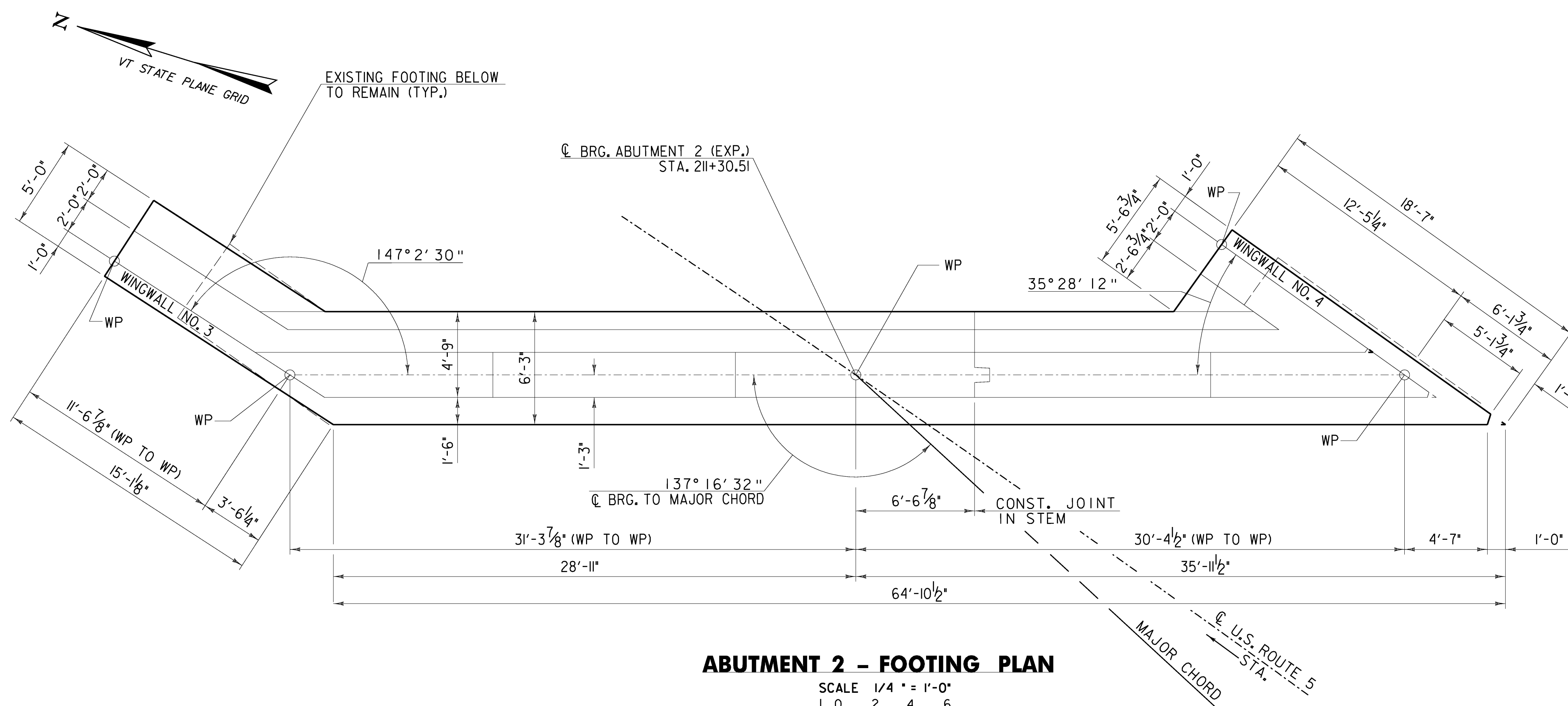
SCALE 1/4" = 1'-0"
 0 2 4 6

NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

**STATE OF VERMONT
 AGENCY OF TRANSPORTATION**

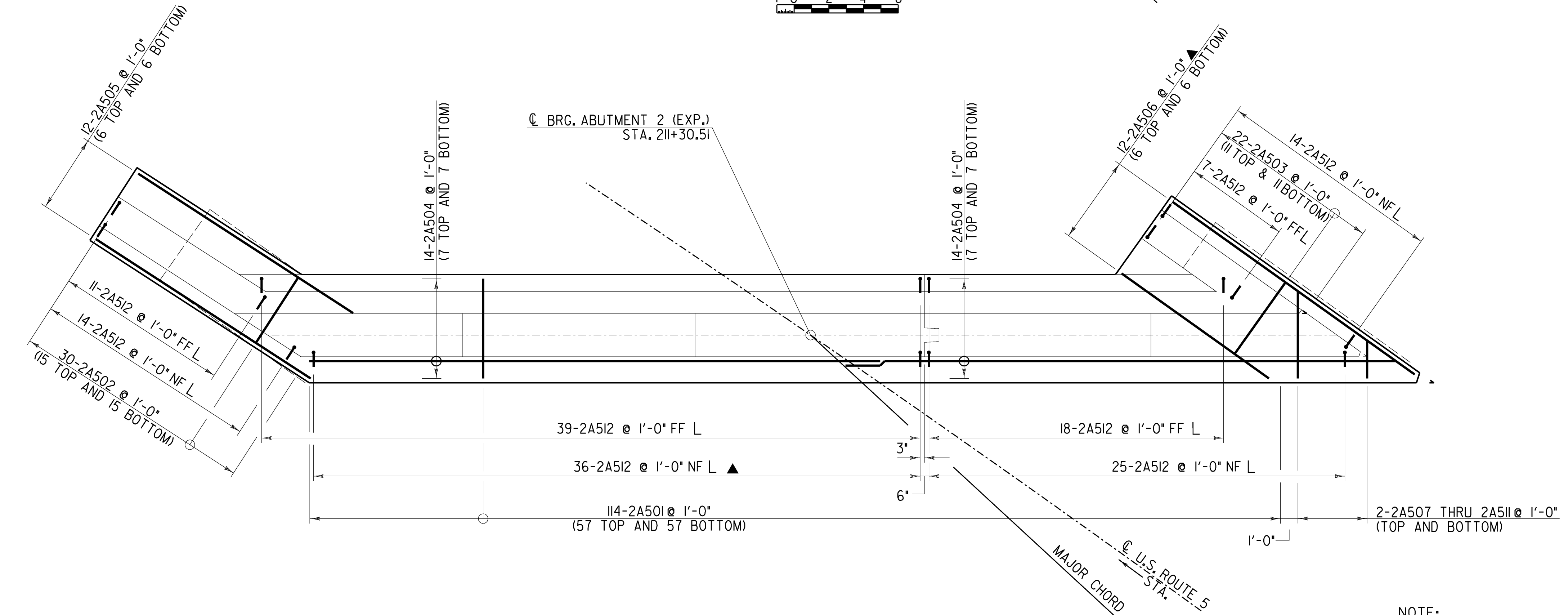
Town Of	PUTNEY	Bridge No.	19A
Highway No.		Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
ABUTMENT 2 PLAN AND ELEVATION			
Designed By	T. KNIGHT	Drawn By	R. WALKER
Checked By	T. KNIGHT	Date	06/09
		Bridge Design Supervisor	G. BOGUE
		Date	06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(131)
CAD Drawing Name:	... \Plot Files\43 z93B1080062.m10/19/2009		
Bridge Sheet No.		Sheet	43 of 75





ABUTMENT 2 - FOOTING PLAN

SCALE 1/4" = 1'-0"
 0 2 4 6



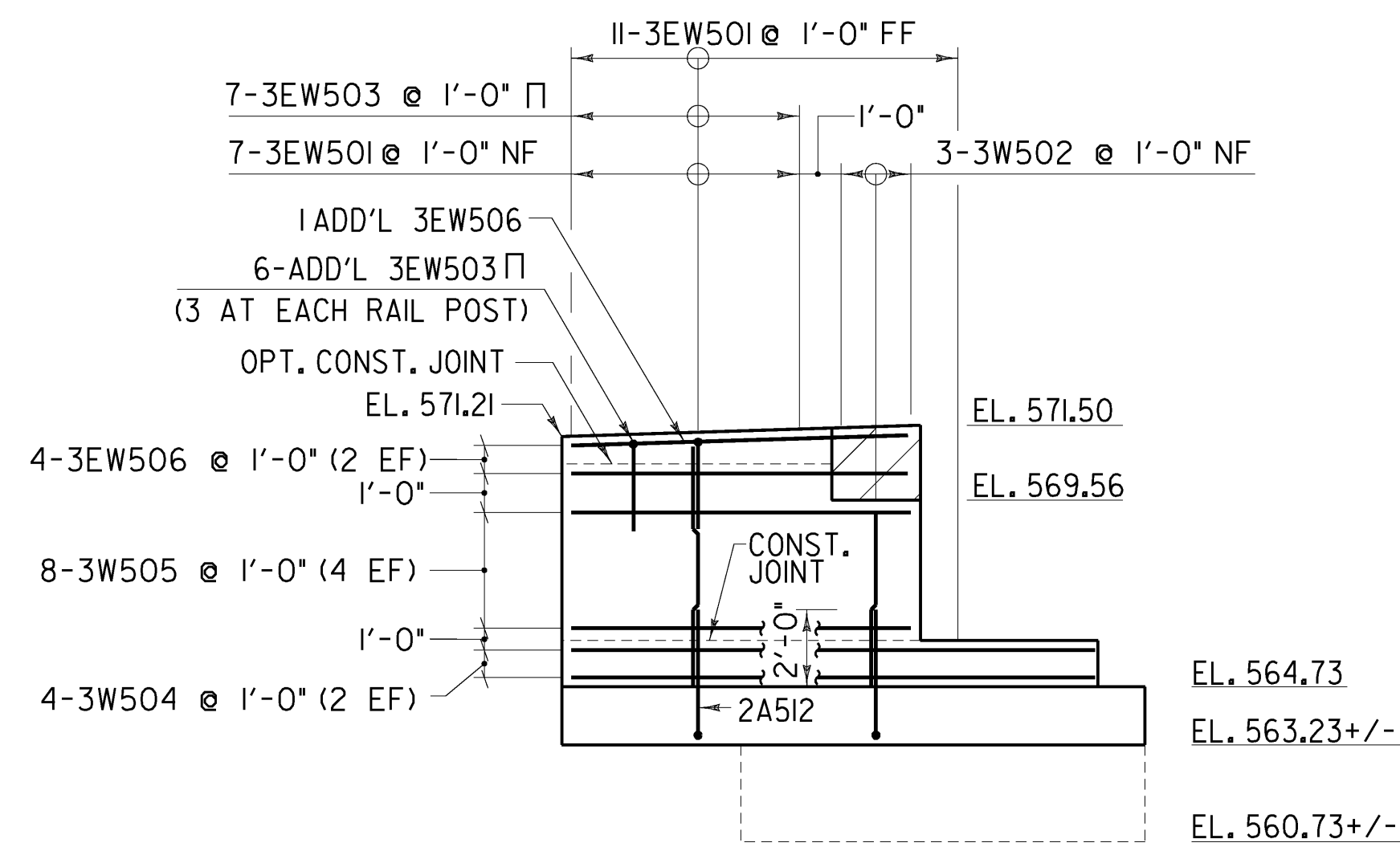
ABUTMENT 2 - FOOTING REINFORCEMENT

SCALE 1/4" = 1'-0"
 0 2 4 6

NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

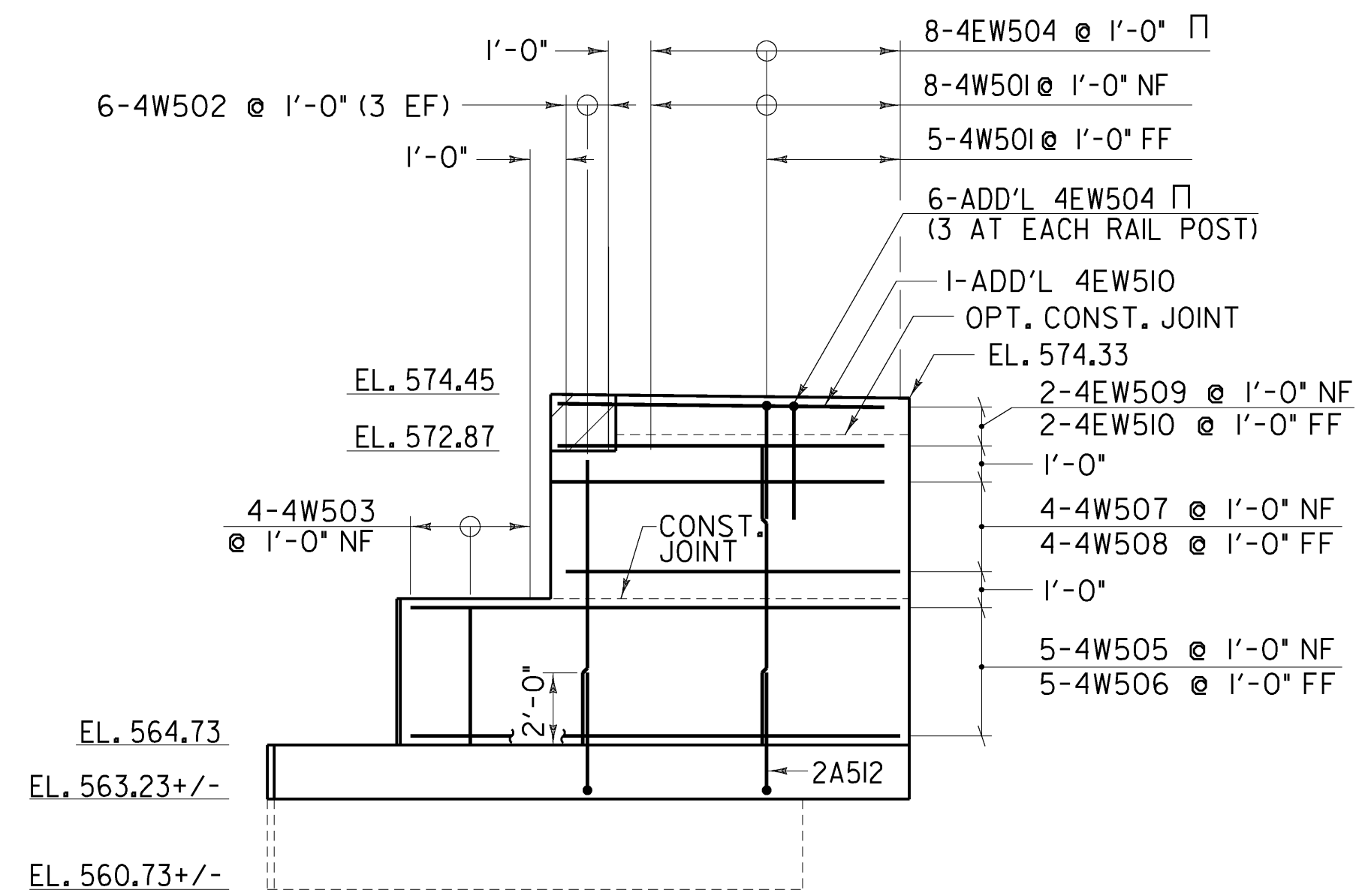


STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	PUTNEY	Bridge No.	19A
Highway No.		Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER 1-91			
ABUTMENT 2 FOOTING			
Designed By	T. KNIGHT	Drawn By	R. WALKER
Checked By	T. KNIGHT	Date	06/09
		Bridge Design Supervisor	G. BOGUE Date 06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(131)
CAD Drawing Name:	...\\44 z93a148obf11t02p#	Date:	10/19/2009
Bridge Sheet No.		Sheet	44 of 75



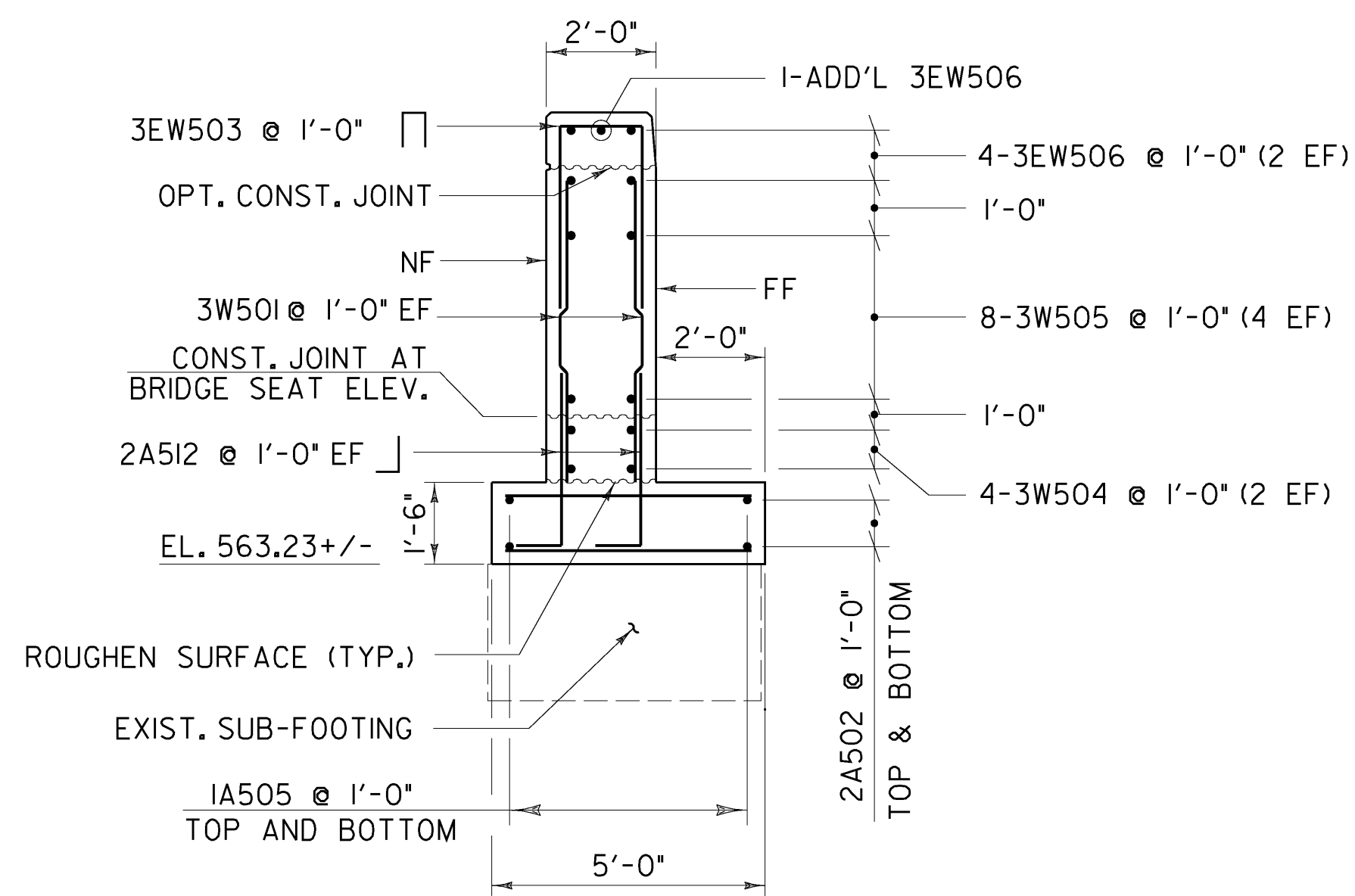
WINGWALL No. 3 ELEVATION

SCALE 1/4" = 1'-0"
 1 0 2 4 6



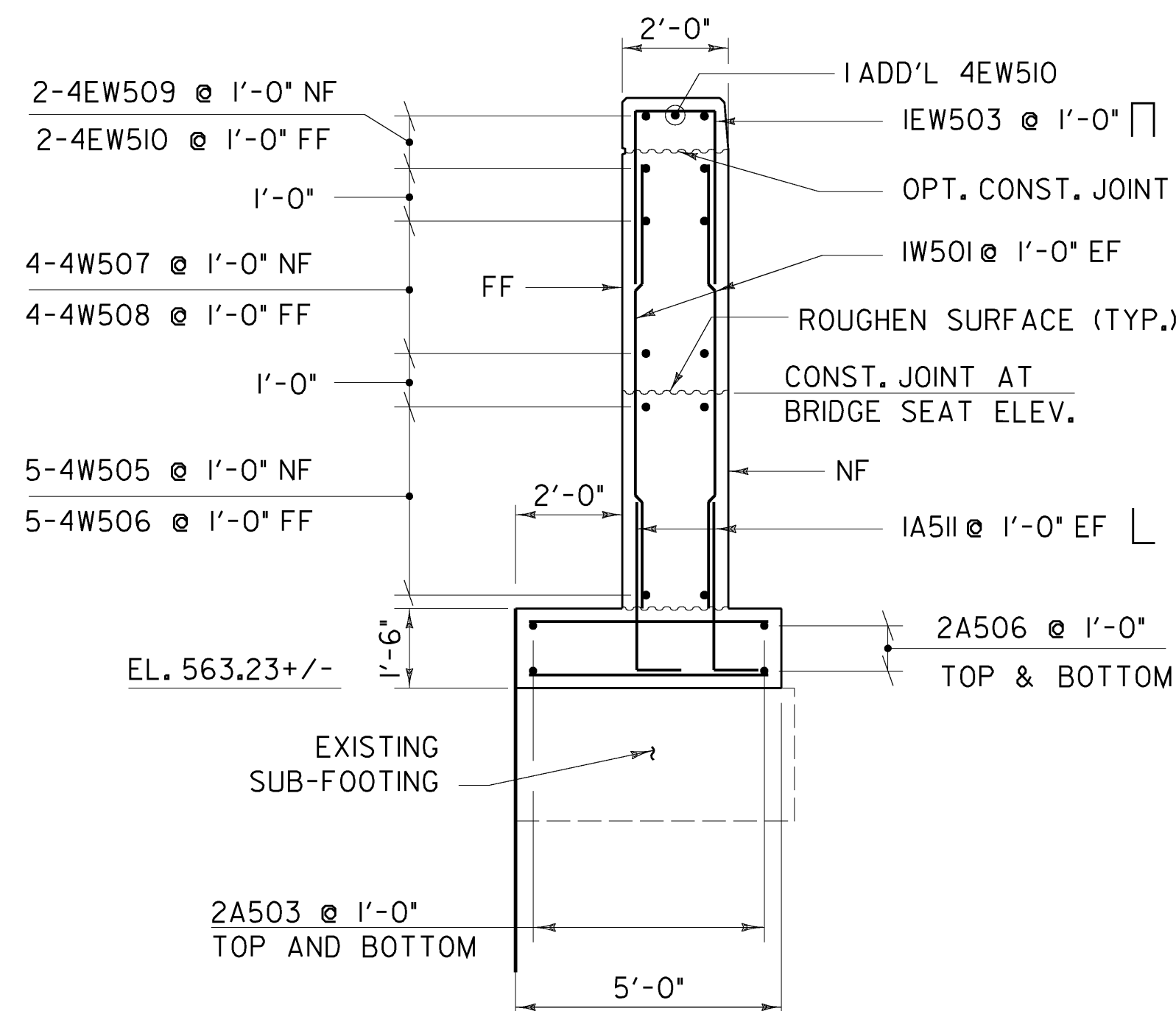
WINGWALL No. 4 ELEVATION

SCALE 1/4" = 1'-0"
 1 0 2 4 6



WINGWALL No. 3 SECTION

SCALE 3/8" = 1'-0"
 1 0 1 2 3 4



WINGWALL No. 4 SECTION

SCALE 3/8" = 1'-0"
 1 0 1 2 3 4

NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE
 SPECIFIED ON THE PLANS.



**STATE OF VERMONT
 AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.		Log Sta.	
		Surv. Sta.	

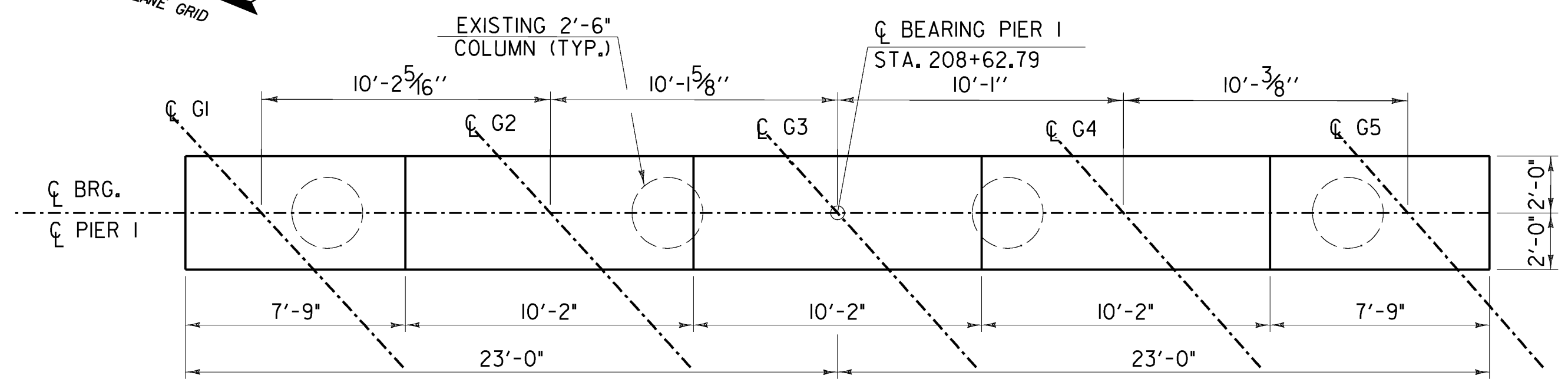
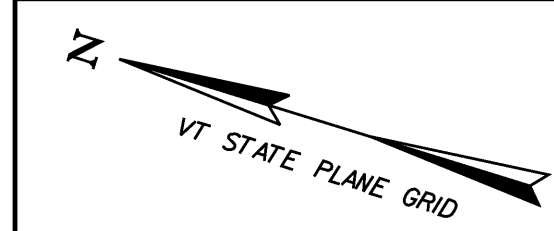
U.S. ROUTE 5 OVER I-91

ABUTMENT 2 WINGWALL DETAILS

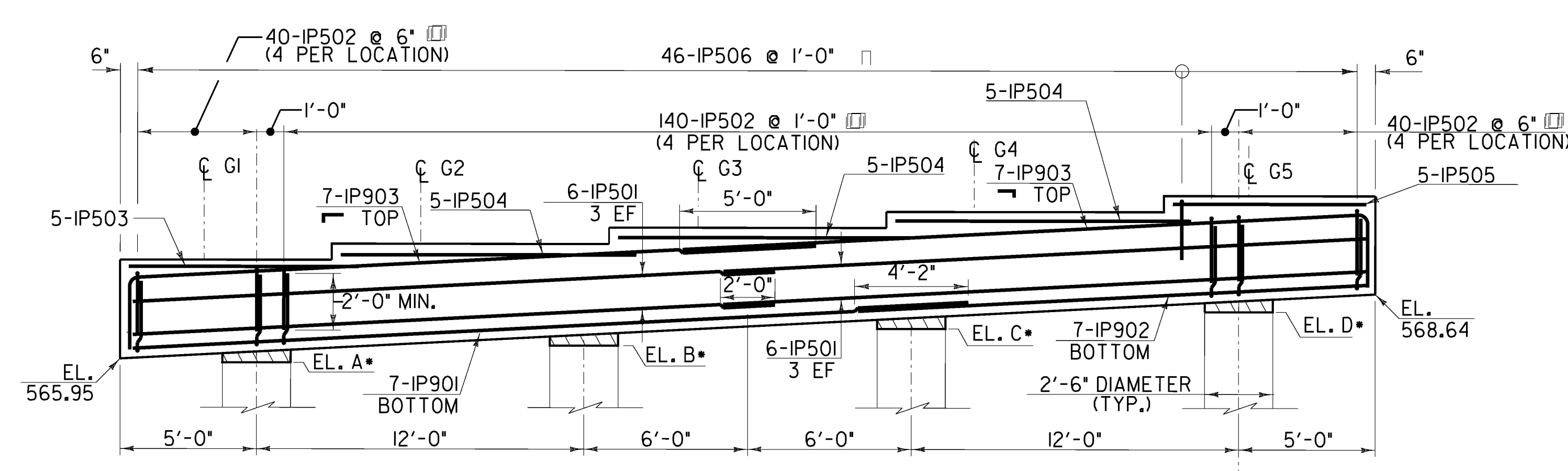
Designed By	T. KNIGHT	Drawn By	R. WALKER
Checked By	Date	Bridge Design Supervisor	
T. KNIGHT	07/09	G. BOGUE	Date 07/09

PROJECT	PUTNEY	PROJECT NO.	IM 091-(31)
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CAD Drawing Name:	...\\45 z93al48ob+2 wRlppt#	Date:	10/19/2009
Bridge Sheet No.		Sheet	45 of 75



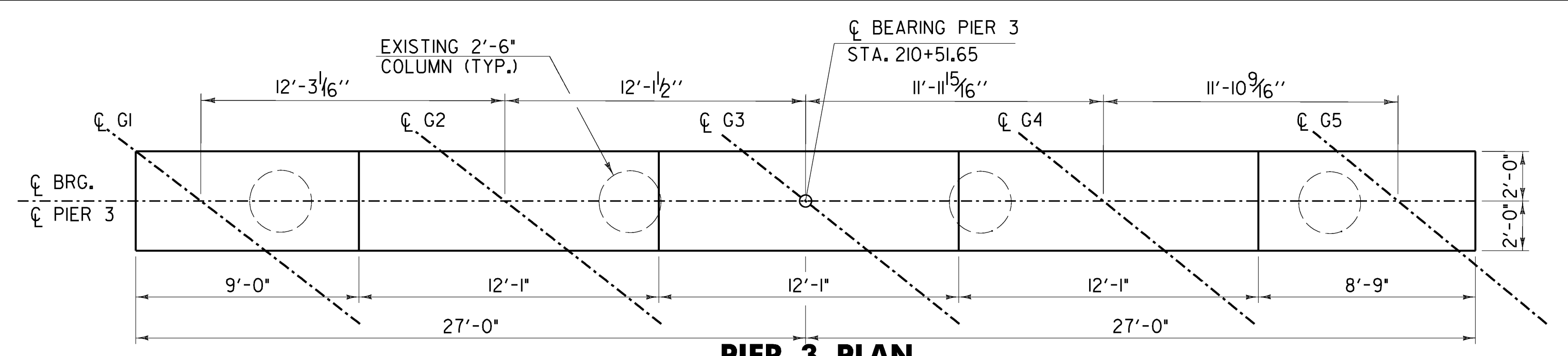
PIER 1 PLAN



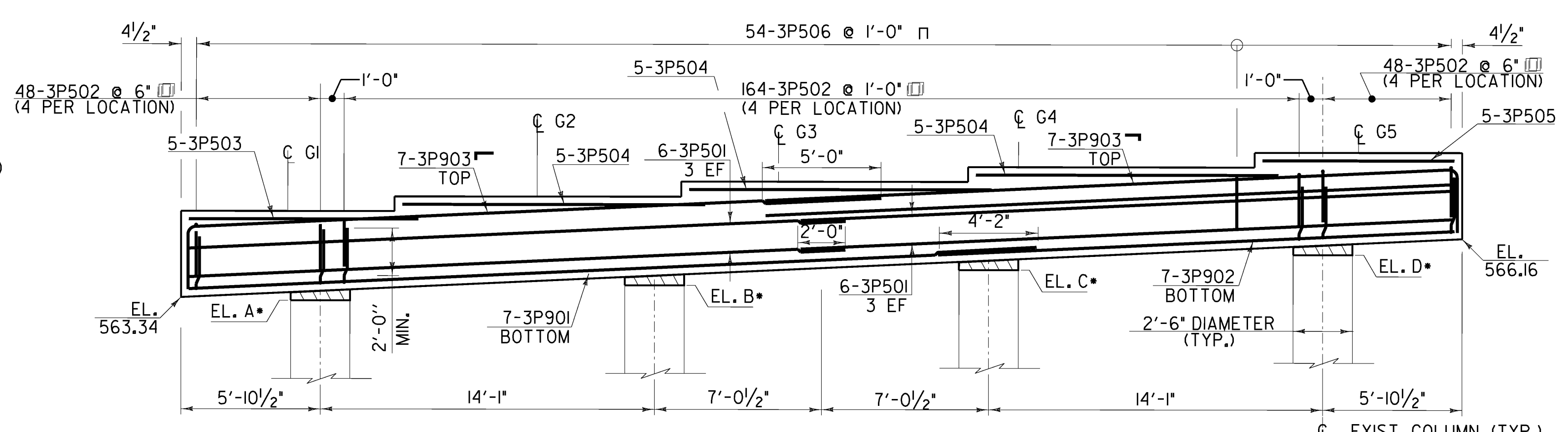
* LIMITS OF REMOVAL OF EXISTING PIER CAP AND COLUMNS SEE TABLE 2

PIER 1 ELEVATION

SCALE 1/4" = 1'-0"
1 0 2 4 6



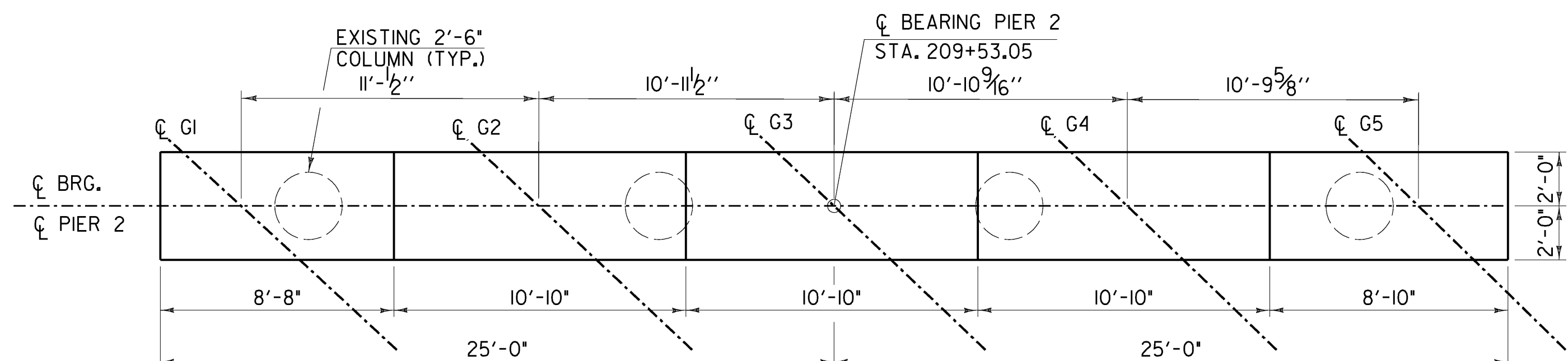
PIER 3 PLAN



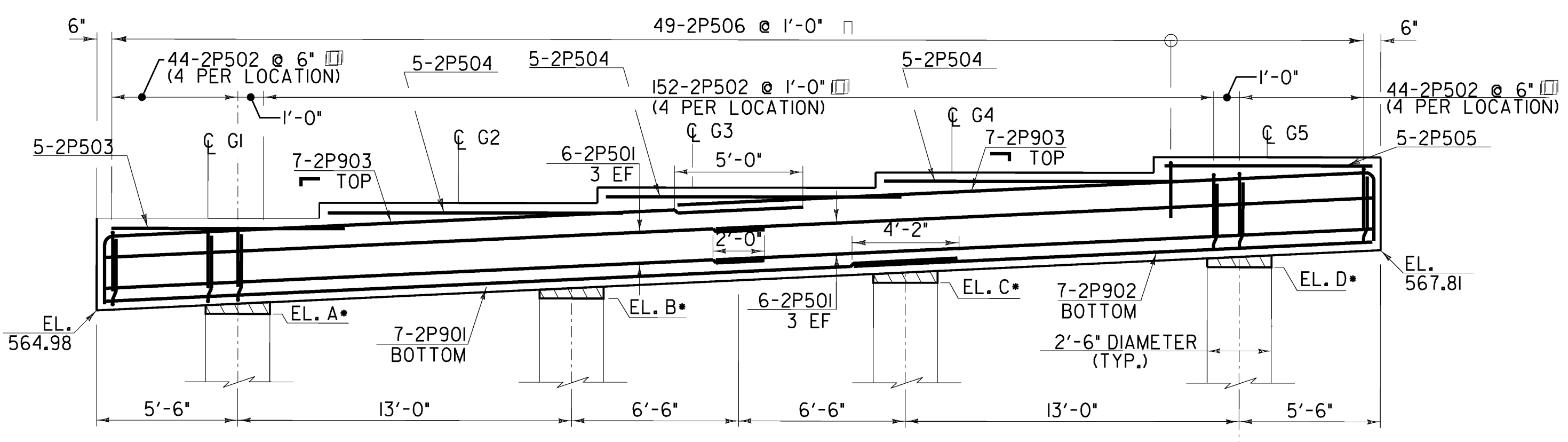
* LIMITS OF REMOVAL OF EXISTING PIER CAP AND COLUMNS SEE TABLE 2

PIER 3 ELEVATION

SCALE 1/4" = 1'-0"
1 0 2 4 6



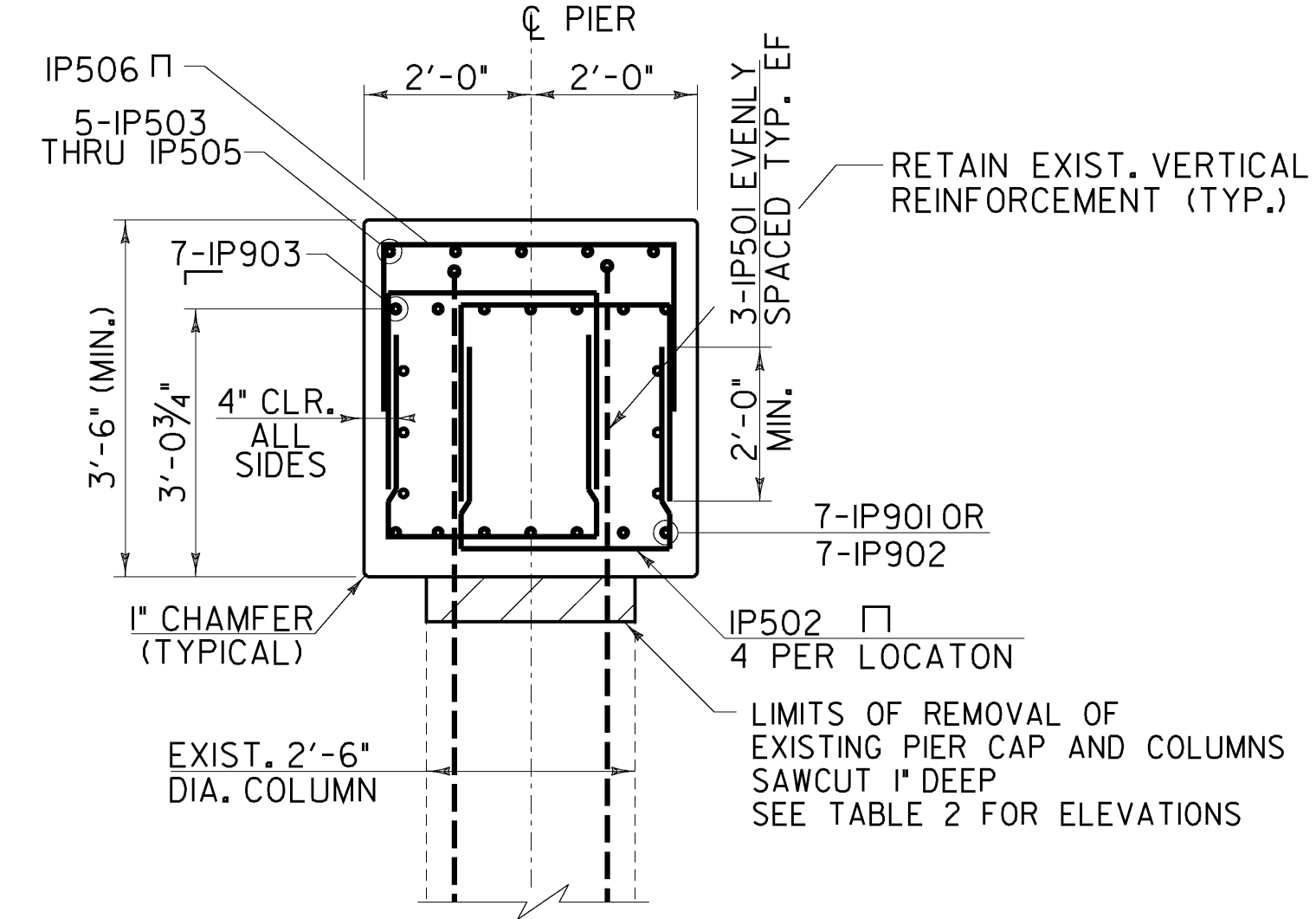
PIER 2 PLAN



* LIMITS OF REMOVAL OF EXISTING PIER CAP AND COLUMNS SEE TABLE 2

PIER 2 ELEVATION

SCALE 1/4" = 1'-0"
1 0 2 4 6



PIER CAP TYPICAL SECTION

SCALE 1/2" = 1'-0"
1 0 1 2

NOTE: PIER CAP 1 SHOWN, PIER CAPS 2 & 3 SIMILAR EXCEPT PREFIX.

TABLE 1 - BRIDGE SEAT ELEVATIONS

GIRDER NO.	ABUT #1	PIER #1	PIER #2	PIER #3	ABUT #2
1	570.76	569.91	568.98	567.31	565.93
2	571.35	570.50	569.59	567.94	566.67
3	571.93	571.10	570.20	568.57	567.39
4	572.52	571.69	570.81	569.20	568.09
5	573.10	572.28	571.41	569.82	568.78

TABLE 2 - ELEVATION LIMITS OF REMOVAL OF PIER CAP AND COLUMNS

EL.	PIER #1	PIER #2	PIER #3
A	565.9	564.9	563.3
B	566.6	565.6	564.0
C	567.3	566.4	564.7
D	568.0	567.1	565.5

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of **PUTNEY** Bridge No. **19A**
 Highway No. **U.S. ROUTE 5** Log Sta. _____
 Surv. Sta. _____
U.S. ROUTE 5 OVER I-91

PIER DETAILS

Designed By G. BOGUE	Drawn By T. KNIGHT
Checked By G. BOGUE Date 06/09	Bridge Design Supervisor G. BOGUE Date 06/09
PROJECT PUTNEY	PROJECT NO. IM 091-(131)
CAD Drawing Name: ...46 z93a148piercap1.dwg	Date: 10/19/2009
Bridge Sheet No. _____	Sheet 46 of 75

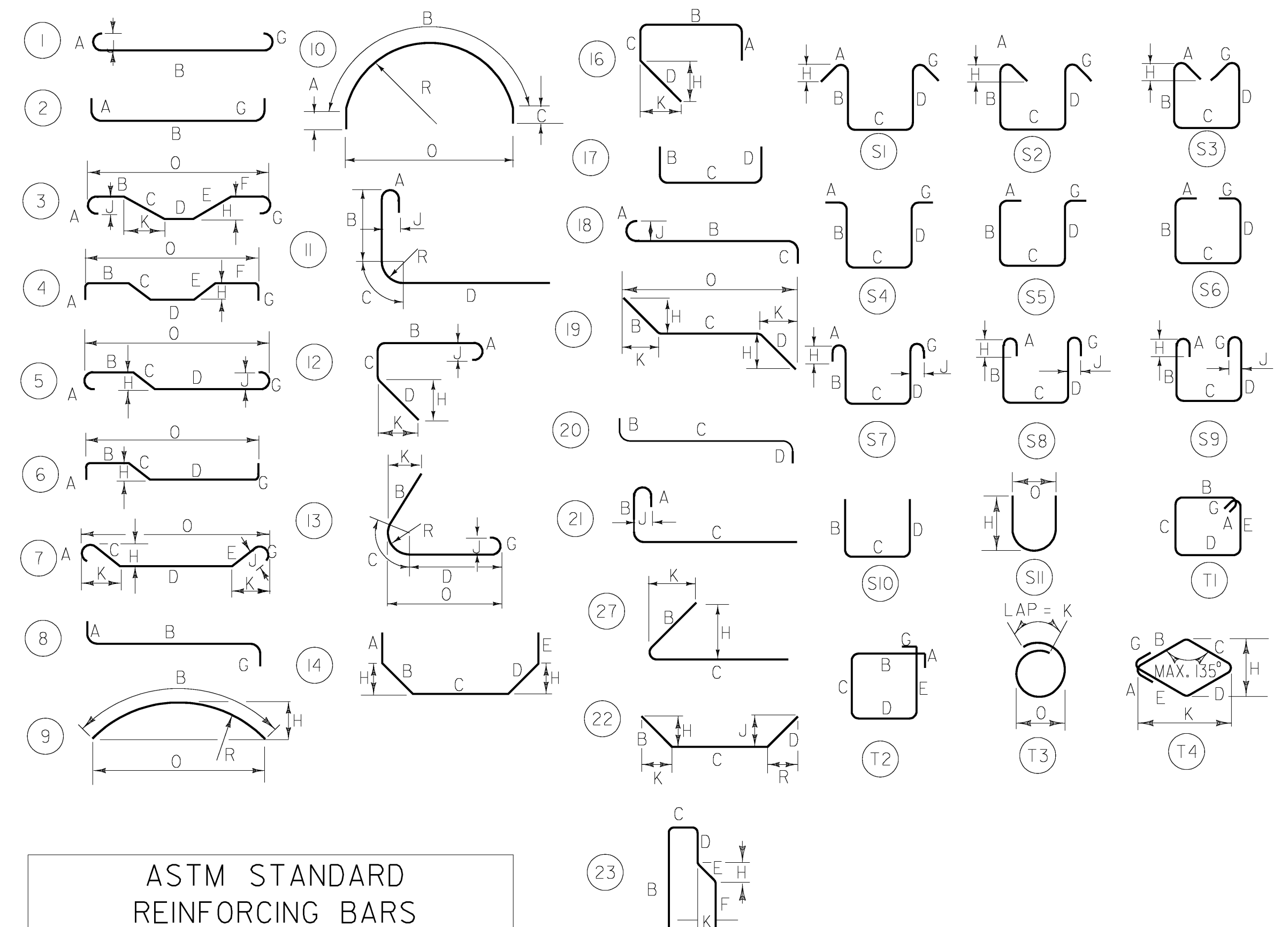


REINFORCING STEEL SCHEDULE

NO. PIER #1										NO. PIER #2										NO. PIER #3																																			
ITEM	PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O		
PIER #1																																																							
	12	5	23'-8"	IP501	STR.																																																		
	220	5	7'-2"	IP502	17	2'-5"	2'-4"	2'-5"																																															
*	6	5	8'-5"	IP503	STR.																																																		
	15	5	10'-10"	IP504	STR.																																																		
*	6	5	7'-1"	IP505	STR.																																																		
	46	5	7'-4"	IP506	17	2'-0"	3'-4"	2'-0"																																															
	7	9	30'-9"	IP901	STR.																																																		
Δ	9	9	18'-9"	IP902	STR.																																																		
	14	9	27'-11"	IP903	17	2'-9"	25'-2"																																																
PIER #2																																																							
	12	5	25'-8"	2P501	STR.																																																		
	248	5	7'-2"	2P502	17	2'-5"	2'-4"	2'-5"																																															
	5	5	9'-4"	2P503	STR.																																																		
	15	5	11'-6"	2P504	STR.																																																		
	5	5	8'-2"	2P505	STR.																																																		
	49	5	7'-4"	2P506	17	2'-0"	3'-4"	2'-0"																																															
	7	9	33'-3"	2P901	STR.																																																		
	7	9	20'-3"	2P902	STR.																																																		
	14	9	29'-11"	2P903	17	2'-9"	27'-2"																																																
PIER #3																																																							
	12	5	27'-8"	3P501	STR.																																																		
	260	5	7'-2"	3P502	17	2'-5"	2'-4"	2'-5"																																															
	5	5	9'-8"	3P503	STR.																																																		
	15	5	12'-9"	3P504	STR.																																																		
	5	5	8'-1"	3P505	STR.																																																		
	54	5	7'-4"	3P506	17	2'-0"	3'-4"	2'-0"																																															
	7	9	35'-10"	3P901	STR.																																																		
	7	9	21'-8"	3P902	STR.																																																		
	14	9	31'-11"	3P903	17	2'-9"	29'-2"																																																

~ NOTES ~

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATION FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-S1). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
- FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE."
- BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD
- * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- Δ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



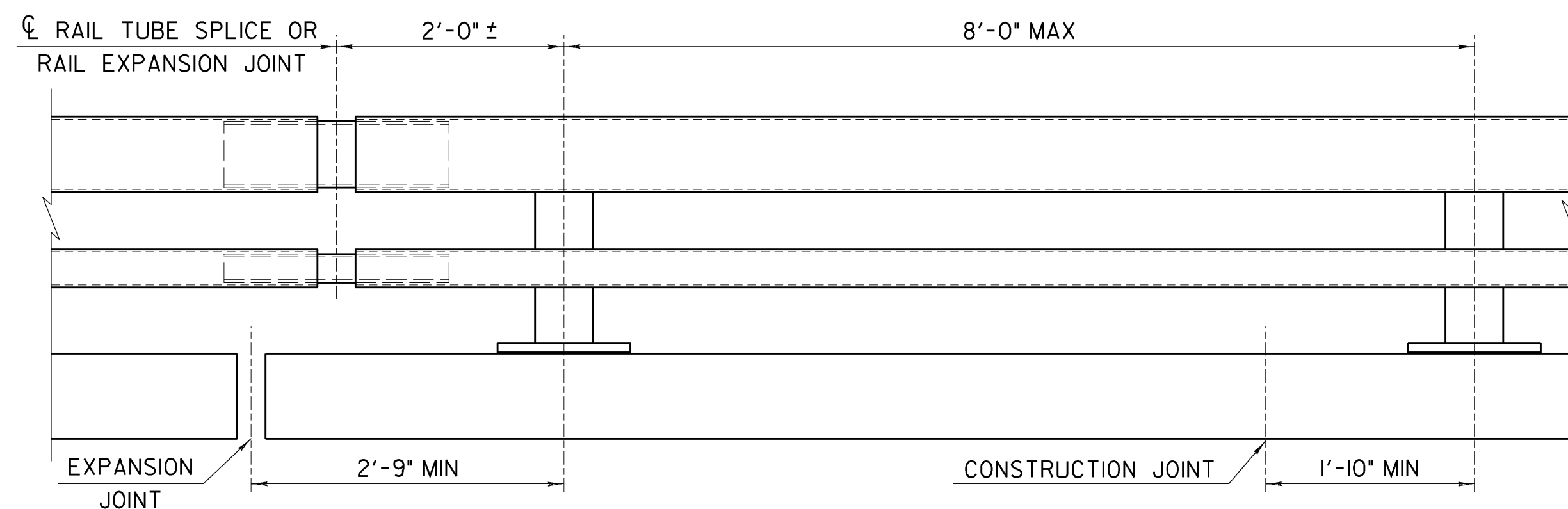
ASTM STANDARD
REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	CROSS SECTIONAL AREA SQ. INCHES	PERIMETER INCHES
#3	.376	.375	.11	1.178
#4	.668	.500	.20	1.571
#5	1.043	.625	.31	1.963
#6	1.502	.750	.44	2.356
#7	2.044	.875	.60	2.749
#8	2.670	1.000	.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

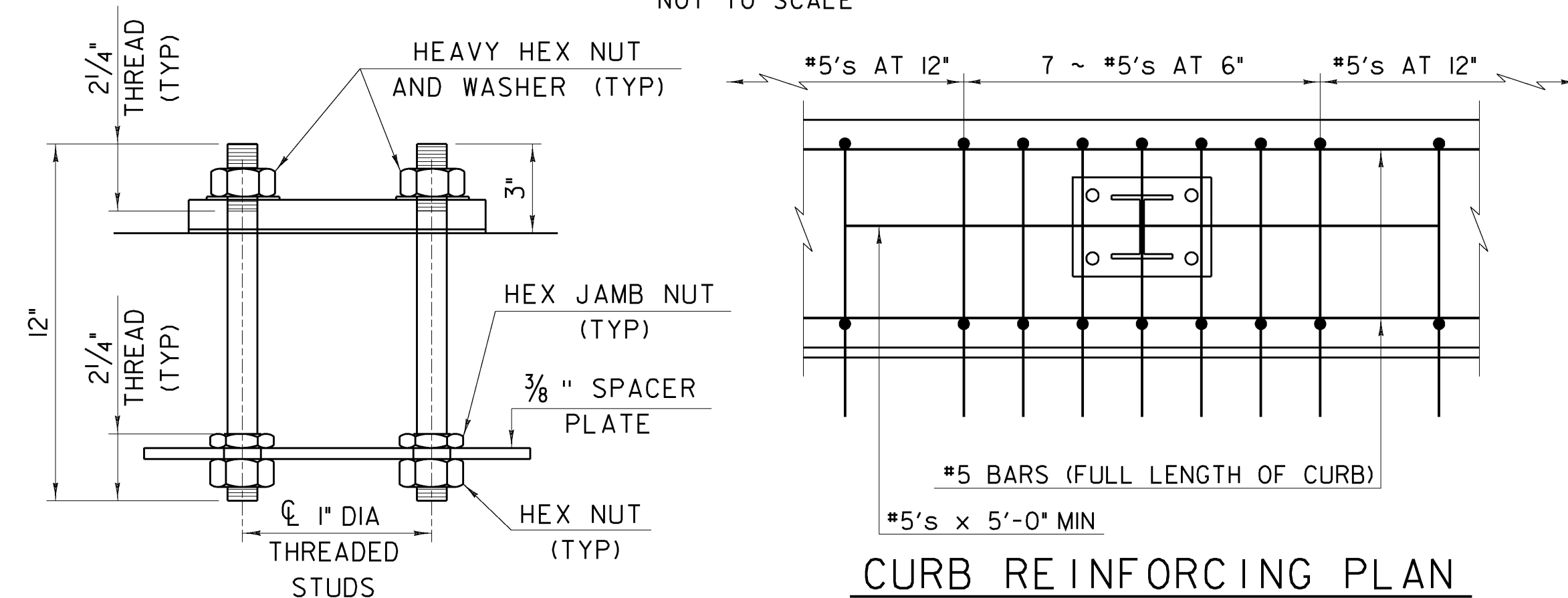
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	PUTNEY	Bridge No.	19A
Highway No.		Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
REINFORCING STEEL SCHEDULE 2			
Designed By	T. KNIGHT	Drawn By	R. WALKER
Checked By	D. HARRINGTON	Bridge Design Supervisor	G. BOGUE
Date	07/09	Date	06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(31)
CAD Dwg: ... \Plot Files\48 z93a148r.ss.ptf		Plot Date:	10/19/2009
Bridge Sheet No.		Sheet	48 of 75



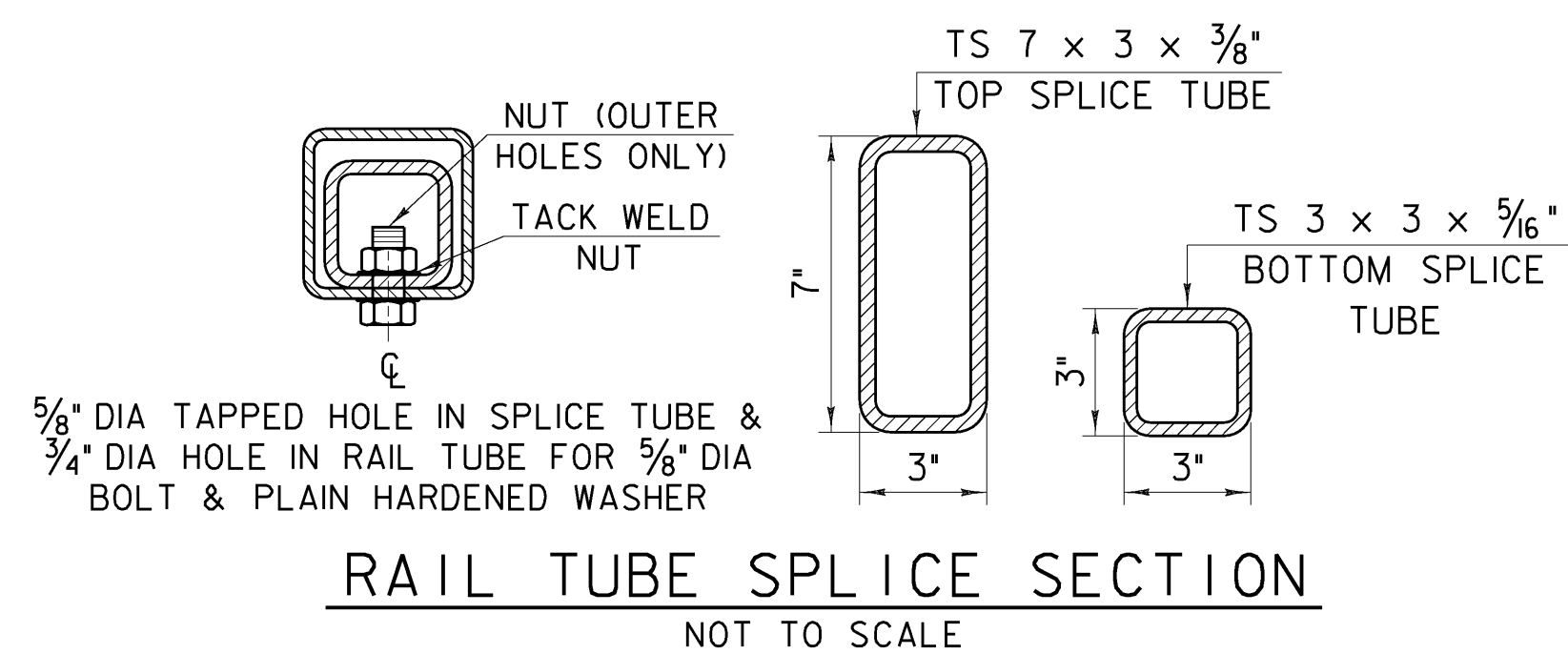


BRIDGE RAILING ELEVATION
NOT TO SCALE

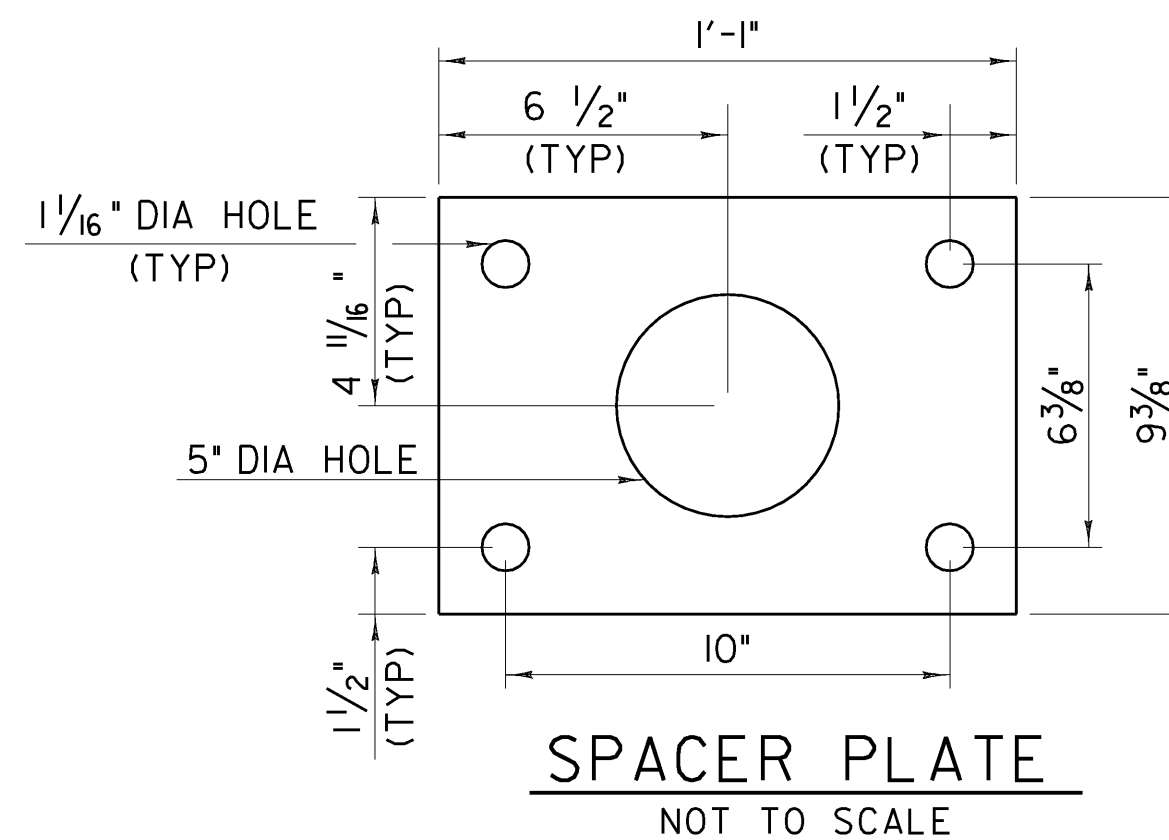


RAIL POST ANCHORAGE
NOT TO SCALE

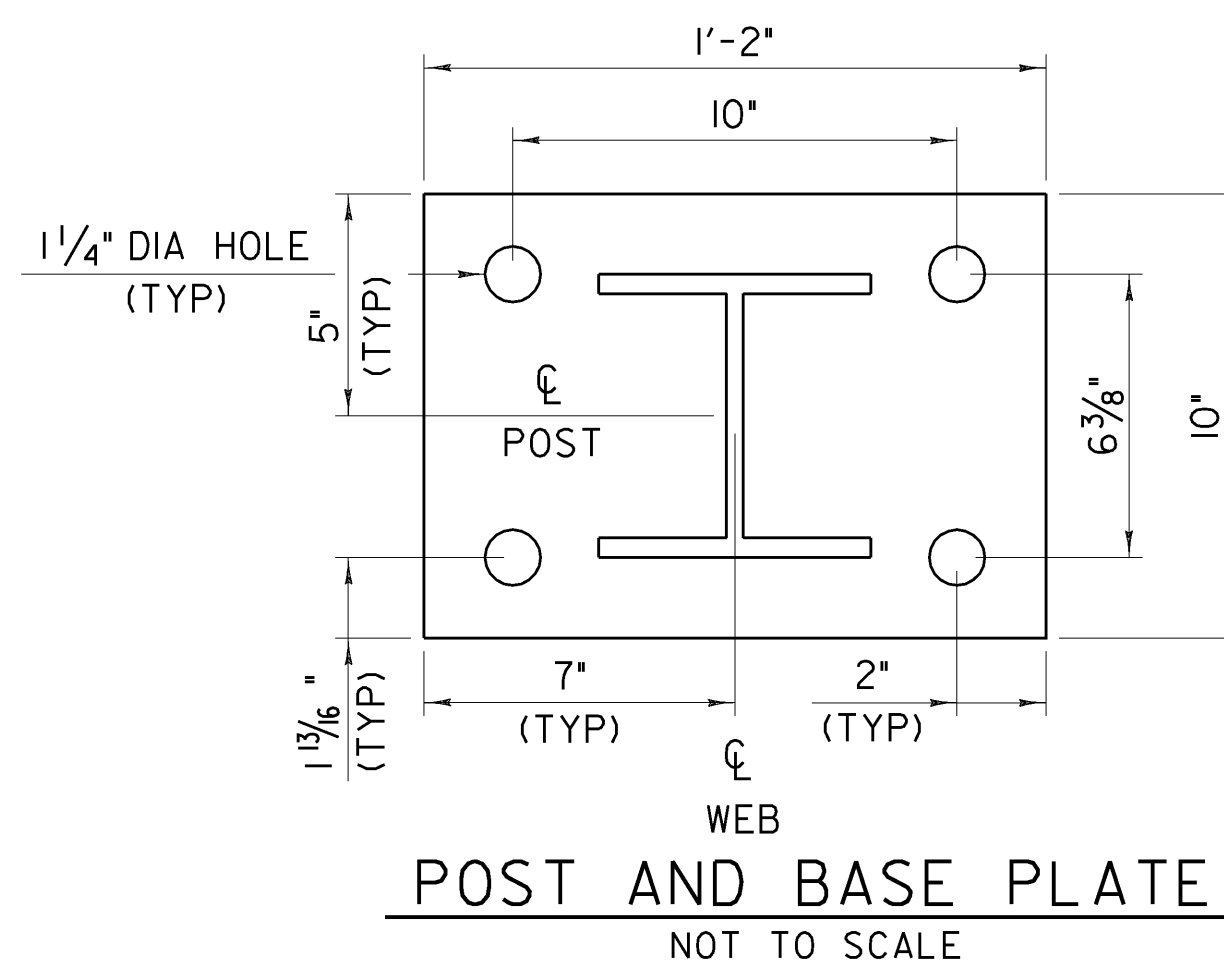
CURB REINFORCING PLAN
NOT TO SCALE



RAIL TUBE SPLICE SECTION
NOT TO SCALE



SPACER PLATE
NOT TO SCALE



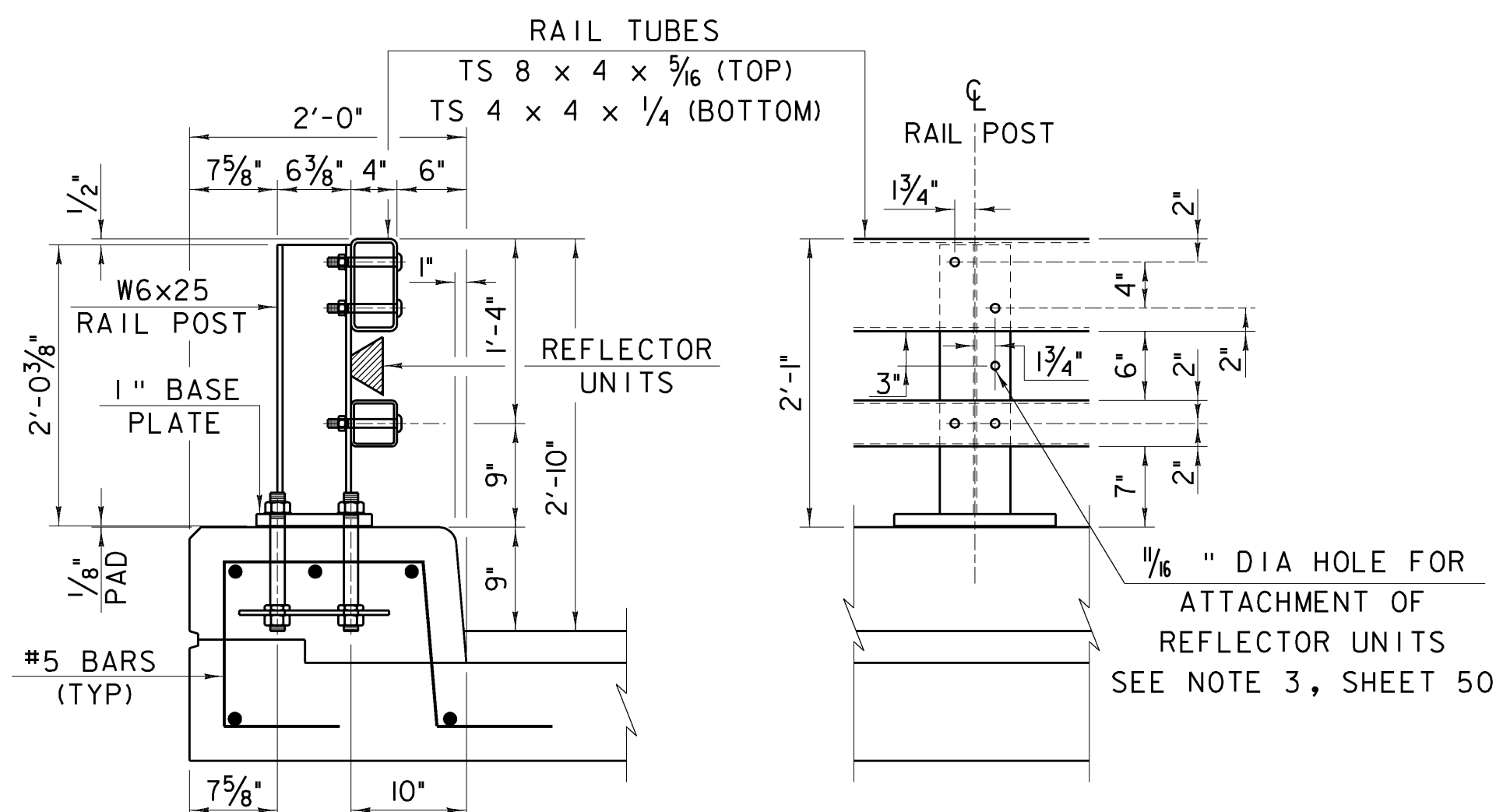
POST AND BASE PLATE
NOT TO SCALE

NOTES

- ALL WORK AND MATERIALS SHALL CONFORM TO THE PROVISIONS OF SECTION 525, "METAL RAILINGS" OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- TUBING AND POSTS SHALL MEET THE REQUIREMENTS OF SECTION 732, "RAILING MATERIALS OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION" EXCEPT THE DROP-WEIGHT TEAR TEST IN SECTION 732 SHALL NOT APPLY TO THE STRUCTURAL TUBING DETAILED HEREIN.
- ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS.
- RAIL POSTS SHALL BE SET NORMAL TO GRADE.
- SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO (2) RAIL POSTS AND PREFERABLY TO AT LEAST FOUR (4) POSTS.
- RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING A SUPERSTRUCTURE EXPANSION JOINT. EXPANSION JOINT WIDTH SHALL BE "X" AT 45°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
- ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M 111M/M 111, EXCEPT THAT HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M 232M/M 232.
- RAIL POSTS ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
- RAIL TUBES SHALL BE ATTACHED USING 3/4" FULL DIAMETER BODY AASHTO M164 (TYPE 1) ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE 1/16" LARGER THAN THE BOLT SIZE.
- HOLES IN RAILS FOR RAIL TUBE ATTACHMENT MAY BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO ERECTION.
- IF THERE IS A CONFLICT BETWEEN THESE STANDARD DETAILS AND THE DESIGN, THE REQUIREMENTS OF THE DESIGN DRAWINGS SHALL BE FOLLOWED.
- ANY BENDING OF RAIL SHALL BE BY SHOP PROCEDURE ONLY.
- THE FABRICATOR SHALL SUBMIT FABRICATION DRAWINGS INCLUDING WELDING PROCEDURES TO THE STRUCTURES ENGINEER FOR APPROVAL IN ACCORDANCE WITH SUB SECTION 525.03. ALL WELDING SHALL CONFORM WITH SUB SECTION 506.10.
- RAIL POSTS AND BASE PLATES SHALL BE TESTED FOR IMPACT PROPERTIES IN ACCORDANCE WITH ASTM A-370 CHARPY IMPACT TESTING USING TYPE A SPECIMEN.

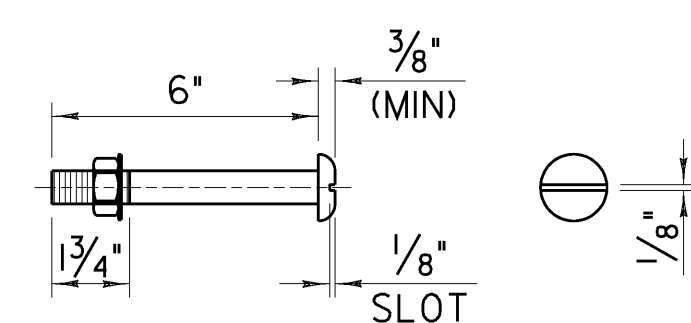
MATERIALS

RAIL TUBES.....ASTM A500, GRADE B OR ASTM A501
 RAIL POSTS AND BASE PLATES.....ASTM A709/A709M, GRADE 50
 ALL OTHER SHAPES AND PLATES.....ASTM A709/A709M, GRADE 36
 ANCHOR STUDS.....ASTM A449
 ALL OTHER BOLTS (UNLESS NOTED).....AASHTO M164, TYPE 1
 NUTS FOR AASHTO M164 BOLTS AND FOR ANCHOR STUDS SHALL COMPLY WITH AASHTO M291 (ASTM A563).
 WASHERS SHALL COMPLY WITH AASHTO M293 (ASTM F436) SPECIFICATIONS.
 1/8" PAD SHALL COMPLY WITH STANDARD SPECIFICATION SUBSECTION 731.01 OR 731.02.



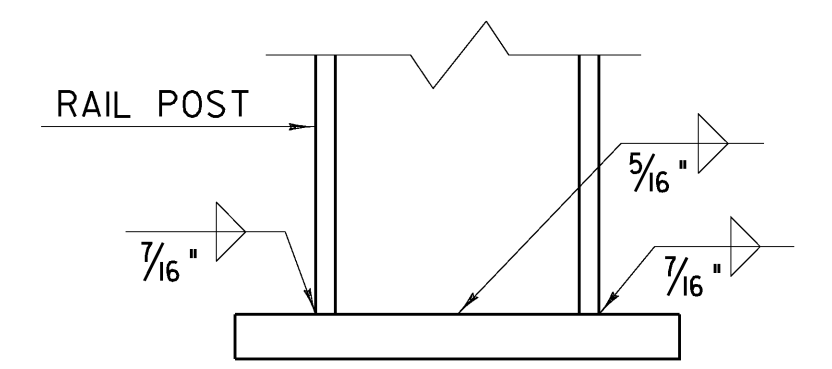
TYPICAL SECTION
NOT TO SCALE

ELEVATION
NOT TO SCALE



3/4" DIA M164 (TYPE 1) ROUND HEAD BOLT

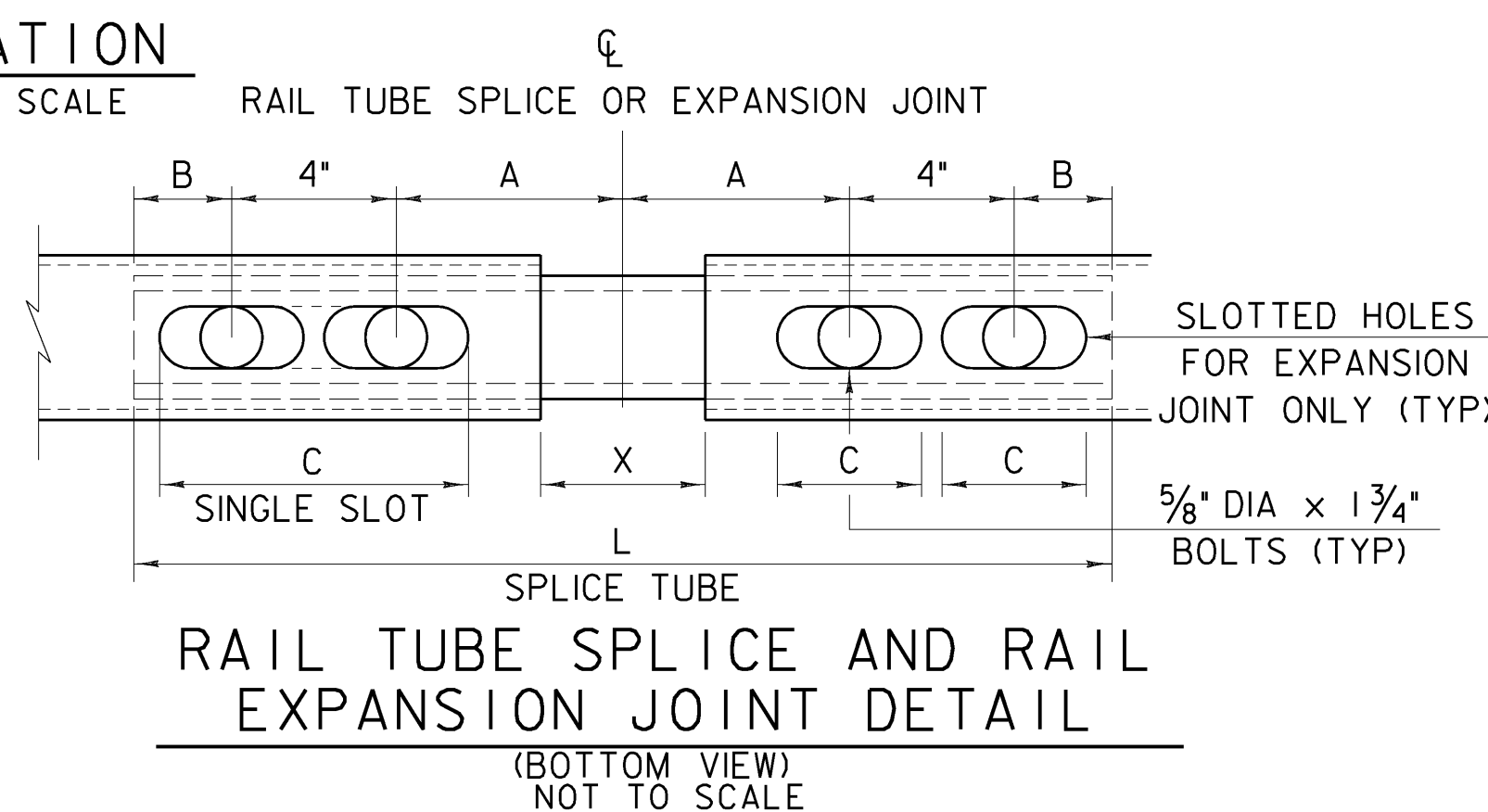
(WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT)
 (SEE NOTE #9)
 ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.
 NOT TO SCALE



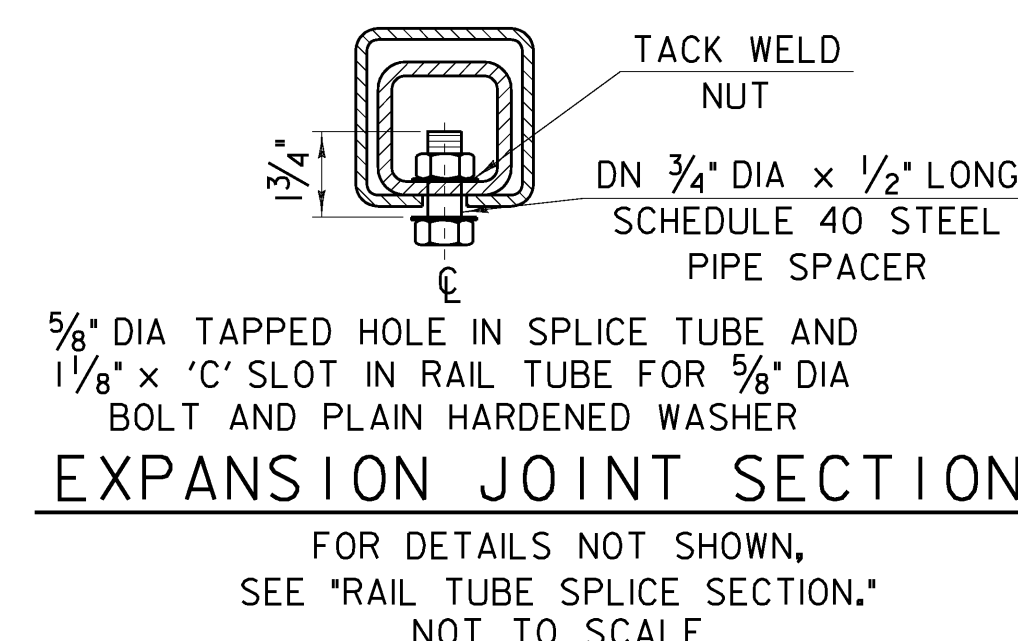
BASE WELD DETAIL
NOT TO SCALE

SPLICE TABLE					
T	A	B	C	L	X
N/A	4"	2"	--	20"	3/4"
EXPANSION JOINT TABLE					
<4"	4"	2"	2 1/2"	20"	2 1/2"
>4" <6 1/2"	5 1/2"	2 3/8"	3 1/2"	23 3/4"	4"
>6 1/2" <9"	6 1/2"	3 3/8"	9"	27 3/4"	5"
>9" <13"	8 1/2"	4 3/8"	11"	33 3/4"	7"

T = TOTAL MOVEMENT BETWEEN BRIDGE EXPANSION JOINTS. SEE NOTE 6.
 * = SINGLE SLOT



RAIL TUBE SPLICE AND RAIL EXPANSION JOINT DETAIL
(BOTTOM VIEW)
NOT TO SCALE

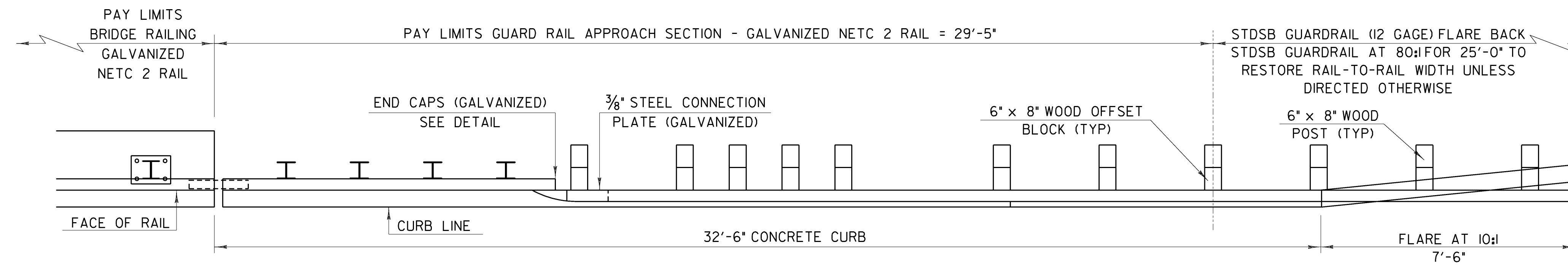


EXPANSION JOINT SECTION
FOR DETAILS NOT SHOWN, SEE "RAIL TUBE SPLICE SECTION."
NOT TO SCALE

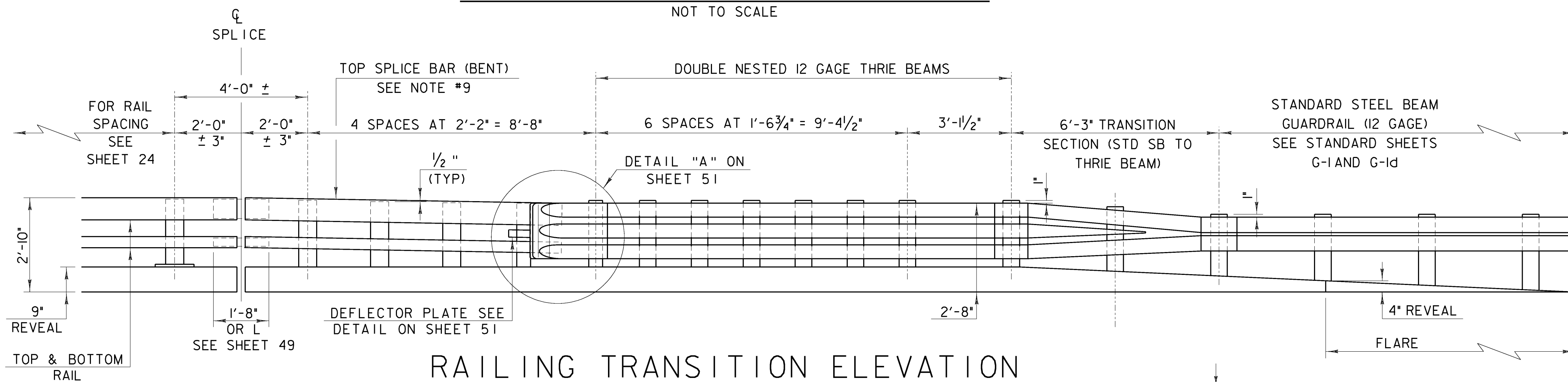
STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	Surv. Sta.
U.S. ROUTE 5 OVER I-91			
BRIDGE RAILING - NETC 2 RAIL			
Designed By	VTRANS	Drawn By	VTRANS
Checked By	T. KNIGHT	Date	06/09
		Bridge Design Supervisor	C. BOGUE Date 06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(131)
CAD Drawing Name:	...49 z93a148brail.ppt	Date:	10/19/2009
Bridge Sheet No.		Sheet	49 of 75

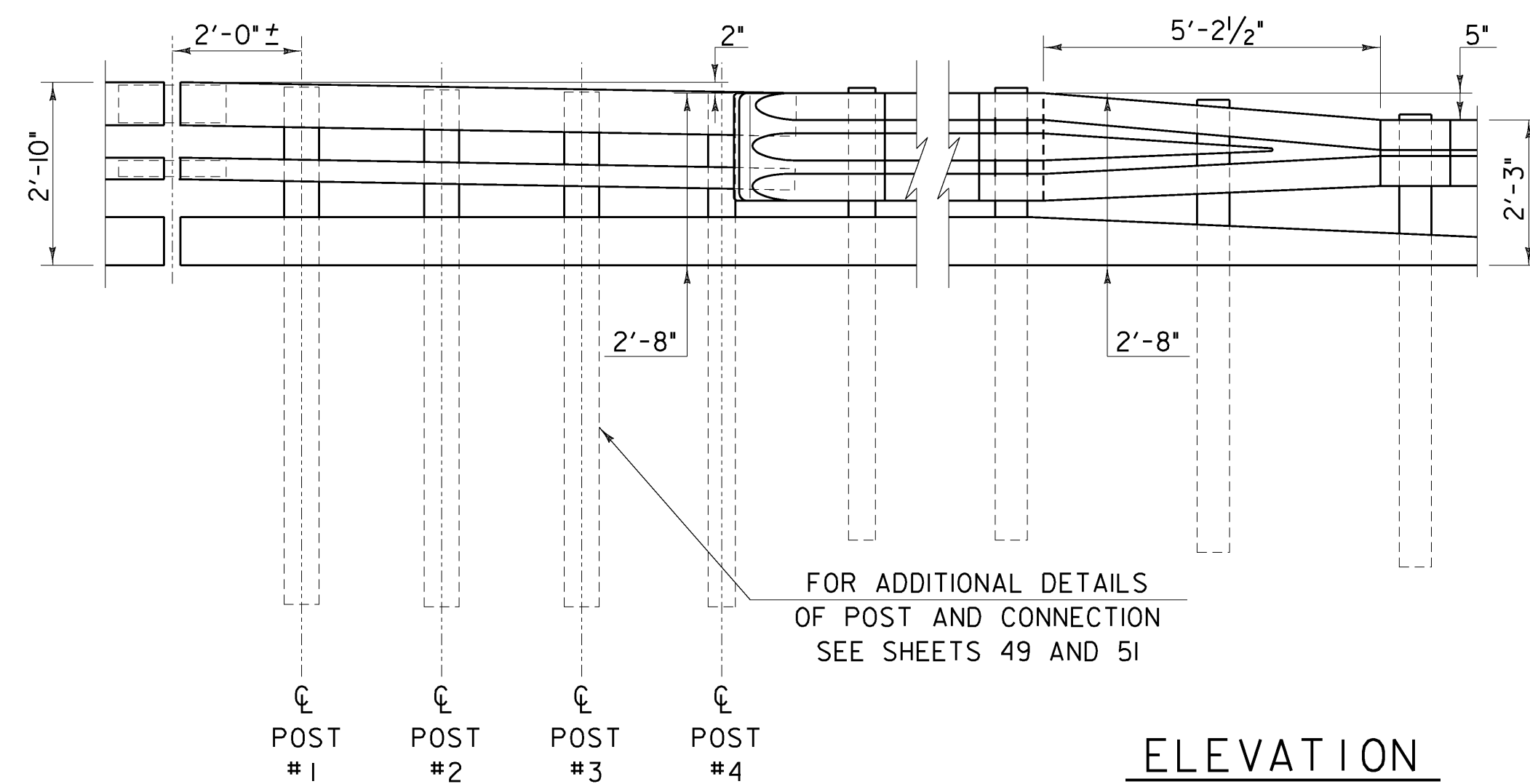




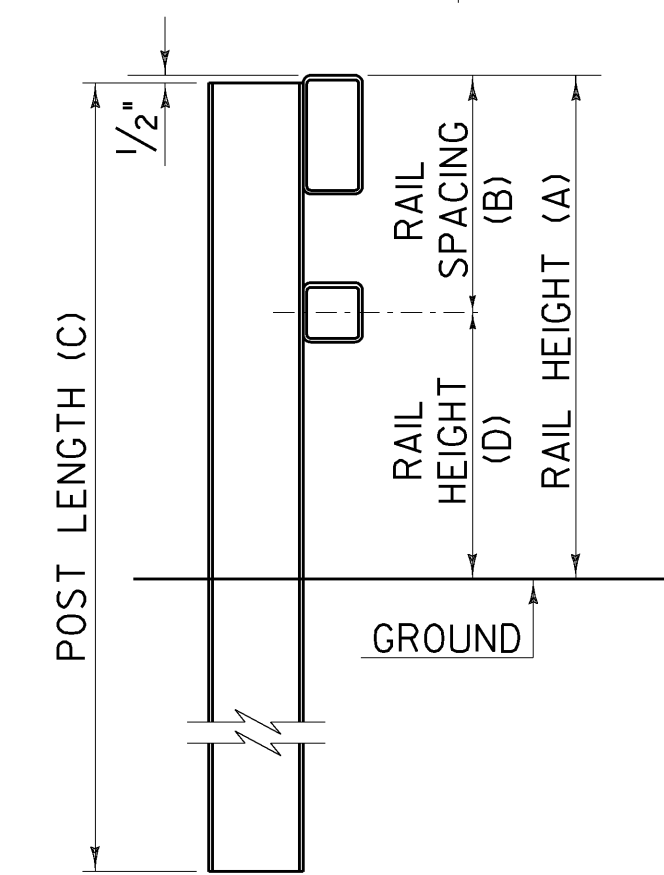
RAILING TRANSITION PLAN
NOT TO SCALE



RAILING TRANSITION ELEVATION
NOT TO SCALE



ELEVATION
NOT TO SCALE

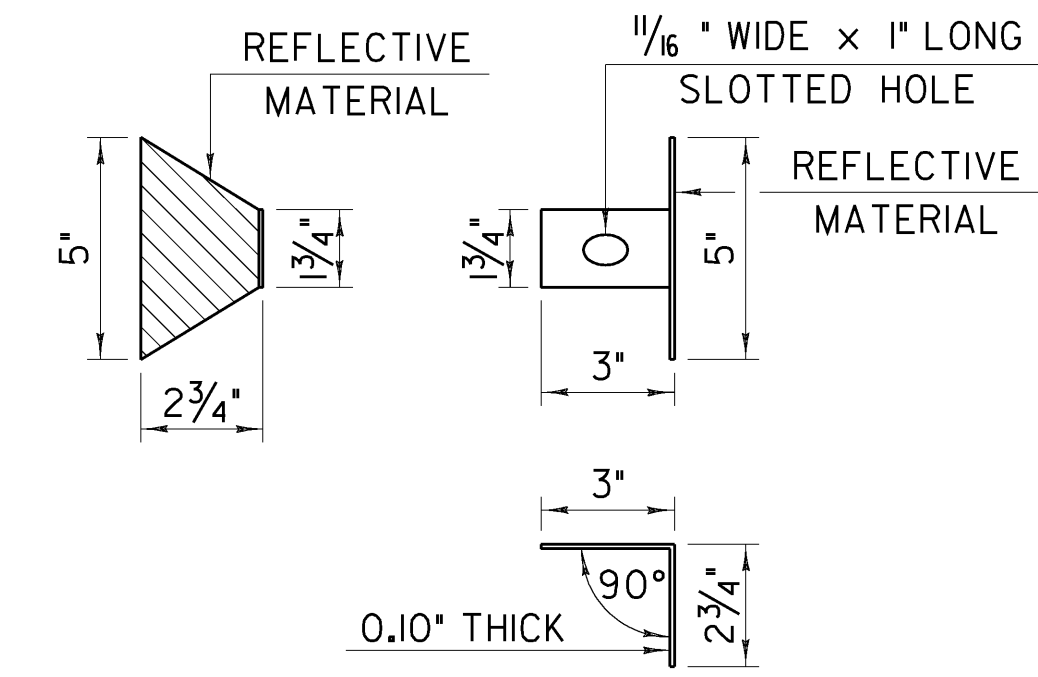


TYPICAL SECTION
NOT TO SCALE

POST NUMBER	RAIL HEIGHT (A)	RAIL SPACING (B)	POST LENGTH (C)	RAIL HEIGHT (D)
1	2'-9 1/2"	1'-3 3/4"	8'-0"	1'-5 3/4"
2	2'-9"	1'-3 1/2"	8'-0"	1'-5 1/2"
3	2'-8 1/2"	1'-3 3/8"	8'-0"	1'-5 5/8"
4	2'-8"	1'-2 7/8"	8'-0"	1'-5 1/8"

NOTES

- REFER TO SHEET 49 FOR ADDITIONAL DETAILS, NOTES AND MATERIAL SPECIFICATIONS.
- PAYMENT FOR GUARD RAIL APPROACH SECTION - GALVANIZED NETC 2 RAIL SHALL INCLUDE THE TERMINAL CONNECTOR, THE CONNECTION PLATE, THE DEFLECTOR PLATE, RAIL, POSTS, BLOCKS AND ATTACHMENT HARDWARE.
- THE REFLECTORIZED ALUMINUM DELINEATION IS TO BE ERECTED EVERY 30' (OR CLOSEST POST) WITH A 5/8" DIAMETER BOLT. DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.
- REFLECTIVE MATERIAL SHALL MEET REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVERS' LEFT AND SILVER ON THEIR RIGHT.
- ON BRIDGES WITH A SIDEWALK, DELINEATORS ARE NOT TO BE INSTALLED ON THE SIDEWALK SIDE OF THE BRIDGE (I.E. DELINEATORS INSTALLED ONLY ON THE CURB SIDE AND ON THE APPROACH ON THE CURB SIDE). PAYMENT SHALL BE INCIDENTAL TO ALL OTHER ITEMS.
- ALL APPROACH RAIL SPLICES SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW.
- ALL BRIDGE APPROACH RAIL MATERIALS, DIMENSION SIZES AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED.
- CARRIAGE BOLTS SHALL BE AASHTO M164 AND NUTS SHALL BE ASTM A563 GRADE A OR BETTER (GALVANIZED).
- WELD TOP SPLICE BAR TO FIT BEND. USE COMPLETE PENETRATION WELD (B-U2).
- THE CONCRETE CURB WILL BE PAID FOR AS ITEM 616.28, "CAST-IN-PLACE CONCRETE CURB, TYPE B."



DELINEATION DEVICE DETAILS
NOT TO SCALE

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			

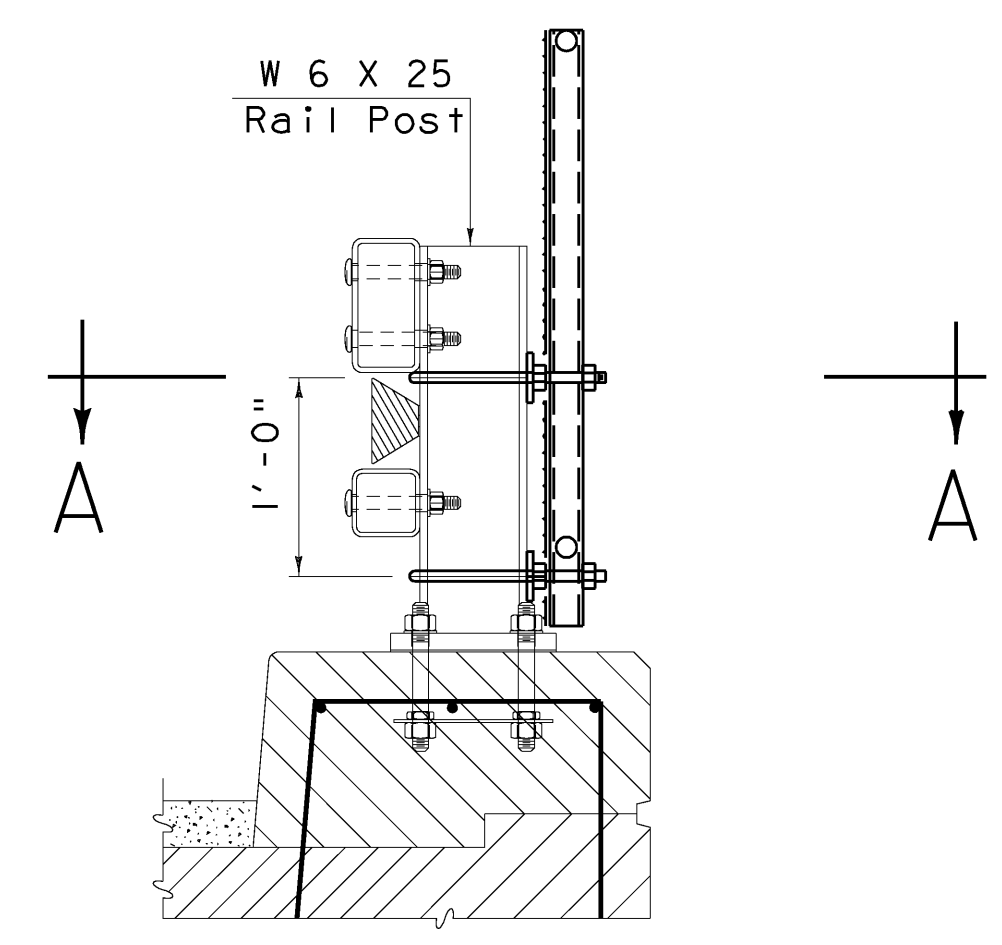
NETC 2 RAIL - THRIE BEAM APPROACH RAIL 1

Designed By	VTRANS	Drawn By	VTRANS
Checked By	T. KNIGHT	Date	06/09
		Bridge Design Supervisor	C. BOGUE
		Date	06/09

PROJECT	PUTNEY	PROJECT NO.	IM 091-(31)
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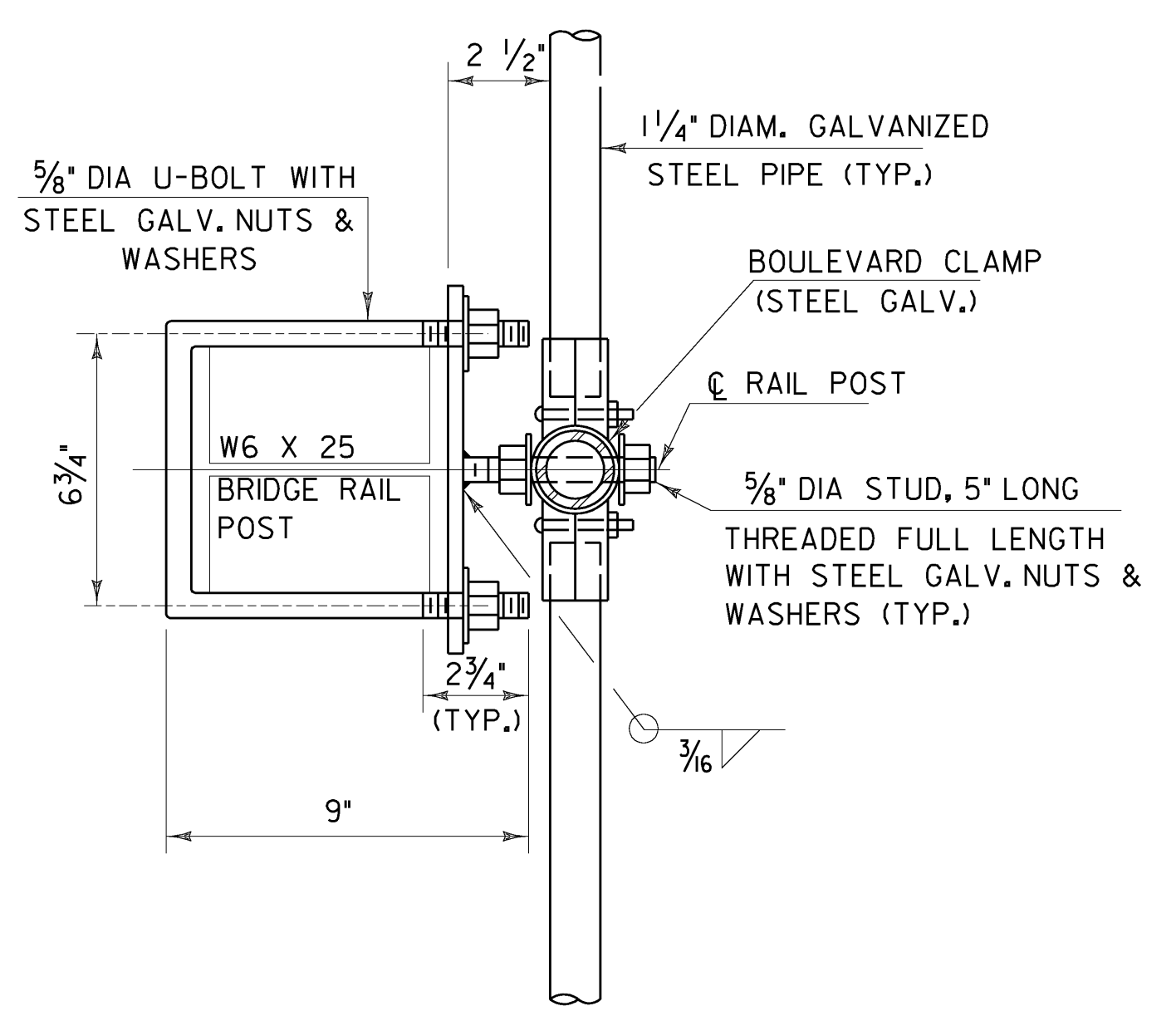
CAD Drawing Name:	... \50 z93al48brall2.Plot	Date:	10/19/2009
Bridge Sheet No.		Sheet	50 of 75





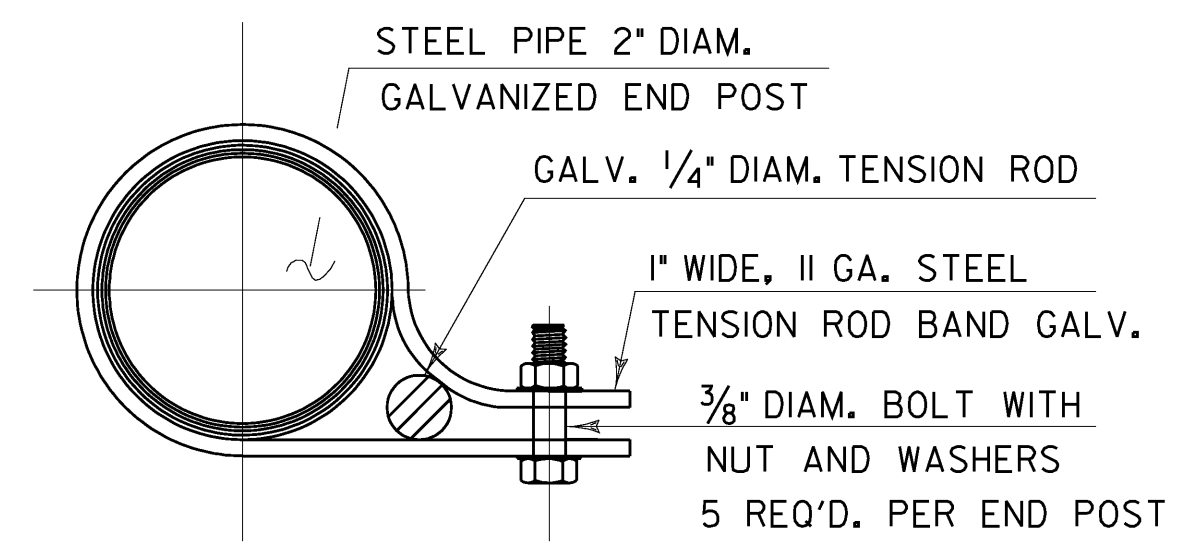
TYPICAL SECTION

NOT TO SCALE
NOTE: FOR DIMENSIONS SEE SHEETS 49 AND 50



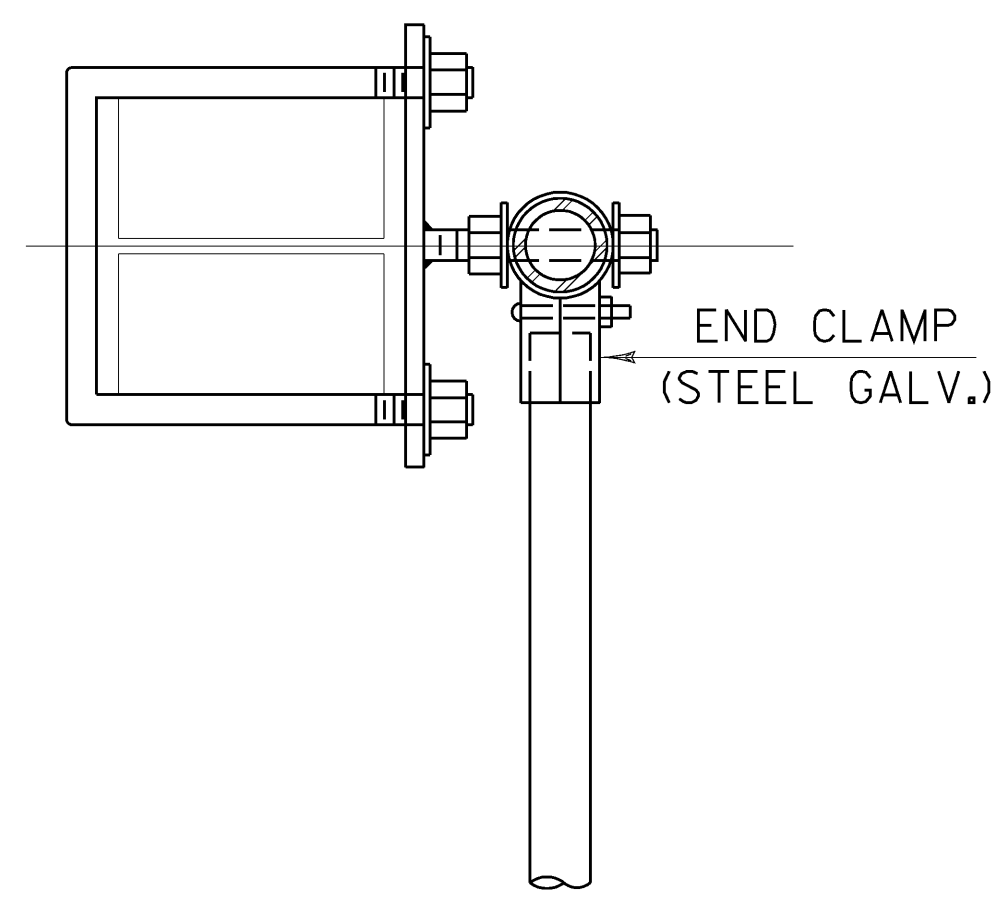
SECTION A-A

NOT TO SCALE



TENSION ROD BAND

NOT TO SCALE



PLAN VIEW AT END POST

NOT TO SCALE

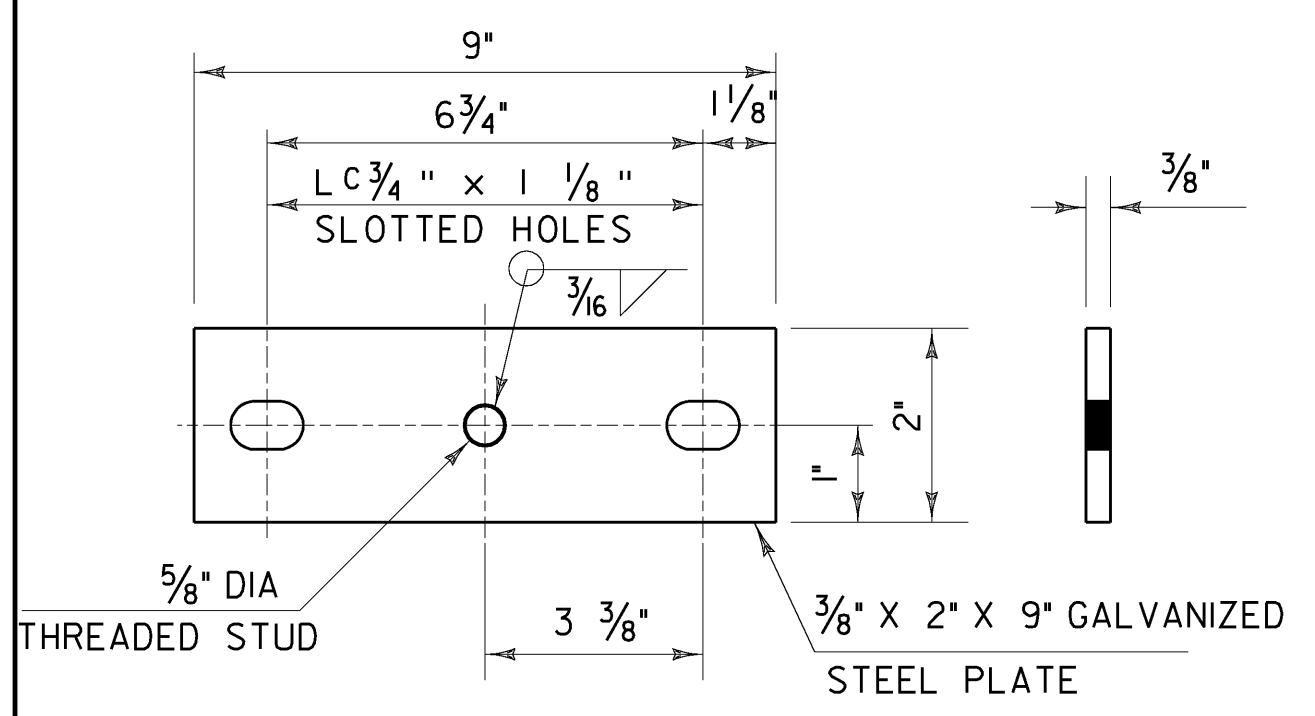
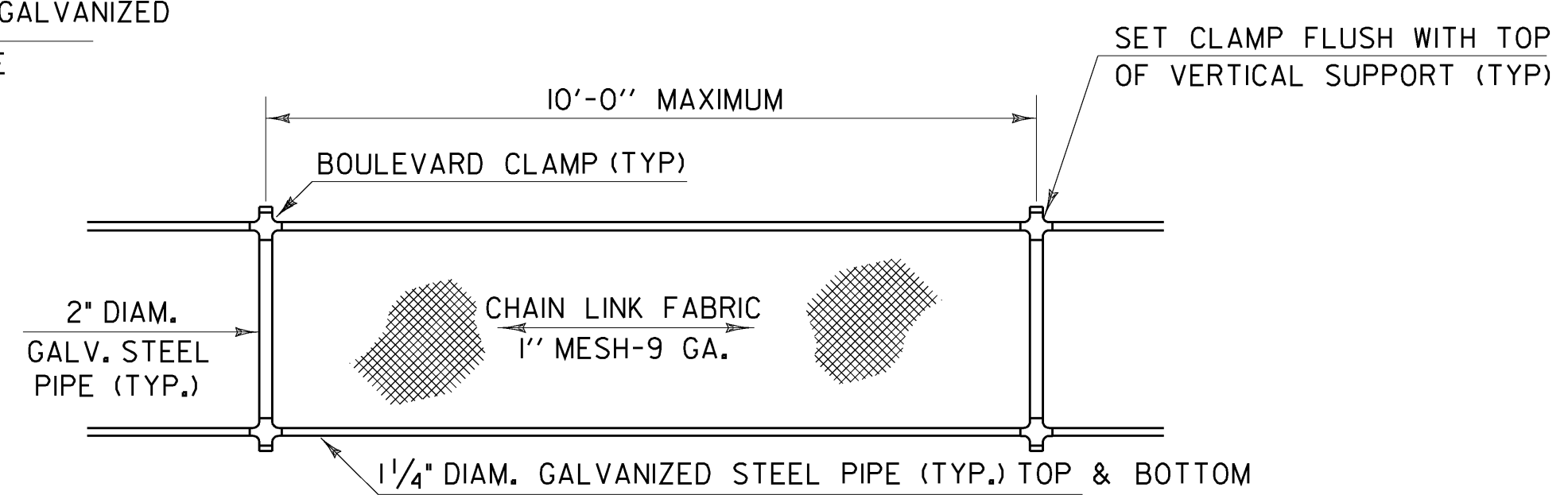


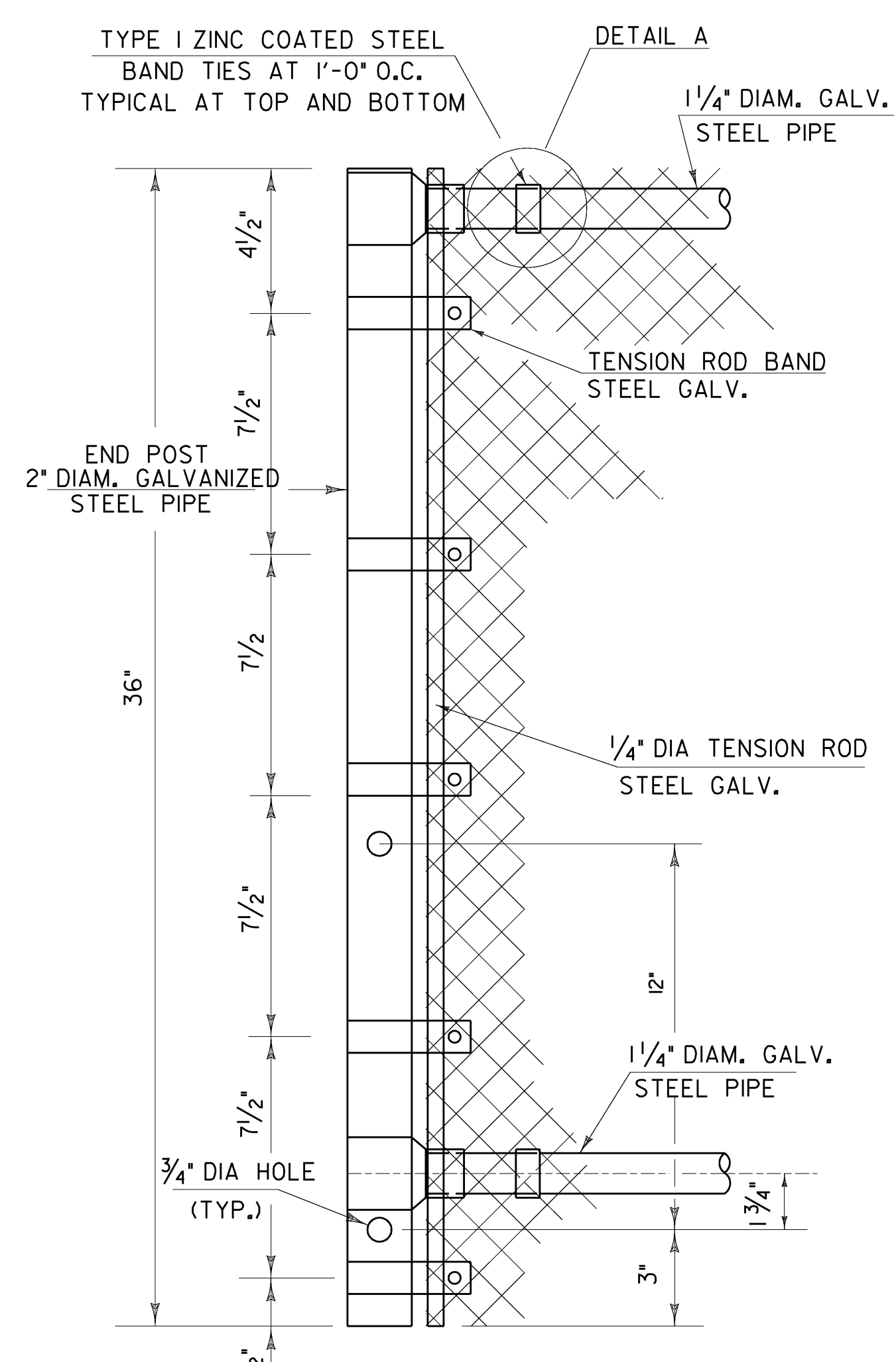
PLATE DETAILS

NOT TO SCALE



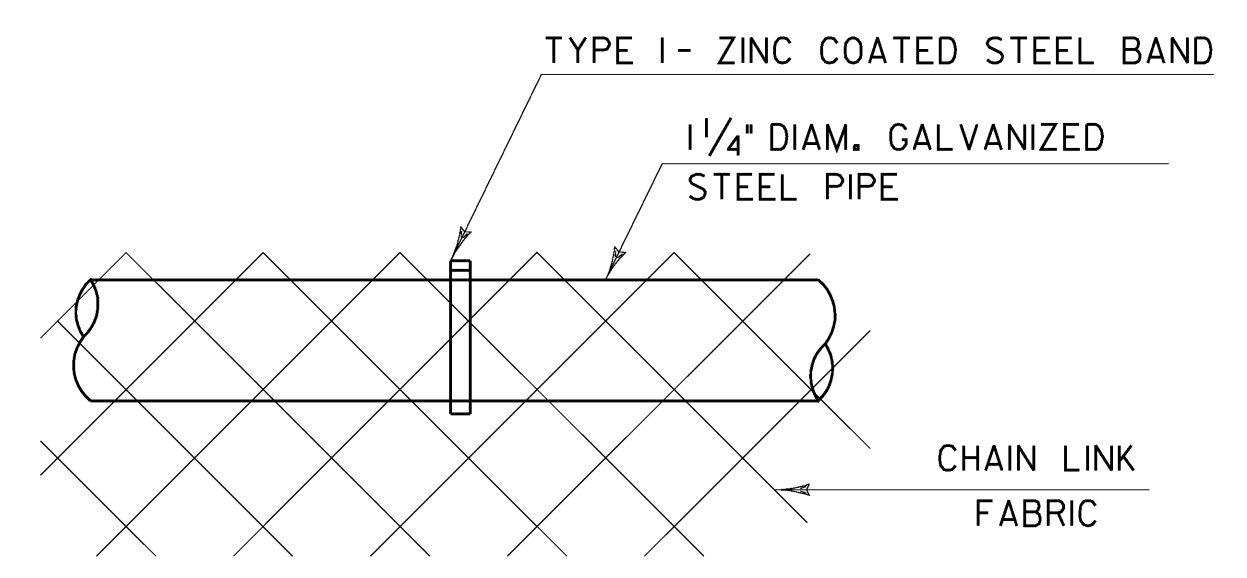
ELEVATION SNOW BARRIER

NOT TO SCALE



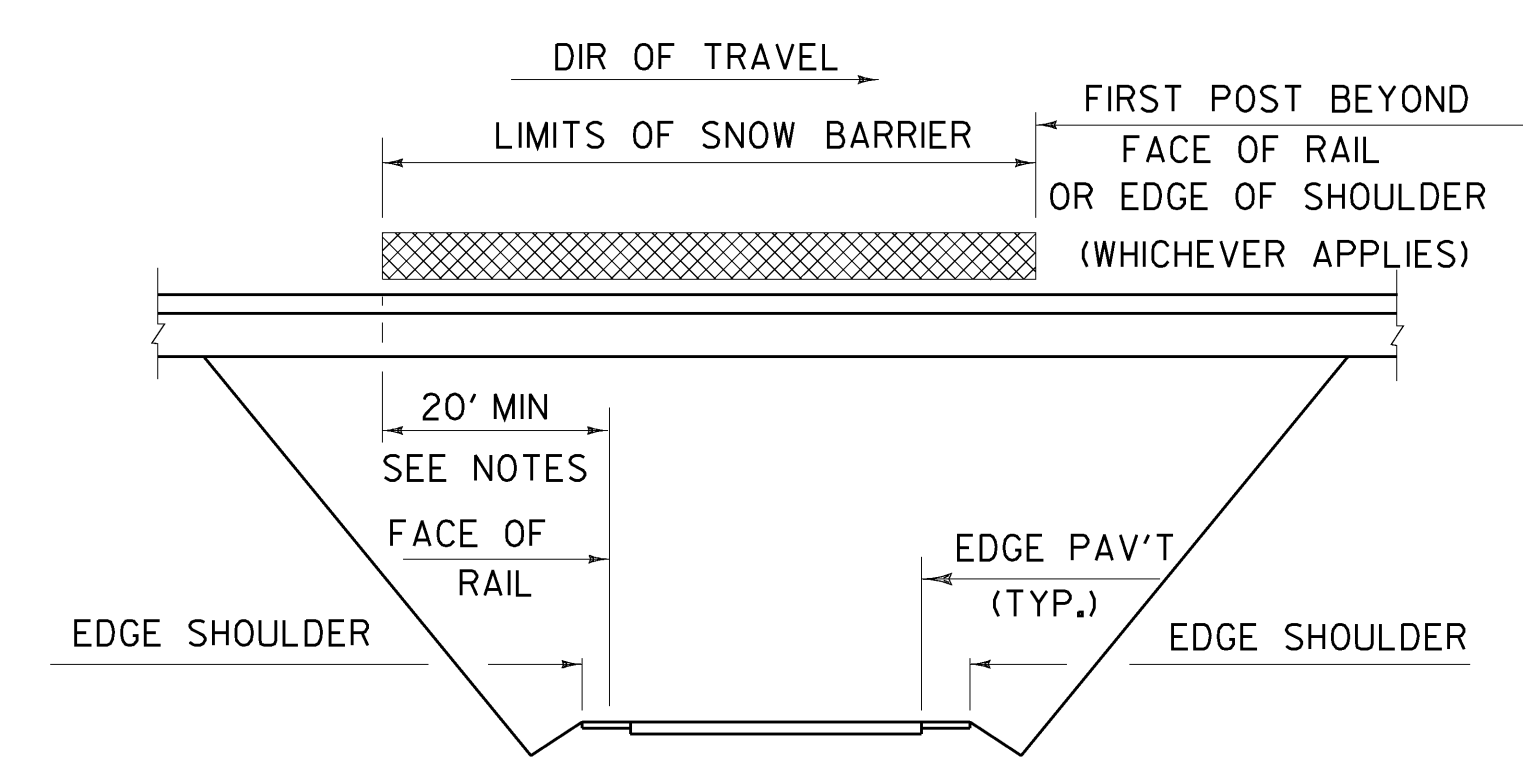
END POST DETAILS

NOT TO SCALE



DETAIL A

NOT TO SCALE



SCHEMATIC SNOW BARRIER LIMITS

NOT TO SCALE

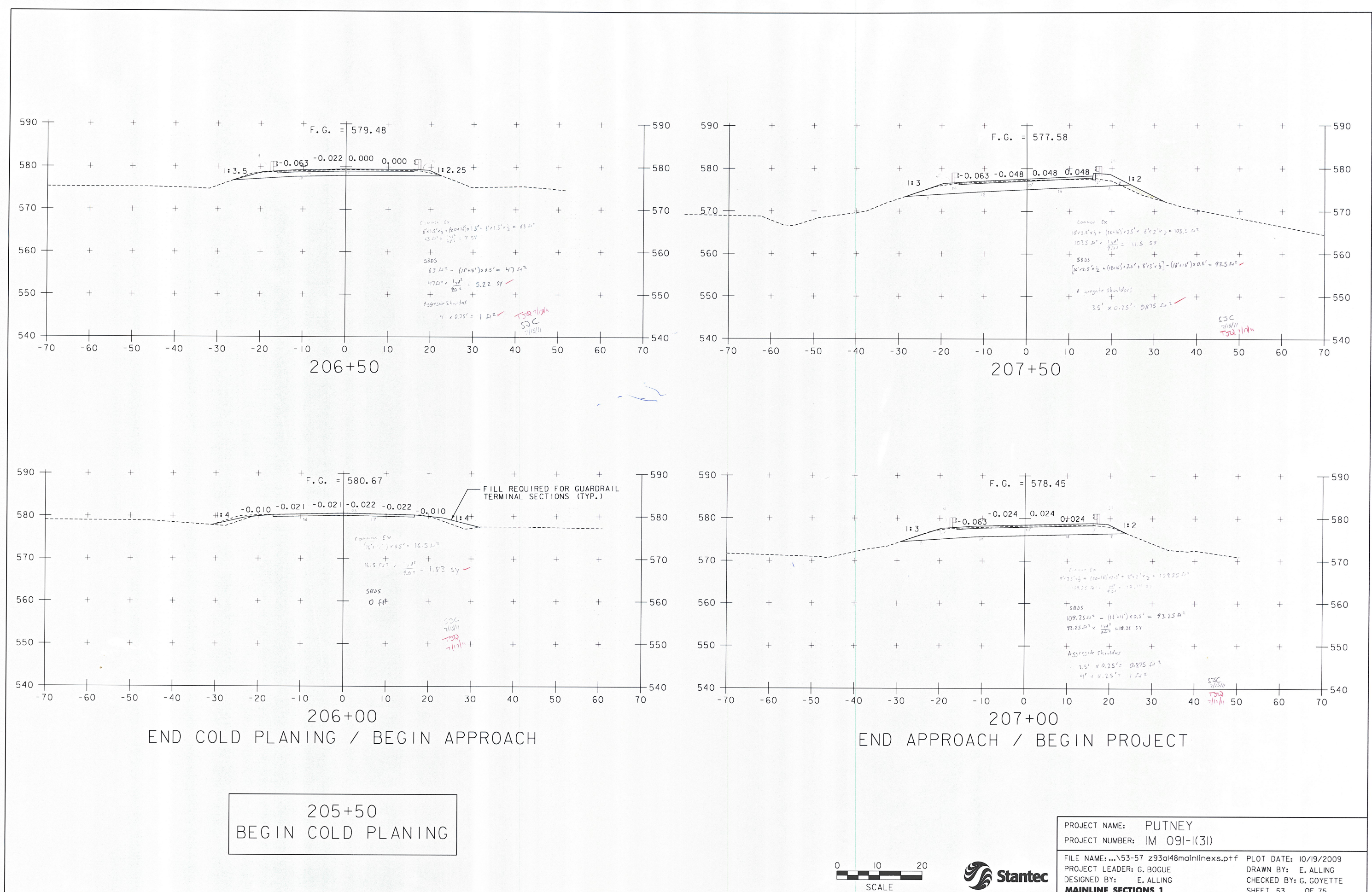
NOTES

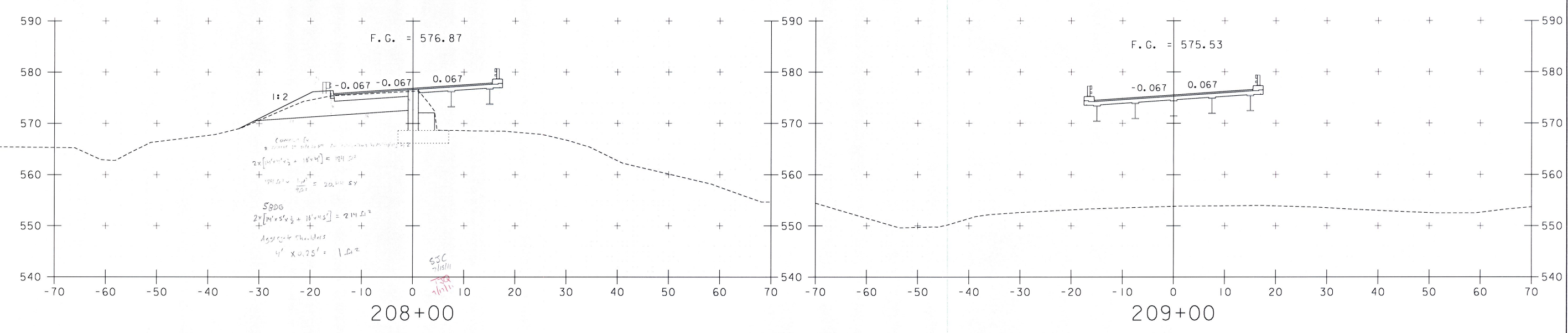
1. THREADS OF STUDS AND U-BOLTS TO BE 5/8-11 UNC.
2. ALL CONNECTION PLATES TO BE GALVANIZED AFTER FABRICATION.
3. 1 1/4" PIPE LENGTH SHALL BE FIELD CUT TO FIT POST SPACING.
4. CHAIN LINK FABRIC TO BE KNUCKLED TOP AND BOTTOM.
5. ALL BOLTS, THREADED STUDS AND WASHERS SHALL CONFORM TO THE SPECIFICATIONS FOR AASHTO M-164, TYPE 1. NUTS SHALL CONFORM TO AASHTO M-291.
6. ALL STEEL PLATES SHALL CONFORM TO THE SPECIFICATION FOR AASHTO M 270M/M 270 GRADE 36.
7. ALL GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-181 WITH HARDWARE AND FITTINGS CONFORMING TO THE REQUIREMENTS OF AASHTO M 111M/M 111 OR AASHTO M 232M/M 232 WHICHEVER IS APPLICABLE. ALL BOLTS, NUTS AND WASHERS SHALL BE EITHER HOT-DIP GALVANIZED IN ACCORDANCE WITH THE ABOVE AASHTO REQUIREMENTS OR MECHANICALLY GALVANIZED USING A MECHANICALLY DEPOSITED PROCESS CONFORMING TO THE REQUIREMENTS OF AASHTO M-298, CLASS 110.
8. GALVANIZED CHAIN-LINK FABRIC SHALL BE TYPE 1 (ZINC) CLASS D AS SPECIFIED IN AASHTO M-181.
9. SNOW BARRIER SHALL BEGIN AT THE BRIDGE RAIL POST WHICH WILL PROVIDE A MINIMUM DISTANCE OF 20' (AS SHOWN) OR AS DIRECTED BY THE ENGINEER.
10. ALL REFERENCES TO THE DIAMETERS OF GALVANIZED STEEL PIPE SHALL REFER TO THE OUTSIDE DIAMETER (O.D.).
11. ALL POSTS, RAILS AND HARDWARE SHALL BE ZINC COATED AND CONFORM TO THE REQUIREMENTS OF AASHTO M-181, GRADE 1 OR GRADE 2.

