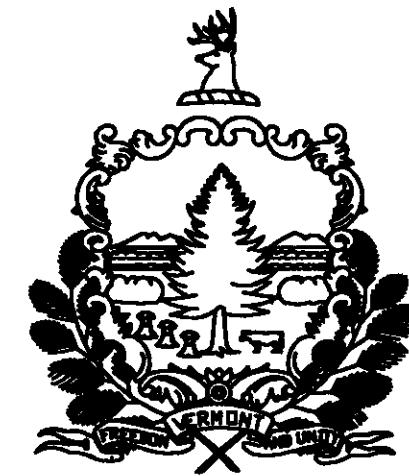
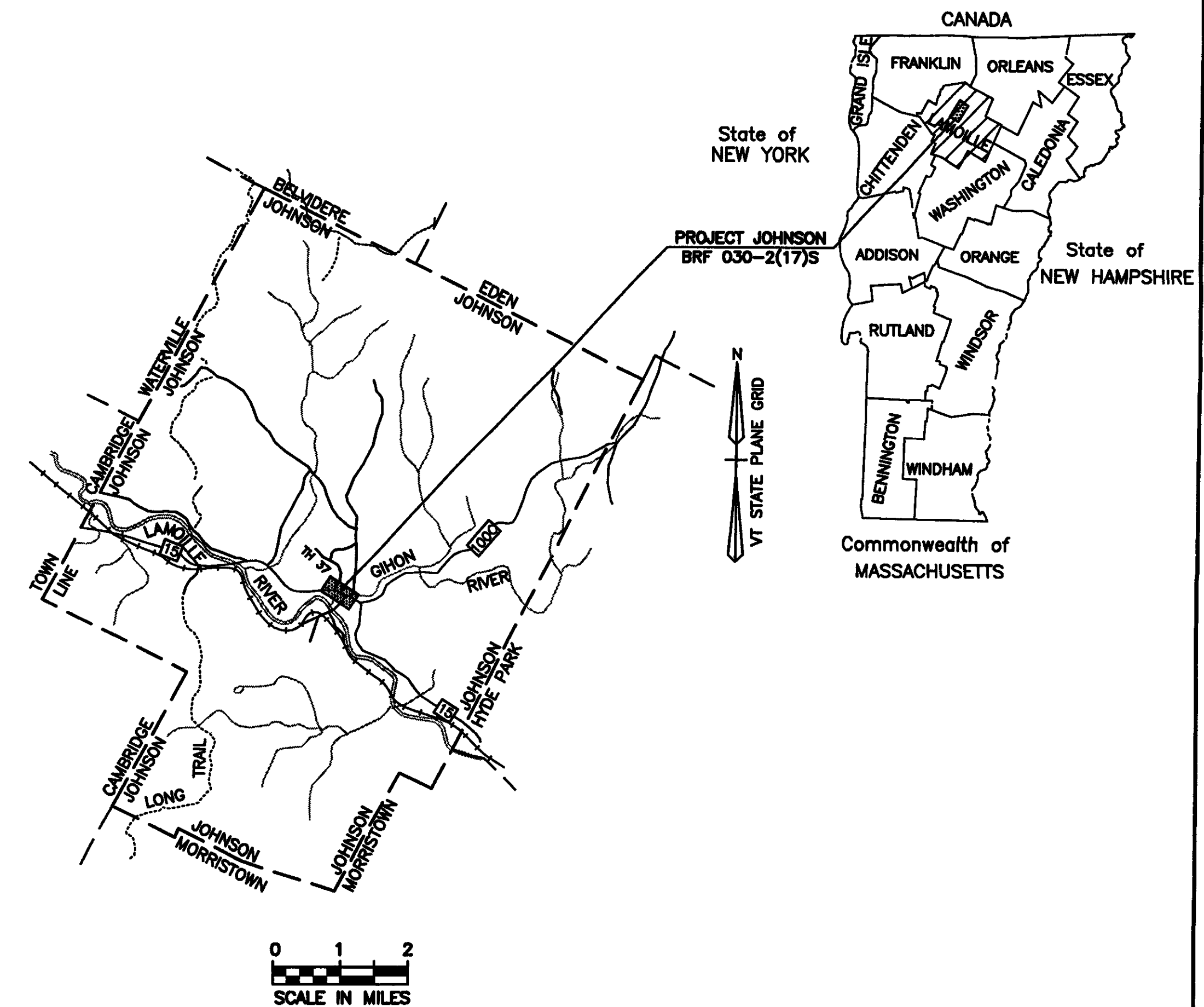


INDEX OF SHEETS
SEE SHEET 2

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT TOWN OF JOHNSON COUNTY OF LAMOILLE VT ROUTE 15 (MINOR ARTERIAL)



RECORD PLANS	
CONTRACTOR	A.L. ST ONGE CONTRACTOR INC - MONTGOMERY, VT
RESIDENT ENGINEER	BOB SUCKERT
CONSTRUCTION BEGAN	JUNE 4, 2007
CONSTRUCTION COMPLETE	DECEMBER 5, 2008
RECORD PLANS BY	BOB SUCKERT & CRAIG PIERCE

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN

BY *[Signature]* RESIDENT ENGINEER

DATE 12-20-10

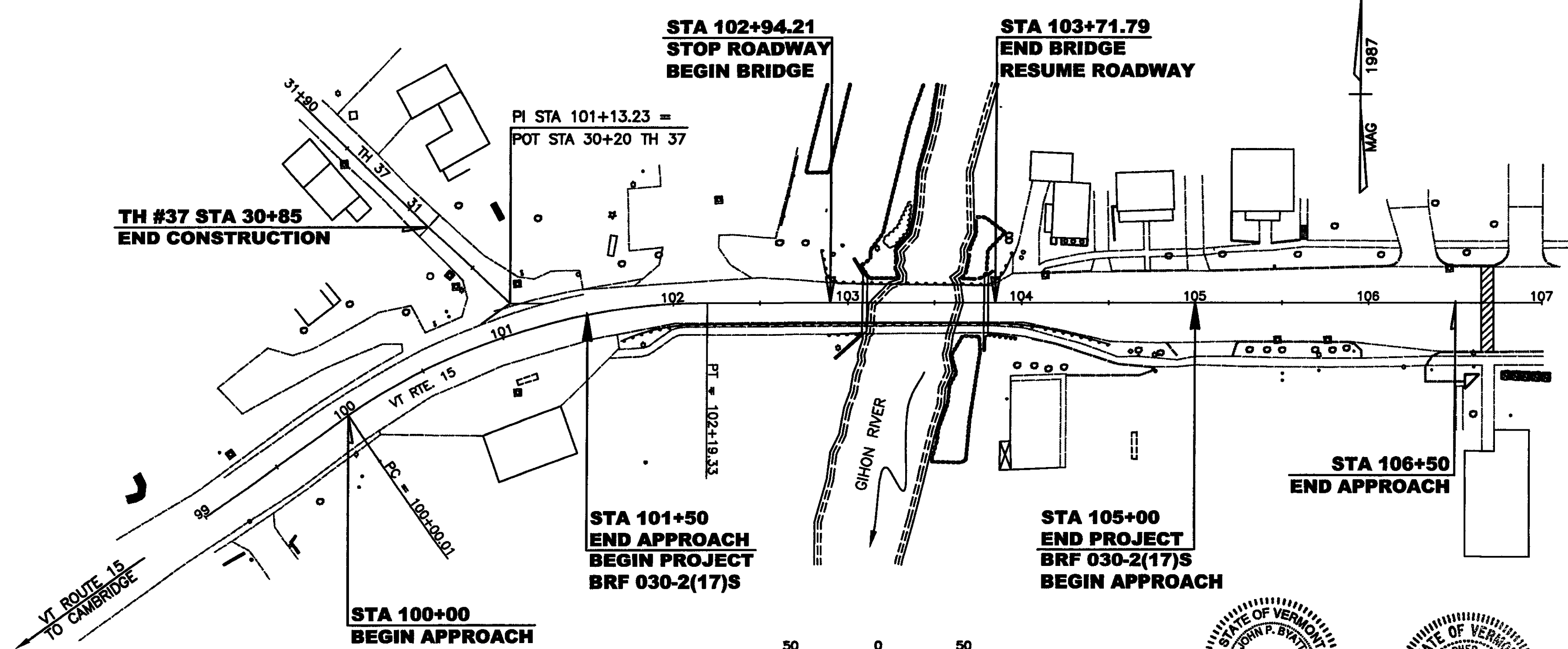
NOTE Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives

PROJECT LOCATION:
BEGINNING AT A POINT ON VT ROUTE 15 APPROX. 0.372 MILES WEST OF THE INTERSECTION OF VT ROUTE 15 AND VT ROUTE 100C, EXTENDING EASTERLY ALONG VT ROUTE 15 FOR 0.066 MILES.

LENGTH OF ROADWAY = 272.42 FEET = 0.051 MILES
LENGTH OF BRIDGE = 77.58 FEET = 0.015 MILES
LENGTH OF PROJECT = 350.00 FEET = 0.066 MILES

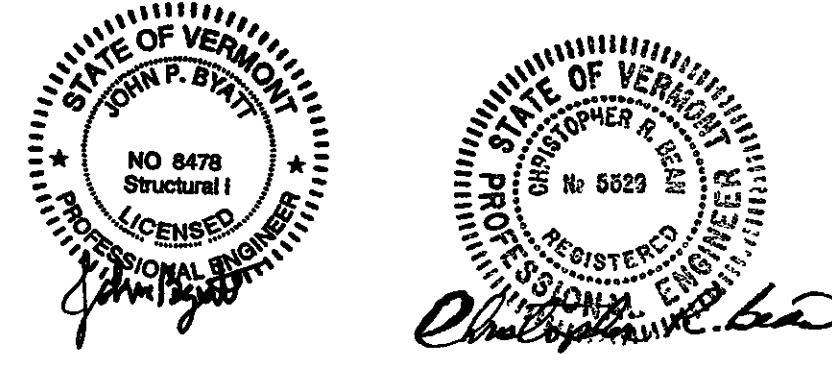
PROJECT DESCRIPTION:
THE REPLACEMENT OF A STRUCTURALLY DEFICIENT BRIDGE (BR#37) ON VT ROUTE 15 INCLUDING ALL THE NECESSARY ROADWAY APPROACH WORK.

TRAFFIC DATA	
FUNCTIONAL CLASSIFICATION MINOR ARTERIAL	
ADT	1999 2019
DHV	7170 9730
ADTT	900 1100
	480 580
D = 51% WB	
T = 5%	
V = 35 M.P.H.	
1999 - 2019 ESALS = 5,846,000	
2019 - 2039 ESALS = 14,552,000	



CONVENTIONAL SIGNS	
COUNTY LINE	---
TOWN LINE	----
LIMITS OF ACCESS	○—○
POINT OF ACCESS	X
FENCE LINE	x—x
STONE WALL	=====
TRAVELED WAY	=====
GUARDRAIL	○—○—○
RAILROAD	—+—+—+—
SURVEY LINE	---
CULVERT	—+—+—+—
POWER POLE	○—○—○
TELEPHONE POLE	○—○—○
TREES	●
CONTROL OF ACCESS	///
PROPERTY LINE	---
R.O.W. TAKING LINE	SR
SLOPE RIGHTS	△
TOP OF CUT	△
TOE OF SLOPE	○

DATUM	NGVD 1929
VERTICAL	
HORIZONTAL	N/A



Plans Prepared By:

CLD CONSULTING ENGINEERS Inc.
540 Commercial Street • Manchester, NH 03101
(603) 668-8223 • Fax (603) 668-8802
cid@cldesigners.com • www.cldengineers.com
Maine • New Hampshire • Vermont

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED <i>[Signature]</i>	DATE 2/13/12
PROJECT MANAGER: W. SYMONDS	
PROJECT NAME: JOHNSON	
PROJECT NUMBER: BRF 030-2(17)S	
SHEET 1 OF 85 SHEETS	

STANDARDS

B-5	SLOPE GRADING, EMBANKMENTS, MUCK	6/01/94
B-11	UNDERDRAIN - ROCK SUBGRADE, SLOPE STABILIZ.	6/01/94
B-17	GUARD RAIL, BRIDGES, REST AREA, TURNOUTS	2/23/95
B-71	RESIDENTIAL AND COMMERCIAL DRIVES	7/08/05
C-1	CURBS, BITUMINOUS CONCRETE SIDEWALKS	1/03/00
	GRANITE SLOPE EDGING, VERTICAL GRANITE CURB	
	PRECAST REINFORCED CONCRETE CURB	
	CAST IN PLACE CONCRETE CURB	
	BITUMINOUS CONCRETE CURB, TREATED TIMBER CURB	
C-2A	PORTLAND CEMENT CONCRETE SIDEWALK DRIVE	10/14/05
	ENTRANCES, SIDEWALK ADJACENT TO CURB	
C-3A	SIDEWALK RAMPS	9/01/04
D-2	C.R.M. HEADWALLS, UNDERDRAIN	6/01/94
	C.R.M. HEADWALLS & RETAINING WALLS	
	RIPRAP LIGHT TYPE SLOPE HEADWALL	
	REINFORCED CONCRETE HEADWALL,	
	UNDERDRAIN & CARRIER PIPE CONSTRUCTION DETAILS	
D-3	TREATED GUTTERS	6/01/94
D-4	FLUSHING BASINS, END SECTION, ELBOWS	6/01/94
	TYPICAL WATERFALL FOR CULVERTS UP TO AND	
	INCLUDING 48" DIA	
	EXTENSION SERVICE BOX AND CURB STOP	
	CORRUGATED PIPE ELBOW	
	GRANULAR BORROW AT CULVERT LOCATIONS	
	UNDERDRAIN FLUSHING BASIN	
	CORRUGATED STEEL PIPE END SECTION	
	CORRUGATED STEEL PIPE ARCH END SECTION	
D-6	REINF. CONCRETE DROP INLET W/GRATE (DITCHES)	6/01/94
D-8	REINFORCED CONCRETE DROP INLET	1/03/00
	WITH PRECAST COVER & GRATE (BOTTOM SECTION)	
	SEE SHEETS D-9,10,11 FOR TOP SECTION	
D-9	REINFORCED CONCRETE DROP INLET TOPS	6/01/94
	VERTICAL CURB & THROAT ADAPTER	
D-11	GRATES & COVERS (TYPE A)	6/01/94
D-13	CONCRETE CATCH BASIN WITH CAST IRON GRATE &	1/03/00
	CONCRETE MANHOLE WITH CAST IRON GRATE	
D-15	PRECAST REINF. CONC. MANHOLE GRATES (BICYCLE SAFE)	6/01/94
	CAST IRON GRATE WITH FRAME,TYPE D	
	CAST IRON GRATE WITH FRAME,TYPE E	
D-20	HIGHWAY CROSSING FOR UNDERGROUND UTILITIES	3/03/03
E-100	CONSTRUCTION APPROACH SIGNS	1/02/04
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	1/02/04
E-101	CONSTRUCTION SIGN DETAILS	5/30/03
E-102	CONSTRUCTION SIGN DETAILS	6/30/03
E-102A	CONSTRUCTION SIGN DETAILS	5/01/04
E-106	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	3/01/04
E-107	DELINEATION, BARRICADES AND DETOURS FOR	6/30/03
	U-TURNS ON DIVIDED HIGHWAY	
E-107A	BREAKAWAY BARRICADE DETAILS	8/08/95
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	8/18/95
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	8/08/95
E-123	GUIDE SIGN PLACEMENT - MISCELLANEOUS DETAILS	3/16/04
E-125	TRAVEL INFORMATION SIGNS	8/08/95
E-134	BRIDGE NUMBER PLAQUE	8/08/95
E-141	REGULATORY SIGN DETAILS	9/20/95
E-142	REGULATORY SIGN DETAILS	9/20/95
E-143	REGULATORY SIGN DETAILS	6/15/04
E-146	REGULATORY SIGN DETAILS	9/20/95
E-152	WARNING SIGN DETAILS	5/01/04
E-160	FLANGED CHANNEL STEEL SIGN POST	5/20/99
E-164	SQUARE STEEL SIGN POST	5/20/99
E-173	PULL BOXES AND JUNCTION BOXES	8/09/95
E-175	POWER DROP STANCHIONS	11/17/93
E-180A	STREET LIGHTING DETAILS	8/09/95
E-180B	STREET LIGHTING DETAILS	8/09/95
E-181	TYPICAL BRIDGE MOUNTING DETAILS	8/09/95
	FOR STREET LIGHT POLE	
E-191	PAVEMENT MARKING DETAILS	2/01/99
E-193	PAVEMENT MARKING DETAILS	8/18/95
G-1	STEEL BEAM GUARDRAIL (50MPH & OVER)	1/03/00
	HEAVY DUTY STEEL BEAM GUARDRAIL	
	TWISTED END TERMINAL	
	ANCHOR FOR STEEL BEAM RAIL	
G-1D	STEEL BEAM GUARDRAIL (40MPH & LESS)	1/03/00
	HEAVY DUTY STEEL BEAM GUARDRAIL	
	STEEL BEAM MEDIAN BARRIER	
	ANCHOR FOR STEEL BEAM RAIL	
G-4	MARKERS - GUIDE POSTS - PLANK GUARD RAIL	6/01/94
	PLANK RAIL	
	GUIDE POSTS	
	WOOD MARKER POSTS	
	STEEL MARKER POSTS	
G-18	PRECAST CONCRETE TEMPORARY TRAFFIC BARRIER	6/01/94
J-1	PROJECT AND BOUNDARY MARKERS	6/01/94
J-3	MAILBOX SUPPORT DETAILS	8/07/95

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 - 2) INDEX OF SHEETS
 - 3) TYPICAL SECTIONS
 - 4-8) SUMMARY OF QUANTITIES
 - 9) BLANK
 - 10) ITEM DETAIL AND DRAINAGE SHEET
 - 11) EARTHWORKS
 - 12-15) RIGHT-OF-WAY SHEETS
 - 16) GENERAL PLAN
 - 17) PROFILE AND TIE SHEET
 - 18) PAVEMENT LAYOUT PLAN
 - 19) DRAINAGE PLAN
 - 20) 8"Ø WATERLINE REPLACE. - STA 101+48 TO 104+13
 - 21) SEWER SIPHON CHAMBER REPLACEMENT
 - 22) WATER DETAILS
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 - 24) UTILITY RELOCATION AND LIGHTING PLAN
 - 25) EROSION PREVENTION AND SEDIMENT CONTROL TITLE SHEET
 - 26) EROSION PREVENTION AND SEDIMENT CONTROL NARRATIVE
 - 27) EPSC - EXISTING CONDITIONS SITE PLAN
 - 28) EROSION PREVENTION AND SEDIMENT CONTROL PLAN
 - 29) EPSC - FINAL CONDITIONS SITE PLAN
 - 30) EROSION PREVENTION & SEDIMENT CONTROL DETAILS SILT FENCE
 - 31) EROSION PREVENTION & SEDIMENT CONTROL DETAILS CHECK DAMS
 - 32) EROSION PREVENTION & SEDIMENT CONTROL DETAILS DROP INLET PROTECTION
 - 33) EROSION PREVENTION & SEDIMENT CONTROL DETAILS CONSTRUCTION ENTRANCE
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 - 42) TRAFFIC CONTROL PLAN - PHASE I CONSTRUCTION
 - 43) TRAFFIC CONTROL PLAN - PHASE II CONSTRUCTION
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 - 47) BRIDGE QUANTITY SHEET
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 - 56) BEARING DETAILS
 - 57-58) ALUMINUM BRIDGE RAILING DETAILS
 - 59) ALUMINUM APPROACH RAILING DETAILS
 - 60) APPROACH RAIL DETAILS
 - 61) APPROACH SLAB DETAILS
 - 62) ABUTMENT NO. 1 DETAILS
 - 63) ABUTMENT NO. 2 DETAILS
 - 64) WINGWALL DETAILS
 - 65) SUBSTRUCTURE DETAILS
 - 66) LIGHTING DETAILS
 - 67) FOOTING REINFORCING PLAN
 - 68) PILE LAYOUT
 - 69) REINFORCING STEEL SCHEDULE
- 70-76) CROSS SECTIONS - ROUTE 15
 - 77-78) CROSS SECTIONS - TH#37
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 - R1) REFERENCE SHEET 1

DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	N/A

STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
Town Of	JOHNSON	Bridge No.	37
		Log Sta.	
Highway No.	VT ROUTE 15	Surv. Sta.	
VT ROUTE 15 OVER THE GIHON RIVER			
INDEX OF SHEETS			
Designed By	J. Warner	Drawn By.	T. Starr
Checked By	Date	Bridge Design Supervisor	
J. Warner	11/06	J. Byatt	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.	Sheet	2	Of 85

MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH)	±1/4"
SUBBASE	±1/2"
SAND BORROW	±1"

STA. 103+92 TO STA. 105+00 LT.
 * 8'-0" SHOULDER

TYPICAL SECTIONS

- 1-1/2" BITUMINOUS CONCRETE PAVEMENT (TYPE III)
 - 3" BITUMINOUS CONCRETE PAVEMENT (TYPE II)
 - 3-3/4" BITUMINOUS CONCRETE PAVEMENT (TYPE I)
 - 21" SUBBASE OF DENSE GRADED CRUSHED STONE
 - 21" SAND BORROW
- PG 58-34

SEEDING FORMULA URBAN AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
42.5	34.0	CREeping RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.00	80.0			

THE SEED MIXTURE SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED - TO BE APPLIED PER SEEDING FORMULA OR AS DIRECTED BY THE ENGINEER.

FERTILIZER - FORMULA 10-20-10 TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE - TO BE APPLIED AT THE RATE OF 2 TONS/ACRE OR AS DIRECTED BY THE ENGINEER.

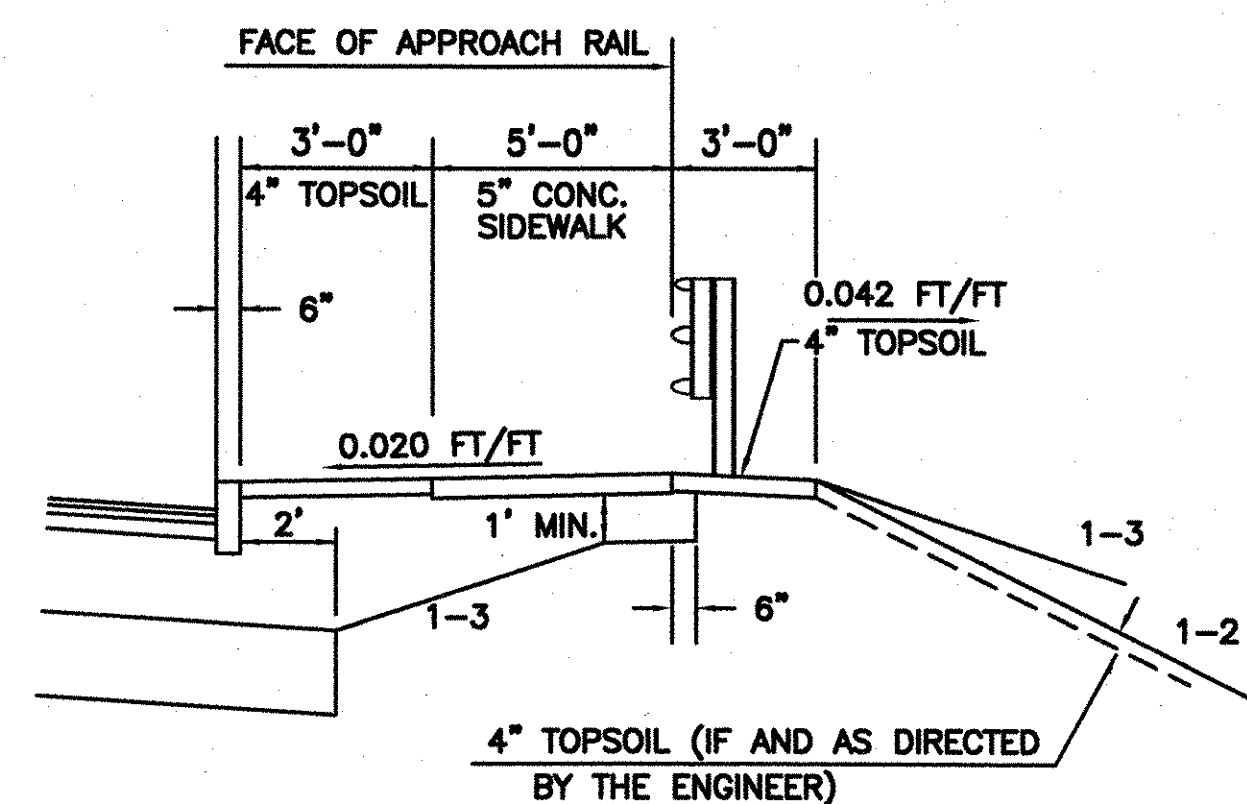
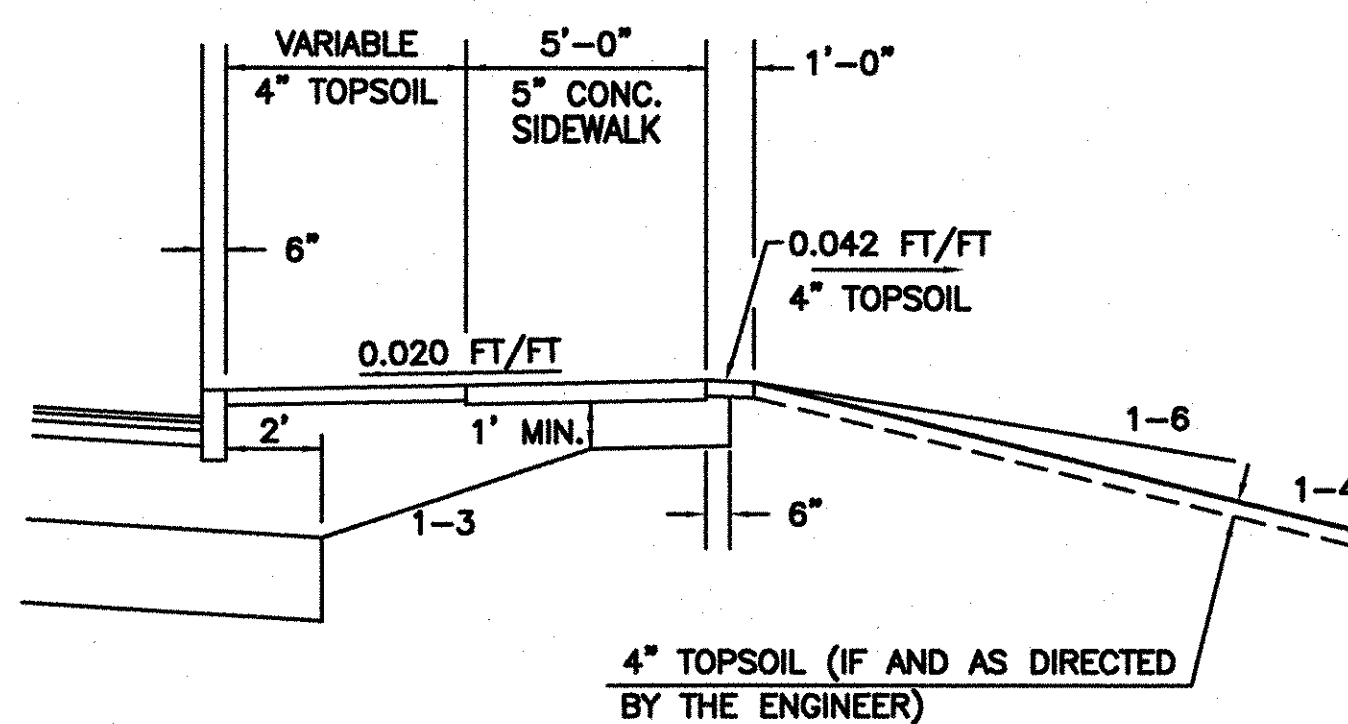
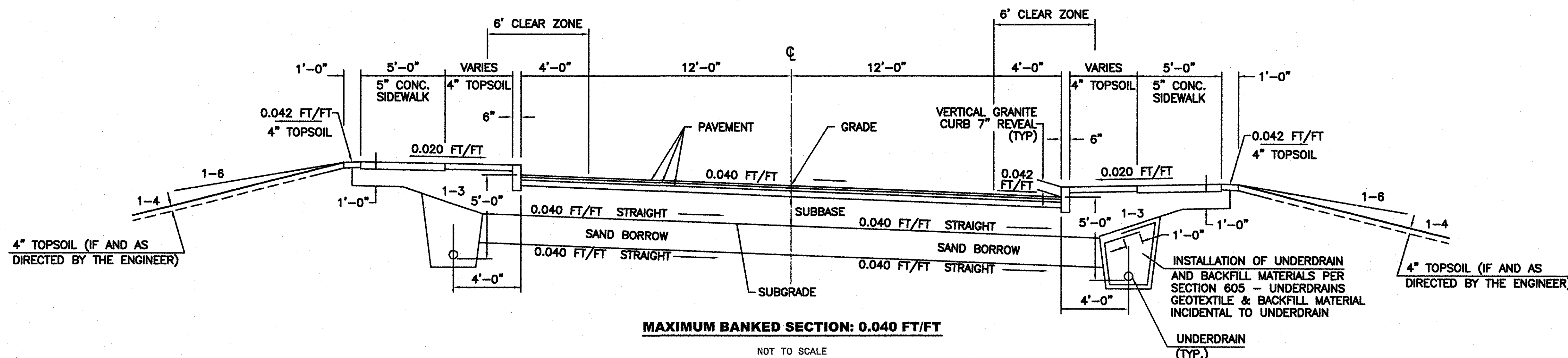
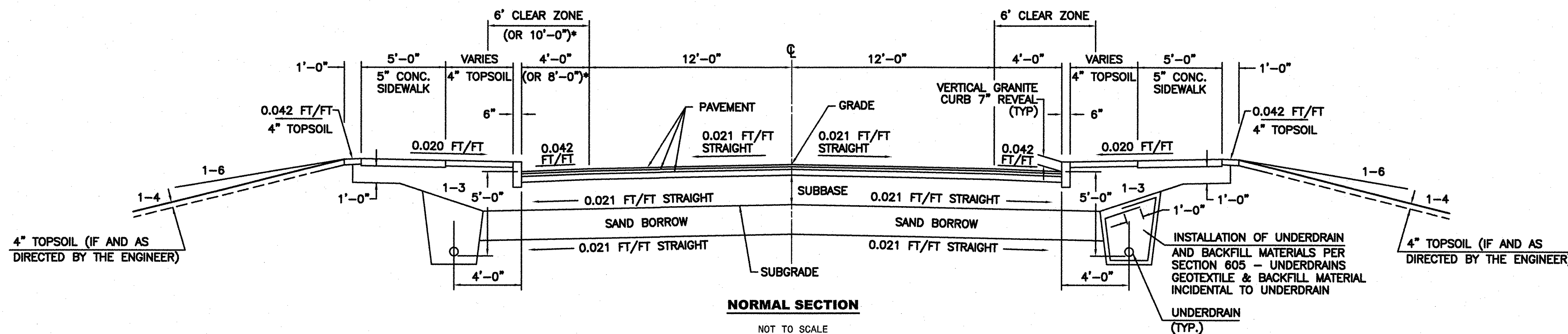
HAY MULCH - TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE OR AS DIRECTED BY THE ENGINEER.

TOPSOIL - TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

MARKER POSTS - TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.

TACK COAT - EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.026 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.

FOR 5" CONCRETE SIDEWALK AND VERTICAL GRANITE CURB DETAILS SEE STANDARD SHEETS C-1 AND C-2A.



STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GIHON RIVER			
TYPICAL SECTIONS			
Designed By	T. STARR	Drawn By	T. Starr
Checked By	Date	Bridge Design Supervisor	
J. Warner	11/06	J. Byatt	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.	Sheet 3	Of	85

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
FULL C.E. ITEMS			BRIDGE NO. 1	UTIL SEWER (NO FED./ST. PARTICIP.)	UTIL WATER (NO FED./ST. PARTICIP.)	EROSION CONTROL	TRAINING	ROADWAY (NO FEDERAL PARTICIP.)	ROADWAY	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS	
									1	1		LS	CLEARING AND GRUBBING (INCL. INDV. TREES & STUMPS)	201.10	-			COMMON EXCAVATION	
									1	1		EACH	THINNING AND TRIMMING (FOR SIGNS)	201.31	-	2525		VT ROUTE 15	
									2750	2750		CY	COMMON EXCAVATION	203.15	32	59		TH #37	
									600	600		CY	SOLID ROCK EXCAVATION	203.16	19	134		DRIVES	
																32		ROUNDING	
																2750	CY	TOTAL	
			1260							1260		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	9			BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	
									1050	1050		CY	SAND BORROW	203.31	44				
			40							40		CY	GRANULAR BORROW	203.32	-	424		APPROACHES	
				270	270	15			1250	1805		CY	TRENCH EXCAVATION OF EARTH	204.20	-	468		VT ROUTE 15	
				20	5				75	100		CY	TRENCH EXCAVATION OF ROCK	204.21	-	43		BRIDGE	
				60						60		CY	STRUCTURE EXCAVATION	204.25	-	78		DRIVES	
			1610	270	270				100	2250		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	-	110		DETOUR	
			2040							2040		CY	COFFERDAM EXCAVATION, EARTH	208.30	8	42		TH #37	
			120							120		CY	COFFERDAM EXCAVATION, ROCK	208.35	7	10		ROUNDING	
			1							1		LS	COFFERDAM (STA 102+95)	208.40	-	1175	TON	TOTAL	
			1							1		LS	COFFERDAM (STA 103+70)	208.40	-				
									470	470		SY	COLD PLANING-BITUMINOUS PAVEMENT	210.10	16				
						100			1940	2040		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	65				
									10	10		CY	AGGREGATE SURFACE COURSE	401.10	3				
									8	8		CWT	EMULSIFIED ASPHALT	404.65	0.7				
									1175	1175		TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25	10				
			1						37	38		CY	CONCRETE, CLASS B	501.25	-				
													BEGIN ALTERNATE ITEMS						
			204							204		CY	CONCRETE, HIGH PERFORMANCE CLASS A (SIPCMF) (MOD.-FPQ)	501.33	-				
			204							204		CY	CONCRETE, HIGH PERFORMANCE CLASS A (MOD.-FPQ)	501.33	-				
													END ALTERNATE ITEMS						
			649							649		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	0.3				
			1							1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10	-				
			2520							2520		LF	STEEL PILING (HP 14 X 73)	505.17	-				
			2							2		EACH	DYNAMIC PILE LOADING TEST	505.45	-				
			136860							136860		LB	STRUCTURAL STEEL(PLATE GIRDER)	506.55	9				
			59275						2900	62175		LB	REINFORCING STEEL	507.15	35				
			38670							38670		LB	EPOXY COATED REINFORCING STEEL	507.17	-				
			480							480		EACH	MECHANICAL BAR CONNECTOR	507.19	-				
			1660							1660		EACH	MECHANICAL BAR CONNECTOR (EPOXY COATED)	507.19	-				
			1							1		LS	SHEAR CONNECTORS (1224 - 7/8" x 7")	508.15	-				
			1							1		LS	STRUCTURAL PAINTING, SHOP APPLIED (68.4 TONS)	513.25	-				
			1							1		LS	CONTAINMENT & ENVIRONMENTAL PROTECTION, SHOP	513.35	-				
			1							1		LS	SURFACE PREPARATION, SHOP (68.4 TONS)	513.40	-				
			27							27		GAL	WATER REPELLENT (MOD.-SILANE)	514.10	0.3				
			33							33		LF	BRIDGE EXPANSION JOINT (ASPHALTIC PLUG)	516.10	-				

PROJECT NAME: JOHNSON
 PROJECT NUMBER: BRF 030-2(17)S
 FILE NAME: 06-0246_QSS.xls
 PROJECT MANAGER: JPB
 DESIGNED BY: JAW
 QUANTITY SHEET #1
 PLOT DATE: 02/12/2007
 DRAWN BY: MWS
 CHECKED BY: PTS
 SHEET 4 OF 85

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
FULL C.E. ITEMS			BRIDGE NO. 1	UTIL SEWER (NO FED./ST. PARTICIP.)	UTIL WATER (NO FED./ST. PARTICIP.)	EROSION CONTROL	TRAINING	ROADWAY (NO FEDERAL PARTICIP.)	ROADWAY	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
			423							423		SY	SHEET MEMBRANE WATERPROOFING (MOD. - TORCH APPLIED)	519.20	0.8			
			80							80		LF	METAL HAND RAILING (MOD. - TEMPORARY PEDESTRIAN RAILING)	525.15	-			
			155							155		LF	BRIDGE RAILING - ALUMNUMPEDESTRIAN (MOD. - ANODIZED BLACK)	525.23	0.8			
			1							1		LS	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS (MOD.)	527.10	-			
			1							1		LS	TWO-WAY TEMPORARY BRIDGE (1500 SF - EST.) (MOD. - 22' WIDE)	528.11	-			
			1							1		EACH	REMOVAL OF STRUCTURE (2000 SF - EST.)	529.15	-			
			18							18		EACH	BEARING DEVICE ASSEMBLY (FABRIC)	531.10	-			
									4	4		LF	12" PCCSP .064 (2-2/3 X 1/2)	601.0405	-			
													BEGIN OPTION AA					
									36	36		LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215	-			
									36	36		LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415	-			
													END OPTION AA					
													BEGIN OPTION BB					
									90	90		LF	24" CAAP .060 (2-2/3 X 1/2)	601.0225	-			
									90	90		LF	24" PCCSP .064 (2-2/3 X 1/2)	601.0425	-			
													END OPTION BB					
									4	4		LF	18" RCP CLASS III	601.0815	-			
													BEGIN OPTION CC					
									146	146		LF	18" RCP CLASS III	601.0815	-			
									146	146		LF	18" CPEP(SL)	601.2615	-			
													END OPTION CC					
													BEGIN OPTION DD					
									454	454		LF	24" RCP CLASS III	601.0825	-			
									454	454		LF	24" CPEP(SL)	601.2620	-			
													END OPTION DD					
									1	1		EACH	CONCRETE CATCH BASIN WITH CAST IRON GRATE	604.10	-			
				2						2		EACH	SANITARY SEWER MANHOLE (MOD. - SIPHON CHAMBER)	604.22	-			
									10	10		EACH	CAST IRON GRATE WITH FRAME, TYPE D	604.47	-			
									800	800		LF	6" UNDERDRAIN (MOD.)	605.10	31			
									95	95		LF	6" UNDERDRAIN CARRIER PIPE (MOD.)	605.20	-			
									8	8		EACH	UNDERDRAIN FLUSHING BASINS (MOD.)	605.95	-			
						5			25	30		HR	BULLDOZER RENTAL, TYPE I	608.10	EST			
									25	25		HR	POWER GRADER RENTAL	608.15	EST			
						5			45	50		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST			
						5			90	95		HR	TRUCK RENTAL	608.37	EST			
									100	100		MGAL	DUST CONTROL WITH WATER	609.10	EST			
									4	4		TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15	EST			
						20			20	20		CY	STONE FILL, TYPE I (MOD. - INLET PROTECTION)	613.10	EST			
						50			50	50		CY	STONE FILL, TYPE I	613.10	-			
						10			10	10		CY	STONE FILL, TYPE I (MOD. - CHECK DAM)	613.10	EST			
						70			70	70		CY	STONE FILL, TYPE I (MOD. - CONSTRUCTION ENTRANCE)	613.10	EST			

PROJECT NAME: JOHNSON
PROJECT NUMBER: BRF 030-2(17)S

FILE NAME: 06-0246_QSS.xls PLOT DATE: 02/12/2007
PROJECT MANAGER: JPB DRAWN BY: MWS
DESIGNED BY: JAW CHECKED BY: PTS
QUANTITY SHEET #2 SHEET 5 OF 85

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
FULL C.E. ITEMS			BRIDGE NO. 1	UTIL SEWER (NO FED./ST. PARTICIP.)	UTIL WATER (NO FED./ST. PARTICIP.)	EROSION CONTROL	TRAINING	ROADWAY (NO FEDERAL PARTICIP.)	ROADWAY	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						50				50		CY	STONE FILL, TYPE II	613.11	EST			
			1140							1140		CY	STONE FILL, TYPE IV	613.13	2			
									1230	1230		LF	VERTICAL GRANITE CURB	616.21	17			
			156							156		LF	GRANITE BRIDGE CURB	616.22	0.8			
									4	4		EACH	RELOCATE MAIL BOX, SINGLE SUPPORT	617.10	-			
									370	370		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (MOD.)	618.10	5			
									80	80		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH (MOD.)	618.11	2			
									4.4	4.4		SY	DETECTABLE WARNING SURFACE	618.30	-			
									10	10		EACH	BOUNDARY MARKERS	619.10	EST			
									5	5		EACH	YIELDING MARKER POSTS	619.17	-			
						500				500		LF	SNOW FENCE (MOD. - PDF)	620.70	EST			
									6	6		EACH	ENERGY ABSORPTION ATTENUATOR (SAND-FILLED PLASTIC BARREL)	621.56	-			
									270	270		LF	ALUMNUM APPROACH RAILING (MOD. - ANODIZED BLACK)	621.74	3			
									315	315		LF	REMOVL AND DISP OF GUARD RAIL	621.80	7			
									340	340		LF	TEMPORARY TRAFFIC BARRIER	621.90	-			
					140					140		LF	SLEEVES FOR UTILITIES (1") (PVC)	625.10	-			
				1						1		LS	DUCTS ON BRIDGE (2 x 10") (MOD.)	625.16	-			
				1						1		LS	DUCTS ON BRIDGE (2 x 12") (MOD.)	625.16	-			
					1					1		LS	DUCTS ON BRIDGE (2 x 16") (MOD.)	625.16	-			
									10	10		LF	VITRIFIED CLAY PIPE, EXTRA STRENGTH (6")	628.27	-			
				20						20		LF	DUCTILE IRON PIPE, CEM LINED (4") (MOD.)	628.28	-			
				160						160		LF	DUCTILE IRON PIPE, CEM LINED (6") (MOD.)	628.28	-			
				160						160		LF	DUCTILE IRON PIPE, CEM LINED (8") (MOD.)	628.28	-			
				65						65		LF	PVC SEWER PIPE (12") (MOD.)	628.35	-			
				1						1		LS	TRANSFER TO NEW SYSTEM-SANITARY SEWER (MOD.)	628.42	-			
					60					60		LF	SEAMLESS COPPER WATER TUBE (2")	629.23	-			
					120					120		LF	DUCTILE, IRON PIPE, CEM LINED (8")	629.24	-			
					1					1		EACH	EXTENSION SERVICE BOX AND CURB STOP (2")	629.25	-			
				1						1		EACH	GATE VALVE WITH VALVE BOX (6")	629.27	-			
				1						1		EACH	GATE VALVE WITH VALVE BOX (8")	629.27	-			
					1					1		EACH	RELOCATE HYDRANT (MOD.)	629.29	-			
					1					1		EACH	CORPORATION STOP (3/4")	629.39	-			
					1					1		LS	TRANSFER TO NEW SYSTEM-WATER SYSTEM	629.42	-			
					160					160		LF	PIPE INSULATION (8") (MOD.)	629.44	-			
				90	130					220		TON	CRUSHED STONE BEDDING	629.54	-			
					1					1		LS	WATER MAIN ON BRIDGE (8")	629.60	-			
									400	400		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST			
									1000	1000		HR	FLAGGERS	630.15	EST			
1										1		LS	FIELD OFFICE-ENGINEERS	631.10	-			
1										1		LS	TESTING EQUIPMENT - CONCRETE	631.16	-			

QUANTITY SHEET 4

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
FULL C.E. ITEMS			BRIDGE NO. 1	UTIL SEWER (NO FED./ST. PARTICIP.)	UTIL WATER (NO FED./ST. PARTICIP.)	EROSION CONTROL	TRAINING	ROADWAY (NO FEDERAL PARTICIP.)	ROADWAY	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
1										1		LS	TESTING EQUIPMENT - PROTECTIVE COATINGS	631.18				
1										1		LS	TESTING EQUIPMENT - BITUMINOUS	631.17	-			
1										1		LU	FIELD OFFICE - TELEPHONE (N.A.B.I.)	631.25	-			
							1040			1040		HR	EMPLOYEE TRAINEESHIP	634.10	-			
									1	1		LS	MOBILIZATION / DEMOBILIZATION	635.11	-			
									1	1		LS	TRAFFIC CONTROL	641.10	-			
									2	2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-			
									1290	1290		LF	DURABLE 4" WHITE LINE (THERMOPLASTIC)	646.40	20			
									1360	1360		LF	DURABLE 4" YELLOW LINE (THERMOPLASTIC)	646.41	20			
									16	16		LF	DURABLE 24" STOP BAR (THERMOPLASTIC)	646.46	-			
									4	4		EACH	DURABLE LETTER OR SYMBOL (THERMOPLASTIC)	646.50	-			
									6840	6840		LF	TEMPORARY 4" WHITE LINE (PAINT)	646.60	60			
									6820	6820		LF	TEMPORARY 4" YELLOW LINE (PAINT)	646.61	60			
									100	100		LF	TEMPORARY 24" STOP BAR (PAINT)	646.66	4			
									8	8		EACH	TEMPORARY LETTERS OR SYMBOLS (PAINT)	646.70	-			
									75	75		LF	TEMPORARY CROSSWALK MARKING W/DIAGONAL LINES (PAINT)	646.71	-			
									120	120		EACH	RAISED PAVEMENT MARKERS TYPE II	646.75	18			
									80	80		EACH	LINE STRIPING TARGETS	646.76	8			
									2200	2200		SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85	37			
									250	250		SY	GEOTEXTILE FOR ROADBED SUBGRADE SEPARATOR	649.11	EST			
			1115			10				1125		SY	GEOTEXTILE UNDER STONE FILL	649.31	1			
						200				200		SY	GEOTEXTILE FOR SILT FENCE	649.51	45			
						250				250		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61	14			
						30				30		LB	SEED	651.15	6			
						10				10		LB	SEED-WINTER RYE	651.17	EST			
						170				170		LB	FERTILIZER	651.18	21			
						1				1		TON	AGRICULTURAL LIMESTONE	651.20	-			
						1				1		TON	HAYMULCH	651.25	-			
									165	165		CY	TOPSOIL	651.35	5			
			325							325		SY	GRUBBING MATERIAL	651.40	-			
						1				1		LS	EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.10	-			
						550				550		HR	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.20	EST			
						1				1		LU	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N.A.B.I.)	652.30	-			
						825				825		SY	EROSION MATTING	654.10	25			
									3	3		EACH	TRANSPLANTING SHRUBS	656.50	-			
									65	65		SF	TRAFFIC SIGNS, TYPE A	675.20	0.25			
													BEGIN OPTION EE					
									160	160		LF	FLANGED CHANNEL SIGN POST	675.301	1			
									160	160		LF	SQUARE TUBE SIGN POSTS AND ANCHOR	675.341	1			
													END OPTION EE					
									247	247		LB	TUBULAR STEEL SIGN POSTS	675.33	-			

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**STATE OF VERMONT
AGENCY OF TRANSPORTATION
TABLE OF PROJECT PROPERTY ACQUISITION**

**STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET**

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS	REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	SAUVE, PAUL J.	9	100+00 CL	103+16 CL	0.27A±		ALL R. T. & I.				JOHNSON		VT. RTE. 15-HWY EASEMENT DRIVE 30' PAVED M.M. 0388	1	6, 9	PARCEL NO. 1 SAUVE. REMOVE DRIVE (T) AT STA. 100+84 RT. AND DETOUR (T) FOR TEMP. SIDEWALK. ADD DRIVE (T) AT STA. 100+20 RT. AND STA. 101+24 RT. PER C.O. 9046.	06-18-99	R. M. W.	L. W. B.
			100+20 RT.	102+97 RT.			CONST. (T) 3270 S.F.±						18" METAL PIPE/ DROP INLET ISLAND WITH LIGHTED SIGN AND CONCRETE BASE WITH LUMINAIRE						
			100+82 RT.	101+87 RT.			REMOVE (T)						CONCRETE BASE DRIVE 12' PAVED M.M. 0390						
			100+94 RT.	101+12 RT.			ALL R. T. & I.												
			101+00 RT.	101+07 RT.			REMOVE (T)												
			101+24 RT.	102+82 RT.			SLOPE (P) 280 S.F.±												
			102+00 RT.	102+72 RT.			CUL., DIT. & DR. (P)												
			102+64 RT.	103+04 RT.			CHANNEL (P) 720 S.F.±												
			102+79 RT.																
2A	POMERLEAU FAMILY PARTNERSHIP (LESSOR) LESSEES: JOHNSON PHARMACY CHAMPLAIN OIL COMPANY INC. GRAND UNION STORES, INC. OF VERMONT UNITED STATES POSTAL SERVICE THE MERCHANTS BANK	9	103+54 RT.	106+50 RT.	0.30A±		ALL R. T. & I.			JOHNSON		VT. RTE. 15-HWY EASEMENT	4	6, 9	PARCEL NO. 1 SAUVE. REMOVE TAKE ON SUB-PARCEL 1B. STA. 101+35 RT. ~ 103+06 RT.; 3950 S.F.±. REMOVE CONST. (T) AT 100+96 RT. ~ 100+81 RT.; 700 S.F.±. REMOVE DRAINAGE (P) AT 102+00 RT. REMOVE DRAINAGE (P) AT STA. 102+45 RT. PER C.O. 9069.	09-02-99	M. J. R.	L. W. B.	
2B		9	103+43 RT.	103+83 RT.	1470 S.F.±								5	6, 9	PARCEL NO. 1 SAUVE. ADD CONST. (T) AT STA. 100+82 RT. ~ 102+92 RT.; 3720 S.F.±. ADD SLOPE (P) AT STA. 102+04 RT. ~ 102+82 RT.; 280 S.F.±. ADD CUL., DIT. & DRAINAGE (P) AT STA. 102+64 RT. ~ 102+72 RT. ADD CHANNEL (P) AT STA. 102+79 RT. ~ 103+04 RT.; 720 S.F.±. PER C.O. 9068.	09-02-99	M. J. R.	L. W. B.	
			103+45 RT.	103+69 RT.			INSTALL (T)					FILTER CURTAIN							
			103+93 RT.	104+25 RT.			EXCEPT & RESERVE					CONC. SIDEWALK & BUILDING							
			104+02 RT.				RESET (T)					SIGN-PERSONAL PROPERTY							
			105+05 RT.				DRIVE (T)					32' PAVED M.M. 0397							
			106+15 RT.									37' PAVED DRIVE M.M. 0400							
3	THE GLORIA MOBBS REVOCABLE TRUST- ROBERT MOBBS, TRUSTEE	9	100+00 CL	100+77 CL	3035 S.F.±		ALL R. T. & I.			JOHNSON		VT. RTE. 15-HWY EASEMENT 12' GRAVEL DRIVE M.M. 0389	6	6, 9	PARCEL NO. 2 POMERLEAU. REMOVE DETOUR (T) AT STA. 103+83 RT. ~ 104+25 RT. PER C.O. 9086.	11-29-99	B. A. H.	L. W. B.	
			100+55 LT.																
4	MOBBS, ROBERT L. & GLORIA J.	9	100+54 LT.	101+07 CL	2200 S.F.±		ALL R. T. & I.	WD		JOHNSON	90	102-103	VT. RTE. 15 & TH 37 HWY EASEMENT	8	7, 9	PARCEL NO. 6 UNION BANK. REMOVE 101.69 LT. -101+73 LT., REMOVE & RESET, LIGHTED SIGN WITH PLANTER PERSONAL PROPERTY ON DETAIL SHEET AND LAYOUT. PER C.O. 9201.	06-25-01	S. L. D.	R. P. D.
			100+55 LT.	100+69 LT.			CONST. (T) 120 S.F.±												
			100+66 LT.	100+70 LT.			SLOPE (T) 5 S.F.±												

PAPER PRINT AND ELECTRONIC FILES TO STRUCTURES. 1/11/07

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DATE PLOTTED 11-JAN-2007

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT
TEMPORARY EASEMENT

LEGEND

--- C&T (P) --- CLEARING & TRIMMING
... CZ (P) ... CLEAR ZONE
--- CONST. (T) --- CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
△ △ TOP OF CUT
○ ○ TOE OF SLOPE

--- UE (P) --- PERMANENT UTILITY EASEMENT
REVISED 03-16-00

APPROVED: FRANK J. MALNATI JR. DATE: 1/8/07
ACTING CHIEF, PLANS & TITLES

R. O. W. PLANS

JOHNSON
BRF 030-2(17) S
R. O. W. SHEET 6 OF 9 SHEETS
SHEET 12 OF 85

**STATE OF VERMONT
AGENCY OF TRANSPORTATION
TABLE OF PROJECT PROPERTY ACQUISITION
RIGHT OF WAY PLANS
DETAIL SHEET**

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS	REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
5	CHARETTE, TROY J. & MILLER, VERONICA J.	9	100+91 LT. 101+18 LT. 101+34 LT.	101+62 LT. 101+66 LT. 101+63 LT.	2740 S.F. ±		ALL R. T. & I. CONST. (T) 200 S.F. ± SLOPE (T) 50 S.F. ±			JOHNSON			VT. RTE. 15-HWY EASEMENT						
6A	UNION BANK	9	101+38 CL 101+62 LT. 101+63 LT. 101+71 LT. 101+94 LT. 102+12 LT. 102+30 LT. 102+30 LT. 102+60 LT. 102+58 LT. 102+75 LT.	103+38 LT. 101+73 LT. 101+78 LT. 102+86 LT. 102.79 LT. 102+60 LT. 102+60 LT.	0.16A±		ALL R. T. & I. SLOPE (T) 15 S.F. ± CONST. (T) 75 S.F. ± TRANSPLANT (T) TRANSPLANT (T) DRIVE (T) CONST. (T) 270 S.F. ± SLOPE (T) 125 S.F. ± TRANSPLANT (T) REMOVE & RESET (T) TRANSPLANT (T)	WD	08-03-01	JOHNSON	90	190-191	VT. RTE. 15-HWY EASEMENT SHRUB HARDWOOD BUSH 29' PAVED M.M. 0392 HARDWOOD SHRUB CHAIN LINK FENCE LENGTH= ±5 FT FLOWERING CRAB						
6B		9	102+71 LT.	103+49 LT.	2610 S.F. ±					JOHNSON									
7A	VIEUX, RODNEY F.	9	103+58 LT. 104+03 LT. 104+15 LT.	104+46 LT. 104+37 LT.	3110 S.F. ±		ALL R. T. & I. DRIVE (T) EXCEPT & RESERVE			JOHNSON			VT. RTE. 15-HWY EASEMENT 16' GRAVEL M.M. 0395 STONE WALL						
7B		9	103+66 LT. 103+67 LT. 103+67 LT.	104+00 LT. 104+00 LT. 103+98 LT.	990 S.F. ±		CONST. (T) 330 S.F. ± INSTALL (T)			JOHNSON			FILTER CURTAIN						

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DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT
TEMPORARY EASEMENT

LEGEND
C&T (P) CLEARING & TRIMMING
CZ (P) CLEAR ZONE
CONSI. (T) CONSTRUCTION EASEMENT
SR SLOPE RIGHTS
P PROPERTY LINE
L TOP OF CUT
O TOE OF SLOPE

..UE (P) PERMANENT UTILITY EASEMENT
REVISED 03-16-00

APPROVED: FRANK J. MALNATI JR. DATE: 1/8/07
ACTING CHIEF, PLANS & TITLES

R. O. W. PLANS
JOHNSON
BRF 030-2(17) S
R. O. W. SHEET 7 OF 9 SHEETS
SHEET 13 OF 85

**STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET**

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS	REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
8	LIBRETT, BERNARD E. & JULIE A.	9	104+46 CL	105+11 LT.	2405 S.F.±		ALL R. T. & I.	WD	08-03-01	JOHNSON	90	192-	VT. RTE. 15-HWY EASEMENT						
			104+52 LT.				EXCEPT & RESERVE					193	CONC. RETAINING WALL - END						
			104+99 LT.				DRIVE (T)						13' GRAVEL M.M. 0397						
9	JENNISON, WILLIAM H.	9	105+11 CL	105+91 LT.	2960 S.F.±		ALL R. T. & I.			JOHNSON			VT. RTE. 15-HWY EASEMENT						
			105+20 LT.	105+60 LT.			EXCEPT & RESERVE						STONE WALL/STEPS						
10	THE UNITED CHURCH OF JOHNSON, INC.	9	105+91 LT.	106+50 LT.	2183 S.F.±		ALL R. T. & I.	WD	07-12-01	JOHNSON	89	531- 532	VT. RTE. 15-HWY EASEMENT						
			106+30 LT.										DRIVE, 20' WIDE PAVED						
													M.M. 0399						
11	TOWN OF JOHNSON	9	100+91 LT.	TH*37 30+85 CL			APPROACH (T)	TU	06-22-01	JOHNSON	89	427	TH*37 *GOULD HILL RD.*						
12	BELL ATLANTIC - NEW ENGLAND												TELEPHONE UTILITY						
13	FRONTIER VISION												CABLE UTILITY						
14	VILLAGE OF JOHNSON												SEWER, WATER UTILITY & ELECTRIC						
15	VILLAGE OF MORRISVILLE WATER & LIGHT DEPT.												ELECTRIC UTILITY						
	MAINTENANCE AGREEMENT AREA NO. 1	9	101+07 LT.	100+91 LT.									TH*37 LENGTH 48'						

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DATE PLOTTED 11-JAN-2007

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
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[W]- WATER SOURCES

PRESENT R.O.W.
 TAKING WITHOUT ACCESS
 TAKING WITHOUT ACCESS ALONG PROPERTY LINE
 TAKING WITH ACCESS
 PERMANENT EASEMENT
 TEMPORARY EASEMENT

LEGEND

 C&T (P) CLEARING & TRIMMING
 CZ (P) CLEAR ZONE
 CONST. (T) CONSTRUCTION EASEMENT
 SR SLOPE RIGHTS
 P PROPERTY LINE
 L TOP OF CUT

 UE (P) PERMANENT UTILITY EASEMENT
 REVISED 03-16-00

APPROVED: FRANK J. MALNATI JR. DATE: 1/8/07
ACTING CHIEF, PLANS & TITLES

R. O. W. PLANS
JOHNSON
 BRF 030-2(17) S
 R. O. W. SHEET 8 OF 9 SHEETS
 SHEET 14 OF 85

RELOCATE MAILBOX, SINGLE SUPPORT
 STA 100+68, LT
 STA 101+17, LT

DEMOLITION & DISPOSAL OF BUILDING
 STA 101+69, LT - LIGHTED PLANTER BOX W/SIGN

END MAINT. AGREE. AREA NO. 1
 STA. 100+91 58' LT. LENGTH 48'

BEGIN MAINT. AGREE. AREA NO. 1
 STA. 101+07 12' LT.

5" PORTLAND CEMENT CONCRETE SIDEWALK
 STA 100+00 - 100+54, RT
 STA 101+13 - 101+89, RT
 STA 101+25 - 101+89, LT
 STA 102+38 - 103+00, LT
 STA 103+66 - 104+80, RT
 STA 103+77 - 105+14, LT
 STA 104+71 - 105+14, LT (3' WIDE)
 STA 105+31 - 105+94, RT

REMOVAL AND DISPOSAL OF GUARDRAIL
 STA 101+67 - 103+05, RT
 STA 102+84 - 103+08, LT
 STA 102+88 - 103+08, RT
 STA 103+80 - 103+96, RT
 STA 103+80 - 104+49, RT
 STA 103+82 - 103+94, LT

CAST IN PLACE CONCRETE CURB TYPE B
 STA 100+00 - 100+61, RT
 STA 100+00 - 100+65, RT
 STA 101+02 - 101+72, RT
 STA 101+02 - 101+72, RT
 STA 101+30 - 102+90, RT
 STA 101+30 - 101+95, LT
 STA 102+30 - 102+99, LT
 STA 103+67 - 104+88, RT
 STA 103+76 - 103+92, LT
 STA 104+14 - 104+39, LT
 STA 104+25 - 104+90, RT
 STA 104+51 - 104+89, LT
 STA 105+09 - 106+15, LT
 STA 105+22 - 105+95, RT
 STA 105+24 - 105+93, RT
 STA 106+38 - 106+50, LT

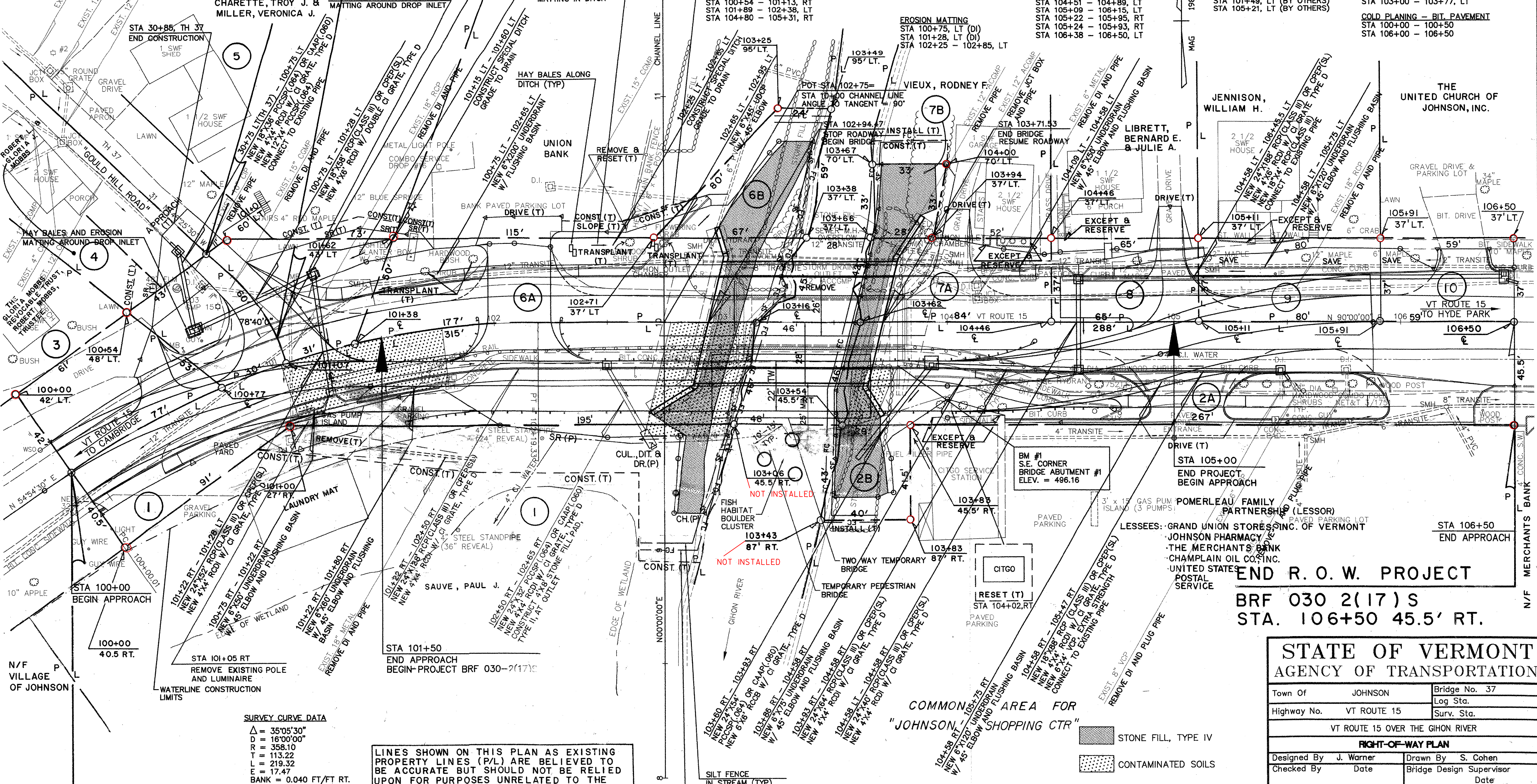
CONSTRUCT DRIVE
 STA 100+55, LT - 12'w GRAVEL
 STA 100+20, RT - 30'w PAVED
 STA 102+12, LT - 29'w PAVED
 STA 104+03, LT - 18'w GRAVEL
 STA 104+99, LT - 13'w GRAVEL
 STA 105+05, RT - 32'w PAVED
 STA 106+15, RT - 37'w PAVED
 STA 106+30, LT - 20'w PAVED
 STA 101+24, RT - 12'w PAVED
 CHANGING ELEV. OF DROP INLETS, CATCH BASINS OR MANHOLES
 STA 101+49, LT (BY OTHERS)
 STA 105+21, LT (BY OTHERS)

CONSTRUCT SIDEWALK RAMP
 STA 101+27, LT (TYPE 1)
 STA 101+27, RT (TYPE 6)

ALUMINUM APPROACH RAIL (MOD)
 STA 101+75 - 102+88, RT
 STA 102+75 - 103+00, LT
 STA 103+65 - 104+15, RT
 STA 103+77 - 104+27, LT

BRIDGE RAILING - ALUMINUM/PEDESTRIAN
 STA 102+88 - 103+65, RT
 STA 103+00 - 103+77, LT

COLD PLANING - BIT. PAVEMENT
 STA 100+00 - 100+50
 STA 106+00 - 106+50



BEGIN R. O. W. PROJECT
 BRF 030-2(17)S STA. 100+00

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES (P/L) ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

SURVEY CURVE DATA
 Δ = 35°05'30"
 D = 16°00'00"
 R = 358.10
 T = 113.22
 L = 219.32
 E = 17.47
 BANK = 0.040 FT/FT RT.

5" PORTLAND CEMENT CONCRETE SIDEWALK
 STA 100+54 - 101+13, RT
 STA 101+89 - 102+38, LT
 STA 104+80 - 105+31, RT

EXTRA DEPTH OF SUBBASE
 STA 102+44 - STA 102+94
 STA 103+72 - STA 104+22

EROSION MATTING
 STA 100+75, LT (DI)
 STA 101+28, LT (DI)
 STA 102+25 - 102+85, LT

REMOVE 8" RCP
 STA 101+02 - 101+72, RT
 STA 101+30 - 102+90, RT
 STA 101+30 - 101+95, LT
 STA 102+30 - 102+99, LT
 STA 103+67 - 104+88, RT
 STA 103+76 - 103+92, LT
 STA 104+14 - 104+39, LT
 STA 104+25 - 104+90, RT
 STA 104+51 - 104+89, LT
 STA 105+09 - 106+15, LT
 STA 105+22 - 105+95, RT
 STA 105+24 - 105+93, RT
 STA 106+38 - 106+50, LT

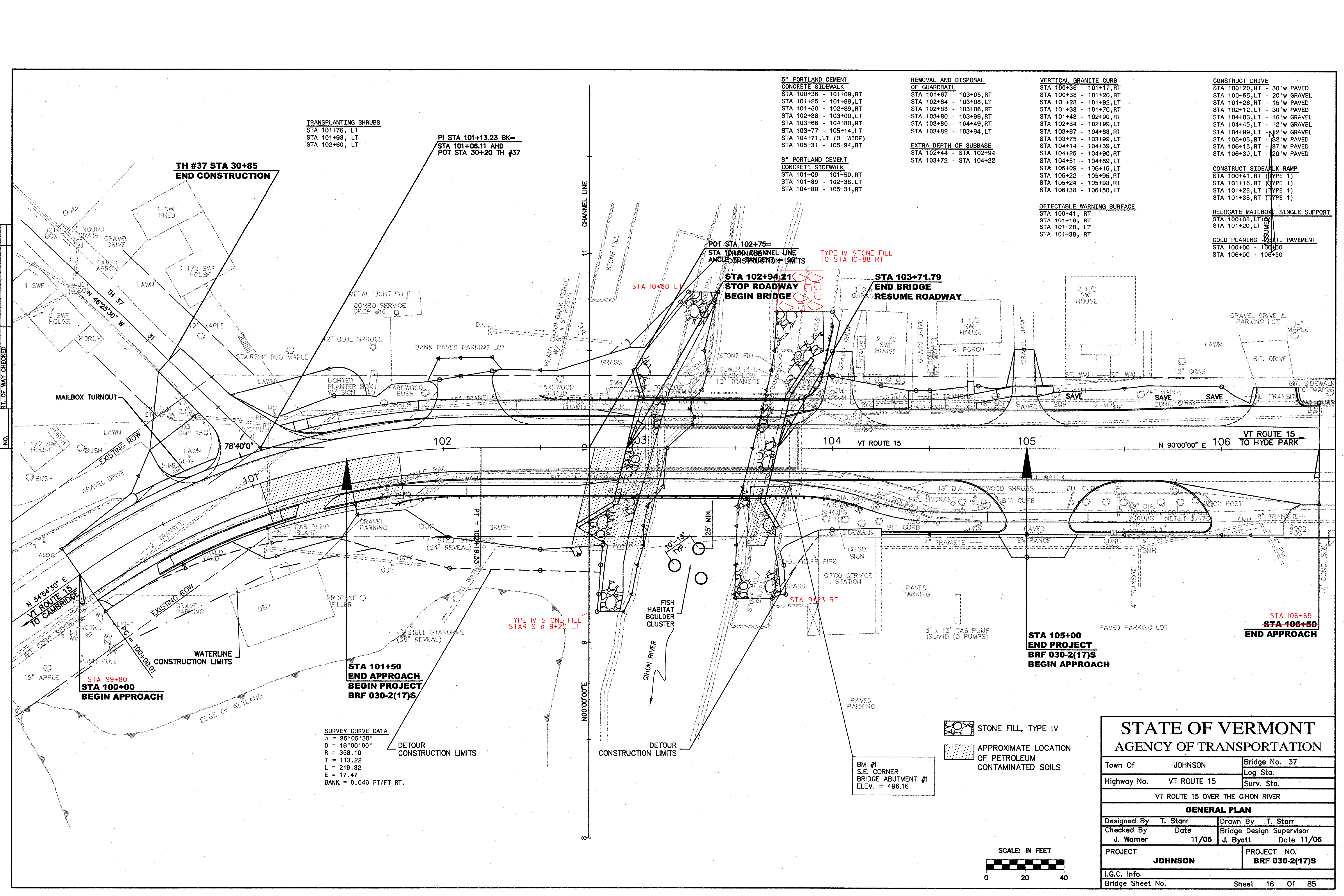
REMOVE 12" RCP
 STA 101+02 - 101+72, RT
 STA 101+30 - 102+90, RT
 STA 101+30 - 101+95, LT
 STA 102+30 - 102+99, LT
 STA 103+67 - 104+88, RT
 STA 103+76 - 103+92, LT
 STA 104+14 - 104+39, LT
 STA 104+25 - 104+90, RT
 STA 104+51 - 104+89, LT
 STA 105+09 - 106+15, LT
 STA 105+22 - 105+95, RT
 STA 105+24 - 105+93, RT
 STA 106+38 - 106+50, LT

REMOVE 18" RCP
 STA 101+02 - 101+72, RT
 STA 101+30 - 102+90, RT
 STA 101+30 - 101+95, LT
 STA 102+30 - 102+99, LT
 STA 103+67 - 104+88, RT
 STA 103+76 - 103+92, LT
 STA 104+14 - 104+39, LT
 STA 104+25 - 104+90, RT
 STA 104+51 - 104+89, LT
 STA 105+09 - 106+15, LT
 STA 105+22 - 105+95, RT
 STA 105+24 - 105+93, RT
 STA 106+38 - 106+50, LT



STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GHON RIVER			
RIGHT-OF-WAY PLAN			
Designed By	J. Warner	Drawn By	S. Cohen
Checked By	Date	Bridge Design Supervisor	Date
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
R.O.W. SHEET 9 OF 9		SHEET 15 OF 85	



TRANSPLANTING SHRUBS
 STA 101+76, LT
 STA 101+93, LT
 STA 102+60, LT

PI STA 101+13.23 BK=
 STA 101+06.11 AHD
 POT STA 30+20 TH #37

**TH #37 STA 30+85
 END CONSTRUCTION**

5" PORTLAND CEMENT
 CONCRETE SIDEWALK
 STA 100+36 - 101+09, RT
 STA 101+25 - 101+89, LT
 STA 101+50 - 102+89, RT
 STA 102+38 - 103+00, LT
 STA 103+66 - 104+80, RT
 STA 103+77 - 105+14, LT
 STA 104+71, LT (3' WIDE)
 STA 105+31 - 105+94, RT

8" PORTLAND CEMENT
 CONCRETE SIDEWALK
 STA 101+09 - 101+50, RT
 STA 101+89 - 102+39, LT
 STA 104+80 - 105+31, RT

REMOVAL AND DISPOSAL
 OF GUARDRAIL
 STA 101+67 - 103+05, RT
 STA 102+84 - 103+08, LT
 STA 102+88 - 103+08, RT
 STA 103+80 - 103+96, RT
 STA 103+80 - 104+49, RT
 STA 103+82 - 103+94, LT

EXTRA DEPTH OF SUBBASE
 STA 102+44 - STA 102+94
 STA 103+72 - STA 104+22

VERTICAL GRANITE CURB
 STA 100+36 - 101+17, RT
 STA 100+38 - 101+20, RT
 STA 101+28 - 101+92, LT
 STA 101+33 - 101+70, RT
 STA 101+43 - 102+90, RT
 STA 102+34 - 102+99, LT
 STA 103+67 - 104+88, RT
 STA 103+75 - 103+92, LT
 STA 104+14 - 104+39, LT
 STA 104+25 - 104+90, RT
 STA 104+51 - 104+89, LT
 STA 105+09 - 106+15, LT
 STA 105+22 - 105+95, RT
 STA 105+24 - 105+93, RT
 STA 106+38 - 106+50, LT

CONSTRUCT DRIVE
 STA 100+20, RT - 30' W PAVED
 STA 100+55, LT - 20' W GRAVEL
 STA 101+28, RT - 15' W PAVED
 STA 102+12, LT - 30' W PAVED
 STA 104+03, LT - 16' W GRAVEL
 STA 104+45, LT - 12' W GRAVEL
 STA 104+99, LT - 12' W GRAVEL
 STA 105+05, RT - 32' W PAVED
 STA 106+15, RT - 37' W PAVED
 STA 106+30, LT - 20' W PAVED

CONSTRUCT SIDEWALK RAMP
 STA 100+41, RT (TYPE 1)
 STA 101+16, RT (TYPE 1)
 STA 101+28, LT (TYPE 1)
 STA 101+38, RT (TYPE 1)

RELOCATE MAILBOX, SINGLE SUPPORT
 STA 100+68, LT (2)
 STA 101+20, LT (2)

DETECTABLE WARNING SURFACE
 STA 100+41, RT
 STA 101+16, RT
 STA 101+28, LT
 STA 101+38, RT

COLD PLANING - BIT. PAVEMENT
 STA 100+00 - 100+50
 STA 106+00 - 106+50

POT STA 102+75=
 STA 102+75.21
 ANGLE OF STANDBY LIMITS

**STA 102+94.21
 STOP ROADWAY
 BEGIN BRIDGE**

**STA 103+71.79
 END BRIDGE
 RESUME ROADWAY**

STA 10+80 LT

TYPE IV STONE FILL
 TO STA 10+88 RT

TYPE IV STONE FILL
 STARTS @ 9+20 LT

STA 106+65
 STA 106+50
 END APPROACH

**STA 105+00
 END PROJECT
 BRF 030-2(17)S
 BEGIN APPROACH**

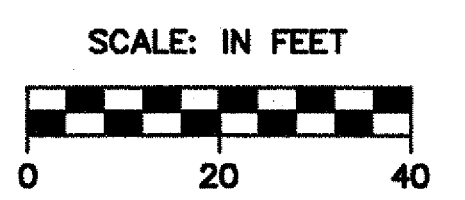
**STA 101+50
 END APPROACH
 BEGIN PROJECT
 BRF 030-2(17)S**

STA 99+80
 STA 100+00
 BEGIN APPROACH

SURVEY CURVE DATA
 $\Delta = 35^{\circ}05'30''$
 $D = 16^{\circ}00'00''$
 $R = 358.10$
 $T = 113.22$
 $L = 219.32$
 $E = 17.47$
 $BANK = 0.040 \text{ FT/FT RT.}$

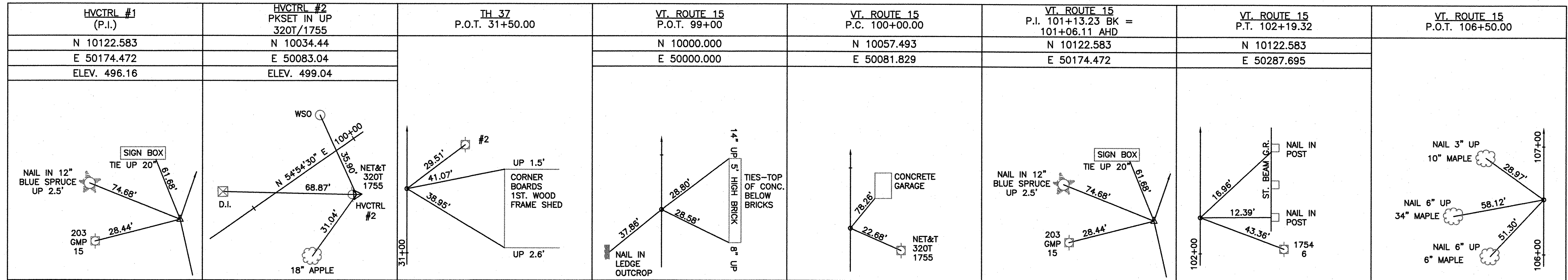
BM #1
 S.E. CORNER
 BRIDGE ABUTMENT #1
 ELEV. = 496.16

STONE FILL, TYPE IV
 APPROXIMATE LOCATION
 OF PETROLEUM
 CONTAMINATED SOILS



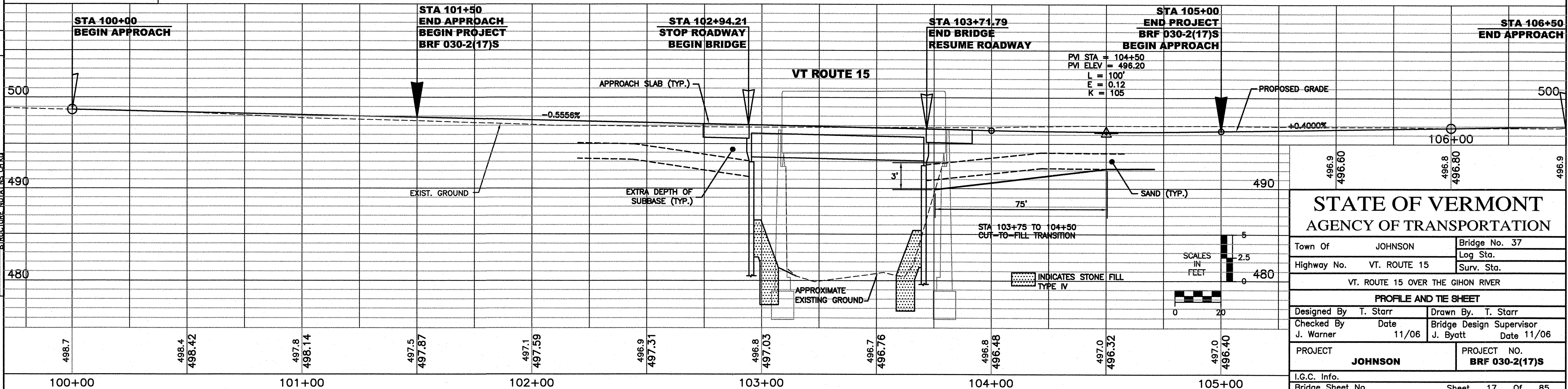
STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT ROUTE 15	Log Sta.
		Surv. Sta.
VT ROUTE 15 OVER THE GHION RIVER		
GENERAL PLAN		
Designed By	T. Starr	Drawn By T. Starr
Checked By	Date	Bridge Design Supervisor
J. Warner	11/06	J. Byatt Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 16 Of 85

SURVEY LINE TIES



NOT TO SCALE

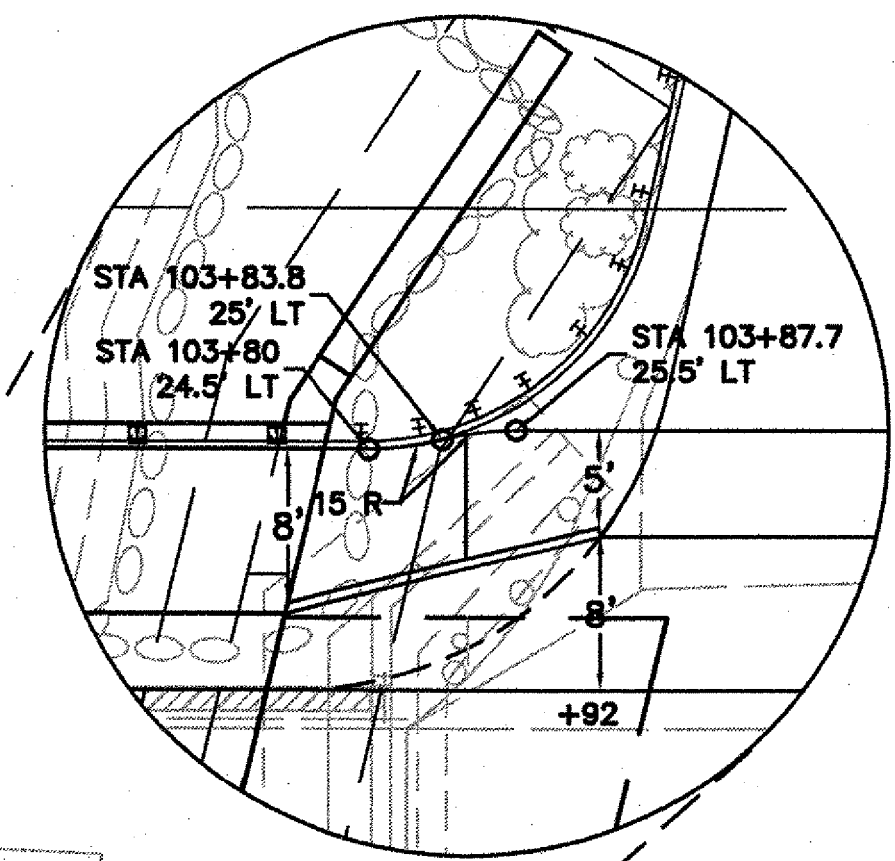
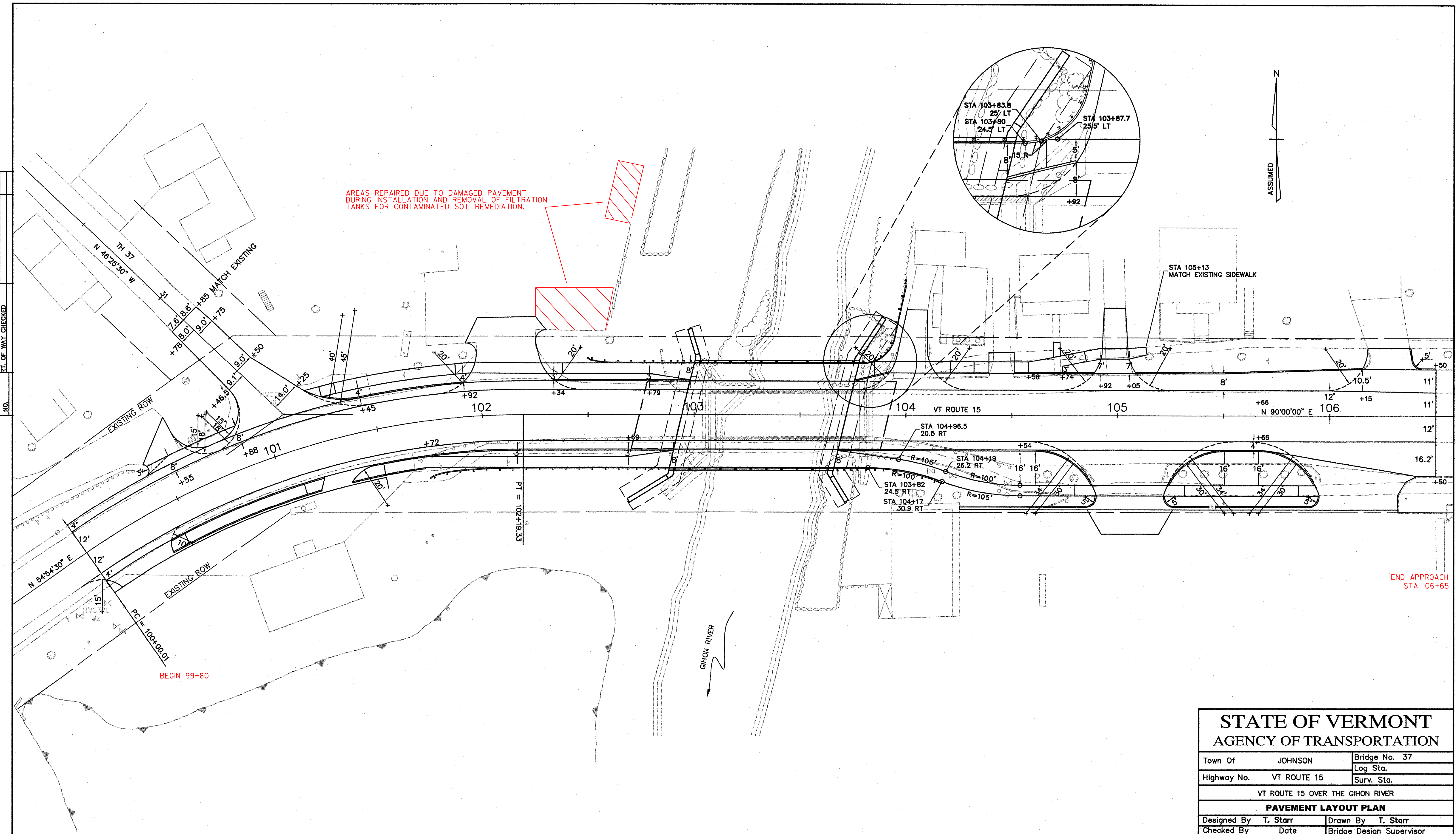
DATUM
 VERTICAL NGVD 1929
 HORIZONTAL N/A



**STATE OF VERMONT
 AGENCY OF TRANSPORTATION**

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT. ROUTE 15	Log Sta.	
		Surv. Sta.	
VT. ROUTE 15 OVER THE GHON RIVER			
PROFILE AND TIE SHEET			
Designed By	T. Starr	Drawn By	T. Starr
Checked By	J. Warner	Bridge Design Supervisor	J. Byatt
Date	11/06	Date	11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.		Bridge Sheet No.	Sheet 17 Of 85

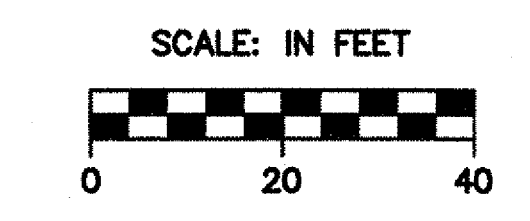
NO. RT. OF WAY CHECKED



BEGIN 99+80

END APPROACH
STA 106+65

STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT ROUTE 15	Log Sta.
		Surv. Sta.
VT ROUTE 15 OVER THE GIHON RIVER		
PAVEMENT LAYOUT PLAN		
Designed By	T. Starr	Drawn By T. Starr
Checked By	Date	Bridge Design Supervisor
J. Warner	11/06	J. Byatt Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 18 Of 85



NOTES:

1. THE INTENT OF THE 4'X6' DI AT STA 106+46.5, LT 19' IS TO INTERCEPT THE 18" DRAINAGE "TRUNK" LINE TO THE EAST, AND RE-ESTABLISH THE DRAINAGE LINE TO THE WEST ALONG THE CURB LINE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR, AT THE DIRECTION OF THE ENGINEER, TO MODIFY THE DESIGN AT 106+46.5 LT TO SEE THAT THE INTENT IS ACCOMPLISHED. SUCH MODIFICATIONS WILL BE SUBSIDIARY TO ITEM 501.25 CONCRETE CLASS B AND ITEM 507.15 REINFORCING STEEL.
2. THE INTENT OF THE 4'X4' DI AT STA 30+75, LT 8.5' (TH 37), IS TO INTERCEPT THE EXISTING 12" CGMP AND TO RE-ESTABLISH THE DRAINAGE LINES AS PROPOSED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR, AT THE DIRECTION OF THE ENGINEER, TO MODIFY THE DESIGN AT 30+75, LT (TH 37) TO SEE THAT THE INTENT IS ACCOMPLISHED. SUCH MODIFICATIONS WILL BE SUBSIDIARY TO ITEM 501.25 CONCRETE CLASS B AND ITEM 507.15 REINFORCING STEEL.

RELOCATE HYDRANT
STA 102+90, LT - DRY HYDRANT
(SEE SHEET 20)

18" CPEP
STA 106+14 - STA 106+54 LT

24" TO 18" COUPLING
STA 106+14

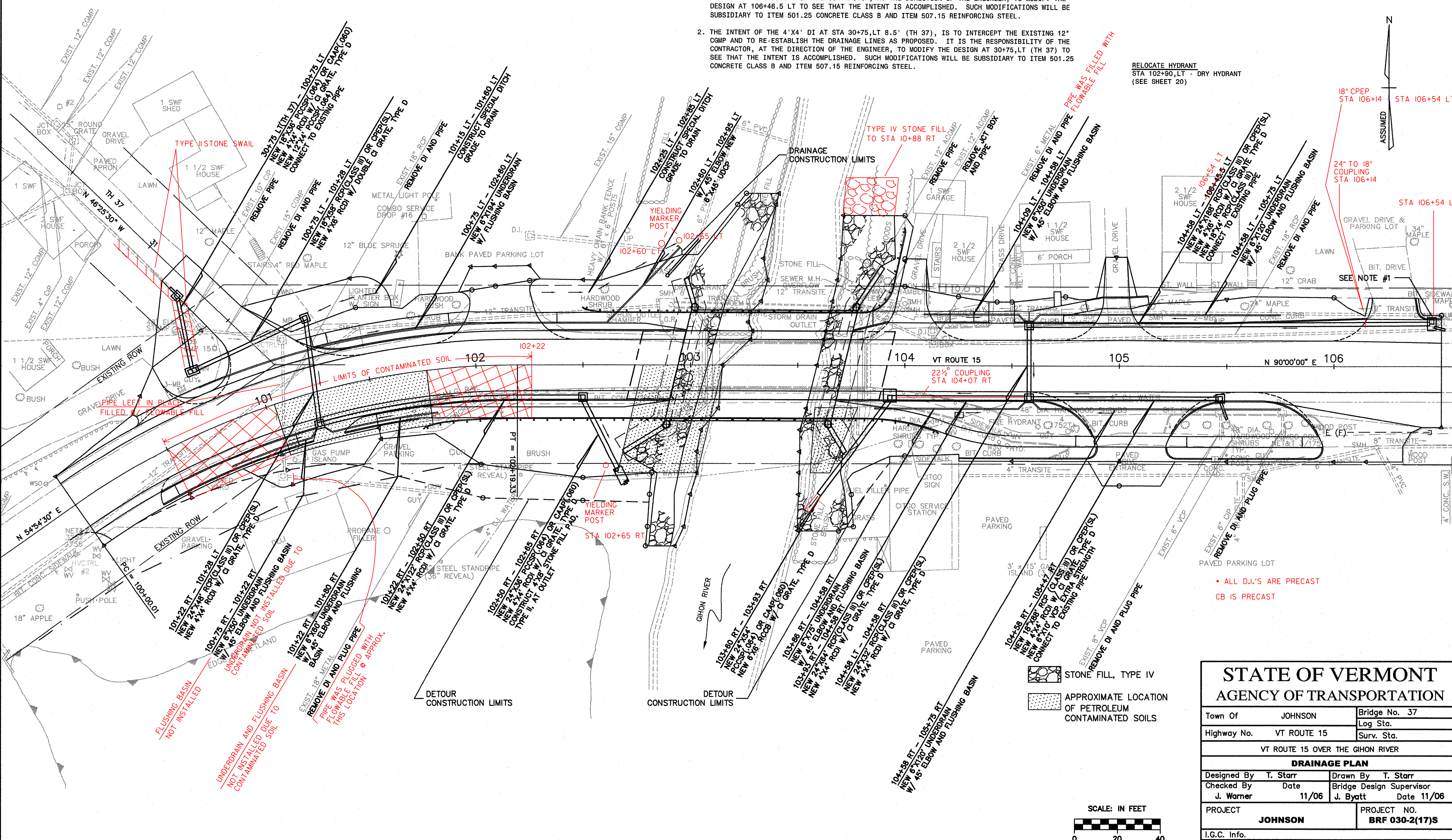
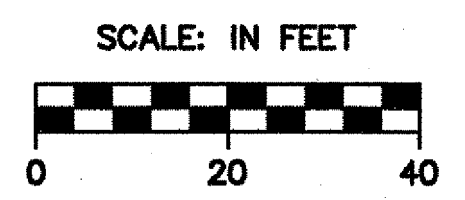
STA 106+54 LT

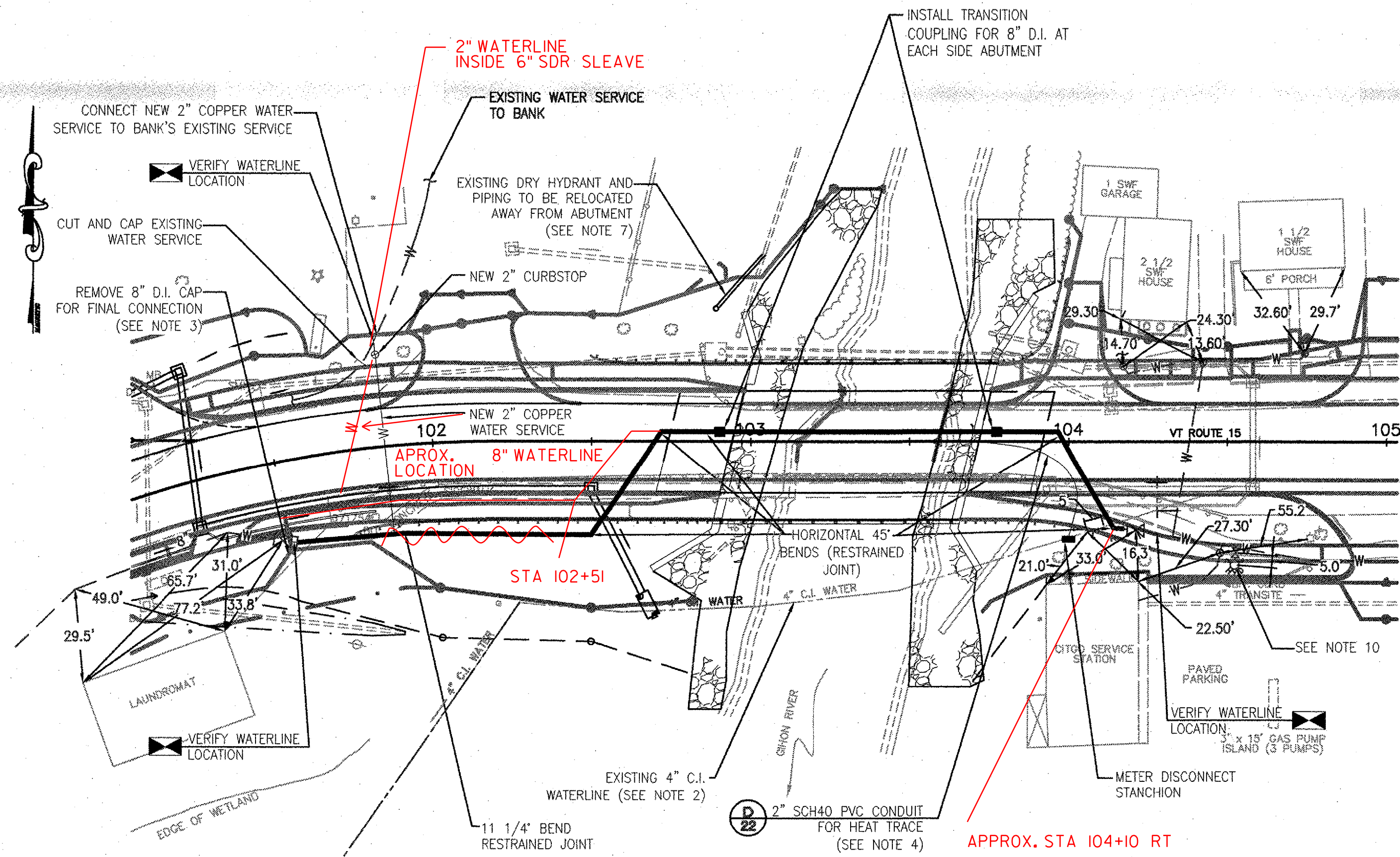
SEE NOTE #1

• ALL D.I.'S ARE PRECAST
CB IS PRECAST

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

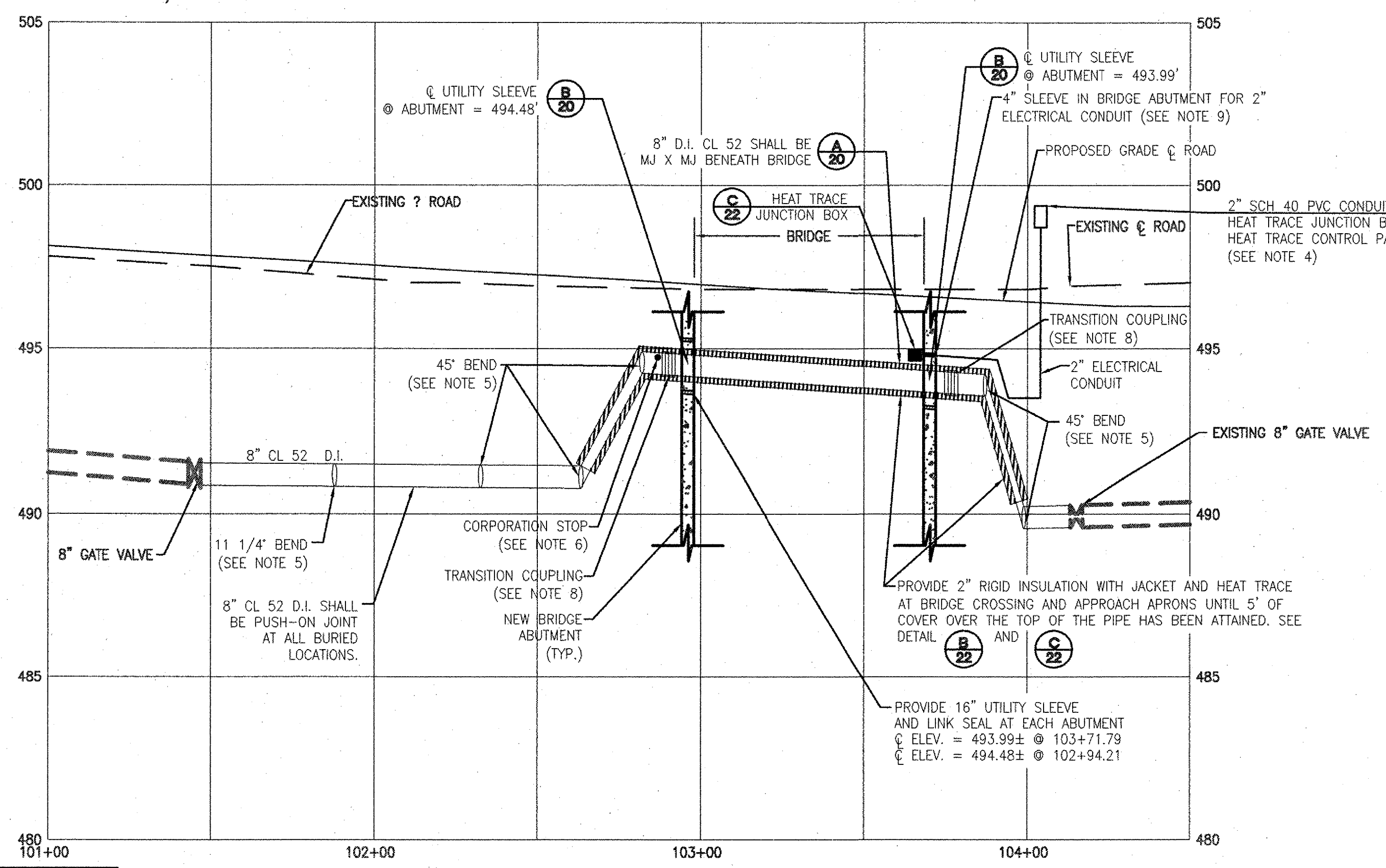
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GHON RIVER			
DRAINAGE PLAN			
Designed By	T. Starr	Drawn By	T. Starr
Checked By	Date	Bridge Design Supervisor	
J. Warner	11/06	J. Byatt	Date 11/06
PROJECT	PROJECT NO.		
JOHNSON	BRF 030-2(17)S		
I.G.C. Info.			
Bridge Sheet No.	Sheet	19	Of 85





WATERLINE PLAN NOTES:
 1. NEW WASTEWATER LINES NOT SHOWN FOR CLARITY. REFER TO DRAWING NO. 21 FOR NEW WASTEWATER WORK TO BE PERFORMED.

WATERLINE PLAN
 SCALE: 1"=30'

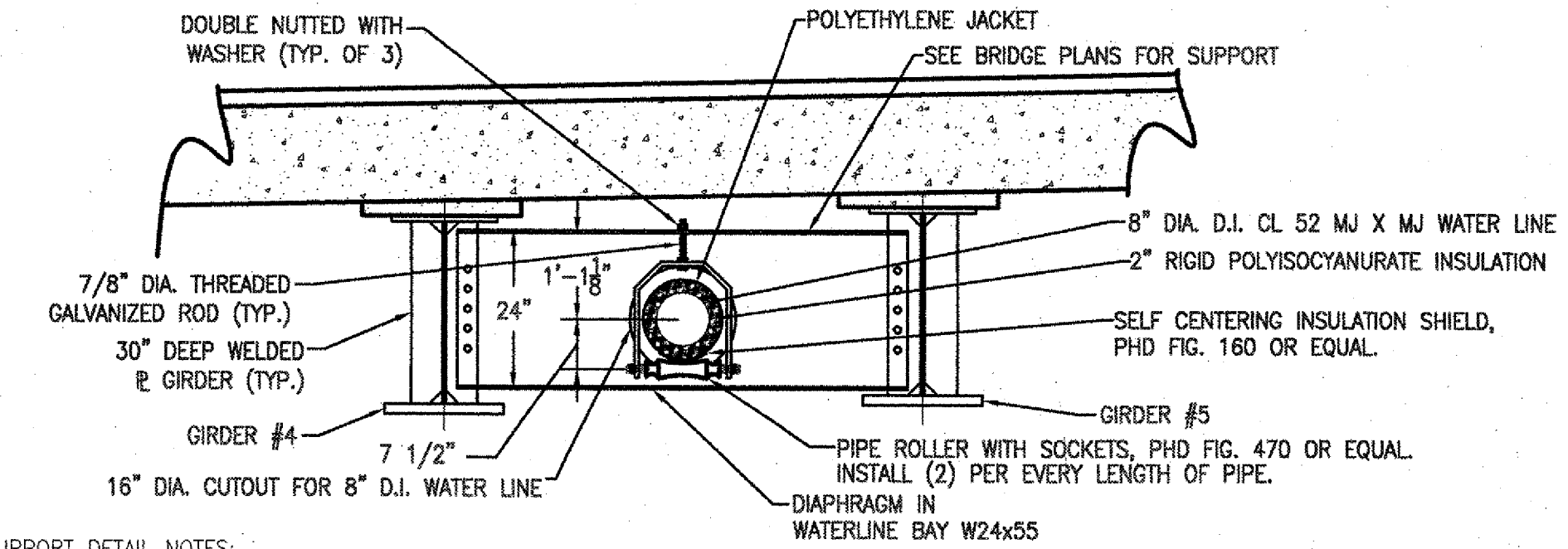


WATERLINE PROFILE
 SCALE: HORZ. = 1"=30'
 VERT. = 1"=3'

DATUM	NGVD 1929
VERTICAL	
HORIZONTAL	N/A

NEW WATERLINE CONSTRUCTION

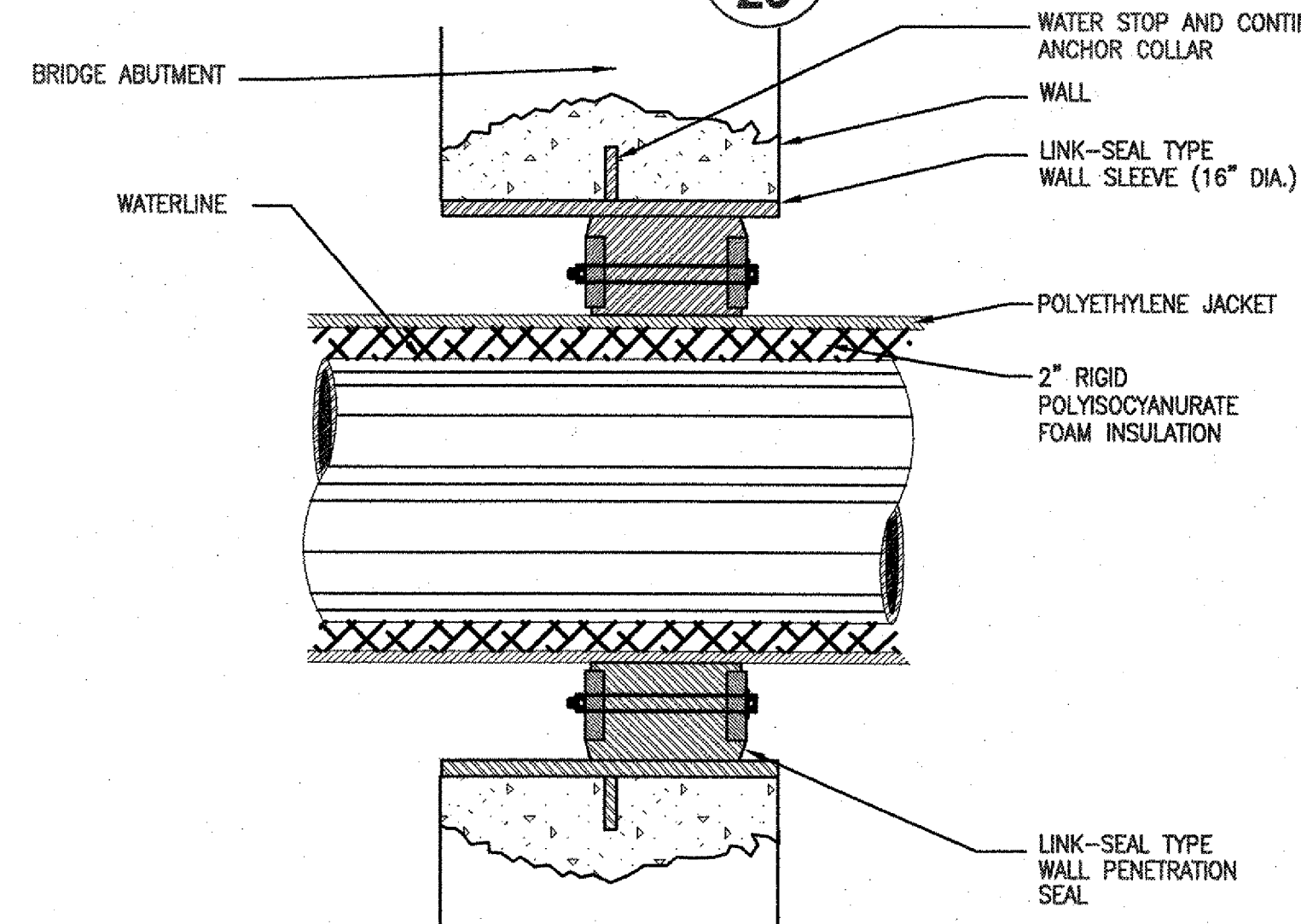
- CONTRACTOR SHALL CONTACT DIG-SAFE AND THE JOHNSON WATER & LIGHT DEPARTMENT TO LOCATE UTILITIES AND TO COORDINATE ALL INTERCONNECTIONS OF WATERLINES PRIOR TO THE START OF CONSTRUCTION.
- A TEMPORARY WATERLINE SHALL BE CONSTRUCTED BY THE VILLAGE OF JOHNSON PRIOR TO THE START OF THIS CONTRACT. IT IS ANTICIPATED THE TEMPORARY WATERLINE WILL BE INSTALLED APPROXIMATELY AS SHOWN ON REFERENCE SHEET R1. CONTRACTOR SHALL COORDINATE ANY RELOCATION. THE TEMPORARY WATERMAIN IS ALUMINUM WITH QUICK CONNECT FITTINGS. THE OWNER WILL HAVE ADDITIONAL FITTINGS/PIPE AVAILABLE FOR THE CONTRACTOR'S USE IN RELOCATING THE TEMPORARY WATERLINE AS NECESSARY TO ACCOMMODATE CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PROTECT AND RELOCATE WATERLINE AS NECESSARY TO KEEP THIS WATERLINE IN SERVICE DURING CONSTRUCTION, UNTIL THE NEW 8" D.I. WATERLINE IS PLACED INTO SERVICE. CONTRACTOR SHALL REMOVE TEMPORARY WATERLINE FOR SALVAGE BY THE VILLAGE OF JOHNSON. TEMPORARY WATERLINE SHALL BE DISMANTLED WITHOUT DAMAGE. MATERIAL SHALL BE DELIVERED TO THE TOWN GARAGE BY THE CONTRACTOR. PAYMENT FOR THIS WORK SHALL BE UNDER ITEM 629.42. THE EXISTING 4" C.I. WATERLINE SHALL BE ABANDONED IN-PLACE BY THE VILLAGE OF JOHNSON PRIOR TO THE BEGINNING OF CONSTRUCTION OF THE BRIDGE. THE CONTRACTOR MAY REMOVE SECTIONS OF THE ABANDONED 4" C.I. WATERLINE AS NECESSARY DURING CONSTRUCTION.
- THE NEW 8" D.I. WATERLINE SHALL BE COMPLETELY CONSTRUCTED FROM 101+45 AND THEN PRESSURE TESTED IN ACCORDANCE WITH SPECIFICATION ITEM 629.11. AFTER SUCCESSFULLY PASSING THE PRESSURE TEST, THE PIPELINE SHALL BE DISINFECTED IN ACCORDANCE WITH SPECIFICATION 629.12. ONCE ALL REQUIREMENTS OF 629.12 HAVE BEEN MET, THE 8" D.I. WATERLINE MAY BE CONNECTED TO THE EXISTING 8" D.I. WATERLINE AS SHOWN ON THE DRAWINGS. ONCE THE 8" D.I. WATERLINE IS CONNECTED AT BOTH LOCATIONS, IT WILL BE CONSIDERED "PLACED INTO SERVICE". TESTING AND DISINFECTION OF THE NEW 8" D.I. WATERLINE AND CONNECTION TO THE EXISTING 8" D.I. WATERLINE SHALL BE CONSIDERED INCIDENTAL TO PAYMENT FOR THE NEW 8" D.I. WATERLINE (ITEM 629.24).
- INSTALL A 2" SCH40 PVC CONDUIT FROM THE HEAT TRACE JUNCTION BOX ON THE WATERMAIN TO THE HEAT TRACE CONTROL PANEL AS SHOWN. INSTALL THE HEAT TRACE CABLE IN THE 2" SCH40 PVC CONDUIT AND ALONG THE WATERMAIN PER THE MANUFACTURER. NO SPlicing SHALL BE ALLOWED ON THE CABLE FROM THE JUNCTION BOX TO THE CONTROL PANEL AND FROM THE JUNCTION BOX TO THE WATERMAIN. CONTRACTOR SHALL COORDINATE REQUIRED LENGTHS OF CABLE WITH THE MANUFACTURER. ALL ELECTRICAL CONNECTIONS AND OTHER WIRING TO PROVIDE A FUNCTIONAL HEAT TRACE SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR. ALL MATERIAL AND LABOR COSTS TO COMPLETE THIS WORK SHALL BE INCLUDED UNDER PAY ITEM 625.10.
- PROVIDE RESTRAINED JOINTS AND CONCRETE THRUST BLOCKS AT ALL BENDS IN THE WATER LINE. REFER TO DETAIL A/22 FOR THRUST BLOCK REQUIREMENTS. THRUST BLOCKS SHALL BE CONSIDERED INCIDENTAL TO THE NEW 8" D.I. WATERLINE (ITEM 629.24)
- PROVIDE A 3/4" CORPORATION STOP AT THE TOP OF PIPE AT WESTERN BRIDGE ABUTMENT. PIPE TO THE EDGE OF THE BRIDGE DECK AND TERMINATE WITH A LOCKABLE BALL VALVE, FOR USE BY THE VILLAGE OF JOHNSON TO BLEED AIR OUT OF THE WATERLINE. ALL MATERIAL AND LABOR COSTS TO COMPLETE THIS WORK SHALL BE INCLUDED UNDER PAY ITEM 629.39.
- RELOCATE THE DRY HYDRANT AWAY FROM THE BRIDGE ABUTMENT. COORDINATE EXACT LOCATION WITH THE JOHNSON FIRE DEPARTMENT. ALL MATERIAL AND LABOR COSTS TO COMPLETE THIS WORK SHALL BE INCLUDED UNDER PAY ITEM 629.29.
- INSTALL THE TRANSITION COUPLING WITHIN 4'-0" OF THE BRIDGE ABUTMENT ON BOTH SIDES. INSTALL VERTICAL 45° BENDS AFTER THE TRANSITION COUPLING.
- LOCATE THE 4" SLEEVE ALONG THE CENTERLINE OF THE WATERLINE 3" ABOVE THE TOP OF THE SLEEVE FOR THE WATERLINE PENETRATION THROUGH THE BRIDGE ABUTMENT.
- INSTALL FIRE HYDRANT AT STATION 104+50. HYDRANT SHALL BE FURNISHED BY THE VILLAGE OF JOHNSON. THIS WORK CANNOT OCCUR UNTIL THE PERMANENT 8" D.I. WATERLINE IS PLACED INTO SERVICE. PAYMENT FOR THIS WORK SHALL BE UNDER ITEM 629.29.



SUPPORT DETAIL NOTES:

- LABORED RODS (2 EACH), PIPE ROLLER WITH SOCKETS (1 EACH), AND DOUBLE NUTS WITH WASHER (4 EACH) SHALL COMPRISE ONE (1) PIPE SUPPORT ASSEMBLY. ALL MATERIAL AND LABOR TO FURNISH AND INSTALL EACH ASSEMBLY SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 629.60.
- PROVIDE TWO (2) PIPE SUPPORT ASSEMBLIES FOR EACH PIPE LENGTH SUSPENDED UNDER THE BRIDGE SPAN.
- 15" DIA. CUT-OUT FOR 8" D.I. WATERLINE SHALL BE CONSIDERED INCIDENTAL TO THE BRIDGE STRUCTURE AND SHALL NOT BE PAID UNDER A SEPARATE BID ITEM.
- REFER TO SHEET 24 FOR ADDITIONAL DIMENSIONAL INFORMATION CONCERNING THE LAYOUT AND SUPPORT OF THE WATERLINE UNDER THE BRIDGE STRUCTURE.

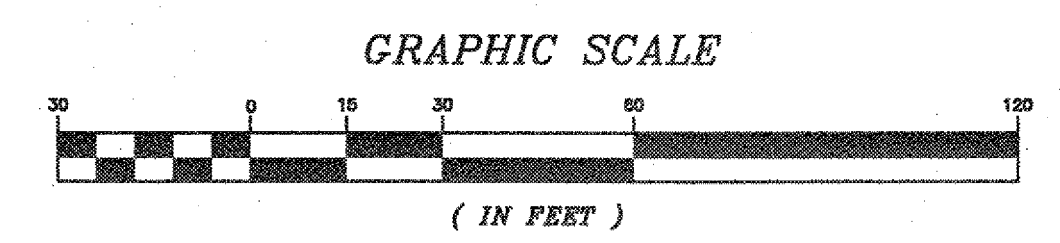
BRIDGE CROSSING SUPPORT DETAIL (TYP. OF 10)
 SCALE: 1/2"=1'-0"



B 20 LINK-SEAL DETAIL-WATERLINE
 SCALE: NONE

LINK-SEAL NOTES:

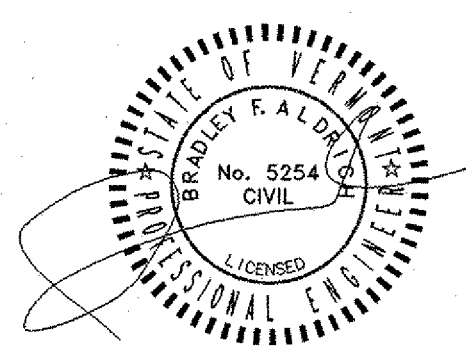
- BUTT PIPE INSULATION (FOR WATERLINE) TIGHT TO LINK-SEAL.