STATE OF VERMONT AGENCY OF TRANSPORTATION

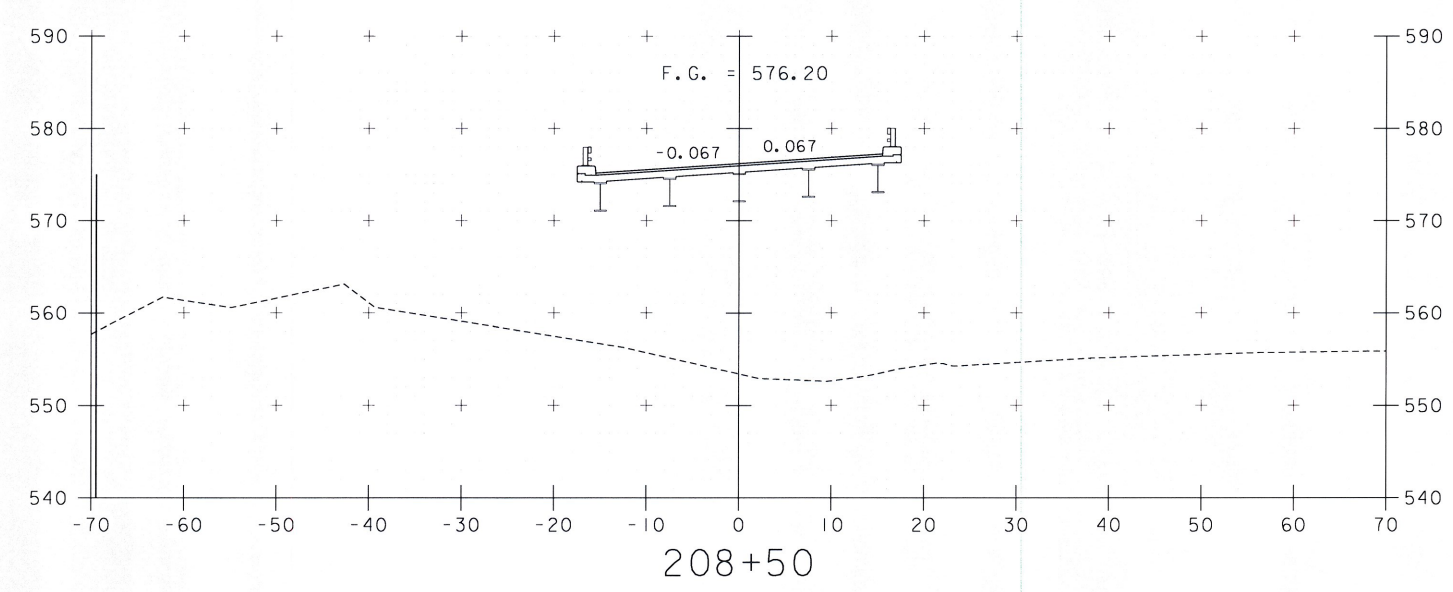
Town Of	PUTNEY	Bridge No.	19A
Highway No.	U.S. ROUTE 5	Log Sta.	
		Surv. Sta.	
U.S. ROUTE 5 OVER I-91			
SNOW FENCE FOR NETC 2 RAIL			
Designed By	VTRANS	Drawn By	VTRANS
Checked By	T. KNIGHT	Date	06/09
		Bridge Design Supervisor	C. BOGUE
		Date	06/09
PROJECT	PUTNEY	PROJECT NO.	IM 091-(131)
CAD Drawing Name:	...52 z93a48brd14.p1d1	Date:	10/19/2009
Bridge Sheet No.		Sheet	52 of 75





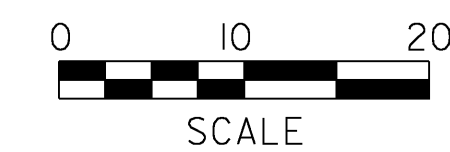
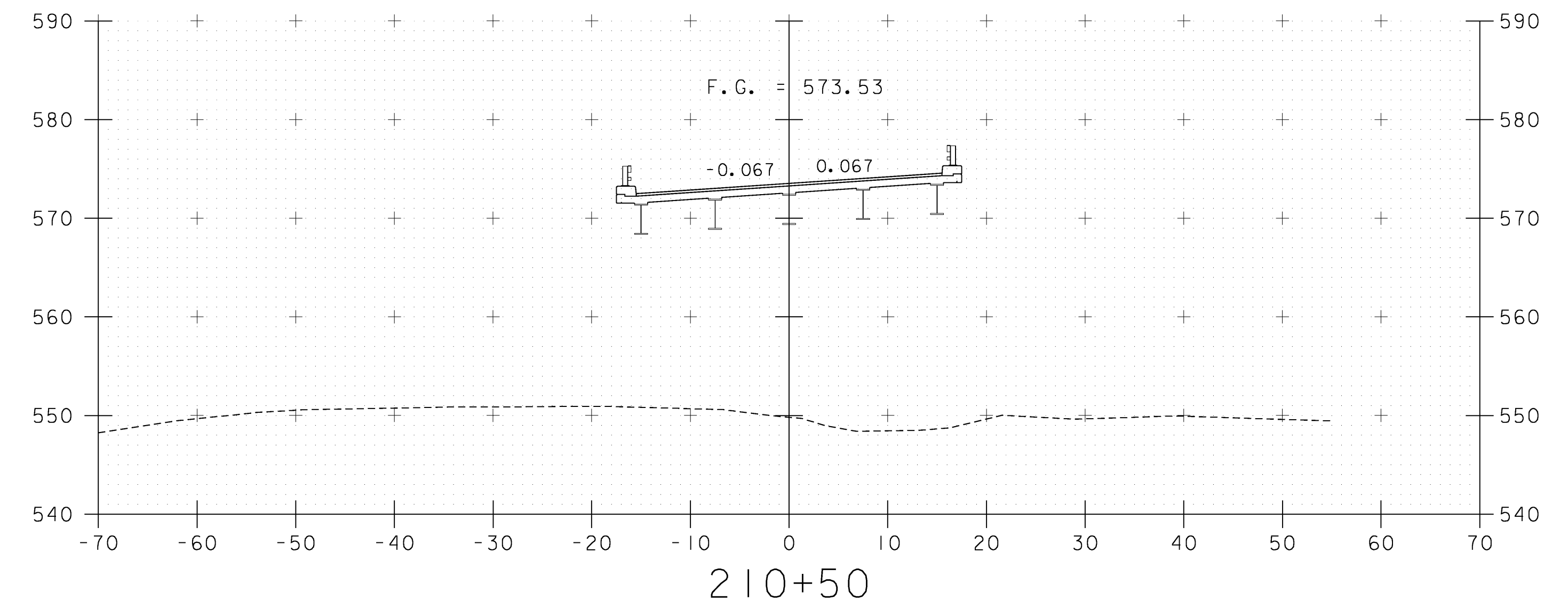
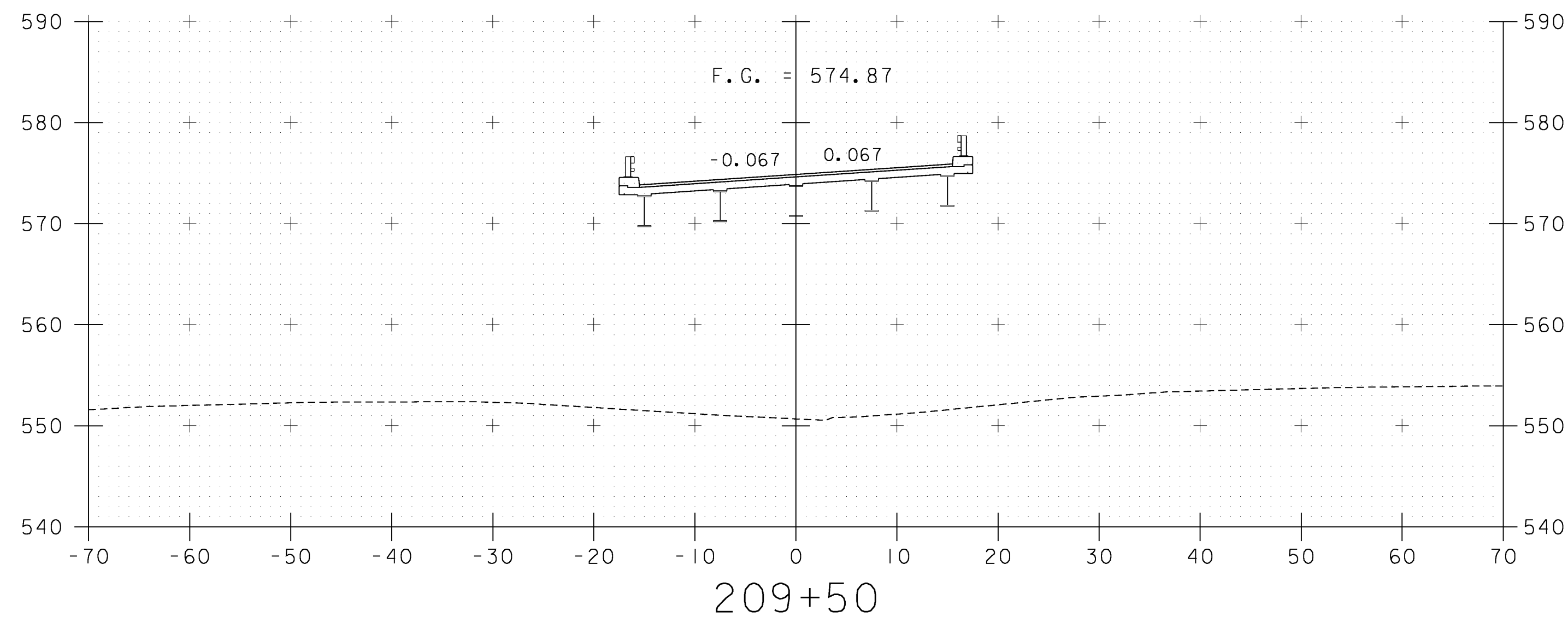
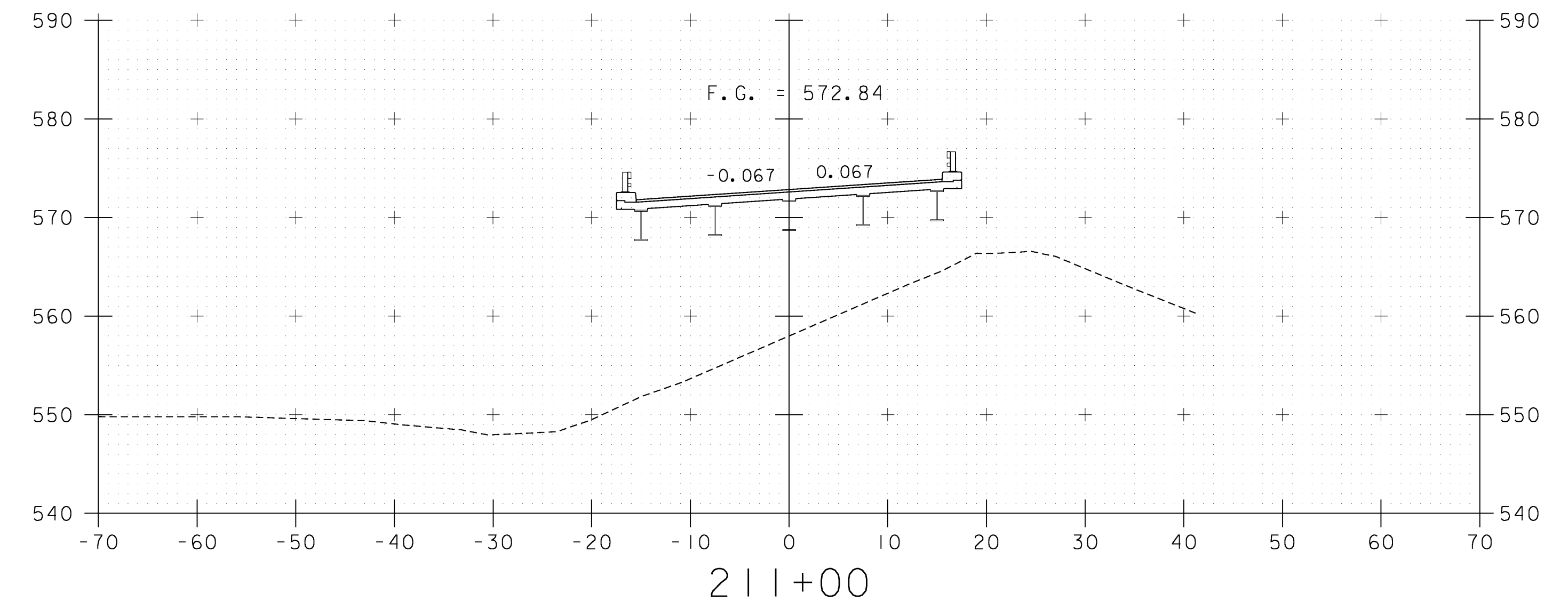
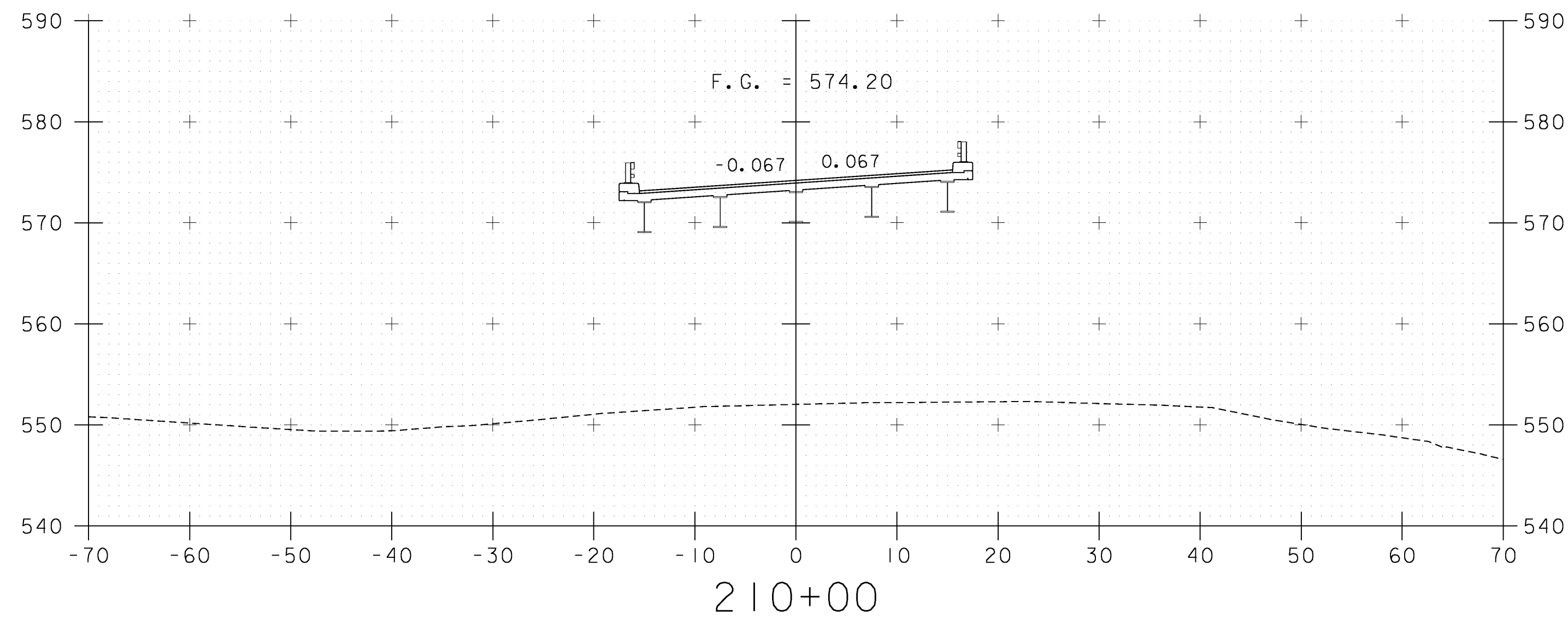


207+98.93
BEGIN BRIDGE

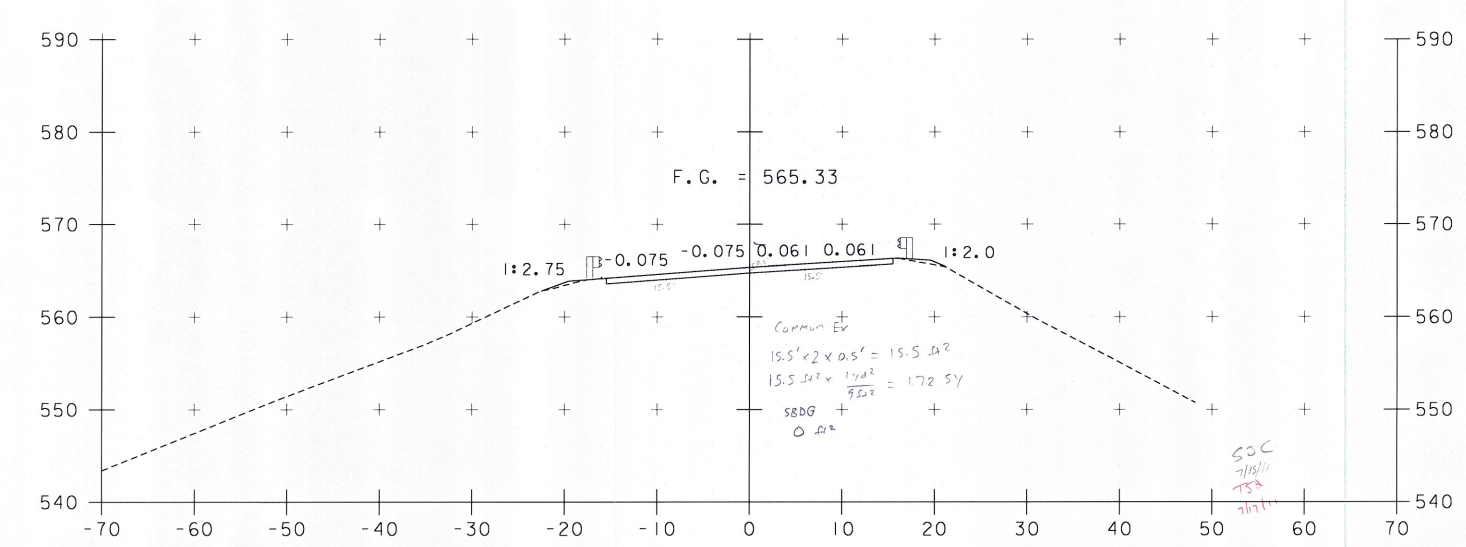


PROJECT NAME: PUTNEY
 PROJECT NUMBER: M 091-1(3)
 FILE NAME: \\S51\ST\29348\end\thexa.dwg PLOT DATE: 10/19/2009
 PROJECT LEADER: G. BOGUE DRAWN BY: E. ALLING
 DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
MAINLINE SECTIONS 2 SHEET 54 OF 15

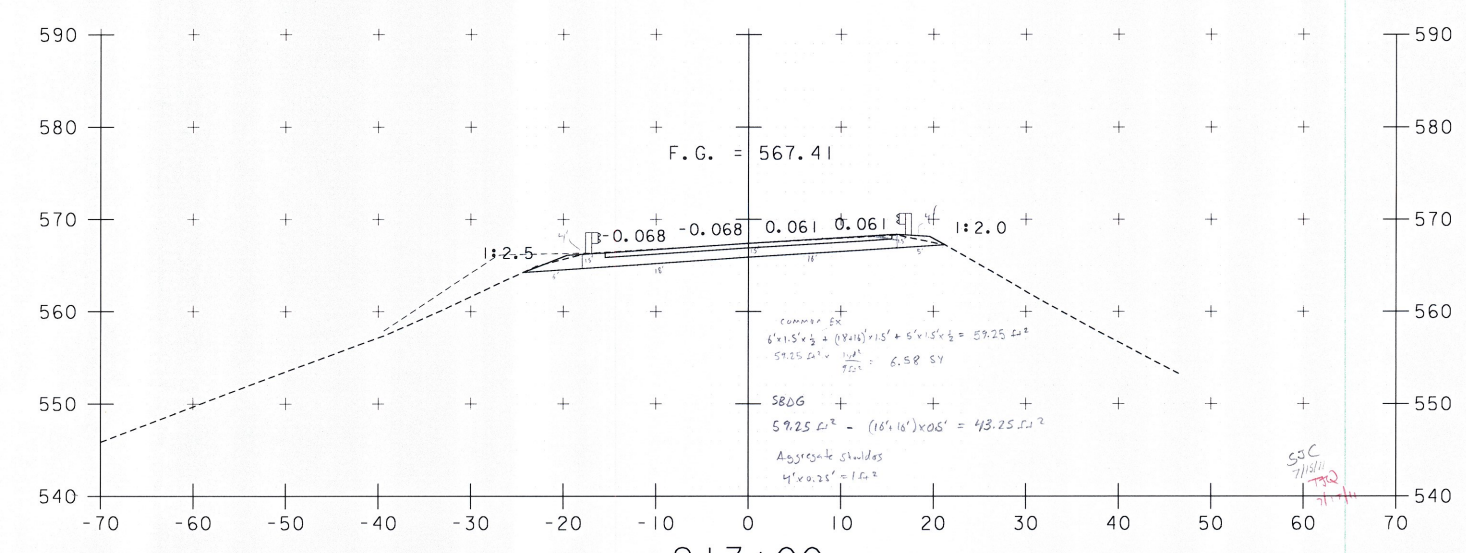




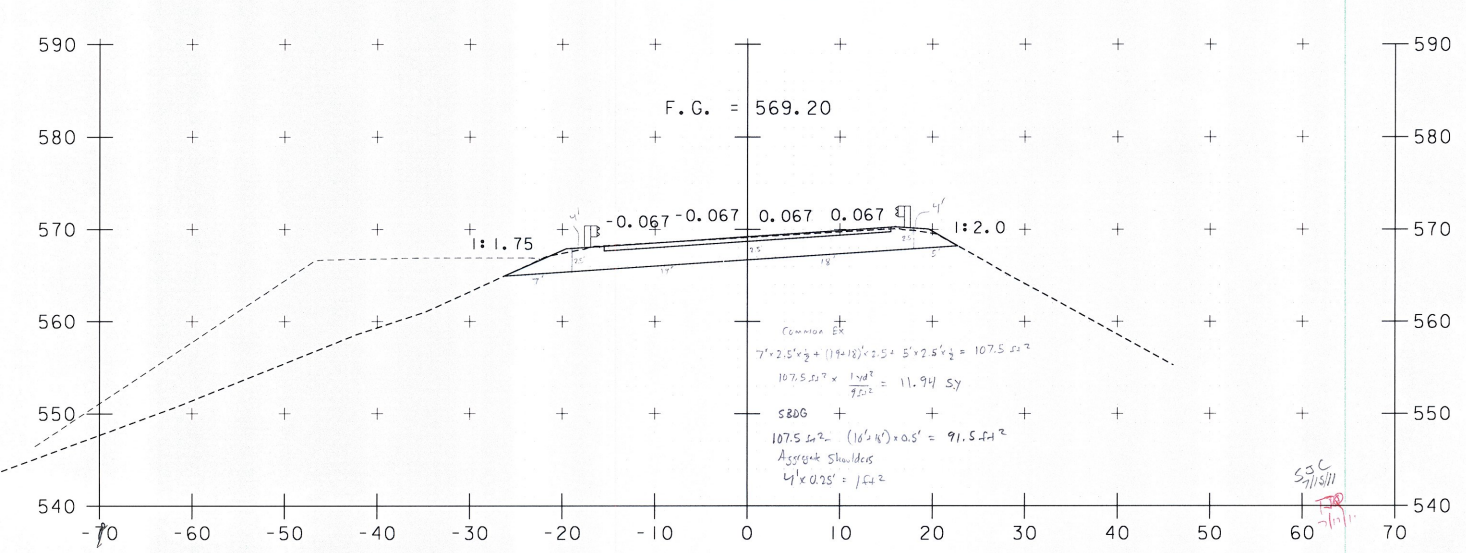
PROJECT NAME:	PUTNEY	FILE NAME: ...53-57 z93a148mainlinexs.pxf	PLOT DATE:	10/19/2009	
PROJECT NUMBER:	IM 091-1(31)	PROJECT LEADER:	G. BOGUE	DRAWN BY:	E. ALLING
		DESIGNED BY:	E. ALLING	CHECKED BY:	G. GOYETTE
		MAINLINE SECTIONS 3		SHEET 55	OF 75



213+50
BEGIN COLD PLANING / END APPROACH

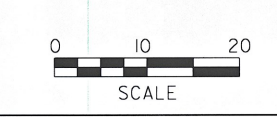


213+00

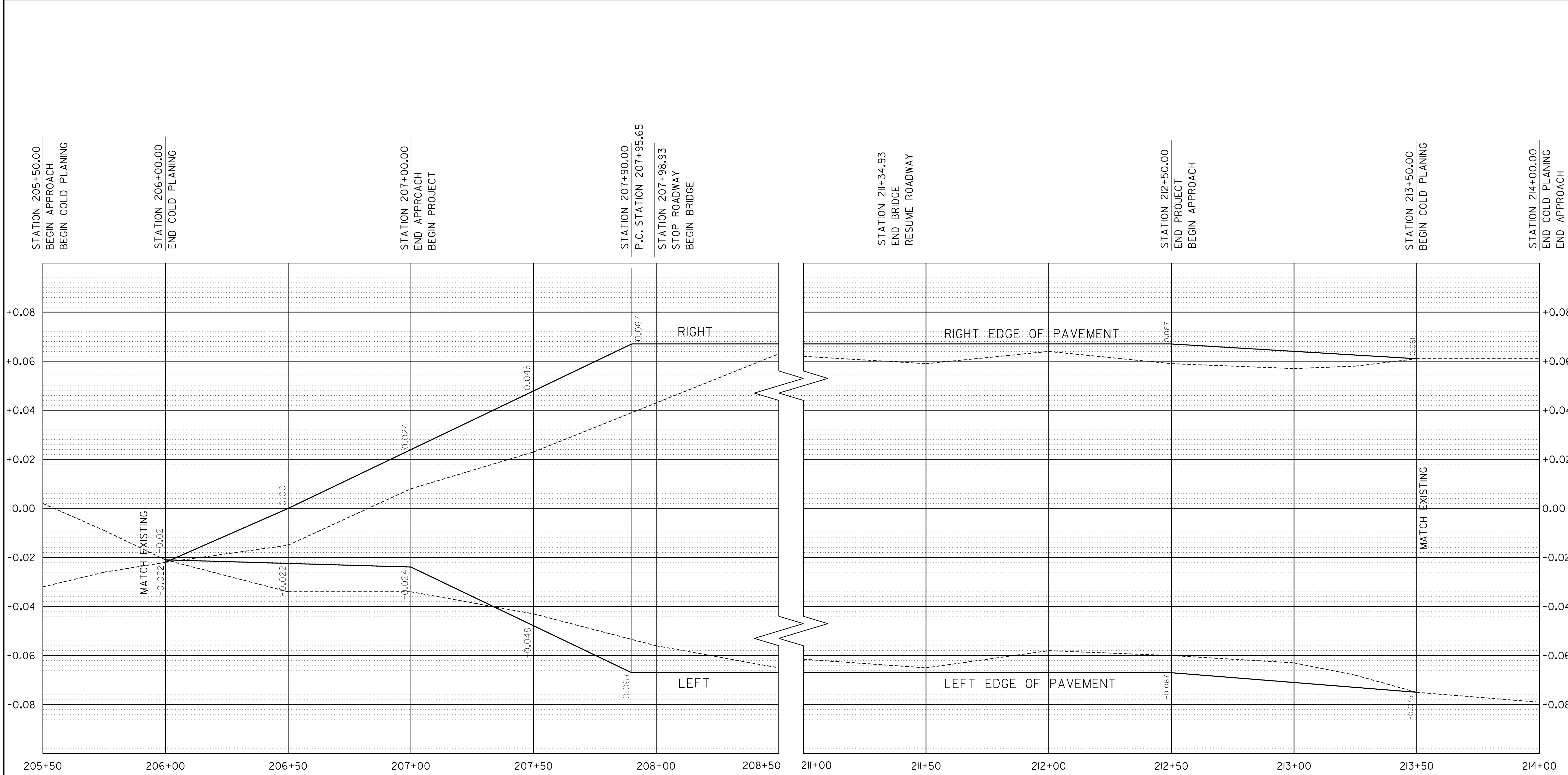


214+00
END PROJECT / BEGIN APPROACH

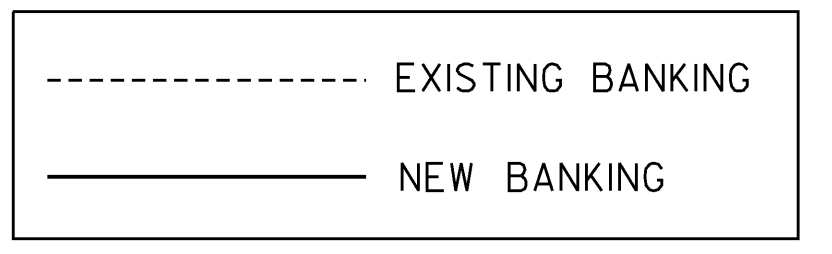
214+00
END COLD PLANING



PROJECT NAME: PUTNEY
 PROJECT NUMBER: M 091-(33)
 FILE NAME: \\S3-57-233448\mainline\p11 PLOT DATE: 10/9/2009
 PROJECT LEADER: G. BODLE DRAWN BY: E. ALLING
 DESIGNED BY: E. ALLING CHECKED BY: G. COFFEE
 MAINLINE SECTIONS 5 SHEET 57 OF 15



MAINLINE BANKING DIAGRAM



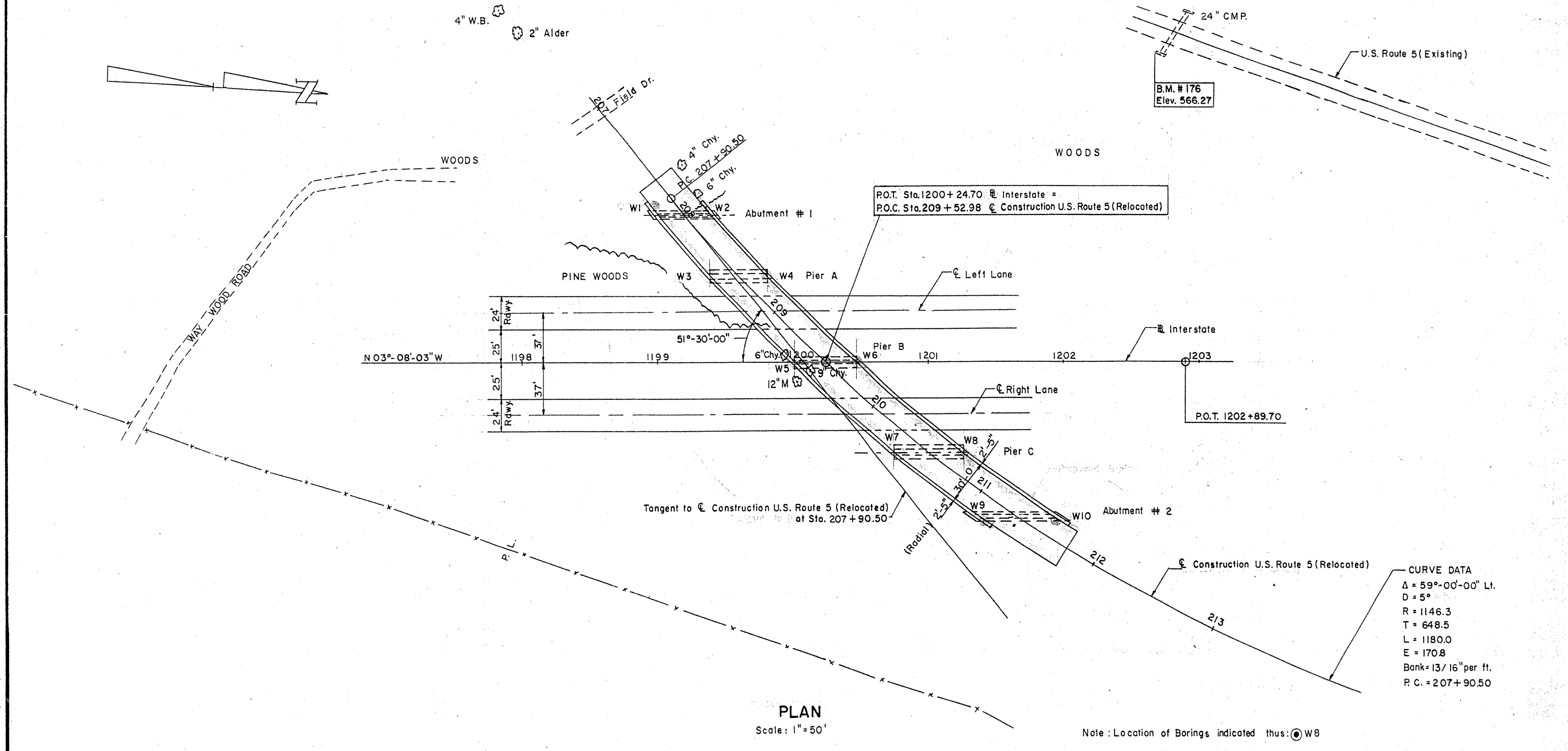
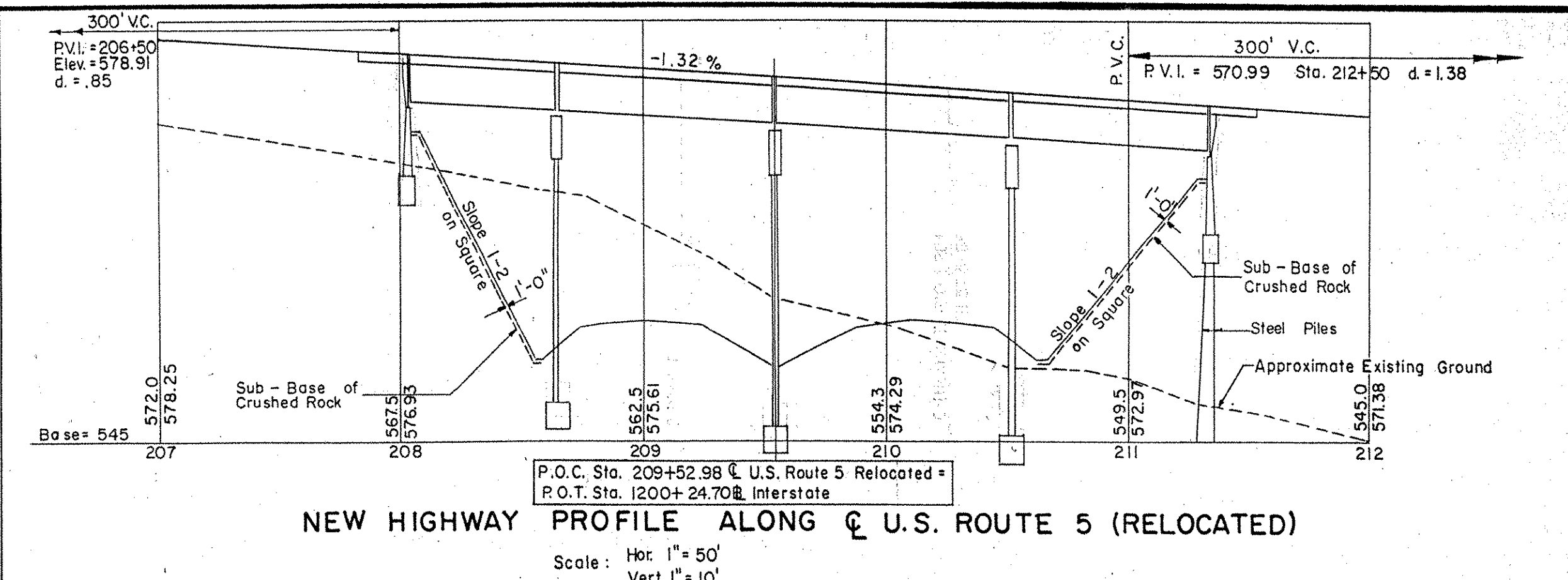
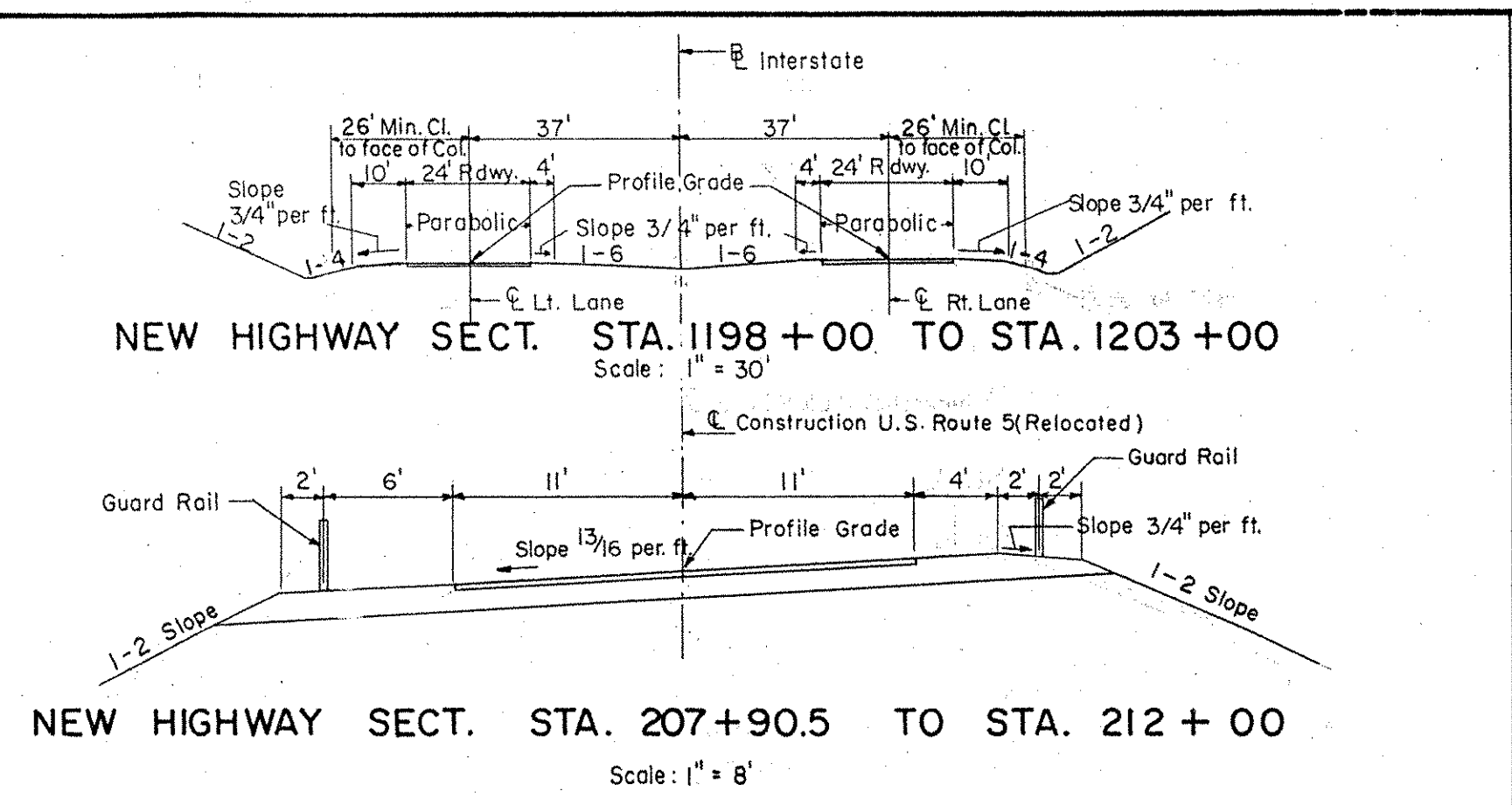
PROJECT NAME: PUTNEY
 PROJECT NUMBER: IM 091-1(31)

FILE NAME: ... \Plot Files\63 z93a148bd.pxf PLOT DATE: 10/19/2009
 PROJECT LEADER: G. BOGUE DRAWN BY: R. WALKER
 DESIGNED BY: E. ALLING CHECKED BY: G. GOYETTE
BANKING DIAGRAM SHEET 63 OF 75



HIGHWAY NO. Rt. 1 Sec. 1-100 NAME OF HIGHWAY Interstate
 STRUCTURE NO. 191-1(10) COUNTY Windham TOWN Putney
 PROJECT NO. 191-1(10) LOCATION Sta. 1200+24.70

B. P. R. DIV. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	Vt.	I 91-1(10)	121	328



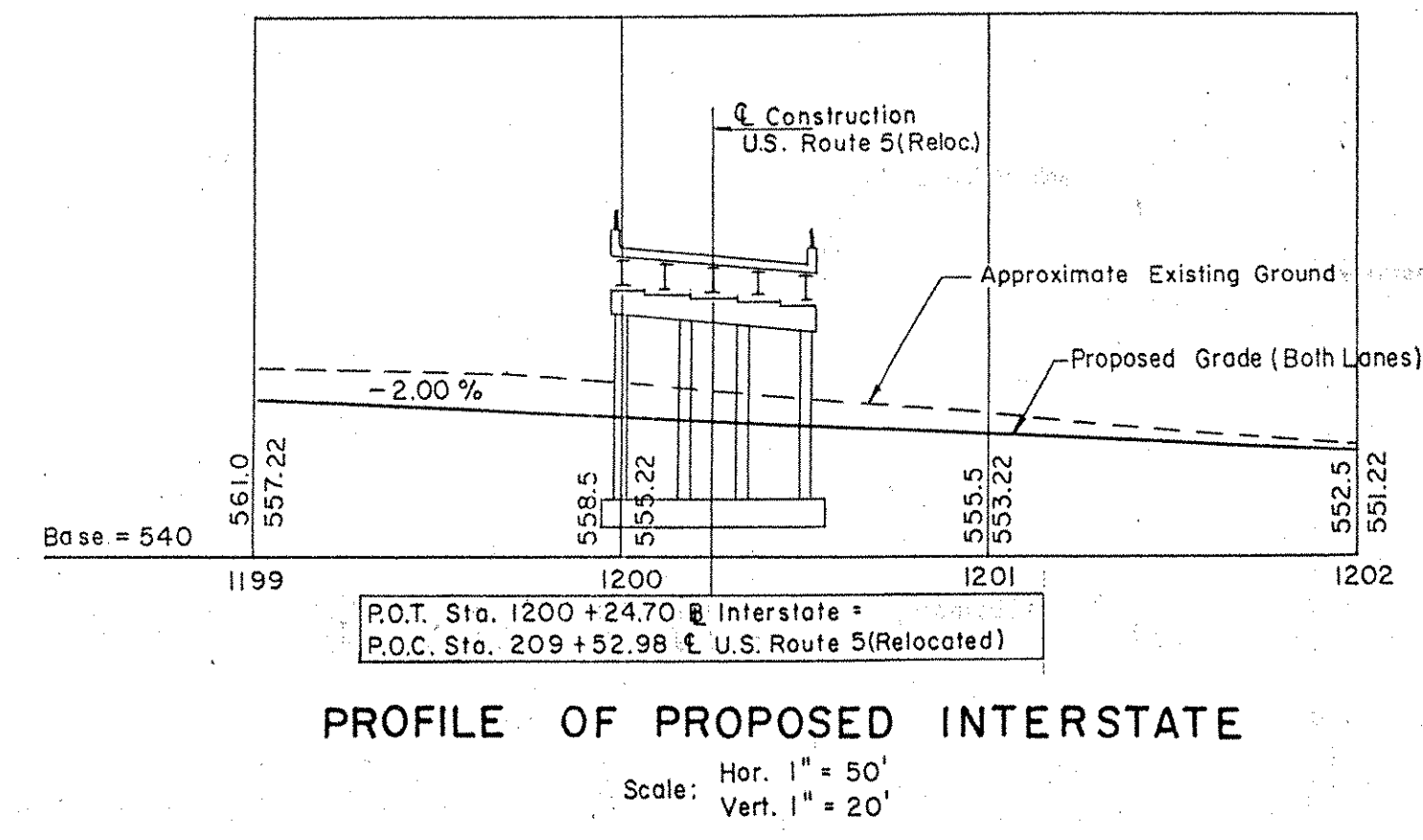
FOUNDATION INFORMATION
 OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION. FOR BORING LOGS, SEE SHEET NO. 121

GENERAL NOTES

DESIGN SPECIFICATIONS:
 AASHO 1957 Edition and as modified by Vermont Dept. of Highways.
 LIVE LOAD:
 H20-S16-44 and Military Loading.
 DESIGN STRESSES:
 Structural Steel $f_s = 18,000$ p.s.i.
 Reinforcing Steel $f_s = 20,000$ p.s.i.
 Concrete $f_c = 1,200$ p.s.i. for $f_c + 3,000$ p.s.i.
 CLEARANCE:
 Horizontal: as shown on drawings.
 Vertical: $15'-3"$ (L.I. Lane Interstate).

SUPERSTRUCTURE:
 30' Roadway, 1'-6" Safety Walks, as per SCB-30-56.
 4 simple spans, rolled beams, composite designs, similar to SCB-30-56, (64'-89'-99'-79' As Modified)
 Aluminum bridge railing, or galvanized bridge railing, and granite bridge curb as per SB-56-57 (1 & 2).
 Bearing and diaphragm connections as per SB-20-56.
 Approach Slabs as per SB-AS-45-Skew-57. As Modified.

SUBSTRUCTURE:
 Open piers, round columns continuous footings.
 Stub abutments.
 FOUNDATIONS:
 Piers: Spread Footings.
 North Abutment: Steel Piles, 35 Ton Design Load.
 South Abutment: Spread Footing.



SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	NET	OVERRUN	TOTAL	FINAL
107	Structure Excavation	C.Y.	484	49	533	437
204	Sub-base of Crushed Rock (Mod.)	C.Y.	475	20	495	213
222	Gravel Backfill	C.Y.	70	20	90	159
361-B	Bit. Conc. Pavement (S.A. 5-22-61)	Tons	155	8	163	155
401-B	Concrete Class B (Mod.)	C.Y.	835	4	839	913
402	Reinforcing Steel	Lbs.	44,656	-	44,656	131,350
403	Spiral Reinforcement (S.A. 6-8-61)	L.S.	1	1	2	1
404-A	Structural Steel	Lbs.	498,890	9,900	508,790	492,245
407	Asphaltic-Asbestos Coating	S.Y.	88	-	88	88
504	Steel Piling	L.F.	440	-	440	535
556-C	Granite Bridge Curb (Type I)	L.F.	70	-	70	712
572	Bridge Rolling (Mod.) (S.A. 9-14-60)	L.F.	648	-	648	648
501	Furnishing Equip. for Driving Piles	Required	-	-	-	1
503	Splices for Steel Piling	Lbs.	-	-	-	0
310	Tar Emulsion for Bridge Floors (Sup. App. 5-25-61)	Gal.	-	-	-	385
372	Joint Sealer, Hot Poured Elastic Type (Sup. App. 4-14-61)	Gal.	-	-	-	273

LIST OF SHEETS

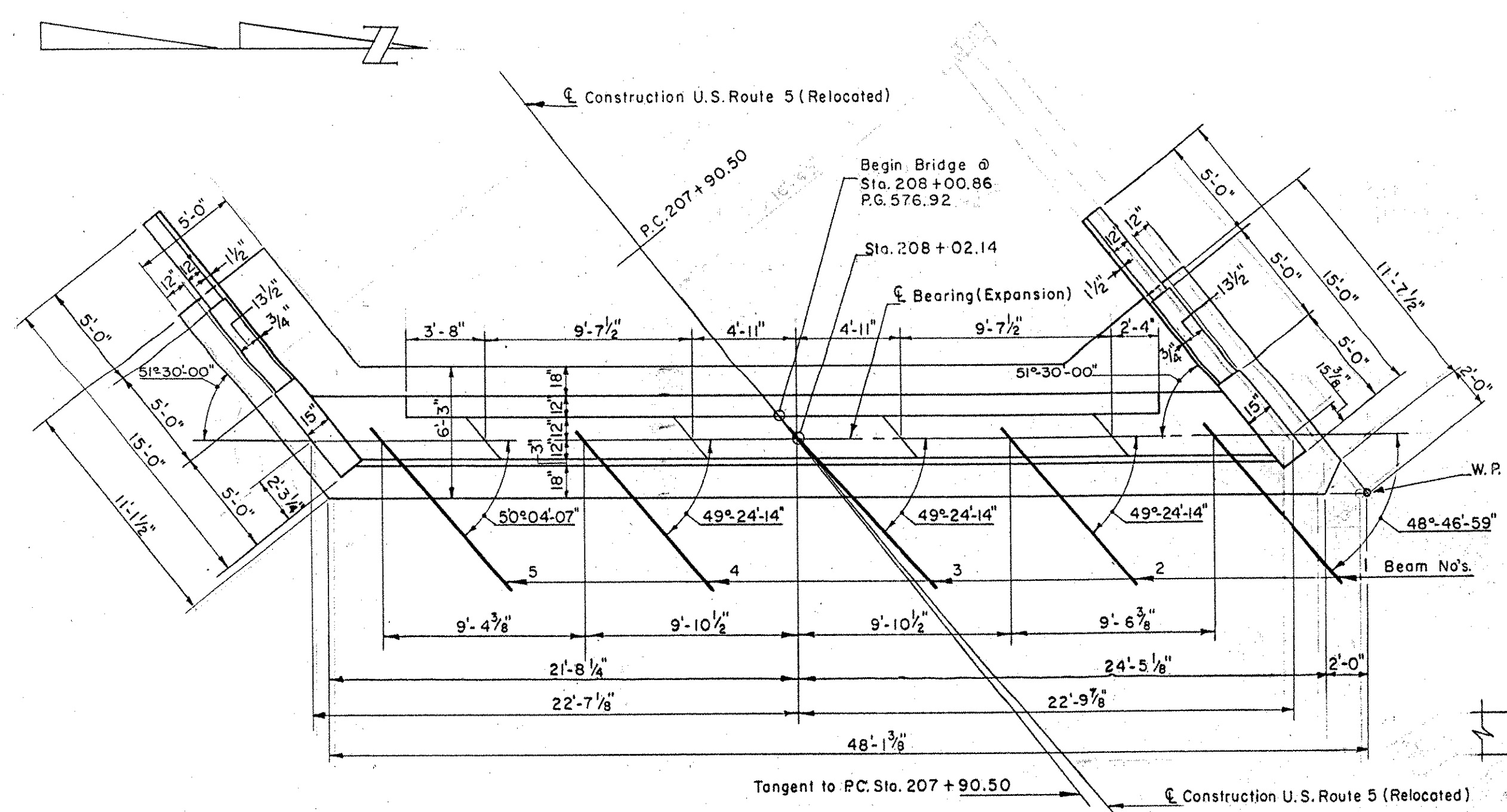
SHEET NO.	DESCRIPTION
121	GENERAL PLAN
122	BORINGS
123	PLAN & ELEVATION
124	ABUTMENTS NO. 1 & 2
125	PIERS A, B & C
126	APPROACH SLABS
127	STRUCTURAL STEEL PLAN
128	STRUCTURAL DETAILS
129	REINFORCING SCHEDULE
130	
478	
52A	
52	
53	
548	
57	

PUTNEY - BRIDGE 19A
 NH F019-1(15)
 SHEET NO. 70 OF 75
 FOR REFERENCE ONLY

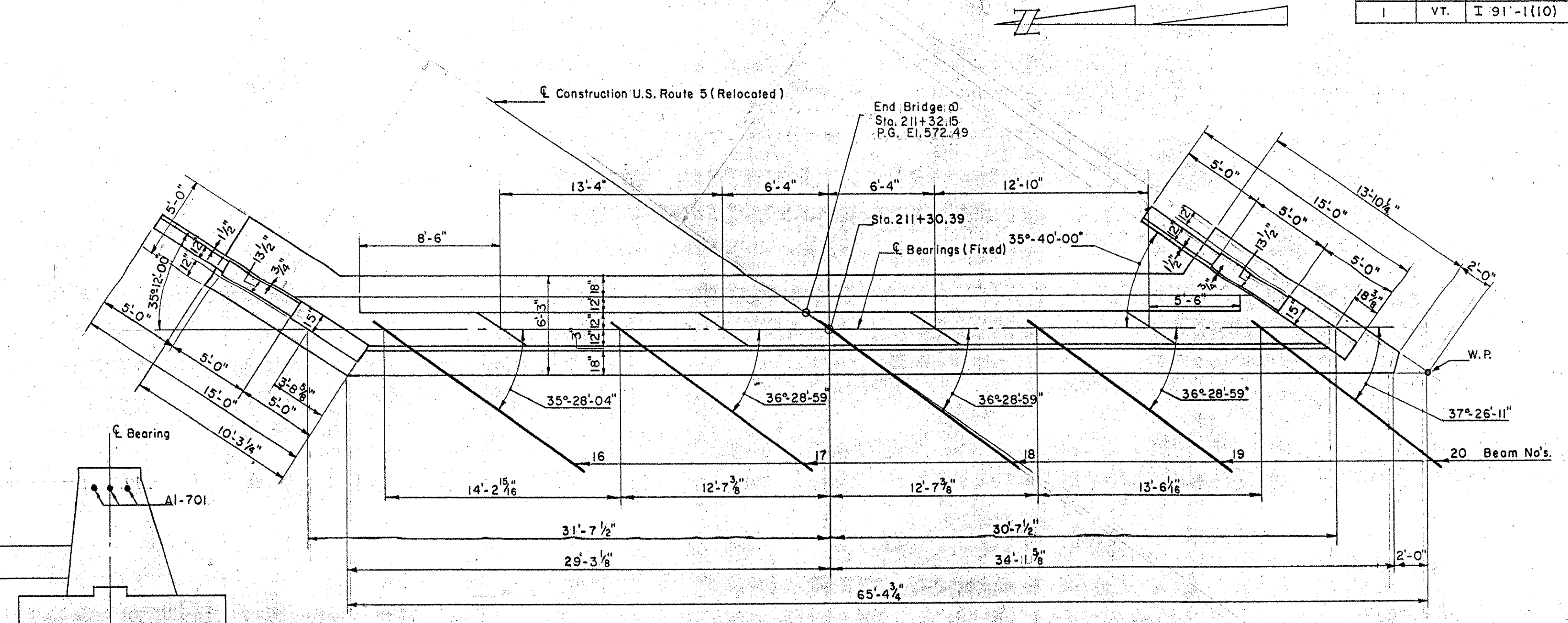
IM 091-1(31)
 This sheet for information only
BR 17 BRIDGE 17
GENERAL PLAN
 STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS
 INTERSTATE PROJECT in the town of
PUTNEY
 INTERSTATE UNDER Sta. 1200+24.70
 U.S. ROUTE 5 (REL.) Sta. 209+52.98

APPROVED BY *John Carson* DATE 7/24/58
 THE CLARKESON ENGINEERING CO. INC.
 CONSULTING ENGINEERS
 BOSTON MASSACHUSETTS

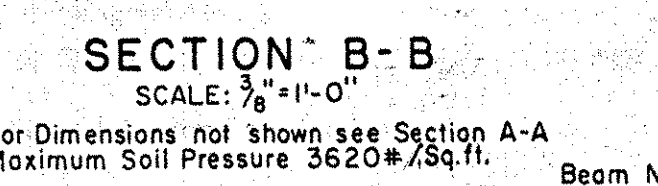
SURVEYED BY H.B.C. CHECKED BY D.S. SCALE AS NOTED
 DRAWN BY J.W.B. IN CHARGE J.V.B. DATE 10-25-57
 PROJECT NO. I 91-1(10) SHEET 121 OF 328



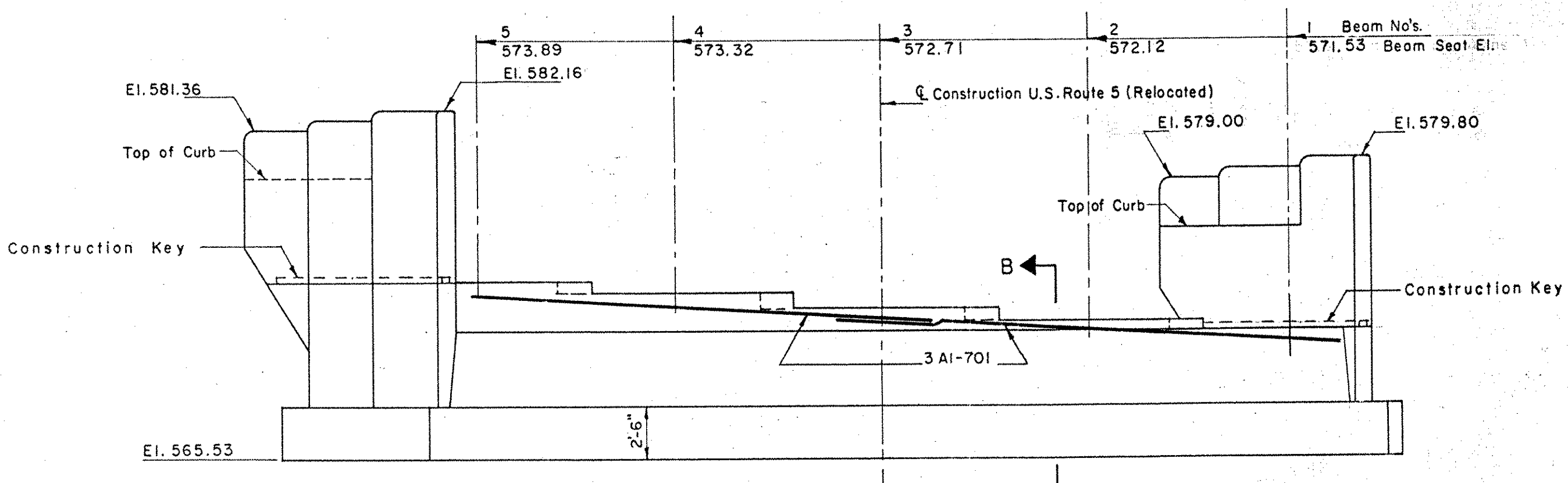
PLAN ABUTMENT NO. 1
SCALE: 3/16" = 1'-0"



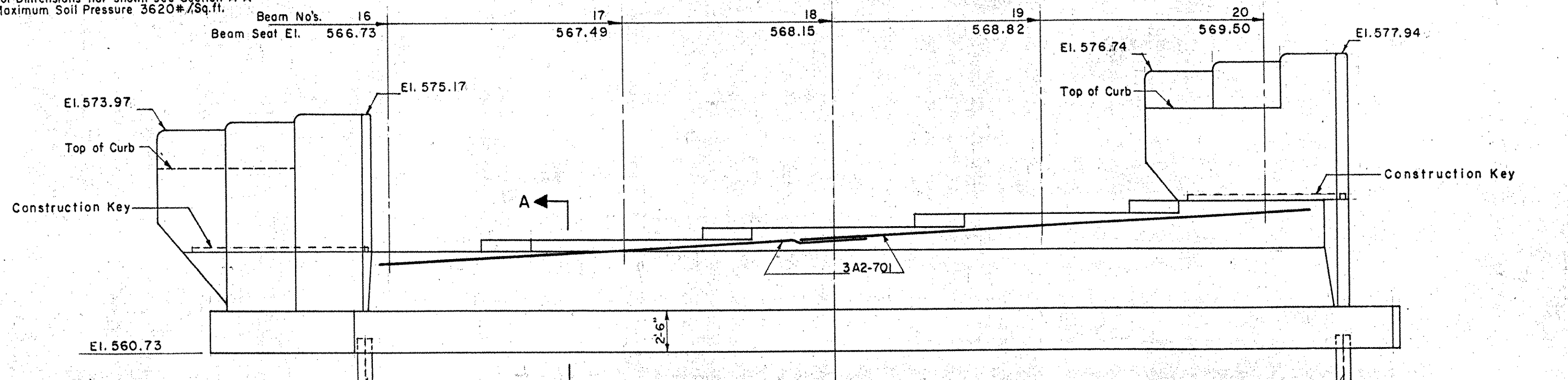
PLAN ABUTMENT NO. 2
SCALE: 3/16" = 1'-0"



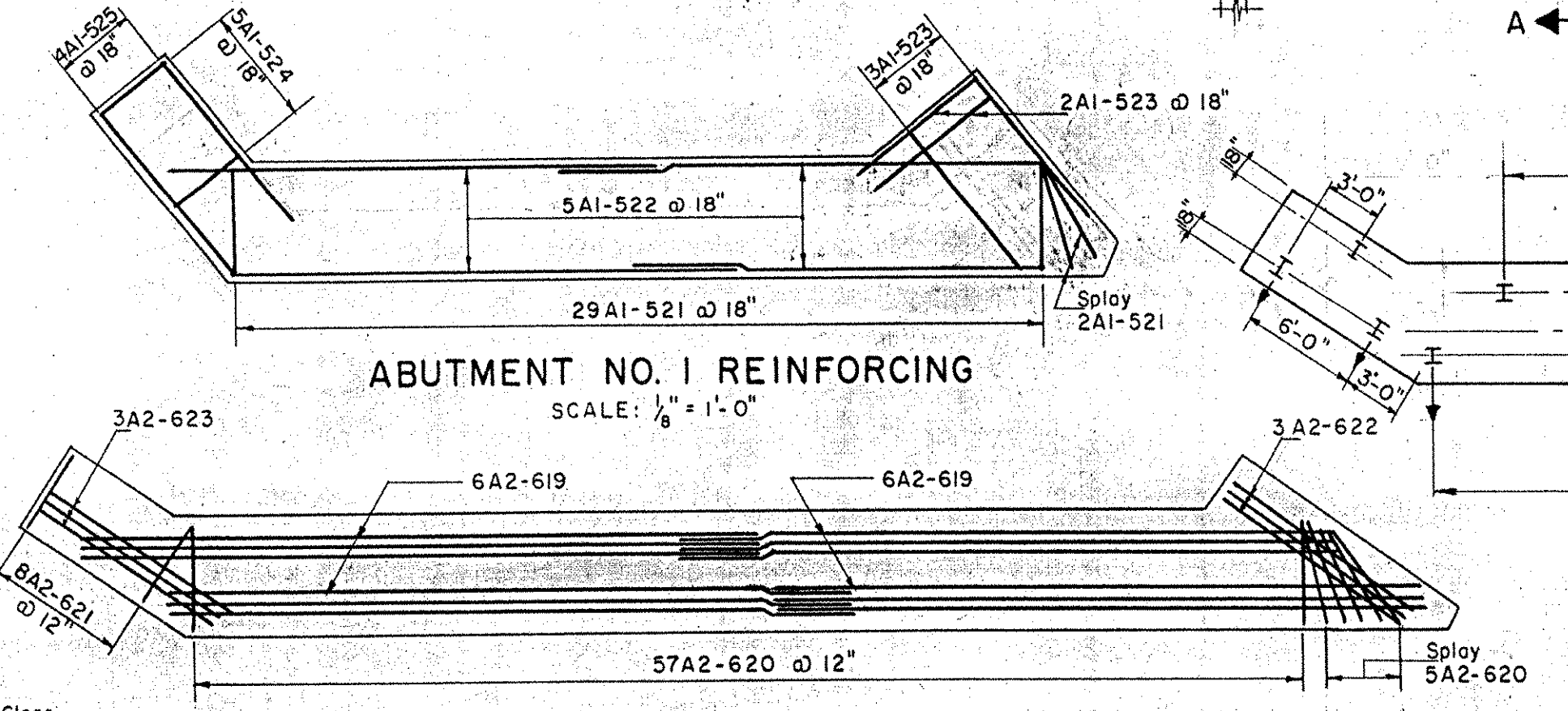
SECTION B-B
SCALE: 3/8" = 1'-0"



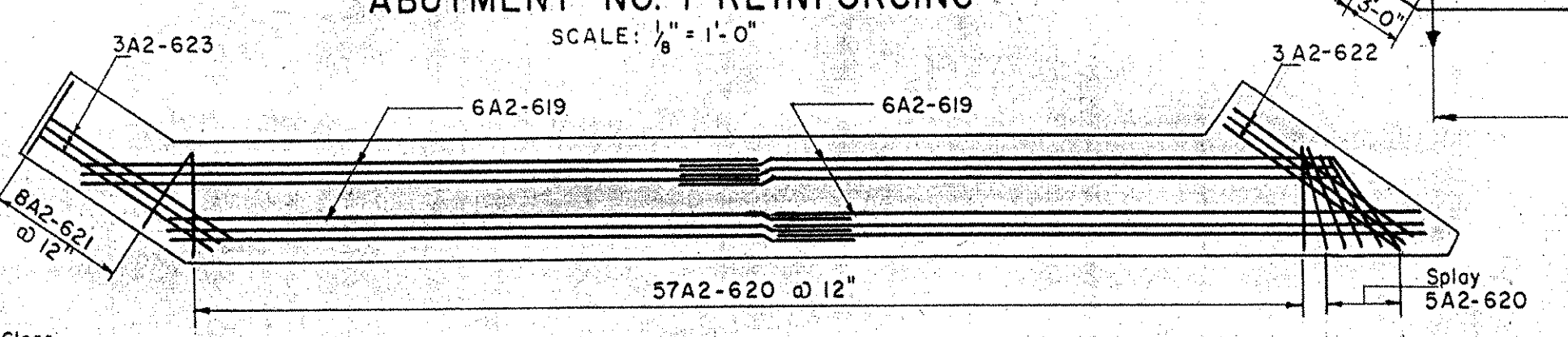
ELEVATION ABUTMENT NO. 1
SCALE: 3/16" = 1'-0"



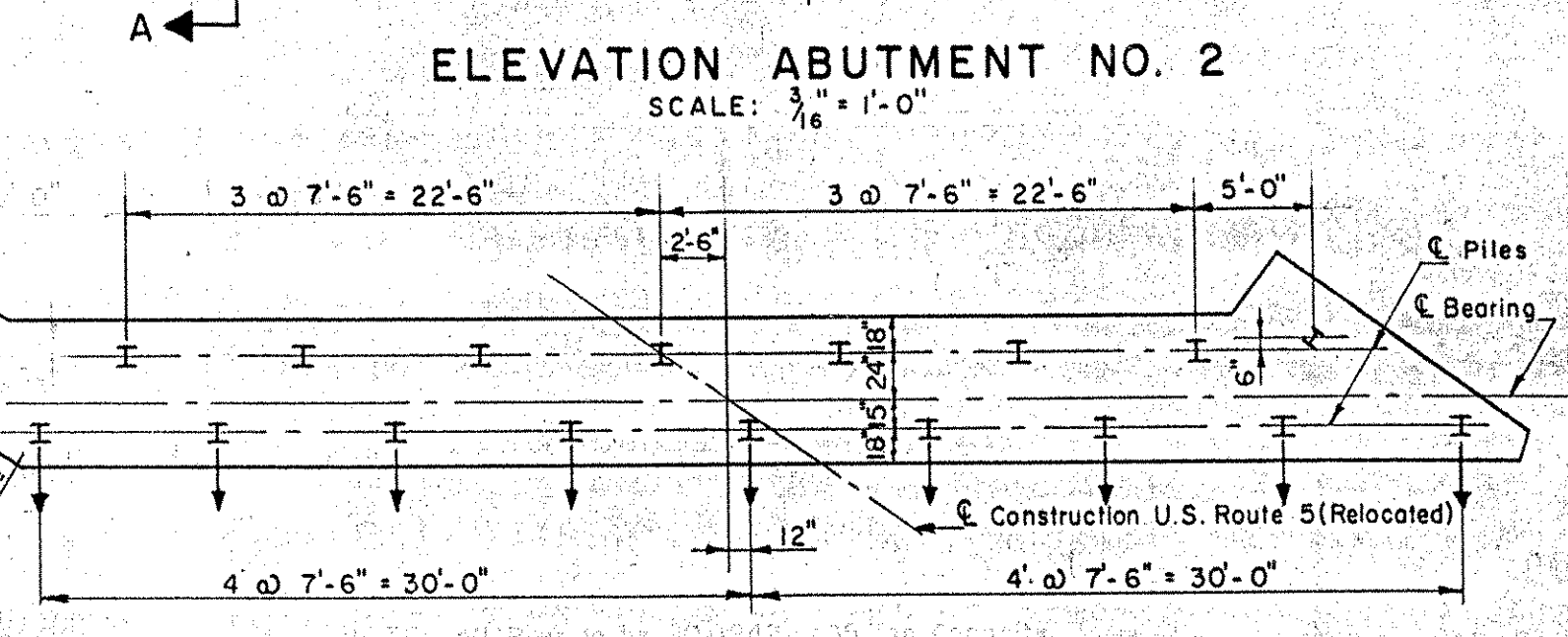
ELEVATION ABUTMENT NO. 2
SCALE: 3/16" = 1'-0"



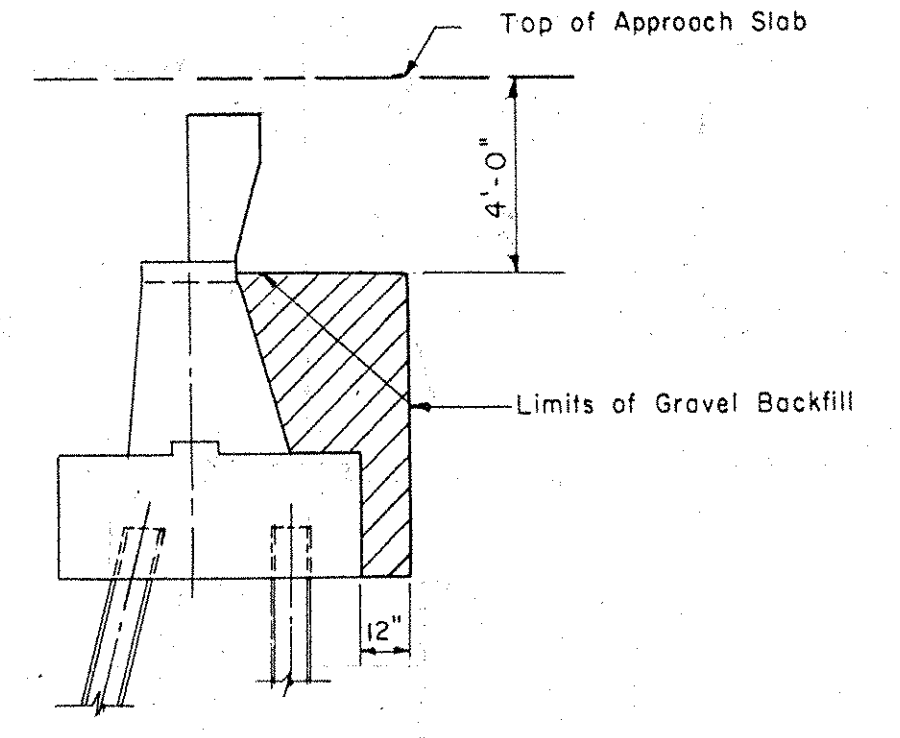
ABUTMENT NO. 1 REINFORCING
SCALE: 1/8" = 1'-0"



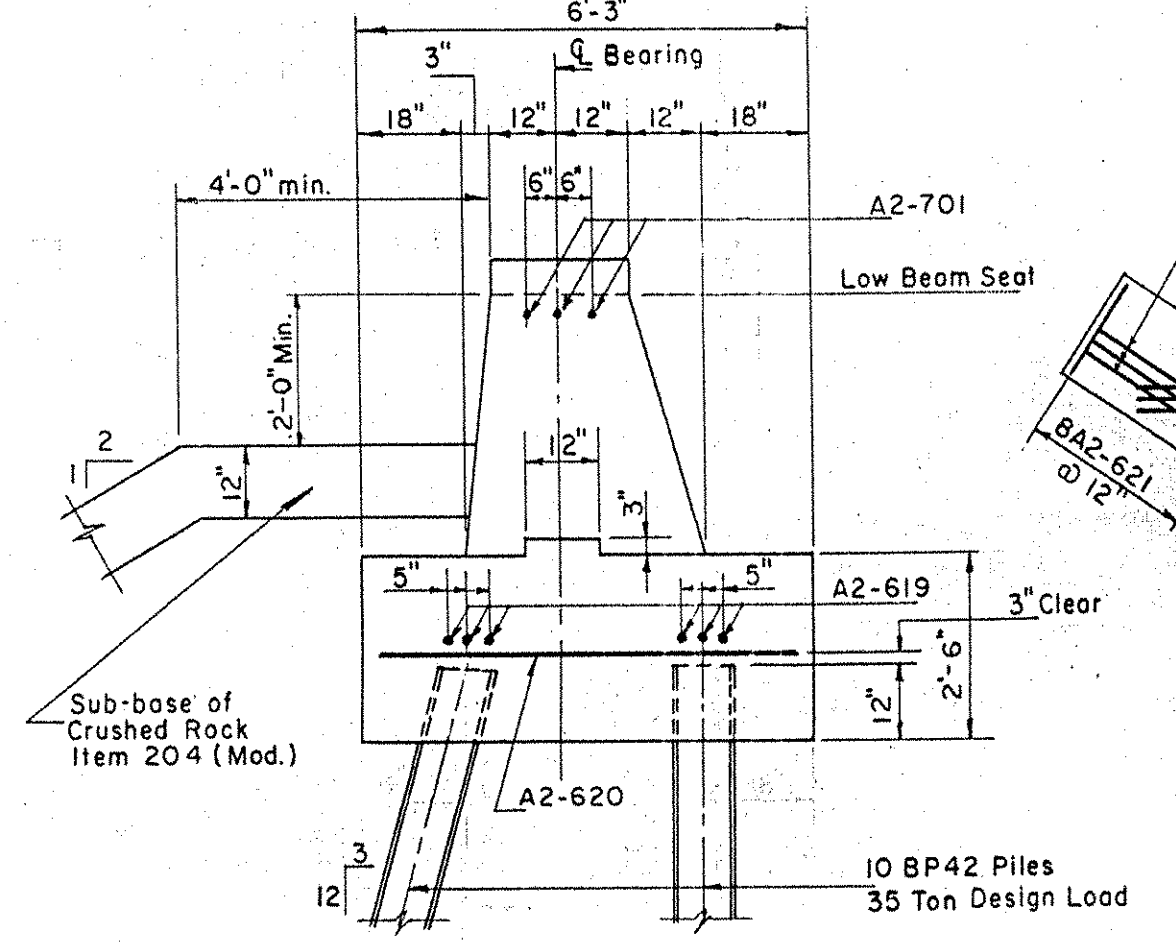
ABUTMENT NO. 2 REINFORCING
SCALE: 1/8" = 1'-0"



PILE PLAN ABUTMENT NO. 2
SCALE: 1/8" = 1'-0"



LIMITS OF GRAVEL BACKFILL
SCALE: 1/4" = 1'-0"



SECTION A-A
SCALE: 3/8" = 1'-0"

- NOTES:**
- Steel piles to be IOBP42 35 Ton design load. Vertical piles indicated thus \perp . Batter piles indicated thus \perp .
 - For estimating purposes piles are assumed to be 22' long. Slope area between bridge seats 1/4' F.I. Entire exposed top of bridge seats to be covered with 1/2" of Asphaltic Asbestos coating after superstructure is in place.
 - Prior to driving piles, rock free fill shall be placed under the abutment area to approximately the pile cutoff elevation and with a surface area of at least (2) two feet outside the abutment area. After piles are driven, the fill shall be excavated to the elevation of the bottom of footing.
 - A layer of Sub Base of Crushed Rock Item 204 (Mod.) one (1) foot thick shall be placed on the embankments in front of the abutment. The edges of the area to be in line with the end posts and parallel to the \perp of the Roadway.
 - Beam Seat Elevations are at top of concrete.

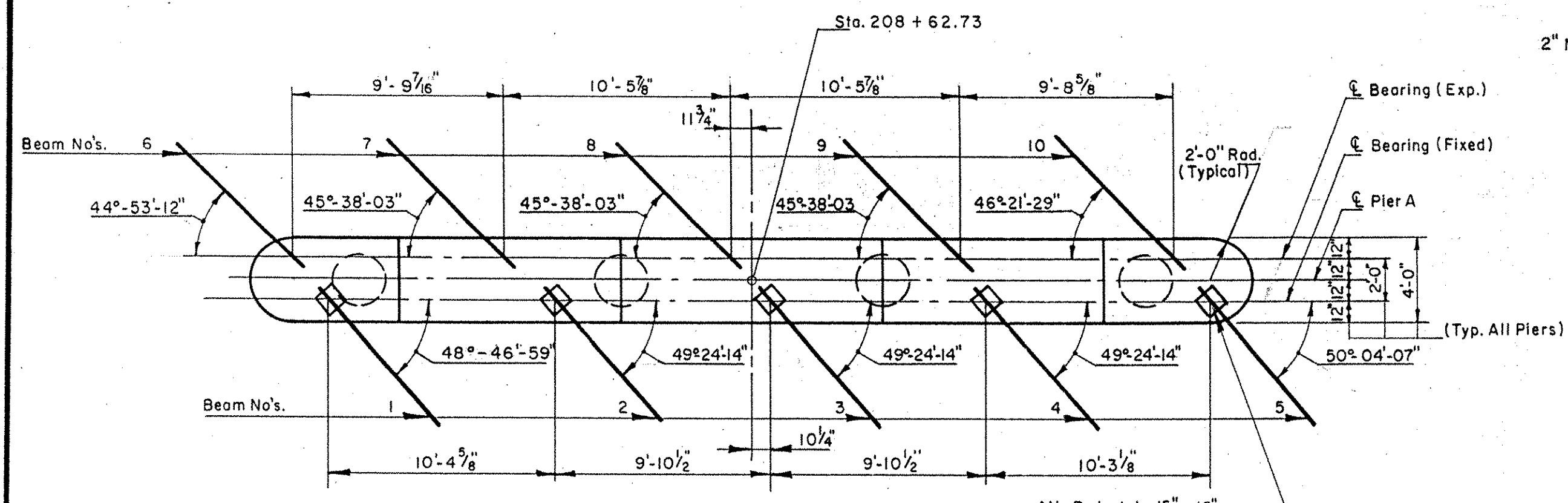
IM 091-1(31)
This sheet for information only
BR 17
ABUTMENTS NO. 1 AND 2

ITEM NO.	DESCRIPTION	UNIT	ABUTMENT NO. 1				ABUTMENT NO. 2			
			NET	OVER-RUN	TOTAL	FINAL	NET	OVER-RUN	TOTAL	FINAL
107	Structure Excavation	C.Y.	48	4	52	27	2	29	27	
204	Sub-base of Crushed Rock	C.Y.	48	4	52	27	2	29	27	
222	Gravel Backfill	C.Y.	48	4	52	27	2	29	27	
40-B	Concrete Class B (Mod.)	C.Y.	64	3	67	67	0	67	67	
402	Reinforcing Steel	LBS.	See Reinfo							
407	Asphaltic-Asbestos Coating	S.Y.	10	0	10	10	0	10	10	
504	Steel Piling	L.F.	NONE							
503	Splices for Steel Piling	EA.	None							

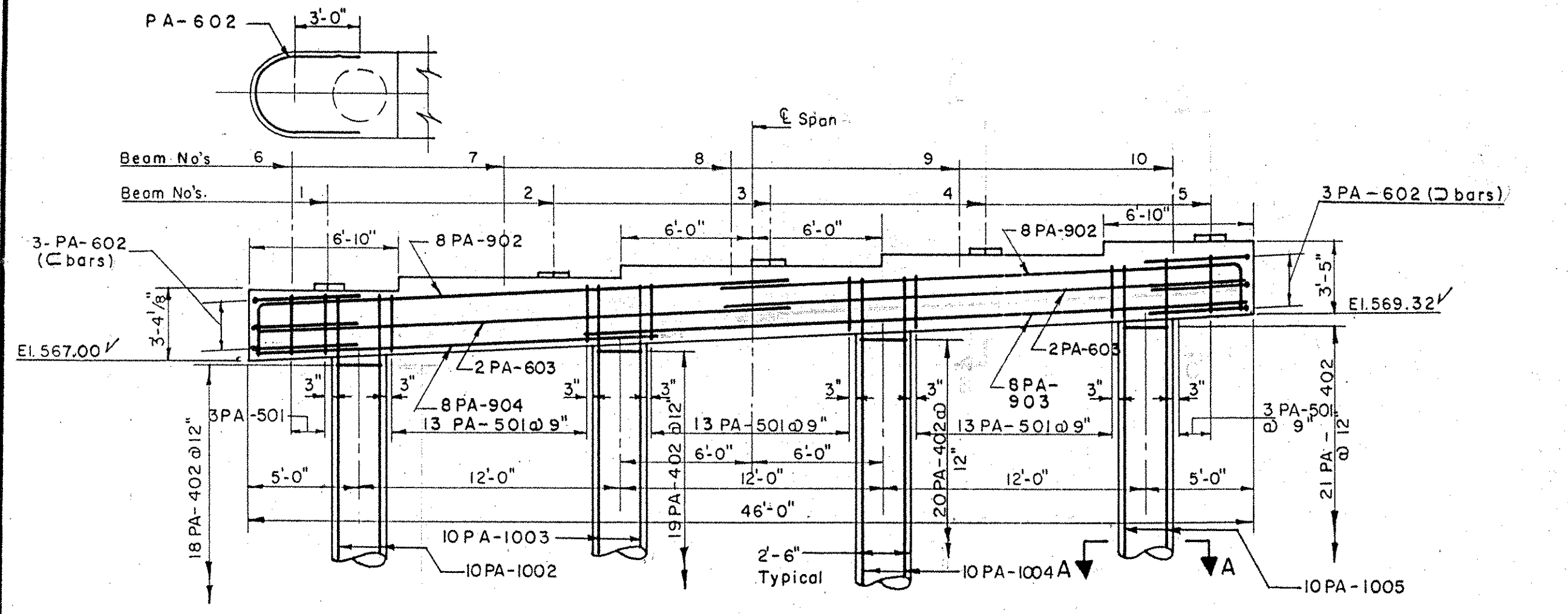
PUTNEY - BRIDGE 19A
NH F019-1(15)
SHEET NO. 71 OF 75
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE PROJECT in the town of
PUTNEY
INTERSTATE UNDER STA. 1200+24.70
U.S. ROUTE 5 (REL.) STA. 209+52.98
THE CLARKSON ENGINEERING CO., INC.
CONSULTING ENGINEERS
BOSTON MASSACHUSETTS
SURVEYED BY: J.V.B. CHECKED BY: D.S. SCALE AS NOTED
DRAWN BY: D.E.S. IN CHARGE J.V.B. DATE 10-25-57
PROJECT NO. I 91-1(10) SHEET 124 OF 328

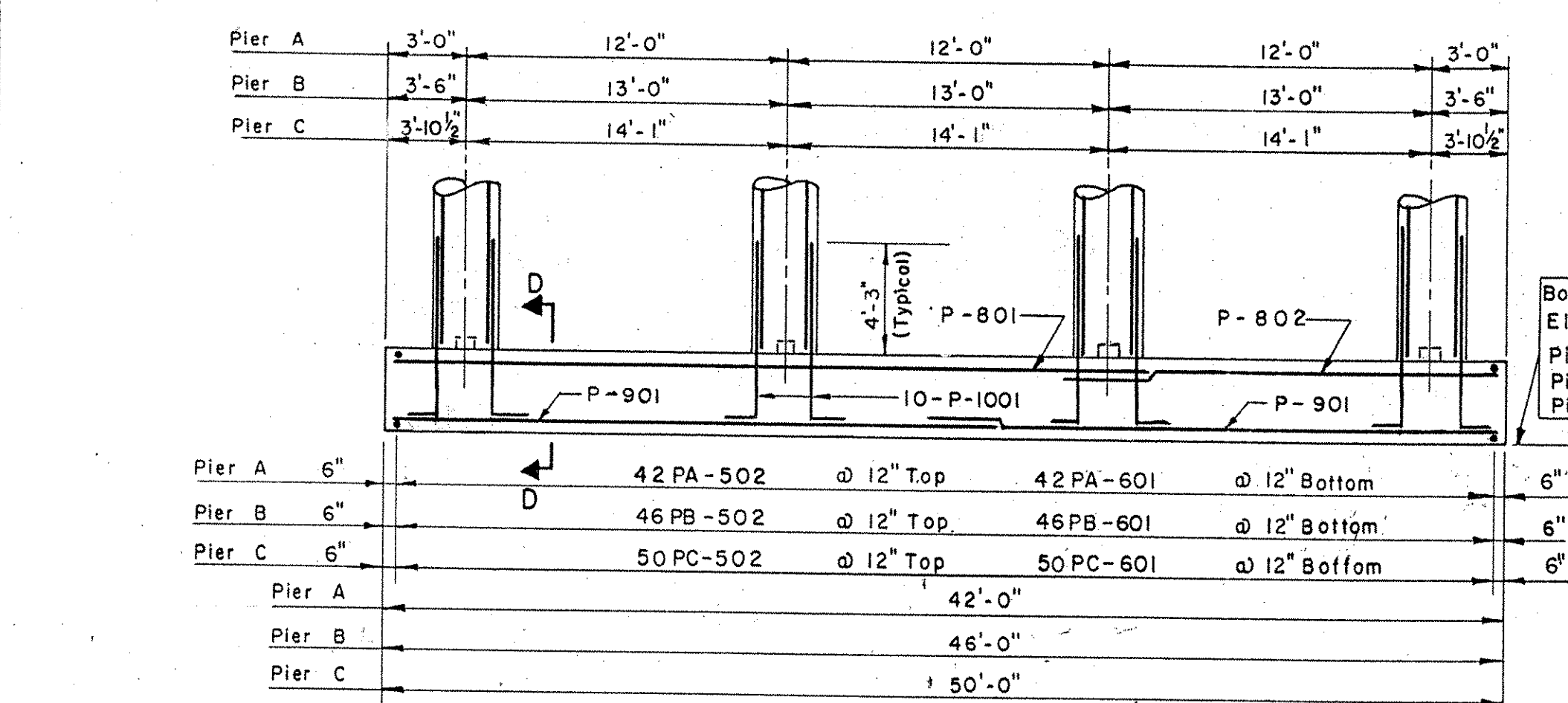
B.P.R. DIV. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	VT.	I 91-1(10)	125	328



PLAN PIER A
SCALE: 3/16" = 1'-0"

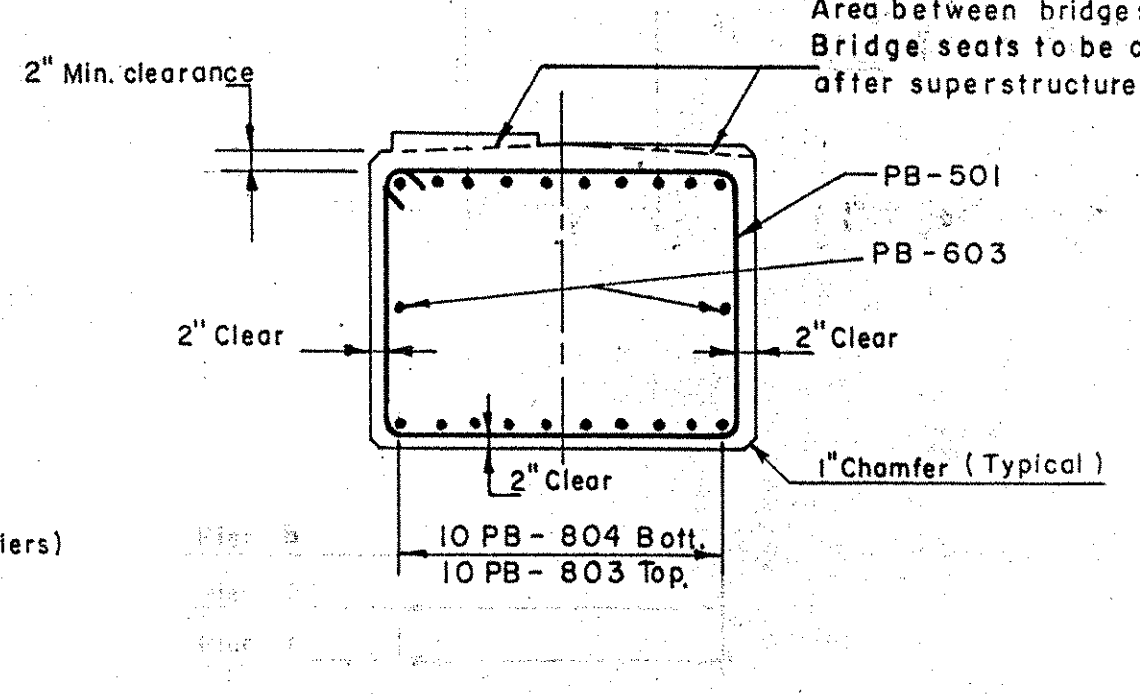


ELEVATION PIER A
SCALE: 3/16" = 1'-0"

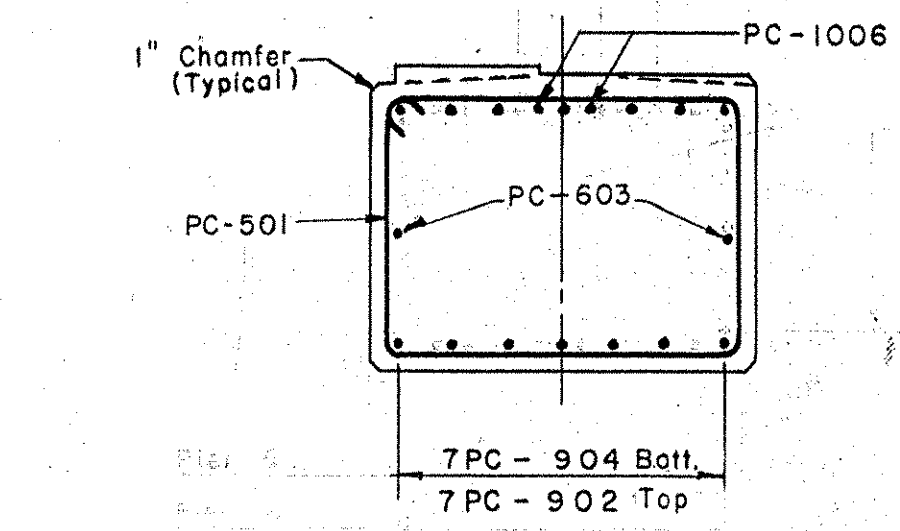


FOOTINGS
SCALE: 3/16" = 1'-0"

ITEM NO.	DESCRIPTION	UNIT	PIER A				PIER B				PIER C			
			NET	OVER-RUN	TOTAL	FINAL	NET	OVER-RUN	TOTAL	FINAL	NET	OVER-RUN	TOTAL	FINAL
107	Structure Excavation	C.Y.	+45	=15	=60	137	+27	=13	=40	131	+89	=16	=105	110
401-B	Concrete Class B (Mod.)	C.Y.	+79	=4	=83	97	+85	=4	=89	102	+90	=4	=94	92
402	Reinforcing Steel	LBS												
407	Asphaltic Asbestos Coating	S.Y.	20	=0	20	20	22	=0	22	22	23	=0	23	23

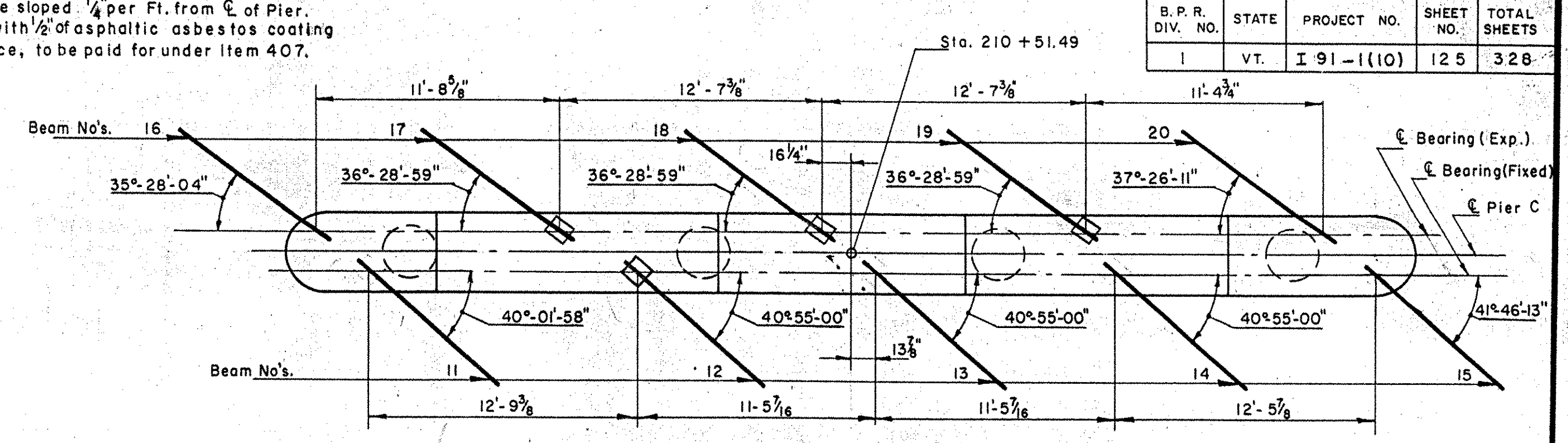


SECTION B-B
SCALE: 1/2" = 1'-0"

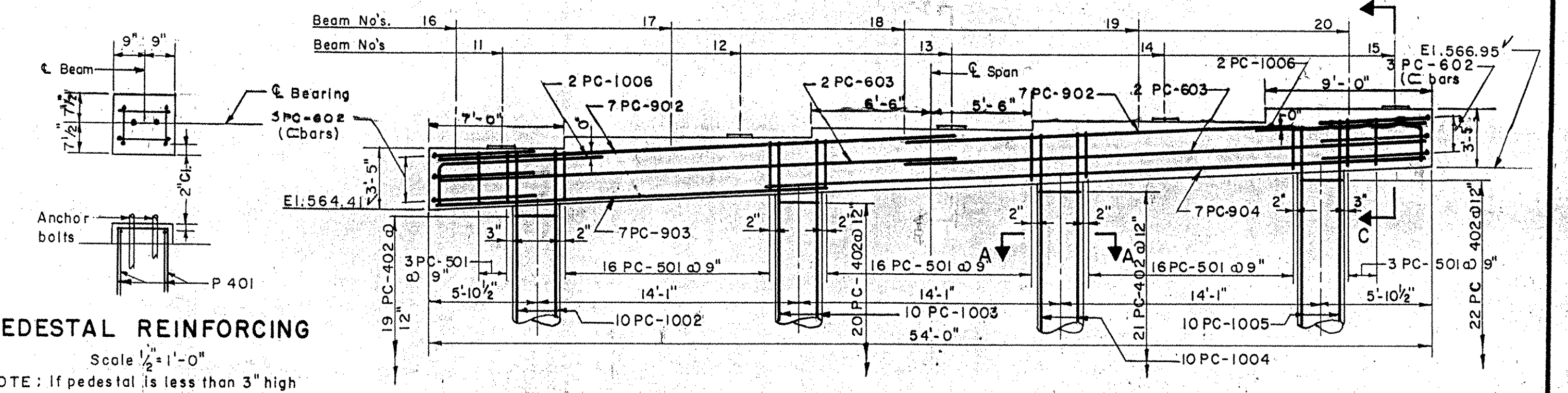


SECTION C-C
SCALE: 1/2" = 1'-0"

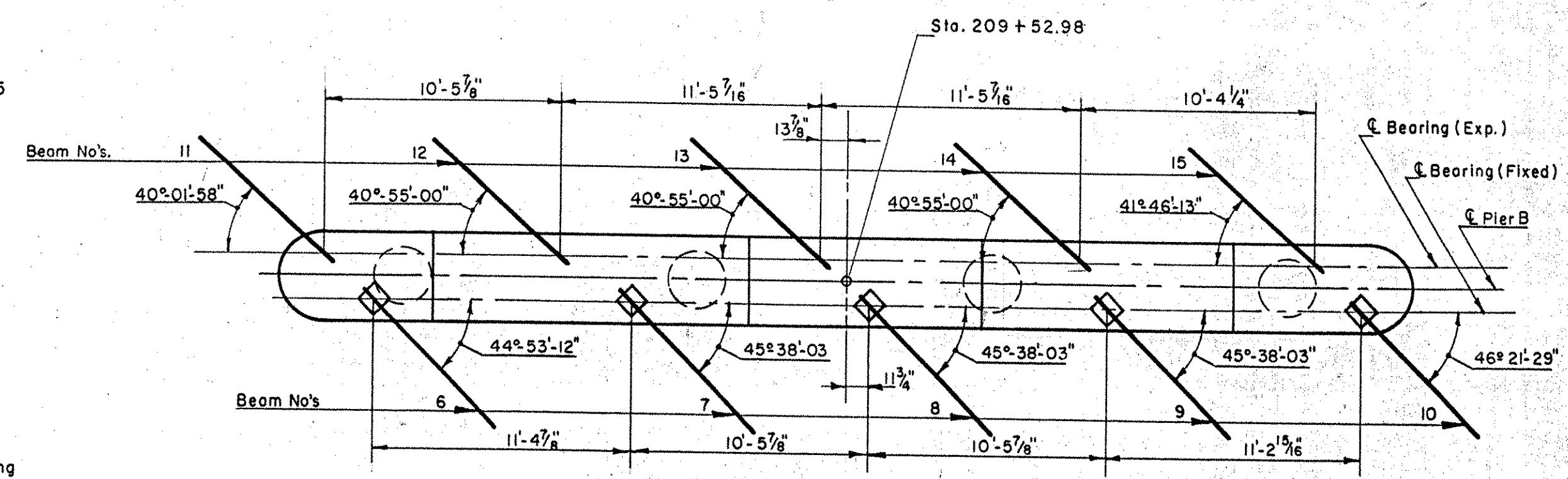
PEDESTAL REINFORCING
Scale 1/2" = 1'-0"
NOTE: If pedestal is less than 3" high omit reinforcing.



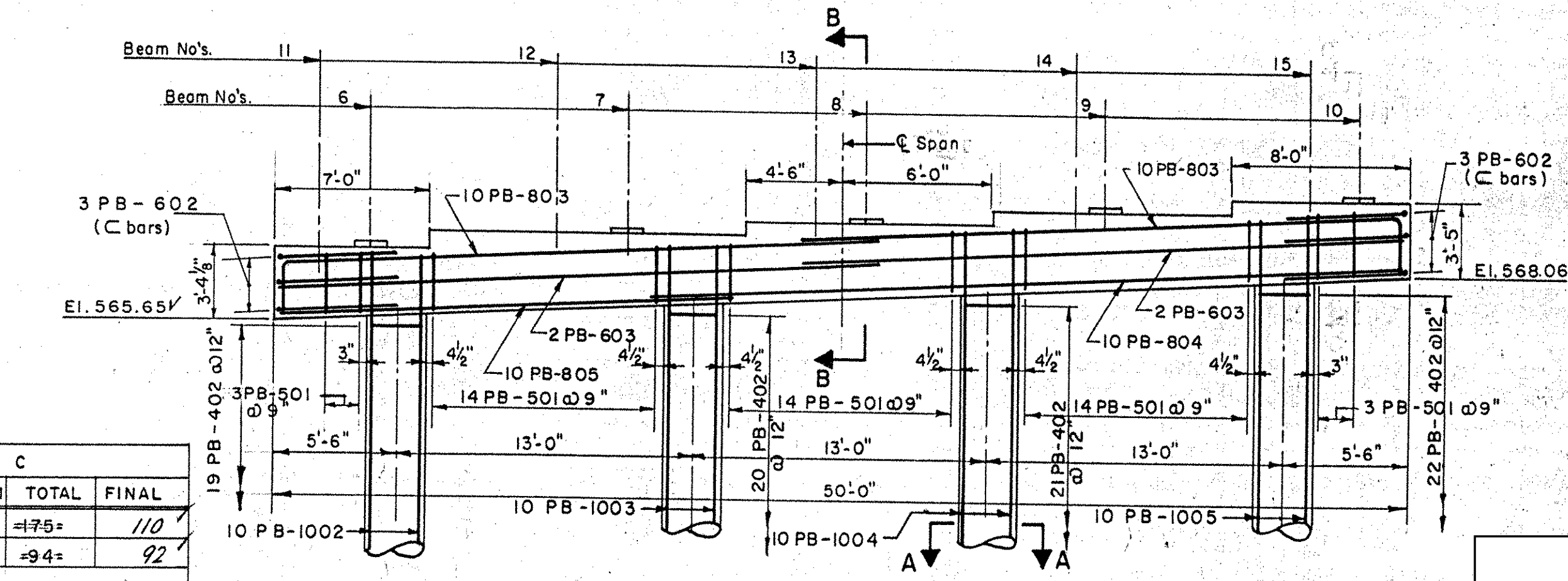
PLAN PIER C
SCALE: 3/16" = 1'-0"



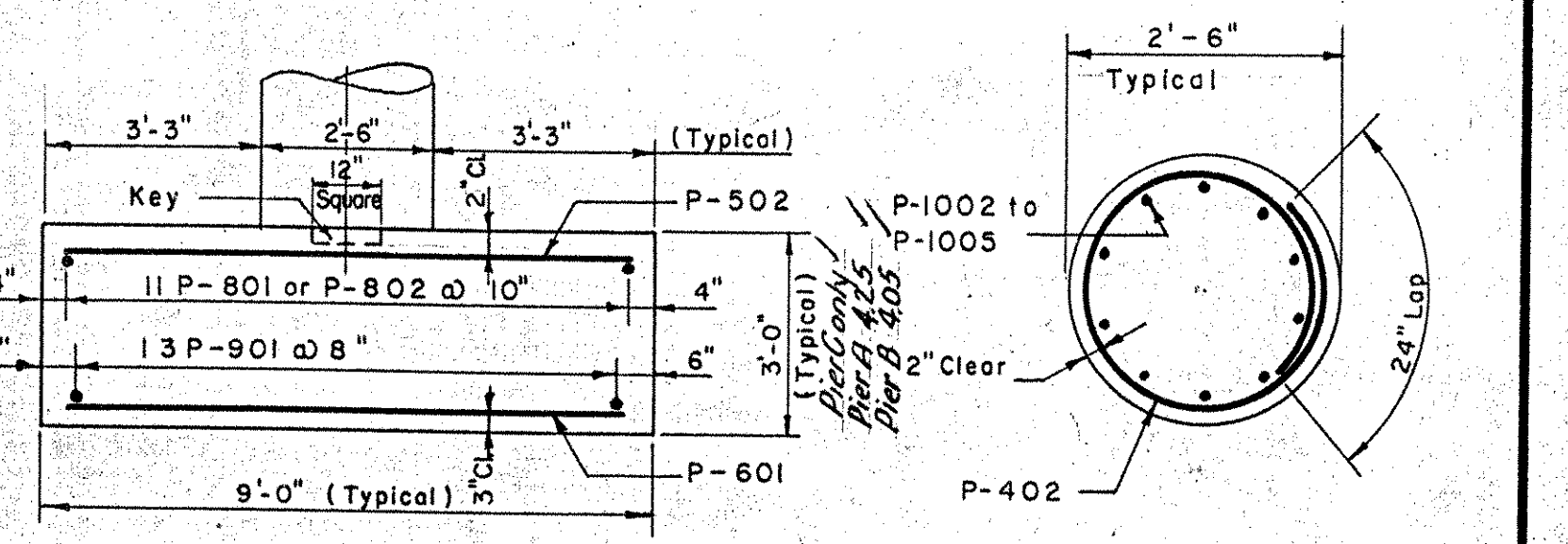
ELEVATION PIER C
SCALE: 3/16" = 1'-0"



PLAN PIER B
SCALE: 3/16" = 1'-0"



ELEVATION PIER B
SCALE: 3/16" = 1'-0"



SECTION D-D
SCALE: 3/16" = 1'-0"

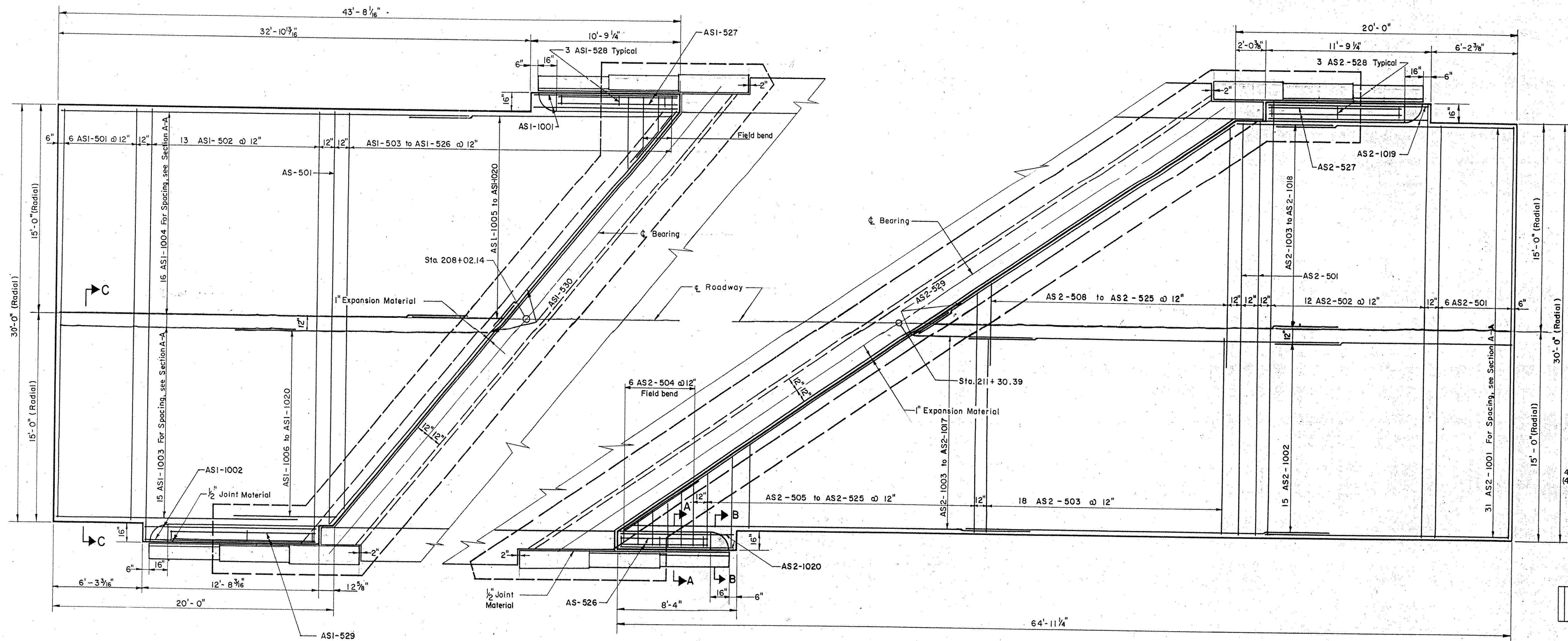
SECTION A-A
NOT TO SCALE

SCHEDULE OF BRIDGE SEAT ELEVATIONS											
BEAM NO.	PIER A	BEAM NO.	PIER B	BEAM NO.	PIER C	BEAM NO.					
1	570.73	570.34	6	569.28	569.01	11	567.83	567.83	16		
2	571.34	570.93	7	569.92	569.60	12	568.50	568.46	17		
3	571.93	571.54	8	570.51	570.24	13	569.10	569.11	18		
4	572.51	572.16	9	571.10	570.88	14	569.70	569.77	19		
5	573.13	572.74	10	571.73	571.47	15	570.37	570.37	20		

PIERS A, B AND C
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE PROJECT in the town of
PUTNEY
INTERSTATE STA. 1200 + 24.70
UNDER
U.S. ROUTE 5 (REL.) STA. 209 + 52.98
THE CLARKSON ENGINEERING CO. INC.
CONSULTING ENGINEERS
BOSTON MASSACHUSETTS
SURVEYED BY: DATE: SCALE AS NOTED
DRAWN BY: D.E.S. IN CHARGE: J.V.B. DATE: 10/22/97

IM 091-1(31)
This sheet for information only
BR 17
PUTNEY - BRIDGE 19A
NH F019-1(15)
SHEET NO. 72 OF 75
FOR REFERENCE ONLY

B.P.R. DIV. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	VT.	I 91-1(10)	126	328



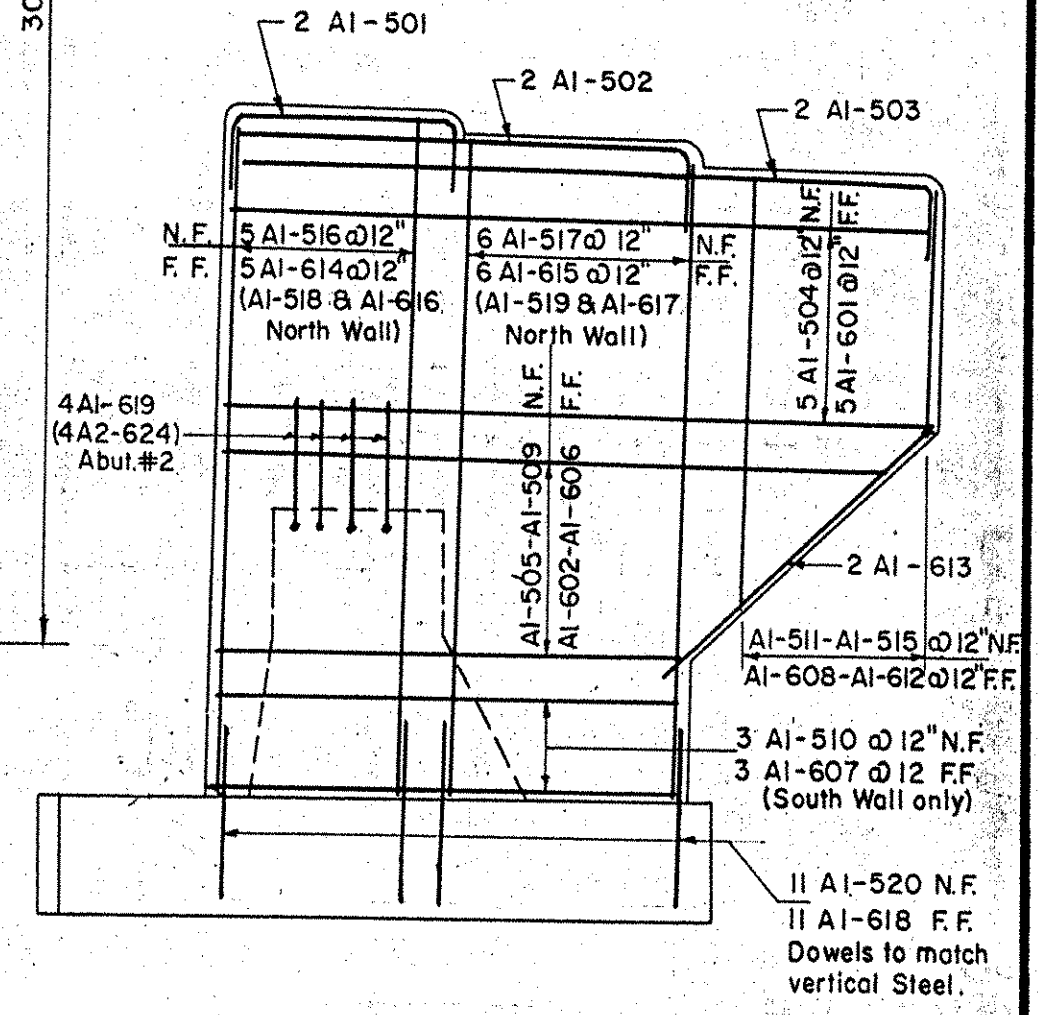
APPROACH SLAB ABUTMENT NO. 1

Scale: 1/4" = 1'-0"

APPROACH SLAB ABUTMENT NO. 2

Scale: 1/4" = 1'-0"

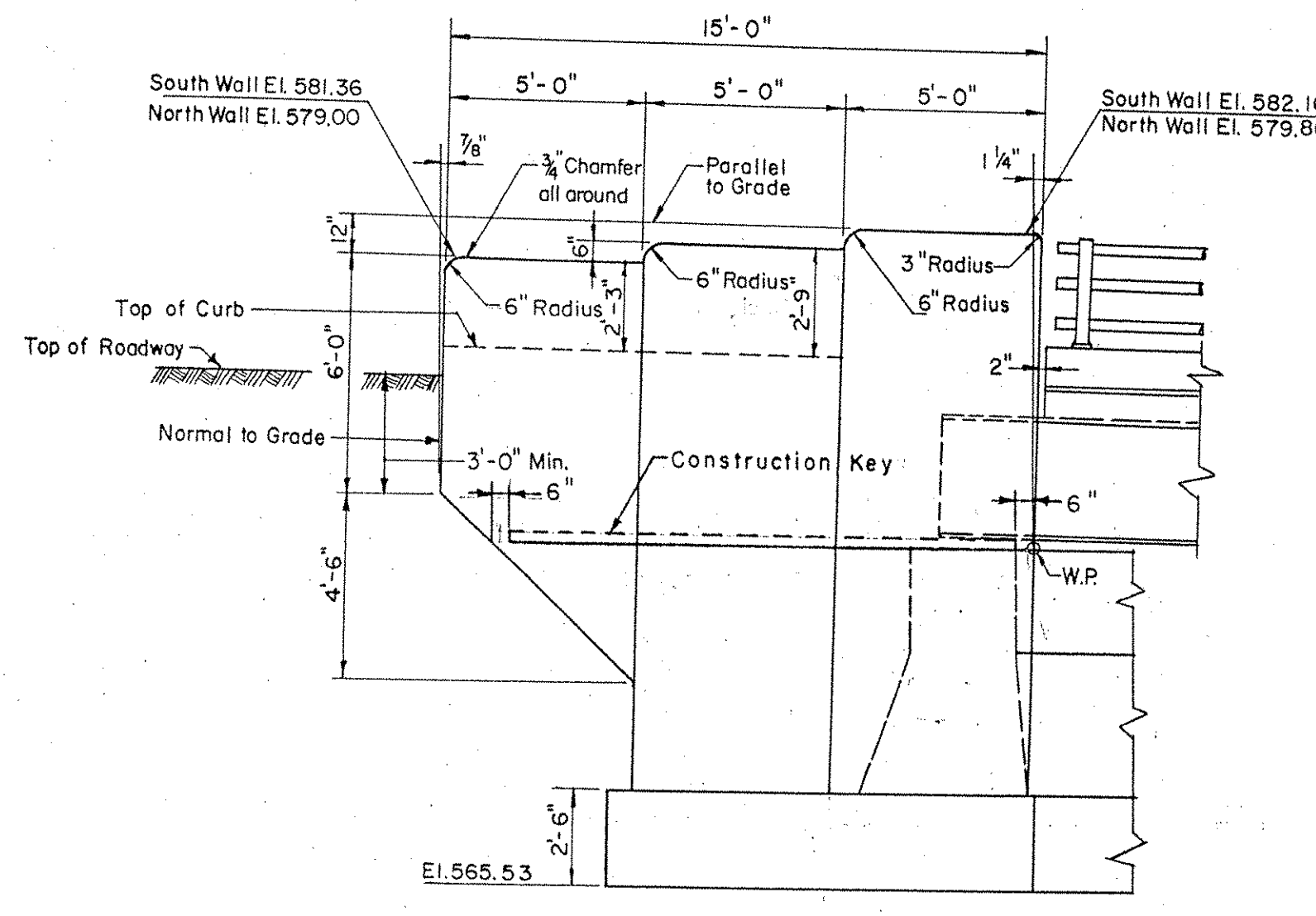
For Sections A-A & B-B, see Standard Sheet SB-AS 45° skew 57.



TYPICAL WINGWALL REINFORCING

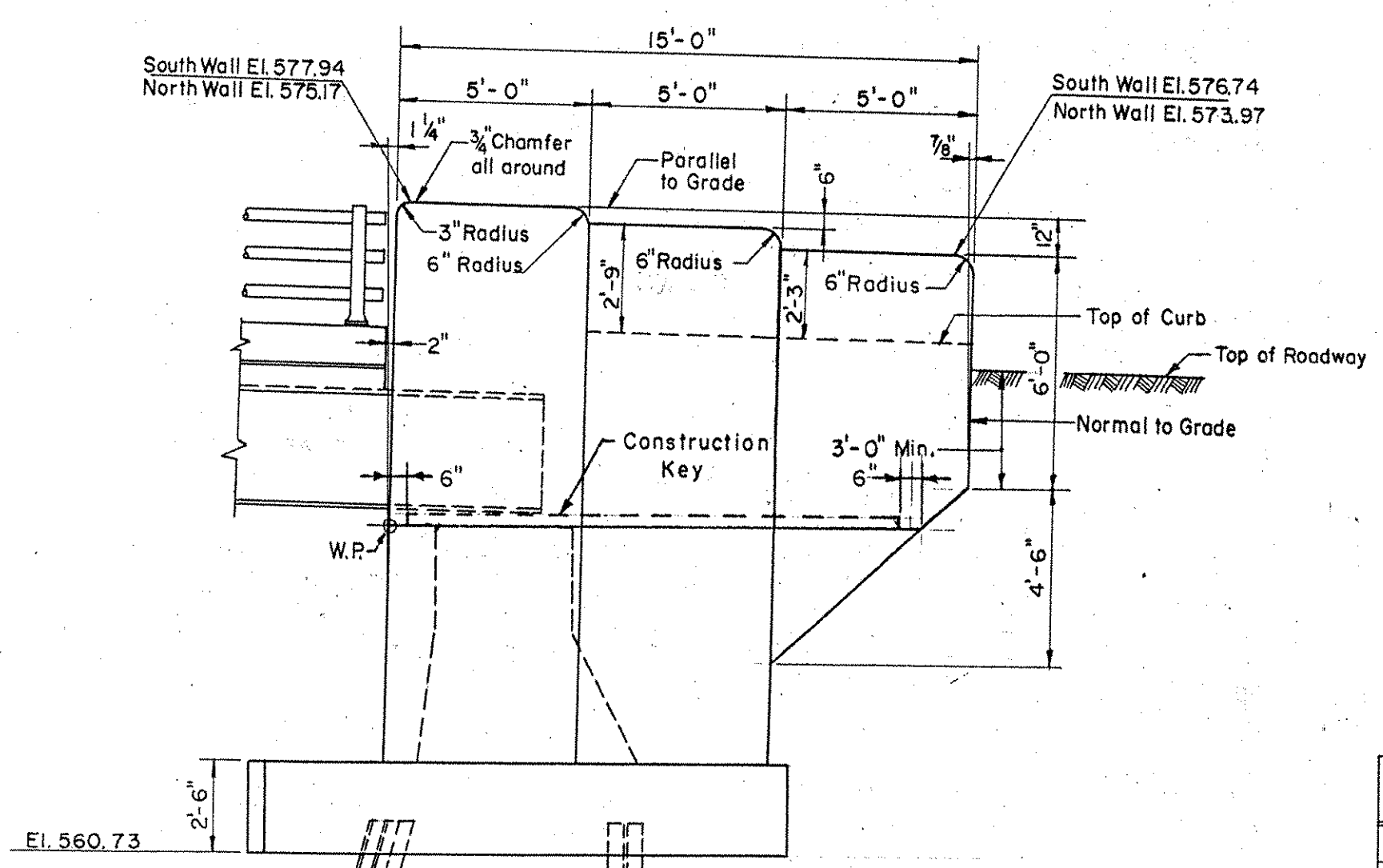
Scale: 1/4" = 1'-0"

Note: South Wall Abutment #1 shown, North Wall as noted. For Abutment #2, bars are prefixed "A2"



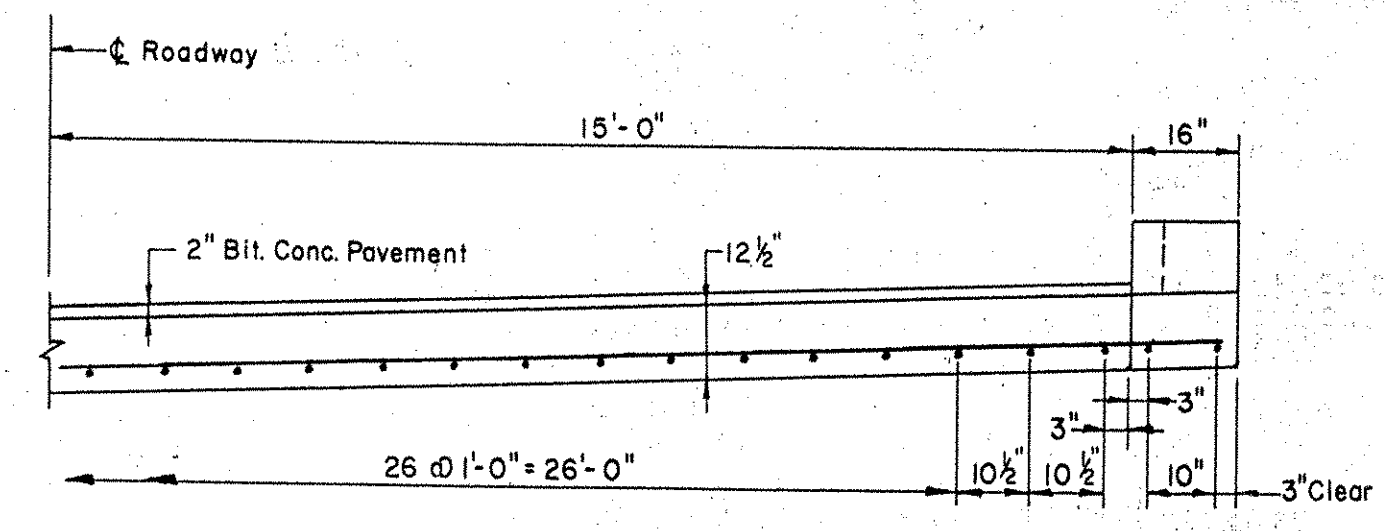
SOUTH WALL ABUTMENT NO. 1
NORTH WALL ABUTMENT NO. 1 (SIMILAR)

Scale: 1/4" = 1'-0"



SOUTH WALL ABUTMENT NO. 2
NORTH WALL ABUTMENT NO. 2 (SIMILAR)

Scale: 1/4" = 1'-0"



SECTION C-C

Scale: 3/8" = 1'-0"

ESTIMATED QUANTITIES

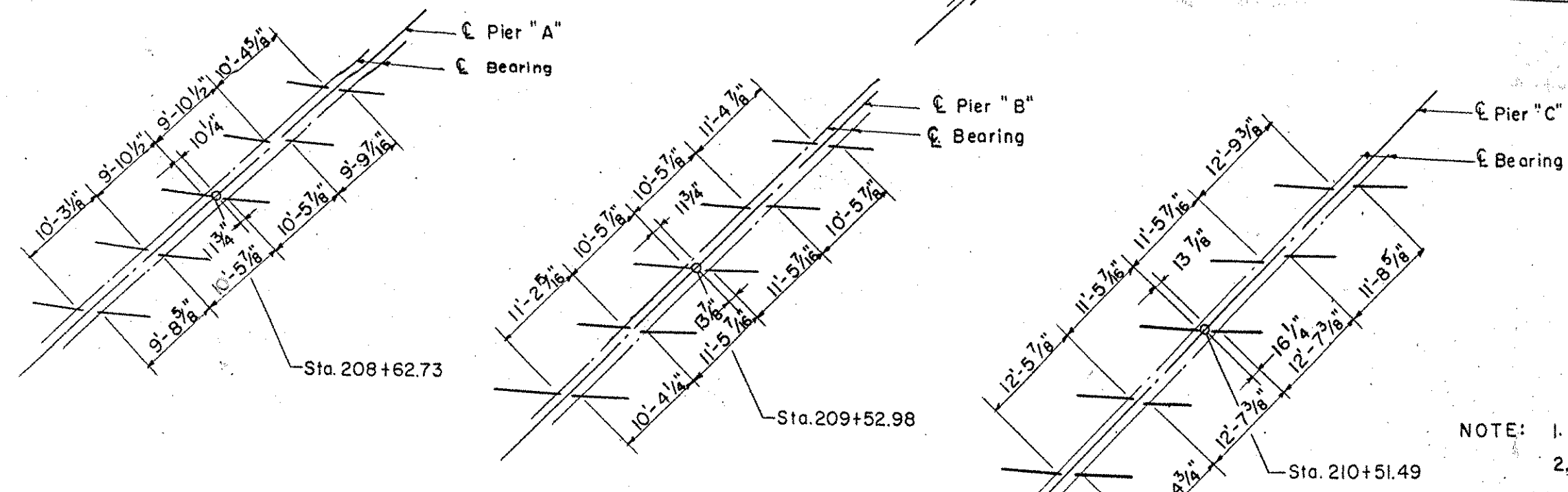
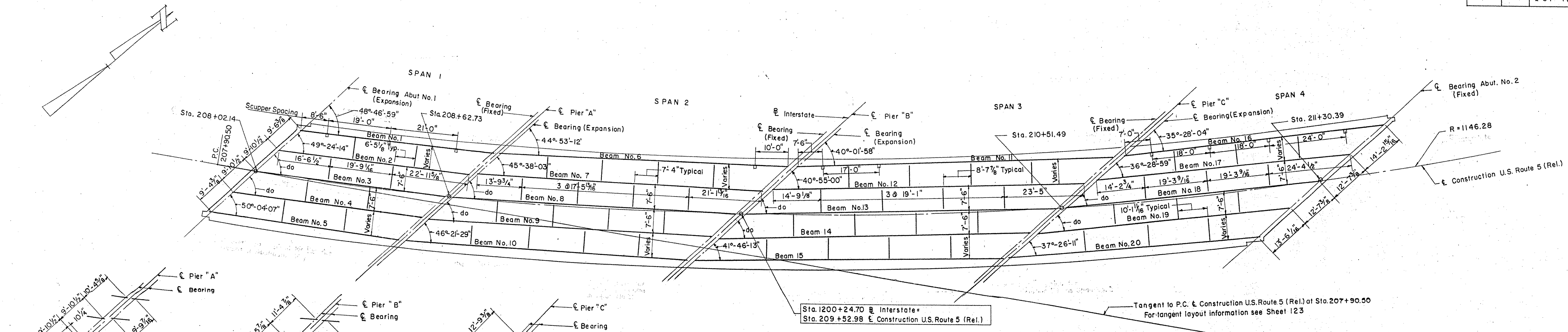
ITEM NO	DESCRIPTION	UNIT	APPROACH SLABS (2)			
			NET	OVER-RUN	TOTAL	FINAL
361-B	Bituminous Concrete Pavement for Bridge Slabs	Ton	2.8	✓	4	2.8
401-B	Concrete, Class 'B' (Mod.)	C.Y.	9.0	✓	9	9.0
402	Reinforcing Steel	Lbs.	See Reinforc			
556-C	Granite Bridge Curb (Type 1)	L.F.	See General P			

PUTNEY - BRIDGE 19A
NH F019-1(15)
SHEET NO. 73 OF 75
FOR REFERENCE ONLY

IM 091-1(31)
This sheet for information only
BR 17
APPROACH SLAB

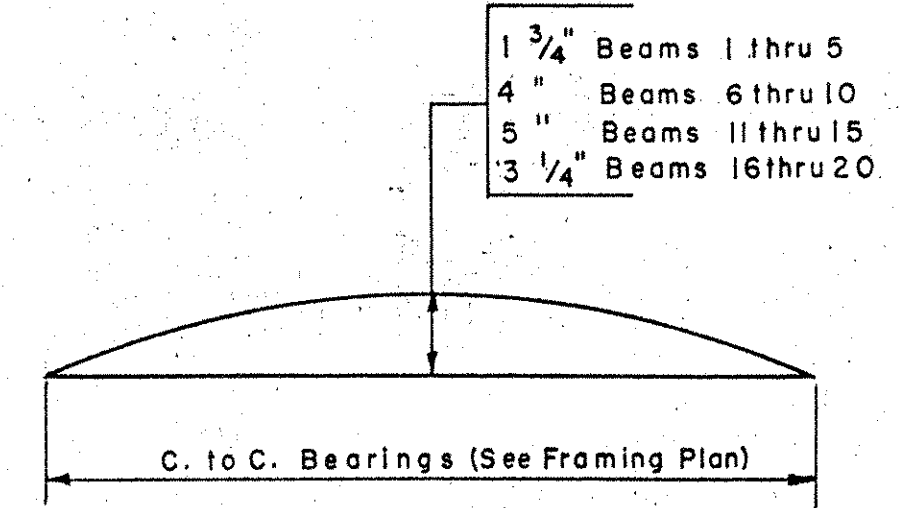
STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
INTERSTATE PROJECT in the town of PUTNEY	
INTERSTATE	STA. 1200 + 24.70
UNDER	
U.S. ROUTE 5 (REL.)	STA. 209 + 52.98
THE CLARKESON ENGINEERING CO. INC. CONSULTING ENGINEERS	
BOSTON MASSACHUSETTS	
SURVEYED BY	CHECKED BY D.S.
DRAWN BY	IN CHARGE
PROJECT NO. I 91-1(10)	SHEET 126 OF 328

S.P.R. DIV. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	VT.	I 91 -1(10)	127	328

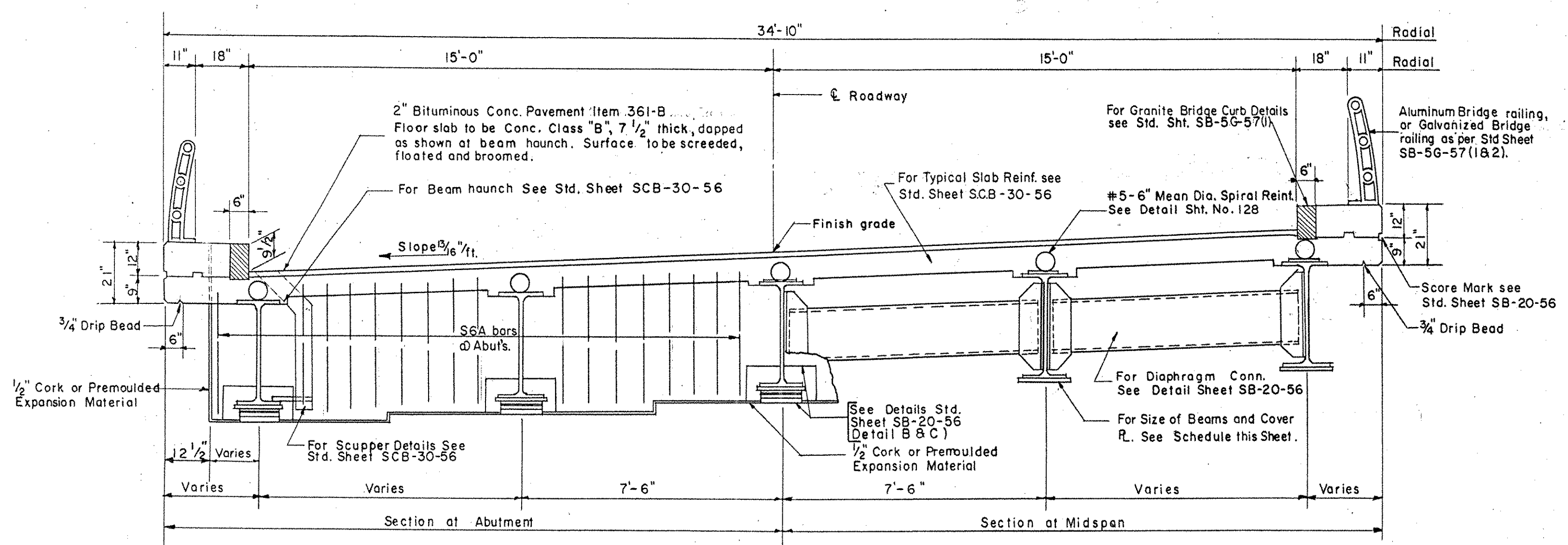


FRAMING PLAN
SCALE 1/16" = 1'-0"

- NOTE:
- All Diaphragms 18 C 42.7.
 - All Beams shall be rolled to a true circular camber with the middle ordinate as shown on this sheet.
 - All dimensions are horizontal dimensions.
 - For bearing details, see Std. sheet SB-20-56.
 - Scuppers to be paid for under Item 404-A Structural steel.
 - All beams and cover plates shall conform to A. S. T. M. Designation A 373. All other structural steel shall conform to Designation A 7 or A 373.



CAMBER DIAGRAM
NO SCALE



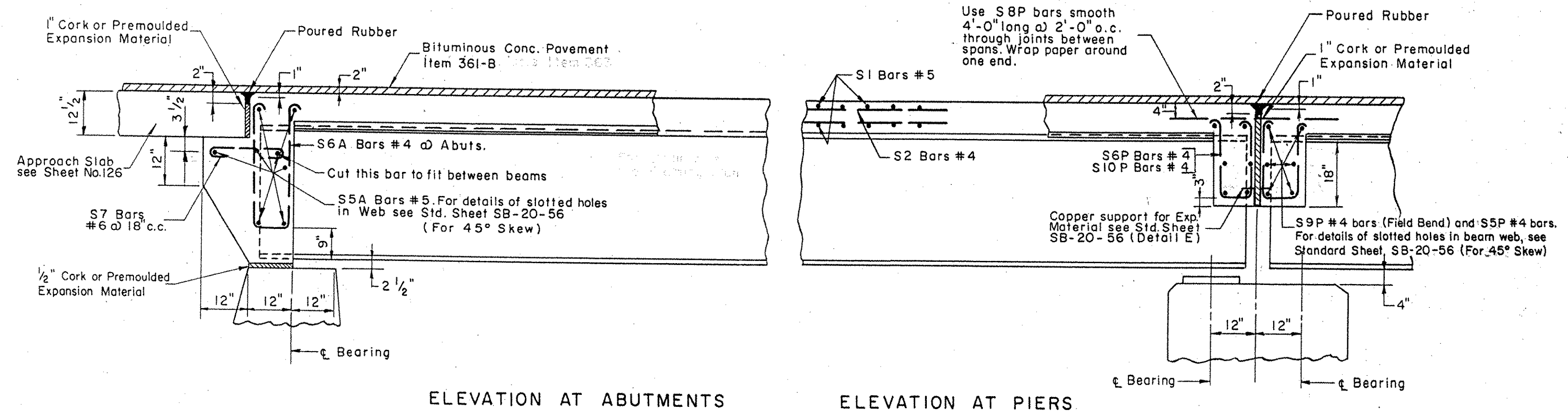
TYPICAL CROSS SECTION
SCALE 3/8" = 1'-0"

BEAM & COVER R. SCHEDULE			
BEAM NO.	C. to C. BEARINGS	BEAM SIZE	COVER PLATES
1	59'-9 7/8"	36 WF150	10" x 3/8" x 38'-0" Bottom
2	59'-3 3/8"	do	do
3	do	do	do
4	do	do	do
5	58'-8 3/4"	do	do
6	88'-6 3/4"	36 WF 300	14" x 1" x 52'-8" Bottom
7	87'-5 1/8"	do	do
8	do	do	do
9	do	do	do
10	86'-4 3/4"	do	do
11	97'-2"	do	Top 12" x 1/2" x 63'-6" Bot. 18" x 3/4" x 66'-9"
12	95'-5 1/8"	do	do
13	do	do	do
14	do	do	do
15	93'-9 7/8"	do	do
16	79'-2 1/8"	36 WF194	14" x 1 1/4" x 54'-0" Bol.
17	77'-2 3/8"	do	do
18	do	do	do
19	do	do	do
20	75'-6 1/8"	do	do

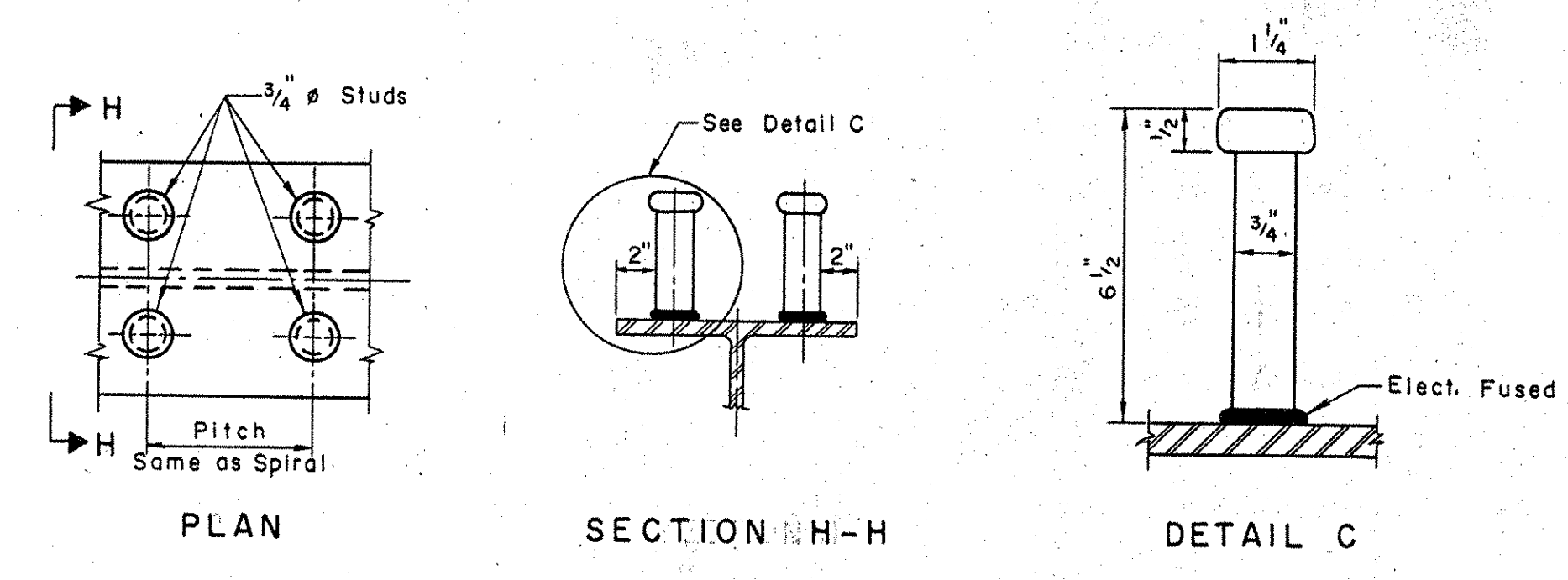
PUTNEY - BRIDGE 19A
NH F019-1(15)
SHEET NO. 74 OF 75
FOR REFERENCE ONLY

IM 091-1(31)
This sheet for information only
BR 17
STRUCTURAL STEEL PLAN
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
INTERSTATE PROJECT in the town of
PUTNEY
INTERSTATE UNDER STA. I200+24.70
U.S. ROUTE 5 (REL.) STA. 209+52.98
THE CLARKESON ENGINEERING CO. INC.
CONSULTING ENGINEERS
BOSTON MASSACHUSETTS
SURVEYED BY DATE SCALE AS NOTED
DRAWN BY M.B.C. IN CHARGE J.V.S. DATE
PROJECT NO. I 91 - (10) SHEET 127 OF 328

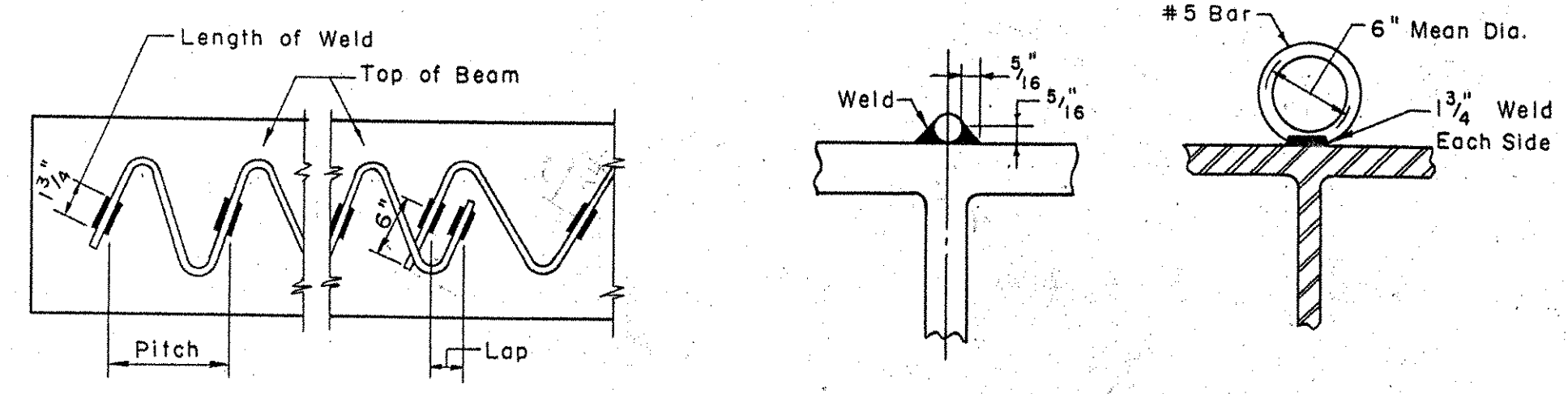
B.P.R. DIV. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	VT.	I 91-1(10)	128	328



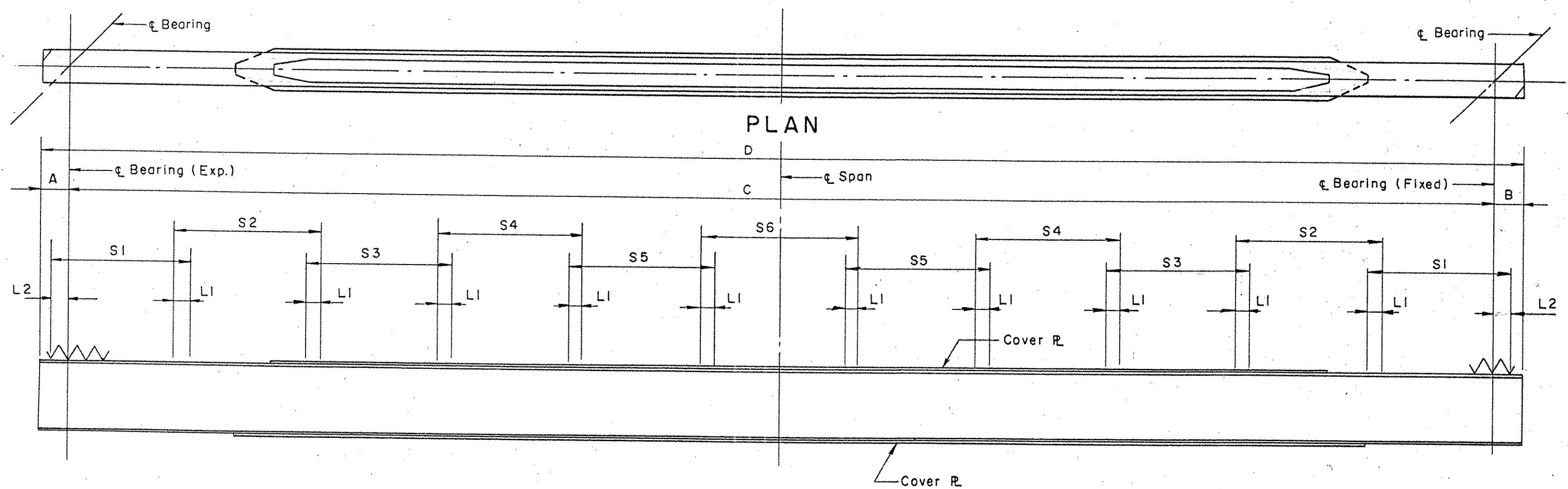
TYPICAL ELEVATION OF BEAM (SQUARE)
Scale: 1/2" = 1'-0"



ALTERNATE SHEAR CONNECTOR
Not To Scale



SPIRAL WELDING DETAILS
Not To Scale



ELEVATION OF BEAMS
Not To Scale

Note: 1. For Beam Size & Cover R.s See Beam & Cover R. Schedule Sheet I27
For Cover R. Details See Sheet SB-30-56.
2. Cut Flanges at ε Bearing as per Standard Sheet SB-22-58.

Beam No.	SPIRAL SCHEDULE										No. Units Per Bm.		
	A	B	C	D	S1	S2	S3	S4	S5	S6	L1	L2	
1	9"	12 5/16"	59' - 9 7/8"	61' - 7 15/16"	27 @ 4 1/2" = 10' - 1 1/2"	19 @ 6 1/2" = 10' - 3 1/2"	13 @ 9 1/2" = 10' - 3 1/2"				2"	4 9/16"	6
2, 3, & 4	9"	9"	59' - 3 3/16"	60' - 9 3/8"	26 @ 4 1/2" = 9' - 9"	do	do					3 3/8"	6
5	9"	12 5/8"	58' - 8 3/16"	60' - 5 13/16"	25 @ 4 1/2" = 9' - 4 1/2"	do	do					2 3/8"	6
6	14"	14"	88' - 6 3/4"	90' - 10 3/4"	30 @ 4" = 10' - 0"	25 @ 5" = 10' - 5"	17 @ 7" = 9' - 11"	12 @ 10" = 10' - 0"		8 @ 15" = 10' - 0"		4 9/8"	9
7, 8, & 9	9"	9"	87' - 5 1/8"	88' - 11 1/8"	do	do	16 @ 7" = 9' - 4"	do		do		4 7/16"	9
10	13 5/8"	13 3/16"	86' - 4 3/8"	88' - 7 1/2"	do	24 @ 5" = 10' - 0"	17 @ 7" = 9' - 11"	do		7 @ 15" = 8' - 9"		5 5/16"	9
11	15 5/8"	15 5/8"	97' - 2"	99' - 9 1/4"	do	27 @ 4 1/2" = 10' - 1 1/2"	21 @ 6" = 10' - 6"	13 @ 9" = 9' - 9"	8 @ 14" = 9' - 4"			4 1/2"	10
12, 13, & 14	9"	9"	95' - 5 1/8"	96' - 11 1/8"	do	do	do	12 @ 9" = 9' - 0"	do			5 15/16"	10
15	15"	15"	93' - 9 7/8"	96' - 3 7/8"	do	do	22 @ 6" = 11' - 0"	13 @ 9" = 9' - 9"	6 @ 14" = 7' - 0"			2 9/16"	10
16	17 1/16"	9"	79' - 2 7/8"	81' - 5 3/8"	32 @ 4" = 10' - 8"	25 @ 5" = 10' - 5"	16 @ 7" = 9' - 4"	11 @ 11" = 10' - 1"				3 9/16"	8
17, 18, & 19	9"	9"	77' - 2 3/8"	78' - 8 3/8"	do	do	do	10 @ 11" = 9' - 2"				4 3/16"	8
20	16 3/4"	9"	75' - 6 1/16"	77' - 7 13/16"	do	do	do	9 @ 11" = 8' - 3"			2"	4"	8

ESTIMATED QUANTITIES						
ITEM NO.	DESCRIPTION	UNIT	NET	OVERRUN	TOTAL	FINAL
361-B	Bit. Concrete Pavement	Tons	127	4%	132	127
401-B	Concrete Class B (Mod.)	C.Y.	347	7%	371	389
402	Reinforcing Steel	LBS.	See Reinforcing Schedule Sheet No. 130.			
403	Spiral Reinforcement (S, 6 BS)	LBS.	117		117	117
404A	Structural Steel	LBS.	495,899	9%	540,529	492,245

PUTNEY - BRIDGE 19A
NH F019-1(15)
SHEET NO. 75 OF 75
FOR REFERENCE ONLY

IM 091-1(31)
This sheet for information only
BR 17

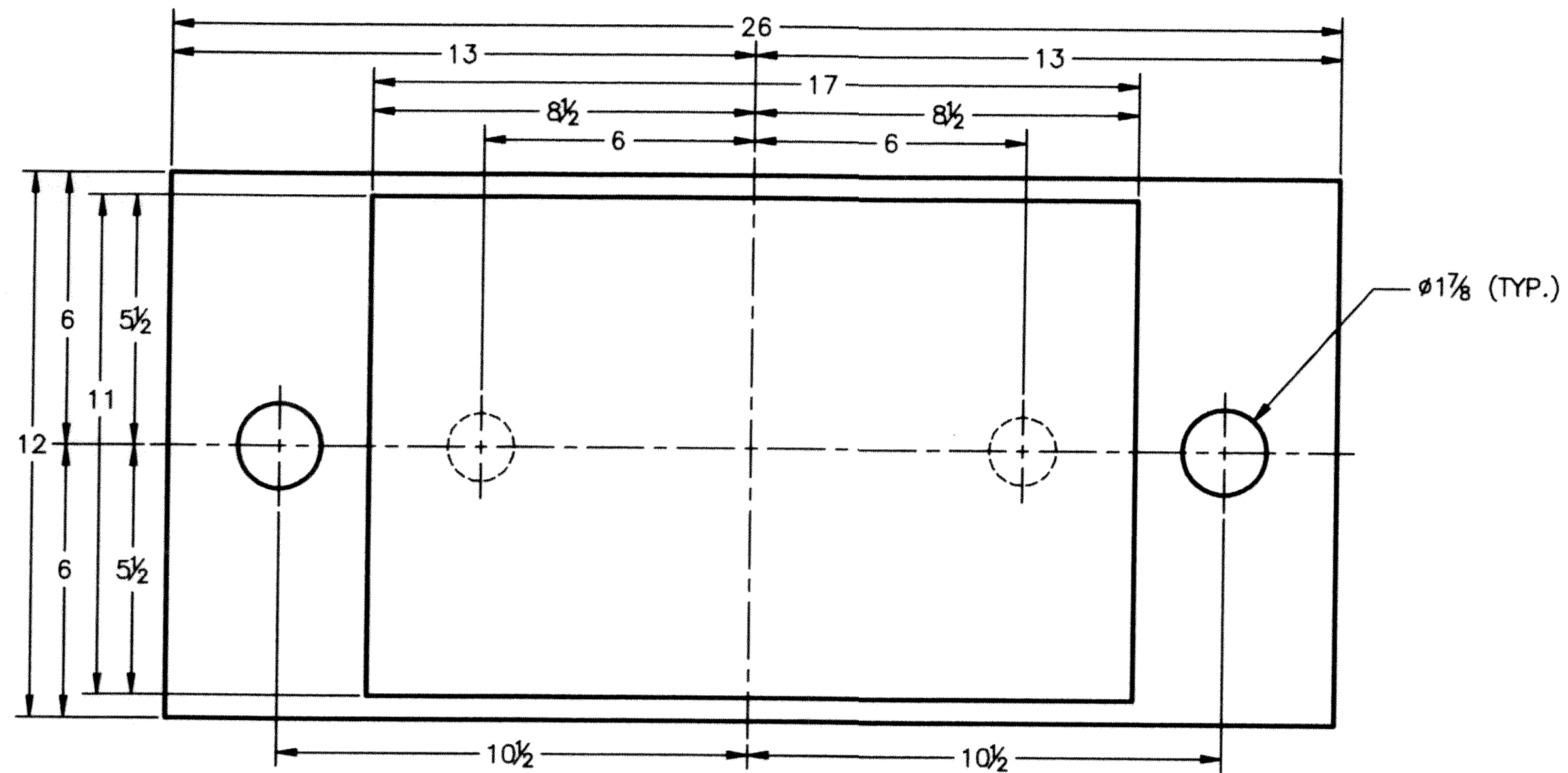
STRUCTURAL DETAILS
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

INTERSTATE PROJECT in the town of
PUTNEY
INTERSTATE STA. 1200 + 24.70
UNDER
U.S. ROUTE 5 (REL.) STA. 209 + 52.98

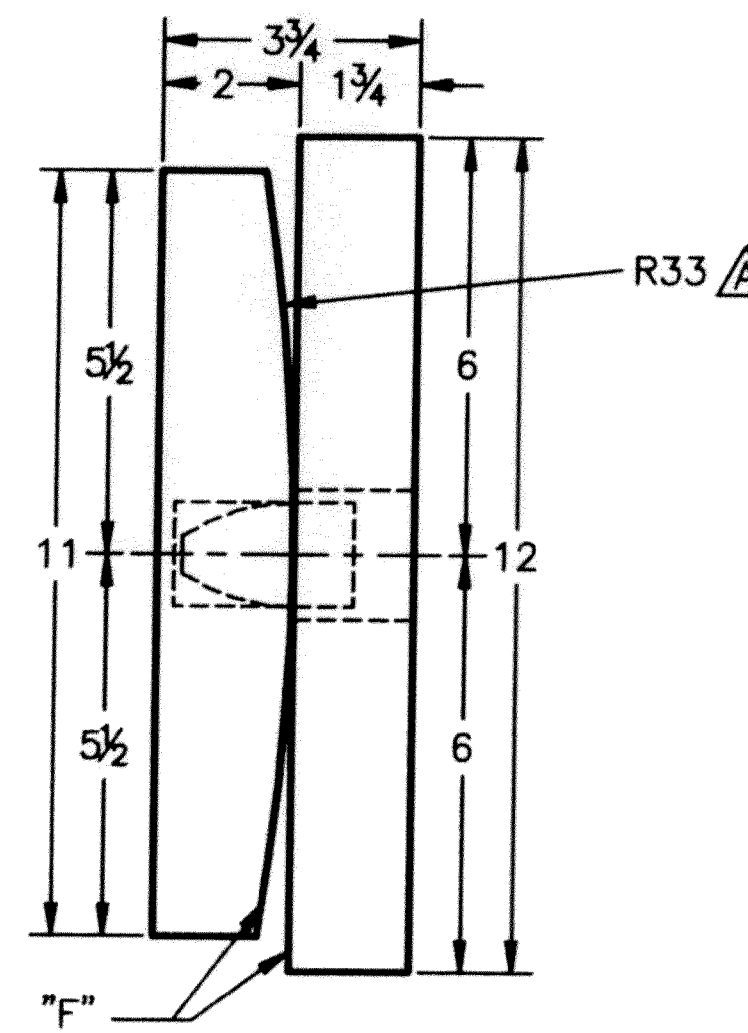
THE CLARKESON ENGINEERING CO., INC.
CONSULTING ENGINEERS
BOSTON MASSACHUSETTS

SURVEYED BY V.S. CHECKED BY D.S. SCALE AS NOTED
DRAWN BY J.V.B. IN CHARGE J.V.B. DATE 10/23/57

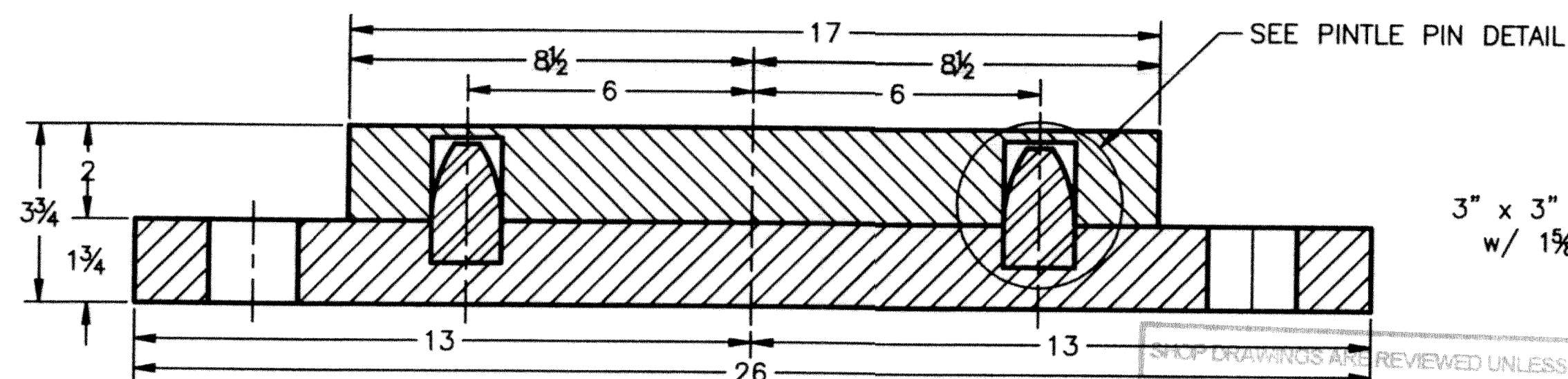
PROJECT NO. I 91-1(10) SHEET 128 OF 328



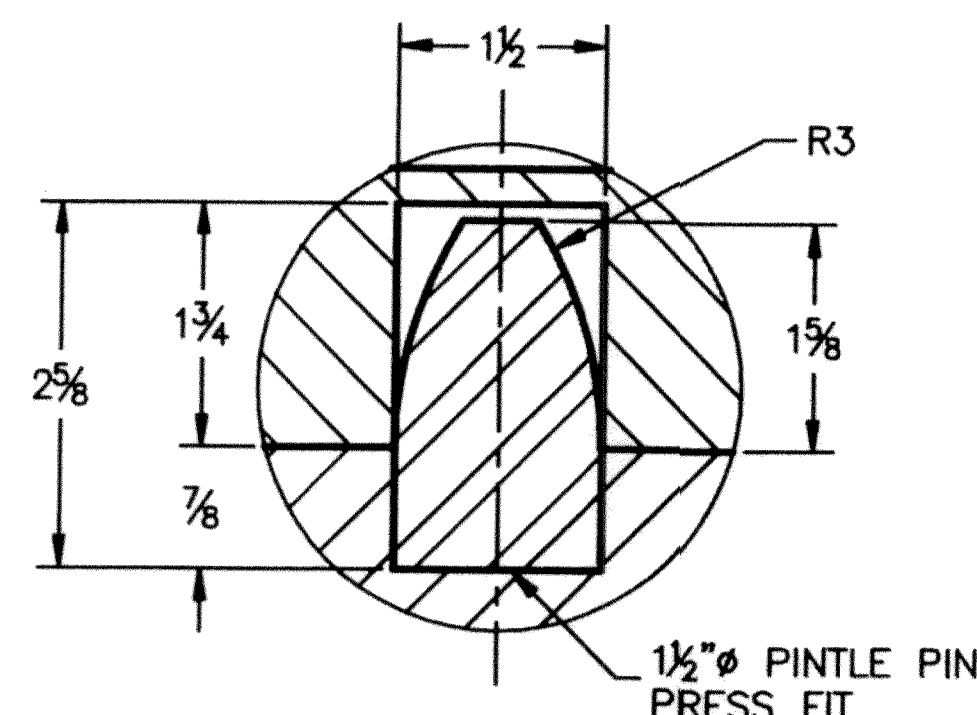
PLAN VIEW
QTY REQ'D = 5 ASSY.
PIER 2



SIDE VIEW



ELEVATION VIEW



PINTLE PIN DETAIL

NO EXCEPTION TAKEN

REVISIONS:

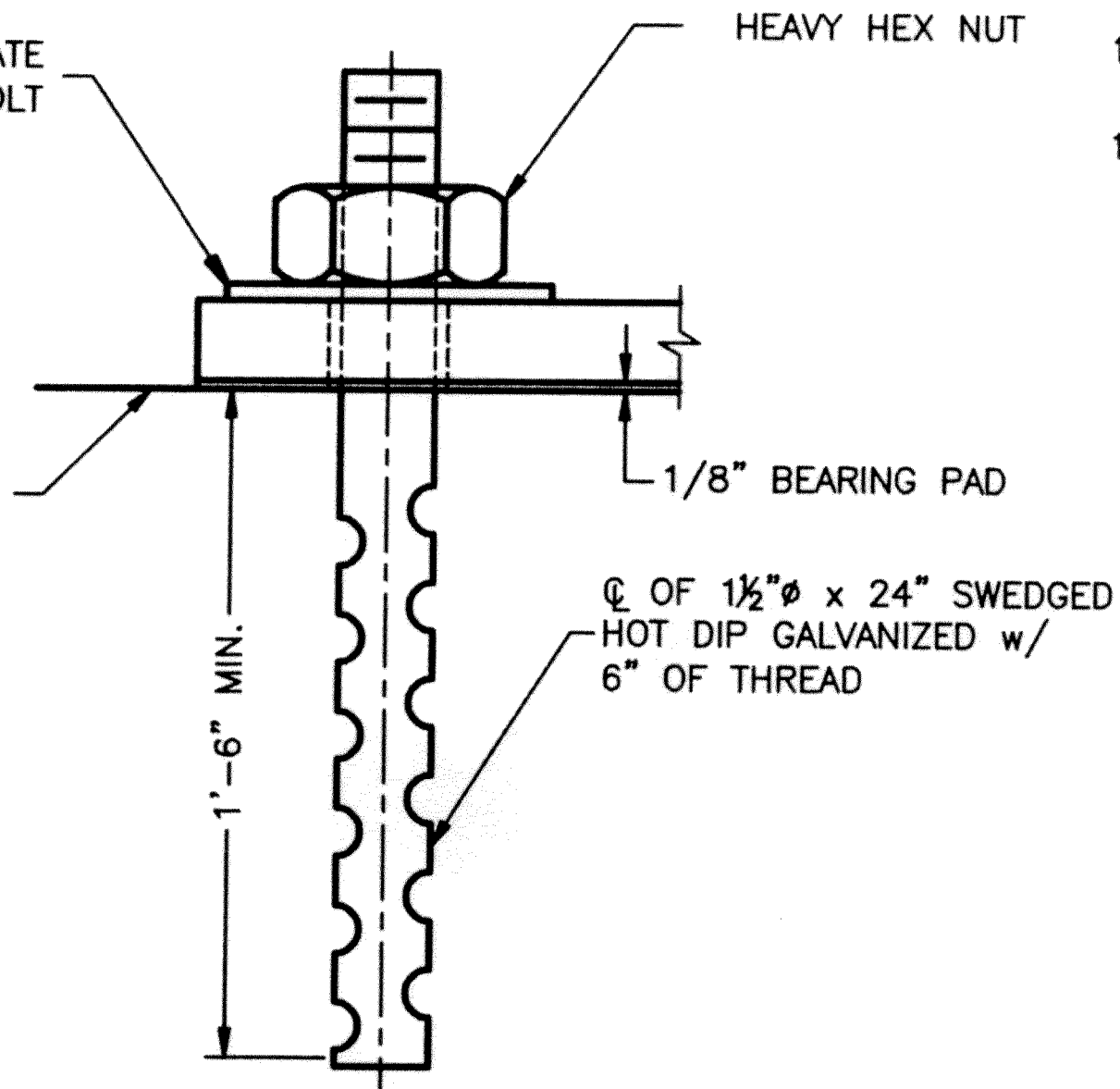
NO EXCEPTION TAKEN	✓
REVISE AS NOTED	
RESUBMISSION NOT REQUIRED	
REVISE AS NOTED	
RESUBMISSION REQUIRED	
REJECTED	

DATE: 2/23/10

SIGNATURE: [Signature]

REVIEW BY STANTEC IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMITY WITH DESIGN. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS, FABRICATION AND CONSTRUCTION METHODS, COORDINATION OF SUB-TRADES, DETAIL DESIGN OF COMPONENTS, AND ERRORS OR OMISSIONS ON SHOP DRAWINGS.

3" x 3" x 3/8" WASHER PLATE
w/ 1 1/8" Ø HOLE FOR BOLT



ANCHOR BOLT DETAIL
QTY. REQ'D = 10, 2 PER BEARING

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
--	A	PER ENGINEER'S MARK	2/23/10	C.A.M.

- NOTES:**
- BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th. EDITION, 2002.
 - THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 20° F. TO 70° F.
 - ALL STEEL IN BEARINGS SHALL BE ASTM A-709 GRADE 36.
 - ALL STEEL PRODUCED IN THE U.S.A.
 - CONTACT PETER SOMOGYI, COORDINATOR.
 - TOLERANCES: THICKNESS -0+1/16"
PLAN -0+1/16"
 - MANUFACTURING FACILITY LOCATION:
AMSCOT STRUCTURAL PRODUCTS INC.
241 EAST BLACKWELL STREET
DOVER, NJ 07801
 - ALL DIMENSIONS ARE IN INCHES.
 - ALL BEARING DEVICES SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b), AS MODIFIED BY THE GENERAL SPECIAL PROVISIONS.
 - ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.
 - BEARING SURFACES MARKED "F" SHALL BE FINISH IN ACCORDANCE WITH AASHTO DIVISION II, SECTION 11.4.6.

VERMONT AGENCY OF TRANSPORTATION
PROPOSED IMPROVEMENT BRIDGE PROJECT
TOWN OF PUTNEY, COUNTY OF WINDHAM
US RT. 5 FAS (MAJOR COLLECTOR), BRIDGE 19A

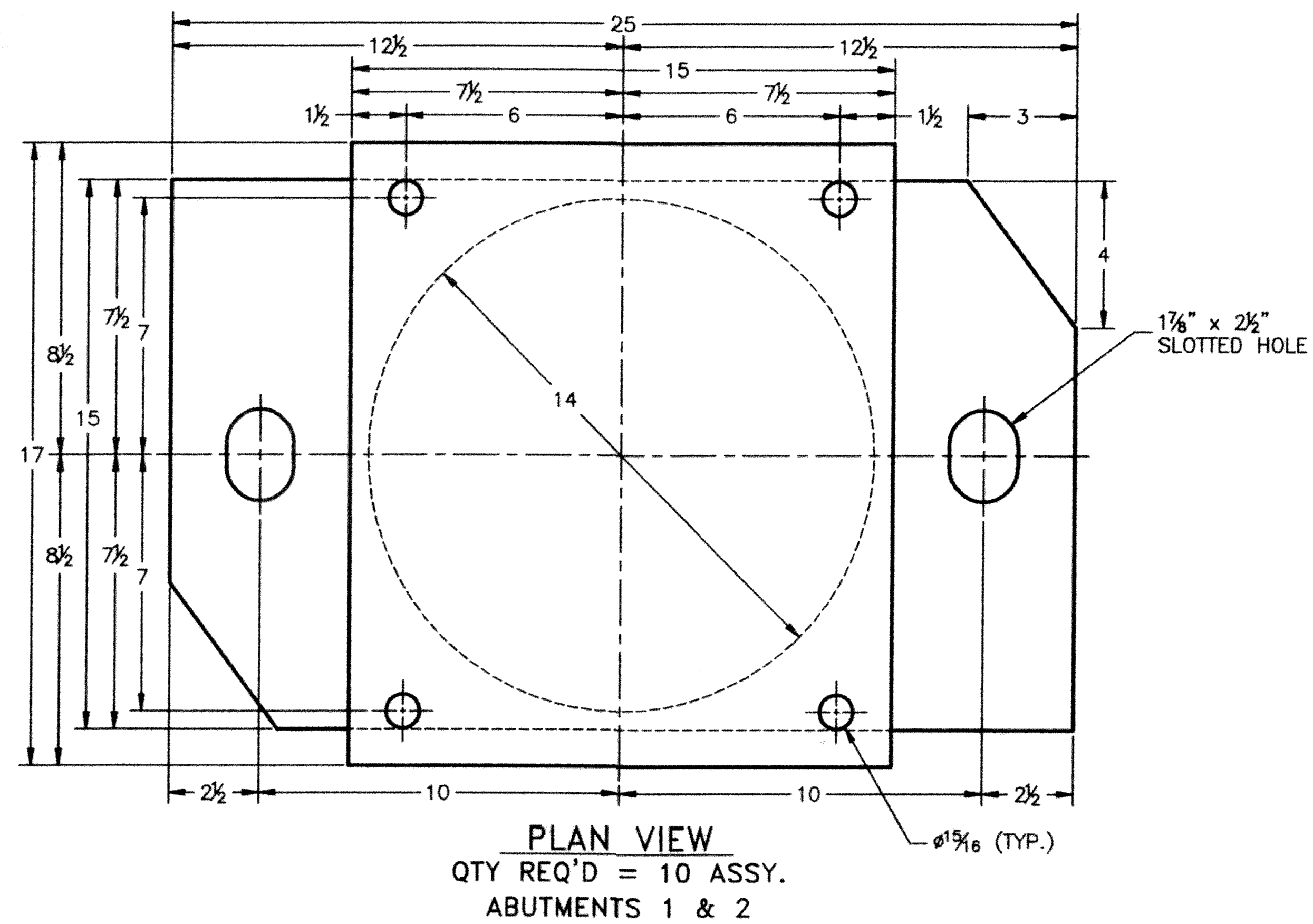
STEEL ROCKER BEARING DETAIL

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ JOB # 3383

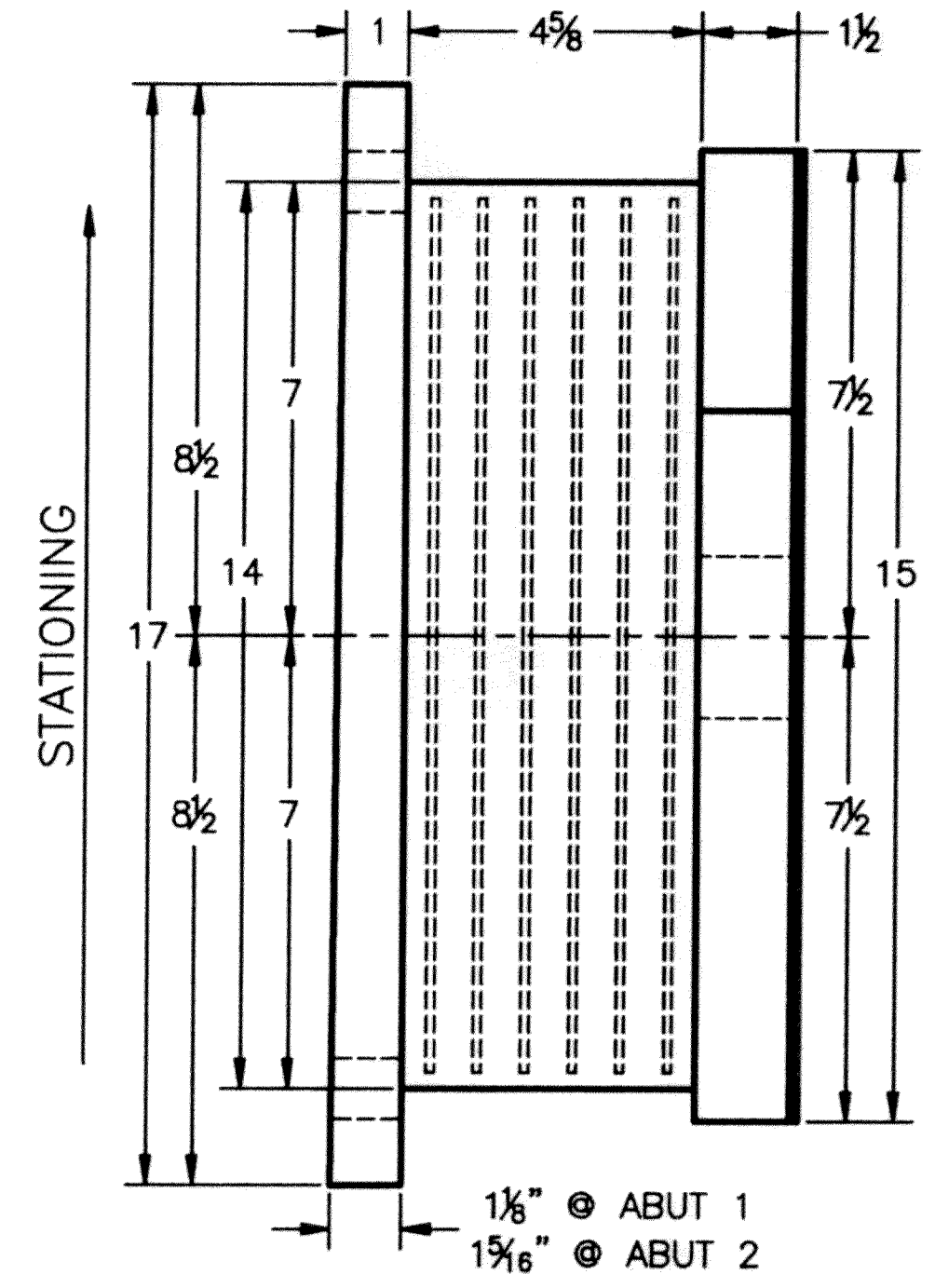
SCALE: N.T.S.	CHECKED: B.F.	DRAWN BY: C.A.M.
DATE: 1/29/10		REVISION: A

FOR: J.A. MCDONALD, INC.

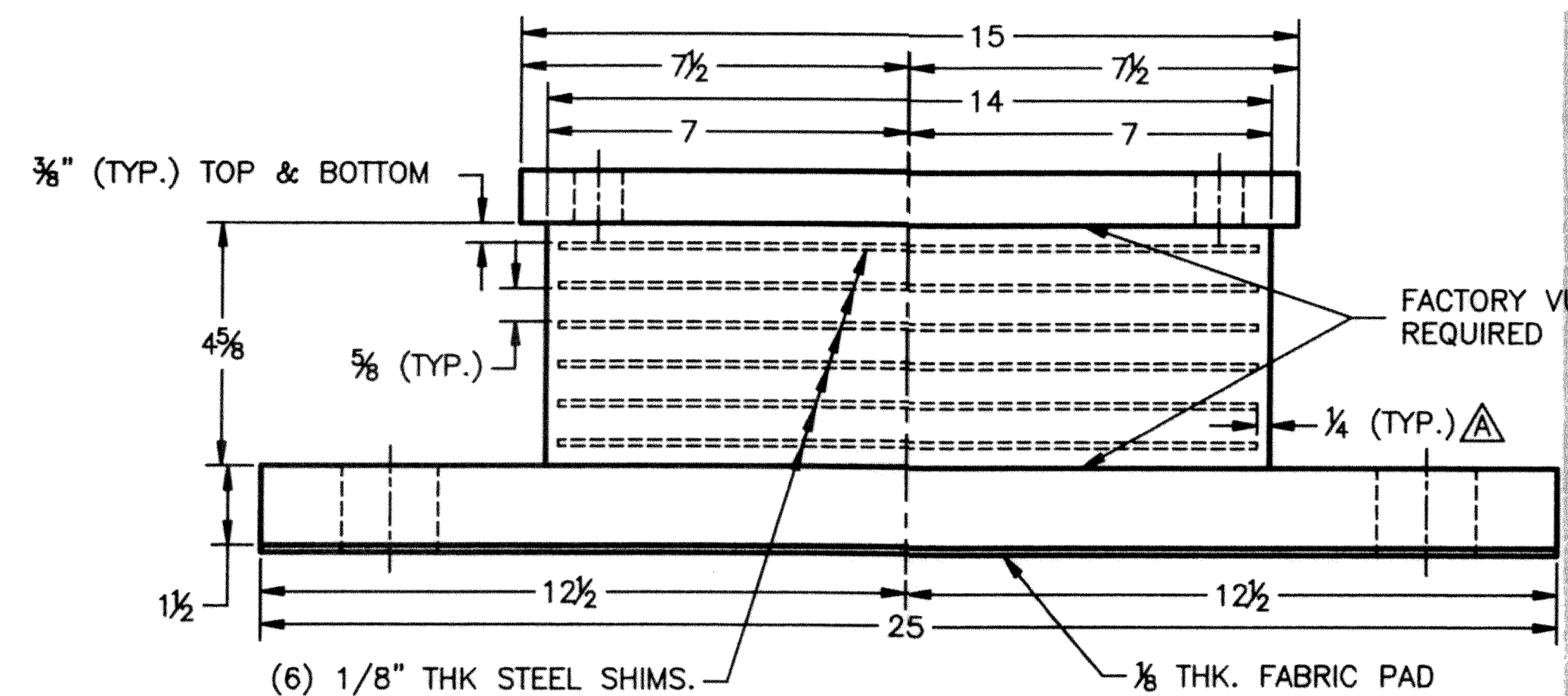
DWG NO: JAM10A1RA	SHEET NO. 1 OF 3
-------------------	------------------



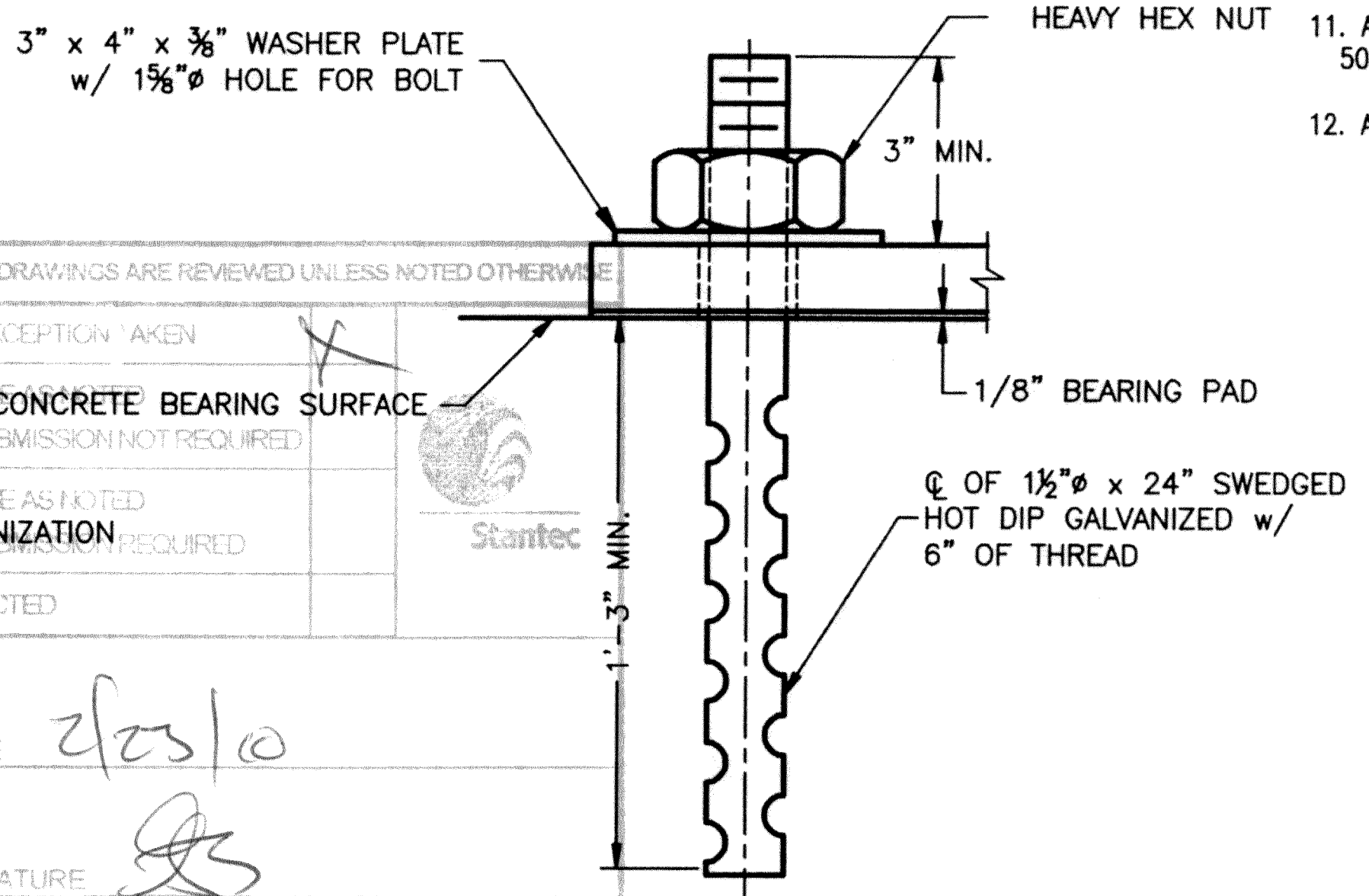
PLAN VIEW
 QTY REQ'D = 10 ASSY.
 ABUTMENTS 1 & 2



STATIONING



ELEVATION VIEW



ANCHOR BOLT DETAIL

QTY. REQ'D = 20, 2 PER BEARING

SHOP DRAWINGS ARE REVIEWED UNLESS NOTED OTHERWISE

NO EXCEPTION TAKEN

REVISIONS:

REVISION	DATE	BY
CONCRETE BEARING SURFACE		
RESUBMISSION NOT REQUIRED		
REVISE AS NOTED		
REVISION REQUIRED		
REJECTED		

DATE: 2/23/10

SIGNATURE: [Signature]

REVIEW BY STANTEC IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMANCE WITH DESIGN. CONTRACTOR IS RESPONSIBLE FOR ALL DIMENSIONS, FABRICATION AND CONSTRUCTION METHODS, COORDINATION OF COMPONENTS, AND ERRORS OR OMISSIONS ON SHOP DRAWINGS.

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
--	A	PER ENGINEER'S MARK	2/23/10	C.A.M.

NOTES:

- BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th. EDITION, 2002.
- THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 20°F. TO 70°F.
- THE ELASTOMER AASHTO GR. (NATURAL RUBBER), TEMPERATURE GR. 3, SHALL HAVE A DUROMETER HARDNESS SHORE A 60 ± 5 POINTS. SHEAR MODULUS TO BE 152 PSI ± 15%.
- STEEL SHIM PLATES FOR INTERNAL LAMINATES SHALL BE ROLLED MILD STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-1011, GRADE 36. SHIMS SHALL BE SMOOTH CUT, DEBURRED, GRIT BLASTED, AND DEGREASED PRIOR TO VULCANIZATION.
- ALL STEEL IN BEARINGS SHALL BE ASTM A-709 GRADE 36.
- ALL STEEL PRODUCED IN THE U.S.A.
- CONTACT PETER SOMOGYI, COORDINATOR.
- TOLERANCES: THICKNESS -0+1/16"
PLAN -0+1/16"
- MANUFACTURING FACILITY LOCATION:
AMSCOT STRUCTURAL PRODUCTS INC.
241 EAST BLACKWELL STREET
DOVER, NJ 07801
- ALL DIMENSIONS ARE IN INCHES.
- ALL BEARING DEVICES SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b), AS MODIFIED BY THE GENERAL SPECIAL PROVISIONS.
- ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

VERMONT AGENCY OF TRANSPORTATION
 PROPOSED IMPROVEMENT BRIDGE PROJECT
 TOWN OF PUTNEY, COUNTY OF WINDHAM
 US RT. 5 FAS (MAJOR COLLECTOR), BRIDGE 19A

EXPANSION ELASTOMERIC BEARING DETAIL

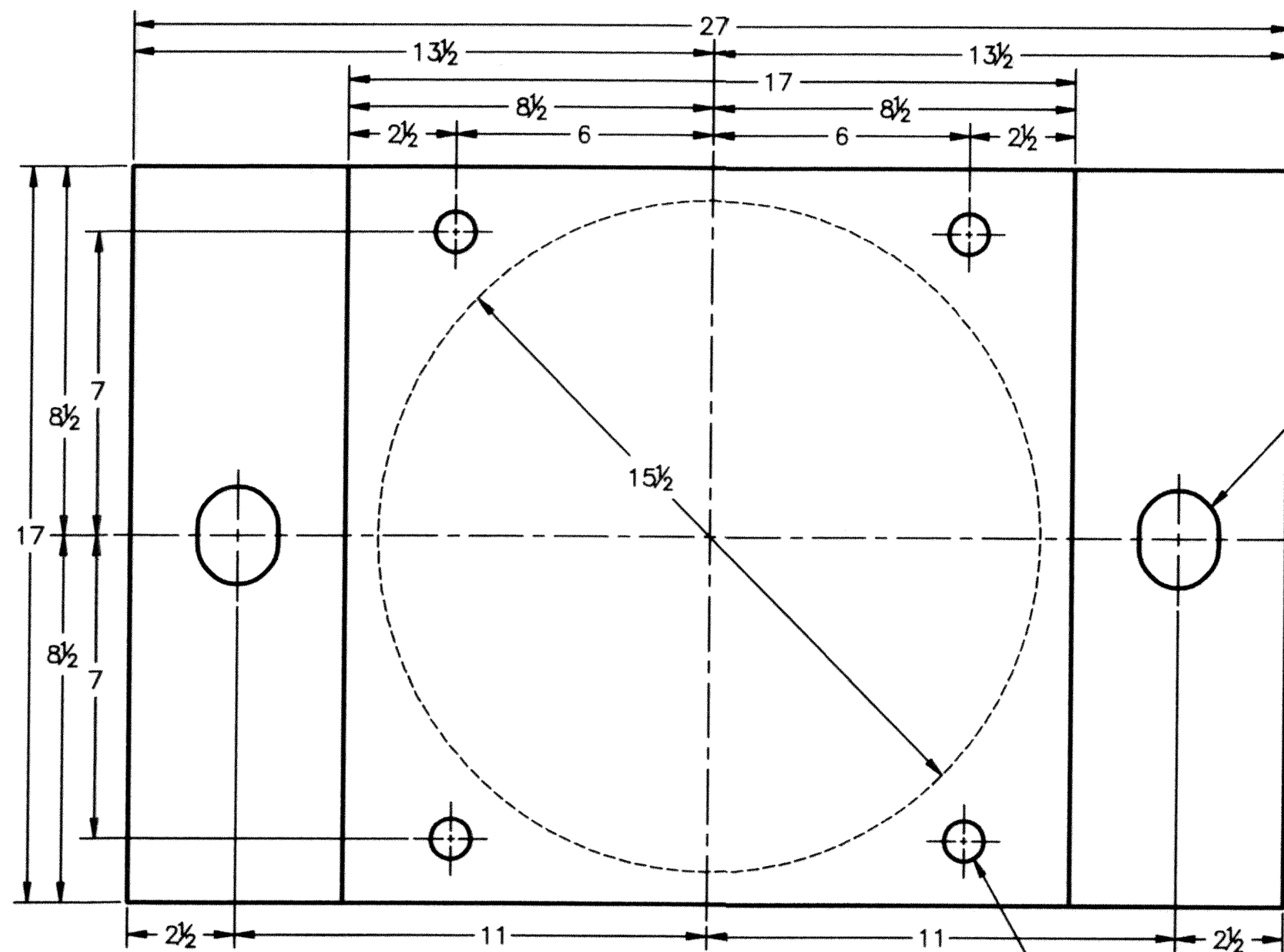
AMSCOT
 STRUCTURAL PRODUCTS CORP.
 DOVER, NJ JOB # 3383

SCALE: N.T.S.	CHECKED: B.F.	DRAWN BY: C.A.M.
DATE: 1/28/10	REVISION: A	

FOR: J.A. MCDONALD, INC.

DWG NO: JAM10A2RA SHEET NO. 2 OF 3

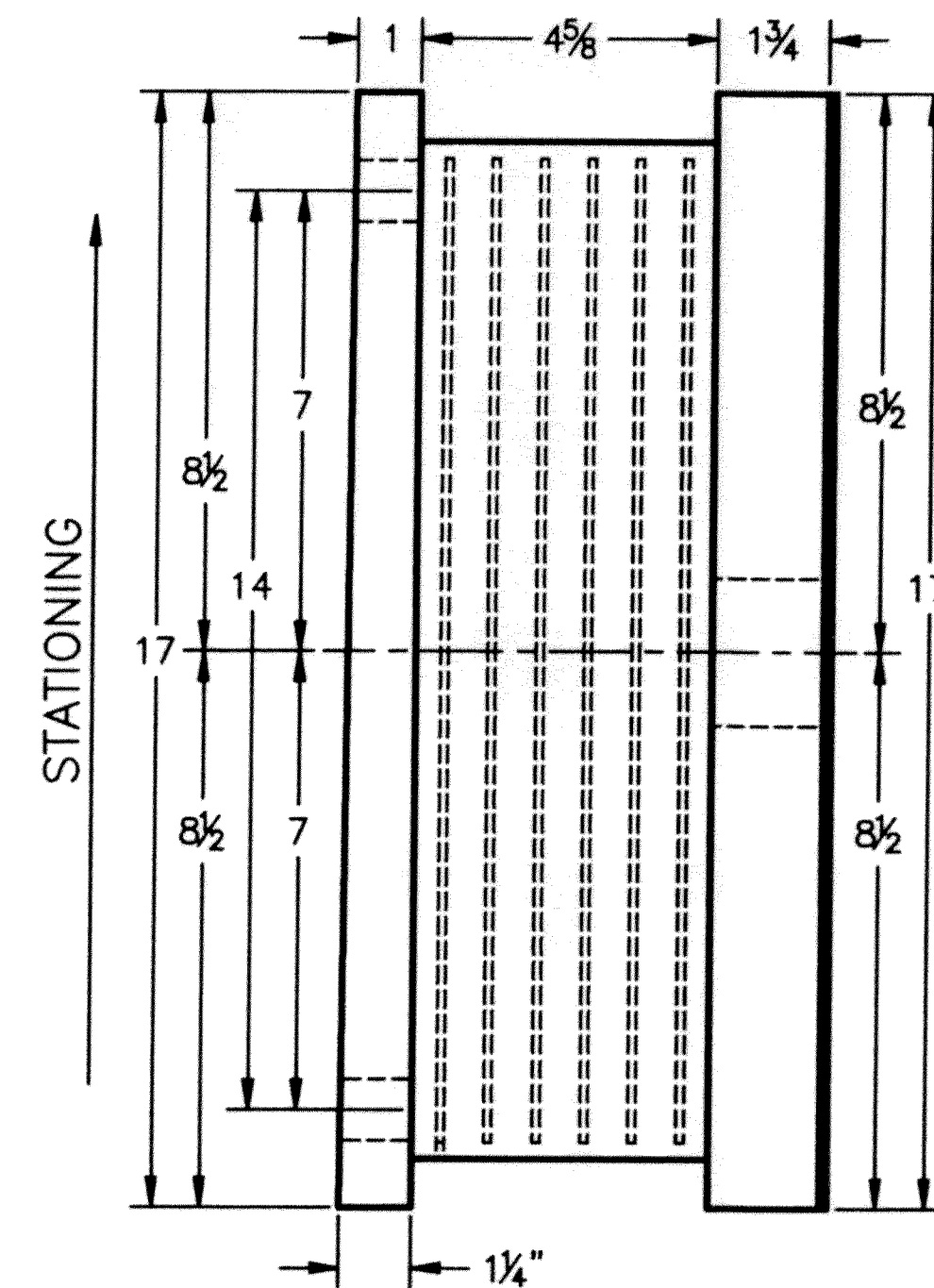
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
--	A	PER ENGINEER'S MARK	2/23/10	C.A.M.



PLAN VIEW
QTY REQ'D = 10 ASSY.
PIERS 1 & 3

1 1/8" x 2 1/4"
SLOTTED HOLE

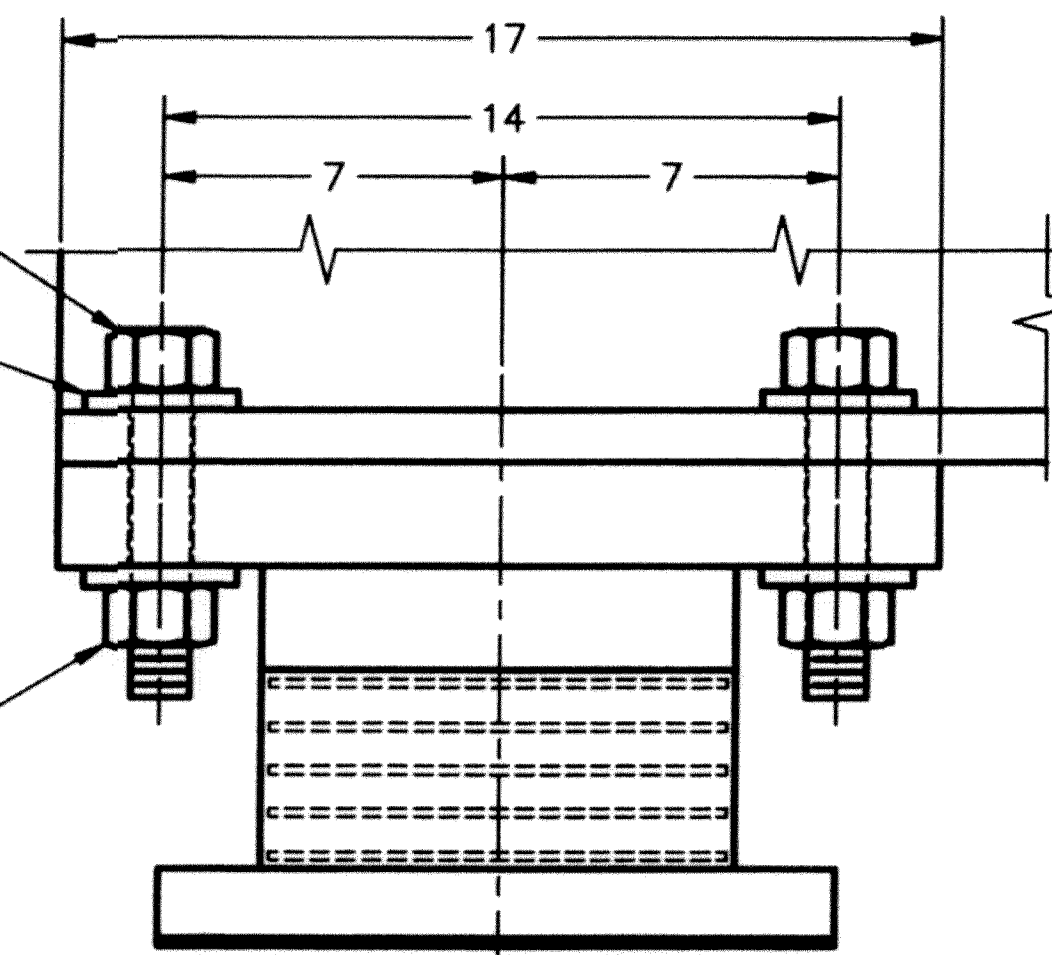
Ø 1 5/16 (TYP.)



STATIONING

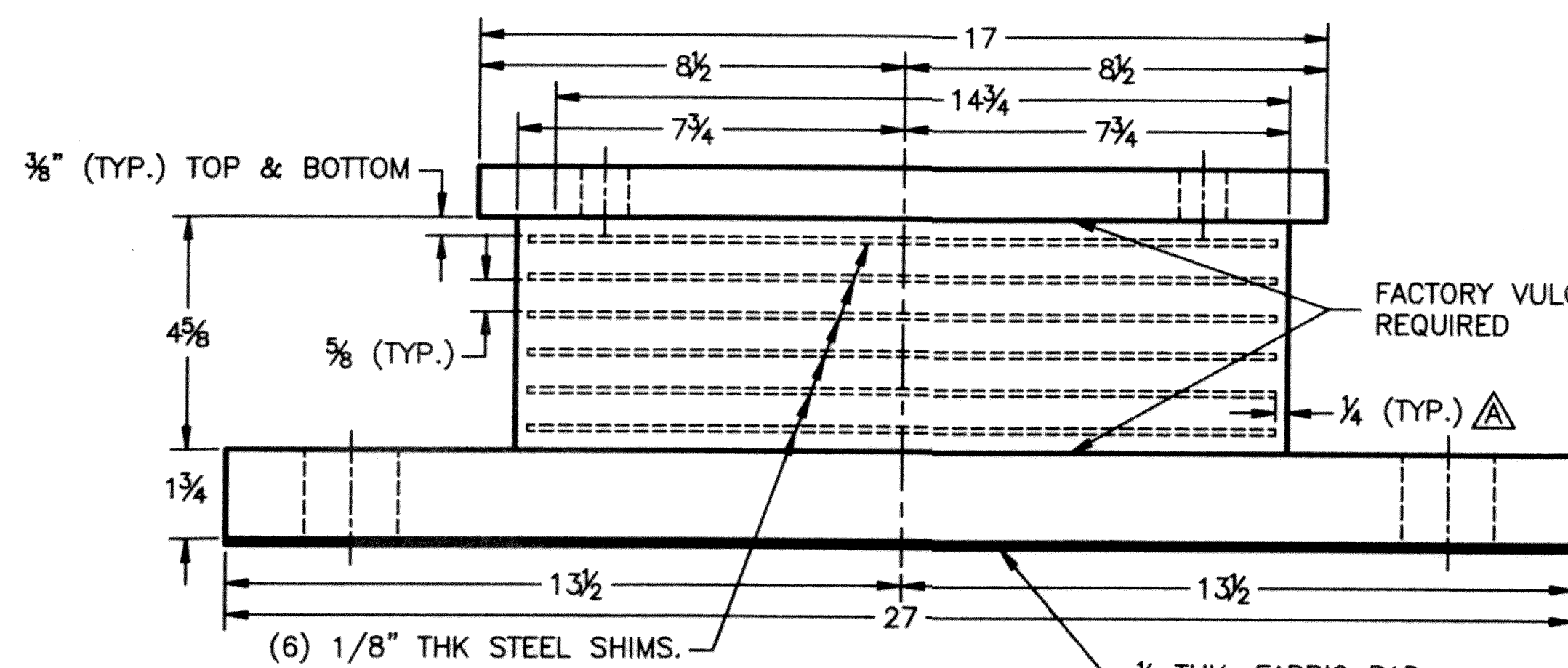
ASTM A325
3/8" BOLT (TYP.)
ASTM F436 WASHER
(TYP.)

ASTM 563 HEAVY
HEX NUT



**SOLE PLATE TO FLANGE
CONNECTION DETAIL**
(ALL BEARINGS)

** FOR NOTES SEE SHEET 2 OF 3



ELEVATION VIEW

(6) 1/8" THK STEEL SHIMS.

1/8" THK. FABRIC PAD

FACTORY VULCANIZATION
REQUIRED

3" x 4" x 3/8" WASHER PLATE
w/ 1 5/8" Ø HOLE FOR BOLT

HEAVY HEX NUT

3" MIN.

1/8" BEARING PAD

Ø OF 1 1/2" Ø x 24" SWEDGED
HOT DIP GALVANIZED w/
6" OF THREAD

SHOP DRAWINGS ARE REVIEWED UNLESS NOTED OTHERWISE

NO EXCEPTION TAKEN

REVISE AS NOTED

RESUBMISSION NOT REQUIRED

CONCRETE BEARING SURFACE

REVISE AS NOTED

RESUBMISSION REQUIRED

DATE

SIGNATURE

REVIEW BY STANTEC IS FOR THE SOLE PURPOSE
OF ASCERTAINING GENERAL CONFORMITY WITH
DESIGN. CONTRACTOR IS RESPONSIBLE FOR
DIMENSIONS, FABRICATION AND CONSTRUCTION
METHODS, COORDINATION OF COMPONENTS,
DETAIL DESIGN OF COMPONENTS, AND WORKS
OR OMISSIONS ON SHOP DRAWINGS.

ANCHOR BOLT DETAIL

QTY. REQ'D = 20, 2 PER BEARING

VERMONT AGENCY OF TRANSPORTATION
PROPOSED IMPROVEMENT BRIDGE PROJECT
TOWN OF PUTNEY, COUNTY OF WINDHAM
US RT. 5 FAS (MAJOR COLLECTOR), BRIDGE 19A

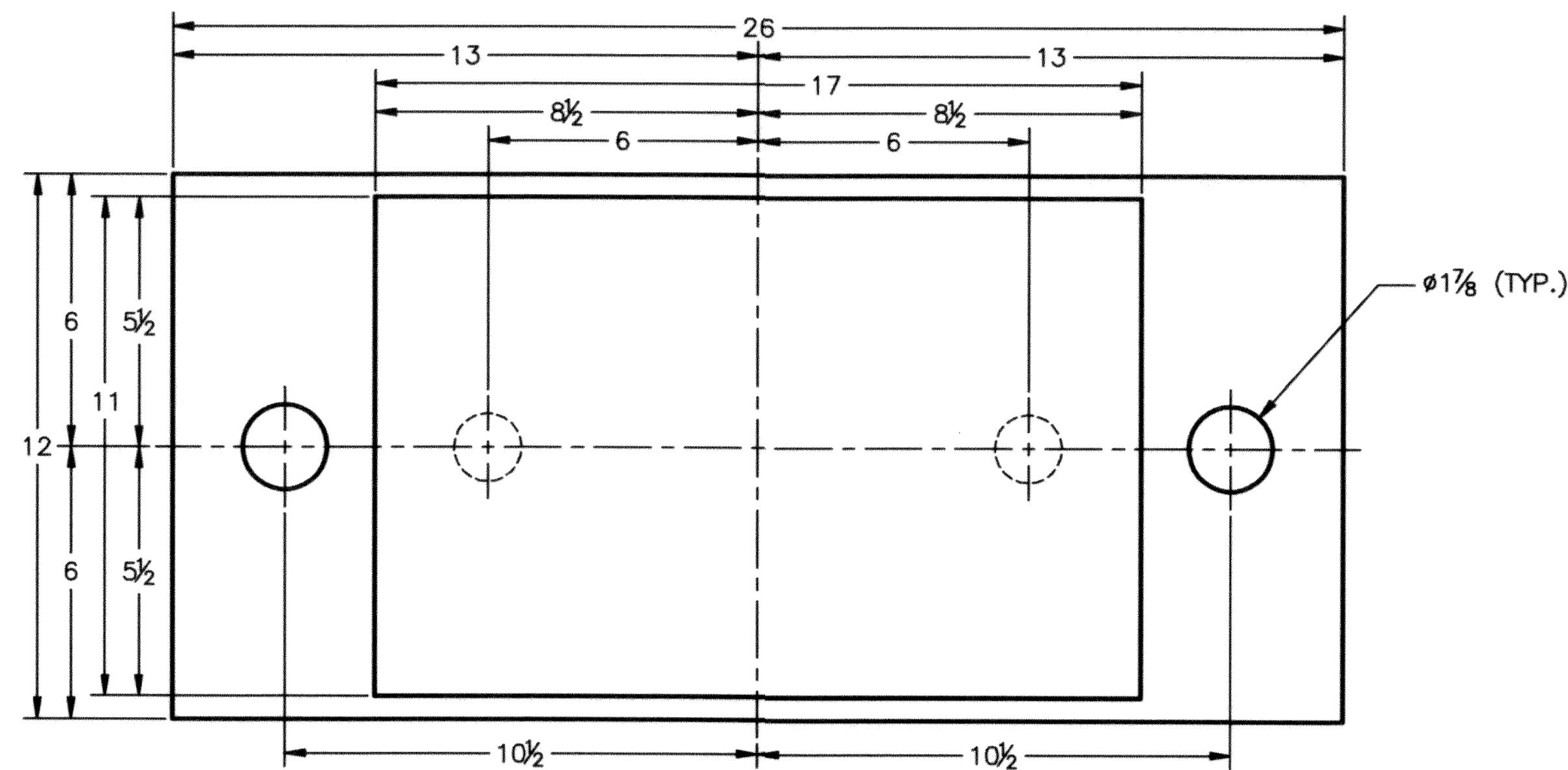
**EXPANSION ELASTOMERIC
BEARING DETAIL**

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ JOB # 3383

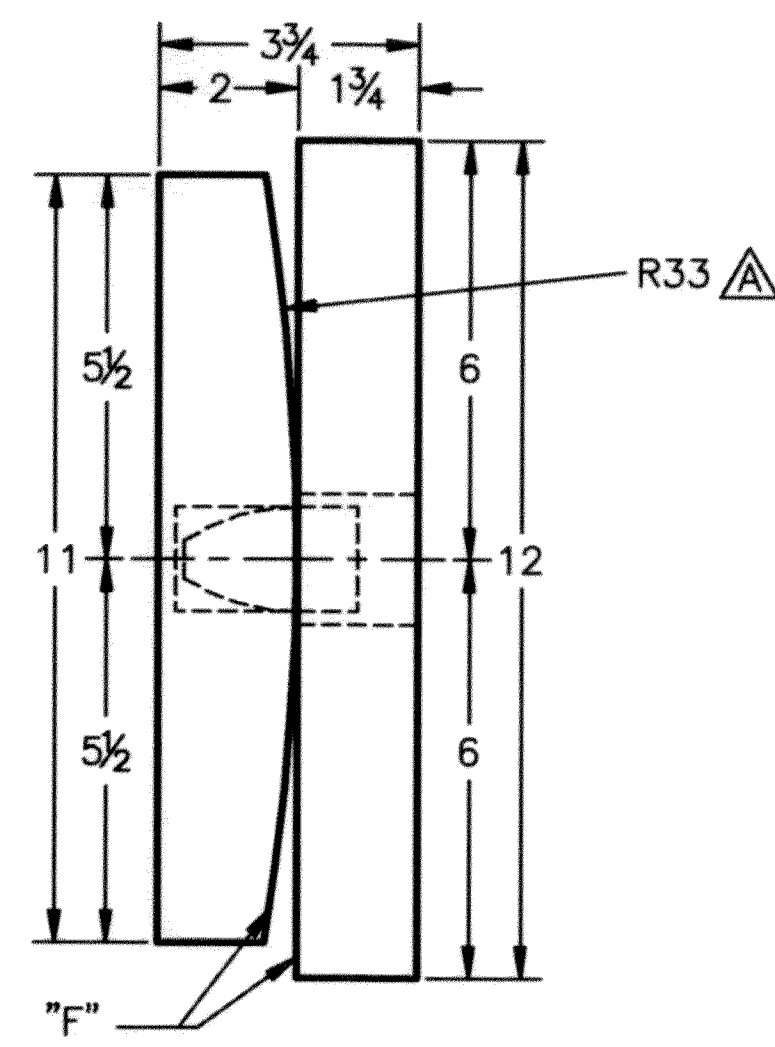
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DATE: 1/29/10	REVISION: A	

FOR: J.A. MCDONALD, INC.

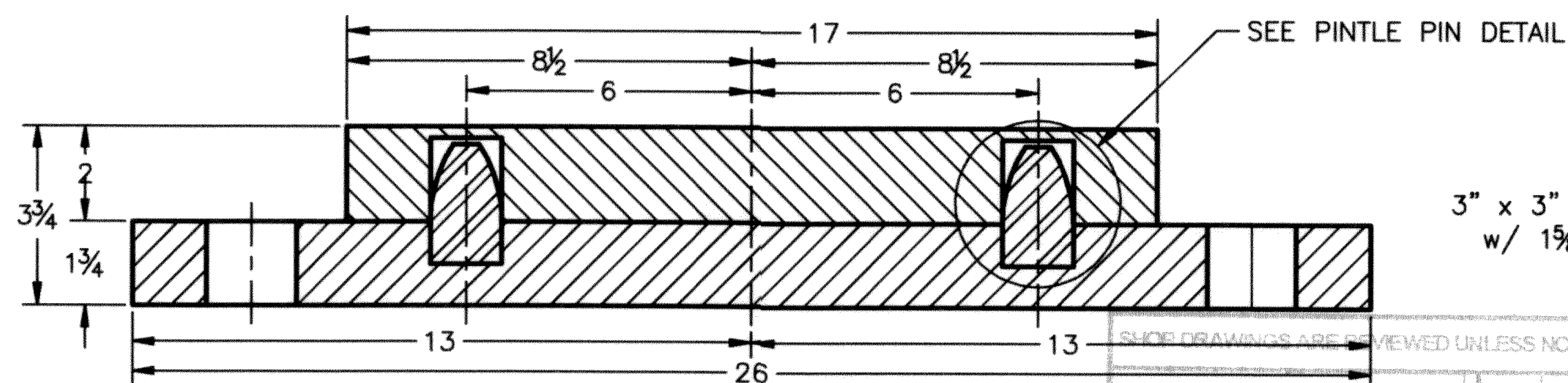
DWG NO: JAM10A3RA SHEET NO. 3 OF 3



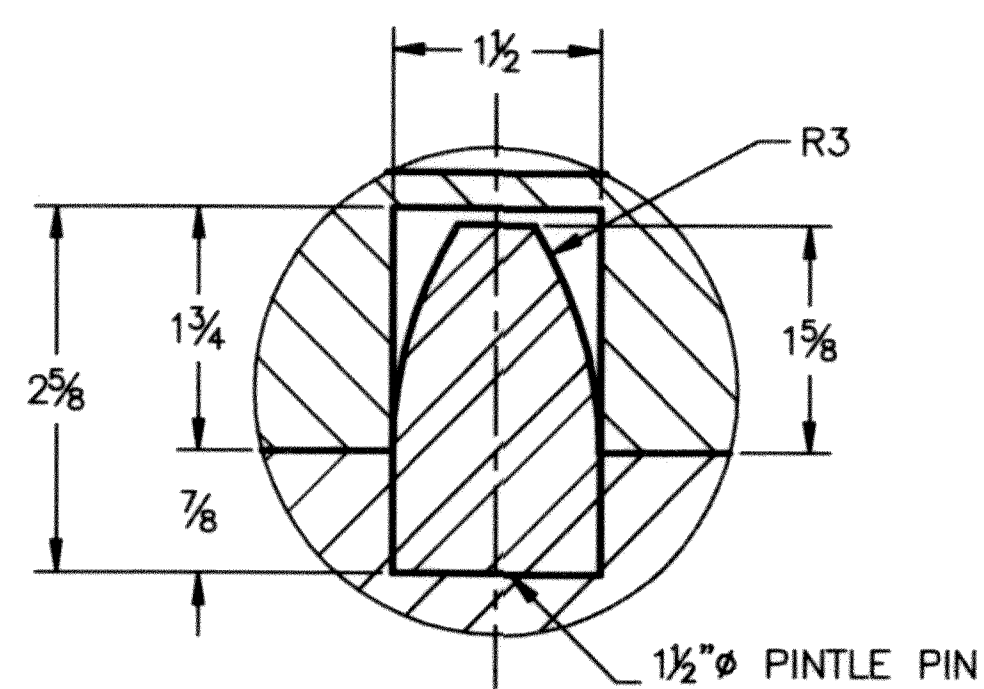
PLAN VIEW
QTY REQ'D = 5 ASSY.
PIER 2



SIDE VIEW



ELEVATION VIEW



PINTLE PIN DETAIL

NO EXCEPTION TAKEN

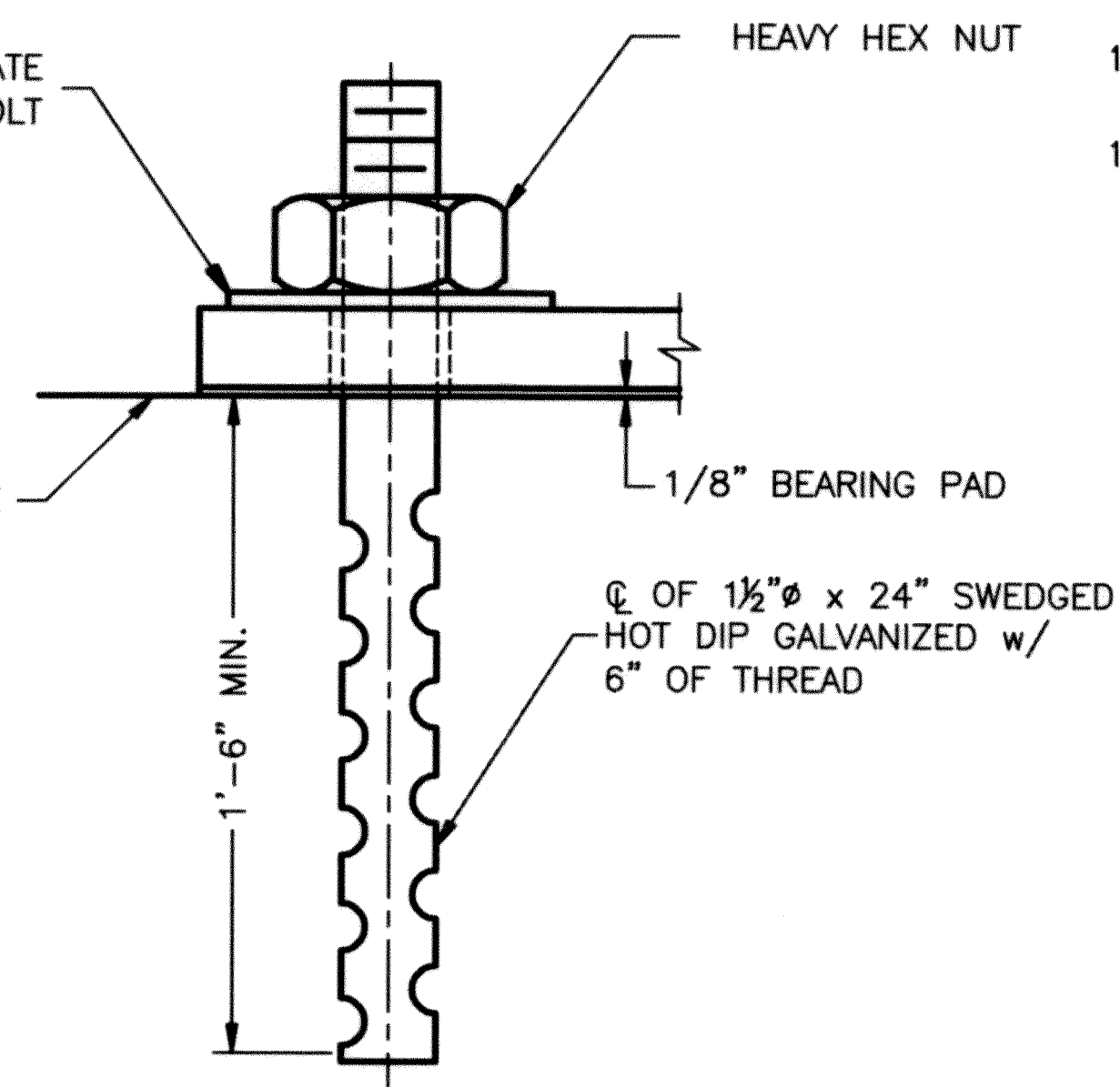
REVISIONS:

NO EXCEPTION TAKEN	
REVISION AS NOTED	
RESUBMISSION NOT REQUIRED	
REVISION AS NOTED	
RESUBMISSION REQUIRED	
REJECTED	

DATE: 2/23/10

SIGNATURE: [Signature]

REVIEW BY STANTEC AS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMITY WITH DESIGN. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS, FABRICATION AND CONSTRUCTION METHODS, COORDINATION OF SUB-TRADES, DETAIL DESIGN OF COMPONENTS, AND ERRORS OR OMISSIONS ON SHOP DRAWINGS.



ANCHOR BOLT DETAIL
QTY. REQ'D = 10, 2 PER BEARING

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
-	-	PER ENGINEER'S MARK	2/23/10	C.A.M.

NOTES:

- BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th. EDITION, 2002.
- THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 20° F. TO 70° F.
- ALL STEEL IN BEARINGS SHALL BE ASTM A-709 GRADE 36.
- ALL STEEL PRODUCED IN THE U.S.A.
- CONTACT PETER SOMOGYI, COORDINATOR.
- TOLERANCES: THICKNESS -0+1/16"
PLAN -0+1/16"
- MANUFACTURING FACILITY LOCATION:
AMSCOT STRUCTURAL PRODUCTS INC.
241 EAST BLACKWELL STREET
DOVER, NJ 07801
- ALL DIMENSIONS ARE IN INCHES.
- ALL BEARING DEVICES SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b), AS MODIFIED BY THE GENERAL SPECIAL PROVISIONS.
- ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.
- BEARING SURFACES MARKED "F" SHALL BE FINISH IN ACCORDANCE WITH AASHTO DIVISION II, SECTION 11.4.6.

VERMONT AGENCY OF TRANSPORTATION
PROPOSED IMPROVEMENT BRIDGE PROJECT
TOWN OF PUTNEY, COUNTY OF WINDHAM
US RT. 5 FAS (MAJOR COLLECTOR), BRIDGE 19A

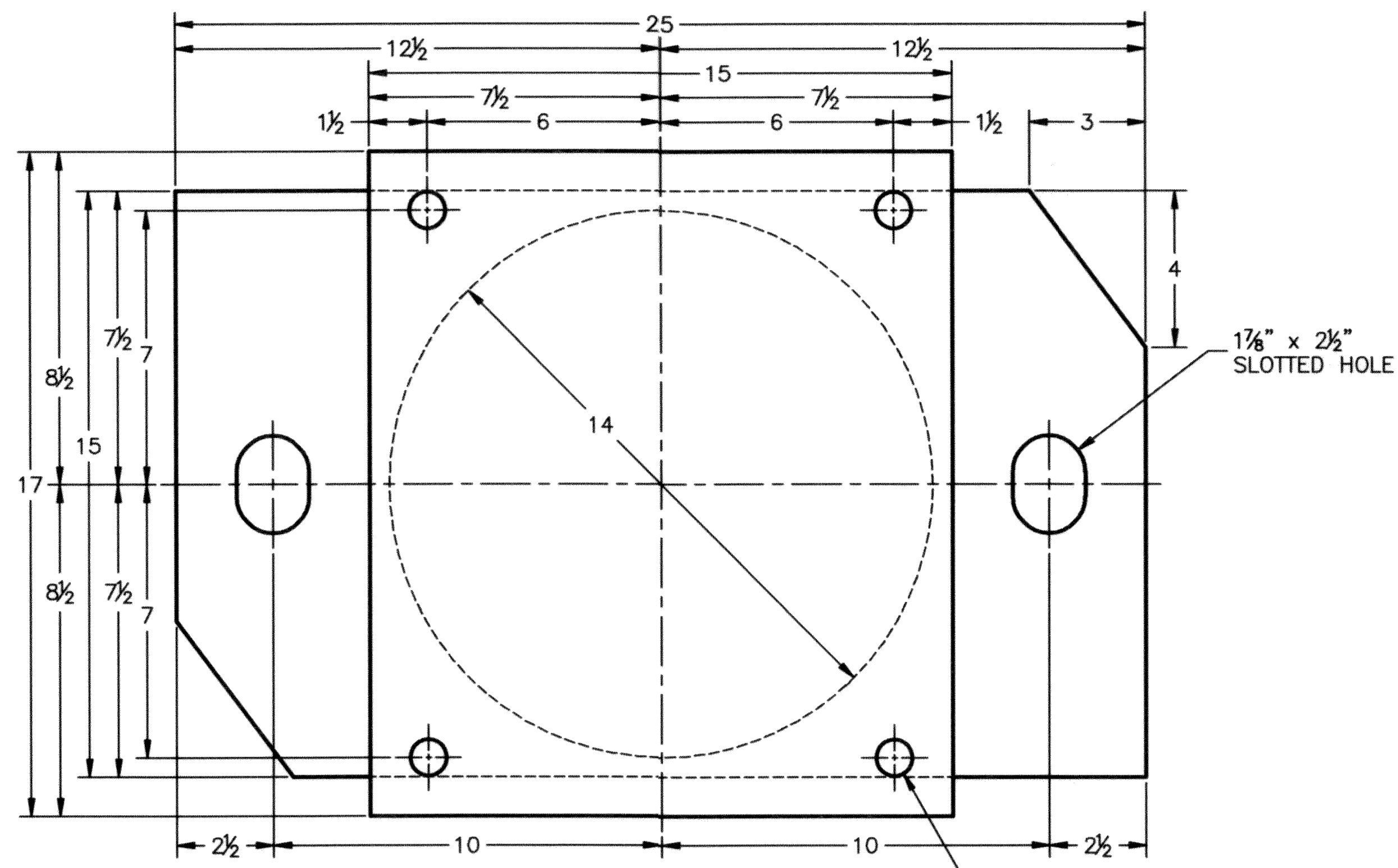
STEEL ROCKER BEARING DETAIL

AMSCOT

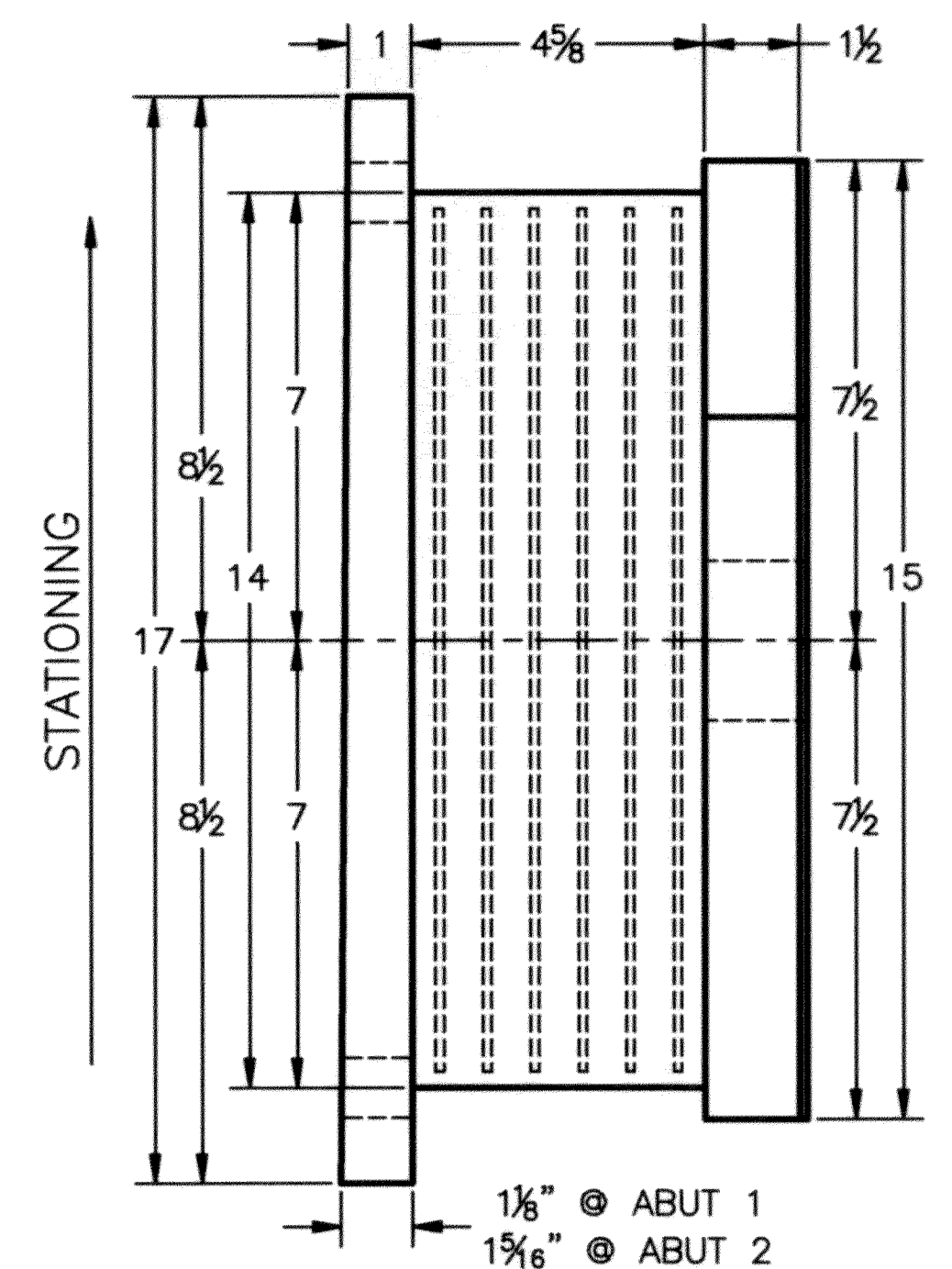
STRUCTURAL PRODUCTS CORP.
DOVER, NJ

JOB # 3383

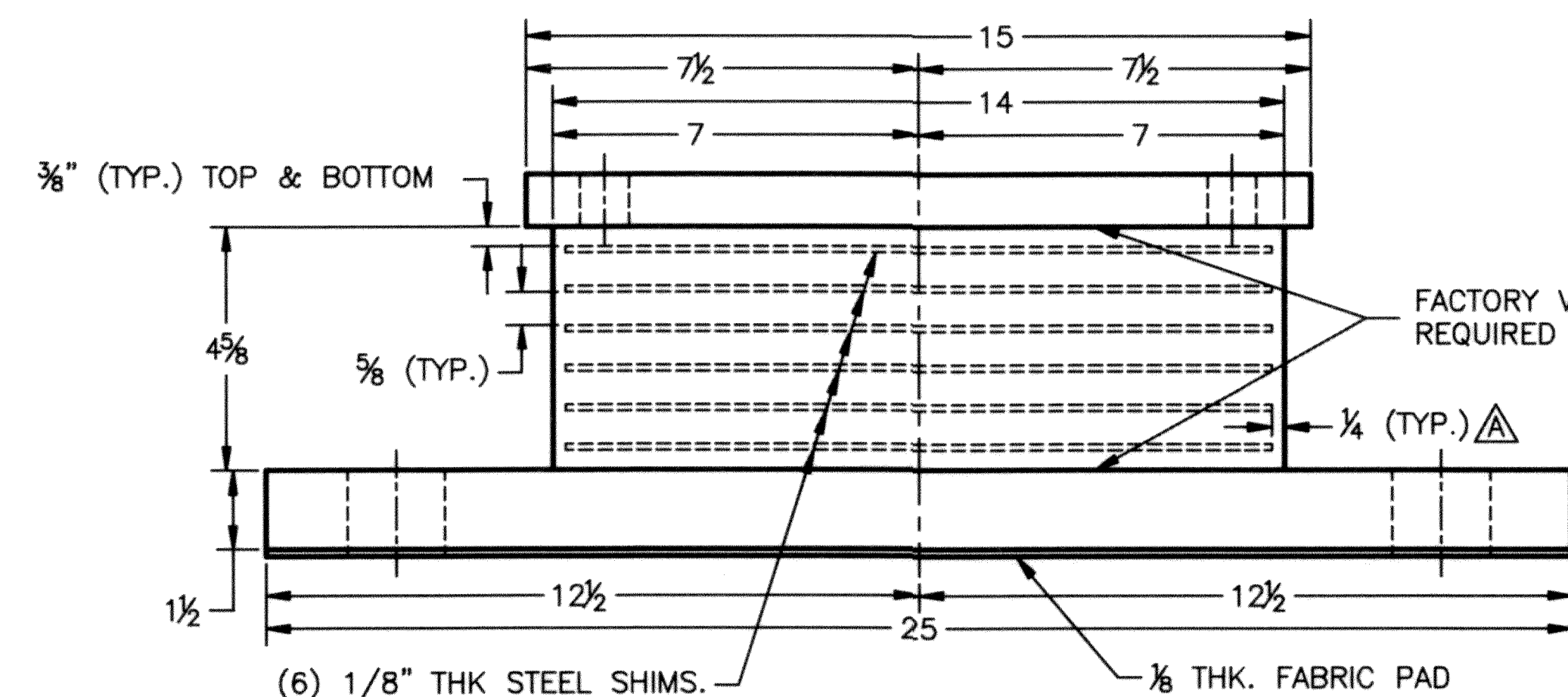
SCALE: N.T.S.	CHECKED: B.F.	DRAWN BY: C.A.M.
DATE: 1/29/10		REVISION: A
FOR: J.A. McDONALD, INC.		
DWG NO: JAM10A1RA	SHEET NO. 1 OF 3	



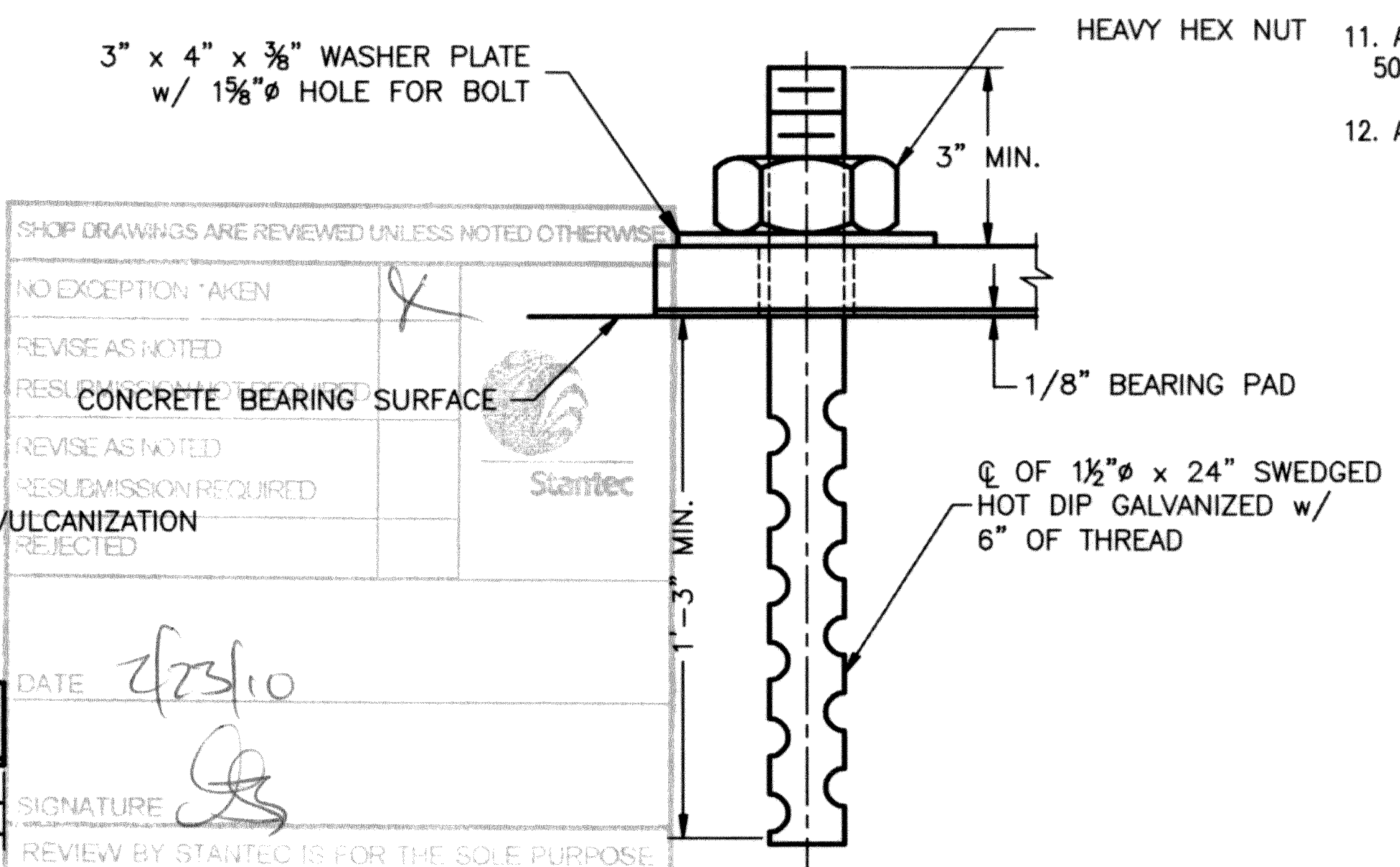
PLAN VIEW
QTY REQ'D = 10 ASSY.
ABUTMENTS 1 & 2



STATIONING



ELEVATION VIEW



ANCHOR BOLT DETAIL

SHOP DRAWINGS ARE REVIEWED UNLESS NOTED OTHERWISE

NO EXCEPTION TAKEN

REVISIONS:

REVISION	DATE	BY
1	2/23/10	[Signature]

CONCRETE BEARING SURFACE

FACTORY VULCANIZATION REQUIRED

DATE: 2/23/10

SIGNATURE: [Signature]

REVIEW BY STANTEC IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMITY WITH DESIGN. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS, FABRICATION AND CONSTRUCTION METHODS, COORDINATION OF SUBMITTALS, DETAIL DESIGN OF COMPONENTS, AND/OR OMISSIONS ON SHOP DRAWINGS.

QTY. REQ'D = 20, 2 PER BEARING

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
--	A	PER ENGINEER'S MARK	2/23/10	C.A.M.

- NOTES:**
- BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th. EDITION, 2002.
 - THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 20°F. TO 70°F.
 - THE ELASTOMER AASHTO GR. (NATURAL RUBBER), TEMPERATURE GR. 3, SHALL HAVE A DUROMETER HARDNESS SHORE A 60 ± 5 POINTS. SHEAR MODULUS TO BE 152 PSI ±15%.
 - STEEL SHIM PLATES FOR INTERNAL LAMINATES SHALL BE ROLLED MILD STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-1011, GRADE 36. SHIMS SHALL BE SMOOTH CUT, DEBURRED, GRIT BLASTED, AND DEGREASED PRIOR TO VULCANIZATION.
 - ALL STEEL IN BEARINGS SHALL BE ASTM A-709 GRADE 36.
 - ALL STEEL PRODUCED IN THE U.S.A.
 - CONTACT PETER SOMOGYI, COORDINATOR.
 - TOLERANCES: THICKNESS -0+1/16"
PLAN -0+1/16"
 - MANUFACTURING FACILITY LOCATION:
AMSCOT STRUCTURAL PRODUCTS INC.
241 EAST BLACKWELL STREET
DOVER, NJ 07801
 - ALL DIMENSIONS ARE IN INCHES.
 - ALL BEARING DEVICES SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b), AS MODIFIED BY THE GENERAL SPECIAL PROVISIONS.
 - ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

**VERMONT AGENCY OF TRANSPORTATION
PROPOSED IMPROVEMENT BRIDGE PROJECT
TOWN OF PUTNEY, COUNTY OF WINDHAM
US RT. 5 FAS (MAJOR COLLECTOR), BRIDGE 19A**

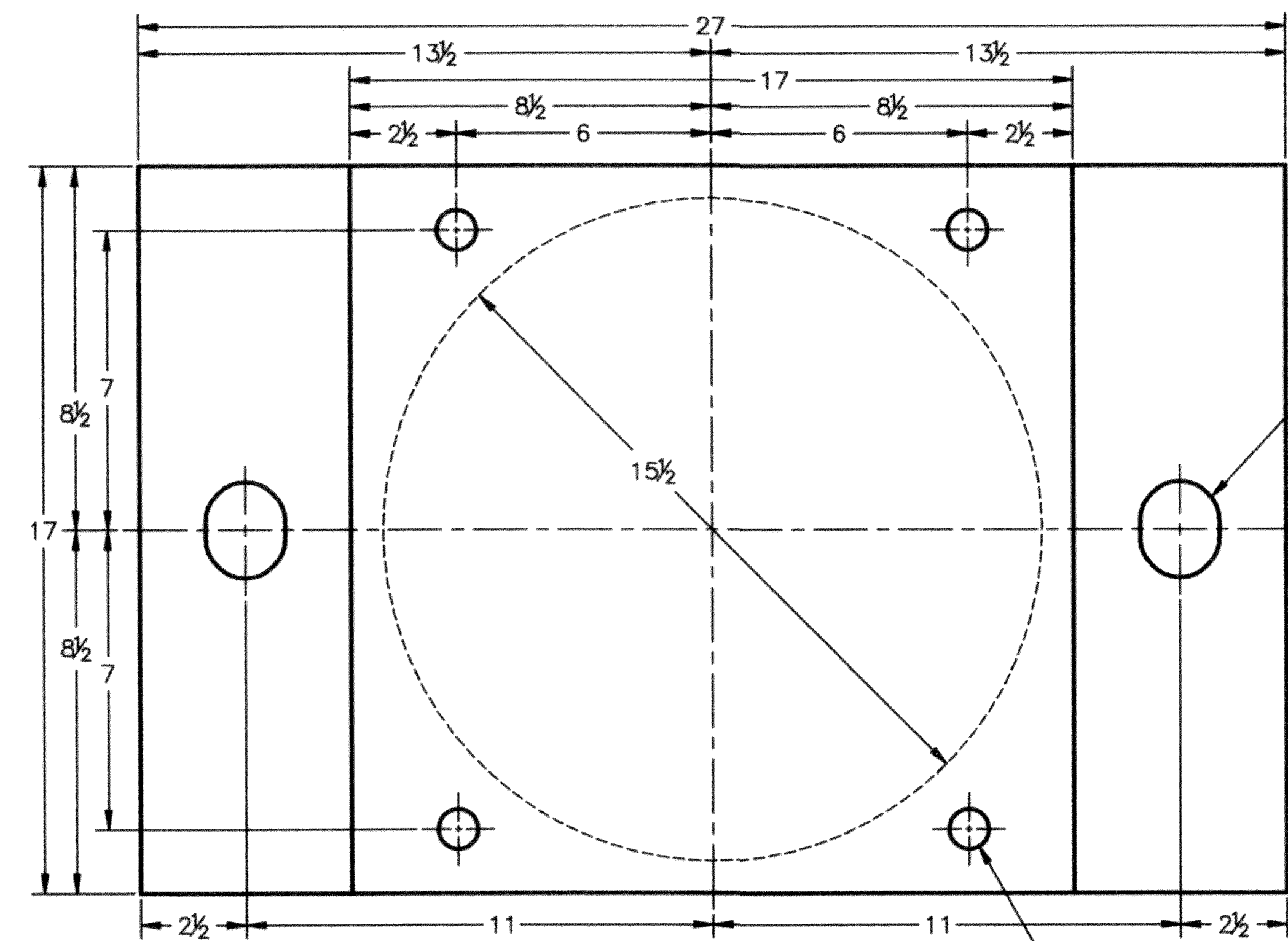
**EXPANSION ELASTOMERIC
BEARING DETAIL**

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ JOB # 3383

SCALE: N.T.S.	CHECKED: B.F.	DRAWN BY: C.A.M.
DATE: 1/29/10	REVISION: A	

FOR: J.A. MCDONALD, INC.