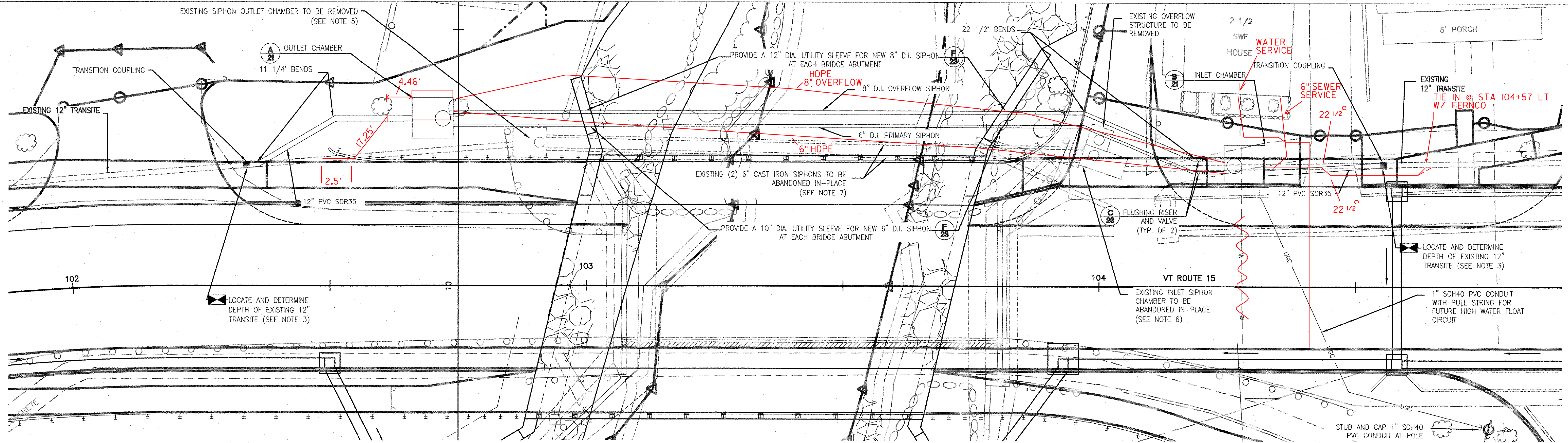


F&A Forcier Aldrich & Associates
 Consulting Engineers
 6 Market Place, Suite 2 (802) 879-7733
 Essex Junction, VT 05495 (802) 879-1742 (Fax)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

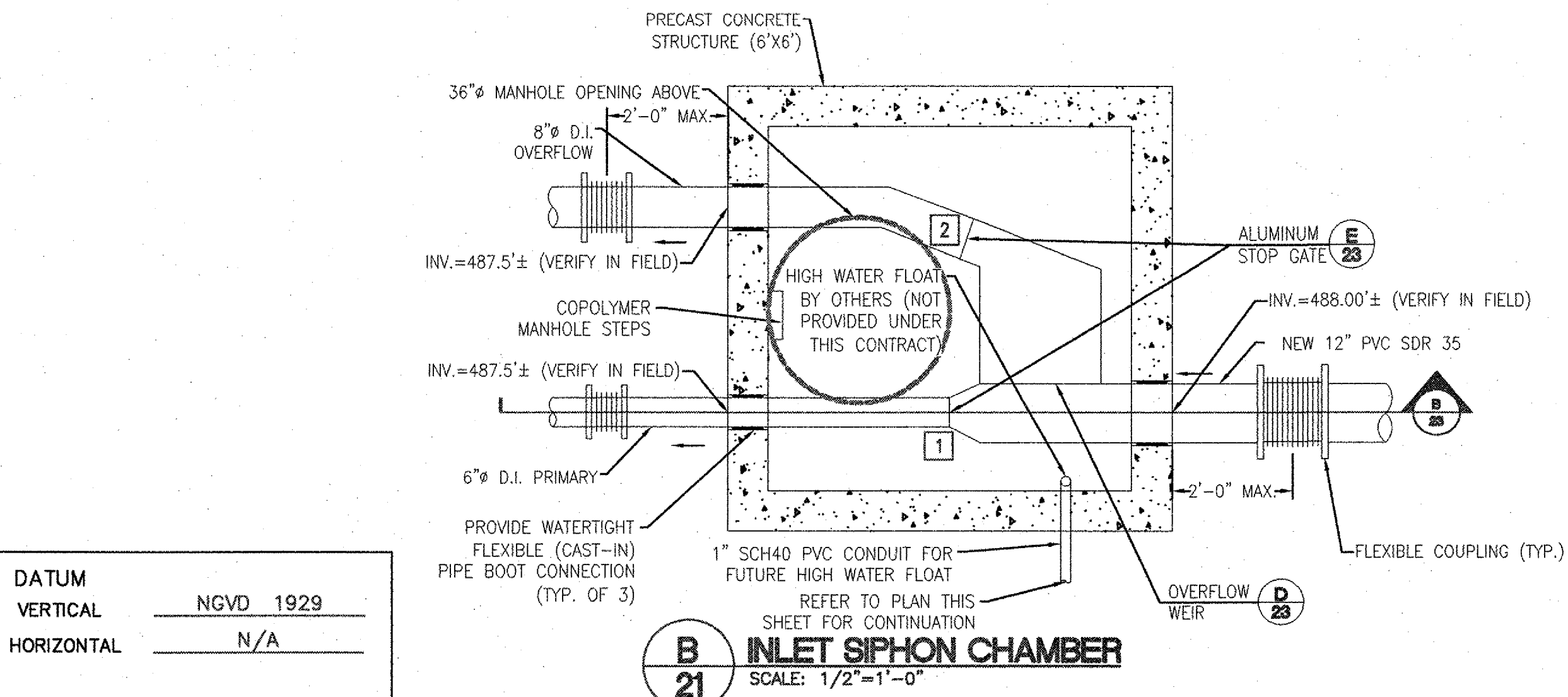
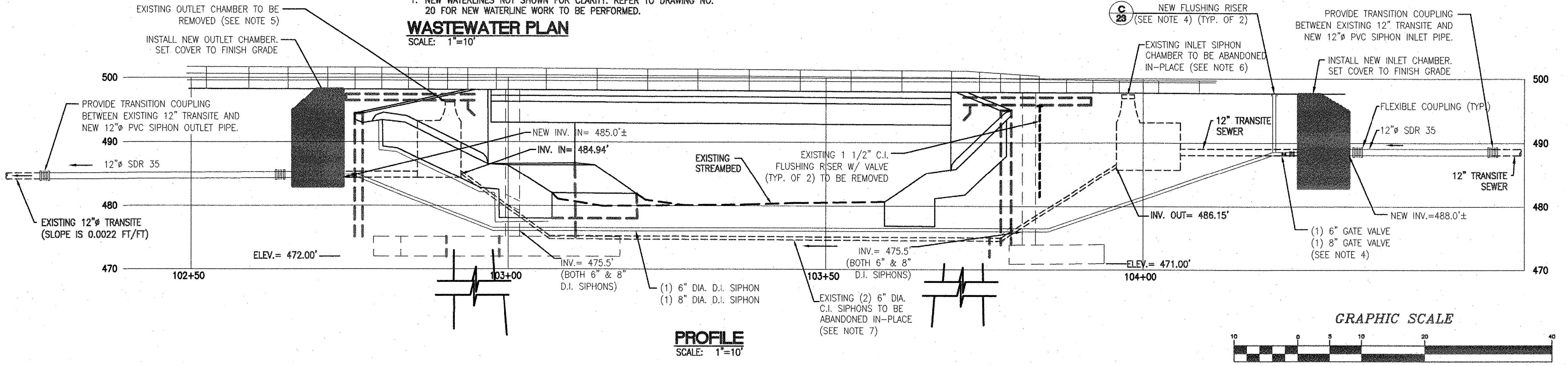
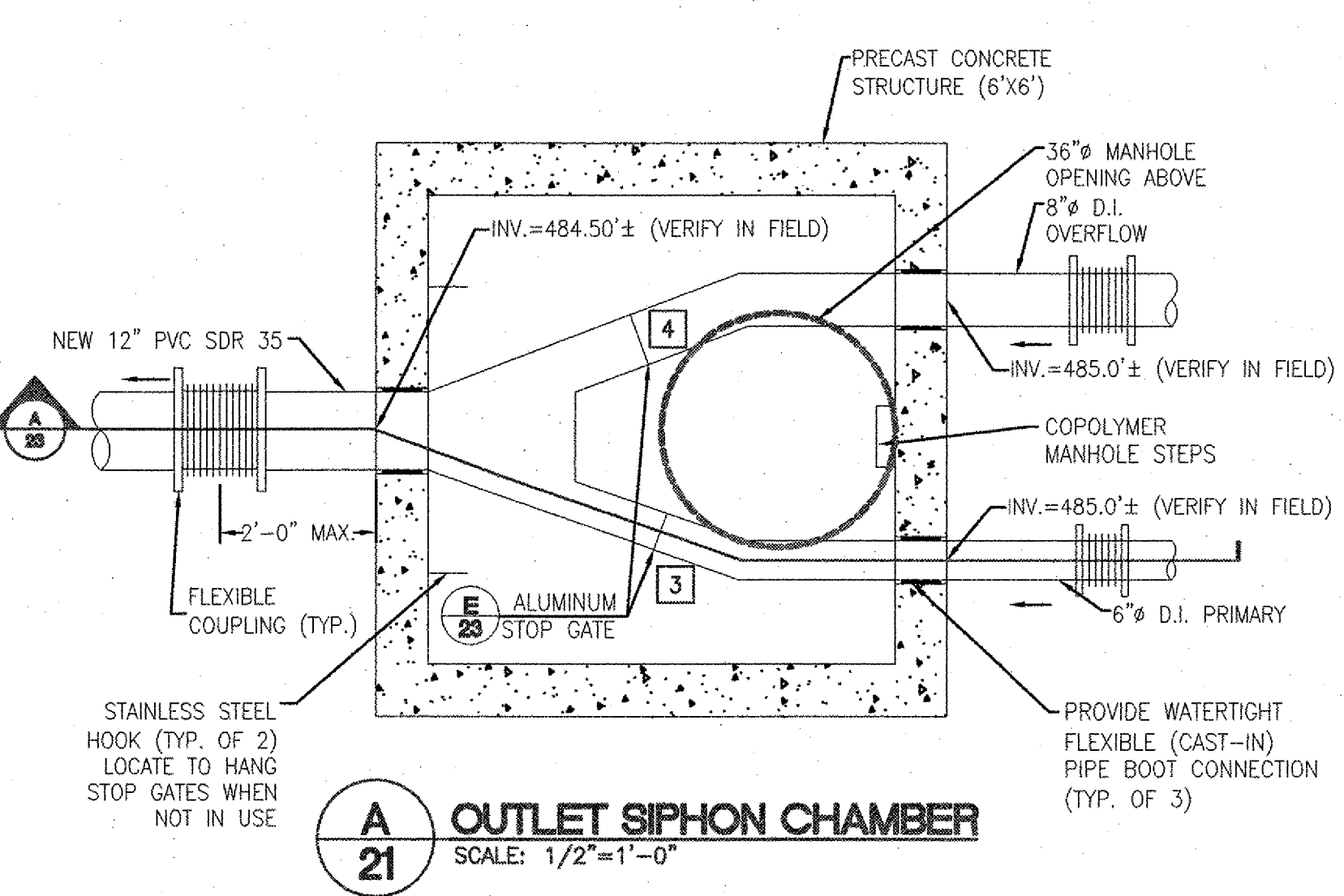
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
VT ROUTE 15 OVER THE GIOH RIVER		Surv. Sta.	
8"Ø WATERLINE REPLACE. - STA. 101+48 TO 104+13			
Designed By	JJD	Drawn By	JEB/JEN
Checked By	JJD	Bridge Design Supervisor	J. Byatt
Date	1-07	Date	11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.	Sheet	20	Of 85





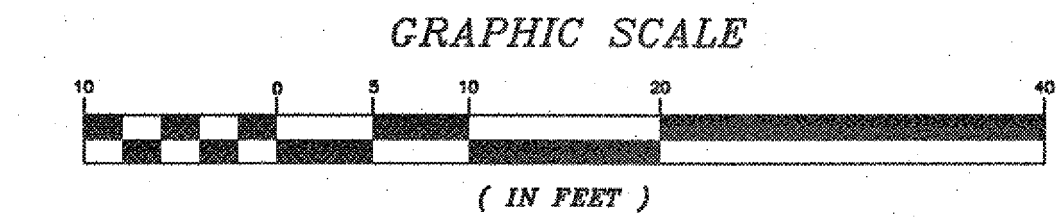
WASTEWATER PLAN NOTES:
 1. NEW WATERLINES NOT SHOWN FOR CLARITY. REFER TO DRAWING NO. 20 FOR NEW WATERLINE WORK TO BE PERFORMED.

WASTEWATER PLAN
 SCALE: 1"=10'



WASTEWATER SIPHON CONSTRUCTION NOTES

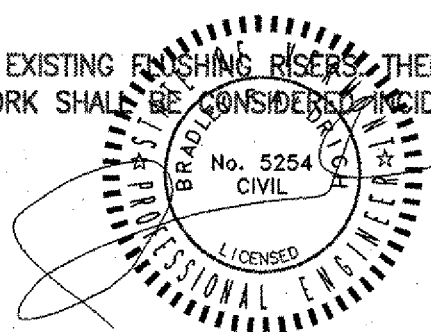
- CONTRACTOR SHALL CONTACT DIG-SAFE AND THE VILLAGE OF JOHNSON WATER AND LIGHT DEPARTMENT TO LOCATE UTILITIES PRIOR TO ANY CONSTRUCTION. PRIOR TO CONSTRUCTION, THE EXISTING 6" C.I. SIPHON PIPES SHALL BE LOCATED AND PROTECTED ALONG WITH THE (2) 1-1/2" FLUSHING RISERS AT INLET SIPHON CHAMBER. PAYMENT FOR MATERIALS AND LABOR FOR THESE COMPONENTS SHALL BE CONSIDERED INCIDENTAL TO PAYMENT FOR THE SIPHON CHAMBER (PAY ITEM 604.22).
- CONTRACTOR SHALL COORDINATE ALL WASTEWATER UTILITY WORK WITH THE VILLAGE OF JOHNSON. WASTEWATER FLOW MUST BE MAINTAINED THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR BYPASS PUMPING OF WASTEWATER THROUGHOUT THE CONSTRUCTION OF NEW WASTEWATER UTILITIES. REFER TO SPECIAL PROVISIONS SECTION 628.42 FOR CONTRACTOR REQUIREMENTS AND A PROPOSED PHASING SCHEME FOR THE WASTEWATER WORK.
- CONTRACTOR SHALL EXCAVATE TEST PITS AT LOCATIONS INDICATED TO DETERMINE LOCATION AND DEPTH OF EXISTING 12" TRANSITE WASTEWATER LINE. LOCATION AND DEPTH SHALL BE PROVIDED TO THE ENGINEER FOR CONFIRMATION PRIOR TO THE INSTALLATION OF EITHER THE INLET OR OUTLET SIPHON CHAMBERS. THIS WORK SHALL BE CONSIDERED EXPLORATORY AND SHALL BE PAID UNDER PAY ITEM 204.20.
- PAYMENT FOR MATERIAL AND LABOR FOR THE FLUSHING RISER AND CAP SHALL BE INCLUDED IN PAY ITEM 628.28. PAYMENT FOR LABOR AND MATERIAL FOR THE 6" AND 8" VALVES SHALL BE INCLUDED IN PAY ITEM 629.27.
- REMOVE EXISTING OUTLET SIPHON STRUCTURE IN ITS ENTIRETY (PAY ITEM 204.21). REFER TO NOTE 2 FOR PHASING REQUIREMENTS.
- REMOVE EXISTING SIPHON INLET STRUCTURE IN ITS ENTIRETY (PAY ITEM 204.21). REFER TO NOTE 2 FOR PHASING REQUIREMENTS.
- EXISTING 6" C.I. SEWER SIPHONS SHALL BE ABANDONED IN-PLACE AFTER NEW SEWER SIPHON IS IN SERVICE. FLUSH LINES WITH WATER USING EXISTING FLUSHING RISERS, THEN EXPOSE ENDS AND GROUT ENDS WATERTIGHT. SECTIONS OF SIPHON PIPE MAY BE REMOVED TO DRIVE SHEETING AT THE CONTRACTOR'S OPTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE REMOVAL OF THE EXISTING SIPHON STRUCTURES (PAY ITEM 204.21).



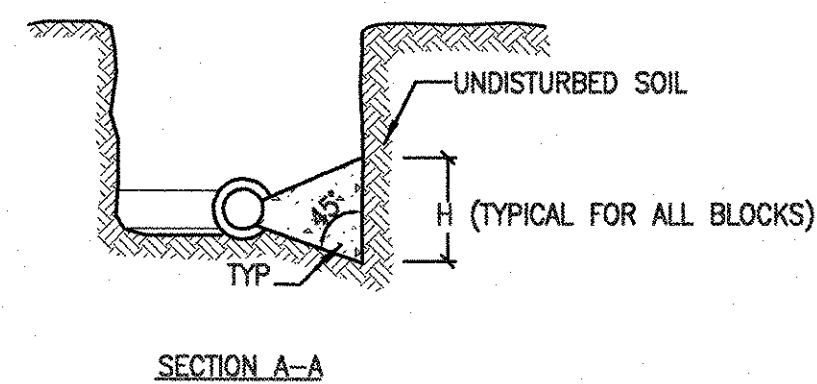
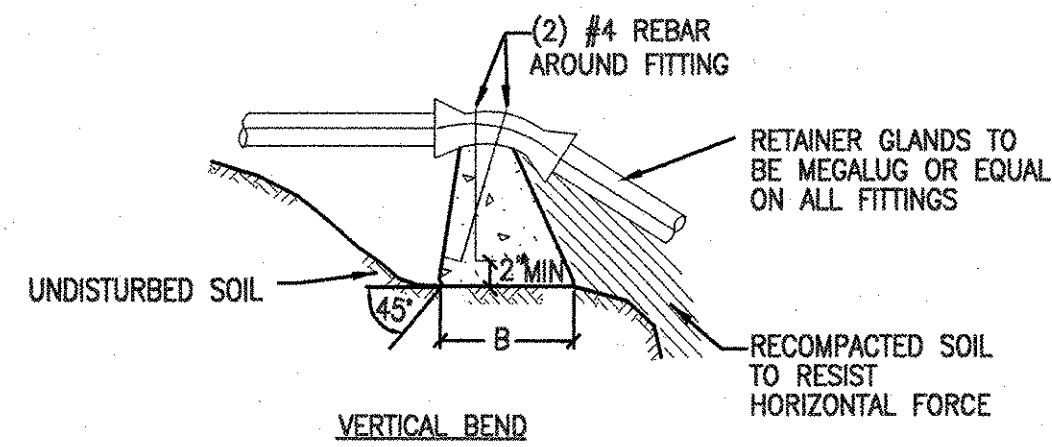
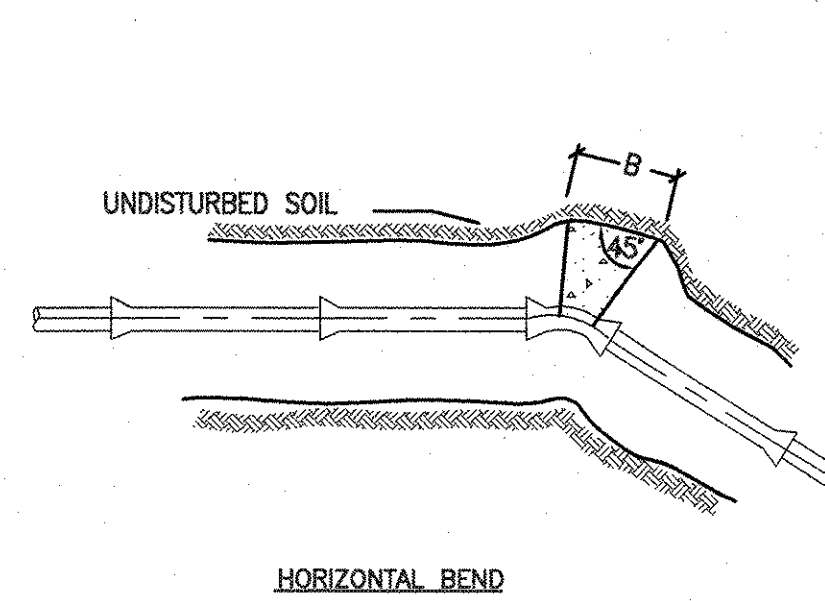
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 6 Market Place, Suite 2 (802) 879-7733
 Essex Junction, VT 05485 (802) 879-1742 (Fax)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GHON RIVER			
SEWER SIPHON CHAMBER REPLACEMENT			
Designed By	JJD	Drawn By	JEB/JEN
Checked By	JJD	Date	1-07
		Bridge Design Supervisor	J. Byatt Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	21 Of 85



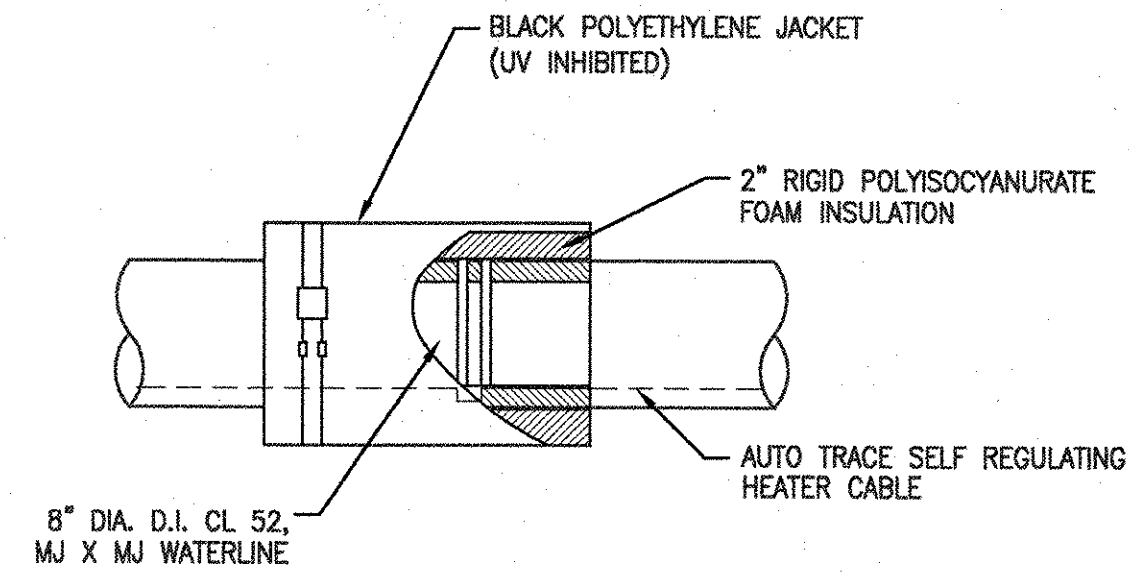
DATUM
 VERTICAL NGVD 1929
 HORIZONTAL N/A



HEIGHT (H) AND WIDTH (B) OF BEARING FACE FOR FITTING TO BE RESTRAINED						
PIPELINE SIZE	11 1/4" BEND		22 1/2" BEND		45" BEND	
	H	B	H	B	H	B
8"	1.0	1.0	1.0	1.75	1.5	2.25

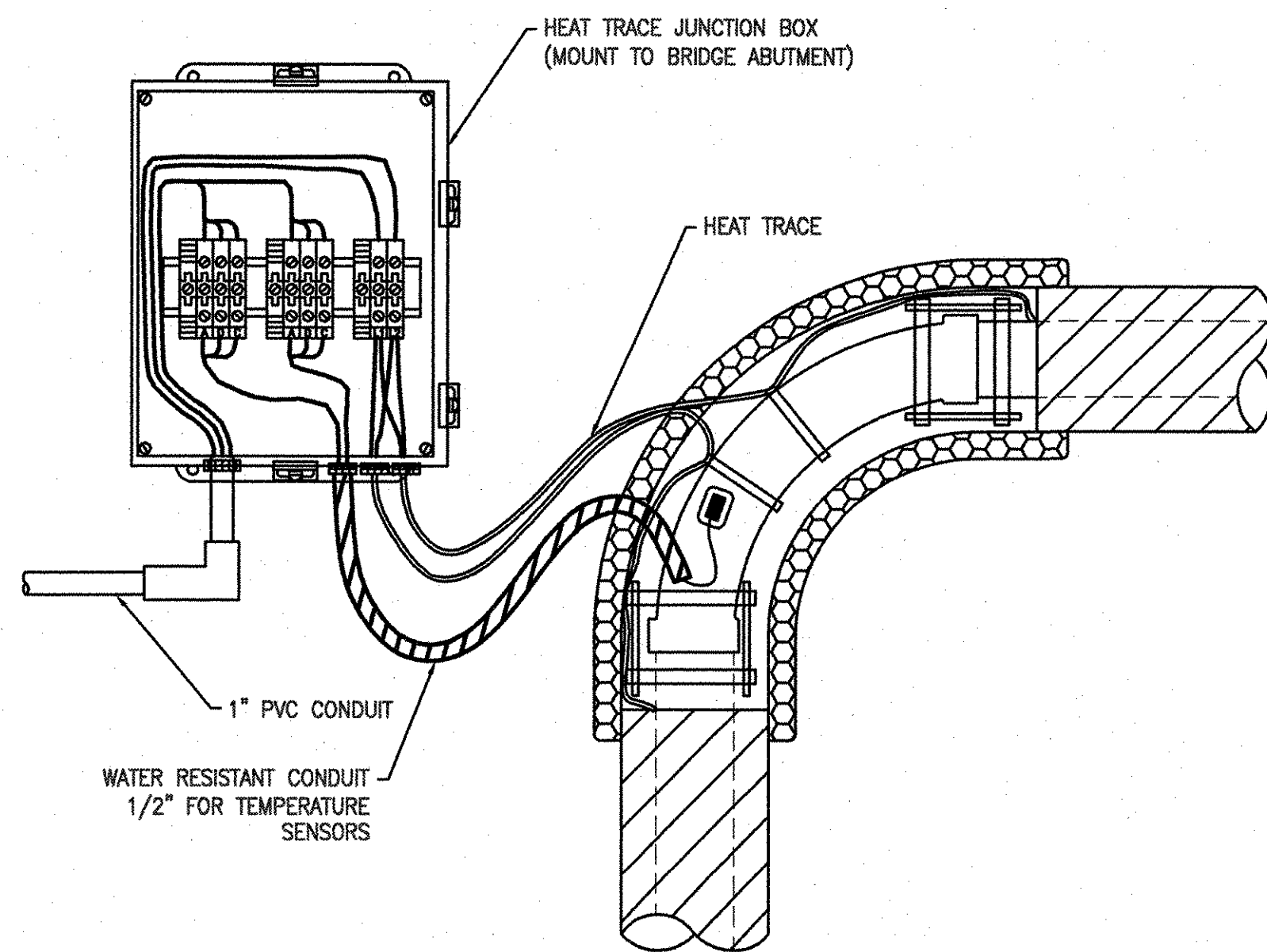
- THRUST BLOCK NOTES:**
1. ALL THRUST BLOCKS SHALL BE CLASS "B" CONCRETE.
 2. CONCRETE SHALL BE PLACED SO AS NOT TO HAMPER THE FUTURE REMOVAL OF A FITTING.
 3. PLACE 6 MIL POLYETHYLENE BETWEEN FITTINGS AND THRUST BLOCKS.
 4. THRUST BLOCKS ARE REQUIRED IN ADDITION TO RESTRAINED JOINTS AT ALL BENDS IN THE WATER LINE.

A WATER LINE THRUST BLOCK DETAILS
SCALE: NONE

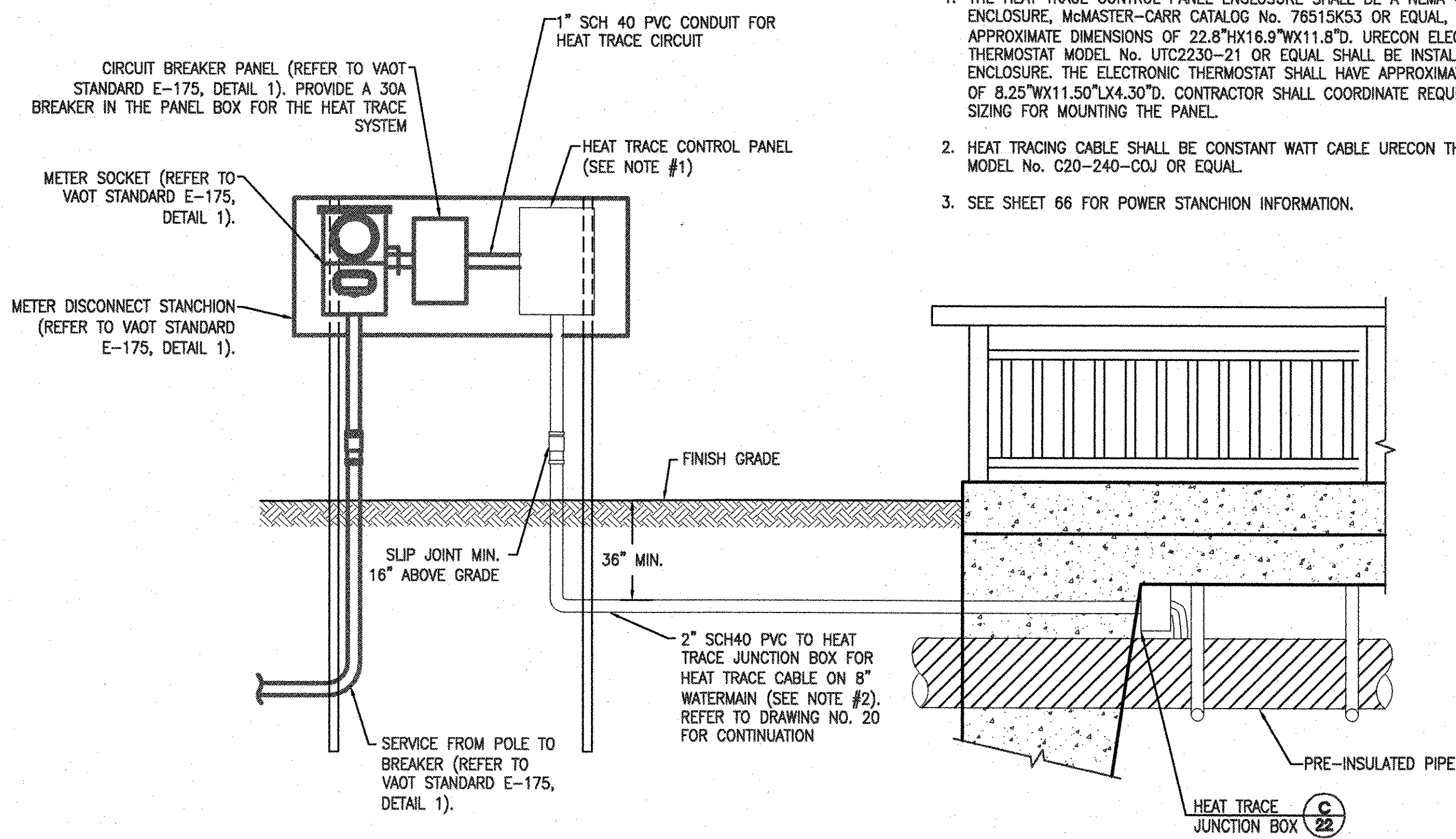


- WATERLINE INSTALLATION NOTES:**
1. WATERLINE INSULATION COMPONENTS SHALL BE EQUIVALENT TO URECON U.J.P. PRE-INSULATED PIPE.
 2. PROVIDE JOINT INSULATION WRAP AT ALL PIPE JOINTS.

B PRE-INSULATED WATERLINE
SCALE: NONE



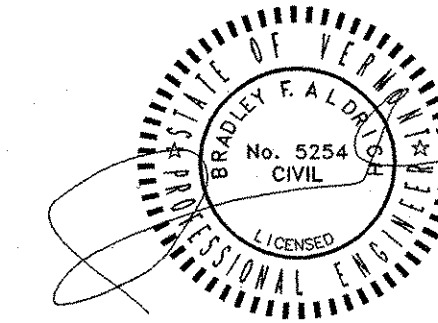
C HEAT TRACE JUNCTION BOX DETAIL
SCALE: NONE



D HEAT TRACE ELECTRICAL DETAIL
SCALE: NONE

- NOTES:**
1. THE HEAT TRACE CONTROL PANEL ENCLOSURE SHALL BE A NEMA 4X FIBERGLASS ENCLOSURE, McMASTER-CARR CATALOG No. 76515K53 OR EQUAL, WITH APPROXIMATE DIMENSIONS OF 22.8"HX16.9"WX11.8"D. URECON ELECTRONIC THERMOSTAT MODEL No. UTC2230-21 OR EQUAL SHALL BE INSTALLED INSIDE THE ENCLOSURE. THE ELECTRONIC THERMOSTAT SHALL HAVE APPROXIMATE DIMENSIONS OF 8.25"WX11.50"LX4.30"D. CONTRACTOR SHALL COORDINATE REQUIRED STANCHION SIZING FOR MOUNTING THE PANEL.
 2. HEAT TRACING CABLE SHALL BE CONSTANT WATT CABLE URECON THERMOCABLE MODEL No. C20-240-COJ OR EQUAL.
 3. SEE SHEET 66 FOR POWER STANCHION INFORMATION.

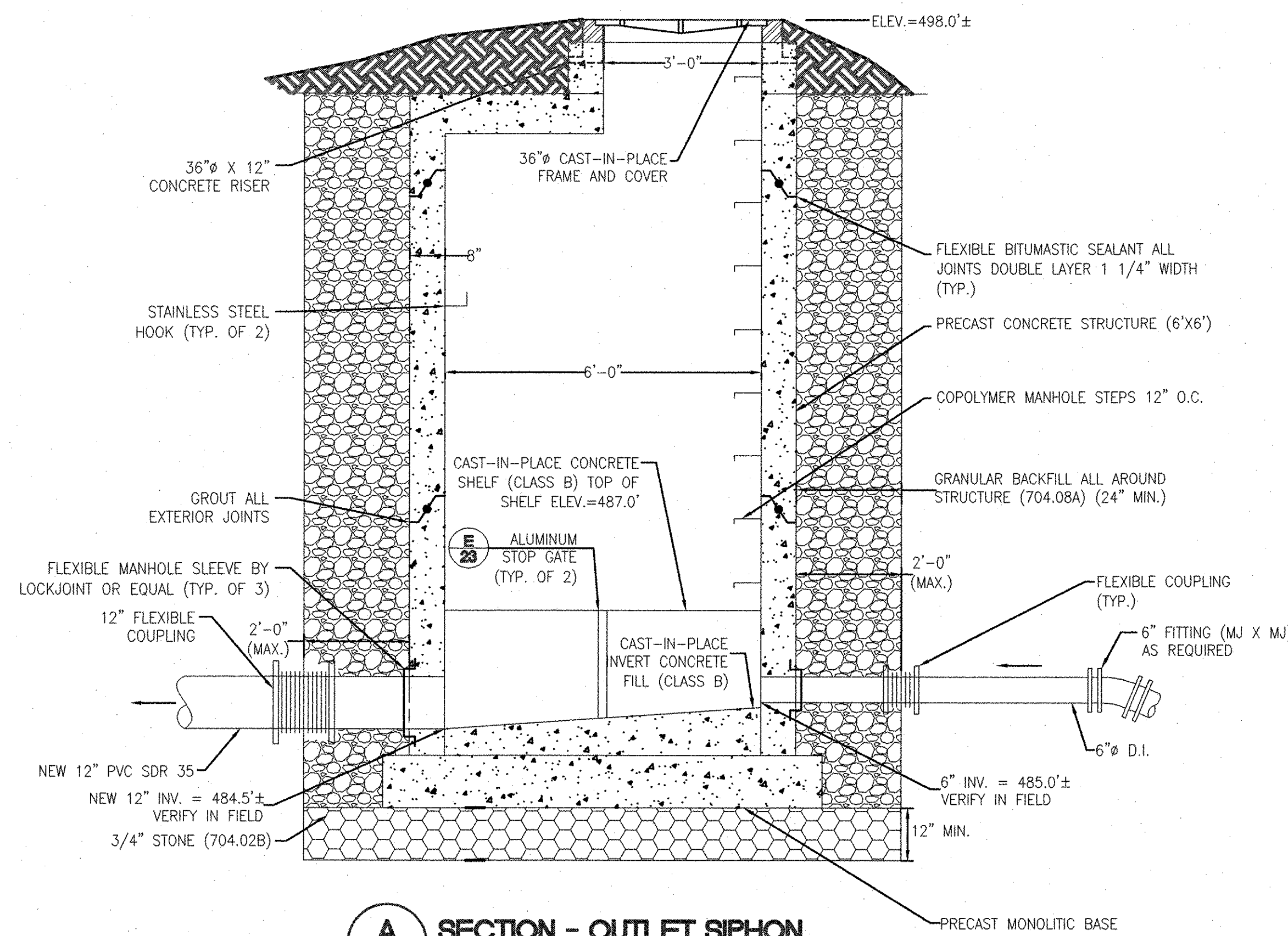
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A



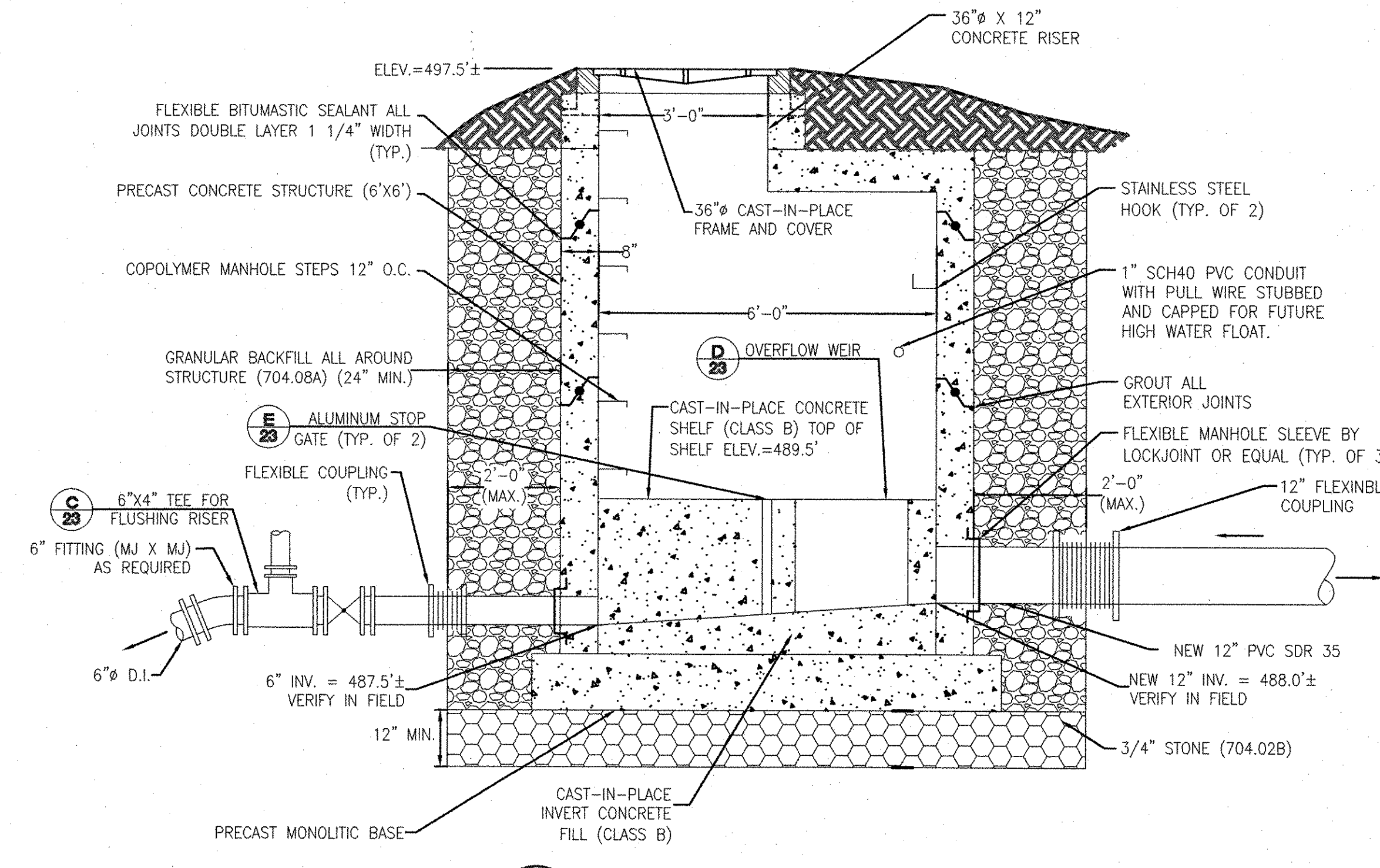
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STATE OF VERMONT
AGENCY OF TRANSPORTATION

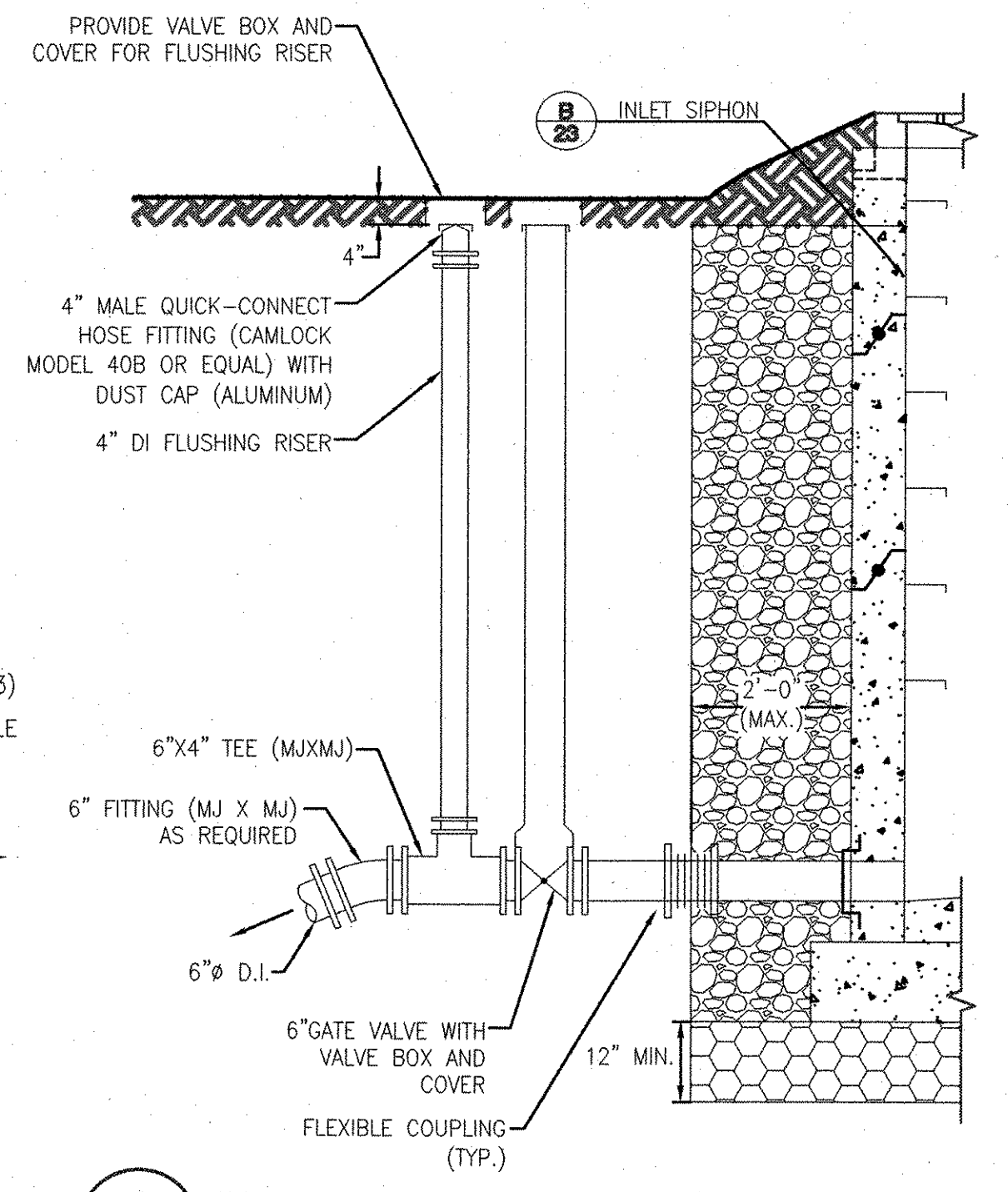
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GHON RIVER			
WATER DETAILS			
Designed By	JJD	Drawn By	JEB/JEN
Checked By	Date	Bridge Design Supervisor	Date
JJD	1-07	J. Byatt	11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	22 Of 85



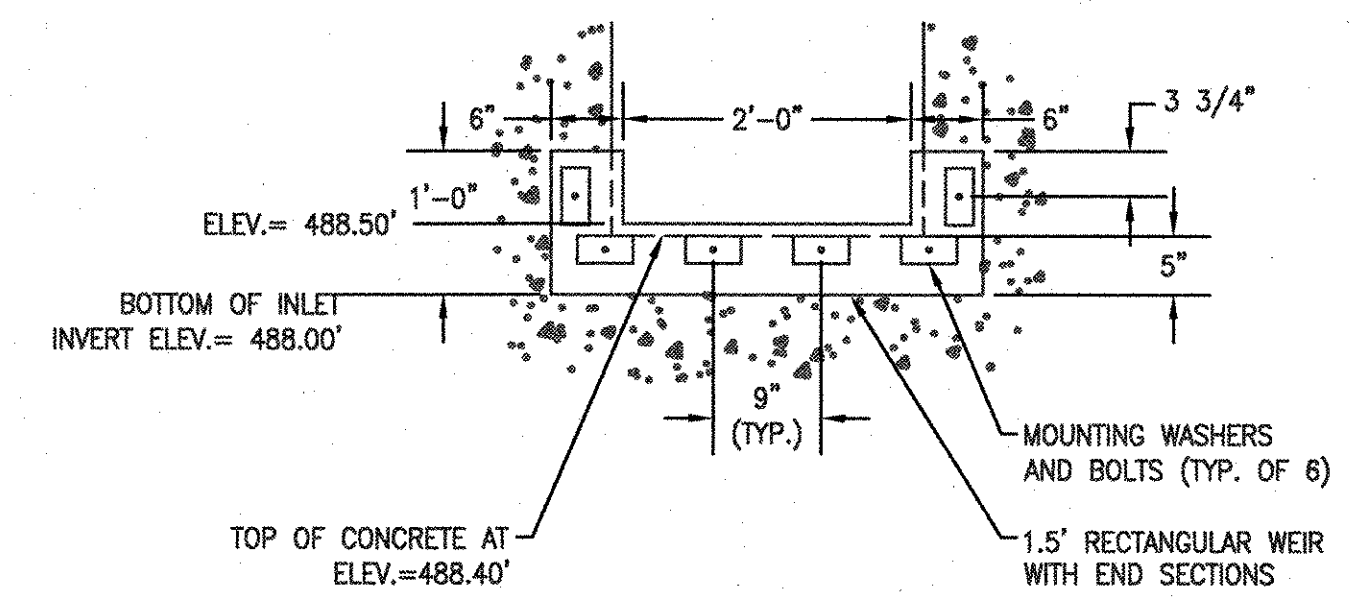
A SECTION - OUTLET SIPHON
SCALE: 1/2"=1'-0"



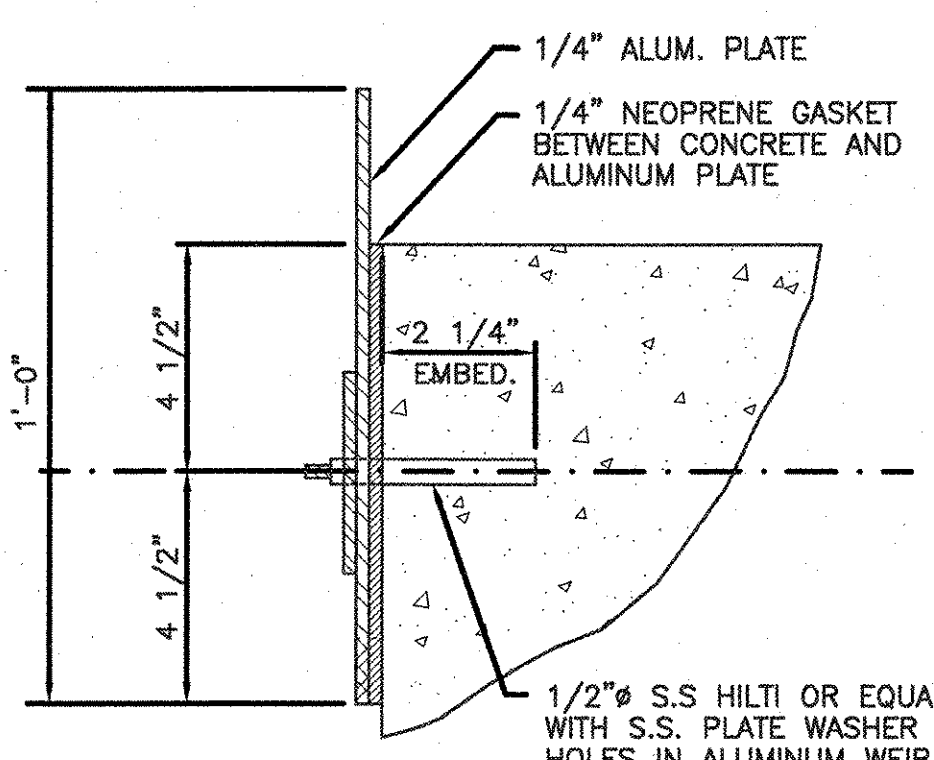
B SECTION - INLET SIPHON
SCALE: 1/2"=1'-0"



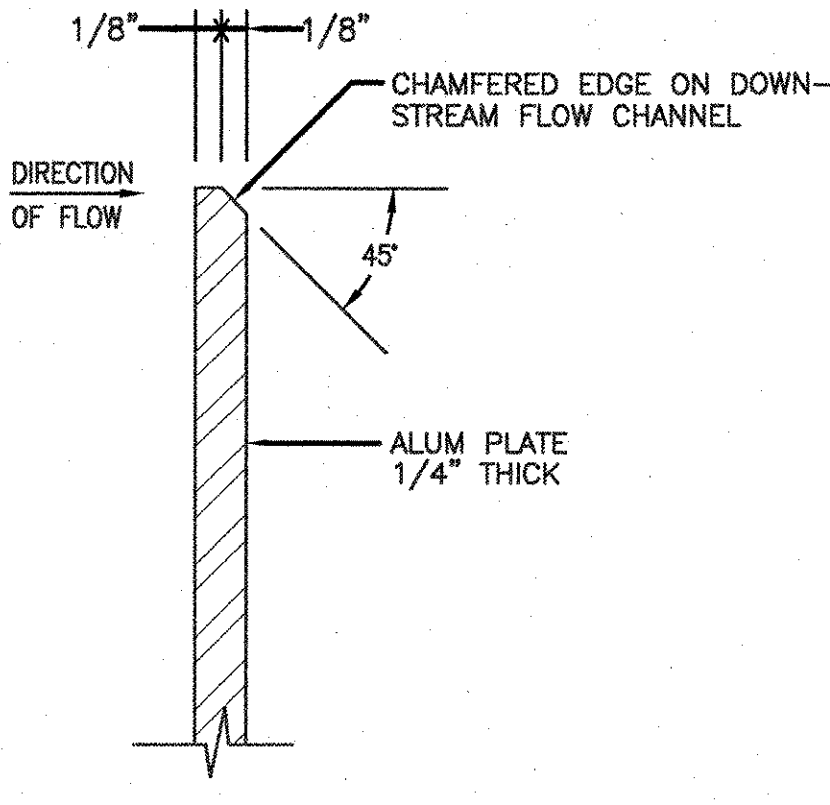
C FLUSHING VALVE AND RISER DETAIL
SCALE: 1/2"=1'-0"



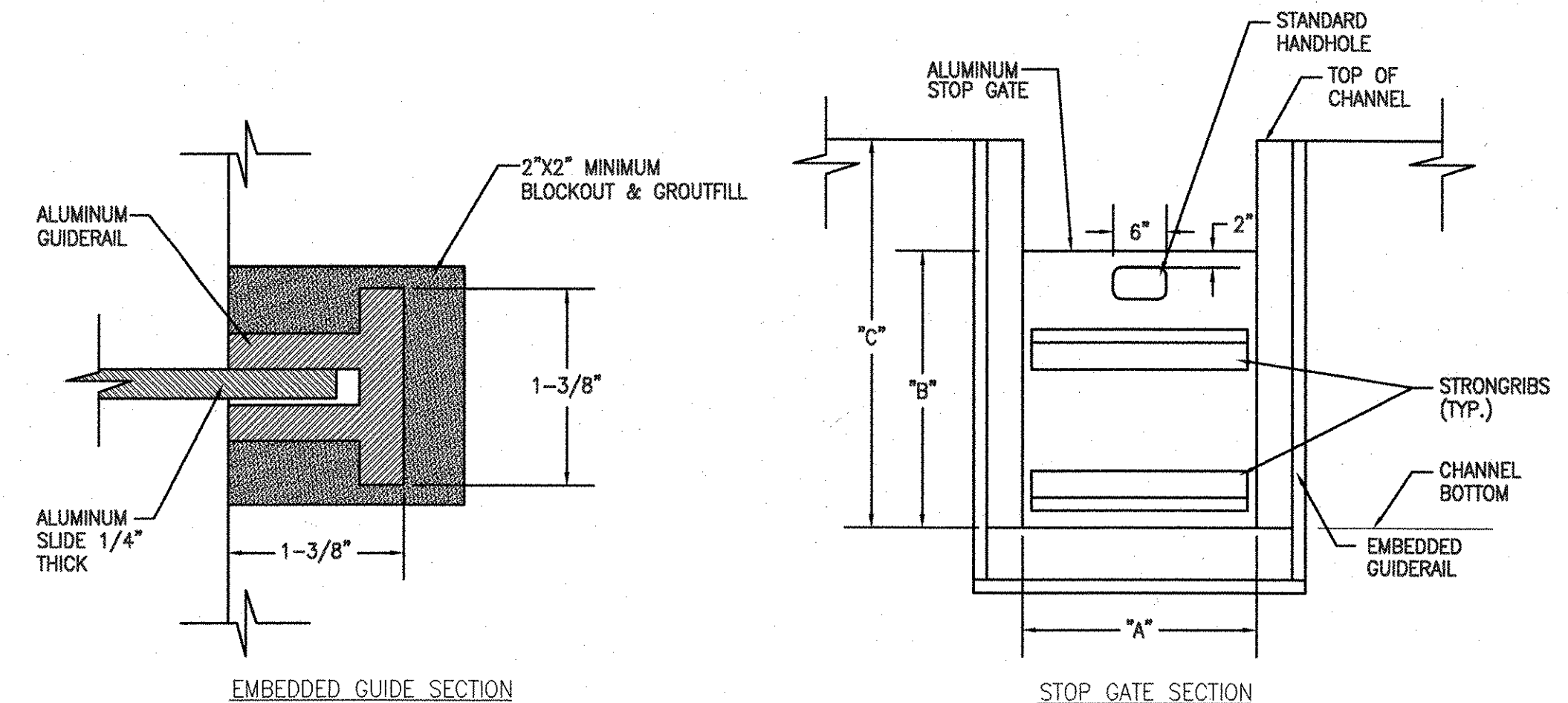
FRONT VIEW
SCALE: 3/4"=1'-0"



MOUNTING DETAIL-TOP VIEW
SCALE: NONE



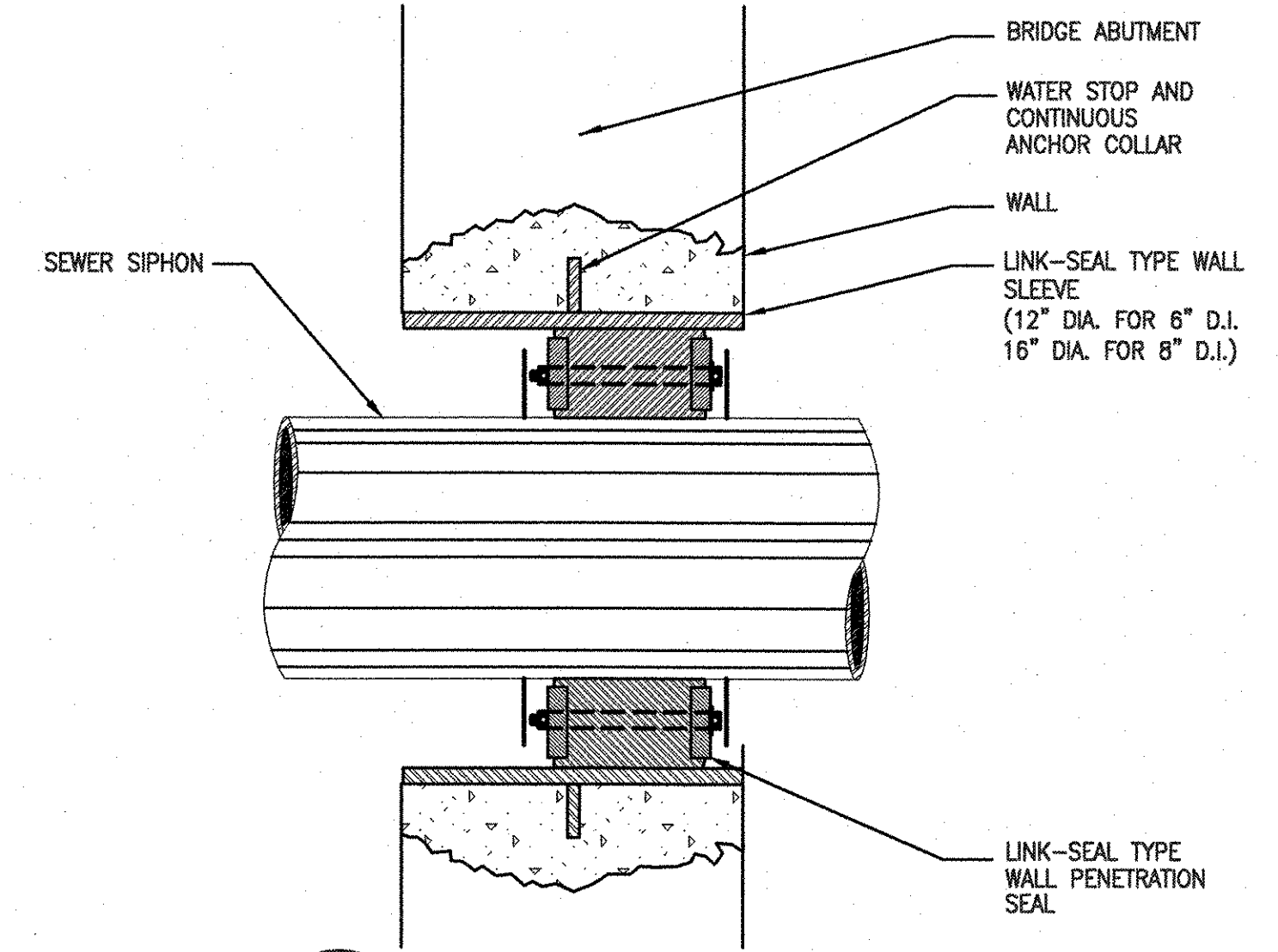
ALUMINUM PLATE SECTION
SCALE: NONE



STOP GATE AND FRAME SCHEDULE

GATE NO.	LOCATION	"A"	FRAME "B"	"C"	COMMENTS
1	INLET SIPHON	6"	1'-6"	1'-8"	"J" BULB SEALS
2	INLET SIPHON	8"	1'-6"	3'-6"	"J" BULB SEALS
3	OUTLET SIPHON	6"	2'-0"	2'-3"	"J" BULB SEALS
4	OUTLET SIPHON	8"	2'-0"	2'-3"	"J" BULB SEALS

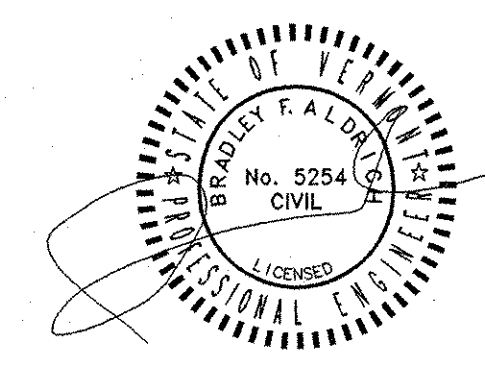
E STOP GATE DETAILS
SCALE: NOT TO SCALE



F LINK-SEAL DETAIL-SEWER SIPHON
SCALE: NONE

DATUM	VERTICAL	NGVD 1929
	HORIZONTAL	N/A

D OVERFLOW WEIR DETAIL
SCALE: AS NOTED



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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	

VT ROUTE 15 OVER THE GHION RIVER

WASTEWATER DETAILS

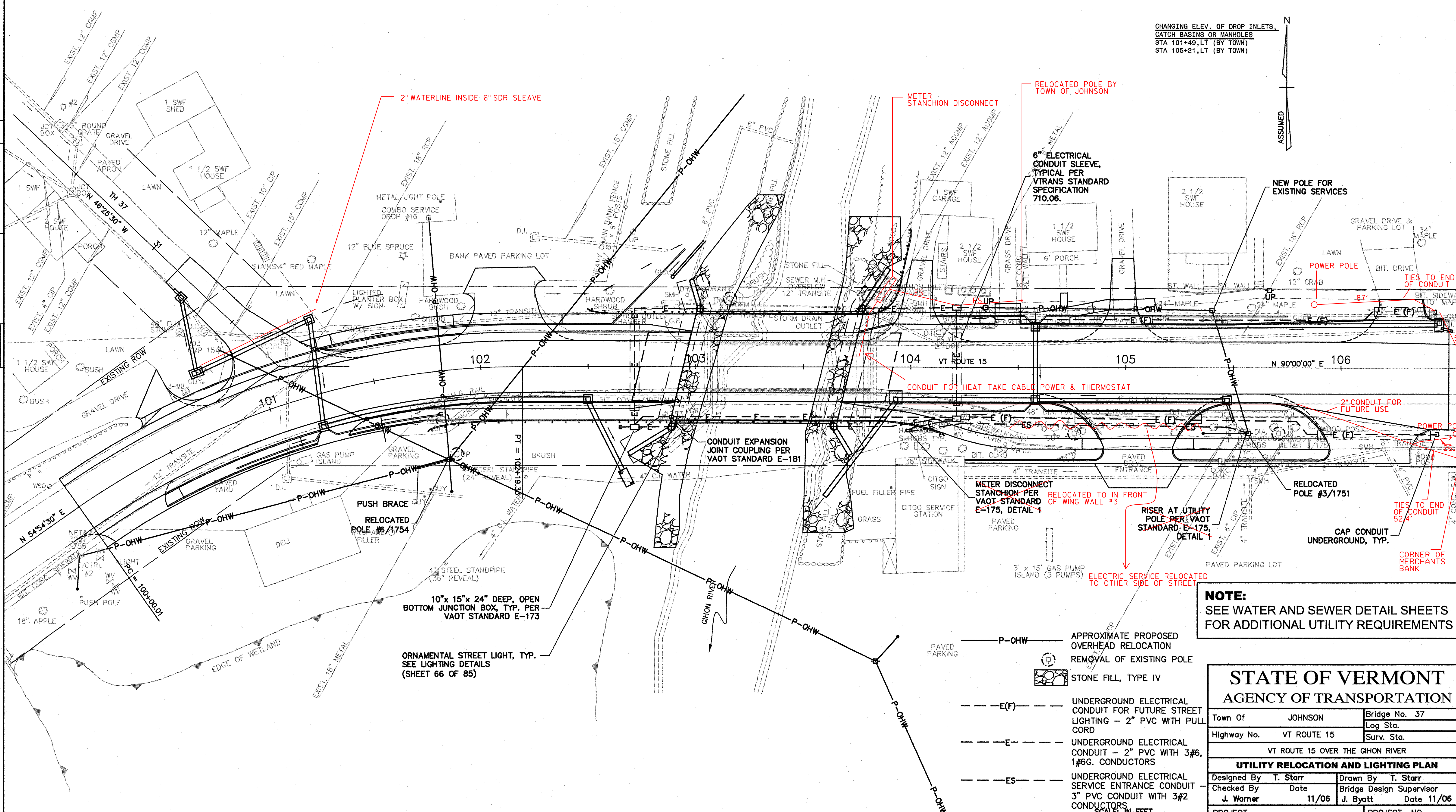
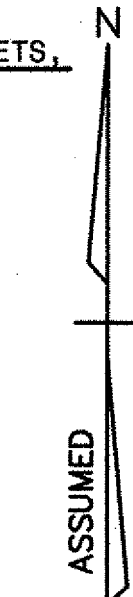
Designed By	JJD	Drawn By	JEB/JEN
Checked By	Date	Bridge Design Supervisor	Date
JJD	1-07	J. Byatt	11/06

PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
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I.G.C. Info.
Bridge Sheet No. Sheet 23 Of 85

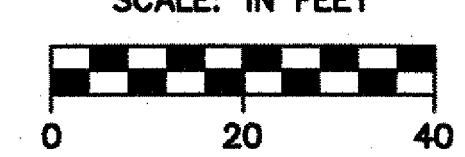
NOTE:
EXISTING UTILITY LOCATIONS (WATER, SEWER, ELECTRIC, AND DRAINAGE) SHOWN ON THESE PLANS HAVE BEEN COMPILED FROM FIELD SURVEY AND CONSTRUCTION/AS-BUILT PLANS. ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.

CHANGING ELEV. OF DROP INLETS, CATCH BASINS OR MANHOLES
STA 101+49, LT (BY TOWN)
STA 105+21, LT (BY TOWN)



NOTE:
SEE WATER AND SEWER DETAIL SHEETS FOR ADDITIONAL UTILITY REQUIREMENTS

- APPROXIMATE PROPOSED OVERHEAD RELOCATION
- UNDERGROUND ELECTRICAL CONDUIT FOR FUTURE STREET LIGHTING - 2" PVC WITH PULL CORD
- UNDERGROUND ELECTRICAL CONDUIT - 2" PVC WITH 3#6, 1#6G. CONDUCTORS
- UNDERGROUND ELECTRICAL SERVICE ENTRANCE CONDUIT 3" PVC CONDUIT WITH 3#2 CONDUCTORS
- STONE FILL, TYPE IV
- PAVED PARKING
- REMOVAL OF EXISTING POLE



NOTE:
SEE SHEET 66 OF 85 FOR LIGHTING DETAILS AND NOTES.

STATE OF VERMONT		
AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT ROUTE 15	Log Sta.
		Surv. Sta.
VT ROUTE 15 OVER THE GHON RIVER		
UTILITY RELOCATION AND LIGHTING PLAN		
Designed By	T. Starr	Drawn By T. Starr
Checked By	Date	Bridge Design Supervisor
J. Warner	11/06	J. Byatt Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 24 Of 85

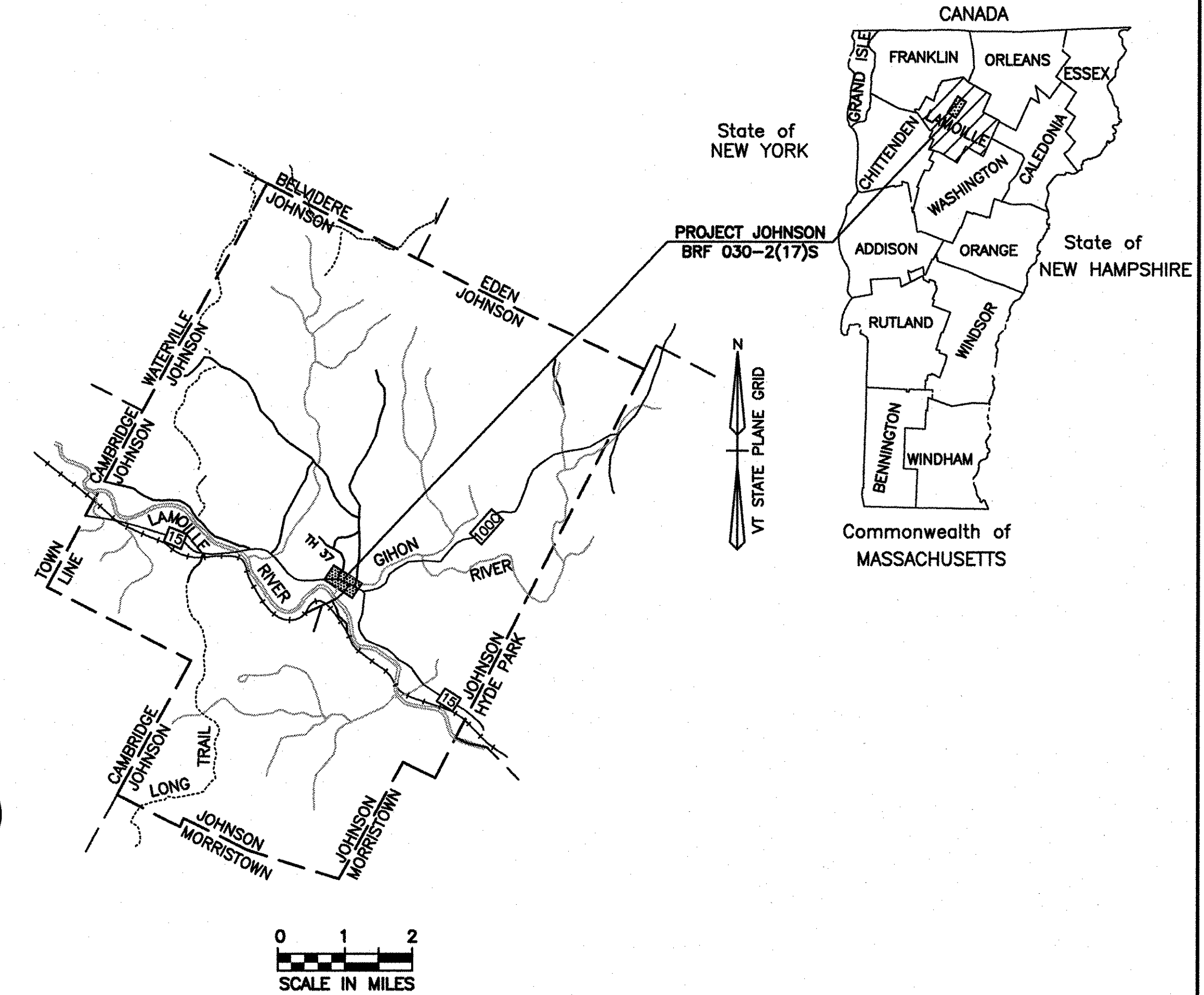
STATE OF VERMONT AGENCY OF TRANSPORTATION



EROSION PREVENTION INDEX OF SHEETS

25	TITLE SHEET
26	EROSION PREVENTION AND SEDIMENT CONTROL NARRATIVE
27	EXISTING CONDITIONS SITE PLAN
28	EROSION PREVENTION & SEDIMENT CONTROL PLAN
29	FINAL CONDITIONS SITE PLAN
30	EROSION PREVENTION & SEDIMENT CONTROL DETAILS SILT FENCE
31	EROSION PREVENTION & SEDIMENT CONTROL DETAILS CHECK DAMS
32	EROSION PREVENTION & SEDIMENT CONTROL DETAILS DROP INLET PROTECTION
33	EROSION PREVENTION & SEDIMENT CONTROL DETAILS CONSTRUCTION ENTRANCE
34	EROSION PREVENTION & SEDIMENT CONTROL DETAILS DITCH AND SLOPE PROTECTION
35	EROSION PREVENTION & SEDIMENT CONTROL DETAILS TURBIDITY CURTAIN
36	BLANK

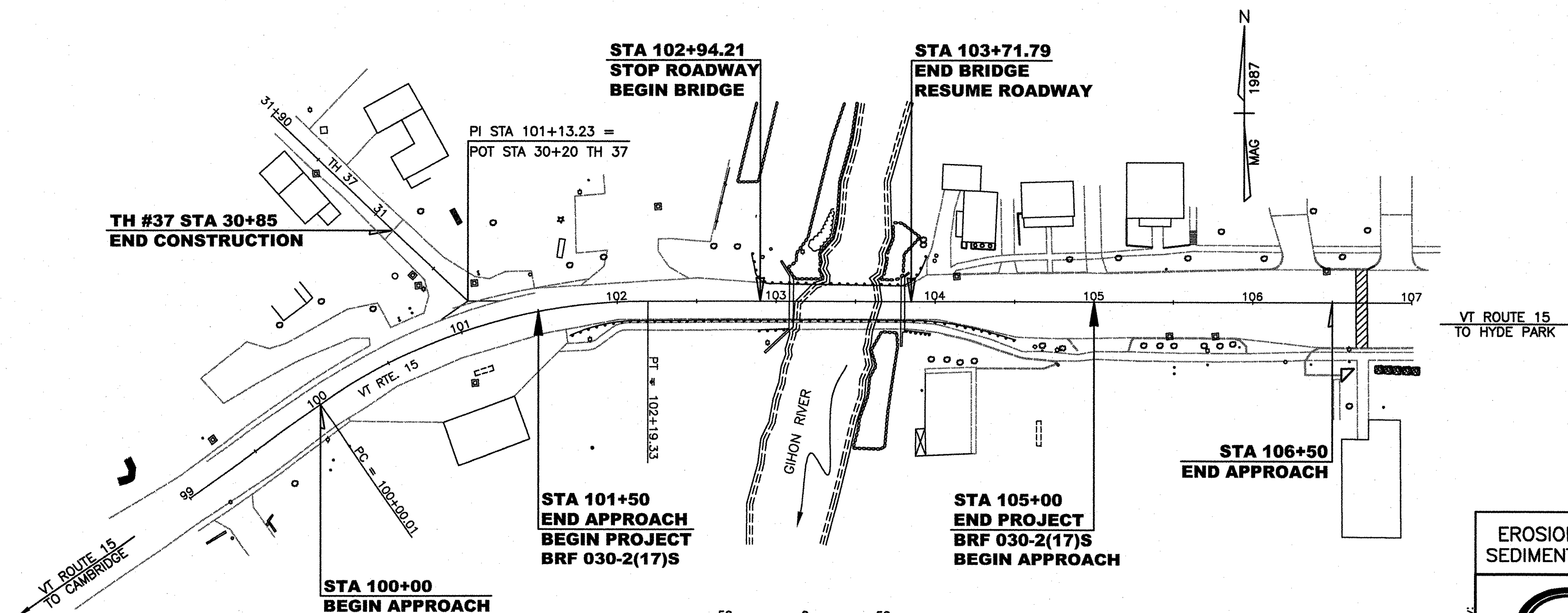
PROPOSED IMPROVEMENT TOWN OF JOHNSON COUNTY OF LAMOILLE VT ROUTE 15 (MINOR ARTERIAL)



PROJECT LOCATION:
BEGINNING AT A POINT ON VT ROUTE 15 APPROX. 0.372 MILES WEST OF THE INTERSECTION OF VT ROUTE 15 AND VT ROUTE 100C, EXTENDING EASTERLY ALONG VT ROUTE 15 FOR 0.066 MILES.

LENGTH OF ROADWAY = 272.42 FEET = 0.051 MILES
LENGTH OF BRIDGE = 77.58 FEET = 0.015 MILES
LENGTH OF PROJECT = 350.00 FEET = 0.066 MILES

PROJECT DESCRIPTION:
THE REPLACEMENT OF A STRUCTURALLY DEFICIENT BRIDGE (BR#37) ON VT ROUTE 15 INCLUDING ALL THE NECESSARY ROADWAY APPROACH WORK.



CONVENTIONAL SIGNS	
COUNTY LINE	---
TOWN LINE	- - - - -
LIMITS OF ACCESS	○-○-○-○
POINT OF ACCESS	X
FENCE LINE	x x x
STONE WALL	=====
TRAVELED WAY	=====
GUARDRAIL	○-○-○-○
RAILROAD	
SURVEY LINE	- - - - -
CULVERT	—○—
POWER POLE	⊕
TELEPHONE POLE	⊕
TREES	⊙
CONTROL OF ACCESS	///
PROPERTY LINE	---
R.O.W. TAKING LINE	SR
SLOPE RIGHTS	○-△
TOP OF CUT	△
TOE OF SLOPE	○

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

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 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

EROSION PREVENTION & SEDIMENT CONTROL PLANS	
540 Commercial Street • Manchester, NH 03101 (603) 668-8223 • Fax: (603) 668-8802 eld@eldengineers.com • www.eldengineers.com Maine • New Hampshire • Vermont	

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED _____	DATE _____
PROJECT MANAGER: W. SYMONDS	
PROJECT NAME: JOHNSON	
PROJECT NUMBER: BRF 030-2(17)S	
SHEET 25 OF 85 SHEETS	
SHEET 1 OF 85 SHEETS	

DESCRIPTION OF PROJECT

THIS PROJECT INVOLVES RECONSTRUCTION OF BRIDGE #37 OVER THE GIHON RIVER ON VERMONT ROUTE 15 IN THE TOWN OF JOHNSON. THE SITE IS LOCATED 0.372 MILES WEST OF THE INTERSECTION OF VERMONT ROUTES 15 AND 100C. THE GIHON RIVER IS CHARACTERIZED AS A SMALL RIVER IN TERRAIN WITH STEEPLY SLOPED FORESTED UPLANDS, A MODERATELY DEVELOPED FLOOD PLAIN AND A STEAM BED OF GRAVEL OVER DEEP SANDY SILT. IT HAS A DRAINAGE AREA OF 65 SQUARE MILES.

FEATURES OF CONCERN WITH RESPECT TO EROSION PREVENTION INCLUDE: THE GIHON RIVER, A CLASS II WETLAND IN THE SOUTHWEST QUADRANT AND THE CONFLUENCE OF THE GIHON AND LAMOILLE RIVER WHICH IS APPROXIMATELY 0.25 MILES SOUTH OF ROUTE 15. A NEW SINGLE SPAN BRIDGE WILL BE CONSTRUCTED ON EXISTING ALIGNMENT. TRAFFIC WILL BE MAINTAINED ON A TWO-WAY TEMPORARY BRIDGE TO BE LOCATED DOWNSTREAM OF THE EXISTING BRIDGE. TOTAL ROADWAY APPROACH WORK, INCLUDING BOTH APPROACHES, IS APPROXIMATELY 650 FEET.

TOTAL DISTURBED AREA (EXCLUDING WASTE, BORROW AND STAGING AREAS): 1.25 AC.

SITE INVENTORY AND ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS

THE LAND SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, WITH MODERATE TO STEEP SLOPES OF LAWN, VARIOUS GRASSES, BRUSH, DECIDUOUS AND CONIFEROUS TREES. THE TOPOGRAPHY RUNS GENERALLY TOWARD THE RIVER FROM THE EAST AND WEST. RUNOFF GENERALLY LEAVES THE SITE IN A CLOSED DRAINAGE SYSTEM.

DRAINAGE, WATERWAYS, BODIES OF WATER

THE GIHON RIVER IS CHARACTERIZED AS A SMALL RIVER IN TERRAIN WITH STEEPLY SLOPED FORESTED UPLANDS, A MODERATELY DEVELOPED FLOOD PLAIN AND A STEAM BED OF GRAVEL OVER DEEP SANDY SILT. IT HAS A DRAINAGE AREA OF 65 SQUARE MILES. THE CONFLUENCE OF THE GIHON AND LAMOILLE RIVER IS APPROXIMATELY 0.25 MILES SOUTH OF ROUTE 15. THERE IS A CLASS II WETLAND IN THE SOUTHWEST QUADRANT.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE SITE SURROUNDING THE BRIDGE IS URBAN IN NATURE WITH A MIX OF RESIDENTIAL AND COMMERCIAL USES. IT IS GENERALLY FLAT WITH THE EXCEPTION OF THE SLOPES LEADING DOWN TO THE RIVER WHICH ARE 1-2 OR STEEPER. ROUTE 15 IS APPROXIMATELY 32 FEET WIDE TO THE WEST AND 40 FEET WIDE, WITH ON STREET PARKING, TO THE EAST OF THE BRIDGE. A LOW VOLUME TOWN HIGHWAY (#37) INTERSECTS ROUTE 15 200' WEST OF THE BRIDGE. UTILITIES CONSIST OF OVERHEAD ELECTRIC, TELEPHONE AND CABLE AS WELL AS UNDERGROUND WATER AND SEWER FACILITIES. THE WATER AND SEWER UTILITIES PASS UNDER THE GIHON RIVER.

VEGETATION

THE VEGETATION SURROUNDING THE PROJECT SITE CONSISTS OF A COMBINATION OF LAWN, GRASS AND BRUSH WITH A FEW SHADE TREES IN LAWN AREAS. THERE ARE NO AGRICULTURAL FIELDS NEAR THE PROJECT LIMITS. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT WHICH ARE AFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE ON THE EXISTING ALIGNMENT AND CONSTRUCTION OF THE DETOUR.

SOILS

A DETAILED DESCRIPTION OF THE SOIL TYPES EXPECTED TO BE ENCOUNTERED IN THE PROJECT AREA IS INCLUDED IN THE PROJECT PLAN SHEET TITLED "EXISTING CONDITIONS SITE PLAN".

SOIL NAME	DEPTH	ERODIBILITY
ONDWA FINE SANDY LOAM	0'-60'	NOT HIGHLY ERODIBLE
UDIFLUVENTS	0'-60'	NOT HIGHLY ERODIBLE

FREQUENTLY FLOODED

SENSITIVE RESOURCE AREAS

THE PROJECT IS LOCATED WITHIN THE JOHNSON VILLAGE HISTORIC DISTRICT. BRIDGE #37 CONTRIBUTES TO THE HISTORIC CHARACTER OF THE DISTRICT. NO "THREATENED & ENDANGERED SPECIES" OR ARCHAEOLOGICAL RESOURCES HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS. THE GIHON RIVER, A CLASS II WETLAND, IN THE SOUTHWEST QUADRANT OF THE PROJECT, AND THE ASSOCIATED BUFFERS ARE THE ONLY IDENTIFIED RESOURCES.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

DISTURBANCE OF SOILS NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO CONSTRUCT TWO NEW CONCRETE ABUTMENTS AND A TEMPORARY DETOUR.

DESCRIPTION OF SLOPES

THE EXISTING AND PROPOSED SLOPES IN THE PROJECT AREA ARE REPRESENTED ON THE EXISTING AND FINAL CONDITIONS SITE PLANS, WHERE THE SLOPE INDICATORS ARE SHOWN, AND THE CROSS SECTIONS. THE ARROWS ASSOCIATED WITH THE SLOPE INDICATORS POINT DOWN THE SLOPE.

EXISTING SLOPES

THE PROJECT IS LOCATED ON AN URBAN AREA WITH GENERALLY FLAT SLOPES WITH THE EXCEPTION OF THOSE ADJACENT TO THE RIVER. SLOPES ALONG THE RIVER ARE IN GENERAL STEEP, RANGING 1-2 TO 1-1. BETWEEN STA. 101+75 AND 102+75 RT THERE ARE 1-2 SLOPES EXTENDING DOWN FROM AN EXISTING SIDEWALK TO THE NORTHERN EDGE OF A FLAT CLASS II WETLAND. FROM THE EASTERLY EDGE OF THE WETLAND, THERE ARE STEEP SLOPES EXTENDING TO THE RIVER.

PROPOSED SLOPES

THE PROPOSED SLOPES WITHIN THE PROJECT ARE SIMILAR TO THE EXISTING SLOPES. THERE WILL BE VERY LITTLE CHANGE. A NEW SIDEWALK IS PROPOSED ALONG THE NORTH SIDE OF ROUTE 15 FROM TH 37 TO THE EAST SIDE OF THE BRIDGE WHERE IT TIES INTO AN EXISTING SIDEWALK. THE SLOPES ALONG THE CHANNEL BANKS WILL BE LINED WITH HEAVY STONE AT 1-1.5 (67%) SLOPE.

TEMPORARY EROSION AND SEDIMENT CONTROL

1. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE PROJECT DEMARCATION FENCING SHALL BE PLACED ALONG THE PERIMETER OF THE PROJECT AS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS. THE INSTALLATION OF THE DEMARCATION FENCING WILL BE PERFORMED SUCH THAT NO VEGETATION ON THE OUTSIDE OF THE FENCING IS DISTURBED.

2. AFTER THE CLEARING OF TREES AND SHRUBS, BUT PRIOR TO ANY GRUBBING AND EXCAVATION, CONSTRUCT PERIMETER EROSION PREVENTION MEASURES AS SHOWN ON THE PLANS. DURING GRUBBING OPERATIONS, STONE CHECK DAM BARRIERS SHALL BE INSTALLED AT ANY OBVIOUS CONCENTRATED FLOW DISCHARGE POINTS, OR AS DIRECTED BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR.

AFTER PERIMETER CONTROLS ARE IN PLACE, AND PRIOR TO GRADING OPERATIONS, CONSTRUCT TEMPORARY ONSITE SETTLING BASINS WHERE NECESSARY. GRADE DISTURBED AREAS TO DRAIN TOWARD SETTLING BASINS WHERE POSSIBLE. WATER WHICH HAS BEEN ADEQUATELY TREATED IN SETTLING BASINS MAY BE DIRECTED TO NEARBY UNDISTURBED STREAMS OR SWALES.

3. ALL AREAS OF EXPOSED SOILS (TEMPORARY OR PERMANENT) SHALL BE STABILIZED AS SOON AS PRACTICABLE AND BEFORE ANY PREDICTED RAINFALL EVENT. SLOPES 1-3 OR STEEPER SHALL BE STABILIZED WITH EROSION MATTING AND SEED. OTHER SLOPES SHALL BE STABILIZED WITH SEED AND MULCH OR EROSION MATTING. ALL SLOPES WILL BE CHECKED EACH SITE VISIT AND ANY ERODED AREAS WILL BE IMMEDIATELY REPAIRED. TEMPORARY STABILIZATION METHODS WILL BE USED AS NECESSARY UNTIL FINAL STABILIZATION MEASURES ARE IN PLACE.

4. PRIOR TO ANY CONSTRUCTION OR STAGING, THE CONTRACTOR WILL INSTALL STABILIZED CONSTRUCTION ENTRANCES LEADING TO STAGING AREAS AND THE PROJECT SITE TO PREVENT THE TRACKING OF SILTS AND SEDIMENTS OFFSITE. COARSE STONE FILL OVER FILTER FABRIC SHOULD BE USED WHERE AN ALREADY ESTABLISHED STABLE ENTRANCE DOES NOT EXIST. THE CRUSHED STONE PRODUCT USED FOR THE CONSTRUCTION OF THE STABILIZED CONSTRUCTION ENTRANCES SHALL BE MONITORED EACH SITE VISIT FOR SEDIMENT ACCUMULATION AND REPLACED AS NECESSARY. STABILIZED CONSTRUCTION ENTRANCES SHALL ALSO BE ESTABLISHED AND MAINTAINED AT ALL OFFSITE WASTE AND BORROW AREAS. THE MINIMUM SIZE OF A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 14 FEET WIDE BY 50 FEET LONG.

5. ALL TEMPORARY EROSION PREVENTION DEVICES WILL STAY IN PLACE UNTIL FINAL GRASS GROWTH HAS BEEN ESTABLISHED AND COMPLETE STABILIZATION OF THE AREAS HAS OCCURRED. ONCE STABILIZATION HAS OCCURRED, ALL TEMPORARY EROSION PREVENTION MEASURES WILL BE REMOVED AND ALL DISTURBED AREAS WILL BE STABILIZED.

6. DRAINAGE STRUCTURES WILL BE CLEANED AS NECESSARY TO REMOVE ANY SEDIMENT BUILDUP IN THE SUMP OF THE STRUCTURES OR AT THE INLET OF THE STRUCTURE. ANY INLET CONTROL FOUND TO BE INEFFECTIVE WILL BE REPLACED AS NECESSARY AND WILL BE DONE IMMEDIATELY. ALL SEDIMENTS REMOVED WILL BE DEPOSITED IN AN UPLAND PORTION OF THE PROJECT SITE, OR DISPOSED OFFSITE IN THE DESIGNATED PROJECT WASTE SITE.

7. ALL MATERIAL STOCKPILES, INCLUDING BUT NOT LIMITED TO, GRUBBING MATERIAL, SAND BORROW, EARTH BORROW, GRANULAR BORROW, TOPSOIL, SUBBASE, AND ANY EXCAVATED WASTE PILES SHALL HAVE SILT FENCE INSTALLED AROUND THE BASE OF THE STOCKPILE. ANY OFFSITE AREAS WHERE BORROW OR EXCAVATED MATERIALS WILL BE STOCKPILED WILL HAVE SILT FENCE AROUND THE BASE OF EACH STOCKPILE. REMOVAL OF THE EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE PERFORMED ONLY AFTER APPROVAL BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR. ALL DISPOSAL SITES SHALL HAVE AN EROSION PREVENTION AND SEDIMENT CONTROL PLAN.

8. THE NEW SUBSTRUCTURES WILL BE CONSTRUCTED IN THE DRY. ALL WATER PUMPED FROM SUBSTRUCTURE AND OTHER EXCAVATION AREAS WILL BE PUMPED TO EITHER A DIRT BAG SILT CONTAINMENT DEVICE, OR AN EXCAVATED SEDIMENT BASIN. THE FIRST PUMPING OF THE EXCAVATIONS WILL CONTAIN THE HIGHEST SEDIMENT LOAD. IT MAY BE NECESSARY TO CONSTRUCT ADDITIONAL SETTLING BASINS, OR TO CONTROL THE RATE OF DRAWDOWN OF THE EXCAVATIONS. AFTER COMPLETION OF THE SUBSTRUCTURES, ALL COLLECTED SEDIMENTS SHOULD BE REMOVED FROM THE SETTLING BASINS AND THE GROUND SHAPED TO ITS FINAL GRADE. DISPOSE OF THE COLLECTED SEDIMENTS IN AN UPLAND PORTION OF THE PROJECT, OR IN A MANNER APPROVED BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR THAT WILL NOT RESULT IN SEDIMENTS OR POLLUTANTS ENTERING THE STREAM.

9. NEW DRAINAGE CULVERTS THAT ARE BEING CONSTRUCTED IN THE SAME LOCATION AS EXISTING CULVERTS SHALL BE ISOLATED FROM THE NEW WORK BY MEANS OF DAMMING AND PUMPING INTO A SETTLING BASIN, OR BY INSTALLING A TEMPORARY PIPE OF SUFFICIENT SIZE TO HANDLE EXPECTED FLOWS.

10. IN AREAS OF CONCENTRATED RUNOFF ABOVE NEWLY CONSTRUCTED FILL SLOPES, FLEXIBLE SLOPE PIPES OR OTHER APPROVED DIVERSION METHODS WILL BE USED TO TRANSPORT RUNOFF DOWN THE FILL SLOPES TO SETTLING BASINS.

11. CONSTRUCTION OF THE BRIDGE REQUIRES A FOUR PHASE TRAFFIC CONTROL SEQUENCE. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION PREVENTION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ASSURE ECONOMICAL, EFFECTIVE, AND CONTINUOUS EROSION PREVENTION AND SEDIMENT CONTROL. THE CONTRACTOR SHALL EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION ACTIVITIES PROCEED.

PRIOR TO CONSTRUCTING THE DETOUR THE CONTRACTOR WILL LAY A GEOTEXTILE TO HELP ENSURE THAT, UPON REMOVAL OF THE DETOUR, THE CONDITIONS WITHIN THE BUFFER ARE RETURNED BACK TO THEIR ORIGINAL STATE. DETOUR FILL MATERIAL SHALL BE REMOVED TO ORIGINAL GROUND OUTSIDE OF THE ULTIMATE CONSTRUCTION LIMITS. AS THE TEMPORARY DETOUR FILLS ARE REMOVED, ALL EXPOSED SOIL SURFACES WILL BE STABILIZED AS PREVIOUSLY NOTED.

SEDIMENT SETTLING BASIN SIZING CRITERIA

PUMP FLOW RATE		REQUIRED SURFACE AREA		LENGTH 2:1 WIDTH			
Q (gpm)	Q (m ³ /s)	(ft ²)	(m ²)	L (ft)	W (ft)	L (m)	W (m)
50	0.0032	595	55	35.0	17.0	10.6	5.3
100	0.0063	1200	111	49.0	24.5	15.0	7.5
150	0.0095	1776	165	59.6	29.8	18.2	9.1
200	0.0126	2368	220	68.8	34.4	21.0	10.5
250	0.0158	2970	276	77.0	38.5	23.4	11.7
300	0.0189	3560	330	84.4	42.2	25.8	12.9
350	0.0221	4155	386	91.2	45.6	27.8	13.9

FINAL EROSION CONTROL MEASURES

1. ALL AREAS OF EXPOSED SOILS SHALL BE STABILIZED AS SOON AS PRACTICABLE AND BEFORE ANY PREDICTED RAINFALL EVENT. SLOPES 1-3 OR STEEPER SHALL BE STABILIZED WITH EROSION MATTING AND SEED. OTHER SLOPES SHALL BE STABILIZED WITH SEED AND MULCH OR EROSION MATTING. TEMPORARY STABILIZATION METHODS WILL BE USED AS NECESSARY UNTIL FINAL STABILIZATION MEASURES ARE IN PLACE.

2. ANY NEW FILL SLOPES THAT ARE DESIGNED WITH STONE FILL BLANKETS FOR SLOPE STABILIZATION SHALL BE CONSTRUCTED WITH THE STONE FILL BEING PLACED AS THE EMBANKMENT CONSTRUCTION PROGRESSES.

3. STONE FILL FOR CHANNEL STABILIZATION AT THE OUTLET ENDS OF CULVERTS IS TO BE PLACED PRIOR TO INSTALLATION OF THE CULVERTS. ALL WORK ON NEW CULVERTS SHOULD PROCEED FROM THE OUTLET TOWARDS THE INLET. STONE CHECK DAMS ARE TO BE INSTALLED ON UNDISTURBED GROUND DOWNSTREAM OF THE STONE FILL PADS AT OUTLETS. STONE FILL FOR DITCH STABILIZATION SHALL BE PLACED DURING THE SAME WORKING DAY THAT THE DITCH EXCAVATION WAS PERFORMED, UNLESS DIRECTED OTHERWISE BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR.

4. THE SUBBASE MATERIAL SHOULD BE PLACED AS SOON AS THE SUBGRADE HAS REACHED ITS FINAL GRADE AND SLOPE. THE TEMPORARY TRAVELING SURFACE WILL BE GRADED TO PROMOTE SHEET FLOW OFF THE SURFACE ONTO THE ADJACENT SLOPES, OR FLOWS WILL BE DIRECTED TO COLLECTION AREAS AND SHALL BE TRANSPORTED DOWN THE FILL SLOPES TO SETTLING BASINS.

5. THE CHANNEL STONE FILL SLOPES WILL BE COMPLETED, AND GRUBBING MATERIAL WILL BE APPLIED TO STONE FILLED AREAS AROUND EACH ABUTMENT. THE GRUBBING MATERIAL SHALL NOT BE PLACED BENEATH THE NEW STRUCTURE OR BELOW THE ORDINARY HIGH WATER ELEVATION. REFER TO THE HYDRAULICS INFORMATION ON THE PRELIMINARY INFORMATION SHEET. THE NEWLY PLACED GRUBBING MATERIAL SHALL BE STABILIZED WITH EROSION MATTING AND SEED.

6. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED FOLLOWING FINAL GRADING ACTIVITIES. ALL AREAS THAT ARE GRADED OUTSIDE OF THE GROWING SEASON SHALL BE TREATED WITH SLOPE STABILIZATION UNTIL SEEDING & MULCHING CAN BE PERFORMED.

7. REMOVAL OF TEMPORARY EROSION PREVENTION / SEDIMENT CONTROL DEVICES SHALL COMMENCE ONLY AFTER ALL UP SLOPE AREAS ARE STABILIZED AND WELL ESTABLISHED, AND THE RESIDENT ENGINEER OR ONSITE COORDINATOR HAS APPROVED THE REMOVAL.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

1. THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS ARE INTENDED AS A GUIDE FOR PREVENTING SOIL EROSION AND CONTROLLING SEDIMENT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE DURATION OF THE PROJECT TO CONTROL EROSION AND MINIMIZE THE SEDIMENTATION OF THE RECEIVING WATERS. AN ALTERNATE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MAY BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE AGENCY OF TRANSPORTATION. THE PLAN PREPARER WILL BE AVAILABLE FOR ONSITE CONSULTATIONS WITH THE RESIDENT ENGINEER OR ONSITE COORDINATOR WITHIN TWENTY FOUR HOURS OF THE REQUEST.

2. AN ASSIGNED INDIVIDUAL WHO IS NOT PERMANENTLY ASSOCIATED WITH THE DAY-TO-DAY OPERATIONS OF THE PROJECT SHALL MONITOR THE CONSTRUCTION SITE. THE INSPECTOR WILL BE FAMILIAR WITH THIS PLAN AND WITH EROSION PREVENTION & SEDIMENT CONTROL PROCEDURES AND WITH ROAD AND BRIDGE CONSTRUCTION TECHNIQUES.

THE INSPECTOR SHALL PERFORM A "SITE VISIT" AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AS SOON AS POSSIBLE BUT NO LATER THAN 24 HOURS AFTER ANY STORM EVENT WHICH GENERATES A DISCHARGE OF STORMWATER RUNOFF FROM THE CONSTRUCTION SITE. DURING THE SITE VISIT, THE INSPECTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL STRUCTURES AND MEASURES AND PREPARE A MONITORING REPORT. A COPY OF THE MONITORING REPORT SHALL BE GIVEN TO THE RESIDENT ENGINEER OR ONSITE COORDINATOR AFTER EACH SITE VISIT. THE REPORT WILL BE A WRITTEN REPORT STATING THE DATE OF THE REVIEW, A DESCRIPTION OF THE EROSION PREVENTION AND SEDIMENT CONTROL MEASURES REVIEWED. ALSO INCLUDED WILL BE THE EFFECTIVENESS OF THE EROSION PREVENTION / CONTROL MEASURES, ANY DEFICIENCIES, AND CORRECTIVE ACTIONS TO BE UNDERTAKEN.

3. THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL DEVICES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR. SEE SECTION 105.23 OF THE 2001 VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE RESIDENT ENGINEER OR ONSITE COORDINATOR MAY DIRECT THE INSTALLATION OF CERTAIN EROSION PREVENTION MEASURES IN ORDER TO FORESTALL OR MITIGATE POTENTIAL OR EXISTING EROSION PROBLEMS, OR TO RESPOND TO STORM EVENTS OR DAMAGE BY CONSTRUCTION OPERATIONS.

4. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION PREVENTION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ASSURE ECONOMICAL, EFFECTIVE, AND CONTINUOUS EROSION PREVENTION AND SEDIMENT CONTROL. THE CONTRACTOR SHALL EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION ACTIVITIES PROCEED.

5. THE CONTRACTOR SHALL INSTALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AS SEQUENCED ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN SHEETS, OR AS DIRECTED BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR. THE TYPE, SIZE, AND LOCATION OF ANY MEASURE SHALL NOT BE CHANGED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE RESIDENT ENGINEER OR ONSITE COORDINATOR. ANY APPROVED CHANGES SHALL BE NOTED ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS AND DISCUSSED IN THE WEEKLY REPORT. THE CONTRACTOR SHALL INSPECT ALL EROSION PREVENTION MEASURES DAILY AND AFTER EACH RAINFALL EVENT. THE CONTRACTOR SHALL REPAIR ALL DAMAGED EROSION PREVENTION MEASURES IMMEDIATELY. ALL EROSION PREVENTION MEASURES THAT TRAP SEDIMENT, SUCH AS SETTLING BASINS, SILT FENCES AND CHECK DAMS, SHALL BE CLEANED OUT WHEN THEIR CAPACITY REACHES 50 %.

6. THE RESIDENT ENGINEER'S OR ONSITE COORDINATOR'S APPROVAL SHOULD BE OBTAINED PRIOR TO INSTALLING ANY EROSION PREVENTION / SEDIMENT CONTROL MEASURE NOT SPECIFIED IN THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS. HOWEVER, IN EMERGENCY SITUATIONS WHERE THE RESIDENT ENGINEER OR ONSITE COORDINATOR IS NOT IMMEDIATELY AVAILABLE, THE CONTRACTOR SHOULD REPAIR OR INSTALL THE MEASURES AS HE/SHE DEEMS NECESSARY AND REPORT THE INCIDENT TO THE RESIDENT ENGINEER OR ONSITE COORDINATOR AS SOON AS PRACTICAL.

7. THE CONTRACTOR SHALL CONTROL ALL SEDIMENT-LADEN RUNOFF GENERATED WITHIN THE PROJECT SITE. CLEAN RUNOFF FROM OUTSIDE THE PROJECT SITE SHALL BE ROUTED THROUGH THE PROJECT SITE USING DIVERSION BERMS, DIVERSION CHANNELS, AND TEMPORARY OR PERMANENT CULVERTS.

8. CONSTRUCTION EQUIPMENT WILL NOT BE ALLOWED TO: OPERATE ON THE DOWNHILL SIDE OF THE PERIMETER CONTROL MEASURES, CROSS A FLOWING STREAM, OR DISTURB THE EXISTING STREAM BANKS, UNLESS AUTHORIZED BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR.

9. ALL IN-STREAM CONSTRUCTION MUST TAKE PLACE IN A DRY CHANNEL BETWEEN JUNE 1ST AND OCTOBER 1ST.

10. IN GENERAL, PRESERVE EXISTING VEGETATION, SHRUBS, AND TREES WHENEVER POSSIBLE.

11. SILT FENCE SHALL BE PLACED AT THE TOES OF ALL FILL SLOPES AND SHALL BE CONSTRUCTED SO THAT FLOWS CANNOT BYPASS THE ENDS. AREAS DIRECTLY BELOW (DOWNHILL) OF THE SILT FENCES MUST BE UN-DISTURBED AND VEGETATED.

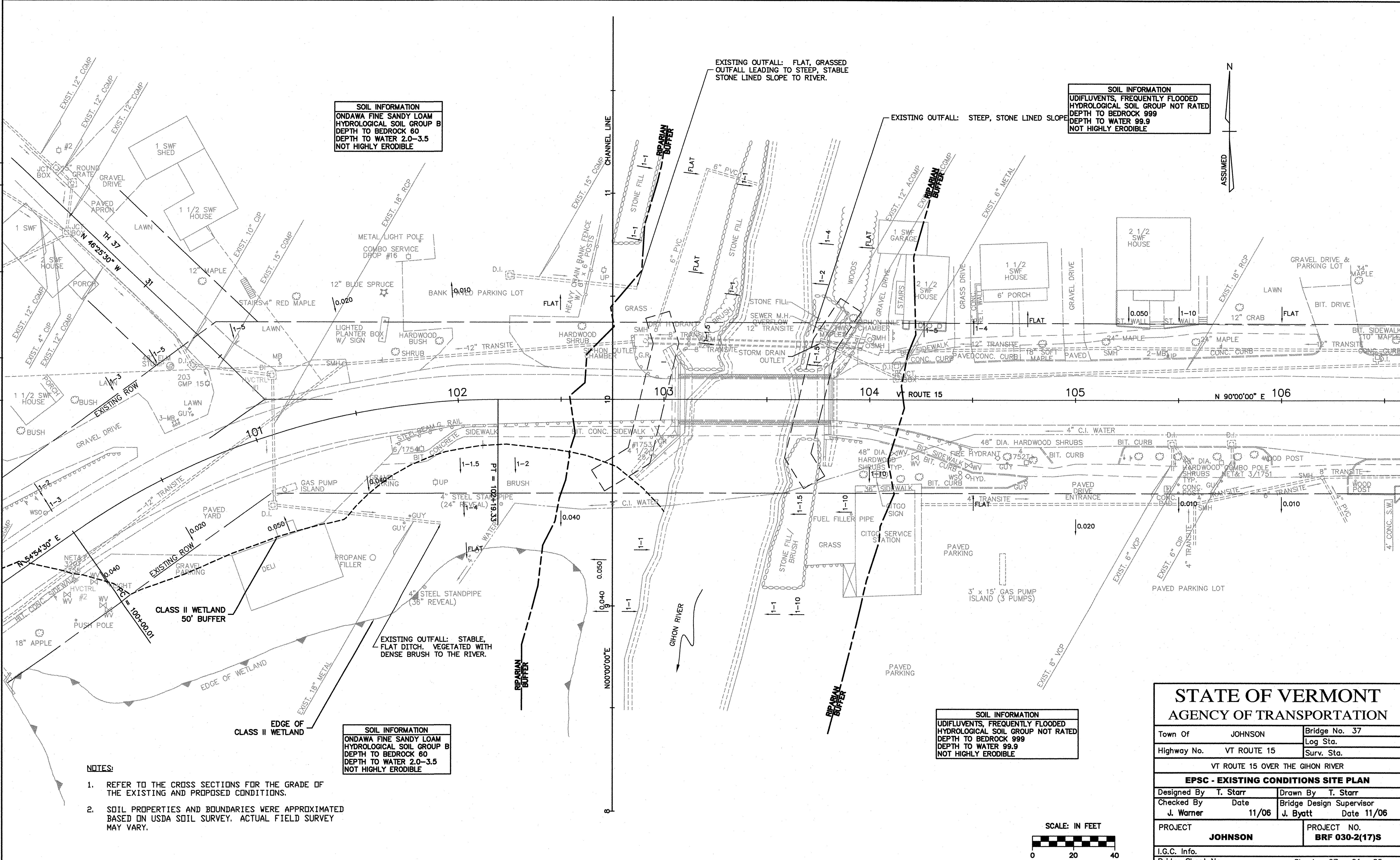
12. ALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURE WILL BE INSPECTED EACH SITE VISIT BY THE DESIGNATED INSPECTOR, AS DESCRIBED BELOW:
A. THESE MEASURES WILL BE MAINTAINED IN GOOD CONDITION. ANY MEASURES THAT ARE INEFFECTIVE WILL BE REPAIRED OR REPLACED IMMEDIATELY.
B. SEDIMENT DEPOSITS WILL BE REMOVED WHEN THEY REACH ONE-HALF THE HEIGHT OF THE SEDIMENT CONTROL DEVICE.
C. ALL SEDIMENTS REMOVED WILL BE DEPOSITED IN AN UPLAND PORTION OF THE PROJECT SITE, OR DISPOSED OFFSITE IN THE DESIGNATED PROJECT WASTE SITE.

13. BOTH TEMPORARY & PERMANENT SEEDING & MULCHING WILL BE CHECKED EACH SITE VISIT FOR VEGETATIVE GROWTH. ANY AREAS REQUIRING RE-VEGETATION WILL BE REPAIRED IMMEDIATELY.

14. THE PROJECT COMPLETION DATE HAS BEEN SET TO ENSURE ALL FINAL EROSION PREVENTION MEASURES FOR THE ESTABLISHMENT OF PERMANENT VEGETATION WILL TAKE PLACE DURING THE GROWING SEASON. THEREFORE, WINTER STABILIZATION METHODS WILL NOT BE SHOWN ON THE PLANS OR DESCRIBED IN THE NARRATIVE.

EROSION PREVENTION AND SEDIMENT CONTROL NARRATIVE		SURVEYED BY	N/A	DATE	N/A
		DRAWN BY	TUS	DATE	X/XX
		SQUAD LEADER	JAW		
		DESIGN FILE NO.	91296		
IPARM FILE		DATE PLOTTED			
PROJ. NAME	JOHNSON				
PROJ. NO.	BRS 030-2(17)S				
SHEET	26	OF	85	SHEETS	

DATE	
BY	
SURVEYED	
PLOTTED	
CHECKED	
NO. OF WAY CHECKED	
PLAN	
NOTE BOOK	
NO.	



SOIL INFORMATION
 ONDWA FINE SANDY LOAM
 HYDROLOGICAL SOIL GROUP B
 DEPTH TO BEDROCK 60
 DEPTH TO WATER 2.0-3.5
 NOT HIGHLY ERODIBLE

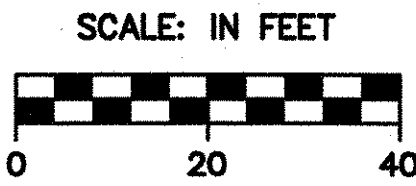
SOIL INFORMATION
 UDIFLUENTS, FREQUENTLY FLOODED
 HYDROLOGICAL SOIL GROUP NOT RATED
 DEPTH TO BEDROCK 999
 DEPTH TO WATER 99.9
 NOT HIGHLY ERODIBLE

SOIL INFORMATION
 UDIFLUENTS, FREQUENTLY FLOODED
 HYDROLOGICAL SOIL GROUP NOT RATED
 DEPTH TO BEDROCK 999
 DEPTH TO WATER 99.9
 NOT HIGHLY ERODIBLE

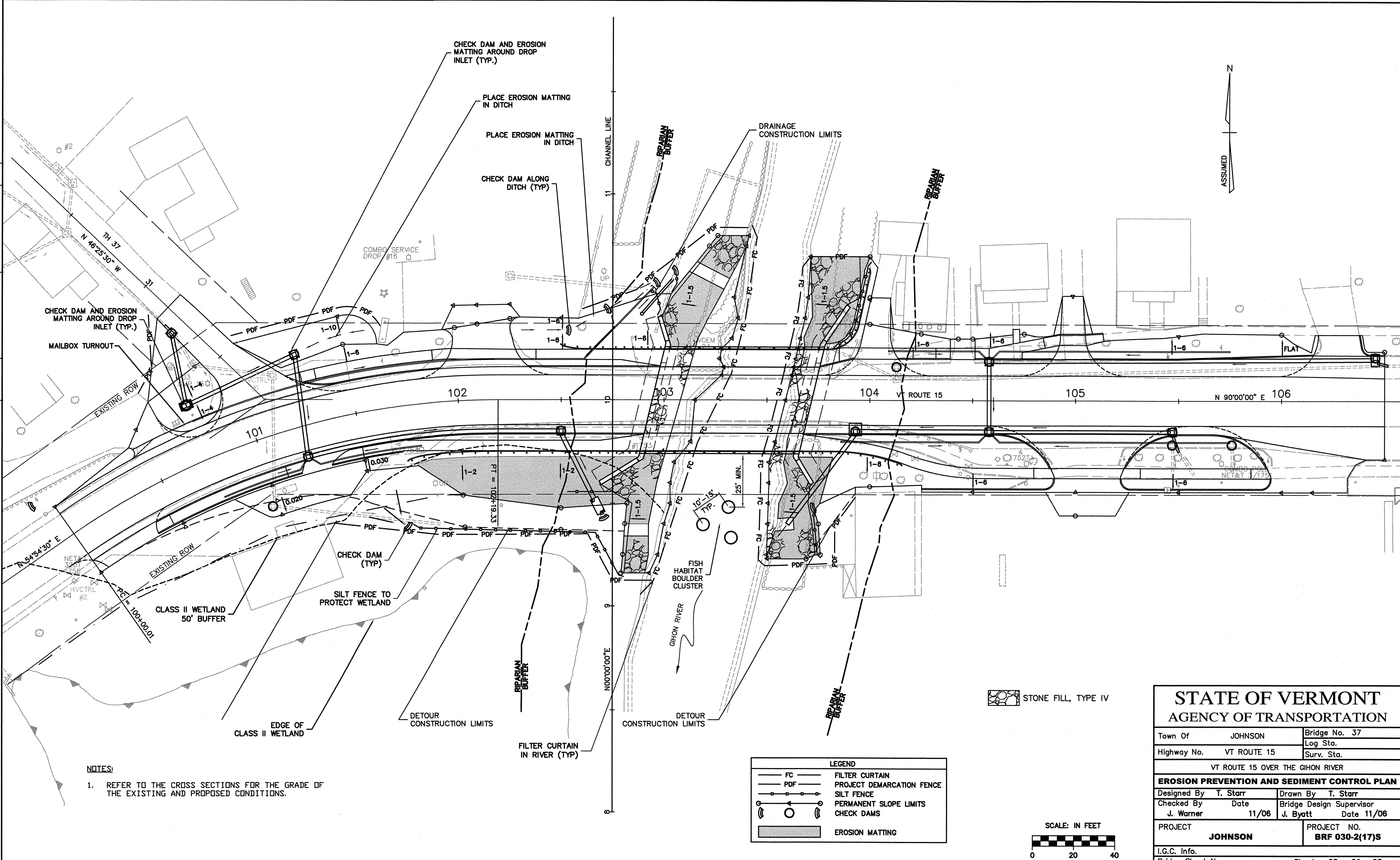
SOIL INFORMATION
 ONDWA FINE SANDY LOAM
 HYDROLOGICAL SOIL GROUP B
 DEPTH TO BEDROCK 60
 DEPTH TO WATER 2.0-3.5
 NOT HIGHLY ERODIBLE

- NOTES:**
- REFER TO THE CROSS SECTIONS FOR THE GRADE OF THE EXISTING AND PROPOSED CONDITIONS.
 - SOIL PROPERTIES AND BOUNDARIES WERE APPROXIMATED BASED ON USDA SOIL SURVEY. ACTUAL FIELD SURVEY MAY VARY.

STATE OF VERMONT		
AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT ROUTE 15	Log Sta.
		Surv. Sta.
VT ROUTE 15 OVER THE GHON RIVER		
EPSC - EXISTING CONDITIONS SITE PLAN		
Designed By	T. Starr	Drawn By T. Starr
Checked By	Date	Bridge Design Supervisor
J. Warner	11/06	J. Byatt Date 11/06
PROJECT	JOHNSON	PROJECT NO.
		BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 27 Of 85



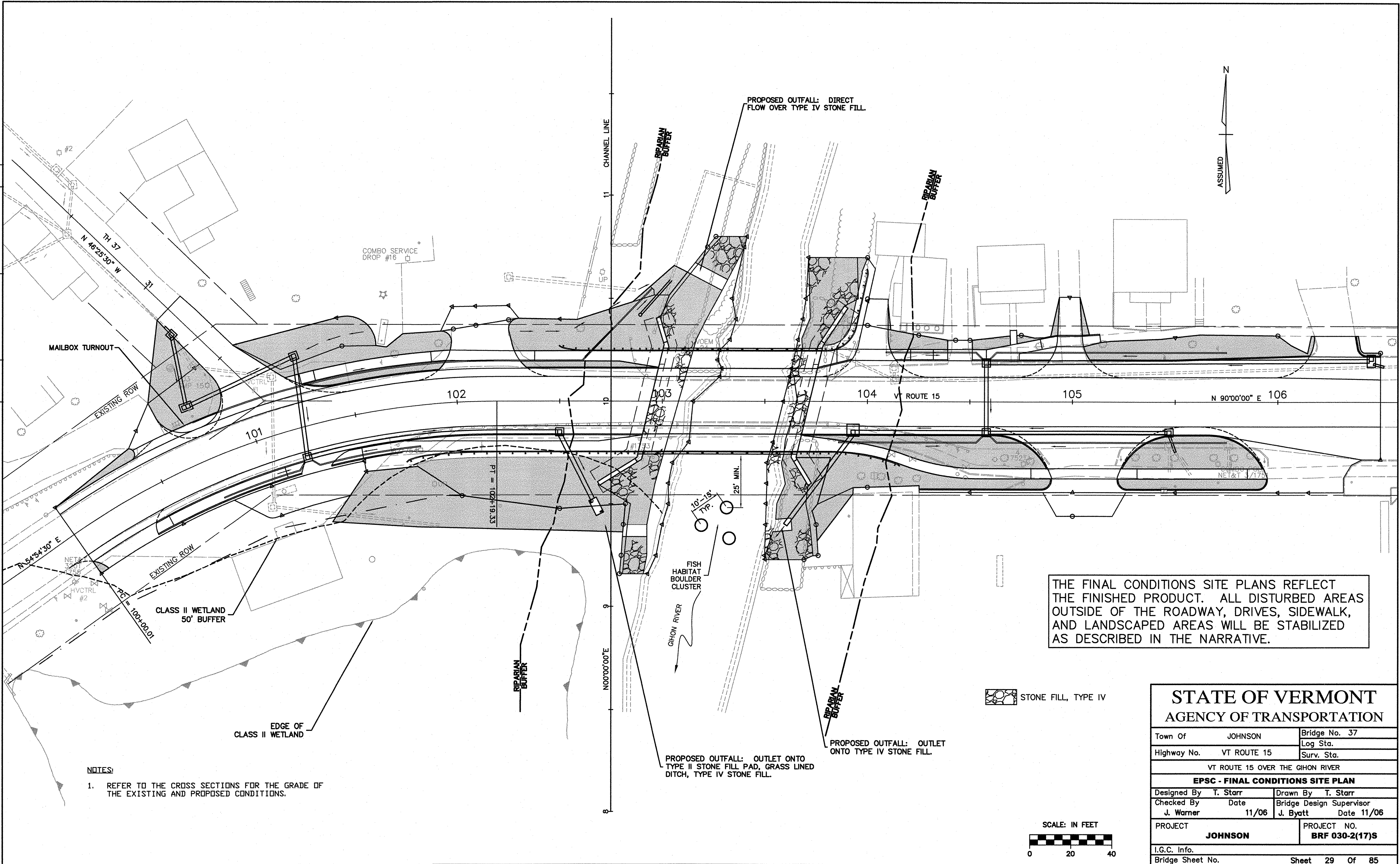
PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	NO. OF WAY CHECKED	
	NO.	