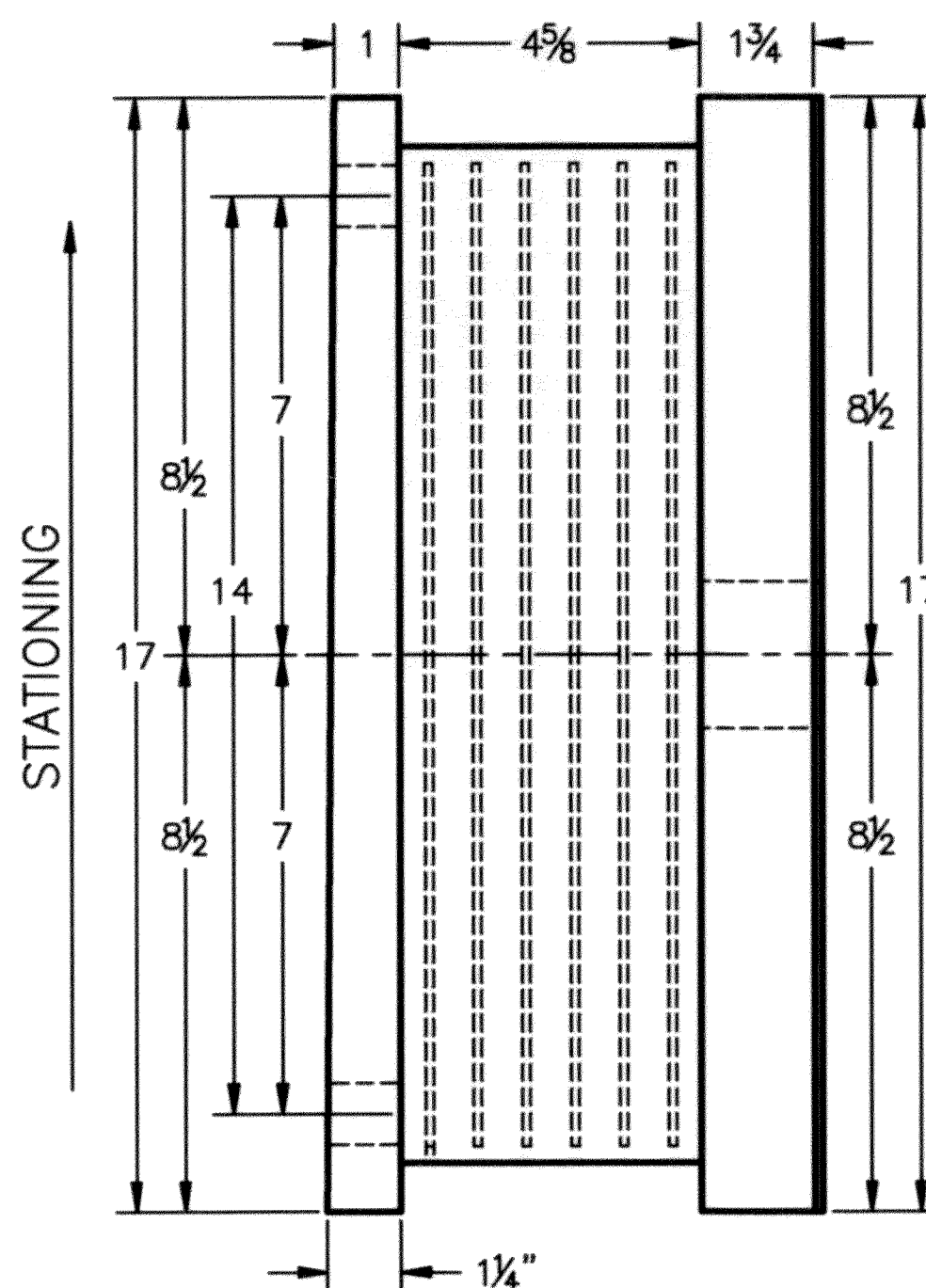
DWG NO: JAM10A2RA SHEET NO. 2 OF 3



PLAN VIEW
QTY REQ'D = 10 ASSY.
PIERS 1 & 3

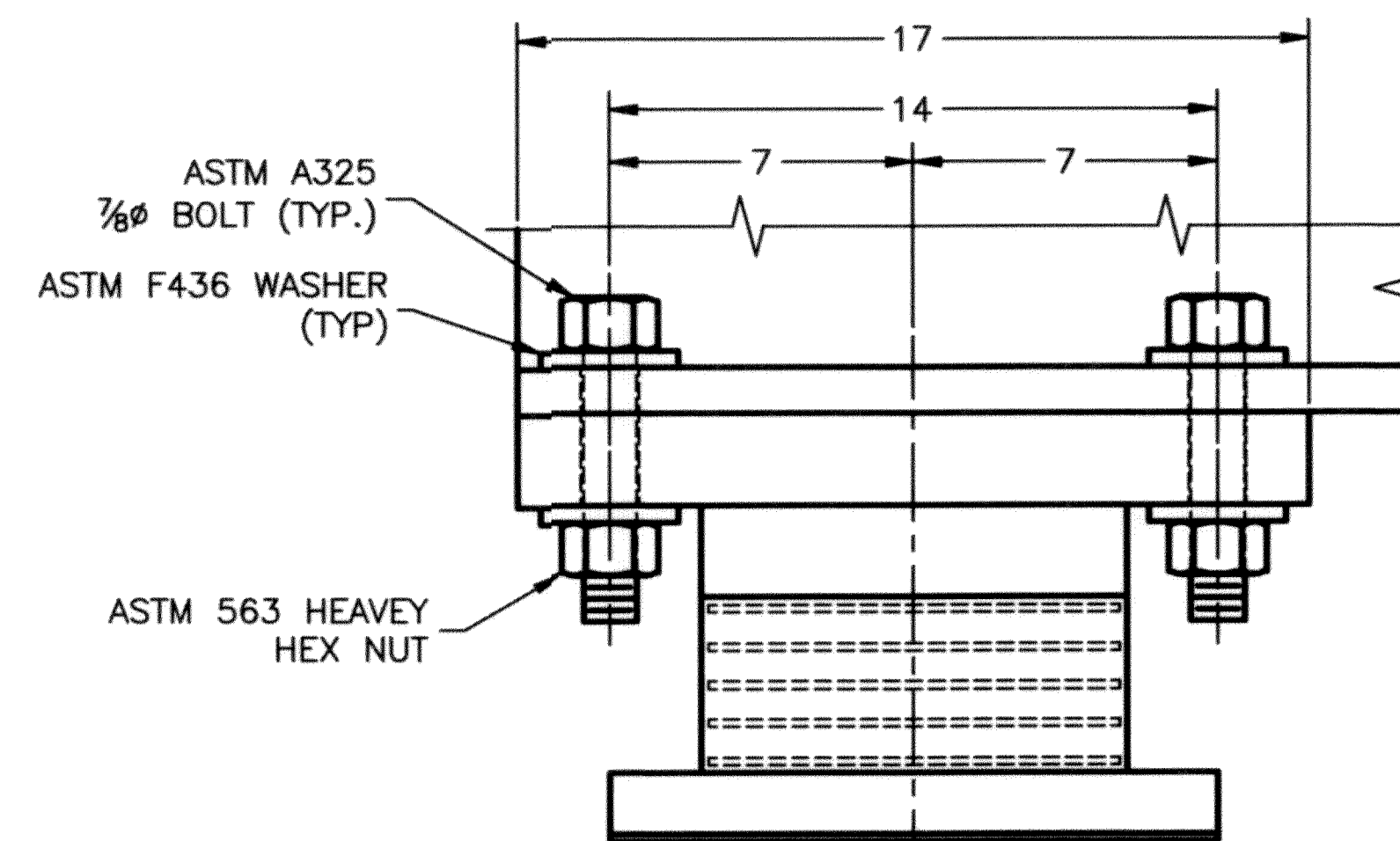
1 7/8" x 2 1/4" SLOTTED HOLE

Ø 1 5/16 (TYP.)



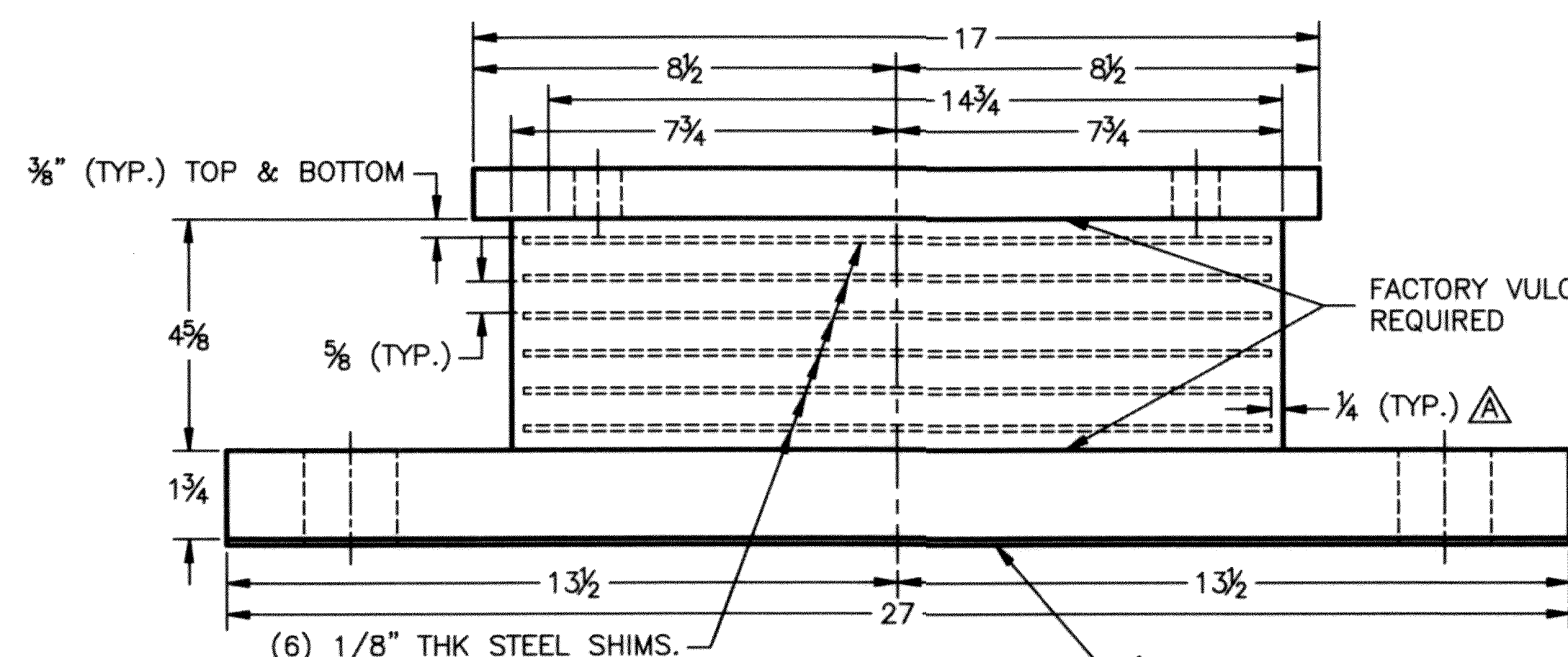
STATIONING

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
--	A	PER ENGINEER'S MARK	2/23/10	C.A.M.

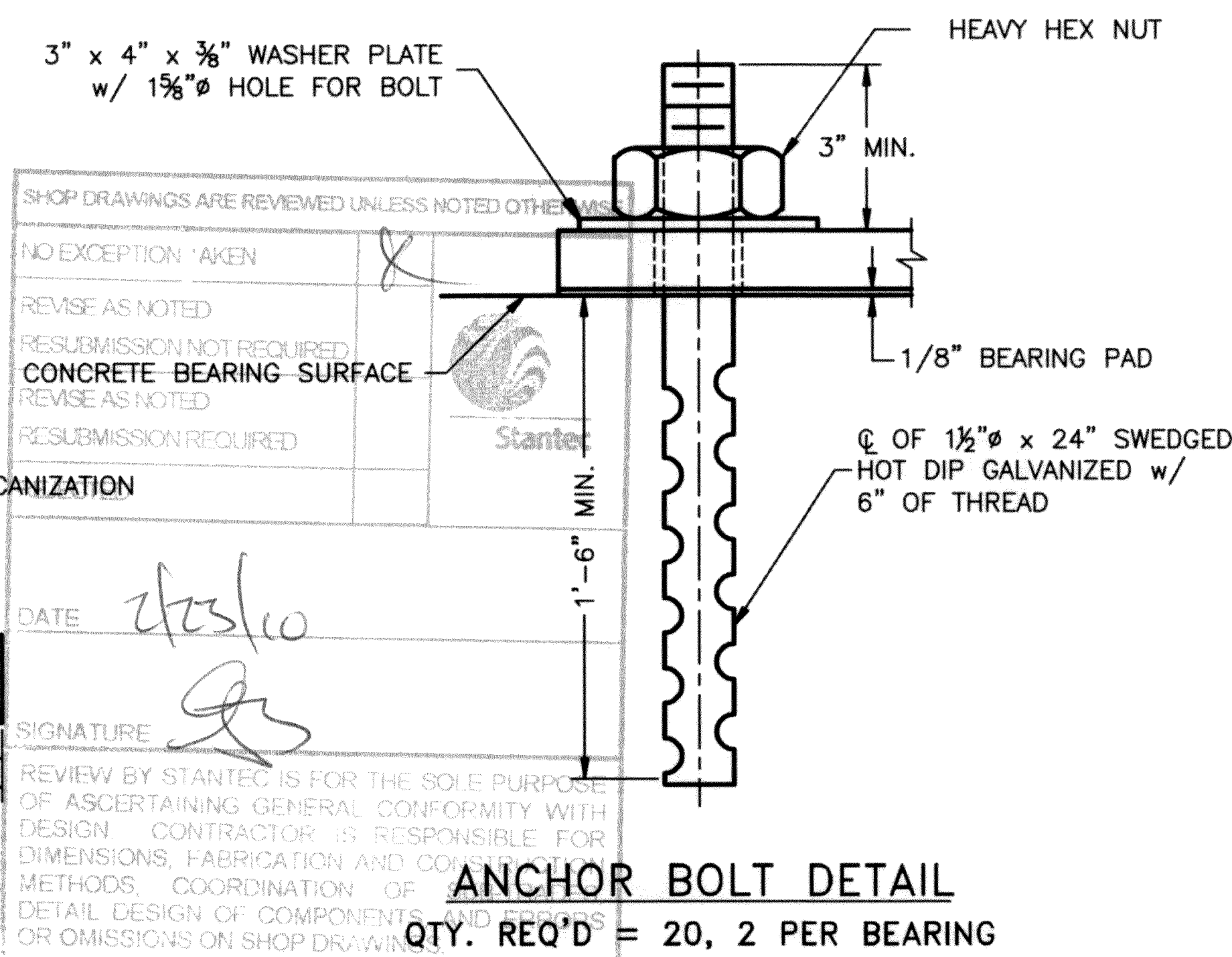


SOLE PLATE TO FLANGE CONNECTION DETAIL
(ALL BEARINGS)

** FOR NOTES SEE SHEET 2 OF 3



ELEVATION VIEW



ANCHOR BOLT DETAIL

QTY. REQ'D = 20, 2 PER BEARING

VERMONT AGENCY OF TRANSPORTATION
PROPOSED IMPROVEMENT BRIDGE PROJECT
TOWN OF PUTNEY, COUNTY OF WINDHAM
US RT. 5 FAS (MAJOR COLLECTOR), BRIDGE 19A

EXPANSION ELASTOMERIC BEARING DETAIL

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ JOB # 3383

SCALE: N.T.S.	CHECKED: B.F.	DRAWN BY: C.A.M.
DATE: 1/29/10		REVISION: A

FOR: J.A. MCDONALD, INC.

DWG NO: JAM10A3RA SHEET NO. 3 OF 3

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

- 1) ALL MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006 WITH LATEST REVISIONS AND THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 2002 AND ITS LATEST REVISIONS.

MATERIAL SPECIFICATIONS

- 1) UNLESS OTHERWISE NOTED, ALL STEEL TO BE UNPAINTED AASHTO M270 (ASTM A709) GRADE 50W.
- 2) MATERIAL NOTED "CVN" OR "T2" ON DETAIL DRAWINGS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF VERMONT STANDARD SPECIFICATIONS SECTION 714.01.
- 3) HIGH STRENGTH BOLTS: ASTM A325 (AASHTO M164) 7/8" DIAMETER, TYPE 3, IN 15/16" DIAMETER HOLES, UNLESS NOTED OTHERWISE. NUTS SHALL BE A563 (TYPE 3) GRADE C3. IN PAINTED AREAS, USE ASTM 325 (AASHTO M164) TYPE 1 (GALV PER AASHTO M232) BOLTS, NUTS AND WASHERS.
BOLTS & NUTS SHALL BE ROTATIONAL CAPACITY TESTED. DO NOT MIX NUTS & BOLTS FROM DIFFERENT CONTAINERS UNLESS ALL BOLTS & NUTS HAVE THE SAME LOT NUMBER.

FABRICATION

- 1) ALL HOLES SHALL BE PUNCHED OR DRILLED FULL SIZE (UN).

WELDING

- 1) THE CONFIGURATION OF THE WELD JOINTS AND ALL WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5-D2 BRIDGE WELDING CODE AND IN ADDITION TO SPECIFICATIONS SHOWN ABOVE. ALL WELDING WILL BE DETAILED TO PRE-QUALIFIED JOINTS, UNLESS PROHIBITED BY THE DESIGNER.
- 2) WELDING OF MAIN LOAD CARRYING MEMBERS AND ATTACHMENTS SHALL BE PERFORMED USING THE AUTOMATIC SUBMERGED ARC & SHIELDED METAL ARC PROCESSES. ALL WELDS ARE CONTINUOUS U.N.
- 3) NON DESTRUCTIVE TESTING OF WELDS SHALL BE IN ACCORDANCE WITH THE REFERENCED SPECIFICATION.
- 4) SEE DETAIL "WS1" ON THIS DRAWING FOR WELD TERMINATION DETAIL.

FIELD CONNECTIONS

- 1) ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH A-325 BOLTS (UN), INSTALLED PER SECTION 506.19(c). SEE DWG E1 FOR FIELD BOLT SIZES.
- 2) BOLTS SHALL HAVE HEAVY HEX NUT, HEAVY HEX HEAD, AND AT LEAST ONE FLAT WASHER EACH. WASHER TO BE PLACED UNDER TURNED ELEMENT.
- 3) PIECE MARKS WILL BE LOCATED AS SHOWN ON ERECTION DRAWINGS.

CLEANING

- 1) ALL STEEL SHALL BE BLAST CLEANED IN ACCORDANCE WITH SSPC SP-10.

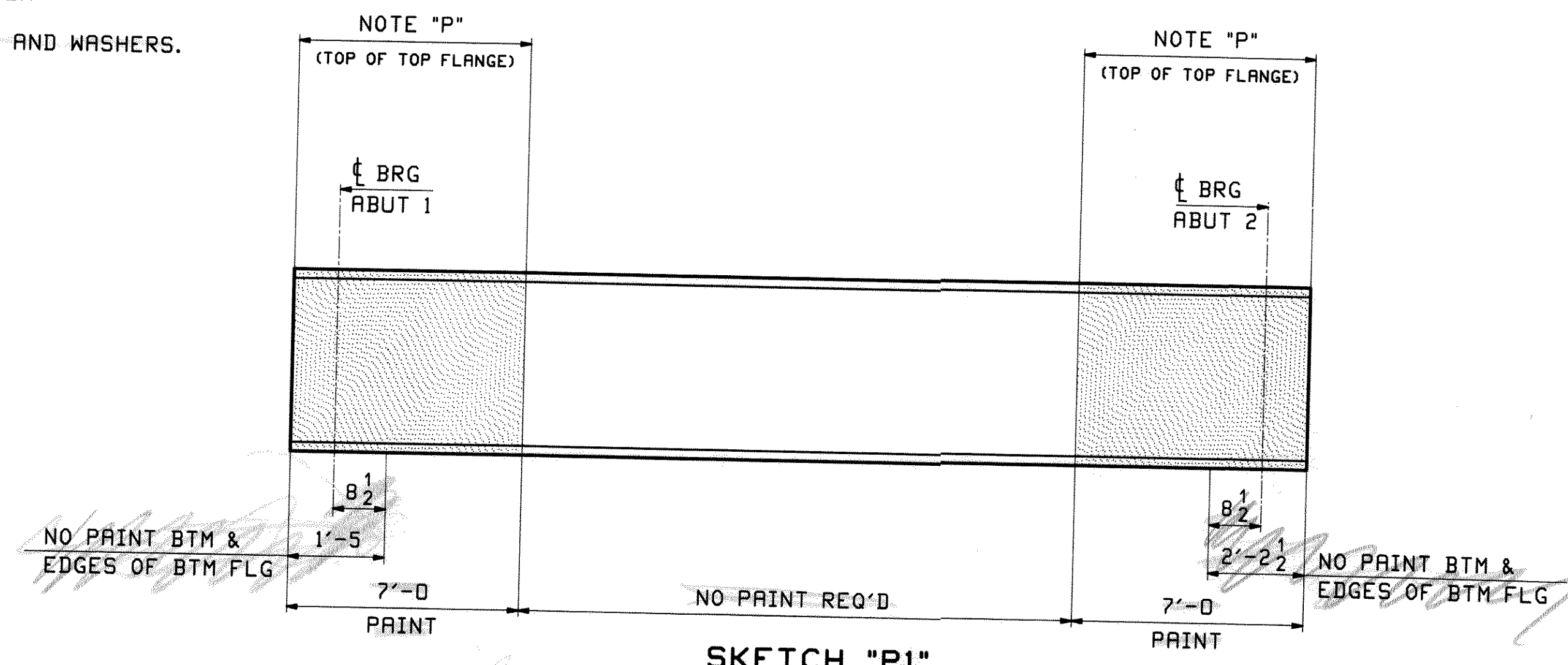
PAINTING

- 1) THE GIRDER ENDS & ABUTMENT DIAPHRAGMS WITHIN 7'-0 OF THE ENDS OF STEEL AT ABUT 1 & ABUT 2 SHALL BE PAINTED, EXCEPT AS NOTED (SEE SKETCH "P1").
- 2) THE PAINT SYSTEM AND ITS APPLICATION SHALL CONFORM TO SECTION 513 OF THE STANDARD SPECIFICATIONS.

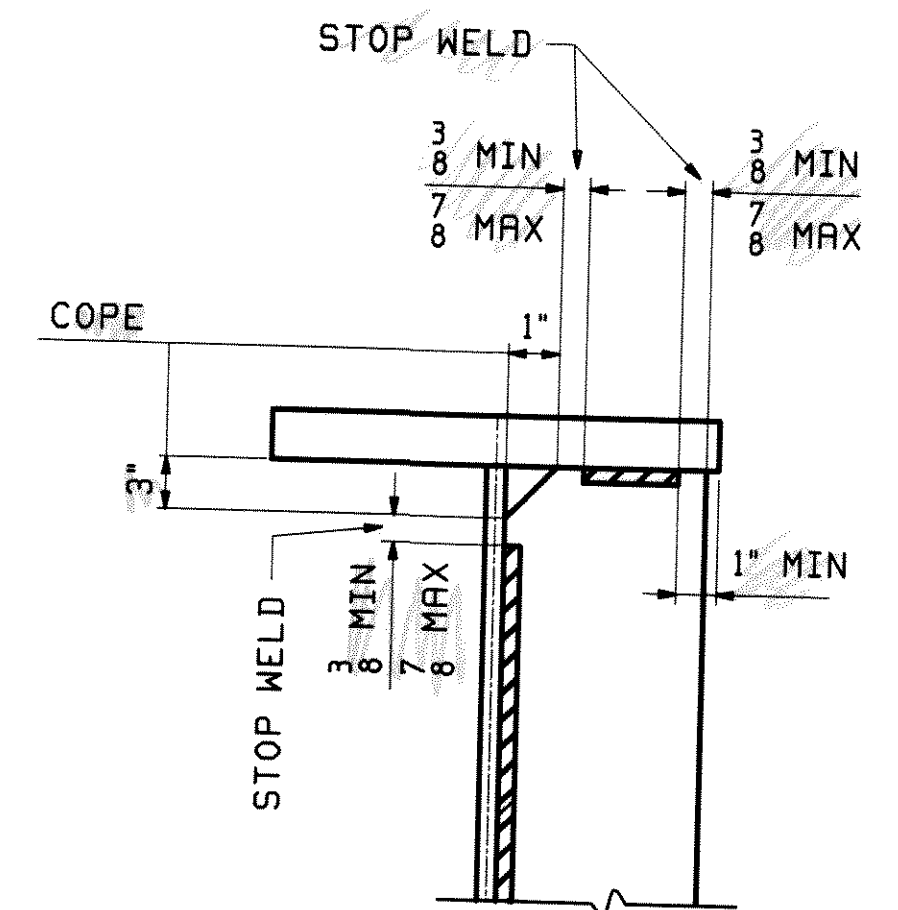
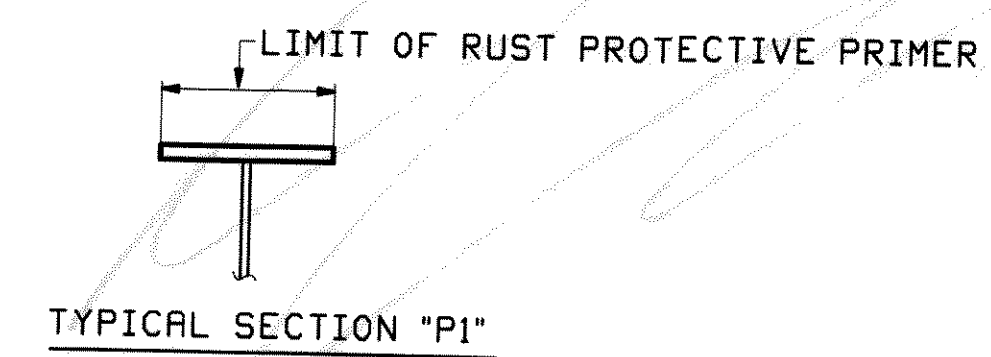
THE PAINT SYSTEM SHALL BE AS FOLLOWS:
 PRIMER: CARBOLINE 859 ORGANIC ZINC RICH PRIMER ~ 3.0 - 5.0 MILS DFT.
 INTERMEDIATE: CARBOLINE 888 EPOXY ~ 4.0 - 6.0 MILS DFT.
 TOPCOAT: CARBOLINE 133 HB ALIPHATIC POLYURETHANE ~ 2.0 - 4.0 MILS DFT.

TOP COAT COLOR: DARK BROWN FED COLOR #20059

- 3) PRIME COAT ONLY WITHIN 3" OF ALL HOLES WITHIN THE PAINTED AREA.



NOTE "P"
 PAINT WITH A LIGHT RUST-PREVENTATIVE COAT OF PRIMER (SEE SECTION "P1")



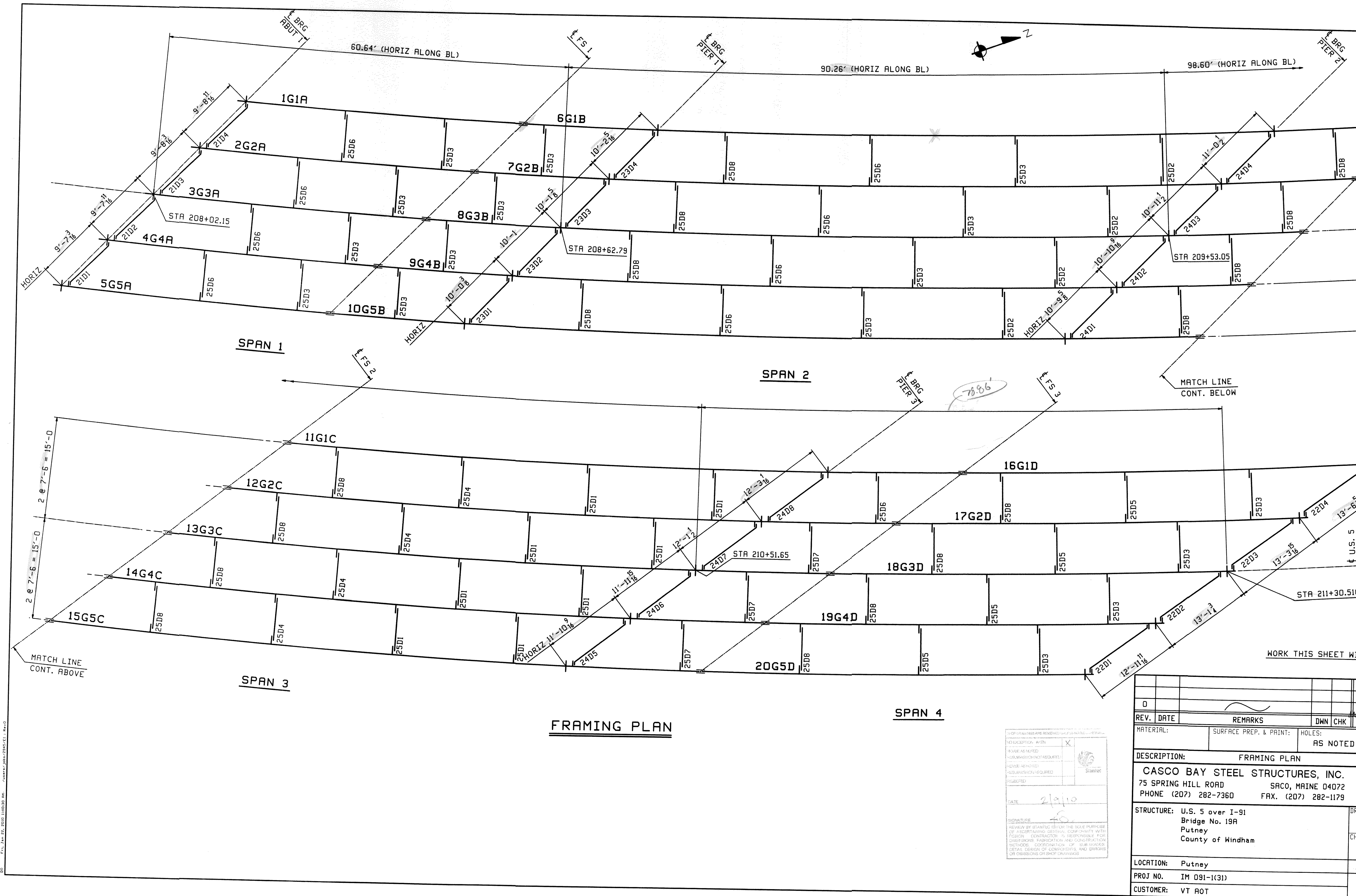
DETAIL "WS1"
 STIFFENER WELD TERMINATION

IF HEAD IS TURNED, 2 WASHERS NEEDED?
 NO, OK AS SHOWN

STATEC'S COPY

NOTE TO ENGINEER:
 THESE NOTES ARE NOT INTENDED TO COMPLIANCE WITH RELEVANT SPECIFICATIONS

REV.	DATE	REMARKS	DWN	CHK
0				
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:	
			AS NOTED	
DESCRIPTION: GENERAL NOTES				
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179				
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham				
LOCATION: Putney				
PROJ NO. IM 091-1(3)				
CUSTOMER: VT AOT				

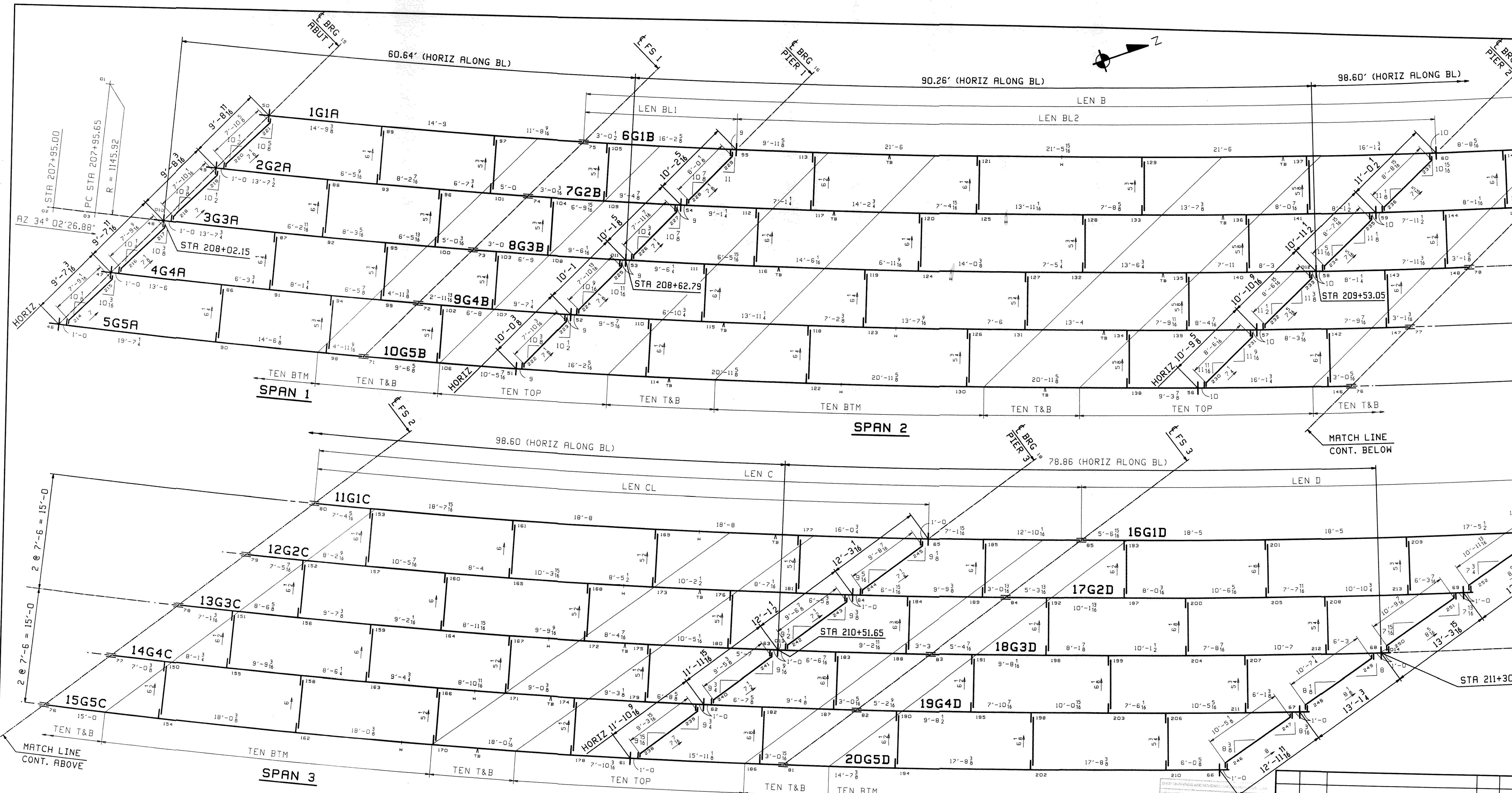


FRAMING PLAN

ALL DIMENSIONS ARE REVIEWED UNLESS OTHERWISE NOTED
 NO EXCEPTIONS - A/E/N
 AS NOTED
 NO WASHINGTON STATE REQUIREMENTS
 REVISE AS NOTED
 REQUIREMENTS REQUIRED
 REQUESTED
 DATE: 2/10/10
 SIGNATURE: [Signature]

REV.	DATE	REMARKS	DWN	CHK
0				
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:	
			AS NOTED	
DESCRIPTION: FRAMING PLAN				
CASCO BAY STEEL STRUCTURES, INC.				
75 SPRING HILL ROAD SACO, MAINE 04072				
PHONE (207) 282-7360 FAX. (207) 282-1179				
STRUCTURE: U.S. 5 over I-91				
Bridge No. 19A				
Putney				
County of Windham				
LOCATION: Putney				
PROJ NO. IM 091-1(31)				
CUSTOMER: VT ROT				

00 104 104 23 2008 11/15/08 000



CALCULATION PLAN

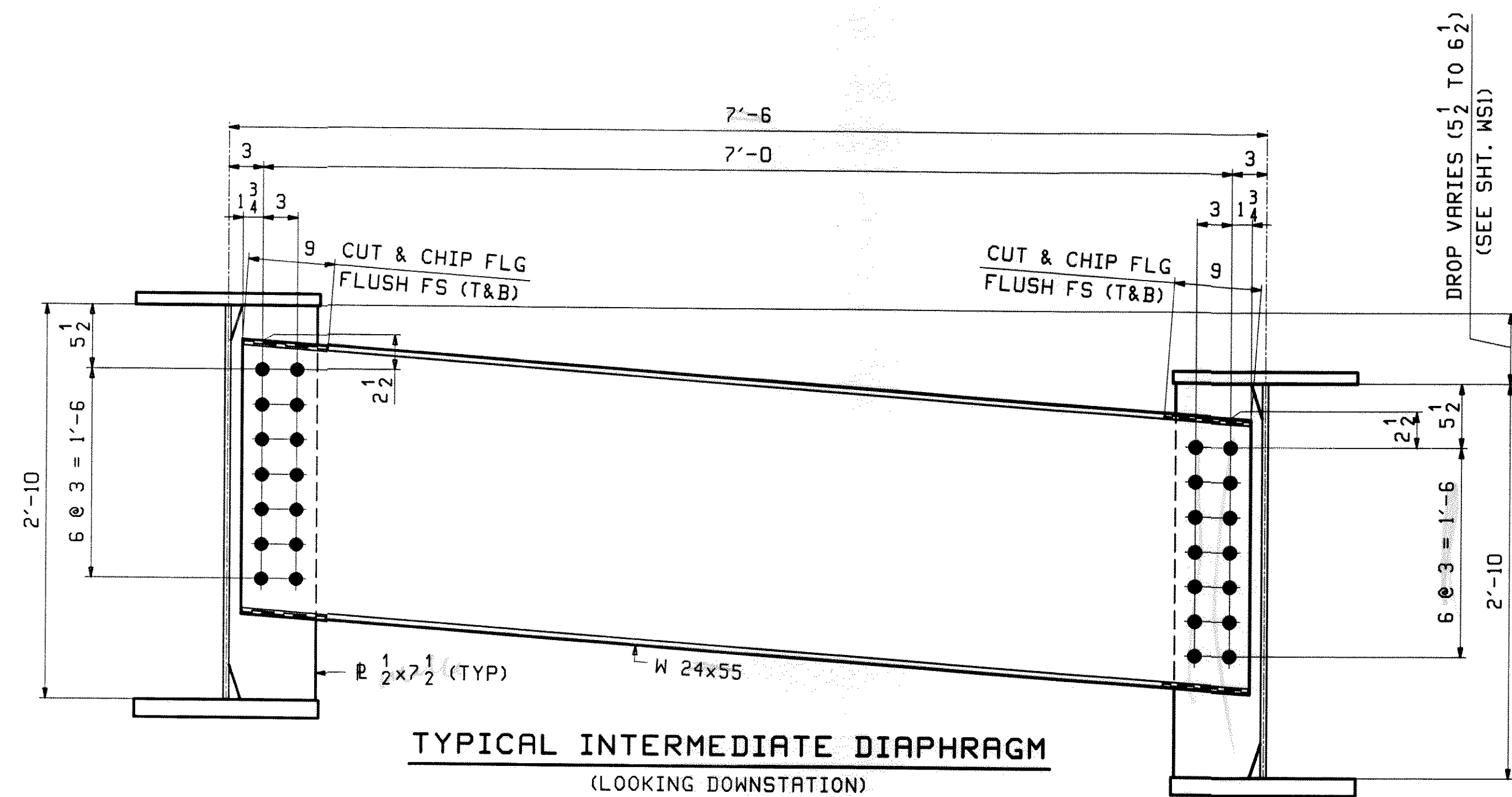
Line	LEN							GRADE				
	LEN A	LEN BL1	LEN BL2	LEN B	LEN CL	LEN C	LEN D	Abut 1	Pier 1	Pier 2	Pier 3	Abut 2
1	41'-2 15/16	20'-0 1/8	91'-5 5/16	131'-5 1/2	80'-5	100'-5	60'-10 7/16	-.0070	-.0125	-.0128	-.0158	-.0213
2	40'-11 1/4	20'-0	90'-10 3/16	130'-10 3/16	79'-5 13/16	99'-5 15/16	59'-10	-.0075	-.0124	-.0129	-.0148	-.0201
3	40'-7 3/4	20'-0 1/16	90'-3 3/16	130'-3 5/16	78'-7 1/4	98'-7 3/8	58'-10 5/16	-.0072	-.0123	-.0128	-.0143	-.0192
4	40'-4 1/4	20'-0 1/16	89'-8 1/2	129'-8 5/8	77'-9 1/8	97'-9 3/16	57'-11 3/16	-.0073	-.0122	-.0127	-.0138	-.0186
5	40'-0 15/16	20'-0 1/16	89'-2 1/16	129'-2 3/16	76'-11 3/8	96'-11 7/16	57'-0 3/4	-.0064	-.0122	-.0130	-.0138	-.0179

**** NOTE ****
 THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION. THIS DMG IS SUBMITTED FOR INFORMATION ONLY AND IS NOT INTENDED FOR SHOP FABRICATION.

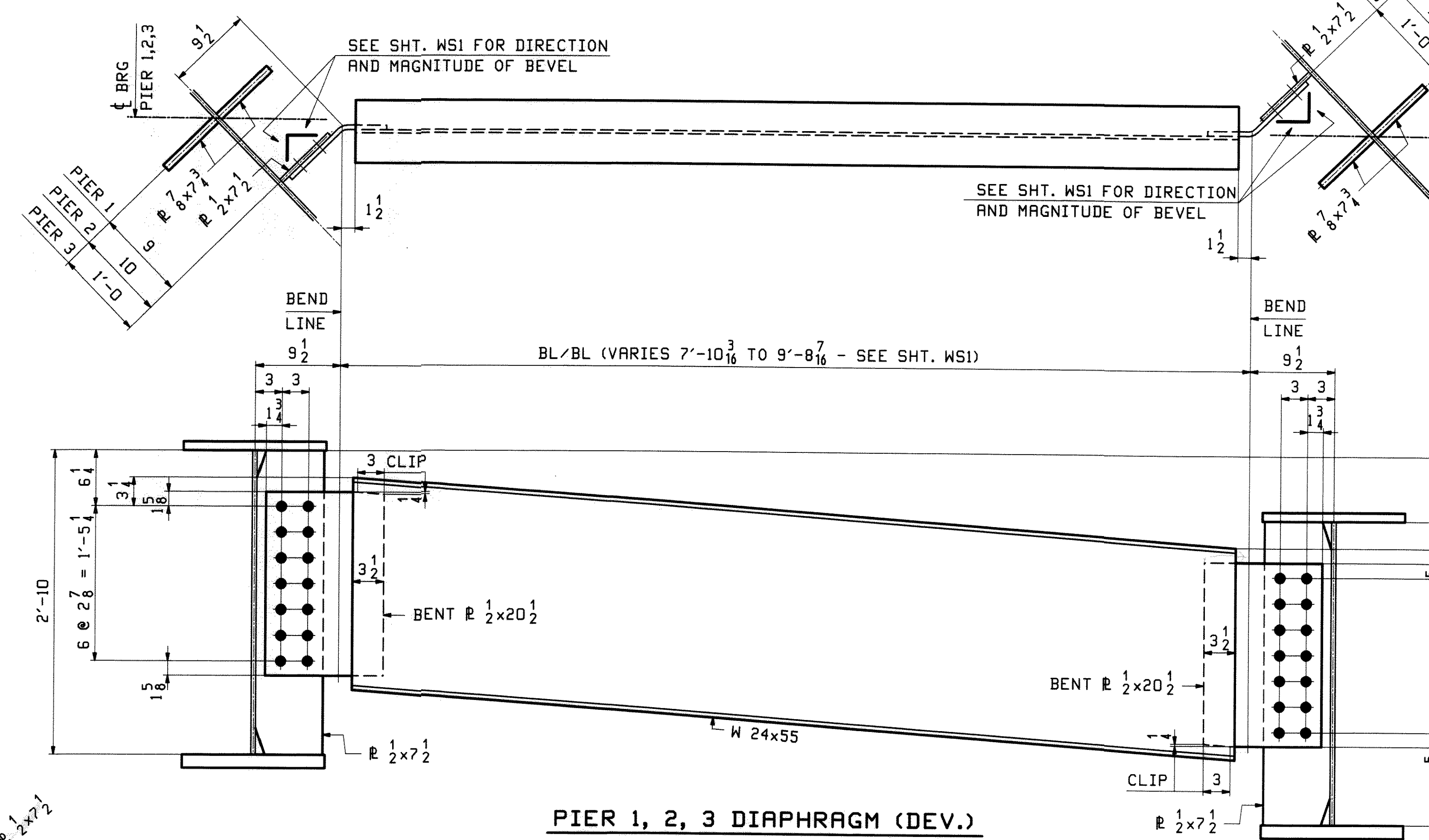
- NOTES
- LONGITUDINAL DIMENSIONS ARE SLOPING ALONG BOTT OF WEB WITH CORRECTIONS MADE FOR VERTICAL CURVE, GRADE & DL CAMBER (UN).
 - TRANSVERSE DIMENSIONS ARE IN A HORIZ. PLANE (UN).
 - DROP ARROW POINTS TOWARDS LOW END OF MEMBER.
 - ENDS OF GIRDERS AND BRG. STIFF'S ARE VERTICAL AFTER DL ROTATION.
 - CF STIFF, INT STIFF & FIELD SPLICES ARE NORMAL TO GRADE.
 - BOTT PT NUMBERS = TOP PT NUMBERS + 300.
 - FOR LAYOUTS SEE "TD" SHEETS
 - CROSSFRAME DROPS ARE CALCULATED IN THE 70% CAMBERED SHAPE OF THE BRIDGE.

DATE: 2/9/10
 2/9/10
 2/9/10

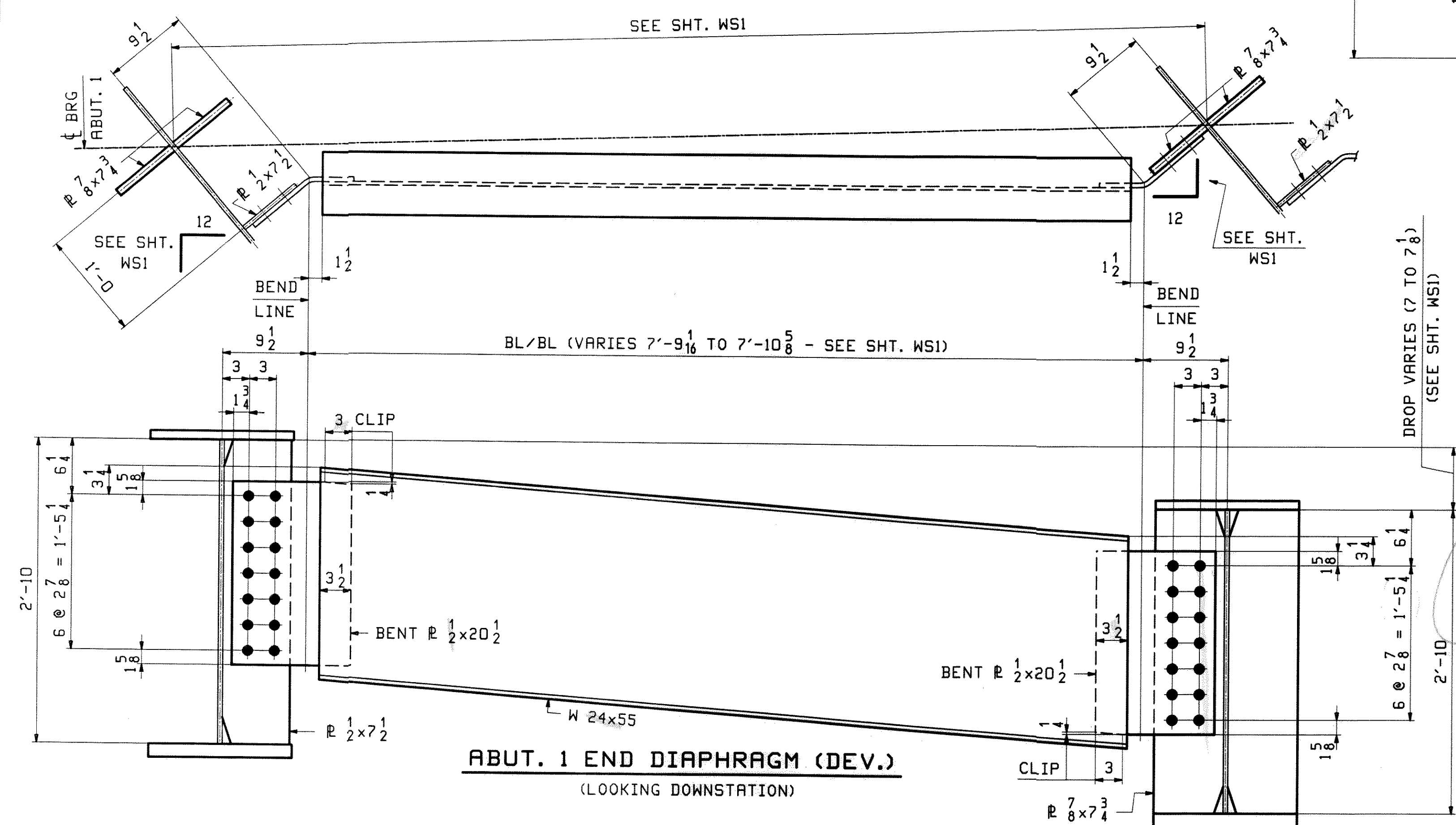
REV.	DATE	REMARKS	DWN	CHK
0				
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:	
			AS NOT	
DESCRIPTION: CALCULATION PLAN				
CASCO BAY STEEL STRUCTURES, INC.				
75 SPRING HILL ROAD SACO, MARINE 04072				
PHONE (207) 282-7360 FAX. (207) 282-1175				
STRUCTURE: U.S. 5 over I-91				
Bridge No. 19A				
Putney				
County of Windham				
LOCATION: Putney				
PROJ NO. IM 091-(31)				
CUSTOMER: VT AOT				



TYPICAL INTERMEDIATE DIAPHRAGM
(LOOKING DOWNSTATION)



PIER 1, 2, 3 DIAPHRAGM (DEV.)
(LOOKING DOWNSTATION)



ABUT. 1 END DIAPHRAGM (DEV.)
(LOOKING DOWNSTATION)

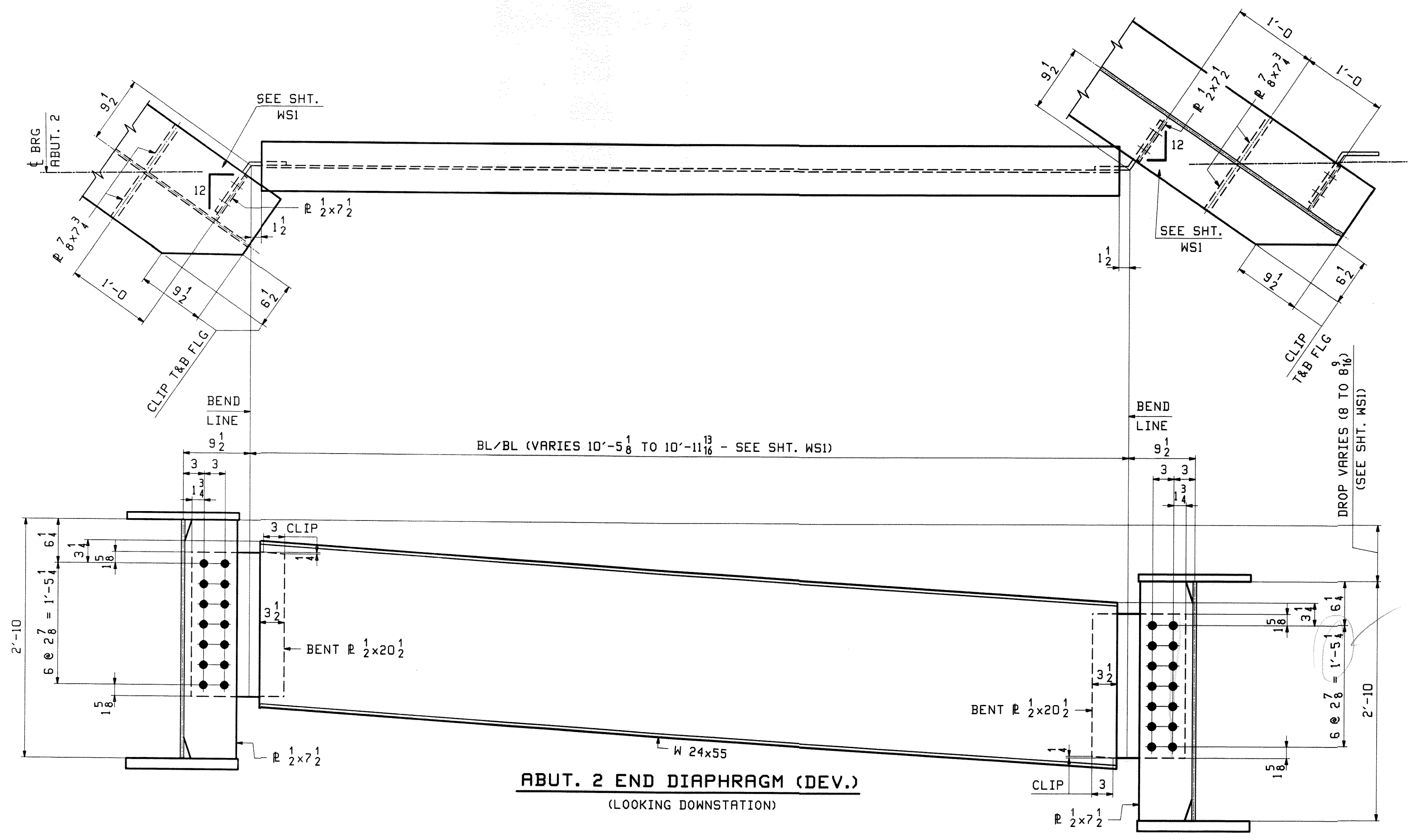
- NOTES:
- MAT'L SHALL BE M270-GR50W
 - HOLES SHALL BE 15/16" Ø
 - BOLTS SHALL BE 7/8" Ø
 - ABUT DIAPHRAGM SHALL BE PAINTED AND HAVE A325 TYPE 1 (GALV) BOLTS
 - INT. & PIER DIAPHRAGM SHALL BE UNPAINTED AND HAVE A325 TYPE 3 BOLTS

**** NOTE ****
THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION AND CONNECTION SPACING. THIS DMG IS SUBMITTED FOR INFORMATION ONLY & IS NOT INTENDED FOR SHOP FABRICATION. DETAIL DMGS WILL SHOW ALL WELDING AND DIMENSIONS REQ'D FOR FABRICATION.

REV.	DATE	REMARKS	DWN	CHK
MATERIAL:		SURFACE PREP. & PAINT:	HOLES: AS NOTED	
DESCRIPTION: TYPICAL LAYOUTS				
CASCO BAY STEEL STRUCTURES, INC.				
75 SPRING HILL ROAD		SACO, MAINE 04072		
PHONE (207) 282-7360		FAX. (207) 282-1179		
STRUCTURE: U.S. 5 over I-91				
Bridge No. 19A				
Putney				
County of Windham				
LOCATION: Putney				
PROJ NO. IM 091-1(31)				
CUSTOMER: VT AOT				

DATE 2/9/10
 SIGNATURE [Signature]
 TITLE [Title]

See page 1 & 2 for details



ABUT. 2 END DIAPHRAGM (DEV.)
(LOOKING DOWNSTATION)

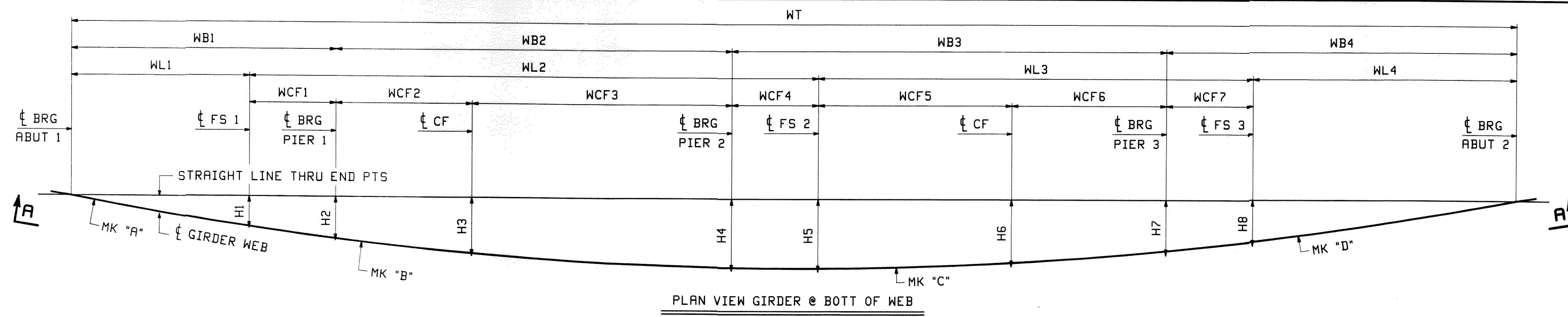
**** NOTE ****
THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION AND CONNECTION SPACING. THIS DWG IS SUBMITTED FOR INFORMATION ONLY & IS NOT INTENDED FOR SHOP FABRICATION. DETAIL DWGS WILL SHOW ALL WELDING AND DIMENSIONS REQ'D FOR FABRICATION.

- NOTES:
- MAT'L SHALL BE M270 GR50W
 - HOLES SHALL BE $\frac{15}{16}\phi$
 - BOLTS SHALL BE $\frac{7}{8}\phi$
 - ABUT DIAPHRAGM SHALL BE PAINTED AND HAVE A325 TYPE 1 (GALV) BOLTS

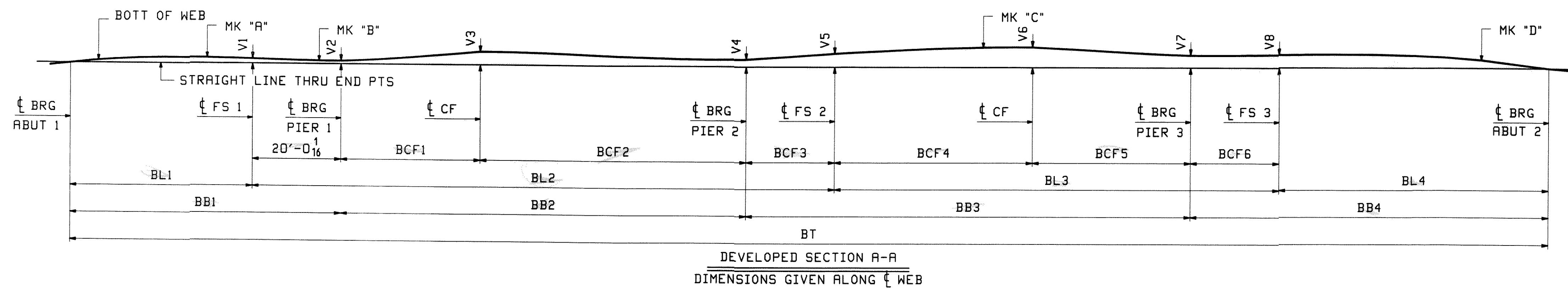
OK

DESIGNATION	REVISION	DATE
10/10/10	1	2/9/10
DESIGNED BY	CHECKED BY	DATE

REV.	DATE	REMARKS	DWN	CHK	AP
0					JAN 2
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:		AS NOTED
DESCRIPTION: TYPICAL LAYOUTS					
CASCO BAY STEEL STRUCTURES, INC.					
75 SPRING HILL ROAD			SACO, MAINE 04072		
PHONE (207) 282-7360			FAX. (207) 282-1179		
STRUCTURE:	U.S. 5 over I-91				DRAWN:
	Bridge No. 19A				SO
	Putney				CHKD:
	County of Windham				PC
LOCATION:	Putney				JOB
PROJ NO.	IM 091-1(31)				
CUSTOMER:	VT ROT				43



LINE	WT	WL1	WL2	WL3	WL4	H1	H2	H3	H4	H5	H6	H7	H8	WB1	WB2	WB3	WB4	WCF1	WCF2	WCF3	WCF4	WCF5	WCF6	WCF7
1	332'-9 ⁵ / ₁₆	40'-10 ³ / ₄	131'-2 ³ / ₈	100'-3 ³ / ₁₆	60'-5	-5'-3 ⁷ / ₈	-7'-4 ³ / ₈	-9'-10 ³ / ₈	-12'-2 ⁹ / ₁₆	-12'-3 ¹ / ₂	-11'-2 ³ / ₁₆	-9'-0 ⁵ / ₁₆	-7'-3 ¹⁵ / ₁₆	60'-9 ⁹ / ₁₆	91'-3 ¹ / ₂	100'-4 ¹ / ₁₆	80'-4 ³ / ₁₆	19'-10 ¹³ / ₁₆	31'-4 ⁷ / ₁₆	59'-11 ¹ / ₁₆	20'-0 ¹ / ₁₆	44'-8	35'-8	19'-11 ³ / ₁₆
2	329'-11 ⁷ / ₁₆	40'-7 ¹ / ₄	130'-7 ¹ / ₄	99'-4 ¹ / ₈	59'-4 ¹³ / ₁₆	-5'-2 ⁷ / ₁₆	-7'-2 ⁹ / ₁₆	-9'-7 ³ / ₄	-11'-11 ³ / ₁₆	-12'-0	-10'-10 ⁷ / ₁₆	-8'-9 ¹ / ₂	-7'-1 ⁵ / ₁₆	60'-6 ¹ / ₁₆	90'-8 ³ / ₈	99'-4 ¹⁵ / ₁₆	79'-4 ¹ / ₁₆	19'-10 ¹³ / ₁₆	31'-1 ¹ / ₈	59'-7 ¹ / ₄	20'-0 ¹ / ₁₆	44'-9 ³ / ₁₆	34'-7 ¹¹ / ₁₆	19'-11 ¹ / ₄
3	327'-3 ¹ / ₈	40'-3 ¹³ / ₁₆	130'-0 ⁷ / ₁₆	98'-5 ⁹ / ₁₆	58'-5 ⁵ / ₁₆	-5'-1 ¹ / ₁₆	-7'-0 ¹³ / ₁₆	-9'-5 ⁹ / ₁₆	-11'-7 ¹⁵ / ₁₆	-11'-8 ⁵ / ₈	-10'-7 ³ / ₄	-8'-6 ¹³ / ₁₆	-6'-10 ¹³ / ₁₆	60'-2 ¹¹ / ₁₆	90'-1 ¹ / ₂	98'-6 ³ / ₈	78'-4 ⁹ / ₁₆	19'-10 ⁷ / ₈	31'-2 ¹ / ₈	58'-11 ³ / ₈	20'-0 ¹ / ₁₆	43'-4 ¹⁵ / ₁₆	35'-1 ³ / ₈	19'-11 ¹ / ₄
4	324'-8 ⁵ / ₁₆	40'-0 ¹ / ₂	129'-5 ⁷ / ₈	97'-7 ⁷ / ₁₆	57'-6 ¹ / ₂	-4'-11 ³ / ₄	-6'-11 ¹ / ₈	-9'-3 ³ / ₁₆	-11'-4 ¹⁵ / ₁₆	-11'-5 ¹ / ₂	-10'-4 ³ / ₄	-8'-4 ¹ / ₄	-6'-8 ¹ / ₂	59'-11 ⁷ / ₁₆	89'-6 ⁷ / ₈	97'-8 ¹ / ₄	77'-5 ³ / ₄	19'-10 ¹⁵ / ₁₆	30'-11 ⁵ / ₁₆	58'-7 ⁹ / ₁₆	20'-0 ¹ / ₁₆	42'-10 ¹ / ₈	34'-10 ¹ / ₁₆	19'-11 ¹ / ₄
5	322'-2 ¹³ / ₁₆	39'-9 ⁵ / ₁₆	128'-11 ⁹ / ₁₆	96'-9 ¹³ / ₁₆	56'-8 ¹ / ₈	-4'-10 ¹ / ₂	-6'-9 ¹ / ₂	-9'-5 ⁷ / ₈	-11'-2	-11'-2 ¹ / ₂	-9'-9	-8'-1 ⁷ / ₈	-6'-6 ⁵ / ₁₆	59'-8 ¹ / ₄	89'-0 ⁹ / ₁₆	96'-10 ⁹ / ₁₆	76'-7 ⁷ / ₁₆	19'-10 ¹⁵ / ₁₆	37'-9 ¹³ / ₁₆	51'-2 ³ / ₄	20'-0 ¹ / ₁₆	51'-0 ¹ / ₂	25'-10	19'-11 ⁵ / ₁₆



LINE	BT	BL1	BL2	BL3	BL4	V1	V2	V3	V4	V5	V6	V7	V8	BB1	BB2	BB3	BB4	BCF1	BCF2	BCF3	BCF4	BCF5	BCF6
1	333'-11 ⁷ / ₈	41'-2 ¹⁵ / ₁₆	131'-5 ⁷ / ₁₆	100'-5 ¹ / ₁₆	60'-10 ⁷ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆	2 ⁷ / ₈	1 ⁵ / ₈	3	4 ⁹ / ₁₆	2 ¹³ / ₁₆	2 ¹⁵ / ₁₆	61'-3	91'-5 ³ / ₈	100'-5	80'-10 ¹ / ₂	31'-5 ⁵ / ₈	59'-11 ³ / ₄	20'-0	44'-8 ¹ / ₄	35'-8 ³ / ₄	20'-0 ¹ / ₁₆
2	331'-1 ⁷ / ₁₆	40'-11 ¹ / ₄	130'-10 ¹ / ₄	99'-5 ¹⁵ / ₁₆	59'-10	7 ⁷ / ₈	3 ³ / ₈	2 ¹ / ₂	1 ¹ / ₈	2 ⁷ / ₁₆	3 ¹³ / ₁₆	1 ¹⁵ / ₁₆	2 ⁵ / ₁₆	60'-11 ⁵ / ₁₆	90'-10 ¹ / ₈	99'-5 ⁷ / ₈	79'-10 ¹ / ₈	31'-2 ¹ / ₄	59'-7 ⁷ / ₈	20'-0 ¹ / ₁₆	44'-9 ³ / ₈	34'-8 ⁷ / ₁₆	20'-0 ¹ / ₈
3	328'-4 ⁵ / ₈	40'-7 ¹¹ / ₁₆	130'-3 ⁵ / ₁₆	98'-7 ⁵ / ₁₆	58'-10 ⁵ / ₁₆	1 ¹³ / ₁₆	3 ³ / ₈	2 ³ / ₈	3 ³ / ₄	2 ¹ / ₁₆	3 ⁵ / ₁₆	1 ⁵ / ₁₆	1 ⁷ / ₈	60'-7 ³ / ₄	90'-3 ³ / ₁₆	98'-7 ⁵ / ₁₆	78'-10 ³ / ₈	31'-3 ³ / ₁₆	59'-0	20'-0 ¹ / ₁₆	43'-5 ¹ / ₈	35'-2 ¹ / ₈	20'-0 ¹ / ₁₆
4	325'-9 ¹ / ₄	40'-4 ¹ / ₄	129'-8 ⁵ / ₈	97'-9 ³ / ₁₆	57'-11 ³ / ₁₆	1 ¹¹ / ₁₆	1 ⁸ / ₁₆	2 ¹ / ₈	7 ⁷ / ₁₆	1 ¹¹ / ₁₆	2 ⁷ / ₈	7 ⁷ / ₈	1 ¹ / ₂	60'-4 ⁵ / ₁₆	89'-8 ¹ / ₂	97'-9 ³ / ₁₆	77'-11 ¹ / ₄	31'-0 ³ / ₈	58'-8 ¹ / ₈	20'-0 ¹ / ₁₆	42'-10 ⁵ / ₁₆	34'-10 ¹³ / ₁₆	20'-0 ¹ / ₁₆
5	323'-3 ³ / ₈	40'-0 ⁷ / ₈	129'-2 ¹ / ₄	96'-11 ¹ / ₂	57'-0 ³ / ₄	5 ⁵ / ₈	1 ¹ / ₁₆	2 ³ / ₁₆	1 ⁸ / ₁₆	1 ³ / ₈	1 ⁷ / ₈	3 ³ / ₈	1 ³ / ₁₆	60'-0 ¹⁵ / ₁₆	89'-2 ¹ / ₈	96'-11 ¹ / ₂	77'-0 ¹³ / ₁₆	37'-11	51'-3 ¹ / ₈	20'-0 ¹ / ₁₆	51'-0 ¹³ / ₁₆	25'-10 ⁵ / ₈	20'-0 ¹ / ₁₆

LINE	"A"	"B"	"C"	"D"
1	1G1A	6G1B	11G1C	16G1D
2	2G2A	7G2B	12G2C	17G2D
3	3G3A	8G3B	13G3C	18G3D
4	4G4A	9G4B	14G4C	19G4D
5	5G5A	10G5B	15G5C	20G5D

NOTES
FOR GENERAL NOTES SEE DWG GNI
ALL DIMENSIONS GIVEN AT BOTT OF WEB

DATE: 2/9/10
BY: JS

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REV.	DATE	REMARKS	DWN	CHK	APP
0					

MATERIAL: _____ SURFACE PREP. & PAINT: _____ HOLES: _____

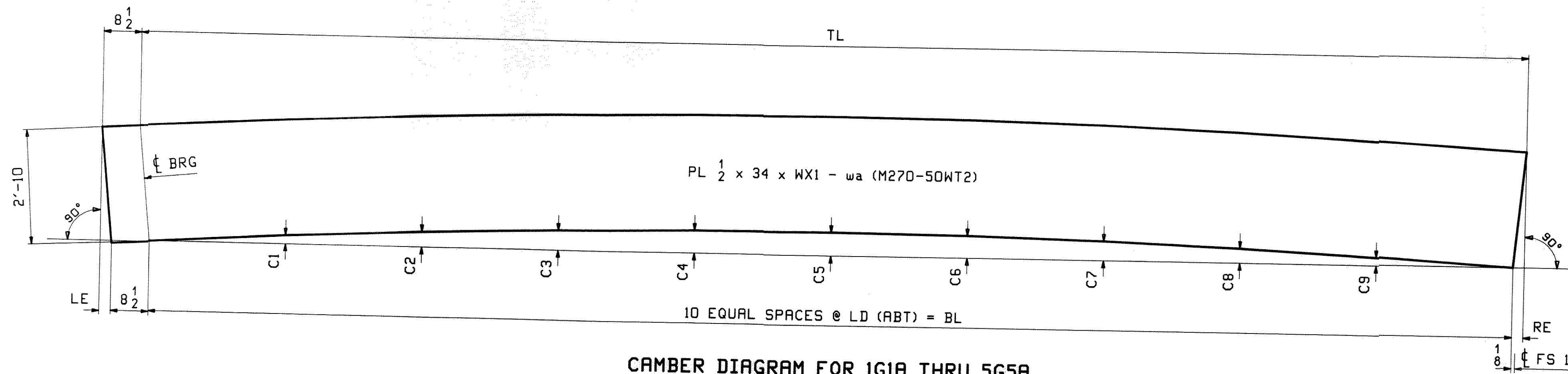
DESCRIPTION: SHOP ASSEMBLY DIAGRAM

CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

STRUCTURE: U.S. 5 over I-91
Bridge No. 19A
Putney
County of Windham

LOCATION: Putney
PROJ NO. IM Q91-(31)
CUSTOMER: VT ROT

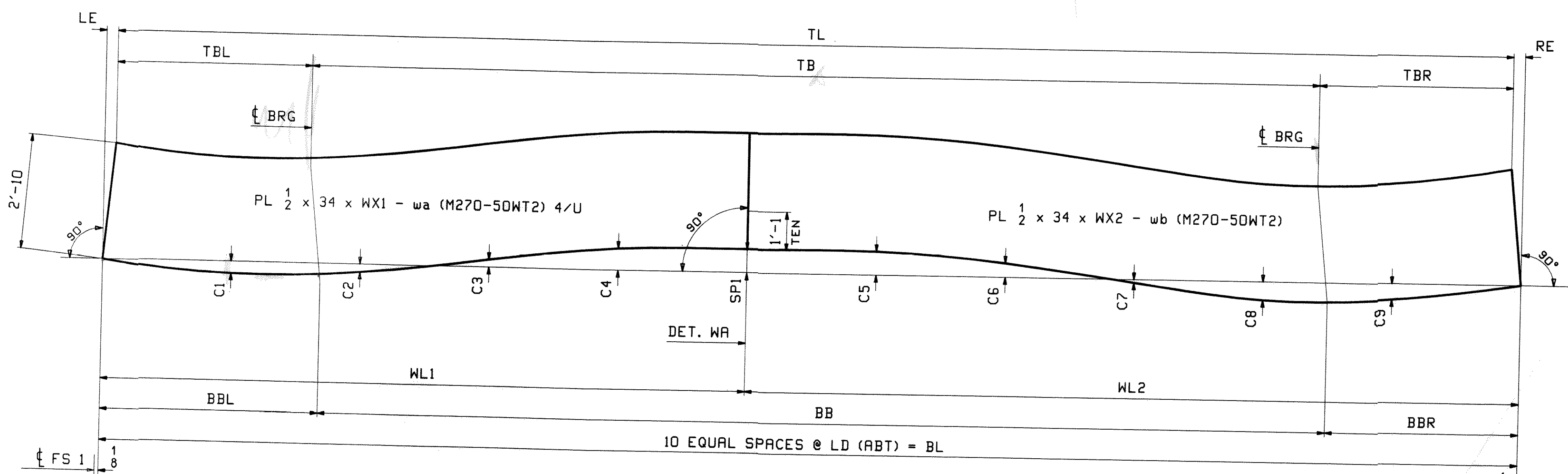
10 1/2" x 11" 2000 10/25/09 1/2" x 11" 2000 10/25/09 1/2" x 11" 2000 10/25/09



CAMBER DIAGRAM FOR 1G1A THRU 5G5A

MARK	TL	BL	LE	RE	WX1	LD	C1	C2	C3	C4	C5	C6	C7	C8	C9	PG/LINE
1G1A	41'-3 1/2"	41'-2 13/16"	1/2"	3/16"	42'-0"	4'-1 1/2"	5/16"	5/8"	3/4"	7/8"	15/16"	7/8"	3/4"	9/16"	5/16"	5/ L
2G2A	40'-11 13/16"	40'-11 1/8"	1/2"	3/16"	41'-8 5/16"	4'-1 1/8"	5/16"	9/16"	3/4"	7/8"	15/16"	7/8"	3/4"	9/16"	5/16"	5/ N
3G3A	40'-8 1/4"	40'-7 5/8"	7/16"	3/16"	41'-4 3/4"	4'-0 3/4"	5/16"	9/16"	3/4"	7/8"	15/16"	7/8"	3/4"	9/16"	5/16"	5/ Q
4G4A	40'-4 13/16"	40'-4 1/8"	7/16"	1/4"	41'-1 5/16"	4'-0 3/8"	5/16"	9/16"	3/4"	7/8"	15/16"	7/8"	3/4"	9/16"	5/16"	5/ S
5G5A	40'-1 7/16"	40'-0 13/16"	7/16"	3/16"	40'-9 15/16"	4'-0 1/8"	3/8"	5/8"	13/16"	7/8"	15/16"	7/8"	3/4"	9/16"	5/16"	5/ U

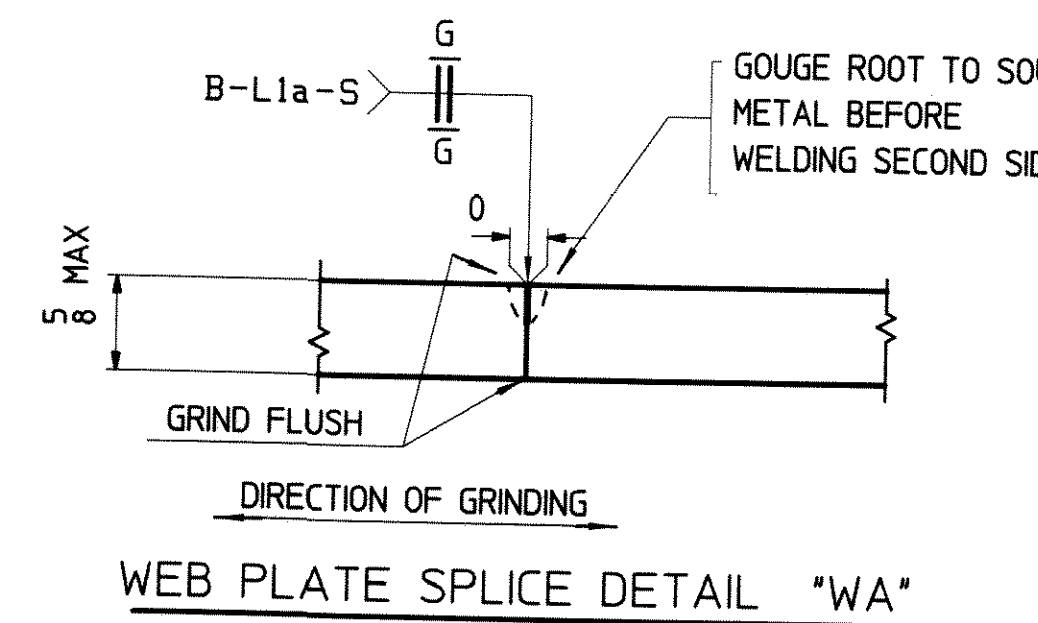
WE HAVE 2 1/8" @ MAX
 DRAWN P1 A12



CAMBER DIAGRAM FOR 6G1B THRU 10G5B

MARK	TL	BL	LE	RE	WL1	WL2	WX1	WX2	SPI	TBL	TB	TBR	BBL	BB	BBR	LD	C1	C2	C3	C4	C5	C6	C7	C8	C9	PG/LINE
6G1B	131'-4 7/8"	131'-5 1/4"	3/16"	3/16"	62'-5 7/8"	68'-11 3/8"	62'-5 15/16"	68'-11 7/16"	1 1/4"	19'-11 5/16"	91'-5 3/8"	20'-0 3/16"	20'-0"	91'-5 5/16"	19'-11 15/16"	13'-1 3/4"	5/8"	7/16"	3/8"	1 1/8"	1 1/4"	3/4"	3/16"	15/16"	13/16"	3/ Y
7G2B	130'-9 5/8"	130'-9 15/16"	3/16"	1/8"	62'-5 7/8"	68'-4 1/16"	62'-5 15/16"	68'-4 1/8"	1 1/4"	19'-11 1/4"	90'-10 3/16"	20'-0 3/16"	19'-11 7/8"	90'-10 3/16"	19'-11 7/8"	13'-1"	5/8"	7/16"	3/8"	1 1/8"	1 1/4"	3/4"	3/16"	15/16"	13/16"	4/ A
8G3B	130'-2 11/16"	130'-3 1/16"	3/16"	3/16"	62'-5 7/8"	67'-9 3/16"	62'-5 15/16"	67'-9 1/4"	1 1/4"	19'-11 5/16"	90'-3 3/16"	20'-0 3/16"	19'-11 15/16"	90'-3 3/16"	19'-11 15/16"	13'-0 1/4"	5/8"	7/16"	3/8"	1 1/8"	1 1/4"	3/4"	3/16"	15/16"	13/16"	4/ C
9G4B	129'-8"	129'-8 3/8"	3/16"	3/16"	62'-5 7/8"	67'-2 1/2"	62'-5 15/16"	67'-2 9/16"	1 1/16"	19'-11 5/16"	89'-8 1/2"	20'-0 3/16"	19'-11 15/16"	89'-8 1/2"	19'-11 15/16"	12'-11 5/8"	5/8"	1/2"	3/8"	1 1/16"	1 1/4"	3/4"	3/16"	1	13/16"	4/ E
10G5B	129'-1 9/16"	129'-1 15/16"	3/16"	3/16"	62'-5 7/8"	66'-8 1/16"	62'-5 15/16"	66'-8 1/8"	1 3/16"	19'-11 5/16"	89'-2 1/16"	20'-0 3/16"	19'-11 15/16"	89'-2 1/16"	19'-11 15/16"	12'-11"	5/8"	1/2"	5/16"	1	1 3/16"	11/16"	1/4"	1	7/8"	4/ G

C1 + C5 = 1 7/8"

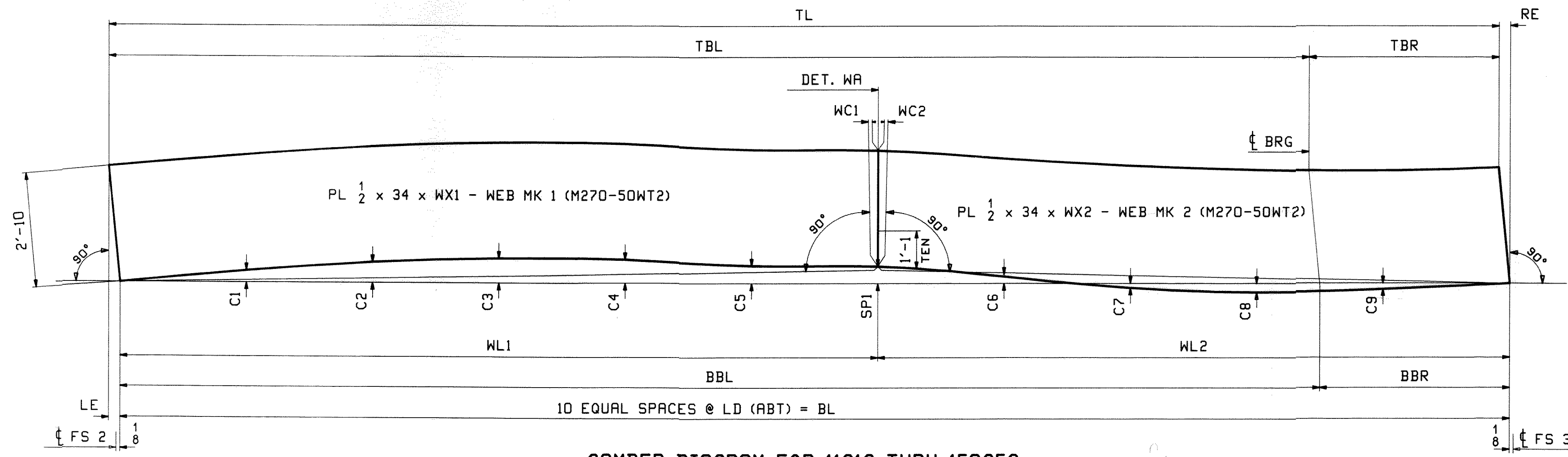


NOTES:
 1. FOR GENERAL SHOP NOTES SEE DRAWING GNI.

DATE: 2/9/12
 FS

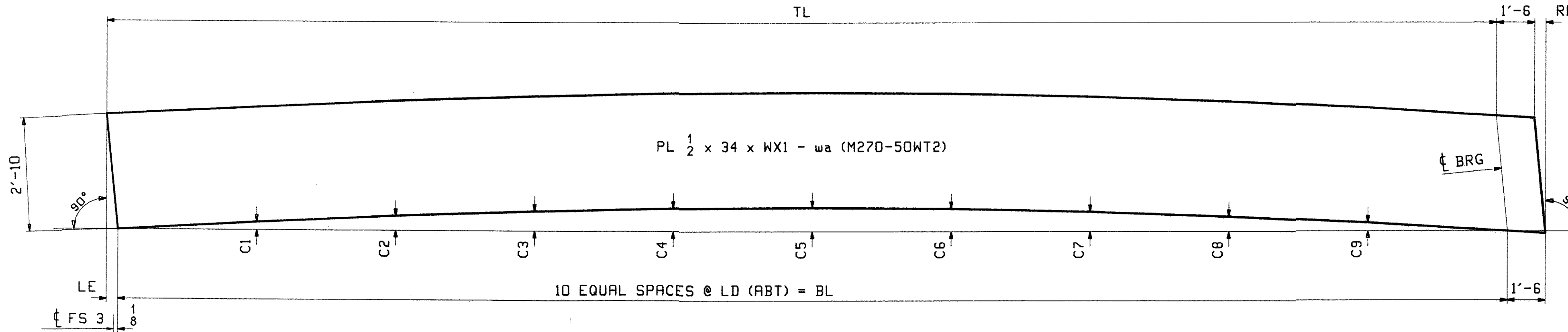
REV.	DATE	REMARKS	DWN	CHK	APVL
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:	
M270-50W		AS NOTED		AS NOTED	
DESCRIPTION: CAMBER DIAGRAMS					
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham				DRAWN: JB CHKD: SOB	
LOCATION: Putney				JOB NO.	
PROJ NO. IM 091-1(3)				438	
CUSTOMER: VT ROT					

DATE PLO 12-22-2010 03:54:01 PM C:\p12\p12\2010\03\01\01.dwg



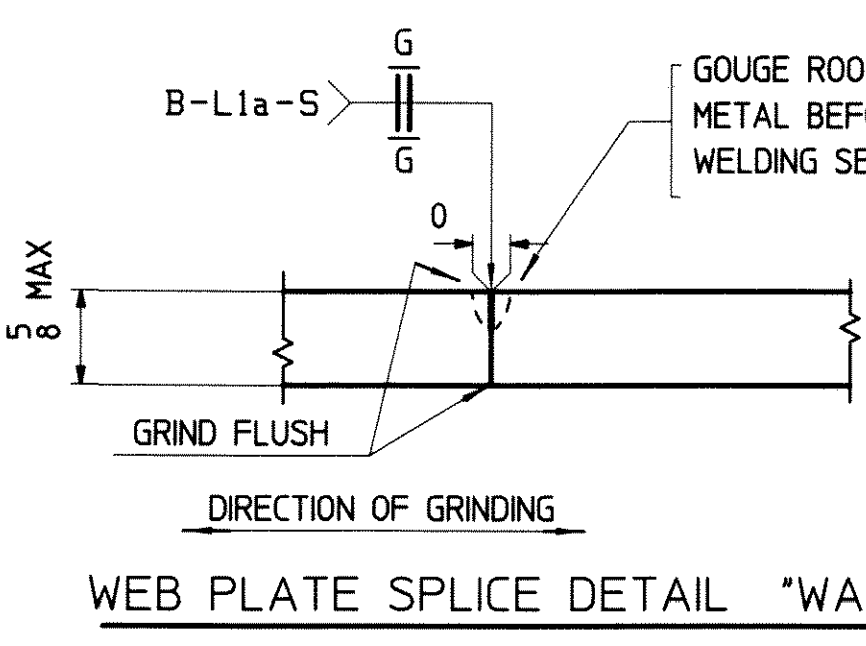
CAMBER DIAGRAM FOR 11G1C THRU 15G5C

MARK	TL	BL	LE	RE	WL1	WL2	WX1	WX2	SP1	WC1	WC2	TBL	TBR	BBL	BBR	LD	C1	C2	C3	C4	C5	C6	C7	C8	C9	WEB MK 1	PG/LINE	WEB MK 2	PG/LINE
11G1C	100'-4 ¹⁵ / ₁₆	100'-4 ³ / ₄	1/4	1/16	50'-4 ⁷ / ₈	49'-11 ⁷ / ₈	50'-5 ¹ / ₈	49'-11 ¹⁵ / ₁₆	1 ¹ / ₄	1/16	1/16	80'-4 ⁵ / ₈	20'-0 ⁵ / ₁₆	80'-4 ⁷ / ₈	19'-11 ⁷ / ₈	10'-0 ¹ / ₂	7/8	1/2	1 ³ / ₄	1 ¹¹ / ₁₆	1/4	11/16	0	3/16	1/4	wa	4/ W	wb	5/ W
12G2C	99'-5 ³ / ₄	99'-5 ¹¹ / ₁₆	3/16	1/8	49'-5 ¹³ / ₁₆	49'-11 ⁷ / ₈	49'-6	49'-11 ¹⁵ / ₁₆	1 ¹ / ₈	1/16	1/16	79'-5 ⁷ / ₁₆	20'-0 ⁵ / ₁₆	79'-5 ¹¹ / ₁₆	20'-0	9'-11 ³ / ₈	13/16	7/16	11/16	1 ⁵ / ₈	1/8	1/2	1/8	3/8	3/8	wa	5/ A	wb	5/ C
13G3C	98'-7 ¹ / ₈	98'-7 ¹ / ₈	3/16	3/16	48'-7 ³ / ₁₆	49'-11 ¹⁵ / ₁₆	48'-7 ³ / ₁₆	50'-0	1 ¹ / ₁₆	1/16	0	78'-6 ⁷ / ₈	20'-0 ¹ / ₄	78'-7 ¹ / ₈	20'-0	9'-10 ³ / ₈	13/16	1/8	5/8	1 ¹ / ₂	1	5/16	5/16	9/16	7/16	wa	5/ E	wb	5/ C
14G4C	97'-8 ¹⁵ / ₁₆	97'-8 ¹⁵ / ₁₆	3/16	3/16	47'-9 ¹ / ₁₆	49'-11 ⁷ / ₈	47'-9 ¹ / ₄	49'-11 ¹⁵ / ₁₆	1 ¹⁵ / ₁₆	0	0	77'-8 ³ / ₄	20'-0 ³ / ₁₆	77'-9	19'-11 ¹⁵ / ₁₆	9'-9 ¹ / ₄	13/16	1/8	9/16	1 ⁷ / ₁₆	7/8	3/16	7/16	11/16	1/2	wa	5/ G	wb	4/ Y
15G5C	96'-11 ¹ / ₄	96'-11 ³ / ₁₆	1/4	3/16	46'-11 ³ / ₈	49'-11 ¹³ / ₁₆	46'-11 ⁵ / ₈	49'-11 ⁷ / ₈	1 ¹³ / ₁₆	0	0	76'-11 ¹ / ₁₆	20'-0 ³ / ₁₆	76'-11 ¹ / ₄	19'-11 ¹⁵ / ₁₆	9'-8 ³ / ₈	13/16	5/16	1/2	5/16	3/4	1/16	9/16	7/8	5/8	wa	5/ J	wb	4/ Y



CAMBER DIAGRAM FOR 16G1D THRU 20G5D

MARK	TL	BL	LE	RE	WX1	LD	C1	C2	C3	C4	C5	C6	C7	C8	C9	PG/LINE
16G1D	60'-10 ¹ / ₁₆	60'-10 ⁵ / ₁₆	1/4	1/2	62'-4 ⁹ / ₁₆	6'-1	1/2	15/16	1/4	7/16	1/2	7/16	1/4	15/16	1/2	4/ J
17G2D	59'-9 ¹¹ / ₁₆	59'-9 ⁷ / ₈	1/4	7/16	61'-4 ¹ / ₈	5'-11 ³ / ₄	1/2	7/8	1/4	7/16	1/2	7/16	1/4	15/16	1/2	4/ L
18G3D	58'-10	58'-10 ³ / ₁₆	1/4	7/16	60'-4 ⁷ / ₁₆	5'-10 ⁵ / ₈	1/2	7/8	1/16	7/16	1 ¹ / ₂	7/16	1/4	7/8	1/2	4/ N
19G4D	57'-10 ¹⁵ / ₁₆	57'-11 ¹ / ₁₆	1/4	3/8	59'-5 ⁵ / ₁₆	5'-9 ¹ / ₂	1/2	7/8	3/16	7/16	7/16	3/8	3/16	7/8	1/2	4/ Q
20G5D	57'-0 ¹ / ₂	57'-0 ⁵ / ₈	1/4	3/8	58'-6 ⁷ / ₈	5'-8 ¹ / ₂	1/2	7/8	3/16	3/8	7/16	3/8	3/16	7/8	1/2	4/ S



NOTES:
1. FOR GENERAL SHOP NOTES SEE DRAWING

REV.	DATE	REMARKS	DWN	CHK
0				
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:
M270-50W				AS NOTED
DESCRIPTION: CAMBER DIAGRAMS				
CASCO BAY STEEL STRUCTURES, INC.				
75 SPRING HILL ROAD		SACO, MAINE 04072		
PHONE (207) 282-7360		FAX. (207) 282-1179		
STRUCTURE: U.S. 5 over I-91				
Bridge No. 19A				
Putney				
County of Windham				
LOCATION: Putney				
PROJ NO. IM 091-1(3)				
CUSTOMER: VT DOT				

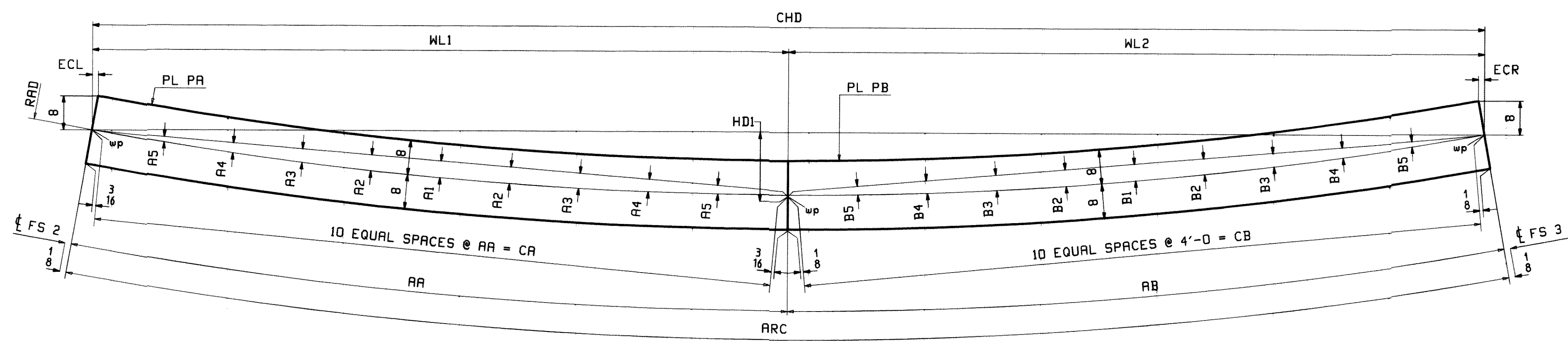
DATE: 2/9/12

SCALE: 1/8" = 1'-0"

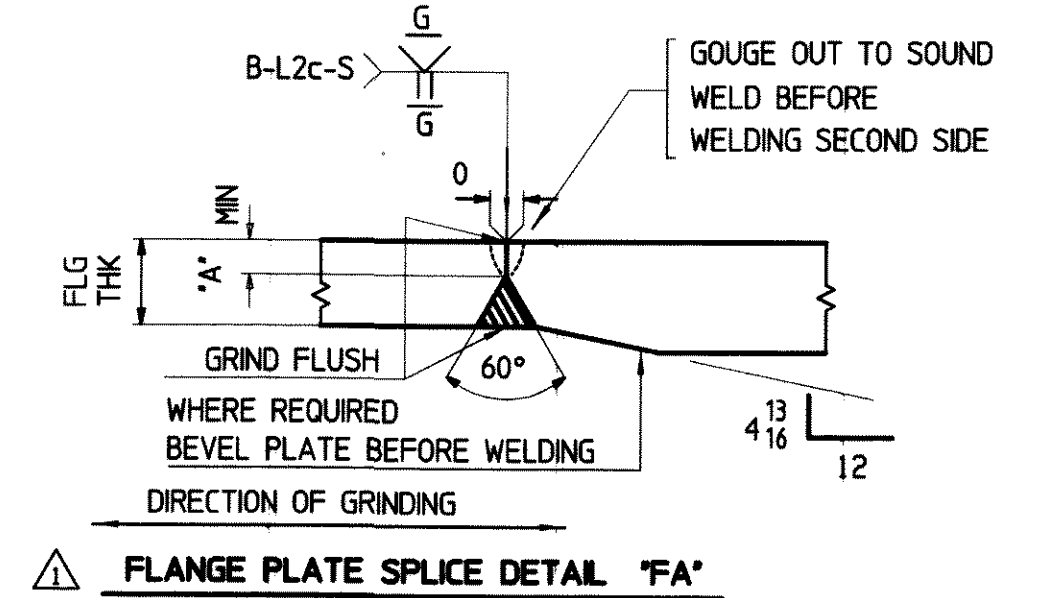
PROJECT: I-91 OVER I-91

DATE: 2/9/12

DATE: 2/9/12 2:20:00 PM

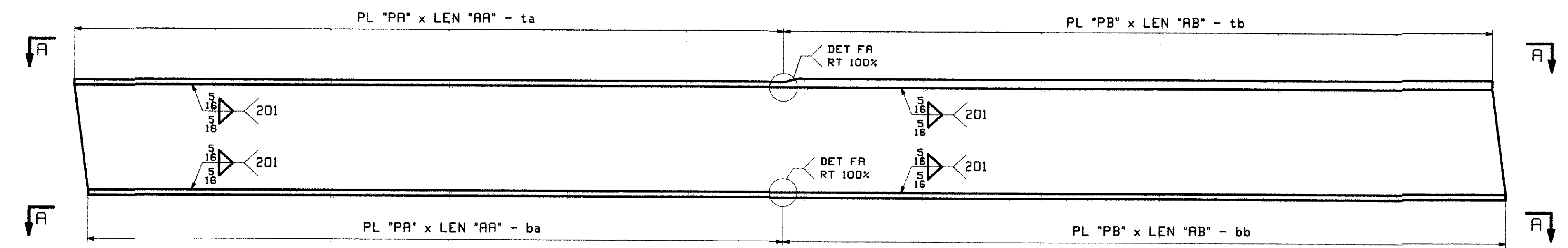


FLG THK	'A'
25	6
42	12



SECTION A-A FOR 11G1C THRU 15G5C

LOCATION	RAD	ARC	CHD	AA	AB	A1	A2	A3	A4	A5	AA	CA	B1	B2	B3	B4	B5	CB	ECL	ECR	WL1	WL2	HDI	PL PA (M270-50WT2)	PL PB (M270-50WT2)
11G1C TOP FL	1130.92	100'-4 ¹⁵ / ₁₆	100'-4 ⁹ / ₁₆	60'-5 ¹ / ₁₆	39'-11 ⁷ / ₈	4 ¹³ / ₁₆	4 ⁵ / ₈	4 ¹ / ₁₆	3 ¹ / ₈	1 ³ / ₄	6'-0 ¹ / ₂	60'-5	2 ¹ / ₈	2 ¹ / ₁₆	1 ³ / ₄	1 ³ / ₈	3 ³ / ₄	39'-11 ⁷ / ₈	3 ³ / ₈	3 ³ / ₈	60'-4 ⁷ / ₈	39'-11 ¹¹ / ₁₆	1'-0 ¹³ / ₁₆	PL 1 x 16-ta (2/S)	PL 1 ¹ / ₂ x 16-tb (2/L)
11G1C BTM FL	1130.92	100'-4 ³ / ₈	100'-4 ³ / ₈	60'-4 ¹⁵ / ₁₆	39'-11 ¹⁹ / ₁₆	4 ¹³ / ₁₆	4 ⁵ / ₈	4 ¹ / ₁₆	3 ¹ / ₈	1 ³ / ₄	6'-0 ¹ / ₂	60'-4 ¹³ / ₁₆	2 ¹ / ₈	2 ¹ / ₁₆	1 ³ / ₄	1 ³ / ₈	3 ³ / ₄	39'-11 ¹³ / ₁₆	3 ³ / ₈	3 ³ / ₈	60'-4 ³ / ₄	39'-11 ⁵ / ₈	1'-0 ¹³ / ₁₆	PL 1 ¹ / ₂ x 16-ba (1/E)	PL 1 ¹ / ₂ x 16-bb (2/L)
12G2C TOP FL	1138.42	99'-5 ³ / ₄	99'-5 ³ / ₈	59'-5 ⁷ / ₈	39'-11 ⁷ / ₈	4 ¹¹ / ₁₆	4 ¹ / ₂	3 ¹⁵ / ₁₆	3	1 ¹¹ / ₁₆	5'-11 ³ / ₈	59'-5 ¹³ / ₁₆	2 ¹ / ₈	2	1 ³ / ₄	1 ³ / ₈	3 ³ / ₄	39'-11 ⁷ / ₈	3 ³ / ₈	3 ³ / ₈	59'-5 ¹¹ / ₁₆	39'-11 ¹¹ / ₁₆	1'-0 ⁹ / ₁₆	PL 1 x 16-ta (2/U)	PL 1 ¹ / ₂ x 16-tb (2/L)
12G2C BTM FL	1138.42	99'-5 ¹¹ / ₁₆	99'-5 ⁵ / ₁₆	59'-5 ¹³ / ₁₆	39'-11 ⁷ / ₈	4 ¹¹ / ₁₆	4 ¹ / ₂	3 ¹⁵ / ₁₆	3	1 ¹¹ / ₁₆	5'-11 ³ / ₈	59'-5 ³ / ₄	2 ¹ / ₈	2	1 ³ / ₄	1 ³ / ₈	3 ³ / ₄	39'-11 ¹³ / ₁₆	3 ³ / ₈	3 ³ / ₈	59'-5 ⁵ / ₈	39'-11 ¹¹ / ₁₆	1'-0 ⁹ / ₁₆	PL 1 ¹ / ₂ x 16-ba (1/G)	PL 1 ¹ / ₂ x 16-bb (2/L)
13G3C TOP FL	1145.92	98'-7 ¹ / ₈	98'-6 ³ / ₄	58'-7 ¹ / ₄	39'-11 ⁷ / ₈	4 ¹ / ₂	4 ⁵ / ₁₆	3 ³ / ₄	2 ⁷ / ₈	1 ⁵ / ₈	5'-10 ⁵ / ₁₆	58'-7 ¹ / ₈	2 ¹ / ₁₆	2	1 ³ / ₄	1 ⁵ / ₁₆	3 ³ / ₄	39'-11 ⁷ / ₈	3 ³ / ₈	5 ¹ / ₁₆	58'-7	39'-11 ³ / ₄	1'-0 ¹ / ₄	PL 1 x 16-ta (2/W)	PL 1 ¹ / ₂ x 16-tb (2/L)
13G3C BTM FL	1145.92	98'-7 ¹ / ₈	98'-6 ³ / ₄	58'-7 ¹ / ₄	39'-11 ⁷ / ₈	4 ¹ / ₂	4 ⁵ / ₁₆	3 ³ / ₄	2 ⁷ / ₈	1 ⁵ / ₈	5'-10 ⁵ / ₁₆	58'-7 ¹ / ₈	2 ¹ / ₁₆	2	1 ³ / ₄	1 ⁵ / ₁₆	3 ³ / ₄	39'-11 ⁷ / ₈	3 ³ / ₈	5 ¹ / ₁₆	58'-7	39'-11 ³ / ₄	1'-0 ¹ / ₄	PL 1 ¹ / ₂ x 16-ba (1/J)	PL 1 ¹ / ₂ x 16-bb (2/L)
14G4C TOP FL	1153.42	97'-8 ¹⁵ / ₁₆	97'-8 ⁹ / ₁₆	57'-9 ¹ / ₁₆	39'-11 ⁷ / ₈	4 ⁵ / ₁₆	4 ³ / ₁₆	3 ⁵ / ₈	2 ³ / ₄	1 ⁹ / ₁₆	5'-9 ⁵ / ₁₆	57'-9	2 ¹ / ₁₆	2	1 ³ / ₄	1 ⁵ / ₁₆	3 ³ / ₄	39'-11 ⁷ / ₈	5 ¹ / ₁₆	5 ¹ / ₁₆	57'-8 ⁷ / ₈	39'-11 ¹¹ / ₁₆	1'-0	PL 1 x 16-ta (2/Y)	PL 1 ¹ / ₂ x 16-tb (2/L)
14G4C BTM FL	1153.42	97'-8 ¹⁵ / ₁₆	97'-8 ⁹ / ₁₆	57'-9 ¹ / ₁₆	39'-11 ⁷ / ₈	4 ⁵ / ₁₆	4 ³ / ₁₆	3 ⁵ / ₈	2 ³ / ₄	1 ⁹ / ₁₆	5'-9 ⁵ / ₁₆	57'-9	2 ¹ / ₁₆	2	1 ³ / ₄	1 ⁵ / ₁₆	3 ³ / ₄	39'-11 ¹³ / ₁₆	5 ¹ / ₁₆	5 ¹ / ₁₆	57'-8 ⁷ / ₈	39'-11 ¹¹ / ₁₆	1'-0	PL 1 ¹ / ₂ x 16-ba (1/L)	PL 1 ¹ / ₂ x 16-bb (2/L)
15G5C TOP FL	1160.92	96'-11 ¹ / ₄	96'-10 ¹⁵ / ₁₆	56'-11 ³ / ₈	39'-11 ⁷ / ₈	4 ³ / ₁₆	4	3 ¹ / ₂	2 ¹¹ / ₁₆	1 ¹ / ₂	5'-8 ⁵ / ₁₆	56'-11 ⁵ / ₁₆	2 ¹ / ₁₆	2	1 ³ / ₄	1 ⁵ / ₁₆	3 ³ / ₄	39'-11 ¹³ / ₁₆	5 ¹ / ₁₆	5 ¹ / ₁₆	56'-11 ¹ / ₄	39'-11 ¹¹ / ₁₆	11 ³ / ₄	PL 1 x 16-ta (3/A)	PL 1 ¹ / ₂ x 16-tb (2/L)
15G5C BTM FL	1160.92	96'-11 ³ / ₁₆	96'-10 ⁷ / ₈	56'-11 ³ / ₈	39'-11 ¹³ / ₁₆	4 ³ / ₁₆	4	3 ¹ / ₂	2 ¹¹ / ₁₆	1 ¹ / ₂	5'-8 ⁵ / ₁₆	56'-11 ⁵ / ₁₆	2 ¹ / ₁₆	2	1 ³ / ₄	1 ⁵ / ₁₆	3 ³ / ₄	39'-11 ³ / ₄	5 ¹ / ₁₆	5 ¹ / ₁₆	56'-11 ¹ / ₄	39'-11 ⁵ / ₈	11 ³ / ₄	PL 1 ¹ / ₂ x 16-ba (1/N)	PL 1 ¹ / ₂ x 16-bb (2/L)



FLANGE DIAGRAM FOR 11G1C THRU 15G5C

1. OF THIS DRAWING REVIEWED AND APPROVED FOR CONSTRUCTION BY THE CONTRACTOR.

DATE: 2/23/10

SCALE: AS SHOWN

PROJECT: BRIDGE NO. 19A

LOCATION: PUTNEY, VT

CONTRACT NO.: IM 091-1(3)

DATE: 01/05

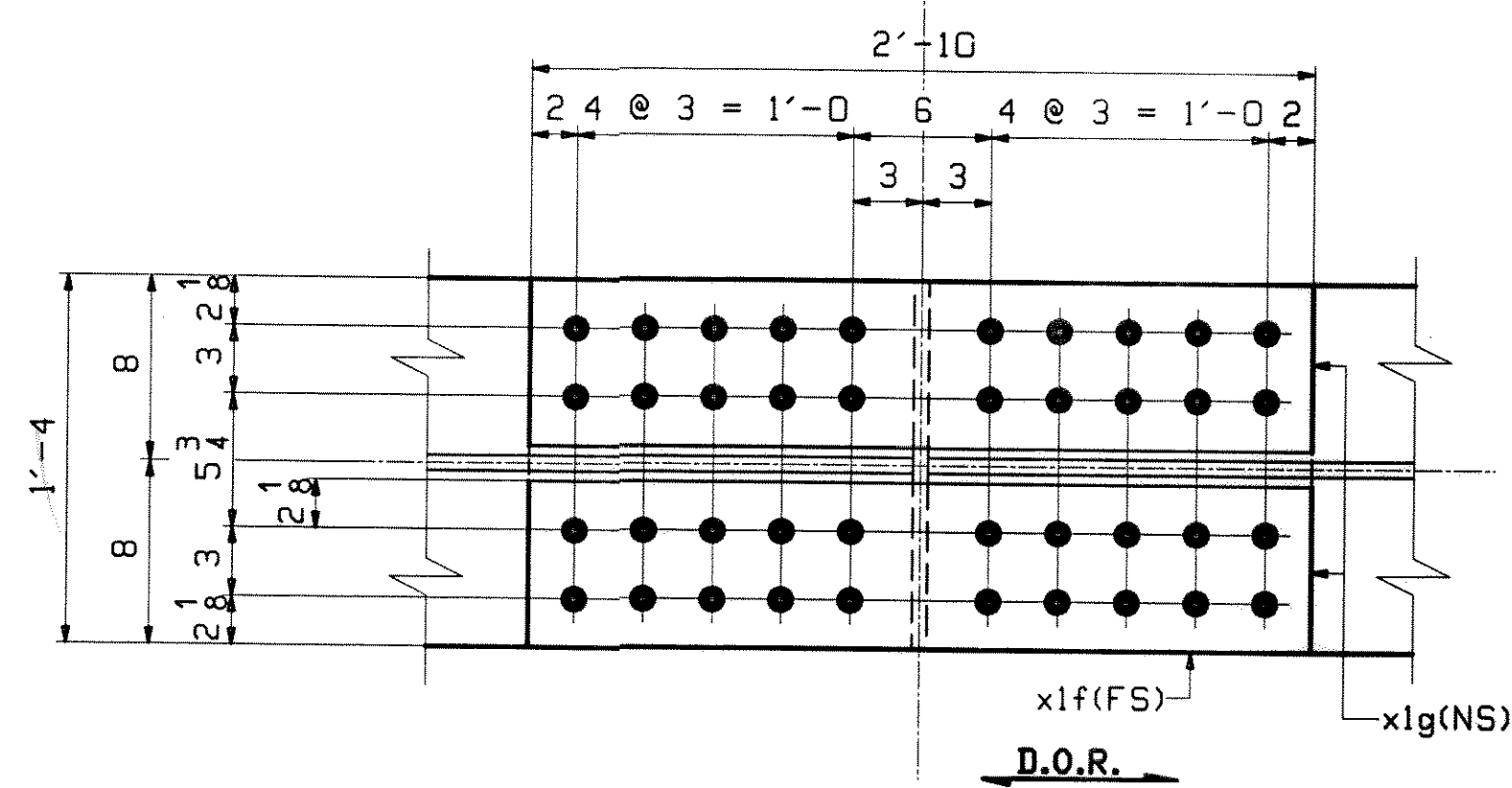
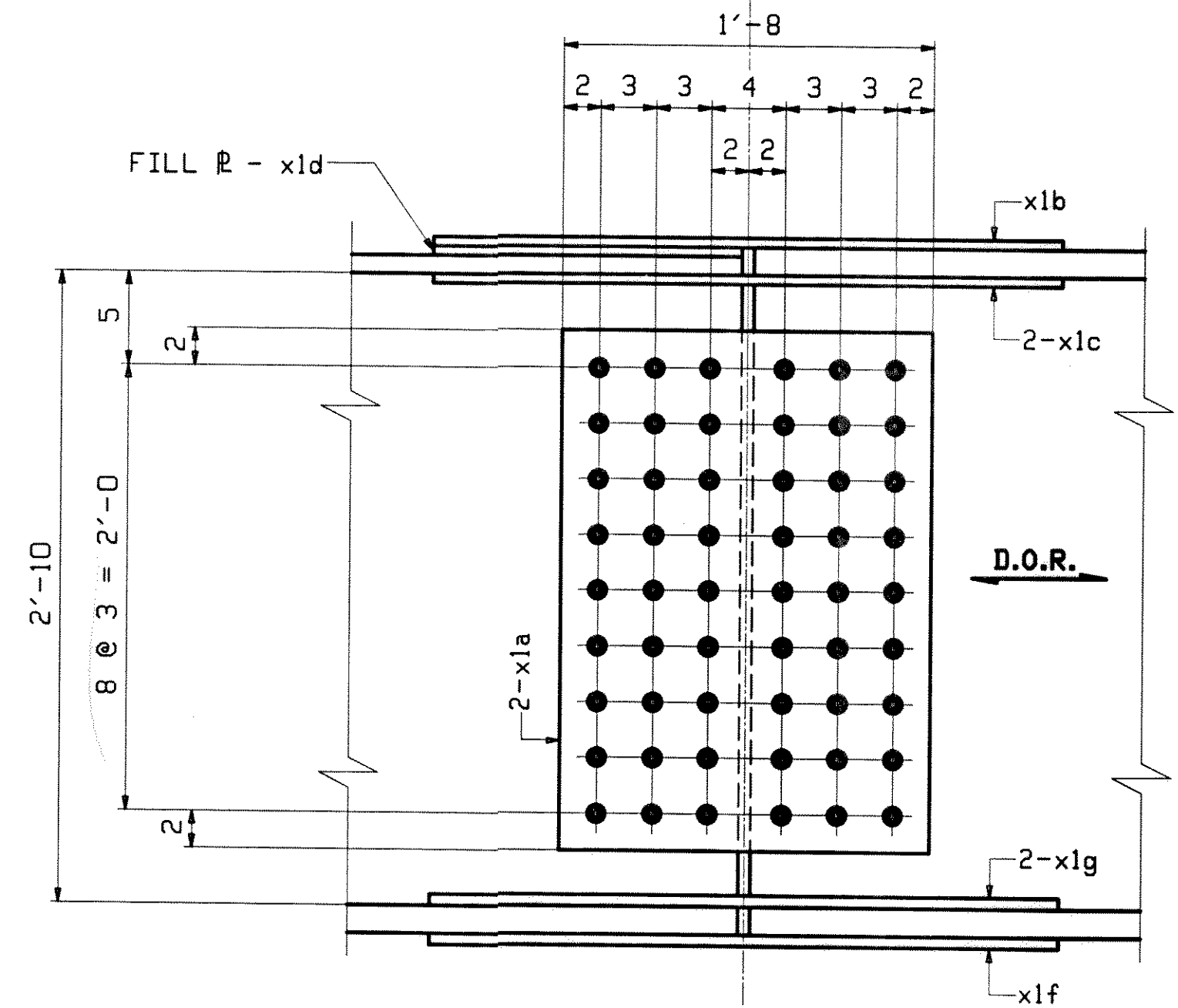
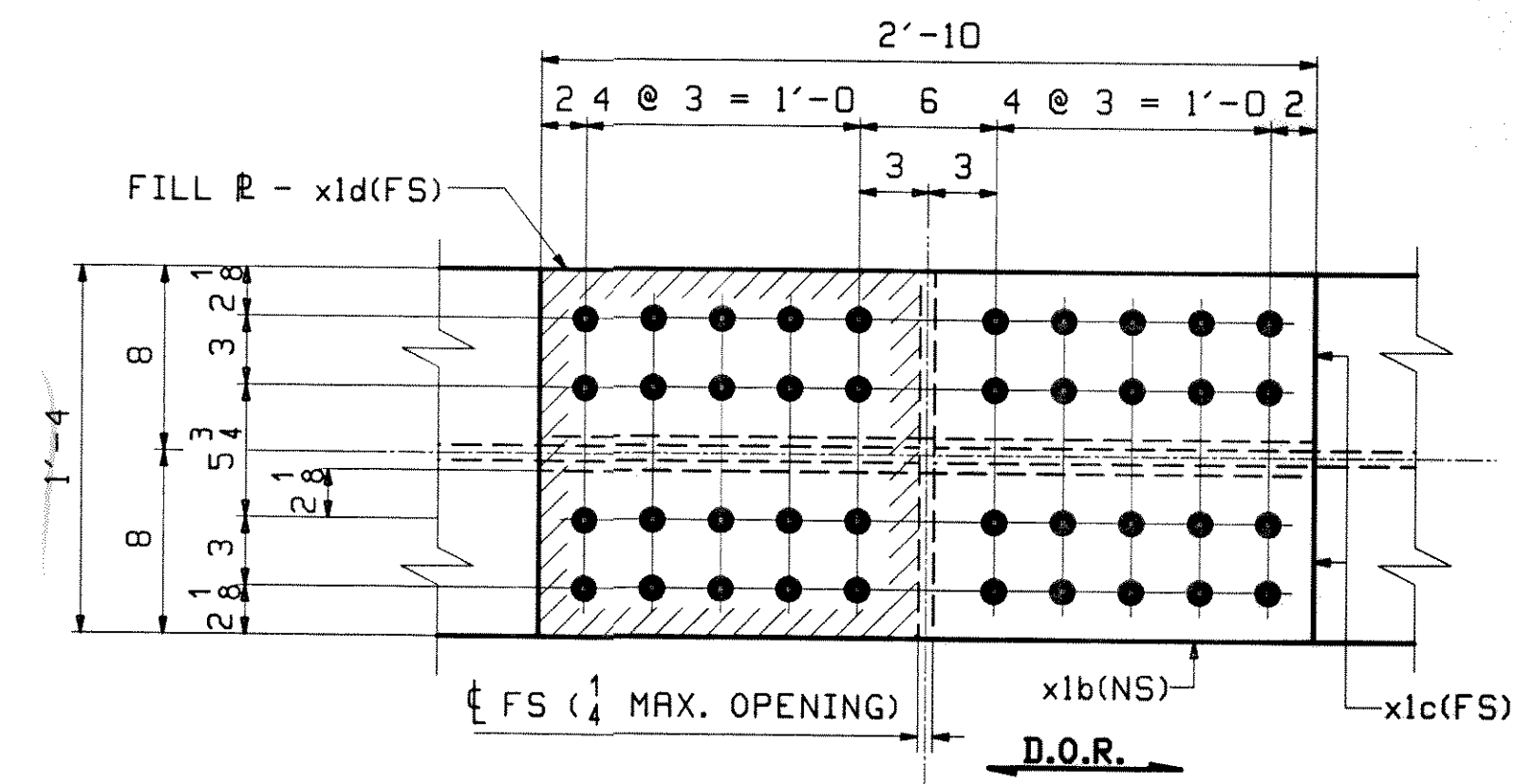
DATE: 01/08

JOB NO.: 438

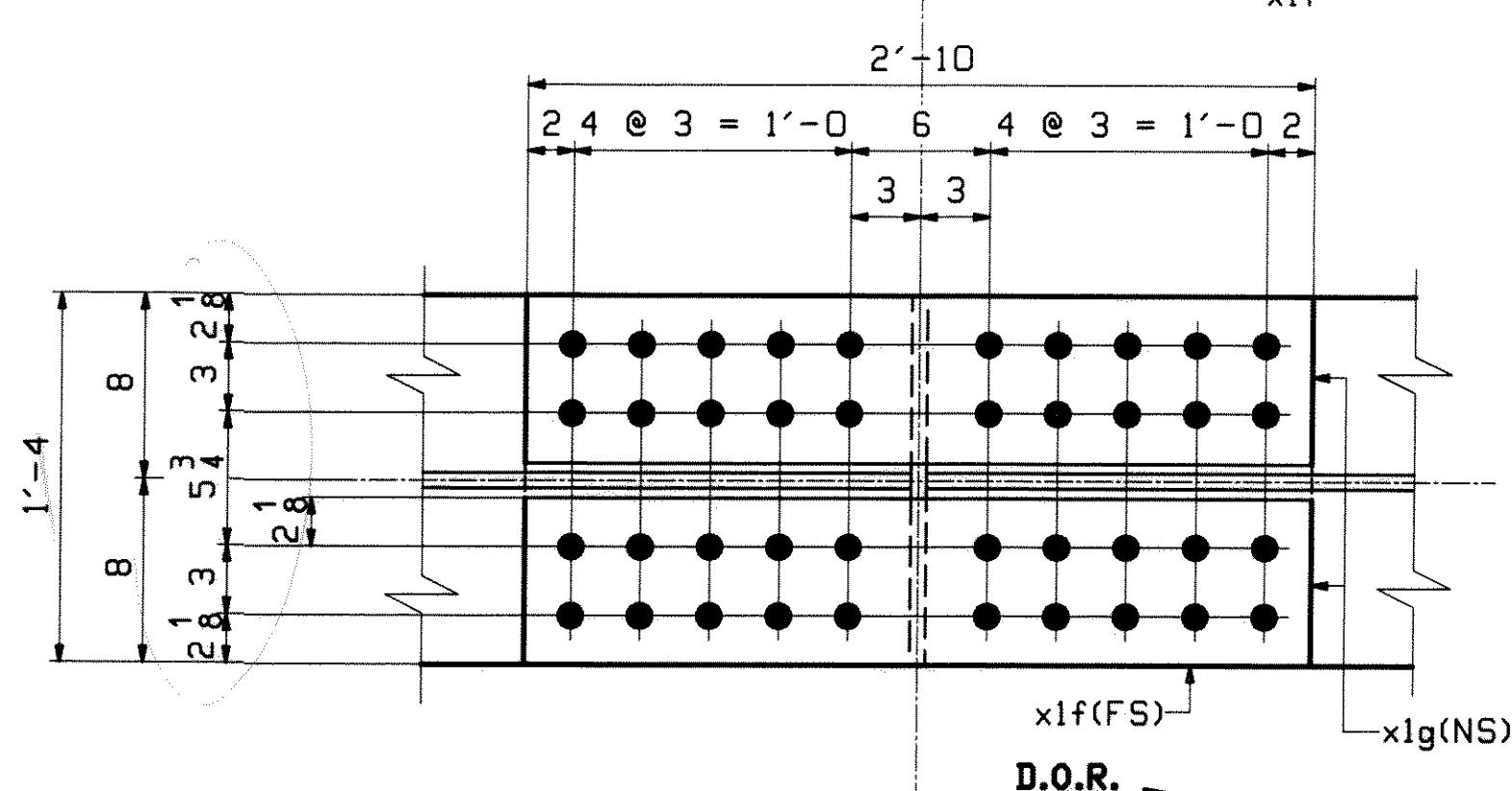
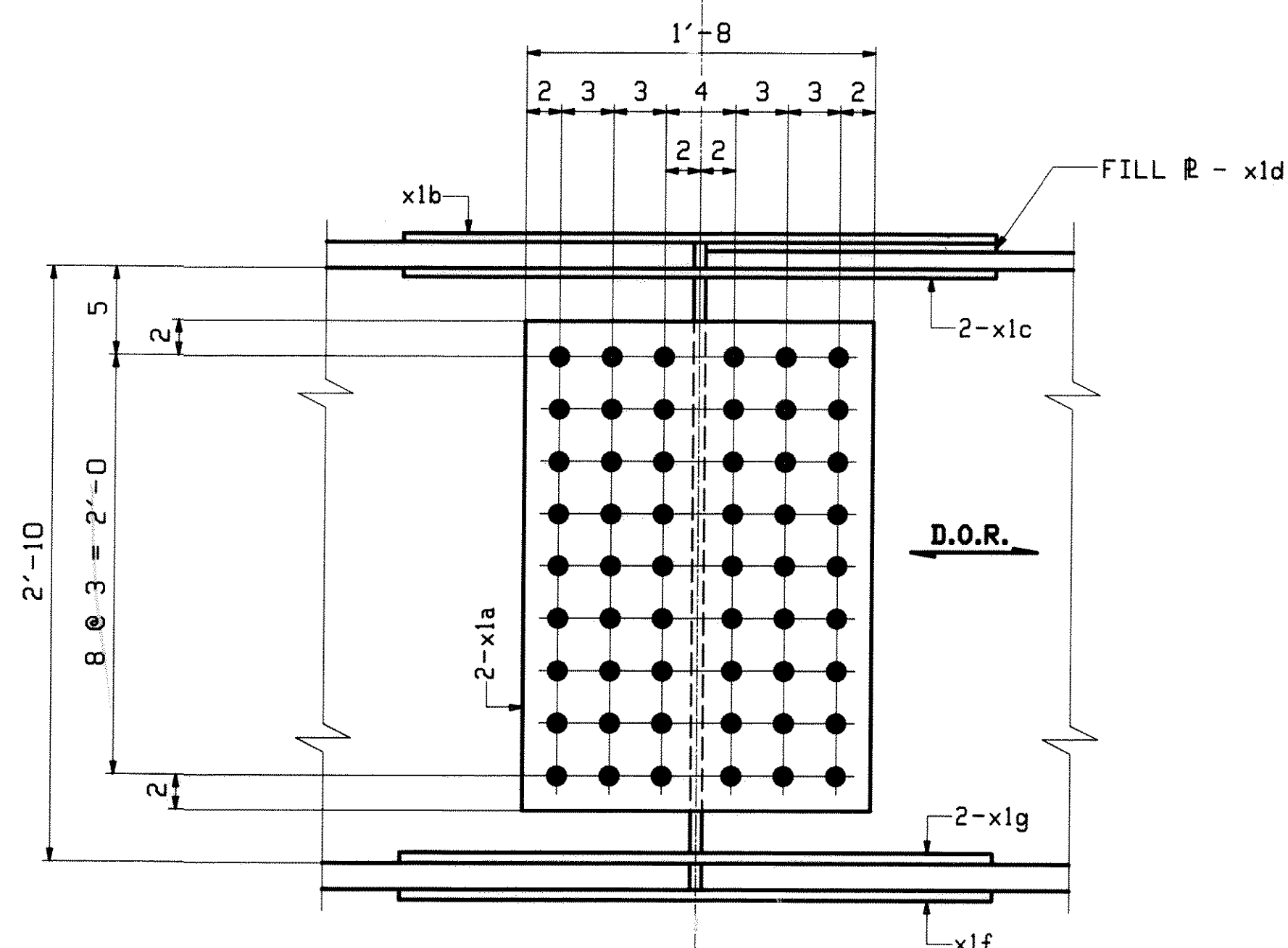
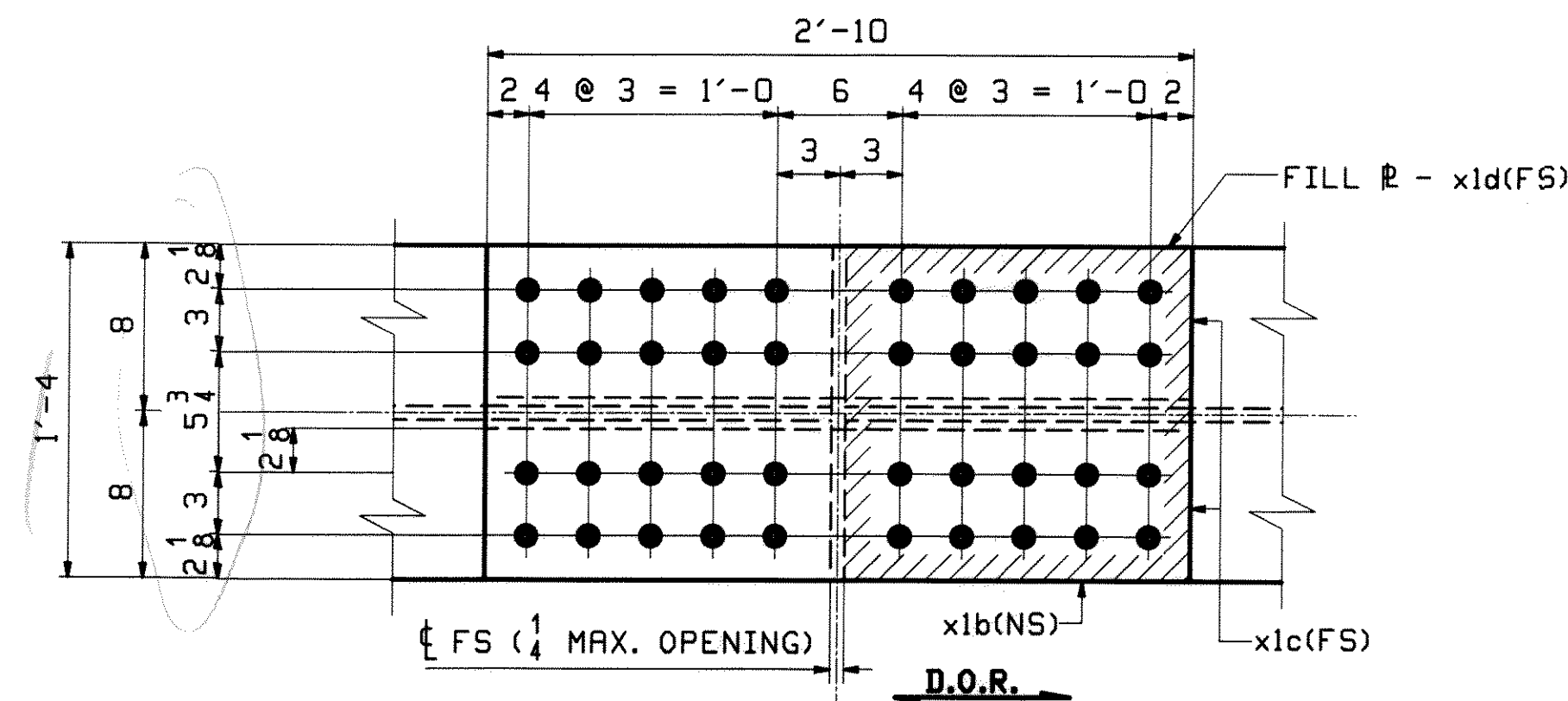
REV.:

NOTES:
1. FOR GENERAL SHOP NOTES SEE DRAWING GNI.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0	2/22/2010	APPROVAL COMMENT ADD THK TRANSITION	SOB	SOB		
MATERIAL: M270-50W SURFACE PREP. & PAINT: AS NOTED HOLES: AS NOTED SHOP BOLTS: AS NOTED						
DESCRIPTION: FLANGE DIAGRAM						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham					DRAWN: JB	DATE: 01/05
					CHKD: SOB	DATE: 01/08
LOCATION: Putney					JOB NO.	DWG NO.
PROJ NO. IM 091-1(3)					438	F3
CUSTOMER: VT ROT					REV.	



5 - FIELD SPLICE DETAIL - X1M1
FIELD SPLICE 1



10 - FIELD SPLICE DETAIL - X1M2
FIELD SPLICE 2 & 3

CHECK THICKNESS, # BOLT'S

ABM INFO		SHIP	BILL OF MATERIAL				JOB NO.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS
		X1M1	5		FIELD SPLICE		
6	B		10	x1a	PL 1/2 x 28	1 8	M270-50WT2
6	C		5	x1b	PL 1/2 x 16	2 10	M270-50WT2
6	E		10	x1c	PL 1/2 x 7 1/4	2 10	M270-50WT2
6	G		5	x1d	PL 1/2 x 16	1 4 7/8	FILL
6	D		5	x1f	PL 5/8 x 16	2 10	M270-50WT2
6	F		10	x1g	PL 5/8 x 7 1/4	2 10	M270-50WT2
		X1M2	10		FIELD SPLICE		
6	B		20	x1a	PL 1/2 x 28	1 8	M270-50WT2
6	C		10	x1b	PL 1/2 x 16	2 10	M270-50WT2
6	E		20	x1c	PL 1/2 x 7 1/4	2 10	M270-50WT2
6	G		10	x1d	PL 1/2 x 16	1 4 7/8	FILL
6	D		10	x1f	PL 5/8 x 16	2 10	M270-50WT2
6	F		20	x1g	PL 5/8 x 7 1/4	2 10	M270-50WT2

- NOTES:
- FOR GENERAL NOTES SEE DRAWING GNI.
 - HOLES IN SPLICE PLATES ARE PRE-DRILLED. ENDS OF GIRDERS ARE DRILLED FROM SOLID USING SPLICE PLATES AS A TEMPLATE.
 - D.O.R.** DENOTES DIRECTION OF MILL ROLLING

REV.	DATE	REMARKS	DWN	CHK	APP
0					
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:	
M270-50WT2		NONE		15" Ø 16" Ø	
DESCRIPTION: FIELD SPLICE DETAILS					
CASCO BAY STEEL STRUCTURES, INC.					
75 SPRING HILL ROAD			SACO, MAINE 04072		
PHONE (207) 282-7360			FAX. (207) 282-1179		
STRUCTURE:		U.S. 5 over I-91		DRAWN	
		Bridge No. 19A		W	
		Putney		CHKD:	
		County of Windham		I	
LOCATION:		Putney		JOB	
PROJ NO.		IM 091-1(31)		4	
CUSTOMER:		VT AOT			

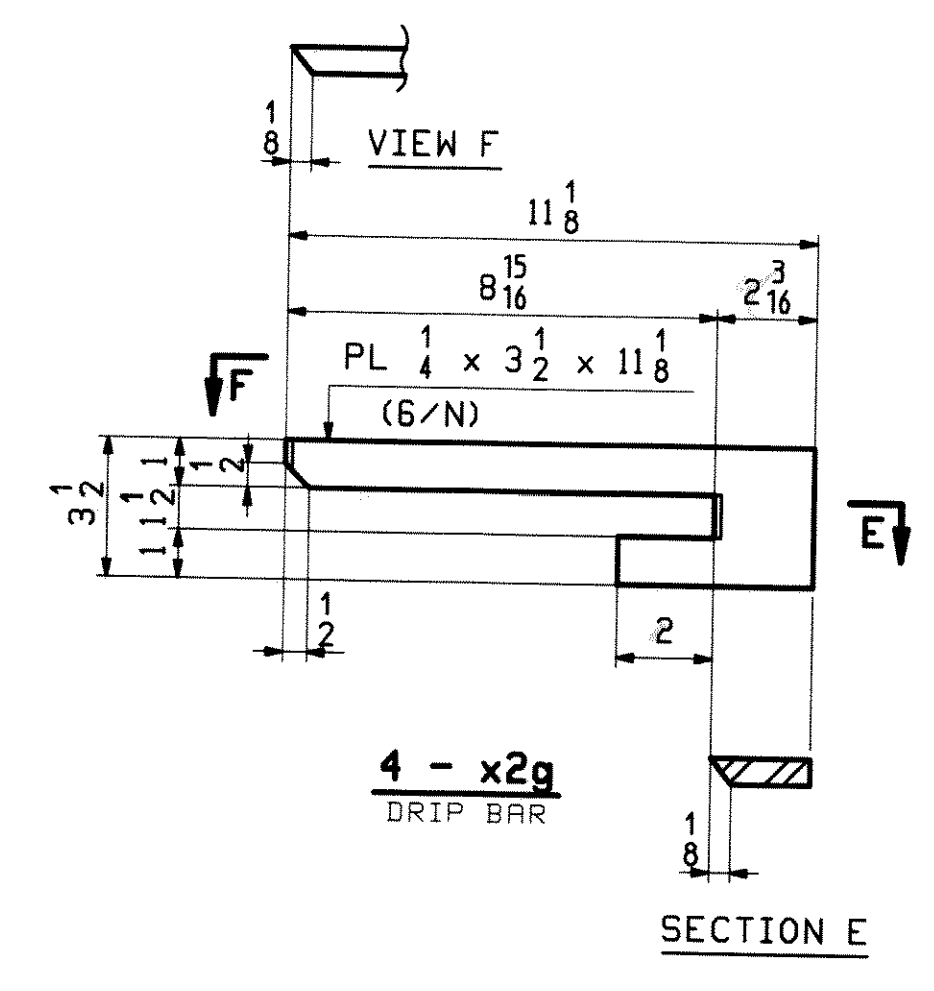
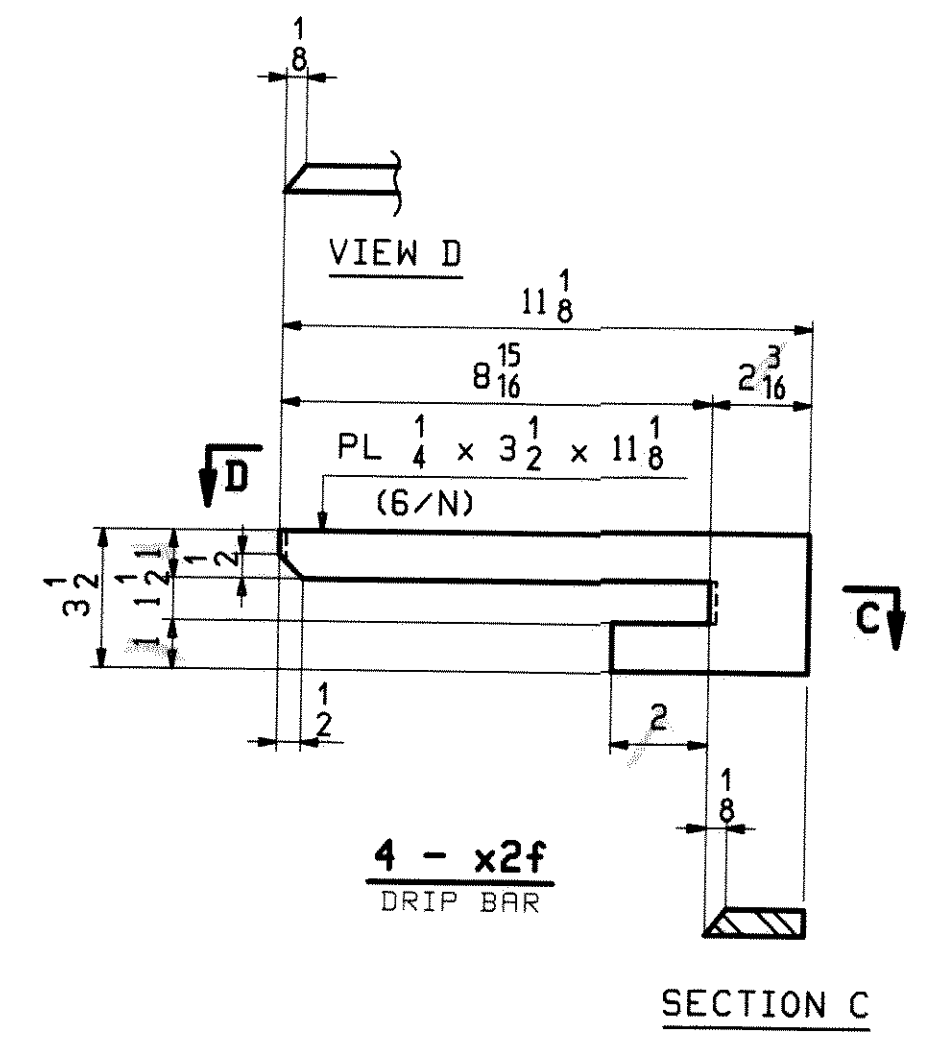
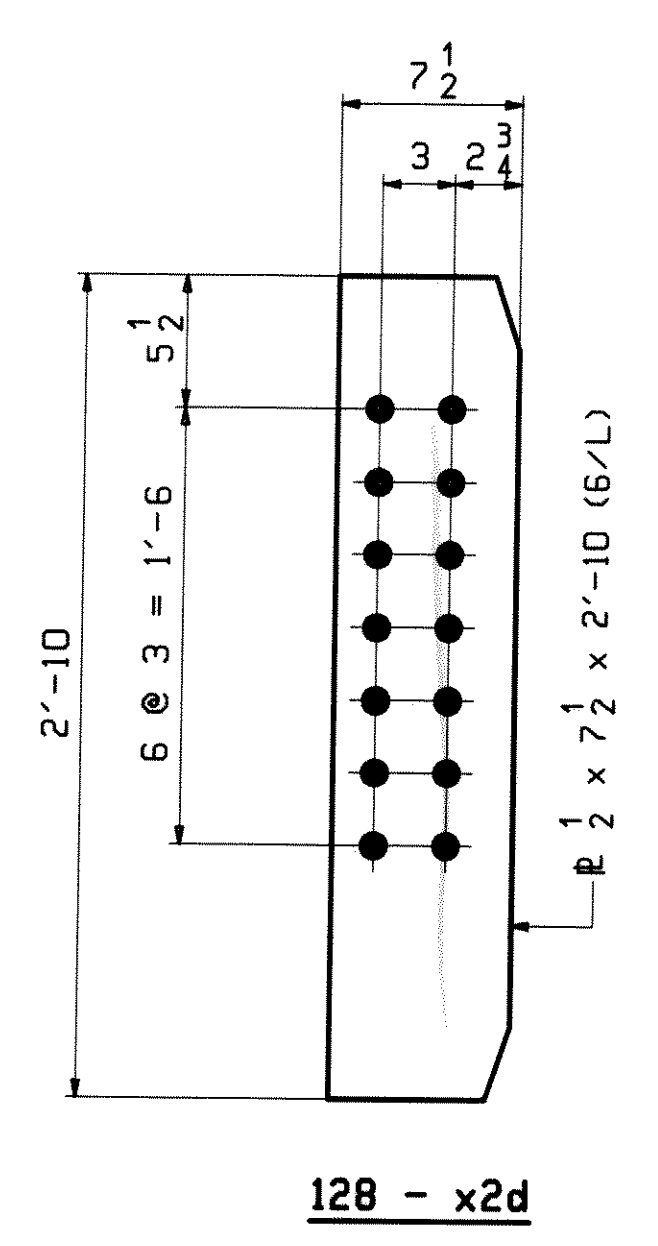
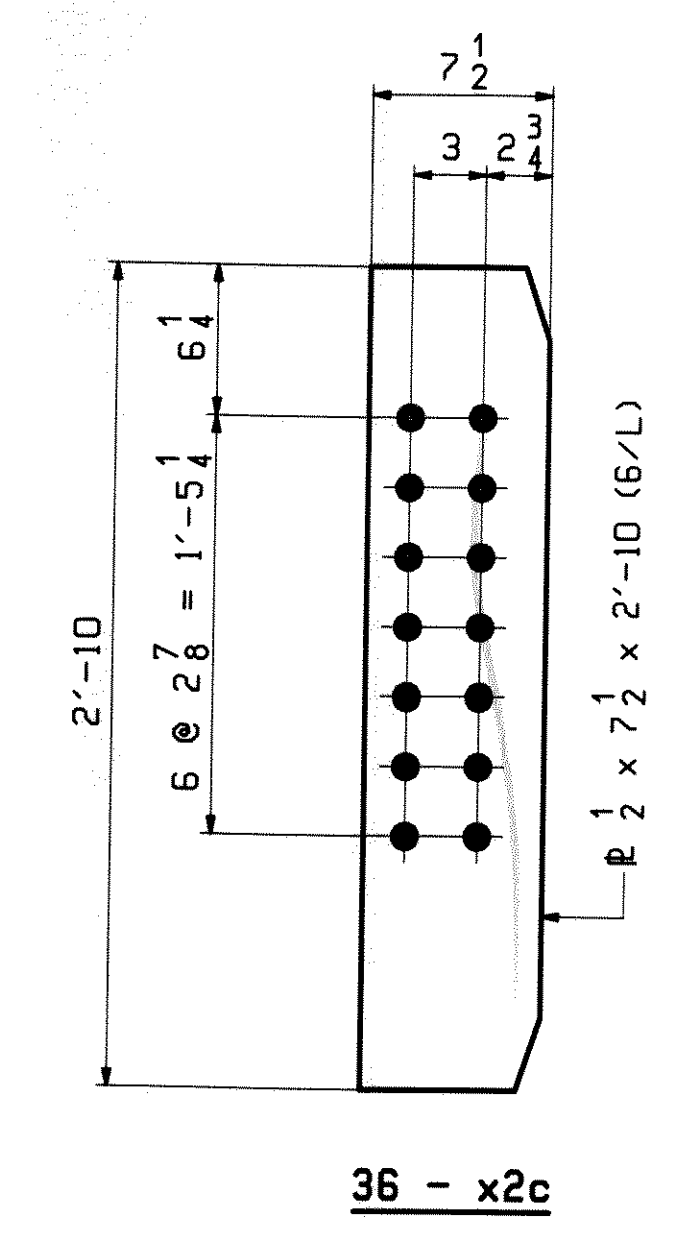
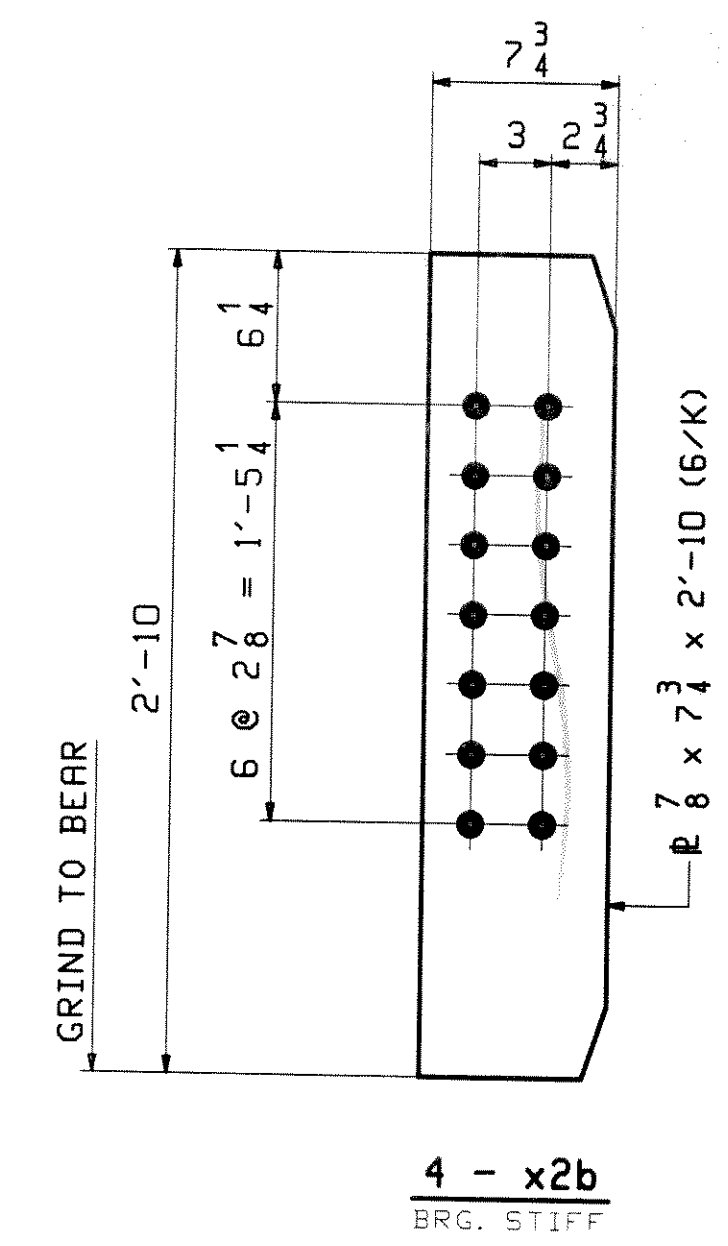
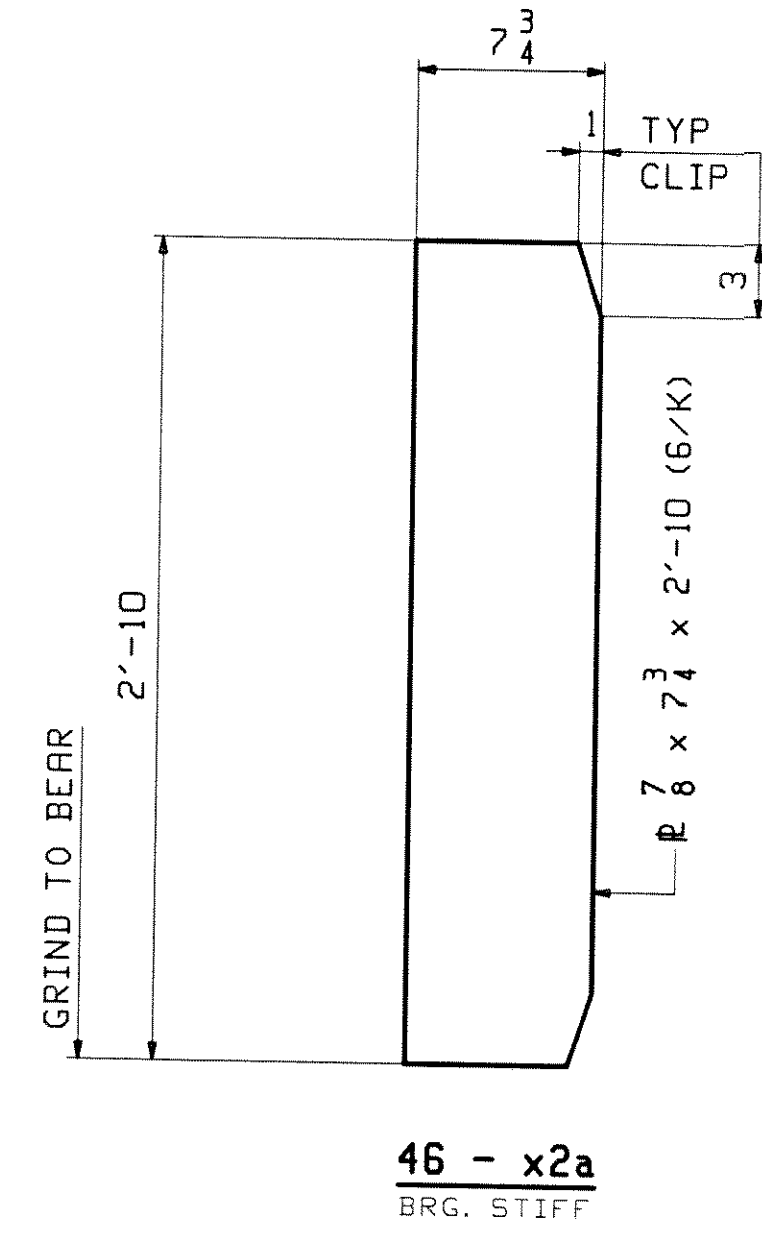
REVISIONS ARE PERMITTED UNLESS NOTED OTHERWISE

DATE: 2/9/10

SIGNATURE: [Signature]

APPROVED BY: [Signature]

FOR THE SOLE PURPOSES OF THE CONTRACT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, AND CONSTRUCTION OF THE STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAIL DESIGN OF COMPONENTS AND ERRORS OF CONSTRUCTION OR MATERIAL PROPERTIES.

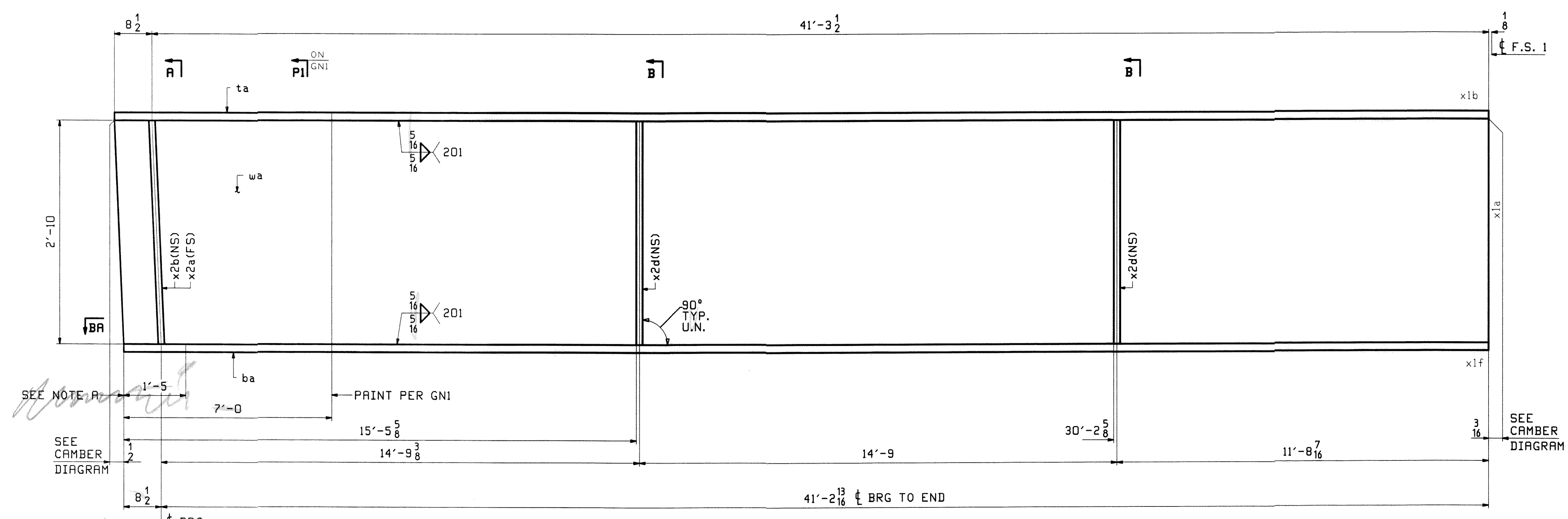


NOTES:
FOR GENERAL NOTES SEE DRAWING GN

REV.	DATE	REMARKS	DWN	CHK	AP
0					JAN 2
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:		
M270-50W		SEE GNI	15 16 Ø		
DESCRIPTION: GIRDER STANDARDS					
CASCO BAY STEEL STRUCTURES, INC.					
75 SPRING HILL ROAD SACO, MAINE 04072					
PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham					DRAWN: WJ
LOCATION: Putney					CHKD: DO
PROJ NO. IM 091-1(31)					JOB
CUSTOMER: VT AOT					43

DATE: 2/9/10
DRAWN: [Signature]

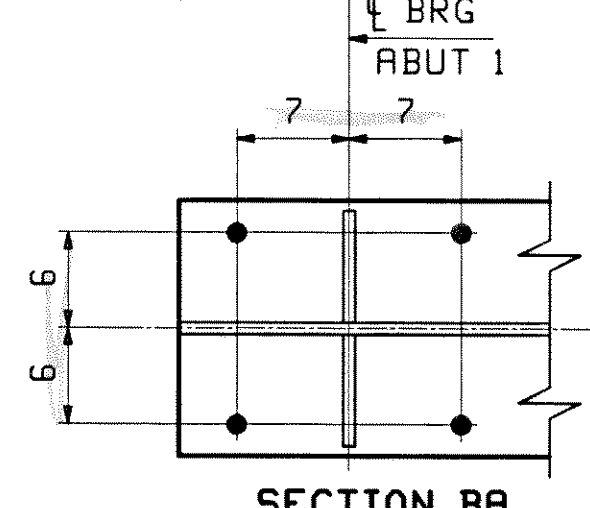
ABM INFO		BILL OF MATERIAL				JOB NO.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	REMARKS
		IG1A	1		GIRDER	
5	L		1	wa	PL 1/2x34	M270-50WT2
3	N		1	ta	PL 1x16	M270-50WT2
2	A		1	ba	PL 1/2x16	M270-50WT2
6	K		1	x2a	PL 7/8x7 3/4	MIE
6	K		1	x2b	PL 8x7 3/4	MIE
6	L		2	x2d	PL 1/2x7 1/2	MIE



SEE NOTE A
SEE CAMBER DIAGRAM

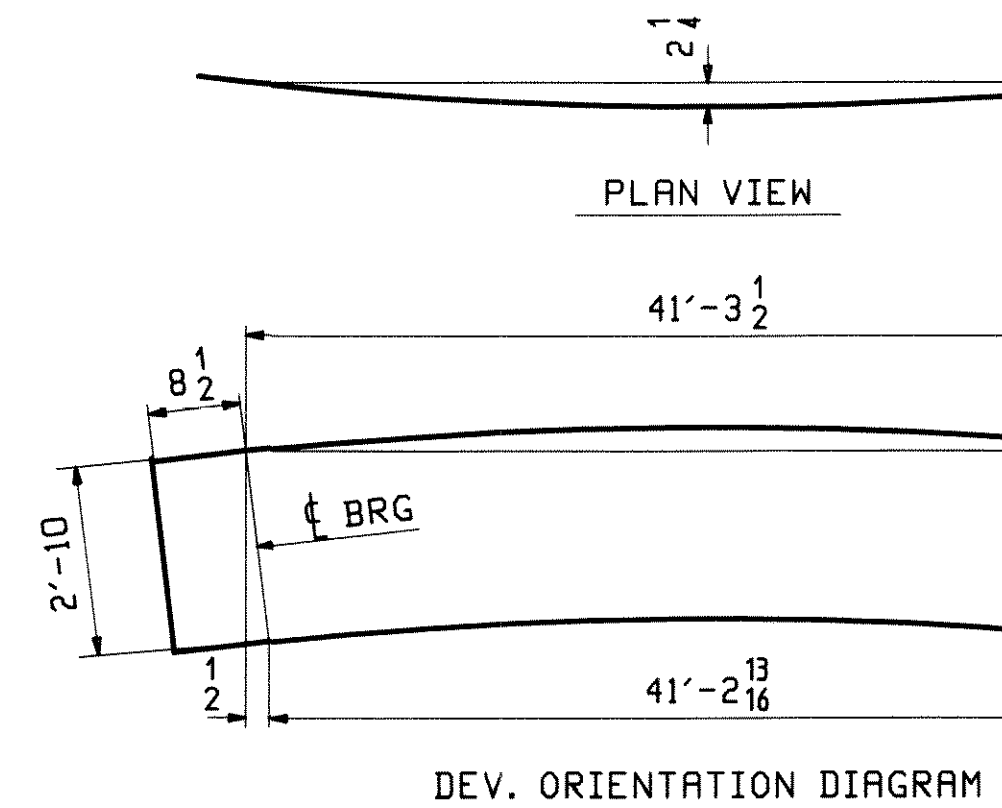
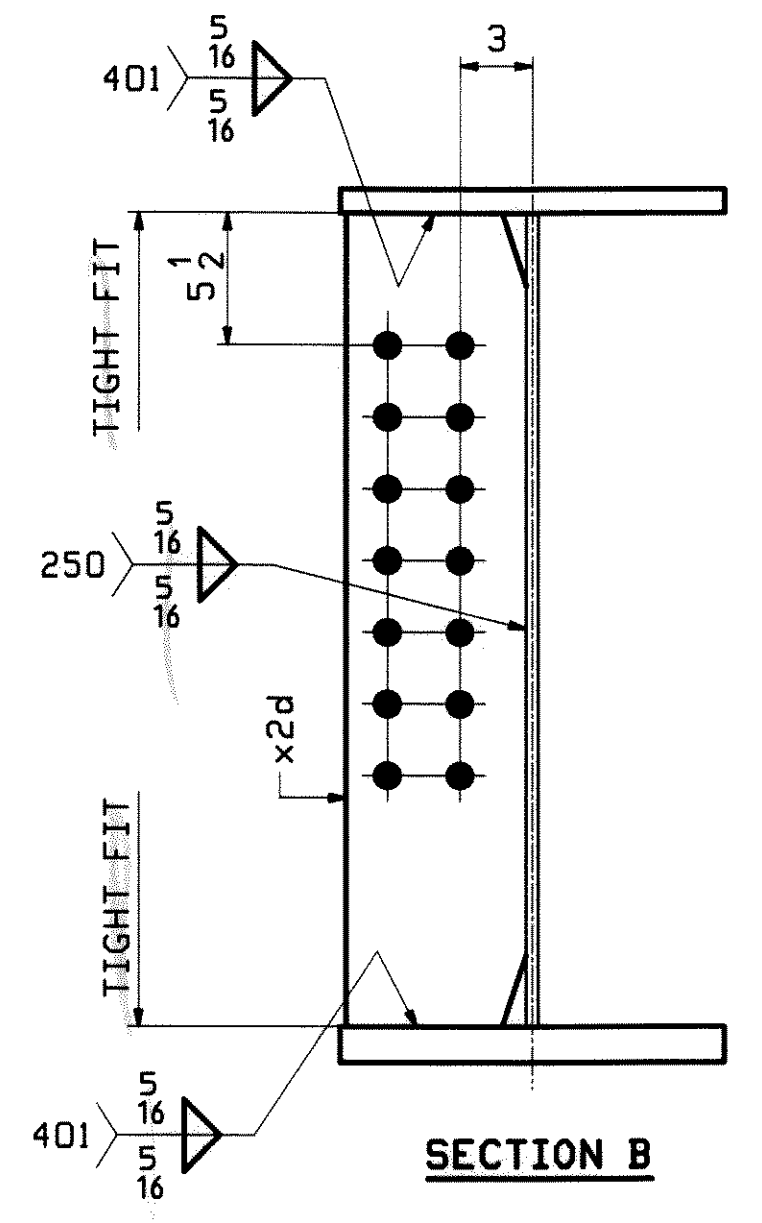
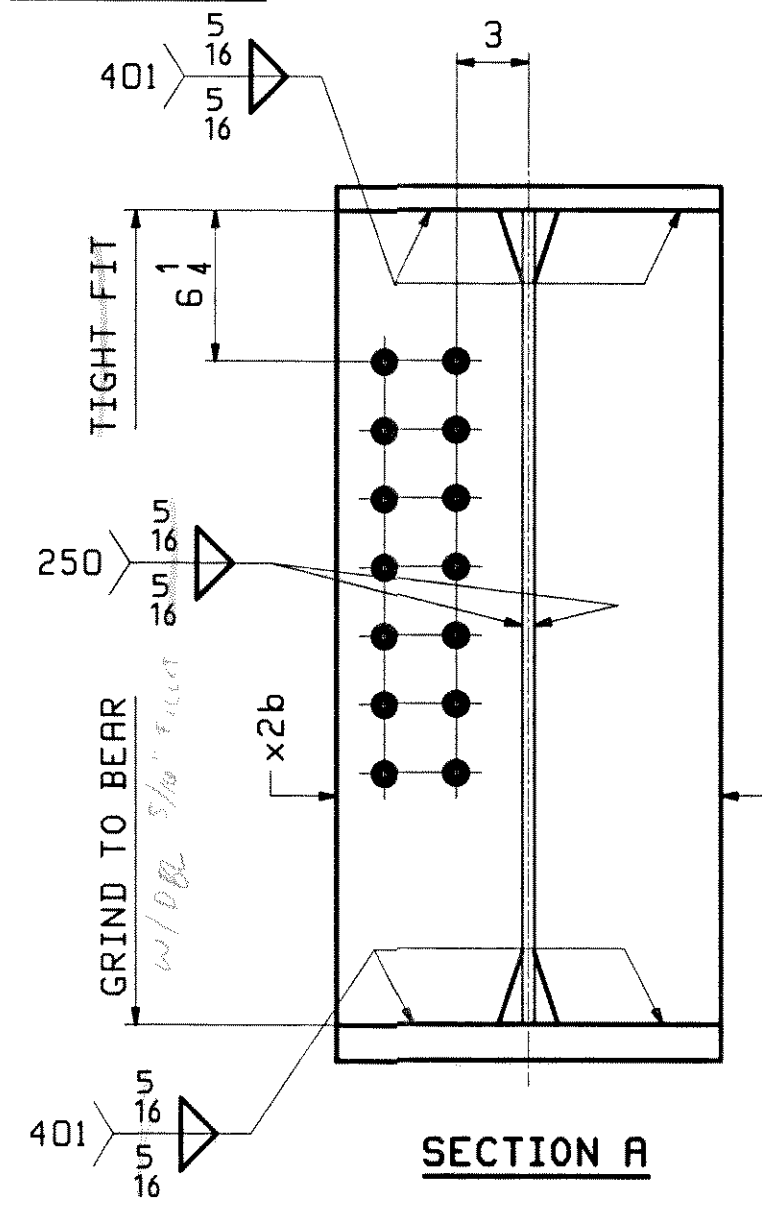
FOR FIELD SPLICE XIMI DETAILS SEE SHT XI

SEE CAMBER DIAGRAM



ONE - GIRDER - IG1A (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER DIAGRAM SEE SHEET C1
FOR FLANGE DIAGRAM SEE SHEET F1
FOR GENERAL NOTES SEE SHEET GNI



DATE: 2/9/10
SIGNATURE: [Signature]
REVIEW BY: [Signature]
REVISIONS: [List of revisions]

NOTE A:
NO PAINT BOTTOM AND EDGES OF BOTTOM FLANGE.

REV.	DATE	REMARKS	DWN	CHK
0				

MATERIAL: M270-50W (UN) SURFACE PREP. & PAINT: SEE GNI HOLES: 15° Ø U.N.

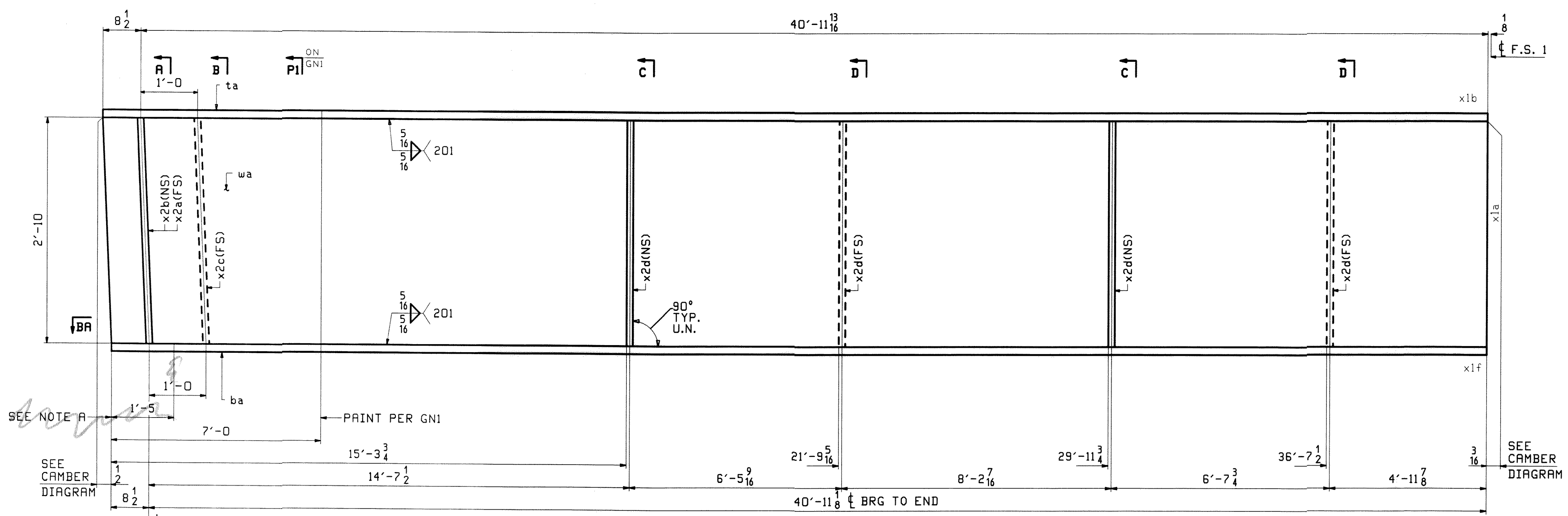
DESCRIPTION: GIRDER - IG1A

CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

STRUCTURE: U.S. 5 over I-91
Bridge No. 19A
Putney
County of Windham

LOCATION: Putney
PROJ NO. IM 091-1(31)
CUSTOMER: VT AOT

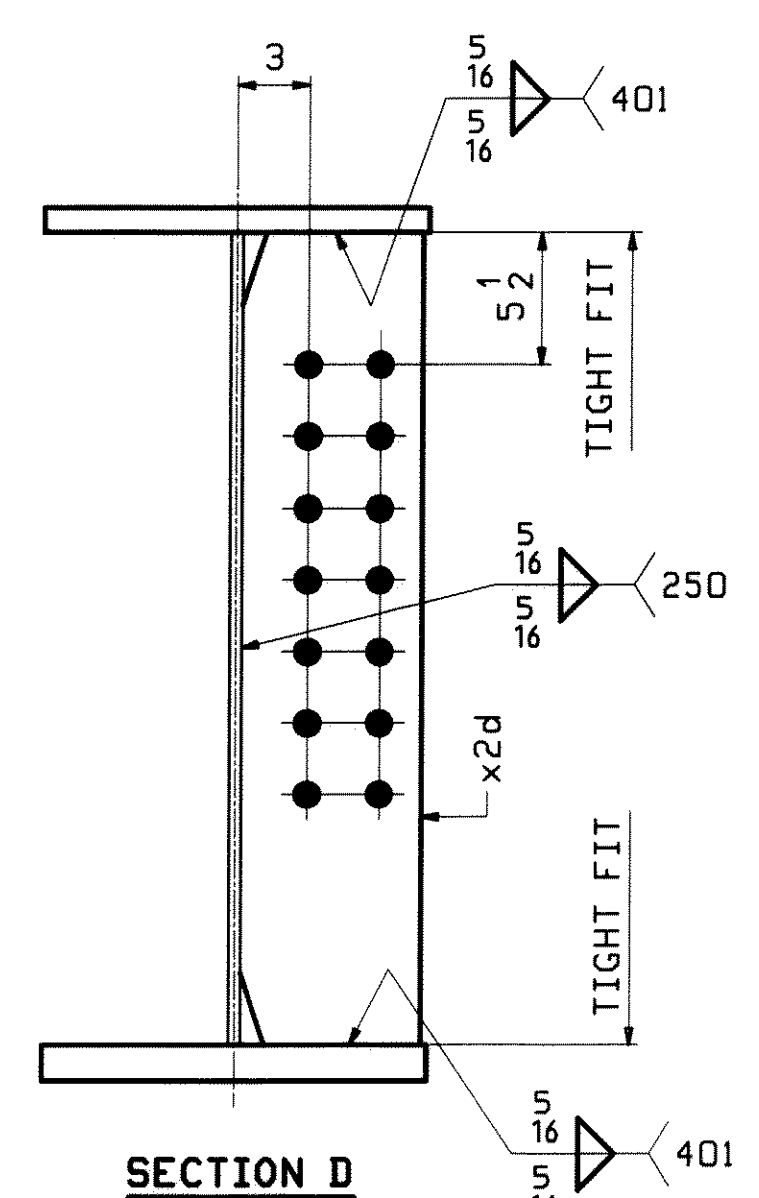
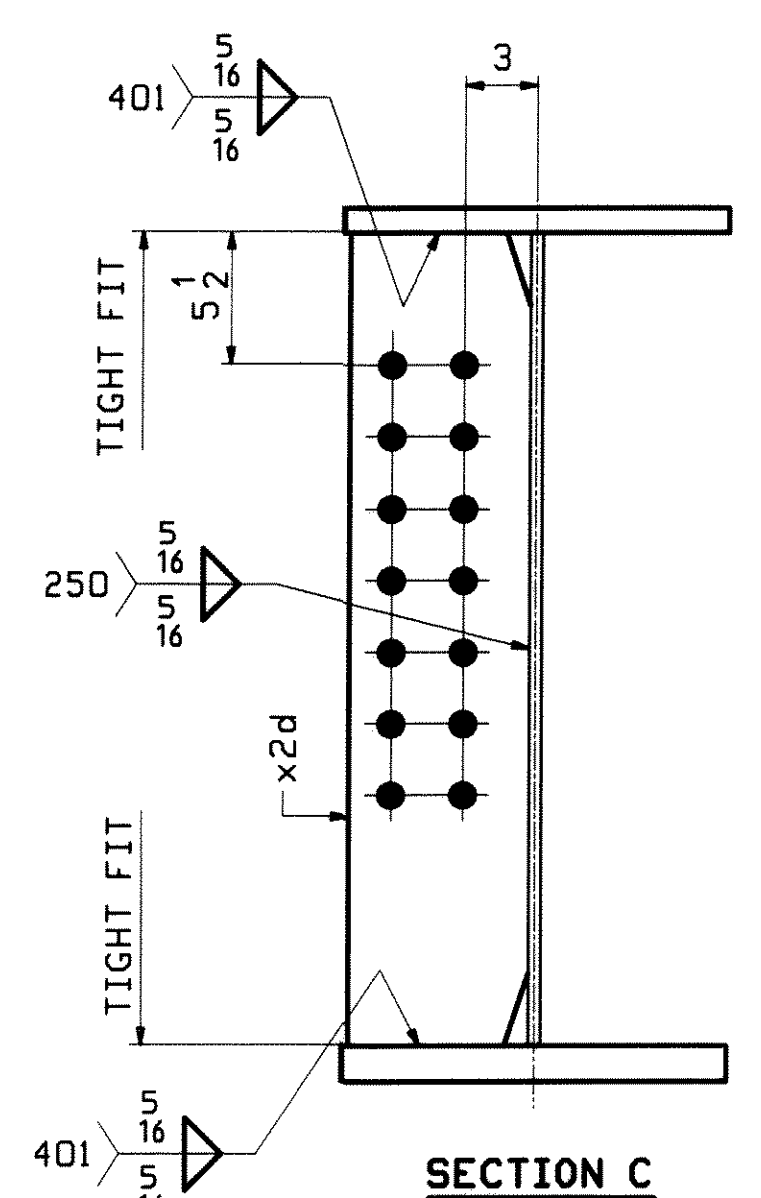
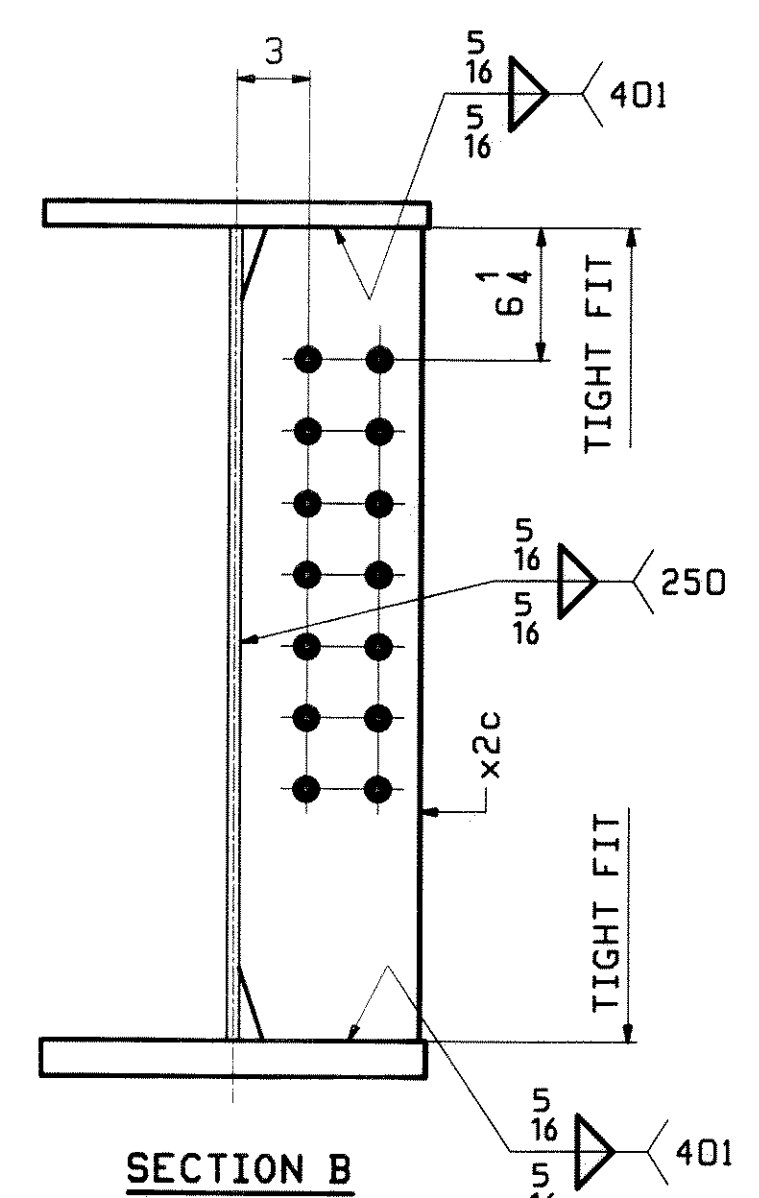
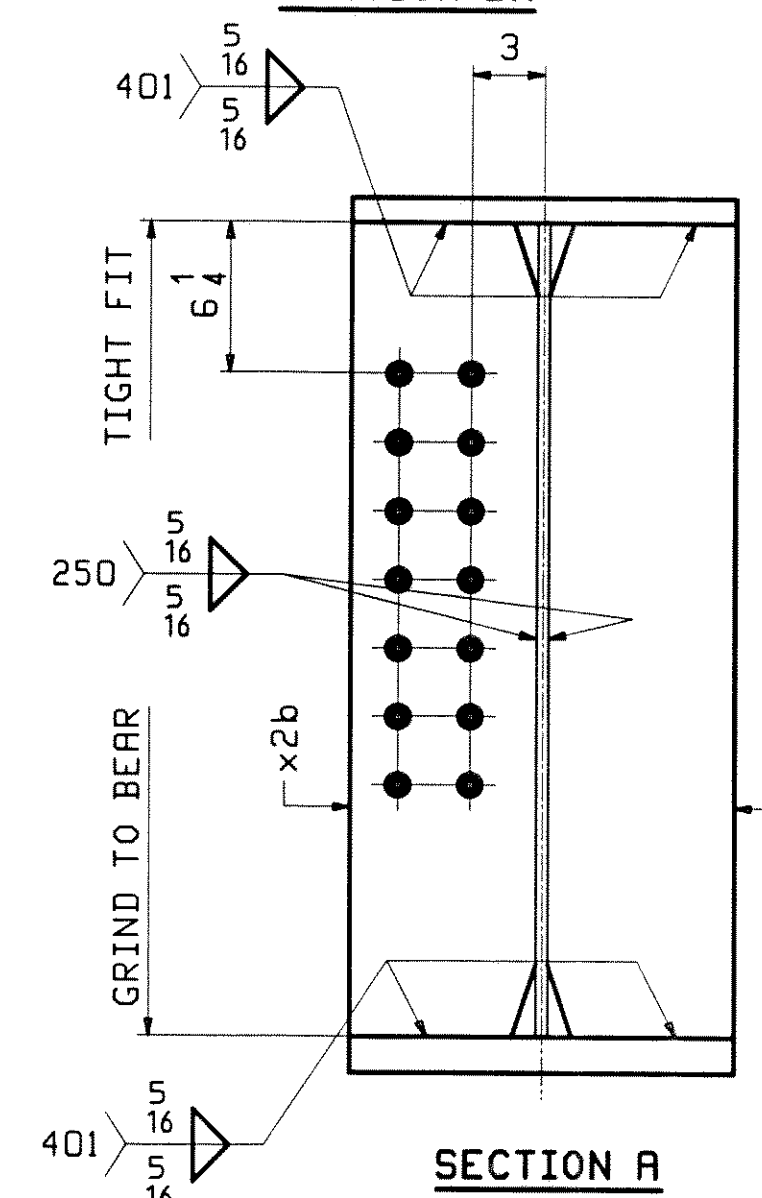
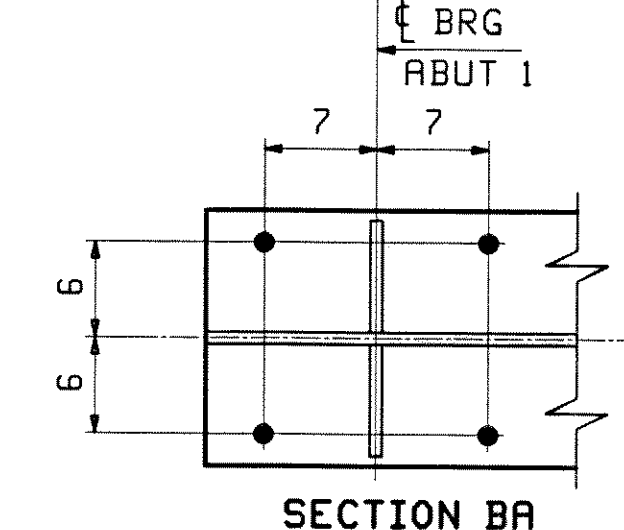
ABM INFO		BILL OF MATERIAL				JOB NO.		DRAWN	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	INCHES	REMARKS	WT
		2G2A	1		GIRDER				8394
5	N		1	wa	PL $\frac{1}{2}$ x 34	41	$8\frac{5}{16}$	M270-50HT2	
3	O		1	ta	PL 1x16	41	$8\frac{5}{16}$	M270-50HT2	
2	C		1	ba	PL $\frac{1}{2}$ x 16	41	$7\frac{5}{8}$	M270-50HT2	
6	K		1	x2a	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	2	10	MIE	
6	K		1	x2b	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	2	10	MIE	
6	L		1	x2c	PL $\frac{1}{2}$ x 7 $\frac{1}{2}$	2	10		
6	L		4	x2d	PL $\frac{1}{2}$ x 7 $\frac{1}{2}$	2	10		



FOR FIELD SPLICE XIMI
DETAILS SEE SHT XI

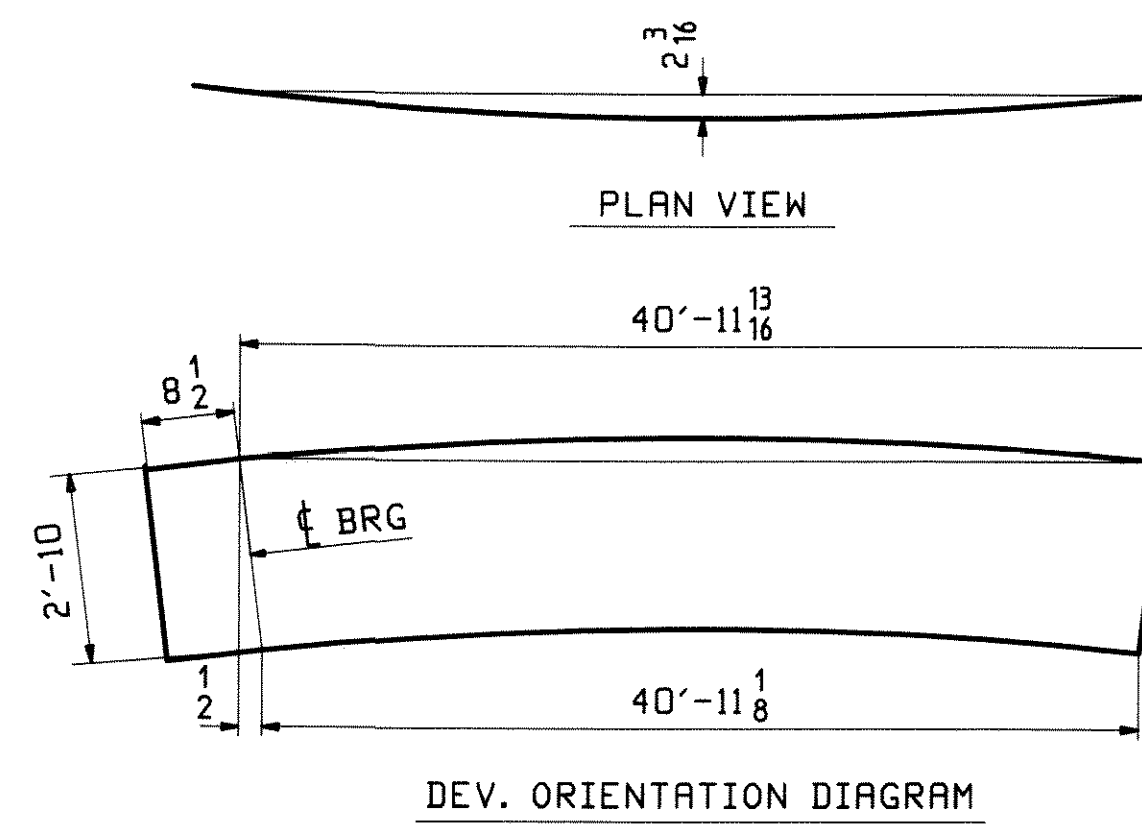
SEE CAMBER
DIAGRAM

SEE NOTE A
SEE CAMBER
DIAGRAM



ONE - GIRDER - 2G2A (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER DIAGRAM SEE SHEET C1
FOR FLANGE DIAGRAM SEE SHEET F1
FOR GENERAL NOTES SEE SHEET GNI



DATE: 2/9/10

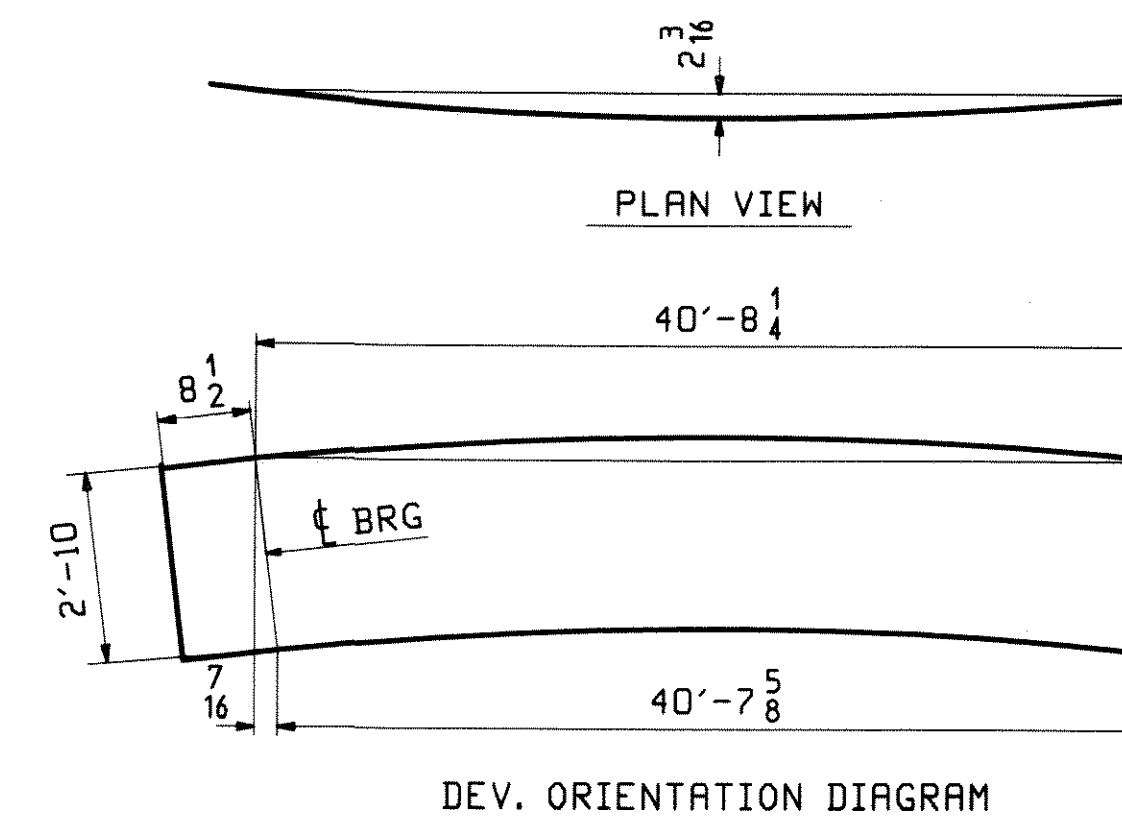
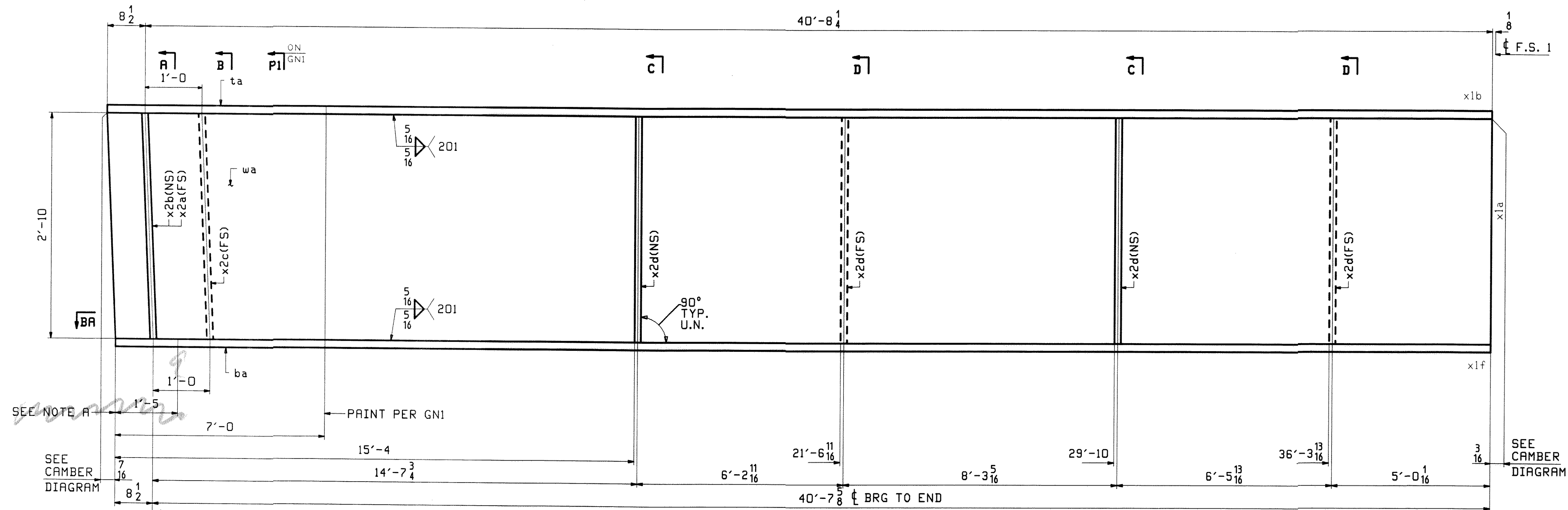
REVISIONS:

NO.	DATE	DESCRIPTION
1	2/9/10	REVISED PER COMMENTS

NOTE A:
NO PAINT BOTTOM AND EDGES OF BOTTOM FLANGE.

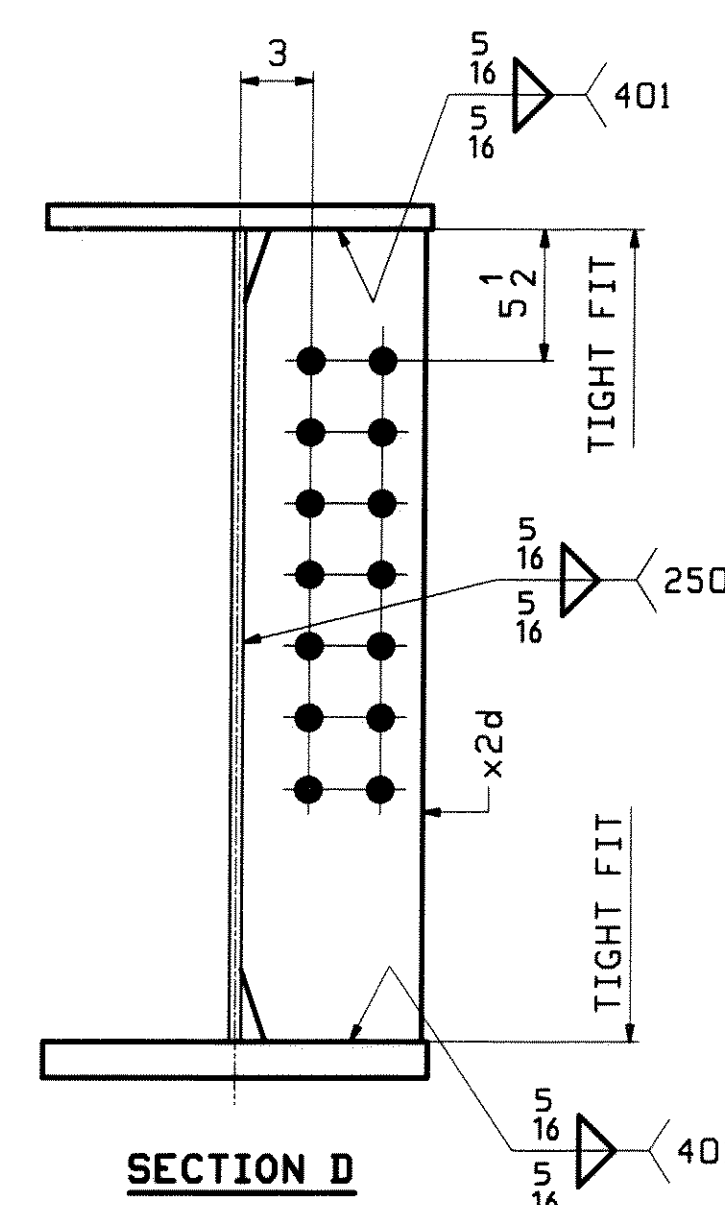
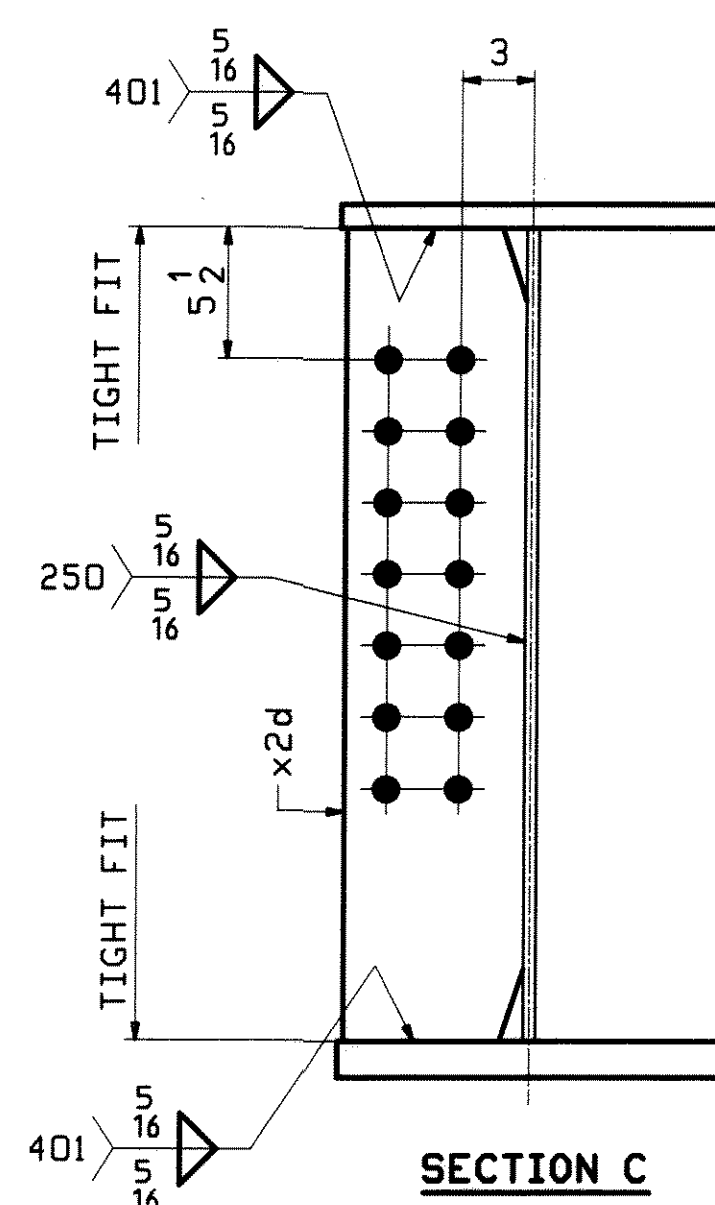
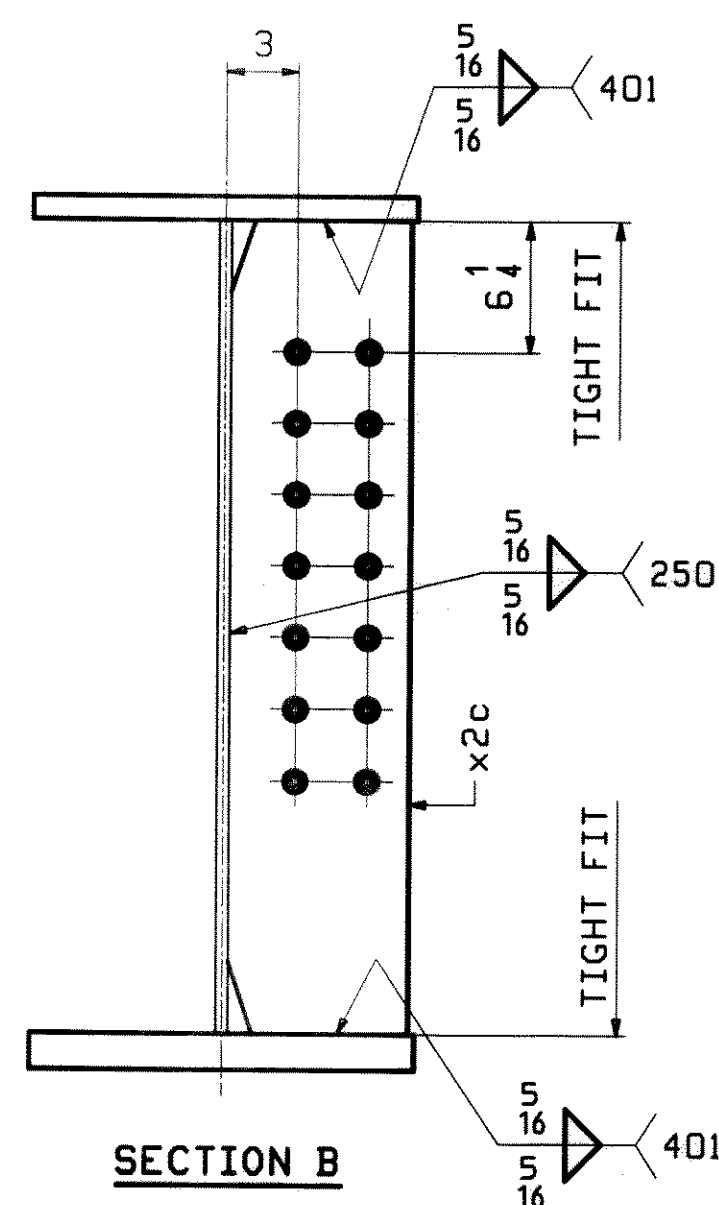
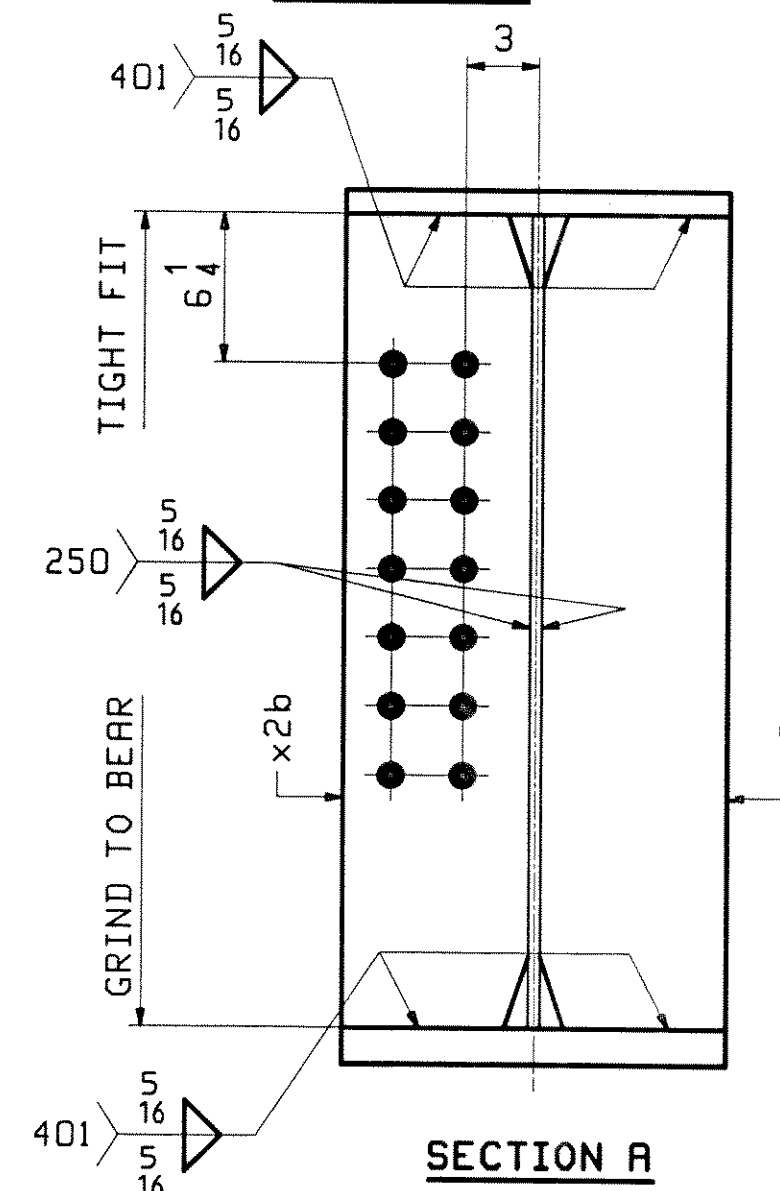
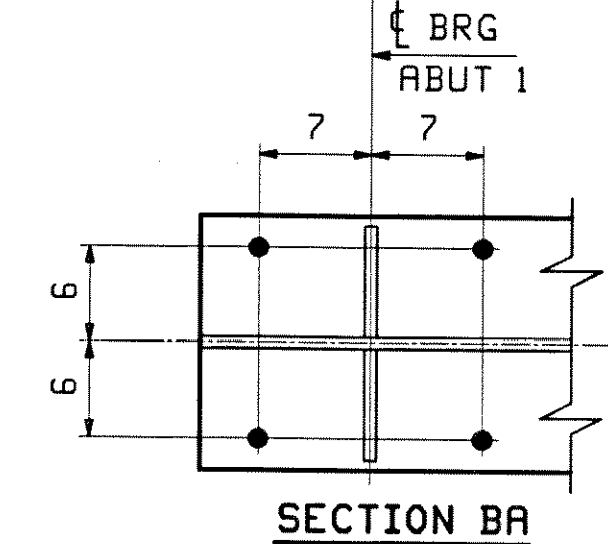
REV.	DATE	REMARKS	DWN	CHK	APVL
0					JAN 2010
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:	
M270-50W (UN)		SEE GNI		15" ϕ U.N.	
DESCRIPTION: GIRDER - 2G2A					
CASCO BAY STEEL STRUCTURES, INC.					
75 SPRING HILL ROAD			SACO, MAINE 04072		
PHONE (207) 282-7360			FAX. (207) 282-1179		
STRUCTURE: U.S. 5 over I-91					DRAWN:
Bridge No. 19A					WJF
Putney					CHKD:
County of Windham					DO
LOCATION: Putney					JOB NO.
PROJ NO. IM 091-1(31)					438
CUSTOMER: VT AOT					

ABH INFO		BILL OF MATERIAL				JOB NO.	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS
		3G3A	1		GIRDER		
5	Q		1	ua	PL 1/2x34	41'-4 3/4"	M270-50HT2
3	S		1	ta	PL 1x16	41'-4 3/4"	M270-50HT2
2	E		1	ba	PL 1/2x16	43'-4 1/8"	M270-50HT2
6	K		1	x2a	PL 7/8x7 1/2	2'-10"	MIE
6	K		1	x2b	PL 7/8x7 1/2	2'-10"	MIE
6	L		1	x2c	PL 1/2x7 1/2	2'-10"	MIE
6	L		4	x2d	PL 1/2x7 1/2	2'-10"	MIE



ONE - GIRDER - 3G3A (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C1
 FOR FLANGE DIAGRAM SEE SHEET F1
 FOR GENERAL NOTES SEE SHEET GNI



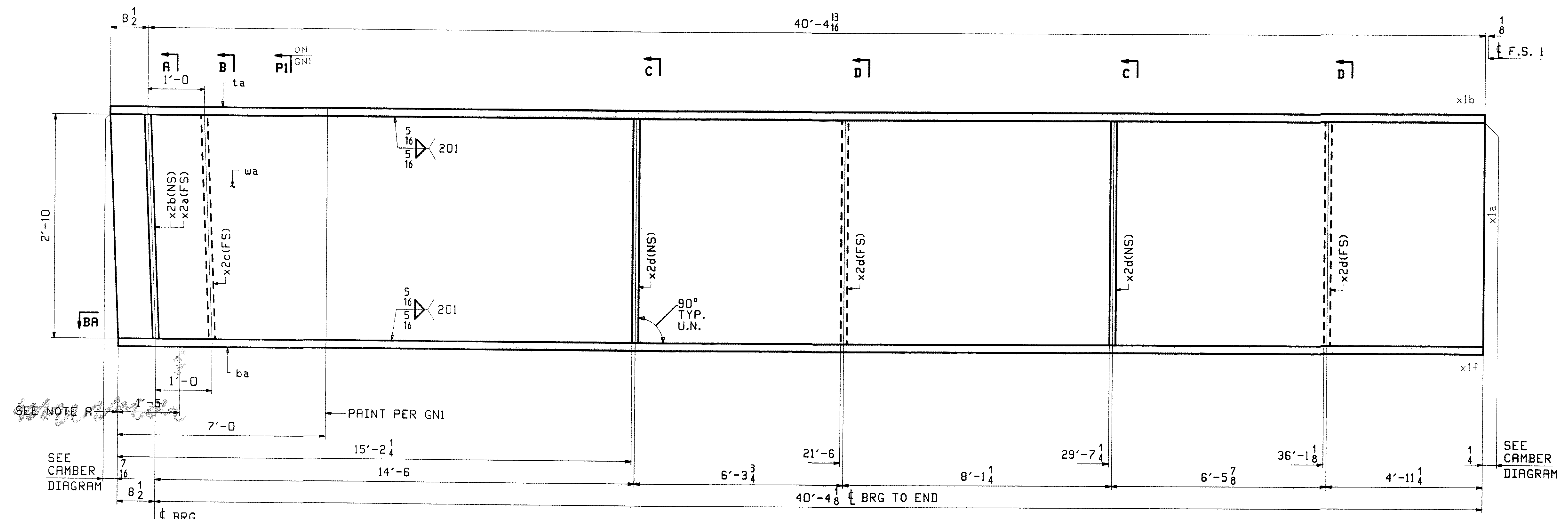
2/9/10

DATE

NOTE A:
 NO PRINT BOTTOM AND EDGES OF BOTTOM FLANGE.

REV.	DATE	REMARKS	DWN	CHK	APV
0					
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:	
M270-50W (UN)		SEE GNI		15/16" Ø U.N.	
DESCRIPTION: GIRDER - 3G3A					
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham					DRAWN: WJF
LOCATION: Putney					CHKD: DO
PROJ NO. IM 091-1(31)					JOB NO.
CUSTOMER: VT AOT					438

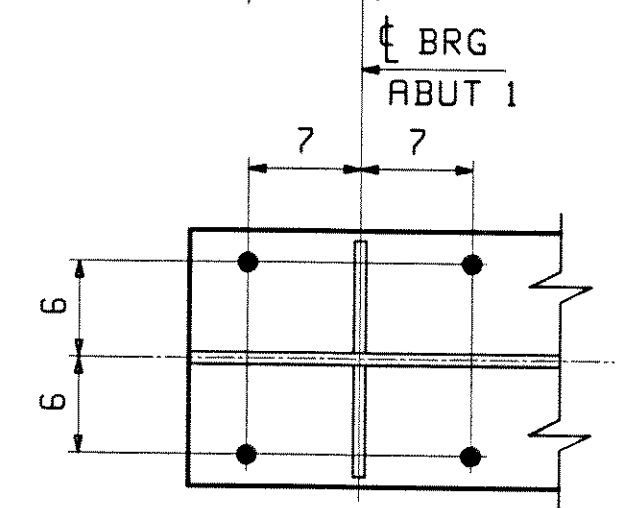
JOB NO.		DRAWING				
438		4				
ABH INFO	SHIP	BILL OF MATERIAL		REMARKS	NT	P
PAGE LINE	MARK	QTY	MATERIAL	LENGTH		
				FT	INCHES	
	4G4A	1	GIRDER			8280
5	S	1	wa	PL 2x34	41 1/8	M270-SOWT2
3	U	1	ta	PL 1x16	41 1/8	M270-SOWT2
2	G	1	ba	PL 1 1/2x16	41 0.8	M270-SOWT2
6	K	1	x2a	PL 7/8x7 1/2	2 10	MIE
6	K	1	x2b	PL 7/8x7 1/2	2 10	MIE
6	L	1	x2c	PL 1/2x7 1/2	2 10	
6	L	4	x2d	PL 1/2x7 1/2	2 10	



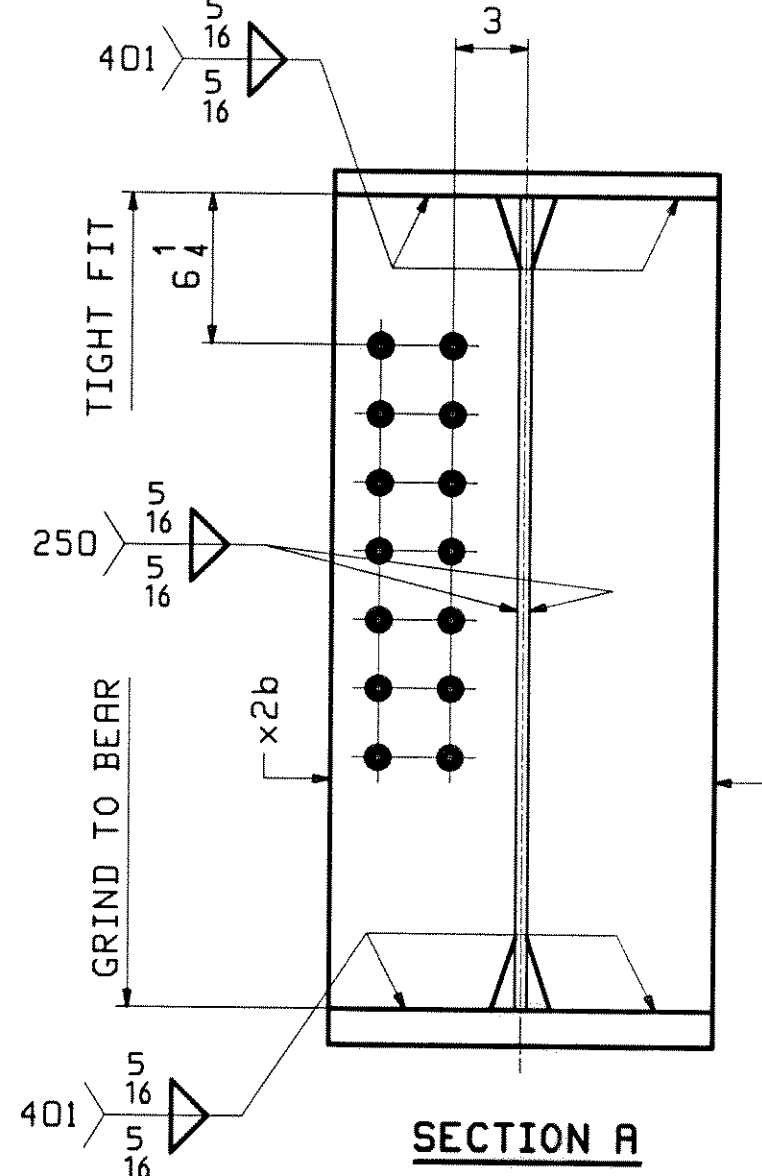
SEE NOTE A
SEE CAMBER DIAGRAM

FOR FIELD SPLICE XIMI DETAILS SEE SHT XI

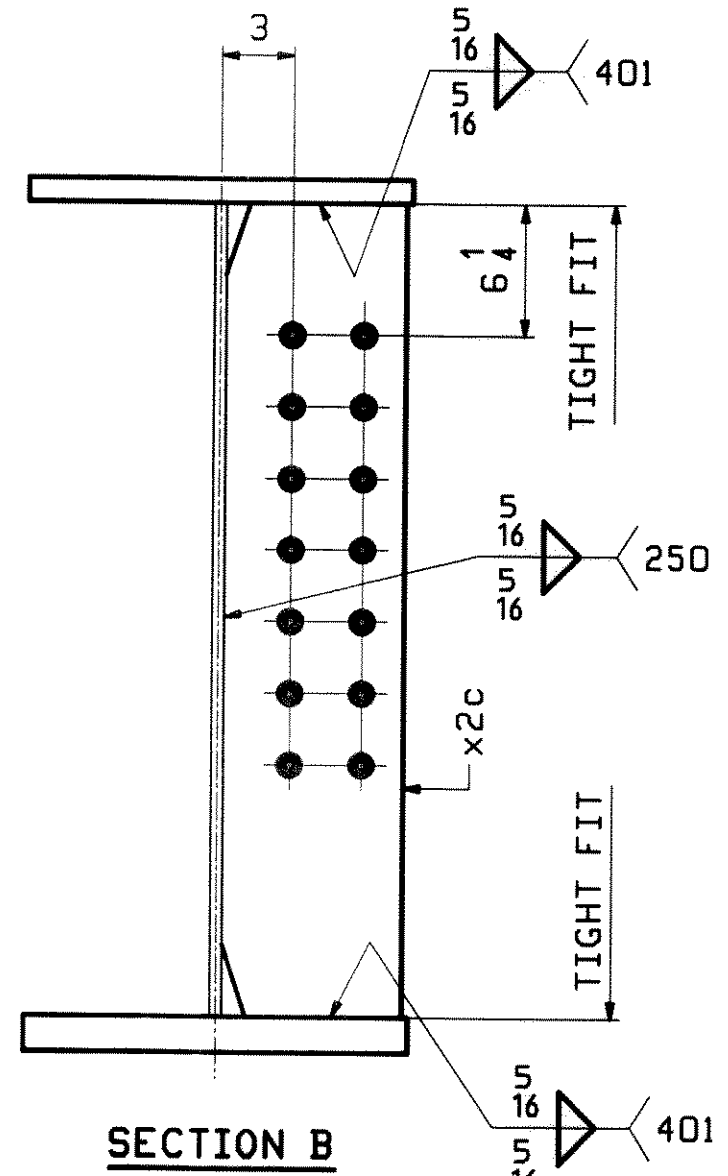
SEE CAMBER DIAGRAM



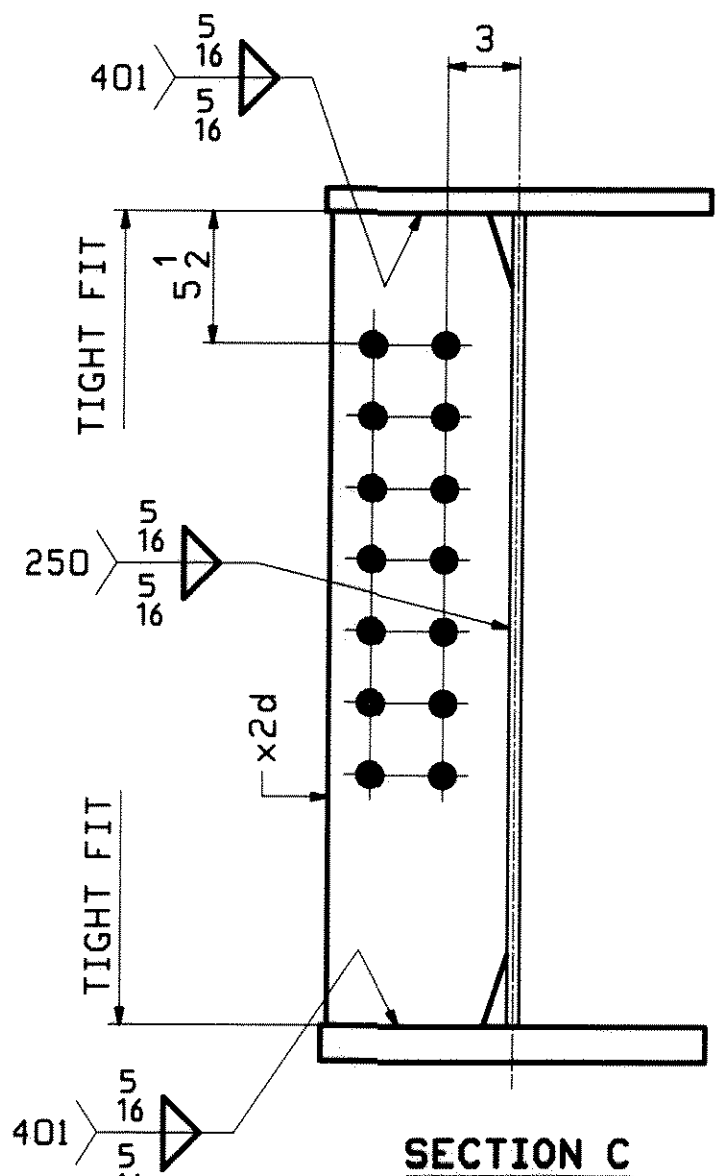
SECTION BA



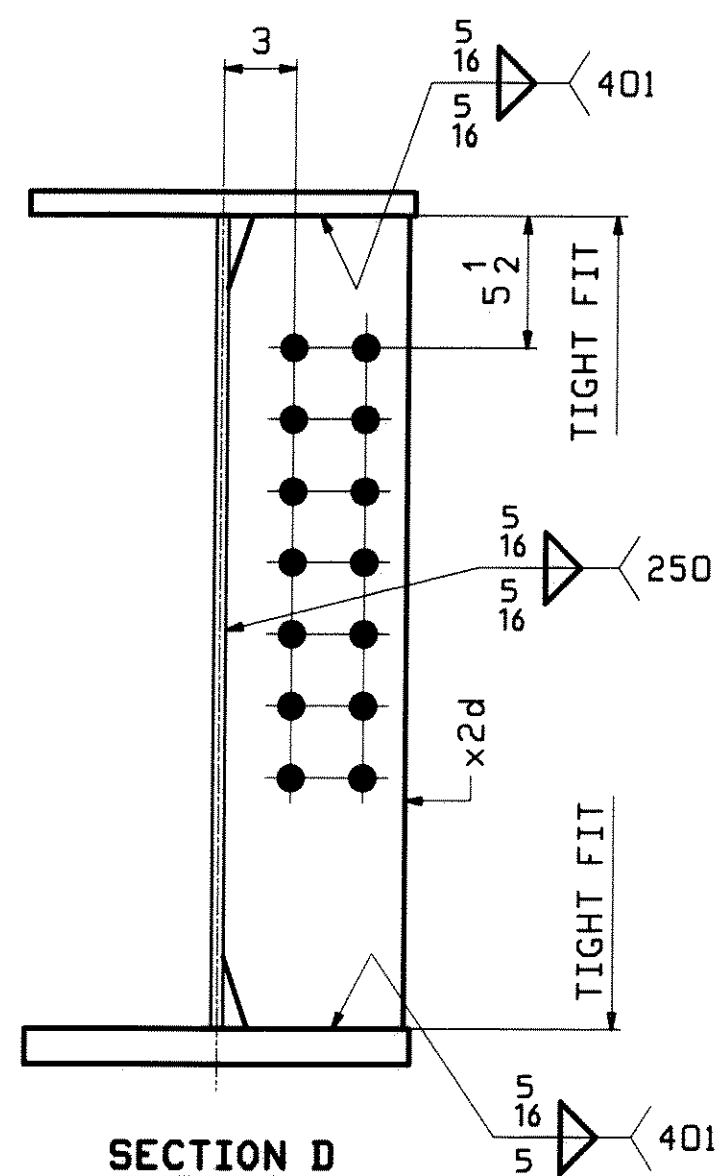
SECTION A



SECTION B



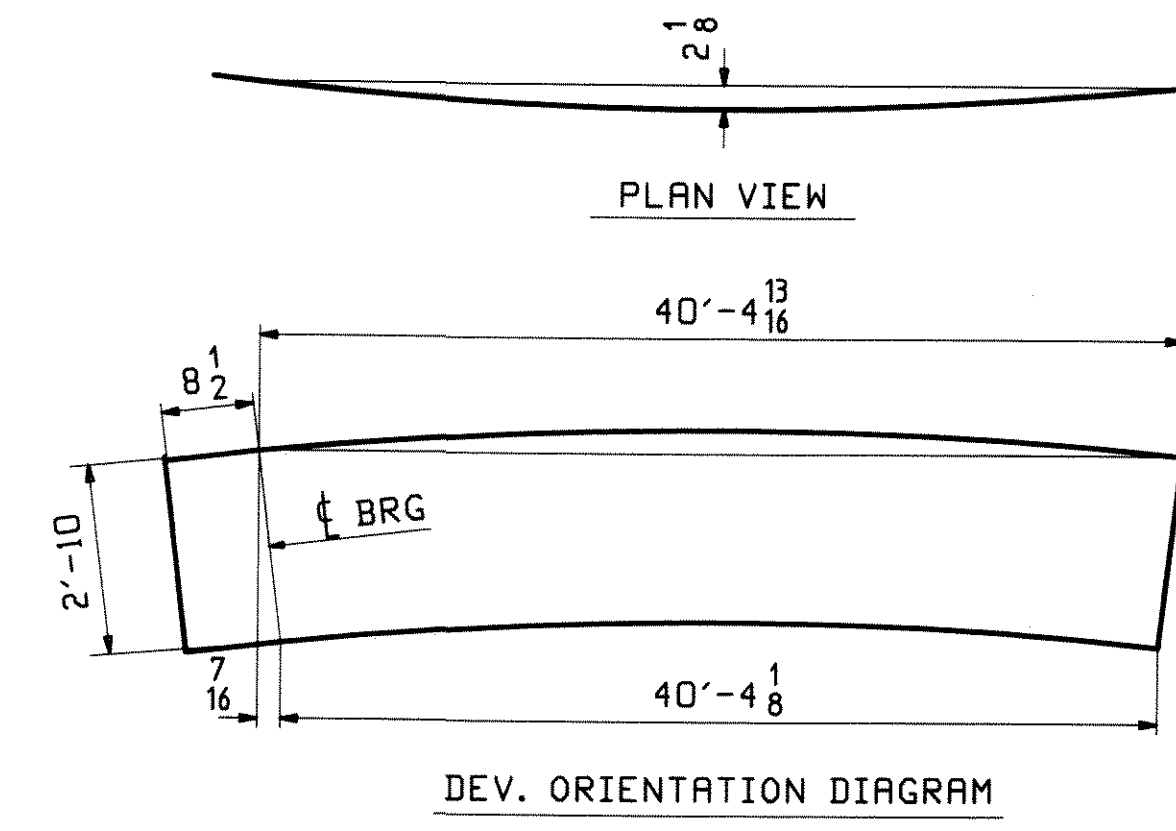
SECTION C



SECTION D

ONE - GIRDER - 4G4A (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER DIAGRAM SEE SHEET C1
FOR FLANGE DIAGRAM SEE SHEET F1
FOR GENERAL NOTES SEE SHEET GNI

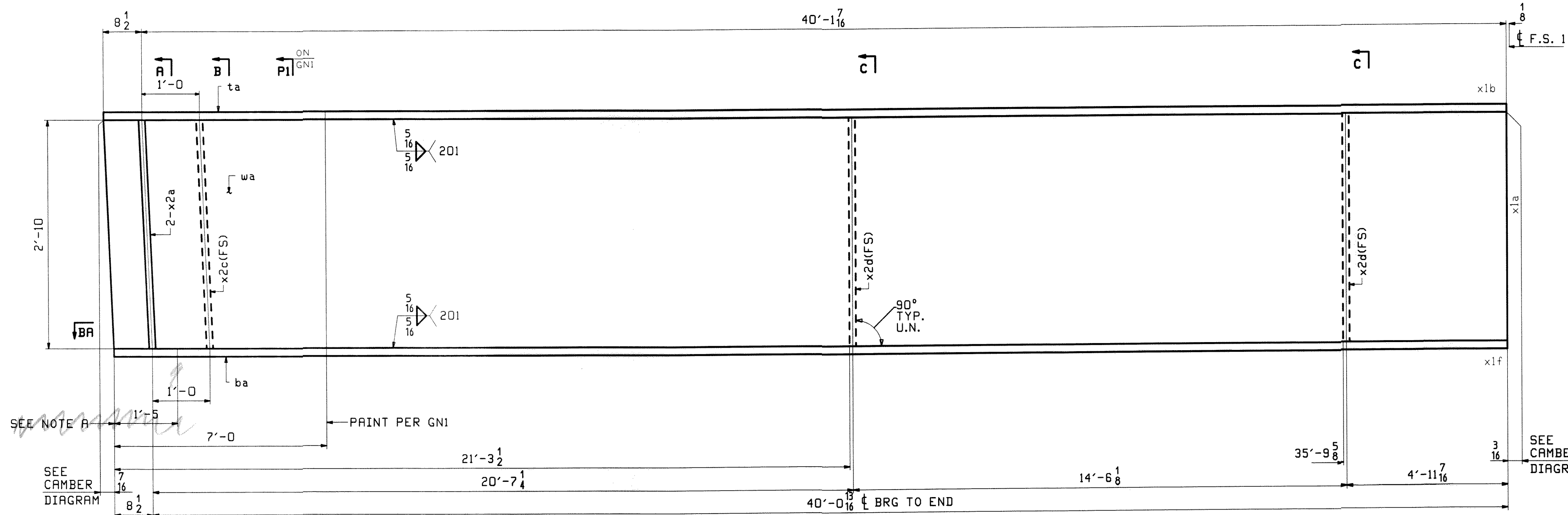


DATE: 2/9/16
SIGNATURE: [Handwritten Signature]

NOTE A:
NO PAINT BOTTOM AND EDGES OF BOTTOM FLANGE.

REV.	DATE	REMARKS	DWN	CHK	APVL
0					JAN 29 2010
MATERIAL:		SURFACE PREP. & PAINT: SEE GNI	HOLES: 15/16" Ø U.N.		SHOP BOL
DESCRIPTION: GIRDER - 4G4A					
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham			DRAWN: WJF CHKD: DO		
LOCATION: Putney			JOB NO.		
PROJ NO. IM 091-1(31)			438		
CUSTOMER: VT ROT					

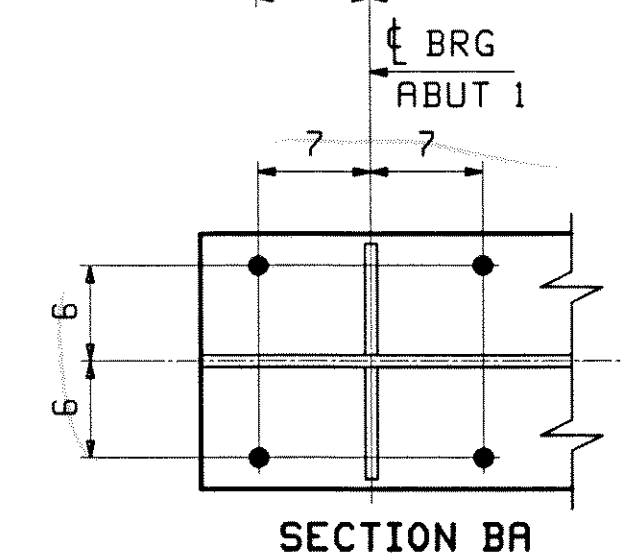
ABM INFO		BILL OF MATERIAL				JOB NO.	DRAWING		
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH	REMARKS	WT	PR
						FT			
						INCHES			
		5G5A	1		GIRDER				B154
5	U		1	wa	PL 1/2 x 34	40 9/16	M270-50WT2		
3	W		1	ta	PL 1 x 15	40 9/16	M270-50WT2		
2	J		1	ba	PL 1 1/2 x 15	40 9/16	M270-50WT2		
6	K		2	x2a	PL 7/8 x 7 3/4	2' 10"	MIE		
6	L		1	x2c	PL 1/2 x 7 1/2	2' 10"			
6	L		2	x2d	PL 1/2 x 7 1/2	2' 10"			



FOR FIELD SPLICE XIMI
DETAILS SEE SHT XI

SEE NOTE A
SEE CAMBER
DIAGRAM

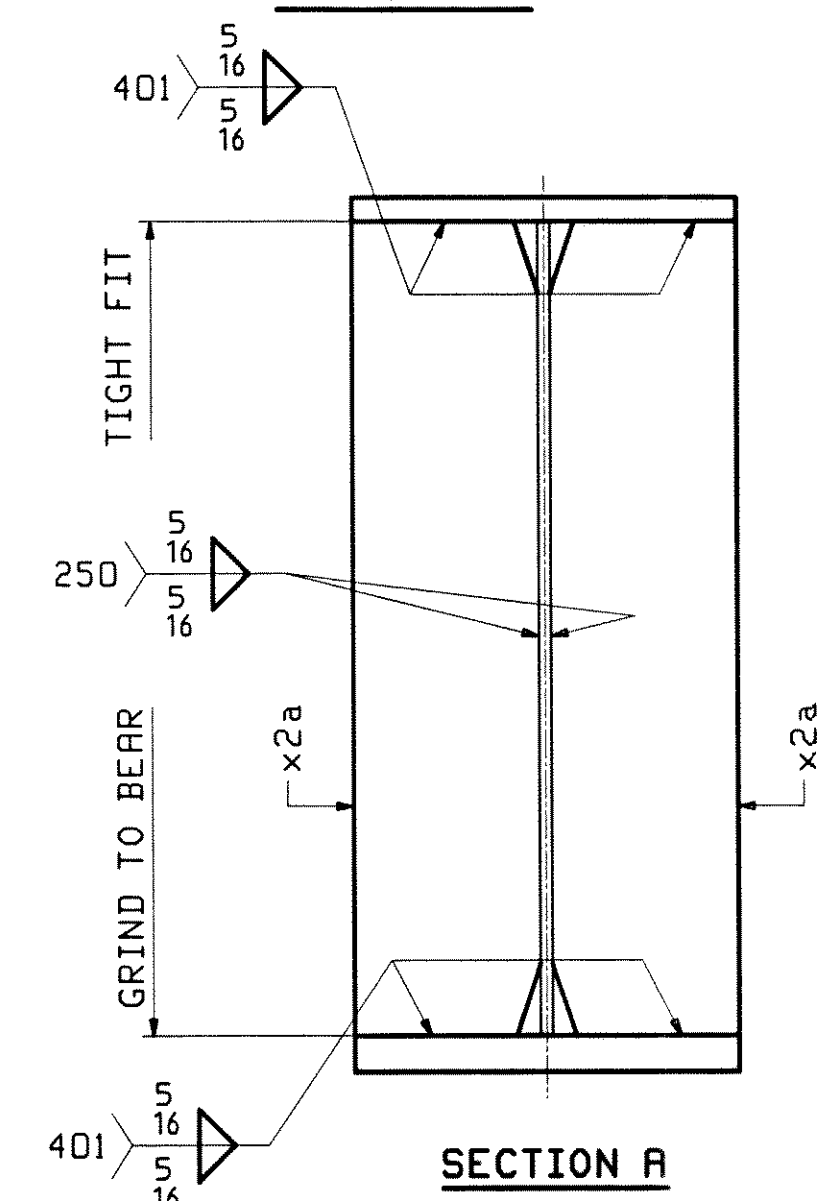
SEE CAMBER
DIAGRAM



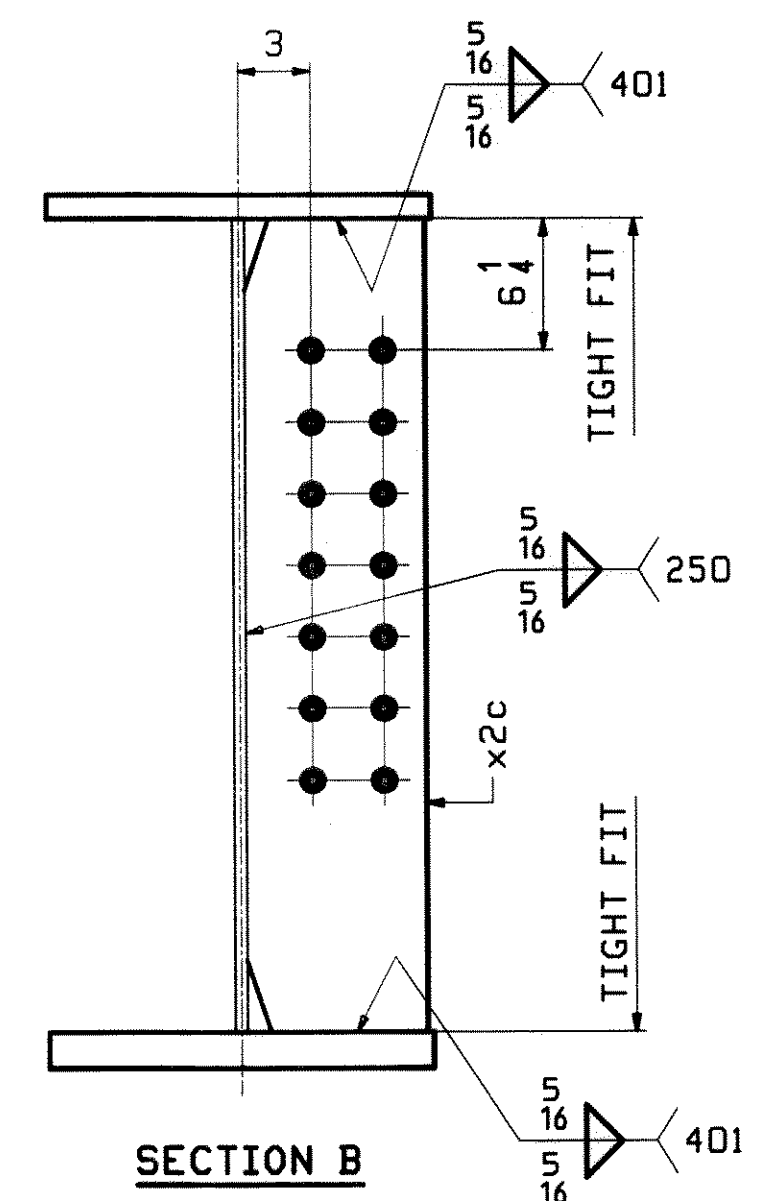
SECTION BA

ONE - GIRDER - 5G5A (DEV)

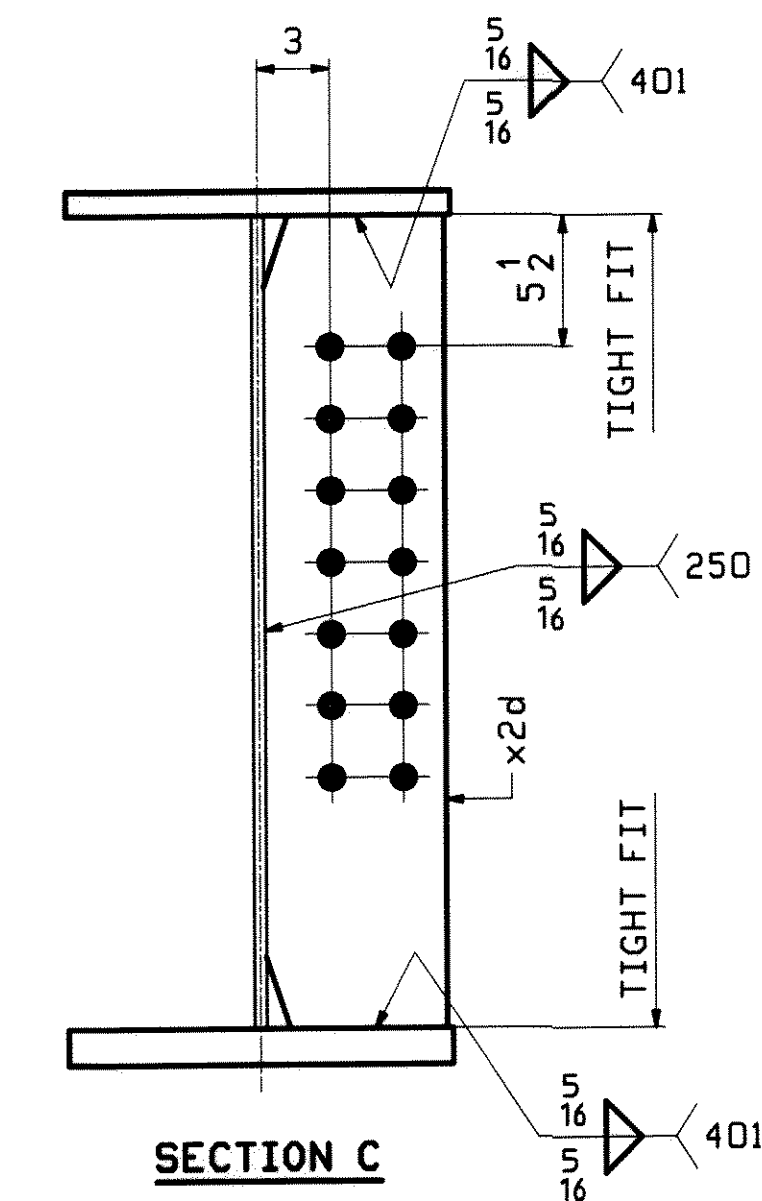
FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER DIAGRAM SEE SHEET C1
FOR FLANGE DIAGRAM SEE SHEET F1
FOR GENERAL NOTES SEE SHEET GNI



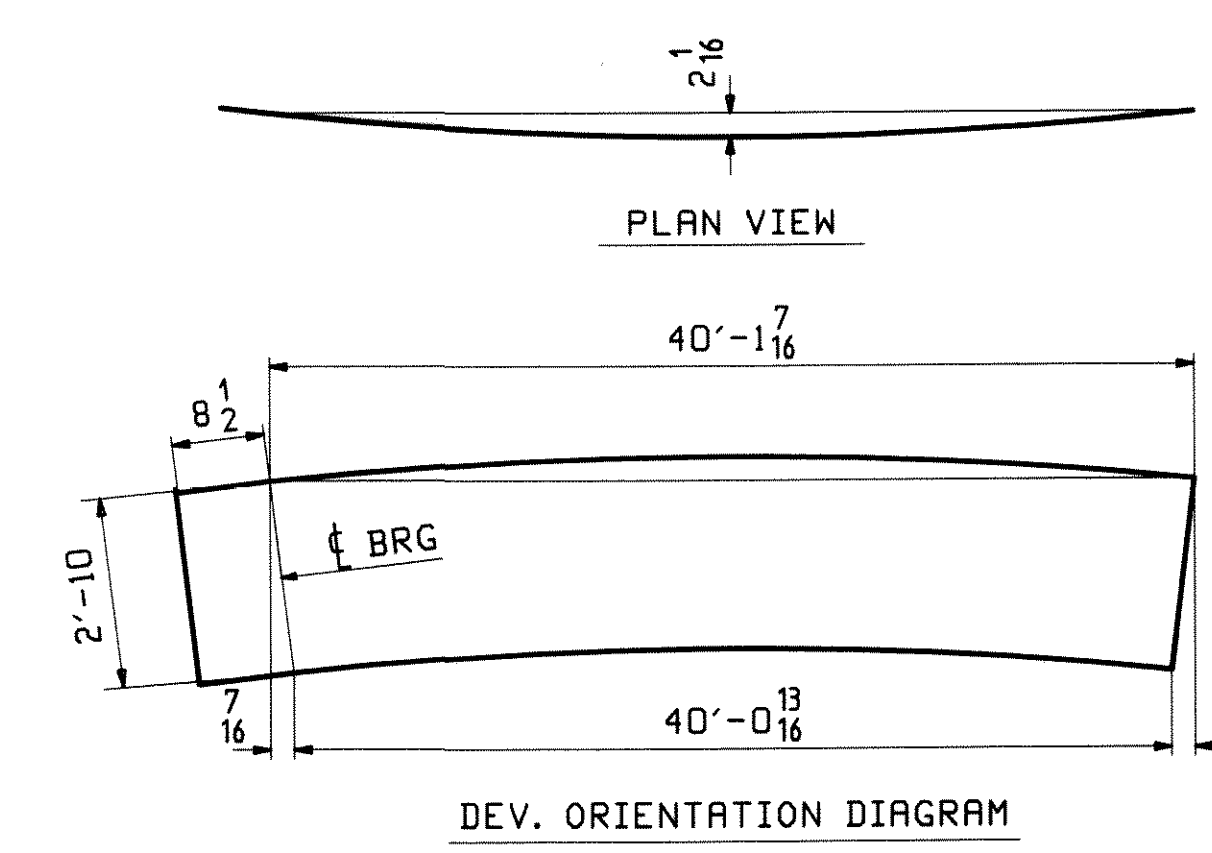
SECTION A



SECTION B



SECTION C

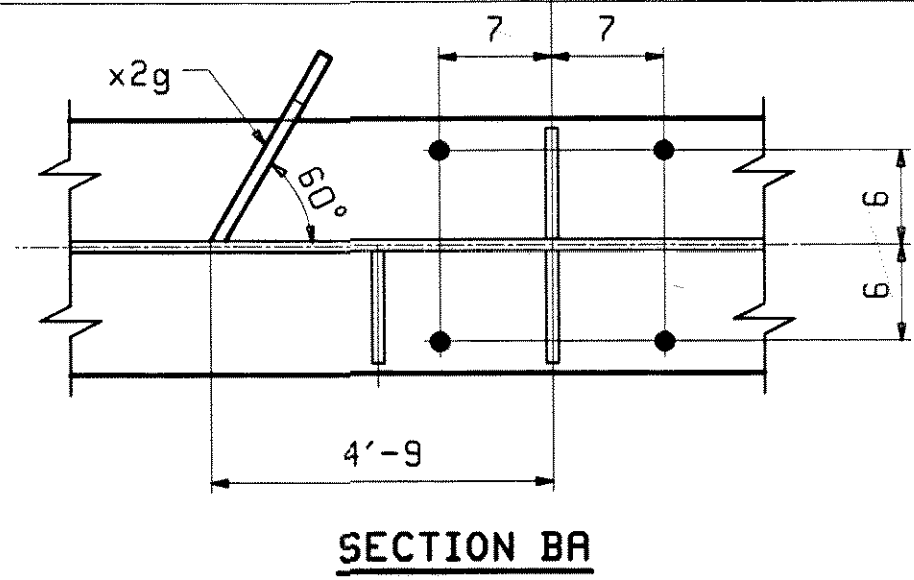
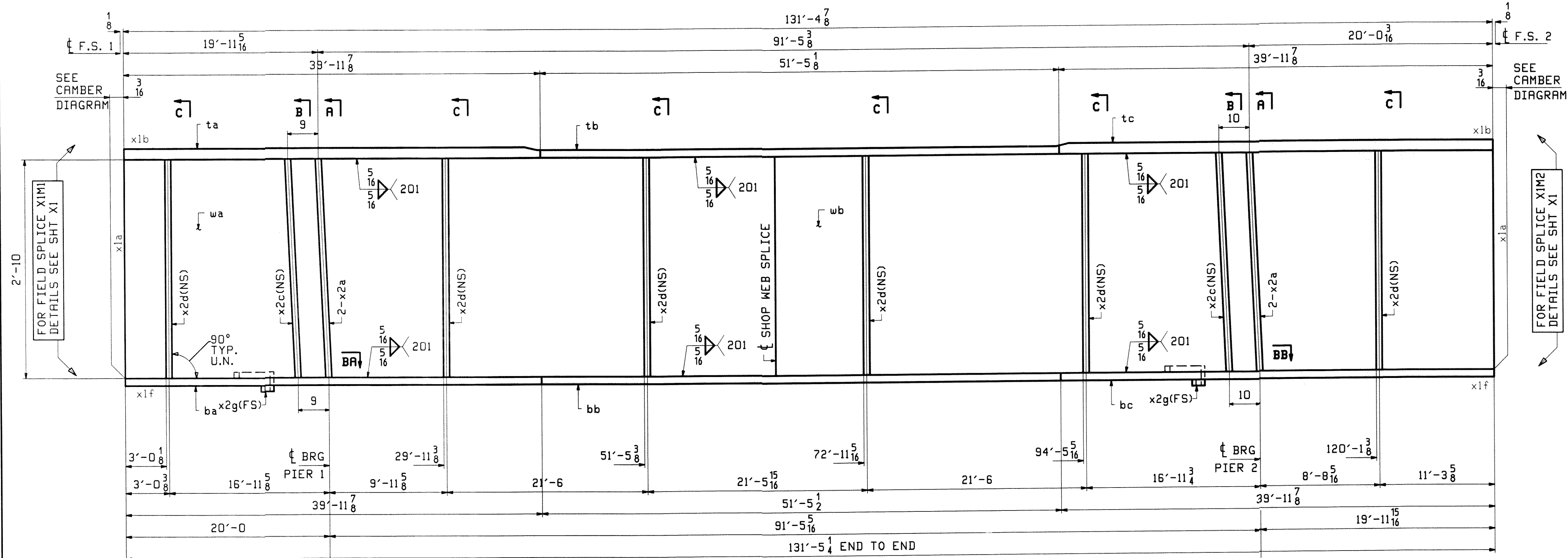


DATE: 2/9/10
 SIGNATURE: [Signature]
 CHECKED: [Signature]

NOTE A:
NO PAINT BOTTOM AND EDGES OF BOTTOM FLANGE.