NOTES:
 1. REFER TO THE CROSS SECTIONS FOR THE GRADE OF THE EXISTING AND PROPOSED CONDITIONS.

STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
Town Of	JOHNSON	Bridge No.	37
		Log Sta.	
Highway No.	VT ROUTE 15	Surv. Sta.	
VT ROUTE 15 OVER THE GIHON RIVER			
EROSION PREVENTION AND SEDIMENT CONTROL PLAN			
Designed By	T. Starr	Drawn By	T. Starr
Checked By	Date	Bridge Design Supervisor	
J. Warner	11/06	J. Byatt	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	28 Of 85

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNMENT CHECKED	
	BY	
	NO. OF WAY CHECKED	



THE FINAL CONDITIONS SITE PLANS REFLECT THE FINISHED PRODUCT. ALL DISTURBED AREAS OUTSIDE OF THE ROADWAY, DRIVES, SIDEWALK, AND LANDSCAPED AREAS WILL BE STABILIZED AS DESCRIBED IN THE NARRATIVE.

NOTES:
 1. REFER TO THE CROSS SECTIONS FOR THE GRADE OF THE EXISTING AND PROPOSED CONDITIONS.

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	JOHNSON	Bridge No.	37
		Log Sta.	
Highway No.	VT ROUTE 15	Surv. Sta.	
VT ROUTE 15 OVER THE GIHON RIVER			
EPSC - FINAL CONDITIONS SITE PLAN			
Designed By	T. Starr	Drawn By	T. Starr
Checked By	Date	Bridge Design Supervisor	
J. Warner	11/06	J. Byatt	Date 11/06
PROJECT	PROJECT NO.		
JOHNSON	BRF 030-2(17)S		
I.G.C. Info.			
Bridge Sheet No.	Sheet		29 Of 85

SILT FENCE

APPLICATION NOTES:

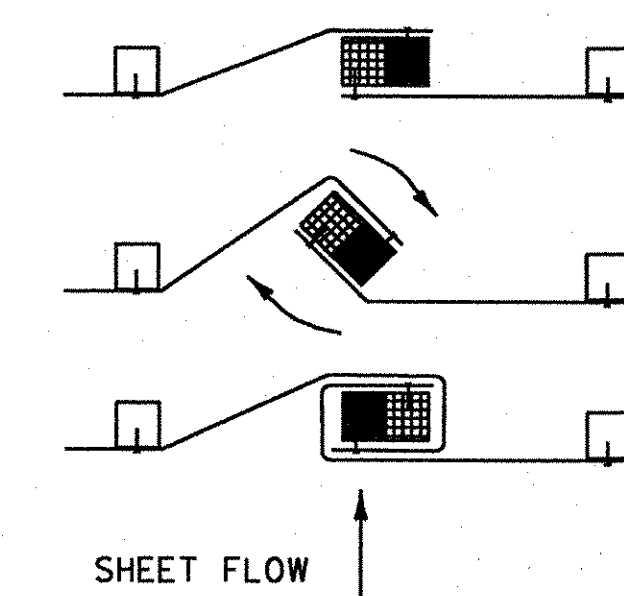
- THE PRIMARY PURPOSE OF SILT FENCE IS TO REDUCE RUNOFF VELOCITY AND TRAP SEDIMENT. VELOCITY IS REDUCED, WATER IS IMPOUNDED BEHIND THE MEASURE, AND SEDIMENT FALLS OUT OF SUSPENSION.
- SILT FENCE SHALL BE INSTALLED ON A LINE OF EQUAL ELEVATION (CONTOUR). IT MAY BE INSTALLED AT INTERMEDIATE POINTS UP SLOPES AS WELL AS AT THE BOTTOM, AS SHOWN IN THE DETAIL.
- SILT FENCE SHALL NOT BE USED ACROSS CONCENTRATED FLOW.

GENERAL NOTES:

- SILT FENCE SHALL GENERALLY BE PLACED A MINIMUM OF 5 FEET BEYOND TOE OF SLOPE, 10 FEET PREFERRED, TO PROVIDE ADEQUATE AREA FOR SEDIMENT STORAGE AND FACILITATE MAINTENANCE OF SEDIMENT CONTAINMENT AREA.
- ALL ENDS SHALL BE 'J' HOOKED TO TRAP SEDIMENT.
- IN AREAS WITH TWO SLOPES, SILT FENCE SHALL BE USED TO ERECT A DAM AND TRAP SEDIMENT AT THE BASE OF THE STEEPER SLOPE.
- THE BOTTOM EDGE OF SILT FENCE SHALL BE BURIED A MINIMUM OF 6 INCHES BELOW GROUND, AND KEYS IN 4 INCHES. THE FENCE SHALL BE INSTALLED WITH THE POSTS ON THE DOWNSTREAM SIDE OF THE FABRIC.
- MAXIMUM DRAINAGE AREA TRIBUTARY TO 100 FEET OF SILT FENCE SHALL BE 0.25 ACRES.
- THE FOLLOWING ARE MAXIMUM SLOPE LENGTHS FOR THESE MEASURES:

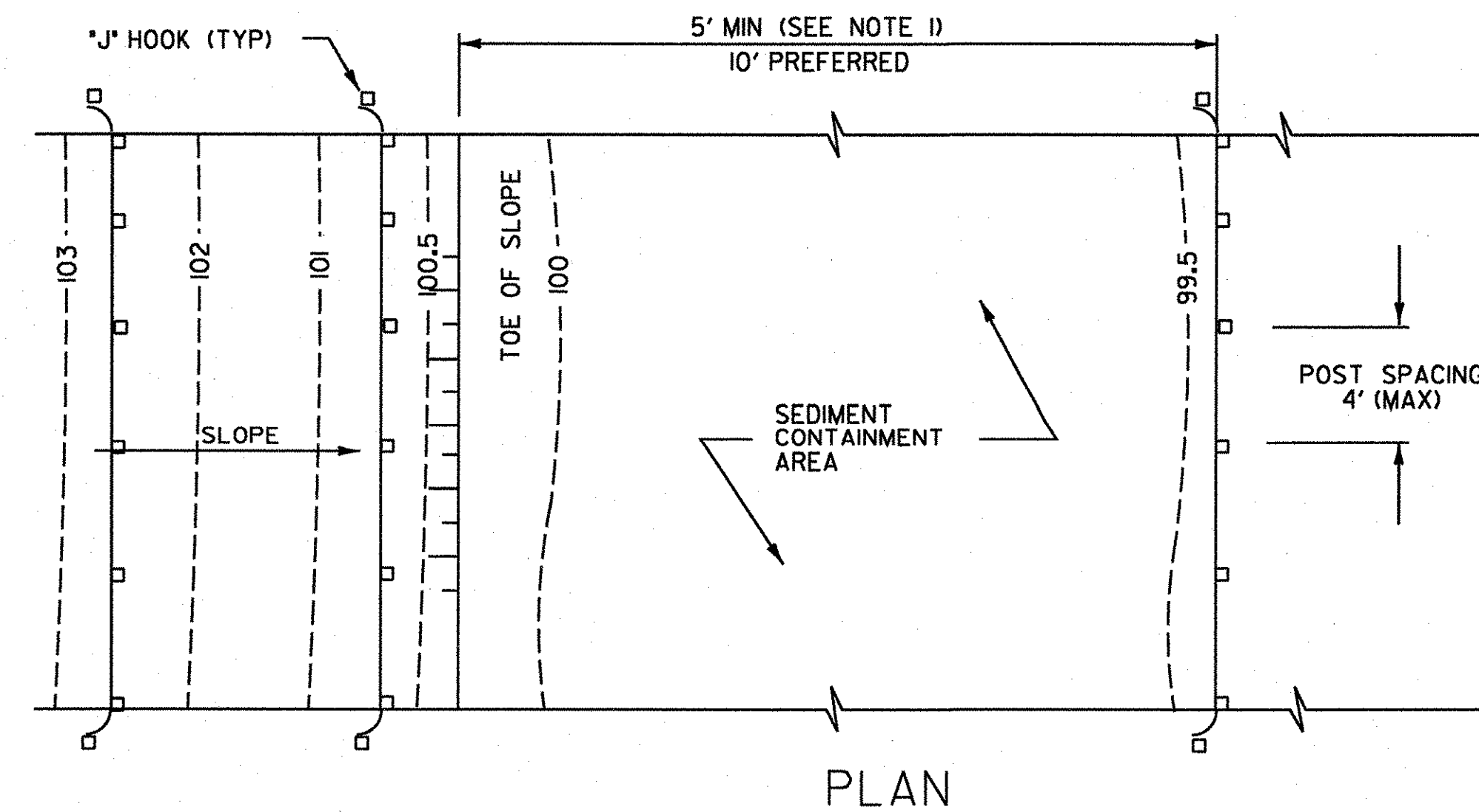
CONSTRUCTED SLOPE	SLOPE LENGTH (LS) FT	HORIZONTAL LENGTH (LH) FT
3 : 1	80	75
4 : 1	130	125
5 : 1	200	200
> 5 : 1	250	250

- MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
- MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
- SILT FENCE SHALL BE REMOVED WHEN THE AREA HAS BEEN STABILIZED. AT TIME OF REMOVAL OF THE SILT FENCE, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
- PAYMENT FOR INSTALLATION AND REMOVAL OF SILT FENCE SHALL BE MADE UNDER THE GEOTEXTILE FOR SILT FENCE ITEM.
- PAYMENT FOR MONITORING SILT FENCE SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.
- PAYMENT FOR MAINTAINING SILT FENCE SHALL BE MADE UNDER THE MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

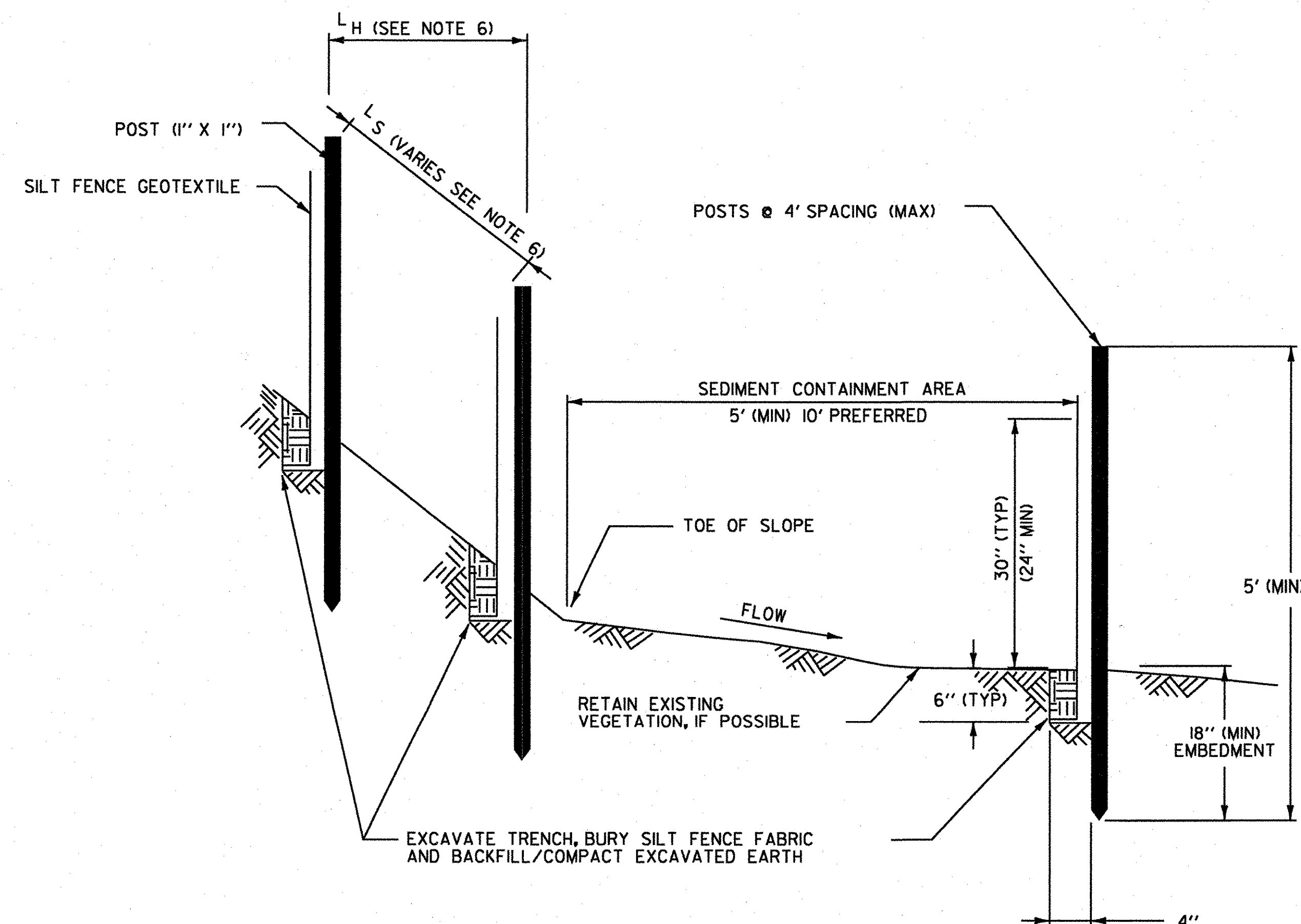


- PLACE THE END POST OF ONE FENCE INSIDE THE END POST OF THE OTHER FENCE.
- ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
- DRIVE BOTH POSTS 18 INCHES INTO THE GROUND AND BURY THE FLAP IN THE TRENCH.

SPLICING DETAIL



PLAN

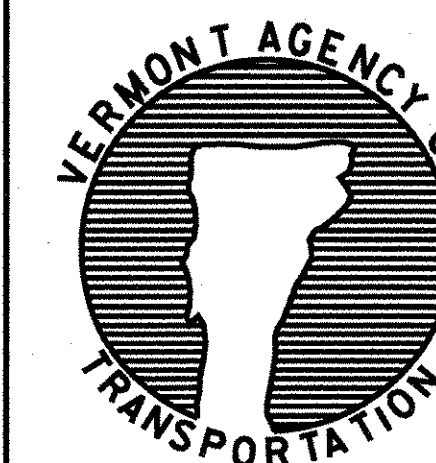


SECTION
SILT FENCE - TEMPORARY

REVISIONS AND CORRECTIONS

MAY 18, 2004 N. GARBACK

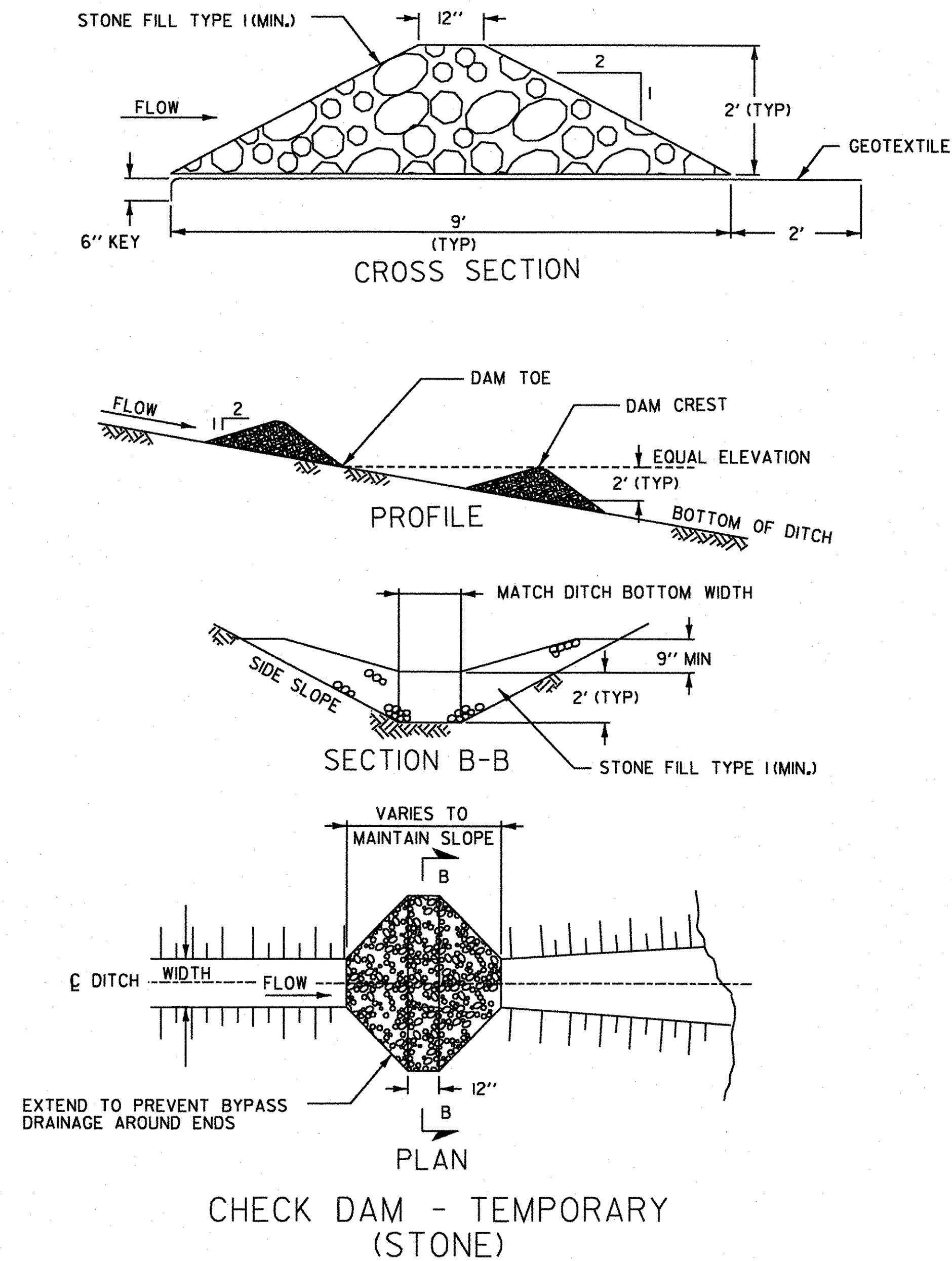
EROSION PREVENTION & SEDIMENT CONTROL DETAILS SILT FENCE



DETAIL
EPSC-1

SHEET 30 OF 85 SHEETS

CHECK DAMS



APPLICATION NOTES:

- THE PRIMARY PURPOSE OF A CHECK DAM IS TO REDUCE EROSION IN A CHANNEL BY REDUCING FLOW VELOCITY.
- CHECK DAMS WILL CAPTURE SEDIMENT THAT FALLS OUT OF SUSPENSION BEHIND THE CHECK DAM DUE TO DECREASED VELOCITY.
- CHECK DAMS ARE NOT INTENDED TO FILTER SEDIMENT FROM TURBID WATER.
- DETAILS SHOWN SHALL BE USED FOR TEMPORARY INSTALLATION ONLY.
- PREFABRICATED DAMS ARE NOT TO BE USED ON SLOPES GREATER THAN 5% OR PER MANUFACTURER'S SPECIFICATIONS.
- PREFABRICATED DAM SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

GENERAL NOTES:

- GEOTEXTILE SHALL BE INSTALLED UNDER STONE FILL. IT SHALL BE KEYED IN ON THE UP HILL END AND SHALL EXTEND 2 FEET BEYOND THE STONE ON THE DOWN HILL END.
- CORE MATERIAL FOR THE STONE CHECK DAM SHALL MEET THE GRADATION REQUIREMENTS OF STONE FILL TYPE 1(MIN.). STONE SIZE SHOULD BE INCREASED WITH INCREASED SLOPE AND VELOCITY.
- THE UPHILL END OF THE APRON FOR THE PREFABRICATED CHECK DAM SHALL BE STAPLED AND BURIED AS SHOWN IN DETAIL "A" OR AS RECOMMENDED BY THE MANUFACTURER'S LITERATURE.
- MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
- MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
- AT TIME OF REMOVAL OF THE CHECK DAMS, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
- PAYMENT FOR INSTALLATION AND REMOVAL OF CHECK DAMS SHALL BE MADE UNDER APPLICABLE ITEMS INCLUDED IN THE CONTRACT PLANS.
- PAYMENT FOR MONITORING CHECK DAMS SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.
- PAYMENT FOR MAINTAINING CHECK DAMS SHALL BE MADE UNDER THE MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

STONE CHECK DAM PLACEMENT INTERVAL	
DITCH SLOPE	PLACEMENT INTERVAL **
1 %	200 FT
2 %	100 FT
3 %	65 FT
4 %	50 FT
5 %	40 FT
6 %	30 FT
8 %	25 FT
10 %	20 FT

** BASED ON 2' TYPICAL HEIGHT

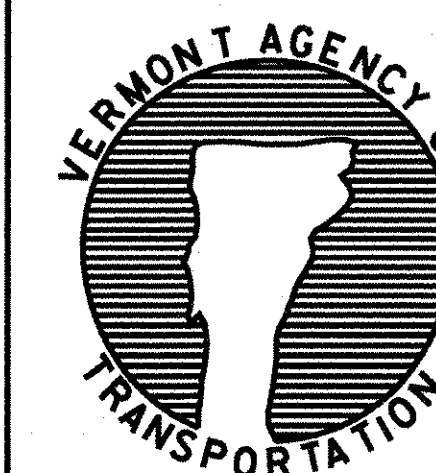
REVISIONS AND CORRECTIONS

MAY 18, 2004

N. GARBACIK

EROSION PREVENTION & SEDIMENT CONTROL DETAILS

CHECK DAMS



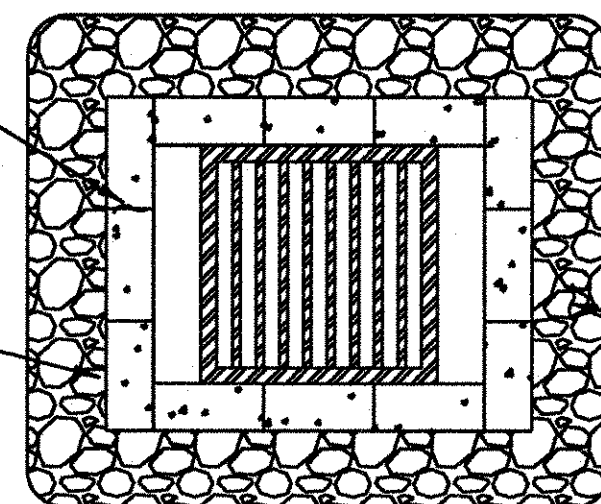
DETAIL

EPSC-2

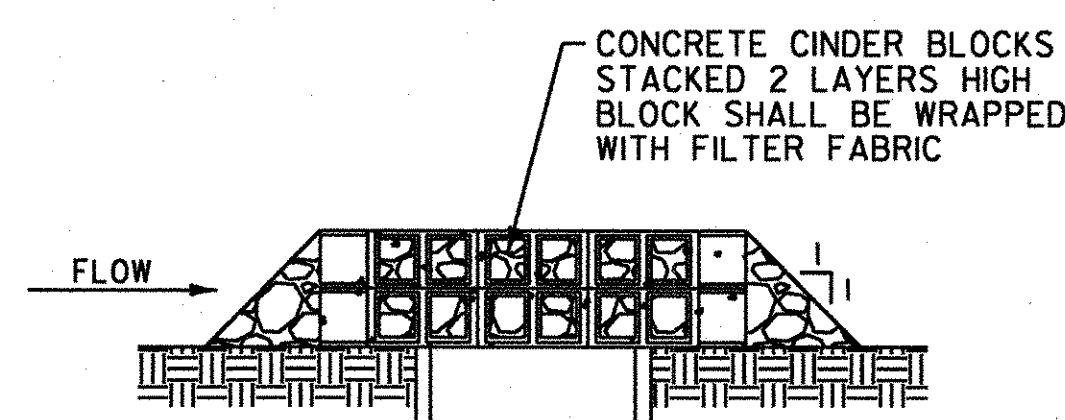
SHEET 31 OF 85 SHEETS

PLACE CONCRETE "CINDER" BLOCKS AROUND THE DRAINAGE STRUCTURE SO THAT OPEN AREAS OF BLOCKS ALLOW FLOW TO REACH THE GRATE.

PLACE FILTER FABRIC AROUND THE CONCRETE BLOCKS TO PREVENT CRUSHED STONE FROM ENTERING OPEN AREAS OF BLOCKS.

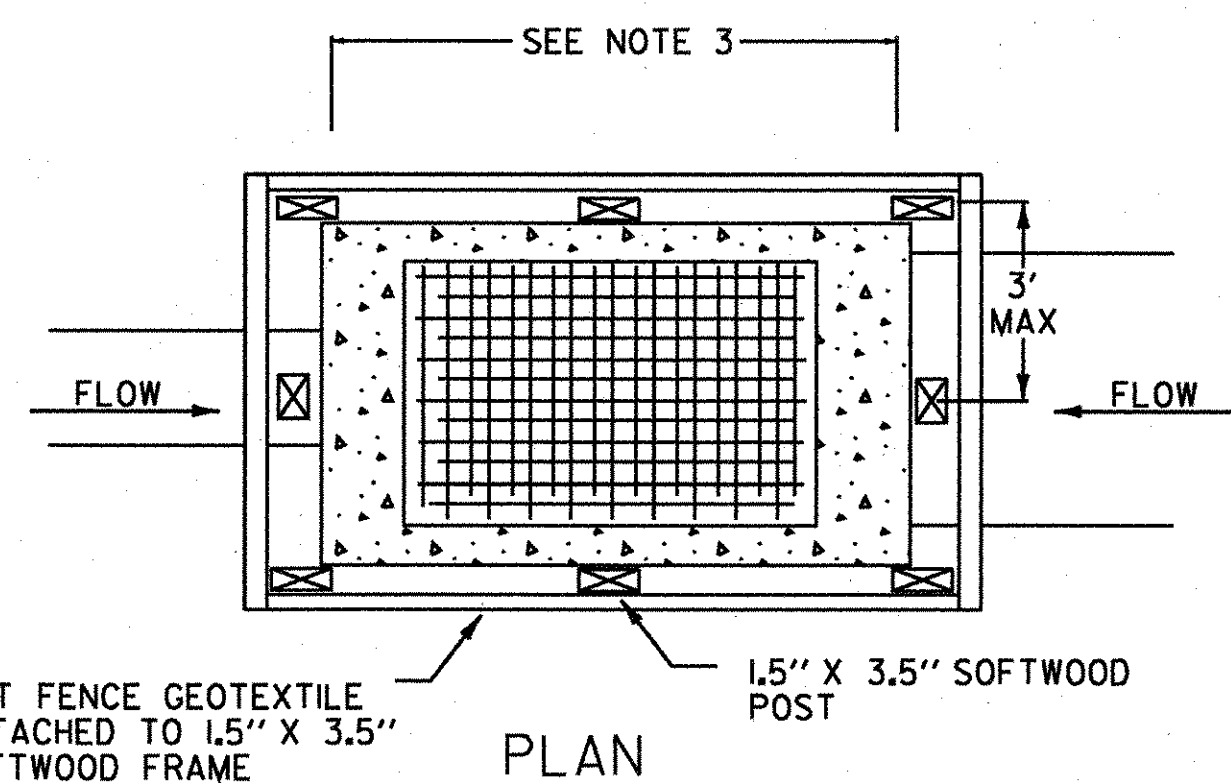


PLAN



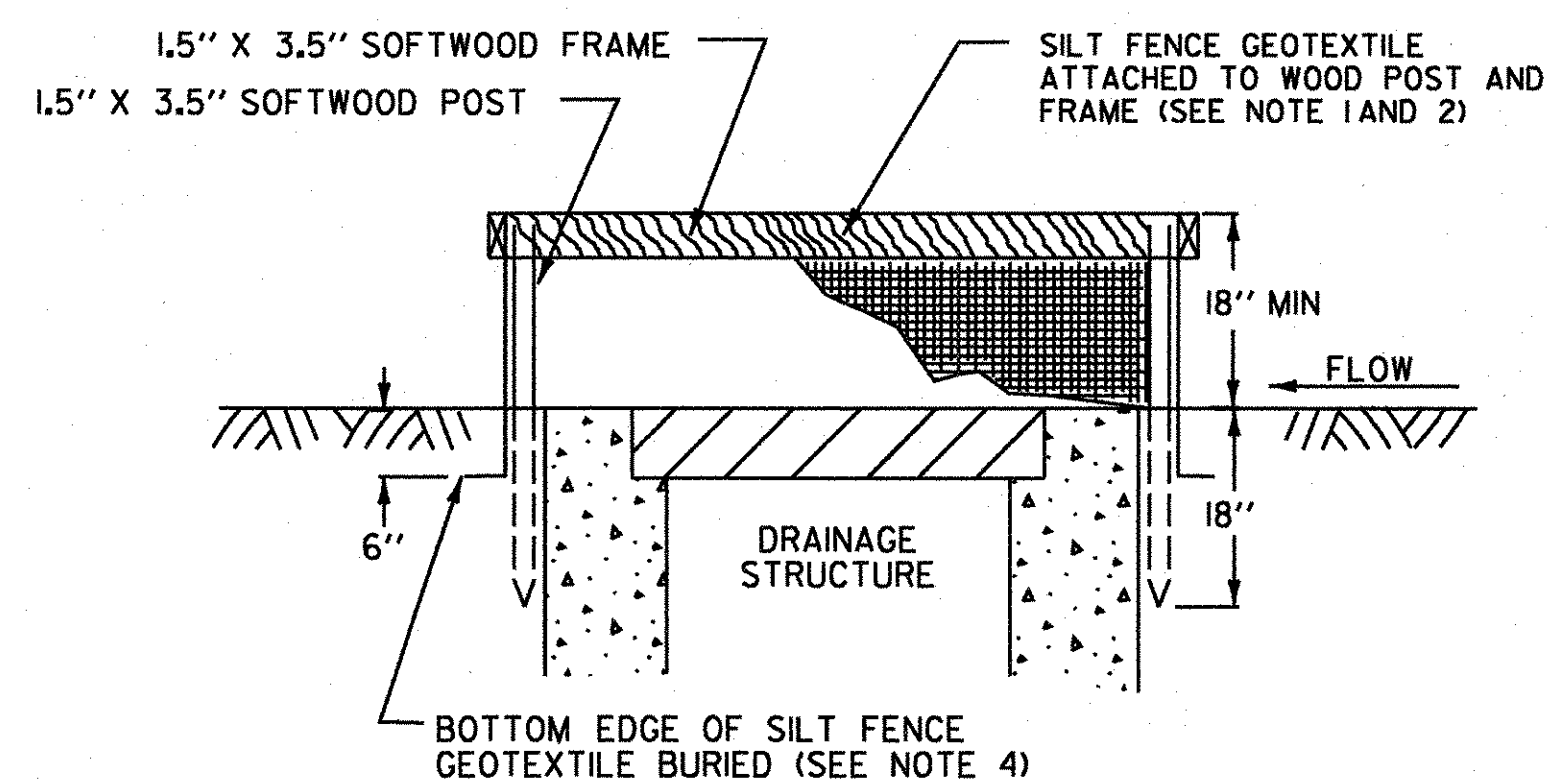
SECTION

ROCK BARRIER DROP INLET PROTECTION
TEMPORARY PAVED AREAS



SILT FENCE GEOTEXTILE ATTACHED TO 1.5" X 3.5" SOFTWOOD FRAME

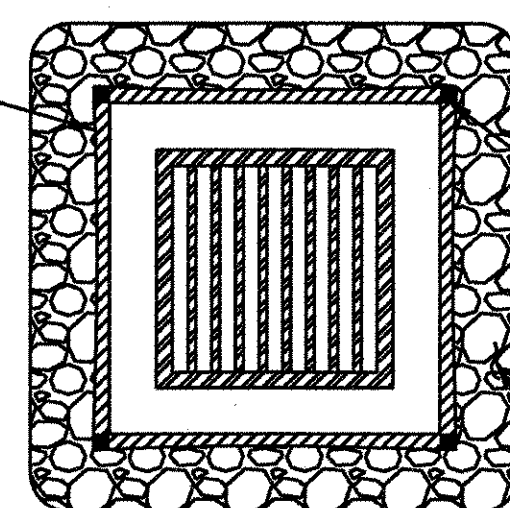
PLAN



SECTION

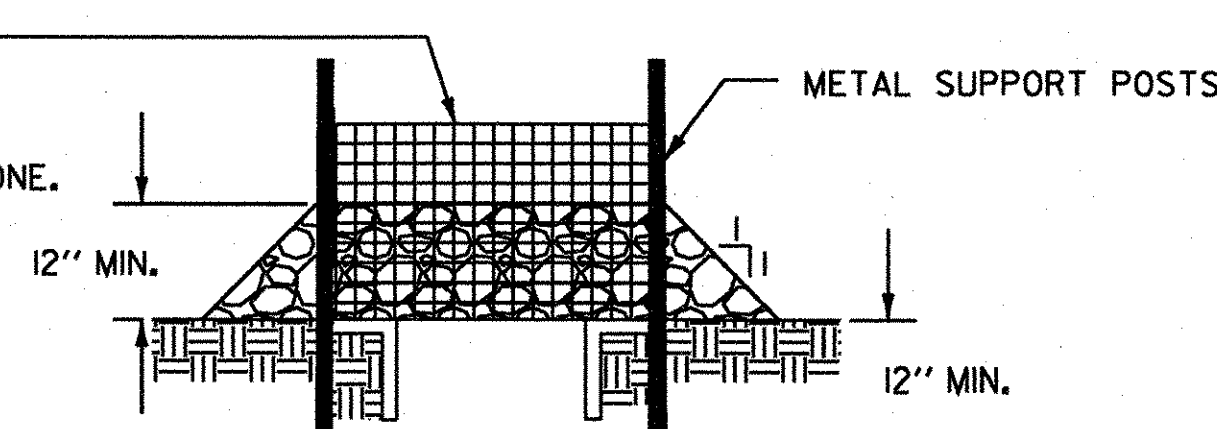
SILT FENCE DROP INLET PROTECTION

PLACE FILTER FABRIC AROUND THE WIRE MESH TO PREVENT CRUSHED STONE FROM ENTERING THE DROP INLET.



PLAN

WIRE MESH FENCE WITH 0.5" MAX. OPENINGS, FENCE WILL BE WRAPPED WITH FILTER FABRIC, SECURE TIGHTLY TO METAL SUPPORT POSTS BEFORE PLACEMENT OF CRUSHED STONE.



SECTION

ROCK BARRIER INLET PROTECTION
TEMPORARY UNPAVED AREAS

DROP INLET PROTECTION

APPLICATION NOTES:

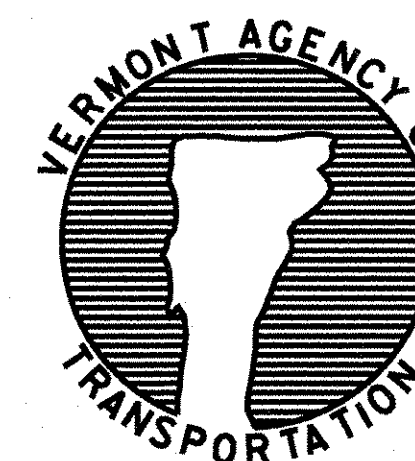
- A. THE PRIMARY PURPOSE OF DRAINAGE STRUCTURE INLET PROTECTION IS TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM BY PONDING WATER WHICH ALLOWS SEDIMENT TO FALL OUT OF SUSPENSION.
- B. THESE EXAMPLES OF DROP INLET PROTECTION ARE NOT INTENDED FOR USE ON GRADES. ON GRADE THEY MAY CAUSE WATER TO BYPASS THE STRUCTURE, CREATING ADDITIONAL EROSION OR FLOODING.
- C. POSSIBLE MODIFICATIONS FOR USE ON GRADE INCLUDE ADDING A BERM DOWNSTREAM OF THE INLET TO CREATE PONDING. CHECK DAMS MAY ALSO BE USED UPSTREAM OF THE INLET TO SLOW VELOCITIES.
- D. PREFABRICATED DROP INLET PROTECTION SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

GENERAL NOTES:

1. THE TOP OF THE INLET PROTECTION SHALL BE SET AT THE MAXIMUM DESIRED WATER LEVEL, BASED ON FIELD LOCATION AND CONDITIONS.
2. SILT FENCE GEOTEXTILE SHALL BE A SINGLE CONTINUOUS PIECE TO ELIMINATE JOINTS.
3. SPACE SILT FENCE POSTS EVENLY AROUND INLET WITH A MAXIMUM SPACING OF 3 FEET. DRIVE POSTS A MINIMUM OF 18 INCHES INTO GROUND. WIRE MESH MAY BE REQUIRED BEHIND GEOTEXTILE TO PROVIDE SUPPORT.
4. SILT FENCE GEOTEXTILE SHALL BE EMBEDDED A MINIMUM OF 6 INCHES AND BACKFILLED. GEOTEXTILE SHALL BE SECURELY FASTENED TO POSTS AND FRAME.
5. GRAVEL BAGS SHALL BE FILLED WITH CLEAN STONE, RATHER THAN SAND, TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM IF BAGS ARE DAMAGED DURING USE.
6. GRAVEL BAGS SHALL BE INDIVIDUALLY TIED, DOUBLE BAGGED AND INVERSELY INSERTED. GRAVEL BAGS SHALL LAP THE JOINTS BETWEEN THE BAGS IN THE LAYER BELOW.
7. SECURE THE ENDS OF THE APRON FOR THE PREFABRICATED DRAINAGE STRUCTURE INLET PROTECTION WITH STAPLES AS DETAILED IN THE PLAN VIEW OR AS RECOMMENDED BY THE MANUFACTURERS LITERATURE.
8. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
9. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED, SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
10. PAYMENT OF INLET PROTECTION SHALL BE MADE UNDER APPLICABLE ITEMS INCLUDED IN THE CONTRACT PLANS.
11. PAYMENT FOR MONITORING INLET PROTECTION SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.
12. PAYMENT FOR MAINTAINING INLET PROTECTION SHALL BE MADE UNDER THE MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

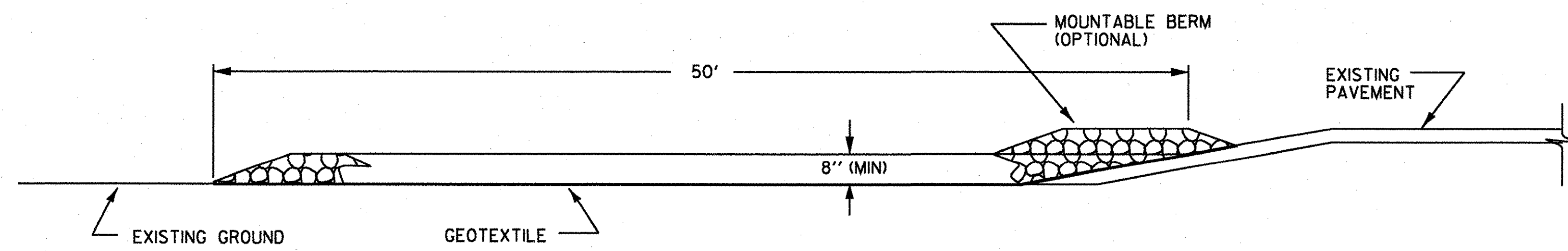
REVISIONS AND CORRECTIONS
MAY 18, 2004 N. GARBACK

EROSION PREVENTION &
SEDIMENT CONTROL DETAILS
DROP INLET PROTECTION

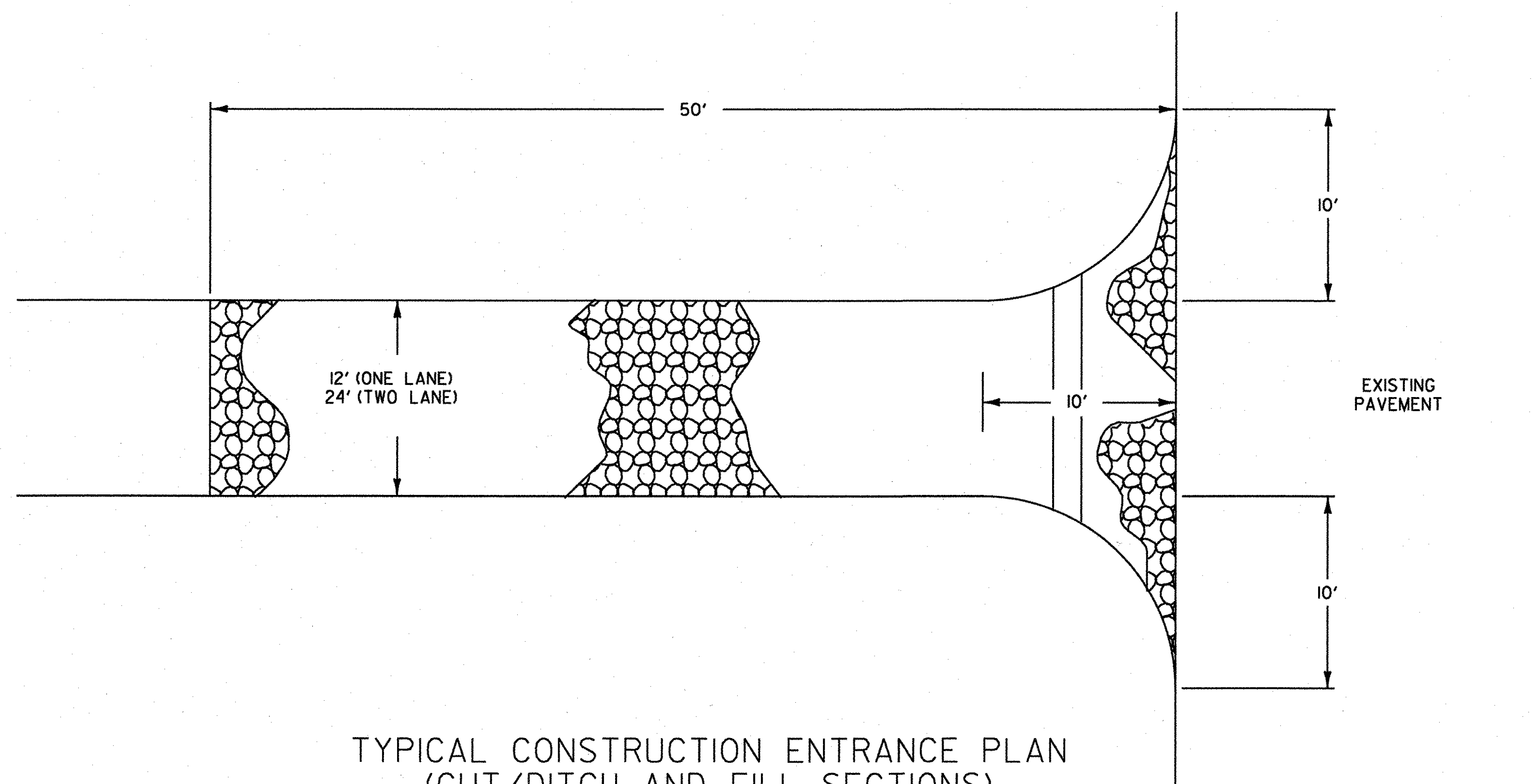


DETAIL
EPSC-3

STABILIZED CONSTRUCTION ENTRANCE



TYPICAL CONSTRUCTION ENTRANCE PROFILE
(CUT AND DITCH SECTIONS)



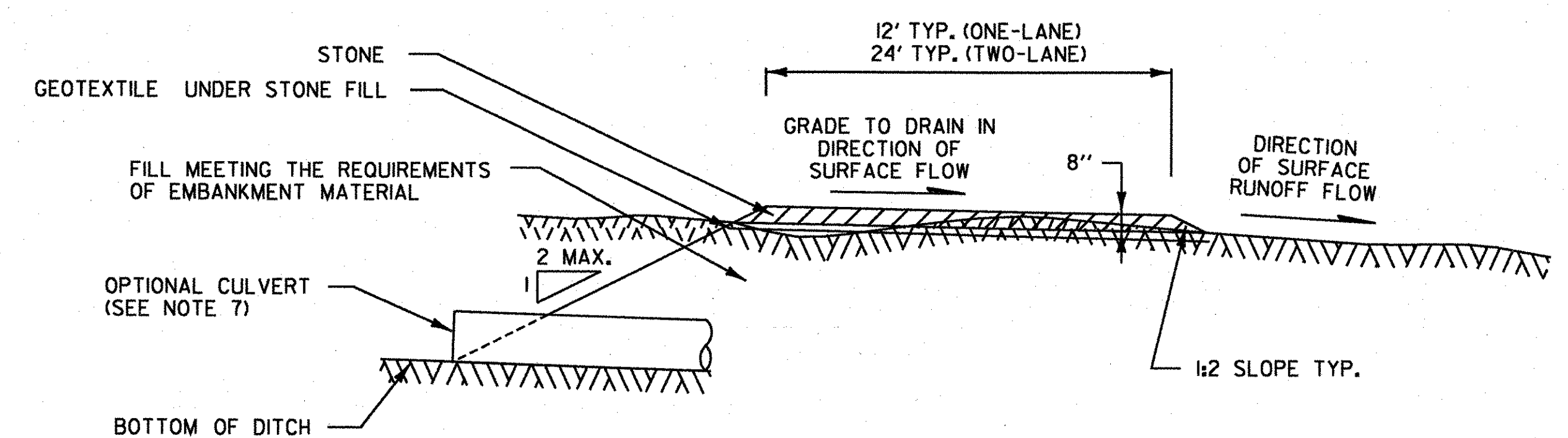
TYPICAL CONSTRUCTION ENTRANCE PLAN
(CUT/DITCH AND FILL SECTIONS)

APPLICATION NOTES:

A. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY OR STREETS.

GENERAL NOTES:

1. STONE SIZE - USE CLEAN STONE WITH GRADATION BETWEEN 2 INCHES AND 4 INCHES .
2. LENGTH - 50 FEET (MIN)
3. THICKNESS - 8 INCHES (MIN)
4. WIDTH - 12 FEET (MIN)
5. GEOTEXTILE UNDER STONE WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE AS DIRECTED BY THE ENGINEER. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. PROPOSED DRAINAGE PIPES SHALL BE SIZED WITH SUFFICIENT CAPACITY TO CARRY DITCH FLOWS. ALTERNATIVE WAYS OF TRANSPORTING DITCH DRAINAGE ACROSS CONSTRUCTION ENTRANCES MAY BE PROPOSED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
8. WHEN WASHING OF VEHICLE IS NECESSARY, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
10. 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.
11. AT THE TIME OF REMOVAL OF THE STABILIZED CONSTRUCTION ENTRANCE THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
12. PAYMENT OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MADE UNDER APPLICABLE ITEMS INCLUDED IN THE CONTRACT PLANS.
13. PAYMENT FOR MONITORING STABILIZED CONSTRUCTION ENTRANCES SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.
14. PAYMENT FOR MAINTAINING THE CONSTRUCTION ENTRANCE SHALL BE MADE UNDER THE MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

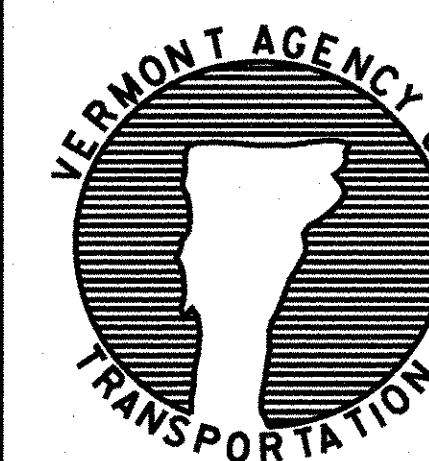


TYPICAL CONSTRUCTION ENTRANCE SECTION

REVISIONS AND CORRECTIONS

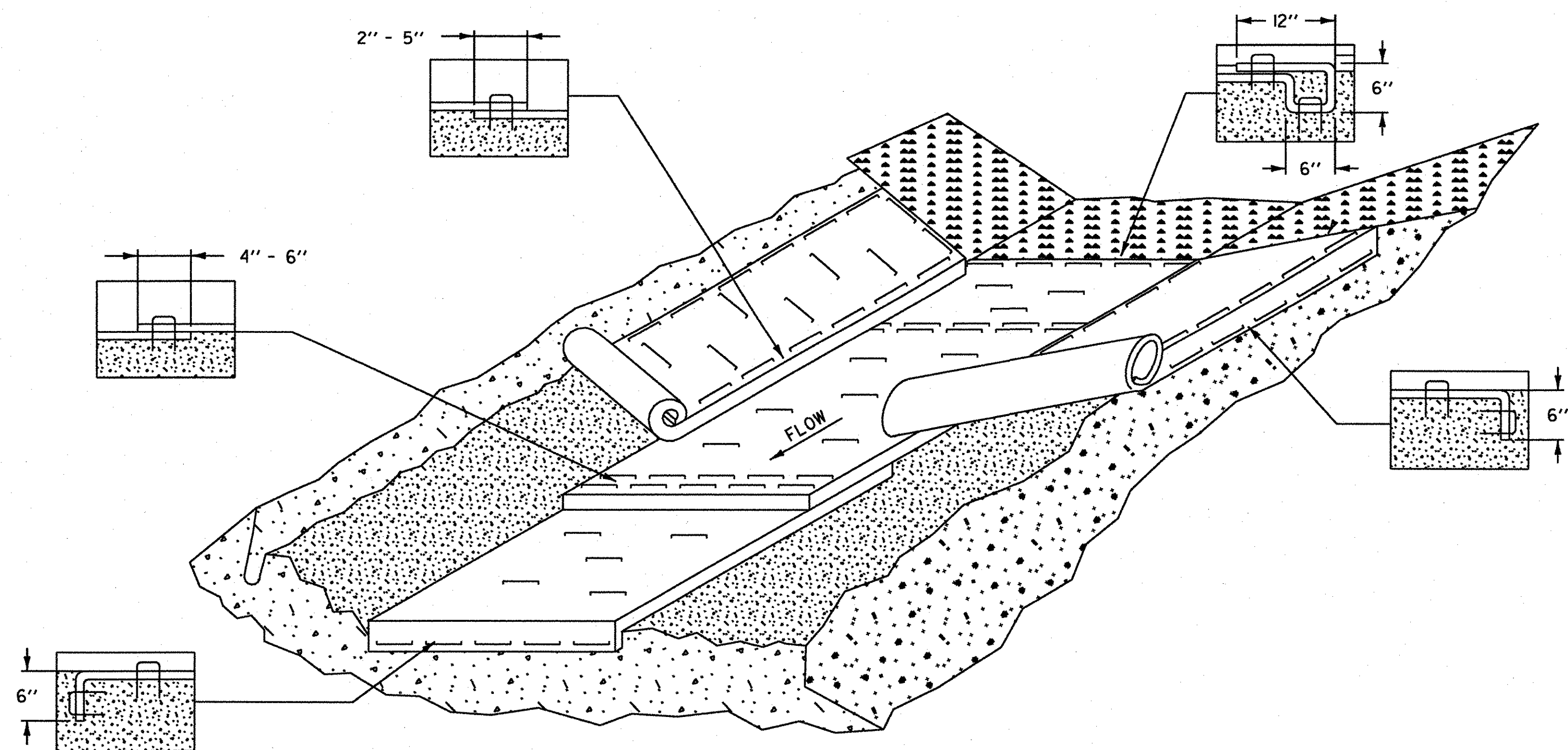
MAY 18, 2004 N. GARBACIK

EROSION PREVENTION & SEDIMENT CONTROL DETAILS CONSTRUCTION ENTRANCE



DETAIL
EPSC-4

SHEET 33 OF 85 SHEETS



EROSION PREVENTION FOR DITCHES

APPLICATION NOTES:

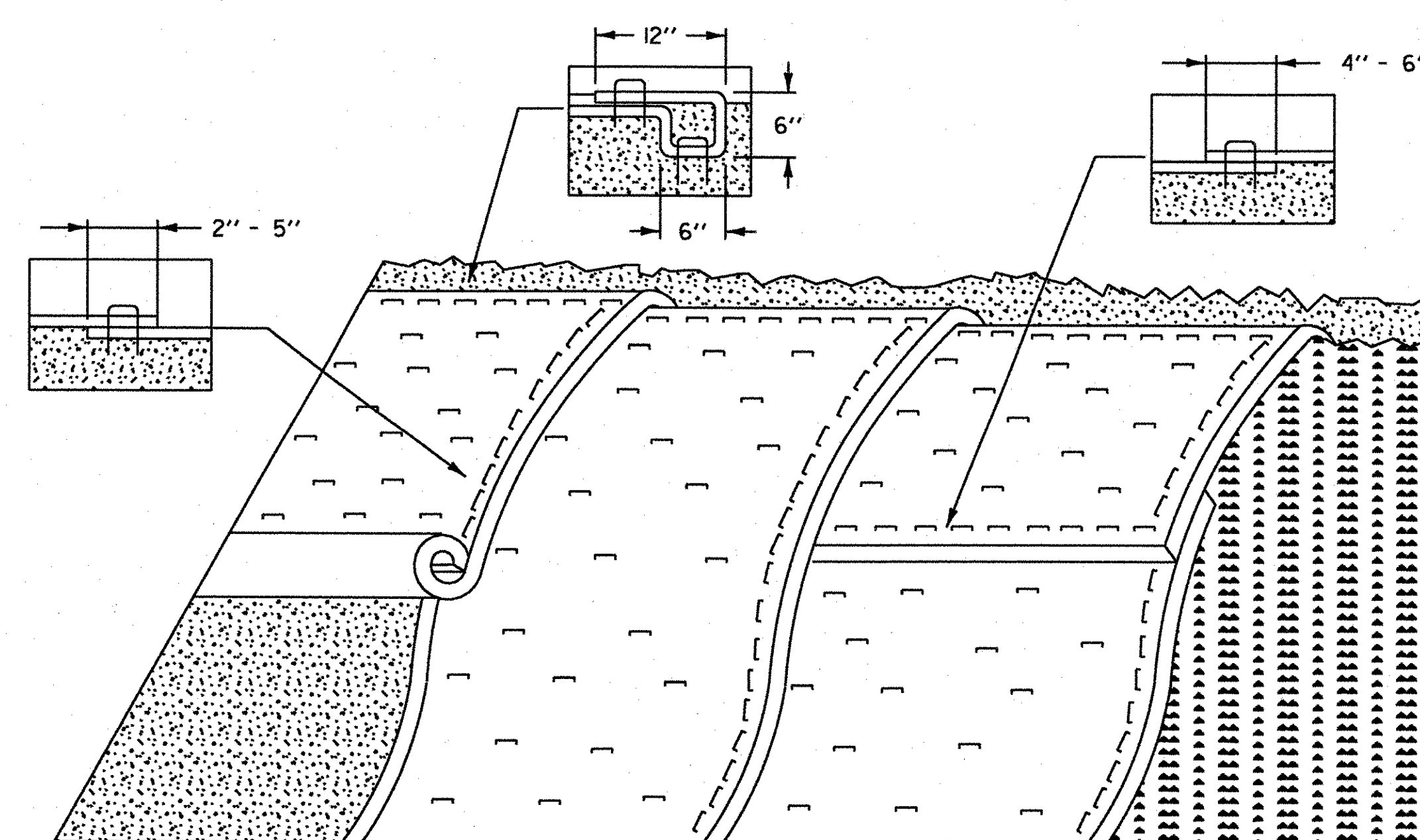
- A. THE PURPOSE OF LINING THE DITCH WITH EROSION MATTING IS TO REDUCE EROSION AND AID THE ESTABLISHMENT OF VEGETATION AT LOW VELOCITIES.
- B. THE FOLLOWING CHARTS SHALL BE USED TO DETERMINE THE APPROPRIATE EROSION CONTROL MEASURE:

DITCH AND CHANNEL PROTECTION	
SLOPE	LINING
< 1%	GRASS
1% TO 4%	EROSION MATTING
4% TO 10%	STONE FILL, TYPE I
> 10%	STONE FILL, TYPE II

STONE FILL THICKNESS	
STONE FILL TYPE	THICKNESS
TYPE I	1 FT
TYPE II	2 FT

GENERAL NOTES:

1. WATER MAY NEED TO BE DIVERTED TO ALLOW PROPER MATTING INSTALLATION.
2. GRADE AND SMOOTH CHANNEL TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
3. APPLY FERTILIZER, LIME, AND SEED PRIOR TO PLACING MATTING.
4. INSTALL MATTING IN THE CENTER OF THE CHANNEL, IN THE DIRECTION OF THE WATER FLOW.
5. INSTALL MATTING ON THE SIDE SLOPES OF THE CHANNEL, OVERLAPPING THE CENTER MAT.
6. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
7. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
8. MEASURES SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.
9. PAYMENT FOR INSTALLATION OF MATTING SHALL BE MADE UNDER THE EROSION CONTROL WITH MATTING ITEM.
10. PAYMENT FOR MONITORING EROSION CONTROL MATTING SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.
11. PAYMENT FOR MAINTAINING DITCH PROTECTION SHALL BE MADE UNDER THE MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.



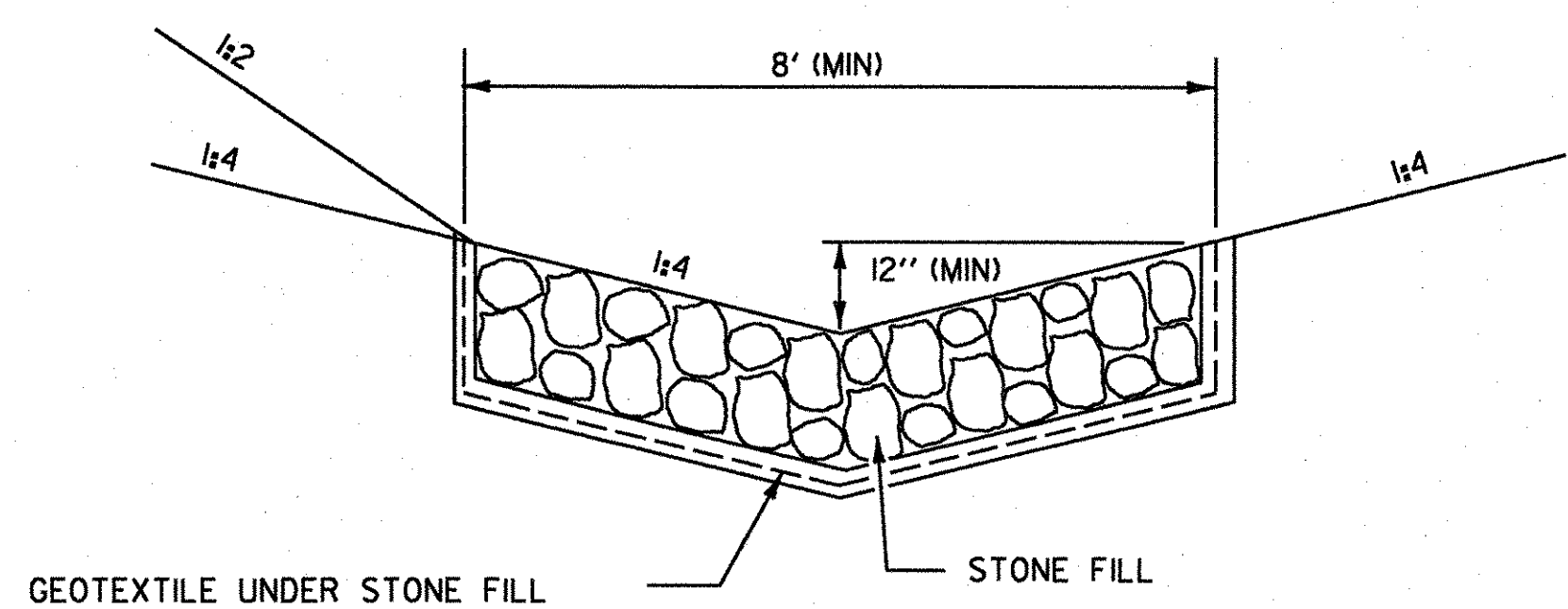
EROSION PREVENTION FOR SIDE SLOPES

APPLICATION NOTES:

- A. THE PURPOSE OF MATTING ON SIDE SLOPES IS TO REDUCE EROSION AND AID THE ESTABLISHMENT OF VEGETATION
- B. EROSION CONTROL MATTING SHALL BE USED FOR THE FOLLOWING REASONS:
 - SIDE SLOPES > 3:1 (H:V)
 - AREAS WHERE SEED AND MULCH WILL NOT STAY IN PLACE ALONE
 - WHERE SEEDING IS OUTSIDE THE GROWING SEASON.

GENERAL NOTES:

1. GRADE AND SMOOTH THE SLOPE TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
2. APPLY FERTILIZER, LIME, AND SEED PRIOR TO PLACING MATTING.
3. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. UNROLL MATTING VERTICALLY DOWN SLOPE IN THE DIRECTION OF WATER FLOW.
5. OVERLAP UPPER MATTING OVER LOWER MATTING AS SHOWN.
6. OVERLAP ADJACENT MATTING AS SHOWN.
7. CUT EXCESS MATTING AT END OF SLOPE AND ANCHOR THE END.
8. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
9. MATTING SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.
10. PAYMENT FOR INSTALLATION OF MATTING SHALL BE MADE UNDER THE EROSION CONTROL WITH MATTING ITEM.
11. PAYMENT FOR MONITORING EROSION CONTROL MATTING SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.
12. PAYMENT FOR MAINTAINING SLOPE PROTECTION SHALL BE MADE UNDER THE MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.



**TEMPORARY
STONE LINED
DITCH**

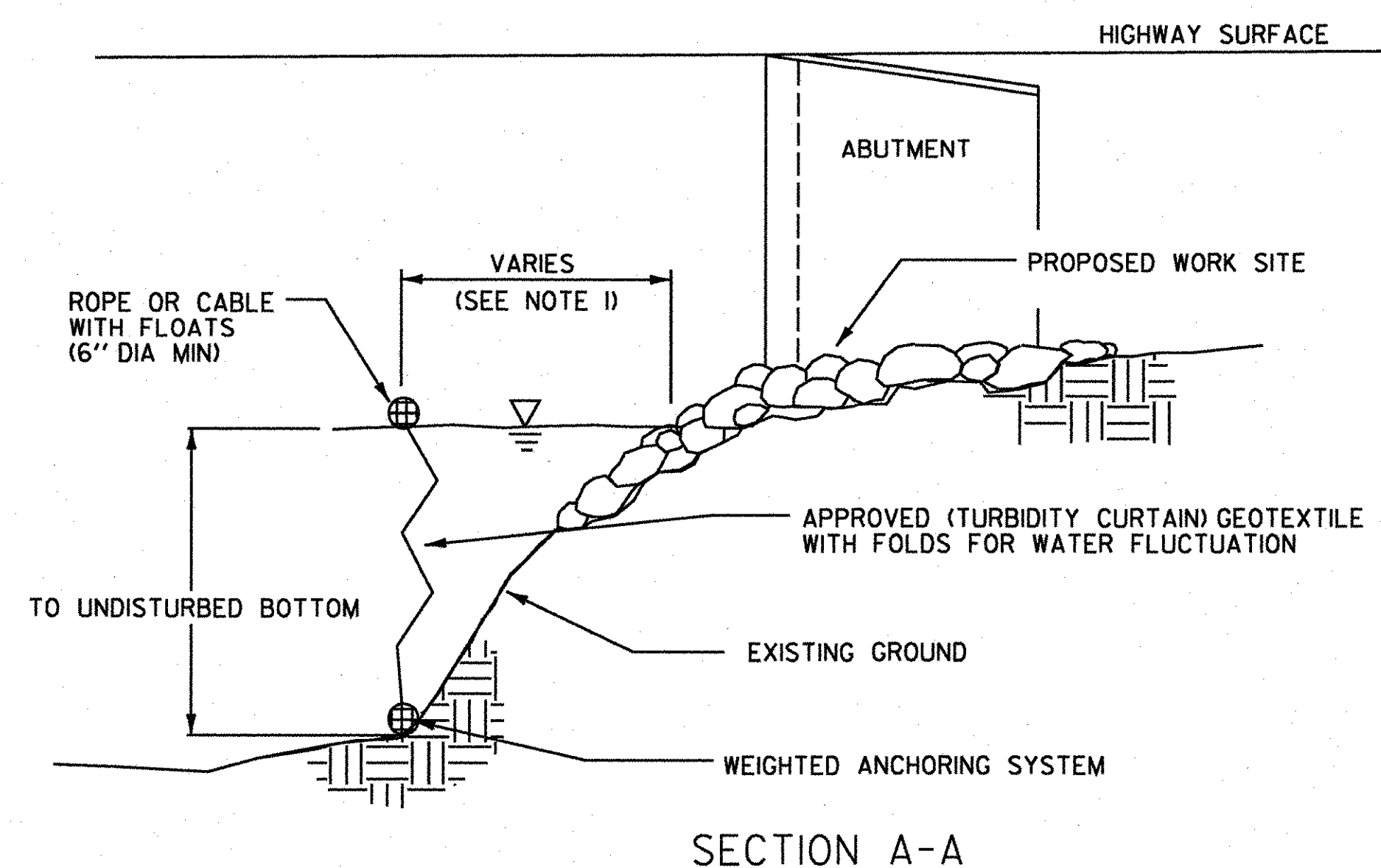
REVISIONS AND CORRECTIONS

MAY 18, 2004 N. GARBACK

**EROSION PREVENTION &
SEDIMENT CONTROL DETAILS
DITCH & SLOPE PROTECTION**



**DETAIL
EPSC-5**



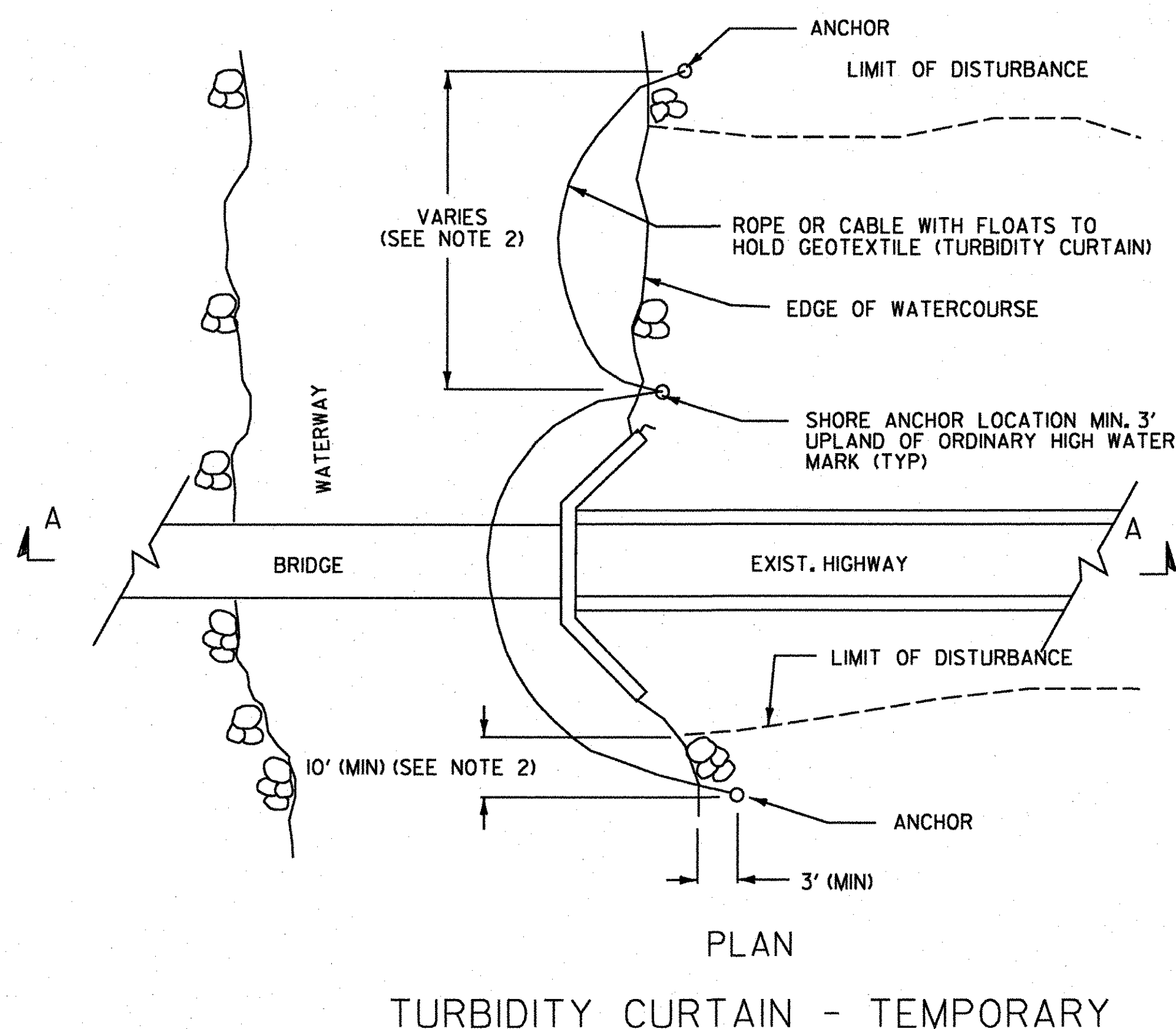
TURBIDITY CURTAIN

APPLICATION NOTES:

- A. THE PURPOSE OF A TURBIDITY CURTAIN IS TO SEPARATE WORK AREAS IN OR ADJACENT TO WATERS, TO PREVENT SEDIMENT FROM ENTERING THE WATERS.
- B. TURBIDITY CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FT/SEC.
- C. TURBIDITY CURTAIN SHALL NOT BE PLACED AT THE OUTLET OF A CULVERT OR DITCH UNLESS THE VELOCITY DOES NOT EXCEED 1.5 FT/SEC.
- D. THE DETAIL DEPICTS WORK AT A BRIDGE LOCATION, BUT TURBIDITY CURTAIN MAY BE APPLIED AT OTHER LOCATIONS.

GENERAL NOTES:

1. THE TURBIDITY CURTAIN SHALL BE PLACED AS CLOSE TO THE WORK AS POSSIBLE WITHOUT INTERFERING WITH CONSTRUCTION OPERATIONS.
2. THE TURBIDITY CURTAIN SHALL BE A MAXIMUM OF 100 FEET LONG BETWEEN ANCHORS. LAST SECTION SHALL TERMINATE A MINIMUM OF 10 FEET BEYOND THE LIMIT OF DISTURBANCE.
3. THE CONTRACTOR SHALL MONITOR THE TURBIDITY CURTAIN, TAKING INTO ACCOUNT WEATHER PATTERNS AND PREVAILING WIND DIRECTIONS THAT MAY AFFECT WATER LEVELS, VELOCITY AND MOVEMENT OF THE TURBIDITY CURTAIN.
4. THE TURBIDITY CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE TO MINIMIZE ESCAPE OF SEDIMENTS INTO THE WATERWAY.
5. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE THAT ALLOWS THE CURTAIN TO CONFORM TO THE CONTOUR ON THE BOTTOM OF THE WATERWAY.
6. PAYMENT FOR INSTALLATION AND REMOVAL OF THE TURBIDITY CURTAIN SHALL BE MADE UNDER THE GEOTEXTILE FOR FILTER CURTAIN ITEM.
7. PAYMENT FOR MONITORING TURBIDITY CURTAIN SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.
8. PAYMENT FOR MAINTAINING TURBIDITY CURTAIN SHALL BE MADE UNDER THE MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.



REVISIONS AND CORRECTIONS

MAY 18, 2004 N. GARBACIK

EROSION PREVENTION & SEDIMENT CONTROL DETAILS TURBIDITY CURTAIN



DETAIL
EPSC-6

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DATE	
BY	
PLAN	
SURVEYED	
PLOTTED	
NOTE BOOK	
NO. OF SHEETS	
CHECKED	
NO.	

PAVEMENT MARKINGS

DURABLE 4" DOUBLE YELLOW LINE (THERMOPLASTIC) (DDYL)
TEMPORARY 4" DOUBLE YELLOW LINE (PAINT) (DDYL)

STA 100+00 TO STA 100+90 (CENTERLINE)
 STA 101+30 TO STA 106+50 (CENTERLINE)
 STA 30+25 TO STA 30+85 (CENTERLINE), TH 37

DURABLE 4" WHITE LINE (THERMOPLASTIC) (DSWL)
TEMPORARY 4" WHITE LINE (PAINT) (DSWL)

STA 100+00 TO STA 100+92 LT
 STA 101+22 TO STA 106+50 LT
 STA 100+00 TO STA 106+50 RT

DURABLE 24" STOP BAR (THERMOPLASTIC)
TEMPORARY 24" STOP BAR (PAINT)

STA 30+25 LT (TH 37)

DURABLE LETTER OR SYMBOL (THERMOPLASTIC)
TEMPORARY LETTER OR SYMBOL (PAINT)

STA 30+37 LT (TH 37) - "STOP"

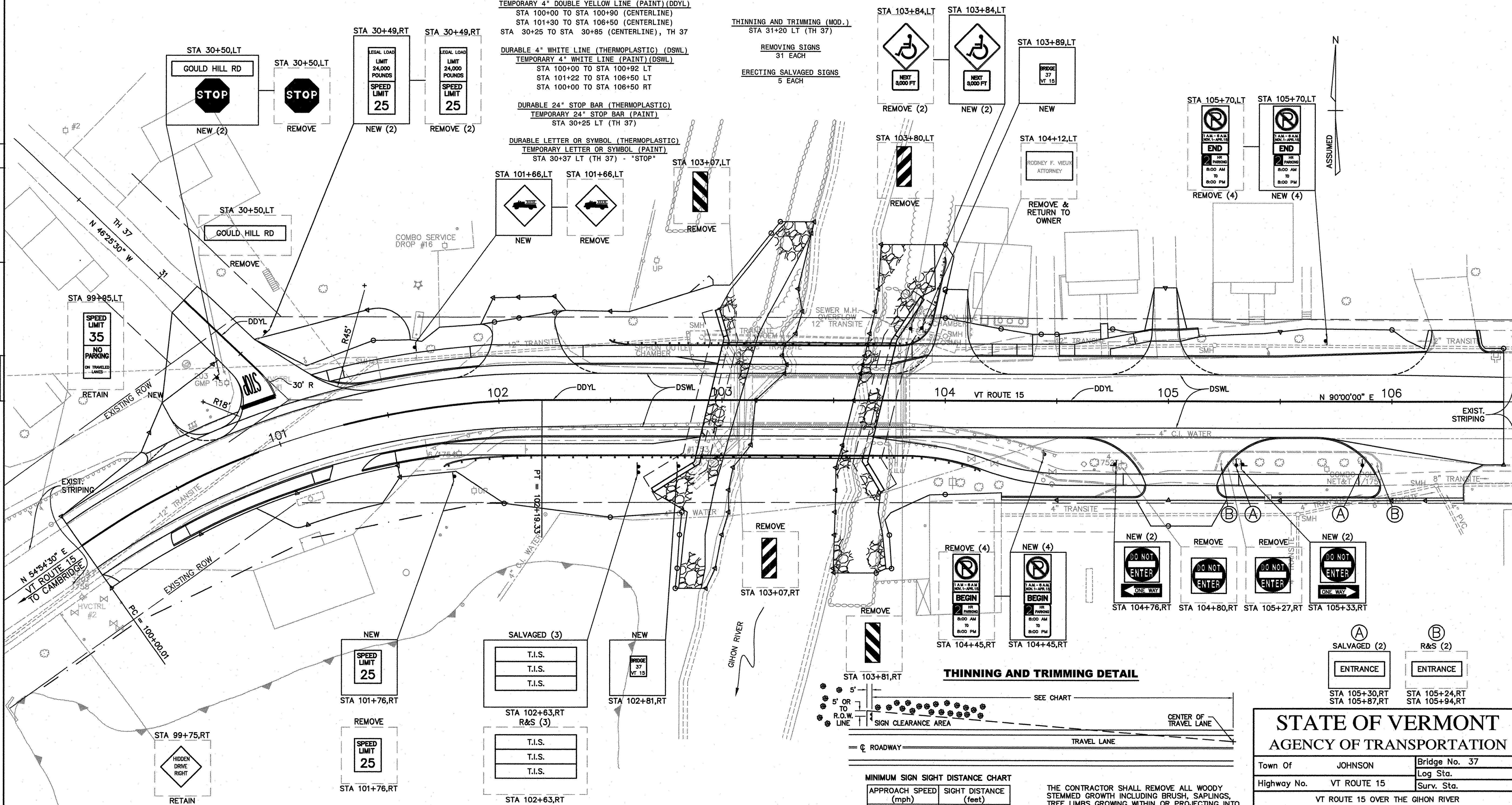
THINNING AND TRIMMING (MOD.)
 STA 31+20 LT (TH 37)

REMOVING SIGNS

31 EACH

ERECTING SALVAGED SIGNS

5 EACH



MINIMUM SIGN SIGHT DISTANCE CHART

APPROACH SPEED (mph)	SIGHT DISTANCE (feet)
30 (OR LESS)	300
35	350
40	400
45	450
50	500

THE CONTRACTOR SHALL REMOVE ALL WOODY STEMMED GROWTH INCLUDING BRUSH, SAPPLINGS, TREE LIMBS GROWING WITHIN OR PROJECTING INTO THE CLEARANCE AREA AND DOWN TO GROUND LEVEL. PAYMENT WILL BE FOR THINNING AND TRIMMING (MOD.) ITEM 201.31 AND PAID PER EACH. NO CHEMICALS (POISONS OR DEFOLIANTS) ALLOWED.

SCALE: IN FEET



STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GHON RIVER			
TRAFFIC SIGN AND PAVEMENT MARKING PLAN			
Designed By	T. Starr	Drawn By	T. Starr
Checked By	Date	Bridge Design Supervisor	
J. Warner	11/06	J. Byatt	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	37 Of 85

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

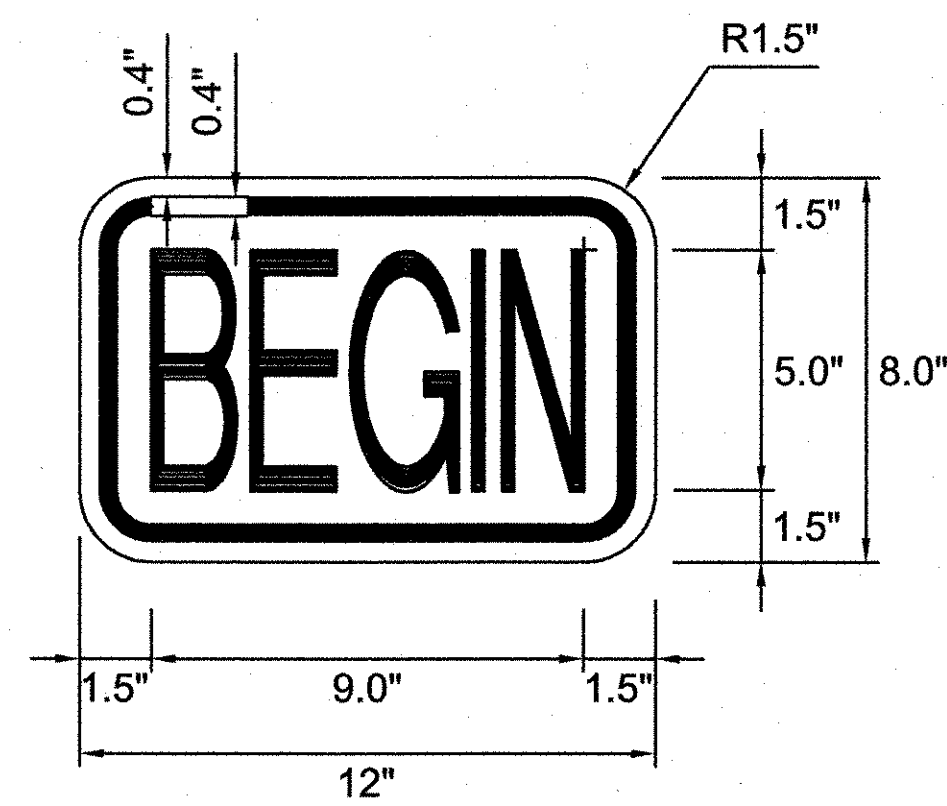
MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST	NO. OF POSTS	NEW SIGN POSTS														REMARKS	SIGN DETAIL				
		E A	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL		SQUARE STEEL (in)			TUBULAR ALUMINUM (in)			TUBULAR STEEL (in)				W-SHAPE STEEL		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER			
											lb/ft	lb/ft	1.75	2.0	2.5	3.0	4.0	4.0 MOD	3.0	3.5	4.0	5.0	FTG. SIZE				WEIGHT	POST SIZE	
																													1.12
STA 101+66 LT		1	30"	30"	6.25				1			14'	X	X	X												W11-8		
STA 101+76 RT		1	24"	30"	5.00				1			14'	X	X	X												R2-1	E-142	
STA 102+63 RT		1	72"	16"																2	1 @ 11"	X	1 @ 11.25"	22.25 x 7.6 = 169.1LBS				PLACE SALVAGED SIGNS ON TWO 3-INCH DIA. TUBULAR STEEL POSTS NON FEDERAL PARTICIPATION	E-125
		1	72"	16"																								E-125	
		1	72"	16"																								E-125	
STA 102+81 RT		1	6"	8"	0.33				1			8'	X	X	X												VD-701	E-134	
STA 103+84 LT		1	30"	30"	6.25				1			16'	X	X	X												W11-9		
		1	24"	18"	3.00																						W16-4		
STA 103+89 LT		1	6"	8"	0.33				1			8'	X	X	X												VD-701	E-134	
STA 104+45 RT		1	12"	12"	1.00				1			16'	X	X	X												R8-3A	E-143	
		1	12"	6"	0.50																						R8-3E	19	
		1	12"	8"	0.67																						M4-11	19	
		1	12"	18"	1.50																						R7-108	19	
STA 104+76 RT		1	30"	30"	6.25				1			14'	X	X	X												R5-1	E-143	
		1	36"	12"	3.00																						R6-1R	E-142	
<p>FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."</p>		TOTALS		SF	SF	EA.	SF			LF	LF	LF	LF	LF	LF	LF	LB	LB	LB	EA.	LB	EA.	EA.	LB					
				34.08		3				85	85	85	85	85	85	85	247	247	247	2	169.1LBS								

PROJECT: JOHNSON PROJECT NO.: BRF 030-2(17)S

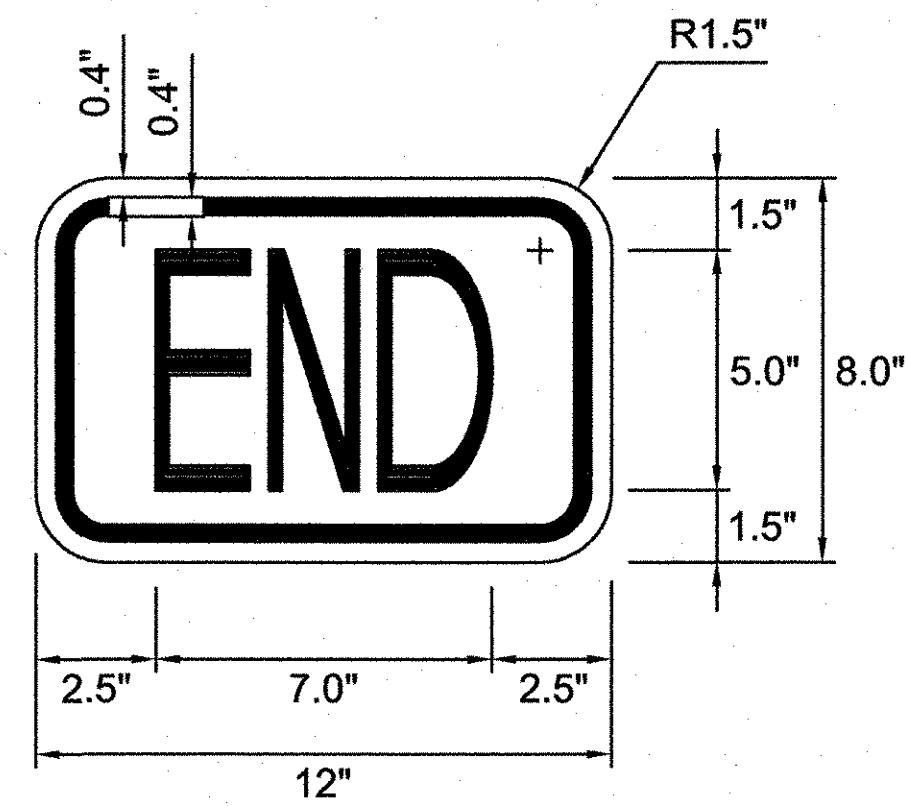
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IPARM FILE NAME: SURVEYED BY: N/A DRAWN BY: SMC

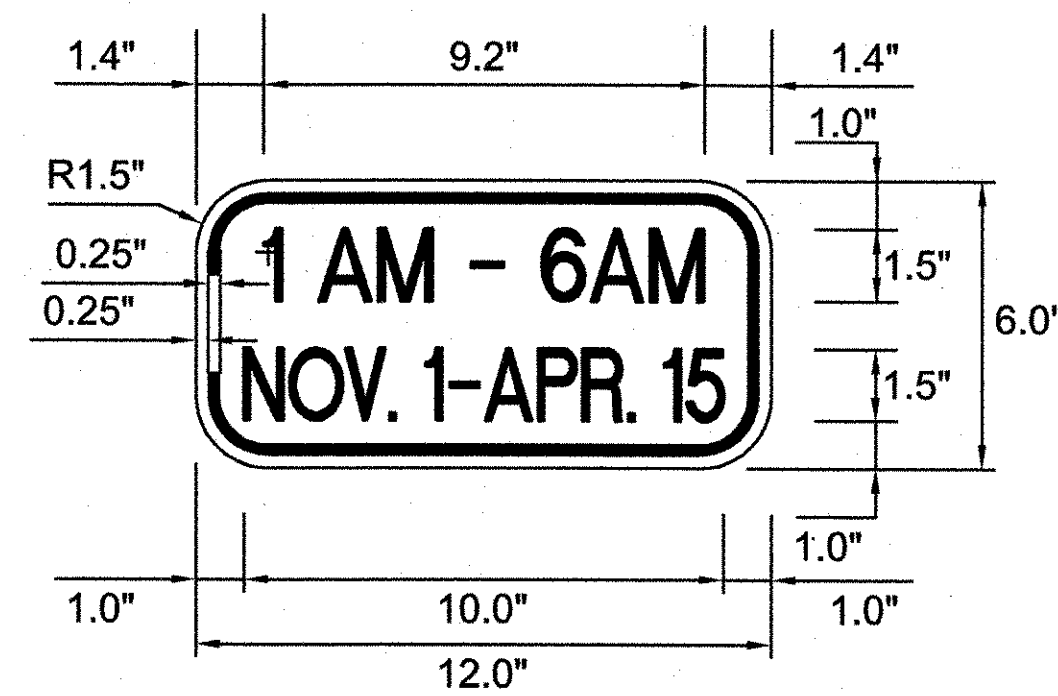
SQUAD LEADER: JAW SHEET: 38 OF 85



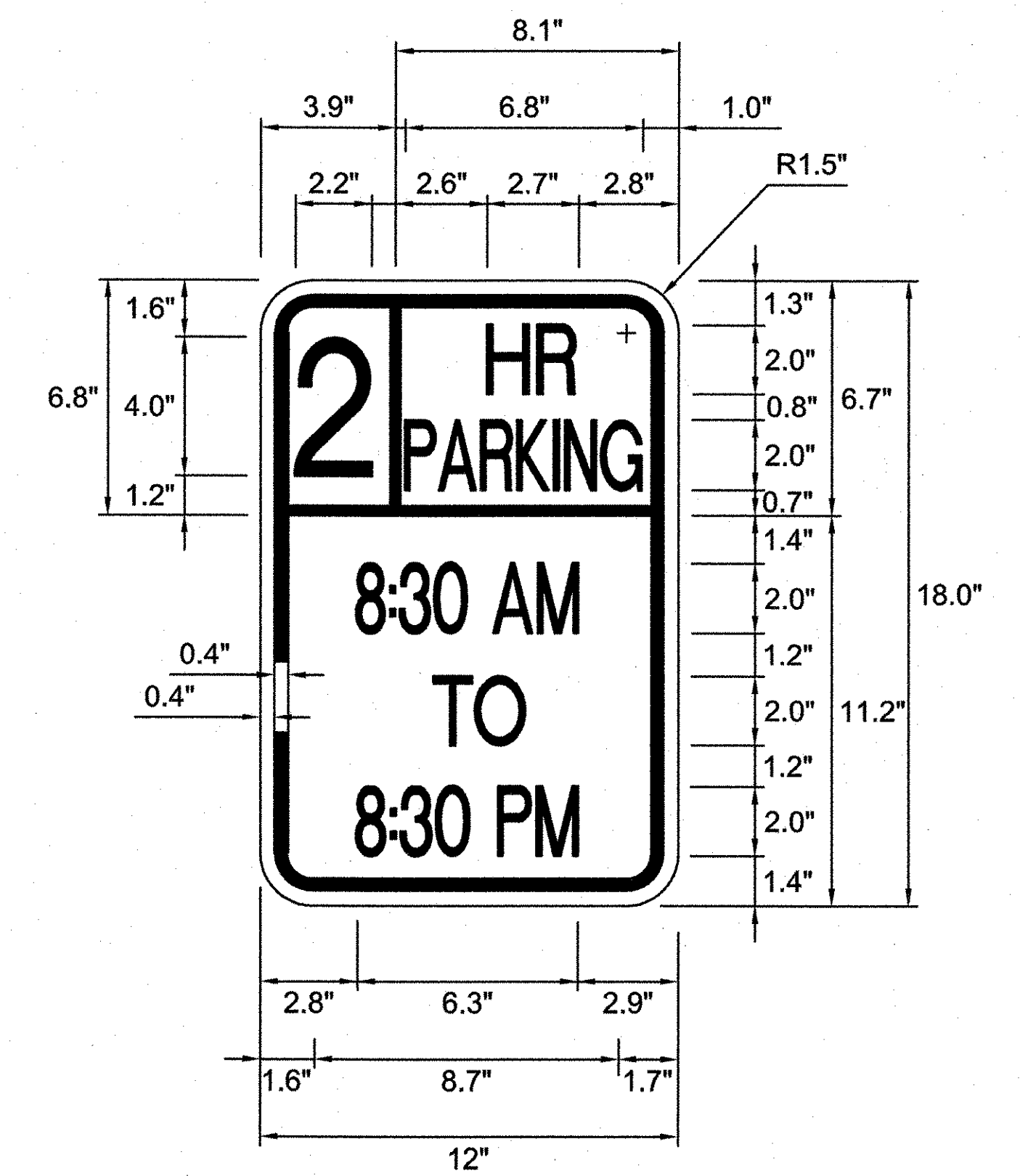
M4-11
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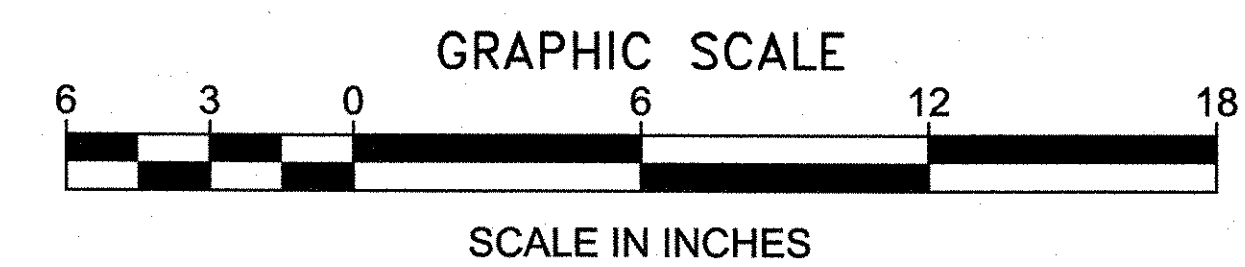
M4-12
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R8-3e
(RED TEXT ON WHITE BACKGROUND)

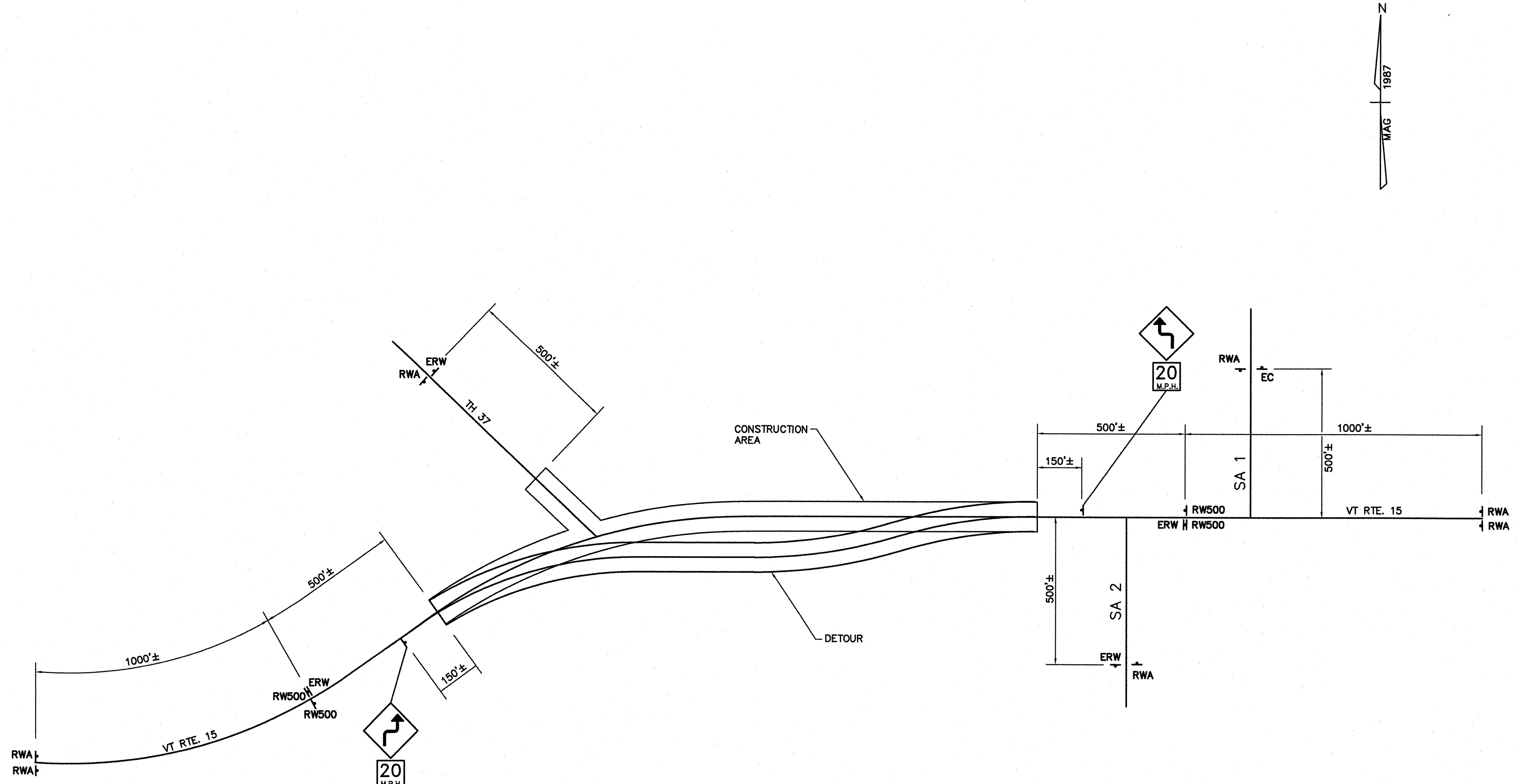


R7-108
(RED TEXT ON WHITE BACKGROUND)



STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GIHON RIVER			
SIGN DETAIL SHEET			
Designed By	T. Starr	Drawn By	T. Starr
Checked By	Date	Bridge Design Supervisor	Date
J. Warner		J. Byatt	
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet 40 Of 85	

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNMENT CHECKED	
	BY WAY CHECKED	
	NO.	



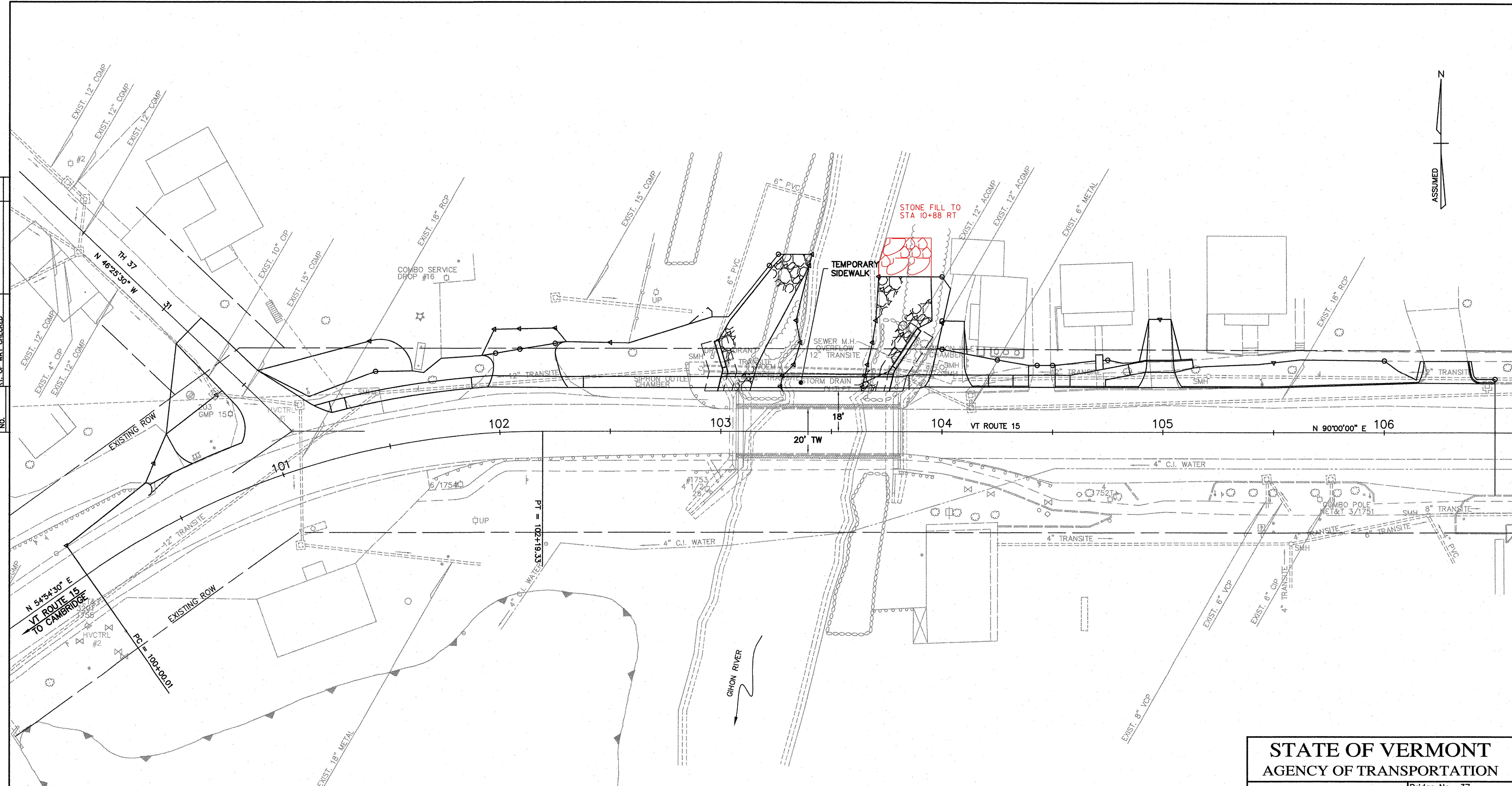
APPROACH SIGNING
NOT TO SCALE

NOTE:
SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS WILL BE LOCATED IN THE FIELD BY THE ENGINEER OR AS INDICATED IN THE STANDARD DETAILS.

LEGEND

- RWA ROAD WORK AHEAD
- ERW END ROAD WORK
- RW500 ROAD WORK 500 FEET

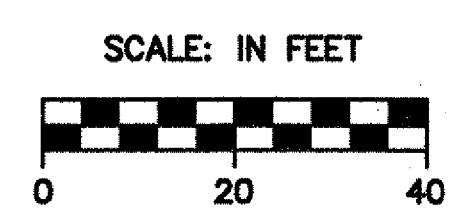
STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	JOHNSON	Bridge No.	37
		Log Sta.	
Highway No.	VT ROUTE 15	Surv. Sta.	
VT ROUTE 15 OVER THE GHON RIVER			
CONSTRUCTION APPROACH SIGNING			
Designed By	T. Starr	Drawn By	T. Starr
Checked By	Date	Bridge Design Supervisor	Date
J. Warner	11/06	J. Byatt	11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.	Sheet 41 Of 85		



NOTE:
ALL TEMPORARY STRIPING IS TO BE REMOVED UPON COMPLETION OF PHASE I CONSTRUCTION.

THE CONTRACTOR SHALL PROVIDE A PEDESTRIAN TRAFFIC PLAN FOR EACH PHASE OF THE PROJECT THAT IS COMPLIANT WITH MUTCD.

STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GIHON RIVER			
TRAFFIC CONTROL PLAN - PHASE I CONSTRUCTION			
Designed By	T. Starr	Drawn By	T. Starr
Checked By	Date	Bridge Design Supervisor	Date
J. Warner	11/06	J. Byatt	11/06
PROJECT	JOHNSON		PROJECT NO.
			BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.	Sheet		42 Of 85



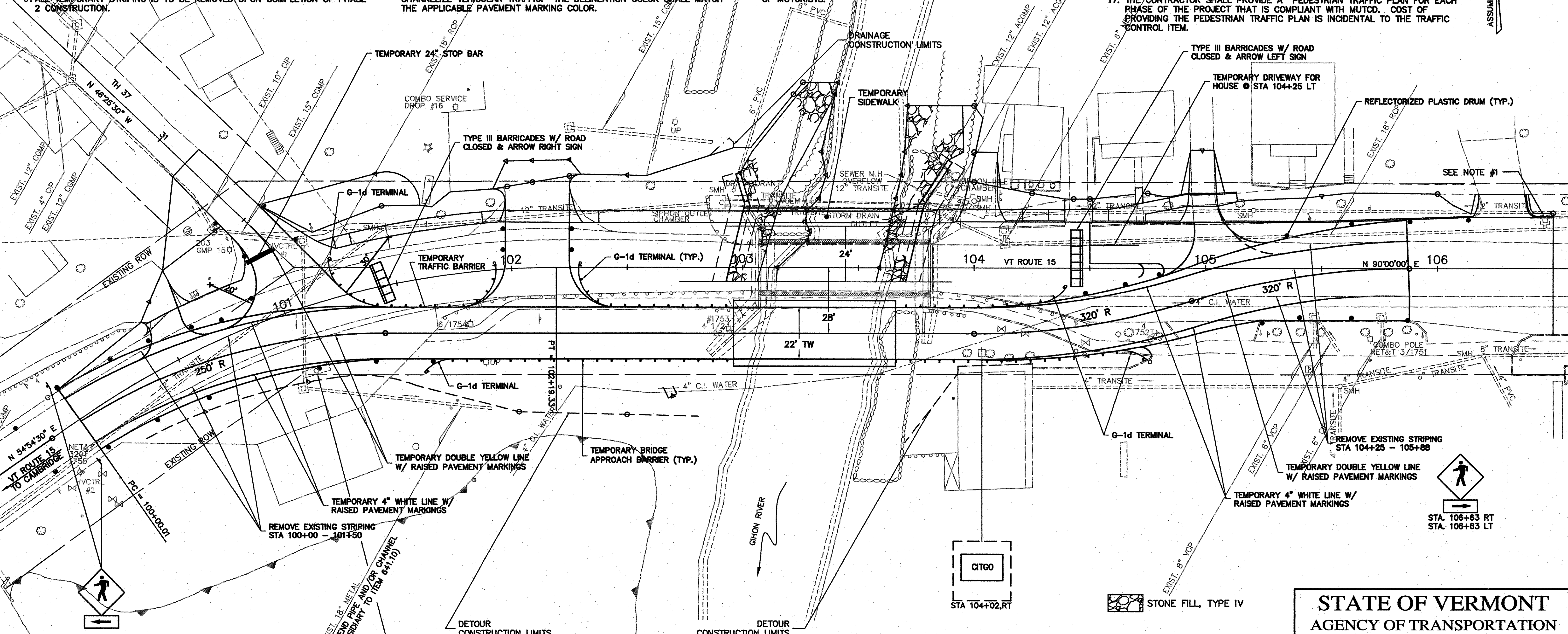
NOTES:

- DETOUR CONSTRUCTION LIMITS ARE TO REMAIN WITHIN THE DETOUR CONSTRUCTION LIMITS INDICATED ON THIS PLAN, OR WITHIN THE CONSTRUCTION LIMITS SHOWN ON THE GENERAL PLAN, WHICHEVER IS FURTHEST FROM THE SURVEY LINE.
- GEOTEXTILE FOR ROADBED SUBGRADE SEPARATOR SHALL BE PLACED UNDER ALL TEMPORARY FILL FROM STA 101+50 - 103+00 RT OR AS DIRECTED BY THE ENGINEER OR THE STREAM ALTERATION ENGINEER.
- BARRELS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER OR AS SHOWN ON THE STANDARD DETAILS. SEE STANDARDS E-106, E-107 & E-107A FOR ADDITIONAL DETAILS.
- SEE BRIDGE PRELIMINARY INFORMATION SHEET FOR TEMPORARY BRIDGE HYDRAULIC OPENING REQUIREMENTS.
- ALL TEMPORARY STRIPING IS TO BE REMOVED UPON COMPLETION OF PHASE 2 CONSTRUCTION.
- THERE IS AN EXISTING CROSSWALK AT STA 106+63. THIS CROSSWALK MAY BE USED BY WESTBOUND PEDESTRIANS TO CROSS FROM THE SOUTH SIDE TO THE NORTH SIDE OF ROUTE 15 TO CONTINUE WEST ALONG THE NEWLY CONSTRUCTED SIDEWALK ON THE NORTH SIDE OF ROUTE 15.
- INSTALLATION AND REMOVAL OF GUARDRAIL IS INCLUDED AS PAY ITEM TEMPORARY TRAFFIC BARRIER WHERE NOT INCLUDED IN TWO-WAY TEMPORARY BRIDGE. ANCHORS FOR GUARDRAIL SHALL BE SUBSIDIARY TO TEMPORARY TRAFFIC BARRIER.
- BARRIER USED IN MISCELLANEOUS AREAS IS INCLUDED IN PAY ITEM TEMPORARY TRAFFIC BARRIER. PRIOR APPROVAL BY THE ENGINEER IS REQUIRED FOR USE OF BARRIER IN MISCELLANEOUS AREAS.
- TEMPORARY TRAFFIC BARRIER SHALL BE SUPPLEMENTED WITH STANDARD DELINEATION, PAVEMENT MARKINGS, OR CHANNELIZING DEVICES FOR IMPROVED DAYTIME AND NIGHTTIME VISIBILITY IF THEY ARE USED TO CHANNELIZE VEHICULAR TRAFFIC. THE DELINEATION COLOR SHALL MATCH THE APPLICABLE PAVEMENT MARKING COLOR.
- CONSTRUCTION SIGNS SHALL NOT BE INSTALLED AS TO INTERFERE OR OBSTRUCT THE VIEW OF EXISTING TRAFFIC CONTROL DEVICE, STOPPING SIGHT DISTANCE AND CORNER SIGHT DISTANCE.
- ALL SIGNS THAT ARE NOT BEING USED SHALL BE COVERED APPROPRIATELY.
- PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL CONSIST OF EITHER ONE OR TWO PHASES. TYPICALLY, A PHASE SHALL CONSIST OF UP TO THREE LINES OF EIGHT CHARACTERS PER LINE. THE PCMS SHOULD BE USED AS A SUPPLEMENT AND NOT AS A SUBSTITUTE FOR CONVENTIONAL SIGNS AND PAVEMENT MARKINGS.
- THE PCMS SHOULD COMMUNICATE WHAT INFORMATION MOTORISTS NEED TO KNOW. UNNECESSARY INFORMATION SHOULD BE AVOIDED. MESSAGES SHOULD BE UPDATED PERIODICALLY TO DESCRIBE THE WORK ACTIVITY OCCURRING SO THAT THE PCMS CONTINUES TO COMMAND THE ATTENTION OF MOTORISTS.
- CARE SHOULD BE GIVEN TO THE BUSINESSES LOCATED ALONG THE PROJECT ROUTE. ACCOMMODATIONS TO ALLOW CUSTOMERS TO ACCESS BUSINESSES THROUGH THE PROJECT AREA WILL NEED TO BE DEVELOPED.
- ANY NEW SIGN INSTALLATIONS MUST NOT INTERFERE OR OBSTRUCT EXISTING TRAFFIC CONTROL DEVICES AND SHALL BE FABRICATED AND INSTALLED AS TO MEET OR EXCEED THE LATEST MUTCD AND/OR STATE STANDARDS.
- TYPE III BARRICADE WITH SIGNAGE TO GUIDE TRAFFIC THROUGH THE CROSSOVER SHALL BE INSTALLED AS TO BE HIGH ENOUGH TO BE VIEWED ABOVE THE CONCRETE BARRIER AND/OR REFLECTORIZED DRUMS. SEE VTRANS STATE STANDARD E-170A FOR MORE INFORMATION.

FOR ADDITIONAL INFORMATION REFER TO 2003 MUTCD PART #6 - TYPICAL APPLICATION 7 - ROAD CLOSURE WITH DIVERSION OR VTRANS STANDARD E-107 DELINEATION, BARRICADES AND DETOUR CONSTRUCTION AREAS.

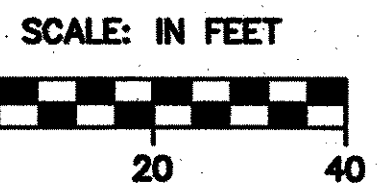
17. THE CONTRACTOR SHALL PROVIDE A PEDESTRIAN TRAFFIC PLAN FOR EACH PHASE OF THE PROJECT THAT IS COMPLIANT WITH MUTCD. COST OF PROVIDING THE PEDESTRIAN TRAFFIC PLAN IS INCIDENTAL TO THE TRAFFIC CONTROL ITEM.

PLAN	DATE
SURVEYED	
PLOTTED	
ALIGNMENT CHECKED	
BY	
NO.	



PRIOR TO IMPLEMENTING THE DETOUR, THE CONTRACTOR SHALL REMOVE THE CONCRETE ISLAND, LIGHT FIXTURE, ANCHORS, CONDUITS, WIRING AND INCIDENTALS SHALL BE REMOVED WITHIN THE CONSTRUCTION LIMITS FOR THE PROJECT. PAYMENT WILL BE INCIDENTAL TO ITEM 528.11 TWO-WAY TEMPORARY BRIDGE (MOD.-22' WIDE) AND BE FULL COMPENSATION FOR REMOVING THE CONCRETE ISLAND, LIGHT FIXTURE, FOR EXCAVATING, BACKFILLING, RESTORATION / REPLACEMENT OF EXISTING SUBBASE AND FOR FURNISHING ALL LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

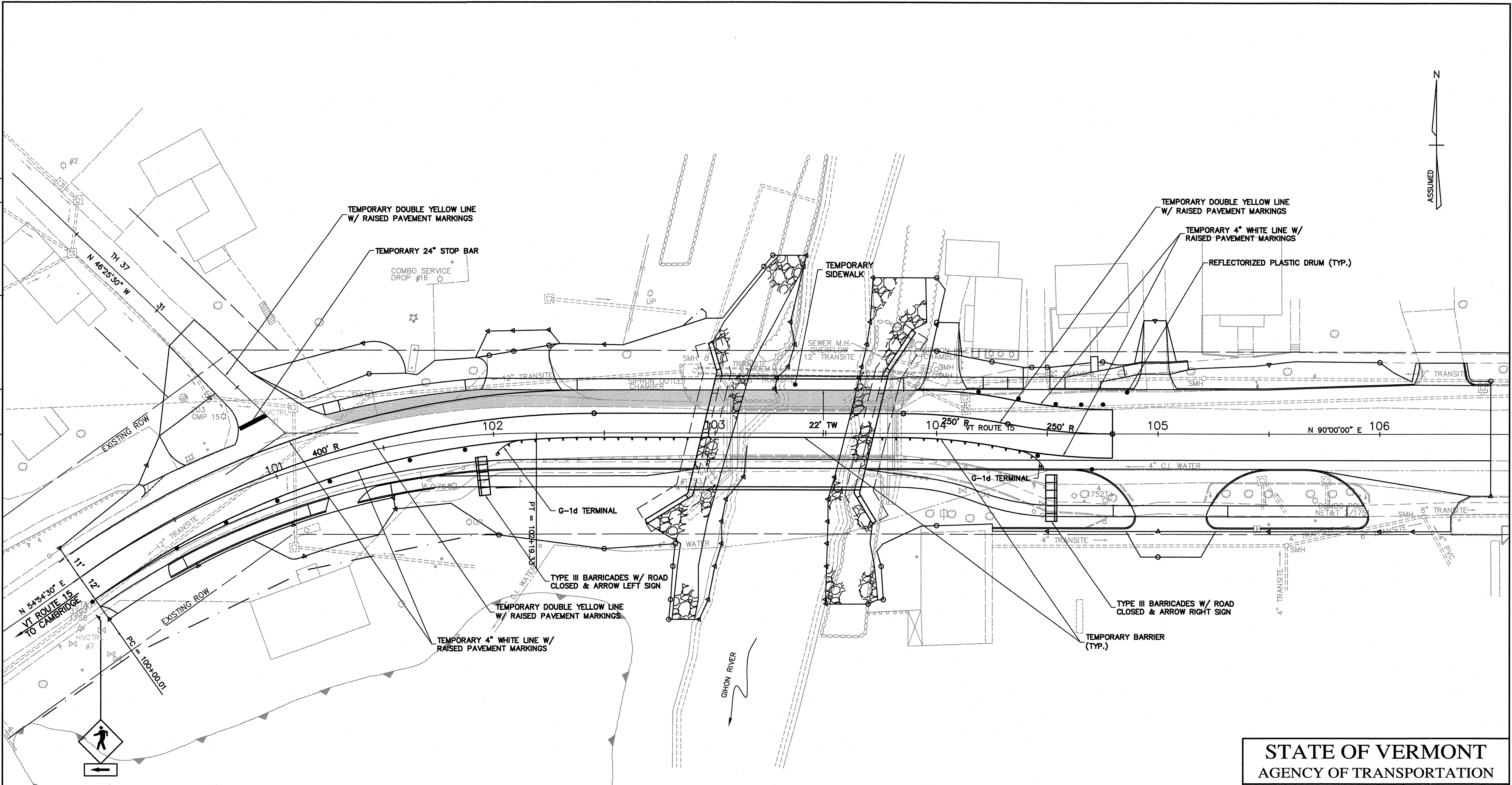
PRIOR TO IMPLEMENTING THE DETOUR, THE CONTRACTOR SHALL REMOVE THE EXISTING BUSINESS SIGN (CITGO). THE FOUNDATION, ANCHORS, CONDUITS, WIRING AND INCIDENTALS SHALL BE REMOVED OR PROTECTED DURING OPERATION OF THE DETOUR SUCH THAT THE SIGN CAN BE REINSTALLED IN ITS ORIGINAL LOCATION AFTER REMOVAL OF THE DETOUR. IF THE FOUNDATION, ANCHORS, CONDUITS, WIRING AND INCIDENTALS REMAIN IN PLACE DURING THE OPERATION OF THE DETOUR, THEY SHALL NOT CAUSE AN UNEVEN OR ABRUPT CHANGE IN THE RIDING SURFACE OF THE DETOUR. SHOULD THE FOUNDATION AND ASSOCIATED COMPONENTS NEED TO BE REMOVED AND REPLACED FOR OPERATION OF THE DETOUR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE FOUNDATION, ANCHORS, CONDUITS, WIRING AND INCIDENTALS SUCH THAT THE SIGN OPERATES TO THE SATISFACTION OF THE ENGINEER. PAYMENT WILL BE INCIDENTAL TO ITEM 528.11 TWO-WAY TEMPORARY BRIDGE (MOD.-22' WIDE) AND BE FULL COMPENSATION FOR REMOVING AND RELOCATING THE BUSINESS SIGN, FOR EXCAVATING, BACKFILLING, AND FOR FURNISHING ALL DESIGN, LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.