REV.	DATE	REMARKS	DWN	CHK	APVL
0					JAN 20 2010
MATERIAL:		M270-50W (UN)	SURFACE PREP. & PAINT: SEE GNI		HOLES: 15/16" Ø U.N.
DESCRIPTION:		GIRDER - 5G5A			
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham					DRAWN: WJF CHKD: DO
LOCATION: Putney		JOB NO. 438			
PROJ NO. IM 091-1(31)					
CUSTOMER: VT AOT					

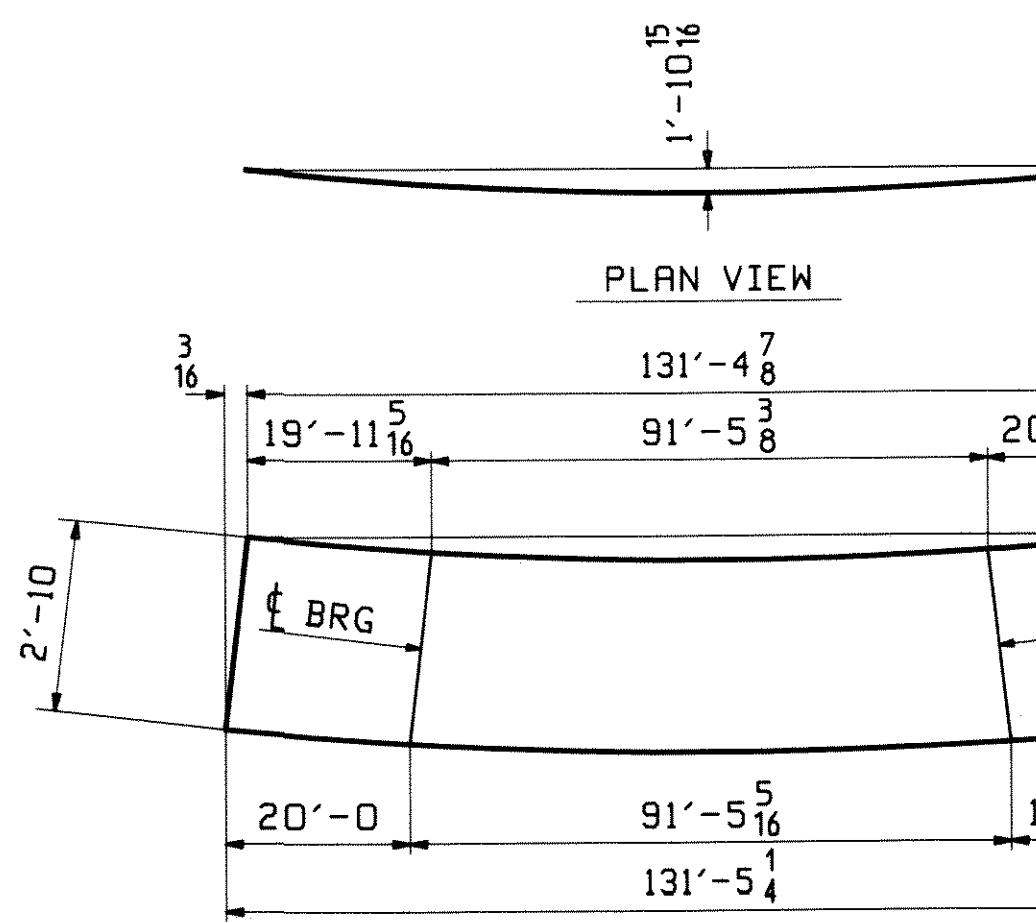
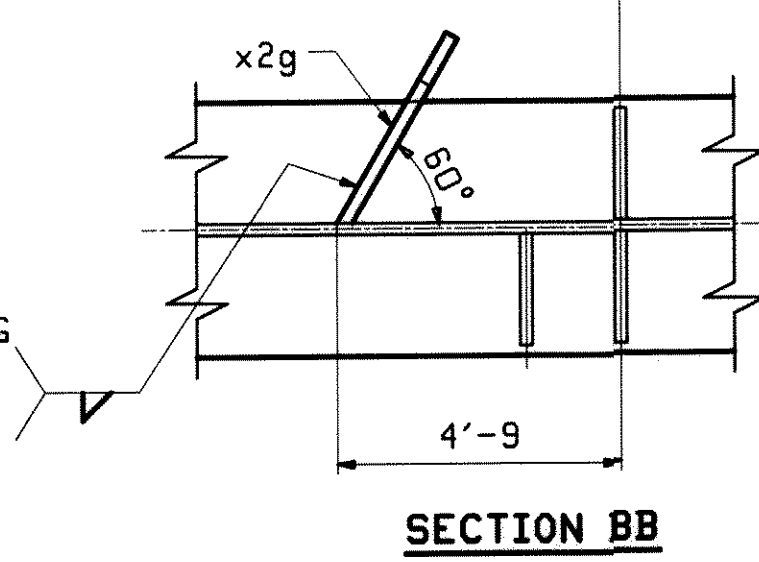
ABM INFO		BILL OF MATERIAL				JOB NO.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	REMARKS
		6G1B	1		GIRDER	
4	U		1	wa	PL 1/2x34	M270-SOWT2
3	Y		1	wb	PL 1/2x34	M270-SOWT2
2	L		1	ta	PL 1/2x16	M270-SOWT2
3	C		1	tb	PL 1x16	M270-SOWT2
2	L		1	tc	PL 1/2x16	M270-SOWT2
2	L		1	ba	PL 1/2x16	M270-SOWT2
1	O		1	bb	PL 1/2x16	M270-SOWT2
2	L		1	bc	PL 1/2x16	M270-SOWT2
6	K		4	x2a	PL 7/8x7 1/2	NIE
6	L		2	x2c	PL 1/2x7 1/2	
6	L		6	x2d	PL 1/2x7 1/2	
6	N		2	x2g	PL 1/4x3 1/2	



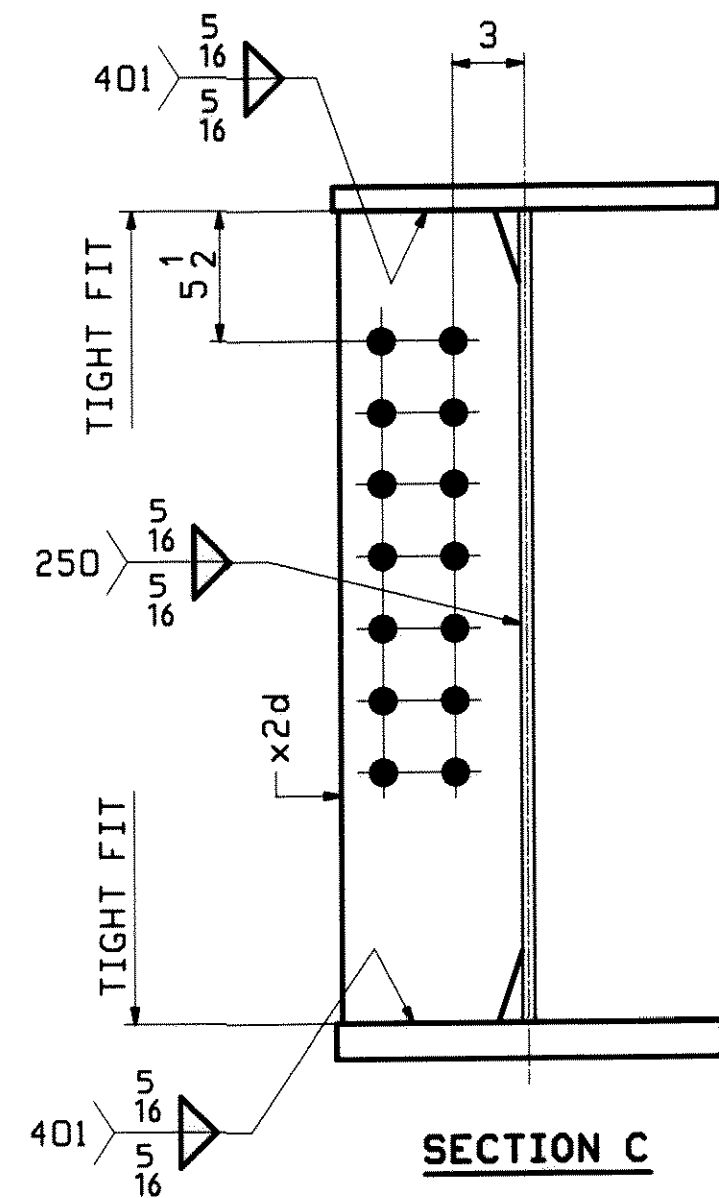
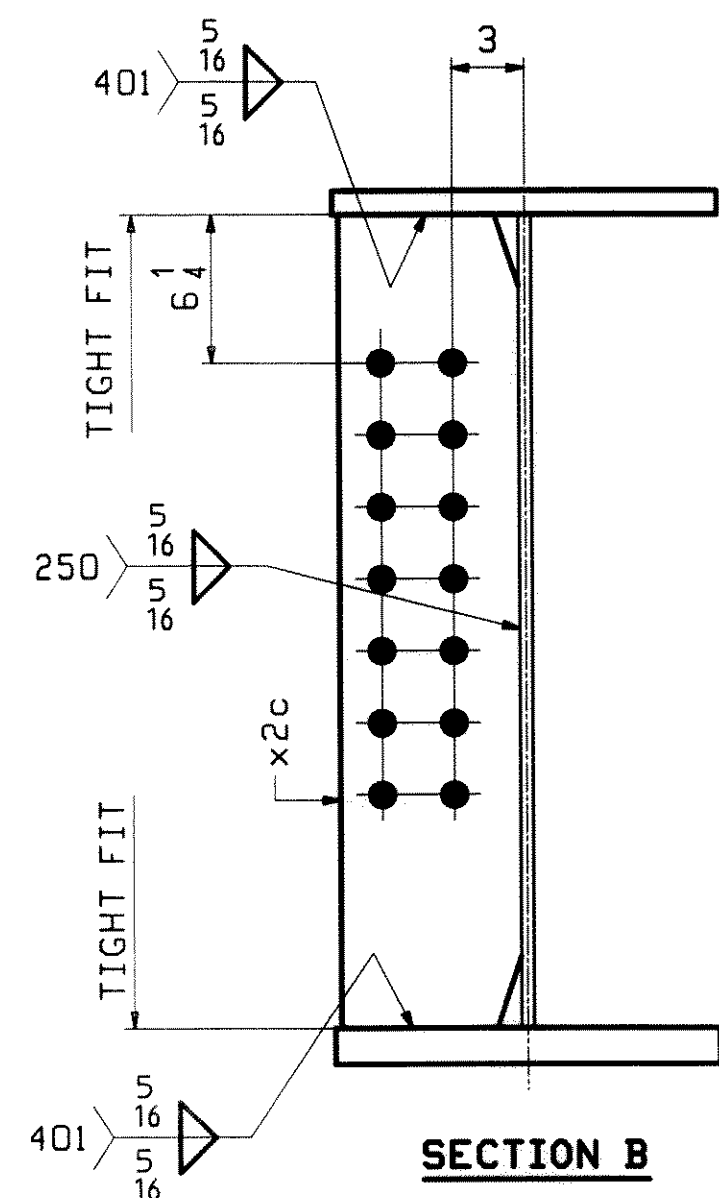
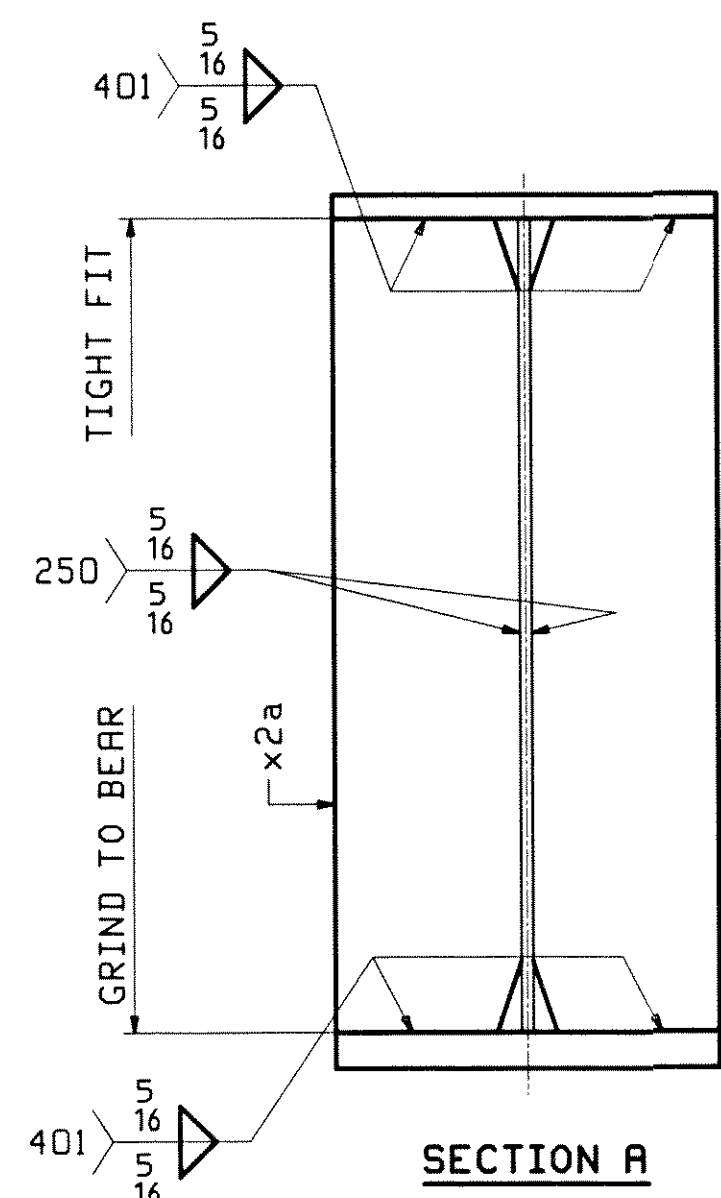
ONE - GIRDER - 6G1B (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER DIAGRAM SEE SHEET C1
FOR FLANGE DIAGRAM SEE SHEET F2
FOR GENERAL NOTES SEE SHEET GNI

TIGHT FIT TO FLG WITH SEAL WELD (TYP 401)



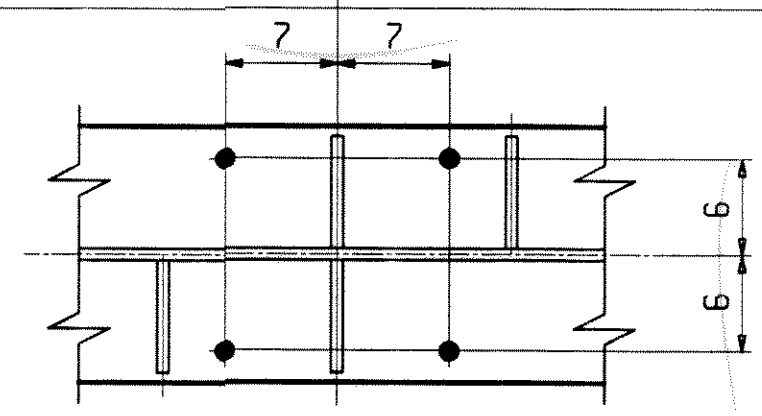
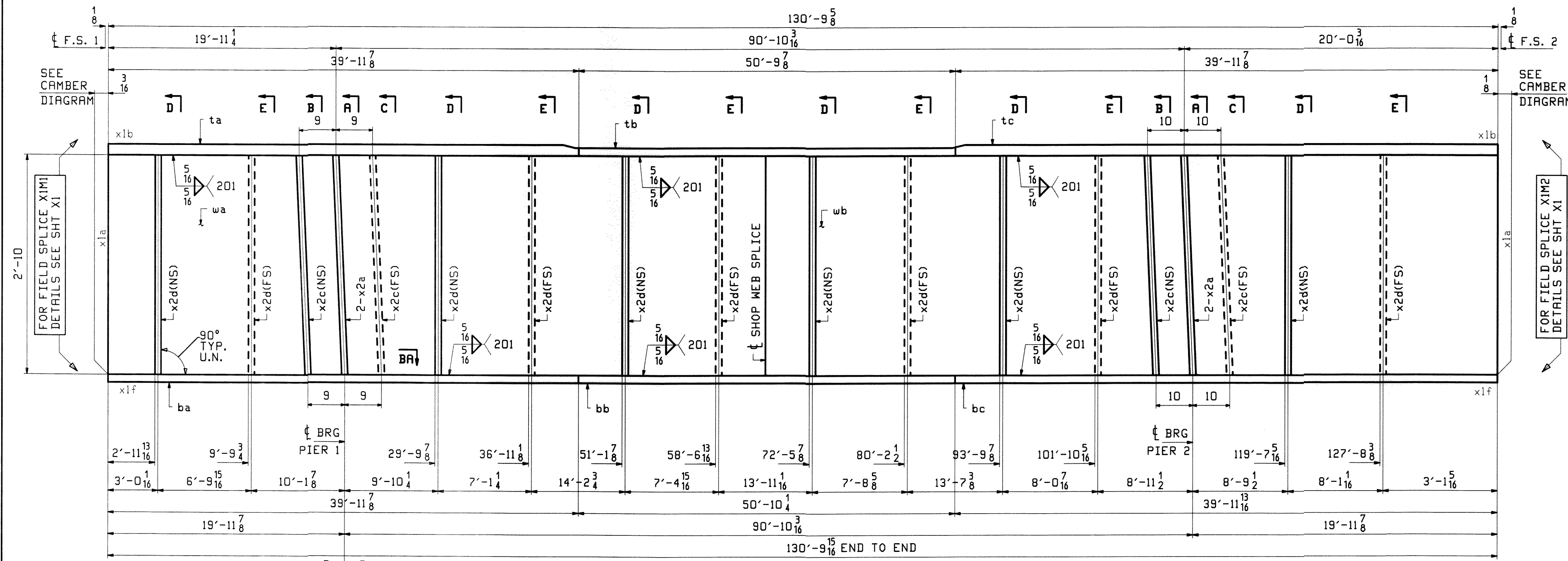
DEV. ORIENTATION DIAGRAM



DATE: 2/9/10
SIGNATURE: [Signature]

REV.	DATE	REMARKS	DWN	CHK
0				
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:
M270-SOW (UN)		SEE GNI		15/16" Ø U.N.
DESCRIPTION: GIRDER - 6G1B				
CASCO BAY STEEL STRUCTURES, INC.				
75 SPRING HILL ROAD			SACO, MAINE 04072	
PHONE (207) 282-7360			FAX. (207) 282-1179	
STRUCTURE: U.S. 5 over I-91				
Bridge No. 19A				
Putney				
County of Windham				
LOCATION: Putney				
PROJ NO. IM 091-1(31)				
CUSTOMER: VT AOT				

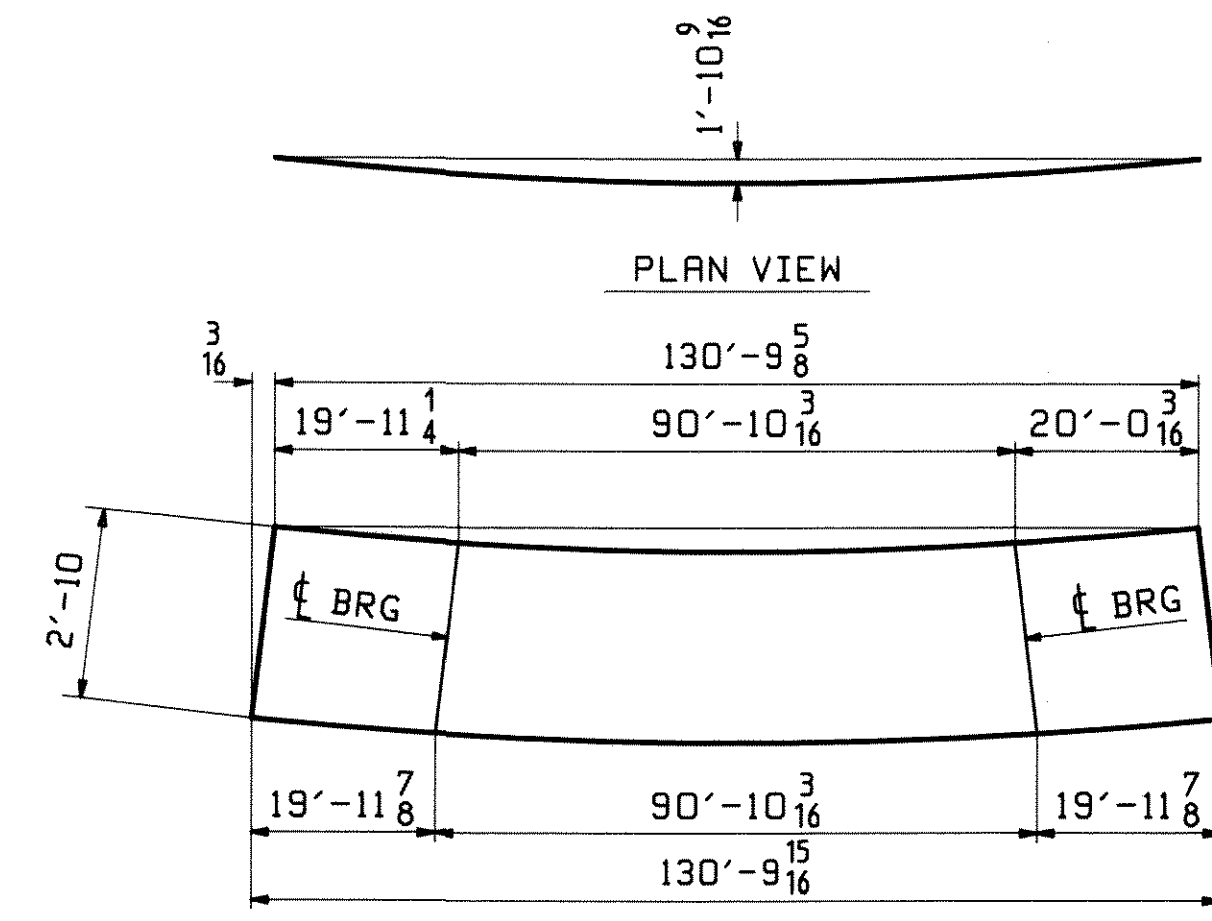
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH		REMARKS	JOB NO.	DRAWING
						FT	INCHES			
					GIRDER				438	7
		7G2B	1							28394
4	U		1	wa	PL 1/2 x 34	62	5 15/16			
4	A		1	wb	PL 1/2 x 34	68	4 1/8			
2	L		1	ta	PL 1/2 x 16	39	11 7/8			
3	E		1	tb	PL 1/2 x 16	50	9 7/8			
2	L		1	tc	PL 1/2 x 16	39	11 7/8			
2	L		1	td	PL 1/2 x 16	39	11 7/8			
1	S		1	ba	PL 1/2 x 16	50	10 1/4			
2	L		1	bc	PL 1/2 x 16	39	11 7/8			
6	K		4	x2a	PL 7/8 x 7 1/2	2	10			
6	L		4	x2c	PL 1/2 x 7 1/2	2	10			
6	L		12	x2d	PL 1/2 x 7 1/2	2	10			



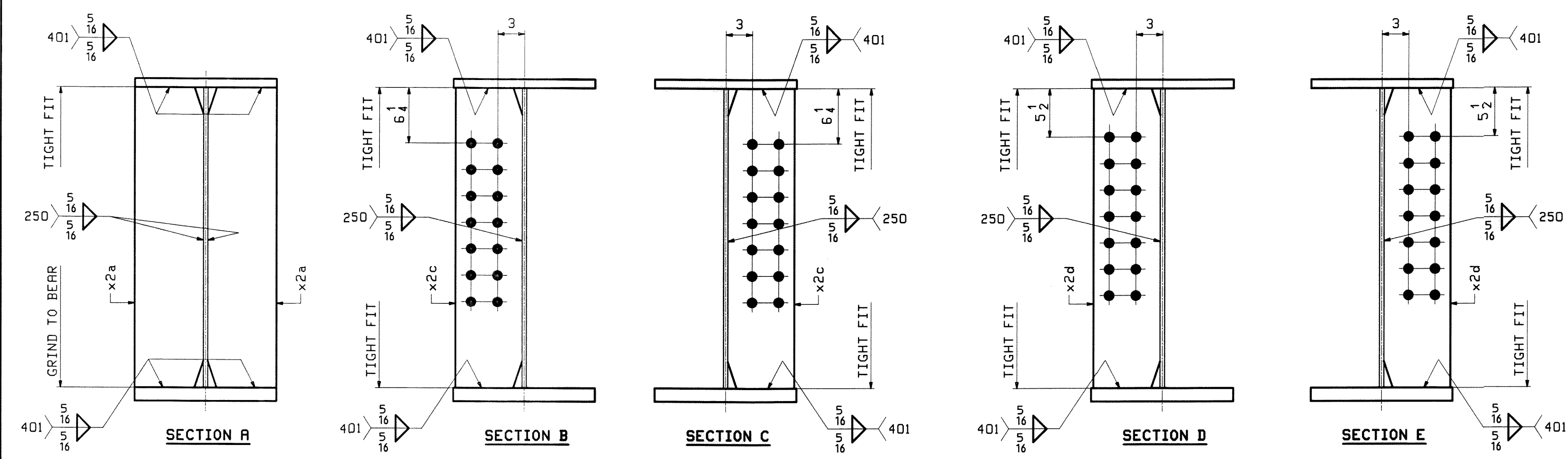
SECTION BA

ONE - GIRDER - 7G2B (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C1
 FOR FLANGE DIAGRAM SEE SHEET F2
 FOR GENERAL NOTES SEE SHEET GN1



DEV. ORIENTATION DIAGRAM



DATE: 2/9/10
 SIGNATURE: [Signature]

REV.	DATE	REMARKS	DWN	CHK	APVL
0					

MATERIAL: M270-SOW (UN) SURFACE PREP. & PAINT: SEE GN1 HOLES: 15/16" Ø U.N.

DESCRIPTION: GIRDER - 7G2B

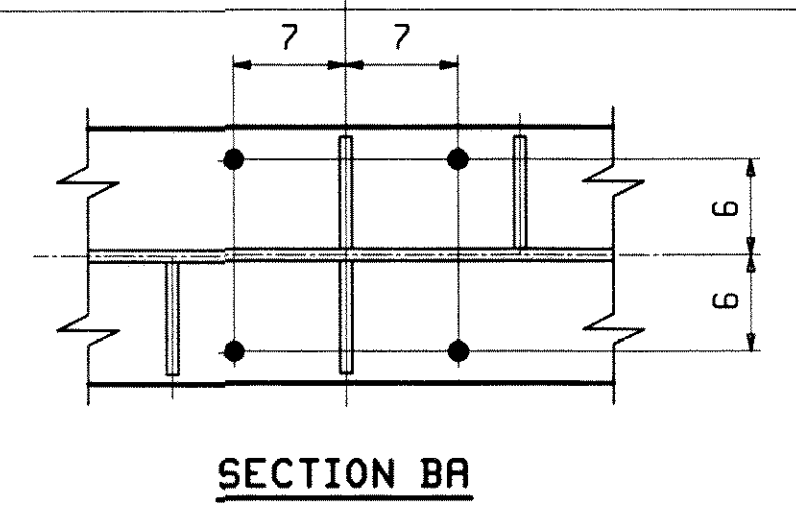
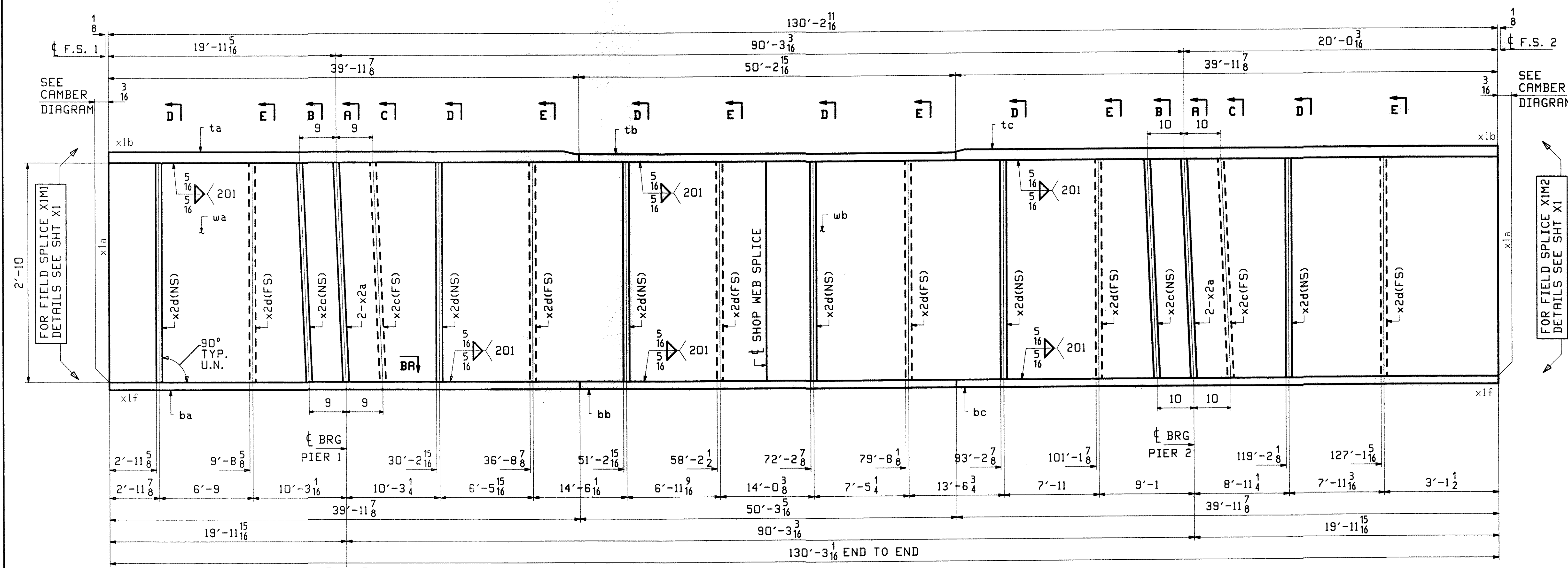
CASCO BAY STEEL STRUCTURES, INC.
 75 SPRING HILL ROAD SACO, MAINE 04072
 PHONE (207) 282-7360 FAX. (207) 282-1179

STRUCTURE: U.S. 5 over I-91
 Bridge No. 19A
 Putney
 County of Windham

LOCATION: Putney
 PROJ NO. IM 091-1(31)
 CUSTOMER: VT AOT

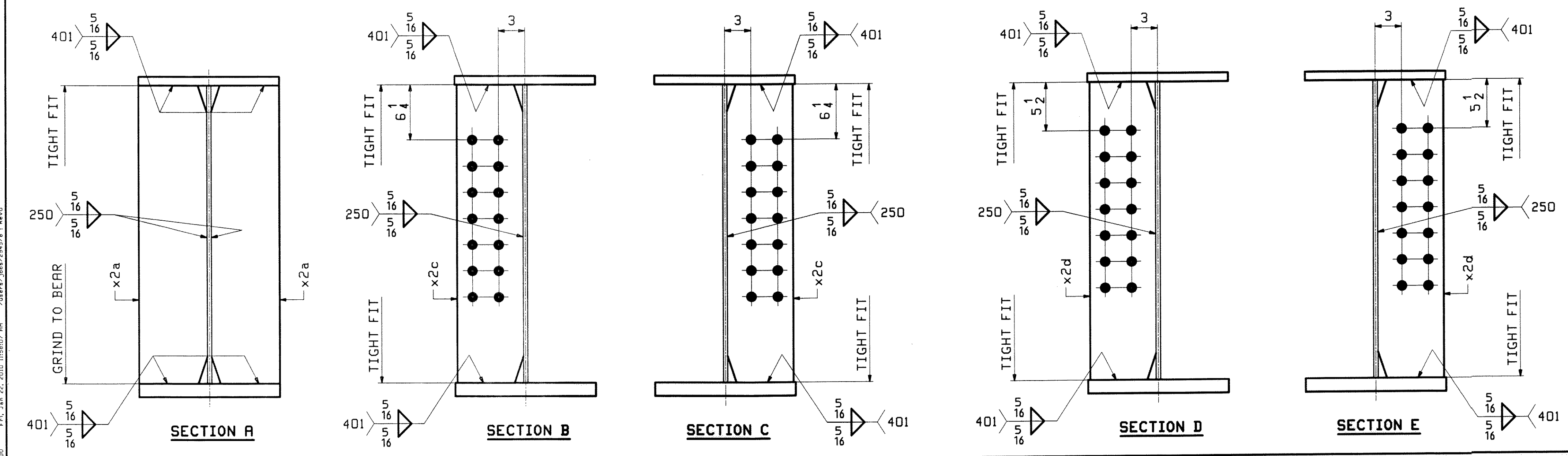
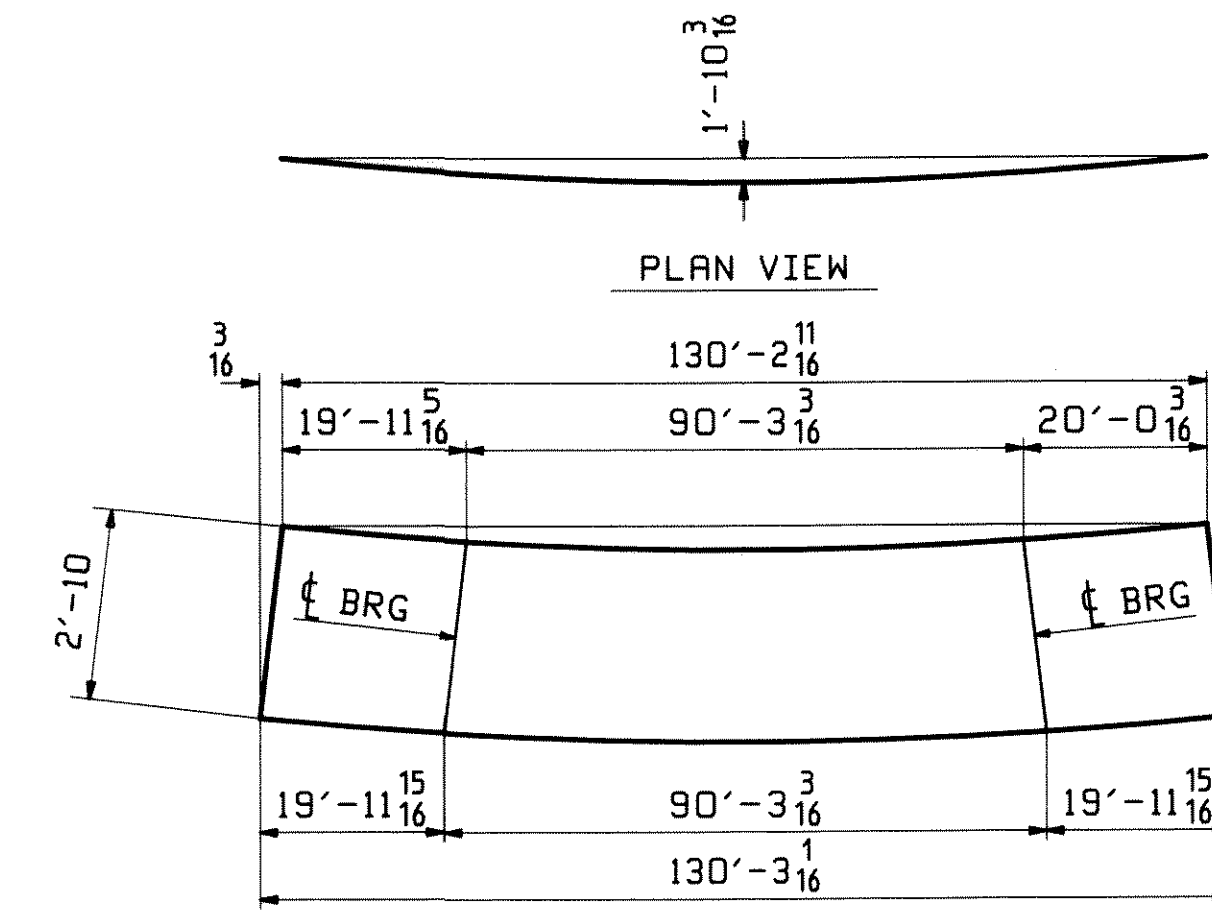
DRAWN: WJF
 CHKD: DO
 JOB NO. 438

JOB NO.		DRAWING								
438		8								
ABM INFO	SHIP	BILL OF MATERIAL		REMARKS	MT	PI				
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES				
		8G3B	1		GIRDER					
4	U		1	wa	PL 1/2 x 34	62 5/16				
4	C		1	wb	PL 1/2 x 34	67 9/4				
2	L		1	ta	PL 1/2 x 16	39 11/8				
3	G		1	tb	PL 1 x 16	50 2/16				
2	L		1	tc	PL 1/2 x 16	39 11/8				
2	L		1	ba	PL 1/2 x 16	39 11/8				
1	U		1	bb	PL 1/2 x 16	50 3/16				
2	L		1	bc	PL 1/2 x 16	39 11/8				
6	K		4	x2a	PL 7/8 x 3/4	2 10				
6	L		4	x2c	PL 2 x 7/2	2 10				
6	L		12	x2d	PL 2 x 7/2	2 10				



ONE - GIRDER - 8G3B (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C1
 FOR FLANGE DIAGRAM SEE SHEET F2
 FOR GENERAL NOTES SEE SHEET GNI



DATE: 2/9/10
 SIGNATURE: [Handwritten Signature]
 TITLE: [Handwritten Title]

REV.	DATE	REMARKS	DWN	CHK	APVL
0					

MATERIAL: M270-SOW (UN) SURFACE PREP. & PAINT: SEE GNI HOLES: 15/16 U.N. SHOP B

DESCRIPTION: GIRDER - 8G3B

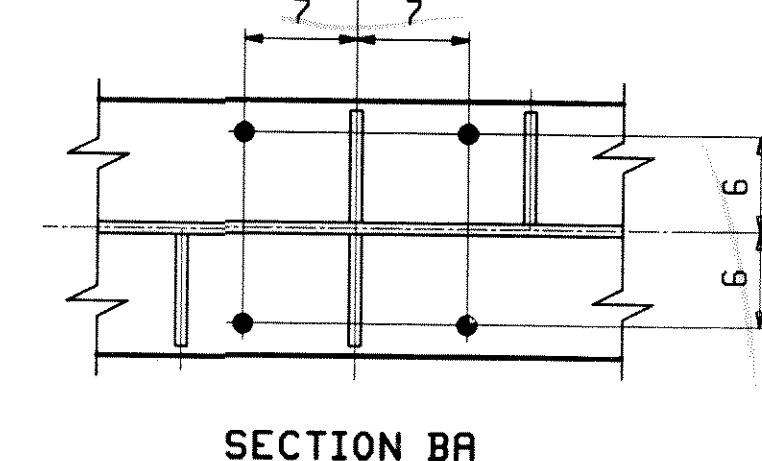
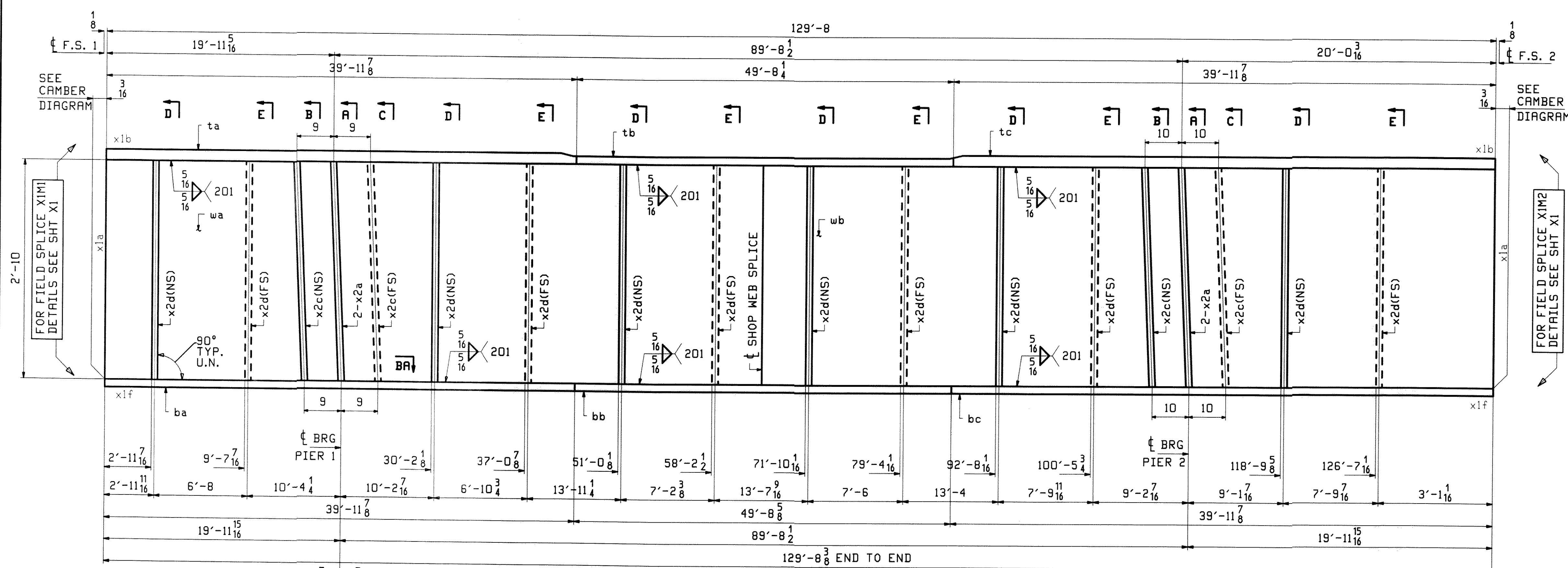
CASCO BAY STEEL STRUCTURES, INC.
 75 SPRING HILL ROAD SACO, MAINE 04072
 PHONE (207) 282-7360 FAX. (207) 282-1179

STRUCTURE: U.S. 5 over I-91
 Bridge No. 19A
 Putney
 County of Windham

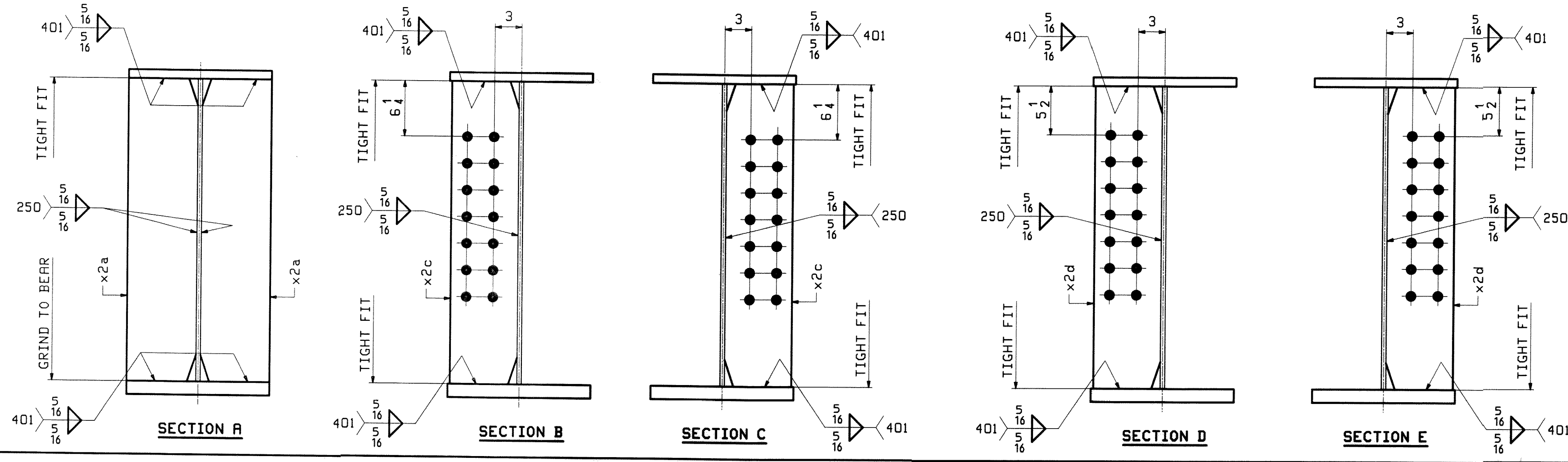
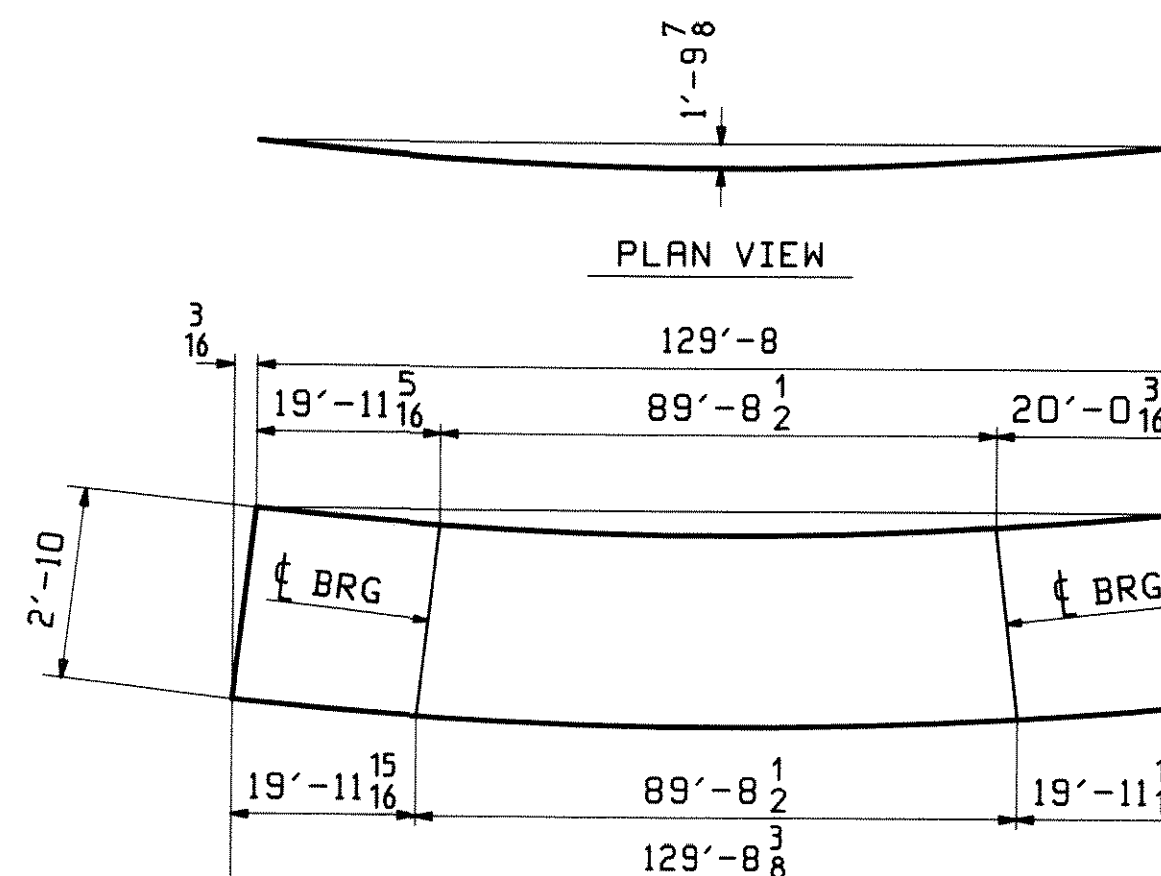
LOCATION: Putney
 PROJ NO. IM 091-1(31)
 CUSTOMER: VT ROT

DRAWN: WJF
 CHKD: DO
 JOB NO. 438

JOB NO.		DRAWN						
438		9						
ABM INFO	SHIP	BILL OF MATERIAL						
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH	REMARKS	WT
						FT INCHES		
		9G4B	1		GIRDER			28122
4	U		1	wa	PL 1/2 x 34	62 5/16	M270-SQWT2	
4	E		1	wb	PL 1/2 x 34	67 2/16	M270-SQWT2	
2	L		1	ta	PL 1/2 x 16	39 11/8	M270-SQWT2	
3	J		1	tb	PL 1 x 16	49 8/4	M270-SQWT2	
2	L		1	tc	PL 1/2 x 16	39 11/8	M270-SQWT2	
2	L		1	ba	PL 1/2 x 16	39 11/8	M270-SQWT2	
1	W		1	bb	PL 1/2 x 16	49 8/4	M270-SQWT2	
2	L		1	bc	PL 1/2 x 16	39 11/8	M270-SQWT2	
6	K		4	x2a	PL 7/8 x 7 1/2	2 10"	MFC	
6	L		4	x2c	PL 1/2 x 7 1/2	2 10"		
6	L		12	x2d	PL 1/2 x 7 1/2	2 10"		



ONE - GIRDER - 9G4B (DEV)
 FOR FIELD SPlice & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C1
 FOR FLANGE DIAGRAM SEE SHEET F2
 FOR GENERAL NOTES SEE SHEET GN1



DEV. ORIENTATION DIAGRAM

REV.	DATE	REMARKS	DWN	CHK	APVL
0					AM 2 1 201

MATERIAL: M270-SQWT2 (UN) SURFACE PREP. & PAINT: HOLES: 15/16" Ø U.N.

DESCRIPTION: GIRDER - 9G4B

CASCO BAY STEEL STRUCTURES, INC.
 75 SPRING HILL ROAD SARCO, MAINE 04072
 PHONE (207) 282-7360 FAX. (207) 282-1179

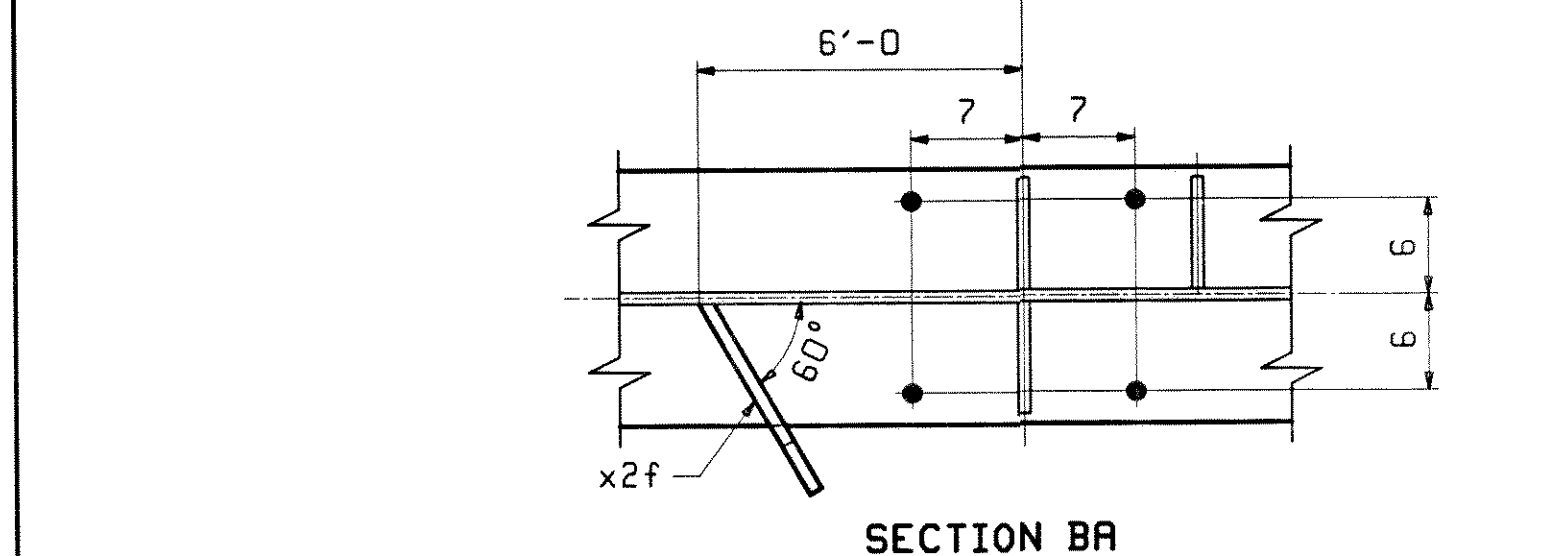
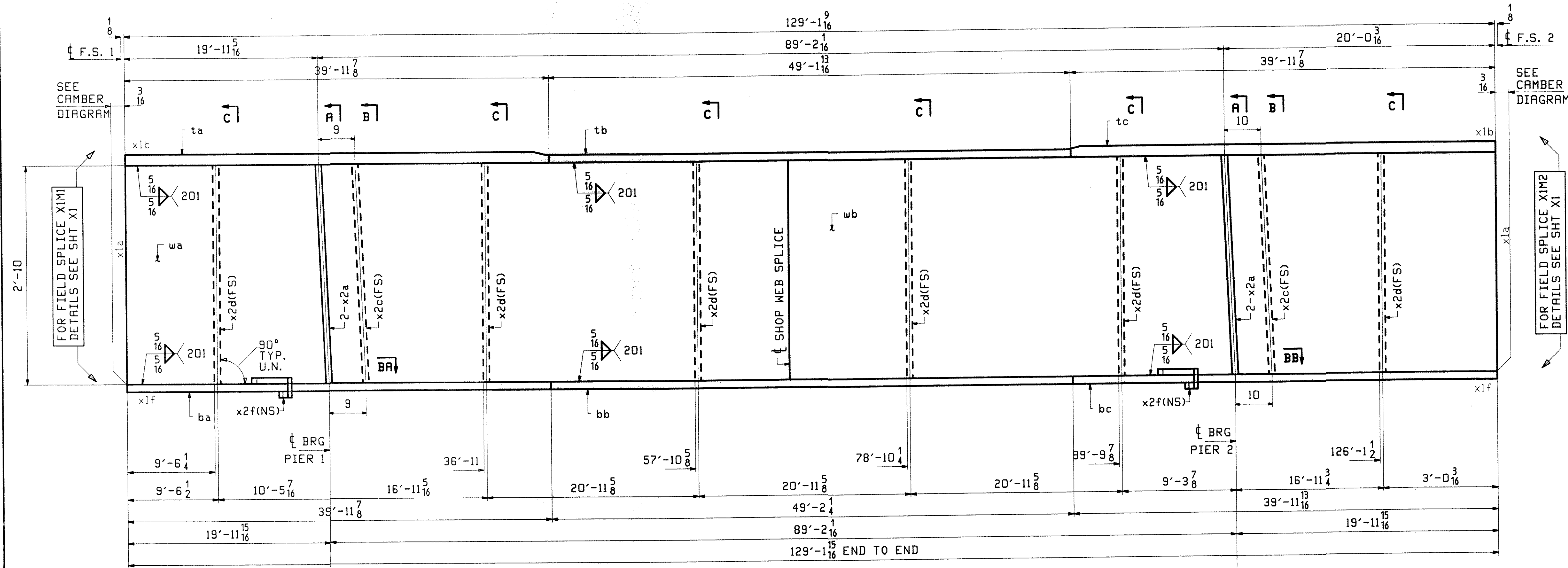
STRUCTURE: U.S. 5 over I-91
 Bridge No. 19A
 Putney
 County of Windham

LOCATION: Putney
 PROJ NO. IM 091-(131)
 CUSTOMER: VT ROT

DRAWN: WJF
 CHKD: DO
 JOB NO. 438

DATE: 2/9/10
 SIGNATURE: [Signature]
 I HEREBY CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

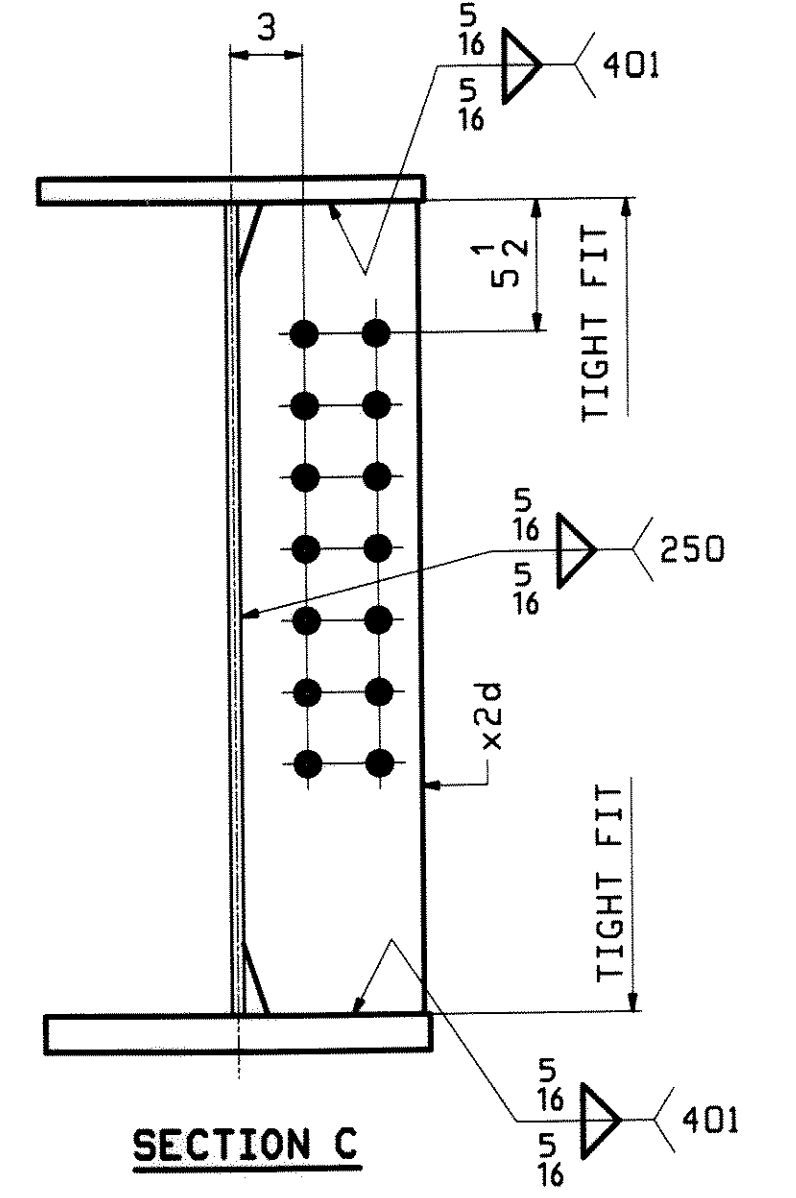
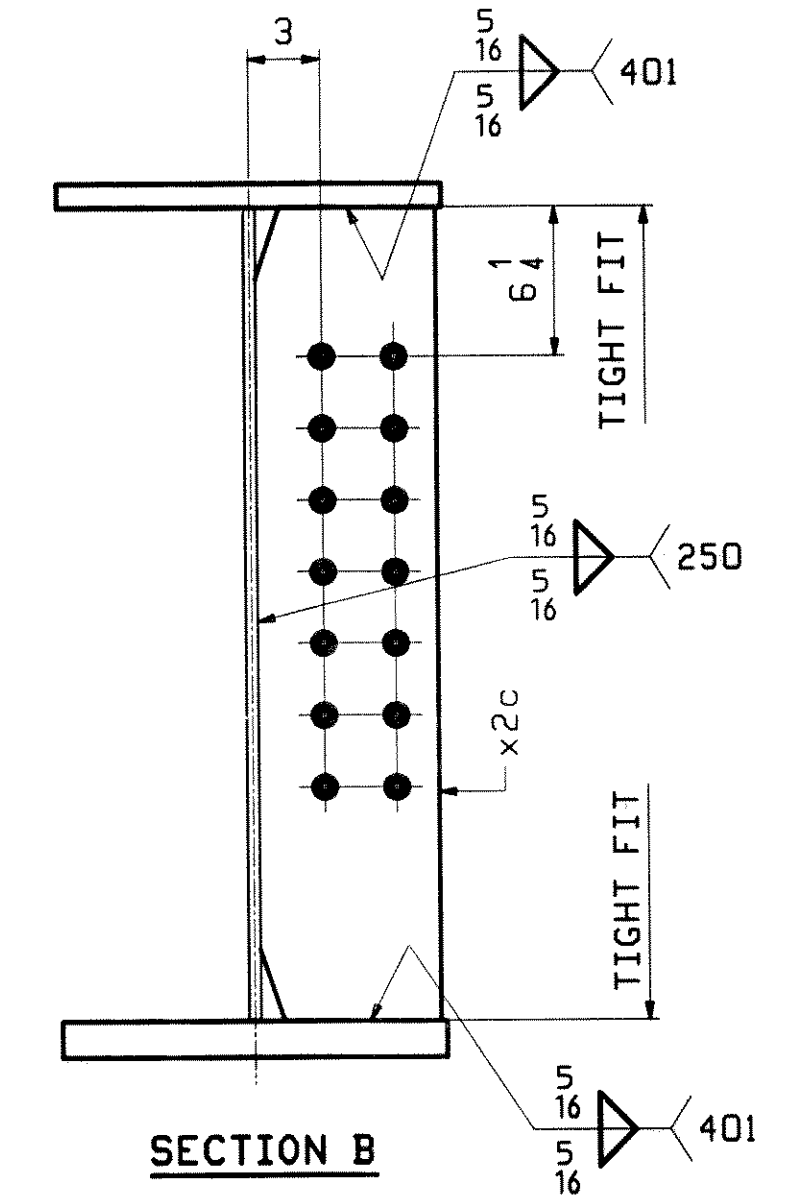
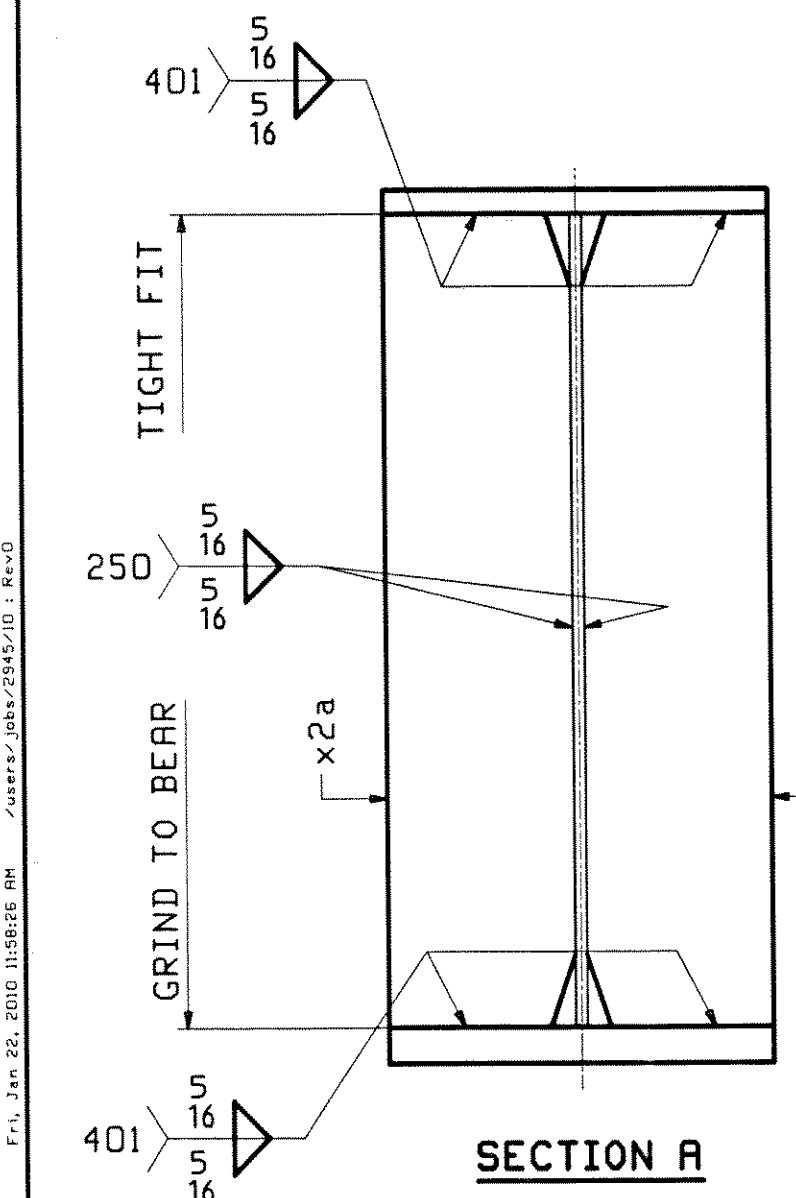
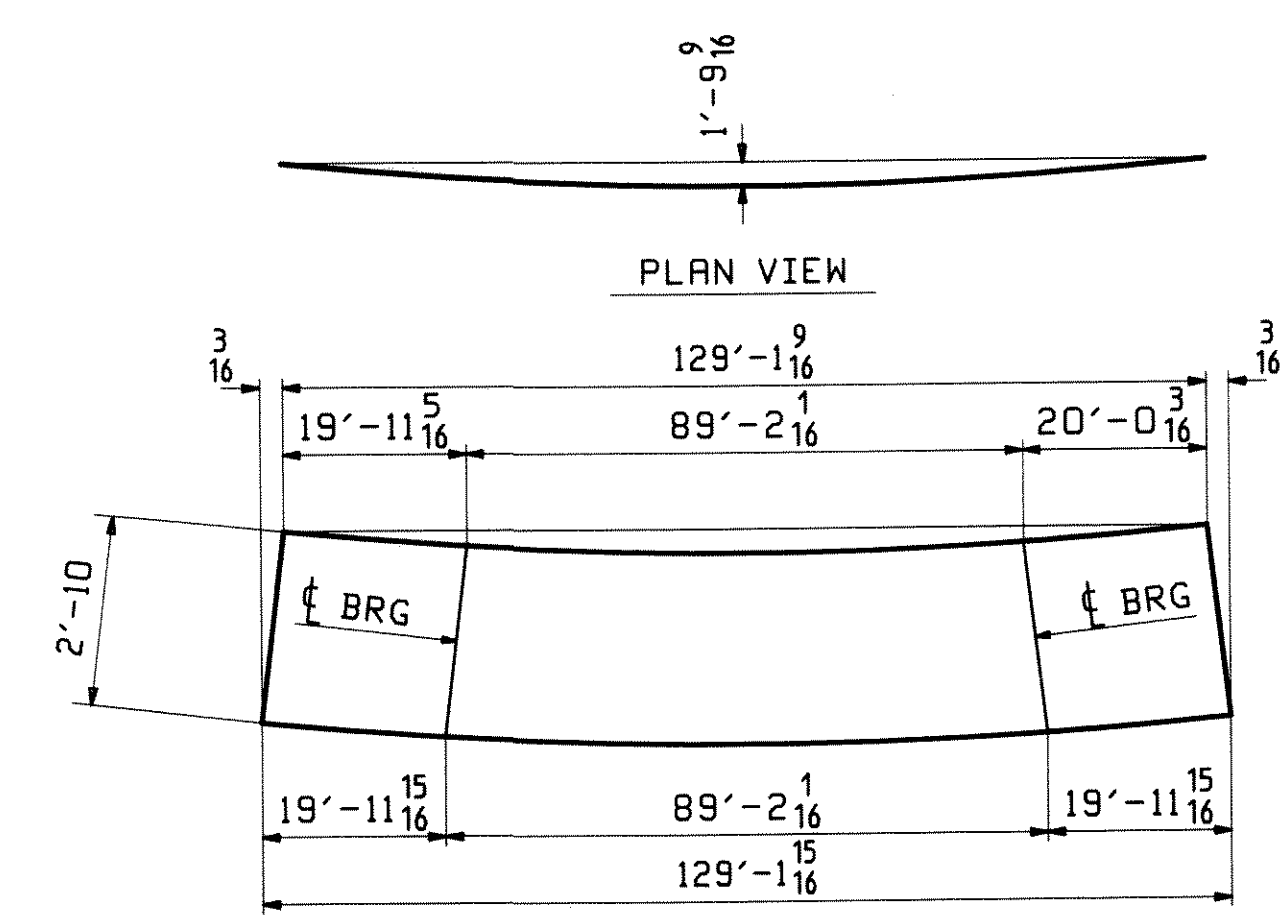
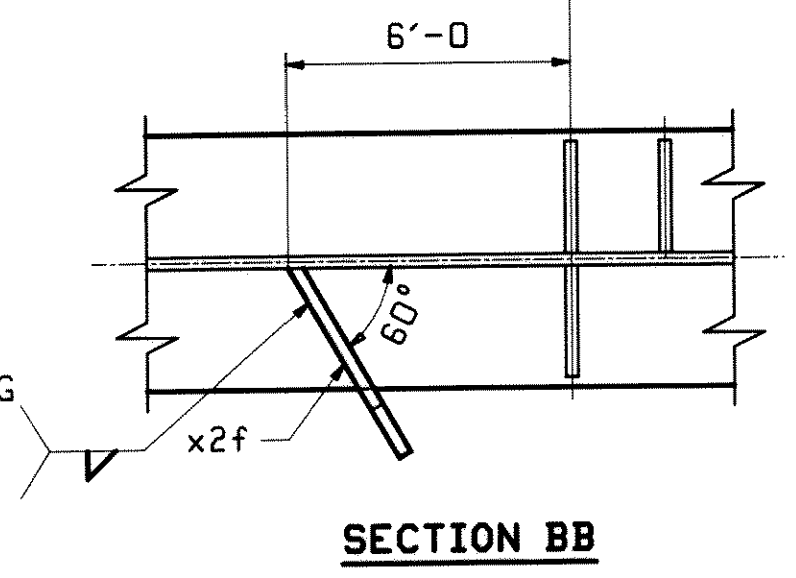
ABM INFO		SHIP	BILL OF MATERIAL				JOB NO.	DRAWING NO.	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT	PROCUR NOT
		10G5B	1		GIRDER				27784
4	U		1	ua	PL 1/2 x 34	62 5/16	M270-SQHT2		
4	G		1	wb	PL 1/2 x 34	66 8/8	M270-SQHT2		
2	L		1	ta	PL 1/2 x 16	39 11/8	M270-SQHT2		
3	L		1	tb	PL 1/2 x 16	49 1 1/8	M270-SQHT2		
2	L		1	tc	PL 1/2 x 16	39 11/8	M270-SQHT2		
2	L		1	ba	PL 1/2 x 16	39 11/8	M270-SQHT2		
1	Y		1	bb	PL 1/2 x 16	49 2 1/8	M270-SQHT2		
2	L		1	bc	PL 1/2 x 16	39 11/8	M270-SQHT2		
6	K		4	x2a	PL 7/8 x 7 1/2	2 10	MIE		
6	L		2	x2c	PL 1/2 x 7 1/2	2 10			
6	L		6	x2d	PL 1/2 x 7 1/2	2 10			
6	N		2	x2f	PL 1/2 x 3 1/2	0 11 3/8			



ONE - GIRDER - 10G5B (DEV)

FOR FIELD SPICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C1
 FOR FLANGE DIAGRAM SEE SHEET F2
 FOR GENERAL NOTES SEE SHEET GNI

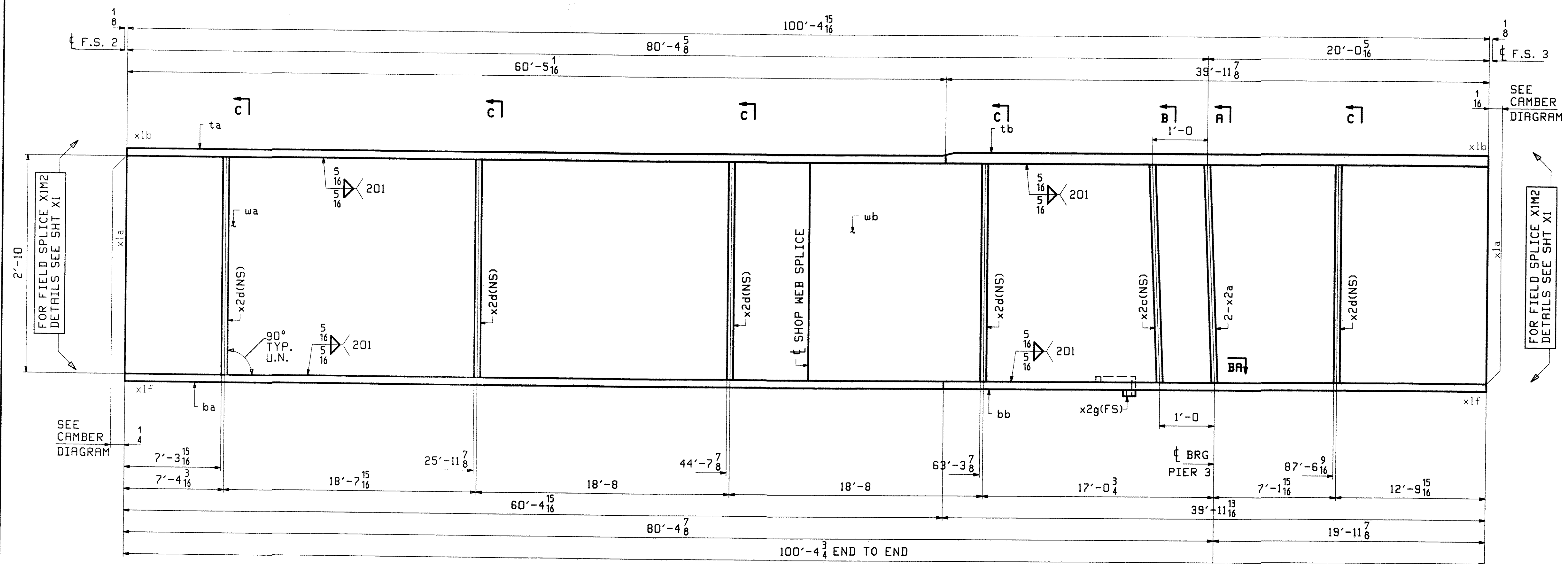
TIGHT FIT TO FLG
 WITH SEAL WELD
 (TYP 401)



DATE: 2/9/10
 SIGNATURE: [Handwritten Signature]

REV.	DATE	REMARKS	DWN	CHK	APVL
0					JAN 29 2010
MATERIAL:		M270-50W (UN)	SURFACE PREP. & PAINT: SEE GNI		HOLES: 15. 16 U.N.
DESCRIPTION:		GIRDER - 10G5B			
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE:		U.S. 5 over I-91 Bridge No. 19A Putney County of Windham		DRAWN:	WJF
LOCATION:		Putney		CHKD:	DO
PROJ NO.		IM 091-1(31)		JOB NO. 438	
CUSTOMER:		VT AOT			

ABM INFO		SHIP		BILL OF MATERIAL			JOB NO.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS
		11G1C	1		GIRDER		438
4	W		1	wa	PL 1/2 x 3/4	50 5/8	M270-SOWT2
5	W		1	wb	PL 1/2 x 3/4	49 11/16	M270-SOWT2
2	S		1	ta	PL 1/2 x 1/8	60 5/16	M270-SOWT2
2	L		1	tb	PL 1/2 x 1/8	39 11/16	M270-SOWT2
1	E		1	ba	PL 1/2 x 1/8	60 4/16	M270-SOWT2
2	L		1	bb	PL 1/2 x 1/8	39 11/16	M270-SOWT2
6	K		2	x2a	PL 7/8 x 7/8	2 10	MIE
6	L		1	x2c	PL 1/2 x 2 1/2	2 10	
6	L		5	x2d	PL 1/2 x 2 1/2	2 10	
6	N		1	x2g	PL 1/2 x 3 1/2	0 11 1/8	



FOR FIELD SPLICE XIM2
DETAILS SEE SHT X1

FOR FIELD SPLICE XIM2
DETAILS SEE SHT X1

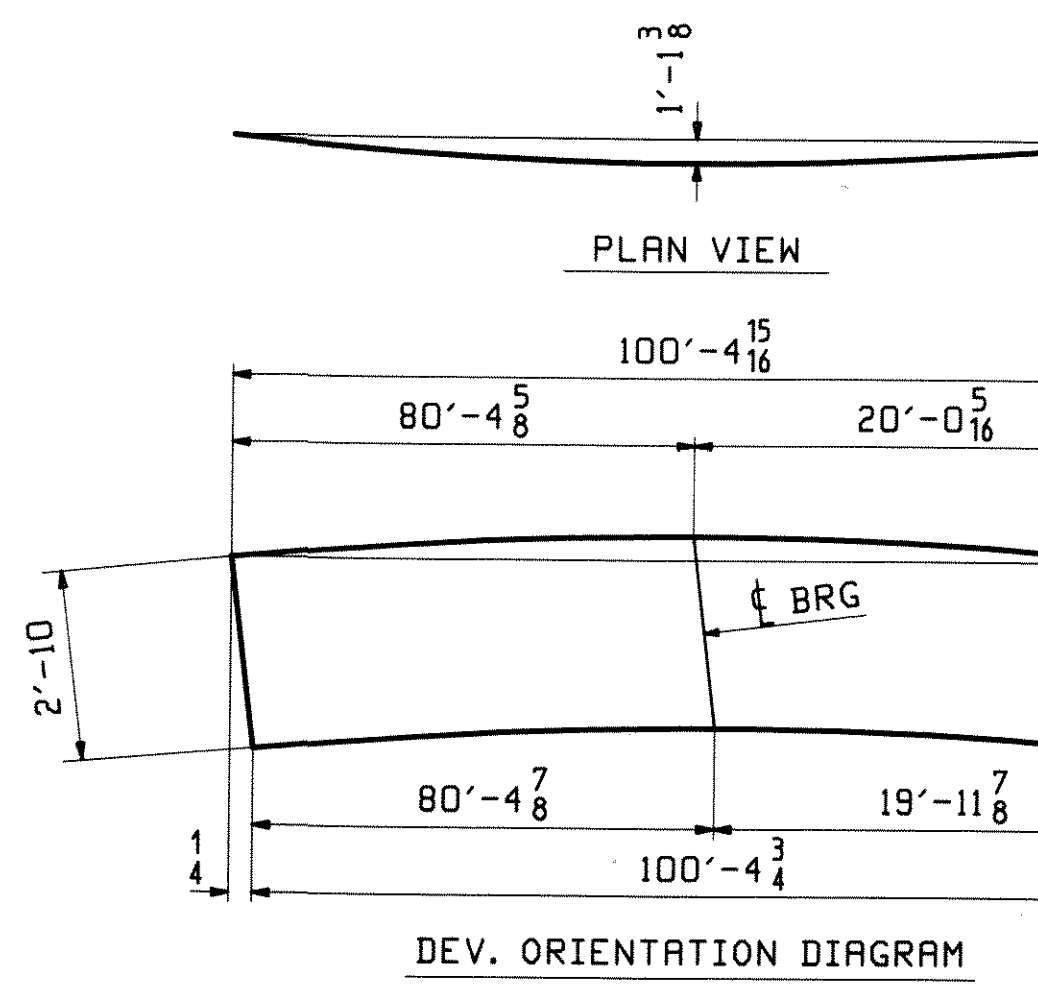
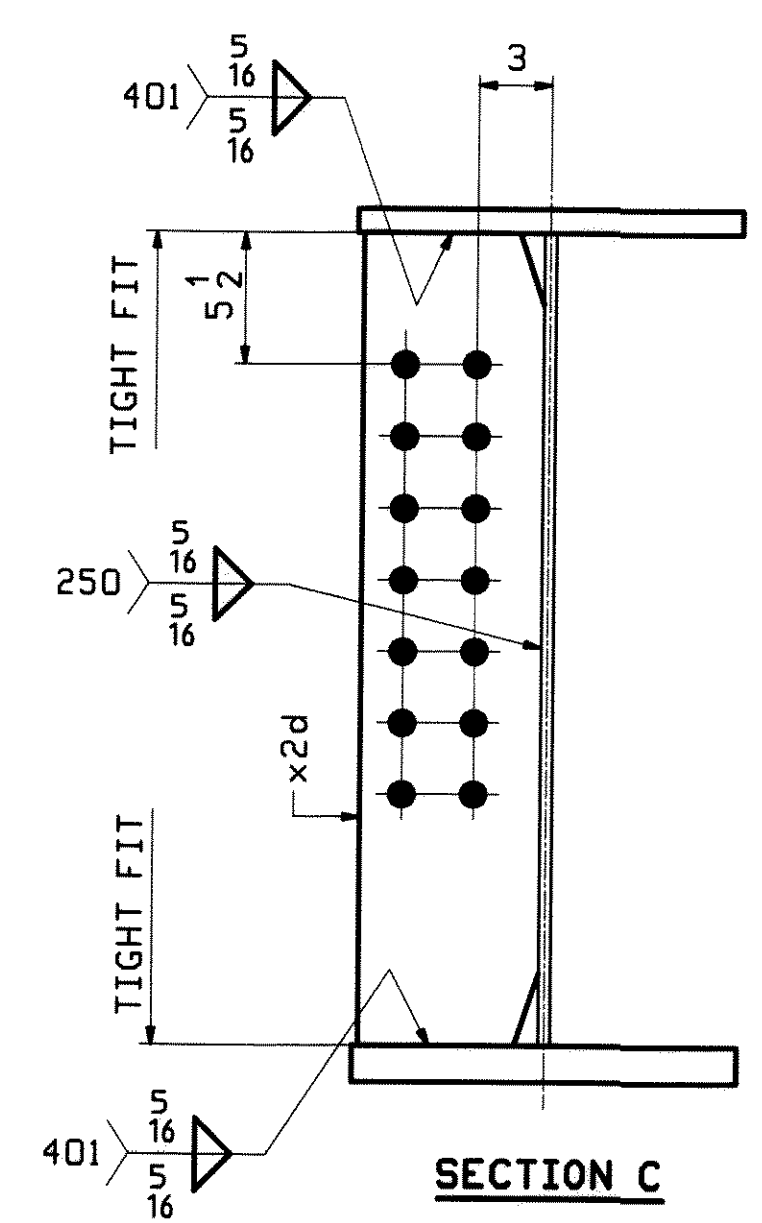
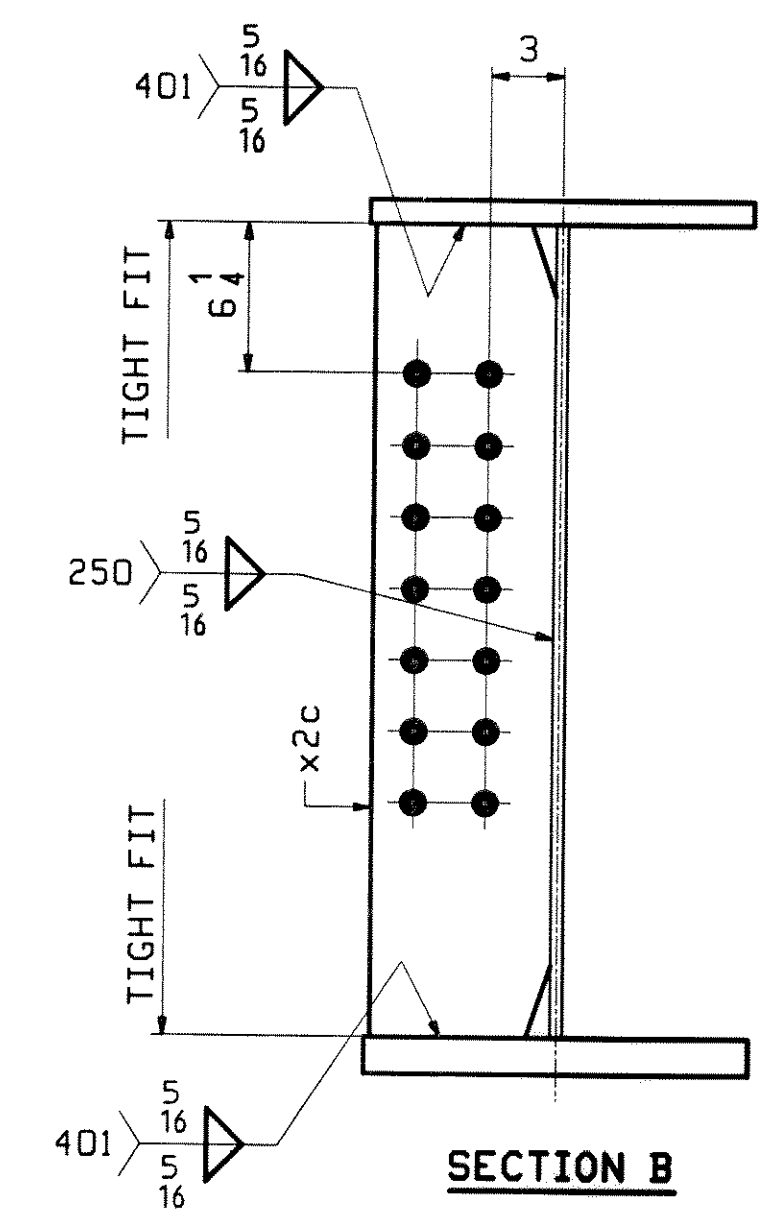
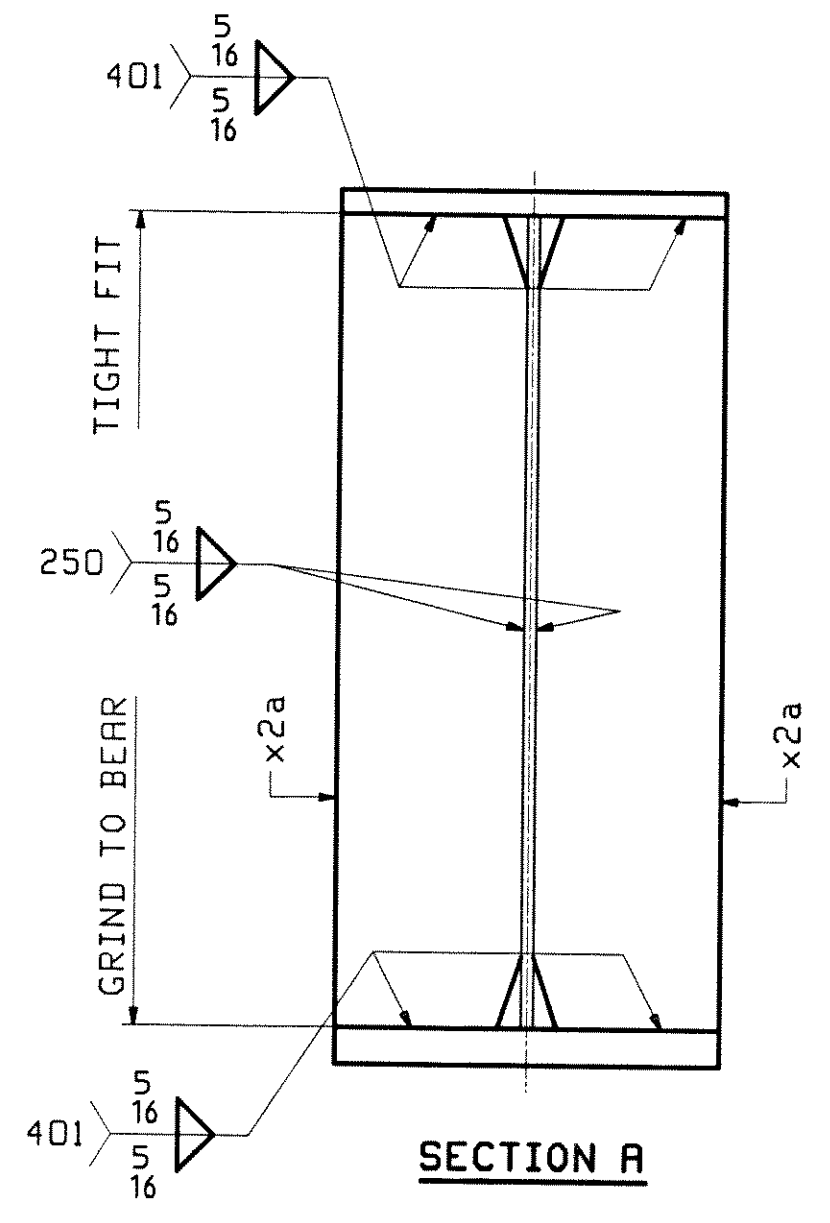
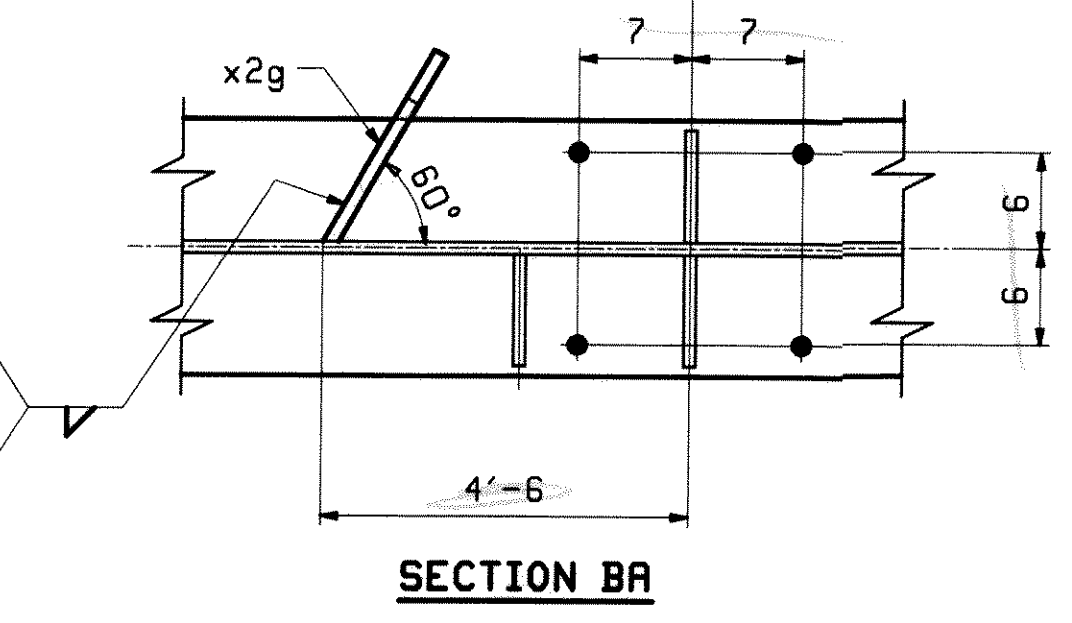
SEE CAMBER
DIAGRAM

SEE CAMBER
DIAGRAM

ONE - GIRDER - 11G1C (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER DIAGRAM SEE SHEET C2
FOR FLANGE DIAGRAM SEE SHEET F3
FOR GENERAL NOTES SEE SHEET GNI

TIGHT FIT TO FLG
WITH SEAL WELD
(TYP 401)



REV.	DATE	REMARKS	DWN	CHK	AP
0					

MATERIAL: M270-SOW (UN) SURFACE PREP. & PAINT: SEE GNI HOLES: 15/16" Ø U.N.

DESCRIPTION: GIRDER - 11G1C

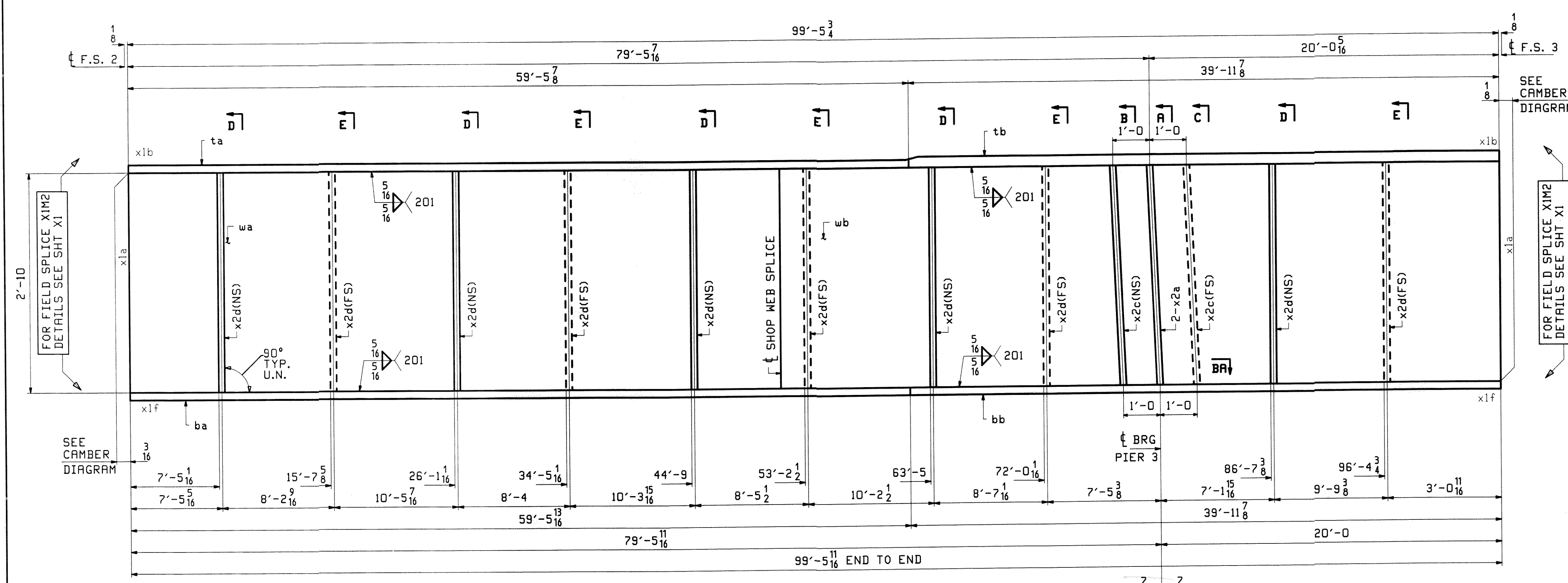
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

STRUCTURE: U.S. 5 over I-91
Bridge No. 19A
Putney
County of Windham

LOCATION: Putney
PROJ NO. IM 091-(31)
CUSTOMER: VT AOT

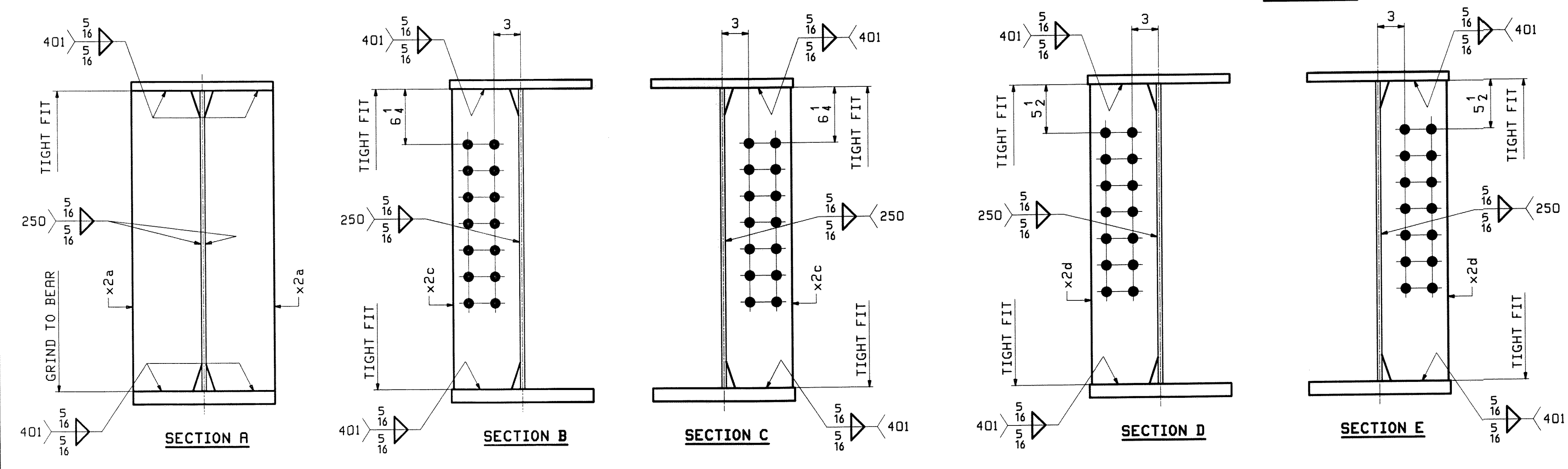
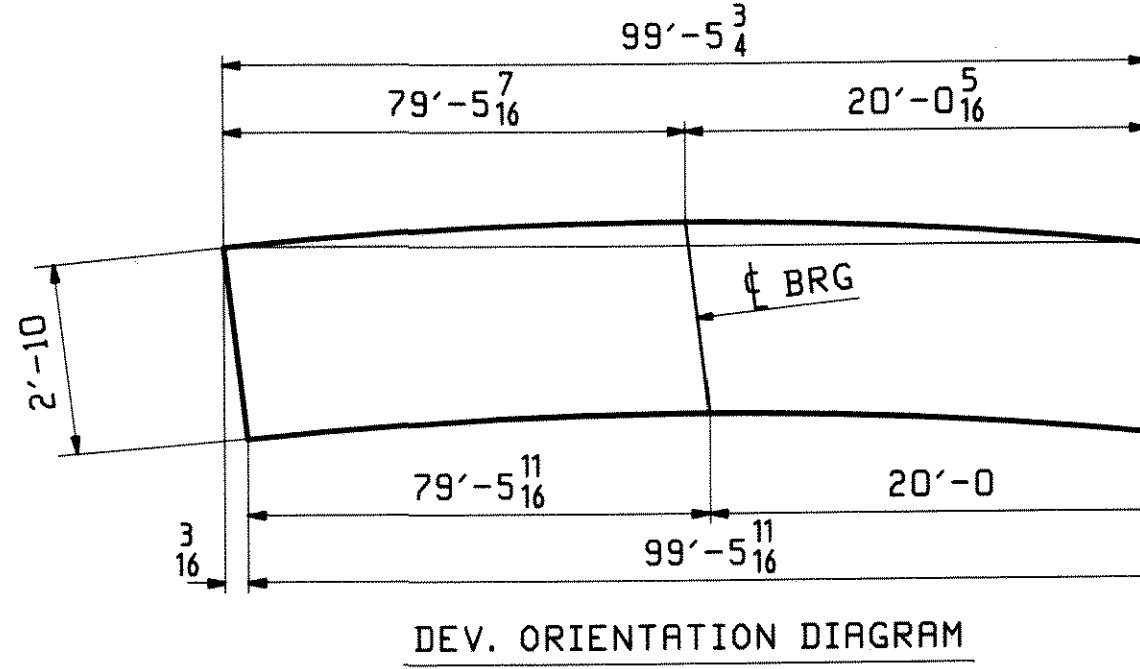
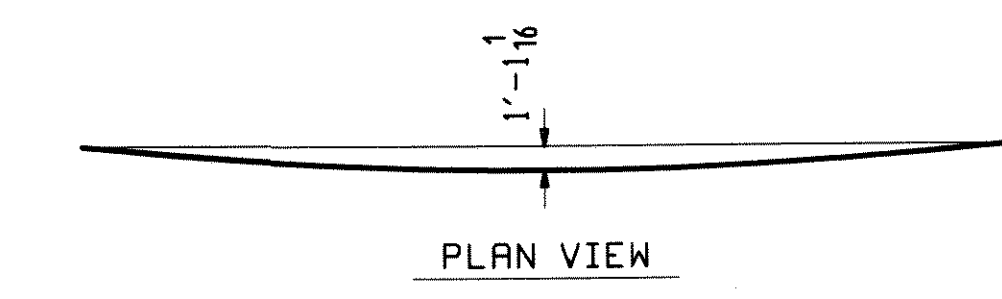
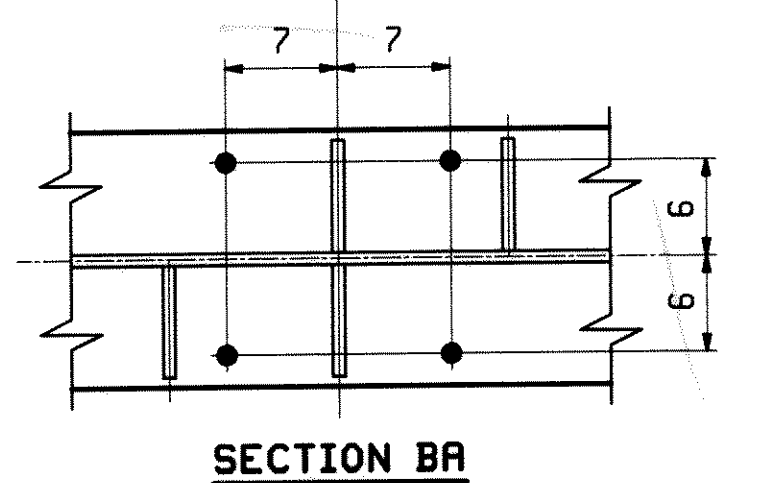
DATE: 2/9/10
SIGNATURE: [Handwritten Signature]

ABM INFO		BILL OF MATERIAL					JOB NO.	DRAWING NO.	
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		12G2C	1		GIRDER				20945
5	A		1	wa	PL $\frac{1}{2}$ x 34	49 6	M270-50HT2		
5	C		1	wb	PL $\frac{1}{2}$ x 34	49 11 15	M270-50HT2		
2	U		1	ta	PL 1 x 16	59 7	M270-50HT2		
2	L		1	tb	PL $\frac{1}{2}$ x 16	39 11 7	M270-50HT2		
1	G		1	ba	PL $\frac{1}{2}$ x 16	59 5 16	M270-50HT2		
2	L		1	bb	PL $\frac{1}{2}$ x 16	39 11 8	M270-50HT2		
6	K		2	x2a	PL $\frac{7}{8}$ x 7 1 2	2 10	MIE		
6	L		2	x2c	PL $\frac{1}{2}$ x 7 1 2	2 10			
6	L		10	x2d	PL $\frac{1}{2}$ x 7 1 2	2 10			



FOR FIELD SPLICE XIM2
DETAILS SEE SHT X1

ONE - GIRDER - 12G2C (DEV)
 FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C2
 FOR FLANGE DIAGRAM SEE SHEET F3
 FOR GENERAL NOTES SEE SHEET GN1



DATE: 2/9/10
 SIGNATURE: [Signature]

REV.	DATE	REMARKS	DWN	CHK	APVL
0					

MATERIAL: M270-50W (UN) SURFACE PREP. & PAINT: SEE GN1 HOLES: 15 16 16 Ø U.N. SHOP BO

DESCRIPTION: GIRDER - 12G2C

CASCO BAY STEEL STRUCTURES, INC.
 75 SPRING HILL ROAD SACO, MAINE 04072
 PHONE (207) 282-7360 FAX. (207) 282-1179

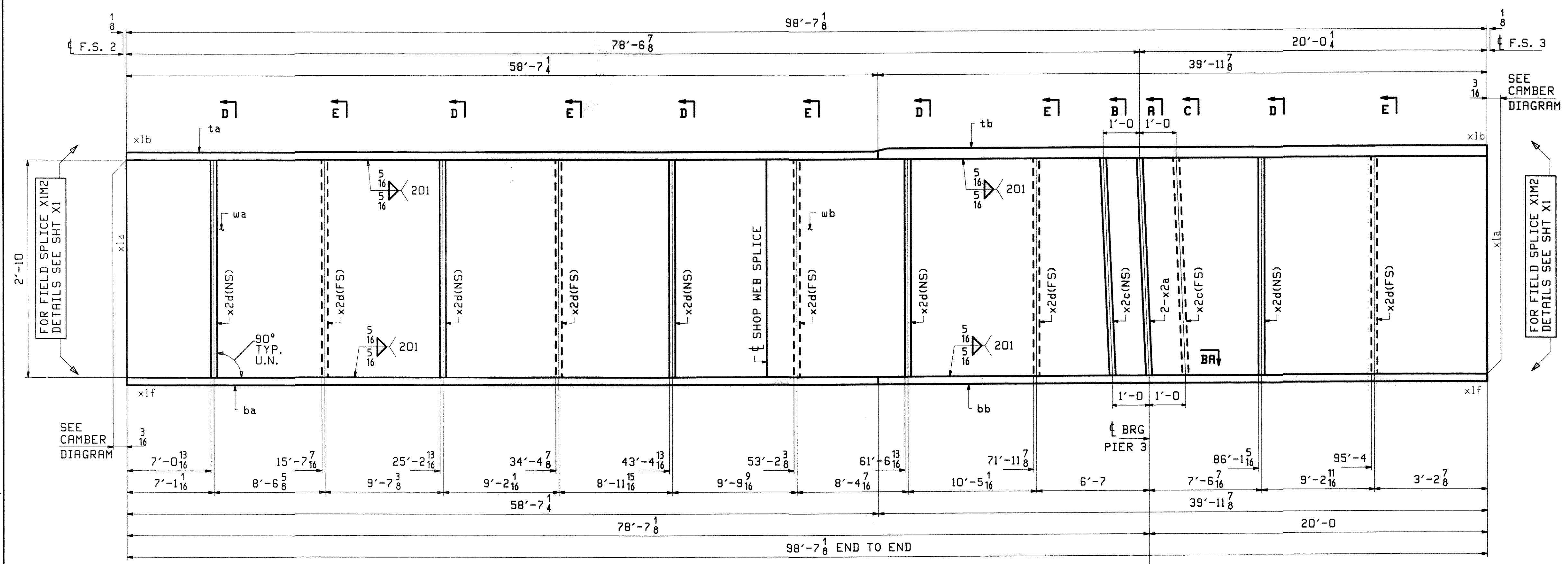
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham

LOCATION: Putney PROJ. NO. IM 091-1(31) CUSTOMER: VT ROT

DRAWN: WJF
 CHKD: DO
 JOB NO. 438

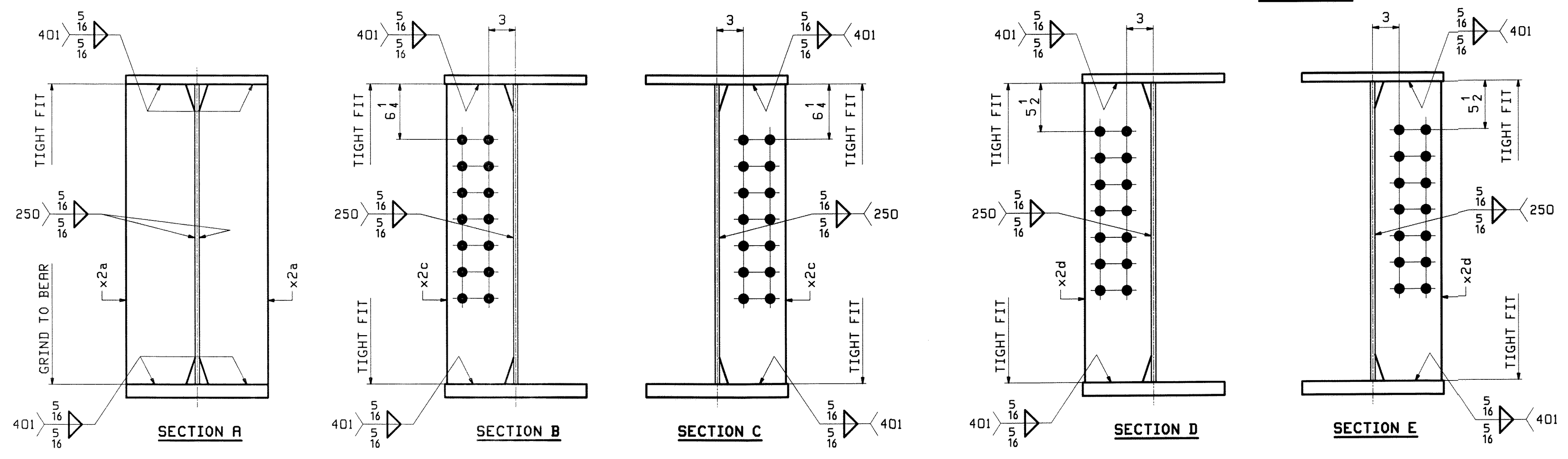
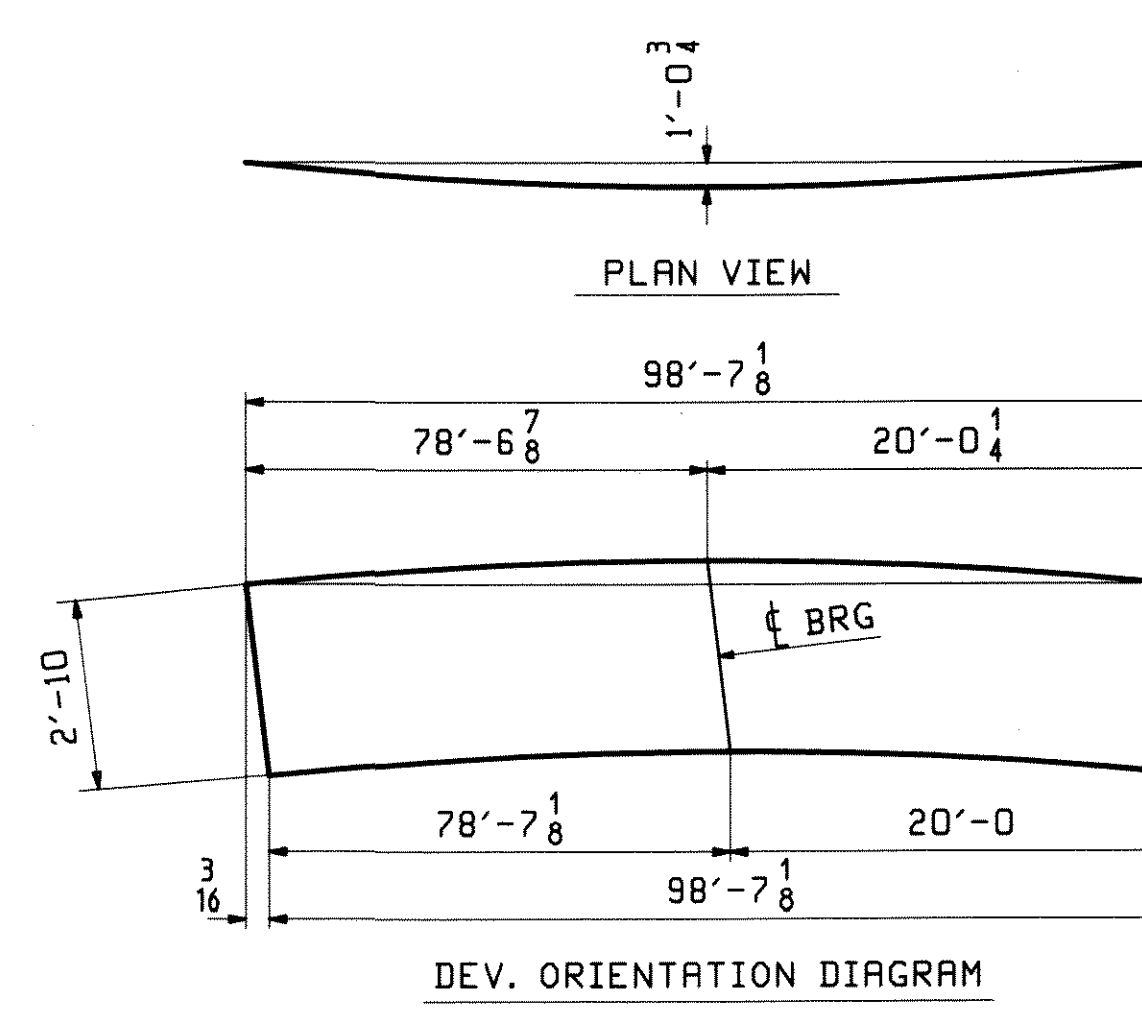
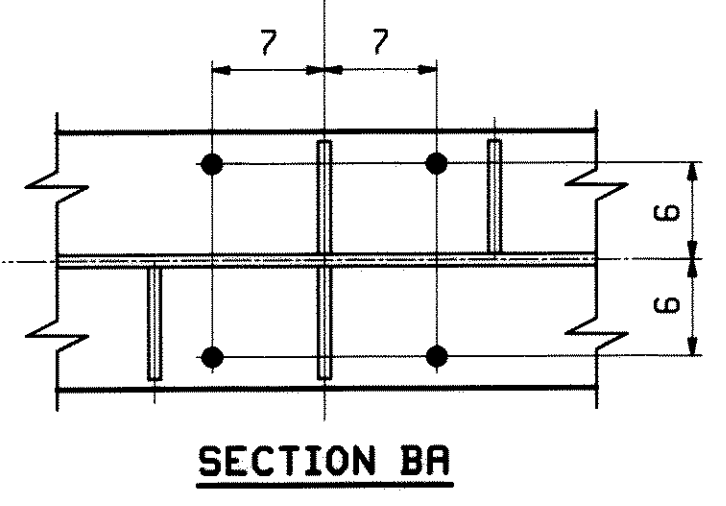
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ABM INFO		BILL OF MATERIAL				JOB NO.		DRAWN	
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		13G3C	1		GIRDER				2077
5	E		1	wa	PL 1/2 x 34	48	7 3/8	M270-50WT2	
5	C		1	wb	PL 1/2 x 34	50	0	M270-50WT2	
2	W		1	ta	PL 1 x 16	58	7 1/4	M270-50WT2	
2	L		1	tb	PL 1 1/2 x 16	39	11 7/8	M270-50WT2	
1	J		1	ba	PL 1 1/2 x 16	58	7 1/4	M270-50WT2	
2	L		1	bb	PL 1 1/2 x 16	39	11 7/8	M270-50WT2	
6	K		2	x2a	PL 1/2 x 7 1/2	2	10	MIE	
6	L		2	x2c	PL 1/2 x 7 1/2	2	10		
6	L		10	x2d	PL 1/2 x 7 1/2	2	10		



ONE - GIRDER - 13G3C (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C2
 FOR FLANGE DIAGRAM SEE SHEET F3
 FOR GENERAL NOTES SEE SHEET GN1



DATE: 2/1/10
 SIGNATURE: [Signature]
 CHECKED BY: [Signature]
 DESIGNED BY: [Signature]
 DRAWN BY: [Signature]

REV.	DATE	REMARKS	DWN	CHK	APVL
0					

MATERIAL: M270-50W (UN) SURFACE PREP. & PAINT: SEE GN1 HOLES: 15-16 U.N. SHOP

DESCRIPTION: GIRDER - 13G3C

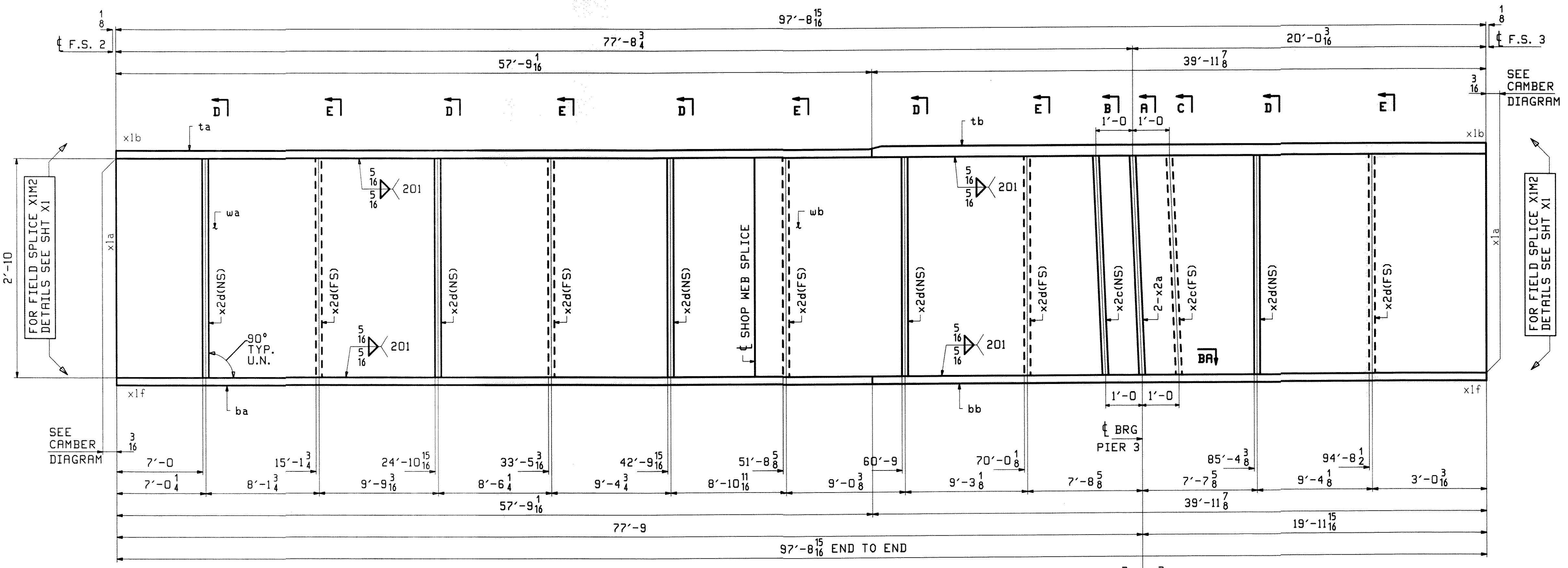
CASCO BAY STEEL STRUCTURES, INC.
 75 SPRING HILL ROAD SACO, MAINE 04072
 PHONE (207) 282-7360 FAX. (207) 282-1179

STRUCTURE: U.S. 5 over I-91
 Bridge No. 19A
 Putney
 County of Windham

LOCATION: Putney
 PROJ NO. IM 091-1(31)
 CUSTOMER: VT ROT

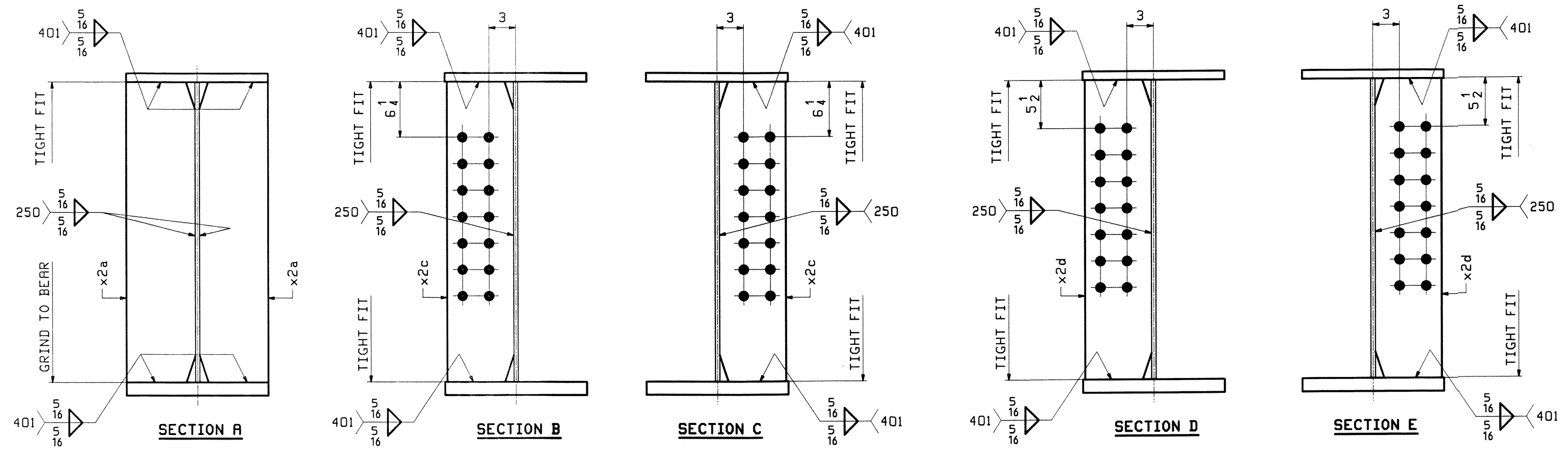
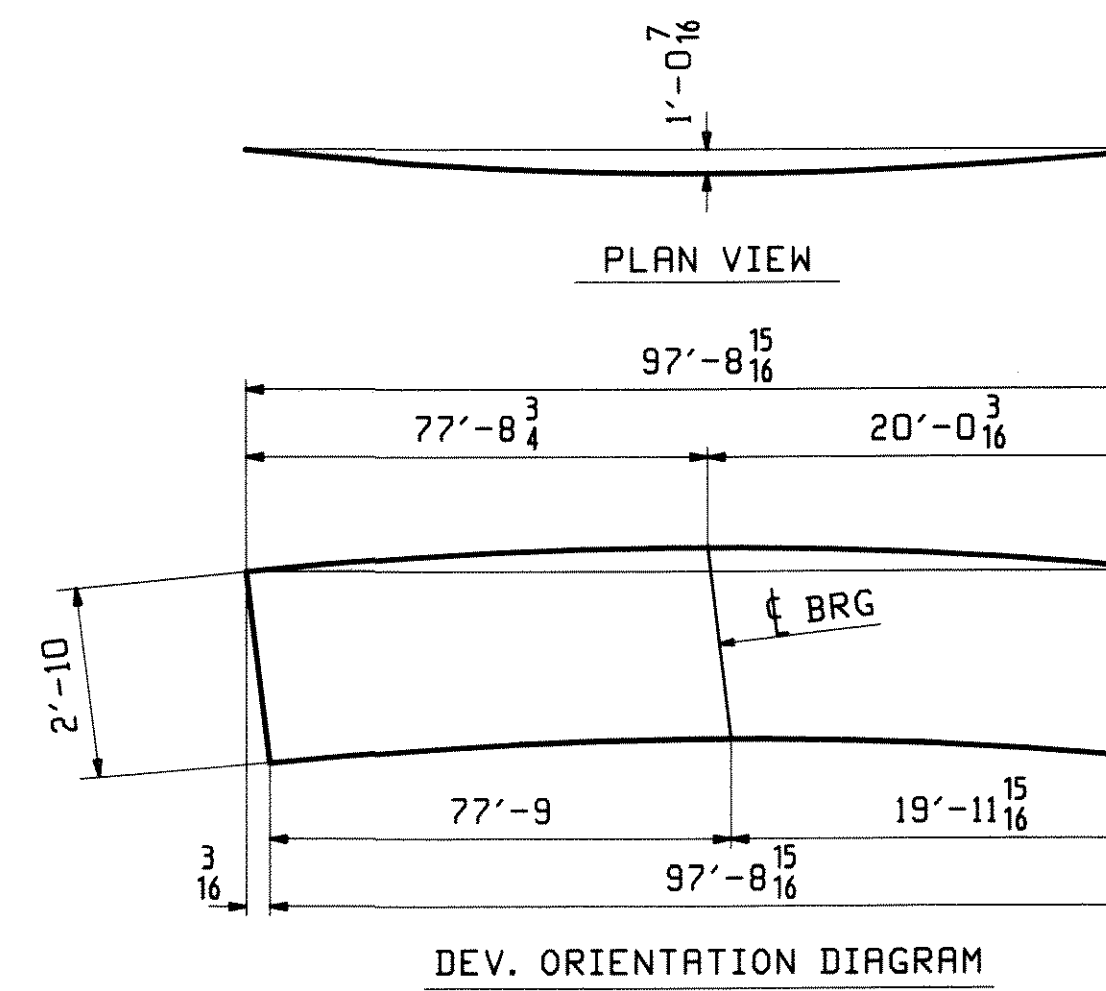
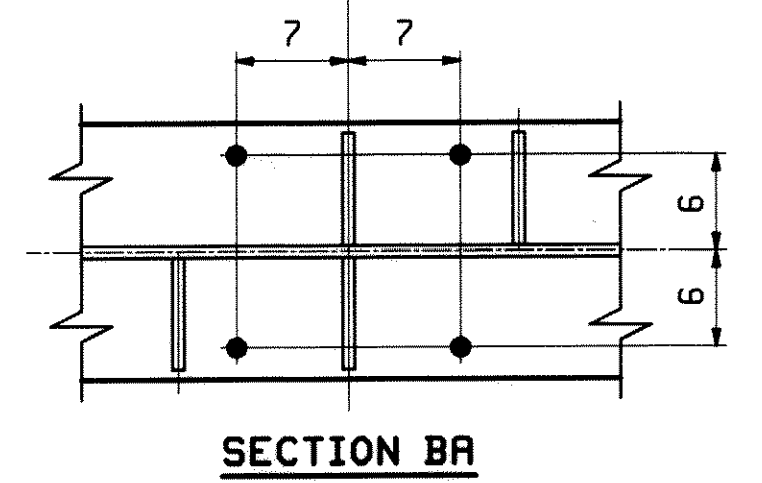
DRAWN: WJF
 CHKD: DO
 JOB NO: 438

ABM INFO		BILL OF MATERIAL				JOB NO.		DRAWN
PAGE	LINE	MARK	QTY	MARK	MATERIAL	438		14
						REMARKS	NT	
						FT	INCHES	
		14G4C	1		GIRDER			20613
5	G		1	wa	PL 7/8x34	47	9 1/8	M270-50WT2
4	Y		1	wb	PL 1/2x34	49	11 1/8	M270-50WT2
2	Y		1	ta	PL 1x16	57	9 1/8	M270-50WT2
2	L		1	tb	PL 1/2x16	39	11 7/8	M270-50WT2
1	L		1	ba	PL 1/2x16	57	9 1/8	M270-50WT2
2	L		1	bb	PL 1/2x16	39	11 7/8	M270-50WT2
6	K		2	x2a	PL 7/8x7 1/2	2	10	MIE
6	L		2	x2c	PL 1/2x7 1/2	2	10	
6	L		10	x2d	PL 1/2x7 1/2	2	10	



ONE - GIRDER - 14G4C (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C2
 FOR FLANGE DIAGRAM SEE SHEET F3
 FOR GENERAL NOTES SEE SHEET GNI



DATE: 2/9/10
 SIGNATURE: [Signature]

REV.	DATE	REMARKS	DWN	CHK	APVL
0					

MATERIAL: M270-50W (UN) SURFACE PREP. & PAINT: SEE GNI HOLES: 15/16" Ø U.N. SHOP

DESCRIPTION: GIRDER - 14G4C

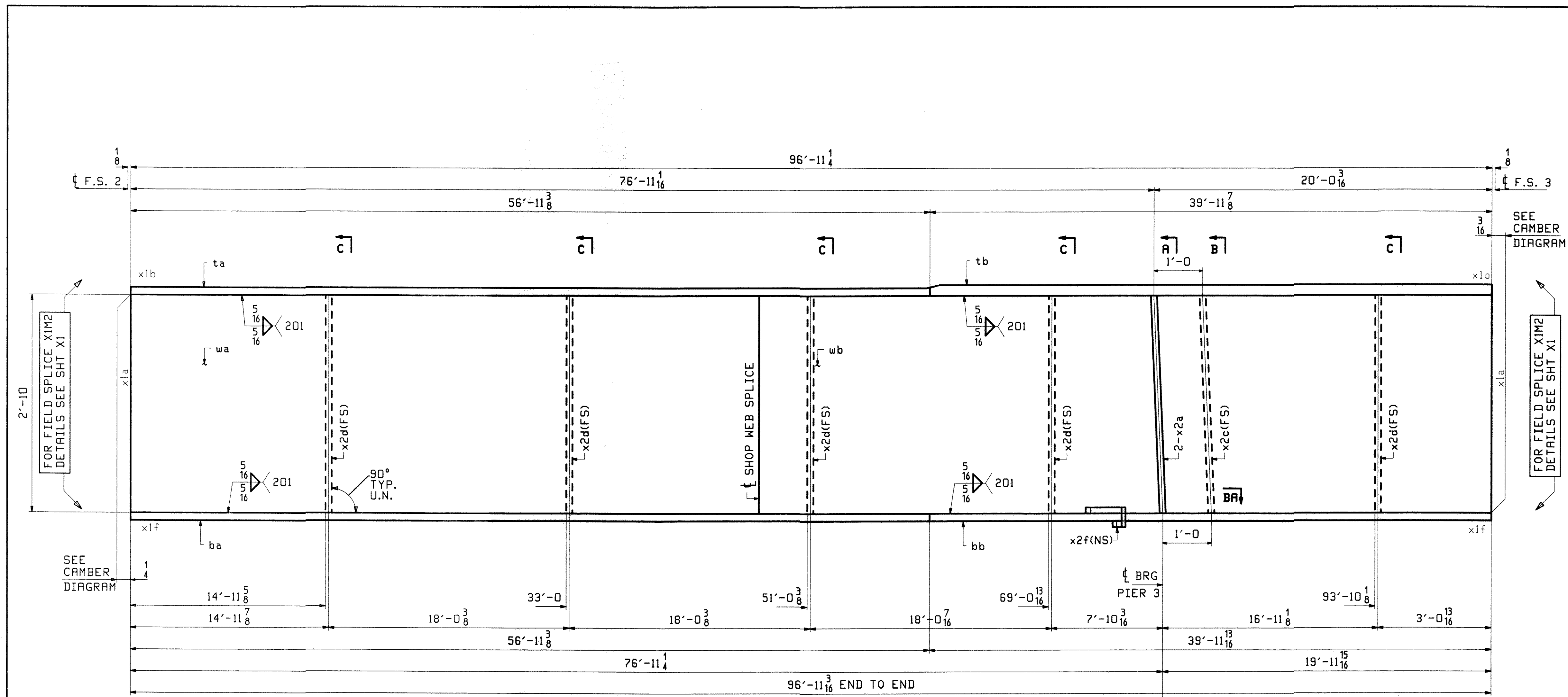
CASCO BAY STEEL STRUCTURES, INC.
 75 SPRING HILL ROAD SACO, MAINE 04072
 PHONE (207) 282-7360 FAX. (207) 282-1179

STRUCTURE: U.S. 5 over I-91
 Bridge No. 19A
 Putney
 County of Windham

LOCATION: Putney
 PROJ NO. IM 091-1(31)
 CUSTOMER: VT ROT

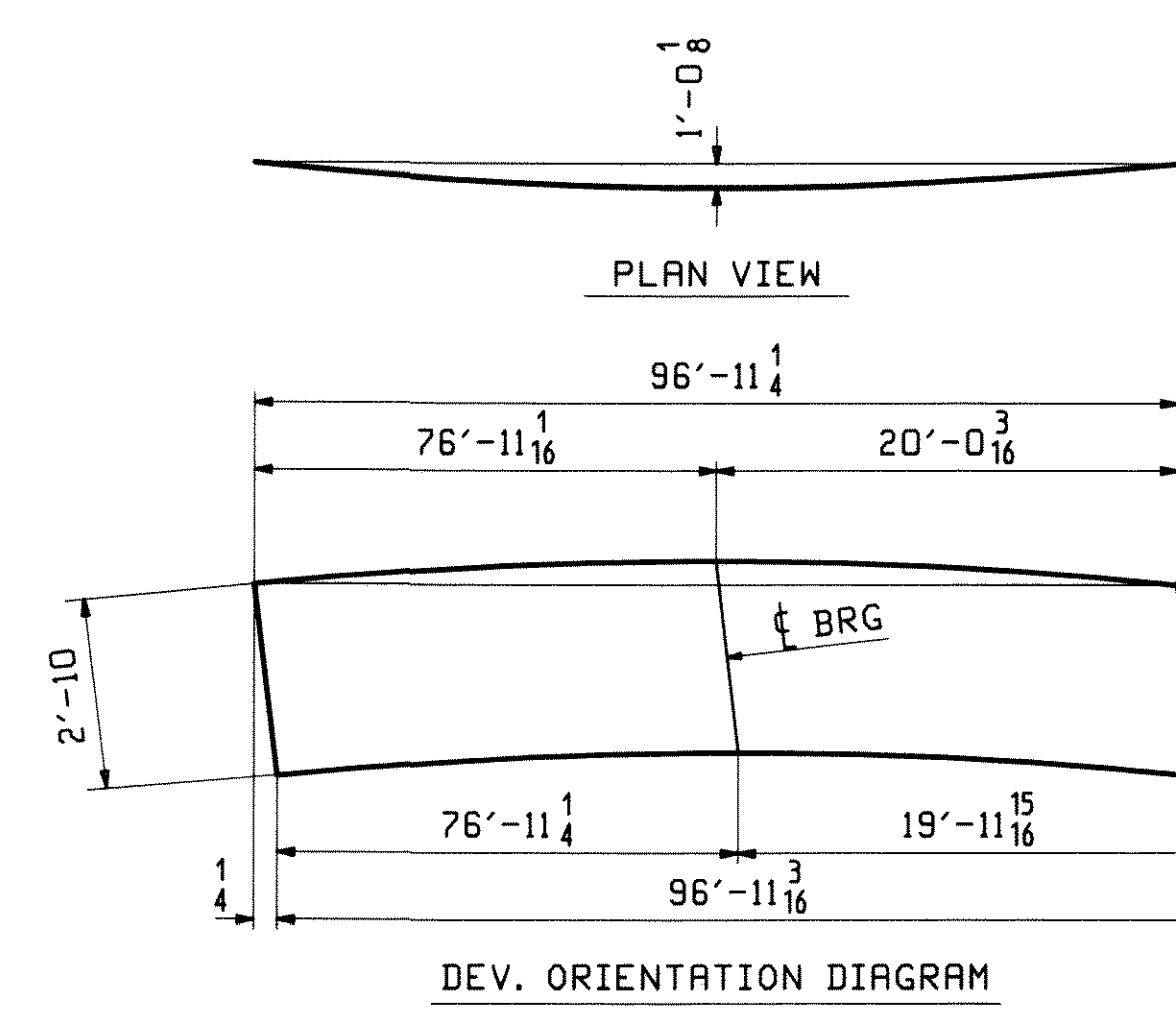
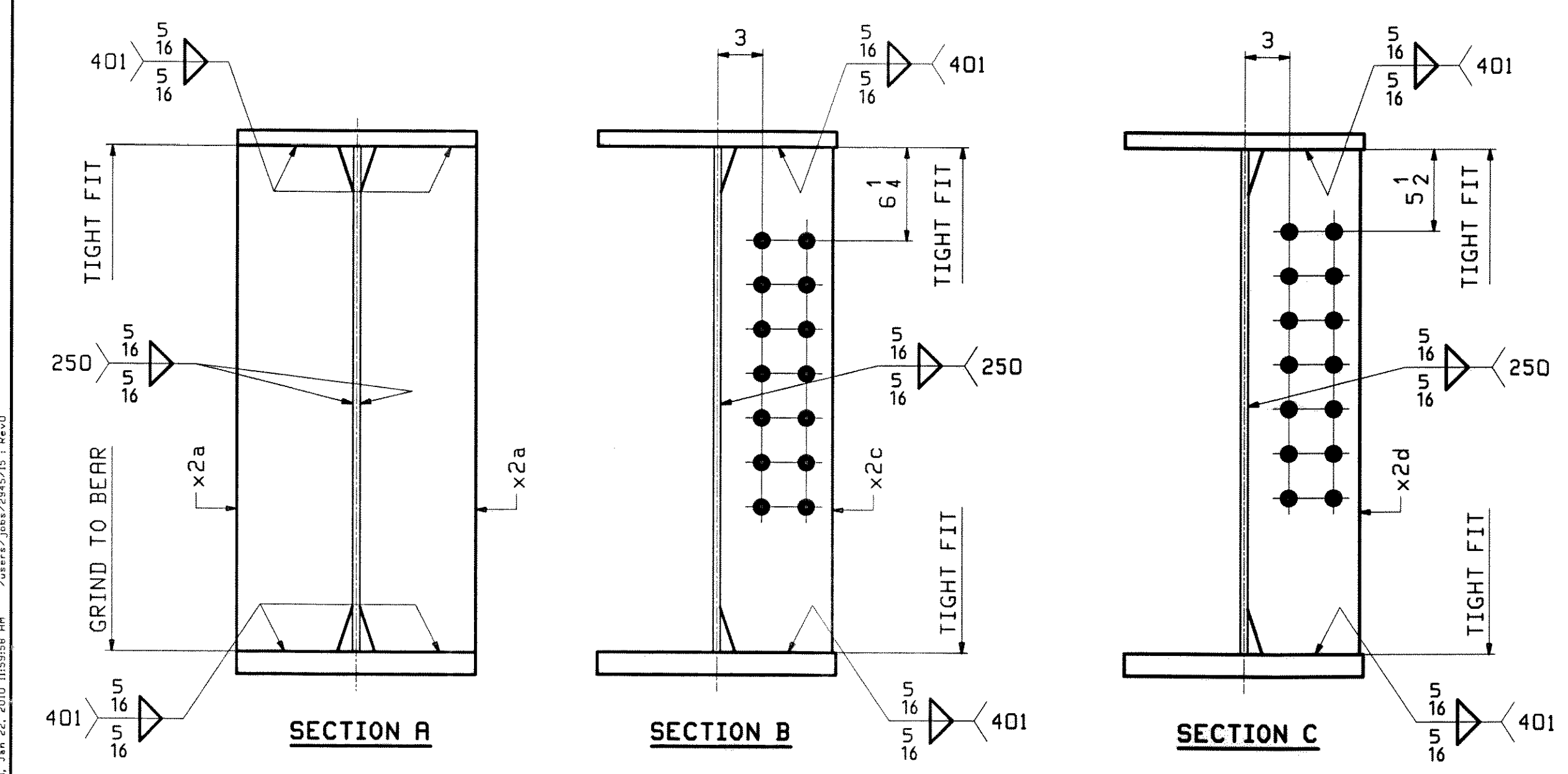
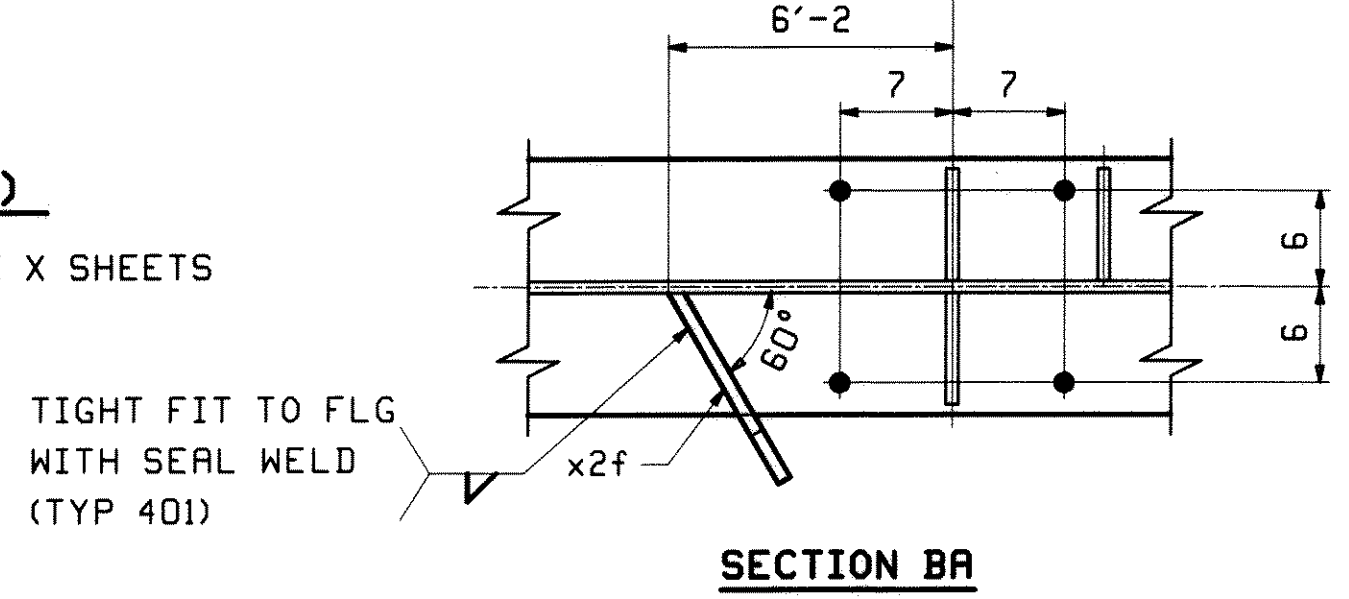
DRAWN: WJF
 CHKD: DO
 JOB NO: 438

ABM INFO		BILL OF MATERIAL				JOB NO.	DRAWING	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT
		15G5C	1		GIRDER			2024
5	J		1	wa	PL 1/2 x 34	46 11/8	M270-50WT2	
4	Y		1	wb	PL 1/2 x 34	49 11/8	M270-50WT2	
3	A		1	ta	PL 1 x 16	56 11/8	M270-50WT2	
2	L		1	tb	PL 1 1/2 x 16	39 11/8	M270-50WT2	
1	N		1	ba	PL 1 1/2 x 16	56 11/8	M270-50WT2	
2	L		1	bb	PL 1 1/2 x 16	39 11/8	M270-50WT2	
6	K		2	x2a	PL 7/8 x 7 3/4	2 - 10"	MIE	
6	L		1	x2c	PL 1/2 x 7 1/2	2 - 10"		
6	L		5	x2d	PL 1/2 x 7 1/2	2 - 10"		
6	N		1	x2f	PL 1/4 x 3 1/2	0 11/8		



ONE - GIRDER - 15G5C (DEV)

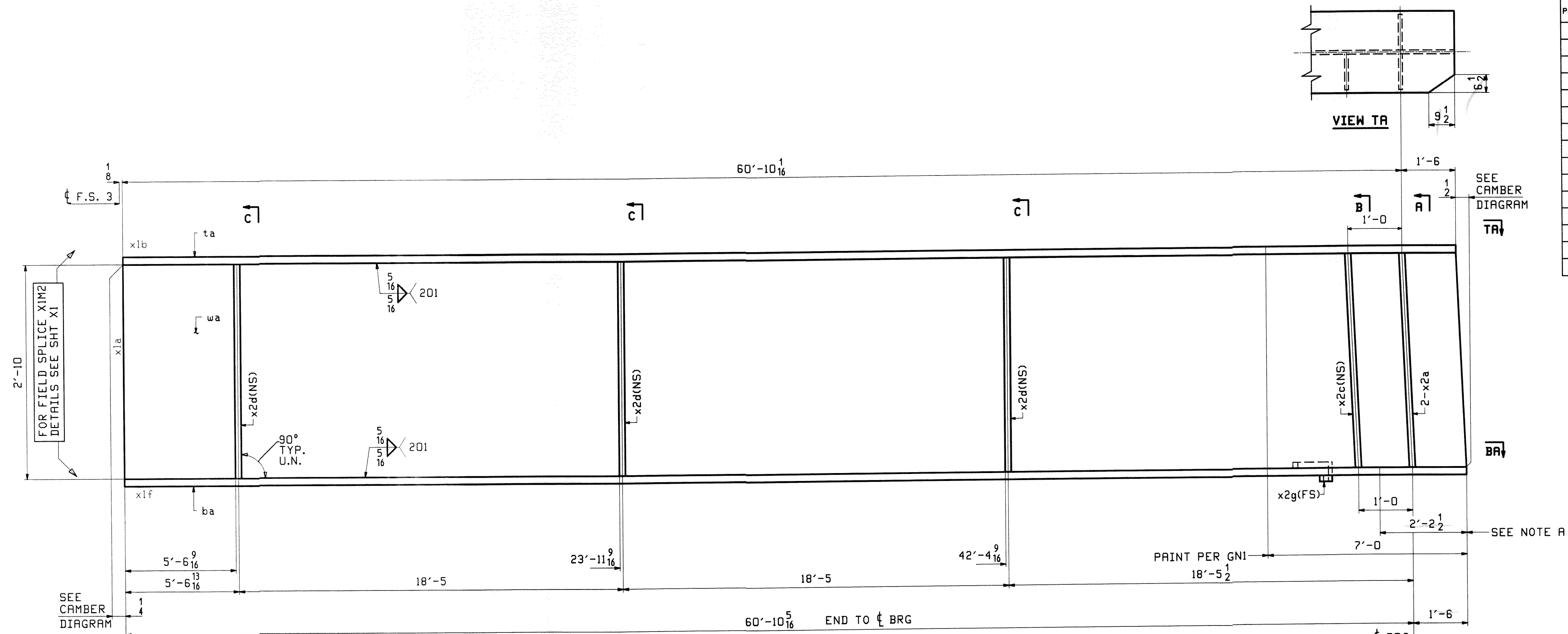
FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C2
 FOR FLANGE DIAGRAM SEE SHEET F3
 FOR GENERAL NOTES SEE SHEET GNI



REV.	DATE	REMARKS	DWN	CHK	APVL
0					
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:	
M270-50W (UN)		SEE GNI		15/16" Ø U.N.	
DESCRIPTION: GIRDER - 15G5C					
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX: (207) 282-1179					
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham				DRAWN: WJF CHKD: DO	
LOCATION: Putney				JOB NO.	
PROJ NO. IM 091-1(31)				438	
CUSTOMER: VT ROT					

DATE: 2/9/10
 SIGNATURE: [Signature]

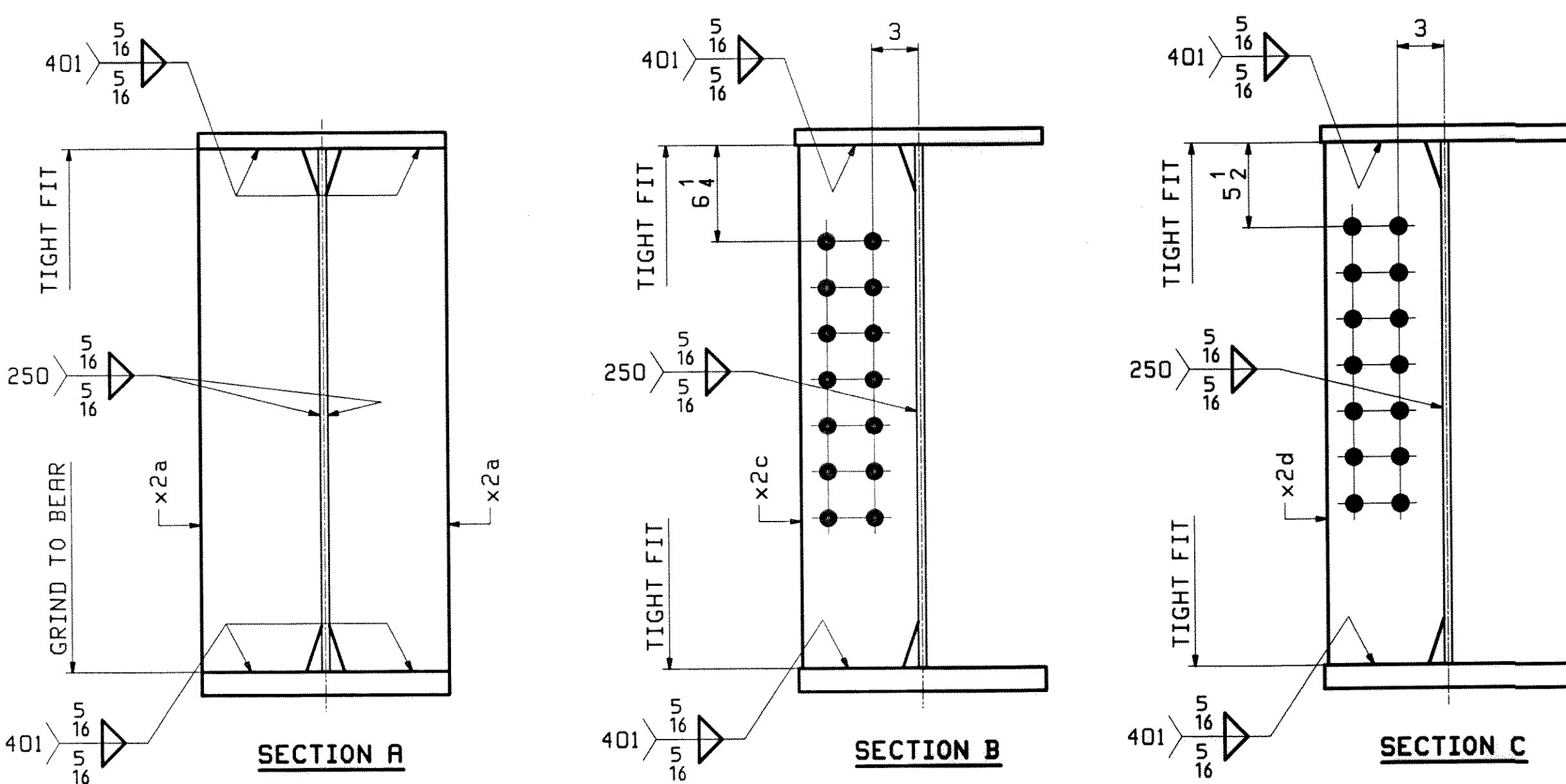
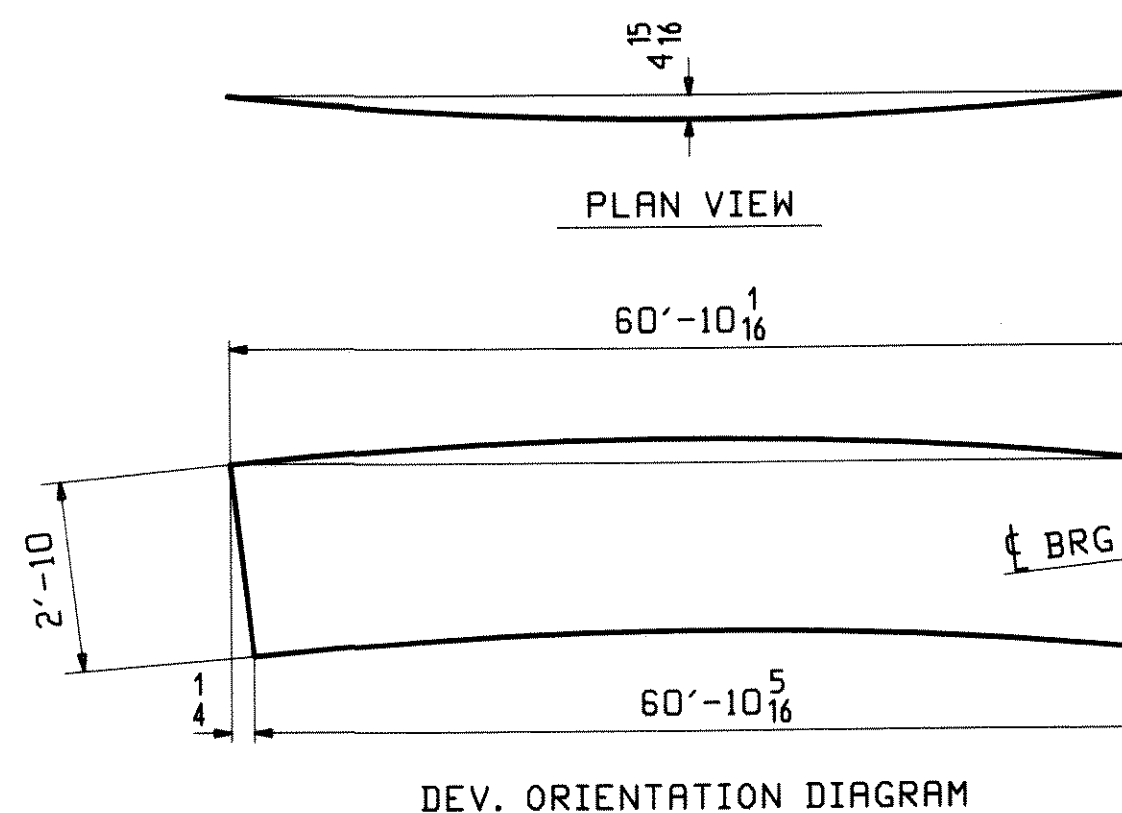
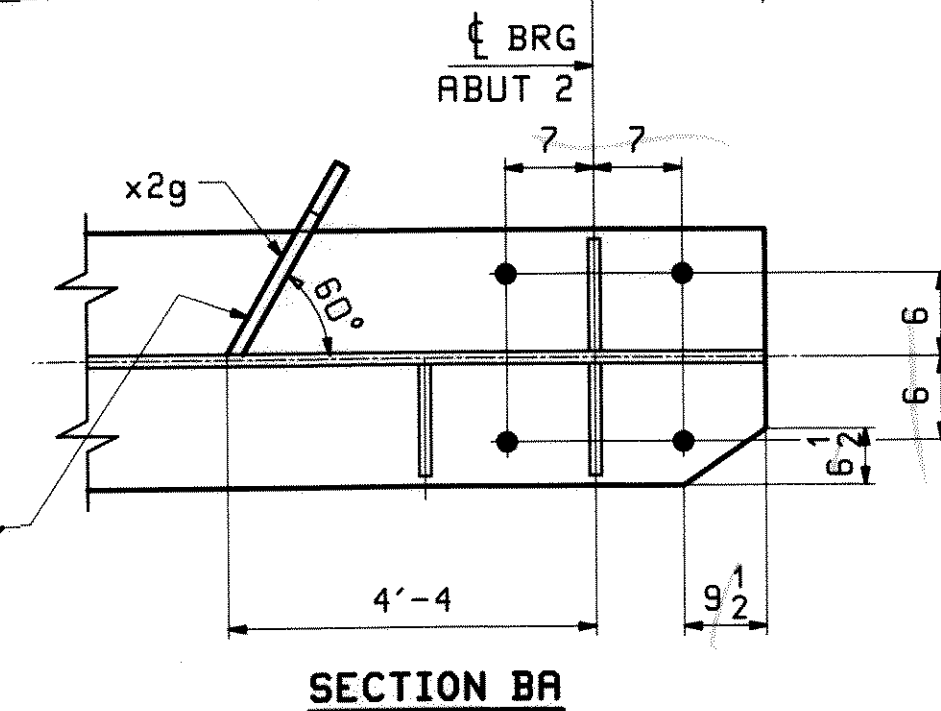
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PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH	REMARKS
						FT	INCHES
		16G1D	1		GIRDER		12373
4	J	1	wa	PL 1/2x34	82	4 9/16	M270-SQHT2
2	N	1	ta	PL 1x16	62	4 9/16	M270-SQHT2
1	A	1	ba	PL 1/2x16	62	4 9/16	M270-SQHT2
6	K	2	x2a	PL 7/8x7 1/4	2	10	MIC
6	L	1	x2c	PL 1/2x7 1/2	2	10	
6	L	3	x2d	PL 1/2x7 1/2	2	10	
6	N	1	x2g	PL 1/2x3 1/2	0	11 1/8	



ONE - GIRDER - 16G1D (DEV)

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C2
 FOR FLANGE DIAGRAM SEE SHEET F1
 FOR GENERAL NOTES SEE SHEET GN1

TIGHT FIT TO FLG WITH SEAL WELD (TYP 401)



NOTE A:
NO PAINT BOTTOM AND EDGES OF BOTTOM FLANGE.

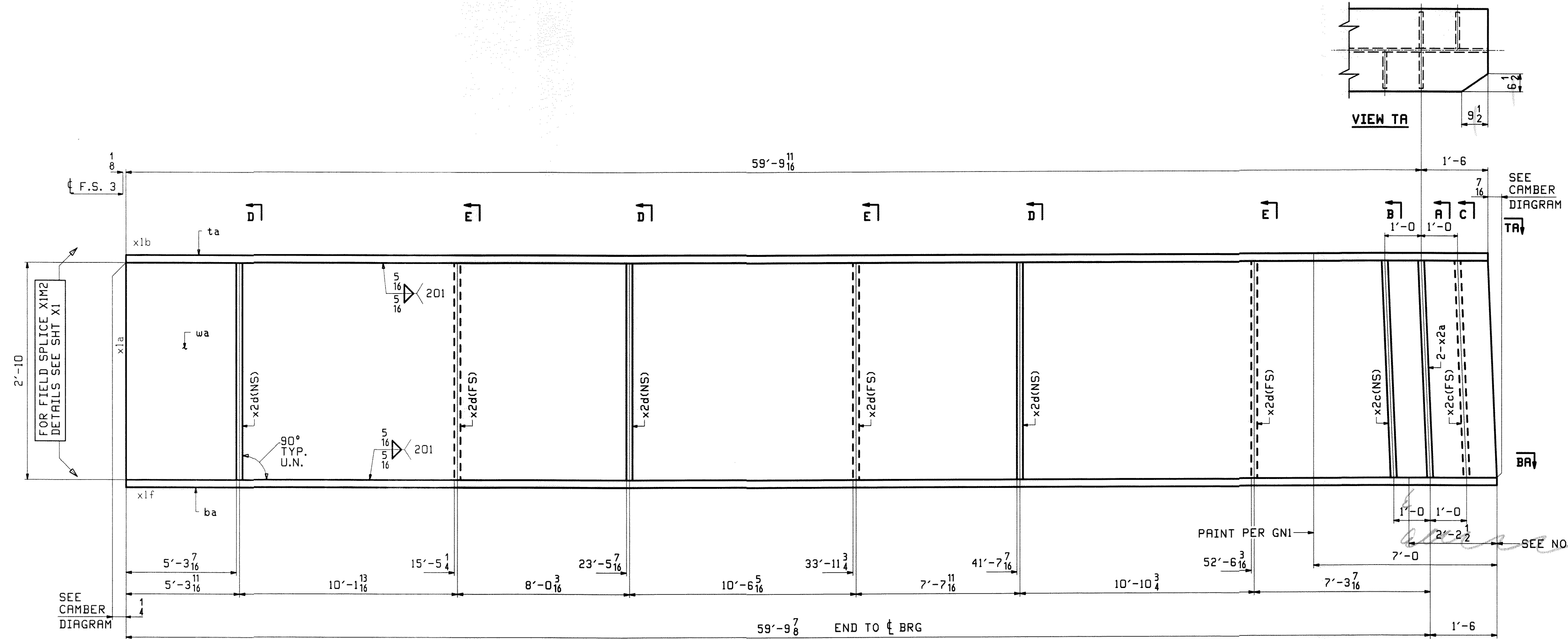
FOR OFFICIAL USE ONLY

DATE: 2/9/10

SIGNATURE: [Signature]

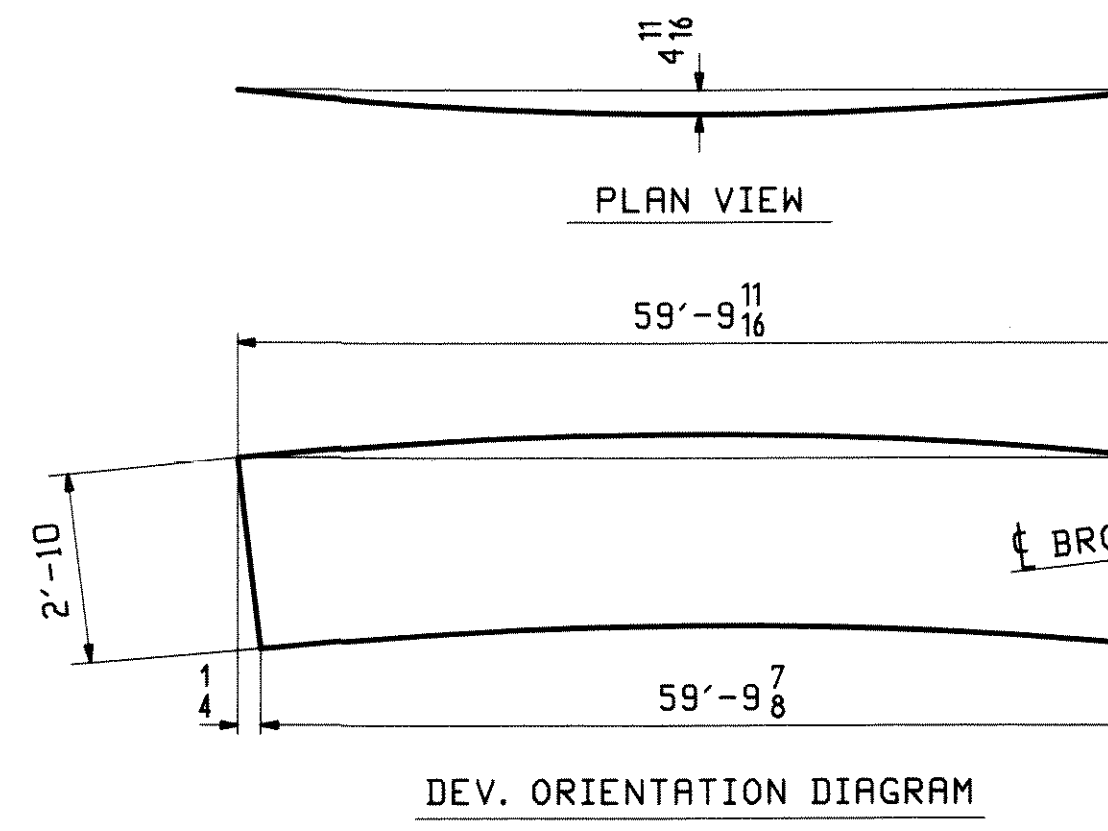
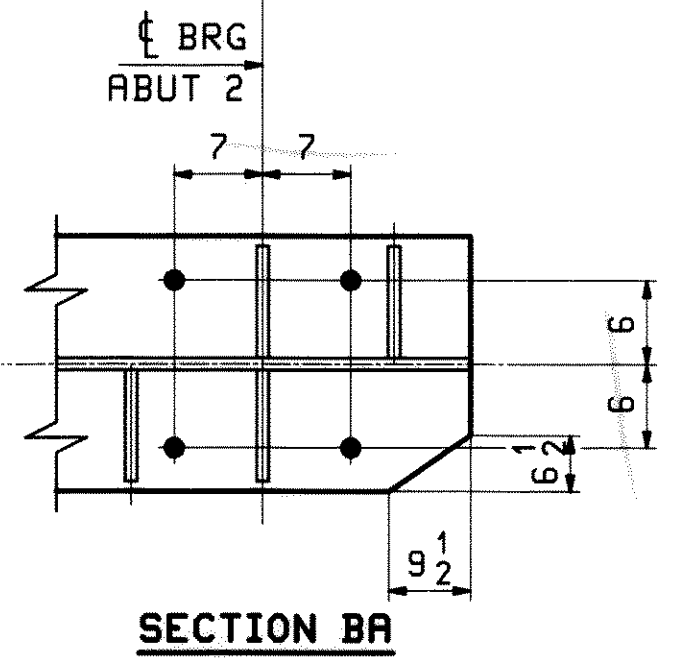
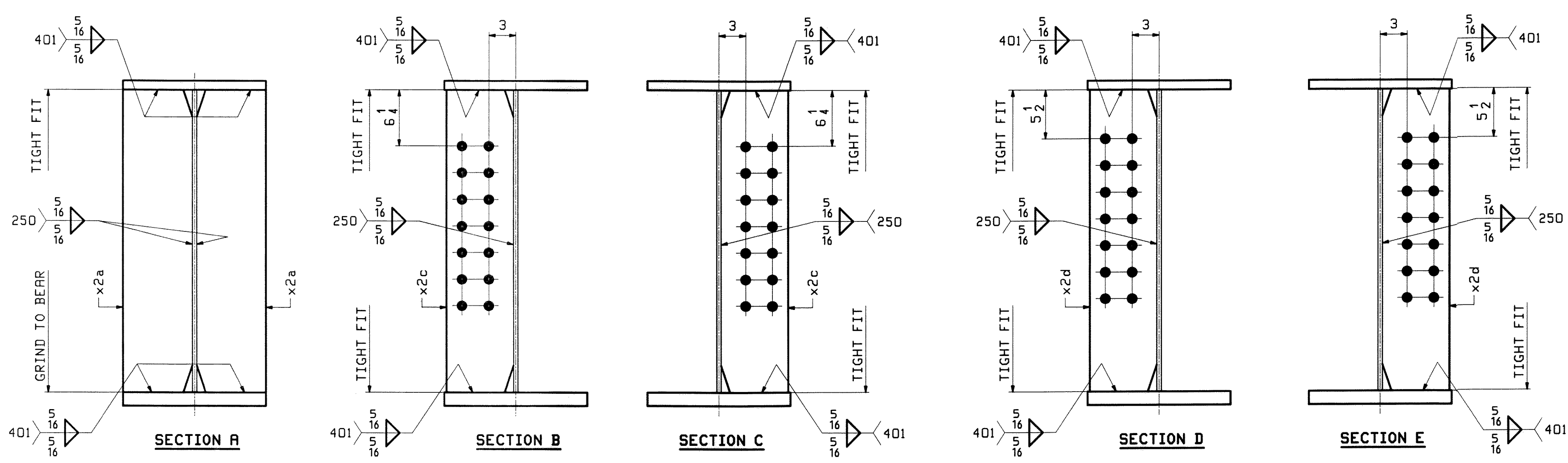
REV.	DATE	REMARKS	DWN	CHK	APVL
0					
MATERIAL:		SURFACE PREP. & PRINT:		HOLES:	
M270-SQW (UN)		SEE GN1		15/16 Ø U.N.	
DESCRIPTION: GIRDER - 16G1D					
CASCO BAY STEEL STRUCTURES, INC.					
75 SPRING HILL ROAD SACO, MAINE 04072					
PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham					DRAWN: WJF
LOCATION: Putney					CHKD: DO
PROJ NO. IM 091-1(31)					JOB NO.
CUSTOMER: VT AOT					438

ABM INFO		SHIP	BILL OF MATERIAL				JOB NO.	DR
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT
		17G2D	1		GIRDER			12314
4	L		1	wa	PL $\frac{1}{2}$ x 34	61'-4 $\frac{1}{8}$	M270-50HT2	
2	Q		1	ta	PL $\frac{1}{2}$ x 16	61'-3 $\frac{11}{16}$	M270-50HT2	
1	C		1	ba	PL $\frac{1}{2}$ x 16	61'-3 $\frac{7}{8}$	M270-50HT2	
6	K		2	x2a	PL $\frac{7}{8}$ x 7 $\frac{3}{4}$	2'-10"	MIE	
6	L		2	x2c	PL $\frac{1}{2}$ x 7 $\frac{3}{4}$	2'-10"		
6	L		6	x2d	PL $\frac{1}{2}$ x 7 $\frac{3}{4}$	2'-10"		



NOTE A:
NO PAINT BOTTOM AND EDGES OF BOTTOM FLANGE

ONE - GIRDER - 17G2D (DEV)
 FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C2
 FOR FLANGE DIAGRAM SEE SHEET F1
 FOR GENERAL NOTES SEE SHEET GNI

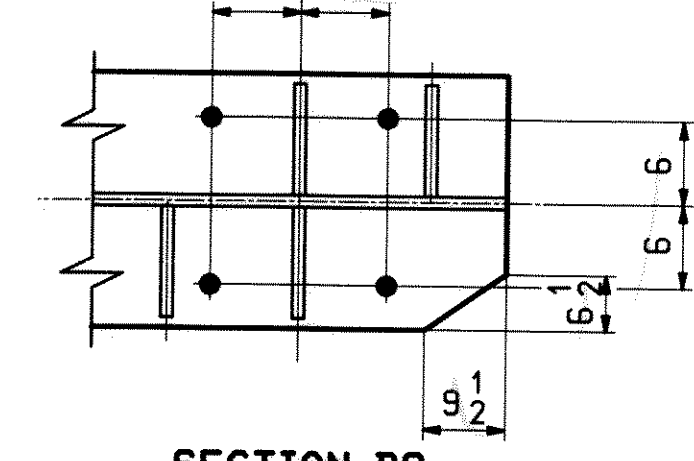
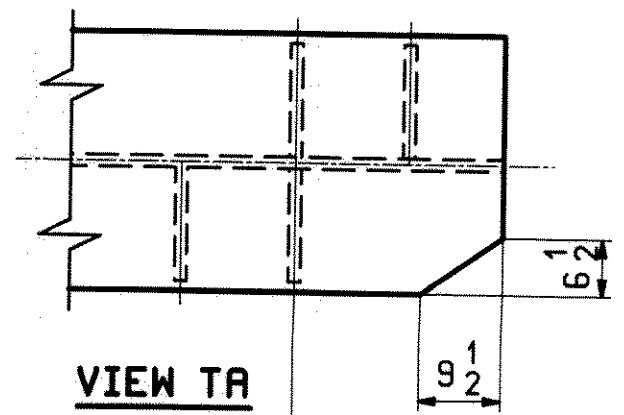
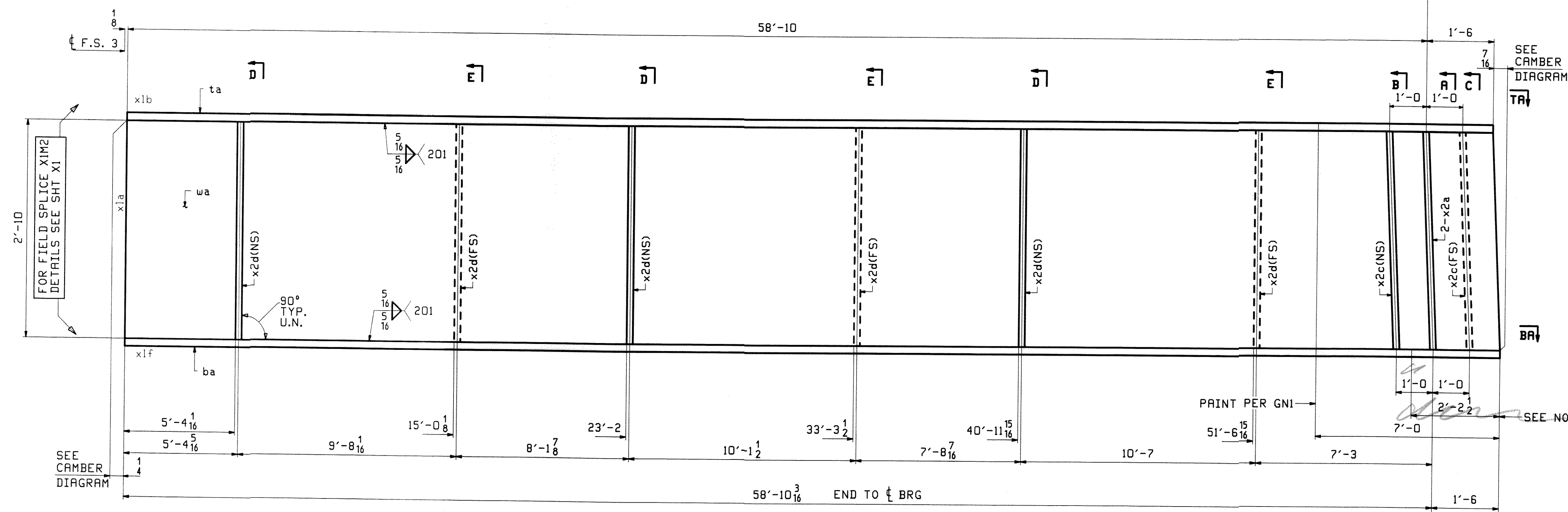


REV.	DATE	REMARKS	DWN	CHK	APV
0					
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:	
M270-50W (UN)		SEE GNI		15 16" Ø U.N.	
DESCRIPTION: GIRDER - 17G2D					
CASCO BAY STEEL STRUCTURES, INC.					
75 SPRING HILL ROAD			SACO, MAINE 04072		
PHONE (207) 282-7360			FAX (207) 282-1179		
STRUCTURE: U.S. 5 over I-91					BRWN:
Bridge No. 19A					WJF
Putney					CHKD:
County of Windham					DO
LOCATION: Putney					JOB N
PROJ NO. IM 091-1(31)					43
CUSTOMER: VT AOT					

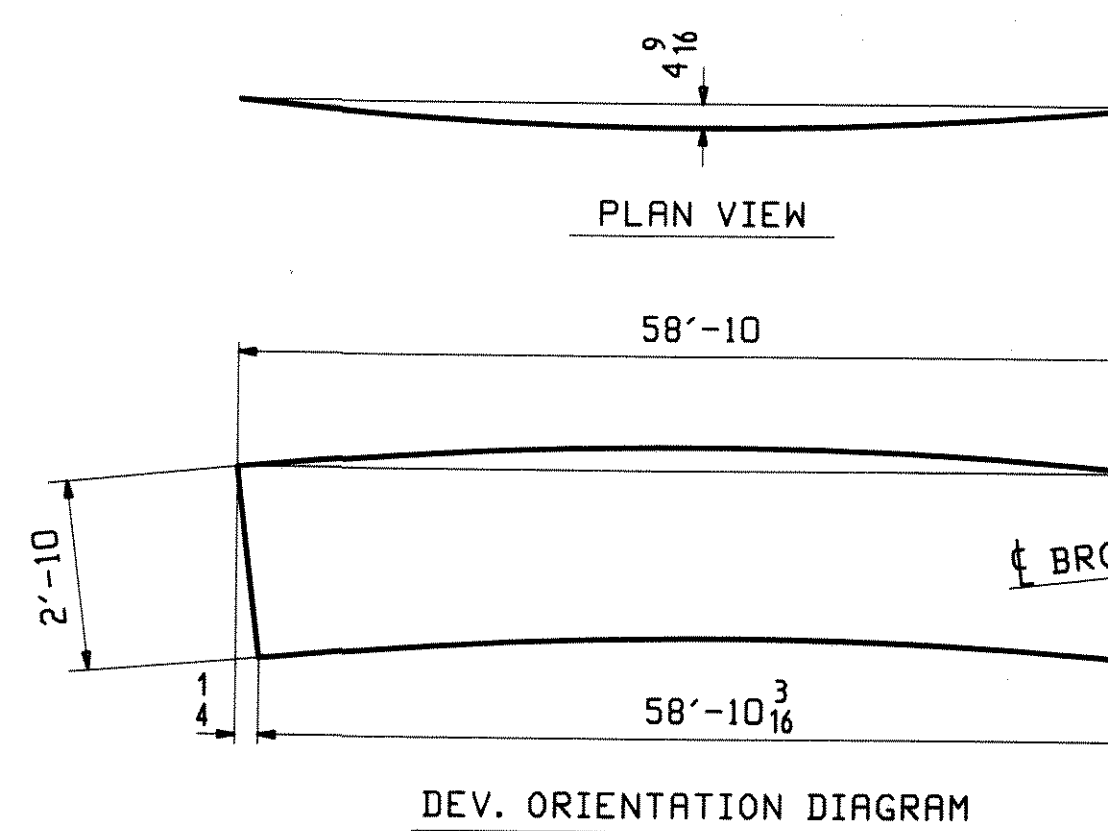
DATE: 2/9/10
 SIGNATURE: [Signature]

30
 F:_Jan 27, 2010 10:53:33 AM
 C:\Users\jhb\2845\17 Rev0

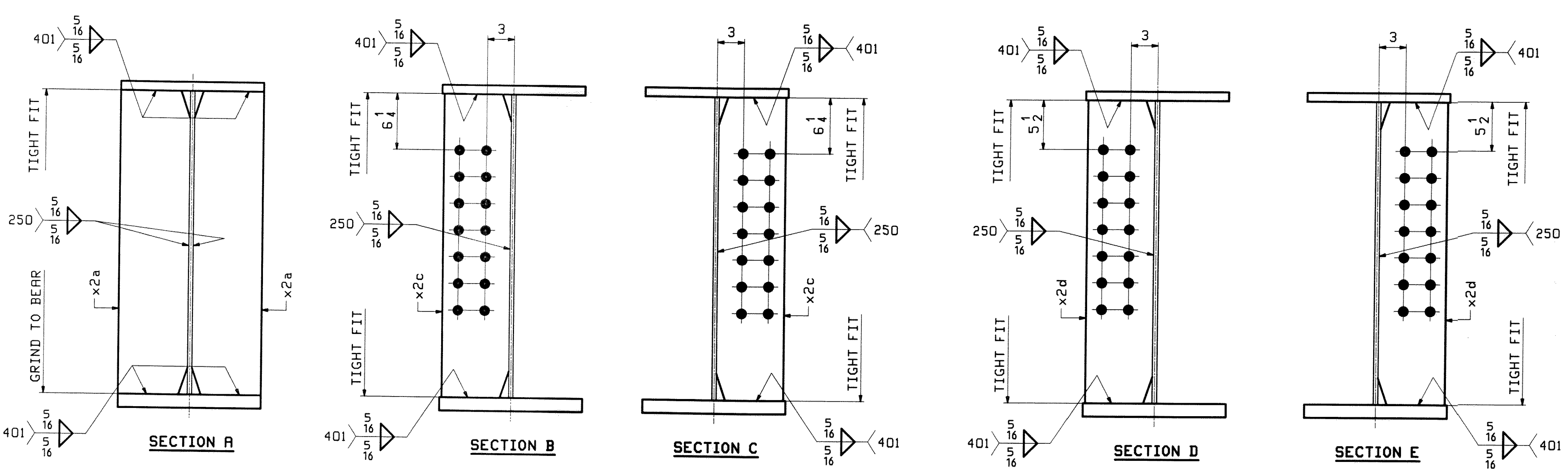
ABM INFO		BILL OF MATERIAL				JOB NO.	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH	REMARKS
						FT	INCHES
		18G3D	1		GIRDER		
4	N		1	wa	PL- $\frac{1}{2}$ x34	60- $\frac{7}{16}$	M270-50WT2
2	S		1	ta	PL- $\frac{1}{2}$ x16	60-4	M270-50WT2
1	E		1	ba	PL- $\frac{1}{2}$ x16	60- $\frac{3}{16}$	M270-50WT2
6	K		2	x2a	PL- $\frac{7}{8}$ x7 $\frac{1}{2}$	2-10	MIE
6	L		2	x2c	PL- $\frac{1}{2}$ x7 $\frac{1}{2}$	2-10	
6	L		6	x2d	PL- $\frac{1}{2}$ x7 $\frac{1}{2}$	2-10	



NOTE A:
NO PAINT BOTTOM AND EDGES OF BOTTOM FLANGE



ONE - GIRDER - 18G3D (DEV)
FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER DIAGRAM SEE SHEET C2
FOR FLANGE DIAGRAM SEE SHEET F1
FOR GENERAL NOTES SEE SHEET GNI



APPROVED BY: [Signature]
DATE: 2/29/00

REV.	DATE	REMARKS	DWN	CHK	APV
0					

MATERIAL: M270-50W (UN) SURFACE PREP. & PAINT: SEE GNI HOLES: 15/16" Ø U.N.

DESCRIPTION: GIRDER - 18G3D

CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham

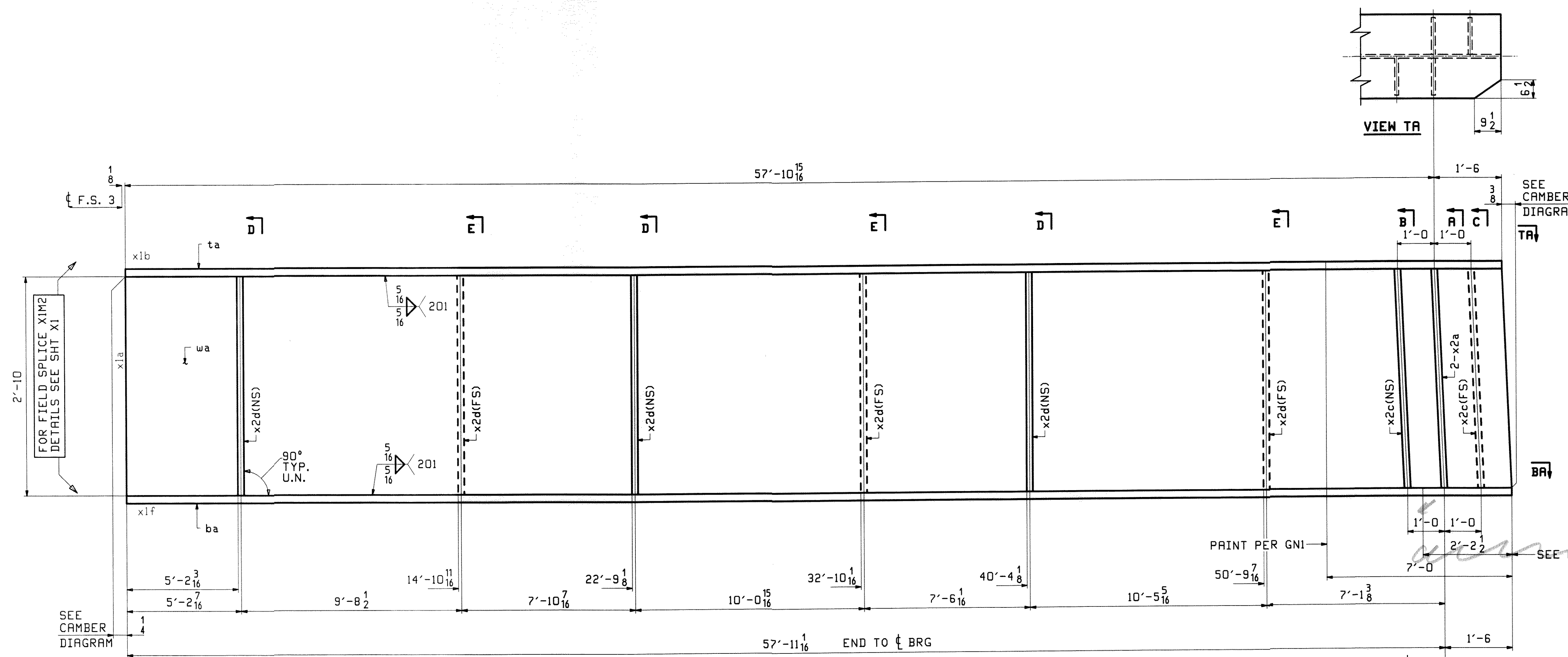
LOCATION: Putney

PROJ NO. IM 091-1(31)

CUSTOMER: VT ROT

DRAWN: WJF
CHKD: DO
JOB NO: 438

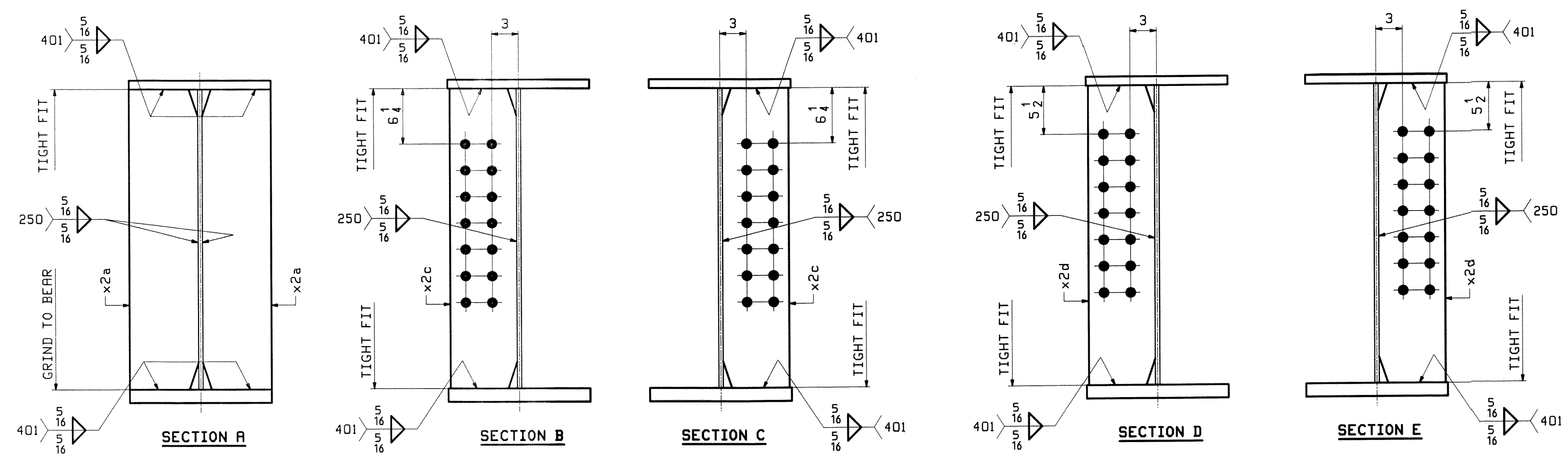
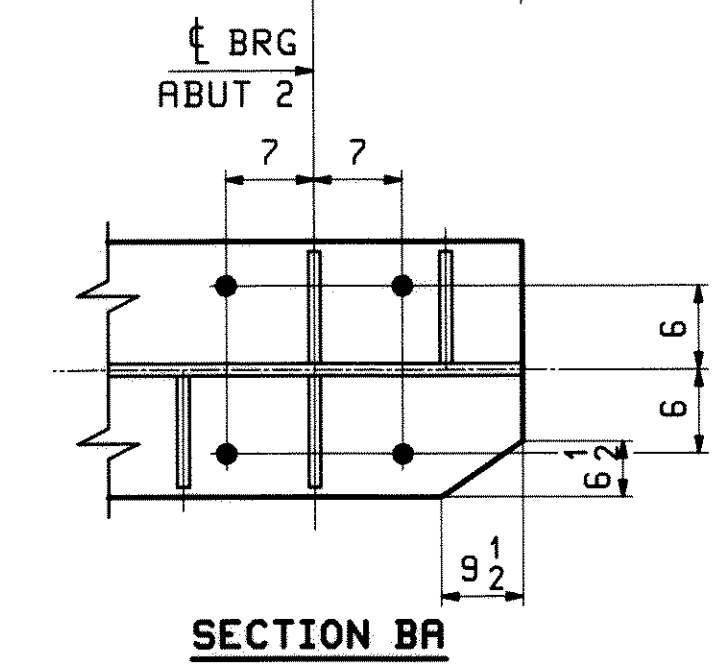
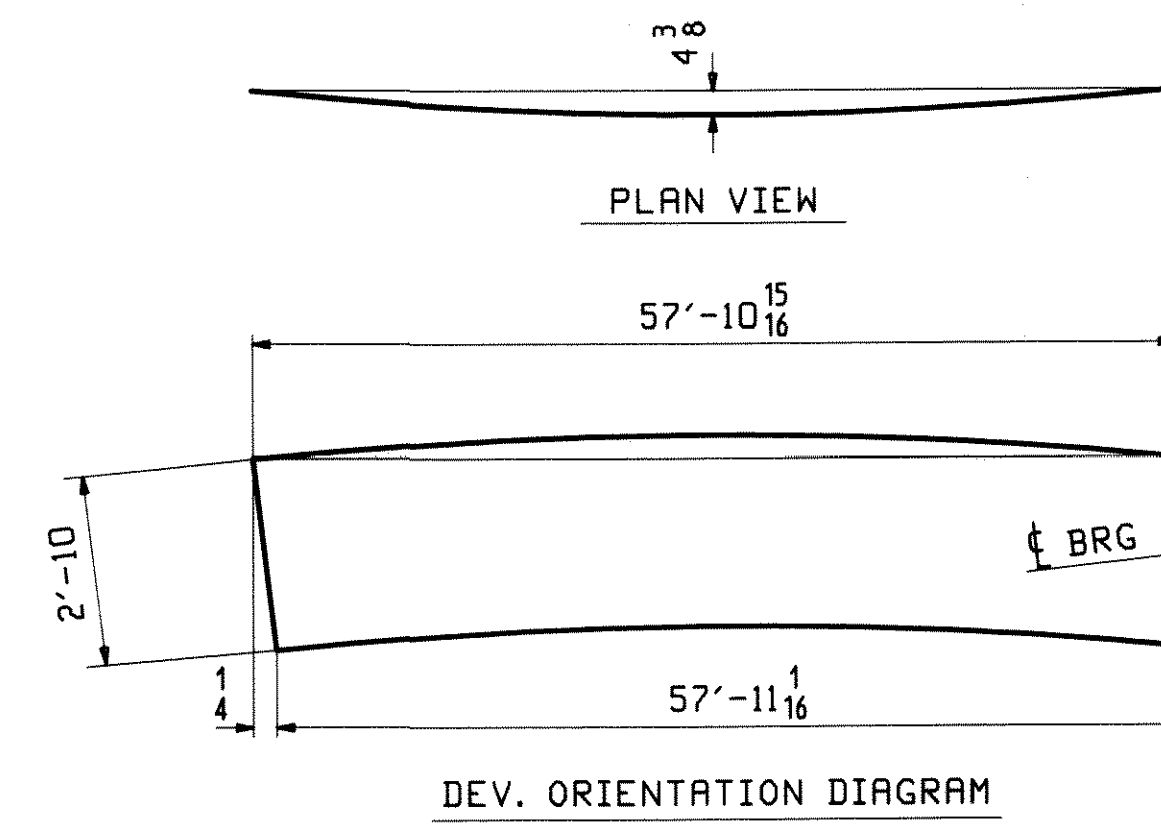
ABM INFO		BILL OF MATERIAL				JOB NO.		DRAWING	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT	P
		19G4D	1		GIRDER				11946
4	Q		1	wa	PL 1/2x34	59'-5 5/16	M270-50WT2		
2	U		1	ta	PL 1x16	59'-4 1/16	M270-50WT2		
1	G		1	ba	PL 1/2x16	59'-5 1/16	M270-50WT2		
6	K		2	x2a	PL 7/8x7 1/2	2'-10"	NIE		
6	L		2	x2c	PL 1/2x7 1/2	2'-10"			
6	L		6	x2d	PL 1/2x7 1/2	2'-10"			



NOTE A:
NO PRINT BOTTOM AND EDGES OF BOTTOM FLANGE

ONE - GIRDER - 19G4D (DEV)

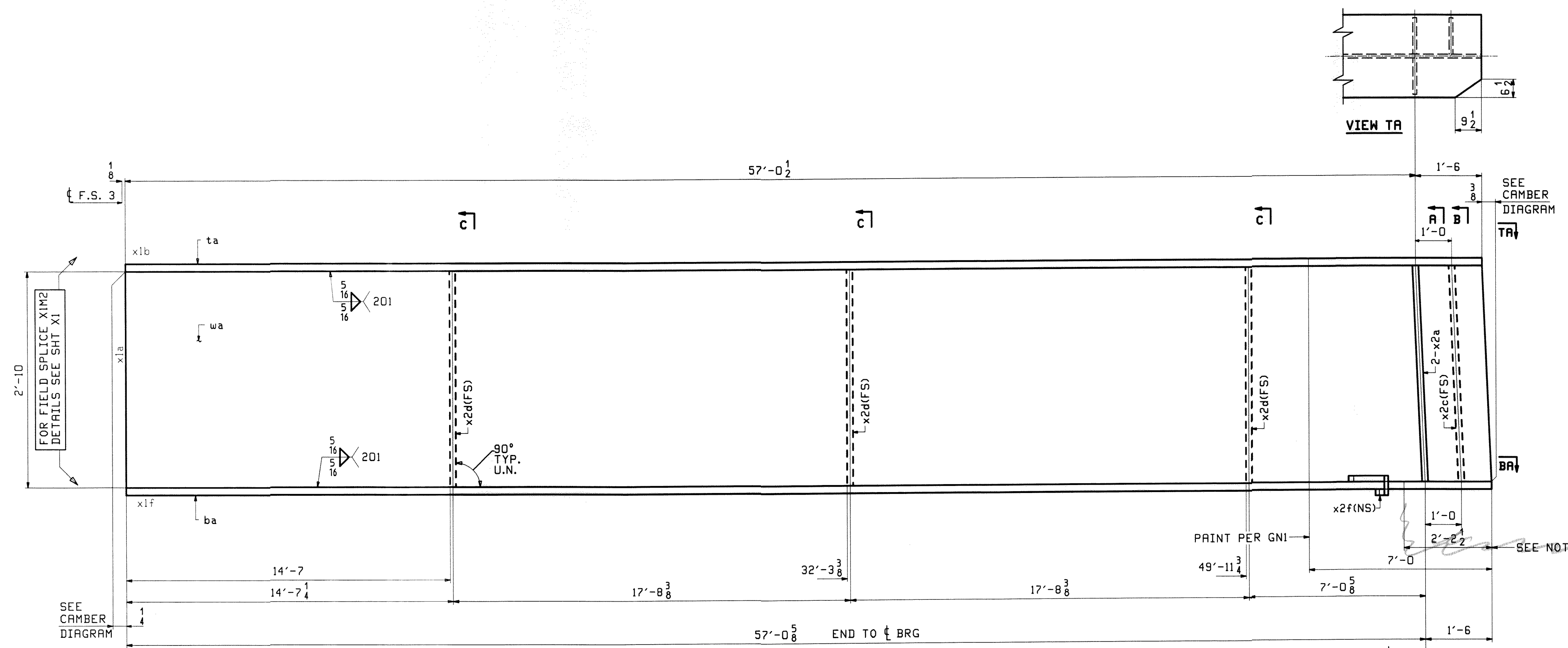
FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER DIAGRAM SEE SHEET C2
FOR FLANGE DIAGRAM SEE SHEET F1
FOR GENERAL NOTES SEE SHEET GNI



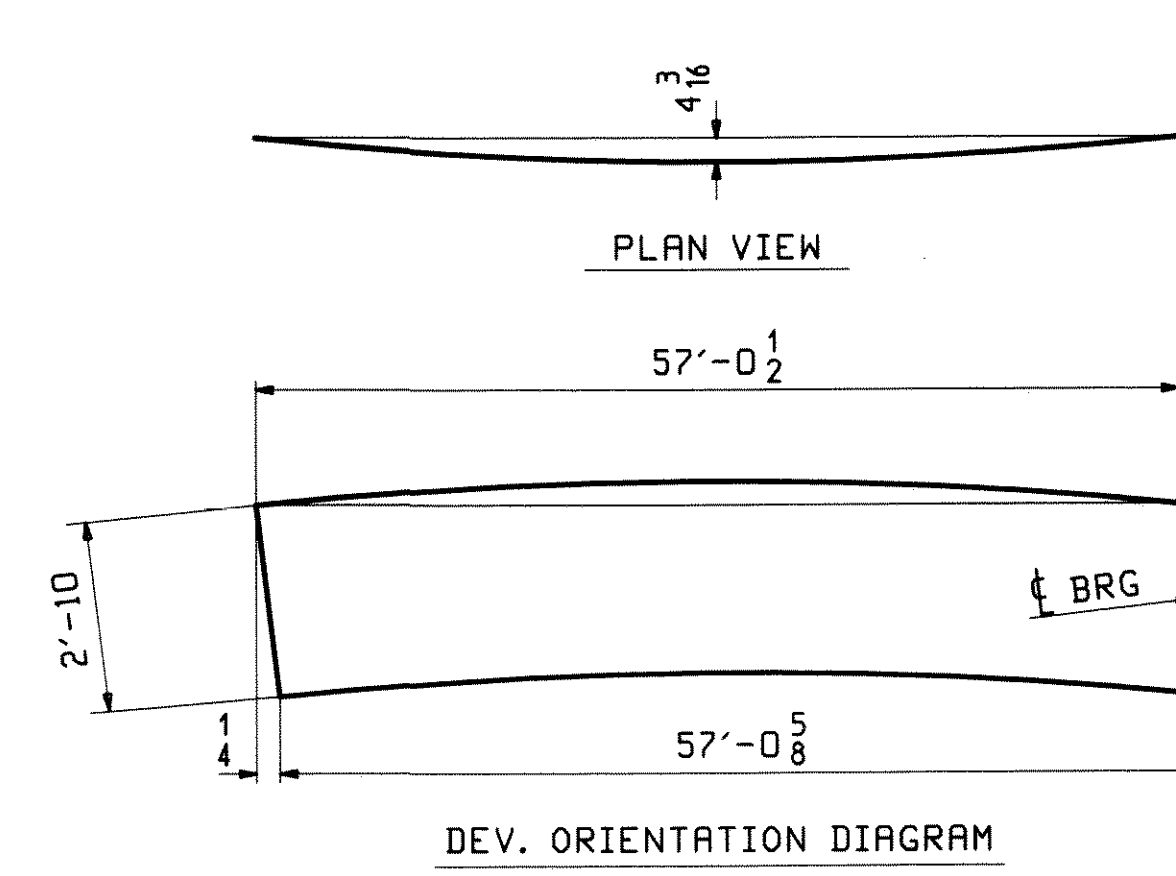
DATE: 2/1/10
SIGNATURE: [Signature]
PROVIDED BY: CASCO BAY STEEL STRUCTURES, INC.
DESIGN: CONFIRMATION OF RESPONSIBILITY FOR THE DESIGN OF THE STRUCTURE AND THE DESIGN OF THE COMPONENTS AND DETAILS OR OTHERWISE SHOWN THEREON.

REV.	DATE	REMARKS	OWN	CHK	APVL
0					
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:		SHOP
M270-50W (UN)		SEE GNI	15. 16 Ø U.N.		
DESCRIPTION: GIRDER - 19G4D					
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX: (207) 282-1179					
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham					DRAWN: WJF CHKD: DO
LOCATION: Putney					JOB NO.
PROJ NO. IM 091-1(31)					438
CUSTOMER: VT AOT					

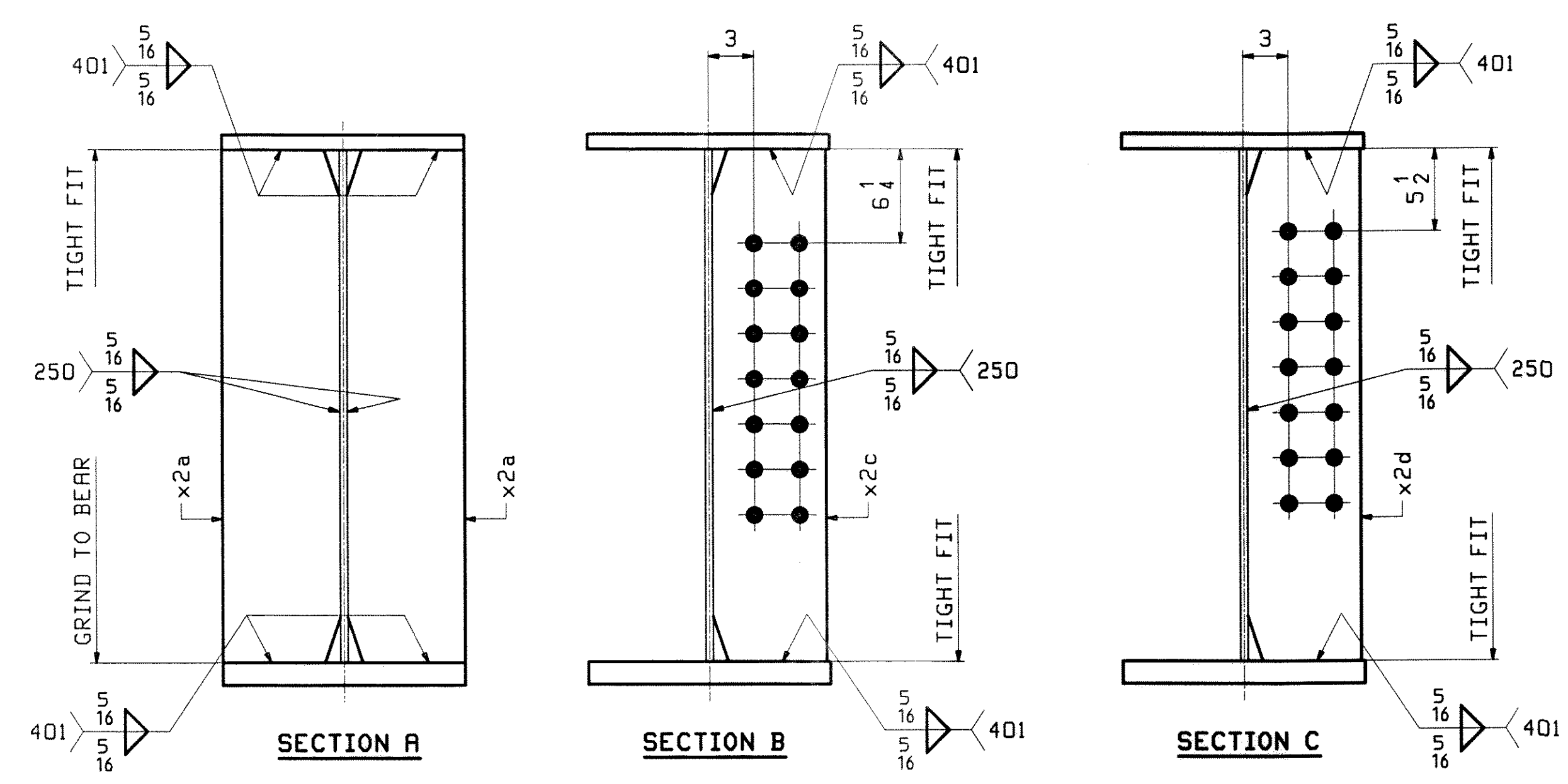
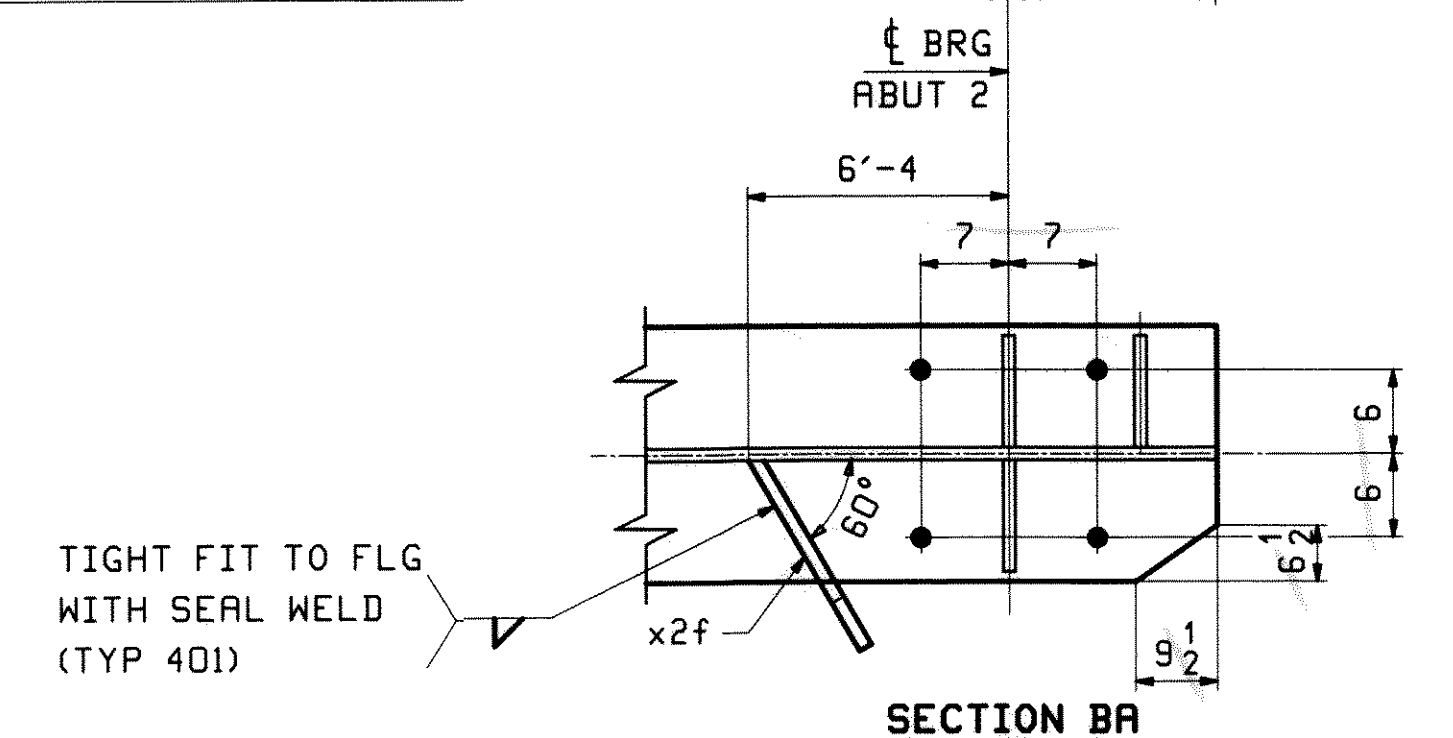
ABM INFO		SHIP	BILL OF MATERIAL			JOB NO.	DRAWING
PAGE	LINE	MARK	QTY	MARK	MATERIAL	REMARKS	WT
		20G5D	1		GIRDER		11635
4	S		1	wa	PL-1/2x34	M270-50WT2	
2	H		1	ta	PL-1x16	M270-50WT2	
1	J		1	ba	PL-1/2x16	M270-50WT2	
6	K		2	x2a	PL-7/8x7 1/2	MIE	
6	L		1	x2c	PL-1/2x7 1/2		
6	L		3	x2d	PL-1/2x7 1/2		
6	N		1	x2f	PL-1/4x3 1/2		



NOTE A:
NO PAINT BOTTOM AND EDGES OF BOTTOM FLANGE



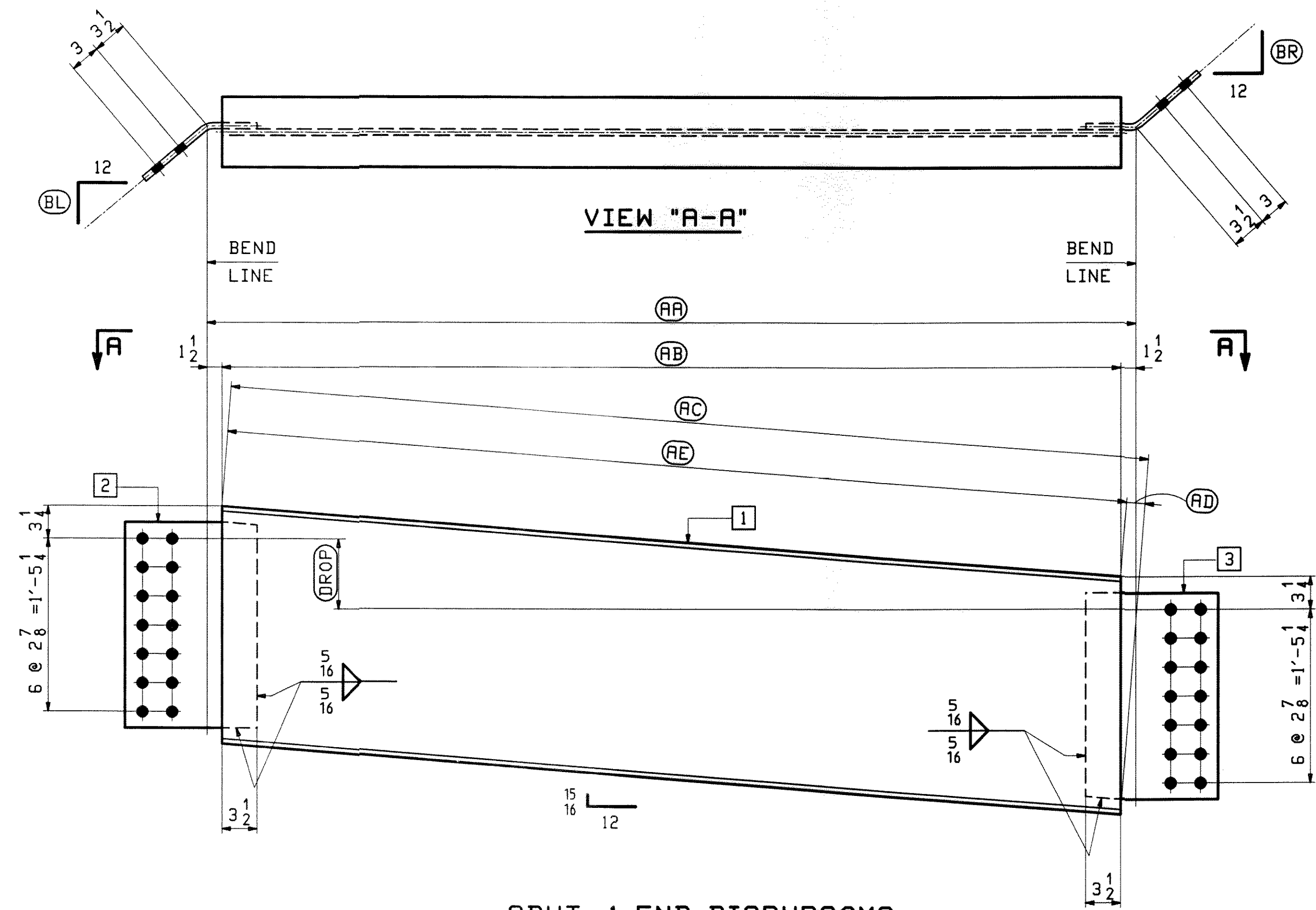
ONE - GIRDER - 20G5D (DEV)
 FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER DIAGRAM SEE SHEET C2
 FOR FLANGE DIAGRAM SEE SHEET F1
 FOR GENERAL NOTES SEE SHEET GN1



DATE 2/7/10
 SIGNATURE [Signature]
 CHECKED BY [Signature]
 DESIGNED BY [Signature]

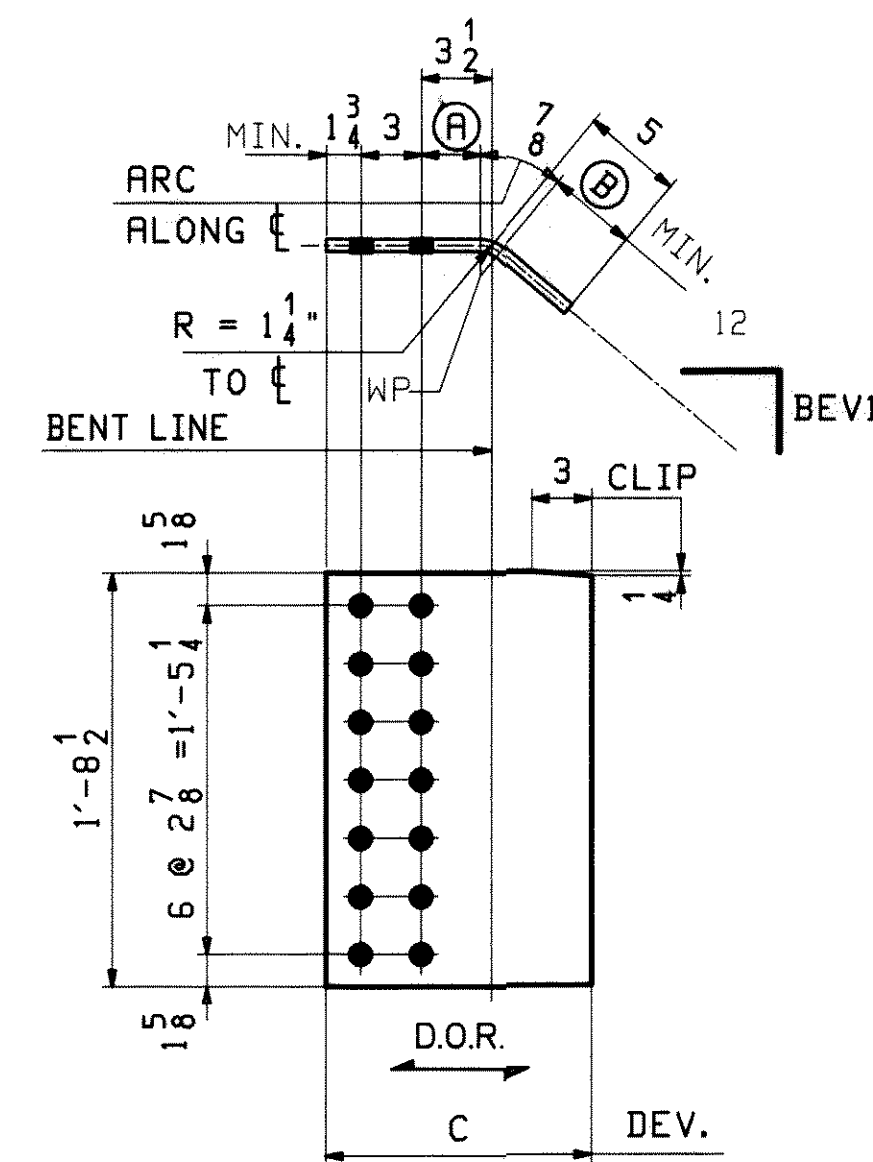
REV.	DATE	REMARKS	DWN	CHK	RPVL
0					
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:	SHOP	
M270-50W (UN)		SEE GNI	5/16" U.N.		
DESCRIPTION: GIRDER - 20G5D					
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham				DRAWN: WJF CHKD: DO	
LOCATION: Putney				JOB NO. 438	
PROJ NO. IM 091-1(31)					
CUSTOMER: VT AOT					

09 171 24 22 2010 10:03:03 PM 4/11/10 2:25:20 PM B-REV



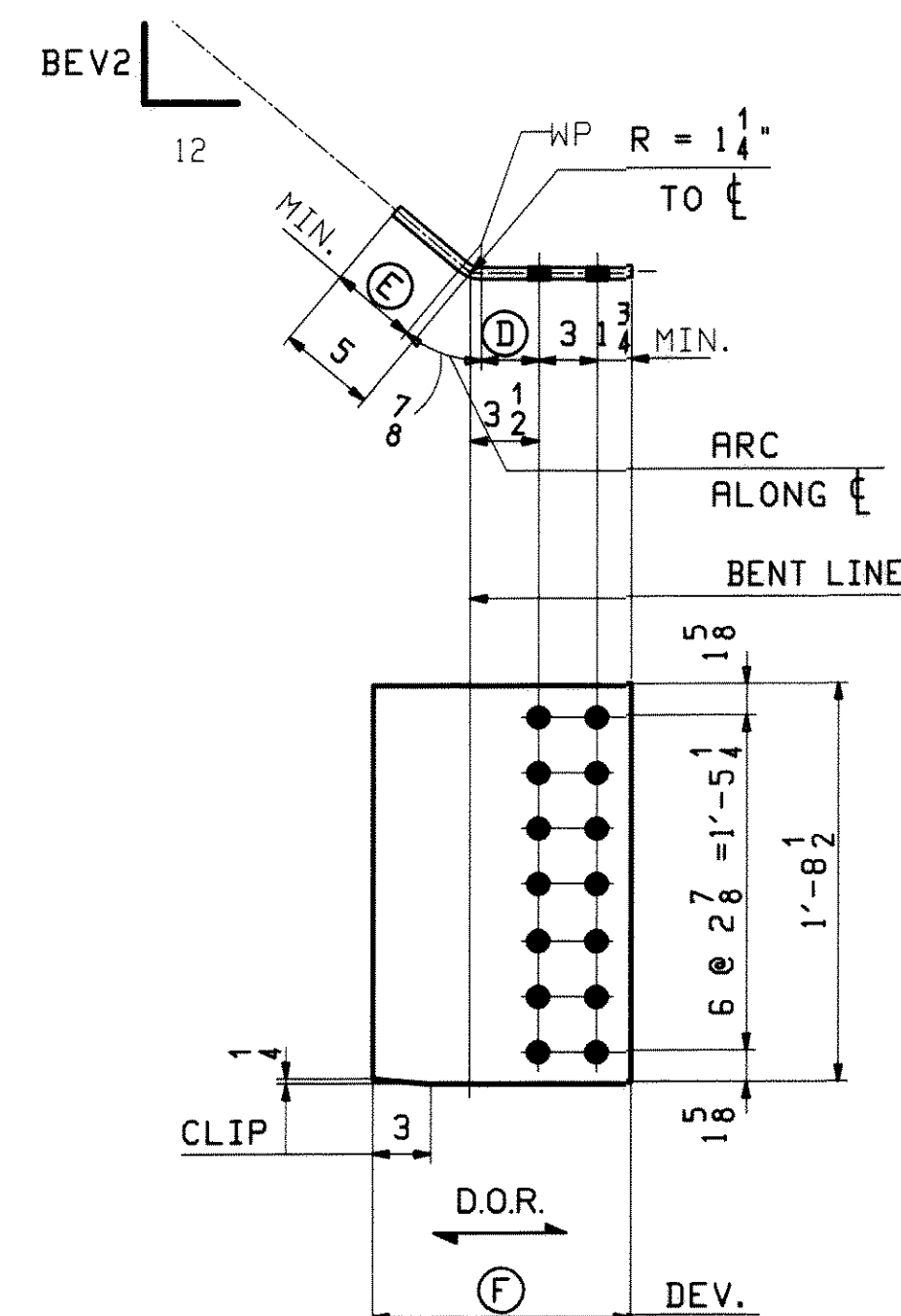
ABUT. 1 END DIAPHRAGMS

LINE	MARK	QTY.	BL	BR	DROP	AA	AB	AC	AD	AE	1	2	3
LINE 5-4	21D1	1	10 1/8	10 3/16	7	7'-9 1/16	7'-6 1/16	7'-8 1/8	13 1/16	7'-6 5/16	a21	f21	m21
LINE 4-3	21D2	1	10 1/4	10 3/8	7 1/8	7'-9 9/16	7'-6 9/16	7'-8 11/16	13 1/8	7'-6 13/16	b21	g21	n21
LINE 3-2	21D3	1	10 3/8	10 1/2	7	7'-10 1/16	7'-7 1/16	7'-9 1/8	13 1/16	7'-7 5/16	c21	h21	p21
LINE 2-1	21D4	1	10 1/2	10 5/8	7 1/8	7'-10 5/8	7'-7 5/8	7'-9 3/4	13 1/16	7'-7 7/8	d21	k21	s21



BENT PL'S

MARK	QTY.	BEV1	A	B	C
f21	1	10 1/8	3 1/16	4 9/16	1'-1 1/4
g21	1	10 1/4	3 1/16	4 9/16	1'-1 1/4
h21	1	10 3/8	3 1/16	4 9/16	1'-1 1/4
k21	1	10 1/2	3	4 1/2	1'-1 1/8



BENT PL'S

MARK	QTY.	BEV2	D	E	F
m21	1	10 3/16	3 1/16	4 9/16	1'-1 1/4
n21	1	10 3/8	3 1/16	4 9/16	1'-1 1/4
p21	1	10 1/2	3	4 1/2	1'-1 1/8
s21	1	10 5/8	3	4 1/2	1'-1 1/8

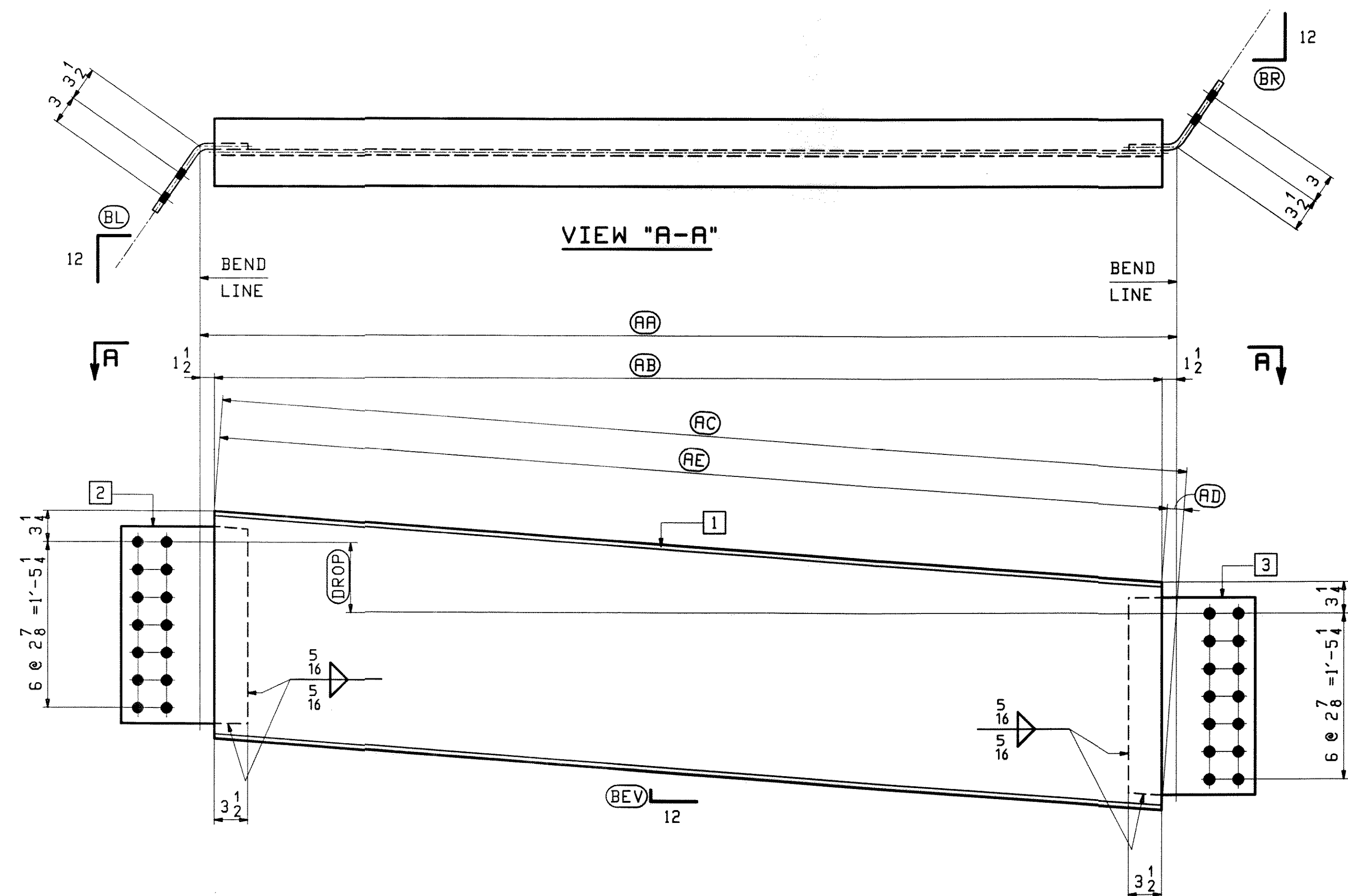
REVISIONS

DATE: 2/9/10

SIGNATURE: [Signature]

ABM INFO		SHIP	BILL OF MATERIAL			JOB NO.	DRAWING NO.		
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH	REMARKS	WT	PROC
						438	21		
						FT	INCHES		
7	C	21D1	1		END DIAPHRAGM				498
7	J		1	a21	W-24x55	7'-8 1/2	M270-SQHT2		
7	J		1	f21	PL 1/2x20 1/2	1'-1 1/4	(BENT)		
7	J		1	m21	PL 1/2x20 1/2	1'-1 1/4	(BENT)		
7	C	21D2	1		END DIAPHRAGM				502
7	J		1	b21	W-24x55	7'-8 1/2	M270-SQHT2		
7	J		1	g21	PL 1/2x20 1/2	1'-1 1/4	(BENT)		
7	J		1	n21	PL 1/2x20 1/2	1'-1 1/4	(BENT)		
7	C	21D3	1		END DIAPHRAGM				503
7	J		1	c21	W-24x55	7'-9 1/2	M270-SQHT2		
7	J		1	h21	PL 1/2x20 1/2	1'-1 1/4	(BENT)		
7	J		1	p21	PL 1/2x20 1/2	1'-1 1/4	(BENT)		
7	C	21D4	1		END DIAPHRAGM				506
7	J		1	d21	W-24x55	7'-9 1/2	M270-SQHT2		
7	J		1	k21	PL 1/2x20 1/2	1'-1 1/8	(BENT)		
7	J		1	s21	PL 1/2x20 1/2	1'-1 1/8	(BENT)		

REV.	DATE	REMARKS	DWN	CHK	APVL
0					
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:		SHOP BOLT
M270-50W (UN)		SEE GNI	15 1/16 Ø		NONE
DESCRIPTION: ABUT1 DIAPHRAGMS					
CASCO BAY STEEL STRUCTURES, INC.					
75 SPRING HILL ROAD			SACO, MAINE 04072		
PHONE (207) 282-7360			FAX. (207) 282-1179		
STRUCTURE:		U.S. 5 over I-91		DRAWN: TS	
		Bridge No. 19A		CHKD: DO	
		Putney		JOB NO. 438	
		County of Windham		CUSTOMER: VT AOT	

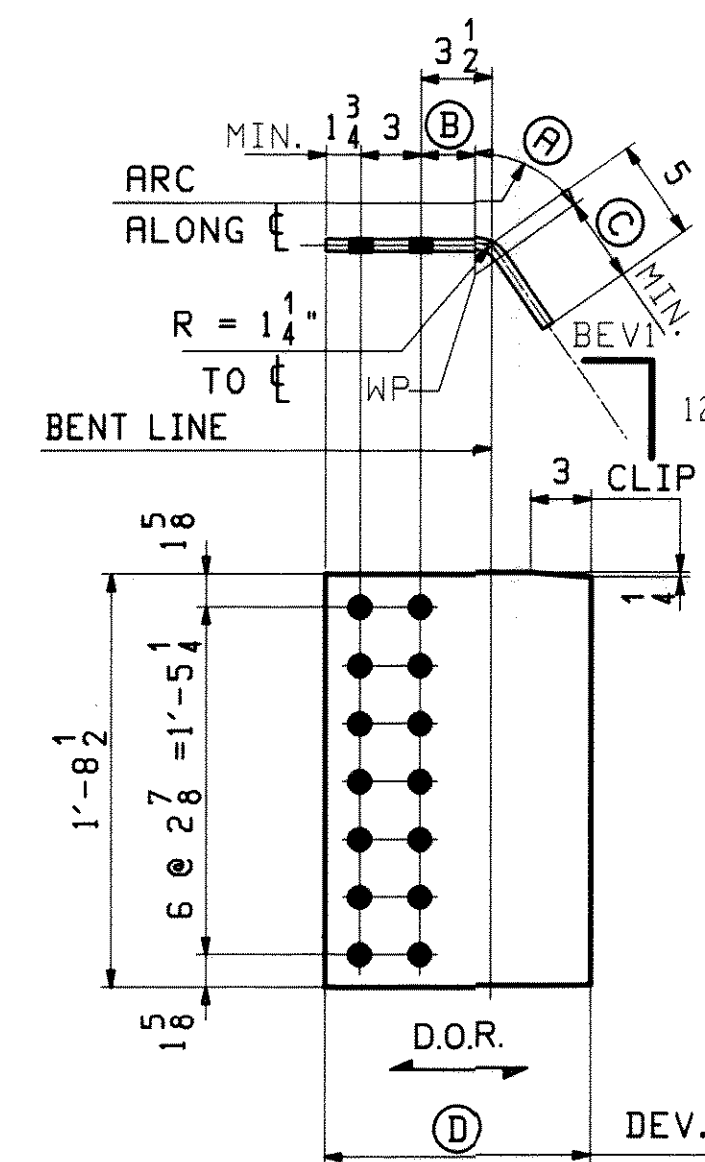


PIER 2 & 3 DIAPHRAGMS

MARK	QTY.	BEV	BL	BR	DROP	RA	RB	RC	RD	RE	1	2	3	
LINE 5-4	24D1	1	7/8	11 11/16	11 9/16	7 1/4	8'-6 1/16	8'-3 1/16	8'-5 1/16	1 3/4	8'-3 5/16	a24	m24	aa24
LINE 4-3	24D2	1	7/8	11 1/2	11 3/8	7 5/16	8'-6 15/16	8'-3 15/16	8'-5 15/16	1 3/4	8'-4 3/16	b24	n24	ab24
LINE 3-2	24D3	1	7/8	11 5/16	11 1/8	7 5/16	8'-7 15/16	8'-4 15/16	8'-6 7/8	1 11/16	8'-5 3/16	c24	p24	ac24
LINE 2-1	24D4	1	7/8	11 1/8	10 15/16	7 5/16	8'-8 15/16	8'-5 15/16	8'-7 7/8	1 11/16	8'-6 3/16	d24	s24	ad24
LINE 5-4	24D5	1	13/16	9 15/16	9 3/4	7 7/16	9'-3 15/16	9'-0 15/16	9'-2 13/16	1 5/8	9'-1 3/16	f24	t24	af24
LINE 4-3	24D6	1	13/16	9 3/4	9 1/16	7 1/2	9'-5 3/8	9'-2 3/8	9'-4 1/4	1 5/8	9'-2 5/8	g24	v24	ag24
LINE 3-2	24D7	1	13/16	9 1/2	9 3/8	7 1/2	9'-6 7/8	9'-3 7/8	9'-5 11/16	1 9/16	9'-4 1/8	h24	w24	ah24
LINE 2-1	24D8	1	13/16	9 5/16	9 1/8	7 1/2	9'-8 7/16	9'-5 7/16	9'-7 1/4	1 9/16	9'-5 11/16	k24	y24	ak24

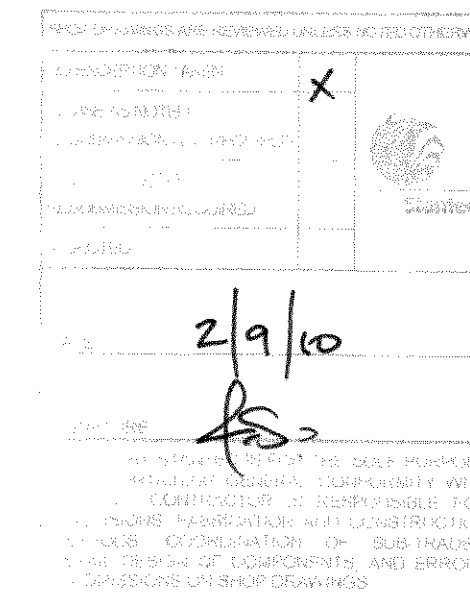
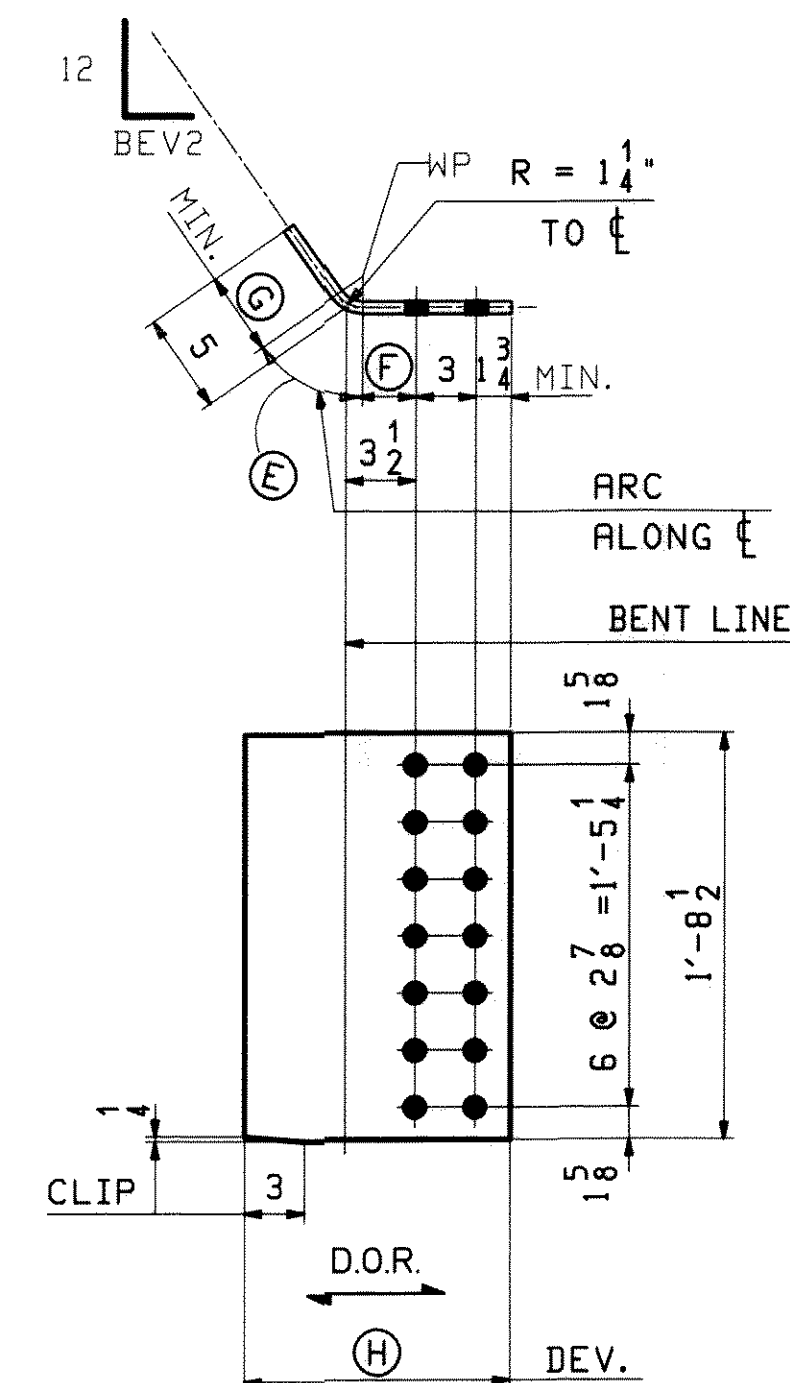
BENT PL'S

MARK	QTY.	BEV2	E	F	G	H	MARK	QTY.	BEV2	E	F	G	H
aa24	1	11 9/16	1	2 15/16	4 7/16	1'-1 1/8	af24	1	9 3/4	1 1/8	2 7/8	4 3/8	1'-1 1/8
ab24	1	11 3/8	1	2 15/16	4 7/16	1'-1 1/8	ag24	1	9 9/16	1 1/8	2 7/8	4 3/8	1'-1 1/8
ac24	1	11 1/8	1	2 15/16	4 7/16	1'-1 1/8	ah24	1	9 3/8	1 1/8	2 7/8	4 3/8	1'-1 1/8
ad24	1	10 15/16	1 1/16	2 15/16	4 7/16	1'-1 3/16	ak24	1	9 1/8	1 1/8	2 7/8	4 3/8	1'-1 1/8



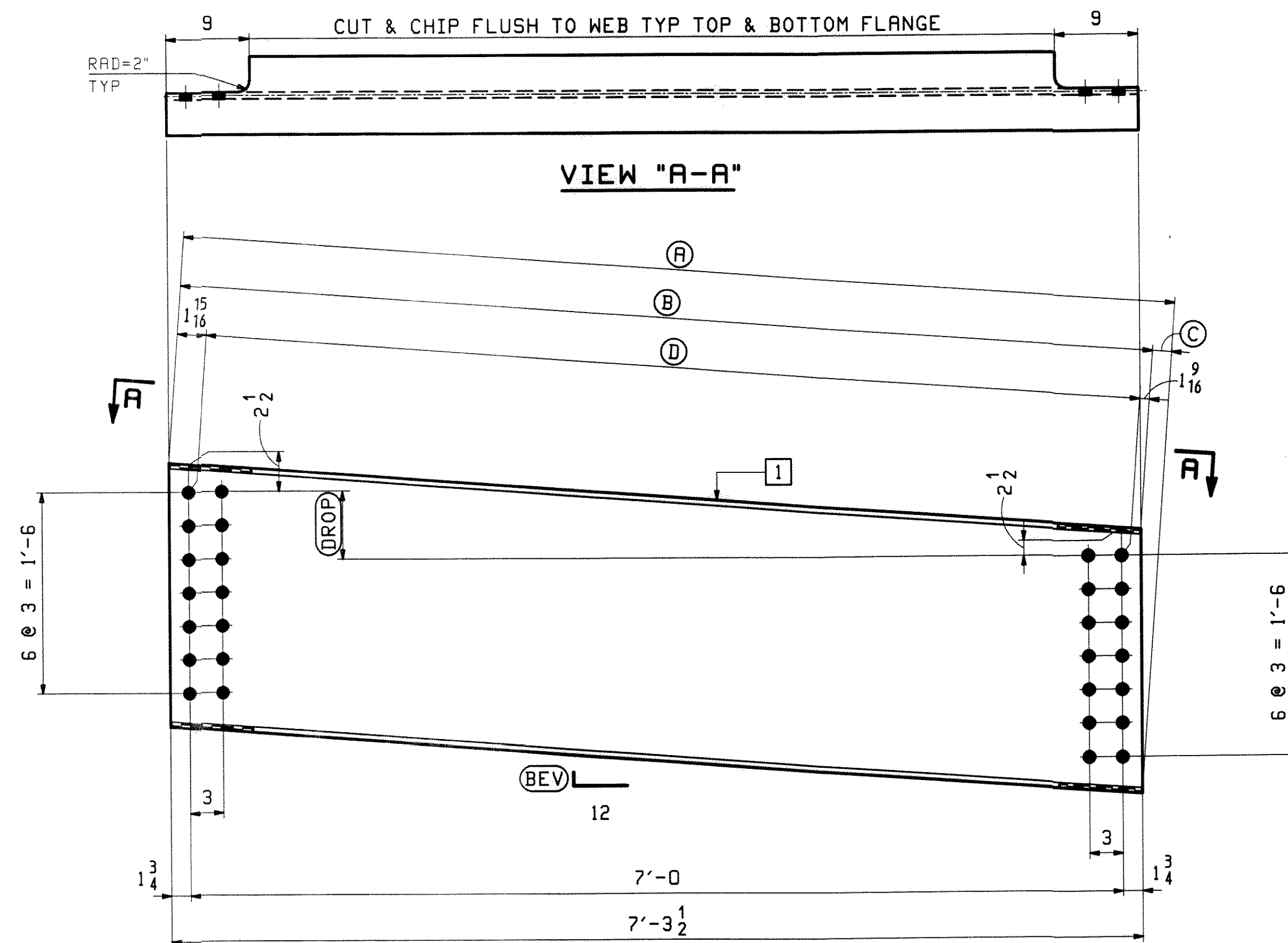
BENT PL'S

MARK	QTY.	BEV1	A	B	C	D
m24	1	11 11/16	1	3	4 1/2	1'-1 1/4
n24	1	11 1/2	1	2 15/16	4 7/16	1'-1 1/8
p24	1	11 5/16	1	2 15/16	4 7/16	1'-1 1/8
s24	1	11 1/8	1	2 15/16	4 7/16	1'-1 1/8
t24	1	9 15/16	1 1/8	2 15/16	4 7/16	1'-1 1/4
v24	1	9 3/4	1 1/8	2 7/8	4 3/8	1'-1 1/8
w24	1	9 1/2	1 1/8	2 7/8	4 3/8	1'-1 1/8
y24	1	9 5/16	1 1/8	2 7/8	4 3/8	1'-1 1/8



ABM INFO	SHIP	BILL OF MATERIAL				JOB NO.	DRAWING			
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	INCHES	REMARKS	WT	PR
		24D1	1		PIER DIAPHRAGM					540
7	G		1	a24	W-24x55	8	5 1/8	M270-SQWT2		
7	J		1	m24	PL 2x20 1/2	1	1 1/4	(BENT) M270-SQWT2		
7	J		1	aa24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
		24D2	1		PIER DIAPHRAGM					544
7	G		1	b24	W-24x55	8	5 1/8	M270-SQWT2		
7	J		1	n24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
7	J		1	ab24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
		24D3	1		PIER DIAPHRAGM					548
7	G		1	c24	W-24x55	8	6 1/8	M270-SQWT2		
7	J		1	p24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
7	J		1	ac24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
		24D4	1		PIER DIAPHRAGM					553
7	G		1	d24	W-24x55	8	7 1/8	M270-SQWT2		
7	J		1	s24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
7	J		1	ad24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
		24D5	1		PIER DIAPHRAGM					585
7	H		1	f24	W-24x55	9	2 1/8	M270-SQWT2		
7	J		1	t24	PL 2x20 1/2	1	1 1/4	(BENT) M270-SQWT2		
7	J		1	af24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
		24D6	1		PIER DIAPHRAGM					591
7	H		1	g24	W-24x55	9	4 1/4	M270-SQWT2		
7	J		1	v24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
7	J		1	ag24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
		24D7	1		PIER DIAPHRAGM					597
7	H		1	h24	W-24x55	9	5 1/16	M270-SQWT2		
7	J		1	w24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
7	J		1	ah24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
		24D8	1		PIER DIAPHRAGM					605
7	H		1	k24	W-24x55	9	7 1/4	M270-SQWT2		
7	J		1	y24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		
7	J		1	ak24	PL 2x20 1/2	1	1 1/8	(BENT) M270-SQWT2		

REV.	DATE	REMARKS	DWN	CHK	APVL
0					
MATERIAL:		SURFACE PREP. & PRINT:	HOLES:	SHOP BOU	
M270-SQW (UN)		SEE GNI	15 16 Ø	NON	
DESCRIPTION: PIER 2 & 3 DIAPHRAGMS					
CASCO BAY STEEL STRUCTURES, INC.					
75 SPRING HILL ROAD SACO, MAINE 04072					
PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE: U.S. 5 over I-91				DRAWN:	
Bridge No. 19A				TS	
Putney				CHKD:	
County of Windham				DO	
LOCATION: Putney				JOB NO.	
PROJ NO. IM 091-K(3)				438	
CUSTOMER: VT ROT					



INTERMEDIATE DIAPHRAGMS

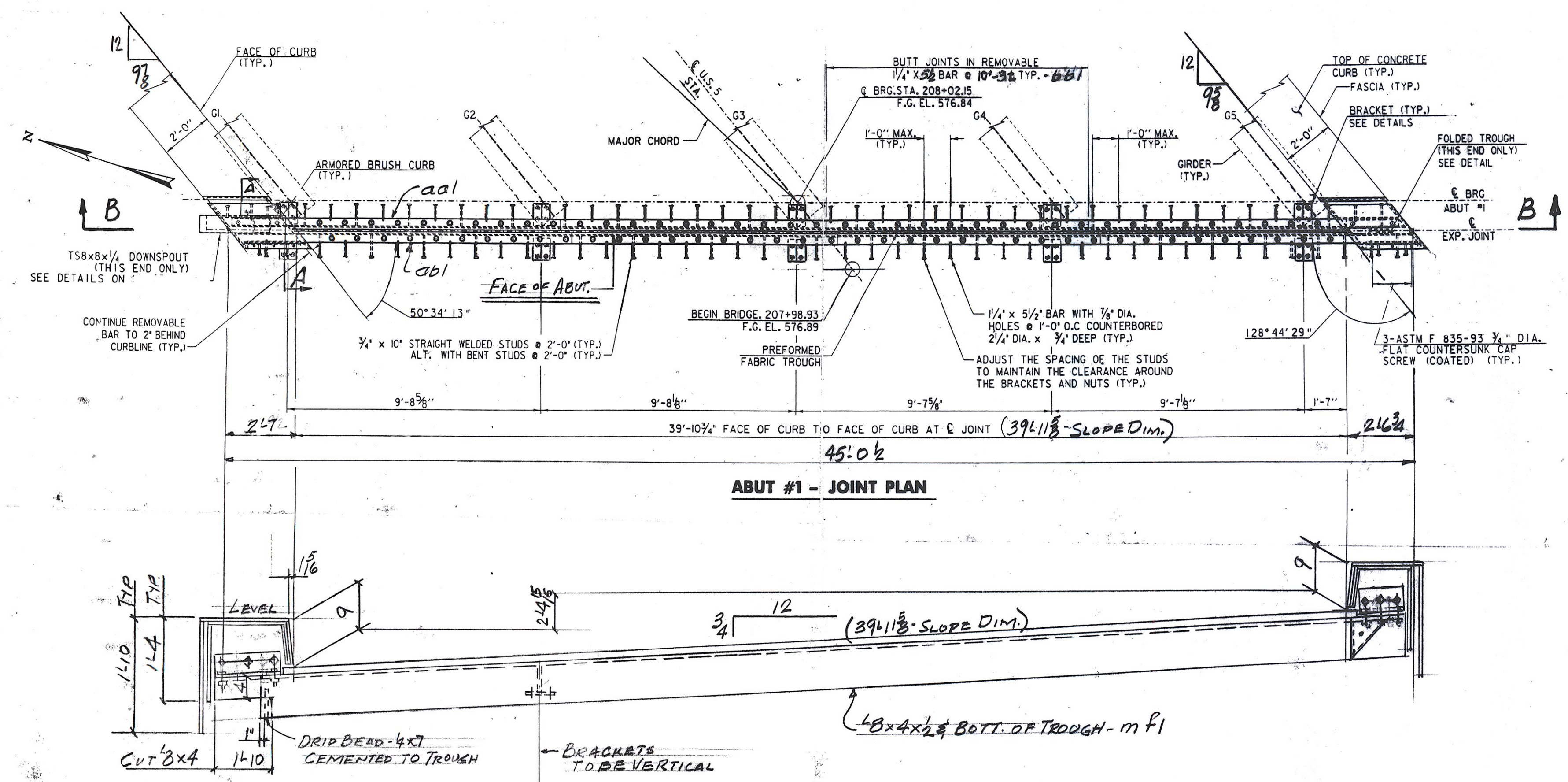
LOOKING DOWNSTATION

MARK	QTY.	(DROP)	(BEVEL)	(A)	(B)	(C)	(D)	(E)	(F)
25D1	8	5 1/2	13/16	7'-5 1/4	7'-3 11/16	9/16	7'-0 3/16	15/16	5/8
25D2	4	5 5/8	13/16	7'-5 1/4	7'-3 11/16	9/16	7'-0 3/16	15/16	9/16
25D3	16	5 3/4	13/16	7'-5 5/16	7'-3 11/16	5/8	7'-0 3/16	15/16	9/16
25D4	4	6	7/8	7'-5 3/8	7'-3 11/16	11/16	7'-0 3/16	15/16	9/16
25D5	4	6 1/8	7/8	7'-5 7/16	7'-3 3/4	11/16	7'-0 1/4	15/16	9/16
25D6	9	6 1/4	7/8	7'-5 1/2	7'-3 3/4	1 3/4	7'-0 1/4	15/16	9/16
25D7	3	6 3/8	15/16	7'-5 9/16	7'-3 3/4	1 13/16	7'-0 1/4	15/16	9/16
25D8	16	6 1/2	15/16	7'-5 9/16	7'-3 3/4	1 13/16	7'-0 1/4	15/16	9/16

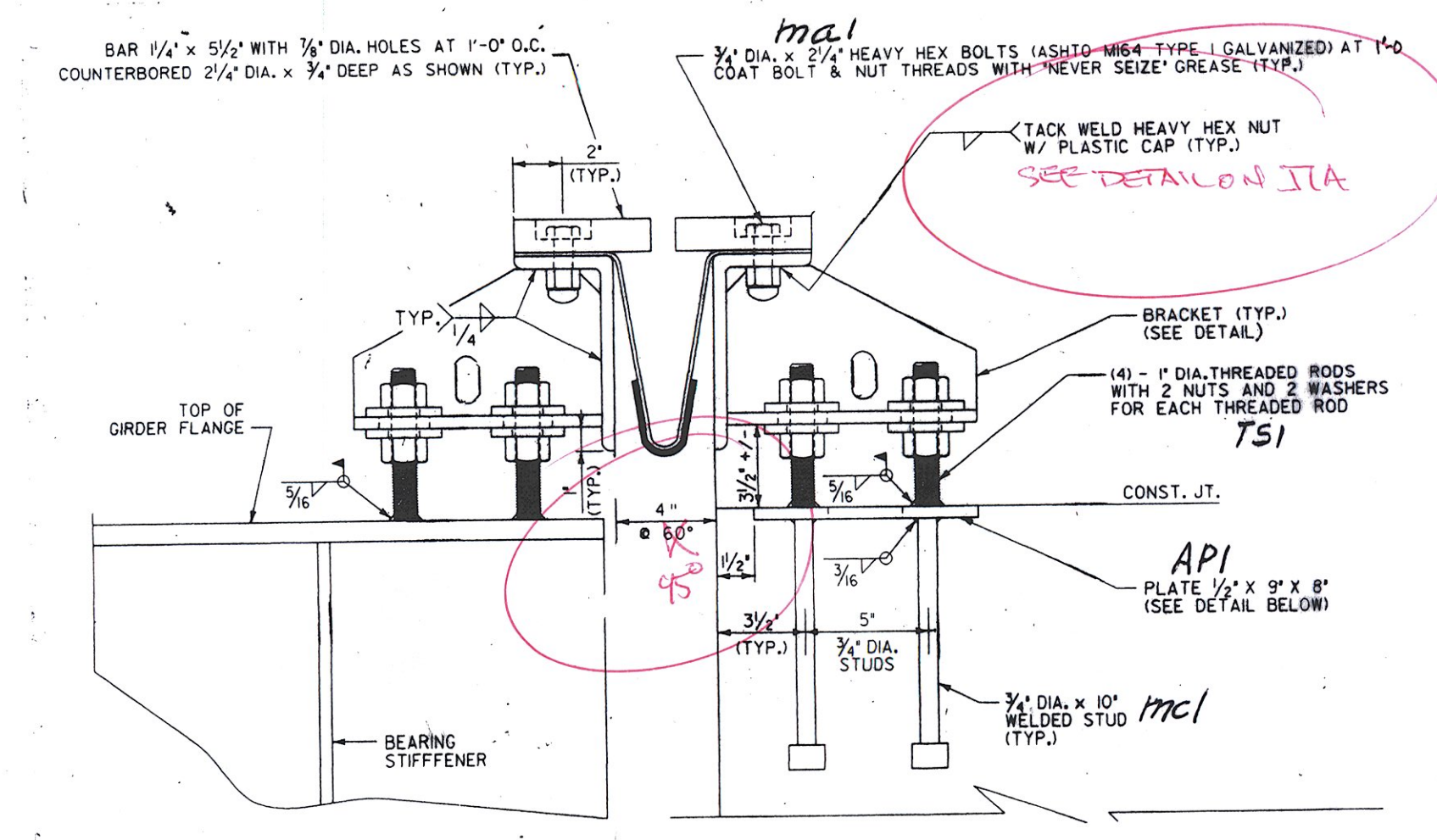
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PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT
		25D1	8		INTR DIAPHRAGM			409
7	B		8	a25	W 24x55	7 5 1/4	M270-SOWT2	
		25D2	4		INTR DIAPHRAGM			409
7	B		4	b25	W 24x55	7 5 1/4	M270-SOWT2	
		25D3	16		INTR DIAPHRAGM			409
7	B		16	c25	W 24x55	7 5 1/4	M270-SOWT2	
		25D4	4		INTR DIAPHRAGM			410
7	B		4	d25	W 24x55	7 5 3/8	M270-SOWT2	
		25D5	4		INTR DIAPHRAGM			410
7	B		4	f25	W 24x55	7 5 1/4	M270-SOWT2	
		25D6	9		INTR DIAPHRAGM			410
7	B		9	g25	W 24x55	7 5 1/2	M270-SOWT2	
		25D7	3		INTR DIAPHRAGM			410
7	B		3	h25	W 24x55	7 5 9/16	M270-SOWT2	
		25D8	16		INTR DIAPHRAGM			410
7	B		16	k25	W 24x55	7 5 9/16	M270-SOWT2	

DATE: 2/9/10
 SIGNATURE: [Signature]
 I AM RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS DRAWING AND I AGREE TO BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. I HAVE REVIEWED THE DRAWING AND I AGREE TO BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. I HAVE REVIEWED THE DRAWING AND I AGREE TO BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS.