**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

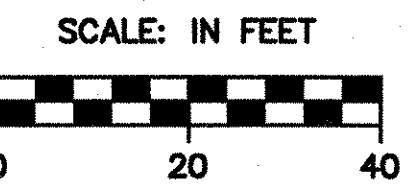
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GIHON RIVER			
TRAFFIC CONTROL PLAN - PHASE II CONSTRUCTION			
Designed By	T. Starr	Drawn By	T. Starr
Checked By	Date	Bridge Design Supervisor	
	11/06	J. Byatt	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	43 Of 85

DATE	
BY	
SUBMITTED	
PLANNED	
NOTED	
NOTE BOOK NO.	
ALIGNMENT CHECKED	
BY	
DATE	



- NOTES:
1. ALL TEMPORARY STRIPING IS TO BE REMOVED UPON COMPLETION OF PHASE III CONSTRUCTION.
 2. PHASE IV CONSTRUCTION SHALL CONSIST OF SHIFTING TRAFFIC ONTO ULTIMATE ALIGNMENT AND COMPLETING CONSTRUCTION OF GREEN BELT, CURBING AND SHOULDER ON LEFT SIDE OF ROADWAY FROM TH #37 TO DRIVE AT 104+03 LT. REPRESENTED BY SHADED AREA ON THIS PLAN.
 3. THE CONTRACTOR SHALL PROVIDE A PEDESTRIAN TRAFFIC PLAN FOR EACH PHASE OF THE PROJECT THAT IS COMPLIANT WITH MUTCD.

PHASE IV CONSTRUCTION



STATE OF VERMONT
AGENCY OF TRANSPORTATION

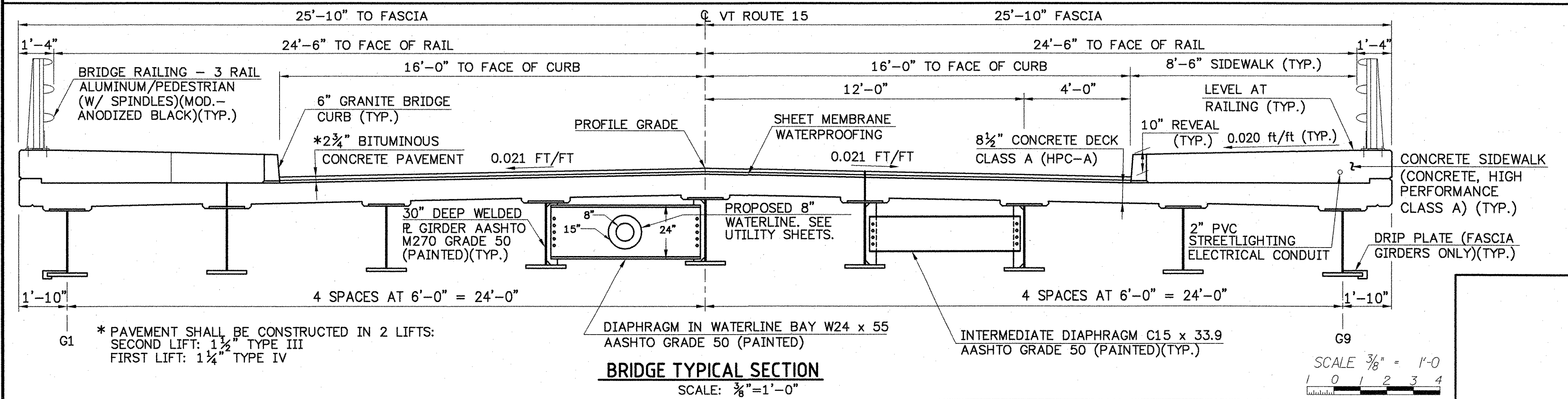
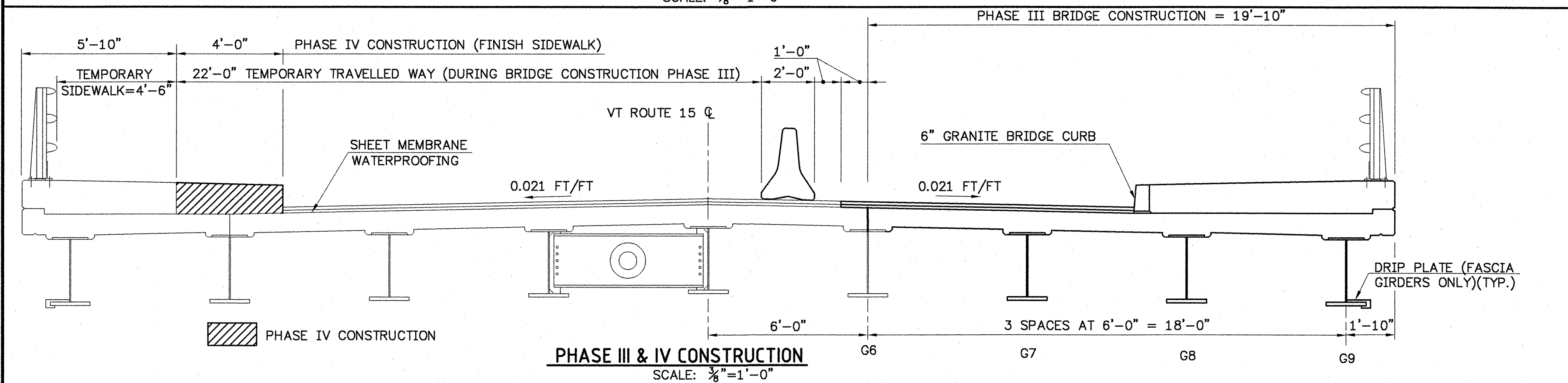
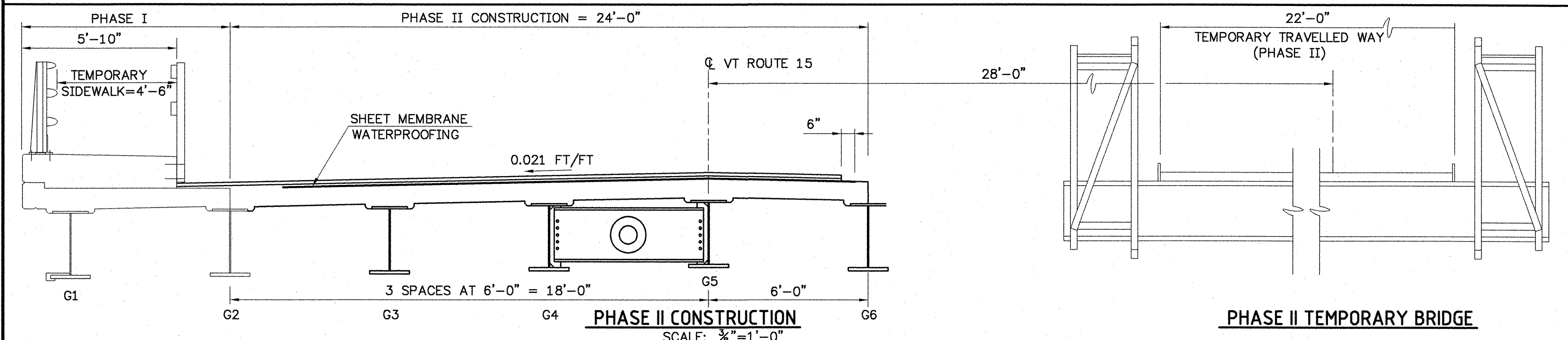
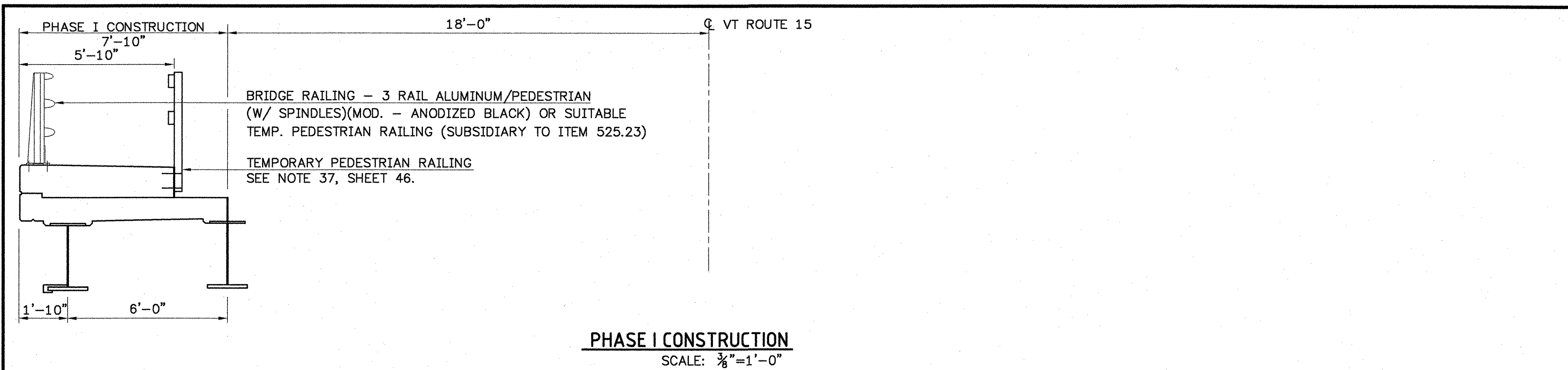
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	

VT ROUTE 15 OVER THE GIHON RIVER

TRAFFIC CONTROL PLAN - PHASE III & IV CONSTRUCTION

Designed By	T. Starr	Drawn By	T. Starr
Checked By	Date	Bridge Design Supervisor	
J. Warner	11/06	J. Byatt	Date 11/06

PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
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HYDRAULIC DATA

1. DRAINAGE AREA 65 SQ.MI.
 CHARACTER OF TERRAIN STEELY SLOPED FORESTED UPLANDS; MODERATELY DEVELOPED FLOOD PLAIN
 NATURE OF STREAMBED GRAVEL OVER DEEP SANDY SILT

Q 2.33	2000 CFS	Q 50	6550 CFS
Q 10	3750 CFS	Q 100	8200 CFS
Q 25	5100 CFS	Q 500	14200 CFS

DATE OF FLOOD OF RECORD 1927 WATER SURFACE ELEVATION 512 ESTIMATED DISCHARGE _____
 NATURAL STREAM VELOCITY @ Q 10 = 6.2 fps (approach section) ICE CONDITIONS MODERATE TO HEAVY DRIFT MODERATE
 DOES THE STREAM REACH MAX. HIGHWATER ELEVATION RAPIDLY? YES
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? DOWNSTREAM
 IF YES, DESCRIBE: CONFLUENCE OF THE LAMOILLE RIVER IS APPROX. 0.35 MILES DOWNSTREAM
 WATERSHED STORAGE 2% HEADWATERS X UNIFORM THROUGHOUT WATERSHED IMMEDIATELY ABOVE SITE

EXISTING STRUCTURE

1. STRUCTURE TYPE: STEEL THROUGH GIRDER YEAR BUILT: 1928
 2. SPAN NORMAL TO STREAM: 66'
 3. VERTICAL CLEARANCE ABOVE STREAMBED: 13.8'
 4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM): 810 SF
 5. DISPOSITION OF STRUCTURE: SUPERSTRUCTURE AND PORTIONS OF SUBSTRUCTURE TO BE REMOVED
 6. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL: WOODEN PILES THROUGH SANDY SILT
 7. WATER SURFACE ELEVATION @ Q 2.33 486.17 @APPROACH AREA VELOCITY= 6.9 fps
 Q 10 488.53 (491.56) = 8.7 fps (5.7 fps)
 Q 25 489.98 = 10.4 fps
 Q 50 491.42 (496.27) = 12.3 fps (7.8 fps)
 Q 100 493.16 (497.71) = 14.7 fps (8.1 fps)
 8. LONG TERM STREAM BED CHANGES: SINUOUS STREAM
 9. IS THE ROADWAY OVERTOPPED BELOW THE 0100? NO FREQUENCY: SEE NOTE 2
 10. RELIEF ELEVATION: SEE NOTE 2 DISCHARGE OVER ROAD @Q100: (1339 cfs)

PROPOSED STRUCTURE

1. STRUCTURE TYPE: REINFORCED CONCRETE SLAB ON STEEL GIRDERS
 2. CLEAR SPAN LENGTH(S) NORMAL TO STREAM: 71'
 3. VERTICAL CLEARANCE ABOVE STREAMBED: 12.8'
 4. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? YES WATER LINE ON BRIDGE & BURIED SEWER LINE UNDER RIVER

HYDRAULIC DATA

1. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM): 780 SF
 2. WATER SURFACE ELEVATION @ Q 2.33 488.38 @APPROACH AREA VELOCITY= 7.3 fps
 Q 10 488.71 (491.56) = 8.8 fps (5.5 fps)
 Q 25 490.15 = 10.4 fps
 Q 50 491.55 (496.38) = 12.2 fps (8.1 fps)
 Q 100 493.11 (497.71) = 14.3 fps (8.1 fps)
 3. IS THE ROADWAY OVERTOPPED BELOW THE 0100? NO FREQUENCY: SEE NOTE 2
 4. RELIEF ELEVATION: SEE NOTE 2 DISCHARGE OVER ROAD @Q100: (1590 cfs)
 5. AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 492.7' (LIMITED BY LOW STEEL)
 6. VERTICAL CLEARANCE @Q100: 0
 7. SCOUR: 5'
 8. REQUIRED CHANNEL PROTECTION: STONE FILL, TYPE IV

ALLOWABLE STRESSES:

1. DESIGN LIVE LOAD AASHTO HS25-44
 2. DESIGN SPAN 75 ft
 3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE N/A
 4. ALLOWABLE LOAD FOR PILING
ASTM A36 (GRADE 36 STEEL) 192.6 KIPS TYPE HP 14 X 73 AVERAGE LENGTH 27 KSI
 5. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M 270 GR50 TENSION 27 KSI
 6. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 24000 PSI COMPRESSION 20000 PSI
 7. ALLOWABLE STRESS FOR CONCRETE, HIGH PERFORMANCE CLASS A f_c = 4000 PSI f_c = 1400 PSI
 CONCRETE, HIGH PERFORMANCE CLASS B f_c = 3500 PSI f_c = 1400 PSI

TRAFFIC MAINTENANCE:

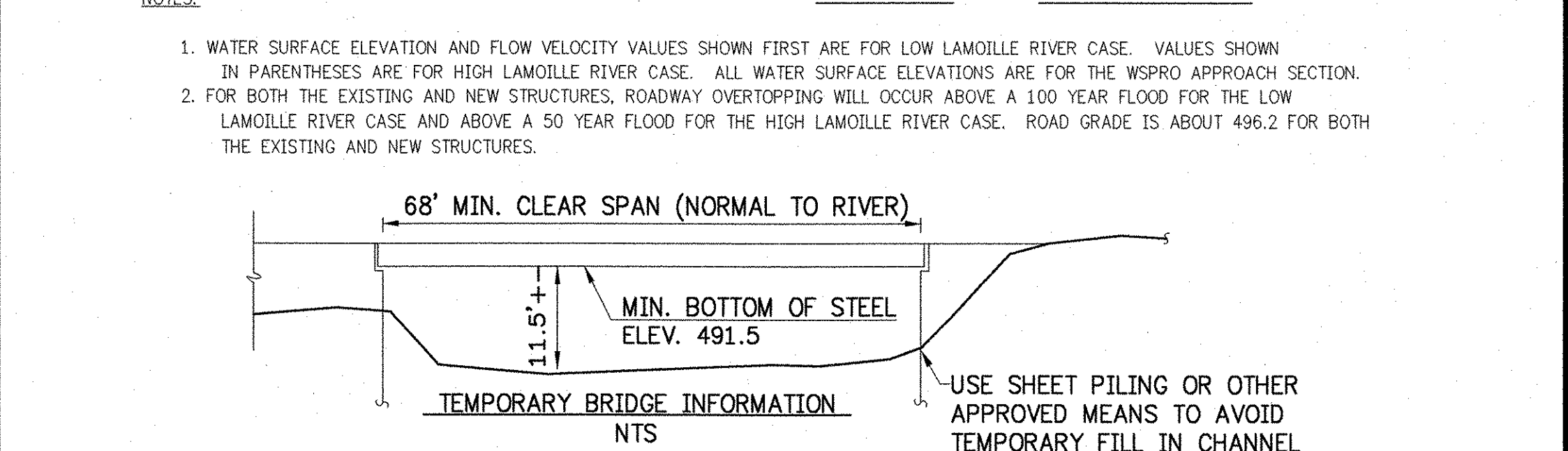
1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE YES, DURING PHASE I
 OR ON TEMPORARY BRIDGE YES, DURING PHASE II
 2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY TWO WAY TRAFFIC CONTROL SIGNALS REQUIRED NO (SEE SKETCH BELOW)
 MINIMUM CLEAR SPAN SEE SKETCH BELOW MINIMUM CLEAR HEIGHT SEE SKETCH BELOW MINIMUM WATERWAY AREA
 ARE SIDEWALKS REQUIRED? NO IF SO, ON WHAT SIDE? N/A

PERMIT INFORMATION

AVERAGE DAILY FLOW: 134 cfs ORDINARY LOW WATER: 61 cfs DEPTH: 1 ft
 ORDINARY HIGH WATER: 858 cfs DEPTH: 4 ft

NOTES:

1. WATER SURFACE ELEVATION AND FLOW VELOCITY VALUES SHOWN FIRST ARE FOR LOW LAMOILLE RIVER CASE. VALUES SHOWN IN PARENTHESES ARE FOR HIGH LAMOILLE RIVER CASE. ALL WATER SURFACE ELEVATIONS ARE FOR THE WSPRO APPROACH SECTION.
 2. FOR BOTH THE EXISTING AND NEW STRUCTURES, ROADWAY OVERTOPPING WILL OCCUR ABOVE A 100 YEAR FLOOD FOR THE LOW LAMOILLE RIVER CASE AND ABOVE A 50 YEAR FLOOD FOR THE HIGH LAMOILLE RIVER CASE. ROAD GRADE IS ABOUT 496.2 FOR BOTH THE EXISTING AND NEW STRUCTURES.



LOAD FACTOR LOAD RATING (TONS)

LOAD LEVELS (LOAD FACTOR)	TRUCK						
	H	HS	3S2	6 AXLE	SA STR	4ASTR	5ASEMI
INVENTORY A=2.17 B=1.00	33	60					
POSTED A=1.55 B=1.40	47	84	121	91	93	110	
OPERATING A=1.30 B=1.67			100	144	173	108	111

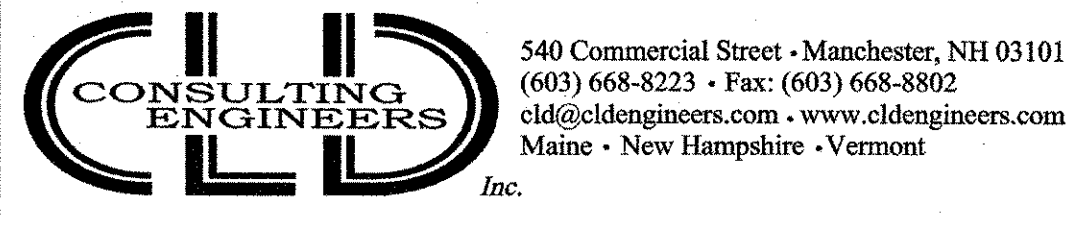
STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of JOHNSON Bridge No. 37
 Highway No. VT. ROUTE 15 Log Sta. _____
 Surv. Sta. _____

VT. ROUTE 15 OVER GIHON RIVER
PRELIMINARY INFORMATION SHEET

Designed By R. RICARD Drawn By D. DUGAL
 Checked By Date Bridge Design Supervisor
R. ROONEY 11/02 J. BYATT Date 11/06

PROJECT JOHNSON PROJECT NO. BRF 030-2(17)S
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 Bridge Sheet No. _____ Sheet 45 Of 85



GENERAL NOTES

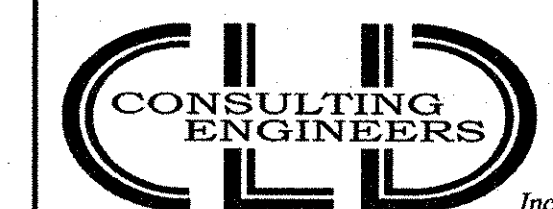
1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION, 2001 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND ITS LATEST REVISIONS, AND THE 2002 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, AND ITS LATEST INTERIMS.
2. DESIGN IS FOR HS-25 LOADING WITH NO ALLOWANCE FOR FUTURE PAVEMENT. SUPERSTRUCTURE DESIGN IS BY THE LOAD FACTOR METHOD. SUBSTRUCTURE DESIGN IS BY THE SERVICE LOAD DESIGN METHOD.
3. DESIGN SOIL UNIT WEIGHT = 140 PCF
4. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES F UNLESS OTHERWISE NOTED.
5. ALL WELDING AND FABRICATION SHALL BE PERFORMED IN CONFORMANCE WITH THE ANSI/AASHTO/AWS D1.5-02 BRIDGE WELDING CODE AND VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION
6. THE PAINTING OF THE NEW STEEL WILL BE PAID FOR UNDER THE ITEM 513.25 "STRUCTURAL PAINTING, SHOP APPLIED". SEE SPECIAL PROVISIONS FOR THE SPECIFICATIONS PERTAINING TO THE PAINTING OF STRUCTURAL STEEL. SHOP APPLIED PROTECTIVE COATINGS FOR USE ON THIS STRUCTURE SHALL BE ONE OF THE APPROVED SYSTEMS ON THE QUALIFIED PRODUCT LIST MAINTAINED AT THE AGENCY'S MATERIALS LABORATORY. THE COLOR OF THE FINAL TOPCOAT SHALL CONFORM WITH FEDERAL STANDARD NO. 595: COLOR CHIP NO. 20059 (BROWN).
7. ALL FIELD CONNECTIONS SHALL BE MADE WITH GALVANIZED, 7/8" DIAMETER, TYPE I BOLTS MEETING THE REQUIREMENTS OF AASHTO M164 (ASTM A325) HOLES SHALL BE 1 1/16" DIAMETER. CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STATE FOR APPROVAL.
8. MECHANICALLY GALVANIZED AND PAINTED TYPE I BOLTS ARE TO BE USED FOR PAINTED M270 GRADE 50 AND PAINTED M270 GRADE 36 STRUCTURAL STEEL CONNECTIONS. FIELD PAINTING OF BOLTS TO INCLUDE INTERMEDIATE AND FINAL COATING SYSTEMS AFTER CONNECTION APPROVAL.
9. ALL WELDING SHALL CONFORM WITH THE PROVISIONS OF SUBSECTION 506.10 OF THE 2001 STANDARD SPECIFICATIONS.
10. ANY HOLES IN FASCIA BEAMS OR FASCIA GIRDER WEBS NOT OTHERWISE FILLED SHALL BE FILLED WITH ASTM A325 BOLTS. SEE STANDARD SPECIFICATION SECTION 506.19 FOR BOLT TENSIONING REQUIREMENTS.
11. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF THE BEAMS SHALL BE TAKEN AS DIRECTED BY THE ENGINEER FOR USE IN DETERMINING FINAL GRADE.
12. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".
13. MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS: SUBSTRUCTURE: TWO (2) INCHES ALONG BACK FACES OF WALLS AGAINST EARTH, AND THREE (3) INCHES ELSEWHERE. FOR BRIDGE DECK: 2 1/2" MIN. COVER FOR TOP REINFORCING, AND 1 1/2" MIN. COVER FOR BOTTOM REINFORCING.
14. REINFORCING PLACEMENT TOLERANCES SHALL BE: SPACING +/- 1" CLEARANCE +/- 1/4" OR AS SHOWN ON THE PLANS.
15. DECK CONCRETE AND CONCRETE BRIDGE SIDEWALKS SHALL BE CONCRETE, HIGH PERFORMANCE CLASS A. CONCRETE ROADWAY SIDEWALKS AND ALL OTHER CONCRETE SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B UNLESS OTHERWISE NOTED. SEE STAY-IN-PLACE CORRUGATED METAL FORMS NOTES FOR ALTERNATIVE TO ABOVE NOTE.
16. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" BY 1".
17. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/2" PER FOOT. ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD CENTER SPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE MAGNESIUM FLOAT FINISHED.
18. FOR EACH CONSTRUCTION PHASE, THE DECK SHALL BE PLACED IN A SINGLE OPERATION WITHIN AN 8 HOUR PERIOD. IF THIS CAN NOT BE ACCOMPLISHED DUE TO CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL, A NEAT (DAMMED) CONSTRUCTION JOINT SHALL BE USED, SEE SHEET 54 FOR TRANSVERSE JOINT DETAILS. A NINETY-SIX HOUR DELAY BETWEEN PLACEMENTS SHALL BE OBSERVED.
19. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF DECK BETWEEN DRIP BEADS.
20. TRAFFIC SHALL BE ALLOWED ON THE NEW BRIDGE ONLY AFTER THE SPECIFIED CURE PERIOD HAS EXPIRED AND 28 DAY DESIGN STRENGTH HAS BEEN ATTAINED AS EVIDENCED BY TEST CYLINDERS CURED UNDER FIELD CONDITIONS. TRAFFIC WILL ALSO NOT BE ALLOWED ON THE NEW BRIDGE WITHOUT PAVEMENT IN PLACE.
21. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
22. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND SPACING OF FASCIA OVERHANG BRACKETS; HOWEVER, SPACING SHALL NOT EXCEED FOUR (4) FEET.
24. NO CONCRETE ABOVE THE BRIDGE SEATS SHALL BE PLACED UNTIL THE FINAL FINISHED GRADE OF THE DECK HAS BEEN ESTABLISHED, OR AS OTHERWISE PERMITTED BY THE ENGINEER.
25. ALL PILES SHALL BE ASTM A36 HP14X73 BEARING PILES DRIVEN TO REFUSAL ON BEDROCK. THE ULTIMATE CAPACITY IS 530 KIPS PER PILE.
26. ALL PILES SHALL BE FURNISHED WITH A REINFORCED PILE TIP OF PREFABRICATED CAST STEEL MEETING THE REQUIREMENTS OF ASTM A-27. SEE STANDARD SPECIFICATION SECTION 505.04 (E).
27. ALL NECESSARY COFFERDAM CONSTRUCTION INCLUDING ANY PHASED INSTALLATION AND REMOVAL NECESSARY FOR EACH PHASE OF CONSTRUCTION AT EACH ABUTMENT SHALL BE PAID AS ITEM 208.40, COFFERDAM, LUMP SUM, AT EACH ABUTMENT.
28. FOR EACH CONSTRUCTION PHASE, THE STONE FILL TYPE IV SHALL BE PLACED IN FRONT OF THE ABUTMENTS PRIOR TO ERECTING THE STRUCTURAL STEEL.
29. THE EXISTING BRIDGE TO BE REMOVED IS BELIEVED TO BE FOUNDED ON TIMBER PILES. ALSO, AS SHOWN ON THE BORING LOGS FOR BORINGS B-6 AND B-7, WOOD CRIBBING IS PRESENT ABOVE THE PROPOSED BOTTOM OF FOOTING ELEVATIONS. PORTIONS OF THE SUBSTRUCTURE ARE TO BE REMOVED AS INDICATED ON THE CHANNEL SECTIONS.
30. IN-STREAM CONSTRUCTION SHALL BE PERFORMED BETWEEN JUNE 1 AND OCTOBER 1, UNLESS THE CONTRACTOR OBTAINS WRITTEN PERMISSION FROM THE AGENCY OF NATURAL RESOURCES TO PERFORM SUCH WORK OUTSIDE OF THAT TIME FRAME.
31. TEN CUBIC YARDS OF STONE FILL TYPE IV HAS BEEN INCLUDED IN THE PROJECT FOR CONSTRUCTION OF A FISH HABITAT BOULDER CLUSTER. THIS CLUSTER SHALL BE LOCATED IN A HIGH VELOCITY PORTION OF THE STREAM A MINIMUM OF 25 FEET DOWNSTREAM OF THE PROPOSED BRIDGE. FINAL LOCATION OF BOULDERS TO BE AS DIRECTED BY THE ENGINEER, BASED ON THE RECOMMENDATIONS OF THE DISTRICT FISHERIES BIOLOGIST AND/OR THE AGENCY OF NATURAL RESOURCES STREAM ALTERATION ENGINEER. CLUSTER SHALL CONSIST OF THREE (3) BOULDERS, EACH 5 FOOT TO 6 FOOT IN DIAMETER, SPACED AT 10 FEET TO 15 FEET AND BURIED 1/2 DIAMETER BELOW STREAMBED.
32. THE EXISTING STRUCTURE SHALL BE REMOVED IN PHASES TO ACCOMMODATE THE 4-PHASE PROPOSED BRIDGE CONSTRUCTION. ITEM 529.15, "REMOVAL OF STRUCTURE" SHALL INCLUDE REMOVAL OF ALL THE EXISTING SUPERSTRUCTURE AND PORTIONS OF THE SUBSTRUCTURE NOT REMOVED UNDER THE ITEMS "COFFERDAM" OR "UNCLASSIFIED CHANNEL EXCAVATION".

33. THE PROPOSED BRIDGE IS CONSTRUCTED IN 4 PHASES. TRAFFIC CONTROL PHASING SHALL BE AS DESCRIBED BELOW AND AS SHOWN ON THE TRAFFIC CONTROL PLANS AND THE BRIDGE PRELIMINARY INFORMATION SHEET.
 - PHASE 1: TRAFFIC SHALL BE MAINTAINED ON THE EXISTING STRUCTURE DURING CONSTRUCTION OF PHASE 1. THE TEMPORARY BRIDGE SHALL BE CONSTRUCTED AT THE CONCLUSION OF PHASE 1. SEE THE BRIDGE PRELIMINARY INFORMATION SHEET FOR TEMPORARY BRIDGE INFORMATION. PHASE 1 INCLUDES REMOVAL OF THE EXISTING SIDEWALK AND PORTIONS OF THE EXISTING BRIDGE AS NECESSARY TO INSTALL THE TEMPORARY BRIDGE.
 - PHASE 2: TWO-WAY TRAFFIC SHALL BE MAINTAINED ON THE TEMPORARY BRIDGE DURING CONSTRUCTION OF PHASE 2. PEDESTRIANS WILL USE THE NEW PHASE 1 SIDEWALK DURING CONSTRUCTION OF PHASE 2. THE TEMPORARY BRIDGE SHALL BE REMOVED AT THE CONCLUSION OF PHASE 2.
 - PHASE 3: TWO-WAY TRAFFIC SHALL BE MAINTAINED ON THE NEW BRIDGE (PHASE 1 AND PHASE 2 LIMITS) DURING CONSTRUCTION OF PHASE 3.
 - PHASE 4: TWO-WAY TRAFFIC SHALL BE MAINTAINED ON THE NEW BRIDGE (PHASE 2 AND PHASE 3 LIMITS) DURING CONSTRUCTION OF PHASE 4. PEDESTRIANS WILL USE PHASE 3 SIDEWALK DURING CONSTRUCTION OF PHASE 4. THE TEMPORARY PEDESTRIAN RAILING SHALL BE MAINTAINED UNTIL SUCH TIME AS PEDESTRIAN TRAFFIC HAS BEEN SHIFTED TO THE PHASE 3 SIDEWALK.
34. ALTERNATE PHASING SEQUENCES MAY BE ALLOWED PENDING APPROVAL OF THE ENGINEER. ANY ALTERNATIVE SHALL INCORPORATE: MAINTAINING PEDESTRIAN TRAFFIC OVER THE RIVER THROUGHOUT THE DURATION OF THE PROJECT (MIN. 4'-6" WALKWAY), MAINTAINING 2-WAY TRAFFIC, MAINTAIN TIME FRAMES FOR INSTALLATION OF PROPOSED UTILITIES IN FINAL LOCATIONS.
35. TEMPORARY FINGER TIGHT BOLTS MEETING THE REQUIREMENTS OF AASHTO M164 (ASTM A325) SHALL BE USED BETWEEN GIRDERS OF DIFFERENT PHASES. (G2 TO G3 AND G6 TO G7). ONCE THE DECK HAS BEEN PLACED AND HAS SET, THE TEMPORARY BOLTS SHALL BE REPLACED WITH PERMANENT BOLTS TIGHTENED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
36. THE EXISTING STRUCTURAL STEEL ON THIS PROJECT IS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE EXISTING STRUCTURAL STEEL IS TO BECOME THE PROPERTY OF THE CONTRACTOR AND THE CONTRACTOR MAY DISPOSE OF OR RETAIN IT FOR FUTURE USE. THE CONTRACTOR WILL INFORM THE ENGINEER OF THEIR PLANS TO DISPOSE OF OR RETAIN THE STRUCTURAL STEEL PRIOR TO ITS REMOVAL.
37. TEMPORARY PEDESTRIAN RAILING SHALL MEET THE REQUIREMENTS OUTLINED IN SECTION 2.7.3 OF THE 2002 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, WITH INTERIMS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING THE PROPOSED METHOD OF CONSTRUCTING THE TEMPORARY RAILING FOR APPROVAL BEFORE PERFORMING THIS WORK. PAYMENT FOR TEMPORARY RAILING TO BE INCLUDED IN ITEM 525.15, METAL HAND RAILING (MOD.-TEMPORARY PEDESTRIAN RAILING).

STAY-IN-PLACE CORRUGATED METAL FORMS

1. THE USE OF STAY-IN-PLACE CORRUGATED METAL FORMS IS ALLOWED ON THIS PROJECT AS AN ALTERNATIVE USING ITEM 501.33 "CONCRETE, HIGH PERFORMANCE, CLASS A (SIPCMF) (MOD.-FPQ)". SEE SPECIAL PROVISIONS FOR SPECIFICATIONS FOR THE FORMS.
2. THE CONTRACTOR MAY CHOOSE TO COMBINE STAY-IN-PLACE CORRUGATED METAL FORMS AND REMOVABLE FORMS AS ALLOWED IN THE SPECIAL PROVISIONS. IF ANY PORTION OF THE DECK IS TO BE FORMED WITH STAY-IN-PLACE CORRUGATED METAL FORMS, THE ENTIRE DECK PAYMENT SHALL BE UNDER THE "CONCRETE, HIGH PERFORMANCE, CLASS A (SIPCMF) (MOD.-FPQ) ITEM.

STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
Town Of	JOHNSON	Bridge No.	37
		Log Sta.	
Highway No.	VT. ROUTE 15	Surv. Sta.	
VT. ROUTE 15 OVER GIBON RIVER			
GENERAL NOTES			
Designed By	R. RICARD	Drawn By	D. DUGAL/M. SMITH
Checked By	S. BEAUMONT	Bridge Design Supervisor	J. BYATT
Date	11/06	Date	11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	46 Of 85



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91296PLDW

BRIDGE QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION
STRUCTURES DIVISION

ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN										TOTAL	FINAL	
			BRIDGE ALT. 1	BRIDGE ALT. 2	SUPER-STRUCT.	ABUT. NO. 1	ABUT. NO. 2	APPR. SLAB NO. 1	APPR. SLAB NO. 2	CHANNEL					
203.27	UNCLASSIFIED CHANNEL EXCAVATION	CY				830	430							1,260	
203.32	GRANULAR BORROW	CY				20	20							40	
204.30	GRANULAR BACKFILL FOR STRUCTURES	CY				800	810							1,610	
208.30	COFFERDAM EXCAVATION, EARTH	CY				1210	830							2,040	
208.35	COFFERDAM EXCAVATION, ROCK	CY				40	80							120	
208.40	COFFERDAM (STA 102+95)	LS				1								1	
208.40	COFFERDAM (STA 103+70)	LS					1							1	
501.25	CONCRETE, CLASS B	CY							0.5	0.5				1	
501.33	CONCRETE, HIGH PERFORMANCE CLASS A (MOD.-FPQ)	CY	204											204	
501.33	CONCRETE, HIGH PERFORMANCE CLASS A (SIPMF)(MOD.-FPQ)	CY		204										204	
501.34	CONCRETE, HIGH PERFORMANCE CLASS B	CY				293	298	29	29					649	
504.10	FURNISHING EQUIPMENT FOR DRIVING PILING	LS				0.5	0.5							1	
505.17	STEEL PILING (HP 14 x 73)	LF				1,080	1,440							2,520	
505.45	DYNAMIC PILE LOADING TEST	EA				1	1							2	
506.55	STRUCTURAL STEEL (PLATE GIRDER)	LB			136,860									136,860	
507.15	REINFORCING STEEL	LB				29,600	29,675							59,275	
507.17	EPOXY COATED REINFORCING STEEL	LB			31,785			3,450	3,435					38,670	
507.19	MECHANICAL BAR CONNECTOR	EA				240	240							480	
507.19	MECHANICAL BAR CONNECTOR (MOD. - EPOXY COATED)	EA			1576			42	42					1,660	
508.15	SHEAR CONNECTORS (1224 @ 7/8" DIA. x 7" STUDS)	LS			1									1	
513.25	STRUCTURAL PAINTING, SHOP APPLIED (68.4 TONS)	LS			1									1	
513.35	CONTAINMENT AND ENVIRONMENTAL PROTECTION, SHOP	LS			1									1	
513.40	SURFACE PREPARATION, SHOP (68.4 TONS)	LS			1									1	
514.10	WATER REPELLENT (MOD. - SILANE)	GAL			13	7	7							27	
516.10	BRIDGE EXPANSION JOINT (ASPHALTIC PLUG)	LF			33									33	
519.20	SHEET MEMBRANE WATERPROOFING (MOD. - TORCH APPLIED)	SY			281			71	71					423	
525.15	METAL HAND RAILING (MOD. - TEMPORARY PEDESTRIAN RAILING)	LF			80									80	
525.23	BRIDGE RAILING -ALUMINUM/PEDESTRIAN (MOD. - ANODIZED BLACK)	LF			155									155	
527.10	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS (MOD.)	LS			1									1	
528.11	TWO-WAY TEMPORARY BRIDGE (1500 SF-EST.) (MOD. - 22' WIDE)	LS			1									1	
529.15	REMOVAL OF STRUCTURE (2000 SF - EST.)	EA			1									1	
531.10	BEARING DEVICE ASSEMBLY (FABRIC)	EA			18									18	
613.13	STONE FILL, TYPE IV	CY				570	570							1,140	
616.22	GRANITE BRIDGE CURB	LF			156									156	
649.31	GEOTEXTILE UNDER STONE FILL	SY				575	540							1,115	
651.40	GRUBBING MATERIAL	SY				147	178							325	

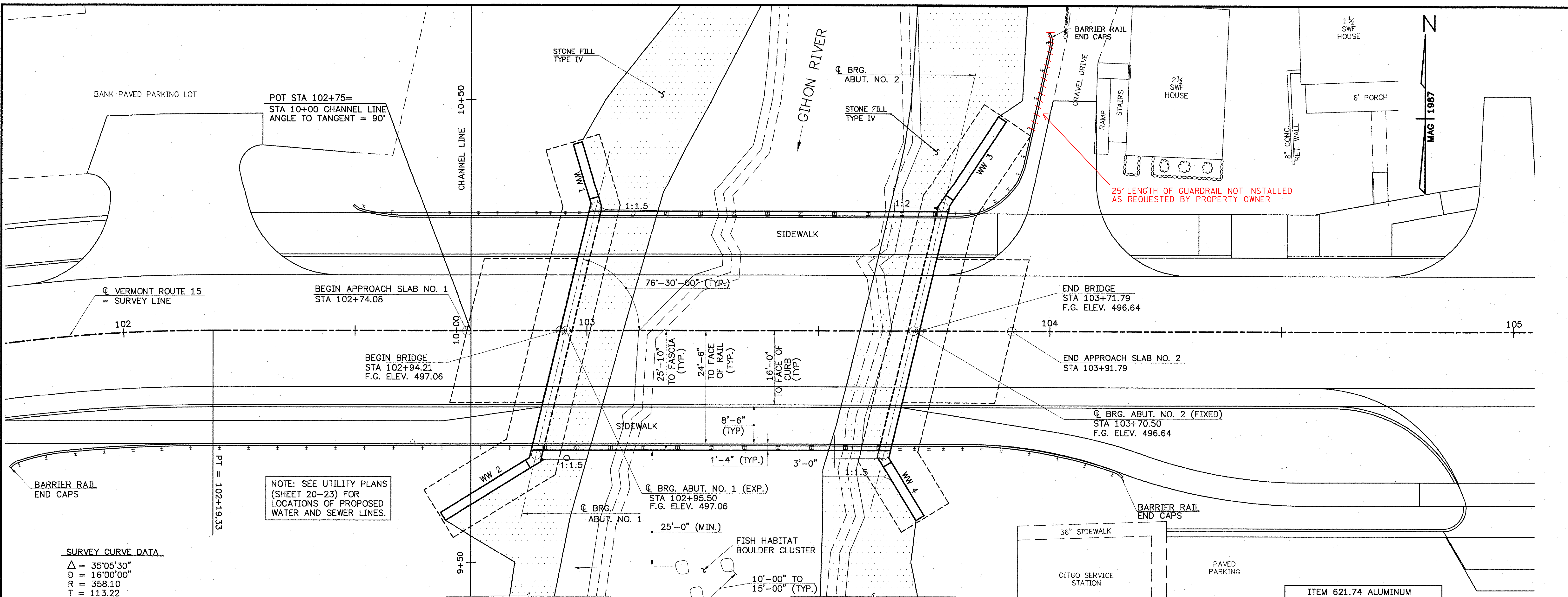
BRIDGE AT STATION REV STA 102+94.21 TO REV STA 103+71.79
LOCATION VT. ROUTE 15 OVER GIHON RIVER

PREPARED BY: R. RICARD
CLD PROJECT MANAGER:
CHECKED BY: B. WELCH / S. BEAUMONT
J. BYATT

PROJECT: JOHNSON
BR 37

PROJECT NO: BRF 030-2(17) S
SHEET NO: 47 OF 85

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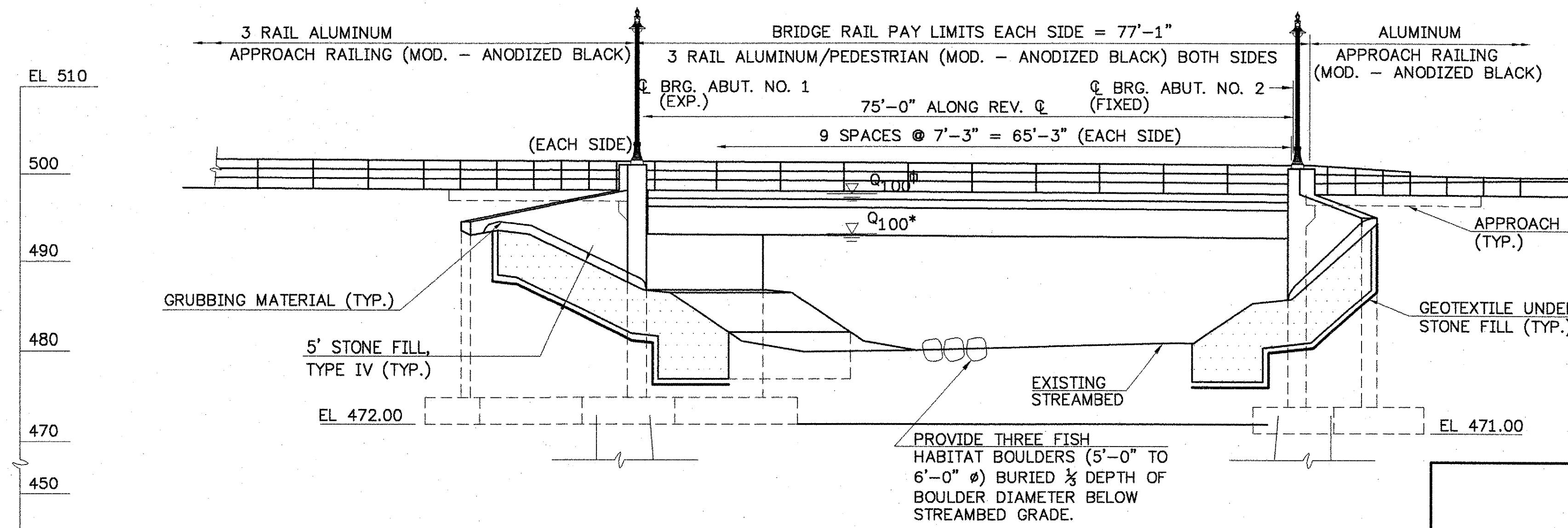
NOTE: SEE UTILITY PLANS (SHEET 20-23) FOR LOCATIONS OF PROPOSED WATER AND SEWER LINES.

SURVEY CURVE DATA
 $\Delta = 35^{\circ}05'30''$
 $D = 16^{\circ}00'00''$
 $R = 358.10$
 $T = 113.22$
 $L = 219.32$
 $E = 17.47$
 $BANK = 0.040 \text{ FT/FT RT.}$

PLAN
SCALE: 1"=10'

ITEM 621.74 ALUMINUM APPROACH RAILING (MOD. - ANODIZED BLACK)	
LOCATION	PAY LENGTH
WW1	50'-11" **
WW2	113'-5" **
WW3	50'-11" **
WW4	50'-11" **

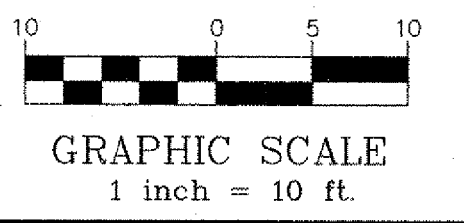
** APPROACH RAIL TO BE 3 RAIL ALUMINUM THROUGHOUT AT THESE LOCATIONS.



ELEVATION
SCALE: 1"=10'

□ DENOTES STONE FILL, TYPE IV SEE CHANNEL SECTIONS FOR STONE FILL LIMITS. REFER TO ROADWAY PLANS FOR LOCATION OF FISH HABITAT BOULDER CLUSTER.

φ 100 YEAR WATER SURFACE ELEVATION SHOWN IS THE GIHON RIVER PEAK 100 YEAR FLOOD LEVEL WITH A COINCIDENT 100 YEAR PEAK ON THE LAMOILLE RIVER.
 * 100 YEAR WATER SURFACE ELEVATION SHOWN IS THE GIHON RIVER PEAK 100 YEAR FLOOD LEVEL WITHOUT A COINCIDENT 100 YEAR PEAK ON THE LAMOILLE RIVER.



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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT. ROUTE 15	Log Sta.	
		Surv. Sta.	
VT. ROUTE 15 OVER GIHON RIVER			
GENERAL PLAN AND ELEVATION			
Designed By	R.RICARD	Drawn By	D.DUGAL
Checked By	Date	Bridge Design Supervisor	
R.ROONEY	11/02	J. BYATT	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	48 Of 85

SOIL CLASSIFICATION

AASHTO

A1	GRAVEL AND SAND
A3	FINE SAND
A2	SILTY OR CLAYEY GRAVEL AND SAND
A4	SILTY SOIL - LOW COMPRESSIBILITY
A5	SILTY SOIL - HIGHLY COMPRESSIBLE
A6	CLAYEY SOIL - LOW COMPRESSIBILITY
A7	CLAYEY SOIL - HIGHLY COMPRESSIBLE

UNIFIED SOIL SYSTEM

GW/GP	CLEAN GRAVELS (FEW FINES)
GM/GC	GRAVELS (APPRECIABLE FINES)
SW/SP	CLEAN SANDS (FEW FINES)
SM/SC	SAND (APPRECIABLE FINES)
ML/CL	LOW PLASTIC SILTS & CLAYS
OL	LOW PLASTIC ORGANIC SILT
MH/CH	HIGH PLASTIC SILTS & CLAYS
OH	HIGH PLASTIC ORGANIC SILT
PT	HIGHLY ORGANIC SOILS

MOISTURE

DESCRIPTIVE TERM	OBSERVED IN FIELD	% ± BY ANALYSIS
DRY	NO VISIBLE WATER	<10
MOIST	DAMP	10 - 20
MOIST TO WET	MOIST TO WET	21 - 50
WET	VISIBLE WATER	51 - 70
SATURATED		>70

ROCK QUALITY DESIGNATION

R.Q.D.	ROCK DESCRIPTION
<.25	VERY POOR
.25 TO .50	POOR
.51 TO .75	FAIR
.76 TO .90	GOOD
>.90	EXCELLENT

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	VERY SOFT
250 - 500	SOFT
500 - 1000	MED. STIFF
1000 - 2000	STIFF
2000 - 4000	VERY STIFF
>4000	HARD

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	VERY LOOSE	<2	VERY SOFT
5-10	LOOSE	2-4	SOFT
11-24	MED. DENSE	5-8	MED. STIFF
25-50	DENSE	9-15	STIFF
>50	VERY DENSE	16-30	VERY STIFF
		31-60	HARD
		>60	VERY HARD

COMMONLY USED SYMBOLS

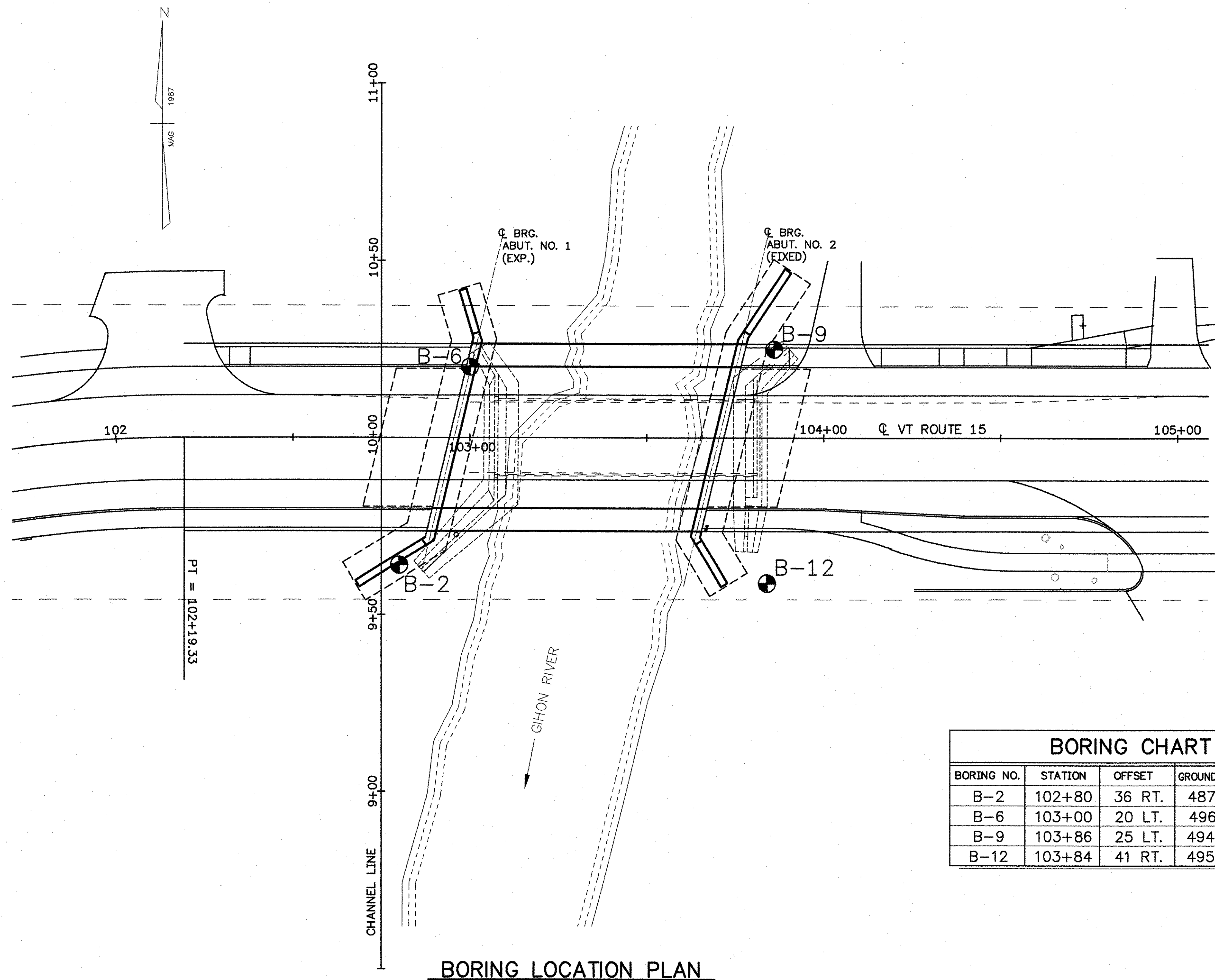
▼	WATER ELEVATION
⊙	STANDARD PENETRATION BORING
⊙	AUGER BORING
⊙	ROD SOUNDING
⊙	SAMPLE
N	STANDARD PENETRATION TEST BLOW COUNT PER FOOT FOR: 2" O.D. SAMPLER 1 3/8" I.D. SAMPLER HAMMER WEIGHT OF 140 LBS. HAMMER FALL OF 30"
VS	FIELD VANE SHEAR TEST
US	UNDISTURBED SOIL SAMPLE
B	BLAST
DC	DIAMOND CORE
MD	MUD DRILL
WA	WASH AHEAD
HSA	HOLLOW STEM AUGER
AX	CORE SIZE 1 1/8"
BX	CORE SIZE 1 5/8"
NX	CORE SIZE 2 1/8"
M	DOUBLE TUBE CORE BARREL USED
LL	LIQUID LIMIT
PL	PLASTIC LIMIT
PI	PLASTICITY INDEX
NP	NON PLASTIC
w	MOISTURE CONTENT (DRY WGT. BASIS)
D	DRY
M	MOIST
MTW	MOIST TO WET
W	WET
Sat	SATURATED
Bo	BOULDER
Gr	GRAVEL
Sa	SAND
Si	SILT
Cl	CLAY
HP	HARDPAN
Le	LEDGE
NLTD	NO LEDGE TO DEPTH
CNPF	CANNOT PENETRATE FURTHER
TLOB	TO LEDGE OR BOULDER
NR	NO RECOVERY
REC.	RECOVERY
%REC.	PERCENT RECOVERY
RQD	ROCK QUALITY DESIGNATION
CBR	CALIFORNIA BEARING RATIO
<	LESS THAN
>	GREATER THAN

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gr	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mitc	Multicolored
or	Orange		

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.	VARVED - Alternate layers of silt and clay.
BOULDER - A rock fragment with an average dimension > 12 inches.	HARDPAN - Extremely dense soil, cemented layer, not softened when wet.
COBBLE - Rock fragments with an average dimension between 3 and 12 inches.	MUCK - Soft organic soil (containing > 10% organic material).
GRAVEL - Rounded particles of rock < 3" and > 0.075" (#10 sieve).	MOISTURE CONTENT - Weight of water divided by dry weight of soil.
SAND - Particles of rock < 0.075" (#10 sieve) and > 0.0029" (#200 sieve).	FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.	STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.
CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.	DIP - Inclination of bed with a horizontal plane.



BORING LOCATION PLAN

SCALE 1"=20'
10 0 10 20
(IN FEET)

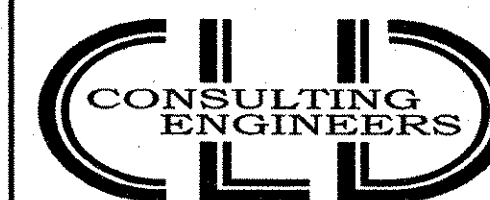
BORING CHART				
BORING NO.	STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
B-2	102+80	36 RT.	487.10	446.60
B-6	103+00	20 LT.	496.51	445.51
B-9	103+86	25 LT.	494.65	438.65
B-12	103+84	41 RT.	495.05	431.55

GENERAL NOTES

- The subsurface explorations shown herein were made between 12-10-92 and 01-06-93 by the Agency.
- Soil and rock classifications, properties and descriptions are based on an engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT. ROUTE 15	Log Sta.	
		Surv. Sta.	
VT. ROUTE 15 OVER GIHON RIVER			
BORING INFORMATION SHEET			
Designed By	R.RICARD	Drawn By	D.DUGAL
Checked By	Date	Bridge Design Supervisor	
B.WELCH/R.ROONEY	11/02	J. BYATT	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.		Bridge Sheet No.	Sheet 49 Of 85



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Johnson BRP 030-2(17)s
BORING NO. B-2

DEPTH	BLISS ON CASING STANDARD PENETRATION SAMPLE NUMBER	MOISTURE	COLOR	LABORATORY CLASSIFICATION OF SOIL
ELEV. 487.10'				
	3	M BRN		A-4 SiSa W=46.1 Rec 0.1
	5	MTWBRN		A-1-b GrSa W=17.5 Rec 0.4
	31	W BRN		A-1-a SaGr W=11.3 Rec 0.8
	28	W BRN		A-1-a SaGr W=12.8 Rec 0.7 No Rec
	13			
10	24	MTWBRN		A-1-b SaGr W=13.3 Rec 0.8
	10	MTWBRN		A-2-4 Sa W=24.1 Rec 1.1
ELEV. 472.00	11	W GRY		A-4 SaSi W=32.1 Rec 1.5
Abut. #1	9	W GRY		A-4 Si W=32.6 Rec 1.2
Bottom of footing	17	W GRY		A-4 Si W=24.8 Rec 1.0
	36	MTWGRY		A-4 GrSi W=17.5 Rec 0.2
	40			A-4 GrSi W=21.3 Rec 0.6 No Rec
	52			
30	48	M GRY		A-4 Si W=25.5 Rec 1.1
	17	W GRY		A-4 Si W=27.8 Rec 1.4
Pile Tip	R	MTWGRY		A-1-b SaGr W=7.4 Rec 0.7 Top of bedrock @40.9
				Run 1: BXDC 40.5-43.5 Rec 2.0
				Run 2: BXDC 43.5-48.5 Rec 4.5
				Run 3: BXDC 48.5-51.5 Rec 0.9
				Hole stopped @ 51.5 in bedrock.
				Core consists of black, moderately soft, quartz- sericite phyllite and schist. The rock is unweathered and competent.
				RUN REC RQD 1 67% 0 2 90% 56% 3 30% 15%
60				
70				
80				
90				
100				

Johnson BRP 030-2(17)s
BORING NO. B-6

DEPTH	BLISS ON CASING STANDARD PENETRATION SAMPLE NUMBER	MOISTURE	COLOR	LABORATORY CLASSIFICATION OF SOIL
ELEV. 496.51				
	9	M BRN		A-1-b GrSa W=12.2 Rec 1.1
10	12	MTWBRN		A-1-b GrSa W=11.7 Rec 1.0
	4			No Rec
20				Wood Cribbing 18.5-19.0'
				Concrete 19.0-22.5'
ELEV. 472.00	51	MTWGRY		A-4 SaGrSi W=17.8 Rec 0.7
Abut. #1				
Bottom of footing				
30	28	M GRY		A-4 Si W=26.8 Rec 1.0
	26	M GRY		A-4 Si W=25.5 Rec 1.1
40	30	MTWGRY		A-2-4 SiSa W=26.7 Rec 1.1
	19	MTWGRY		A-4 Si W=31.7 Rec 1.2
Pile Tip	R	W GRY		A-1-a SaGr W=12.9 Rec 0.6
				Top of bedrock @51.0 Broken soft ledge 51-52'
				Run 1: BXDC 52.0-57.0 Rec 5.0
				Run 2: BXDC 57.0-62.0 Rec 4.9'
				See Geologist Report
				Hole stopped @ 62.0' in bedrock
				RUN REC RQD 1 100% 84% 2 98% 90%
				Core consist of black, moderately soft, quartz- sericite phyllite and schist. The rock is unweathered and competent overall.
60				
70				
80				
90				
100				

Johnson BRP 030-2(17)s
BORING NO. B-3

DEPTH	BLISS ON CASING STANDARD PENETRATION SAMPLE NUMBER	MOISTURE	COLOR	LABORATORY CLASSIFICATION OF SOIL
ELEV. 494.65'				
				Ground level @ 2.0 Elevation 494.65
				No Rec
10	16	MTWBRN		A-1-b SaGr W=11.6
	R	MTWBRN		A-3 Sa W=24.0
				Woodcribbing 15.5-18 Stone & Gravel
20				
ELEV. 471.00	14	MTWBRN		A-4 Si W=28.8 Rec 0.6
Abut. #2				
Bottom of footing				
30	40	M GRY		A-4 SaSi W=24.9 Rec 1.1
	16	W GRY		A-2-4 SiSa W=22.6 Rec 1.1
40	18	W GRY		A-4 GrSi W=31.0 Rec 1.1
	32	W GRY		A-4 SaSi W=24.9 Rec 1.5
50	R			No Rec
Pile Tip	R			Top bedrock @ 56.0
				Run 1: BXDC 56.0-60.0 Rec 3.3
				Run 2: BXDC 60.0-65.0 Rec 3.7
				See geologist report
				Hole stopped @ 65.0' in bedrock
				RUN REC RQD 1 83% 20% 2 74% 40%
				Core consists of black, moderately soft, quartz- sericite phyllite and schist. The rock is unweathered and competent overall.
60				
70				
80				
90				
100				

Johnson BRP 030-2(17)s
BORING NO. B-12

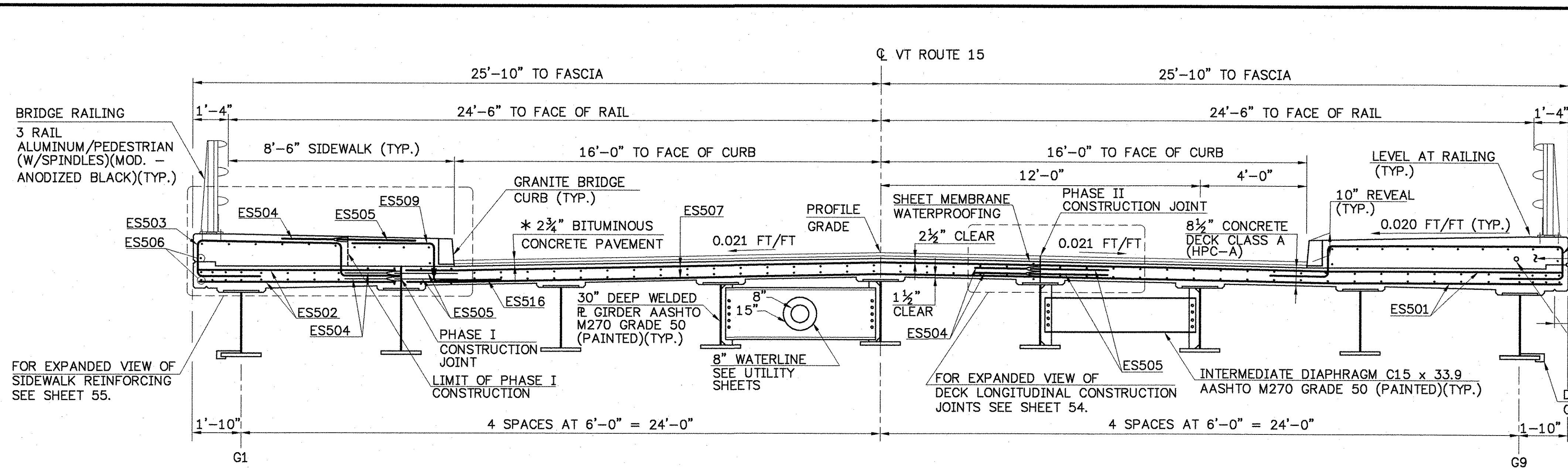
DEPTH	BLISS ON CASING STANDARD PENETRATION SAMPLE NUMBER	MOISTURE	COLOR	LABORATORY CLASSIFICATION OF SOIL
ELEV. 495.05'				
	14	M BRN		A-2-4 SiGrSa W=22.9 Rec 1.1
	11	W BRN		A-2-4 SiSaGr W=21.1 Rec 0.5
	8	W BRN		A-1-a SaGr W=12.1 Rec 0.1
	10	M GRY		A-1-a Gr W=3.5 Rec 0.3
	6	MTWBRN		A-1-b SiSaGr W=15.7 Rec 0.3
10	4	MTWBRN		A-4 SaSi W=27.5 Rec 0.5
	2	W GRY		Silty Sand 100PPM Rec 0.8 VOC
	8	W GRY		Silty Sand w/stone Rec 0.7 10PPM VOC
	7	W GRY		A-4 Si 7PPM VOC
	12	W GRY		A-4 SaSi 3PPM VOC Rec 1.1 W=35.1
	11	W GRY		A-4 Si W=25.8 Rec 0.4 W=31.8
20	12	W GRY		A-4 Si W=35.5 Rec 0.7
	15	W GRY		A-4 Si W=31.3 Rec 1.2
ELEV. 471.00				
Abut. #2				
Bottom of footing				
30	19	W GRY		A-4 Si W=26.7 Rec 1.2
	31	W GRY		A-4 Si 2PPM VOC Rec 1.0 W=22.2
40	25	MTWGRY		A-2-4 SiSa W=17.3 Rec 1.0
	18	W GRY		A-4 SaSi 0 PPM VOC Rec 1.4 W=26.1
50	15	W GRY		A-4 Si W=25.6 Rec 1.3
	19	W GRY		A-4 Si W=27.8 Rec 1.9
Pile Tip	25	W GRY		A-4 Si W=34.6 Rec 1.5
				Top of bedrock @63.5
				Run 1: BXDC 64.0-69.0 Rec 3.6
				Run 2: BXDC 69.0-74.0 Rec 3.9
				Hole stopped @ 74.0' in bedrock
				Core consists of black, moderately soft, quartz- sericite phyllite and schist. The rock is unweathered and competent.
				RUN REC RQD 1 72% 45% 2 78% 8%
60				
70				
80				
90				
100				

Estimated Pile Length
Abutment no.1: 30 ft.
Abutment no.2: 40 ft.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

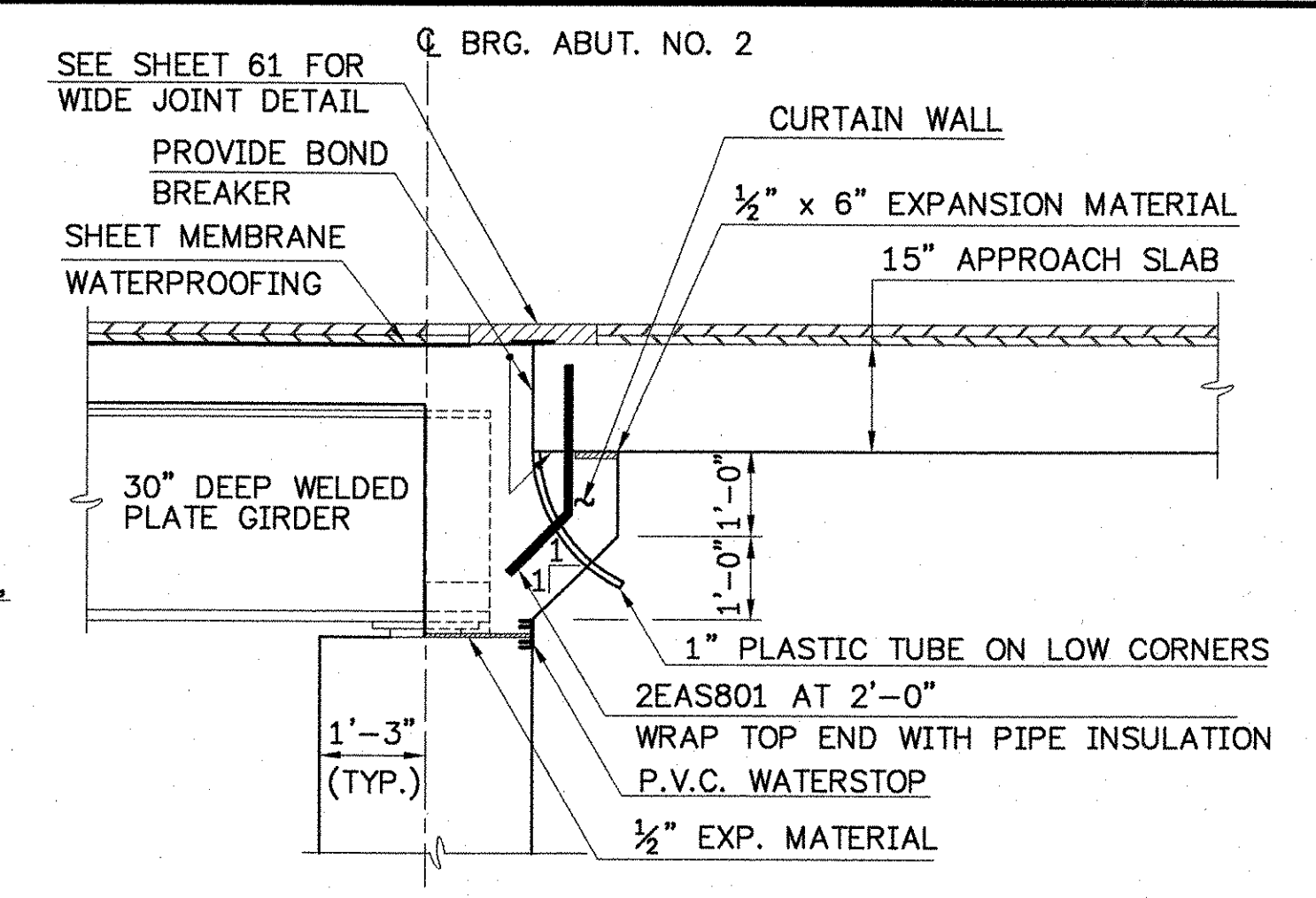
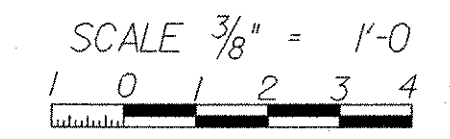
Town Of	JOHNSON	Bridge No.	37
Highway No.	Vt. Route 15	Log Sta.	
		Surv. Sta.	
Vt. Route 15 over the Gihon River			
BORING LOGS			
Designed By	EMS	Drawn By	ACF
Checked By	Date	Bridge Design Supervisor	J. BYATT
		Date	11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)s
I.G.C. Info.			
Bridge Sheet No.		Sheet	50 Of 85

CLD
Consulting Engineers & Surveyors, Inc.
340 Commercial Street
Manchester, NH 03101
(603)888-8223 FAX (603)888-8802



* PAVEMENT SHALL BE CONSTRUCTED IN TWO LIFTS:
 SECOND LIFT: 1 1/2" TYPE III,
 FIRST LIFT: 1 1/4" TYPE IV

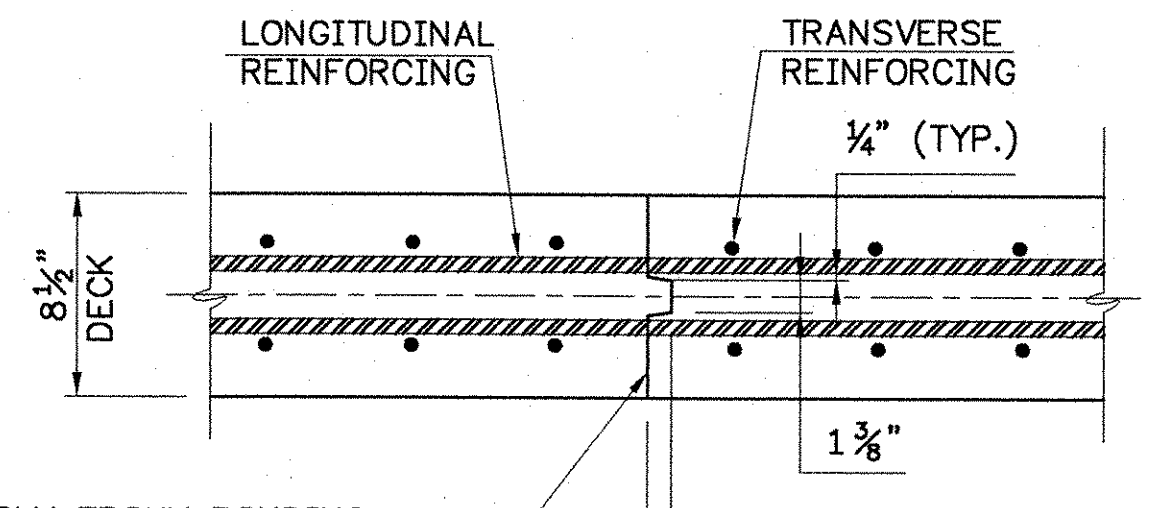
BRIDGE TYPICAL SECTION



NOTE: SEE SHEET 62 OF 85 FOR CURTAIN WALL ELEVATION VIEW.

FIXED END DETAIL - ABUT. NO. 2

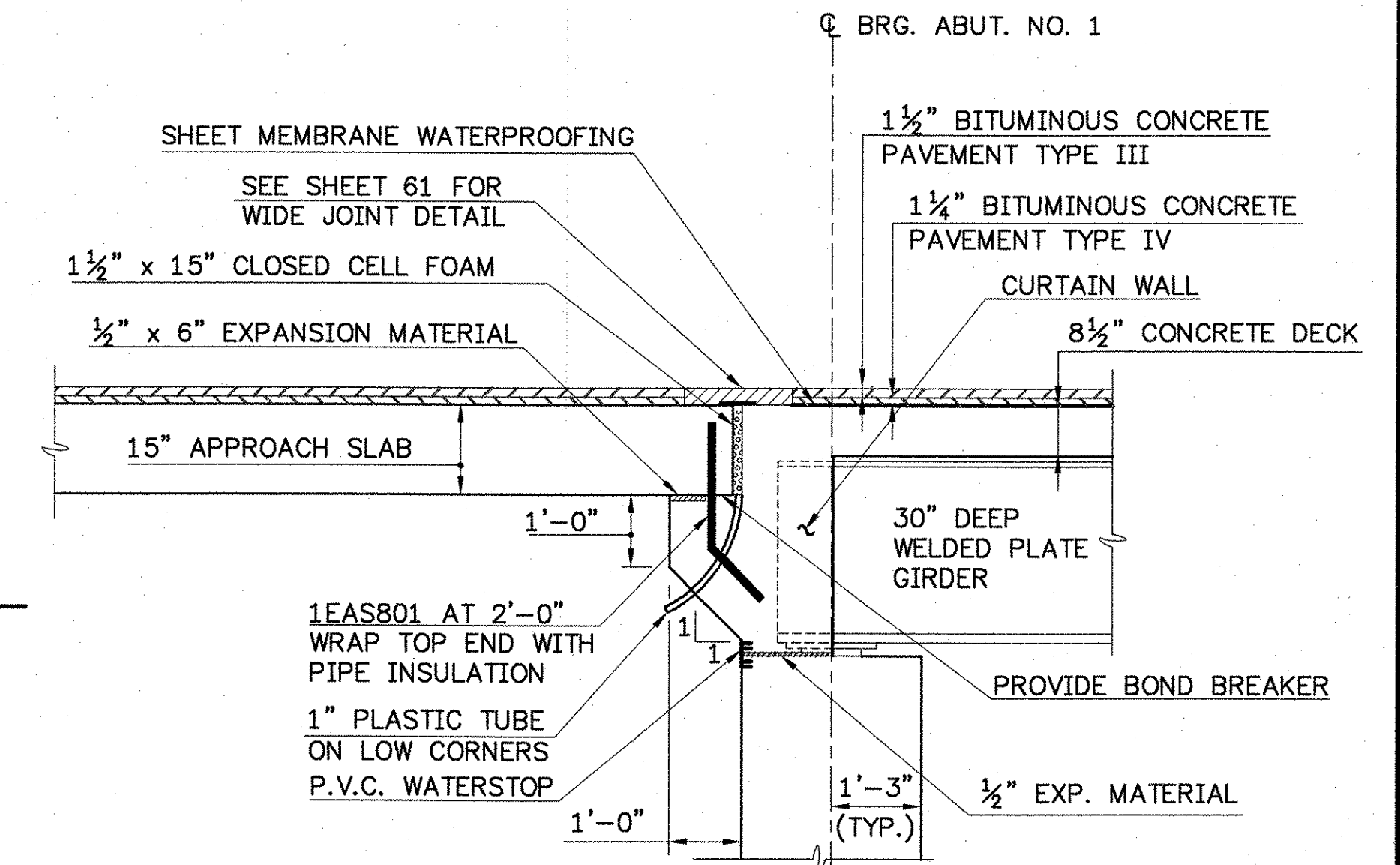
SCALE: 1/2" = 1'-0"



APPLY EPOXY BONDING COMPOUND BEFORE PLACING NEW CONCRETE, INCLUDE WITH COST BID FOR CONCRETE.

TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS

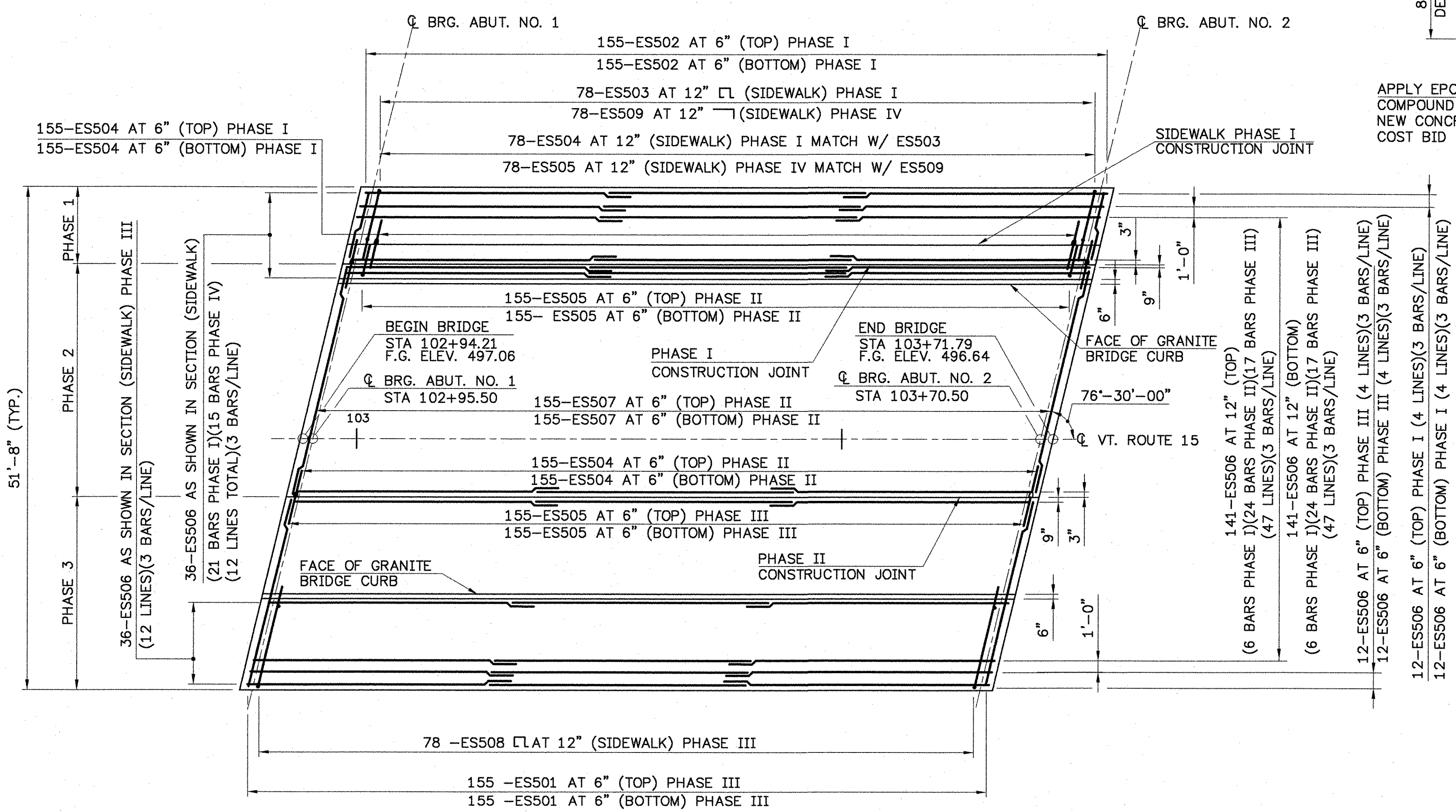
NOT TO SCALE



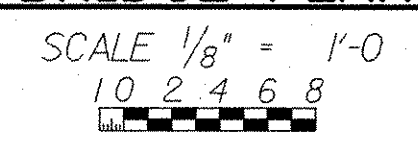
NOTE: SEE SHEET 62 OF 85 FOR CURTAIN WALL ELEVATION VIEW.

EXPANSION END DETAIL - ABUT. NO. 1

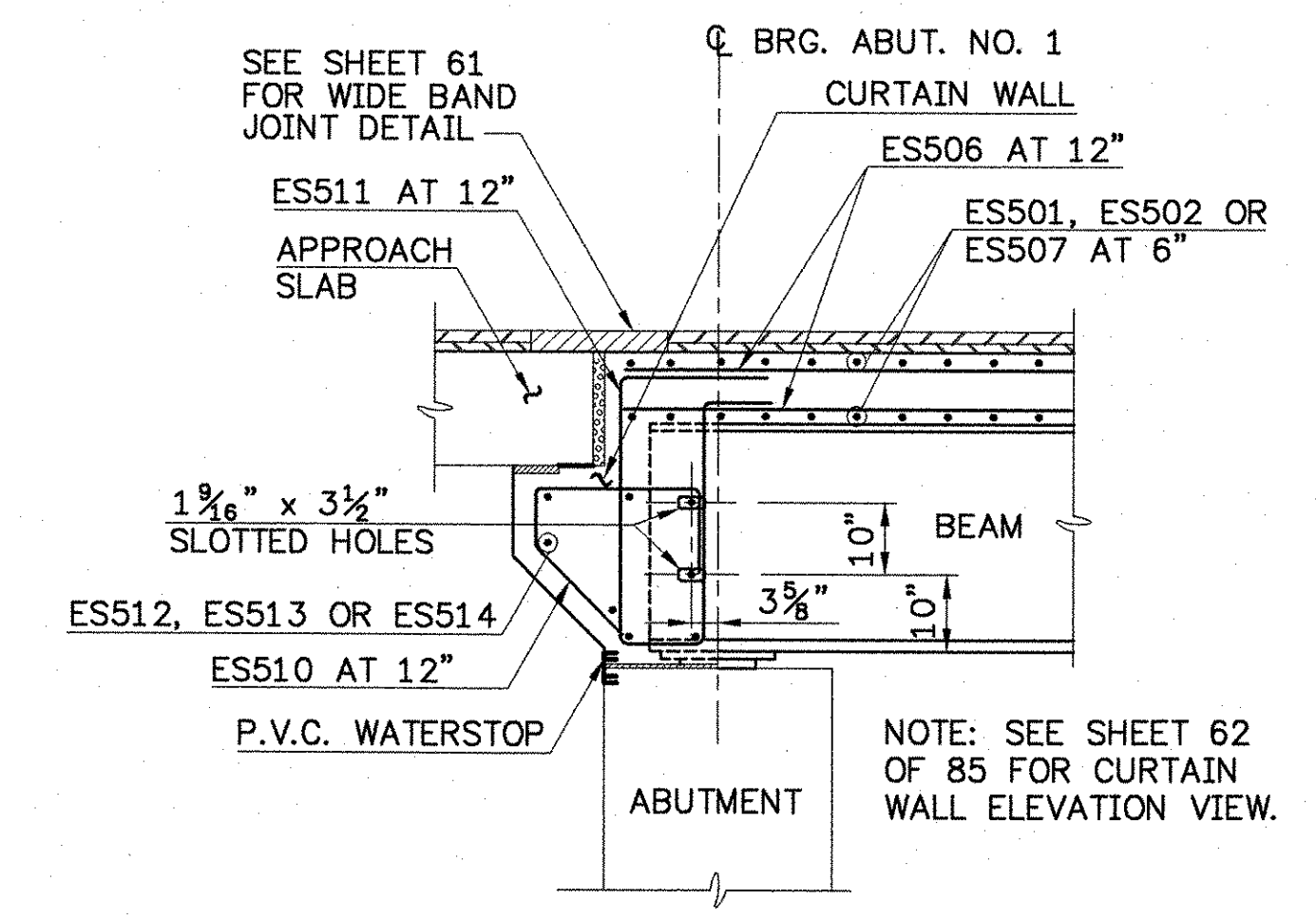
SCALE: 1/2" = 1'-0"



BRIDGE PLAN



NOTE: MINIMUM REBAR SPLICE LENGTH IS 26"

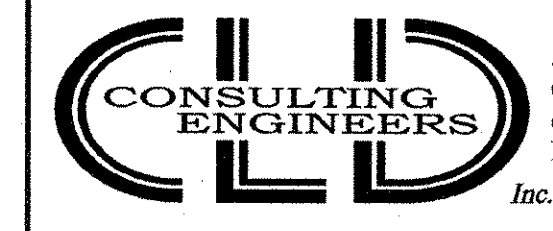


BRIDGE END REINFORCING DETAIL

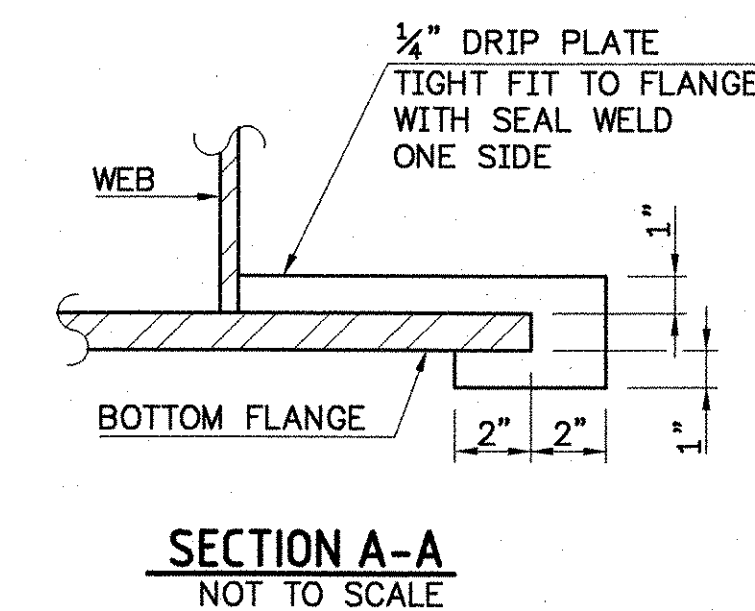
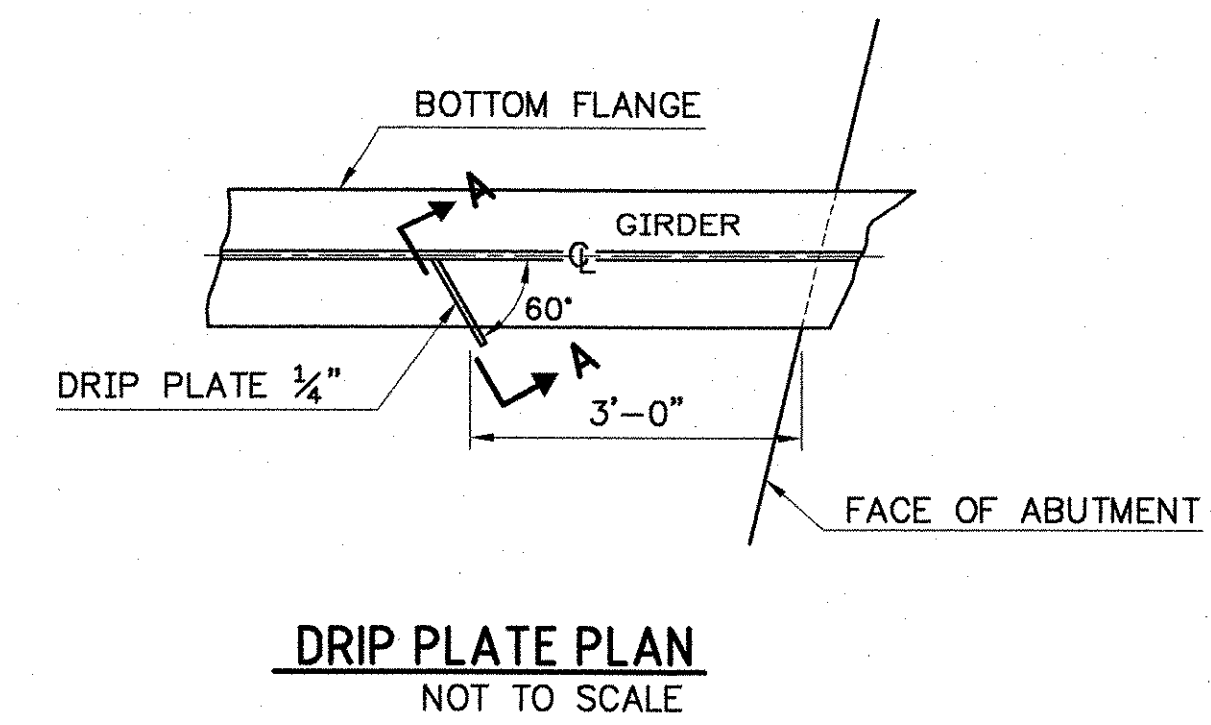
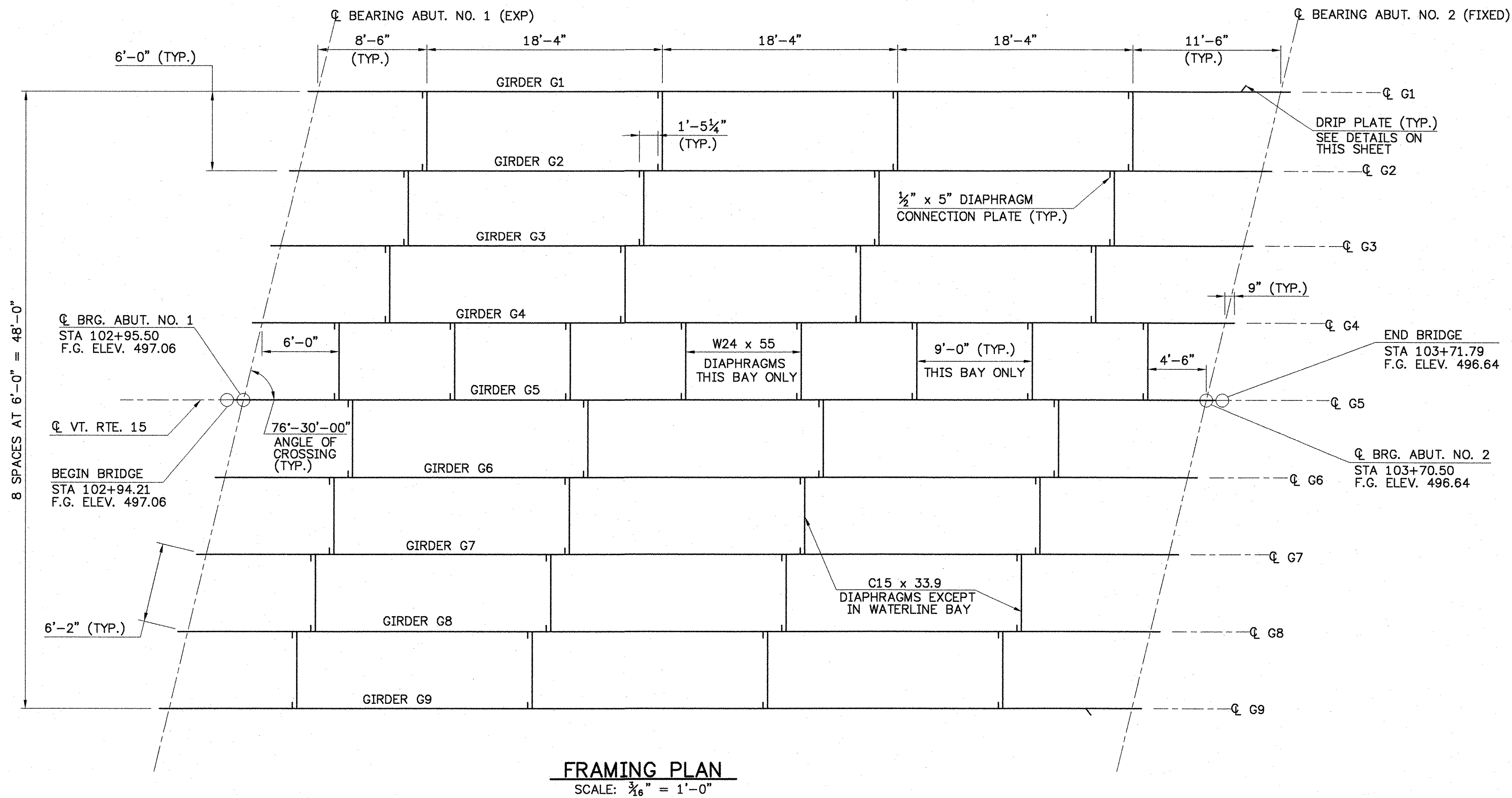
(EXPANSION END SHOWN, FIXED END SIMILAR)
 SCALE: 1/2" = 1'-0"

STATE OF VERMONT AGENCY OF TRANSPORTATION

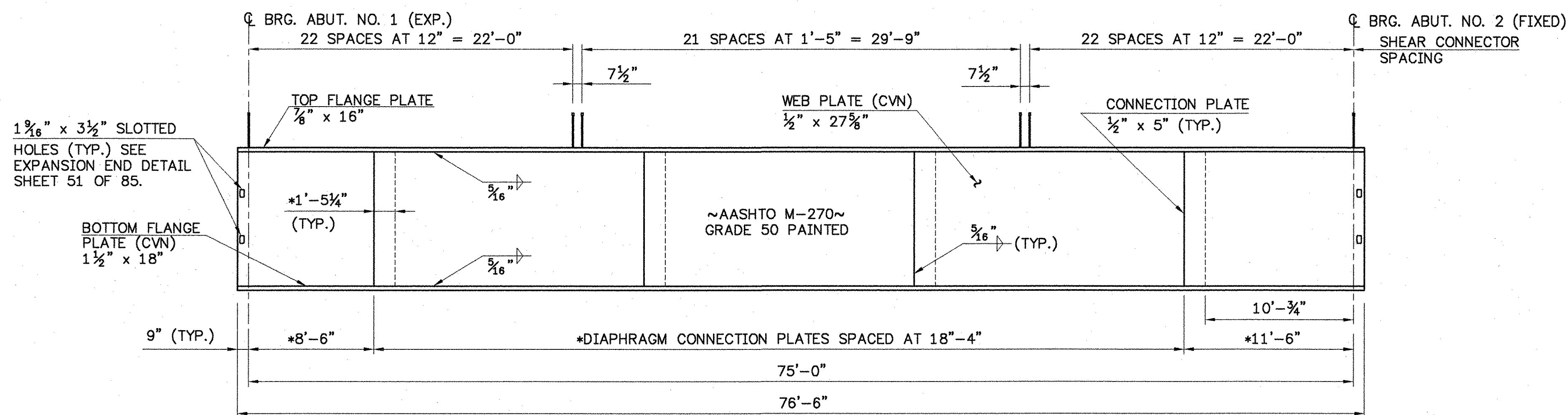
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT. ROUTE 15	Log Sta.	
		Surv. Sta.	
VT. ROUTE 15 OVER GIHON RIVER			
DECK DETAILS			
Designed By	R.RICARD	Drawn By	D.DUGAL
Checked By	Date	Bridge Design Supervisor	
S. BEAUMONT	11/06	J. BYATT	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	51 Of 85



540 Commercial Street • Manchester, NH 03101
 (603) 668-8223 • Fax: (603) 668-8802
 cl@clengineers.com • www.clengineers.com
 Maine • New Hampshire • Vermont



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

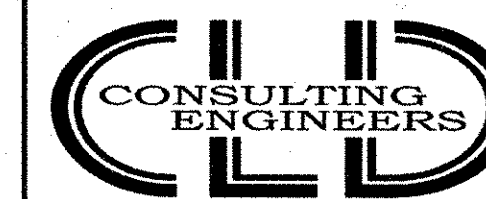


* CONNECTION PLATE SPACING SHOWN IS TYPICAL FOR GIRDERS 1, 2, 3, 6, 7, 8 & 9. SEE FRAMING PLAN FOR CONNECTION PLATE SPACING FOR GIRDERS 4 & 5 (WATERLINE BAY).

FABRICATION NOTE:

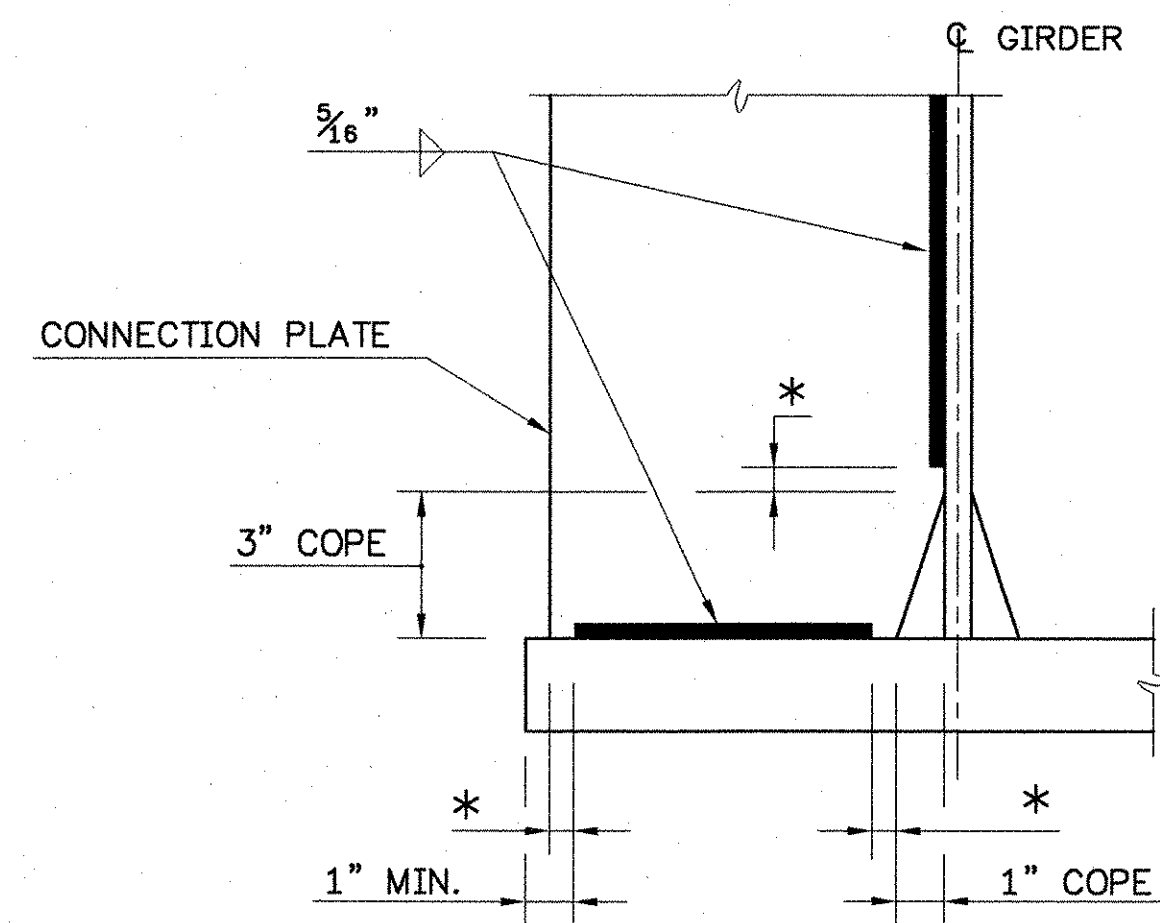
1. THE CHARPY V-NOTCH TEST WILL BE REQUIRED FOR ALL PLATES LABELED WITH CVN. SEE STANDARD SPECIFICATION 714 OF THE 2001 STANDARD SPECIFICATIONS.

SCALE $\frac{3}{16}'' = 1'-0''$
1 0 2 4 6 8



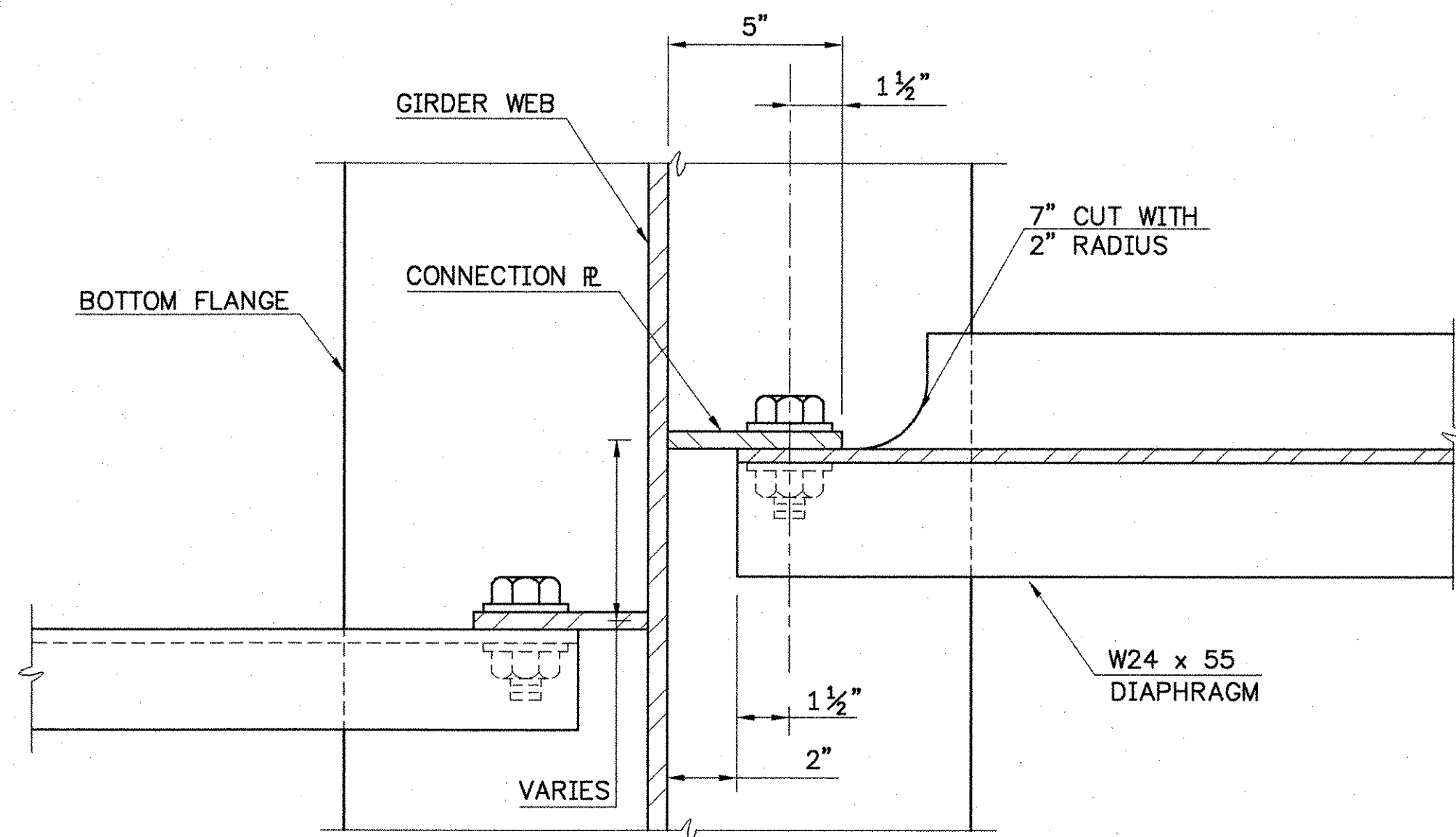
540 Commercial Street • Manchester, NH 03101
(603) 668-8223 • Fax: (603) 668-8802
cld@cldeengineers.com • www.cldeengineers.com
Maine • New Hampshire • Vermont

STATE OF VERMONT		
AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT. ROUTE 15	Log Sta.
		Surv. Sta.
VT. ROUTE 15 OVER GIHON RIVER		
FRAMING PLAN AND GIRDER ELEVATION		
Designed By	R.RICARD	Drawn By. D.DUGAL
Checked By	Date	Bridge Design Supervisor
R.ROONEY	11/02	J. BYATT Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.	Sheet 52	Of 85

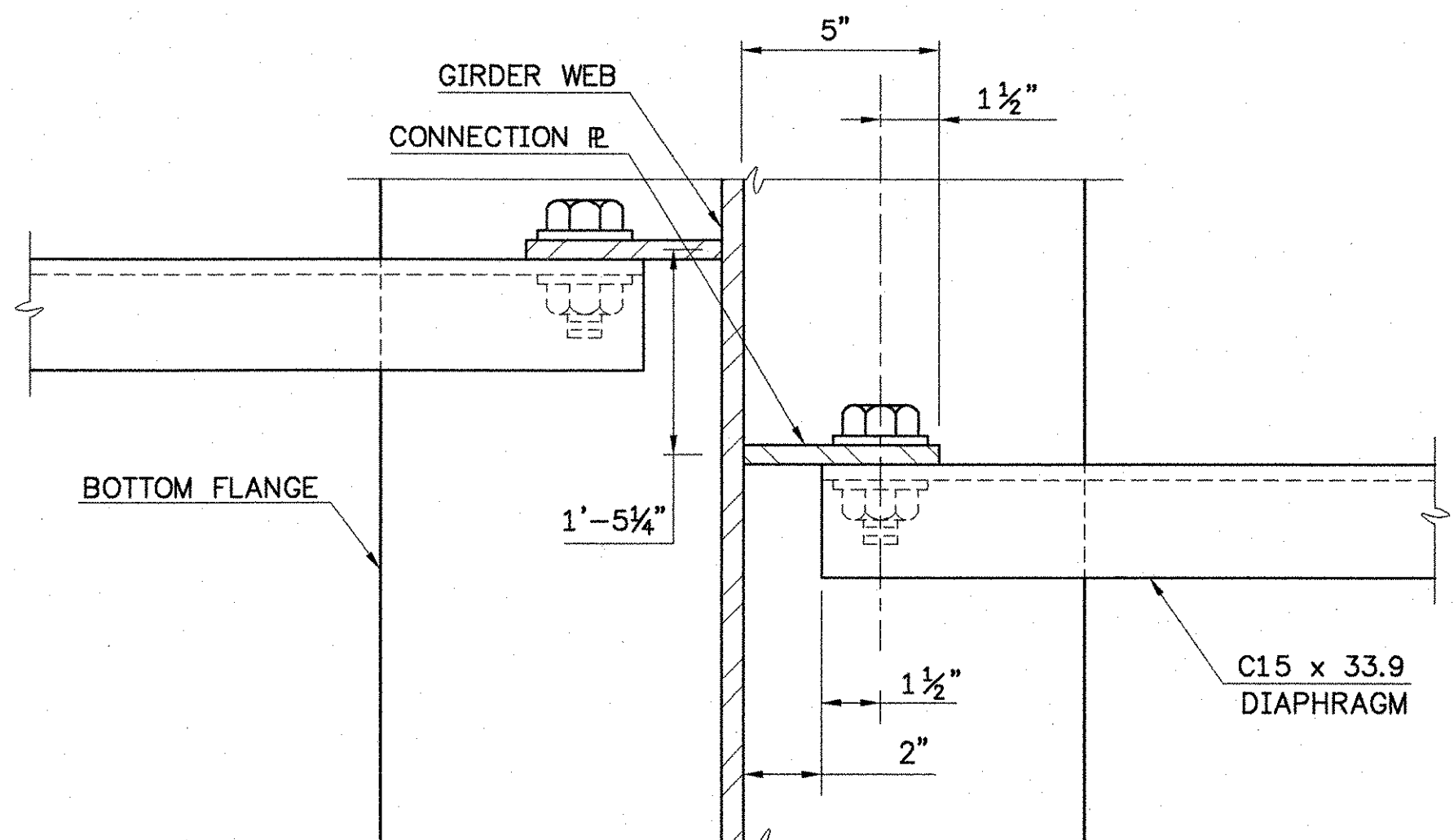


* NO WELD FOR 1/2" MIN. 1/2" MAX. (EXCEPT MUST MAINTAIN 1" MIN. FROM EDGE OF FLANGE)

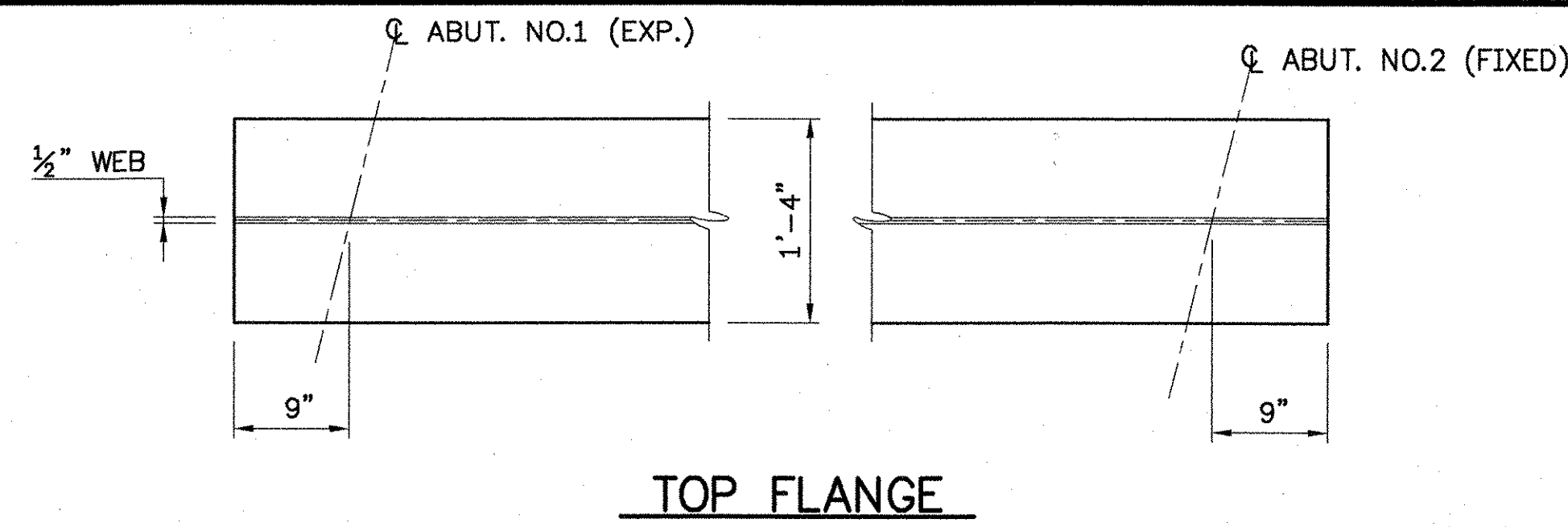
WELD TERMINATION AND COPING DETAILS
SCALE: 3"=1'-0"



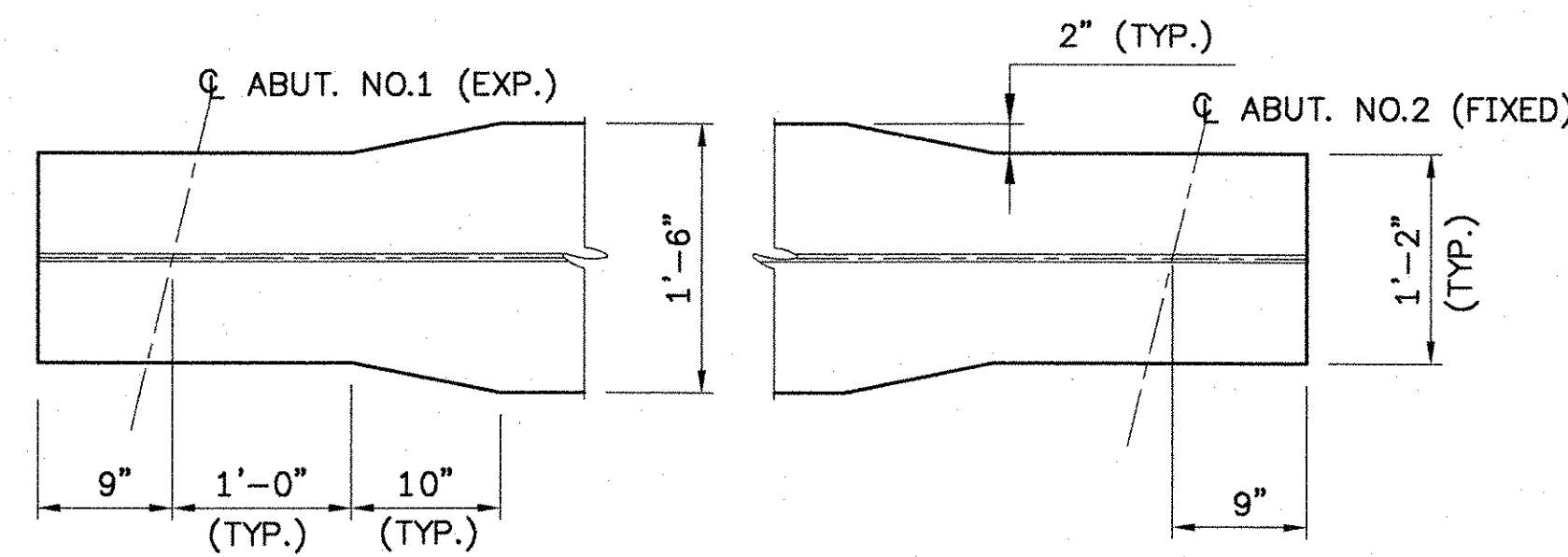
SECTION A-A
SCALE: 3"=1'-0"



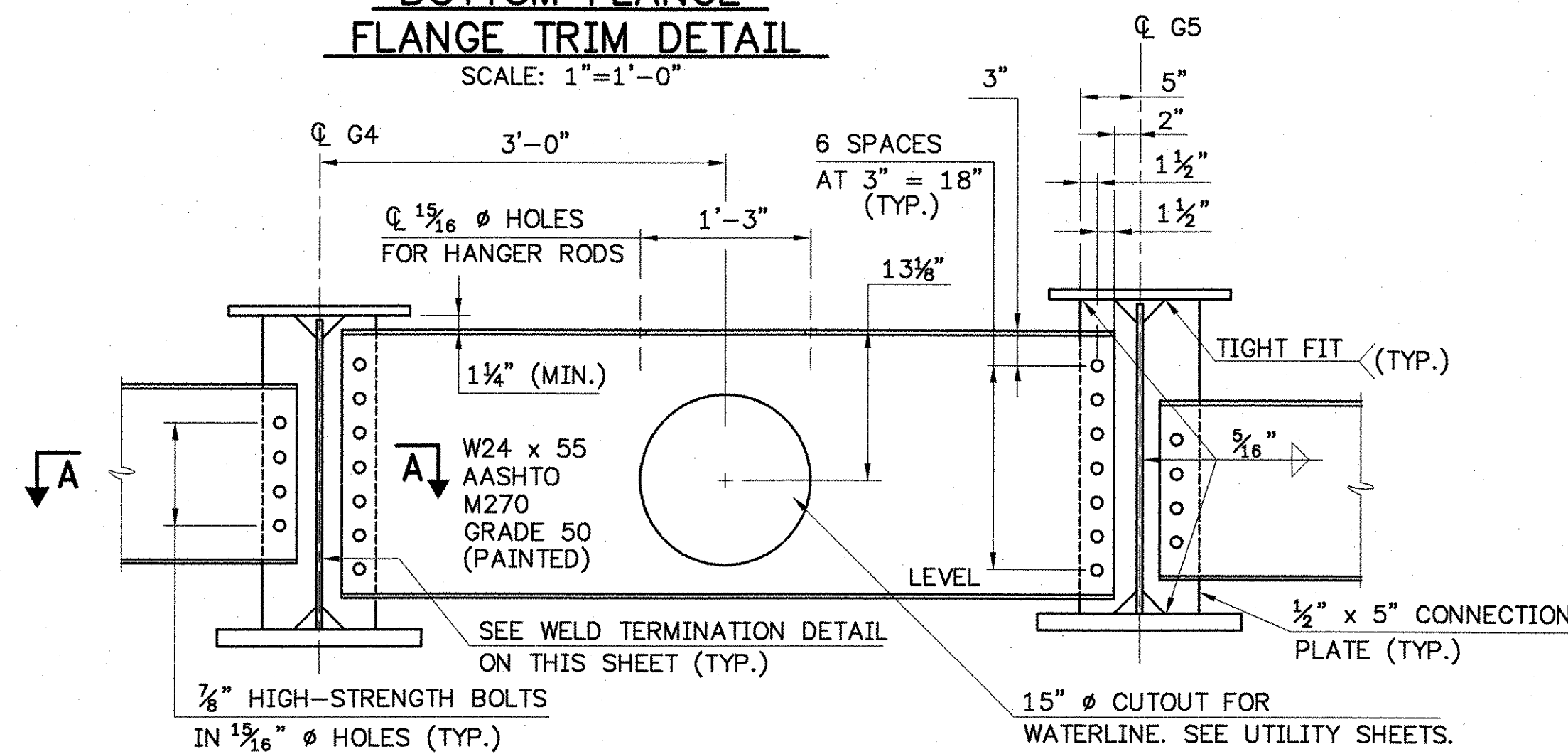
SECTION B-B
SCALE: 3"=1'-0"



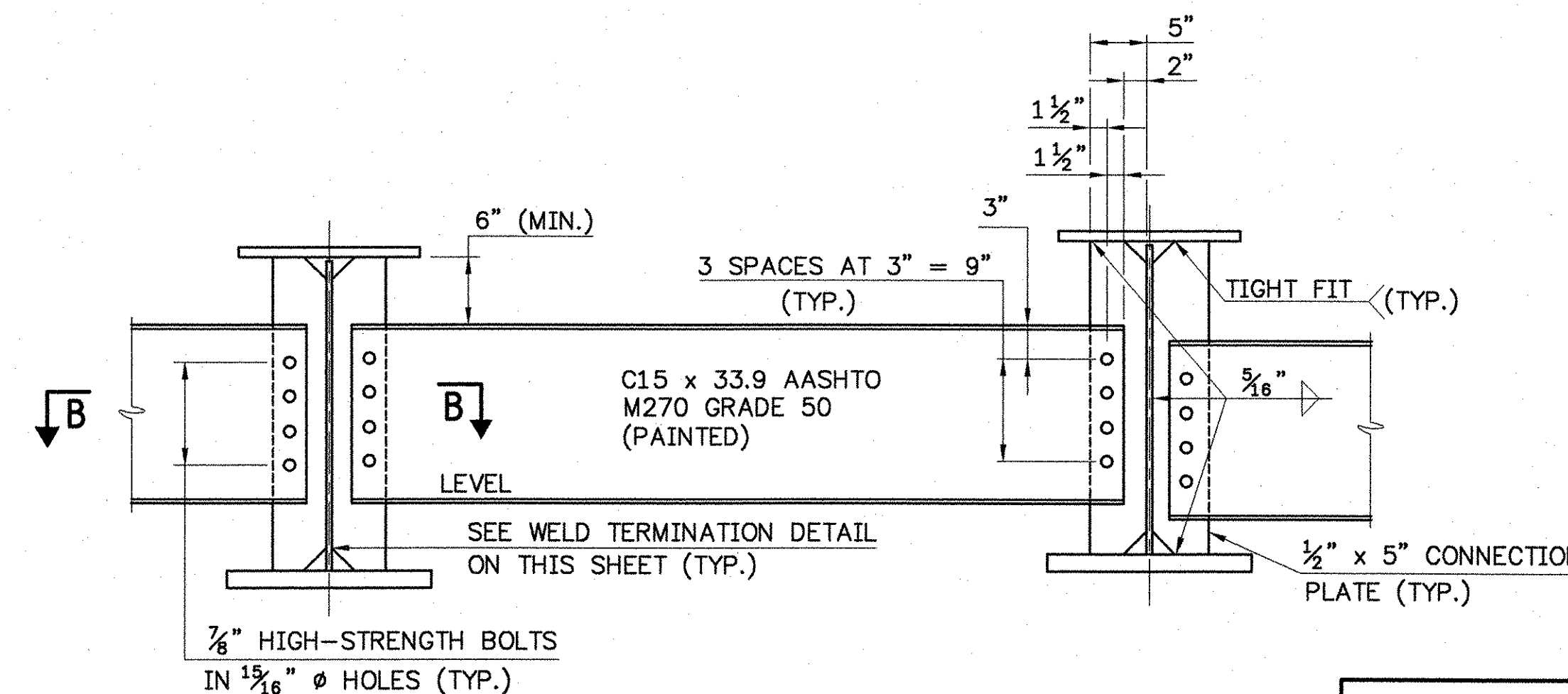
TOP FLANGE



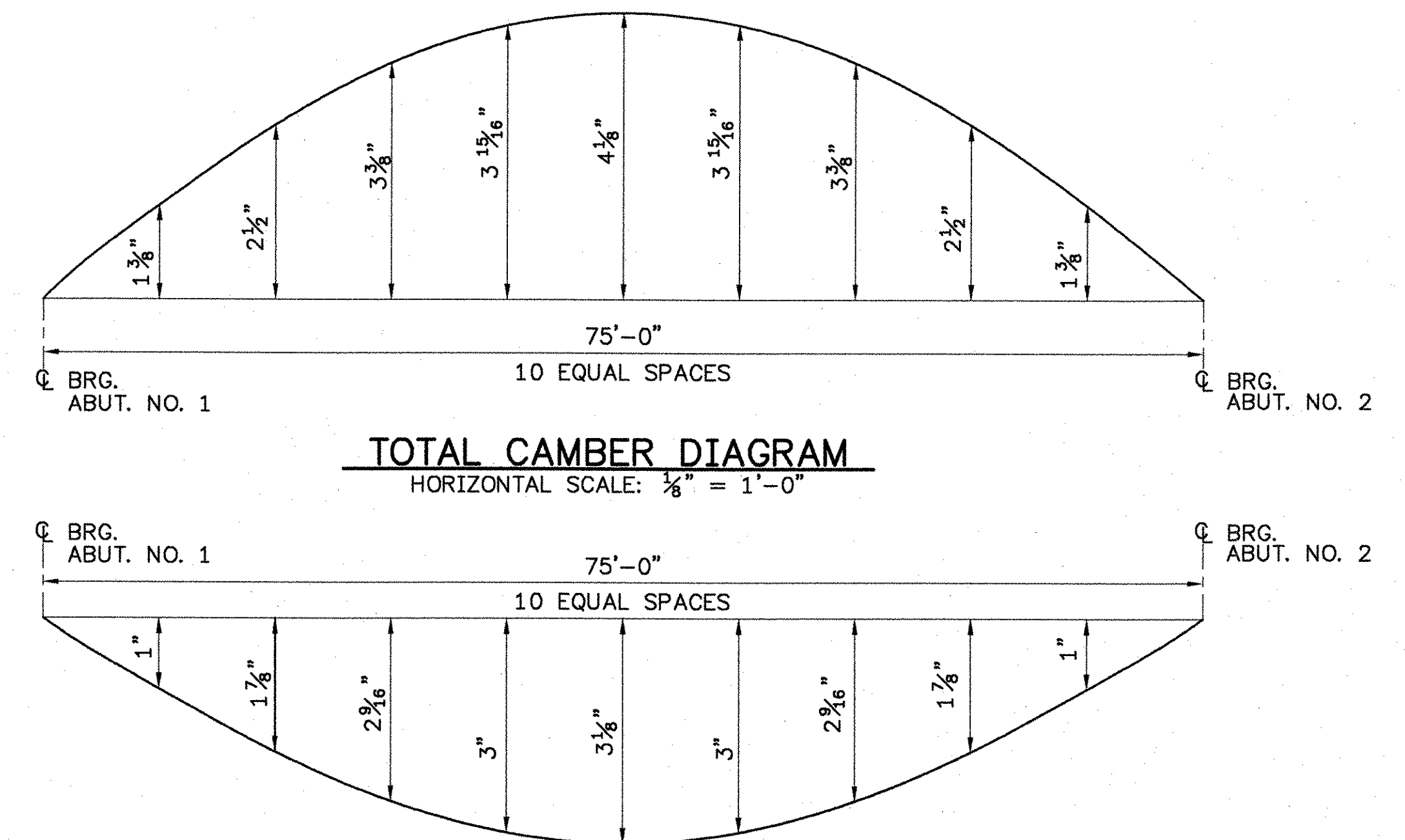
**BOTTOM FLANGE
FLANGE TRIM DETAIL**
SCALE: 1"=1'-0"



TYPICAL DIAPHRAGM IN WATERLINE BAY
SCALE: 1"=1'-0"

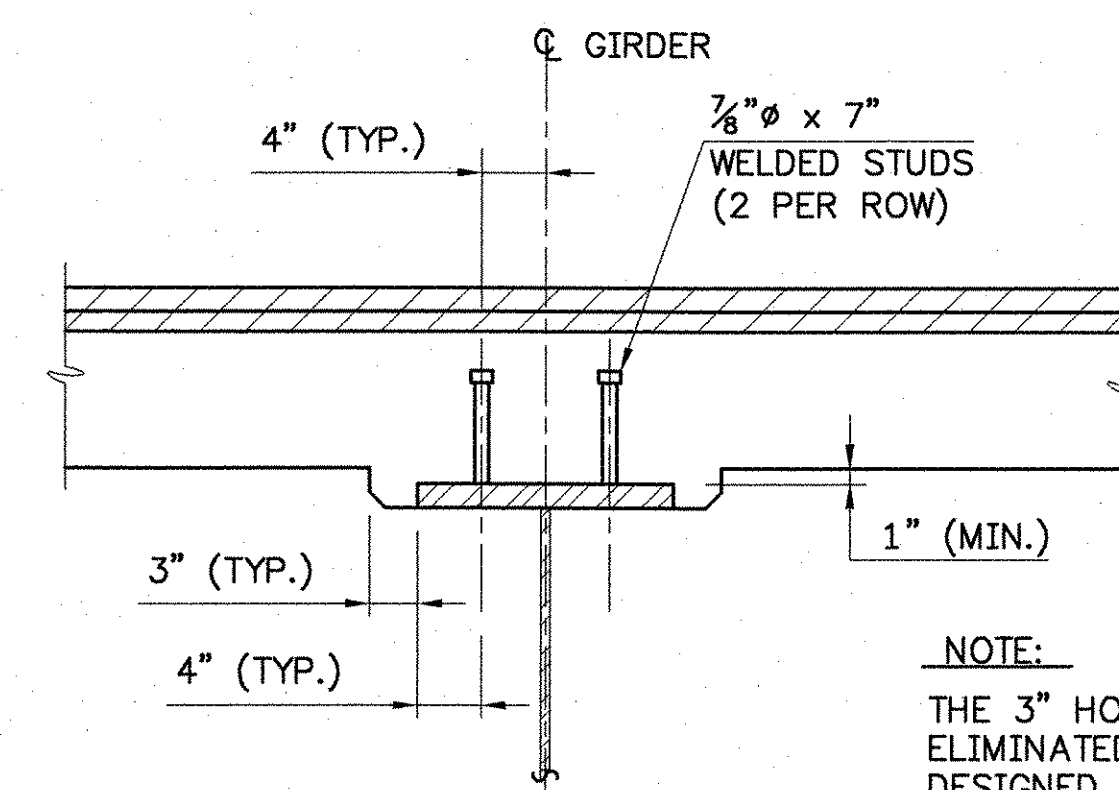


TYPICAL INTERMEDIATE DIAPHRAGM
SCALE: 1"=1'-0"



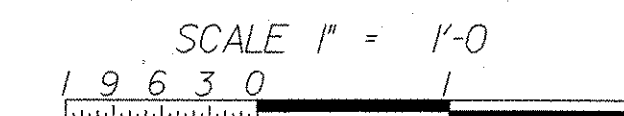
DEAD LOAD DEFLECTION DIAGRAM
NTS

NOTE:
EACH GIRDER SHALL BE CAMBERED A TOTAL OF 4 1/8".
TOTAL DEAD LOAD DEFLECTION HAS BEEN CALCULATED TO BE 3 3/8".
THE DESIGN RESIDUAL POSITIVE CAMBER FOR THIS PROJECT IS 1".

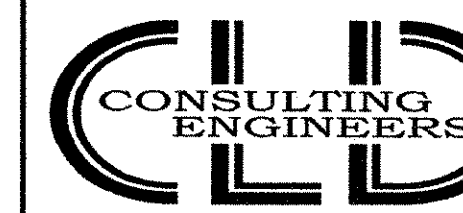


**BEAM HAUNCH AND
SHEAR CONNECTOR DETAILS**
SCALE: 1"=1'-0"

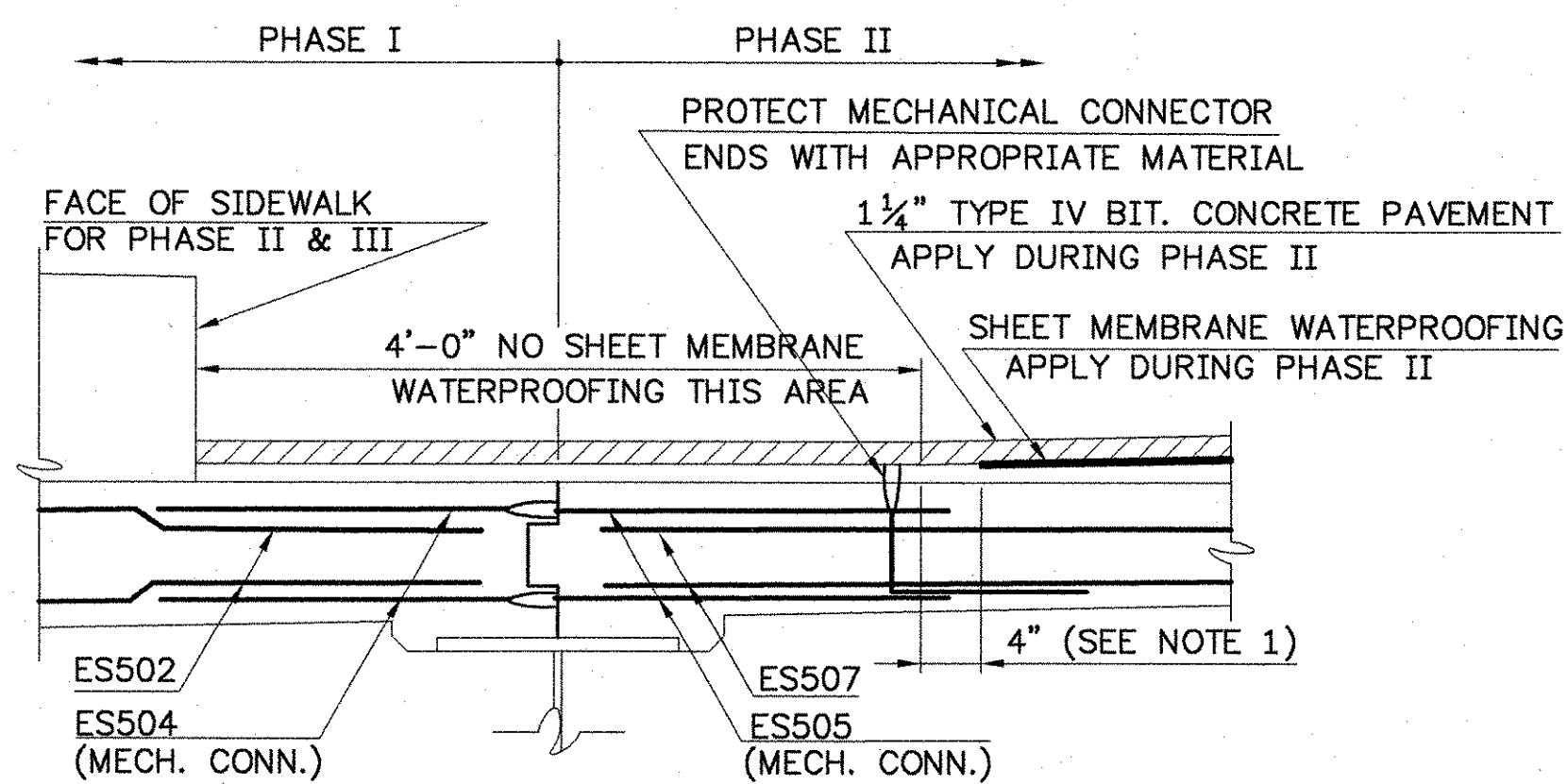
NOTE:
THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. SYSTEMS SHALL BE SUBMITTED FOR APPROVAL TO STRUCTURES ENGINEER. ALL VOIDS SHALL BE FILLED WITH MORTAR TYPE IV OR POLYURETHANE JOINT SEALER.



STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT. ROUTE 15	Log Sta.
		Surv. Sta.
VT. ROUTE 15 OVER GIHON RIVER GIRDER AND CONNECTION DETAILS		
Designed By	R.RICARD	Drawn By. D.DUGAL
Checked By	Date	Bridge Design Supervisor
S. BEAUMONT	11/06	J. BYATT Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 53 Of 85



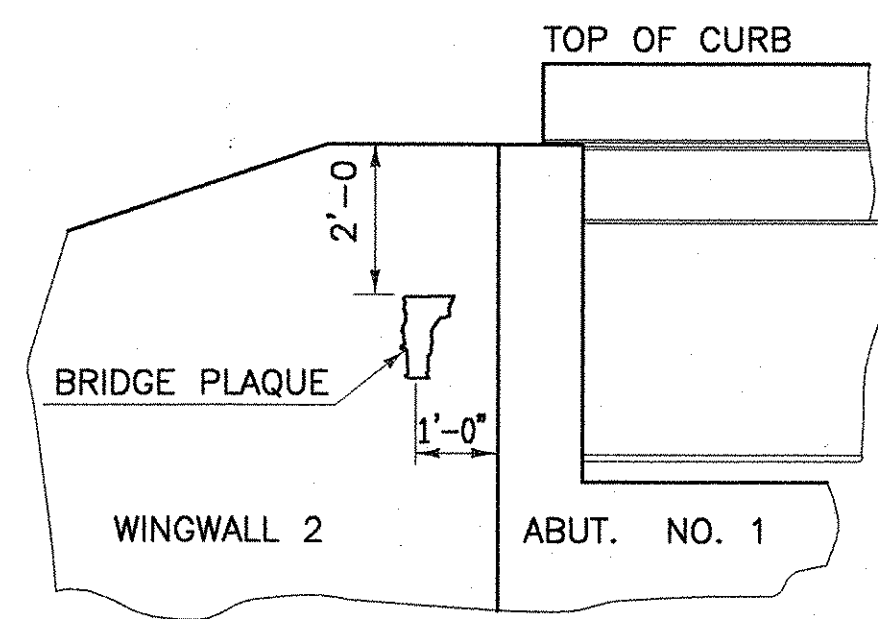
540 Commercial Street - Manchester, NH 03101
(603) 668-8223 - Fax: (603) 668-8802
cld@cldengineers.com - www.cldengineers.com
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NOTE: REMOVAL OF PAVEMENT FOR PLACEMENT OF PHASE IV SIDEWALK TO BE SUBSIDIARY TO ITEM 406.25 BITUMINOUS CONCRETE PAVEMENT.

PHASE I - II CONSTRUCTION JOINT

(UPON COMPLETION OF PHASE II)
SCALE: 1" = 1'-0"



ELEVATION

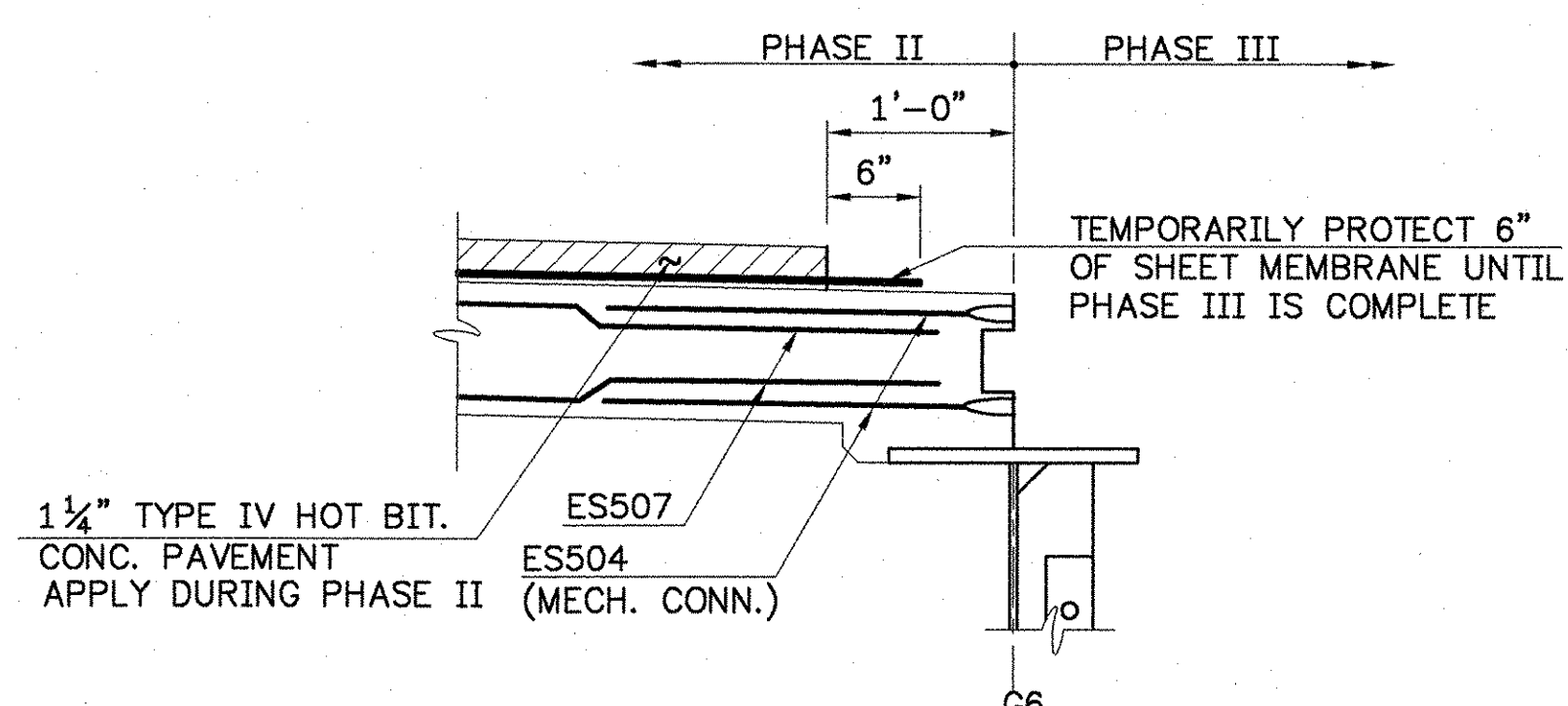
NOT TO SCALE

LOCATE BRIDGE PLAQUE

THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT NO. 1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER. (DETAILS ABOVE ARE NOT MEANT TO BE SITE SPECIFIC)

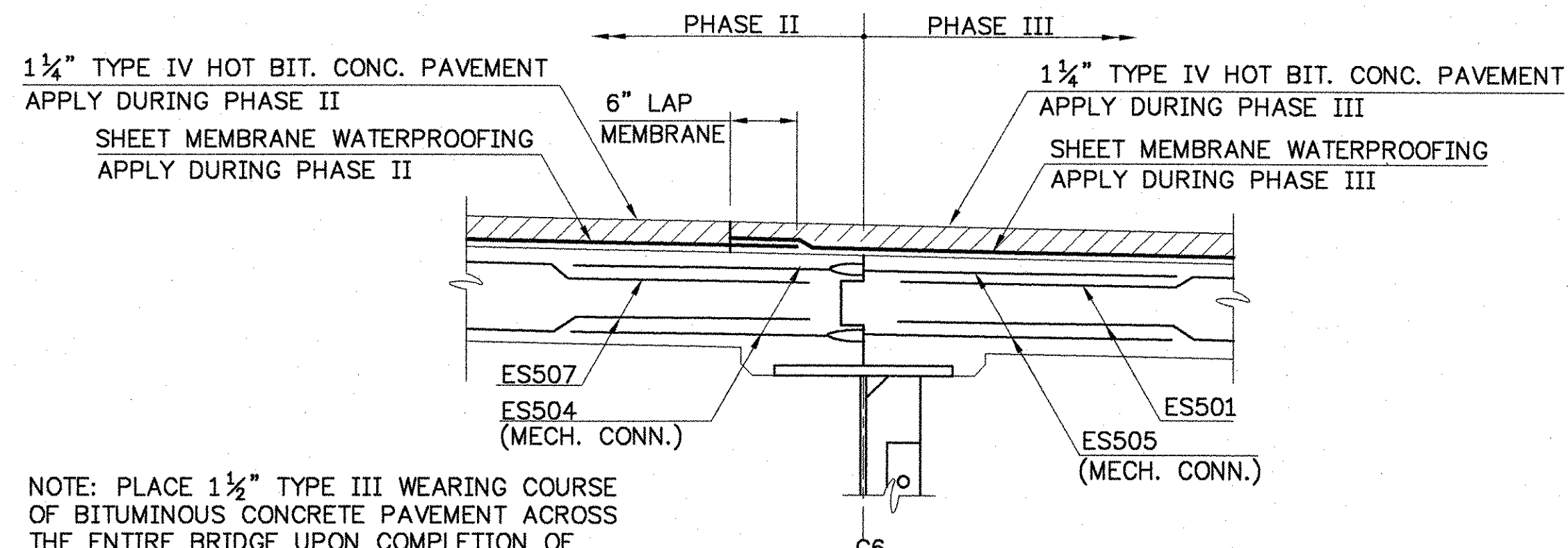
NOTES:

- SHEET MEMBRANE WATERPROOFING, TORCH APPLIED SHALL EXTEND FROM FACE OF CURB TO FACE OF CURB AND UP FACE OF CURB TO TOP OF EPOXY MORTAR. SEE SHEET 55 OF 85 FOR DETAIL. ALTERNATES FOR MEMBRANE AT THE PHASE IV SIDEWALK CURB MAY BE USED PER APPROVAL OF THE ENGINEER.



PHASE II - III CONSTRUCTION JOINT

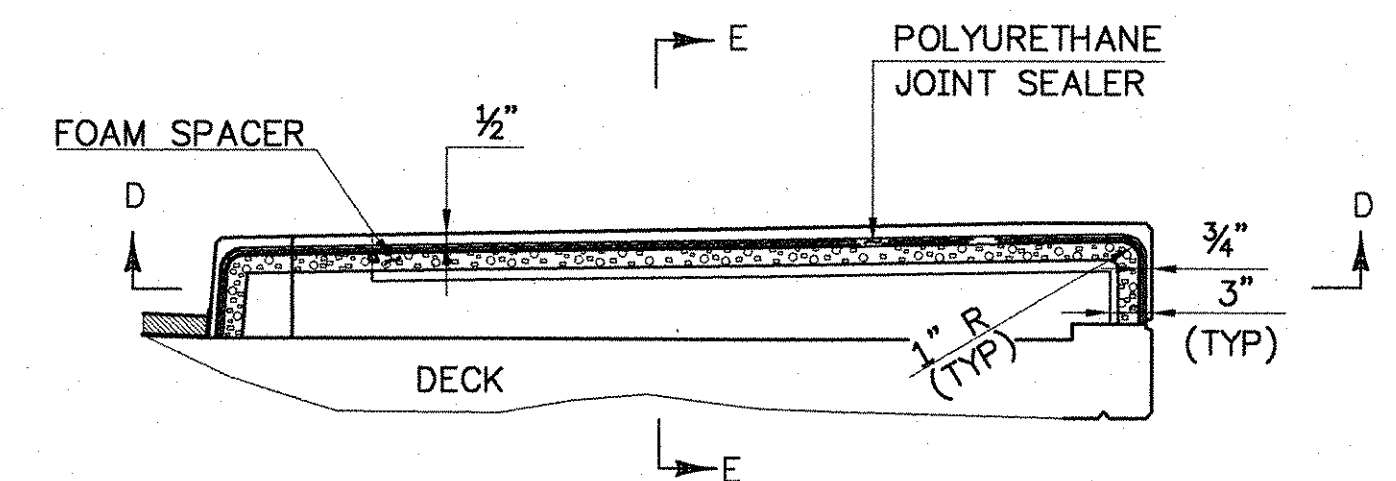
(UPON COMPLETION OF PHASE II)
SCALE: 1" = 1'-0"



PHASE II - III CONSTRUCTION JOINT

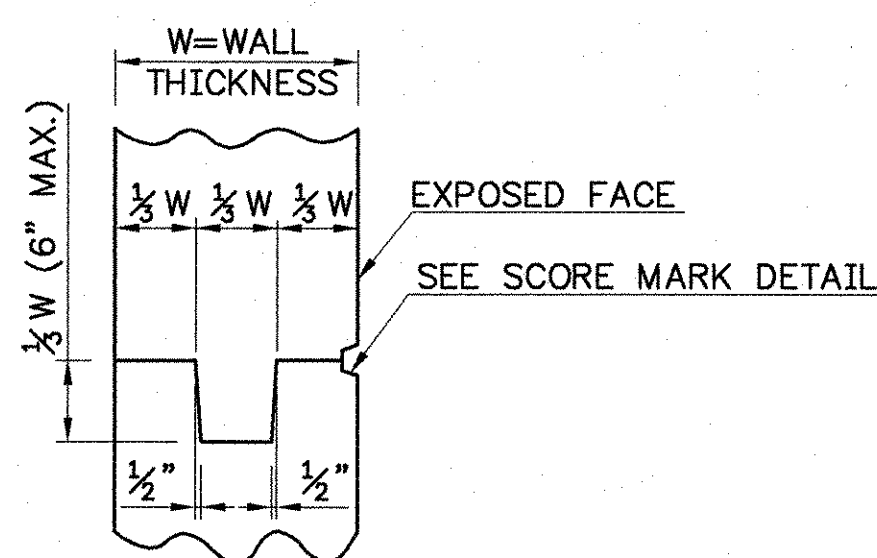
(UPON COMPLETION OF PHASE III)
SCALE: 1" = 1'-0"

NOTE: PLACE 1 1/2" TYPE III WEARING COURSE OF BITUMINOUS CONCRETE PAVEMENT ACROSS THE ENTIRE BRIDGE UPON COMPLETION OF PHASE IV SIDEWALK.



TYPICAL SECTION THROUGH SIDEWALK JOINT BETWEEN BRIDGE AND ROADWAY SIDEWALK

NOT TO SCALE

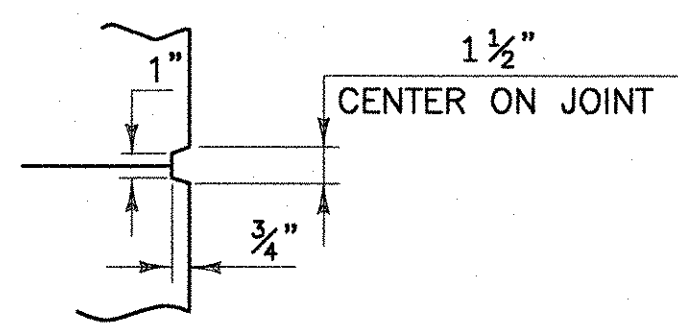


TYPICAL CONCRETE CONSTRUCTION JOINT

N.T.S.

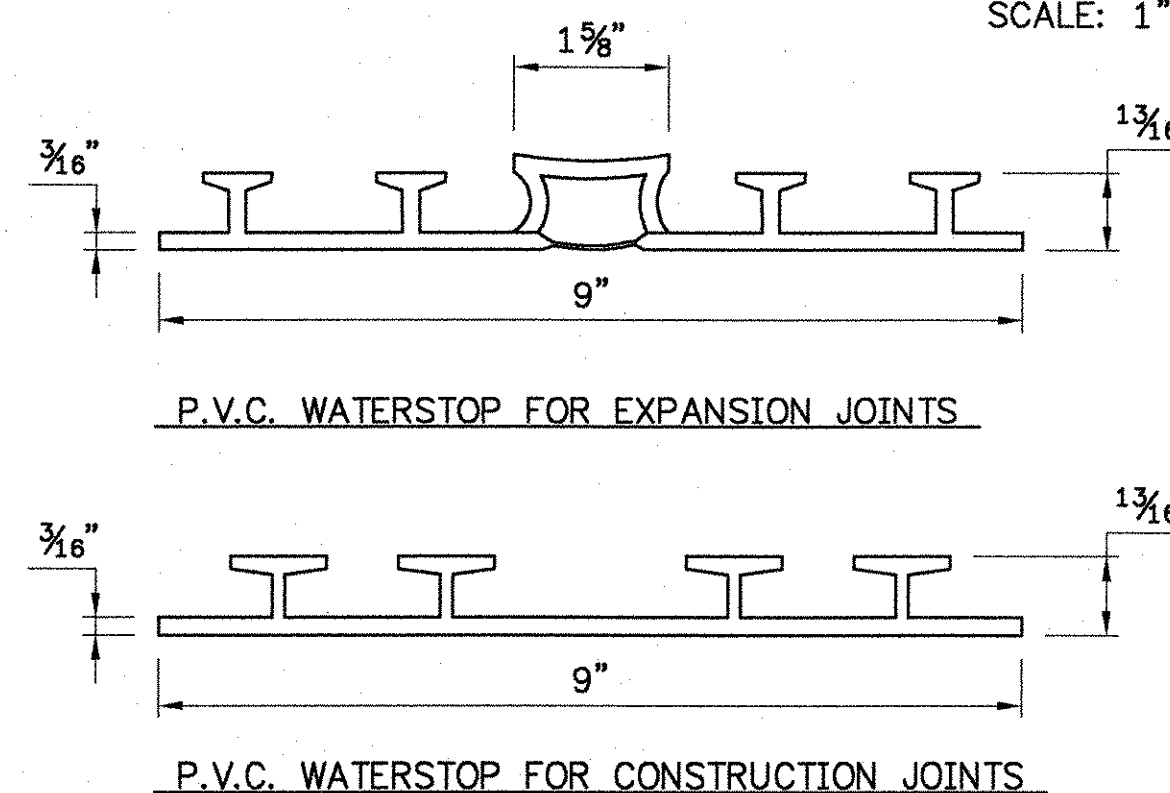
NOTE:

WHERE "CONSTRUCTION JOINT" IS DESIGNATED ON THE DRAWINGS, PROVIDE A CONSTRUCTION JOINT AND SCORE MARK. WHERE "SCORE MARK" IS DESIGNATED ON THE DRAWINGS, PROVIDE A SCORE MARK WITHOUT CONSTRUCTION JOINT, FOR RUSTICATION ONLY.



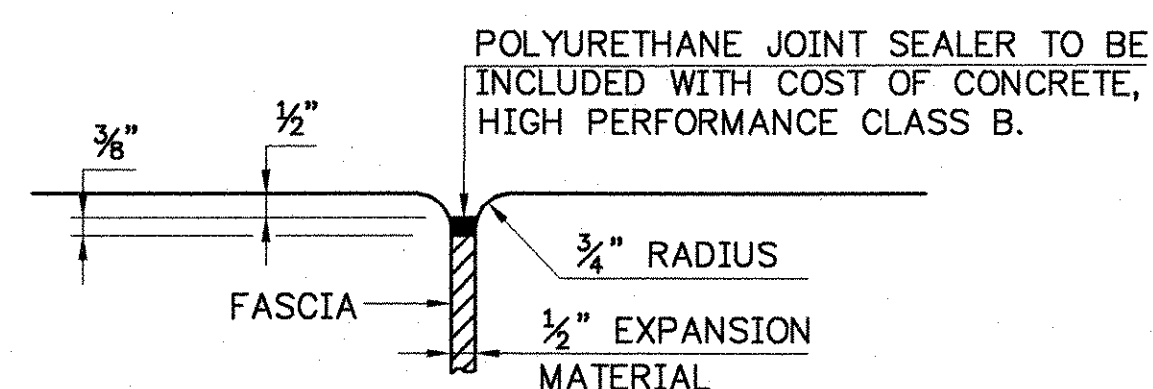
SCORE MARK DETAIL

NOT TO SCALE



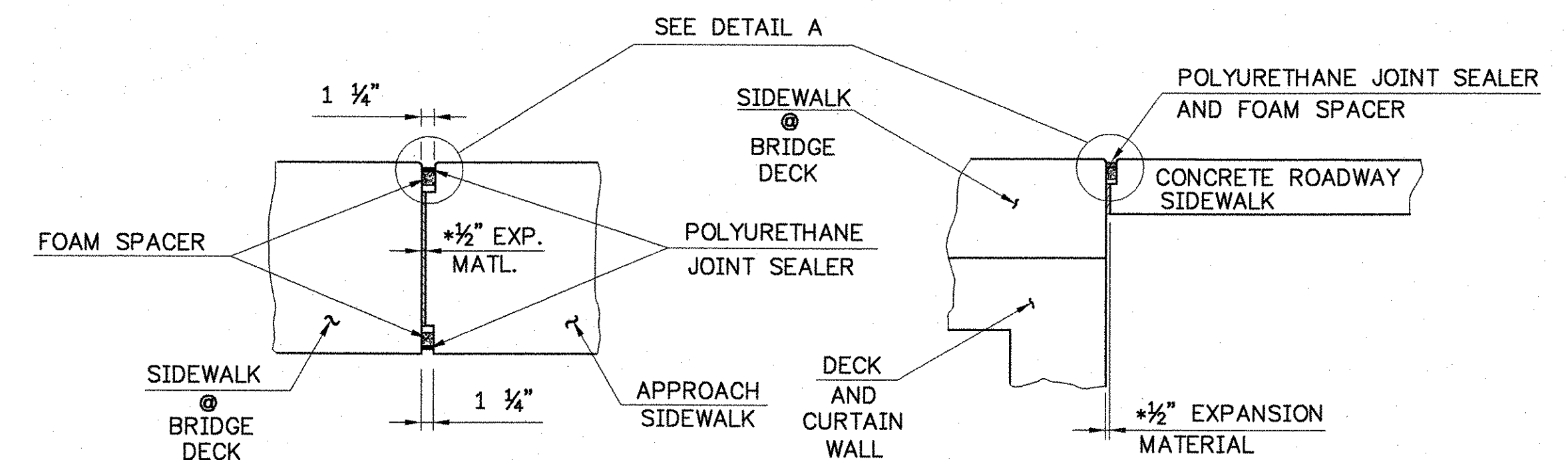
P.V.C. WATERSTOPS

THE COST FOR P.V.C. WATERSTOPS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE, HIGH PERFORMANCE CLASS A. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.



JOINT BETWEEN FASCIA AND WINGWALL

NOT TO SCALE



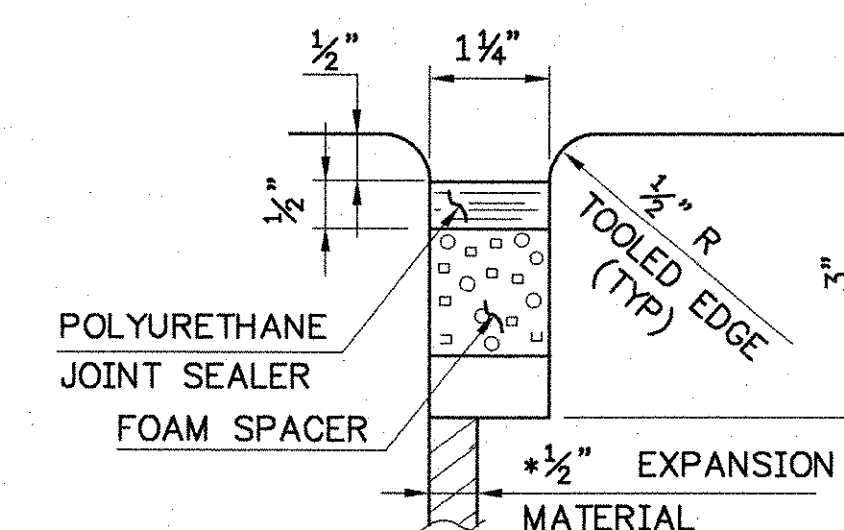
SECTION D - D

NOT TO SCALE

SECTION E - E

NOT TO SCALE

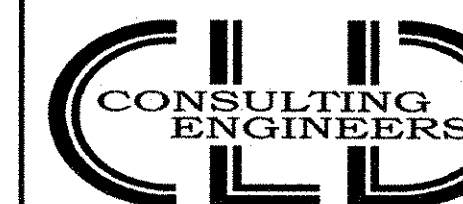
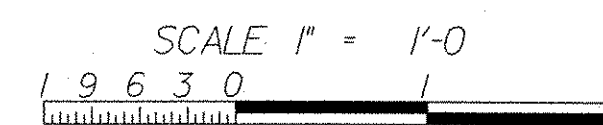
* FIXED END JOINT SHOWN USE 1 1/2" EXP. MATERIAL AT EXP. END



DETAIL "A"

NOT TO SCALE

FOR DETAILS OF POLYURETHANE JOINT SEALER AND FOAM SPACER SEE SUBSECTION 524.06



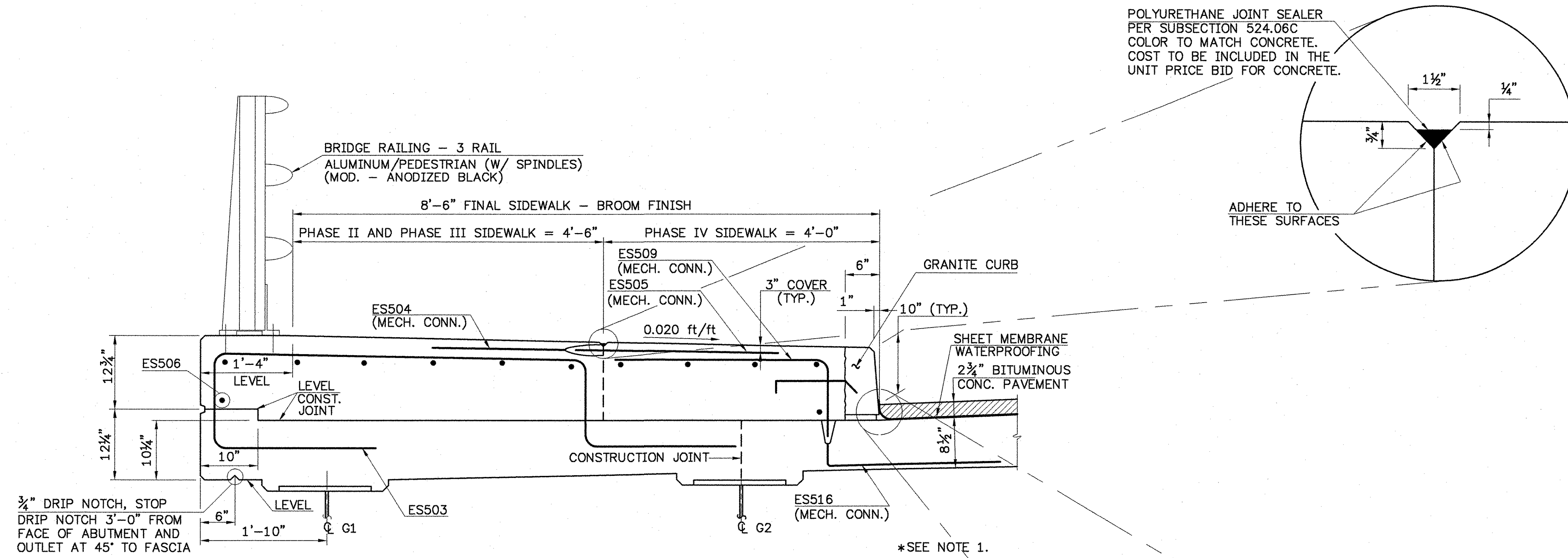
540 Commercial Street • Manchester, NH 03101
(603) 668-8223 • Fax: (603) 668-8802
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Maine • New Hampshire • Vermont

STATE OF VERMONT AGENCY OF TRANSPORTATION

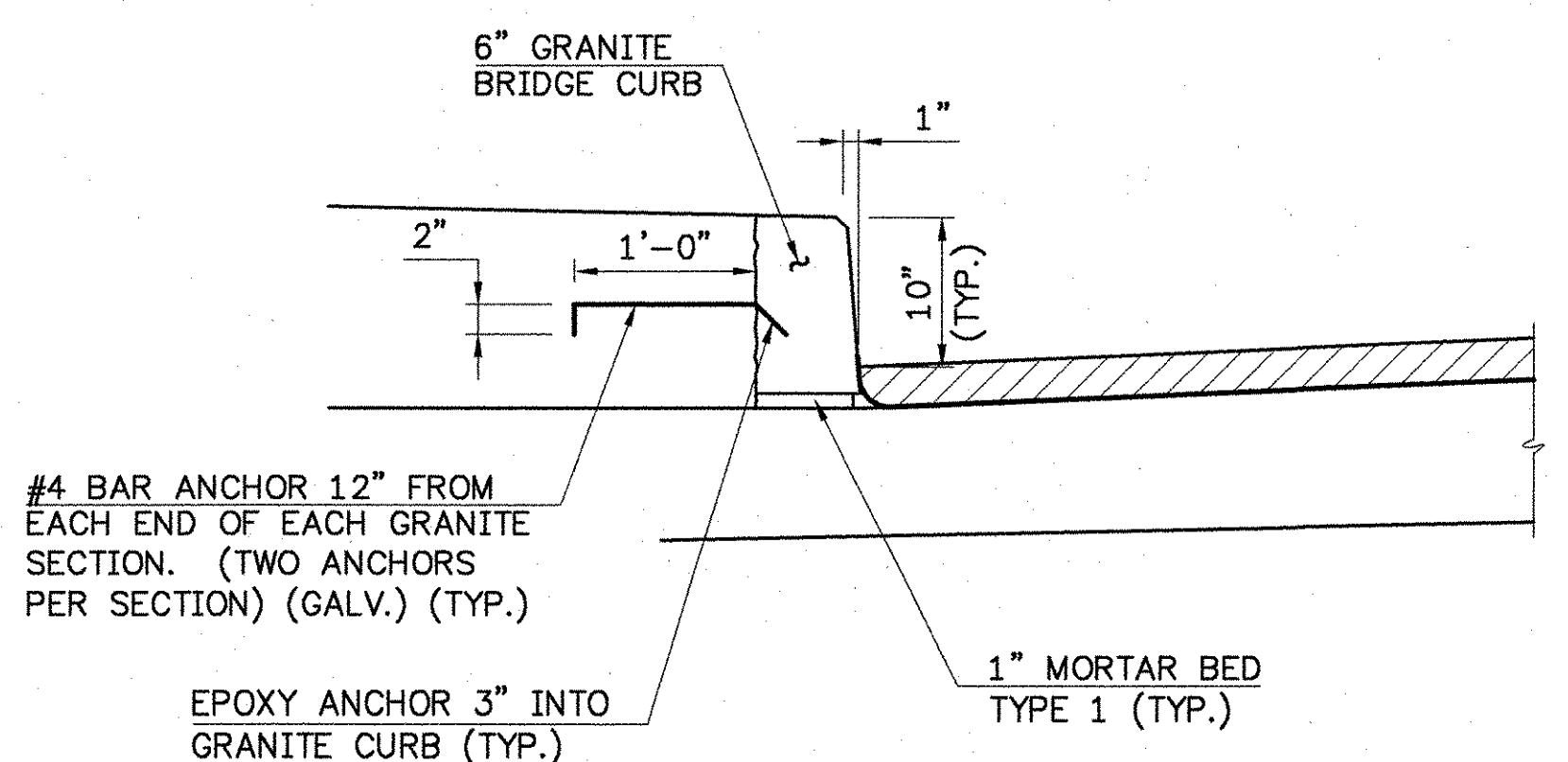
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT. ROUTE 15	Log Sta.	
		Surv. Sta.	
VT. ROUTE 15 OVER GIHON RIVER			
MISCELLANEOUS DETAILS (1 OF 2)			
Designed By	R.RICARD	Drawn By	D.DUGAL
Checked By	Date	Bridge Design Supervisor	
S. BEAUMONT	11/06	J. BYATT	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	54 Of 85

GRANITE CURBING ON BRIDGE

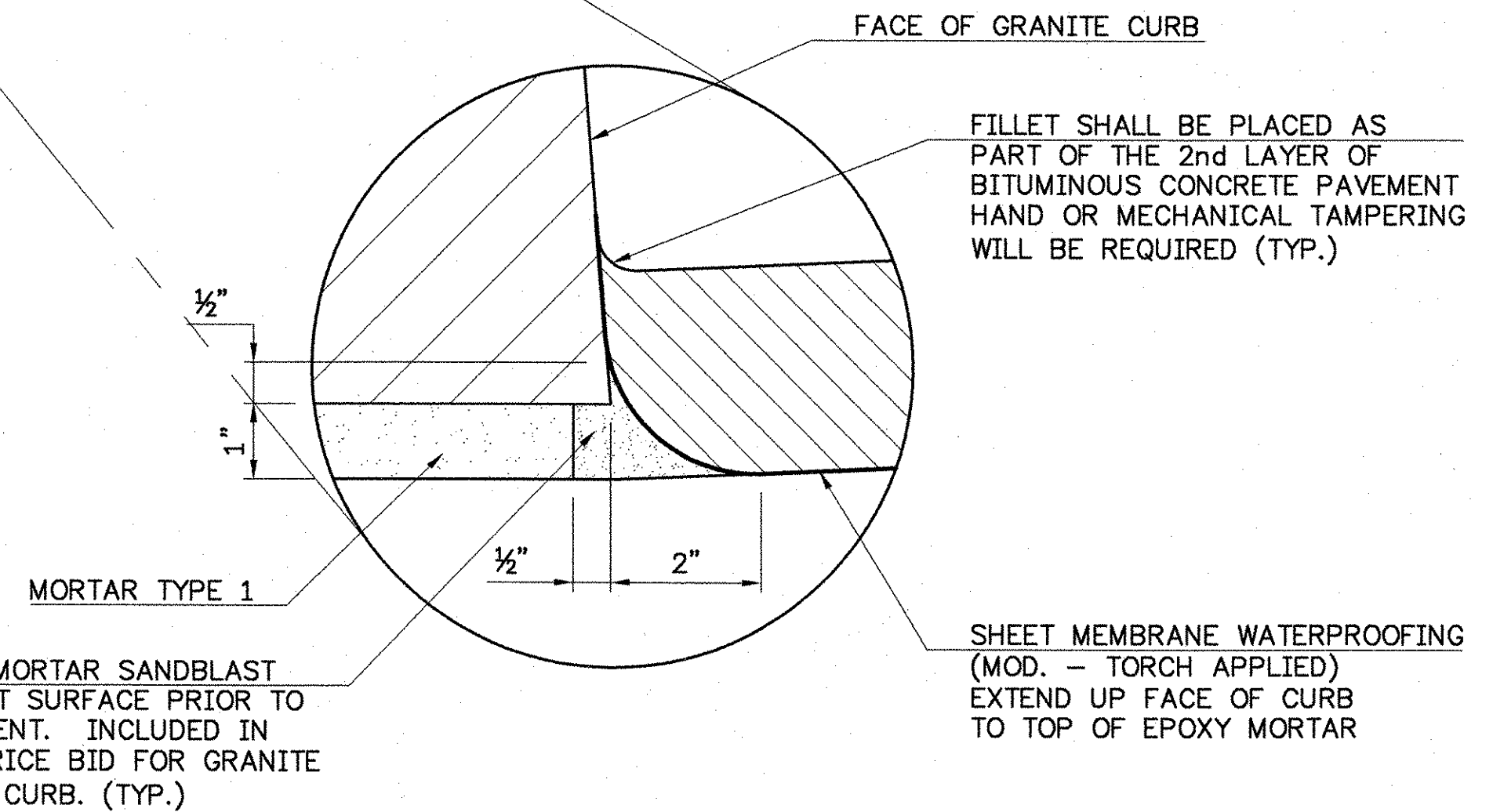
1. THE ITEM 616.22 "GRANITE BRIDGE CURB" SHALL INCLUDE THE COSTS OF MORTAR, TYPE 1, EPOXY MORTAR, #4 GALVANIZED COATED ANCHORS, AND EPOXY USED TO SECURE THE ANCHORS TO THE GRANITE BRIDGE CURB.
2. BEFORE INSTALLATION OF THE GRANITE BRIDGE CURB THE CONTRACTOR SHALL PROVIDE THE RESIDENT ENGINEER WITH A TECHNICAL DATA SHEET FOR THE PROPOSED EPOXY FOR SECURING ANCHORS TO THE GRANITE CURBING. THE TECHNICAL DATA SHEET SHALL INCLUDE SPECIFICATIONS, AND MANUFACTURERS APPLICATION INSTRUCTIONS. THE RESIDENT ENGINEER SHALL APPROVE THE PRODUCT PRIOR TO ANY INSTALLATION.
3. THE GALVANIZED ANCHORS SHALL BE SHIPPED FROM THE SUPPLIER, AFTER CUTTING AND BENDING.
4. THE BLOCKS FOR THE GRANITE BRIDGE CURB MAY BE SHOP ASSEMBLED WITH THE ANCHORS WITH PERMISSION FROM THE RESIDENT ENGINEER.



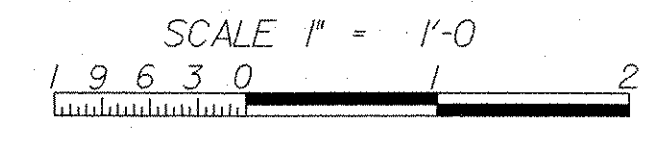
SIDEWALK SECTION - LEFT FASCIA
(RIGHT FASCIA SIMILAR)
SCALE: 1" = 1'-0"



GRANITE CURB ATTACHMENT DETAILS
SCALE: 1" = 1'-0"



NOTE:
THE BACK FACE OF THE GRANITE CURB SHALL BE SATURATED. SURFACE DRY IMMEDIATELY PRIOR TO PLACEMENT OF ADJACENT SIDEWALK OR CURB CONCRETE

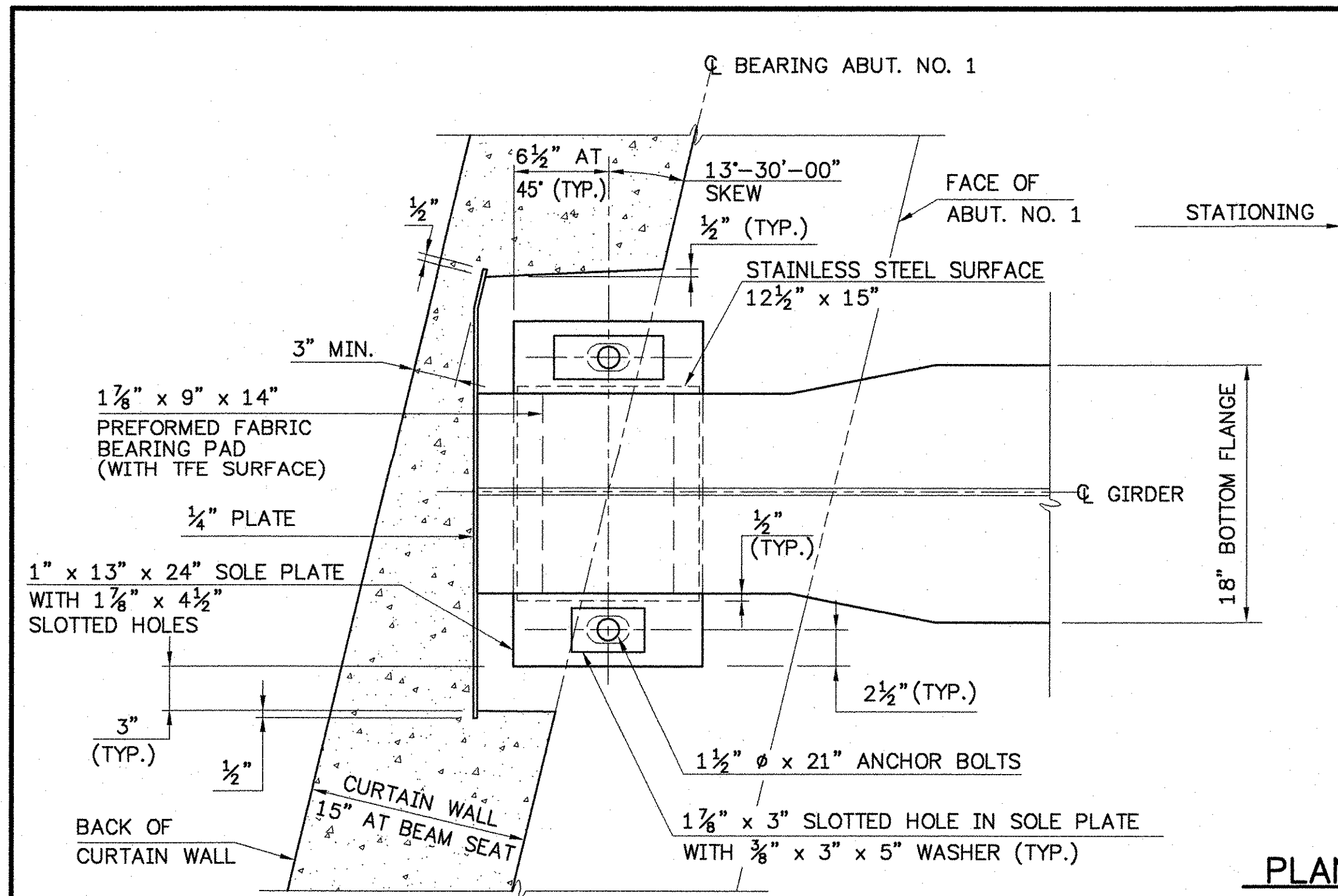


STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT. ROUTE 15	Log Sta.	
		Surv. Sta.	
VT. ROUTE 15 OVER GIHON RIVER MISCELLANEOUS DETAILS (2 OF 2)			
Designed By	R. RICARD	Drawn By	M. SMITH
Checked By	Date	Bridge Design Supervisor	
S. BEAUMONT	11/06	J. BYATT	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.	Sheet	55	Of 85

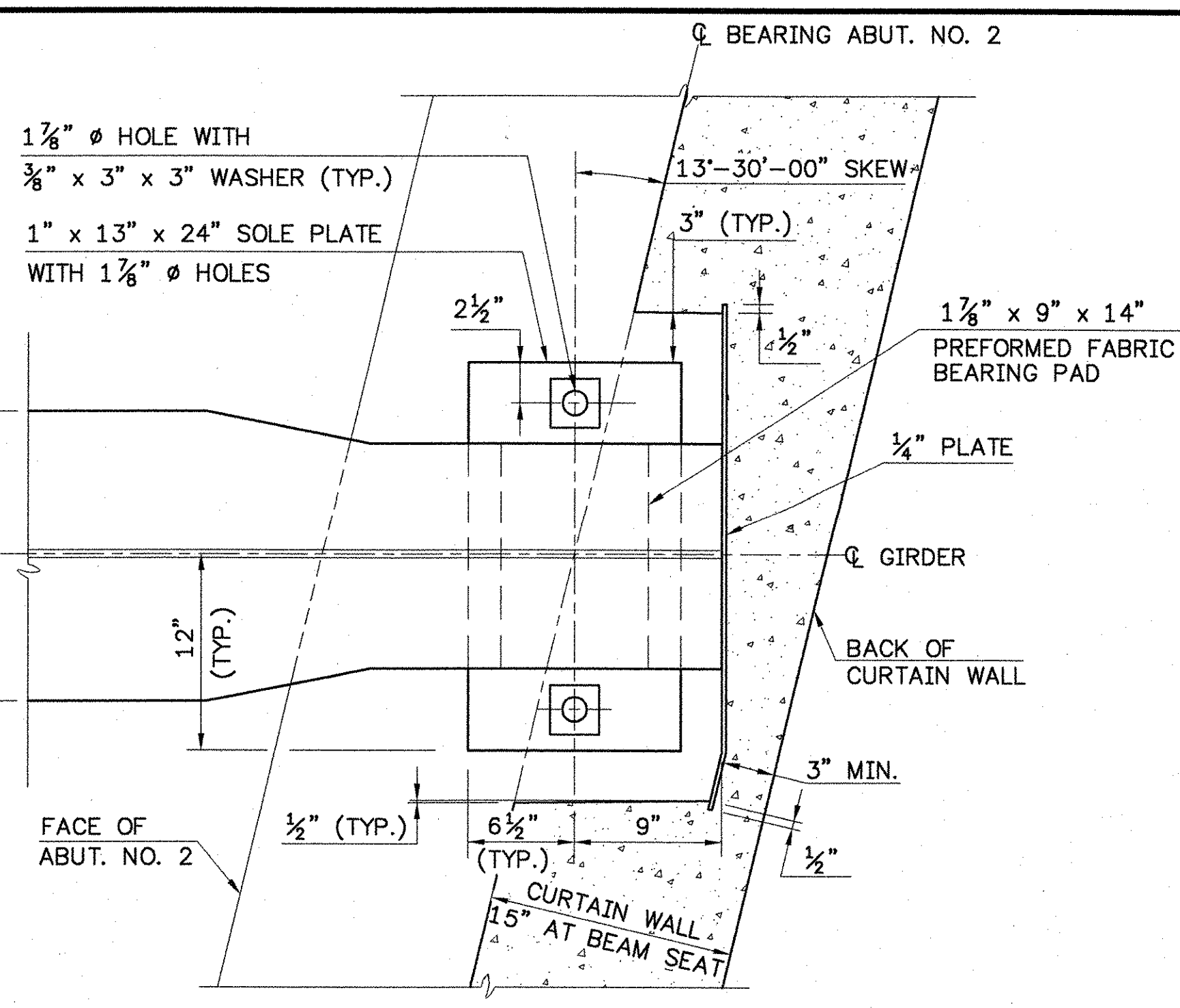
CLD CONSULTING ENGINEERS Inc.

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(603) 668-8223 • Fax: (603) 668-8802
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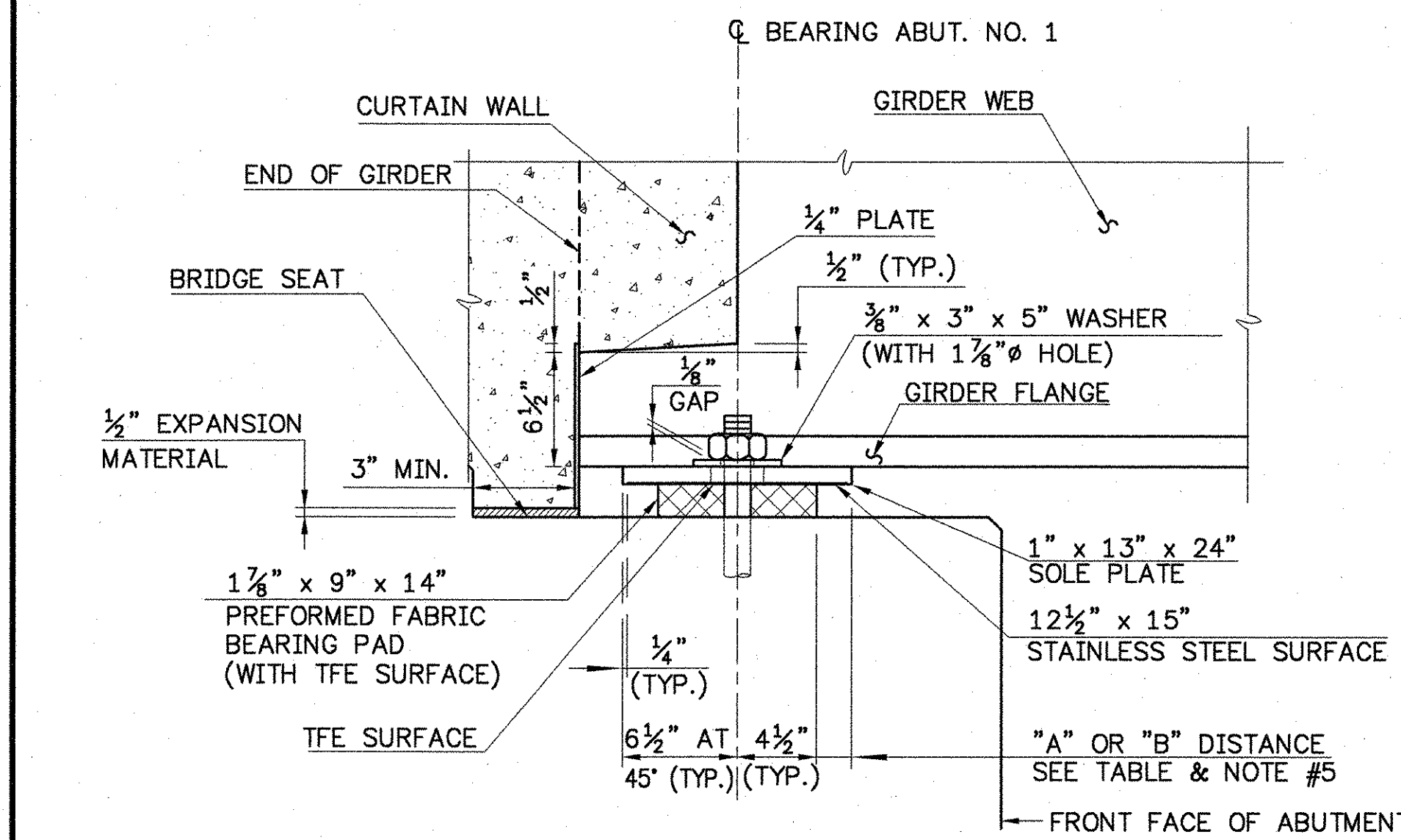
9129CURB.DWG



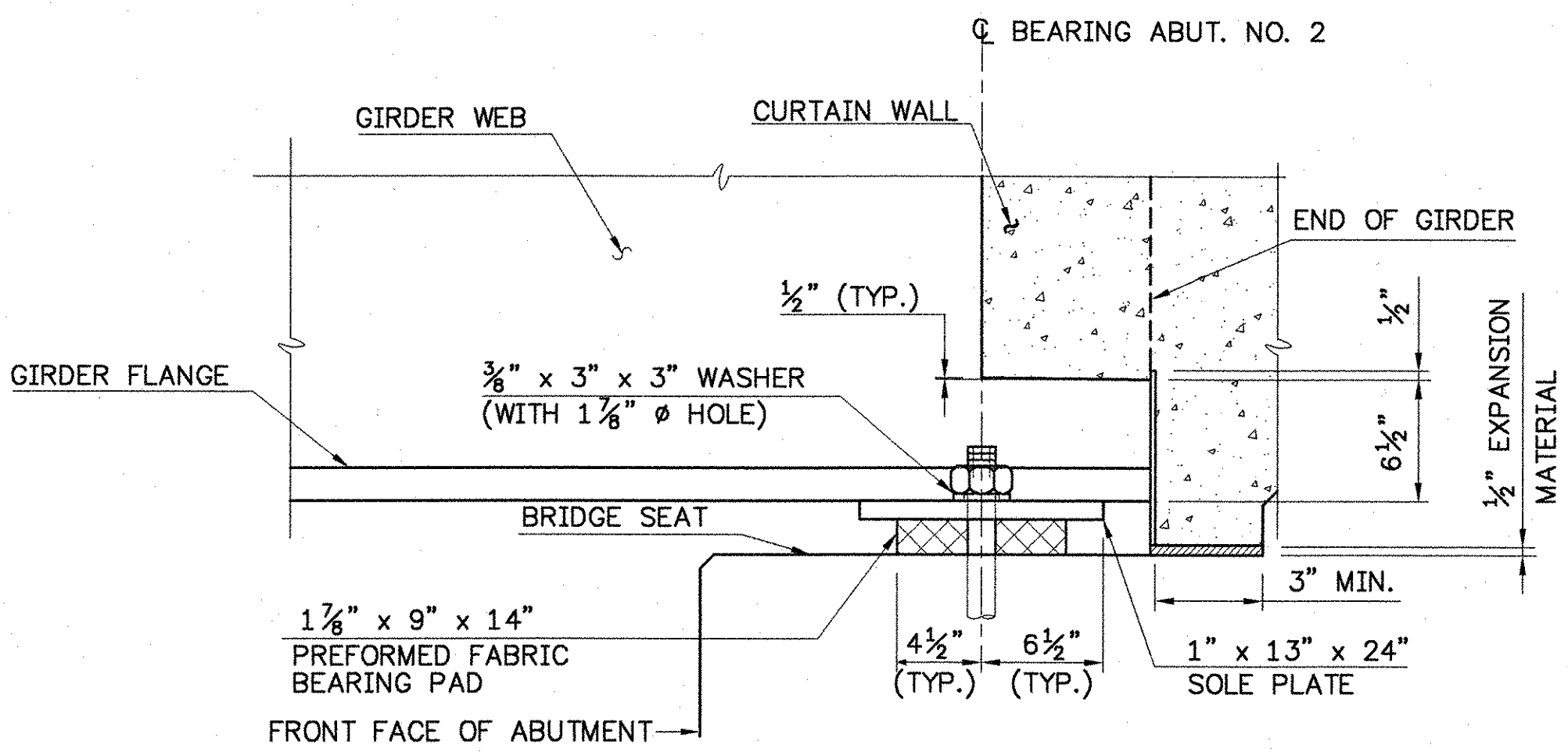
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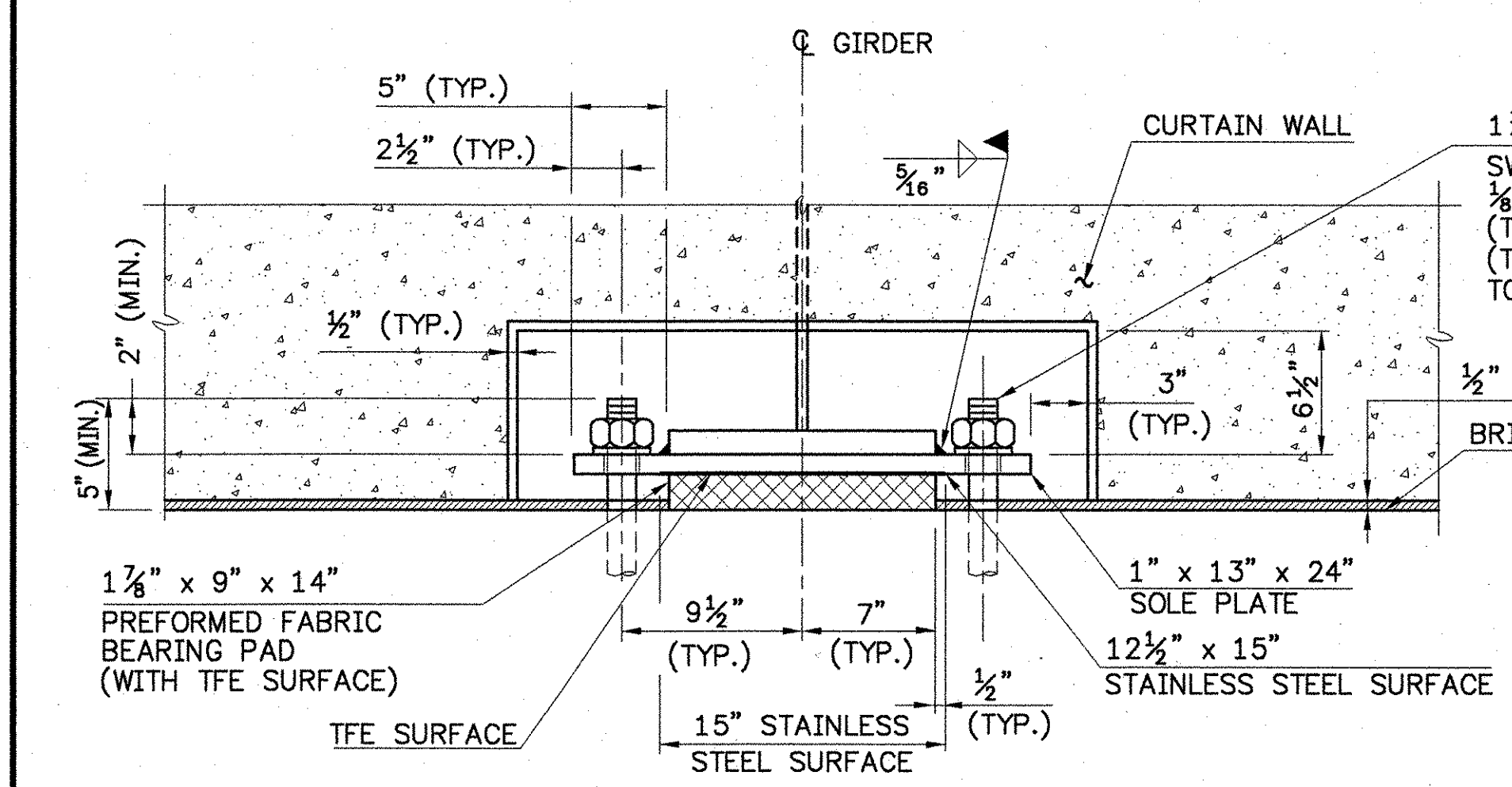
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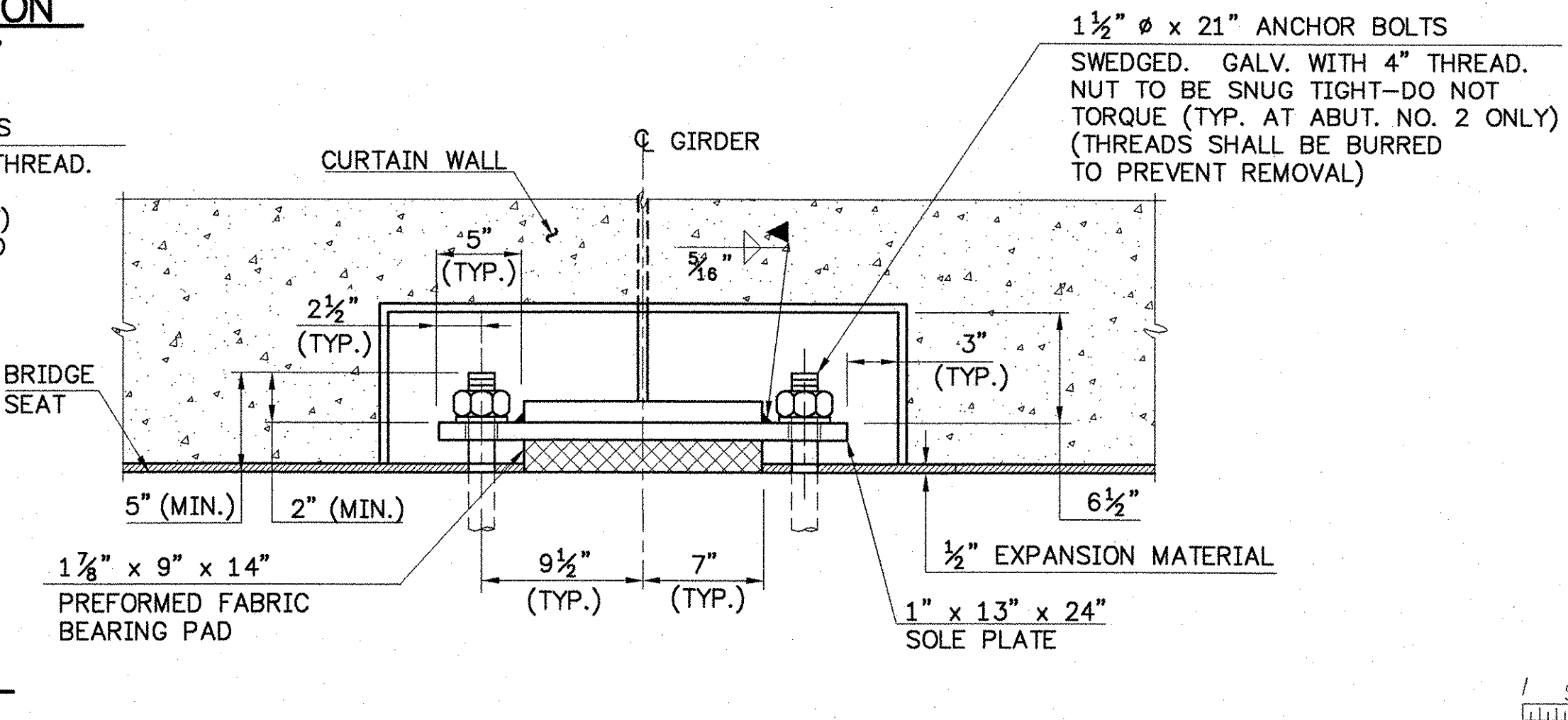
SIDE ELEVATION
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SIDE ELEVATION
SCALE: 1 1/2"=1'-0"



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



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

BEARING NOTES:

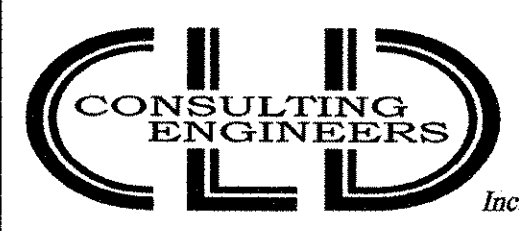
- BEARINGS SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTION 531 AND 731 OF THE VAOT STANDARD SPECIFICATIONS. BEARINGS SHALL BE PREFORMED FABRIC BEARING PADS WITH STEEL SOLE PLATES.
- BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10 "BEARING DEVICE ASSEMBLY".
- SHOP DRAWINGS CONFORMING TO SUBSECTION 531.03 OF THE 2001 VAOT STANDARD SPECIFICATIONS SHALL BE SUBMITTED TO INCLUDE WELDING AND BONDING PROCEDURES.
- THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.
- "A" DISTANCE IS THE FINAL SETTING FOR THE BEARING AFTER THE CONCRETE SLAB, CURB, PAVEMENT AND BRIDGE RAIL ARE PLACED. "B" DISTANCE IS LISTED FOR SETTING THE BEARING AFTER THE STRUCTURAL STEEL IS ERECTED AND BEFORE THE CONCRETE DECK IS POURED. THE DIFFERENCE IS THE THEORETICAL ELONGATION OF THE BOTTOM FLANGE DUE TO THE DEAD LOAD DEFLECTION. THE FINAL "A" DISTANCE, AS SHOWN IN THE TABLE, MUST BE ATTAINED WITHIN 1/8".
- DESIGN CRITERIA:
 - AVERAGE BEARING PRESSURE = 1000 PSI MAXIMUM
 - ROTATION LIMIT = 0.02 RADIAN
 - HORIZONTAL CAPACITY SHALL BE A MINIMUM OF 10% OF THE VERTICAL DESIGN LOAD (WITH IMPACT).
 - DESIGN LOAD PER BEARING = 112 KIPS (DEAD LOAD PLUS LIVE LOAD WITH IMPACT).
- ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS) SHALL BE AASHTO M270 GRADE 36.
- ANCHOR BOLTS SHALL HAVE A MINIMUM OF 15" EMBEDMENT INTO THE CONCRETE AND SHALL CONFORM TO ASTM F1554-99 GRADE 55 (AASHTO M314).
- ALL BEARING DEVICES SHALL BE GALVANIZED OR METALIZED AS PER SUBSECTIONS 531.04(b) AND 506.15(a) & (b) OF THE 2001 VAOT STANDARD SPECIFICATIONS. AREAS OF GALVANIZING OR METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE REPAIRED PER SUPPLEMENTAL SPECIFICATION 513.
- ALL THE ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL BE ASTM F1554-99 GRADE 55 (AASHTO M314). ALL WASHERS SHALL BE 3/8" PLATE (MINIMUM). PAYMENT FOR ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 531.10 "BEARING DEVICE ASSEMBLY".

BEARING SETTING DIMENSIONS

TEMP	"A" DIST.	"B" DIST.
0°F	2 1/4"	2 5/8"
15°F	2 3/8"	2 1/2"
30°F	2 1/2"	2 1/4"
45°F	2"	2 1/8"
60°F	1 15/16"	2 1/4"
75°F	1 11/16"	2 1/8"
90°F	1 3/4"	2 1/8"
105°F	1 5/8"	2"

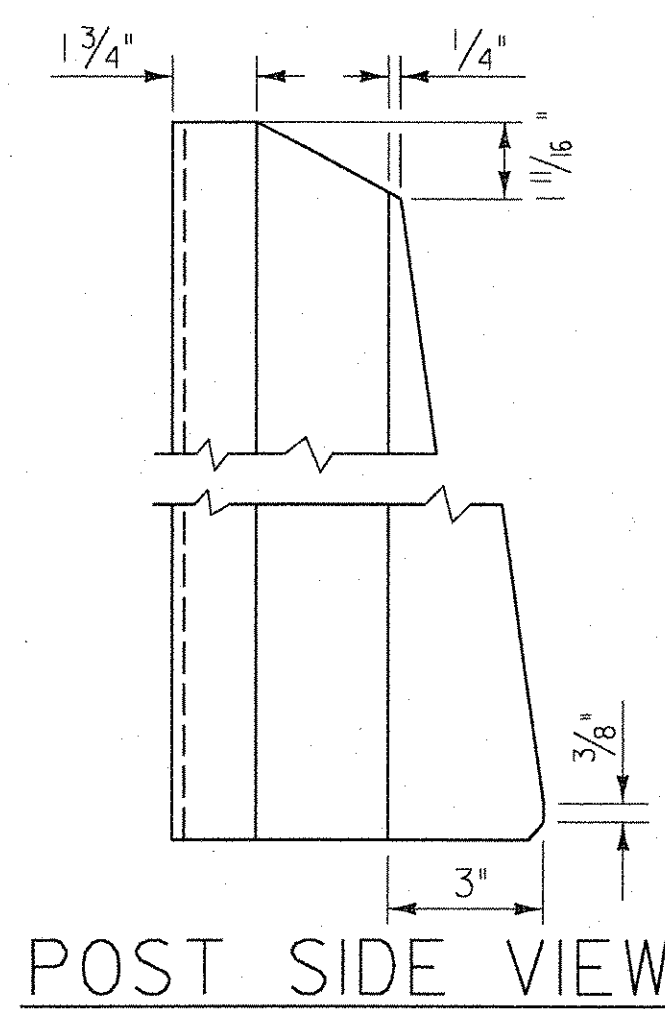
**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT. ROUTE 15	Log Sta.	
		Surv. Sta.	
VT. ROUTE 15 OVER GIHON RIVER			
BEARING DETAILS			
Designed By	R.RICARD	Drawn By	D.DUGAL
Checked By	Date	Bridge Design Supervisor	
		J. BYATT	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.		Bridge Sheet No.	Sheet 56 Of 85

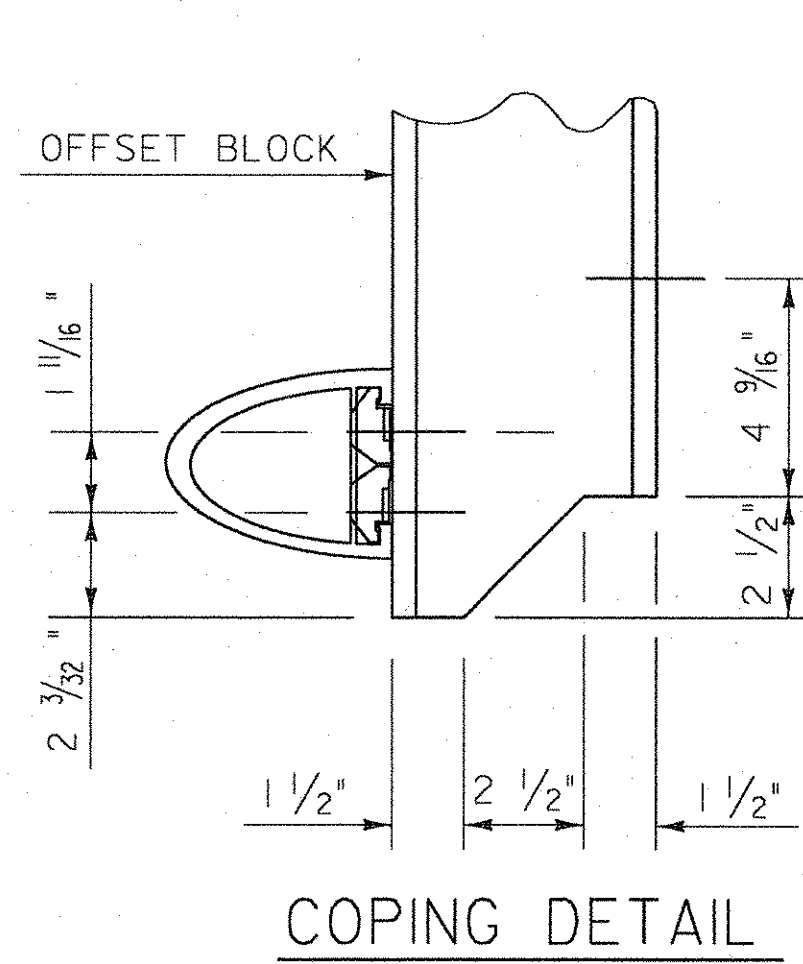


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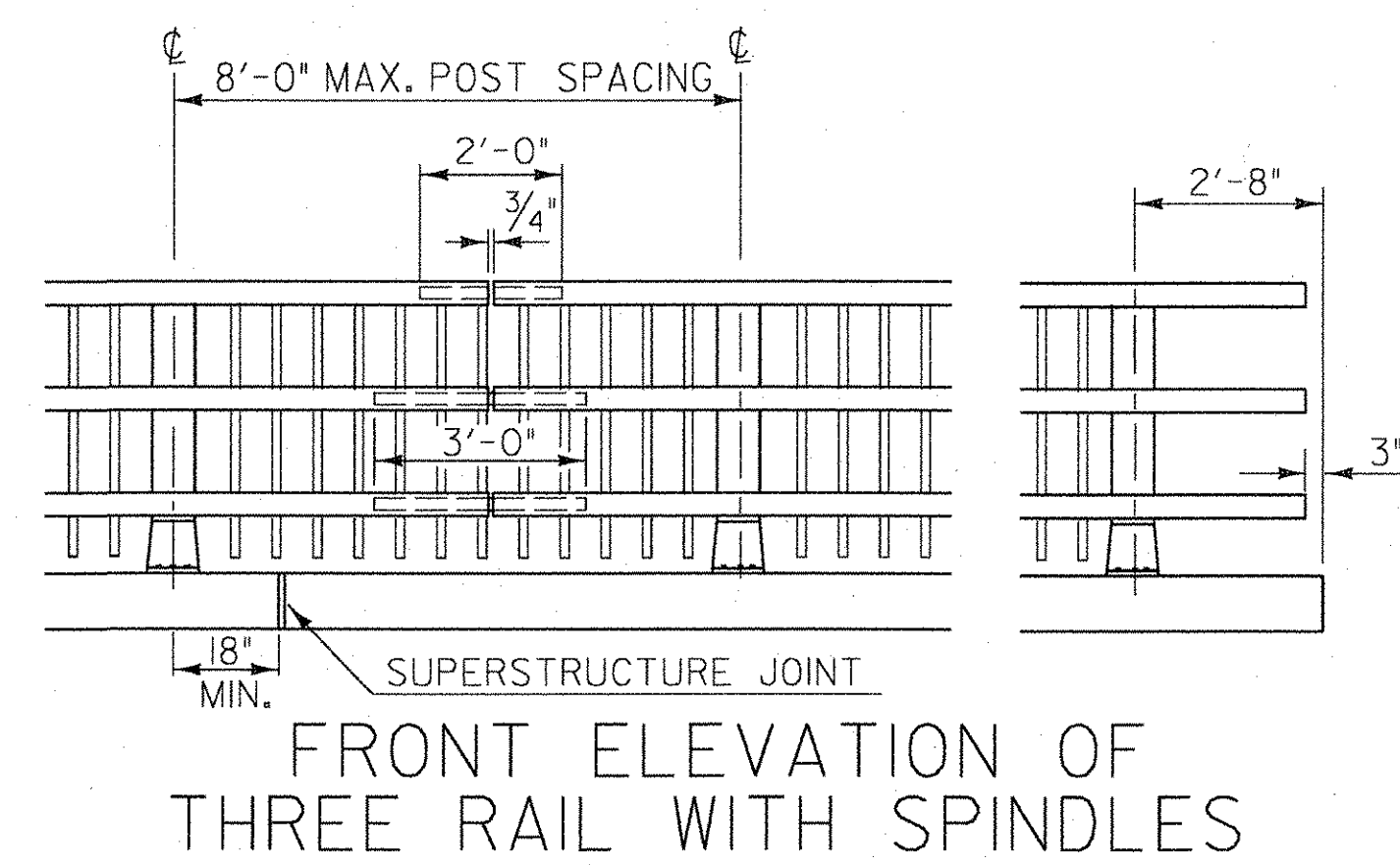
91296BEARING.DWG



POST SIDE VIEW

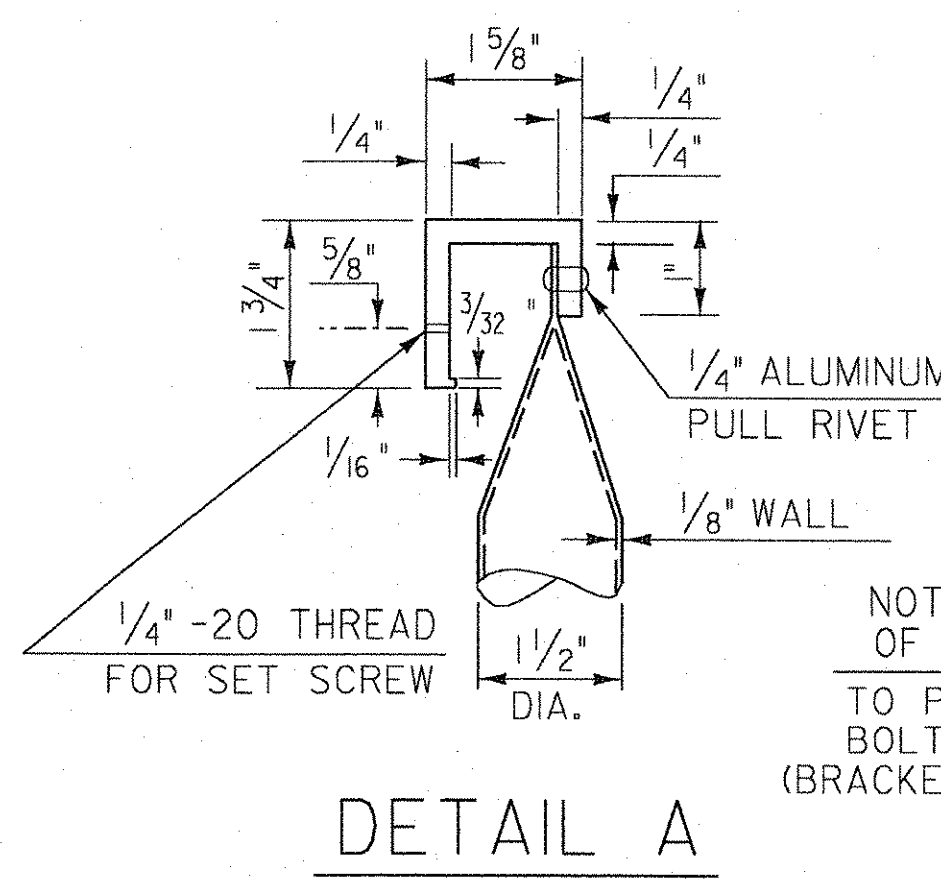


COPING DETAIL

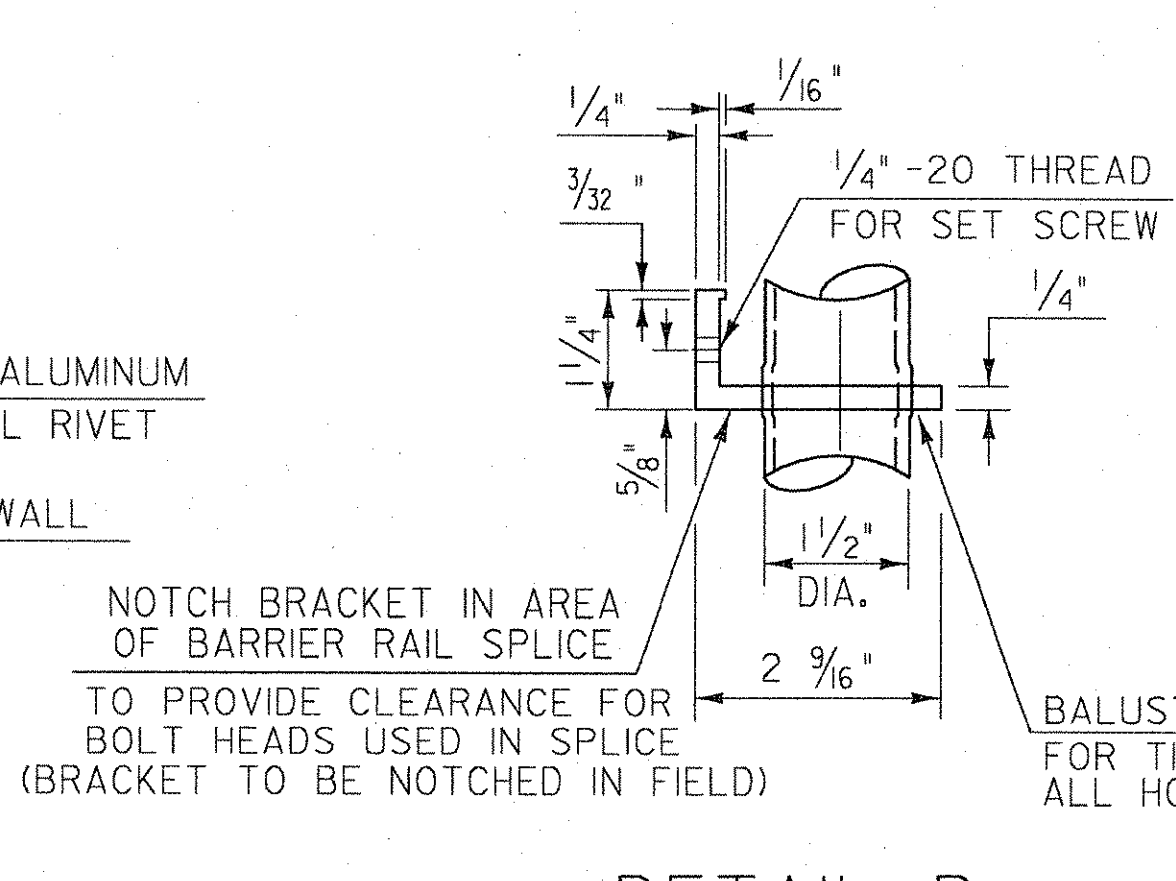


FRONT ELEVATION OF THREE RAIL WITH SPINDLES

NOTE: RAIL POSTS ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE DESIGNATED ON BRIDGE PLANS. ALL DIMENSIONS ARE TYPICAL UNLESS OTHERWISE DESIGNATED ON BRIDGE PLANS.



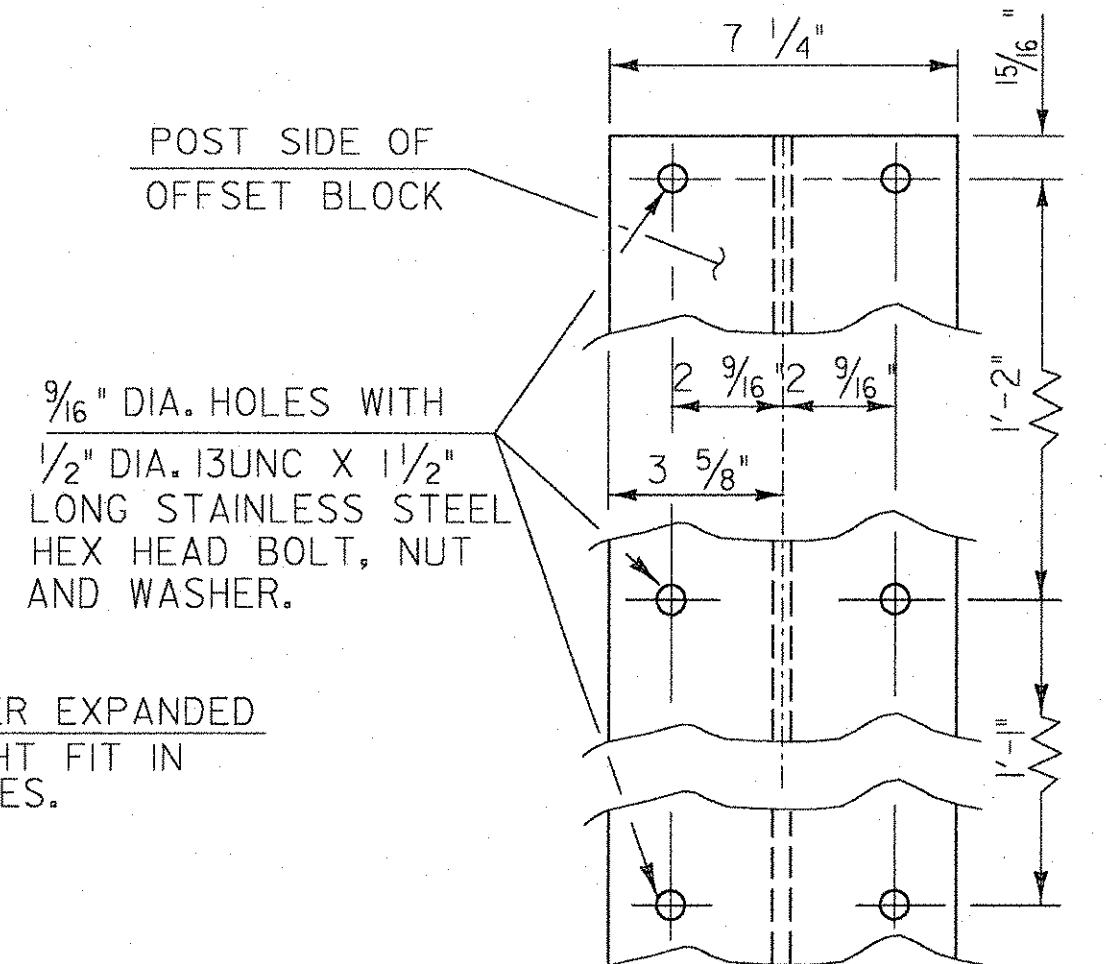
DETAIL A



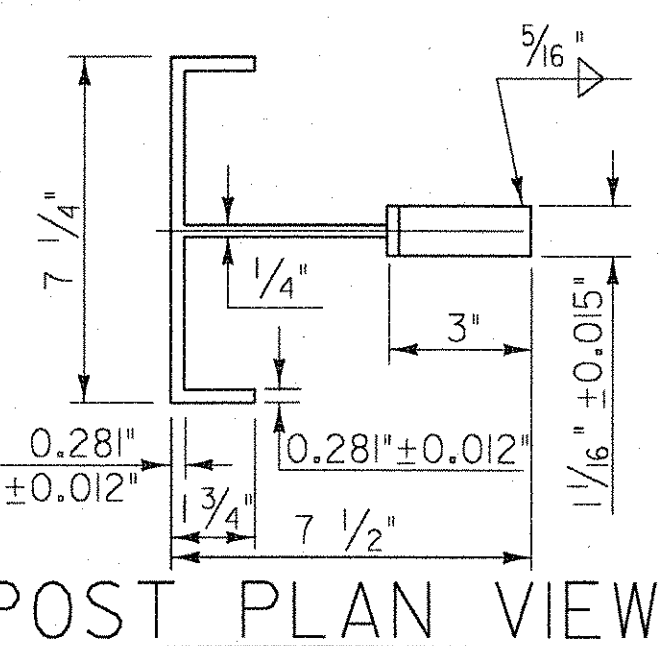
DETAIL B

NOTCH BRACKET IN AREA OF BARRIER RAIL SPLICE TO PROVIDE CLEARANCE FOR BOLT HEADS USED IN SPLICE (BRACKET TO BE NOTCHED IN FIELD)

BALUSTER EXPANDED FOR TIGHT FIT IN ALL HOLES.



OFFSET BLOCK CONNECTION



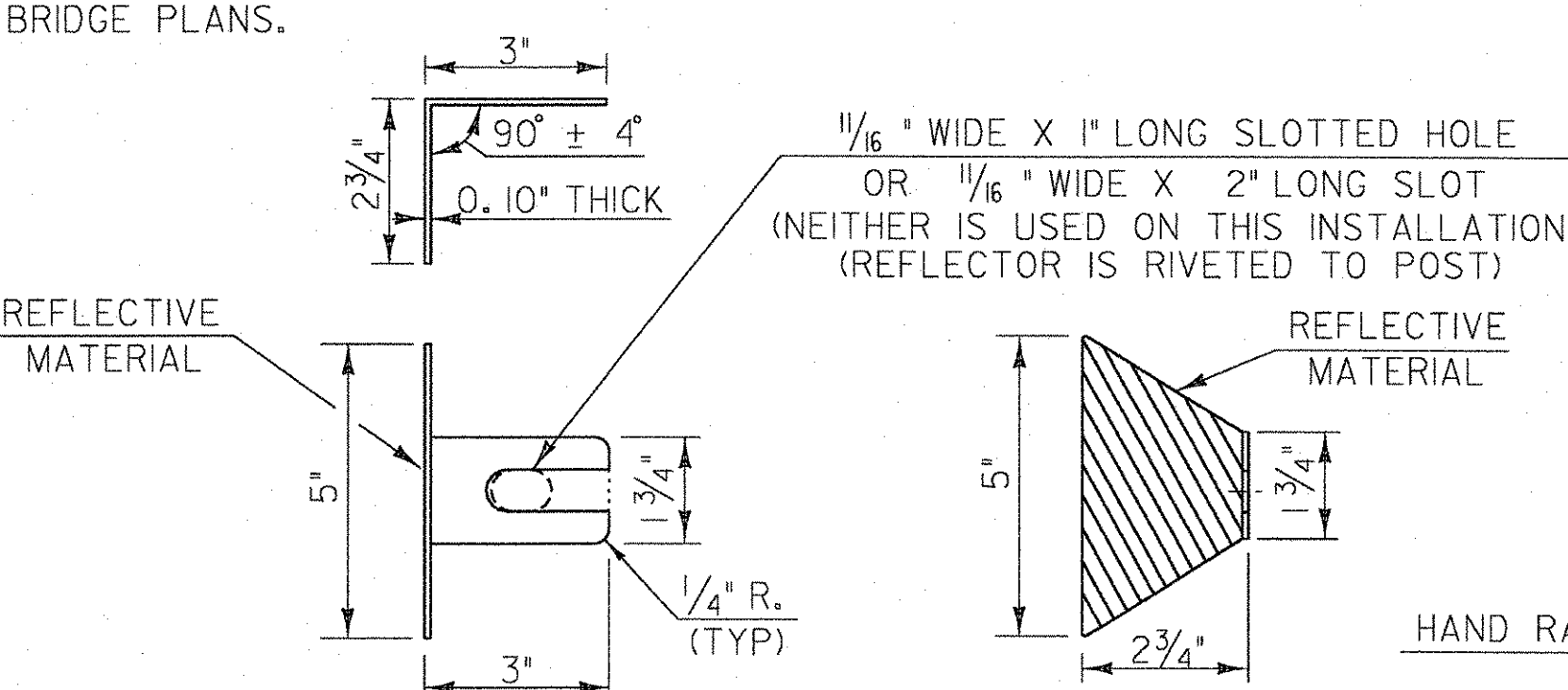
POST PLAN VIEW

THIS REFLECTORIZED ALUMINUM DELINEATOR IS TO BE ERECTED EVERY 30 FEET (OR CLOSEST POST) WITH 2 NO. 8 X 3/4" SELF-TAPPING SCREWS.

DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.

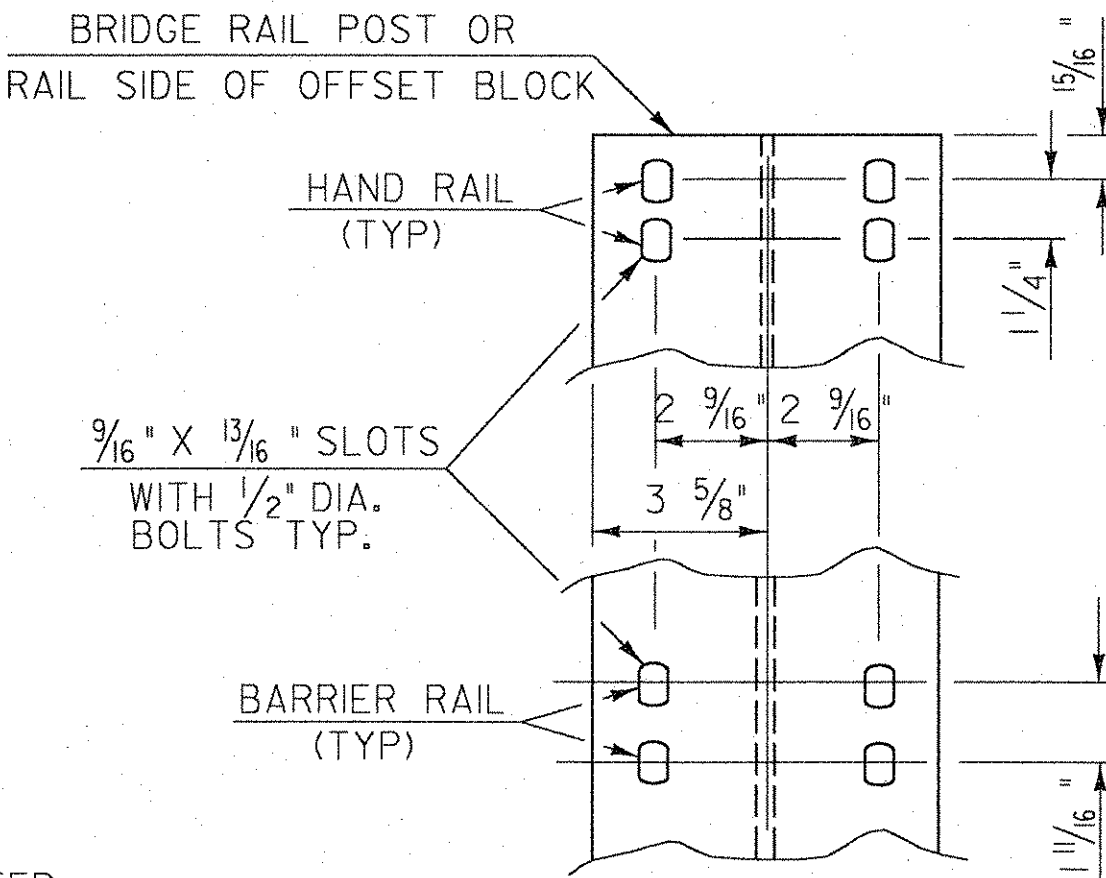
REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVER'S LEFT AND SILVER ON THEIR RIGHT.

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 RAIL ON THE CURB SIDE) PAYMENT SHALL BE SUBSIDIARY TO ALL OTHER ITEMS.