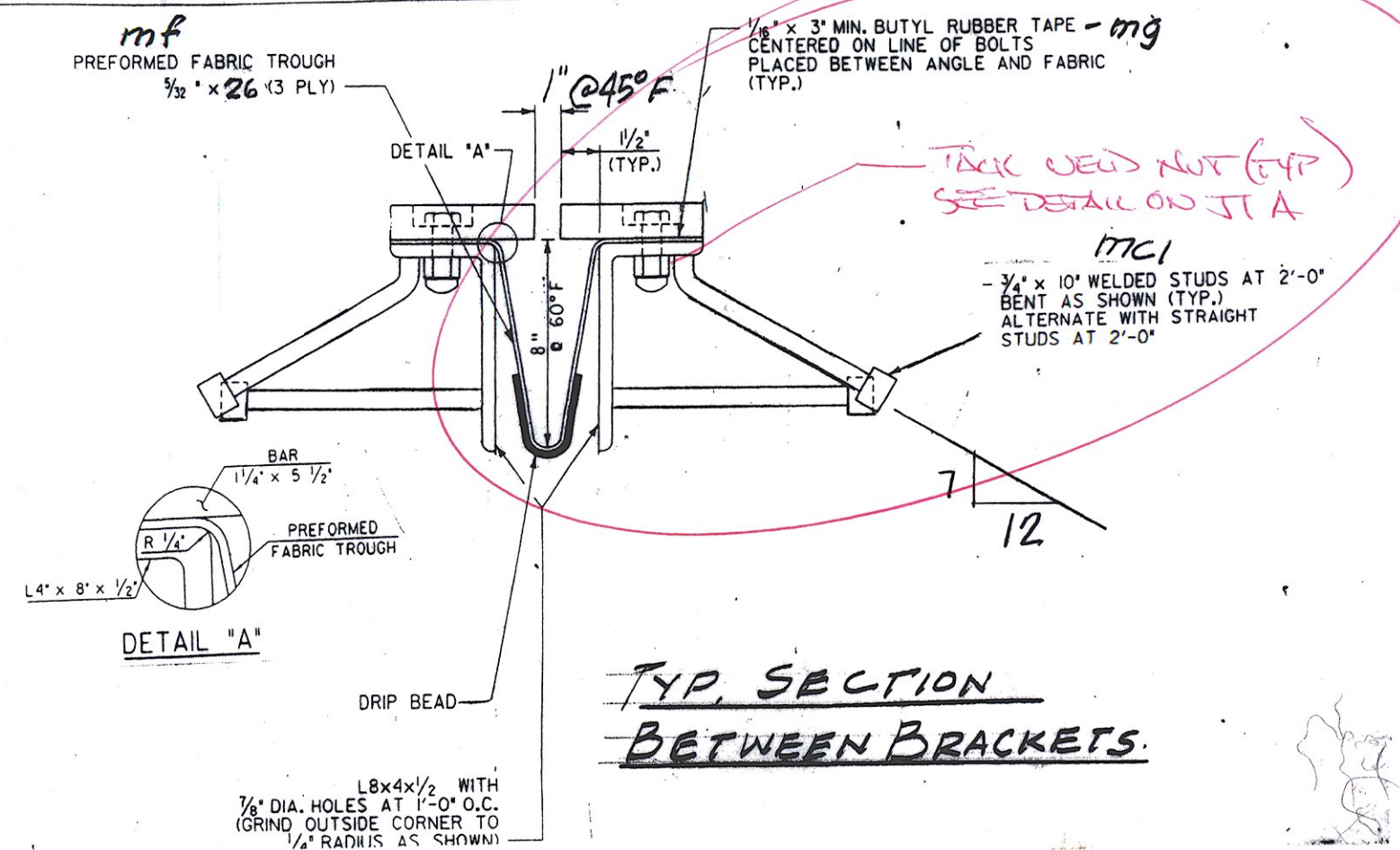
REV.	DATE	REMARKS	DWN	CHK	APVL
0					
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:		SHOP
M270-SOW (UN)		SEE GNI	15 16 Ø		
DESCRIPTION: INT DIAPHRAGMS					
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE: U.S. 5 over I-91 Bridge No. 19A Putney County of Windham					DRAWN: TS
LOCATION: Putney					CHKD: DO
PROJ NO. IM 091-1(31)					JOB NO.
CUSTOMER: VT ROT					438



B-B
EJI - ONE REQ'D @ ABUT. #1
 FOR CURB DETAILS & SHOP BILL SEE DWG. J1A

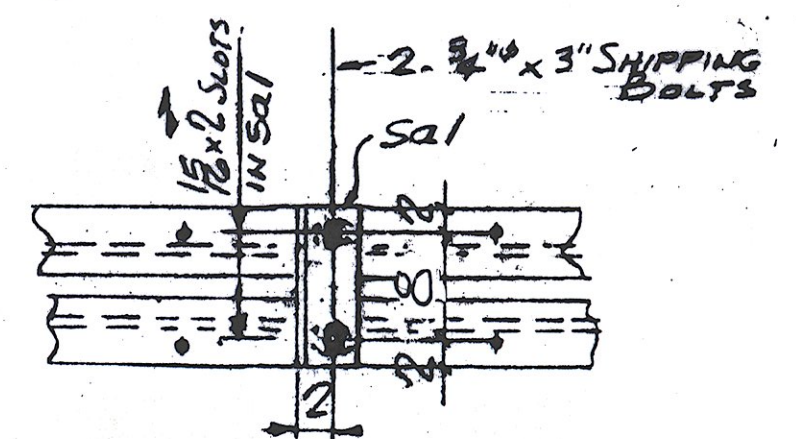


TYP. SECT. @ BRACKETS

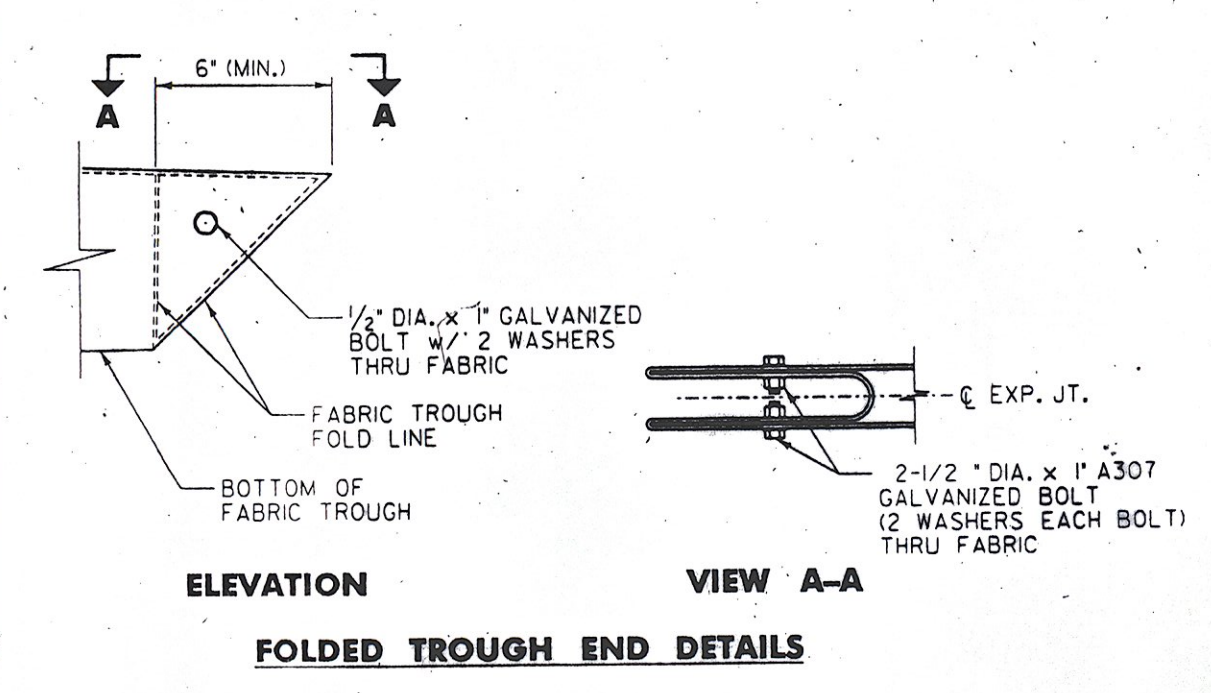
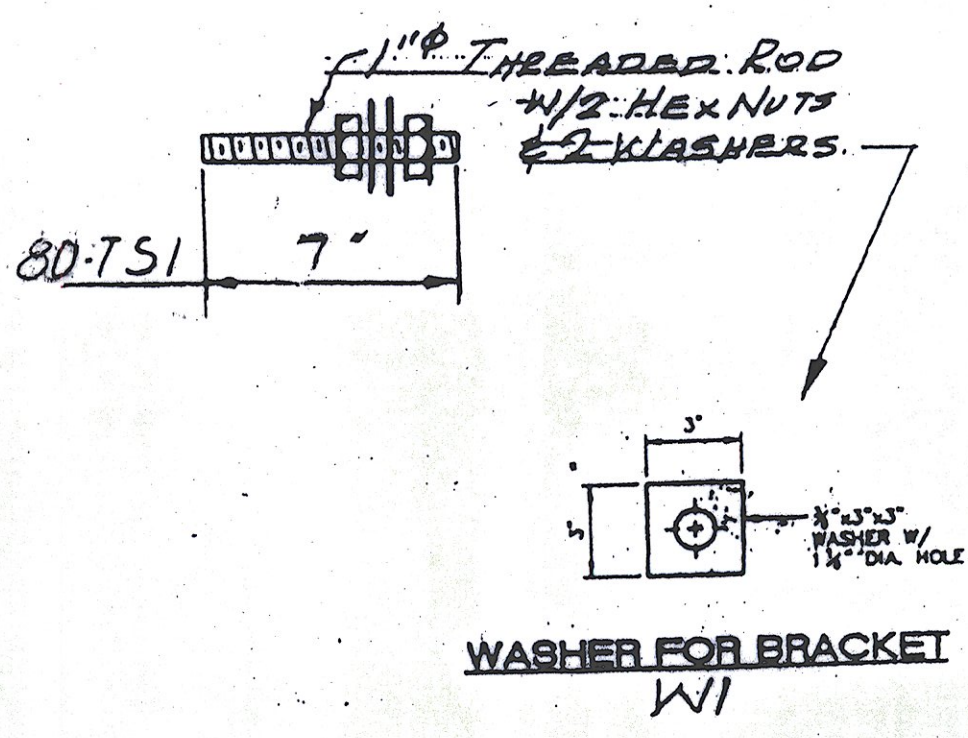
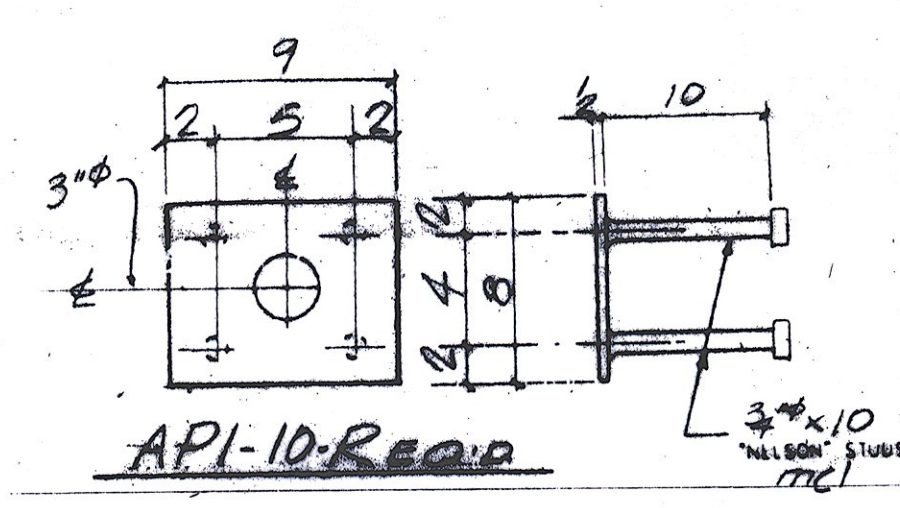


TYP. SECTION BETWEEN BRACKETS

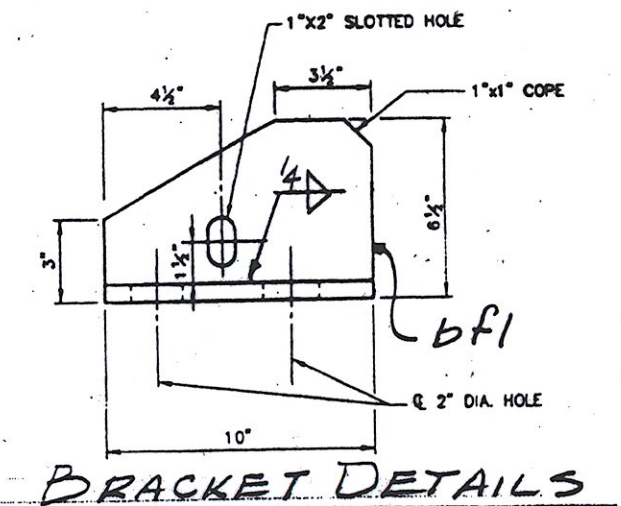
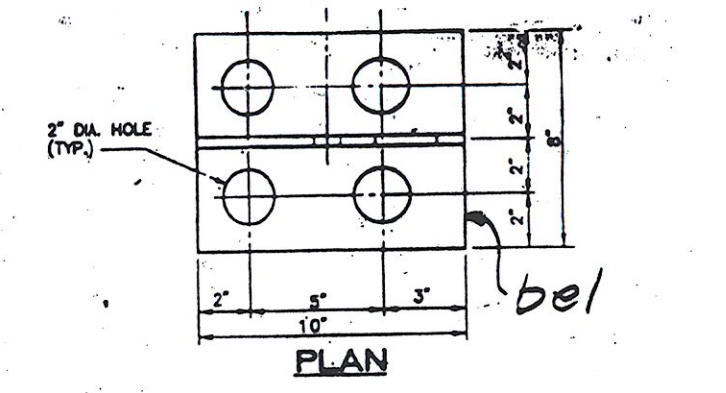
NO. DESCRIPTION	REVISED
REVISIONS	DATE



SHIPPING DEVICE
 SPACED 5'-0\"/>



ELEVATION
 VIEW A-A
 FOLDED TROUGH END DETAILS



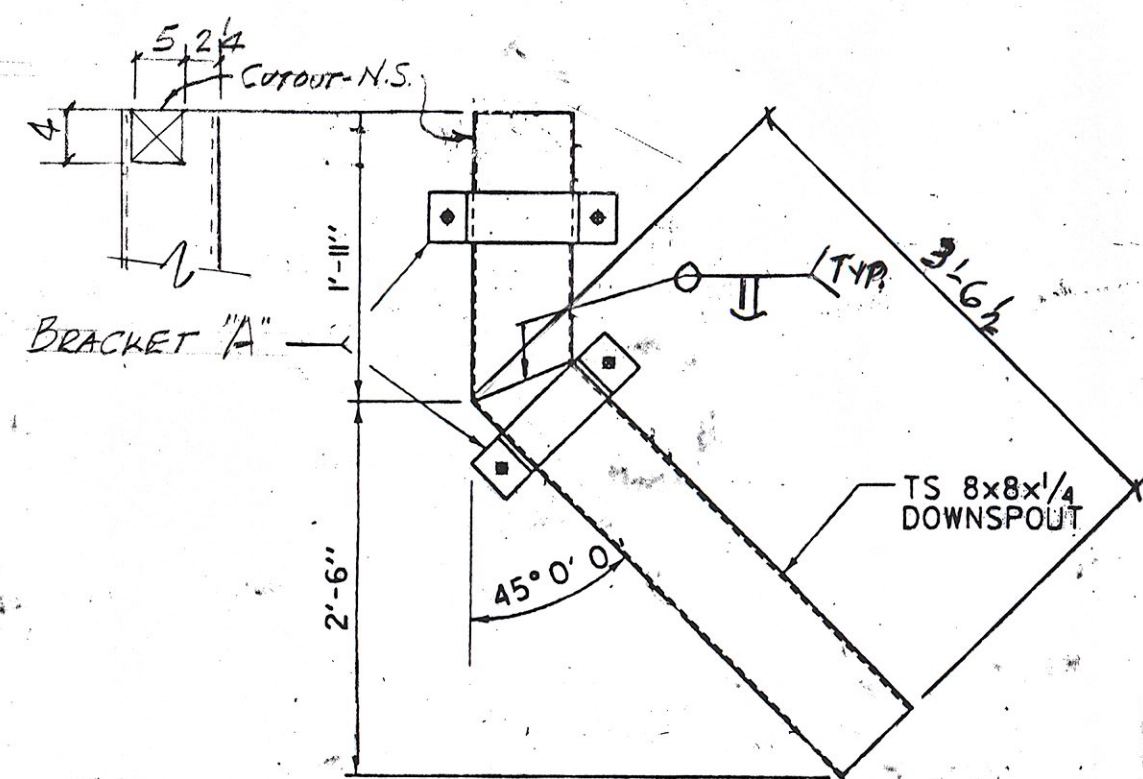
OUT FOR APPROVAL	1/14/10								
OUT FOR APPROVAL									
ISSUED TO SHOP									
FIELD & OFFICE									

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LOT	TYPE	WASHER
	PROJECT NO. 1M 091-1(3) STATE PROJECT NO. BRIDGE No. 19A										
	MATERIAL: 1070-0215 SEE PROC HOLES: AS NOTED SHOP BOLTS: 3/8\"/>										
	SURFACE PREP. & PAINT: GALVANIZE PER SUBSPEC. 506.15										

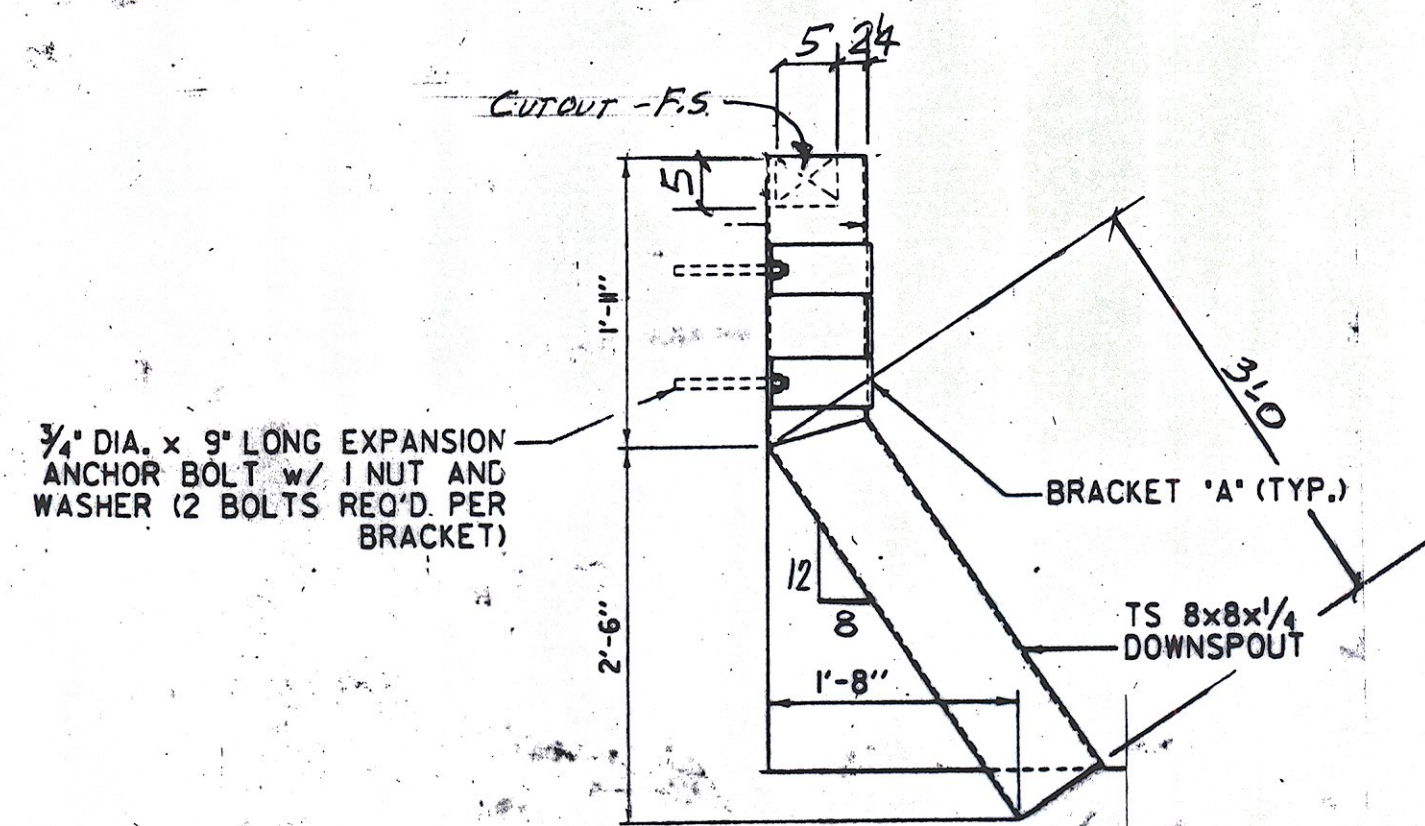
DESCRIPTION: EXP. JOINT - ABUT. #1	DRAWN BY	DATE
JOB: US ROUTE 5 OVER T 91	JPF	3-10
PUTNEY, VERMONT	CHKD BY	
	CR	
	APPROV BY	
	Q.A.	
CUSTOMER: J. A. Mc DONALD		
CASCO BAY STEEL STRUCTURES, INC.	JOB NO.	DRG. NO.
75 SPRING HILL ROAD SACO, MAINE 04072	438	J1
PHONE (207) 282-7360 FAX. (207) 282-1179		REV. Δ

ABM INFO		SHOP BILL				JOB NO.	DRG. NO.		
PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
	1		DOWNSPOUT	5	6+		DS1		—
	1		DO	5	6+		DS2		—
			1 TS8x8x4	11	0	SHOP		ASTM A500-A501	
	4		BAR4x3	2	7		SA1	BEND.	
	8		3/4" EXP. BOLT	9			FIELD	W/NEN.	

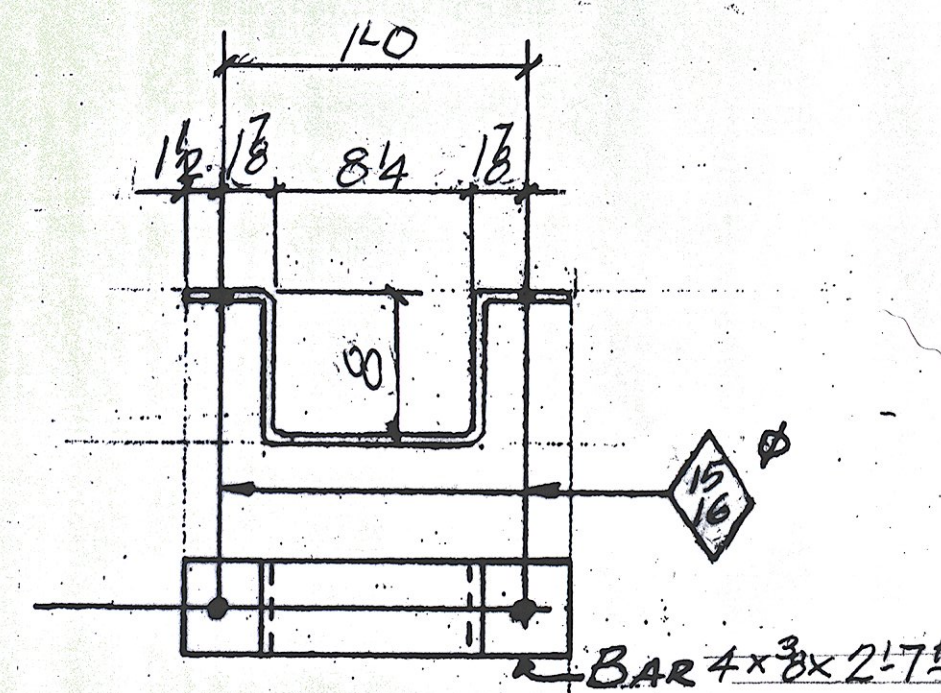
PAY ITEM: 506.60 "STRUCT. STEEL"



DS1-ONE REQ'D.
@ ABUT. #1



DS2-ONE REQ'D.
@ ABUT. #2



SA1-4 REQ'D

SHOP DRAWINGS ARE REVIEWED UNLESS NOTED OTHERWISE

NO EXCEPTION TAKEN

REVISIONS NOT REQUIRED

REVISIONS NOT REQUIRED

REVISIONS NOT REQUIRED

REVISIONS NOT REQUIRED

REVISIONS NOT REQUIRED

DATE: 4/21/02

SIGNATURE: [Signature]

REVIEW BY STATISTIC IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMITY WITH DESIGN. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS, FABRICATION AND CONSTRUCTION METHODS, COORDINATION OF SUB-TASKS, DETAILED DESIGN OF COMPONENTS, AND ERRORS OR OMISSIONS ON SHOP DRAWINGS.

REV.	REMARKS	DATE	DNW	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER

OUT FOR APPROVAL

OUT FOR APPROVAL

ISSUED TO SHOP

FIELD & OFFICE

PROJECT NO. IM 091-1(31) STATE PROJECT NO. BRIDGE No. 19A

MATERIAL: A500 ELECTRODES: SEE SPEC HOLES: AS NOTED SHOP BOLTS: —

SURFACE PREP. & PAINT:

GALVANIZE PER SUBJECT 506.15

DESCRIPTION: DOWNSPOUTS-ABUTS. #1 & #2 DRAWN BY: JPF DATE: 3-10

JOB: U.S. ROUTE 5 OVER I 91 CHKD BY: CR

PUTNEY, VERMONT APPROV BY: [Signature]

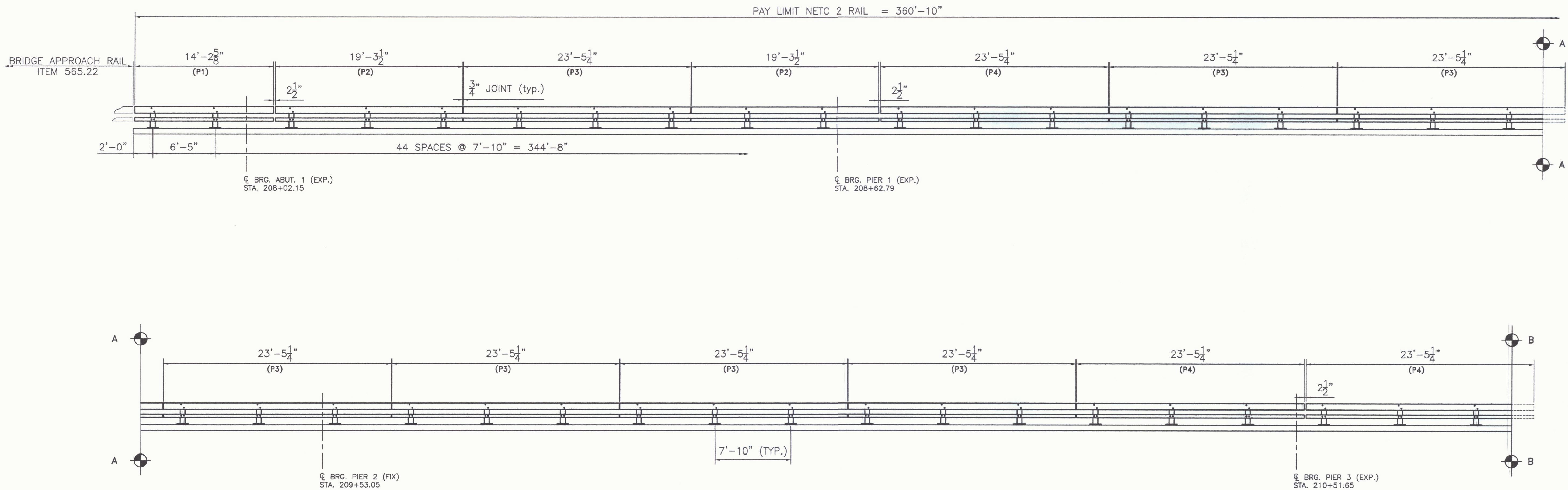
Q.A.

CUSTOMER: JA. McDONALD.

CASCO BAY STEEL STRUCTURES, INC. JOB NO. 438 DRG. NO. M1

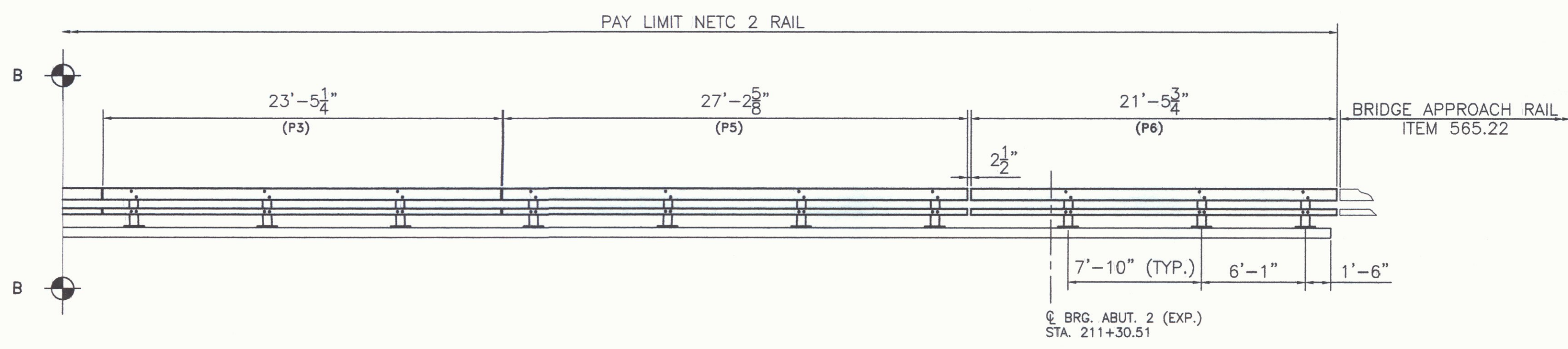
75 SPRING HILL ROAD SACO, MAINE 04072 REV. Δ

PHONE (207) 282-7360 FAX. (207) 282-1179



Mk.	Qty.	Description	Size/Shape	length/qty. per unit	Material
BILL OF MATERIAL (WEST SIDE)					
47		BRIDGE RAIL PED POST 2'-0 3/8" OAH W/ BASE PLATE			
47		POST UPRIGHT	W6 x 25	1'-11 3/8"	A709 Gr. B
47		POST BASE PLATE	1" x 10"	1'-2"	A709 Gr. B
15		UPPER SPLICE TUBE FOR 8 x 4 RAIL			
15		TUBE	TS 7x3x3/8	1'-8"	A500 Gr. B
30		WELDED LOCK NUT (OUTER HOLES ONLY)	5/8"	---	A563
15		LOWER SPLICE TUBE FOR 4 x 4 RAIL			
15		TUBE	TS 3x3x5/16	1'-8"	A500 Gr. B
30		WELDED LOCK NUT (OUTER HOLES ONLY)	5/8"	---	A563
P1	1	UPPER RAIL	TS 8x4x5/16	14'-2.625"	A500 Gr. B
	1	LOWER RAIL	TS 4x4x1/4	14'-2.625"	A500 Gr. B
P2	2	UPPER RAIL	TS 8x4x5/16	19'-3.500"	A500 Gr. B
	2	LOWER RAIL	TS 4x4x1/4	19'-3.500"	A500 Gr. B
P3	8	UPPER RAIL	TS 8x4x5/16	23'-5.250"	A500 Gr. B
	8	LOWER RAIL	TS 4x4x1/4	23'-5.250"	A500 Gr. B
P4	3	UPPER RAIL	TS 8x4x5/16	23'-5.250"	A500 Gr. B
	3	LOWER RAIL	TS 4x4x1/4	23'-5.250"	A500 Gr. B
P5	1	UPPER RAIL	TS 8x4x5/16	27'-2.625"	A500 Gr. B
	1	LOWER RAIL	TS 4x4x1/4	27'-2.625"	A500 Gr. B
P6	1	SHOP CURVED UPPER RAIL	TS 8x4x5/16	21'-5.750"	A500 Gr. B
	1	SHOP CURVED LOWER RAIL	TS 4x4x1/4	21'-5.750"	A500 Gr. B
47		ANCHOR PLATE	3/8 x 9 3/8	1'-1"	A36
188		ANCHOR BOLTS	1" DIA.	12"	A449
188		HEX NUT	1" DIA.	---	A563
188		HEAVY HEX NUT	1" DIA.	---	A563DH
188		HEX JAM NUT	1" DIA.	---	A563
188		WASHER	1" DIA.	---	F436
188		ROUND HEAD BOLT	3/4" DIA.	6"	M164 type 1
188		LOCK NUT	3/4" DIA.	---	A563DH
188		WASHER	3/4" DIA.	---	F436
120		CAP SCREW	5/8" DIA.	1.75"	A325
120		WASHER	5/8" DIA.	---	F436
47		BEARING PAD	1/8"x10"	1'-2"	M251

TOTAL PAY LIMIT ITEM 525.33 = 361'



ELEVATION - NORTHWEST BRIDGE RAIL
FACING NORTHWEST FROM @ US RT 5

- NOTE:
- CONTRACTOR TO VERIFY EXPANSION JOINT LOCATIONS PRIOR TO FABRICATION.
 - BRIDGE RAIL TUBES TO BE SET ON 1130.9' ± CONVEX RADIUS.
 - RAIL TUBES ARE PROVIDED STRAIGHT AND WILL FLEX UNDER OWN WEIGHT IN EXCESS OF REQUIRED RAIL CURVATURE DUE TO LARGE RADIUS.

No.	REVISIONS	Date
0	Initial submittal	6/8/10

HIGHWAY SAFETY CORP
GLASTONBURY, CT
860-633-9445

ITEM 525.33 BRIDGE RAILING - NETC 2 RAIL
US RT 5 OVER I-91, BRIDGE 19A
TOWN OF PUTNEY COUNTY OF WINDHAM, VT
PROJECT NUMBER: IM 091-1(31)

GENERAL CONTRACTOR: F.R. LAFAYETTE, INC.

SUB CONTRACTOR: F.R. LAFAYETTE, INC.

DATE: 6/7/2010

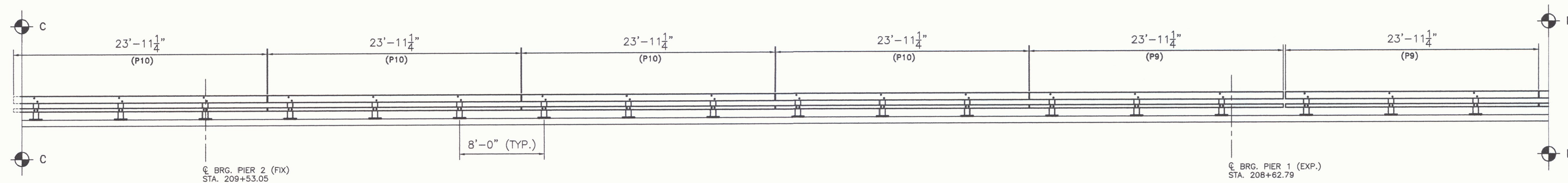
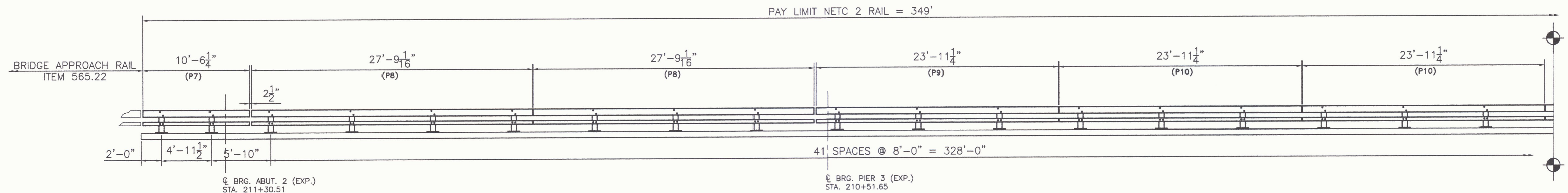
SCALE: NONE

SIZE: D

CERTIFIED FABRICATOR

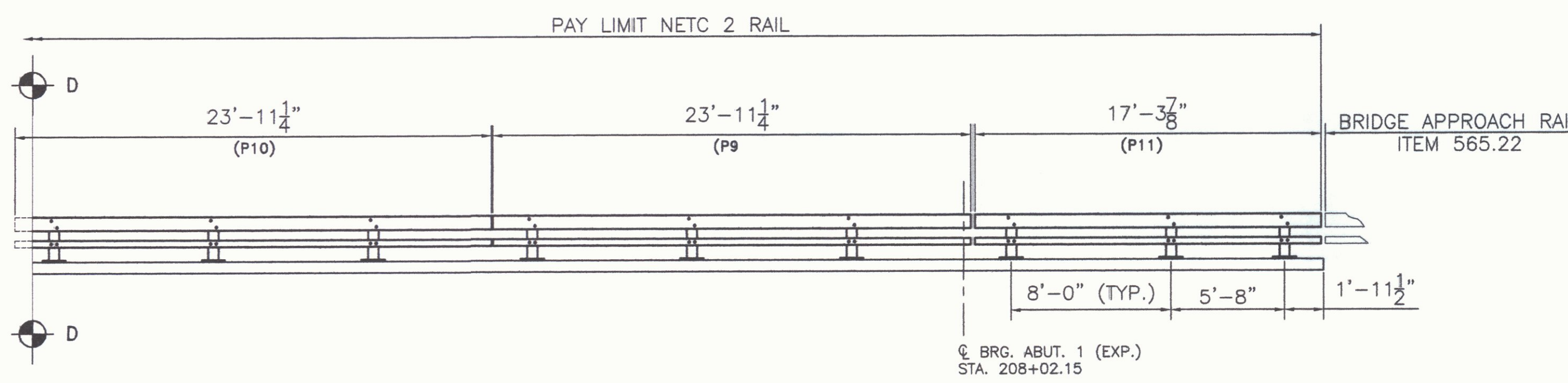
NSC JOB NO. 1752

SHEET NO. 1 of 4



BILL OF MATERIAL (EAST SIDE)					
Mk.	Qty.	Description	Size/Shape	Length/Qty. per unit	Material
	45	BRIDGE RAIL PED POST 2'-0 3/8" OAH W/ BASE PLATE			
	45	POST UPRIGHT	W6 x 25	1'-11 3/8"	A709 Gr. 50
	45	POST BASE PLATE	1" x 10"	1'-2"	A709 Gr. 50
	14	UPPER SPLICE TUBE FOR 8 x 4 RAIL			
	14	TUBE	TS 7x3x3/8	1'-8"	A500 Gr. B
	28	WELDED LOCK NUT (OUTER HOLES ONLY)	5/8"	---	A563
	14	LOWER SPLICE TUBE FOR 4 x 4 RAIL			
	14	TUBE	TS 3x3x5/16	1'-8"	A500 Gr. B
	28	WELDED LOCK NUT (OUTER HOLES ONLY)	5/8"	---	A563
P7	1	UPPER RAIL	TS 8x4x5/16	10'-6.250"	A500 Gr. B
	1	LOWER RAIL	TS 4x4x1/4	10'-6.250"	A500 Gr. B
P8	2	UPPER RAIL	TS 8x4x5/16	27'-9.063"	A500 Gr. B
	2	LOWER RAIL	TS 4x4x1/4	27'-9.063"	A500 Gr. B
P9	4	UPPER RAIL	TS 8x4x5/16	23'-11.250"	A500 Gr. B
	4	LOWER RAIL	TS 4x4x1/4	23'-11.250"	A500 Gr. B
P10	7	UPPER RAIL	TS 8x4x5/16	23'-11.250"	A500 Gr. B
	7	LOWER RAIL	TS 4x4x1/4	23'-11.250"	A500 Gr. B
P11	1	UPPER RAIL	TS 8x4x5/16	17'-3.875"	A500 Gr. B
	1	LOWER RAIL	TS 4x4x1/4	17'-3.875"	A500 Gr. B
	45	ANCHOR PLATE	3/8 x 9 3/8	1'-1"	A36
	180	ANCHOR BOLTS	1" DIA.	12"	A449
	180	HEX NUT	1" DIA.	---	A563
	180	HEAVY HEX NUT	1" DIA.	---	A563DH
	180	HEX JAM NUT	1" DIA.	---	A563
	180	WASHER	1" DIA.	---	F436
	180	ROUND HEAD BOLT	3/4" DIA.	6"	M164 type 1
	180	LOCK NUT	3/4" DIA.	---	A563DH
	180	WASHER	3/4" DIA.	---	F436
	112	CAP SCREW	5/8" DIA.	1.75"	A325
	112	WASHER	5/8" DIA.	---	F436
	45	BEARING PAD	1/8"x10"	1'-2"	M251

TOTAL PAY LIMIT ITEM 525.33 = 349'



ELEVATION - EAST BRIDGE RAIL
FACING EAST FROM Q US RT 5

- NOTE:
- CONTRACTOR TO VERIFY EXPANSION JOINT LOCATIONS PRIOR TO FABRICATION.
 - BRIDGE RAIL TUBES TO BE SET ON 1160.9' ± CONCAVE RADIUS.
 - RAIL TUBES ARE PROVIDED STRAIGHT AND WILL FLEX UNDER OWN WEIGHT IN EXCESS OF REQUIRED RAIL CURVATURE DUE TO LARGE RADIUS.

REVISIONS		
No.	Remarks	Date

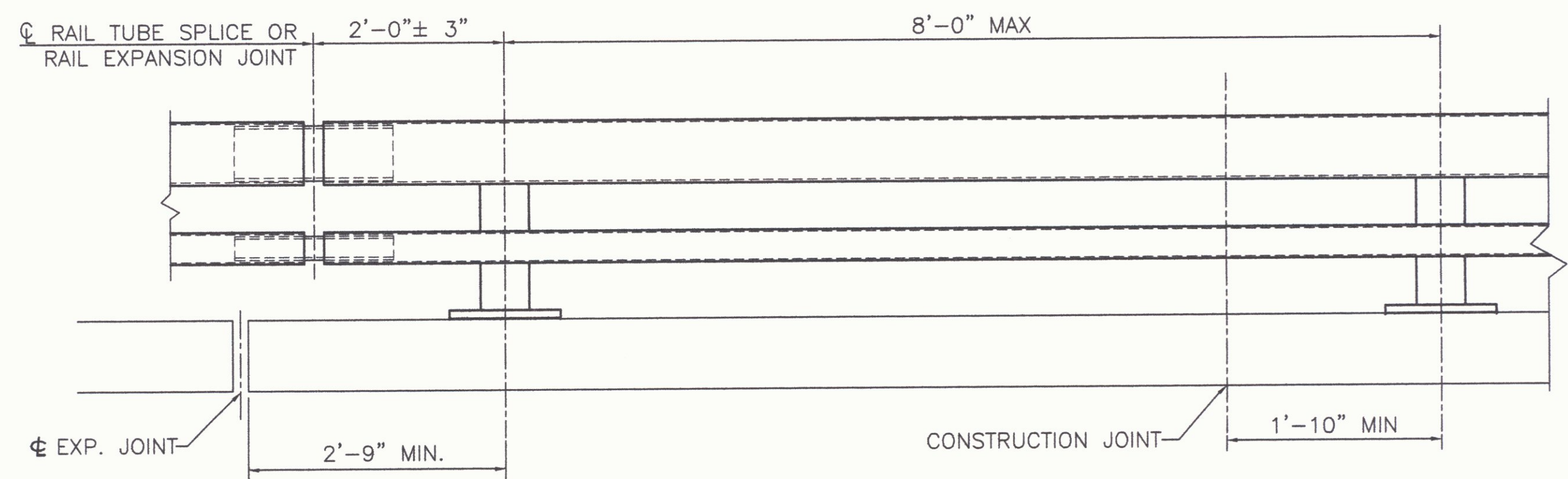
HIGHWAY SAFETY CORP
GLASTONBURY, CT
860-633-9445

ITEM 525.33 BRIDGE RAILING - NETC 2 RAIL
US RT 5 OVER I-91, BRIDGE 19A
TOWN OF PUTNEY COUNTY OF WINDHAM, VT
PROJECT NUMBER: IM 091-1(31)

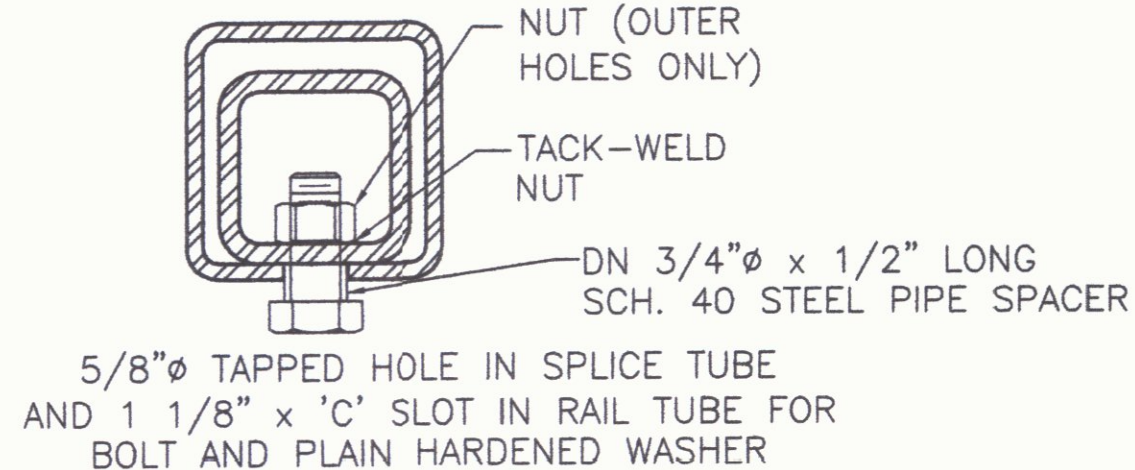
CERTIFIED FABRICATOR

GEN. CONTRACTOR: F.R. LAFAYETTE, INC.
SUB CONTRACTOR: F.R. LAFAYETTE, INC.DRAWN: MHM
CHECKED: PAR
DATE: 6/7/2010
SCALE: NONE
SIZE: D

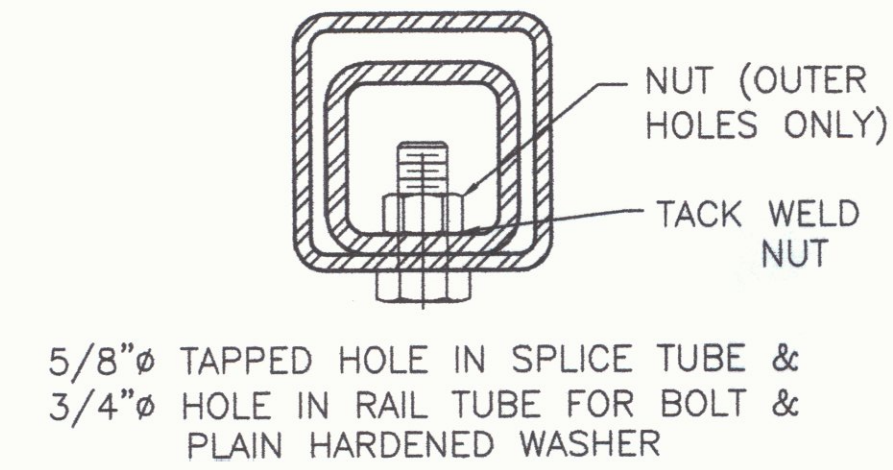
REVISION JOB NO. 1752
SHEET NO. 2 of 4



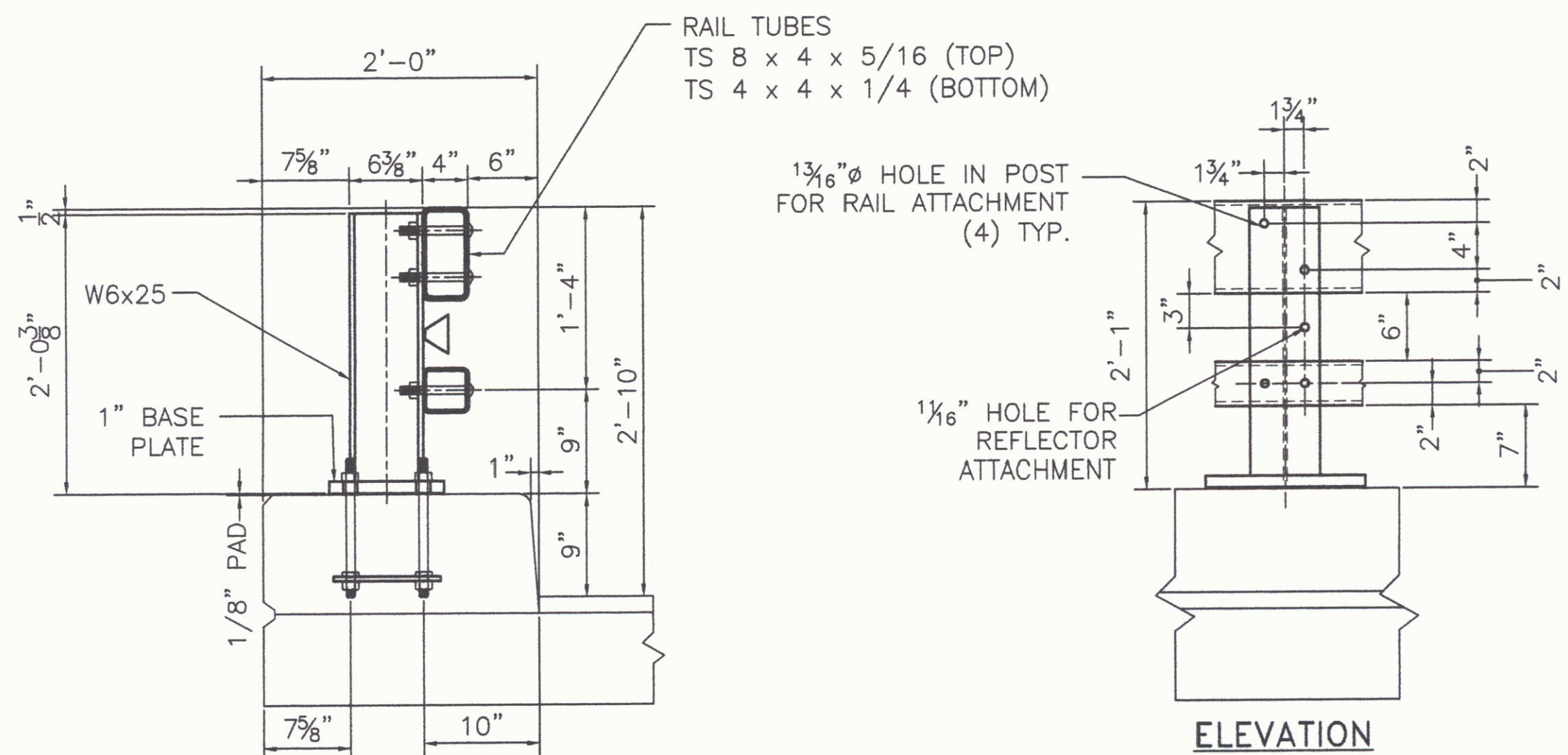
BRIDGE RAILING ELEVATION



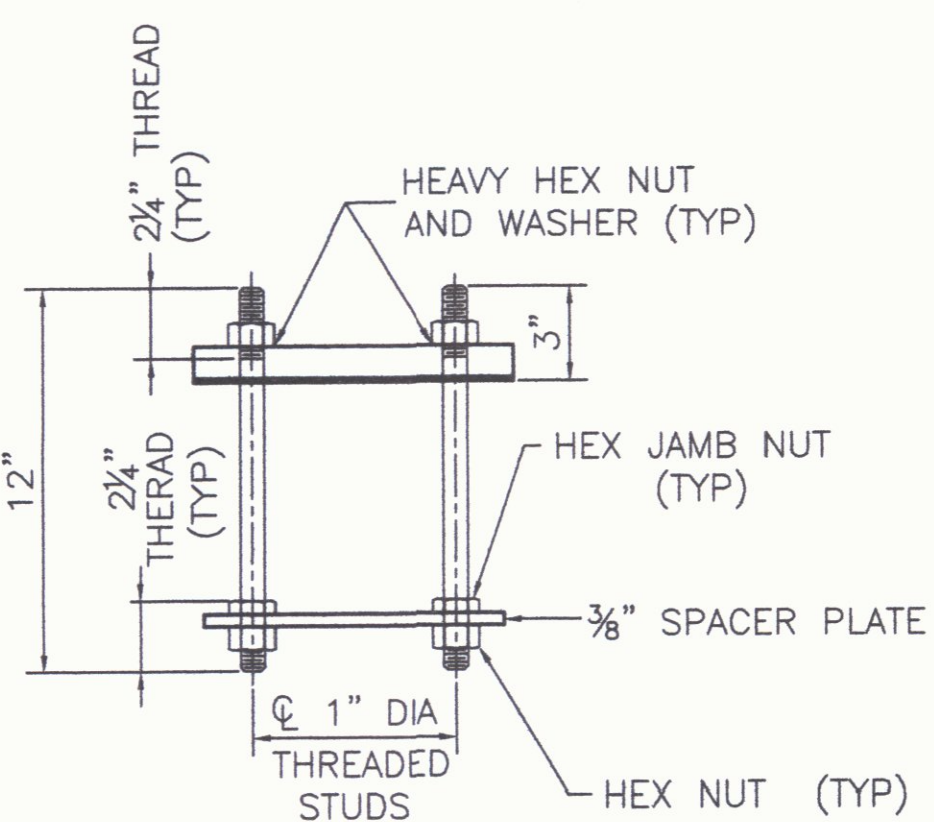
EXPANSION JOINT SECTION
FOR DETAILS NOT SHOWN, SEE "RAIL TUBE SPLICE SECTION."



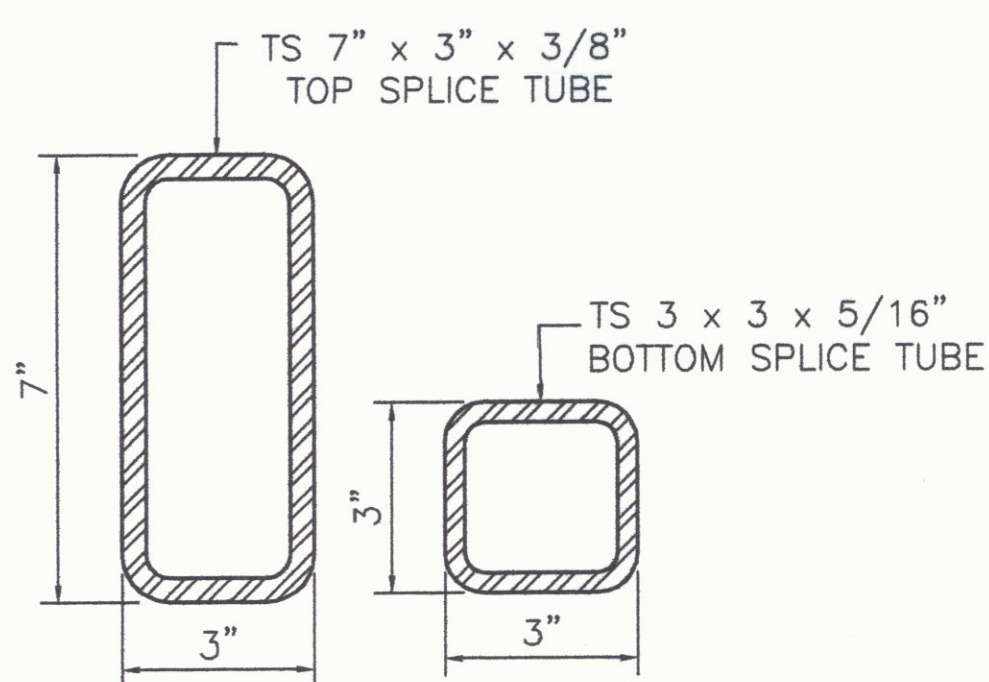
RAIL TUBE SPLICE SECTION



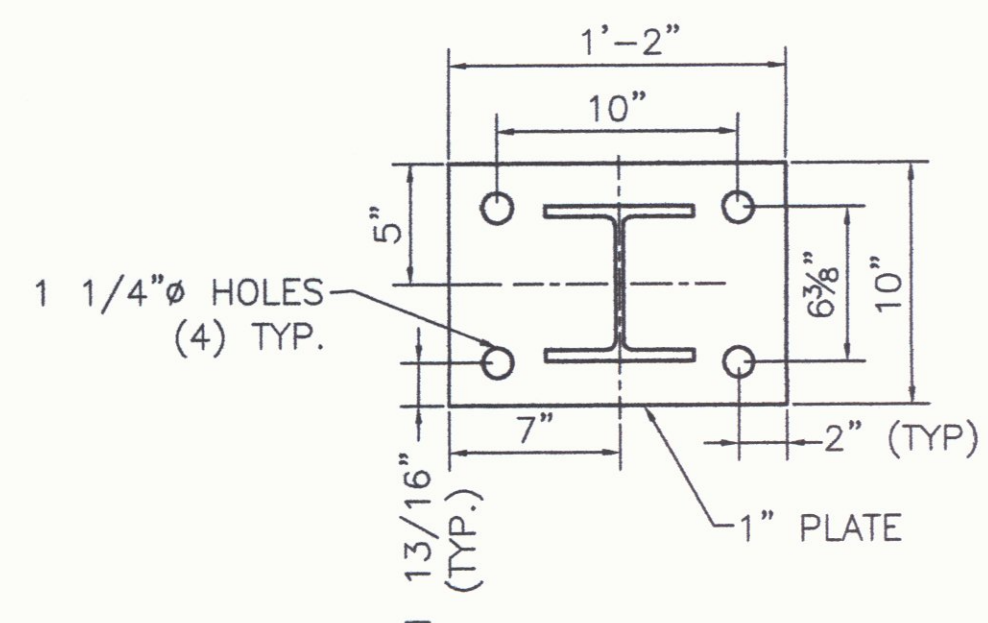
TYPICAL SECTION



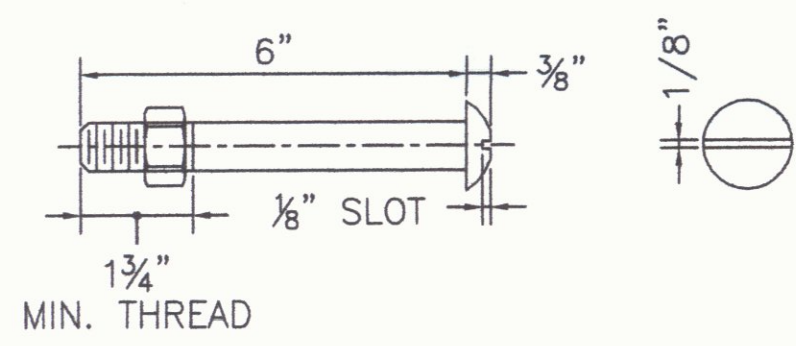
RAIL POST ANCHORAGE



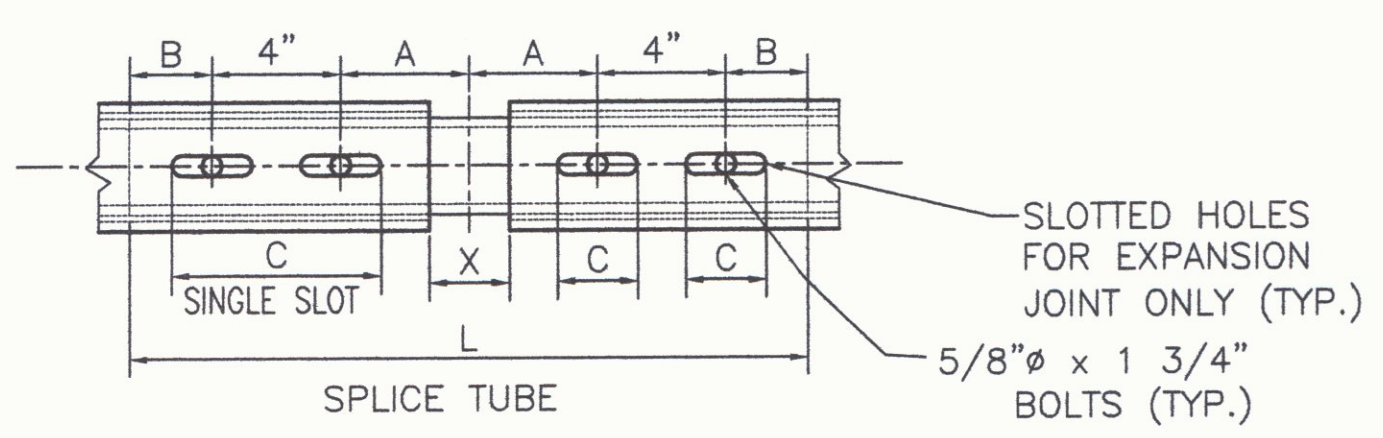
RAIL TUBE SPLICE SECTION



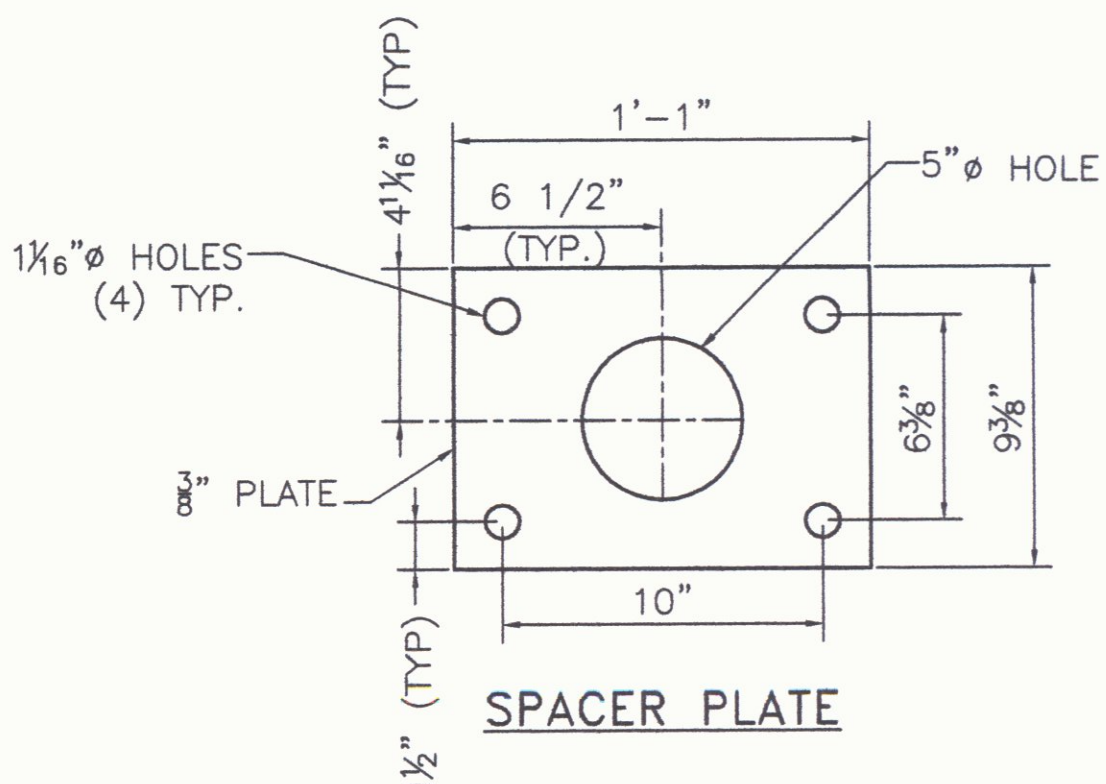
POST AND BASE PLATE



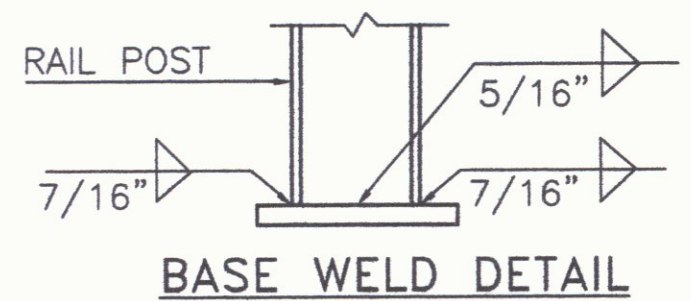
3/4" DIA. M164 (TYPE 1) ROUND HEAD BOLT
(WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT)
(SEE NOTE #8)
ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.



RAIL TUBE SPLICE AND RAIL EXPANSION JOINT DETAIL



SPACER PLATE



BASE WELD DETAIL

SPLICE TABLE					
T	A	B	C	L	X
N/A	4"	2"	--	20"	3/4"
EXPANSION JOINT TABLE					
<4"	4"	2"	2 1/2"	20"	2 1/2"

T = TOTAL MOVEMENT BETWEEN BRIDGE EXPANSION JOINTS. SEE NOTE 5

REVISIONS		
No.	Remarks	Date

NOTES:

- ALL RAILINGS AND MATERIALS SHALL CONFORM TO THE PROVISION OF SECTION 525, "MATERIAL RAILINGS" OF THE STANDARD SPECIFICATION FOR CONSTRUCTION.
- PRIOR TO GALVANIZING, ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS.
- RAIL POSTS SHALL BE SET NORMAL TO GRADE.
- SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO (2) RAIL POSTS AND PREFERABLY TO AT LEAST FOUR (4) POSTS.
- RAIL TUBE EXPANSION JOINT SHALL BE PROVIDED IN ANY RAIL BAY SPANNING A SUPERSTRUCTURE EXPANSION JOINT. EXPANSION JOINT WIDTH SHALL BE "X" AT 45°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
- ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111M/M 111, EXCEPT HARDWARE, WHICH SHALL MEET THE REQUIREMENTS OF AASHTO M232M/M 232.
- RAIL POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
- RAIL TUBES SHALL BE ATTACHED USING 3/4" FULL DIAMETER BODY AASHTO M164 (TYPE 1) ROUND HEAD BOLT INSERTED THROUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE 1/16" LARGER THAN THE BOLT SIZE.
- HOLES IN RAILS FOR RAIL TUBE ATTACHMENT SHALL BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO ERECTION.
- IF THERE IS A CONFLICT BETWEEN THE DETAILS SHOWN ON THIS SHEET AND THE DESIGN, THE REQUIREMENTS OF THE DESIGN DRAWINGS SHALL BE FOLLOWED.
- ANY BENDING OF RAIL SHALL BE BY SHOP PROCEDURE ONLY.
- THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS, INCLUDING WELDING PROCEDURES TO THE STRUCTURES ENGINEER FOR APPROVAL IN ACCORDANCE WITH SUBSECTION 525.03. ALL WELDING SHALL CONFORM WITH SUBSECTION 506.10.
- RAIL POSTS AND BASE PLATES SHALL BE TESTED FOR IMPACT PROPERTIES IN ACCORDANCE WITH ASTM A-370 CHARPY IMPACT TESTING USING TYPE A SPECIMEN.
- REFLECTORS AND REFLECTOR HARDWARE PROVIDED BY OTHERS.

MATERIALS

RAIL TUBES.....ASTM A500, GRADE B OR ASTM A501
RAIL POSTS AND BASE PLATES.....ASTM A709/A709M, GRADE 50
ALL OTHER SHAPES AND PLATES.....ASTM A709/A709M, GARDE 36
ANCHOR STUDS.....ASTM A449
ALL OTHER BOLTS (UNLESS NOTED).....AASHTO M164, TYPE1

NUTS FOR AASHTO M164 BOLTS AND FOR ANCHOR STUDS SHALL COMPLY WITH AASTHO M291 (ASTM A563).

WASHERS SHALL COMPLY WITH AASHTO M293 (ASTM F436) SPECIFICATIONS.

1/8" PAD SHALL COMPLY WITH STANDARD SPECIFICATION SUBSECTION 731.01 OR 731.02.

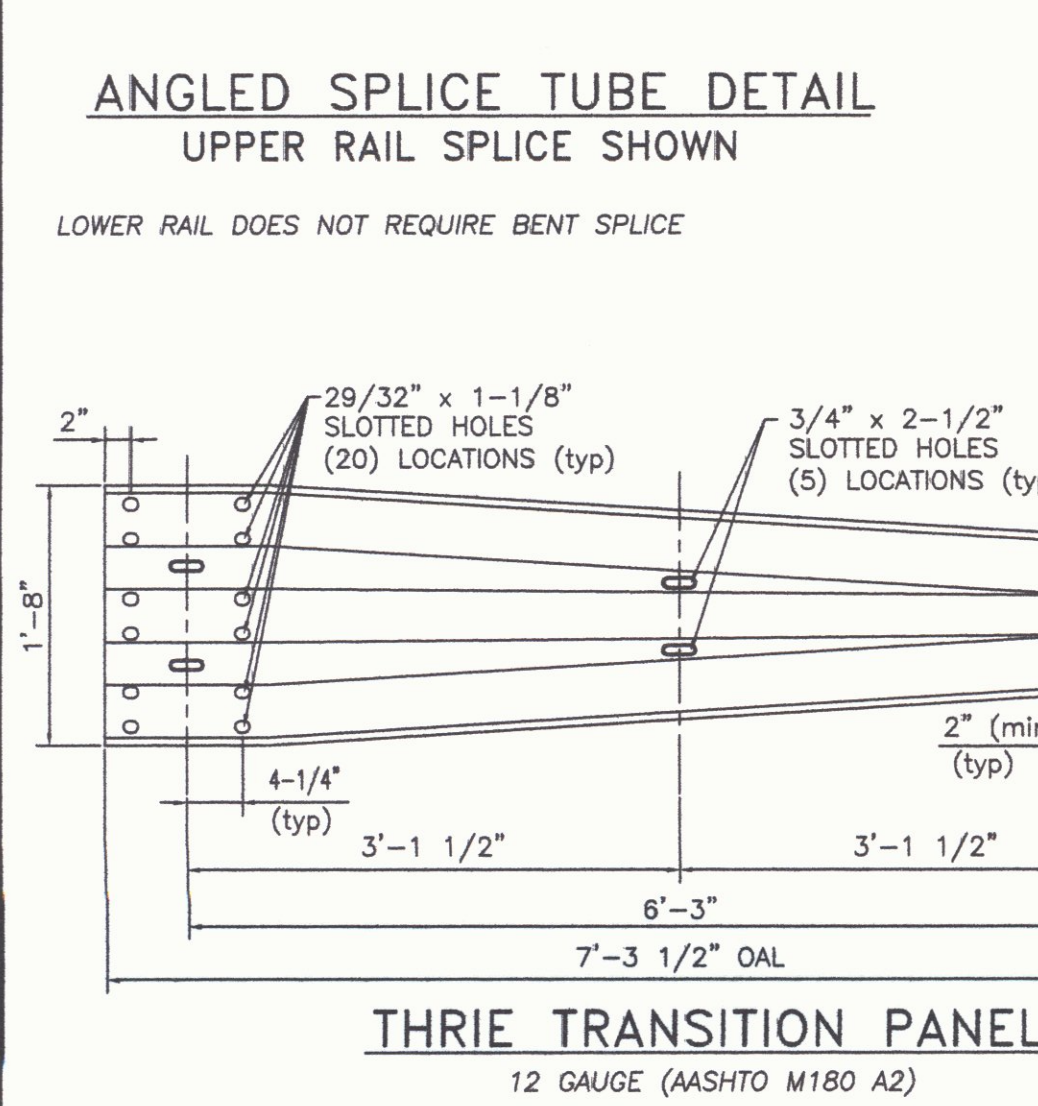
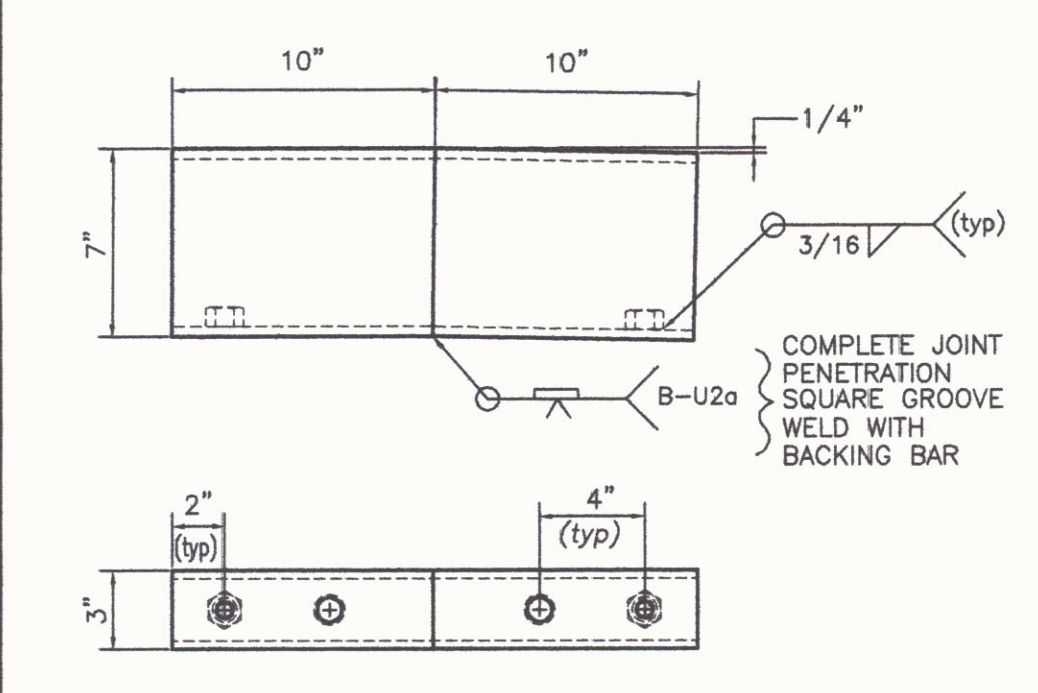
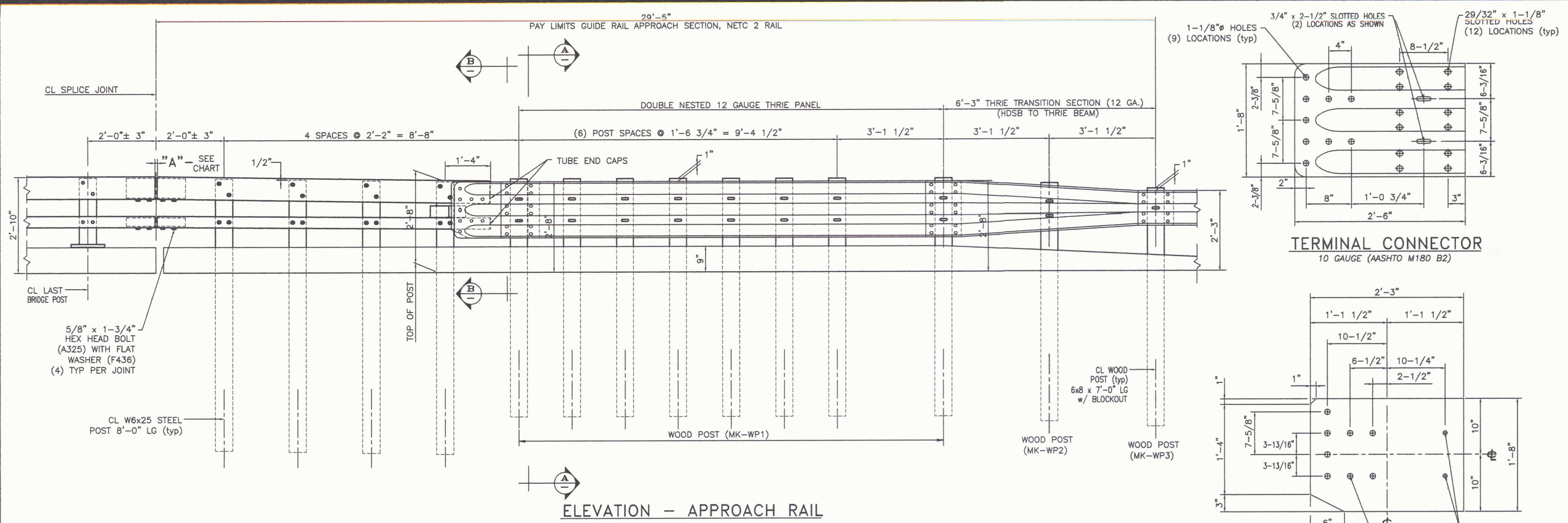
HIGHWAY SAFETY CORP
GLASTONBURY, CT
860-633-9445

ITEM 525.33 BRIDGE RAILING - NETC 2 RAIL
US RT 5 OVER I-91, BRIDGE 19A
TOWN OF PUTNEY COUNTY OF WINDHAM, VT
PROJECT NUMBER: IM 091-1(31)

CERTIFIED FABRICATOR

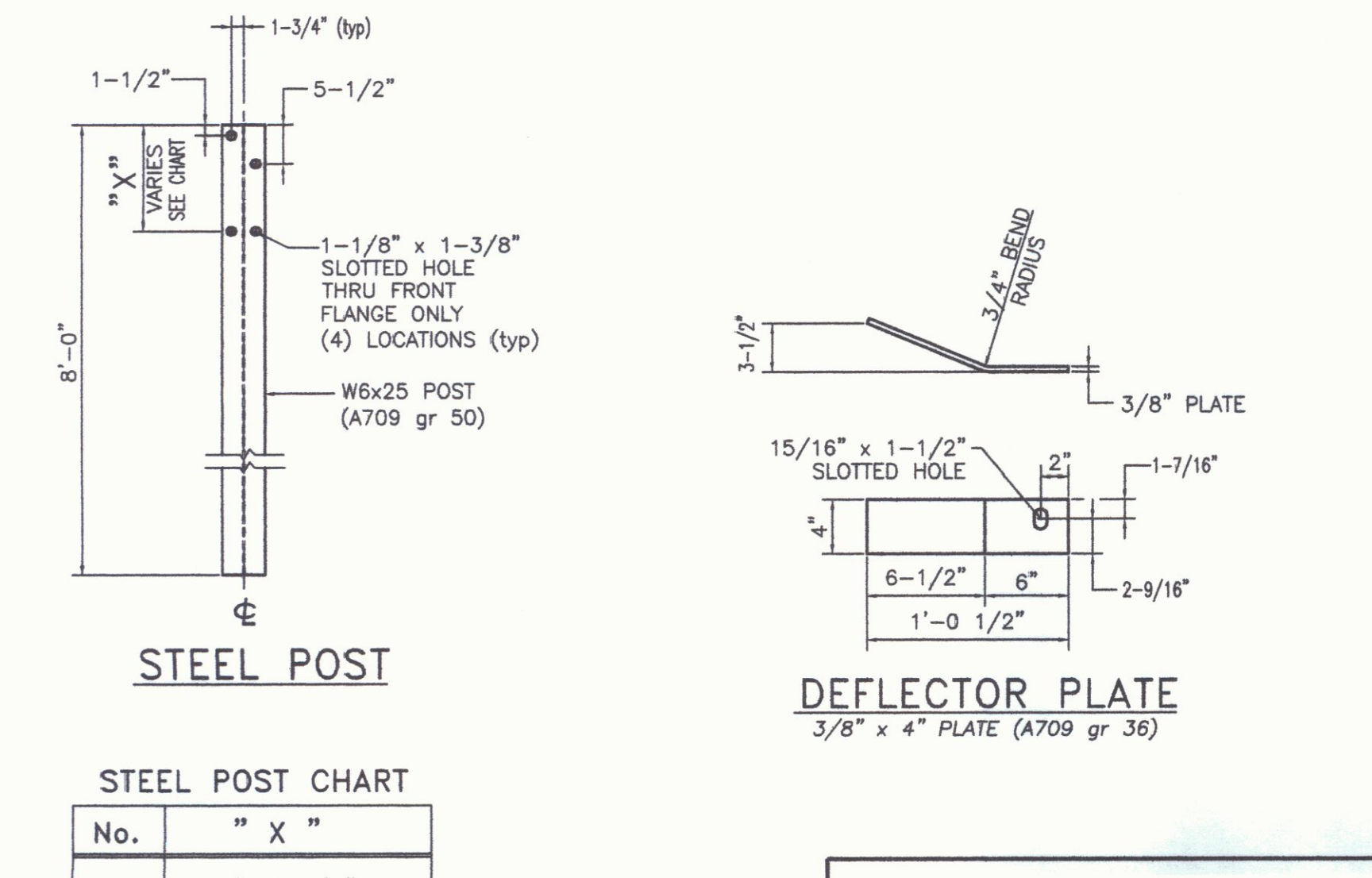
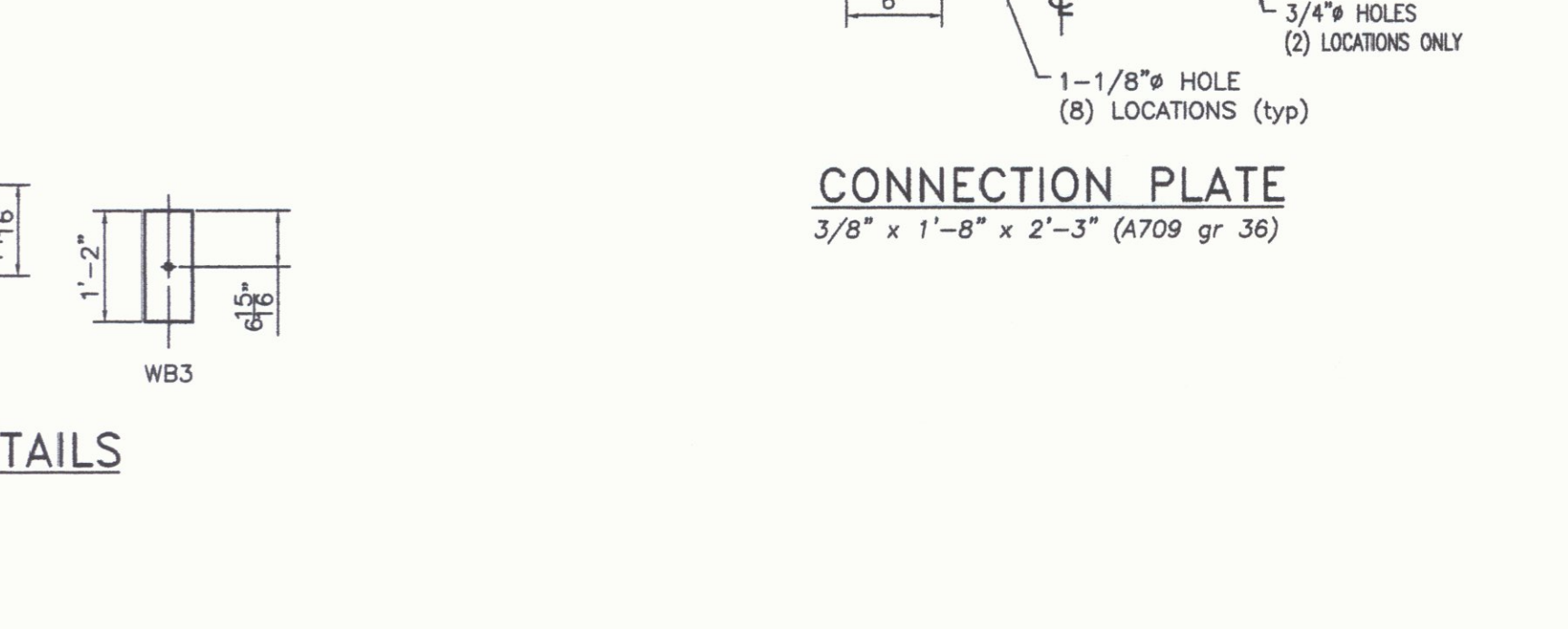
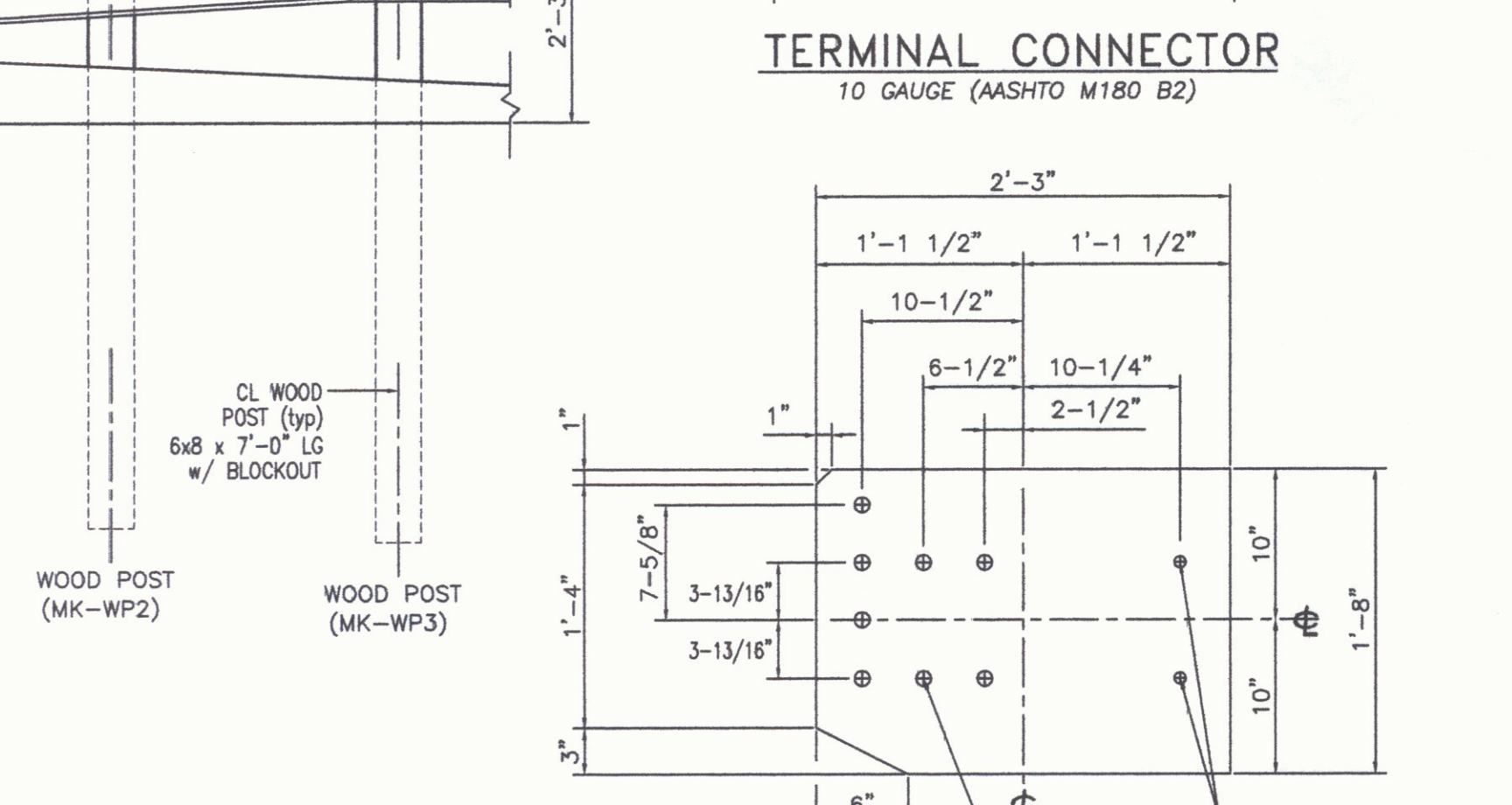
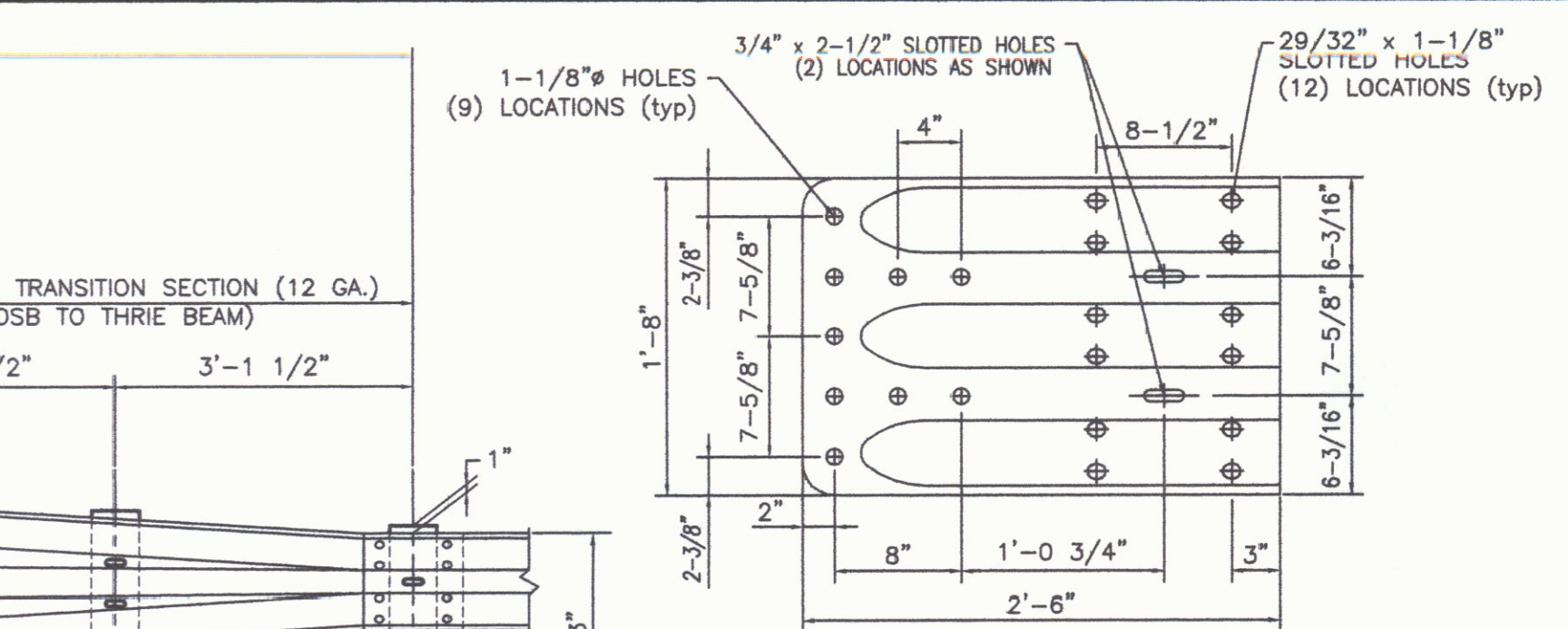
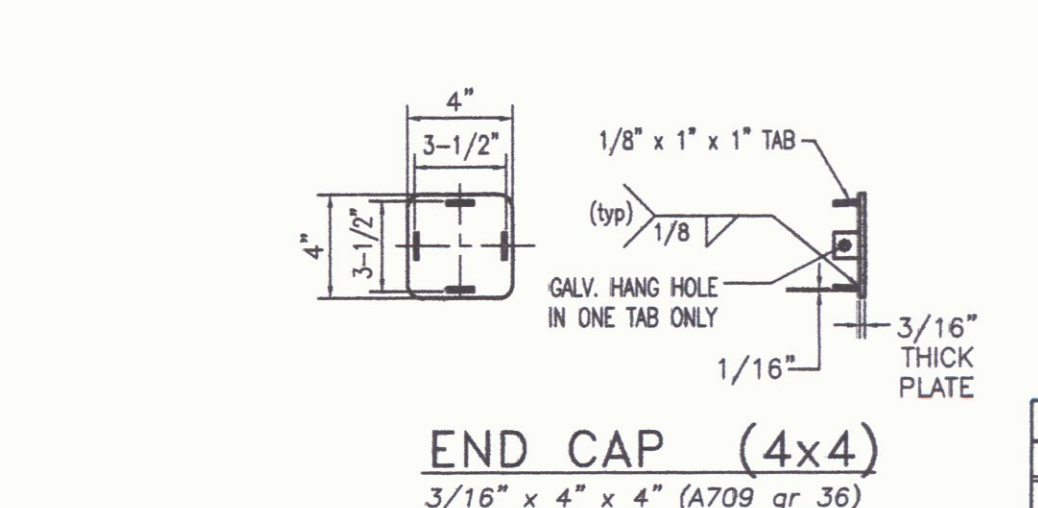
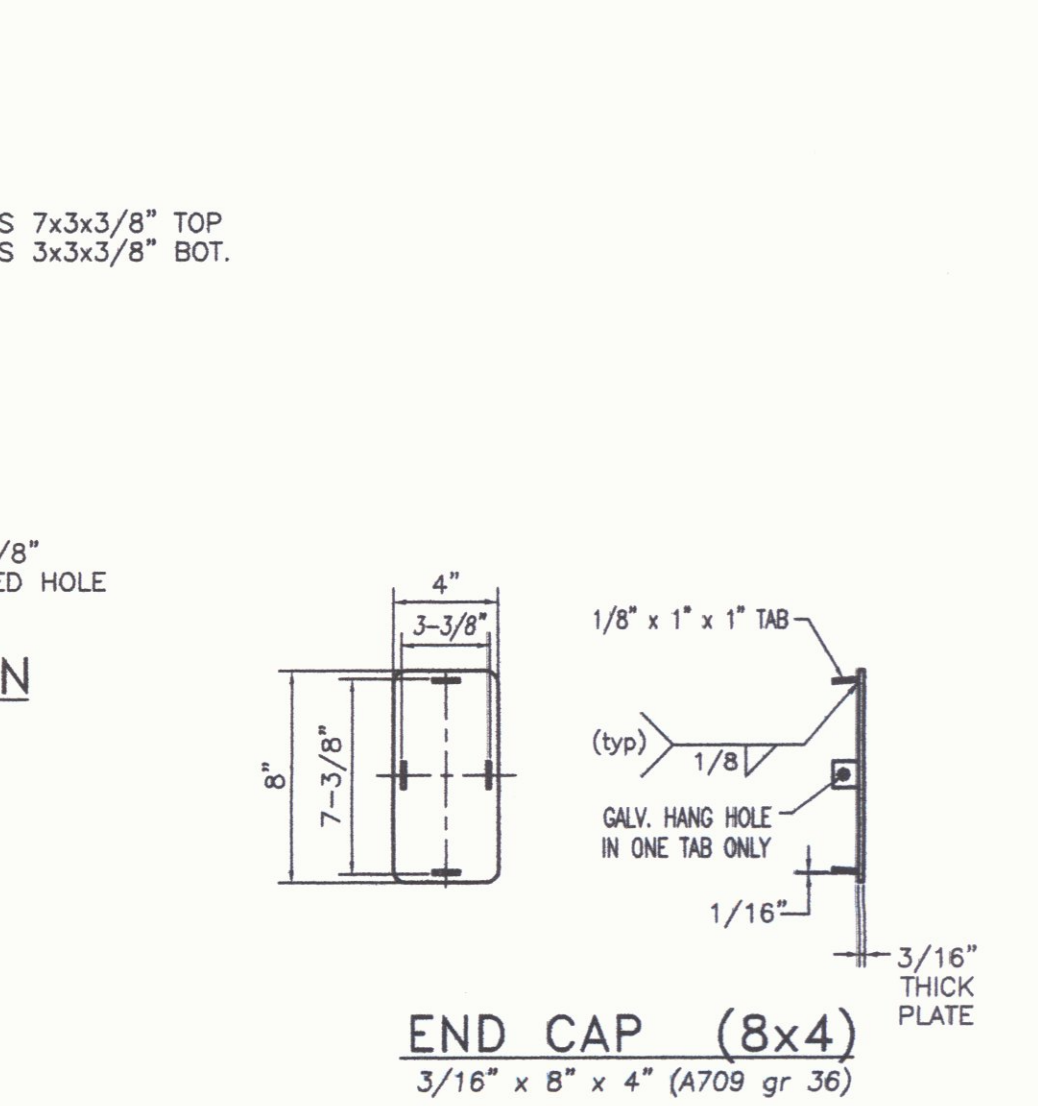
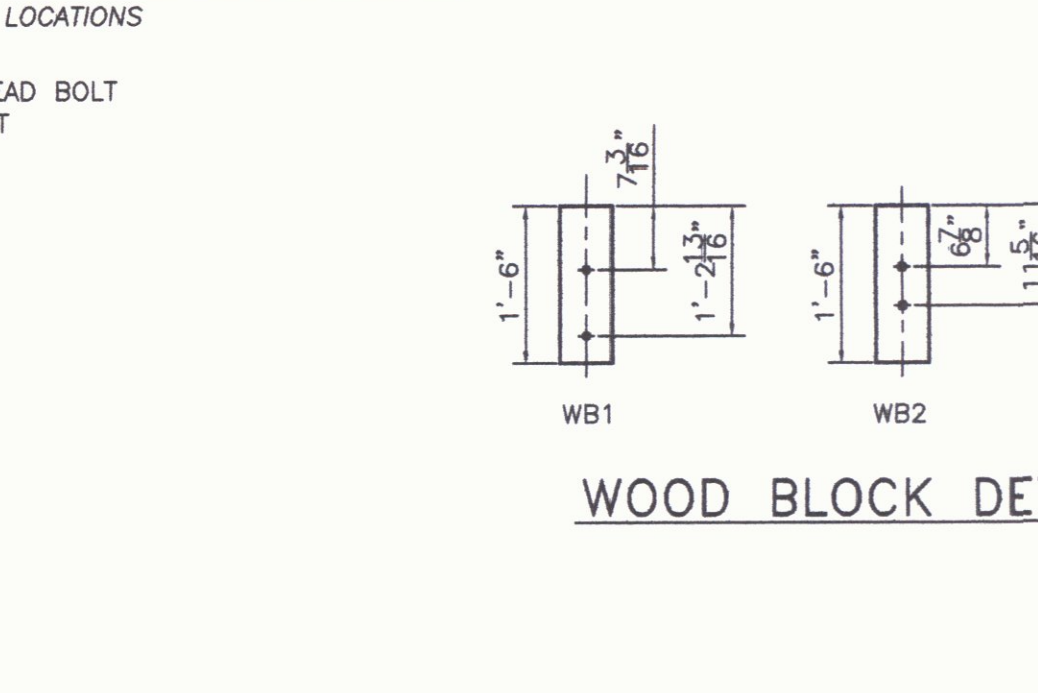
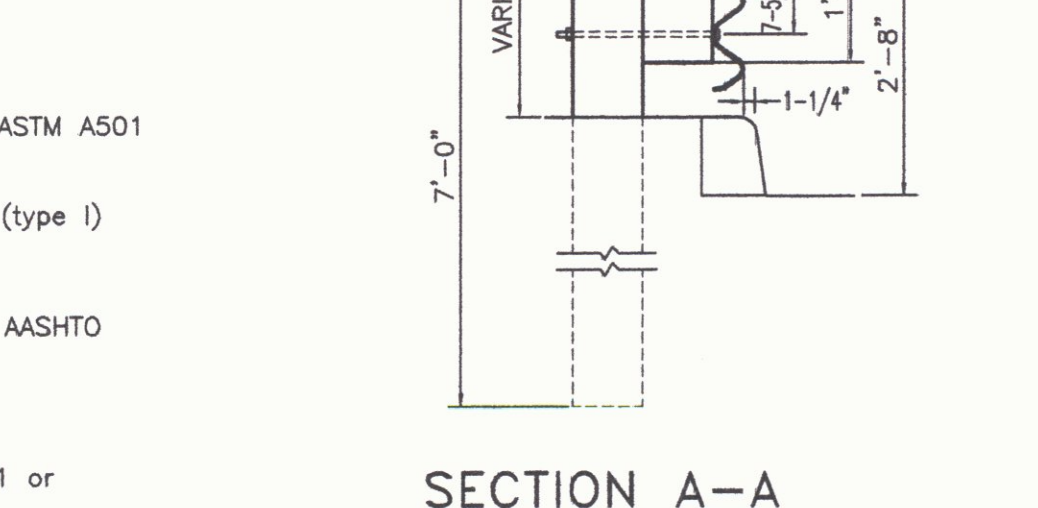
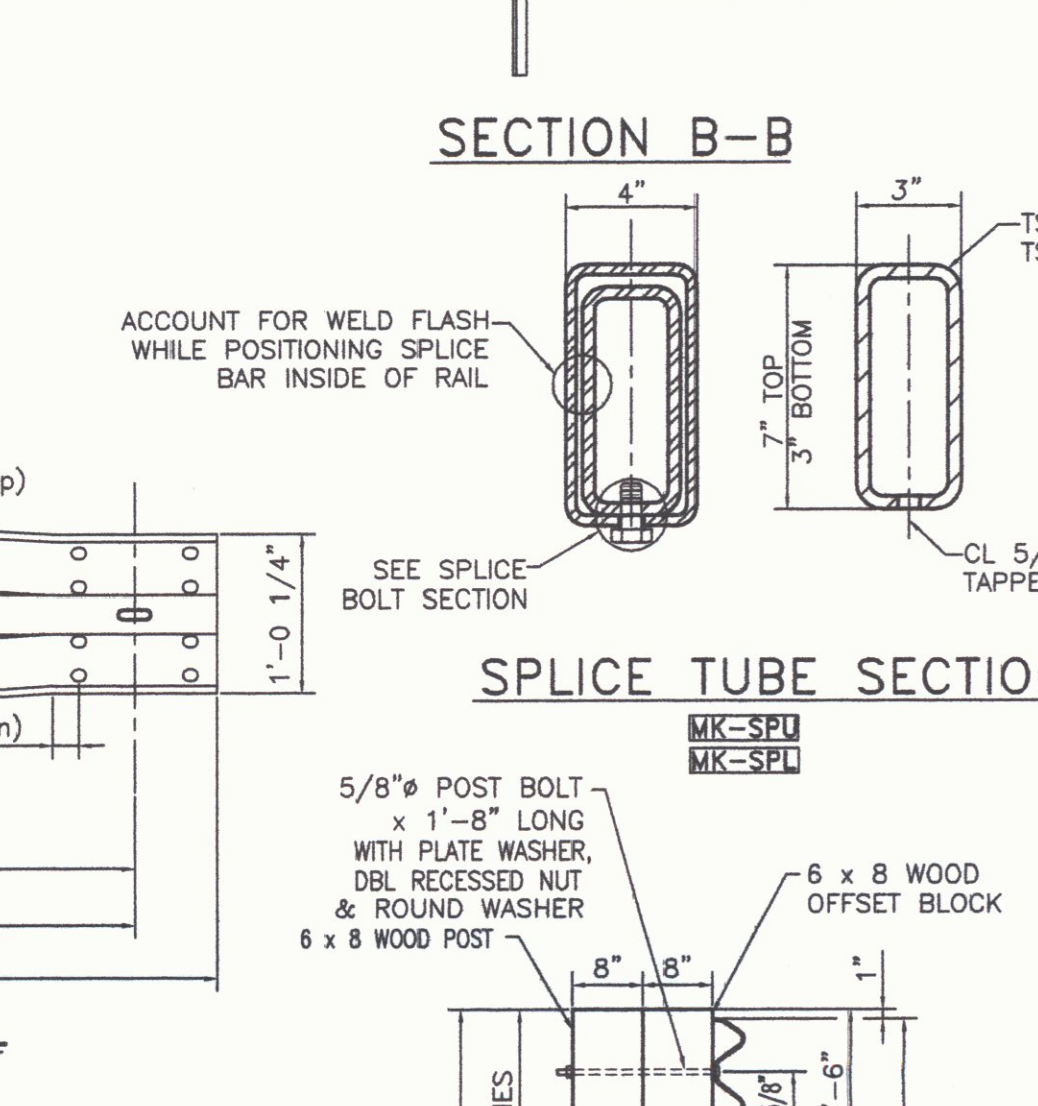
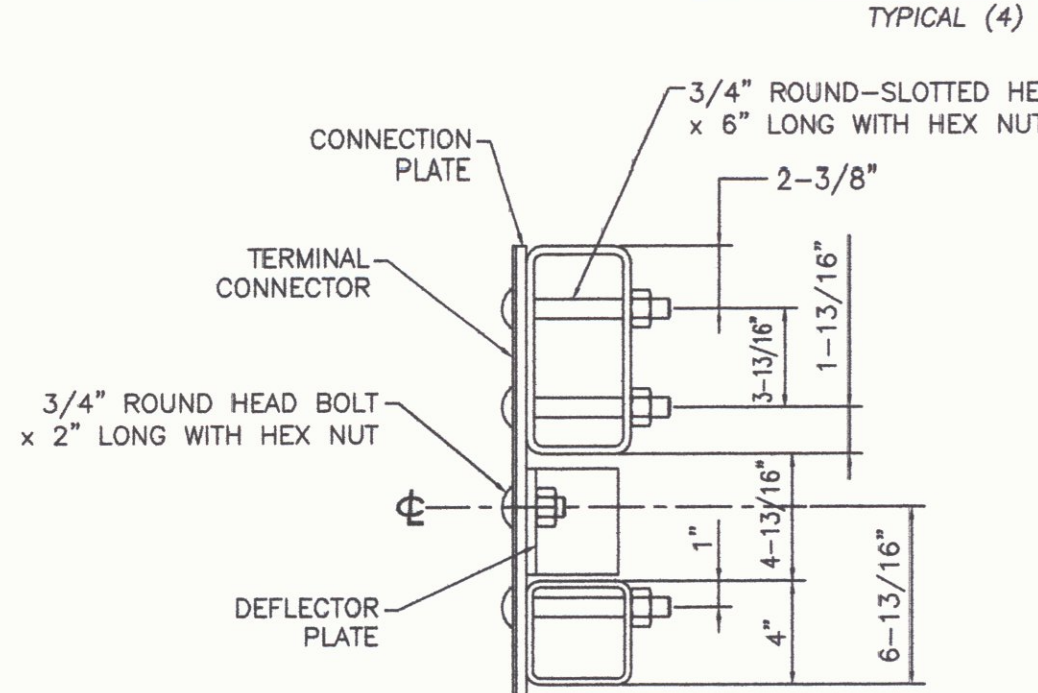
GENERAL CONTRACTOR: F.R. LAFAYETTE, INC.
SUB CONTRACTOR: F.R. LAFAYETTE, INC.DRAWN: MHM CHECKED: PAR DATE: 6/7/2010 SCALE: NONE SIZE: D

JOB NO. 1752
SHEET NO. 3 of 4



MATERIALS

Rail bars.....ASTM A500 GR B or ASTM A501
 Rail posts.....ASTM A709 GR 50
 All other shapes & plates.....ASTM A709 GR 36
 Round-slotted head bolts for Rail-Post connections M164 (type I)
 Hex head bolts for tube splice joints M164 (type 1)
 All other bolts [unless noted].....ASTM A307
 Nuts for ASTM A307 bolts & AASHTO M164 bolts shall comply with AASHTO M291. Nuts for anchor studs shall comply with ASTM A563.
 washers shall comply with ASTM F436
 1/8\"/>



STEEL POST CHART

No.	" X "
#1	1'-3 1/4"
#2	1'-3"
#3	1'-2 11/16"
#4	1'-2 3/8"

BILL OF MATERIAL
4 BRIDGE APPROACHES

MK.	Qty.	Description	Size/Shape	Length/Qty.	Material
4	4	APPROACH RAIL TUBE	TS 8x4x5/16"	9'-9 1/2"	A500 Gr. B
4	4	APPROACH RAIL TUBE	TS 4x4x1/4"	9'-9 1/2"	A500 Gr. B
16	16	STEEL POST	W6 x 25	8'-0"	A709 Gr. 50
WP1	32	WOOD POST	6x8	7'-0"	
WP2	4	WOOD POST	6x8	7'-0"	
WP3	4	WOOD POST	6x8	7'-0"	
WB1	32	WOOD OFFSET BLOCK	6x8	1'-6"	
WB2	4	WOOD OFFSET BLOCK	6x8	1'-6"	
WB3	4	WOOD OFFSET BLOCK	6x8	1'-2"	
4	4	BENT SPLICE TUBE FOR 8 x 4 RAIL TUBE			
4	4	TUBE	TS 7x3x5/16"	1'-8"	A500 Gr. B
8	8	LOCK NUTS	5/8"	---	A563
4	4	SPLICE TUBE FOR 4 x 4 RAIL TUBE			
4	4	TUBE	TS 7x3x1/4"	1'-8"	A500 Gr. B
8	8	LOCK NUTS	5/8"	---	A563
4	4	TERMINAL CONNECTOR	10 Ga.	2'-6"	M180 B2
4	4	CONNECTION PLATE	3/8 x 1'-8"	2'-3"	A709 Gr. 36
2	2	LEFT DEFLECTOR PLATE	3/8 x 4"	1'-9 1/2"	A709 Gr. 36
2	2	RIGHT DEFLECTOR PLATE	3/8 x 4"	1'-9 1/2"	A709 Gr. 36
4	4	END CAP FOR 8 x 4 RAIL TUBE			
16	16	PLATE	1/8 x 1"	1"	A709 Gr. 36
4	4	PLATE	3/8 x 4"	8"	A709 Gr. 36
4	4	END CAP FOR 4 x 4 RAIL TUBE			
16	16	PLATE	1/8 x 1"	1"	A709 Gr. 36
4	4	PLATE	3/8 x 4"	4"	A709 Gr. 36
4	4	THRIE TRANSITION PANEL	12 Ga.	7'-3 1/2"	M180 A2
92	92	3/4" x 6" LG. ROUND HEAD BOLT W/LOCK NUT & ROUND WASHER			M164
4	4	3/4" x 2" LG. ROUND HEAD BOLT W/NUT			A307
8	8	5/8" x 1'-8" LG. POST BOLT W/DBL RECESSED NUT, PLATE & ROUND WASHER			A307
68	68	5/8" x 1'-6" LG. POST BOLT W/DBL RECESSED NUT, PLATE & ROUND WASHER			A307
32	32	5/8" x 1 3/4" LG. HEX BOLT W/WASHER			A325
128	128	5/8" x 1 1/4" LG. PANEL SPLICE BOLT W/DBL RECESSED NUT			A307
32	32	3/4" x 1/2" LG. (SCH 40) SPACER PIPE			A53 Gr. B

TOTAL PAY LIMIT ITEM 621.72 = 118'

GENERAL ERECTION NOTES

- ALL BRIDGE RAIL APPROACH, RAIL MATERIALS, DIMENSION SIZES, AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL UNLESS OTHERWISE NOTED.
- CARRIAGE BOLTS SHALL BE AASHTO M164 AND NUTS SHALL BE ASTM A563 GRADE A OR BETTER (GALVANIZED)
- CUT & WELD TOP SPLICE BAR TO FIT BEND. USE COMPLETE PENETRATION WELD (B-U2).
- REFLECTORIZED ALUMINUM DELINEATION IS TO BE ERECTED EVERY 30 FT. (OR CLOSEST POST) WITH A 5/8" DIAMETER BOLT. DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.
- REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVERS LEFT AND SILVER ON THE RIGHT.
- PAYMENT FOR THE GUARD RAIL APPROACH SECTION - GALVANIZED NETC 2 RAIL SHALL INCLUDE THE TERMINAL CONNECTOR, THE CONNECTION PLATE, THE DEFLECTOR PLATE, RAIL, POSTS, BLOCKS AND ATTACHMENT HARDWARE.

HIGHWAY SAFETY CORP
GLASTONBURY, CT
860-633-9445

ITEM 621.72 BRIDGE RAILING APPROACH
US RT 5 OVER I-91, BRIDGE 19A
TOWN OF PUTNEY COUNTY OF WINDHAM, VT
PROJECT NUMBER: IM 091-1(31)

CERTIFIED FABRICATOR

GENERAL CONTRACTOR
SUB CONTRACTOR
DRAWN
CHECKED
DATE
SCALE
SIZE

F.R. LAFAYETTE, INC.
6/7/2010
NONE
D

SHEET NO. 4 of 4