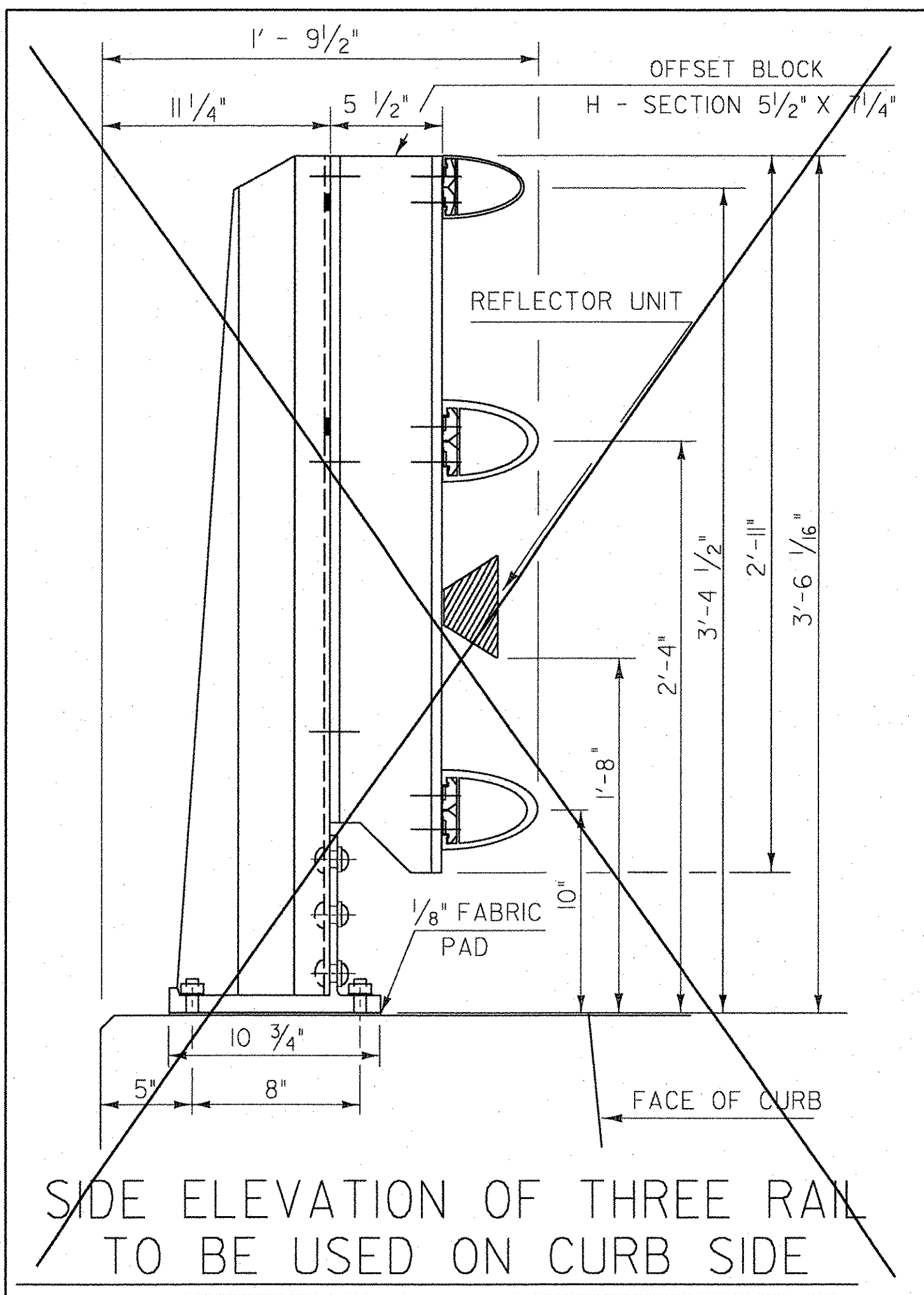


REFLECTOR DETAILS

ALLOWABLE STRESSES:
RAILING: 21,000 PSI TENSION
22,000 PSI COMPRESSION
POSTS: 17,000 PSI TENSION
19,000 PSI COMPRESSION

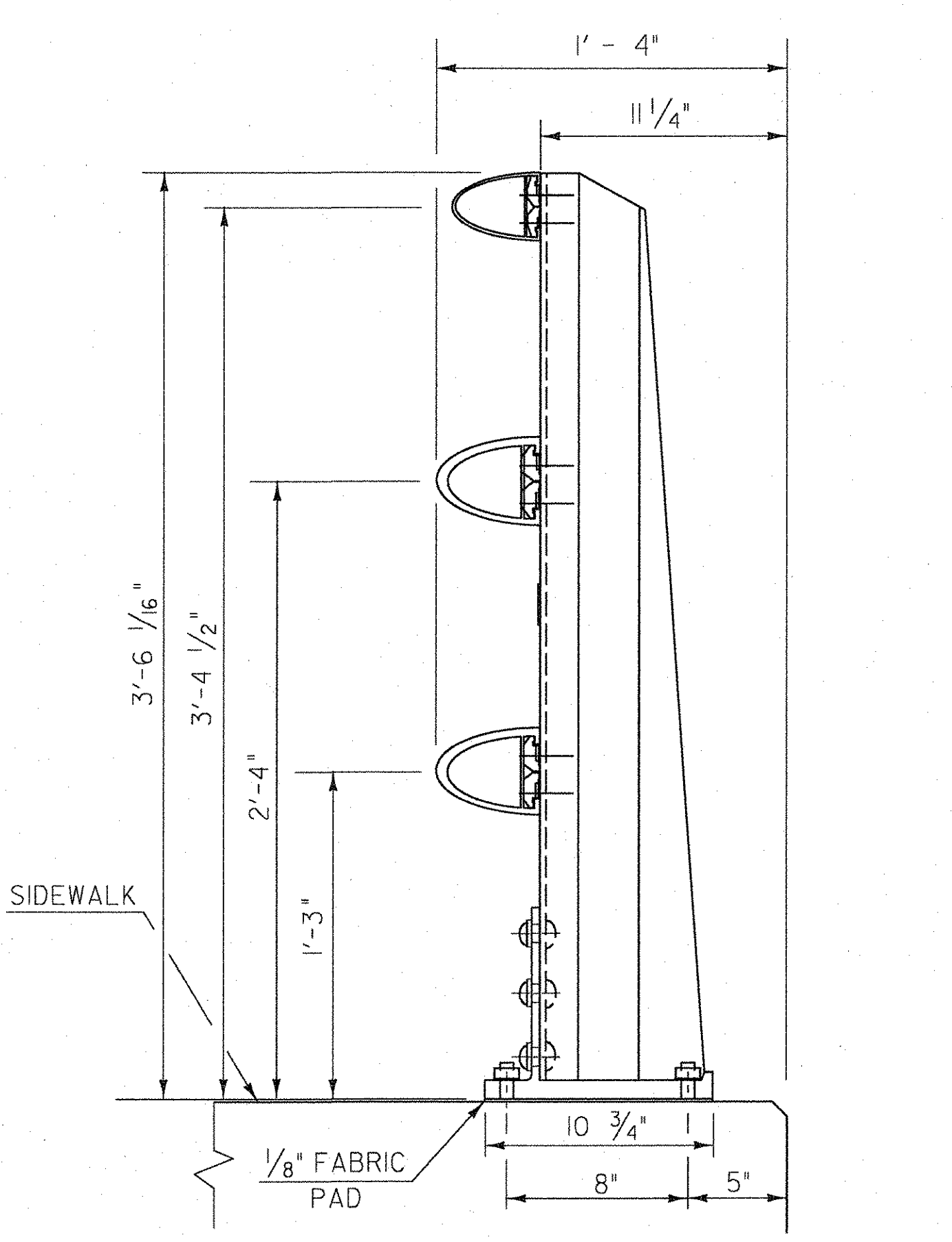


RAIL CONNECTION



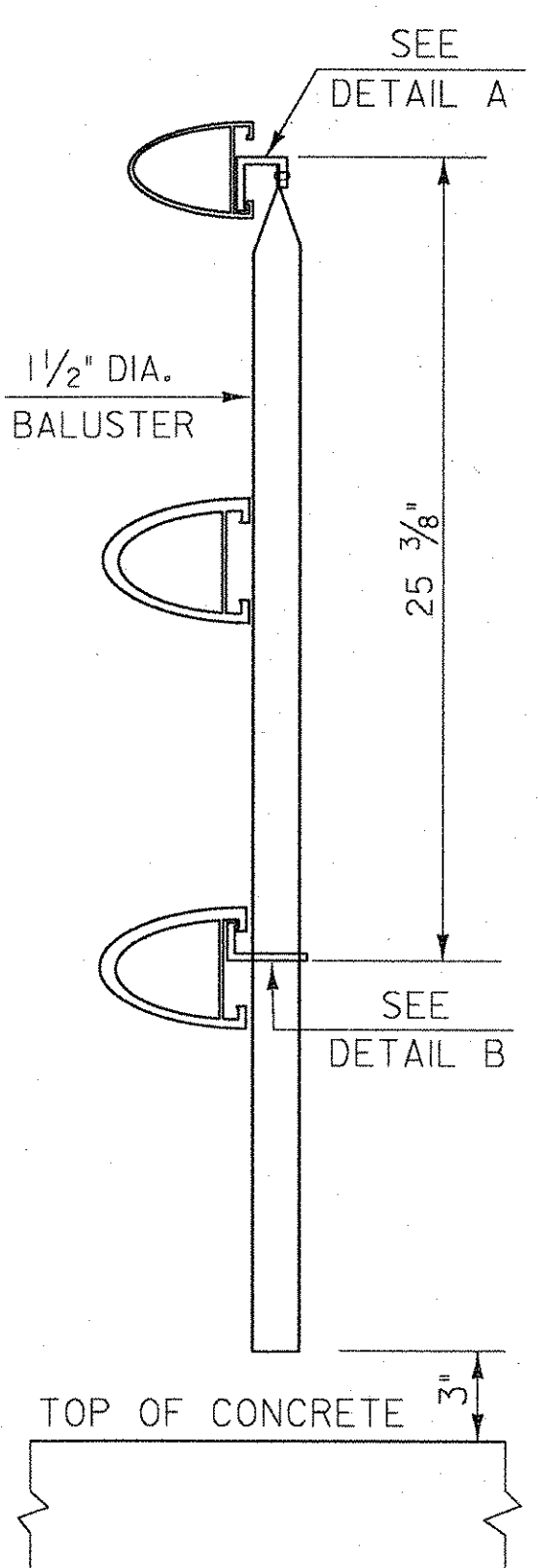
SIDE ELEVATION OF THREE RAIL TO BE USED ON CURB SIDE

RAIL POST DETAILS ON SUPERSTRUCTURE



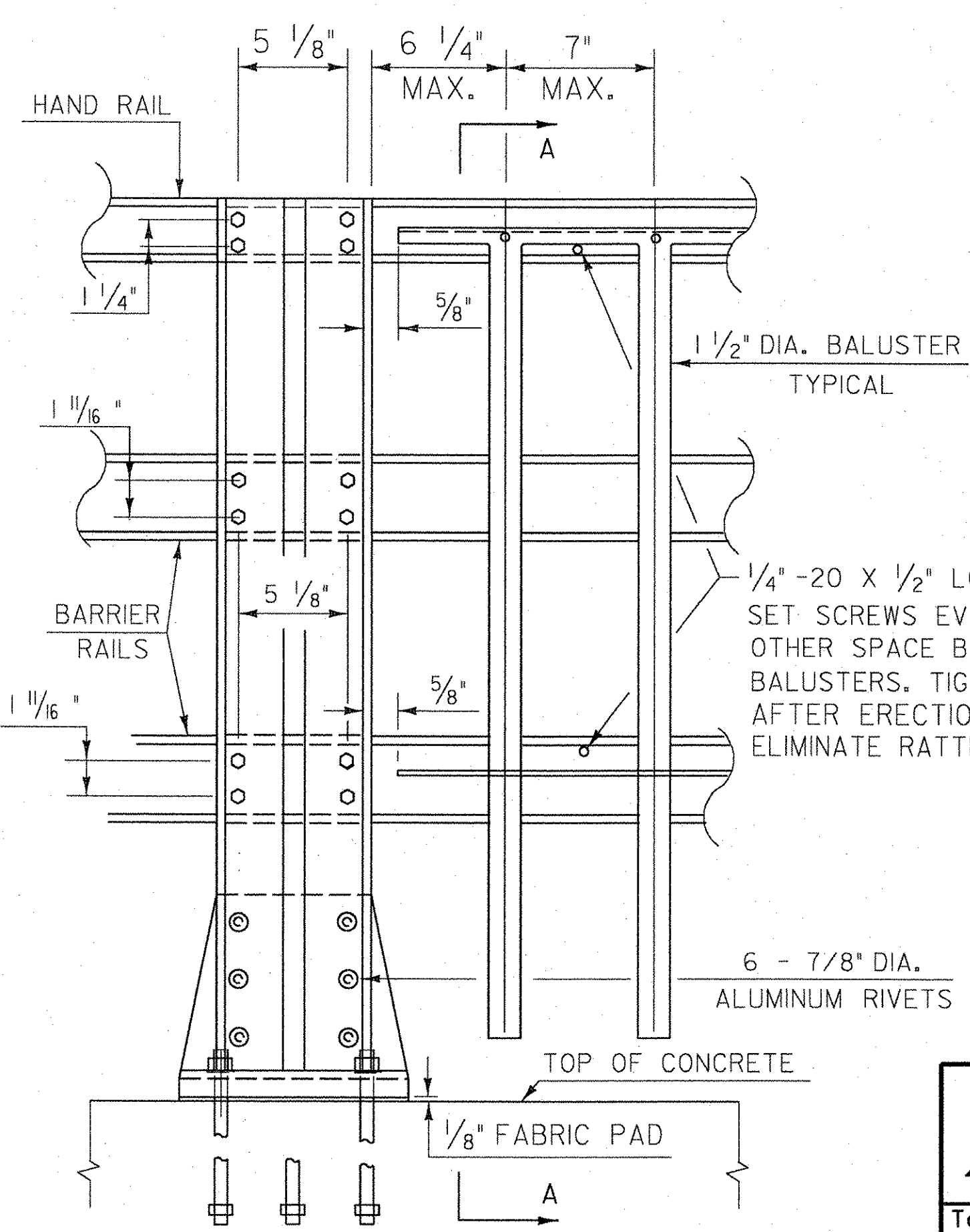
SIDE ELEVATION OF THREE RAIL TO BE USED ON SIDEWALK SIDE

RAIL POST DETAILS ON SUPERSTRUCTURE

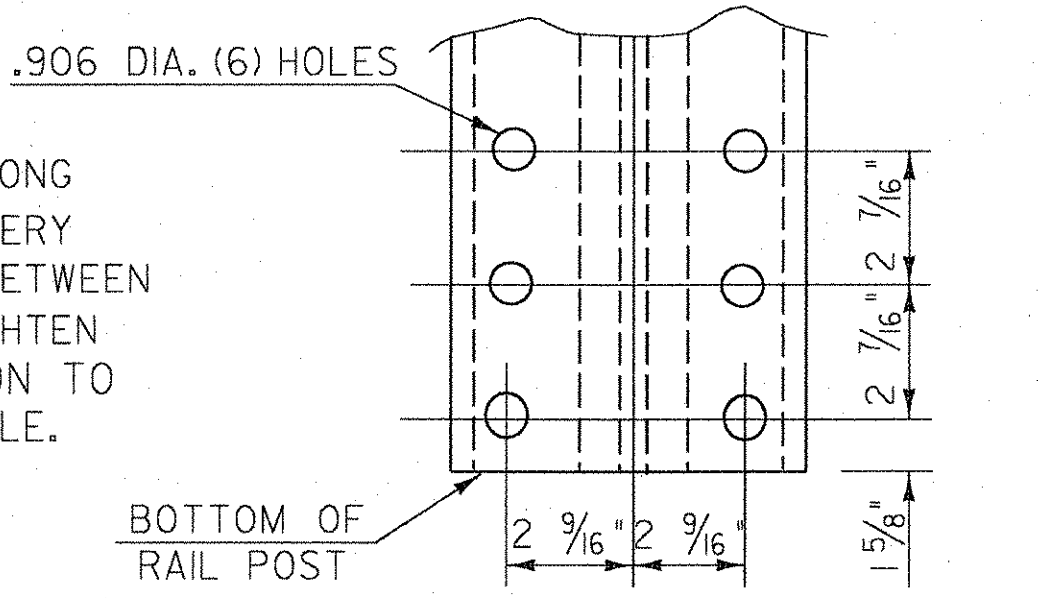


SECTION AA

DETAILS OF SPINDLES FOR ALUMINUM RAILING

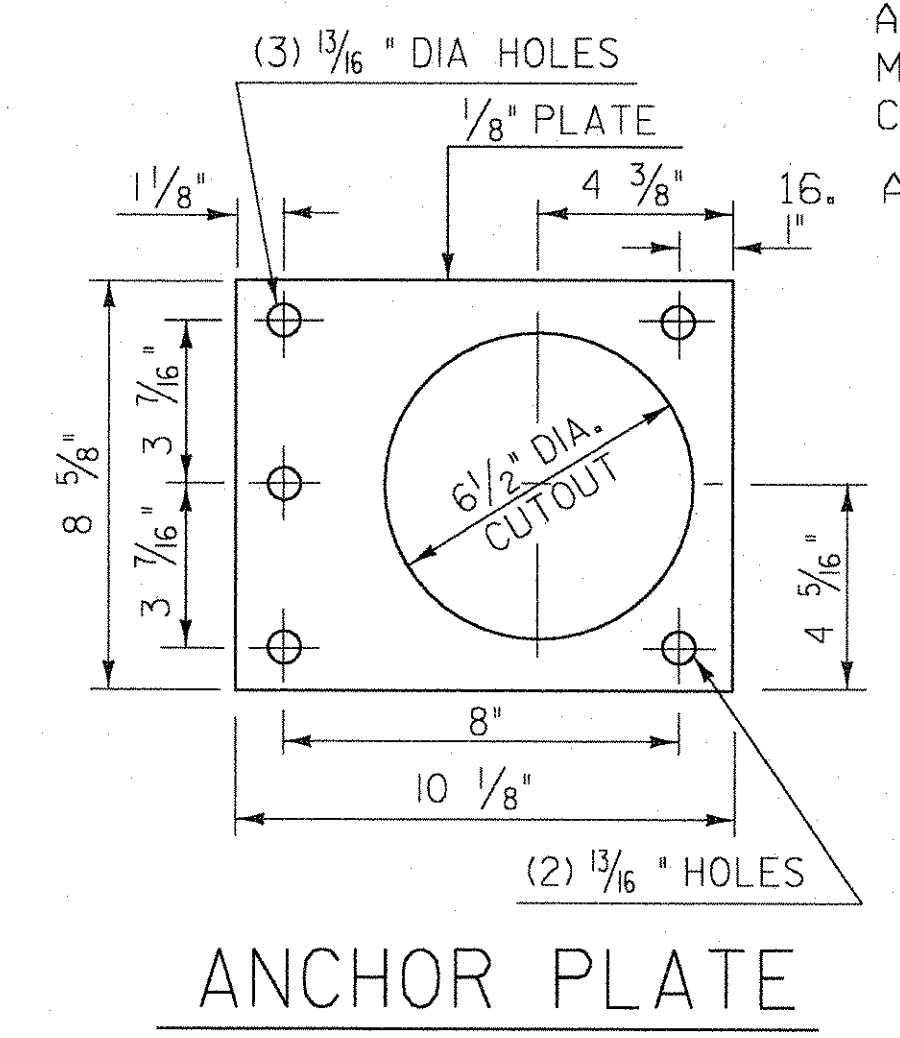
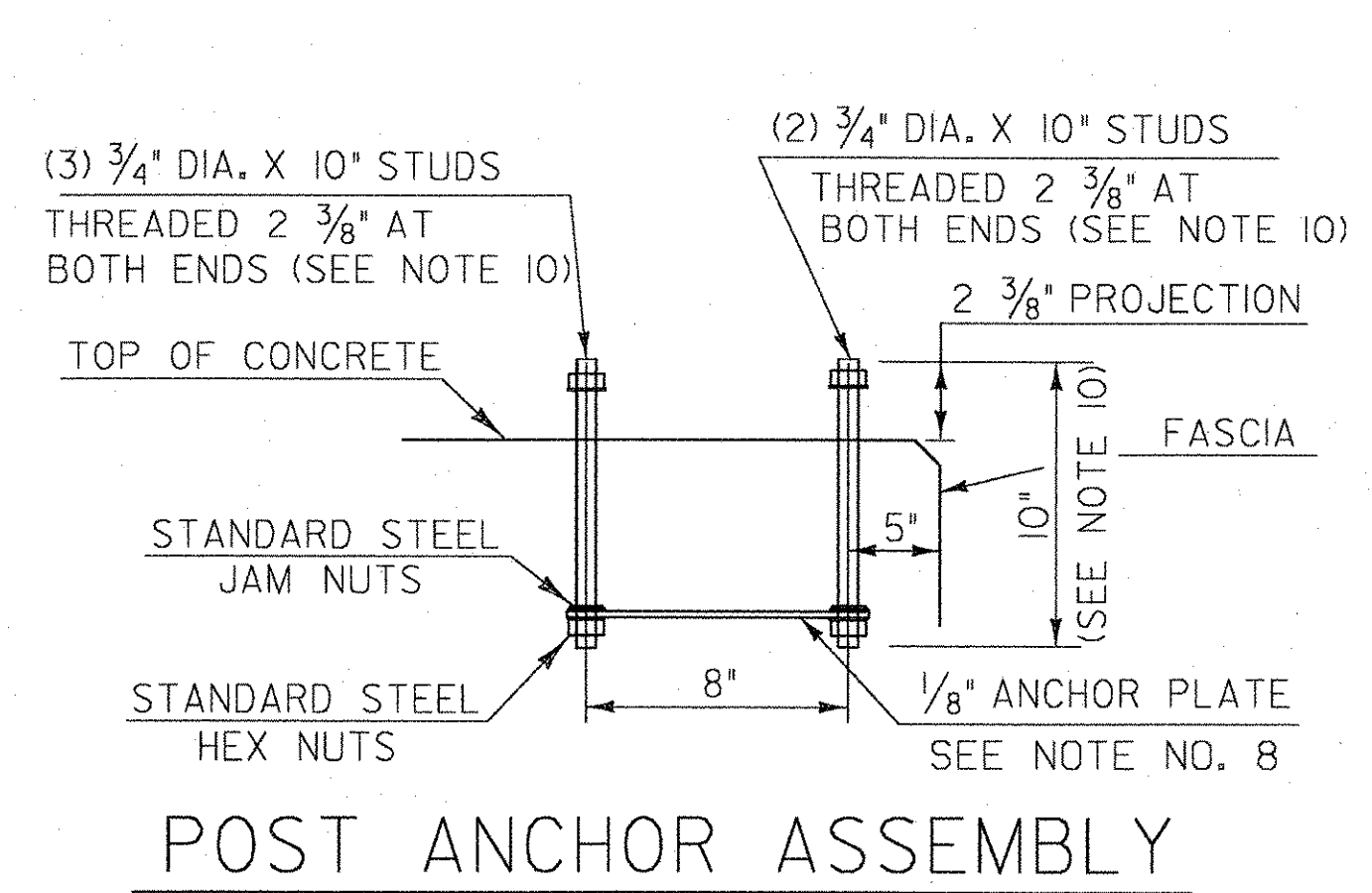
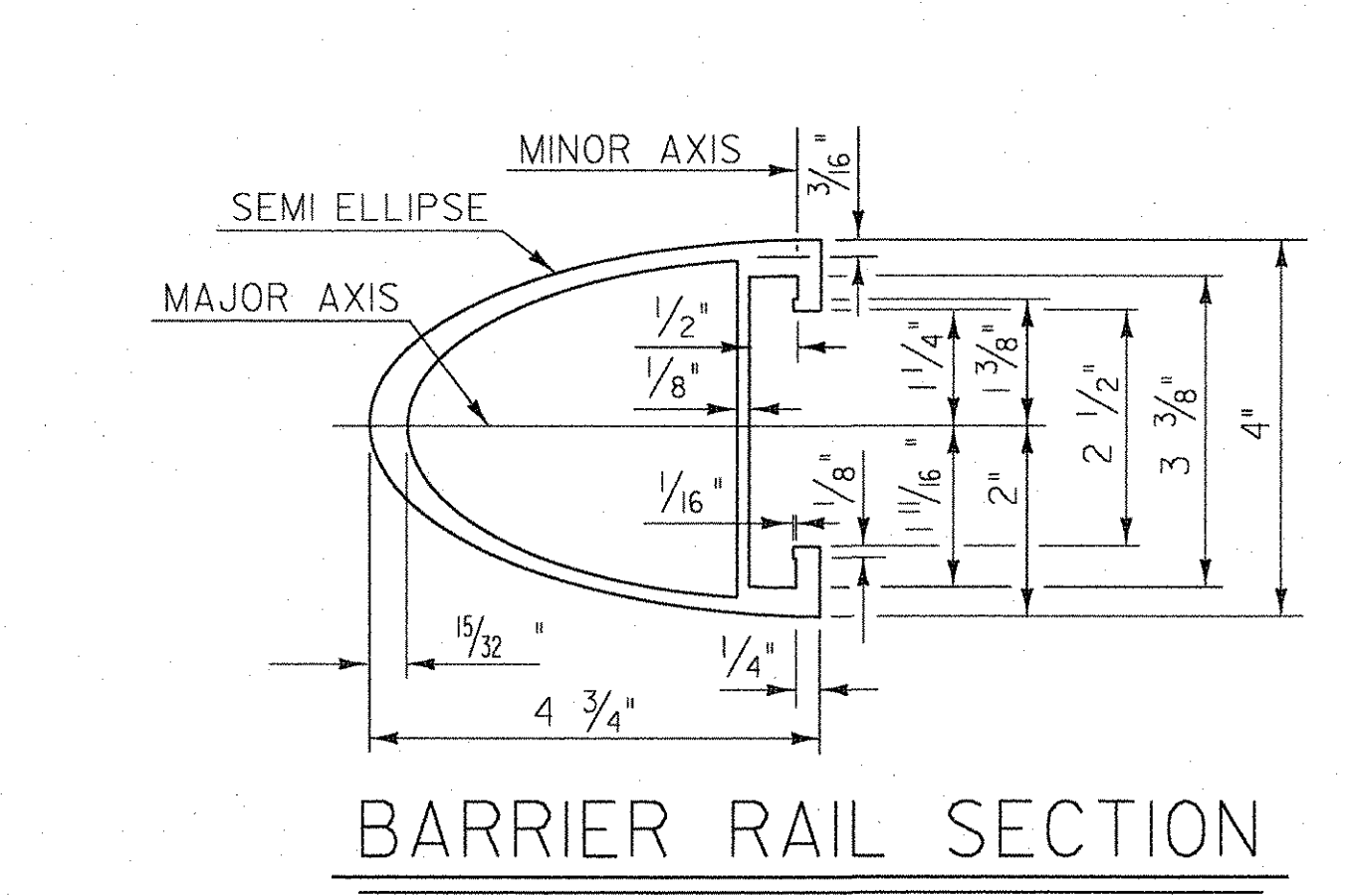
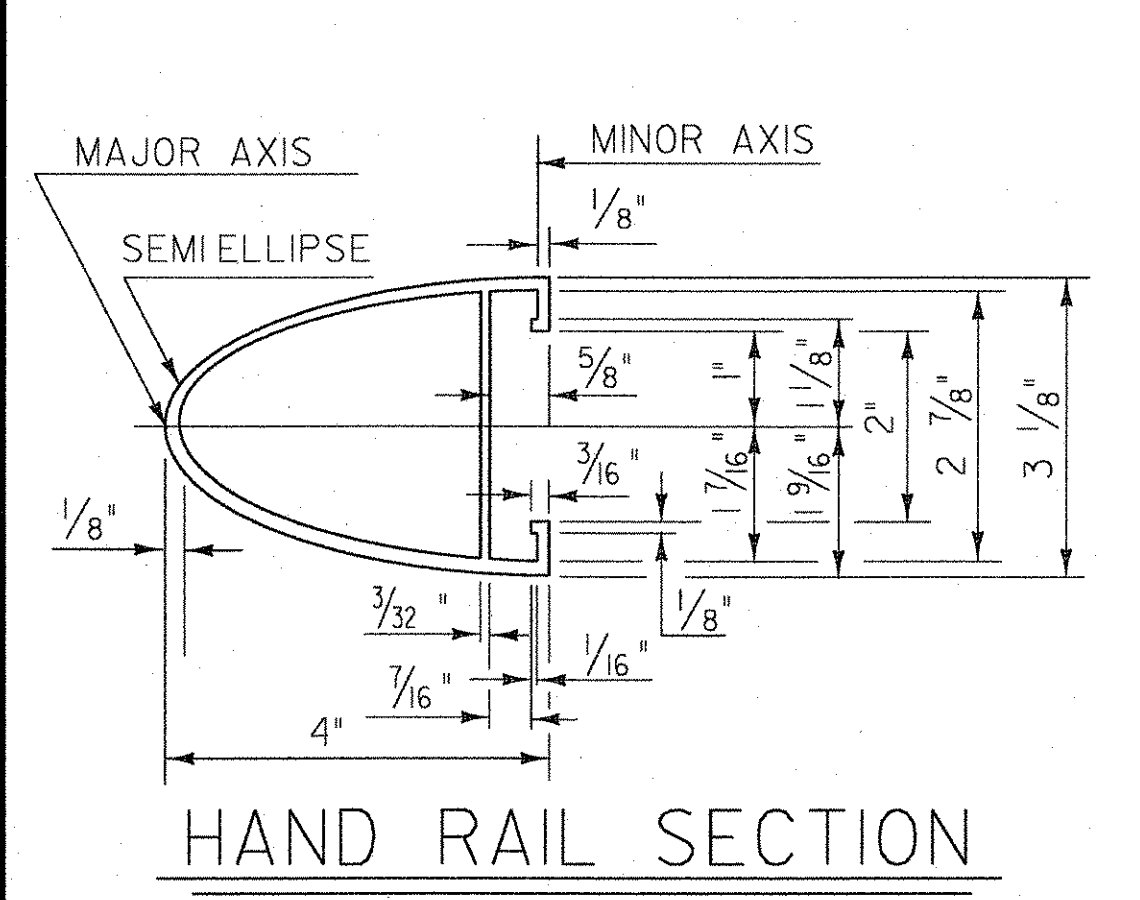
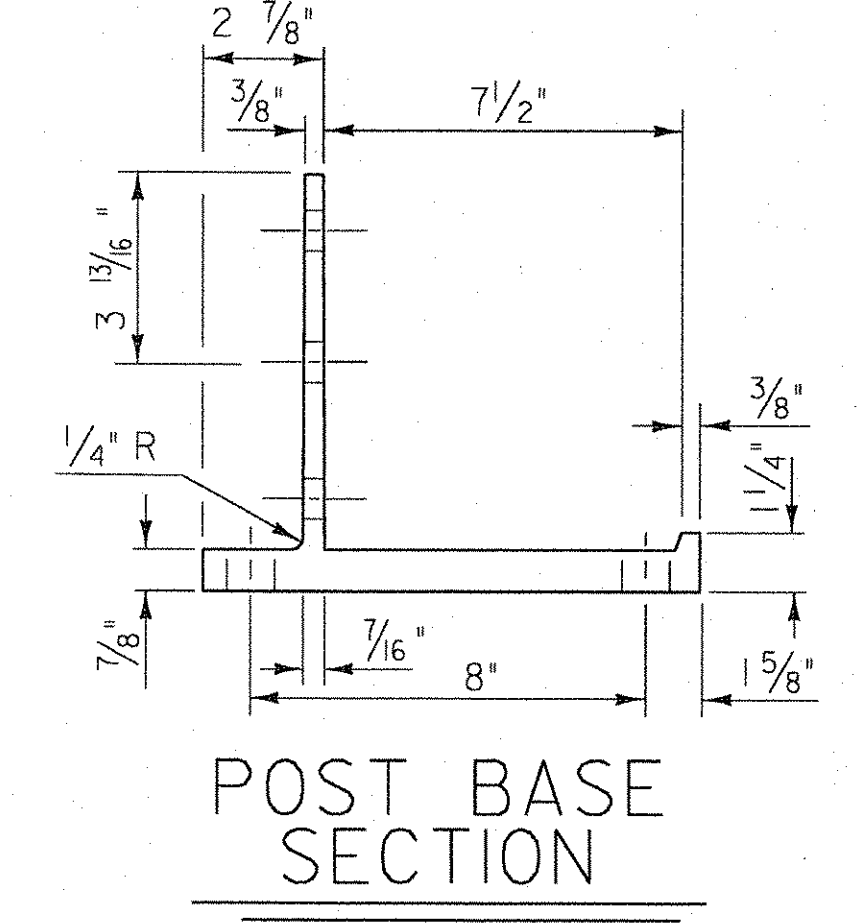
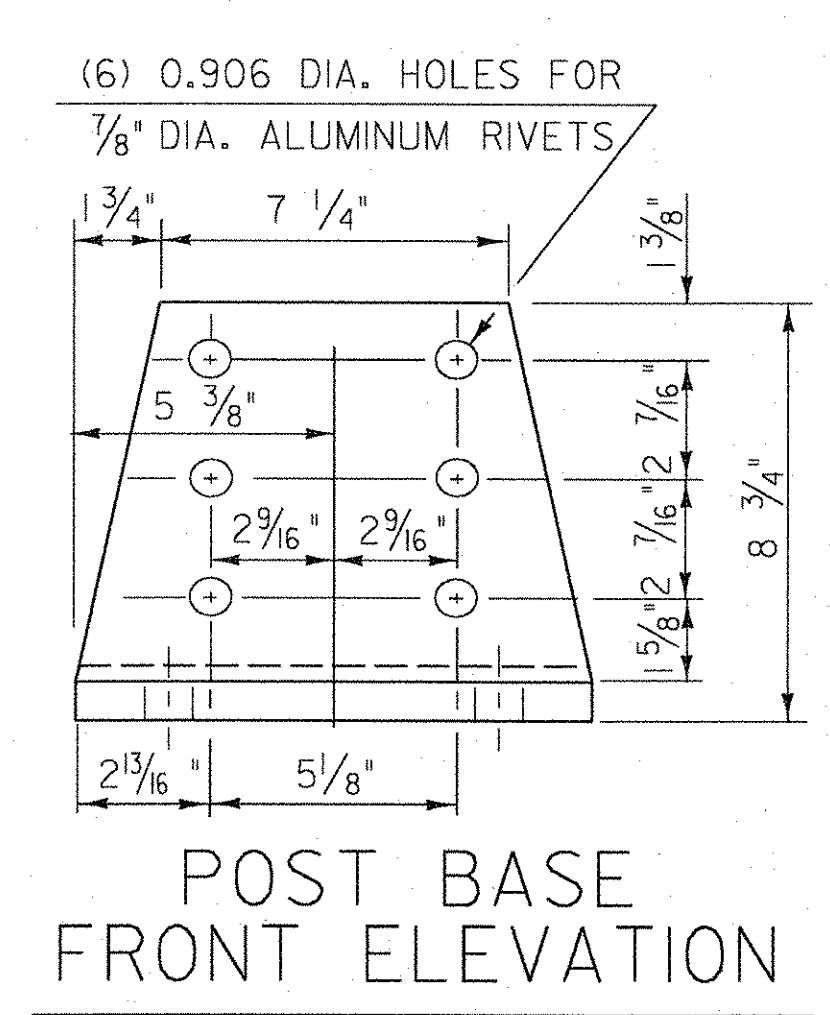
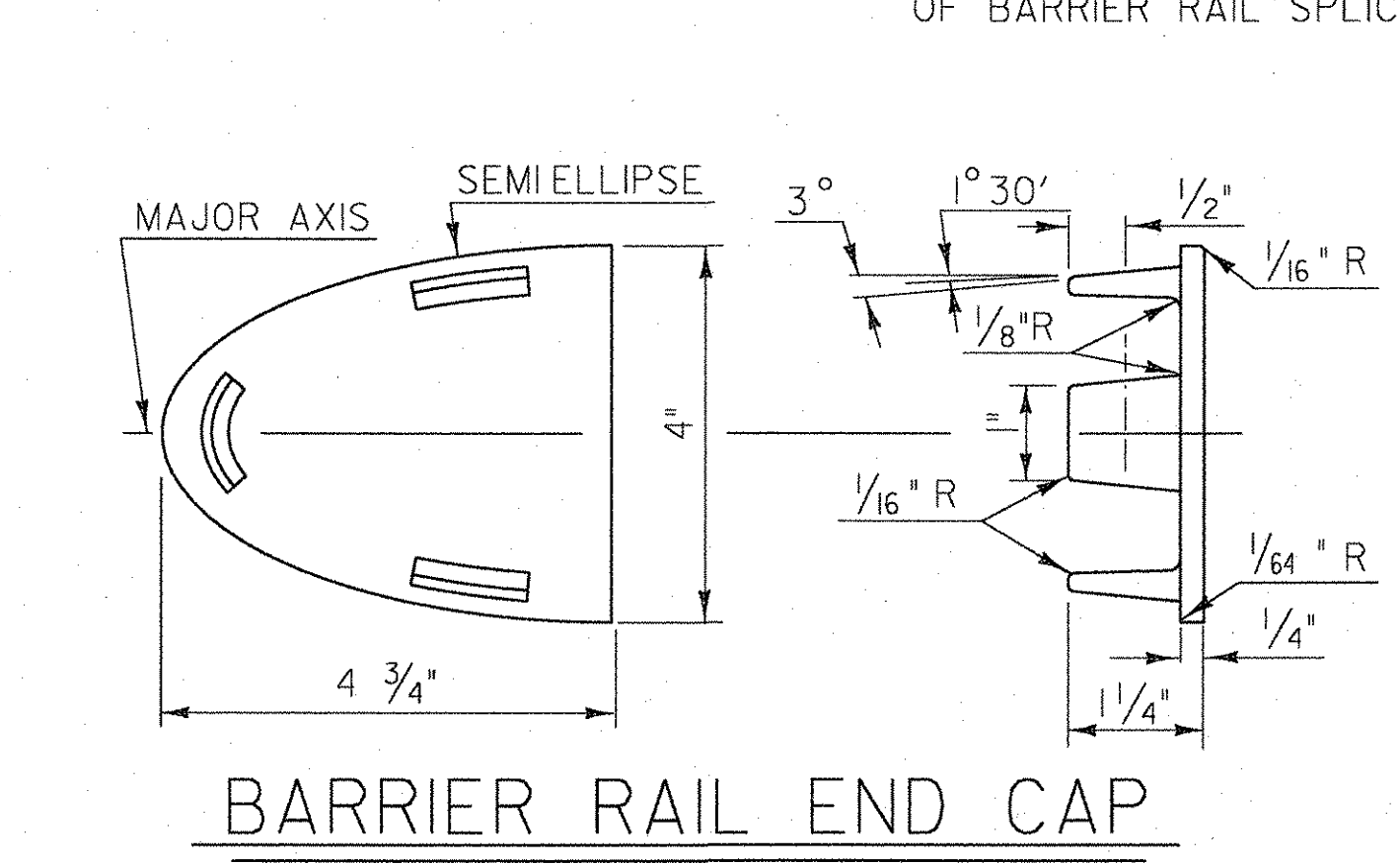
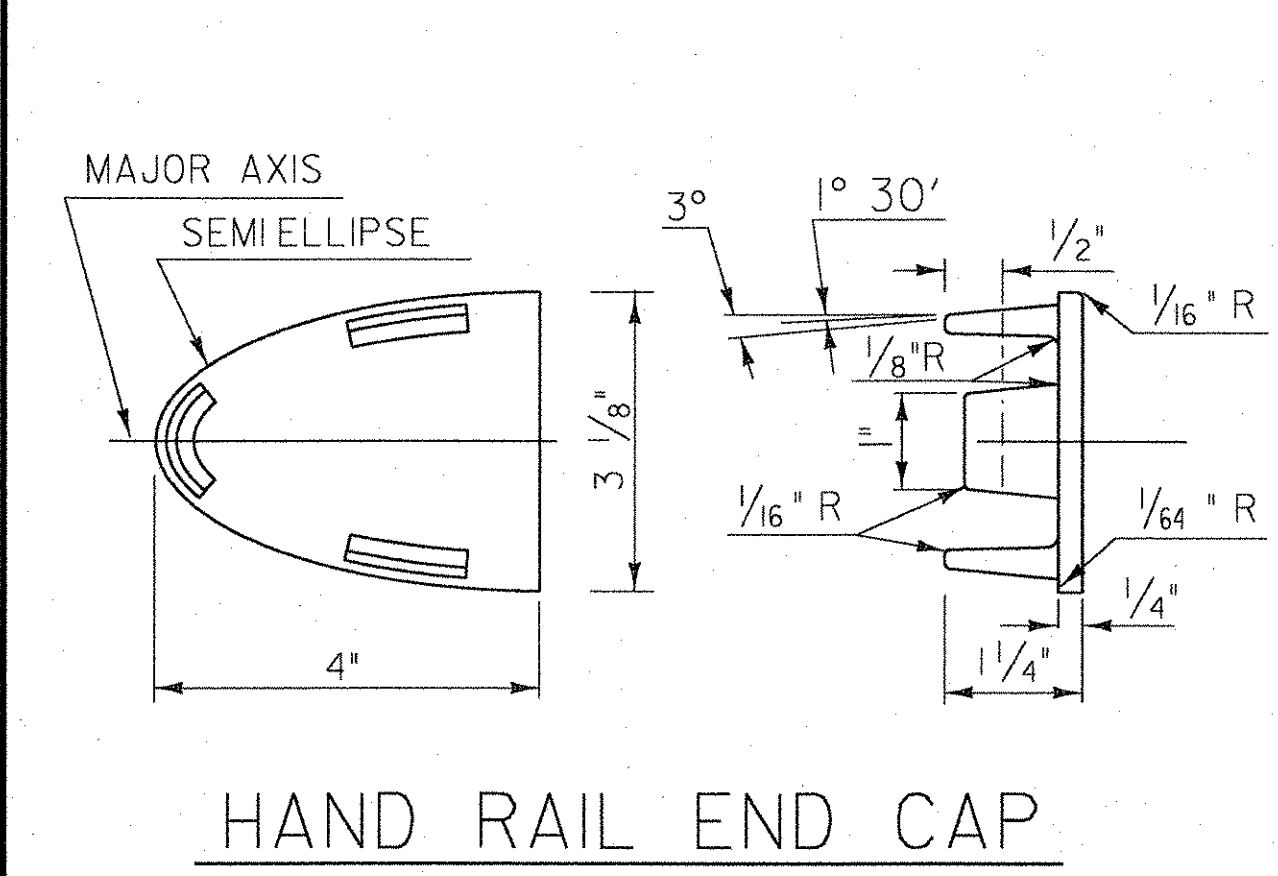
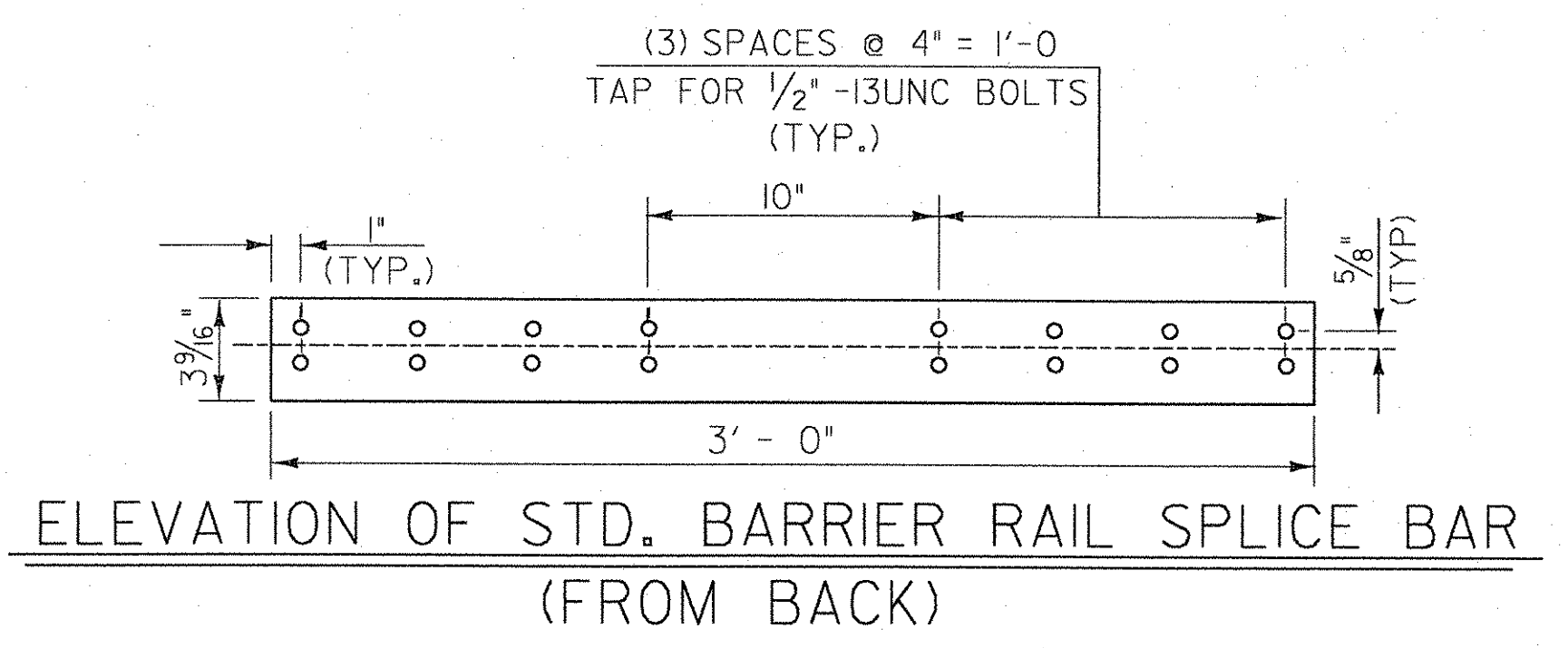
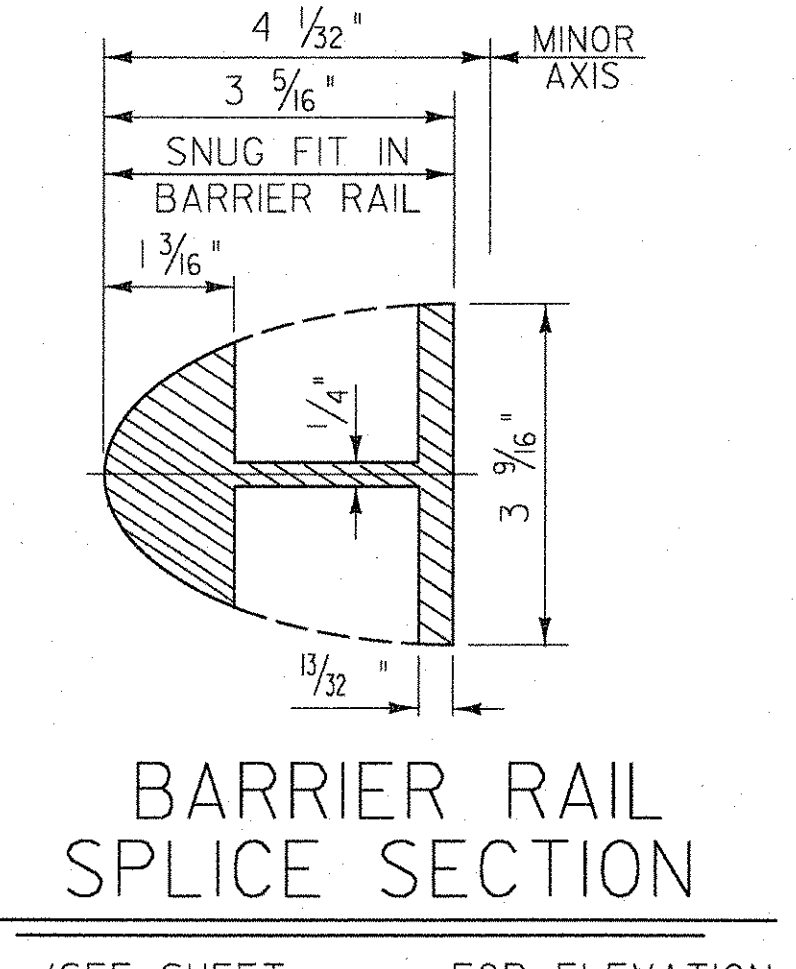
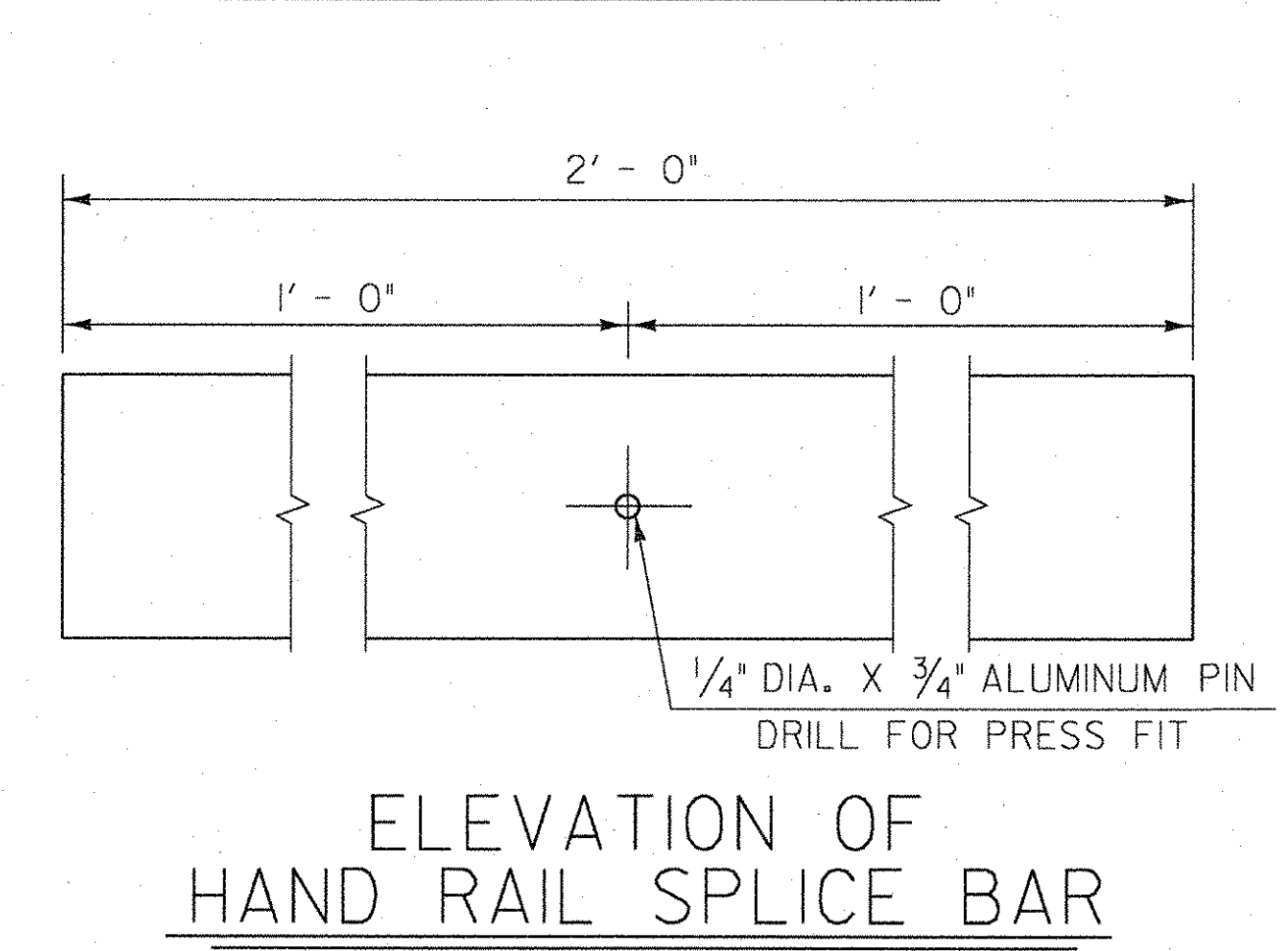
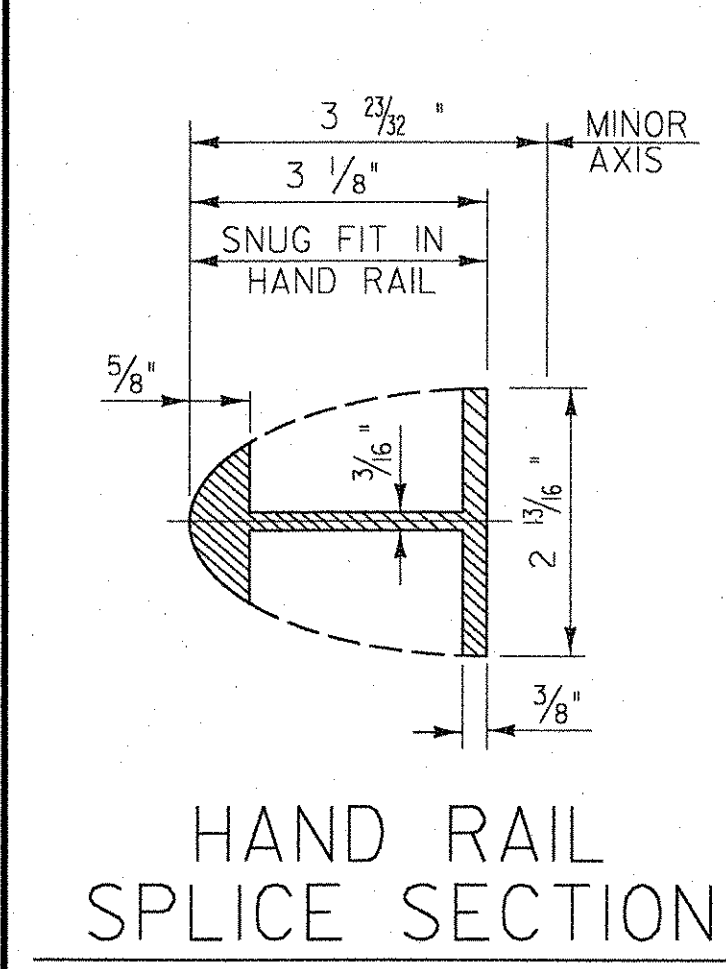
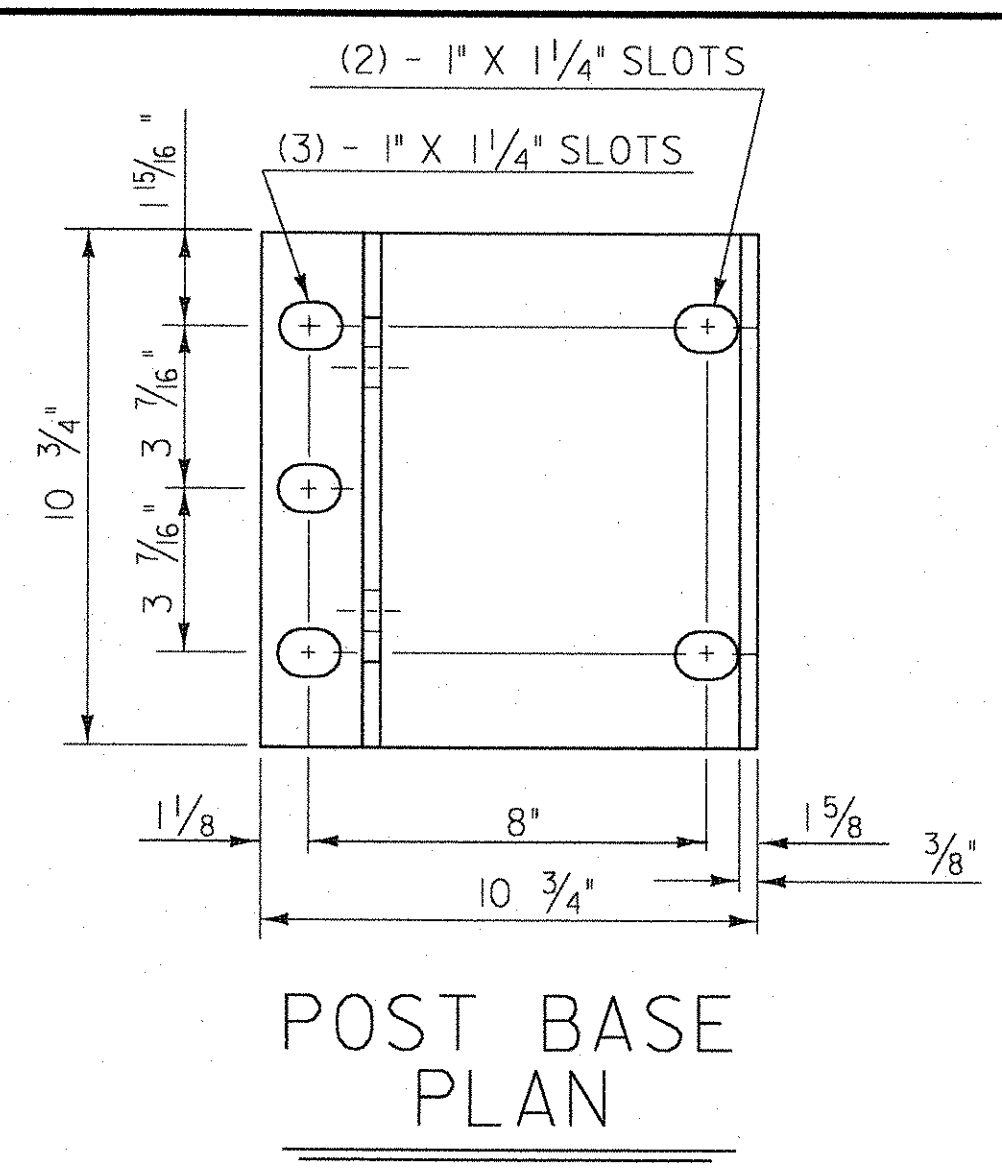
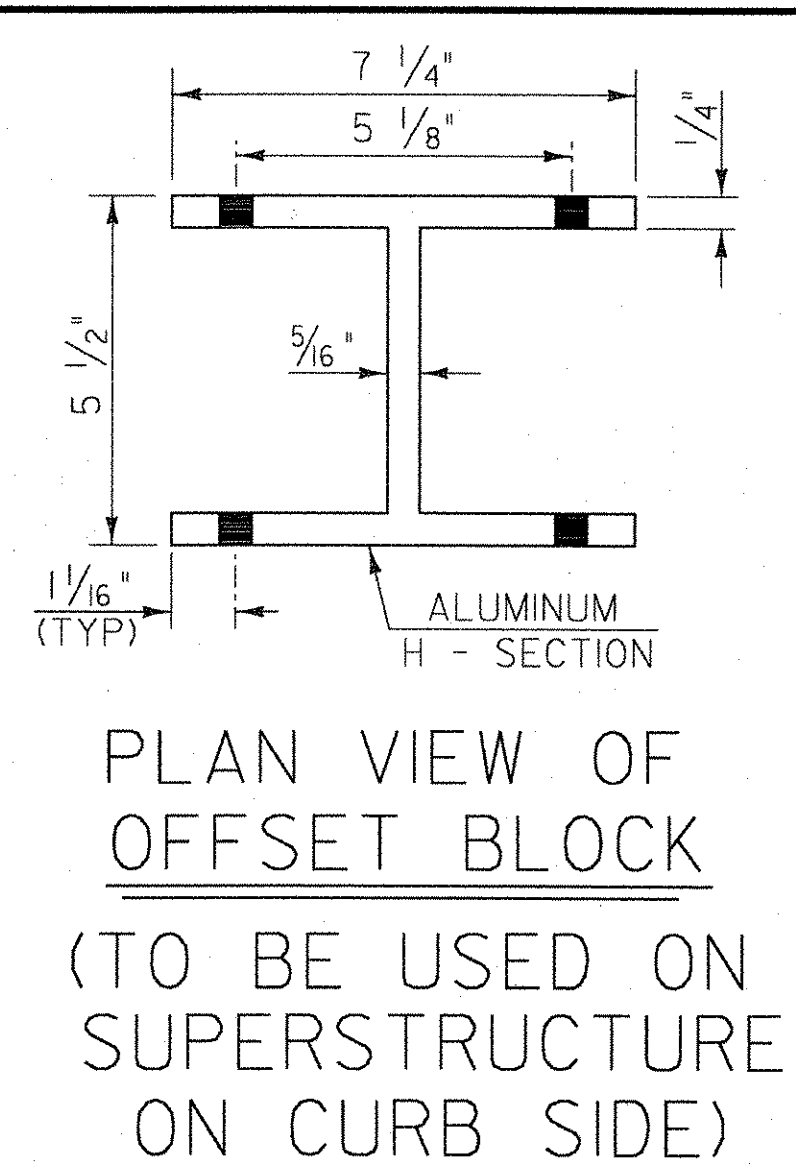
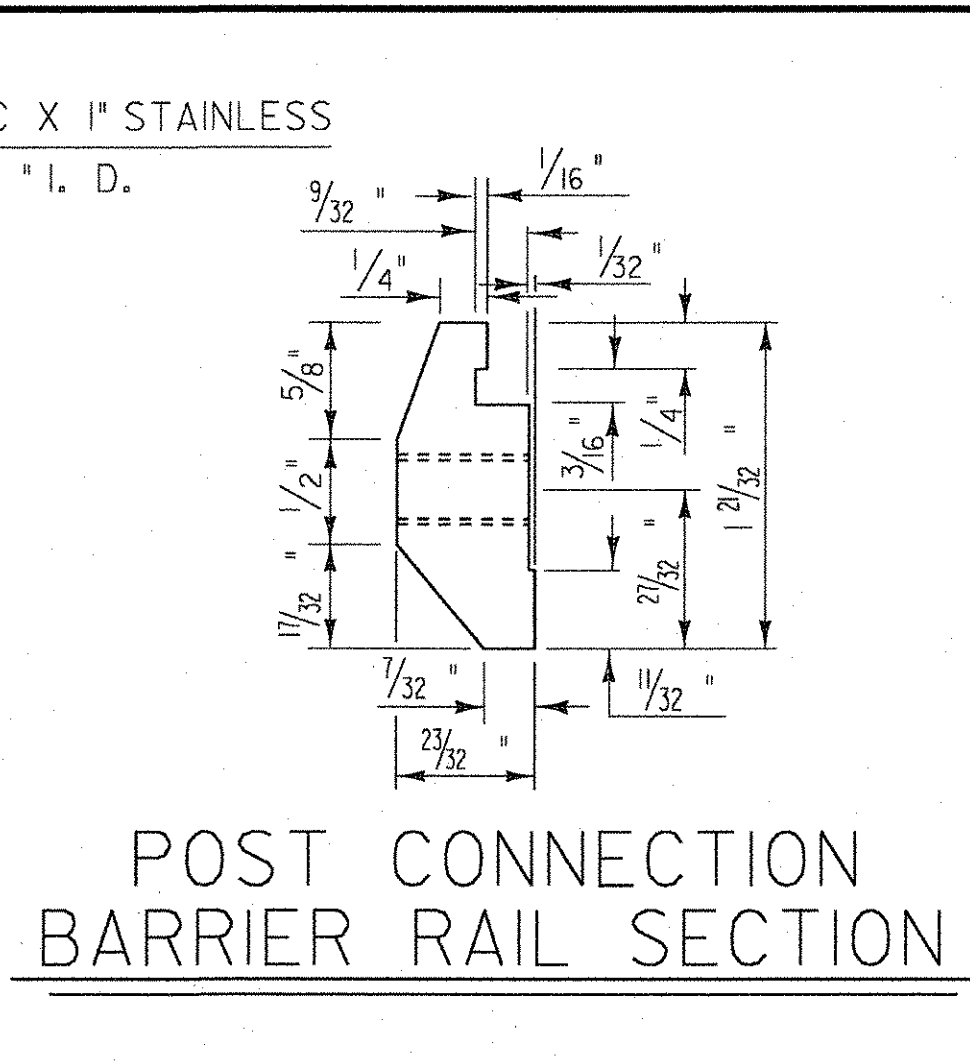
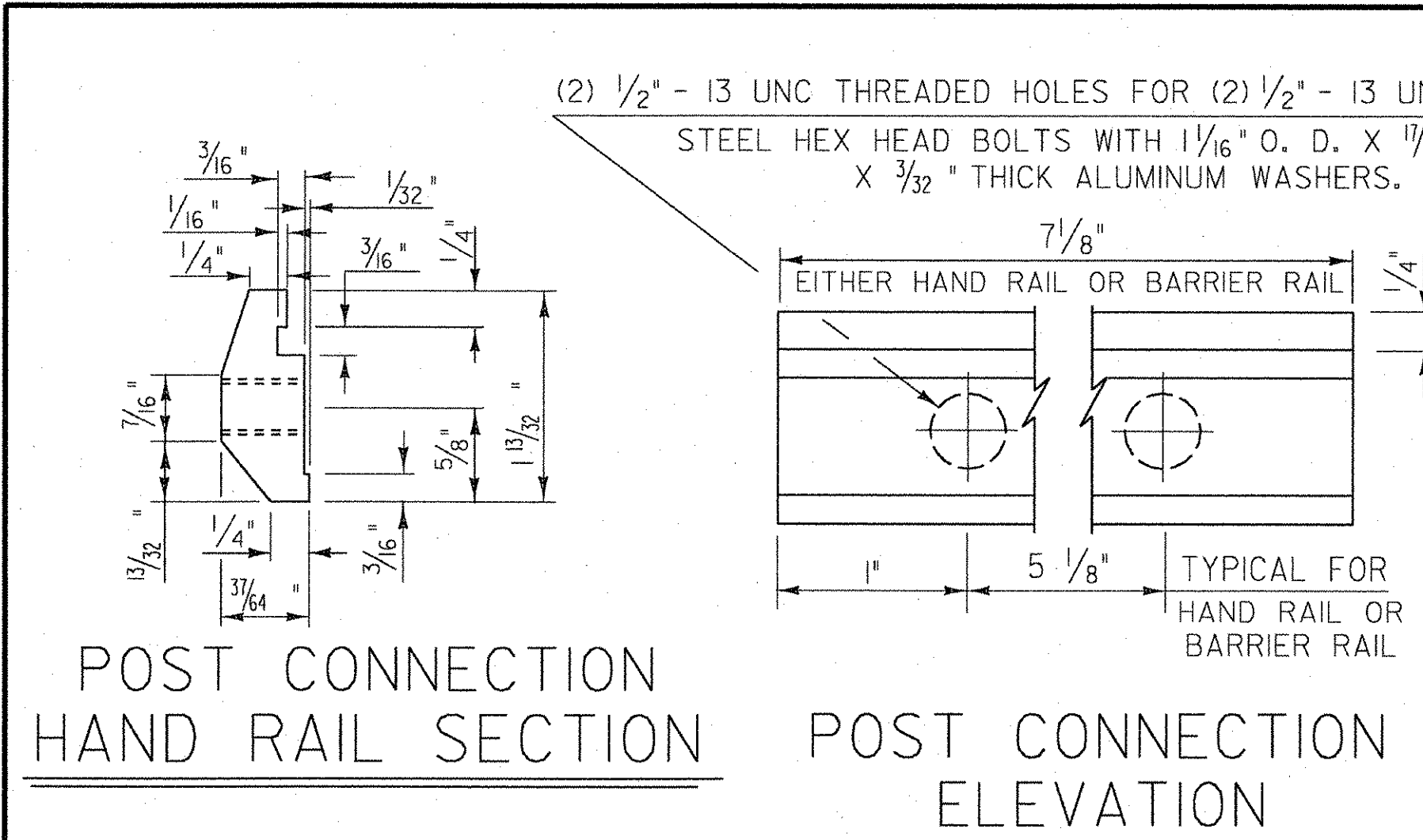


OUTSIDE ELEVATION OF THREE RAIL POST & SPINDLES



POST BASE BOLT HOLE DETAILS

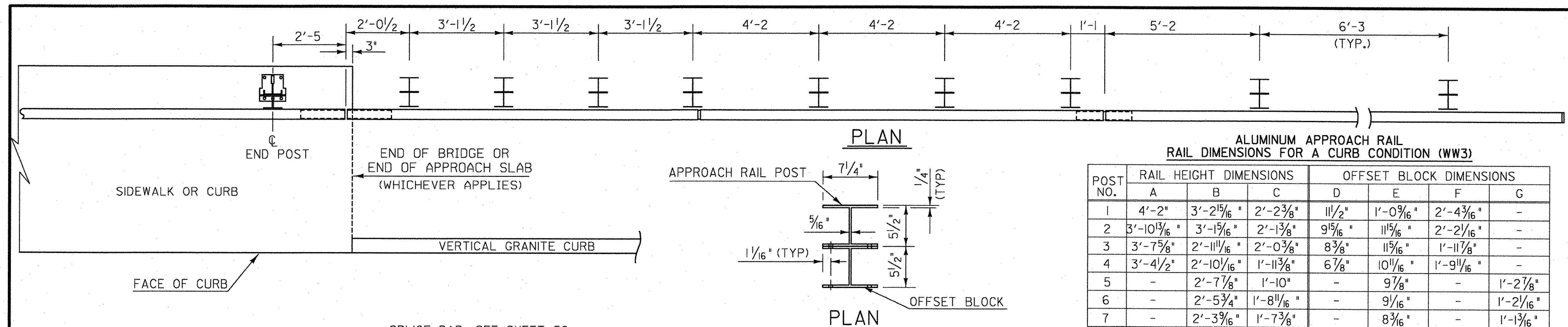
STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GHON RIVER			
ALUMINUM BRIDGE RAILING DETAILS			
Designed By	VTRANS	Drawn By	VTRANS
Checked By	Date	Bridge Design Supervisor	Date 11/06
		J. BYATT	
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.C.C. Info.			
Bridge Sheet No.		Sheet 57	of 85



NOTES

- ANCHOR BOLTS, WASHERS AND HEAVY HEX NUTS MAY BE ANY OF THE FOLLOWING:
 - ASTM A449 GALVANIZED, OR
 - AASHTO M164 (ASTM A325) GALVANIZED
 - BOLTS AND WASHERS OF STAINLESS STEEL ASTM A276, TYPE 304 (MINIMUM ULTIMATE STRENGTH OF 100,000 PSI) WITH STAINLESS STEEL NUTS OF ASTM A194, GRADE 8.
- ALUMINUM POSTS, POST BASES, SPLICE BARS, CONNECTION BARS, RAILS AND BALUSTER FRAMES SHALL CONFORM TO ASTM B221 ALLOY 6061-T6 OR ALLOY 6351-T5. MINIMUM ALLOWABLE STRESS $F_y = 35,000$ PSI.
- ALUMINUM BALUSTER TUBES SHALL CONFORM TO ASTM B210 ALLOY 6061-T5 OR 6063-T5.
- ALUMINUM RAIL END CAPS SHALL CONFORM TO ASTM B26 ALLOY 356-T6.
- THE POST, RAIL, AND OFFSET BLOCK CONNECTION BOLTS SHALL BE EITHER ASTM A193 OR ASTM A320. EITHER ONE SHALL BE CLASS 1, B8 GRADE AISI 304 WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI. NUTS FOR EITHER OF THE ABOVE BOLTS SHALL BE ASTM A194, GRADE 8, STAINLESS STEEL WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI.
- SET SCREWS FOR ATTACHING BALUSTERS TO RAILING SHALL BE ASTM F880, TYPE 303 MATERIAL.
- RIVETS SHALL BE COLD DRIVEN HIGH BUTTON HEAD "CONE POINT", CONFORMING TO ASTM B316 ALLOY 6061-T6.
- THE ANCHOR PLATE FOR THE POST ANCHOR ASSEMBLY SHALL BE ASTM A36 STRUCTURAL STEEL.
- WELDING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 506.10 USING THE GMAW-INERT GAS PROCESS AND AWS ER 5356 ELECTRODE WIRE.
- UNLESS OTHERWISE SPECIFIED, ANCHOR BOLTS SHALL BE CAST INTO THE CONCRETE AS DETAILED.
- WHENEVER FEASIBLE BARRIER RAIL AND HAND RAIL SECTIONS, SHALL BE FULL LENGTH SECTIONS (40' ±) AND WHEN POSSIBLE SHALL BE ATTACHED TO THREE POSTS. RAILS SHALL BE SPLICED AT EACH DECK JOINT AND INTERMITTENTLY AS REQUIRED. SPLICES SHALL OCCUR WITHIN THE SAME PANEL.
- ENDS OF RAILS SHALL BE CUT SQUARE AND GROUND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
- THE CONCRETE CONTACT SURFACE AT THE POST BASE SHALL BE BUSH HAMMERED AND/OR SHIMMED AS REQUIRED FOR PROPER POST ALIGNMENT. POST HEIGHT ADJUSTMENTS LESS THAN 1/4" SHALL BE WITH 1/16" AND 1/8" SHIMS. CORRECTIONS EXCEEDING 1/4" SHALL BE WITH EPOXY MORTAR CONFORMING WITH SECTION 530. FABRIC BEARING PADS AND ANY REQUIRED SHIMS OR EPOXY MORTAR ARE SUBSIDIARY TO THE UNIT PRICE BID FOR THE RAILING.
- SHIMS AND 1/8" FABRIC BEARING PADS SHALL BE 10 3/4" SQUARE WITH SLOTTED HOLES SIZED AND LOCATED THE SAME AS THE POST BASE DETAIL. FABRIC BEARING PADS SHALL CONFORM TO SUBSECTION 731.01 OR 731.02, SHIM MATERIAL SHALL BE ASTM B 209 ALLOY 1100-0.
- EXTRUDED SECTIONS ARE DETAILED TO COMPLY WITH CURRENT AASHTO-AGC-ARTBA STANDARDS. MINOR VARIATIONS OF THE DETAILS SHOWN MAY BE CONSIDERED PROVIDING THEY DO NOT REDUCE THE STRENGTH CAPACITY OF THE RAIL SYSTEM.
- ALUMINUM WASHERS SHALL BE ASTM B209 ALLOY ACLAD 2024-T4.

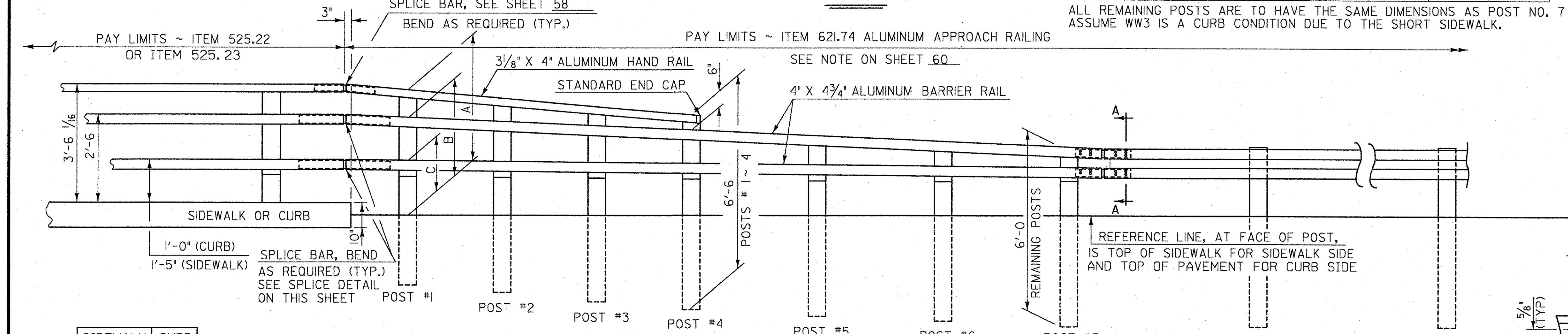
STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT ROUTE 15	Log Sta. Surv. Sta.
VT ROUTE 15 OVER THE GIRON RIVER		
ALUMINUM BRIDGE RAILING DETAILS		
Designed By	VTRANS	Drawn By VTRANS
Checked By	Date	Bridge Design Supervisor J. BYATT Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 58 of 85



**ALUMINUM APPROACH RAIL
RAIL DIMENSIONS FOR A CURB CONDITION (WW3)**

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	4'-2"	3'-2 5/8"	2'-2 3/8"	1 1/2"	1'-0 3/16"	2'-4 3/16"	-
2	3'-10 3/16"	3'-1 5/16"	2'-1 3/8"	9 5/16"	11 5/16"	2'-2 1/16"	-
3	3'-7 5/8"	2'-11 1/16"	2'-0 3/8"	8 3/8"	11 5/16"	1'-11 1/8"	-
4	3'-4 1/2"	2'-10 1/16"	1'-11 3/8"	6 7/8"	10 1/16"	1'-9 1/16"	-
5	-	2'-7 7/8"	1'-10"	-	9 7/8"	-	1'-2 7/8"
6	-	2'-5 3/4"	1'-8 1/16"	-	9 1/16"	-	1'-2 1/16"
7	-	2'-3 3/16"	1'-7 3/8"	-	8 3/16"	-	1'-1 3/16"

- NOTES**
- POST 1 THROUGH 7 SHALL BE EXTRUDED ALUMINUM.
 - ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 GALVANIZED AFTER FABRICATION.
 - ALL ITEMS NOT OTHERWISE INDICATED SHALL MEET THE SPECIFICATION REQUIREMENTS OF THE STANDARD SHEETS ON WHICH THEY ARE DETAILED.
 - SEE STANDARD G-1 FOR STEEL BEAM GUARD RAIL DETAILS. SEE SHEETS 57 AND 58 FOR ALUMINUM BRIDGE RAILING DETAILS.
 - THE COST OF ALL MATERIALS AND LABOR FOR THE SPLICE BETWEEN THE ALUMINUM APPROACH RAILING AND THE STEEL BEAM GUARD RAIL SHALL BE SUBSIDIARY TO ITEM 621.74, ALUMINUM APPROACH RAILING.
 - DETAILS ARE SHOWN FOR TRANSITION TO A 3 RAIL ALUMINUM BRIDGE RAILING.
 - DIMENSIONS SHOWN ARE FROM A REFERENCE LINE AT THE FACE OF POST FOR A NORMAL CROWNED SECTION. APPROPRIATE CORRECTIONS SHALL BE MADE FOR CROSS SLOPES OTHER THAN A NORMAL SECTION.



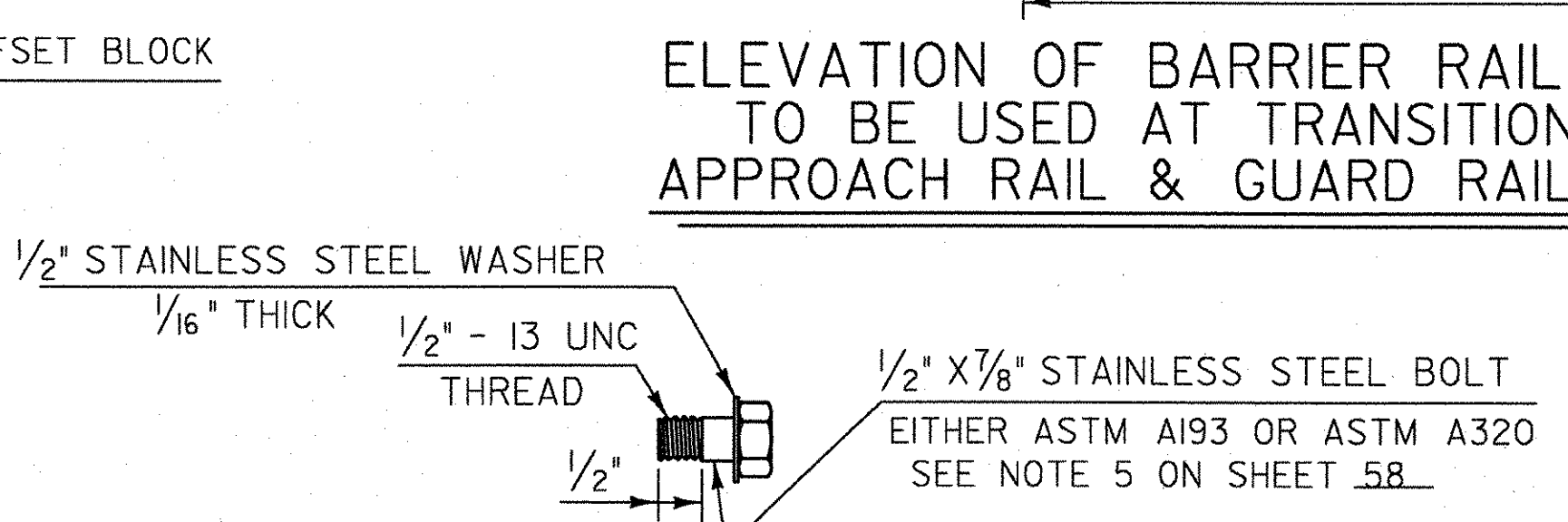
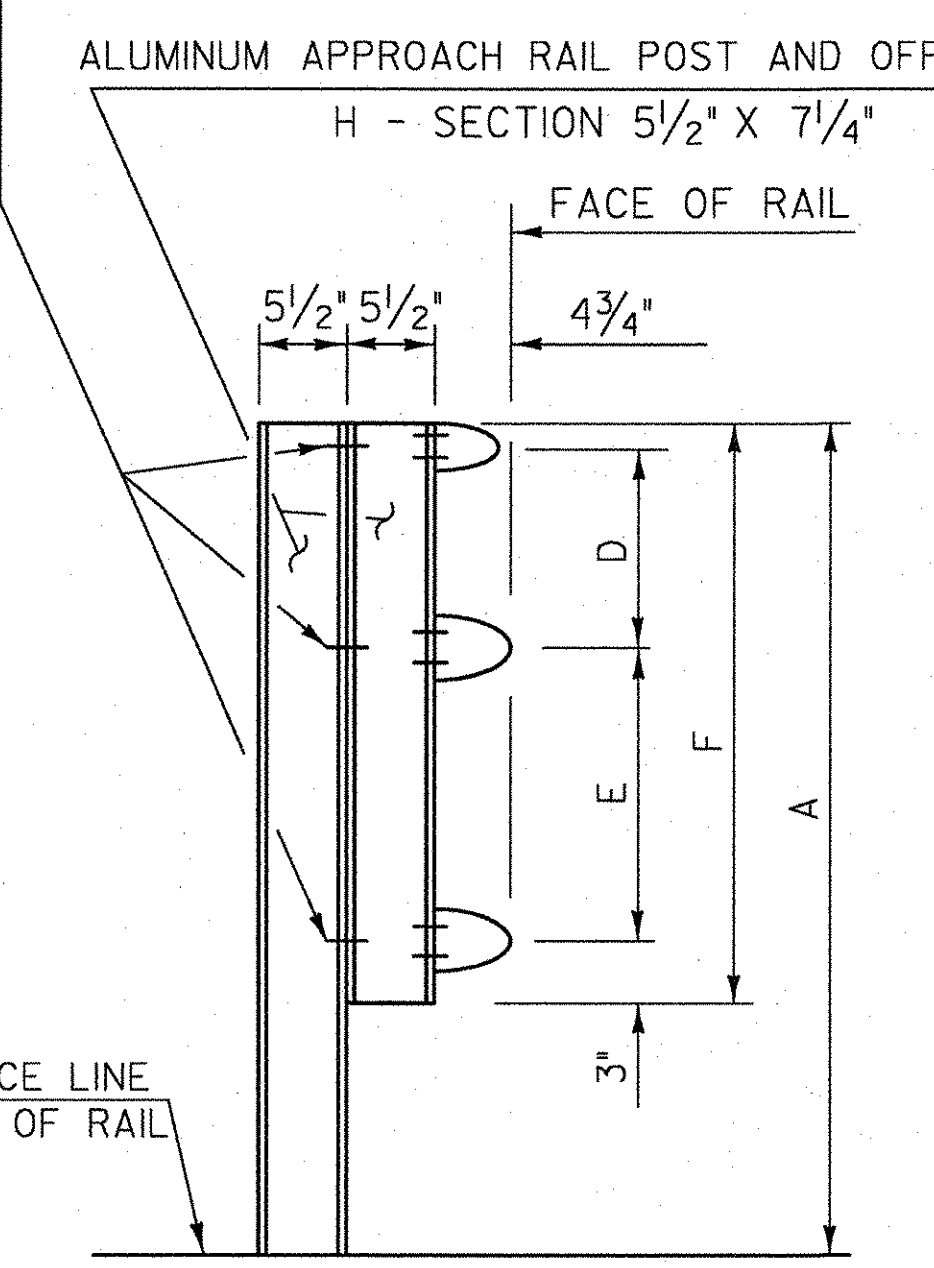
**ALUMINUM APPROACH RAIL
RAIL DIMENSIONS FOR A SIDEWALK CONDITION (WW4)**

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	3'-4 13/16"	2'-5 3/4"	1'-5 3/16"	1 1/2"	1'-0 9/16"	2'-4 3/16"	-
2	3'-2 7/8"	2'-5 3/8"	1'-5 1/16"	9 5/16"	11 5/16"	2'-2 1/16"	-
3	3'-1"	2'-5"	1'-5 1/16"	8 7/8"	11 5/16"	1'-11 7/8"	-
4	2'-11 1/16"	2'-4 5/8"	1'-5 5/16"	6 7/8"	10 3/4"	1'-9 3/4"	-
5	-	2'-4 1/8"	1'-6 1/4"	-	9 7/8"	-	1'-2 7/8"
6	-	2'-3 5/8"	1'-6 9/16"	-	9 1/16"	-	1'-2 1/16"
7	-	2'-3 3/8"	1'-6 5/16"	-	8 7/8"	-	1'-1 1/4"

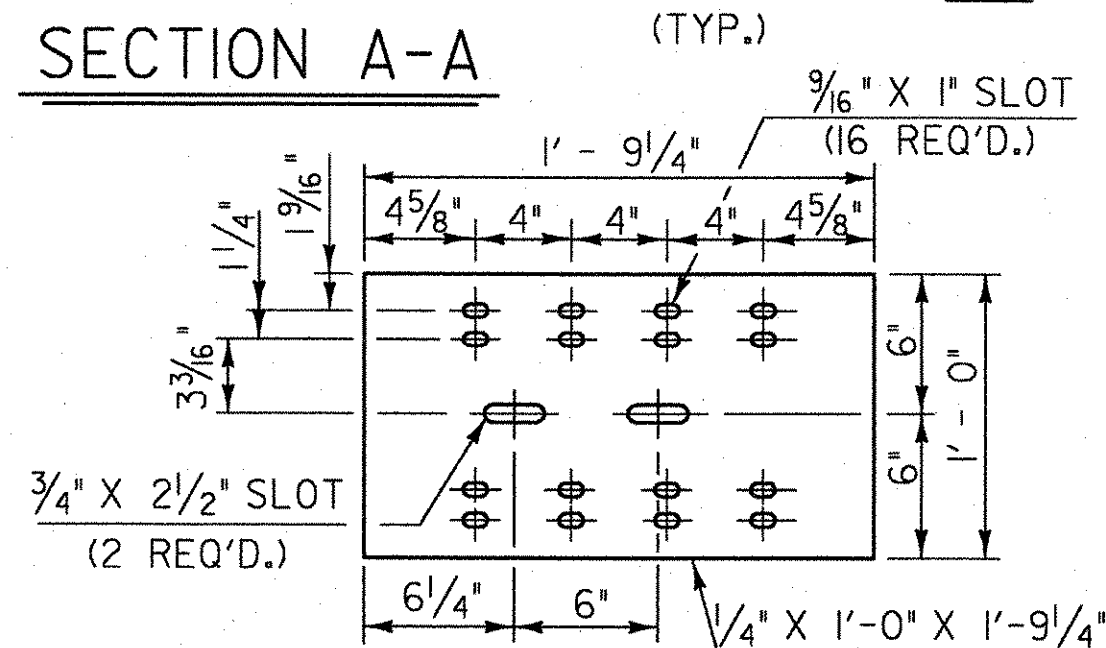
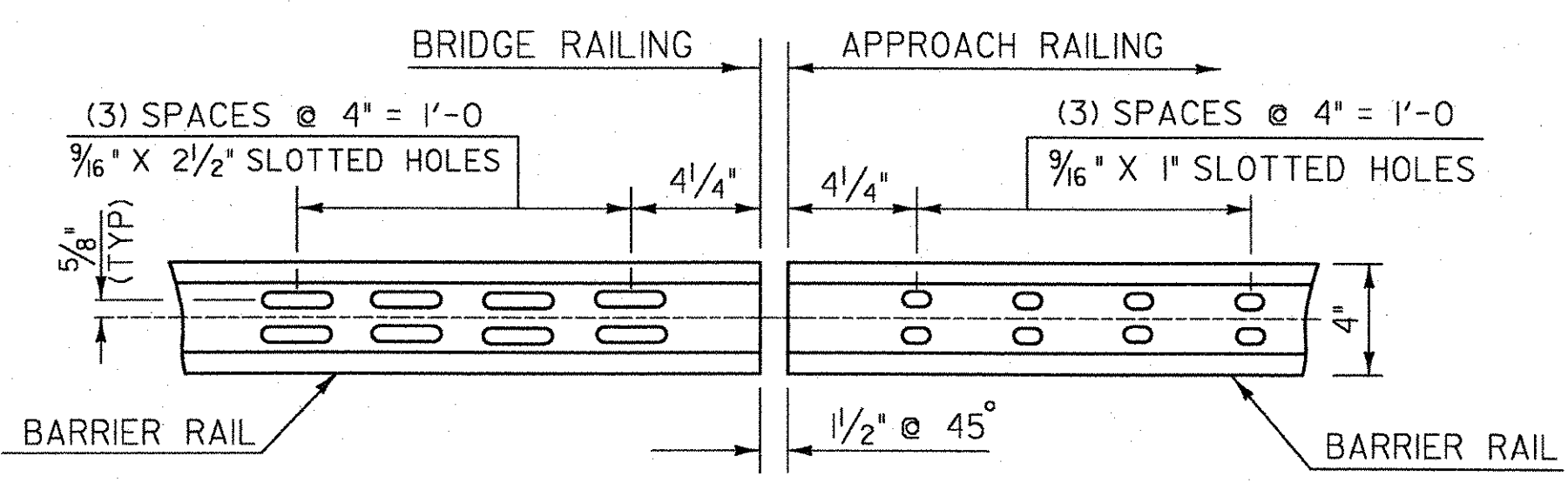
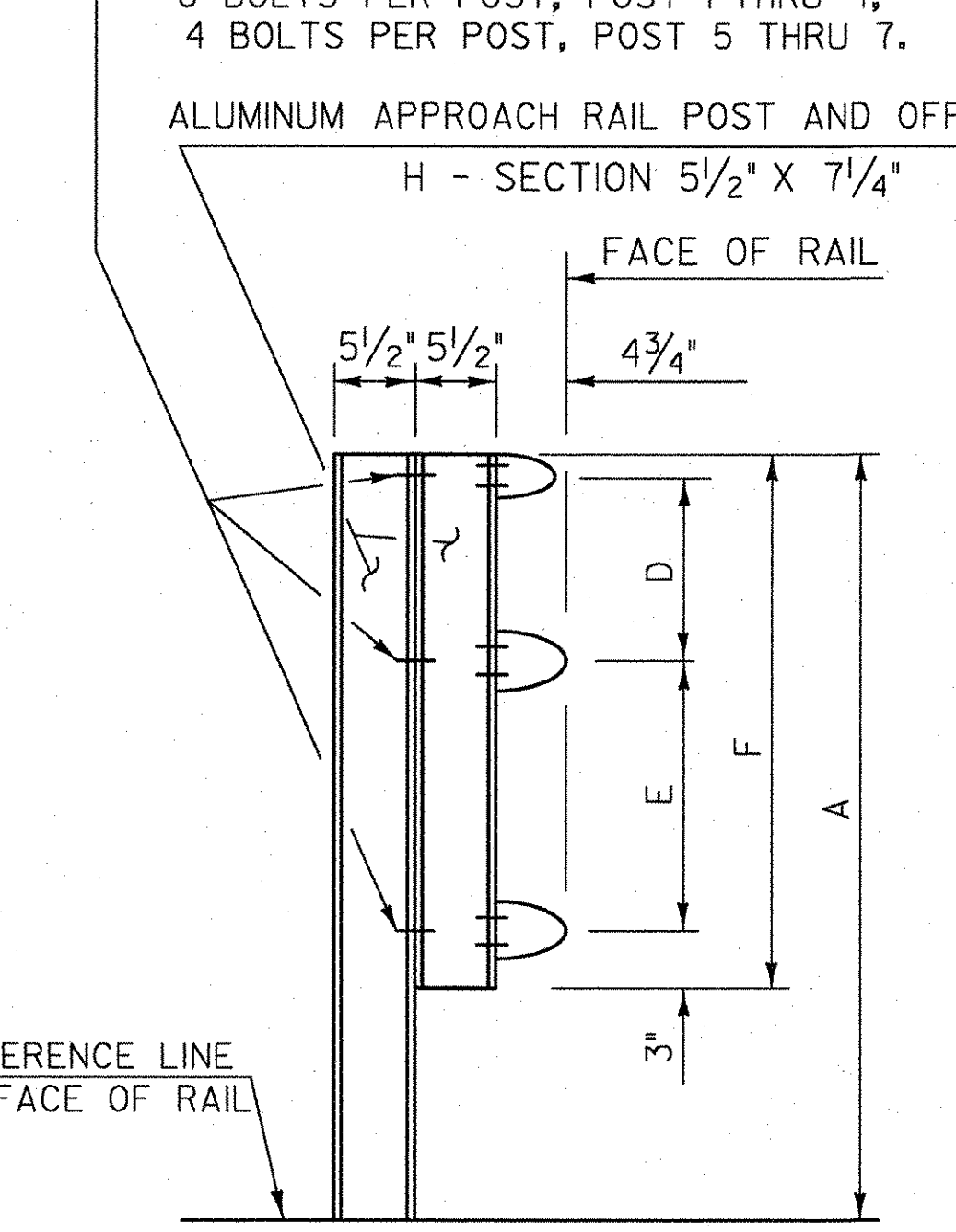
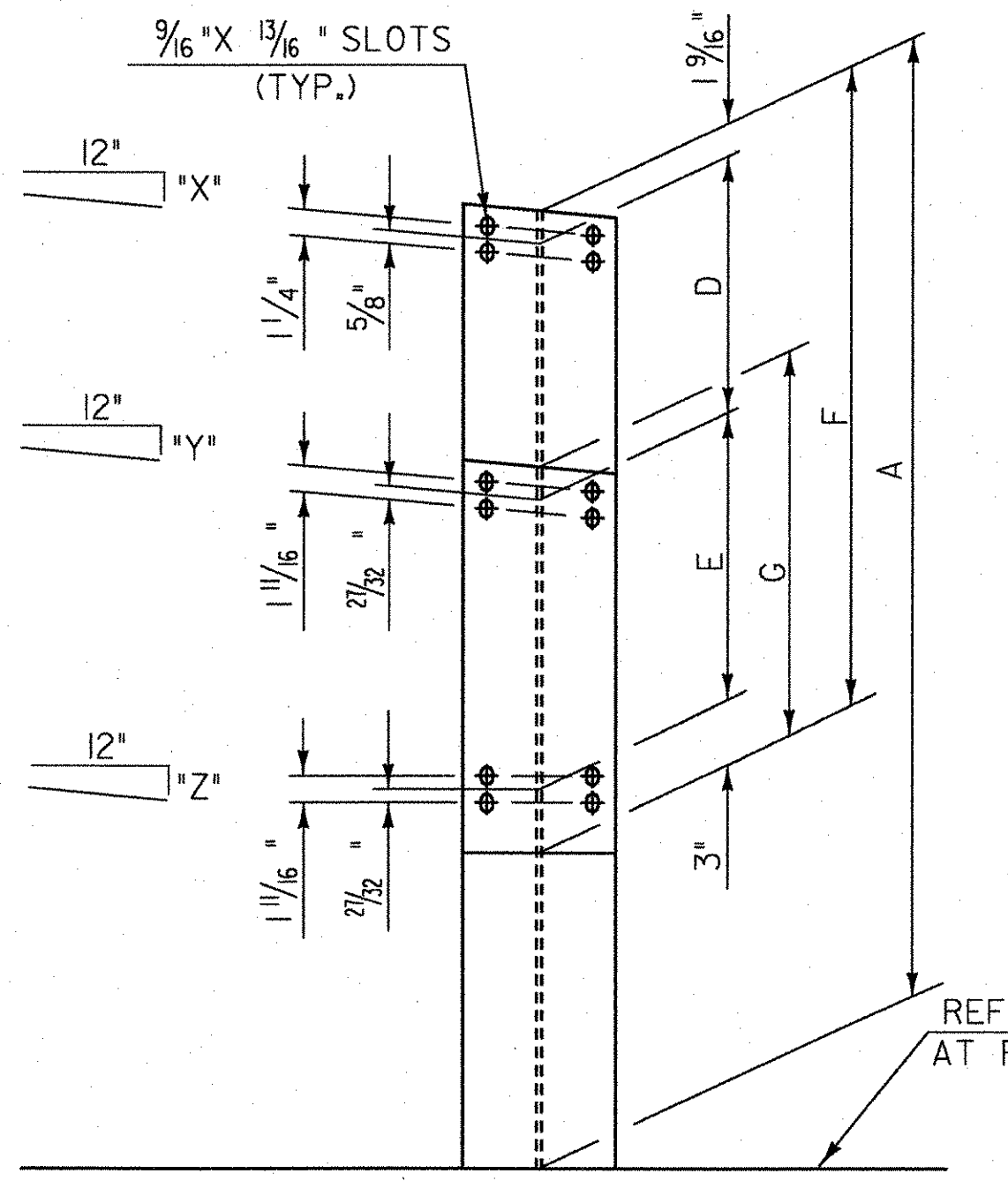
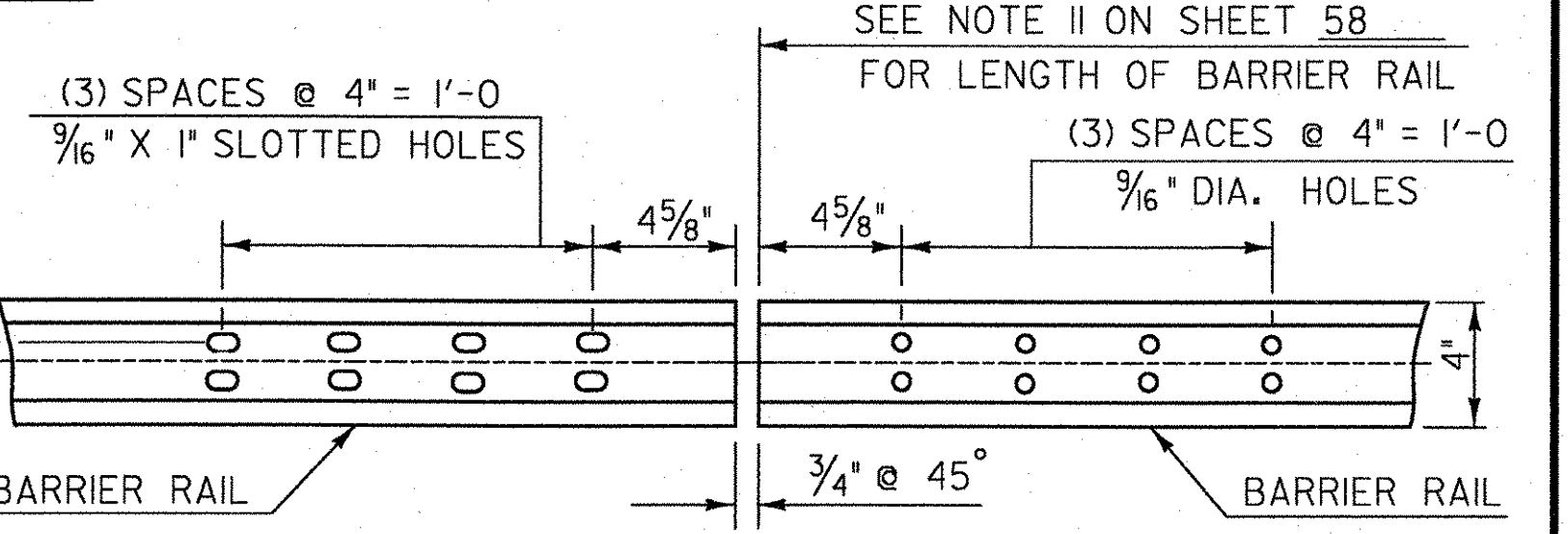
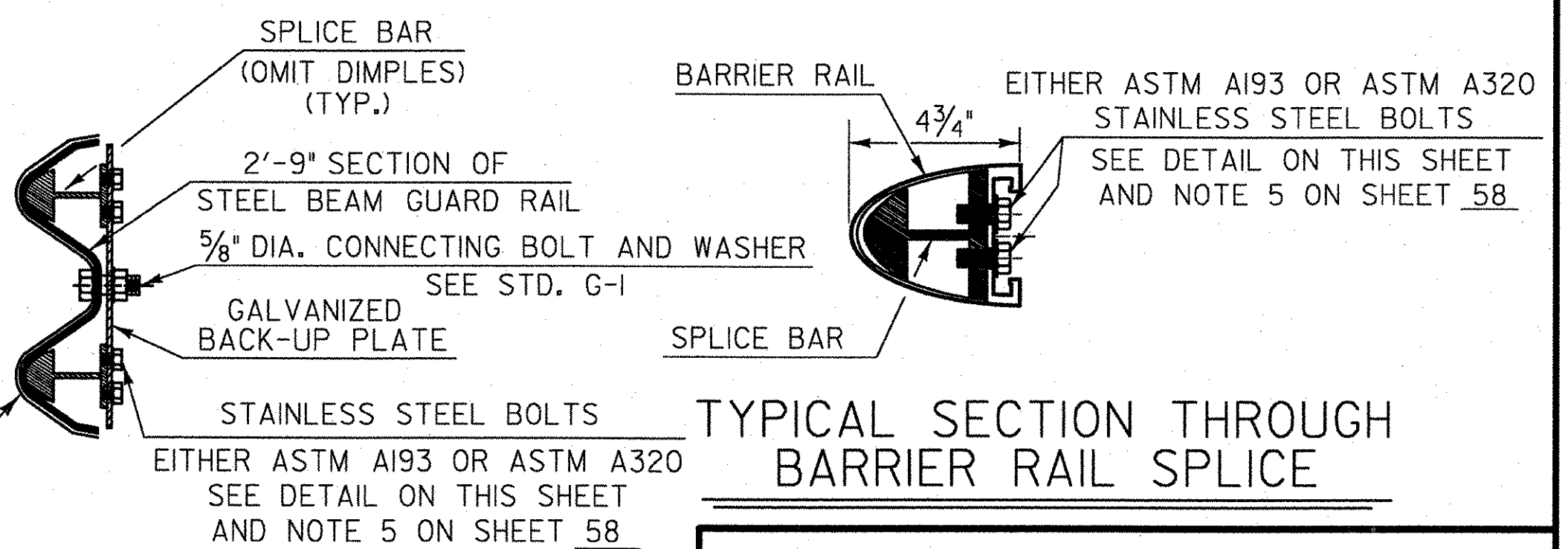
ALL REMAINING POSTS ARE TO HAVE THE SAME DIMENSIONS AS POST NO. 7. THE WW1 AND WW2 APPROACH RAILS ARE TO BE THREE-BAR ALUMINUM RAIL THROUGHOUT THESE LOCATIONS.

	SIDEWALK SIDE	CURB SIDE
X	5/8"	1"
Y	1/8"	1/2"
Z	-1/16"	5/16"

ATTACH OFFSET BLOCK TO POST WITH 1/2" -13 UNC X 1 1/2" LONG STAINLESS STEEL HEX HEAD BOLTS, NUTS AND WASHERS. 6 BOLTS PER POST, POST 1 THRU 4; 4 BOLTS PER POST, POST 5 THRU 7.



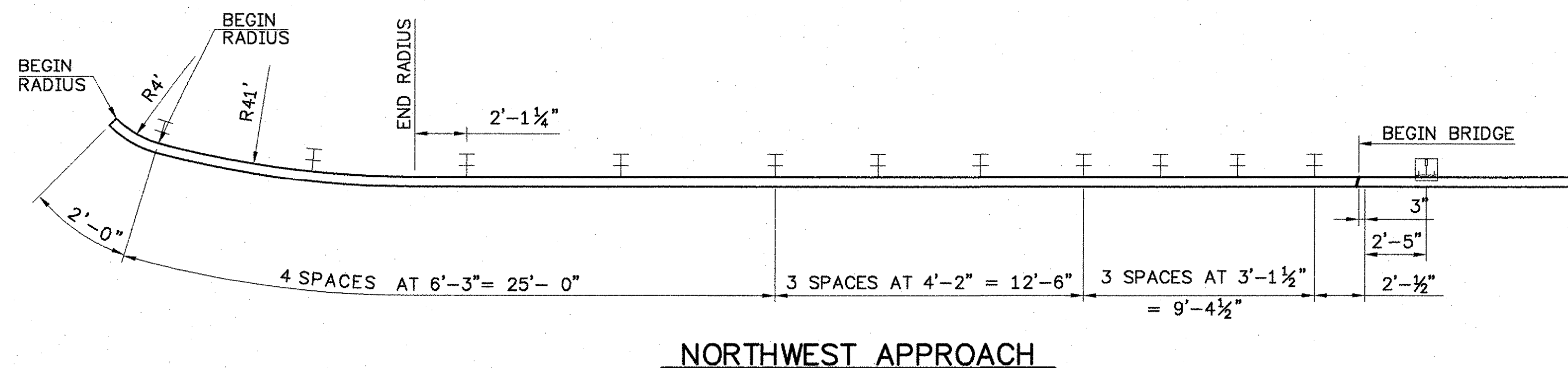
ELEVATION OF BARRIER RAIL SPLICE BAR TO BE USED AT TRANSITION BETWEEN APPROACH RAIL & GUARD RAIL (FROM BACK)



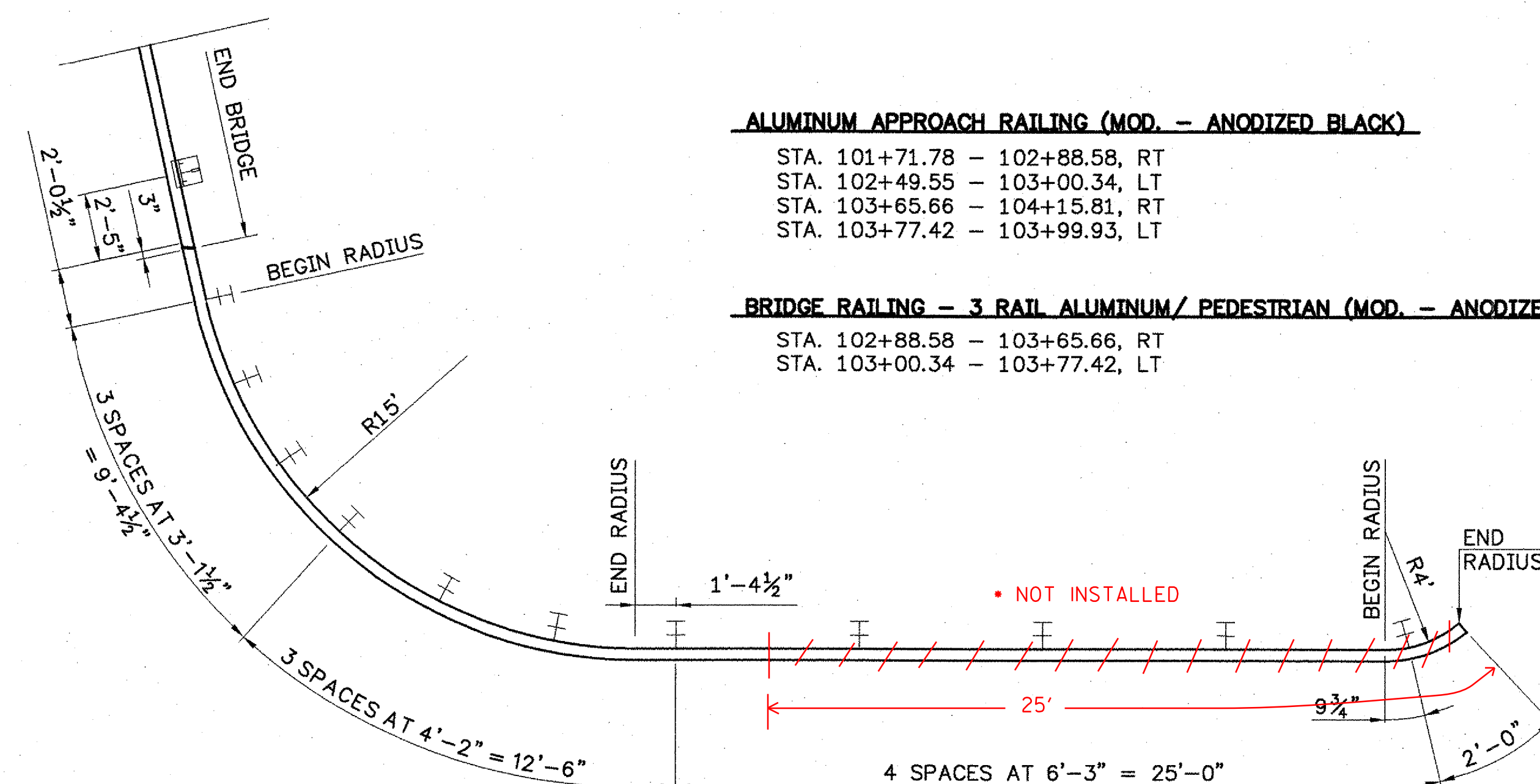
**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT ROUTE 15	Log Sta.	
		Surv. Sta.	
VT ROUTE 15 OVER THE GIHON RIVER			
ALUMINUM APPROACH RAILING DETAILS			
Designed By	VTRANS	Drawn By	VTRANS
Checked By	Date	Bridge Design Supervisor	
		J. BYATT	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	59 of 85

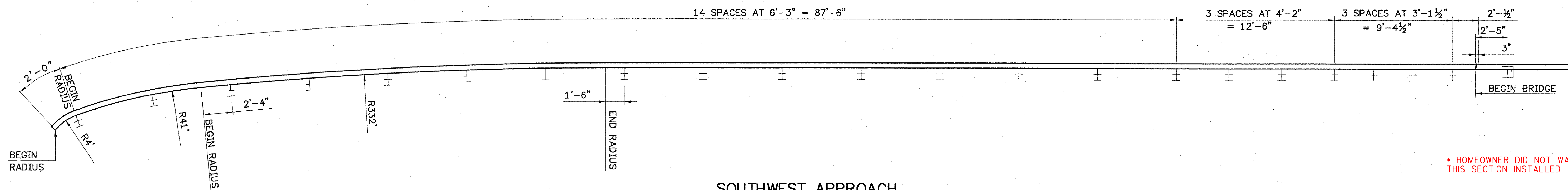
GUARD RAIL TERMINAL DETAILS



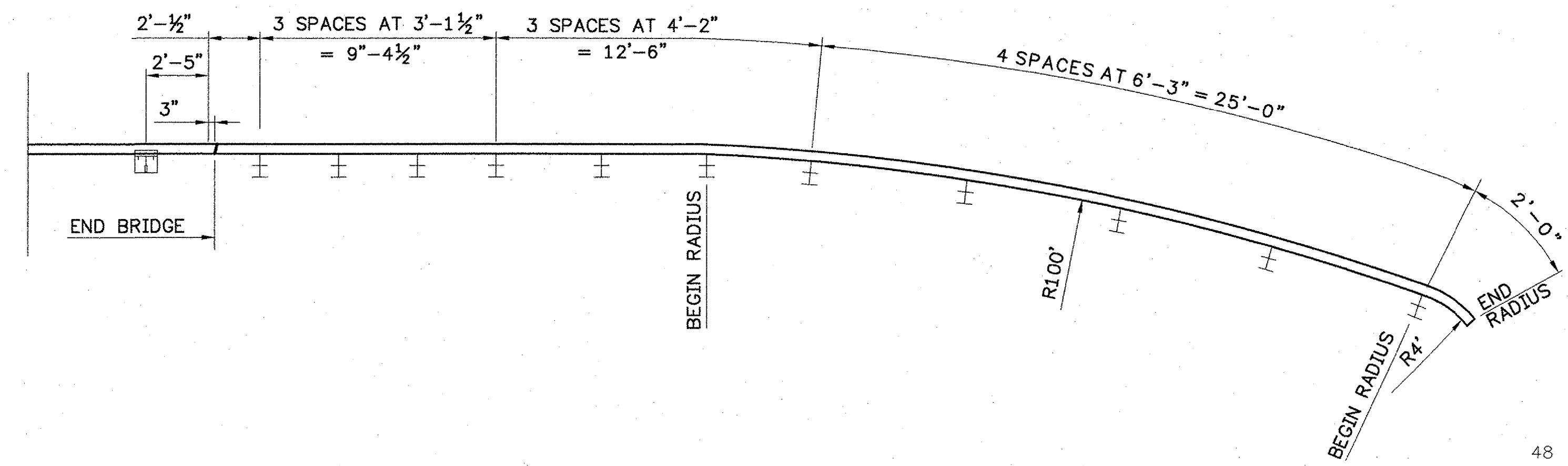
NORTHWEST APPROACH



NORTHEAST APPROACH



SOUTHWEST APPROACH



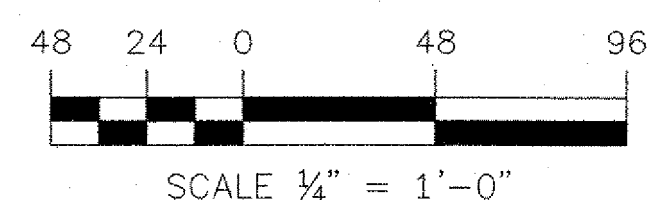
SOUTHEAST APPROACH

ALUMINUM APPROACH RAILING (MOD. - ANODIZED BLACK)

- STA. 101+71.78 - 102+88.58, RT
- STA. 102+49.55 - 103+00.34, LT
- STA. 103+65.66 - 104+15.81, RT
- STA. 103+77.42 - 103+99.93, LT

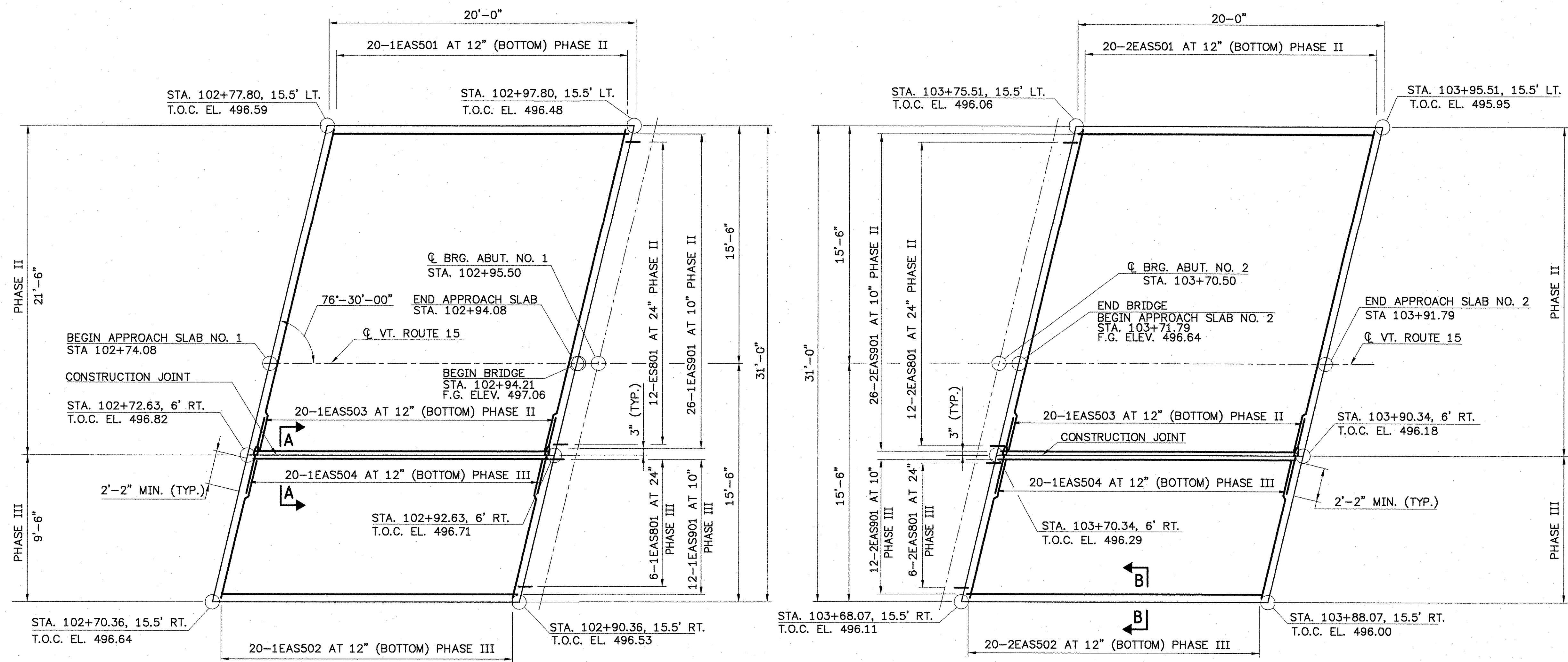
BRIDGE RAILING - 3 RAIL ALUMINUM/ PEDESTRIAN (MOD. - ANODIZED BLACK)

- STA. 102+88.58 - 103+65.66, RT
- STA. 103+00.34 - 103+77.42, LT



STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT. ROUTE 15	Log Sta.
		Surv. Sta.
VT. ROUTE 15 OVER GIHON RIVER		
APPROACH RAIL DETAILS		
Designed By	R.RICARD	Drawn By D.DUGAL
Checked By	R.ROONEY	Date 11/02
		Bridge Design Supervisor J. BYATT
		Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		Bridge Sheet No.
		Sheet 60 Of 85

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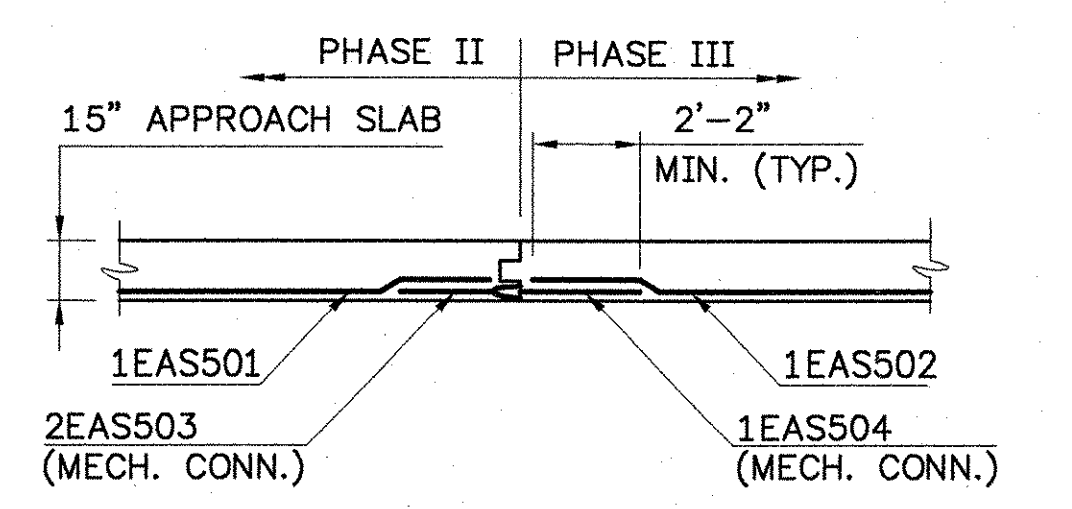
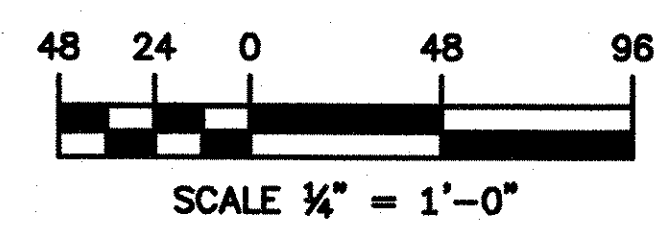
APPROACH SLAB NO. 1

APPROACH SLAB NO. 2

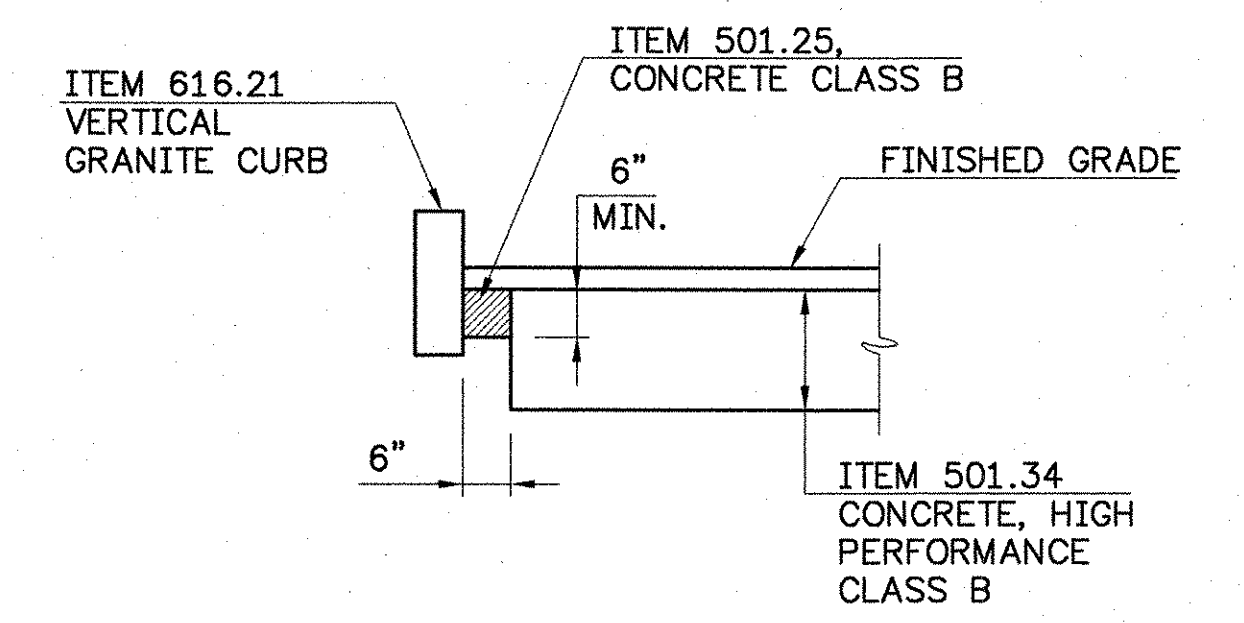
APPROACH SLAB PLAN

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

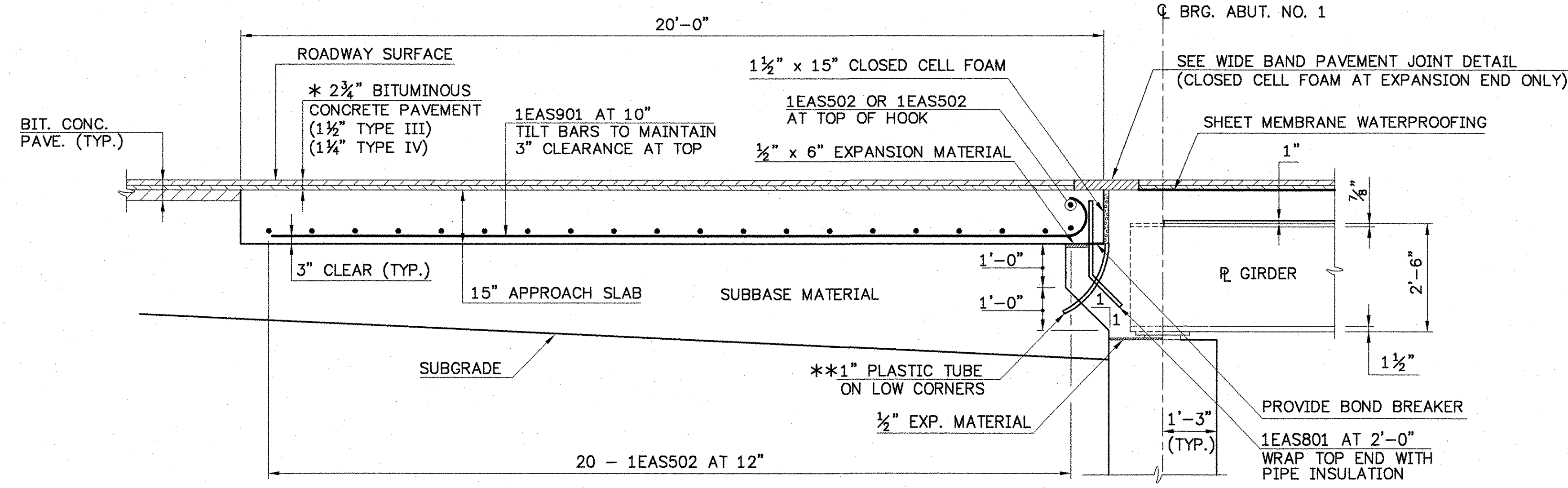
NOTE:
CONSTRUCTION OF APPROACH SLABS SHALL COINCIDE WITH THE RESPECTIVE SUPERSTRUCTURE PHASE.



SECTION A-A
(APPROACH SLAB NO. 2 SIMILAR)
SCALE: 1/4" = 1'-0"



SECTION B-B
(APPROACH SLAB NO. 1 SIMILAR)
SCALE: 1/2" = 1'-0"



WIDE BAND PAVEMENT JOINT DETAIL

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

* PAVEMENT SHALL BE CONSTRUCTED IN TWO LIFTS:
SECOND LIFT: 1 1/2" TYPE III,
FIRST LIFT: 1 1/2" TYPE IV

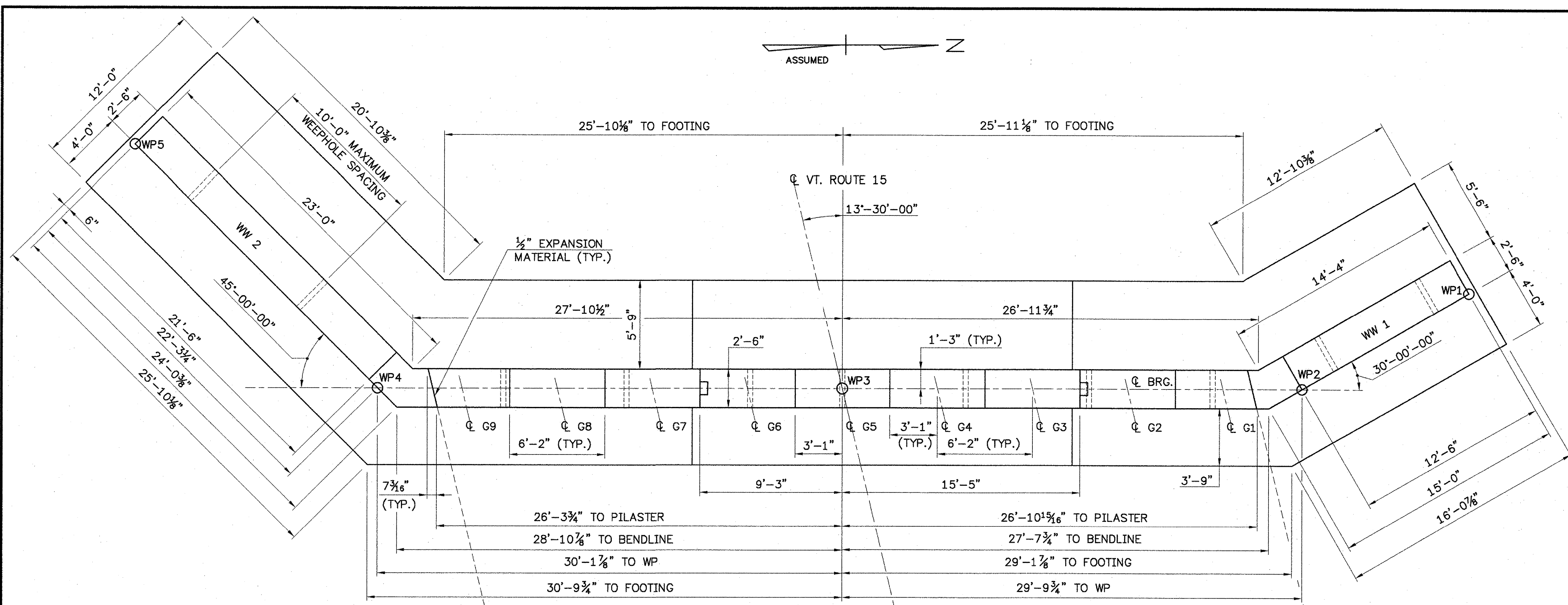
** 1" Ø PLASTIC TUBES SHALL BE PER SECTION 740.01 OF THE 2001 VAOT STANDARD SPECIFICATIONS. (COST INCLUDED IN ITEM 501.33)

APPROACH SLAB DETAIL

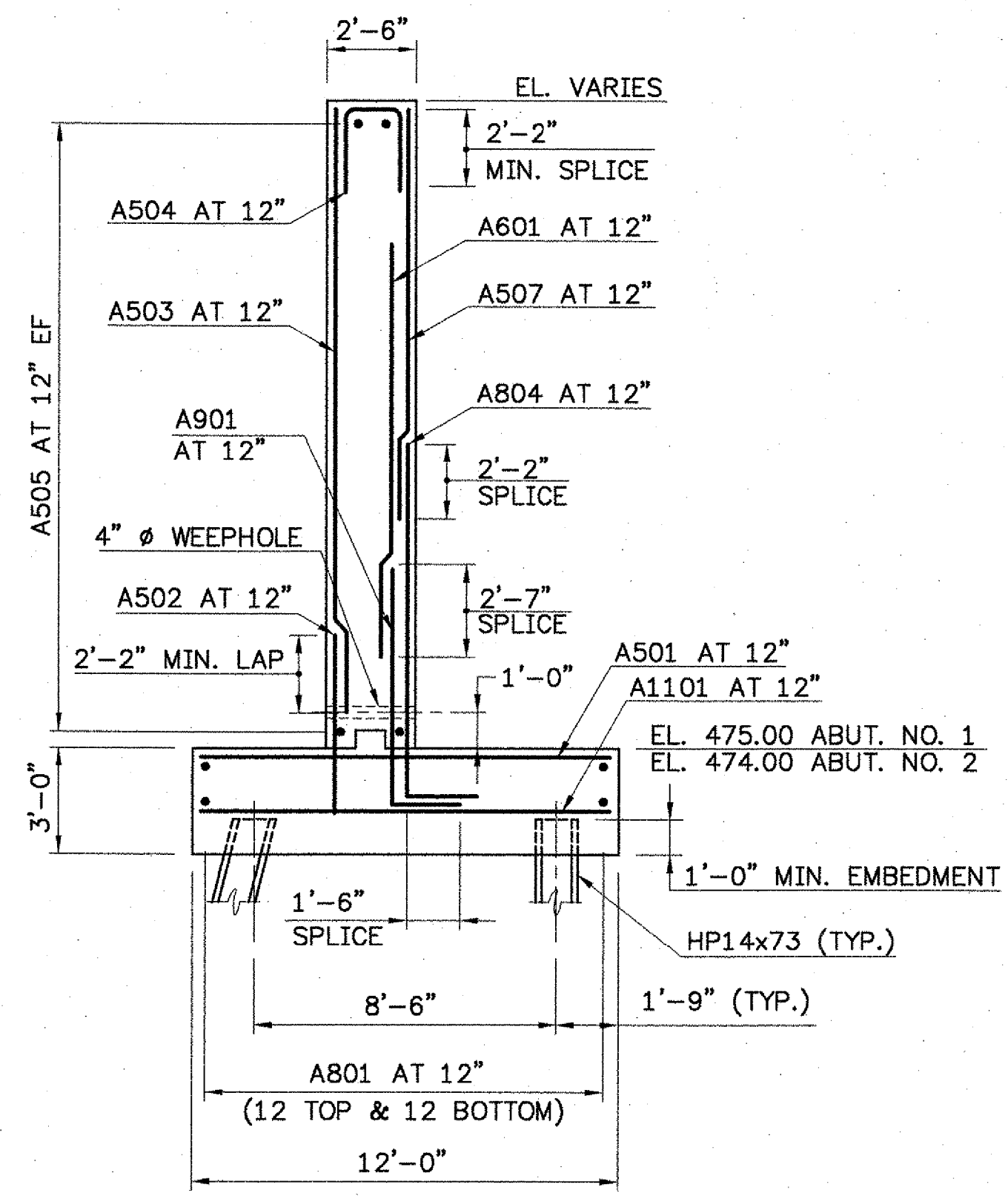
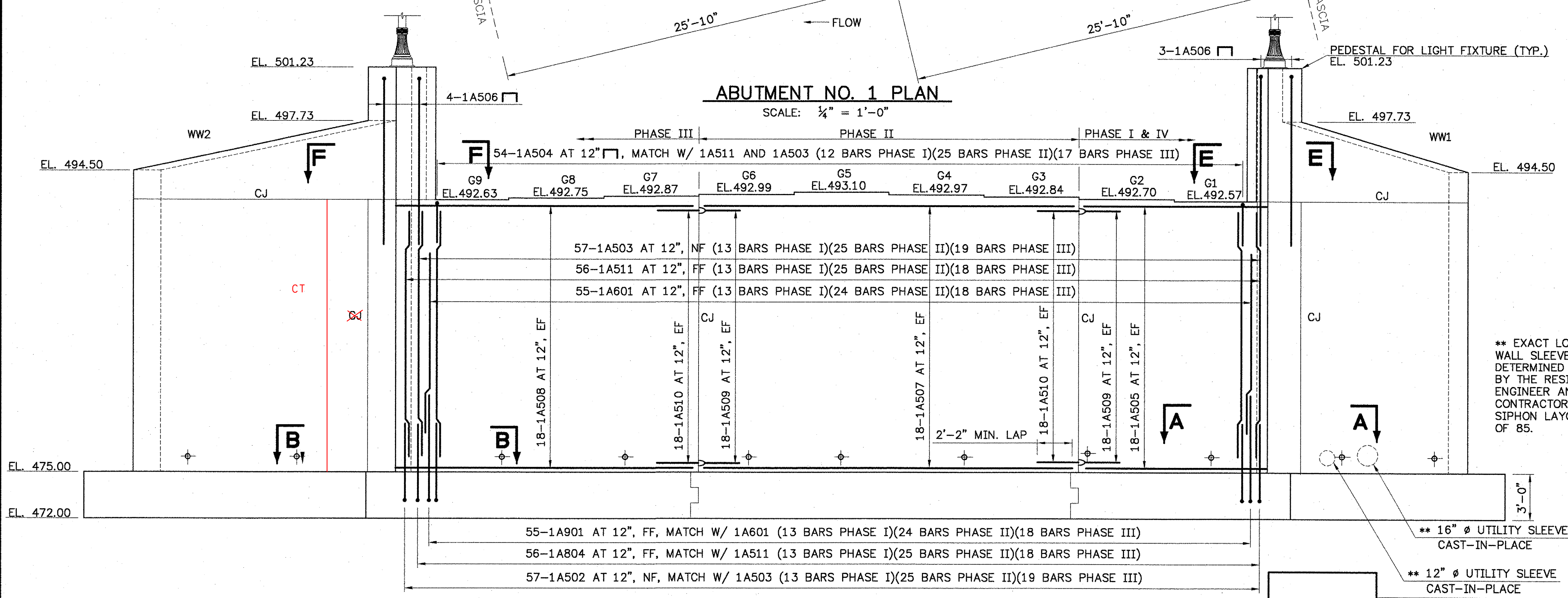
(ABUTMENT NO. 1 SHOWN, ABUTMENT NO. 2 SIMILAR)
SCALE: 1/2" = 1'-0"

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	JOHNSON	Bridge No.	37
Highway No.	VT. ROUTE 15	Log Sta.	
		Surv. Sta.	
VT. ROUTE 15 OVER GIHON RIVER			
APPROACH SLAB DETAILS			
Designed By	R. RICARD	Drawn By	D. DUGAL
Checked By	Date	Bridge Design Supervisor	
S. BEAUMONT	11/06	J. BYATT	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.		Bridge Sheet No.	Sheet 61 Of 85



NOTES:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD



ABUTMENT NO. 1 PLAN
 SCALE: 1/4" = 1'-0"

ABUTMENT TYPICAL SECTION
 SCALE: 1/4" = 1'-0"

ABUTMENT NO. 1 ELEVATION
 SCALE: 1/4" = 1'-0"

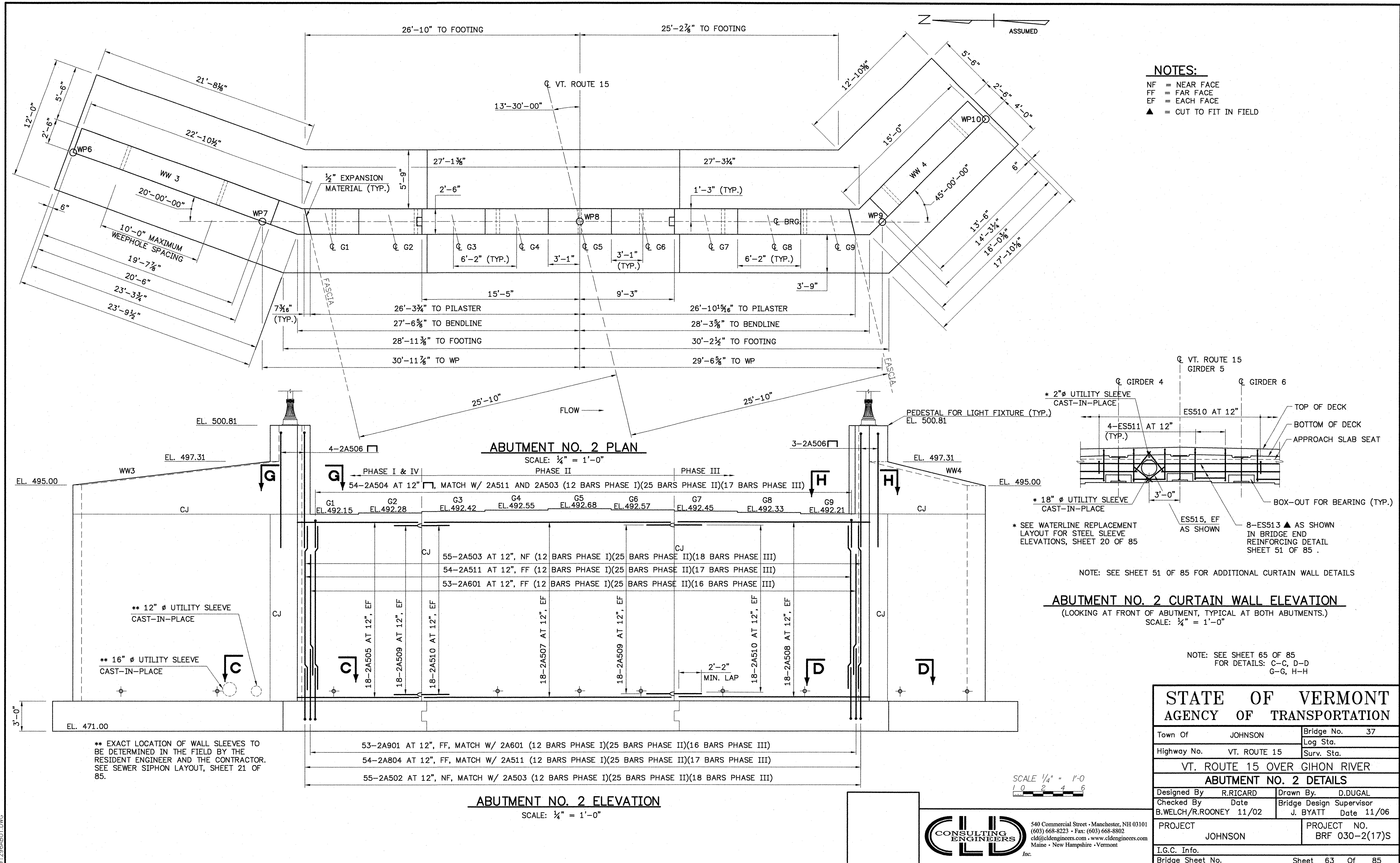
** EXACT LOCATION OF WALL SLEEVES TO BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER AND THE CONTRACTOR. SEE SEWER SIPHON LAYOUT, SHEET 21 OF 85.

NOTE: SEE SHEET 65 OF 85 FOR DETAILS: A-A, B-B, E-E, F-F

STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
Town Of	JOHNSON
Highway No.	VT. ROUTE 15
VT. ROUTE 15 OVER GIHON RIVER	
ABUTMENT NO. 1 DETAILS	
Designed By	R. RICARD
Checked By	B. WELCH/R. ROONEY
PROJECT	JOHNSON
I.G.C. Info.	Bridge Sheet No.
Bridge No.	37
Log Sta.	
Surv. Sta.	
Drawn By	D. DUGAL
Date	11/02
Bridge Design Supervisor	J. BYATT
Date	11/06
PROJECT NO.	BRF 030-2(17)S
Sheet 62 Of 85	

CLD CONSULTING ENGINEERS
 540 Commercial Street - Manchester, NH 03101
 (603) 668-8223 - Fax: (603) 668-8802
 cld@cldeengineers.com - www.cldeengineers.com
 Maine - New Hampshire - Vermont

31296ABUT.DWG



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ABUTMENT NO. 2 PLAN
 SCALE: 1/4" = 1'-0"

ABUTMENT NO. 2 CURTAIN WALL ELEVATION
 (LOOKING AT FRONT OF ABUTMENT, TYPICAL AT BOTH ABUTMENTS.)
 SCALE: 1/4" = 1'-0"

ABUTMENT NO. 2 ELEVATION
 SCALE: 1/4" = 1'-0"

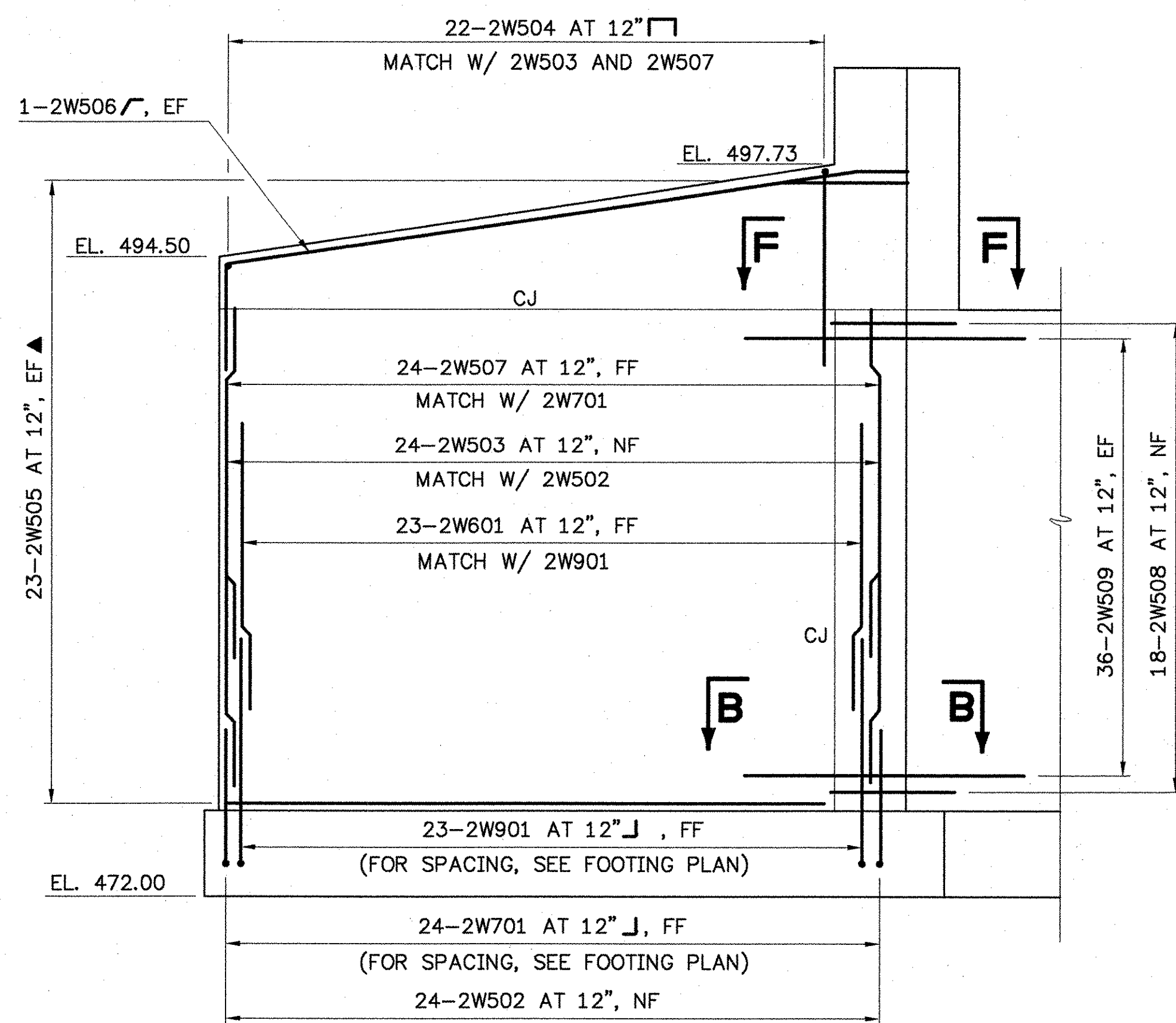
SCALE 1/4" = 1'-0"
 1 0 2 4 6

STATE OF VERMONT
AGENCY OF TRANSPORTATION

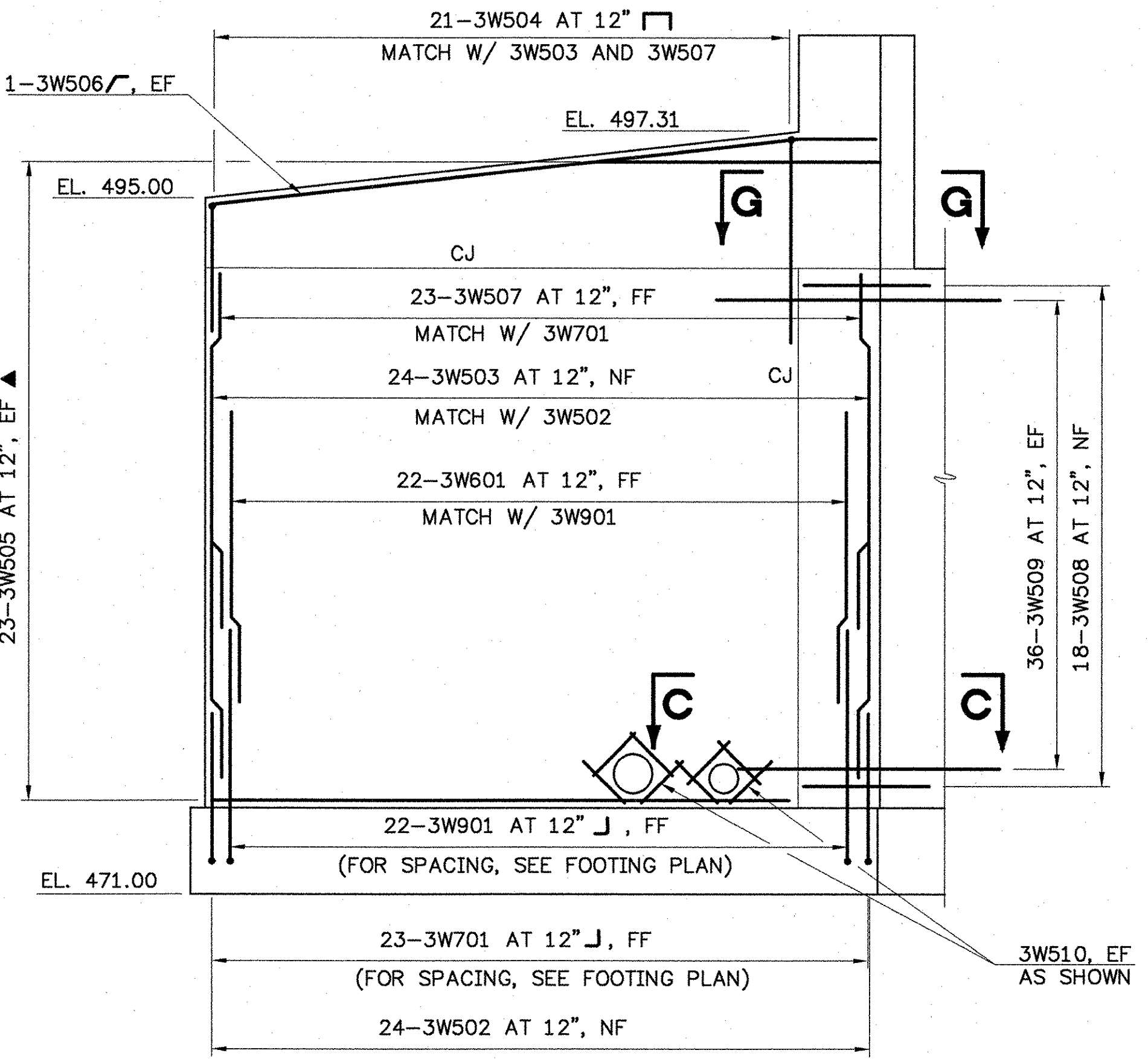
Town Of	JOHNSON	Bridge No.	37
Highway No.	VT. ROUTE 15	Log Sta.	
		Surv. Sta.	
VT. ROUTE 15 OVER GIHON RIVER			
ABUTMENT NO. 2 DETAILS			
Designed By	R.RICARD	Drawn By	D.DUGAL
Checked By	Date	Bridge Design Supervisor	
B.WELCH/R.ROONEY	11/02	J. BYATT	Date 11/06
PROJECT	JOHNSON	PROJECT NO.	BRF 030-2(17)S
I.G.C. Info.			
Bridge Sheet No.		Sheet	63 Of 85

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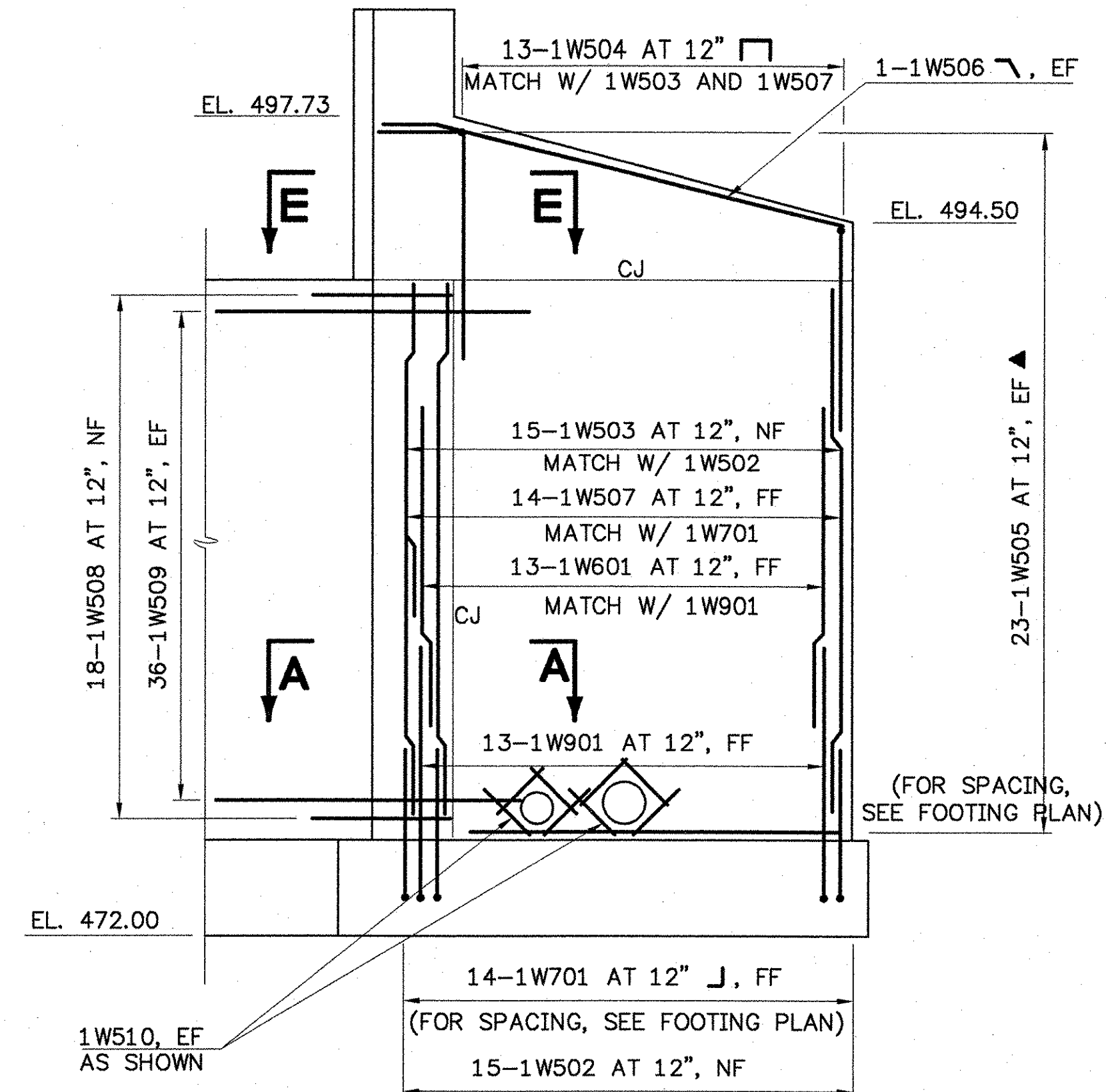
9/26/06ABUT.DWG



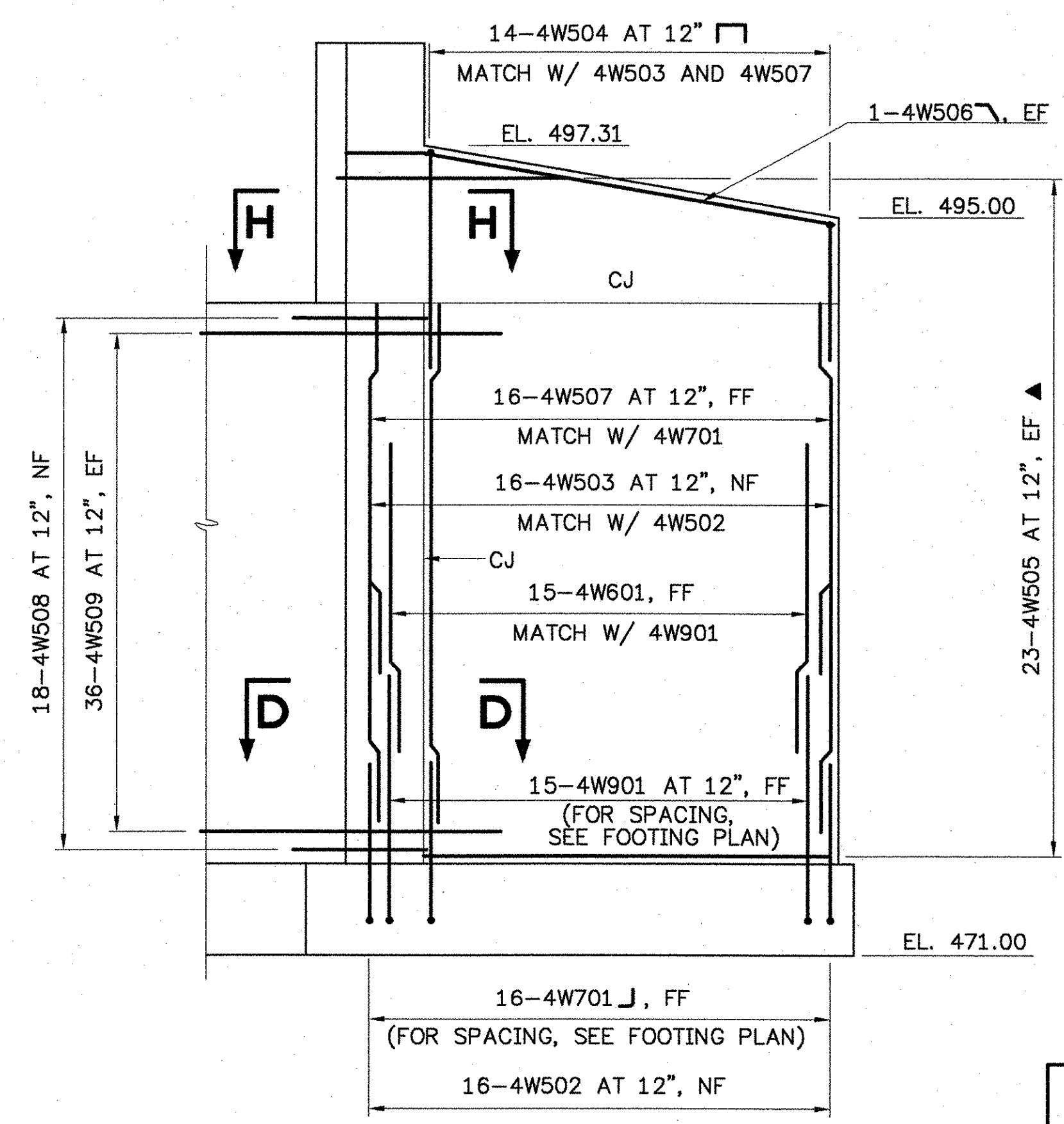
WINGWALL NO. 2 ELEVATION
SCALE: 1/4" = 1'-0"



WINGWALL NO. 3 ELEVATION
SCALE: 1/4" = 1'-0"

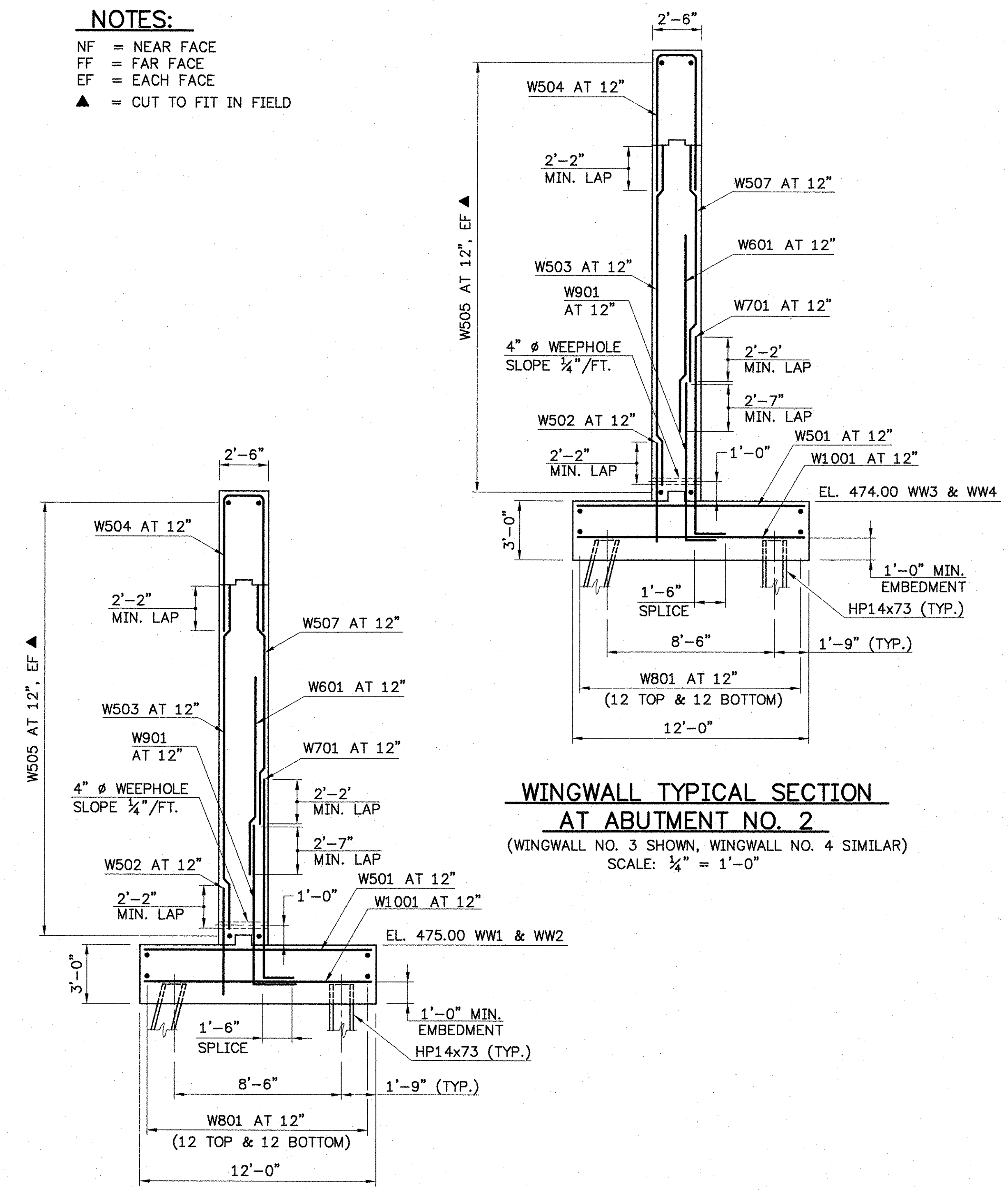


WINGWALL NO. 1 ELEVATION
SCALE: 1/4" = 1'-0"



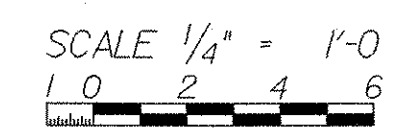
WINGWALL NO. 4 ELEVATION
SCALE: 1/4" = 1'-0"

NOTES:
NF = NEAR FACE
FF = FAR FACE
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▲ = CUT TO FIT IN FIELD

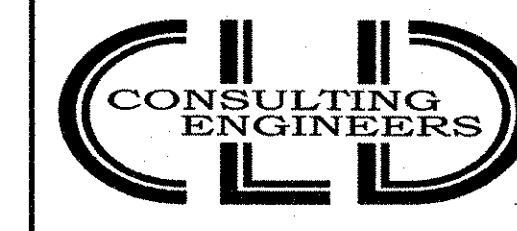


WINGWALL TYPICAL SECTION AT ABUTMENT NO. 2
(WINGWALL NO. 3 SHOWN, WINGWALL NO. 4 SIMILAR)
SCALE: 1/4" = 1'-0"

WINGWALL TYPICAL SECTION AT ABUTMENT NO. 1
(WINGWALL NO. 1 SHOWN, WINGWALL NO. 2 SIMILAR)
SCALE: 1/4" = 1'-0"



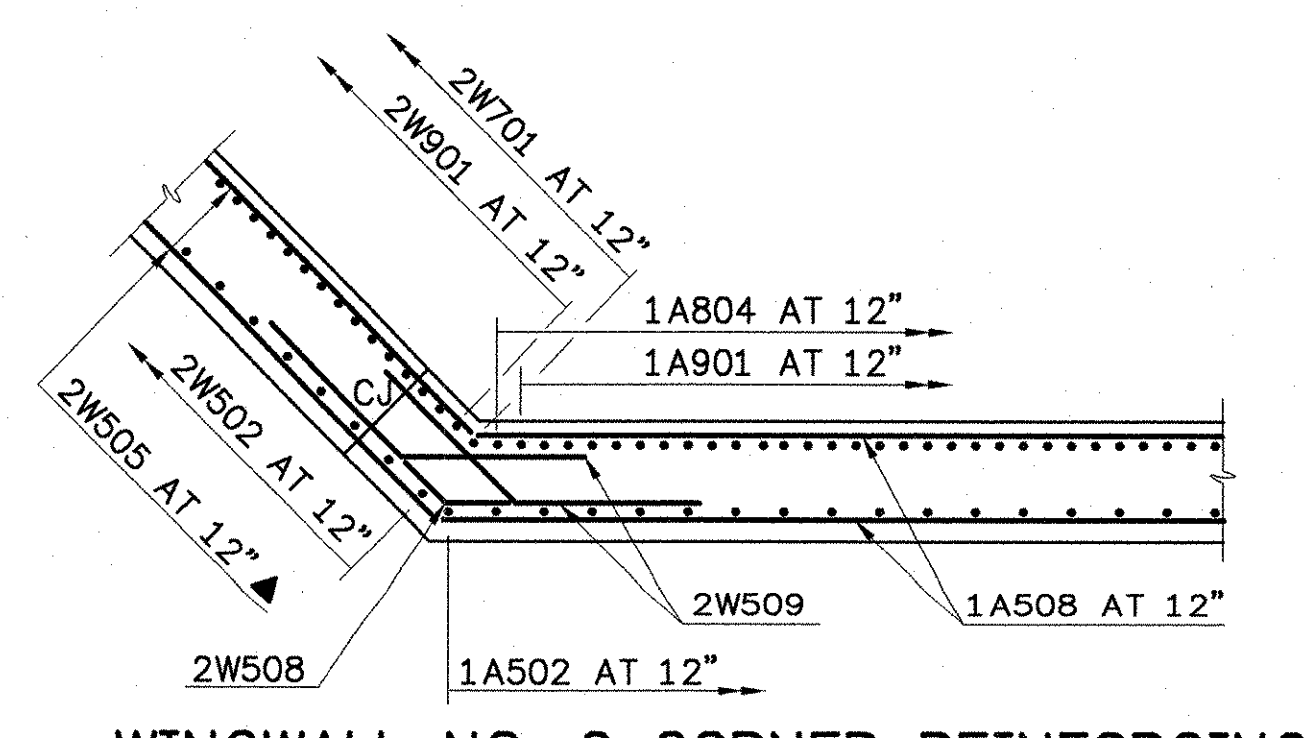
STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT. ROUTE 15	Log Sta.
		Surv. Sta.
VT. ROUTE 15 OVER GIHON RIVER		
WINGWALL DETAILS		
Designed By	R.RICARD	Drawn By D.DUGAL
Checked By	Date	Bridge Design Supervisor
B.WELCH/R.ROONEY	11/02	J. BYATT Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 64 Of 85



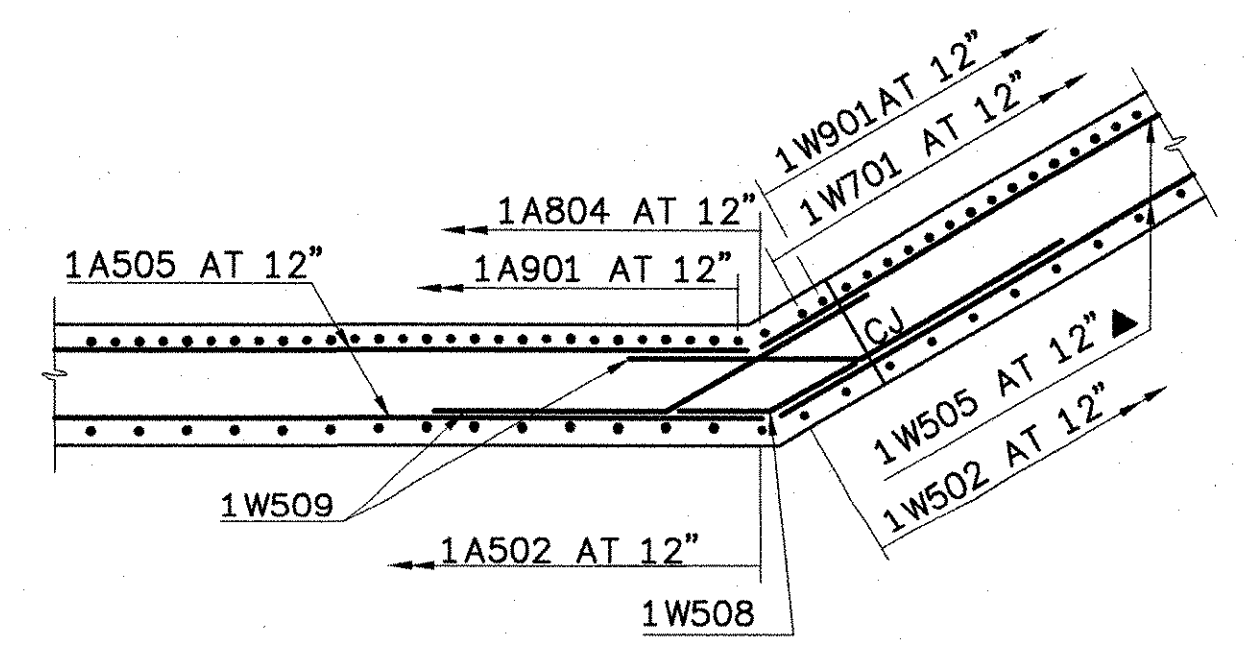
540 Commercial Street - Manchester, NH 03101
(603) 668-8223 • Fax: (603) 668-8802
cid@cldeengineers.com • www.cldeengineers.com
Maine • New Hampshire • Vermont

9:129/ABUT.DWG

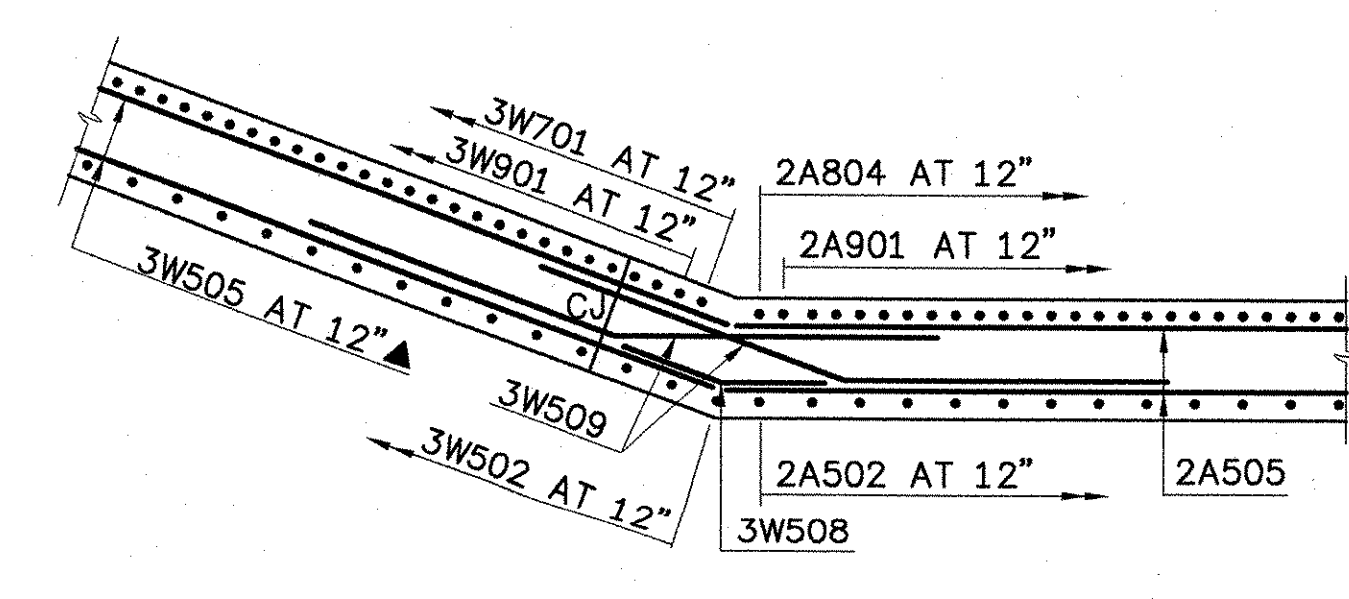
NOTES:
 NF = NEAR FACE
 FF = FAR FACE
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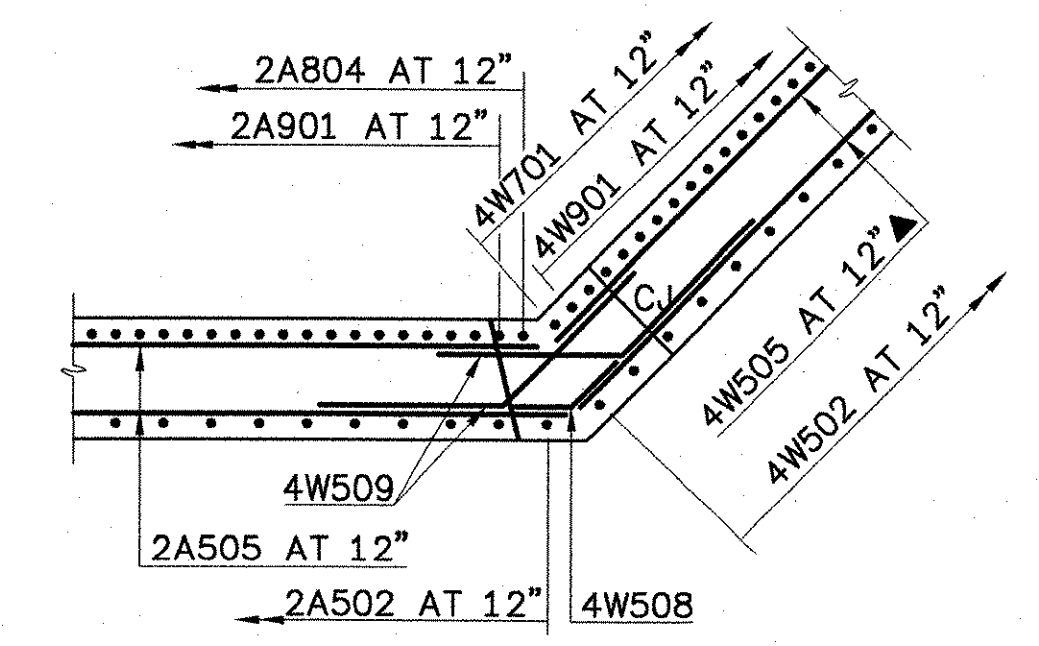
WINGWALL NO. 2 CORNER REINFORCING SECTION B-B
 SCALE: 1/4" = 1'-0"



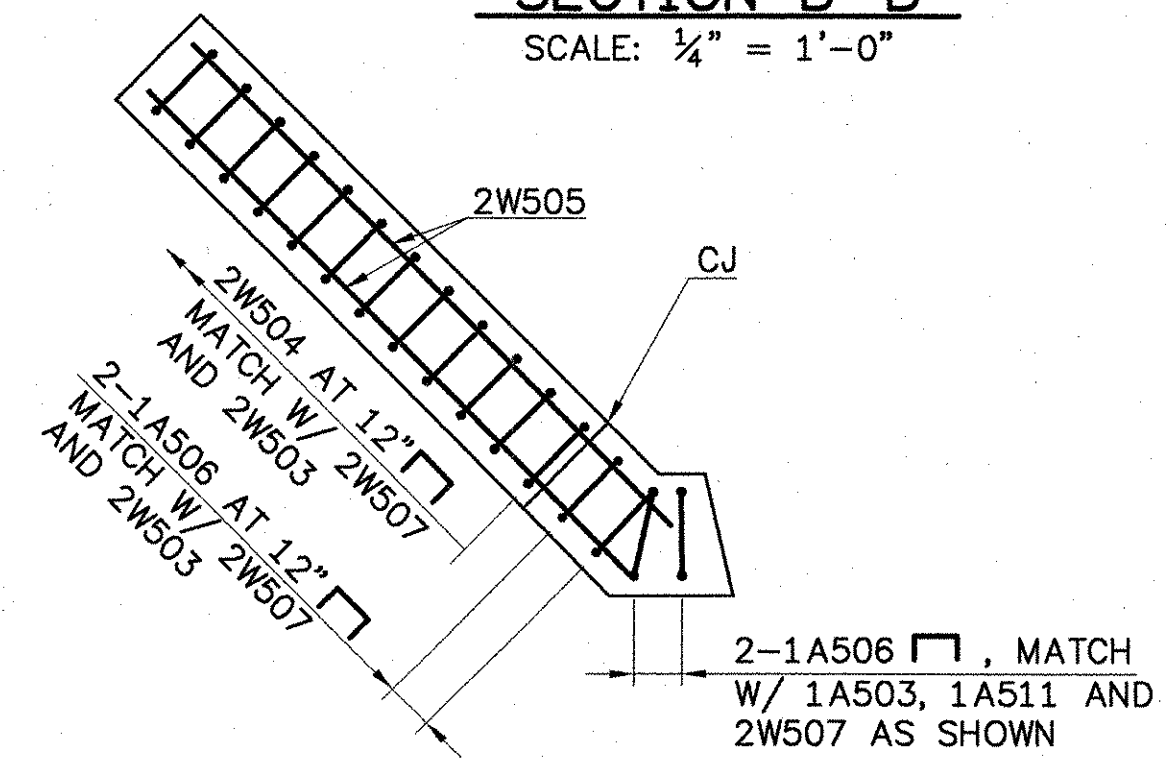
WINGWALL NO. 1 CORNER REINFORCING SECTION A-A
 SCALE: 1/4" = 1'-0"



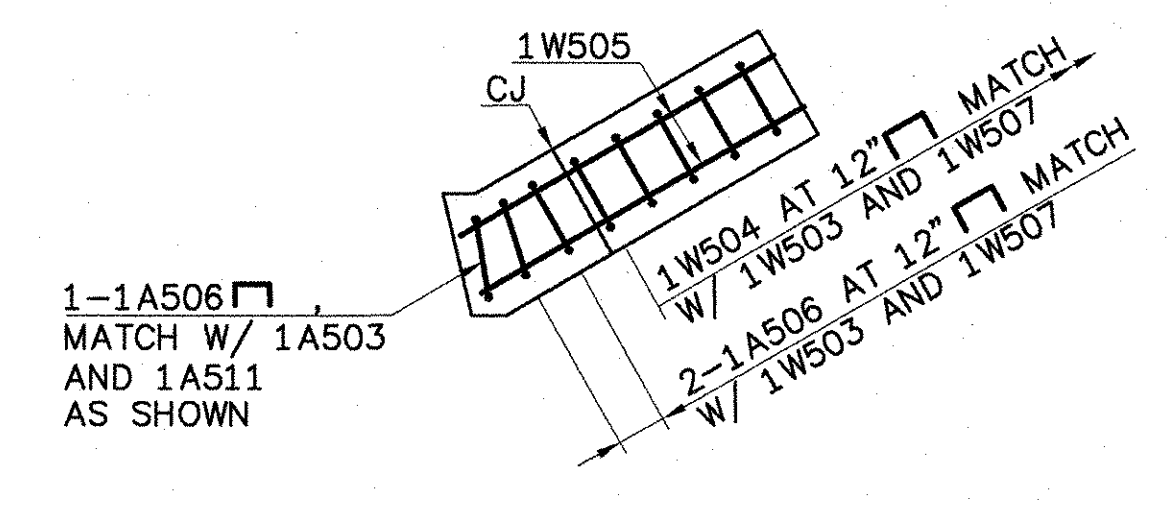
WINGWALL NO. 3 CORNER REINFORCING SECTION C-C
 SCALE: 1/4" = 1'-0"



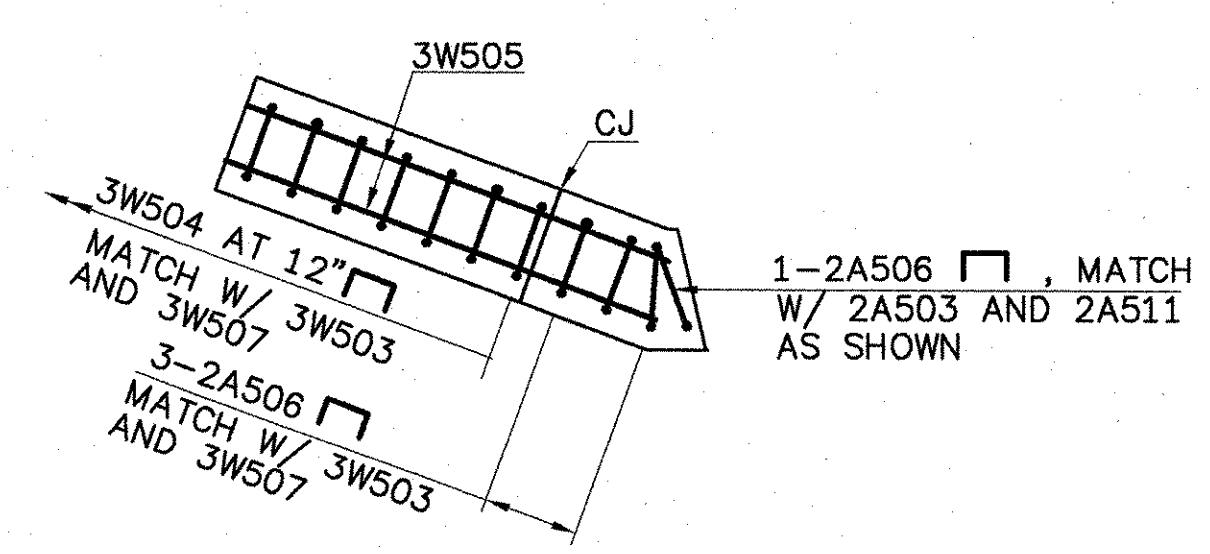
WINGWALL NO. 4 CORNER REINFORCING SECTION D-D
 SCALE: 1/4" = 1'-0"



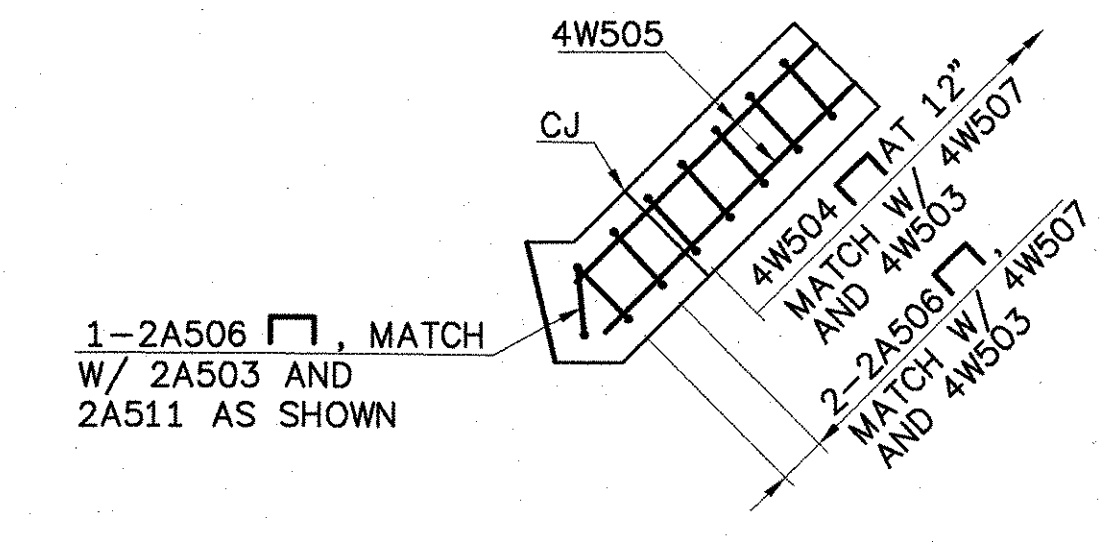
WINGWALL NO. 2 CORNER REINFORCING SECTION F-F
 SCALE: 1/4" = 1'-0"



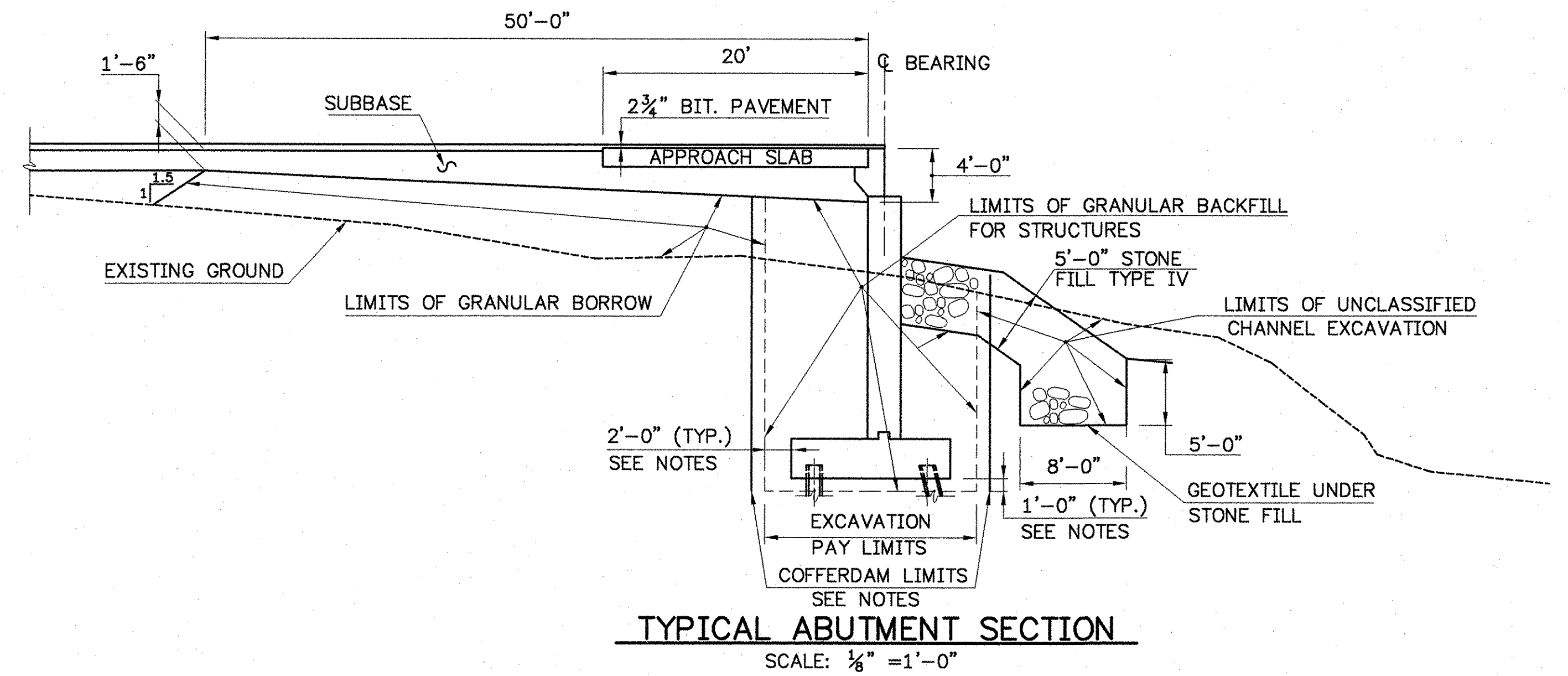
WINGWALL NO. 1 CORNER REINFORCING SECTION E-E
 SCALE: 1/4" = 1'-0"



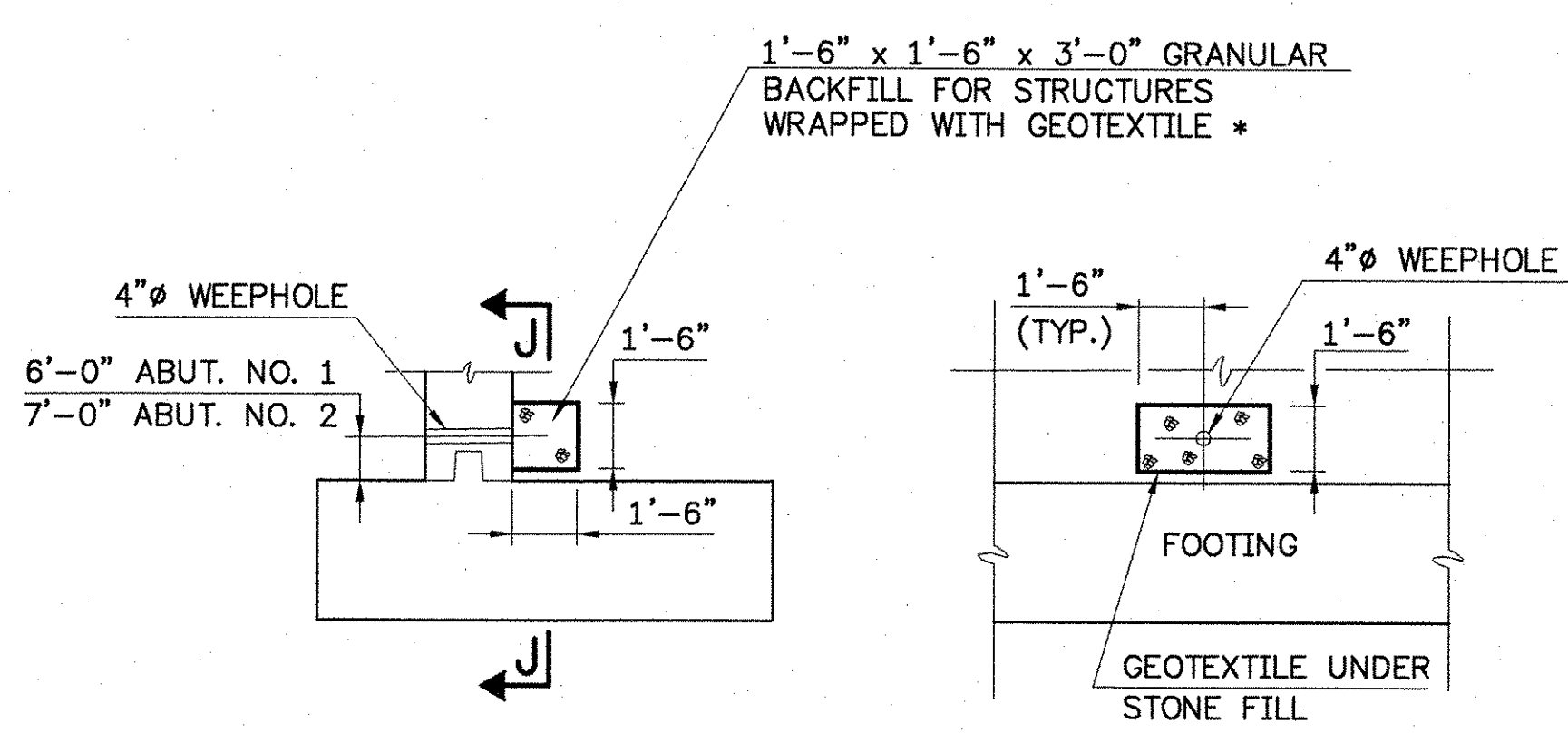
WINGWALL NO. 3 CORNER REINFORCING SECTION G-G
 SCALE: 1/4" = 1'-0"



WINGWALL NO. 4 CORNER REINFORCING SECTION H-H
 SCALE: 1/4" = 1'-0"

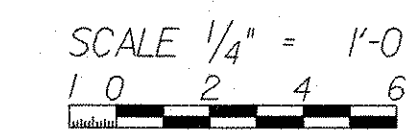


TYPICAL ABUTMENT SECTION
 SCALE: 1/8" = 1'-0"



TYPICAL WEEPHOLE DETAIL SECTION J-J
 SCALE: 1/4" = 1'-0"

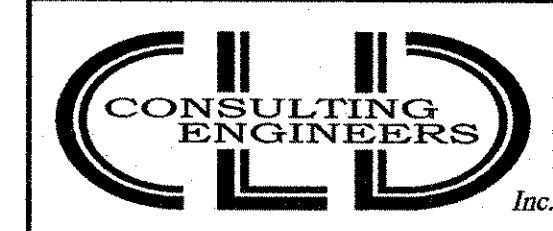
*NOTE: THIS WILL BE PAID FOR UNDER THE ITEMS "GRANULAR BACKFILL FOR STRUCTURES" AND "GEOTEXTILE UNDER STONE FILL".



COFFERDAM NOTES:

1. COFFERDAM LIMITS TO BE DETERMINED BY THE CONTRACTOR.
2. FOR THE PURPOSES OF ESTIMATING EARTHWORK QUANTITIES, THE LIMITS OF THE COFFERDAM HAVE BEEN ASSUMED TO BE 2'-0" OUTSIDE THE PERIMETER OF THE FOOTING.
3. ONE FOOT OF UNDERCUT AS DETERMINED BY THE RESIDENT ENGINEER.
4. IF A COFFERDAM IS CONSTRUCTED WHICH IS MORE THAN THE INDICATED MINIMUM DISTANCE OUTSIDE THE FOOTING LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE MINIMUM COFFERDAM LIMITS SHOWN WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.

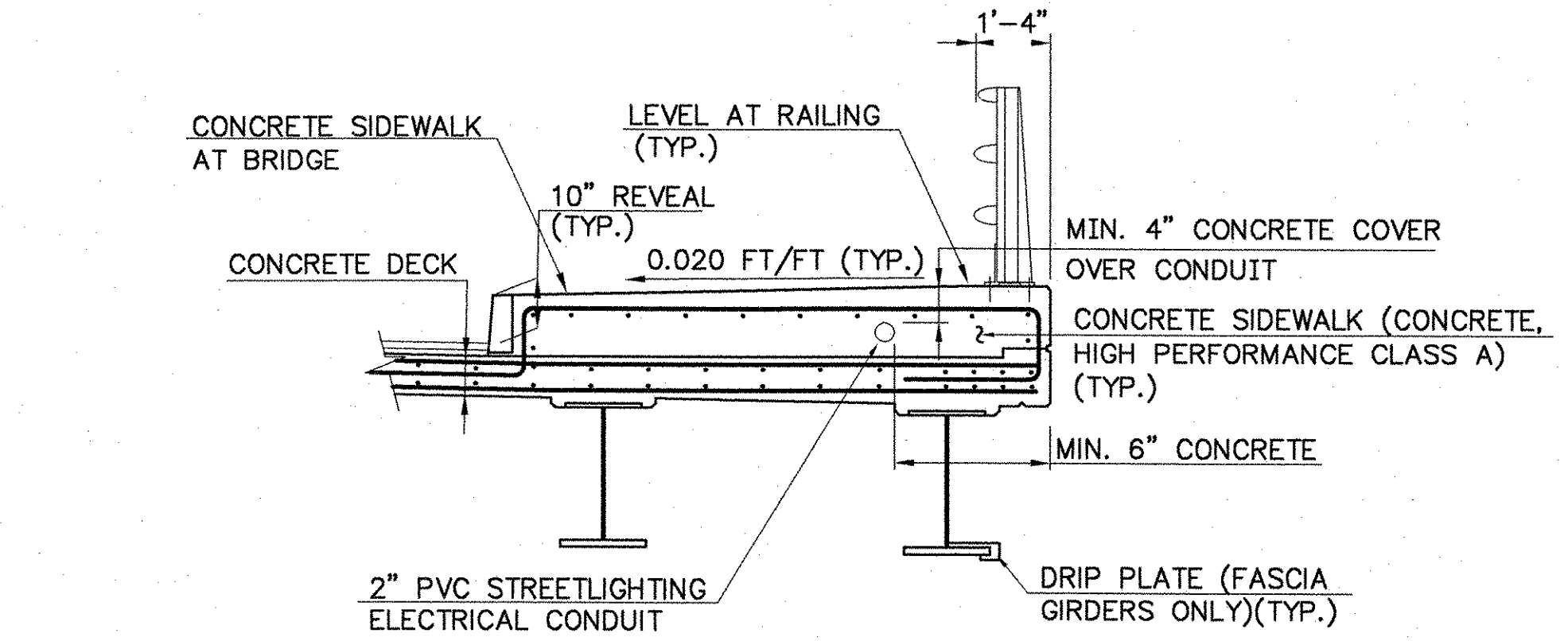
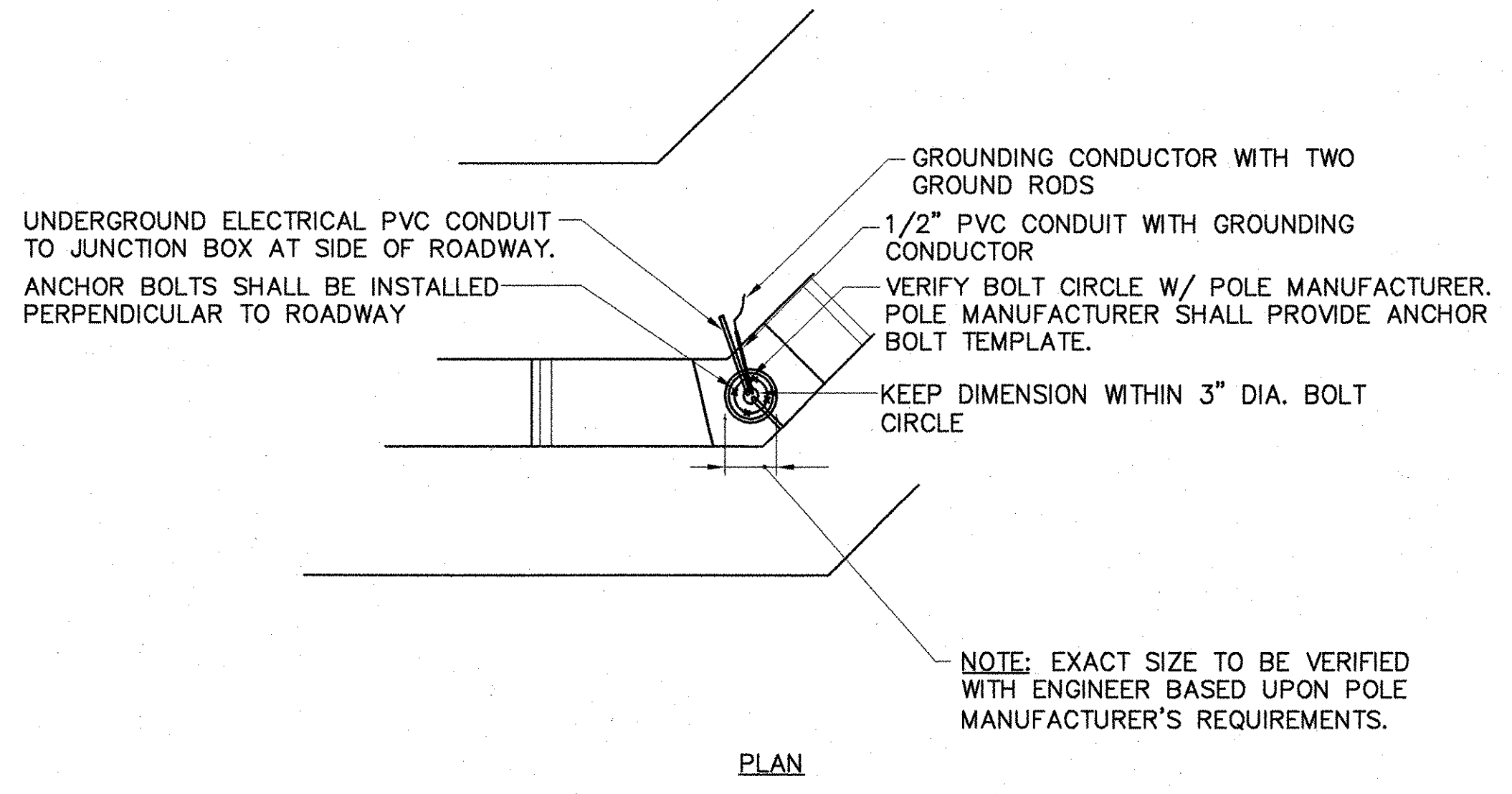
STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT. ROUTE 15	Log Sta.
		Surv. Sta.
VT. ROUTE 15 OVER GIHON RIVER		
SUBSTRUCTURE DETAILS		
Designed By	R.RICARD	Drawn By D.DUGAL
Checked By	Date	Bridge Design Supervisor
B.WELCH/R.RICARD	11/02	J. BYATT Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 65 Of 85



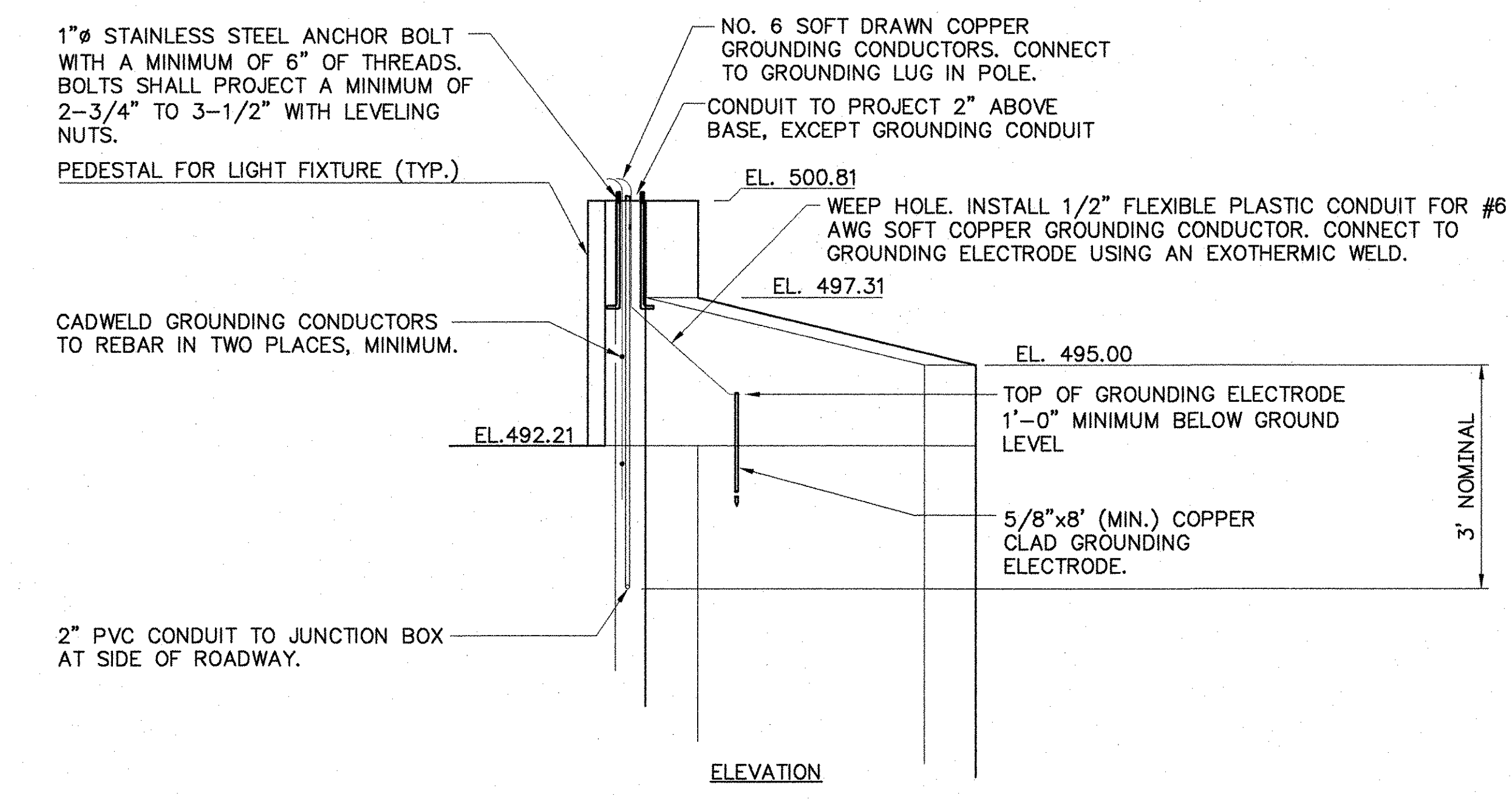
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 (603) 668-8223 • Fax: (603) 668-8802
 cld@cldeengineers.com • www.cldeengineers.com
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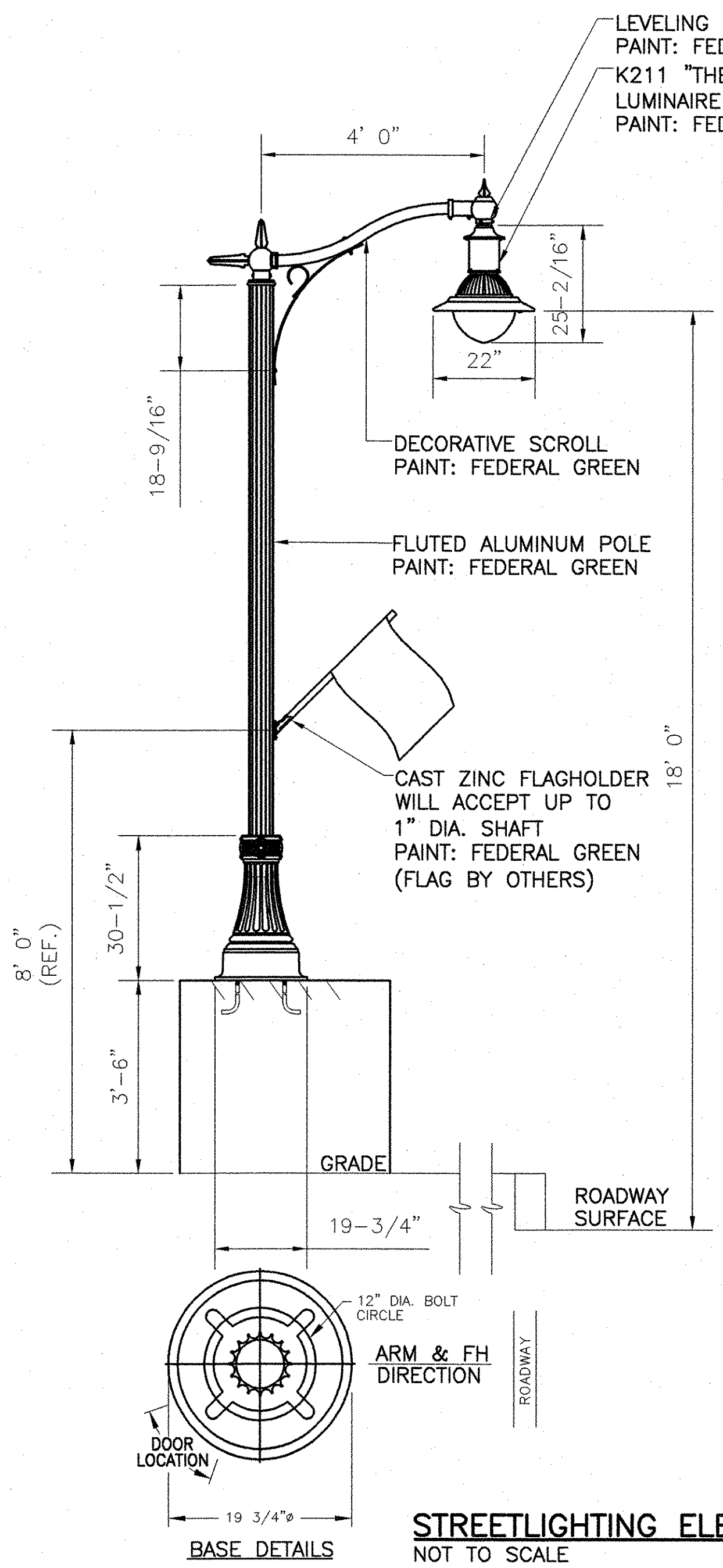
DATE	
BY	
SURVEYED	
PLOTTED	
NOTED	
NO.	
PLAN	
NO.	



STREETLIGHTING ELECTRICAL CONDUIT IN SIDEWALK AT BRIDGE TYPICAL
REFER TO BRIDGE SHEET 23 OF 85 FOR LIGHTING PLAN NOT TO SCALE



STREETLIGHTING ELECTRICAL CONDUIT AT ABUTMENTS
NOT TO SCALE (WW4 SHOWN, OTHERS SIMILAR)



DESCRIPTION OF COMPONENTS
DESCRIPTION IS INTENDED TO DESCRIBE QUALITY AND FUNCTION.

MANUFACTURER: KING LUMINAIRE
CATALOG NO.: K211-EGS-III-100(MED)
-MH-120(MT)-KPL20

OPTICAL SYSTEM: EXTERNAL GLASS
IES CLASS: TYPE III
WATTAGE: 100W
SOCKET TYPE: MEDIUM
LIGHT SOURCE: METAL HALIDE
LINE VOLTAGE: 120V (MULTI-TAP)
PAINT: FEDERAL GREEN
OPTIONS: KPL20 LEVELING DEVICE

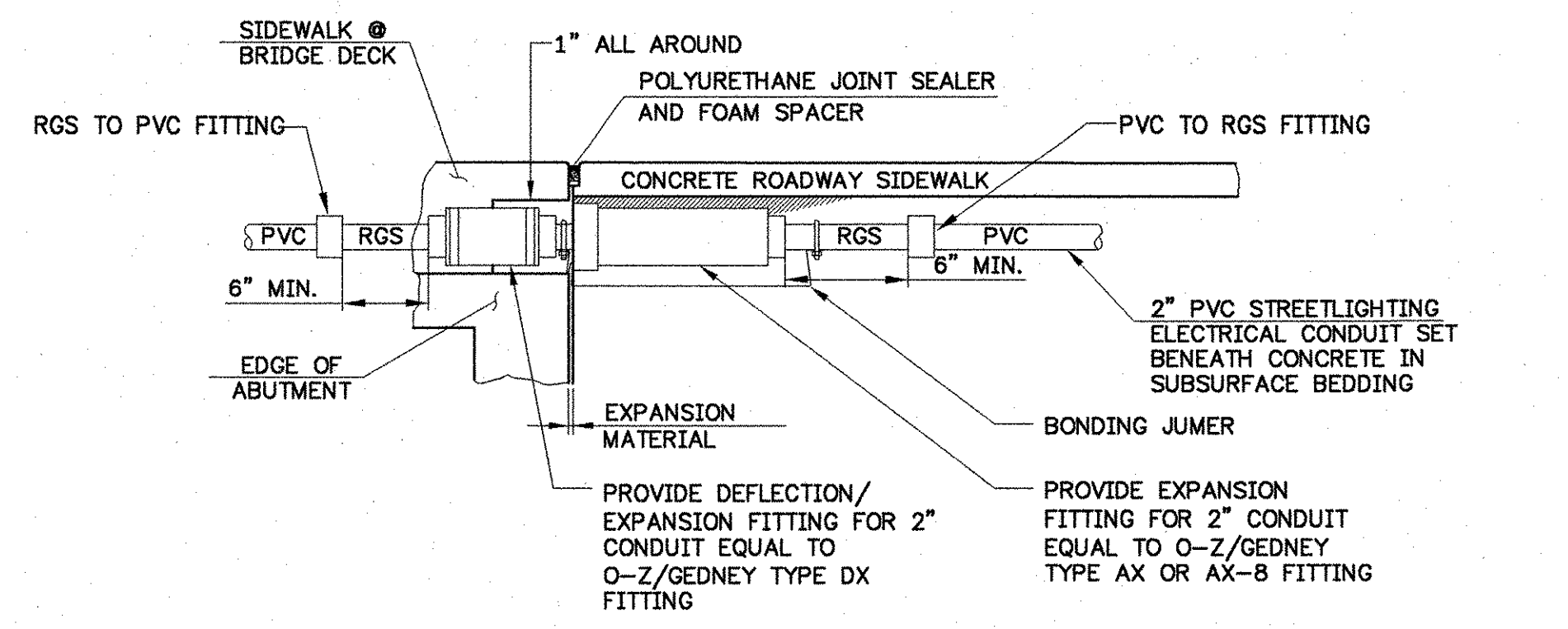
BALLAST INFORMATION:
BALLAST TYPE: HX-HPF
BALLAST MANU.: UNIVERSAL
CATALOG NUMBER: M150MLTLC3M
OPTIONS: QUICK DISCONNECT

ARM SPECIFICATIONS:
CATALOG NO.: KA30-T-1-4'
MATERIAL: ALUMINUM
PAINT: FEDERAL GREEN

POLE SPECIFICATIONS:
CATALOG NO.: KM19FE-16-FH
MATERIAL: ALUM. SHAFT CAST ALUM. BASE
PAINT: FEDERAL GREEN
TOP SIZE: 6 1/2"
POLE HEIGHT: FIELD VERIFY POLE HEIGHT
ANCHOR BOLTS: (4) 1" x 36" H.D.
BOLT CIRCLE: 12" ø
OPTIONS: FLAG HOLDER

PROVIDE PHOTOMETRICS AS PART OF PRODUCT SUBMITTALS

STREETLIGHTING ELECTRICAL CONDUIT AT ABUTMENTS
NOT TO SCALE

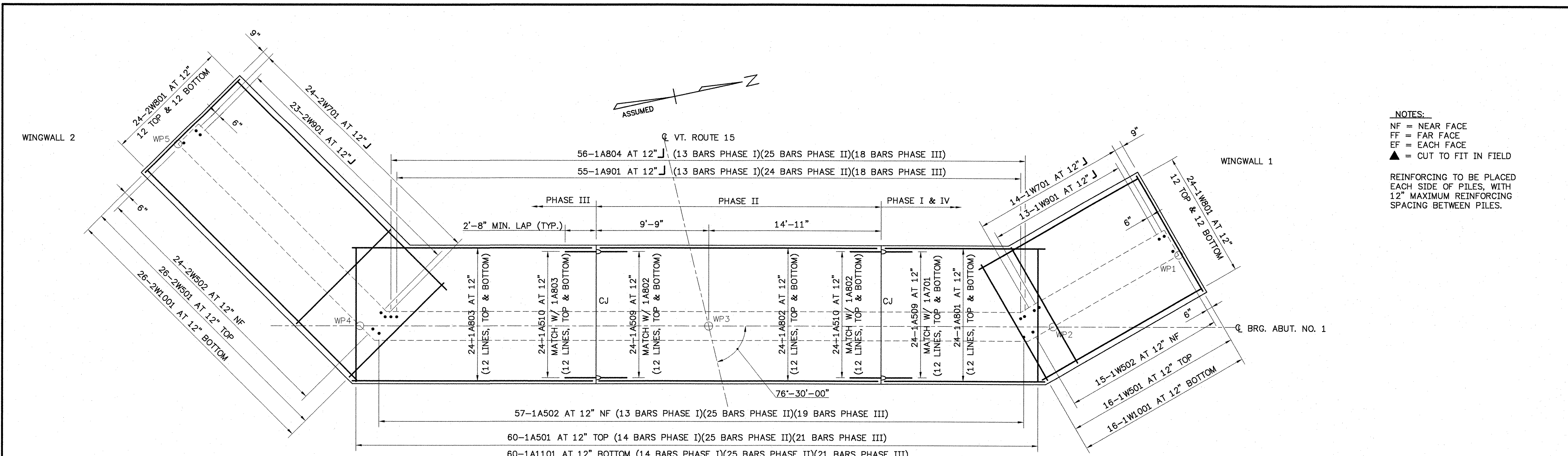


STREETLIGHTING CONDUIT AT TRANSITION TO CONCRETE ROADWAY SIDEWALK
NOT TO SCALE

GENERAL NOTES AND SPECIFICATIONS

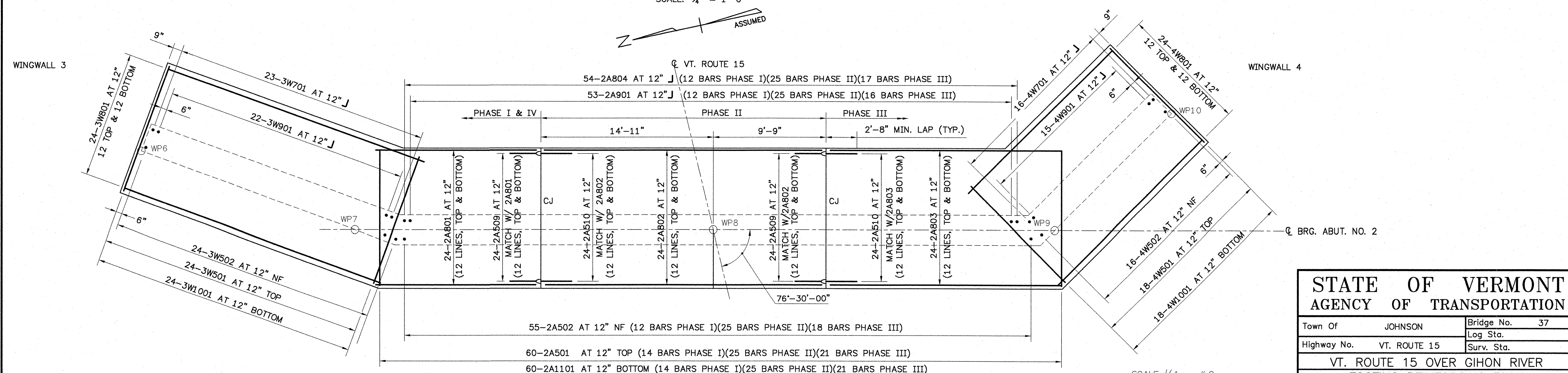
1. THE SCOPE OF WORK IS TO PROVIDE ALL LABOR, MATERIALS, SERVICES, SUPPLIES, TOOLS, EQUIPMENT, TRANSPORTATION, AND FACILITIES NECESSARY TO FURNISH AND INSTALL COMPLETE ELECTRICAL WORK AS CALLED FOR ON THE DRAWINGS, SPECIFIED, OR AS MAY REASONABLY BE IMPLIED AS BEING INCIDENTAL TO THIS WORK.
2. SECURE AND PAY COSTS OF PERMITS, CERTIFICATES, LICENSES, INSPECTIONS, AND APPROVALS.
3. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL CODES, REGULATIONS AND REQUIREMENTS OF ALL MUNICIPAL, STATE, FEDERAL, UTILITY, AND OTHER PUBLIC OR PRIVATE AUTHORITIES WHICH HAVE JURISDICTION. IN EACH CASE, CODES ARE MINIMUM REQUIREMENTS.
4. SHOP DRAWINGS: SUBMIT COMPLETE CATALOG INFORMATION FOR ALL MATERIALS AND EQUIPMENT TO BE PURCHASED AND USED ON THIS PROJECT, AS SPECIFIED ON THE DRAWINGS. DO NOT INSTALL MATERIALS OR EQUIPMENT WITHOUT APPROVAL BY THE ENGINEER. UNAPPROVED MATERIAL ALREADY INSTALLED SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT WITH APPROVED MATERIALS AT THE CONTRACTOR'S EXPENSE.
5. MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS' LABORATORIES AND SHALL BE INSTALLED IN ACCORDANCE WITH SUCH LISTINGS.
6. ELECTRICAL SERVICES SHALL BE 100A, 120/240V, SINGLE PHASE, THREE WIRE SERVICE. METER SOCKET SHALL BE PER UTILITY REQUIREMENTS. SEE VAOT STANDARDS E-175 DETAIL 1 FOR METER/DISCONNECT STANCHION. ALL SERVICE ENTRANCE EQUIPMENT SHALL BE RATED 22 KAIC (MIN.). STANCHION SHALL INCLUDE: A 12 CRK PANEL WITH A 100A, 240V, 2 POLE MAIN BREAKER. PROVIDE (6) 20A, 120V, 1 POLE BREAKERS FOR STREET LIGHTING AND (2) 30A, 240V, 2 POLE BREAKERS WITH GROUND FAULT PROTECTION FOR PERMANENT BRIDGE CROSSING HEAT TRACE SYSTEM. PROVIDE (2) 30A, 120V, 1 POLE BREAKERS FOR SPARE. NEMA 4X ENCLOSURE FOR THE HEAT TRACE SYSTEM SHALL BE LOCATED ADJACENT TO THE ELECTRICAL PANEL. SEE SHEET 22 FOR DETAIL OF HEAT TRACE SYSTEM.
7. INSTALLATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
8. CONTRACTOR TO CONTACT DIGSAFE IN VERMONT STATE PRIOR TO COMMENCING WORK.
9. CONTRACTOR TO CONTACT UTILITY COMPANY FOR COORDINATION OF NEW ELECTRICAL SERVICE.
10. METER/DISCONNECT STANCHIONS SHALL INCLUDE MAIN SERVICE DISCONNECT (2 POLE, 80A, 240V, 1 PHASE) AND (6) SIX BRANCH CIRCUIT BREAKERS (1 POLE, 20A, 120V). ALL SERVICE ENTRANCE EQUIPMENT SHALL BE RATED 22 KAIC (MIN.).
11. ORNAMENTAL STREETLIGHT SHALL BE 100W (MAX.) METAL HALIDE, CUTOFF, TYPE III DISTRIBUTION, LUMINAIRE SOURCE MOUNTED AT 18FT ABOVE ROADWAY SURFACE. LIGHTING SHALL PROVIDE A MINIMUM MAINTAINED ILLUMINATION ON THE ROADWAY SURFACE (FROM STATION 102+75 TO STATION 104+10) OF 0.8 FOOTCANDLES.
12. MAXIMUM OF 270 DEGREES IN TOTAL BEND SHALL BE PERMITTED IN SINGLE RUN OF CONDUIT.
13. LIGHTS SHALL BE FUSED AT BASE WITH Y-TYPE FUSE KIT (EQUIVALENT OF HOMAC/FLOOD SEAL: FYC-6 AND 10 AMP FUSE).
14. UTILIZE DUAL-RATED PARALLEL TAP CONNECTORS AT POLE BASES EQUIVALENT TO ILSCO GTA SERIES WITH INSULATED COVERS.
15. UTILIZE APPROVED DUAL-RATED PARALLEL TAP CONNECTOR EQUAL TO ILSCO PED SERIES WATERTIGHT CONNECTOR. SUITABLE FOR DIRECT BURIAL IN JUNCTION BOXES, HANDHOLES AND MANHOLES.

STATE OF VERMONT		
AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
		Log Sta.
Highway No.	VT ROUTE 15	Surv. Sta.
VT ROUTE 15 OVER THE GHON RIVER		
LIGHTING DETAILS		
Designed By	L. BLACK	Drawn By P. HILL
Checked By	Date	Bridge Design Supervisor J Byatt Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 66 Of 85



**ABUTMENT NO. 1
FOOTING REINFORCING PLAN**
SCALE: 1/4" = 1'-0"

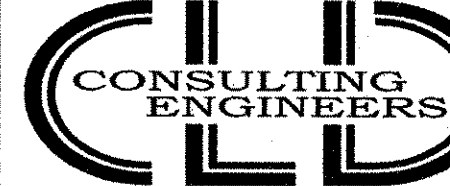
NOTES:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 REINFORCING TO BE PLACED EACH SIDE OF PILES, WITH 12" MAXIMUM REINFORCING SPACING BETWEEN PILES.



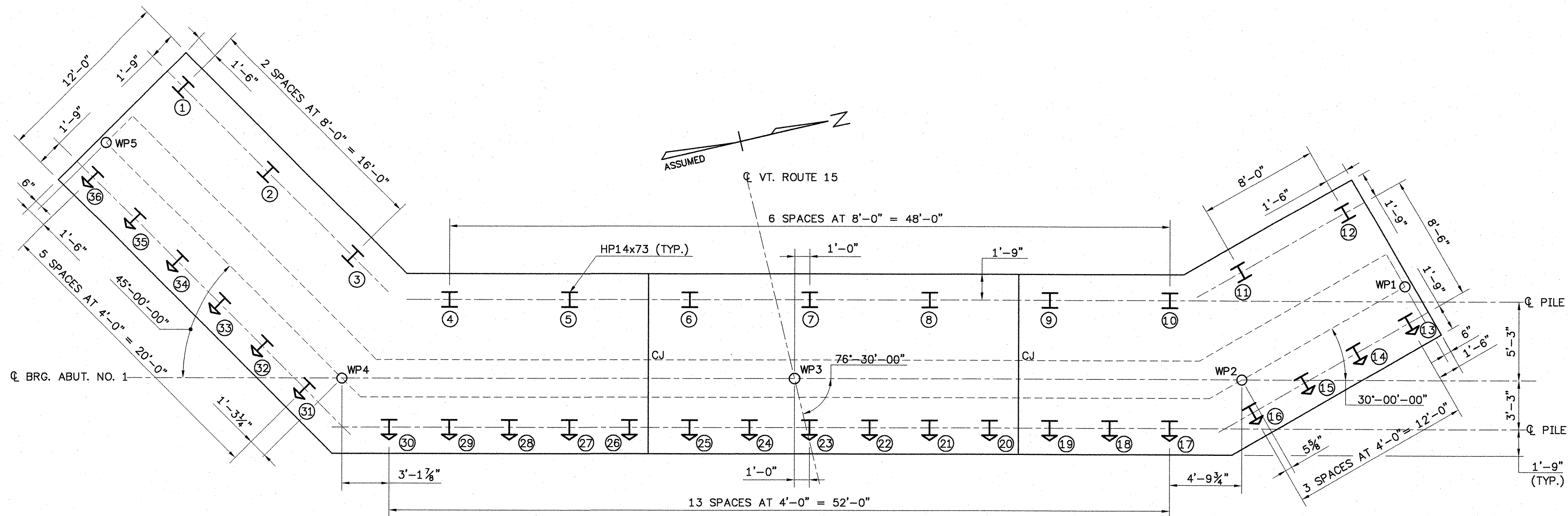
**ABUTMENT NO. 2
FOOTING REINFORCING PLAN**
SCALE: 1/4" = 1'-0"

SCALE 1/4" = 1'-0"
 1 2 3 4 6

STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT. ROUTE 15	Log Sta.
		Surv. Sta.
VT. ROUTE 15 OVER GIHON RIVER		
FOOTING REINFORCING PLAN		
Designed By	R.RICARD	Drawn By. D.DUGAL
Checked By	Date	Bridge Design Supervisor
B.WELCH/R.ROONEY	11/02	J. BYATT Date 11/02
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 67 Of 85


 540 Commercial Street • Manchester, NH 03101
 (603) 668-8223 • Fax: (603) 668-8802
 cld@cldeengineers.com • www.cldeengineers.com
 Maine • New Hampshire • Vermont
 Inc.

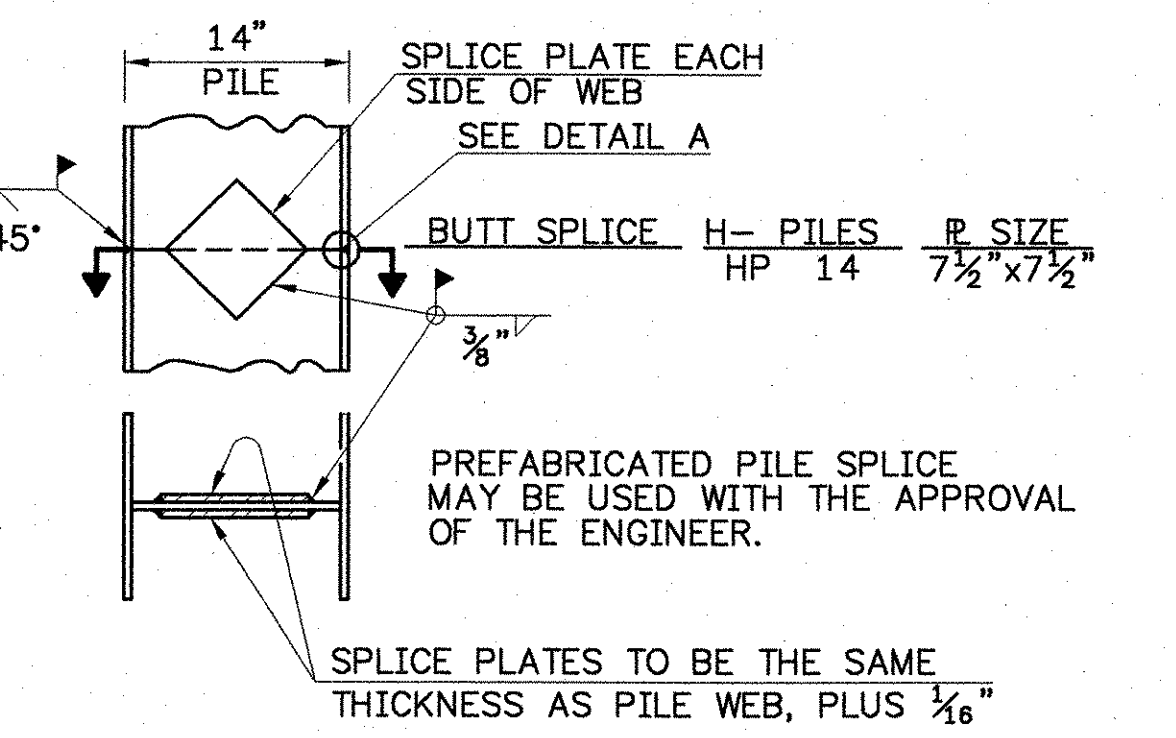
91296FOOT.DWG



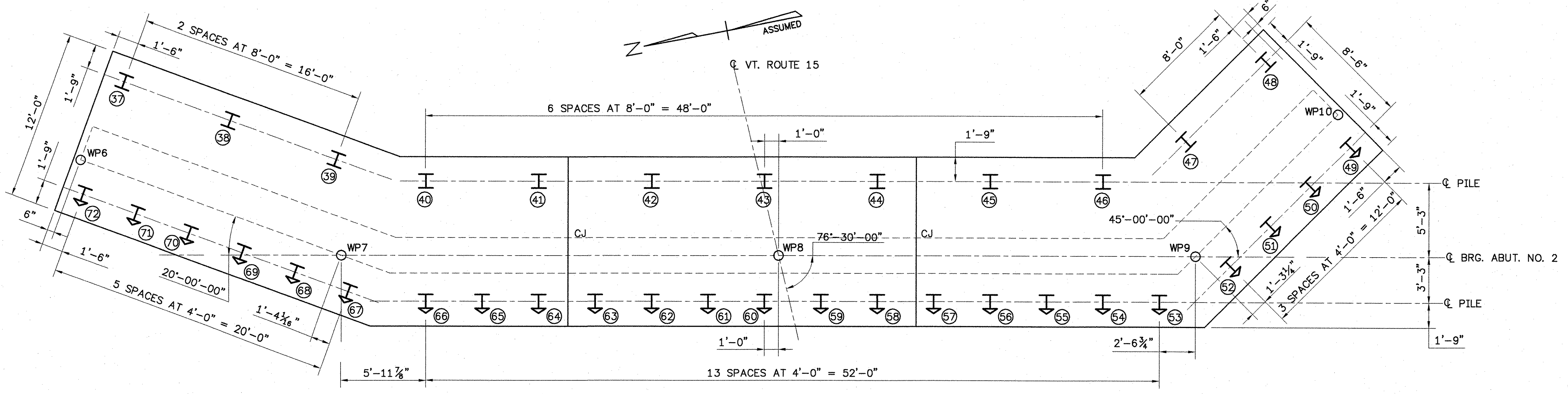
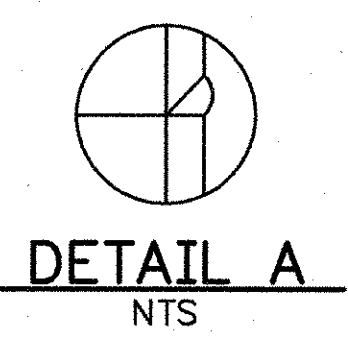
**H-PILE LAYOUT
ABUTMENT NO. 1**
SCALE: 1/4" = 1'-0"

B-U4d(STEEL BACKING) or
B-U4b (BACK GOUGING) FULL
PENETRATION, FLANGE ONLY (TYP)

- PILE NOTES:**
- PILES UNDER 20 FEET SHALL NOT BE SPLICED.
 - PILE CUTOFF ELEVATION: ABUTMENT NO. 1 = 473.00
ABUTMENT NO. 2 = 472.00
 - SEE SHEET 46 OF 85 FOR GENERAL PILE NOTES.
- ⊥ INDICATES VERTICAL HP14x73 PILE
DRIVEN TO ULTIMATE CAPACITY PER
PILE OF 530 KIPS.
- ↘ INDICATES PILE BATTERED 3 ON 12



DETAIL OF PILE SPLICE
SCALE: 1" = 1'-0"



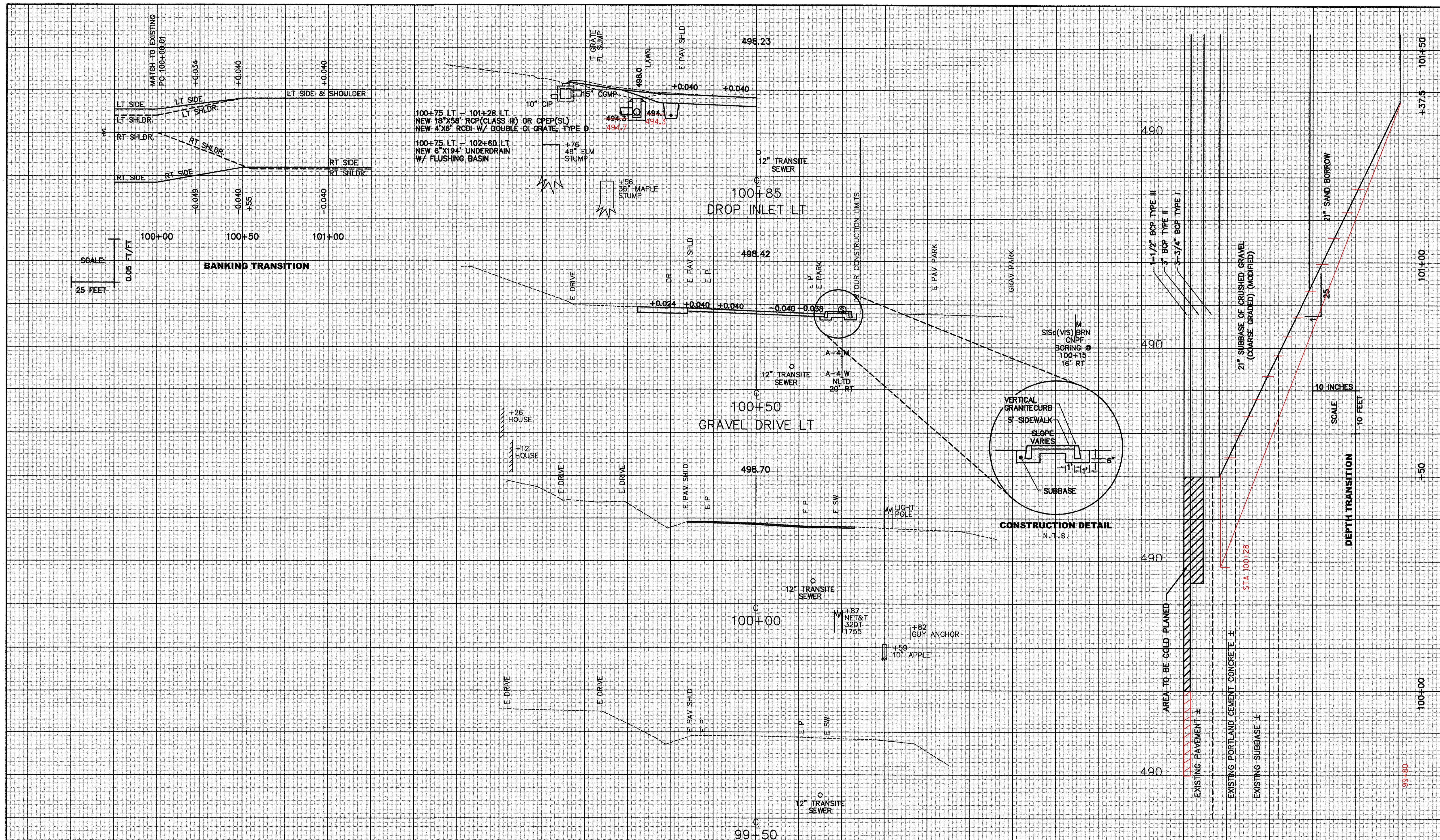
**H-PILE LAYOUT
ABUTMENT NO. 2**
SCALE: 1/4" = 1'-0"

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

STATE OF VERMONT AGENCY OF TRANSPORTATION		
Town Of	JOHNSON	Bridge No. 37
Highway No.	VT. ROUTE 15	Log Sta.
		Surv. Sta.
VT. ROUTE 15 OVER GHON RIVER		
PILE LAYOUT		
Designed By	R.RICARD	Drawn By. D.DUGAL
Checked By	Date	Bridge Design Supervisor
B.WELCH/R.ROONEY	11/02	J. BYATT Date 11/06
PROJECT	JOHNSON	PROJECT NO. BRF 030-2(17)S
I.G.C. Info.		
Bridge Sheet No.		Sheet 68 Of 85

CLD CONSULTING ENGINEERS Inc.
540 Commercial Street • Manchester, NH 03101
(603) 668-8223 • Fax: (603) 668-8802
cld@cldeengineers.com • www.cldengineers.com
Maine • New Hampshire • Vermont

9129SPILE.DWG



SCALE:
0.05 FT/FT
25 FEET

BANKING TRANSITION

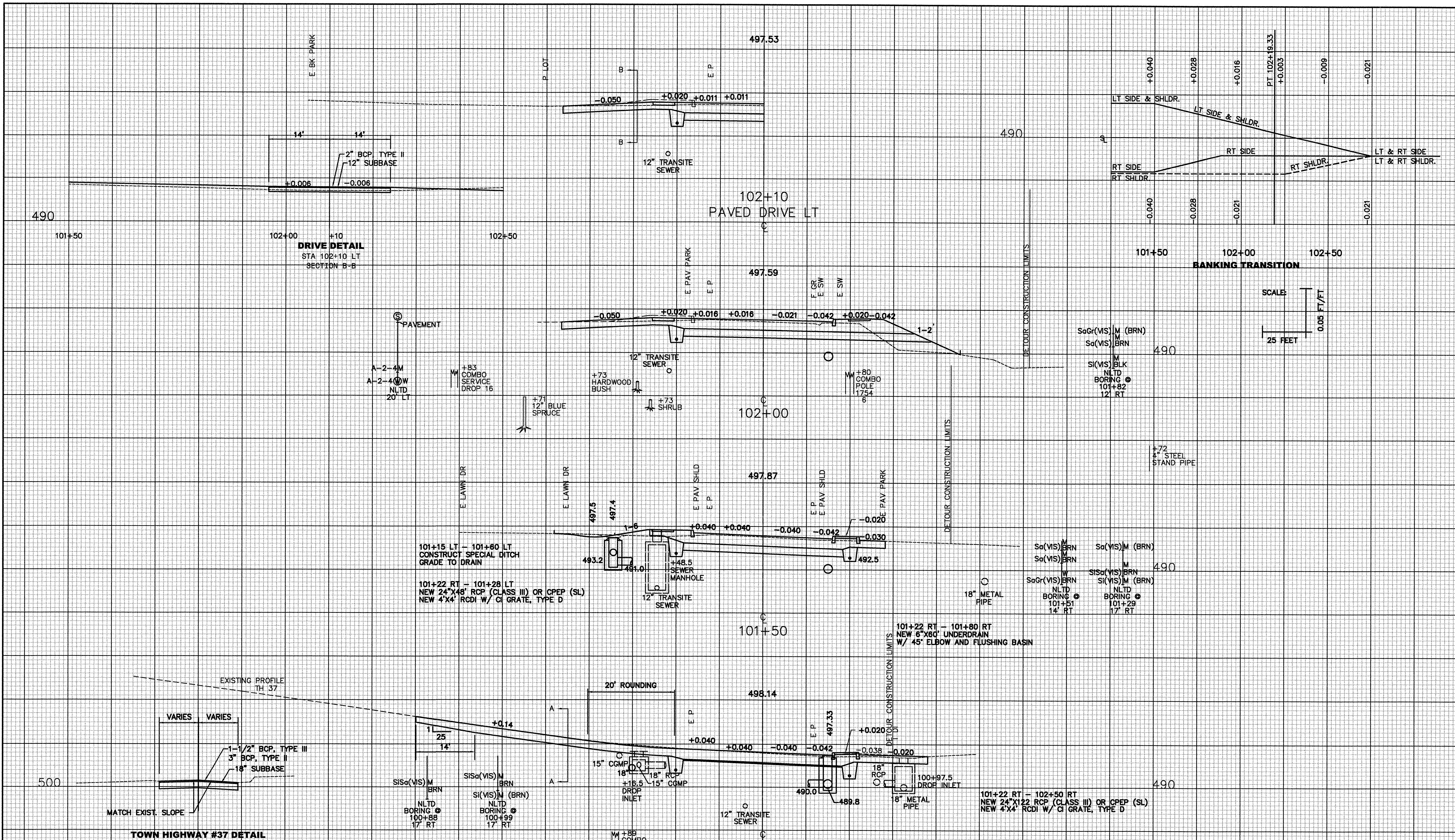
SCALE
10 INCHES
10 FEET

CROSS SECTIONS - ROUTE 15

FROM STA. 99+50 TO STA. 100+85
PROJECT NAME JOHNSON VT ROUTE 15
NO. BR 030-2(17)S PLOTTED 12/30/87
SURVEYED BY SARGENT DEC. 1987
SHEET 70 OF 85 SHEETS

SCALE 10 FEET

99+80



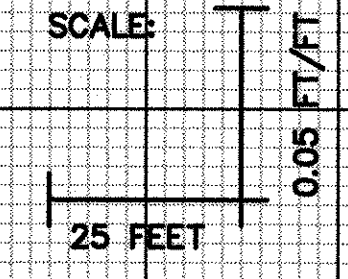
DRIVE DETAIL
 STA 102+10 LT
 SECTION B-B

TOWN HIGHWAY #37 DETAIL
 STA 101+00 LT
 SECTION A-A

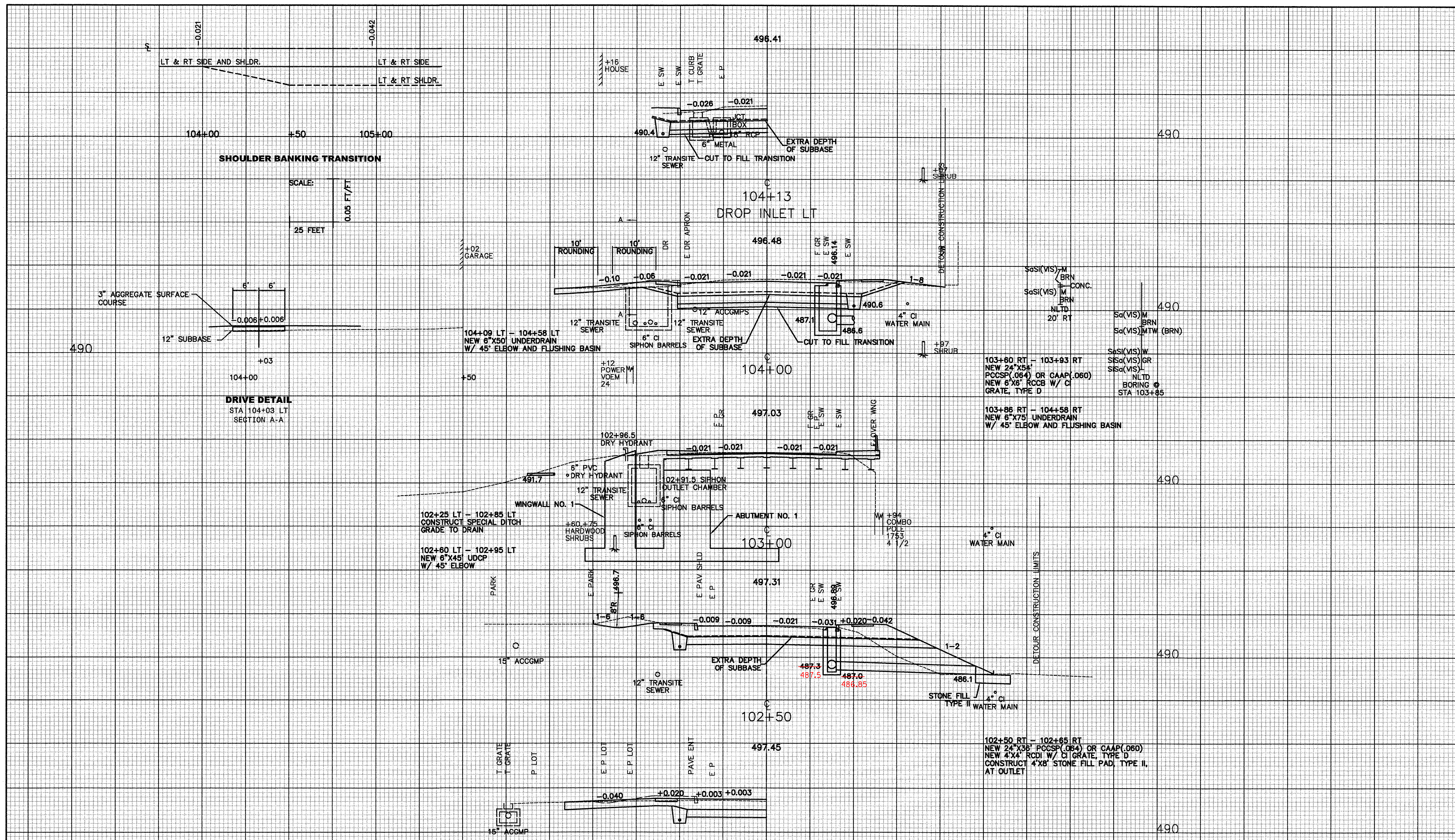
NOTE:
 ADDITIONAL INFORMATION FOR TH 37
 CAN BE FOUND ON SHEETS 54 & 55

CROSS SECTIONS - ROUTE 15

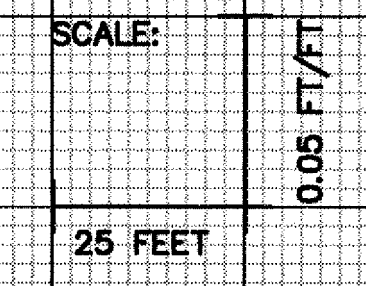
FROM STA.	101+00	TO STA.	102+10
PROJECT NAME	JOHNSON - VT ROUTE 15		
NO.	BRF 030-2(17)S	PLOTTED	12/30/87
SURVEYED BY	SARGENT	DEC.	1987
SHEET	71	OF	85 SHEETS



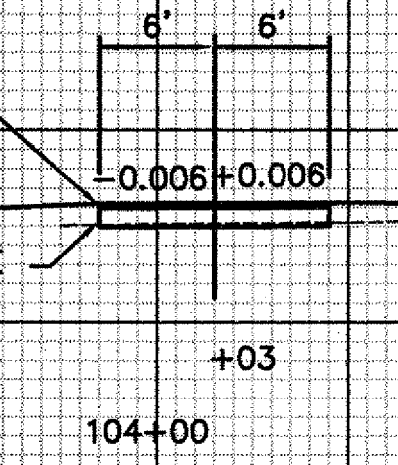
SCALE 1" = 10 FEET



SHOULDER BANKING TRANSITION

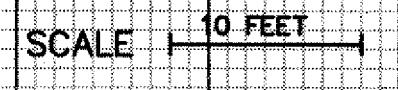


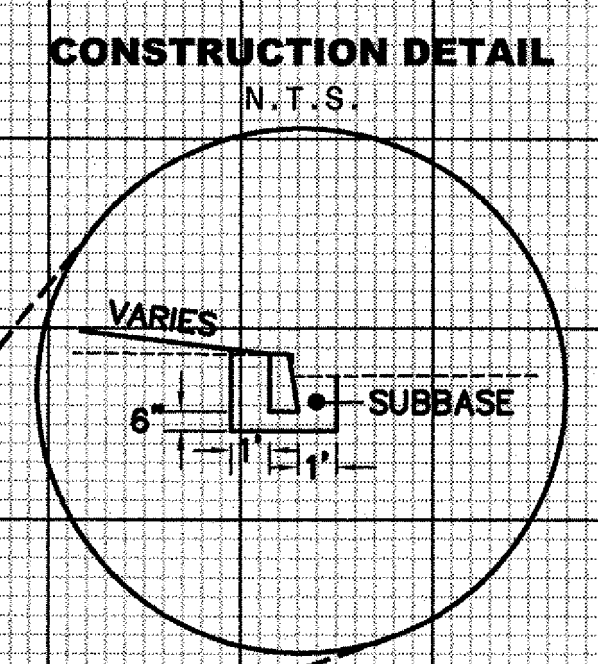
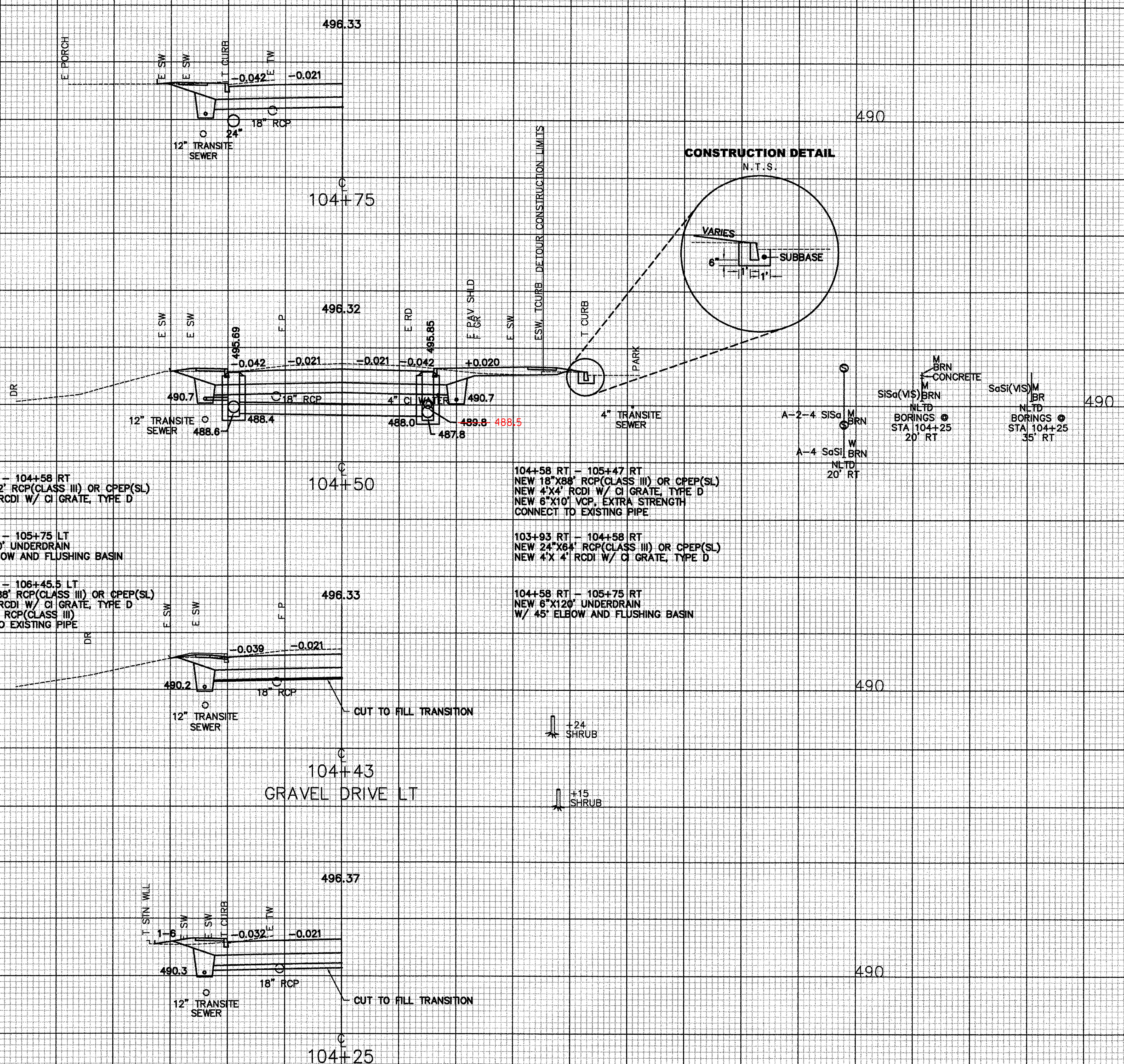
DRIVE DETAIL
STA 104+03 LT
SECTION A-A



CROSS SECTIONS - ROUTE 15

FROM STA. 102+25 TO STA. 104+13
 PROJECT NAME JOHNSON VT ROUTE 15
 NO. BRF 030-2(17)S PLOTTED 12/30/87
 SURVEYED BY SARGENT DEC. 1987
 SHEET 72 OF 85 SHEETS





104+58 LT - 104+58 RT
 NEW 24"X32" RCP(CLASS III) OR CPEP(SL)
 NEW 4'X4' RCDI W/ CI GRATE, TYPE D

104+58 LT - 105+75 LT
 NEW 6"X120" UNDERDRAIN
 W/ 45' ELBOW AND FLUSHING BASIN

104+58 LT - 106+45.5 LT
 NEW 24"X188" RCP(CLASS III) OR CPEP(SL)
 NEW 4'X6' RCDI W/ CI GRATE, TYPE D
 NEW 18"X4' RCP(CLASS III)
 CONNECT TO EXISTING PIPE

104+58 RT - 105+47 RT
 NEW 18"X88" RCP(CLASS III) OR CPEP(SL)
 NEW 4'X4' RCDI W/ CI GRATE, TYPE D
 NEW 6"X10' VCP, EXTRA STRENGTH
 CONNECT TO EXISTING PIPE

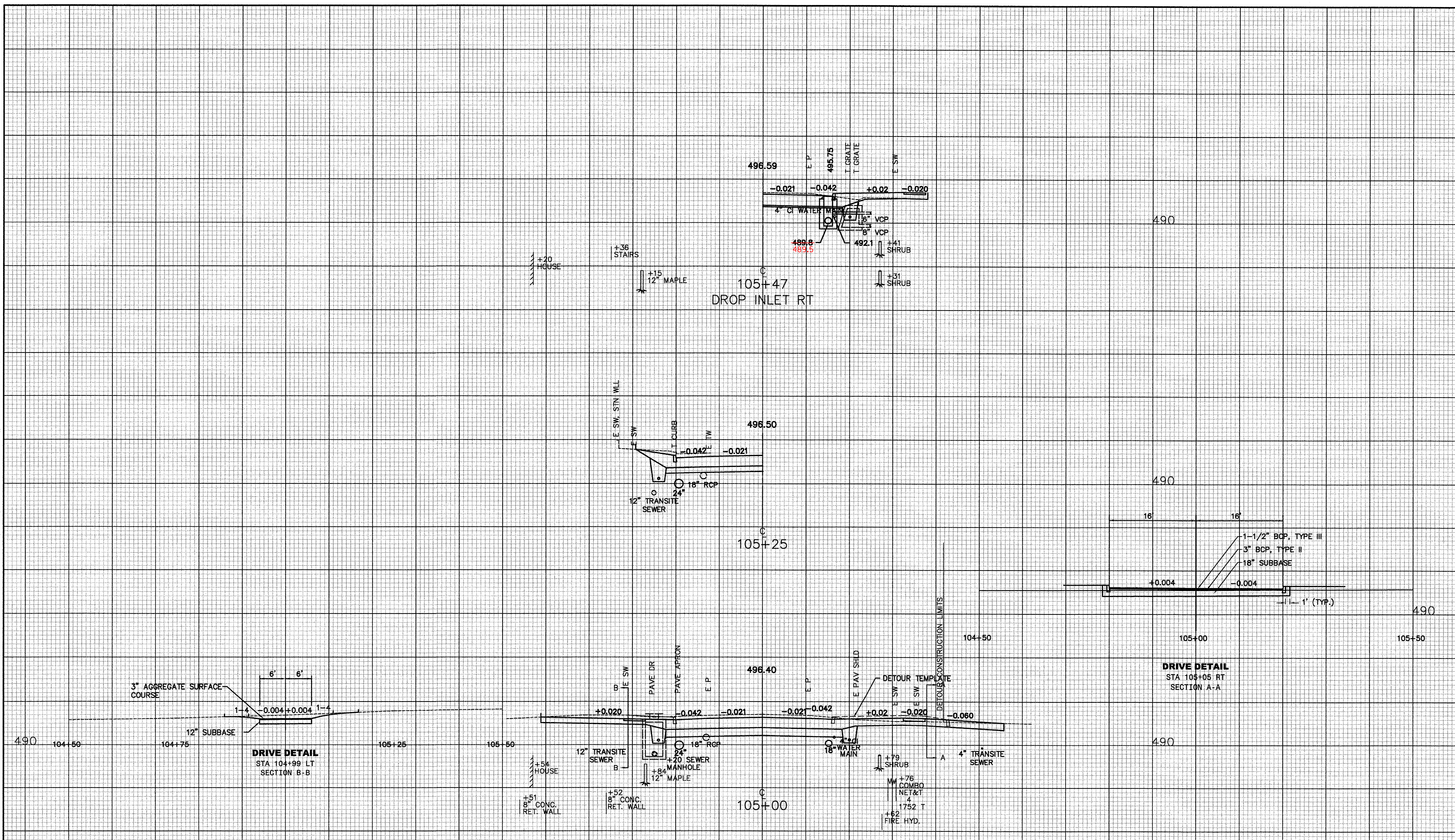
103+93 RT - 104+58 RT
 NEW 24"X64" RCP(CLASS III) OR CPEP(SL)
 NEW 4'X4' RCDI W/ CI GRATE, TYPE D

104+58 RT - 105+75 RT
 NEW 6"X120" UNDERDRAIN
 W/ 45' ELBOW AND FLUSHING BASIN

CROSS SECTIONS - ROUTE 15

FROM STA.	104+25	TO STA.	104+75
PROJECT NAME	JOHNSON VT ROUTE 15		
NO.	BRF 030-2(17)S	PLOTTED	12/30/87
SURVEYED BY	SARGENT	DEC.	1987
SHEET	73	OF	85 SHEETS

SCALE 10 FEET



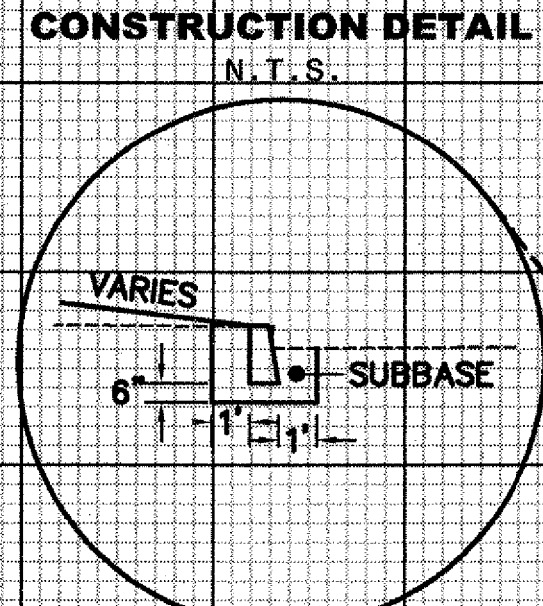
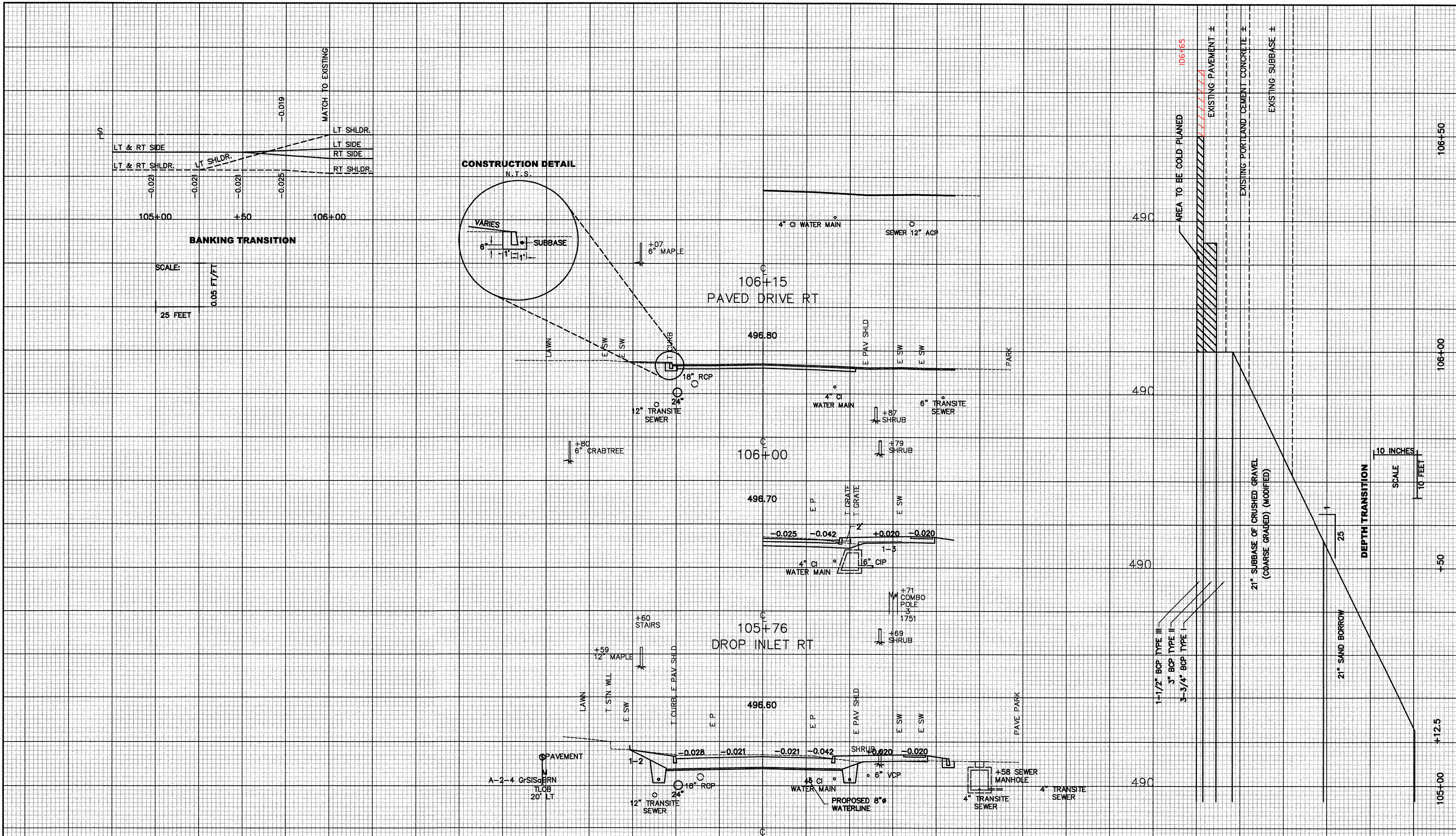
DRIVE DETAIL
 STA 104+99 LT
 SECTION B-B

DRIVE DETAIL
 STA 105+05 RT
 SECTION A-A

CROSS SECTIONS - ROUTE 15

FROM STA.	105+00	TO STA.	105+47
PROJECT NAME	JOHNSON VT ROUTE 15		
NO.	BRF	030-2(17)S	PLOTTED 12/30/87
SURVEYED BY	SARGENT		DEC. 1987
SHEET	74	OF	85 SHEETS

SCALE 1" = 10 FEET



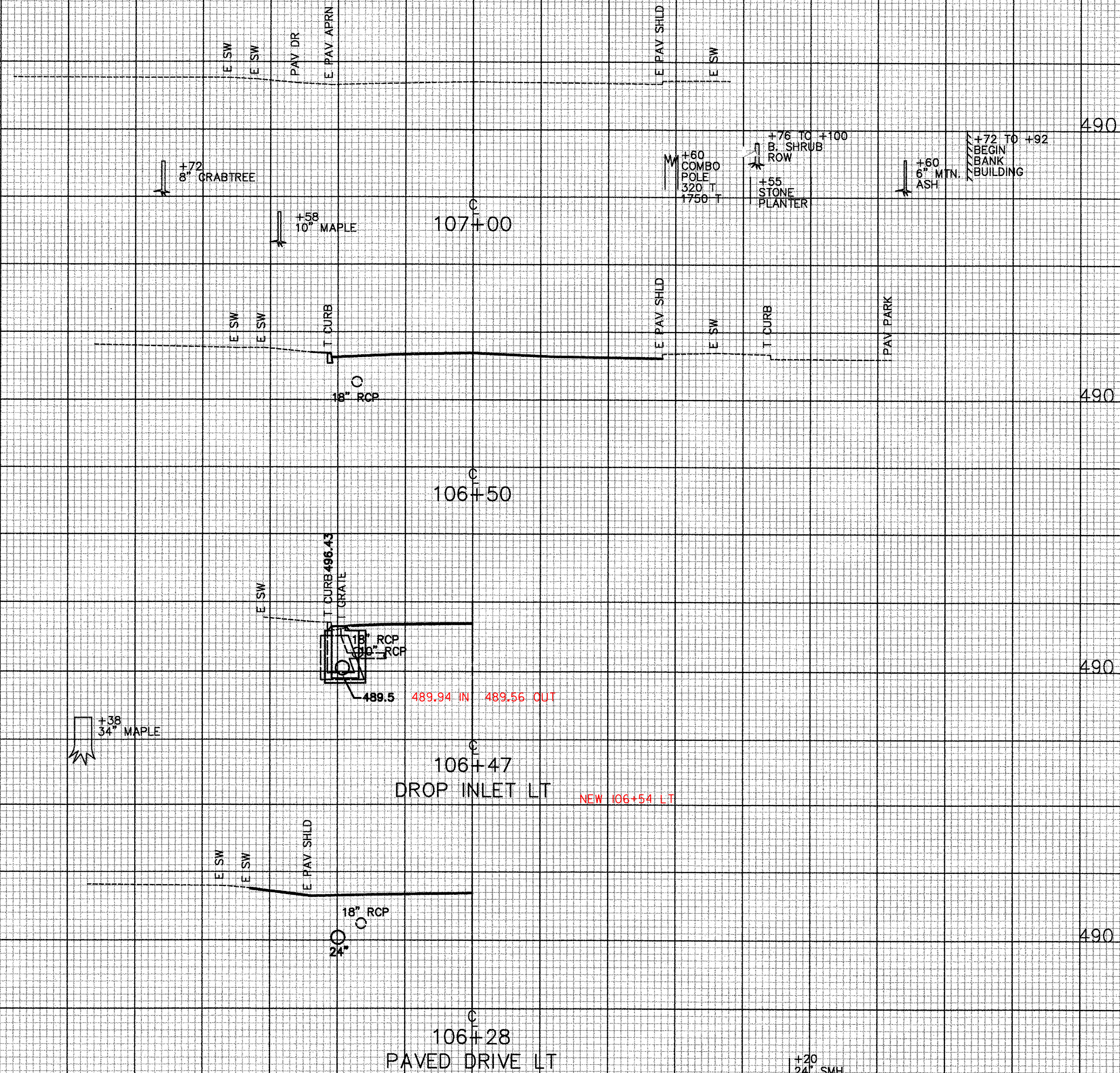
SCALE:
0.05 FT/FT
25 FEET

DEPTH TRANSITION
SCALE
10 INCHES
10 FEET

CROSS SECTIONS - ROUTE 15

FROM STA.	105+50	TO STA.	106+15
PROJECT NAME	JOHNSON VT ROUTE 15		
NO.	030-2(17)S	PLOTTED	12/30/87
SURVEYED BY	SARGENT	DEC.	1987
SHEET	75 OF 85	SHEETS	

SCALE 10 FEET



CROSS SECTIONS - ROUTE 15

FROM STA. 106+28 TO STA. 107+00
 PROJECT NAME JOHNSON VT ROUTE 15
 NO. BRF 030-2(17)S PLOTTED 12/30/87
 SURVEYED BY SARGENT DEC. 1987
 SHEET 76 OF 85 SHEETS



+20
24" SMH

106+28
PAVED DRIVE LT

18" RCP

106+47
DROP INLET LT

NEW 106+54 LT

489.5 489.94 IN 489.56 OUT

T CURB 496.43
GRA T

106+50

18" RCP

107+00

10" MAPLE

+72
8" GRABTREE

+60
COMBO
POLE
320 T
1750 T

+76 TO +100
B. SHRUB
ROW
+55
STONE
PLANTER

+60
6" MTN.
ASH

+72 TO +92
BEGIN
BANK
BUILDING

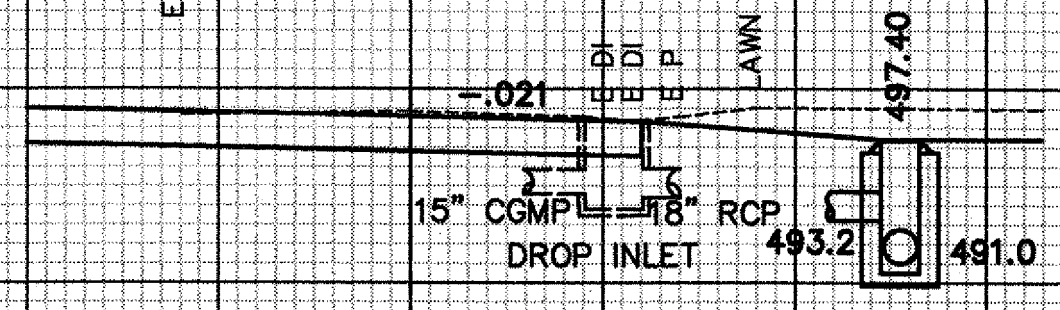
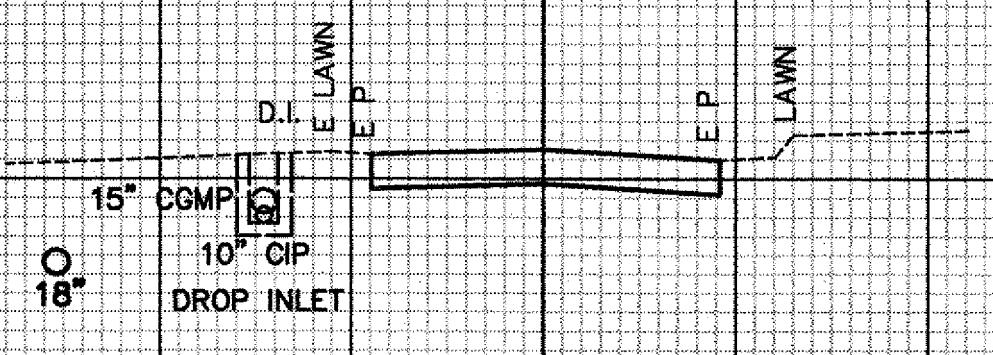
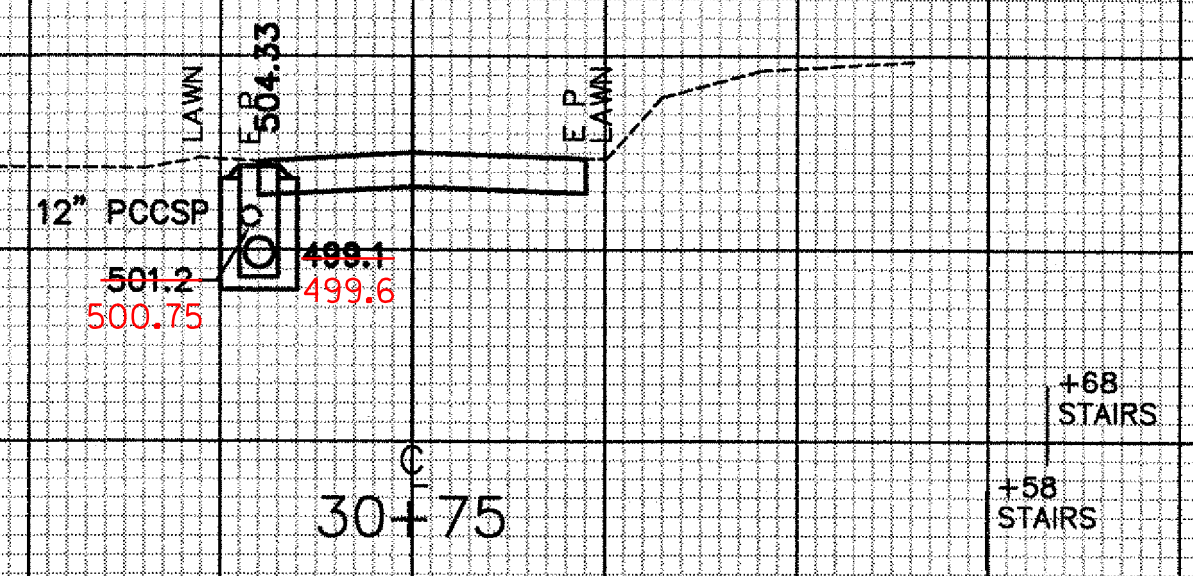
490

490

490

490

30+75 (TH 37) LT TO 100+75 LT
 NEW 18"X36" PCCSP(.064) OR CAAP(.060)
 NEW 4'X4' RCDI W/ CI GRATE TYPE D
 NEW 12"X4' PCCSP(.064)
 CONNECT TO EXISTING PIPE

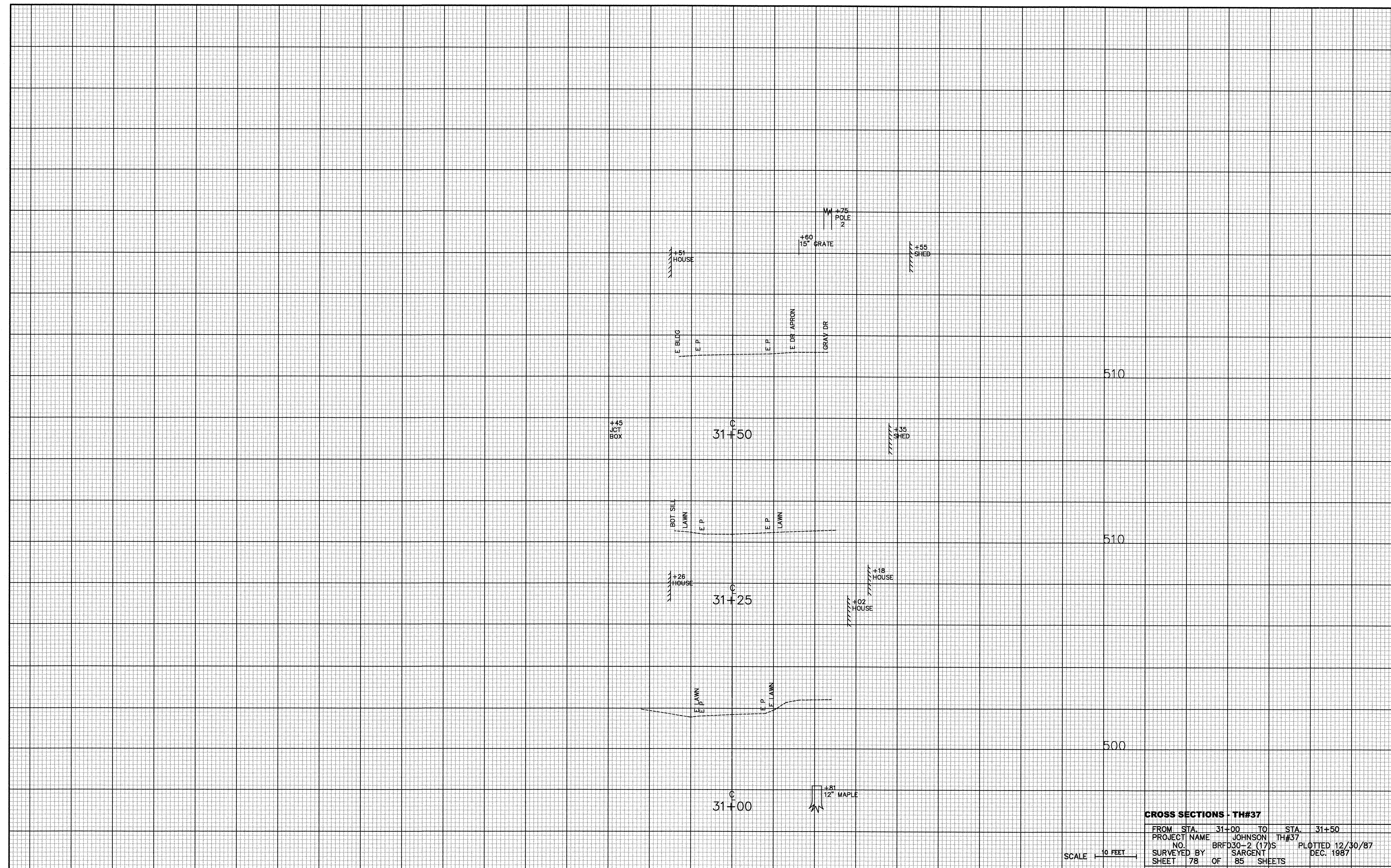


E.V.T. ROUTE 15 PV
 C.V.T. ROUTE 15
 E.V.T. ROUTE 15 PV

CROSS SECTIONS - TH#37

FROM STA.	30+00	TO STA.	30+75
PROJECT NAME	JOHNSON TH #37		
NO.	BRF030-2 (17)S	PLOTTED 12/30/87	
SURVEYED BY	SARGENT	DEC. 1987	
SHEET	77	OF	85 SHEETS

SCALE 10 FEET



CROSS SECTIONS - TH#37

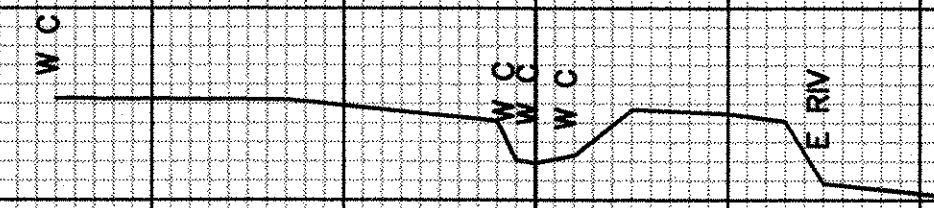
FROM STA.	31+00	TO STA.	31+50
PROJECT NAME	JOHNSON TH#37		
NO.	BRFD30-2 (17)S		
SURVEYED BY	SARGENT		
SHEET	78	OF	85 SHEETS

PLOTTED 12/30/87
DEC. 1987

SCALE 10 FEET

FINAL SURVEY NOTEBOOK NO.	SUBMITTED, PLOTTED, DATE, AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NOTEBOOK NO.	SUBMITTED, PLOTTED, DATE, AREAS CHECKED	BY	DATE



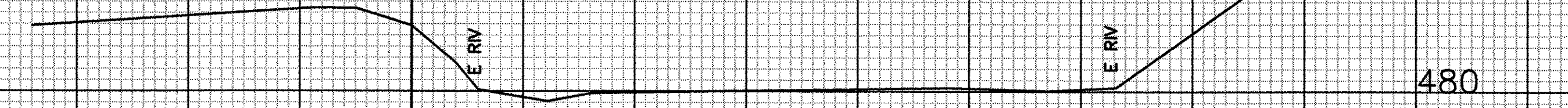
9+15
DRAINAGE DITCH

480



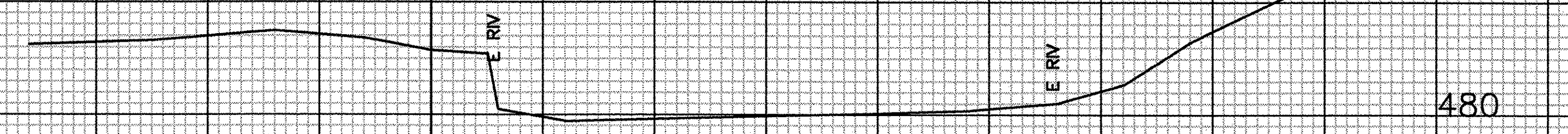
9+00

480



8+75

480



8+50

480

CROSS SECTIONS - CHANNEL

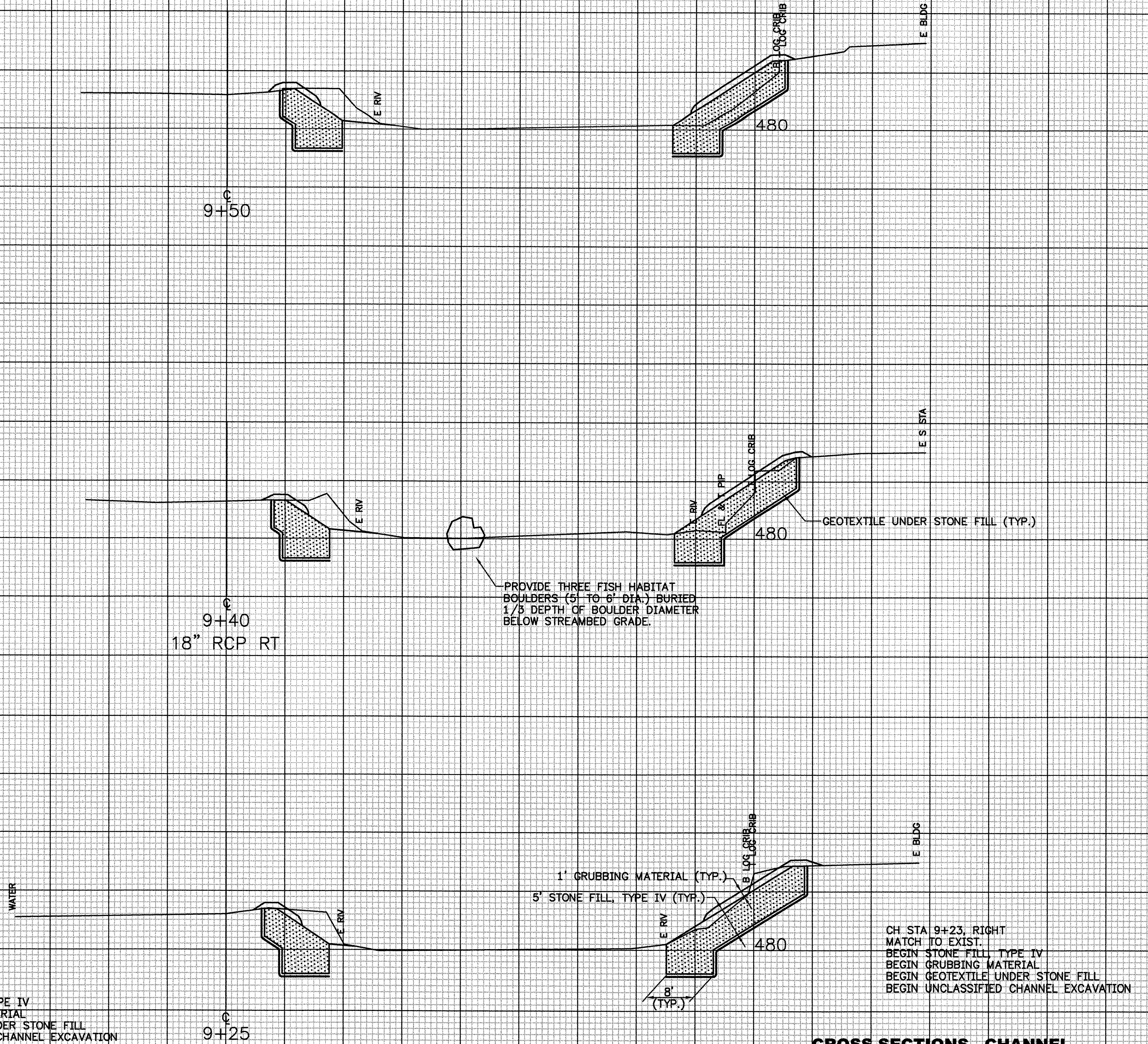
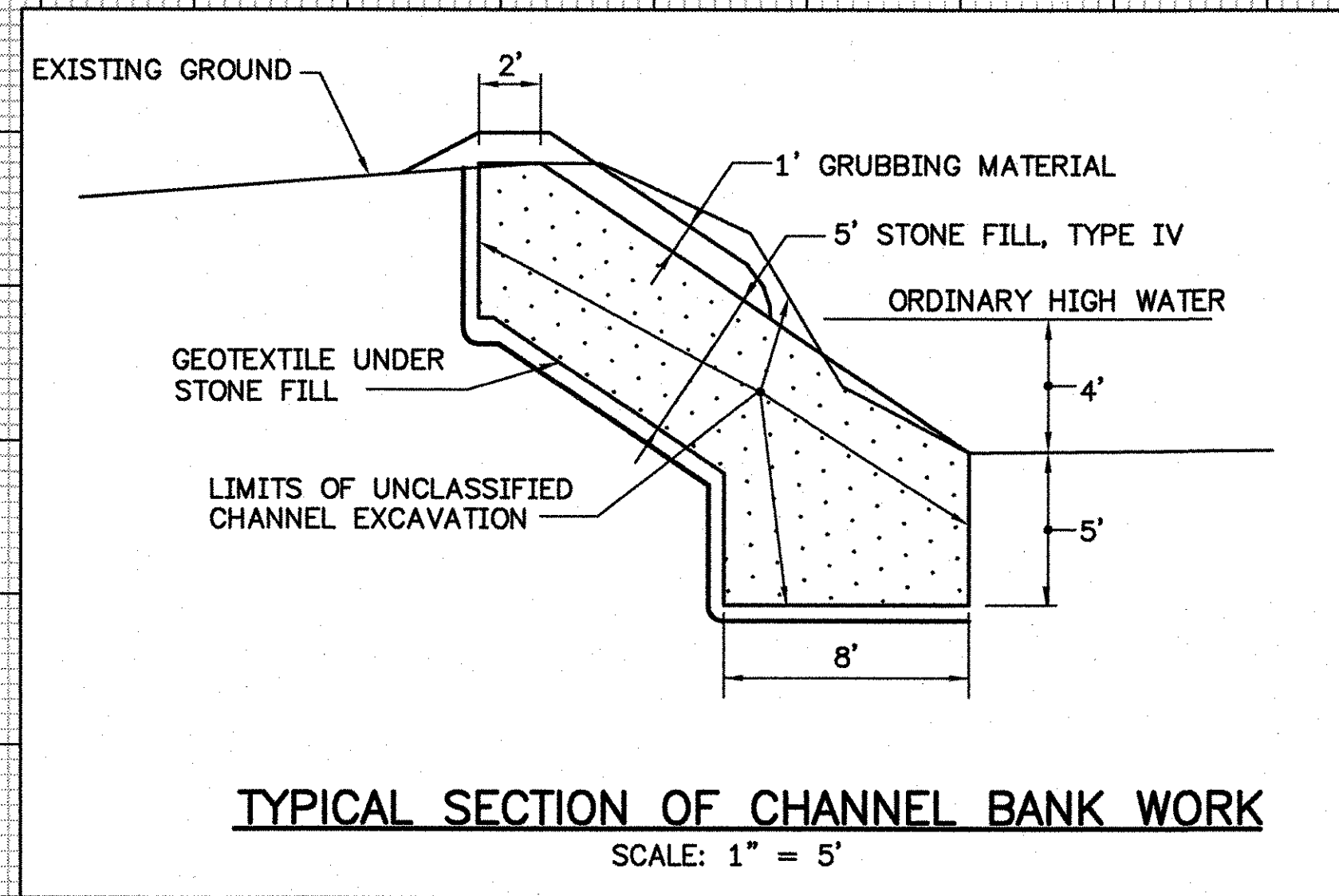
FROM STA.	8+50	TO STA.	9+15
PROJECT NAME	JOHNSON CHANNEL LINE		
NO.	BRF030-2 (17)S	PLOTTED	12/30/87
SURVEYED BY	SARGENT		DEC. 1987
SHEET	79	OF	85 SHEETS

SCALE 1" = 10 FEET

12/26/87 10:47 am EST

FINAL SURVEY	SURVEYED	DATE
NOTEBOOK	PLOTTED	
NO.	AREAS	CHECKED

ORIGINAL SURVEY	SURVEYED	DATE
NOTEBOOK	PLOTTED	
NO.	AREAS	CHECKED



CROSS SECTIONS - CHANNEL

FROM STA.	9+25	TO STA.	9+50
PROJECT NAME	JOHNSON CHANNEL LINE		
NO.	BRF030-2 (17)	PLOTTED	12/30/87
SURVEYED BY	SARGENT	DEC.	1987
SHEET	80 OF 85	SHEETS	

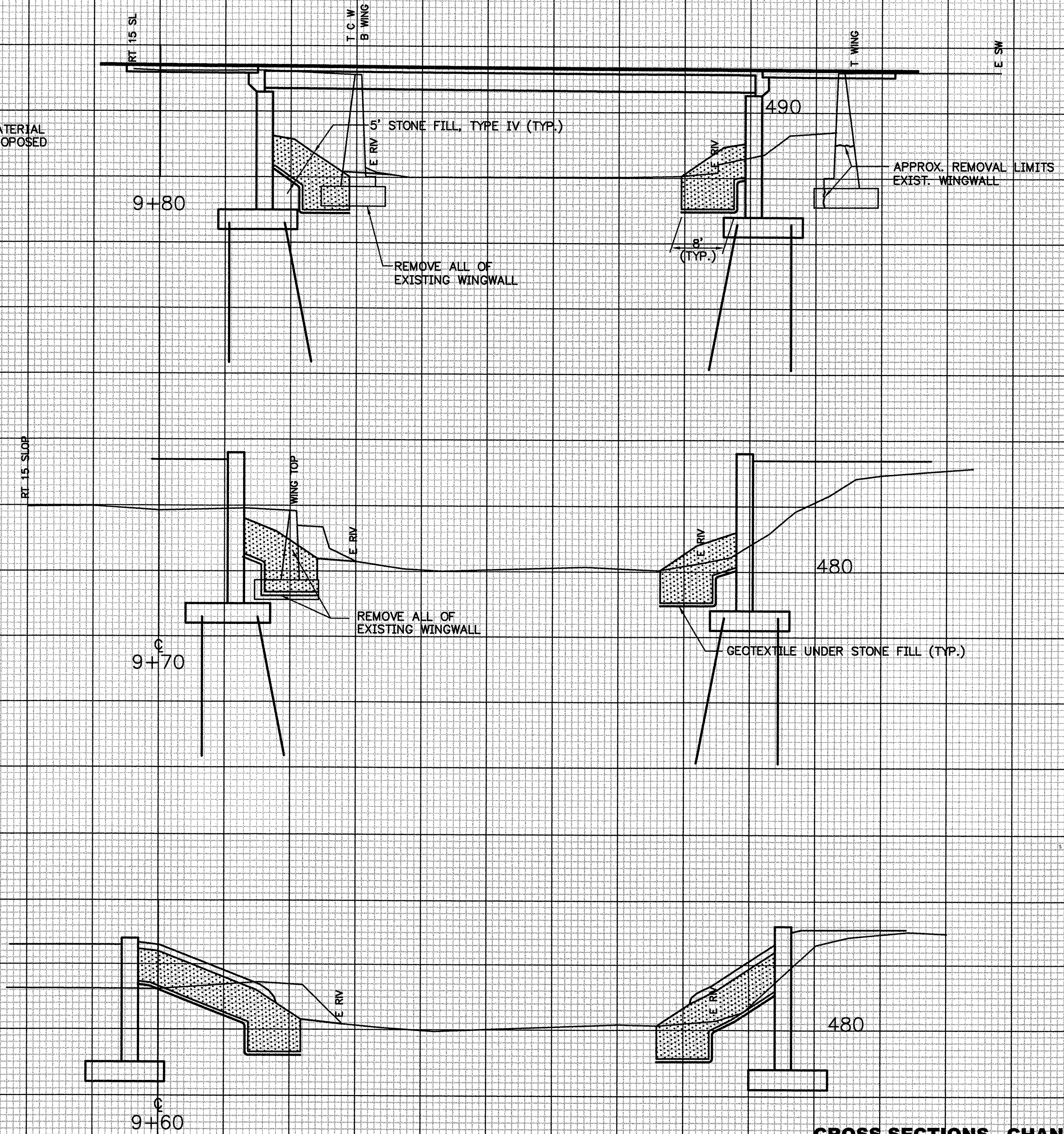
SCALE 1" = 10 FEET

CH STA 9+16, LEFT MATCH TO EXIST.
BEGIN STONE FILL, TYPE IV
BEGIN GRUBBING MATERIAL
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN UNCLASSIFIED CHANNEL EXCAVATION

FINAL SURVEY NOTEBOOK NO.	SURVEYED, PLOTTED, DATE, AREAS CHECKED	BY	DATE
---------------------------	--	----	------

ORIGINAL SURVEY NOTEBOOK NO.	SURVEYED, PLOTTED, DATE, AREAS CHECKED	BY	DATE
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NOTE: DO NOT PLACE GRUBBING MATERIAL UNDER OR WITHIN 10' OF PROPOSED SUPERSTRUCTURE.



CROSS SECTIONS - CHANNEL

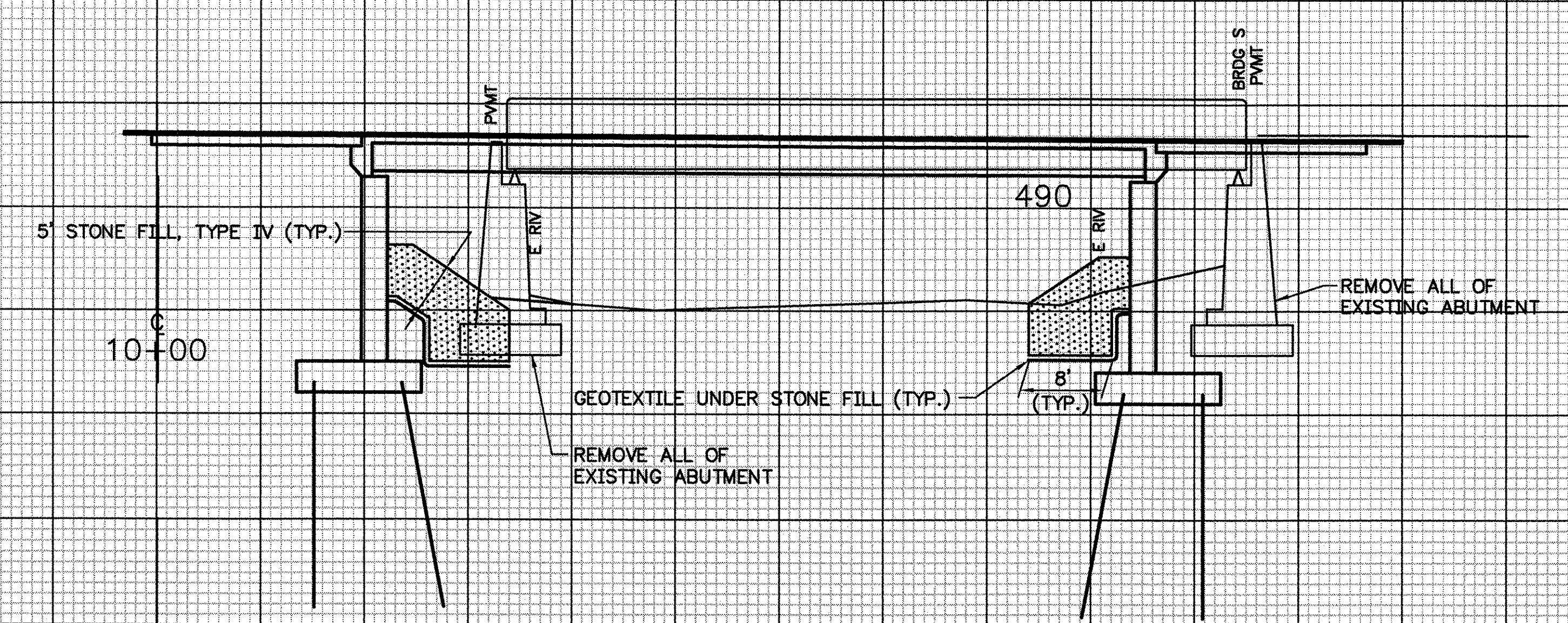
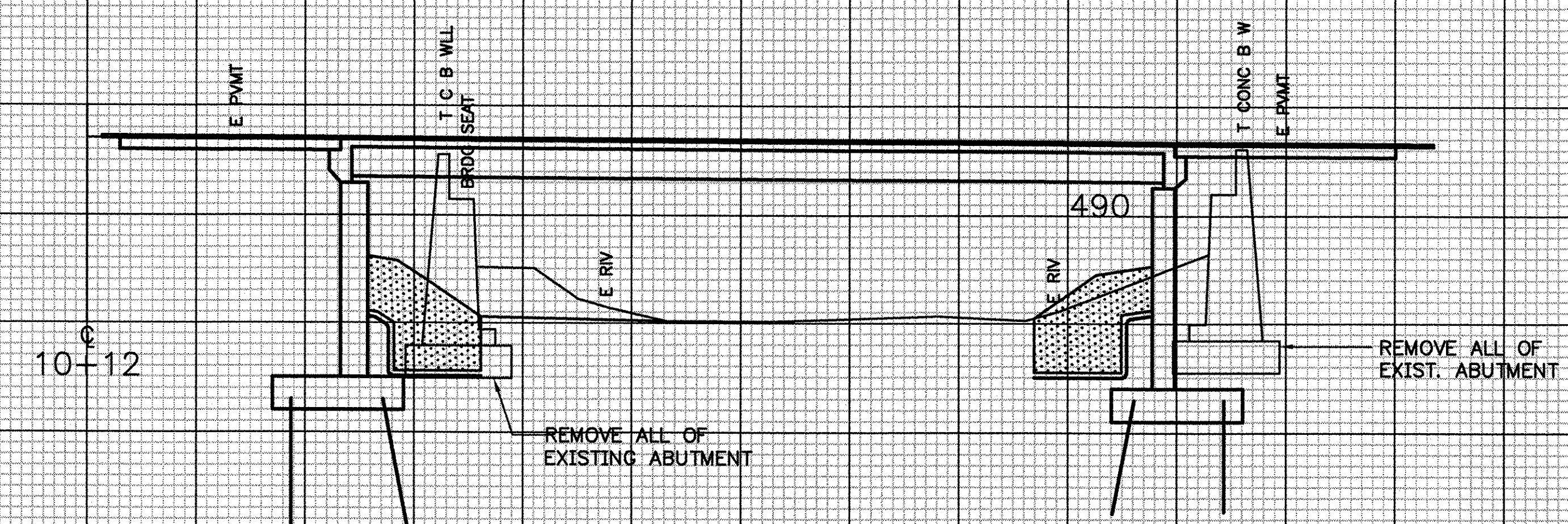
FROM STA.	9+60	TO STA.	9+80
PROJECT NAME	JOHNSON CHANNEL LINE		
NO.	BR030-2 (17)S	PLOTTED	12/30/87
SURVEYED BY	SARGENT	DEC.	1987
SHEET 81	OF 85	SHEETS	

SCALE 1" = 10 FEET

12/30/87

FINAL SURVEY NO.	SURVEYED BY	DATE

ORIGINAL SURVEY NO.	SURVEYED BY	DATE



NOTE: DO NOT PLACE GRUBBING MATERIAL UNDER OR WITHIN 10' OF PROPOSED SUPERSTRUCTURE.

CROSS SECTIONS - CHANNEL

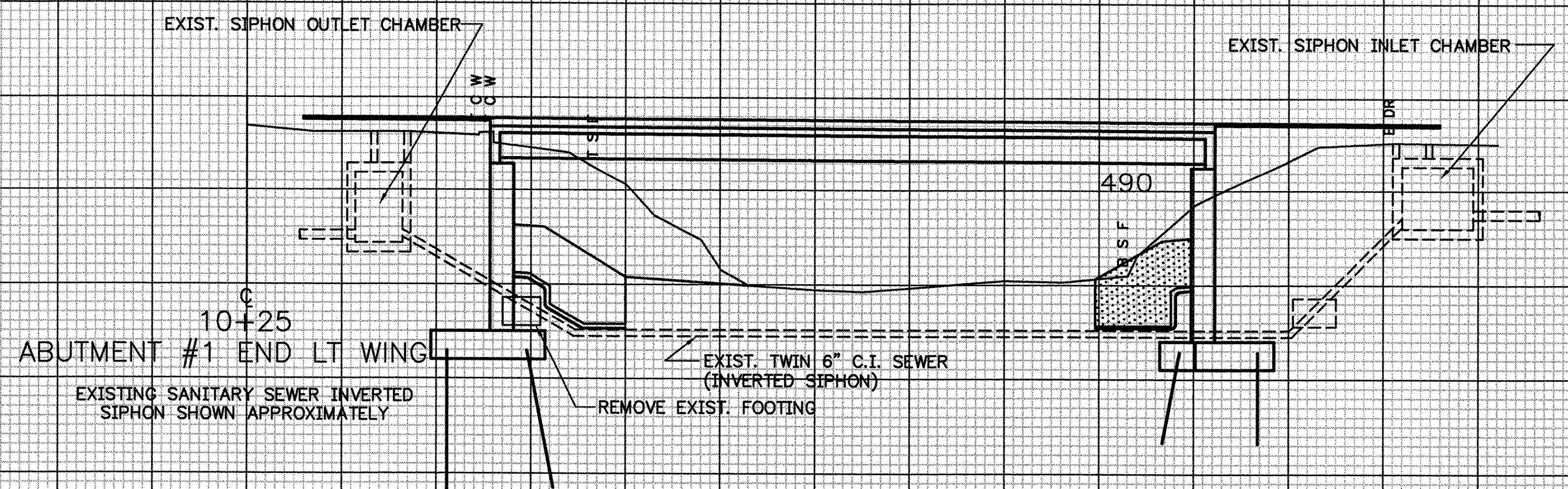
FROM STA. 10+00 TO STA. 10+12
 PROJECT NAME JOHNSON CHANNEL LINE
 NO. BR030-2 (17)S PLOTTED 12/30/87
 SURVEYED BY SARGENT
 SHEET 82 OF 85 SHEETS DEC. 1987

SCALE 10 FEET

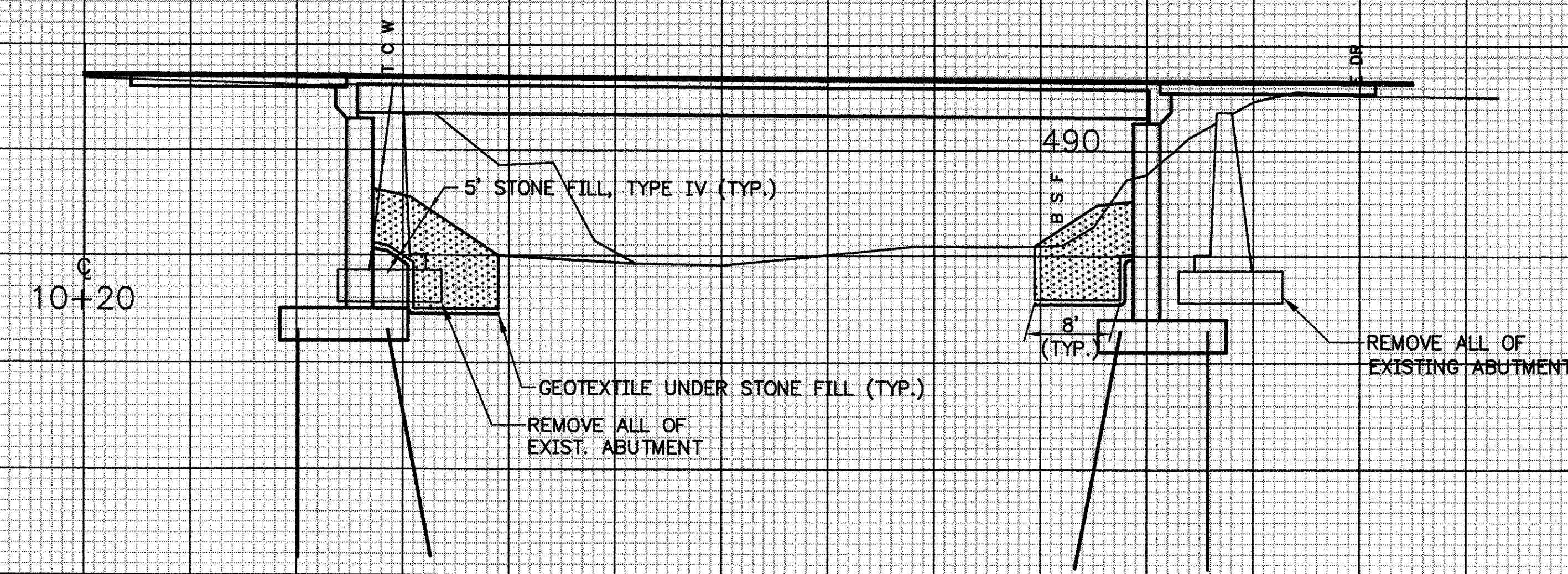
DATE PLOTTED: 12/30/87

FINAL SURVEY NOTEBOOK NO.	DATE
SURVEYED	
PLOTTED	
DATE	
AREAS CHECKED	
BY	

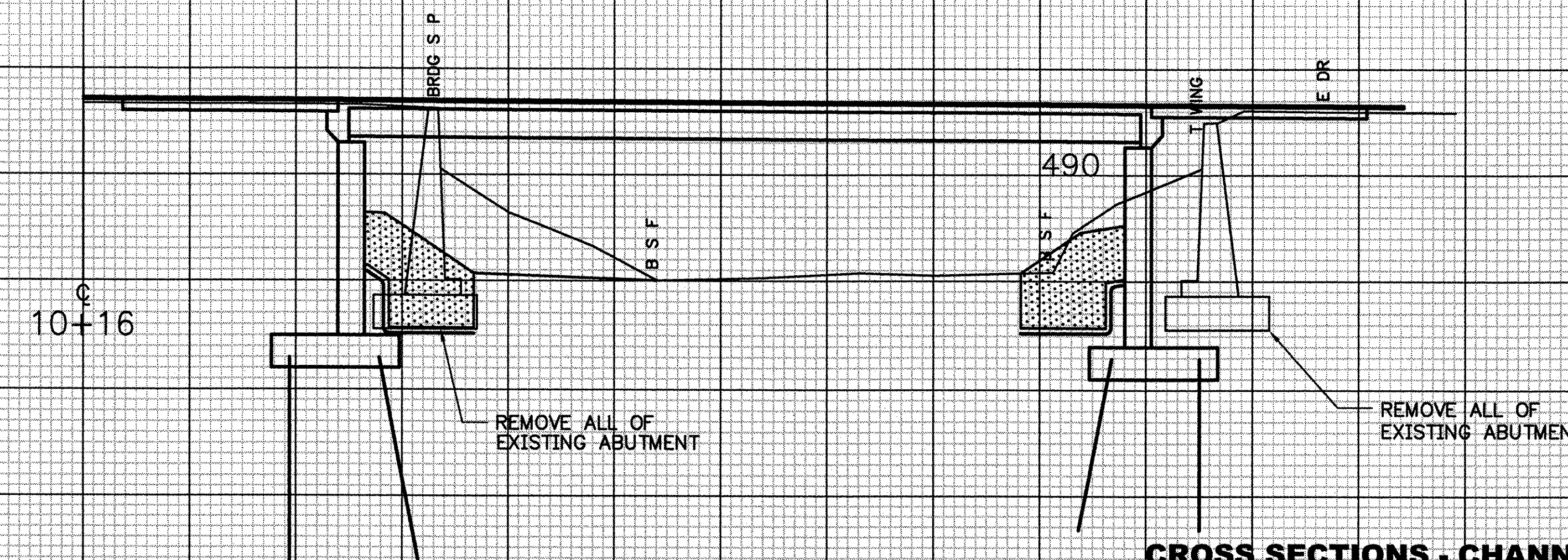
ORIGINAL SURVEY NOTEBOOK NO.	DATE
SURVEYED	
PLOTTED	
DATE	
AREAS CHECKED	
BY	



NOTES: DO NOT PLACE GRUBBING MATERIAL UNDER OR WITHIN 10' OF PROPOSED SUPERSTRUCTURE.



NOTE: DO NOT PLACE GRUBBING MATERIAL UNDER OR WITHIN 10' OF PROPOSED SUPERSTRUCTURE.



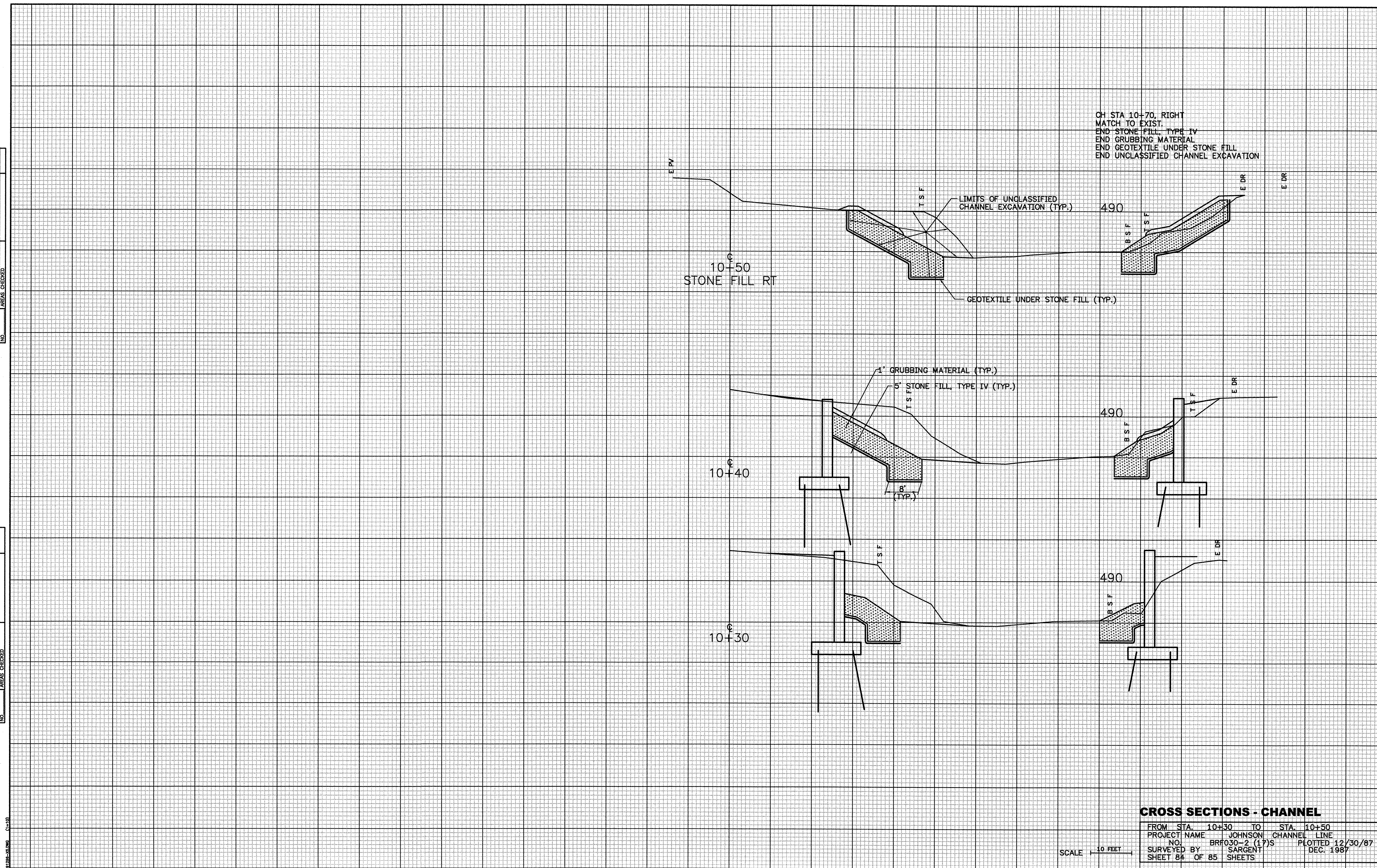
CROSS SECTIONS - CHANNEL
 FROM STA. 10+16 TO STA. 10+25
 PROJECT NAME JOHNSON CHANNEL LINE
 NO. BR030-2 (17)S PLOTTED 12/30/87
 SURVEYED BY SARGENT
 SHEET 83 OF 85 SHEETS DEC. 1987

SCALE 1" = 10 FEET

DATE PLOTTED 12/30/87

FINAL SURVEY	SURVEYED	DATE
NOTEBOOK	PLOTTED	
NO.	AREAS	
	CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTEBOOK	PLOTTED	
NO.	AREAS	
	CHECKED	



CH STA 10+70, RIGHT
MATCH TO EXIST.
END STONE FILL, TYPE IV
END GRUBBING MATERIAL
END GEOTEXTILE UNDER STONE FILL
END UNCLASSIFIED CHANNEL EXCAVATION

CROSS SECTIONS - CHANNEL

FROM STA. 10+30 TO STA. 10+50
PROJECT NAME JOHNSON CHANNEL LINE
NO. BR030-2 (17)S PLOTTED 12/30/87
SURVEYED BY SARGENT DEC. 1987
SHEET 84 OF 85 SHEETS

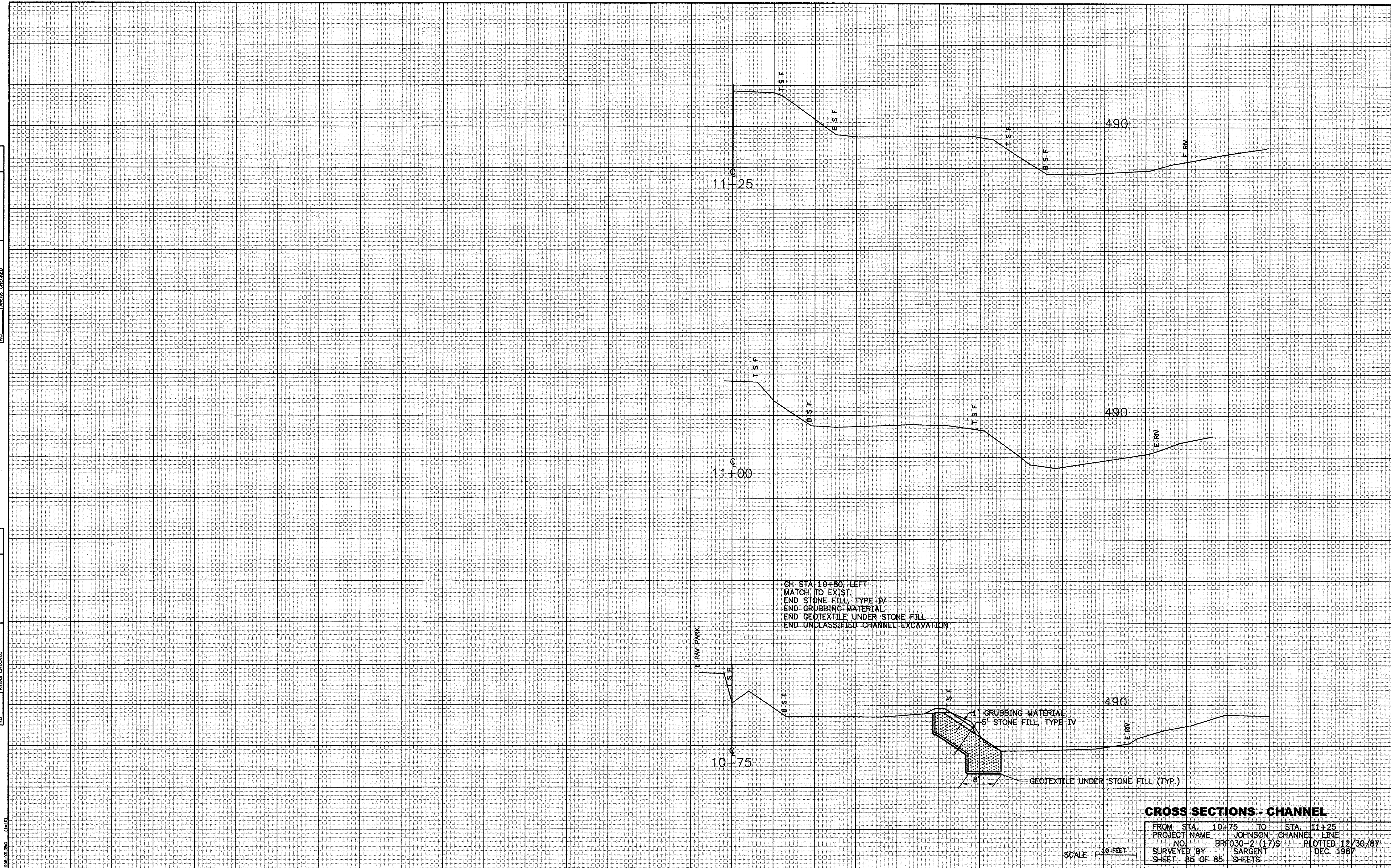
SCALE 1" = 10 FEET

12/30/87

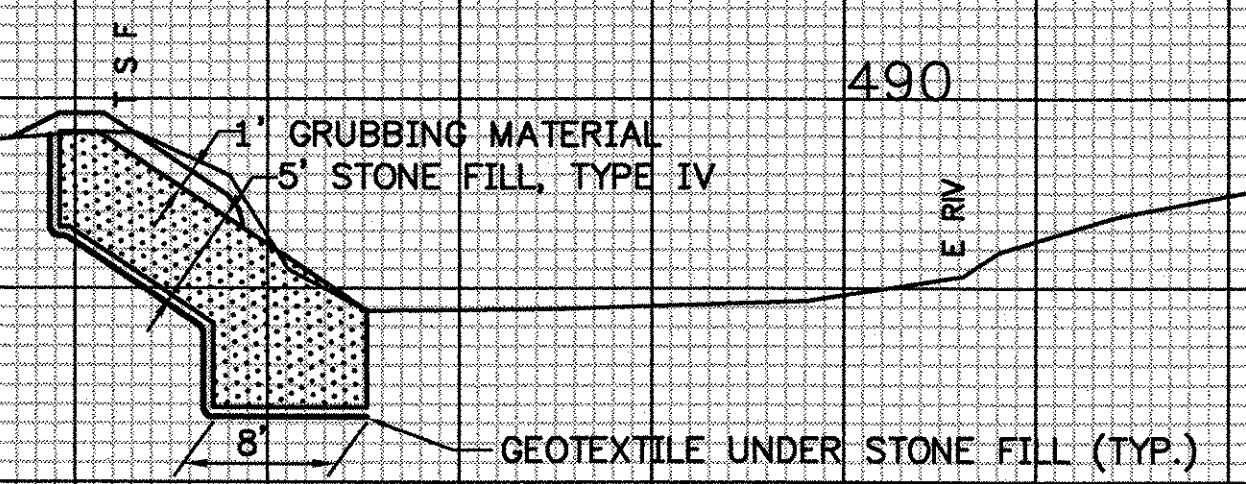
FINAL SURVEY NOTEBOOK NO.	SURVEYED	BY	DATE
	PLOTTED		
	DATE		
	AREAS CHECKED		

ORIGINAL SURVEY NOTEBOOK NO.	SURVEYED	BY	DATE
	PLOTTED		
	DATE		
	AREAS CHECKED		

DATE PLOTTED 12/30/87



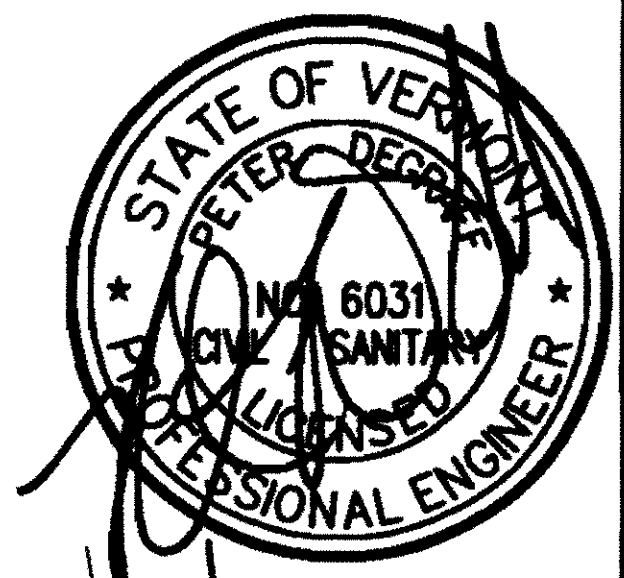
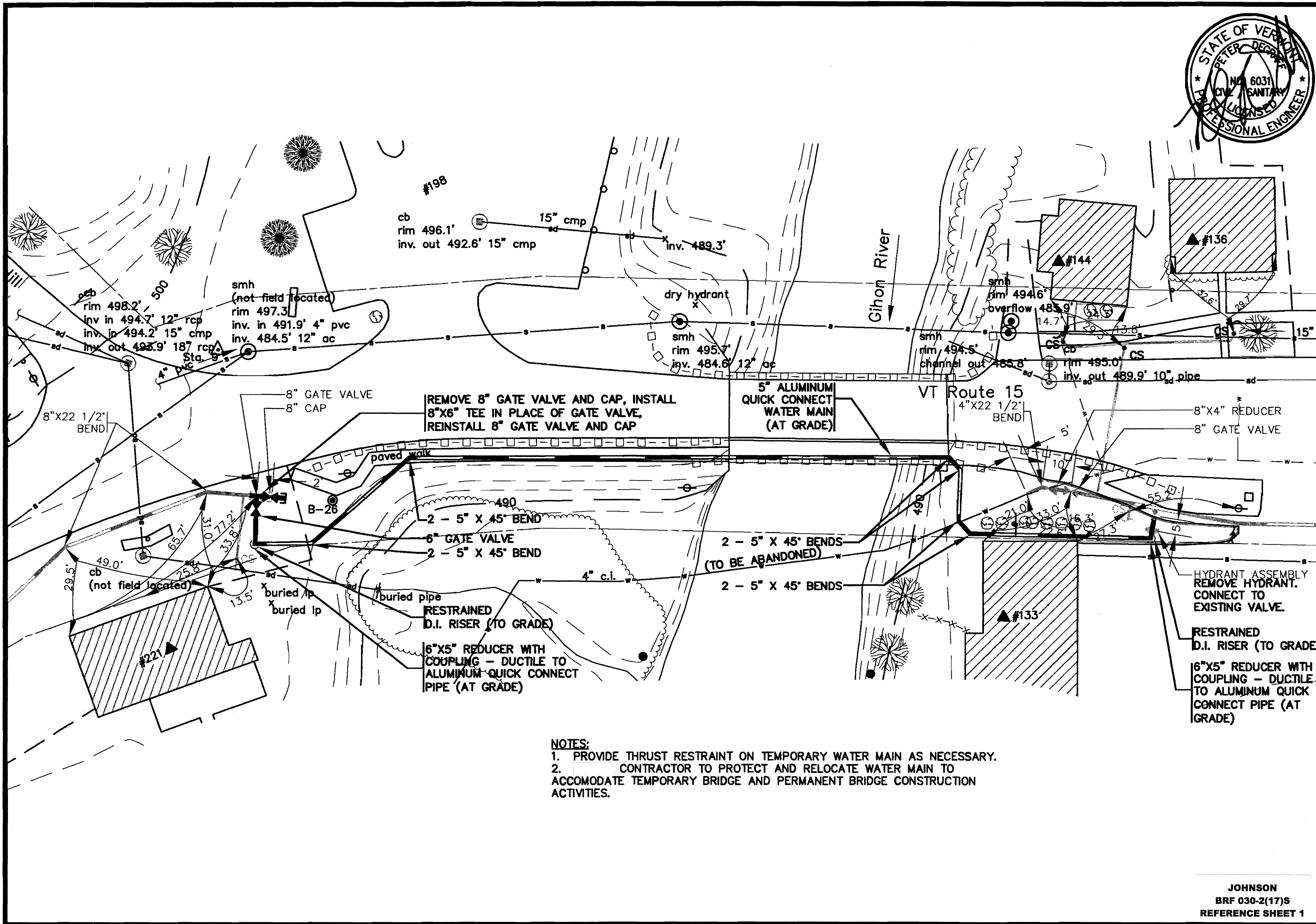
CH STA 10+80, LEFT
MATCH TO EXIST.
END STONE FILL, TYPE IV
END GRUBBING MATERIAL
END GEOTEXTILE UNDER STONE FILL
END UNCLASSIFIED CHANNEL EXCAVATION



CROSS SECTIONS - CHANNEL

FROM STA. 10+75	TO STA. 11+25
PROJECT NAME	JOHNSON CHANNEL LINE
NO.	BRF030-2 (17)S
SURVEYED BY	SARGENT
SHEET	85 OF 85 SHEETS
	PLOTTED 12/30/87
	DEC. 1987

SCALE 1" = 10 FEET



A

SKETCH NO.

OTTER CREEK ENGINEERING, INC.
 404 East Main Street P.O. Box 712 East Middlebury, VT 05740
 Telephone: 802-882-8722 Fax: 802-882-8640 E-mail: ottercrk@ottercrk.com

VILLAGE OF JOHNSON, VERMONT

ROUTE 15 TEMPORARY WATER MAIN

SCALE: 1" = 30'

DRAWN BY: RLH

CHECKED BY: PD

DATE: 02/08/07

PROJECT NO.: 181.001

CADD FILE: GIHON RECORD

- NOTES:**
1. PROVIDE THRUST RESTRAINT ON TEMPORARY WATER MAIN AS NECESSARY.
 2. CONTRACTOR TO PROTECT AND RELOCATE WATER MAIN TO ACCOMMODATE TEMPORARY BRIDGE AND PERMANENT BRIDGE CONSTRUCTION ACTIVITIES.

JOHNSON
 BRF 030-2(17)S
 REFERENCE SHEET 1

75 Spring Hill Road
Saco, Maine 04072

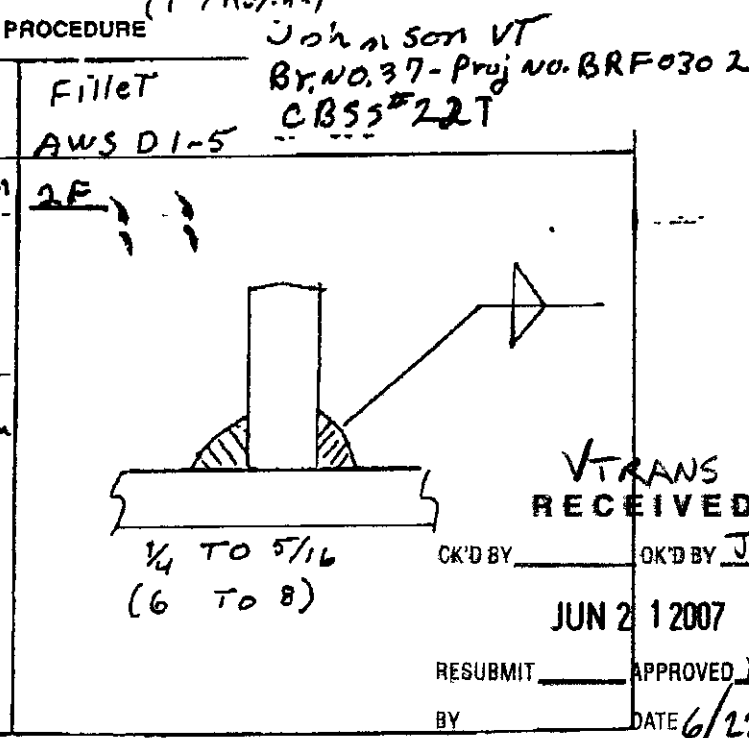
Phone: (207) 282-7368

Fax: (207) 282-1129

WELDING PROCEDURE SPECIFICATION

Material specification ASTM-A709/A709M - Gr 50 (270), 50 (345), 50W (345W)
 Welding process Submerged Arc Welding
 Material or machine Machine
 Position of welding Horizontal (AF)
 Filler metal specification AWS E5-23
 Filler metal classification E502-E611R-N, 1 Lincoln
 Flux Lincoln 96 Flux with LA-75 Electrode
 Shielding gas Ar Flow rate Ar
 Single or multiple pass Single - Electrode E502 (25.4 #11)
 Single or multiple arc Single
 Welding current DC
 Polarity DCEN
 Welding progression See joint detail
 Root treatment AWS spec - wire brush - grind - Blast (lean area)
 Preheat and interpass temperature 30 (19) - 50 (10) - 50 (10) - 70 (20) - 70 (20) - 225 (100) (65)
 Postheat temperature Ar
 Heat input Min 3.0 kJ/in (1.2 kJ/mm) Max 4.0 kJ/in (1.6 kJ/mm) DGR 4-728 kJ/in (1.7 kJ/mm)

Pass no	Electrode size	Welding current		Travel speed
		Amperes	Volts	
1	3/32	299	31	13 IPM
		269	29	11
		329	33	15
2	24	299	31	320 mm
		269	29	299
		329	33	381



This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 250 Contractor Casco Bay Steel
 Revision no. 01 Authorized By Paul E Goodale
 Date 6-13-00

Casco Bay Steel Structures, Inc.

5 Industry Road
South Portland, Maine 04106

Fax: (207) 772-0580

Phone: (207) 772-2533

WELDING PROCEDURE SPECIFICATION

Material specification: ASTM A109 Gr B 50-50W (250-345-345W)
 Welding process: Shielded Metal Arc Welding (SMAW)
 Manual or machine: Manual
 Position of welding: Flat (F)
 Filler metal specification: E6010 AWS A5.1 - A5.5
 Filler metal classification: E6010 AWS A5.1 - A5.5
 Flux: None
 Shielding gas: None
 Single or multiple pass: Single and multiple
 Single or multiple arc: Single
 Welding current: As Ind
 Polarity: Straight / Reverse
 Welding progression: As per AWS specification
 Root treatment: As per AWS specification
 Preheat and interpass temperature: As per AWS specification
 Postheat temperature: None
 Heat input: None

RESUBMITTED APPROVED
 JUN 21 2007
 BY DATE 6/21/07

John S. Con VT
 BR NO. 37 - Proj No. BR F030 2(LV)
 CBS 22 J

(METRIC)

Pass no.	Electrode size	Welding current		Travel speed	AWS D1.5	Joint detail	Filler
		Amps	Volts				
AS	7/32 (A-2)	70-100	22-26	AS	LF	AS	3/8 to 3/8 (5 to 10)
	5/32 (B-2)	120-225	22-26				
	3/16 (C-2)	170-300	24-27				
REQ	7/32 (A-2)	90-160	22-26	REQ	2F	REQ	3/16 to 5/8 (10 to 16)
	5/32 (B-2)	120-225	22-26				
	3/16 (C-2)	180-290	24-27				
REQ	7/32 (A-2)	190-270	22-26	REQ	2F	REQ	3/16 to 5/8 (10 to 16)
	5/32 (B-2)	190-270	22-26				
	3/16 (C-2)	210-330	24-27				

This procedure may vary due to position, sequence, fit-up, pass size, etc., within the limitation of variables given in applicable codes or contract specification.

Procedure no: 401
 Revision no: 001
 Contractor: Casco Bay Steel
 Authorized By: Paul E. Hoodale
 Date: 3/2/00

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360

Fax: (207) 282-1179

WELDING PROCEDURE SPECIFICATION

Material specification: ASTM A 709 Gr 50-50 (250-345-345W)
 Welding process: Submerged Arc Welding - Auto (SAW)
 Manual or machine: Machine
 Position of welding: FLAT (F) Horizontal (HE)
 Filler metal specification: SAW 62-A1 AWS A5.23
 Filler metal classification: ER 60-A1 AWS A5.23
 Flux: Flux - Electrode - LA-75 Electrode
 Shielding gas: Ar Flow rate: Ar
 Single or multiple pass: Single
 Single or multiple arc: Single
 Welding current: Direct
 Polarity: Reverse Electrode Positive
 Welding progression: As per AWS specifications
 Root treatment: As per AWS specifications
 Preheat and interpass temperature: As per AWS specifications
 Postheat temperature: As per AWS specifications
 Heat input: Min 41.85 Max 65.45 PQR # 1-59.5

WELDING PROCEDURE

Joint detail: IF

Pass no	Electrode size	Welding current Amperes	Volts	Travel speed
5/32	605	29.5	18.5	IF
	544.5	27.4	15.3	
	665.5	31.56	20.7	
3.9	605	29.5	459.2	2F
	544.5	27.4	389.6	
	665.5	31.56	525.8	

Diagram 1:

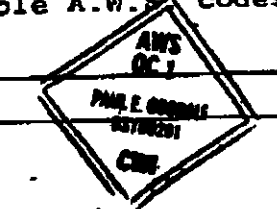
Diagram 2:

Notes: Joint detail IF, 5/16 To 1/2 (8 To 12.7), 1/4 To 5/16 (6 To 8)

Approval: TRANS RECEIVED JUN 2 2007
 CK'D BY: JWC OK'D BY: JWC
 RESUBMIT: APPROVED BY: DATE 6/2/07

This procedure may vary due to fabrication sequence, fit-up, pass size, etc. within the limitation of variables given in applicable A.W.S. codes or contract specifications.

Procedure no. 201 Contractor: Casco Bay Steel
 Revision no. 1 Authorized By: Paul E. Woodale
 Date: 3/2/00



Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Fax: (207) 282-1179

Phone: (207) 282-7360

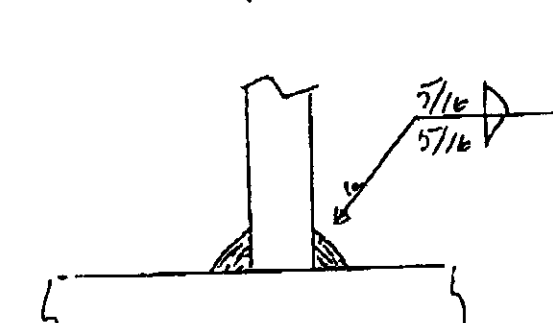
WELDING PROCEDURE SPECIFICATION

Material specification ASTM A 709 - Gr 36-50-50w / A 709M Gr 250-345-345w
 Welding process Flux Cored Arc Welding (FCAW)
 Manual or machine Semi AUTO
 Position of welding Flat - Horizontal
 Filler metal specification AWS A5-23
 Filler metal classification E81T-N11-N4 ESAB
 Flux None
 Shielding gas 75% AR - 25% CO₂ Flow rate 35 CFH @ 4
 Single or multiple pass Single / Multiple Elec. Ex. 70% W
 Single or multiple arc Single
 Welding current DC EP
 Polarity DC EP
 Welding progression See detail
 Root treatment wire brush - as per To be Free of Loose Scale, slag, rust & moisture
 Preheat and interpass temperature 20 (34) 10(50) 20 (36) 20 (40) 20 (38) 40 (74) 10(50) 65 (125)
 Postheat temperature None
 Heat Input Min 2.7 kJ/in Max 43.6 kJ/in PQR FCN # B 39.6 kJ/in

WELDING PROCEDURE

Pass no.	Electrode size	Welding current		Travel speed
		Amperes	Volts	
1/16	2.87	29	13	13 11.4 14
	2.56	26.6	10	
	3.15	31	14	

AWS D1.5 Joint detail F1WET
 VTRANS RECEIVED
 OK'D BY: JWC
 JUN 21 2007
 APPROVED BY: [Signature]
 DATE: 6/27/07



This procedure may vary due to fabrication sequence, fit up, pass size, etc. within the limitation of variables given in applicable A.W.S. codes or contract specifications.

Procedure no. 101 MASS Contractor Casco Bay Steel
 Revision no. _____ Authorized By Fred G. Goodale
 Form 102 Date 12-6-06

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 2001 WITH LATEST REVISIONS

DESIGN SPECIFICATIONS

- 1). AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (A.A.S.H.T.O) STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 2002 EDITION WITH LATEST REVISIONS.

MATERIAL SPECIFICATIONS

- 1). UNLESS NOTED, ALL STEEL TO BE AASHTO M270 GRADE 50 (ASTM A709-50).
- 2). HIGH STRENGTH BOLTS: AASHTO M164-1 GALV (ASTM A325-1). ALL TYPE I BOLTS SHALL BE GALVANIZED PER AASHTO M232.
- 3). GIRDER WEB & BOTTOM FLANGES SHALL BE CHARPY V NOTCH TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF VERMONT STANDARD SPECIFICATIONS. DRAWINGS SHALL CALL OUT "CVN" OR "H2-3" FOR EACH APPLICABLE ITEM IN THE BILLS OF MATERIAL.

FABRICATION

- 1). ALL HOLES SHALL BE PUNCHED OR DRILLED FULL SIZE (UN).
- 2). STUDS ARE FURNISHED AND FIELD APPLIED BY OTHERS.

FIELD CONNECTIONS

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

WELDING

- 1). THE CONFIGURATION OF THE WELD JOINTS AND ALL WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5-02 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.

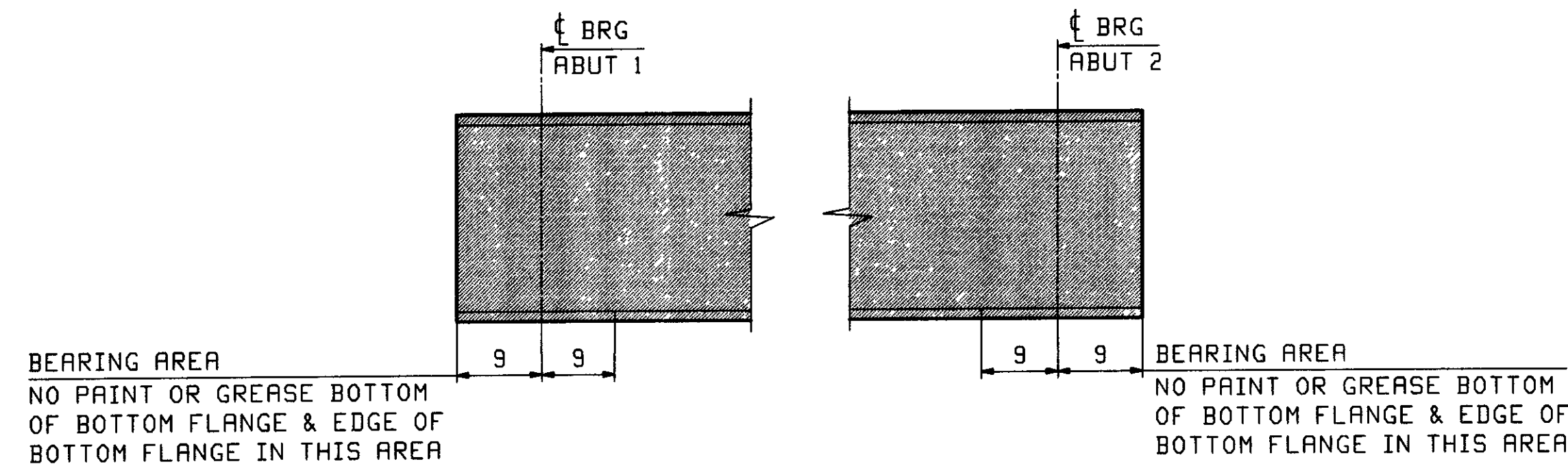
CLEANING:

- 1). ALL STEEL SHALL BE BLAST CLEANED AS PER SSPC SP-10 PER SPEC. 506.14(a)

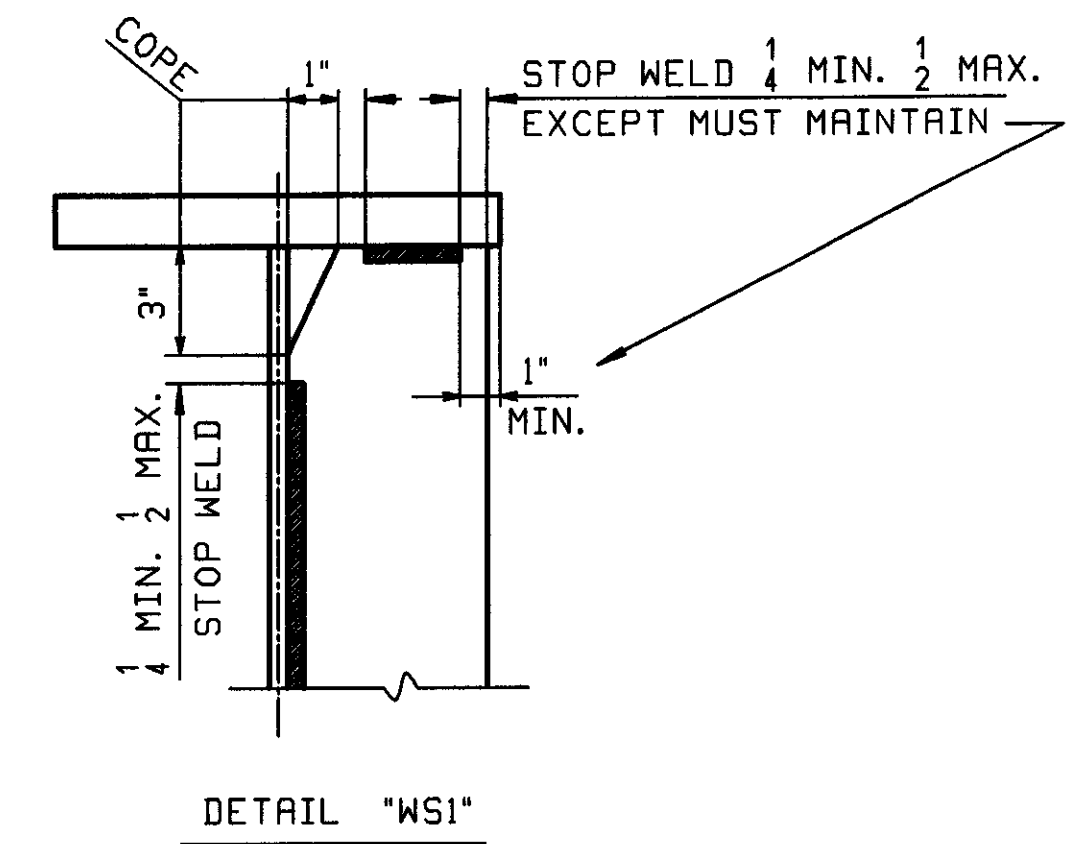
PAINTING:

- 1). ALL STRUCTURAL STEEL SHALL BE PAINTED PER SUPPLEMENTAL SPECIFICATION 513. ALL FIELD CONTACT SURFACES AND THE TOP OF THE TOP FLANGE SHALL RECEIVE ONE COAT OF PRIMER ONLY. MASK ALL AREAS WITHIN 3" OF OPEN HOLES AFTER PRIME COAT HAS BEEN APPLIED. THE FOLLOWING 3 COAT PAINT SYSTEM SHALL BE USED. NO PAINT IN FIELD WELDED AREAS (SEE SKETCH "P1")

	MANUFACTURER: INTERNATIONAL PAINT, INC.	DFT (MILS)	
		MIN.	MAX.
P	INTERZINC 22HS INORGANIC ZINC SILICATE PRIMER	2.5	5.0
I	INTERGARD 475HS EPOXY	4.0	8.0
T	INTERTHANE 870 POLYURETHANE	3.0	5.0



SKETCH "P1"



NOTE TO ENGINEER
THESE NOTES ARE NOT INTENDED TO BE ALL INCLUSIVE AND COMPLIANCE WITH RELEVANT SPECIFICATIONS REMAIN UNCHANGED.

OUT FOR APPROVAL	5-29-07																				
OUT FOR APPROVAL																					
ISSUED TO SHOP																					
FIELD & OFFICE																					

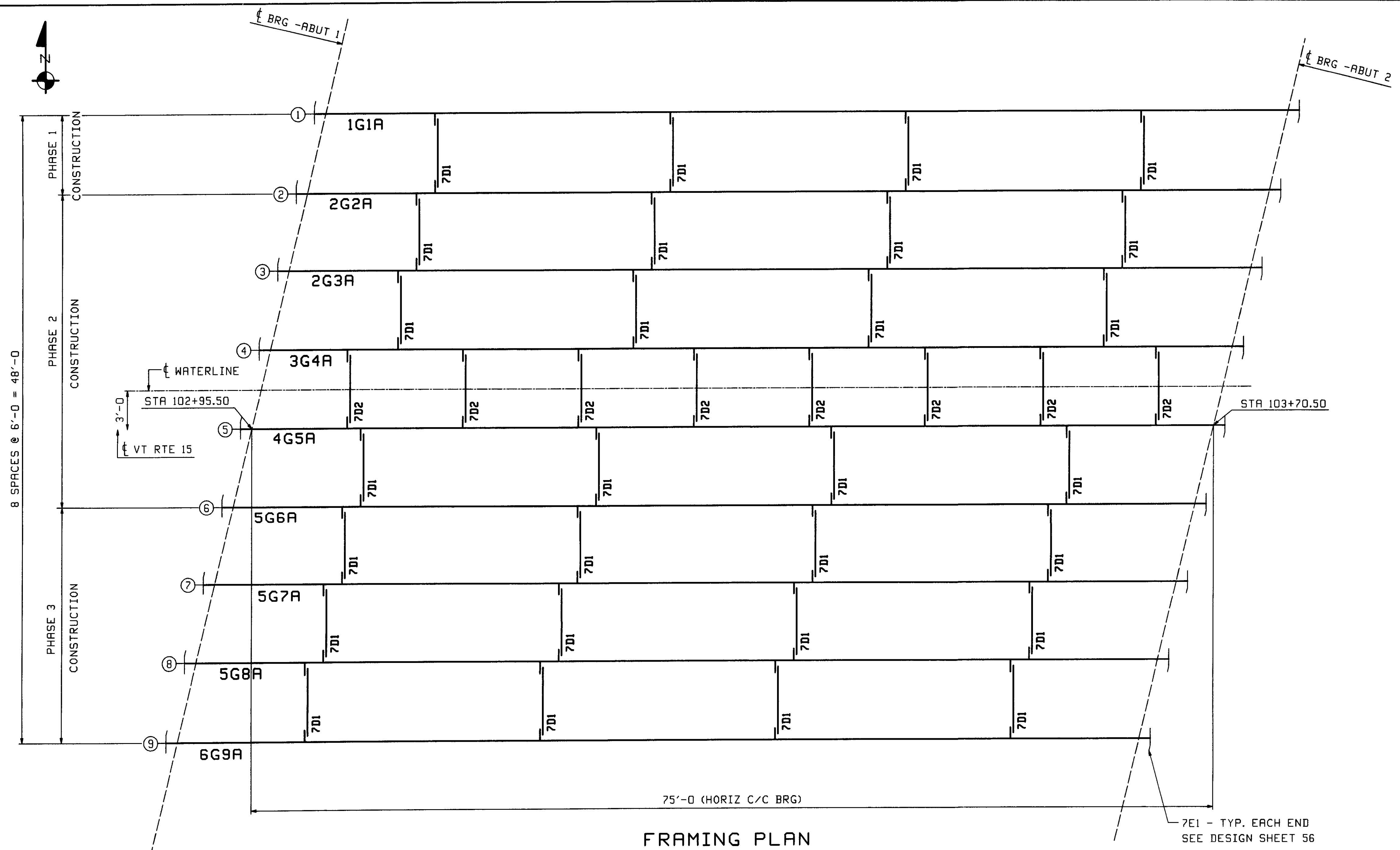
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	MATERIAL (UN) M270 GR. 50						ELECTRODES			HOLES	SHOP BOLTS

SURFACE PREP & PAINT:
SEE PAINT NOTES ON DWG GN1

DESCRIPTION:	GENERAL NOTES	DRAWN BY	DATE
JOB:	VT ROUTE 15 OVER THE GIMON RIVER BRIDGE NO 37 TOWN OF JOHNSON, VT (LAMOILLE COUNTY)	WL	05/12
		CHKD BY	
		PCP	05/14
		APPROV BY	
		SUPERVISOR	W J GATTI

PROJ NO.	BRF D30-2(17)S	Q.A.	
CUSTOMER:	VT A.O.T		
CASCO BAY STEEL STRUCTURES, INC.		JOB NO	DRG. NO.
75 SPRING HILL ROAD SACO, MAINE 04072		323	GN1
PHONE (207) 282-7360 FAX. (207) 282-1179		REV	△

RECEIVED
CKD BY CLD OKD BY _____
JUN 01 2007
RESUBMIT _____ APPROVED AS WJL
BY WJM DATE 6/21/07



FRAMING PLAN

ERECTOR NOTE
 USE ONE TEMPORARY FINGER TIGHT BOLT AT EACH END OF DIAPHRAGM. ONCE THE DECK HAS SET, REPLACE THESE TEMPORARY BOLTS WITH PERMANENT BOLTS.

Update
 - NO CONNECTION BETWEEN ADJACENT PHASES FOR DIAPHRAGMS.
 - LEAVE ONE SIDE CONNECTION PLATE UNDRILLED, MATCH DRILL IN FIELD AFTER DECK HAS BEEN PLACED

NOTE TO FABRICATION PHASE I & II ARE BEING COMBINED BY CONTRACTOR. ANTICIPATE G1 - G6 TO BE ERECTED AT THE SAME TIME

FIELD BOLT LIST				A325 Type 1 GALV. BOLTS				WASHER CODES	
LINE	NO REQ'D	BOLT DIAM	BOLT LEN	BOLTS /CONN	GRIP	THICKNESS OF PCS CONNECTED	WASHER CODE	PIECES CONNECTED AND REMARKS	
1								INT DIAPHRAGMS - 7D1	
2	224	7/8	2 1/4	4	5/8	1/2 3/8		1 DIAPHRAGM WEB TO CONN PLATE	
3									
4								INT DIAPHRAGMS - 7D2	
5	112	7/8	2 1/4	7	1/2	3/8		1 DIAPHRAGM WEB TO CONN PLATE	

1: 1 Hard Flat Washer

FIELD BOLT SUMMARY				2% ADDED, MIN 2 EXTRA		REMARKS
LINE	NO OF BOLTS	BOLT DIAM.	BOLT LEN	ACTUAL COUNT		
1	415	7/8	A325 Type 1 GALV	2 1/4	336	GALV. INCLUDES 72 EXTRA TEMPORARY BOLTS
2						
3	415		Hard Flat Washers for 7/8 BOLT			
4						
5						
6						

OUT FOR APPROVAL	5-24-07								
OUT FOR APPROVAL									
ISSUED TO SHOP									
FIELD & OFFICE									

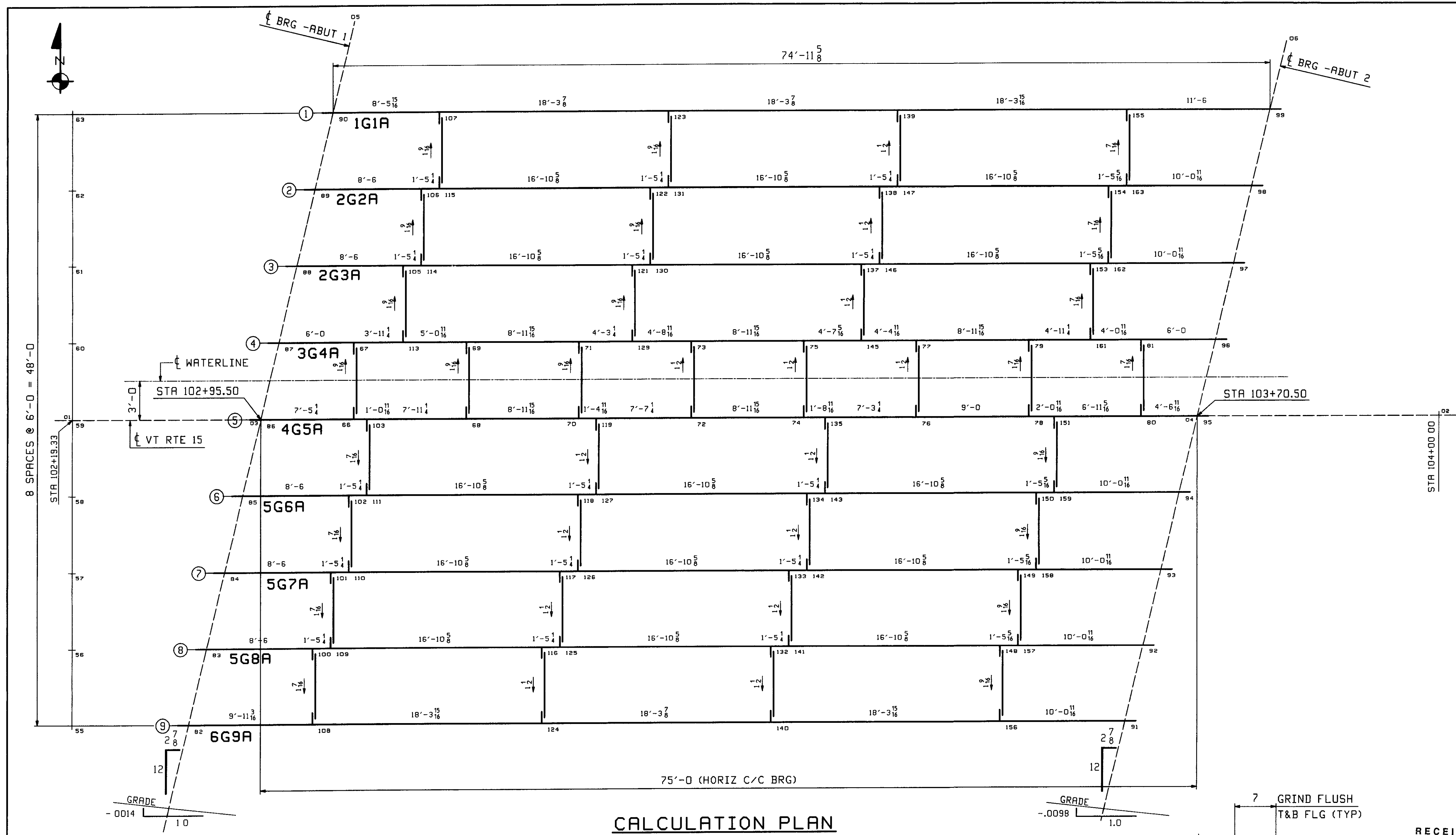
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	MATERIAL (UN)- M270 GR. 50										SHOP BOLTS

SURFACE PREP & PAINT:
 SEE PAINT NOTES ON DWG GNI

DESCRIPTION	FRAMING PLAN	DRAWN BY	DATE
JOB:	VT. ROUTE 15 OVER THE GIBON RIVER	WR	05/17
	BRIDGE NO 37	CHKD BY	
	TOWN OF JOHNSON, VT (LAMOILLE COUNTY)	DO	05/22
		APPROV BY	
		SUPERVISOR	W. J. GATTI

PROJ NO.	BRF 030-2(17)S	Q.A.	
CUSTOMER	VT A.O.T		
CASCO BAY STEEL STRUCTURES, INC.		JOB NO	DRG NO.
75 SPRING HILL ROAD	SACO, MAINE 04072	323	E1
PHONE (207) 282-7360	FAX. (207) 282-1179	REV	△

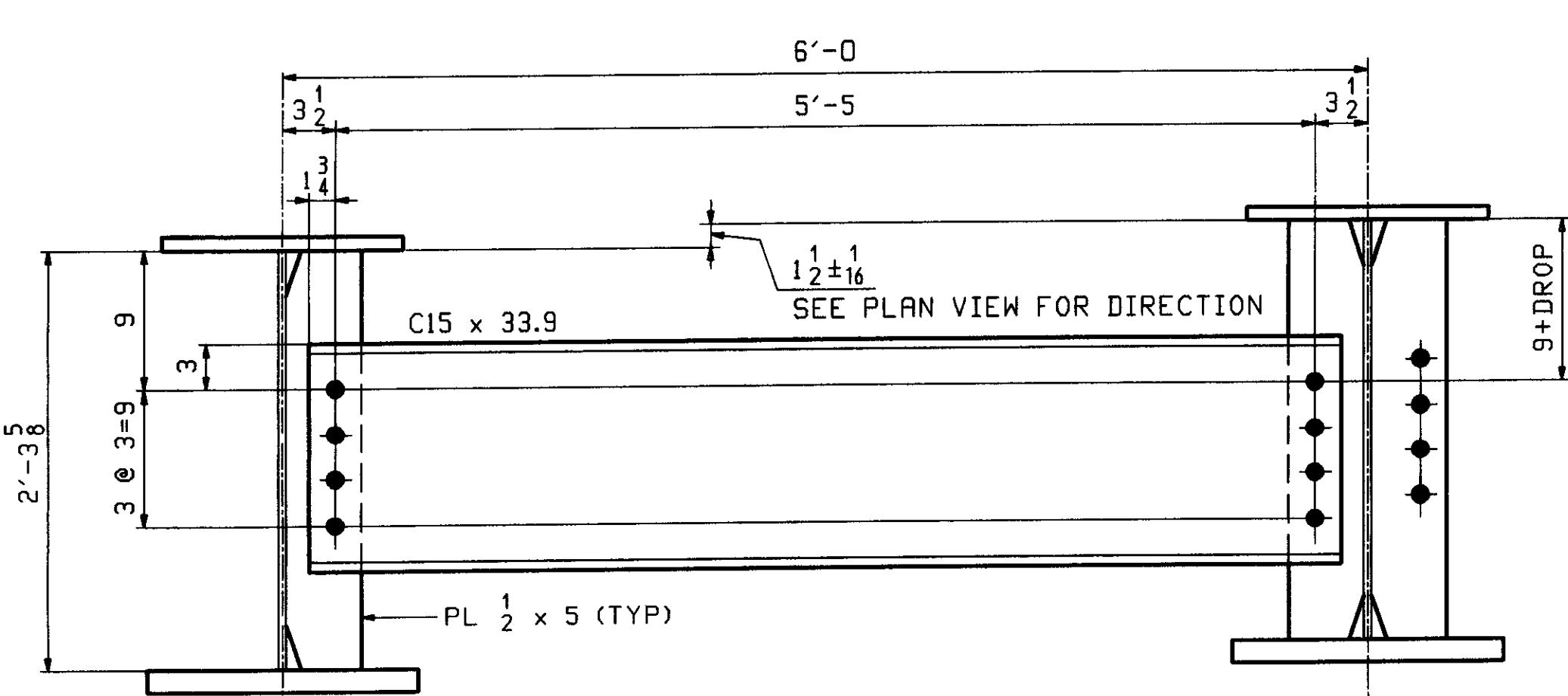
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 JUN 01 2007
 RESUBMIT APPROVED BY [Signature]
 BY [Signature] DATE 6/1/07



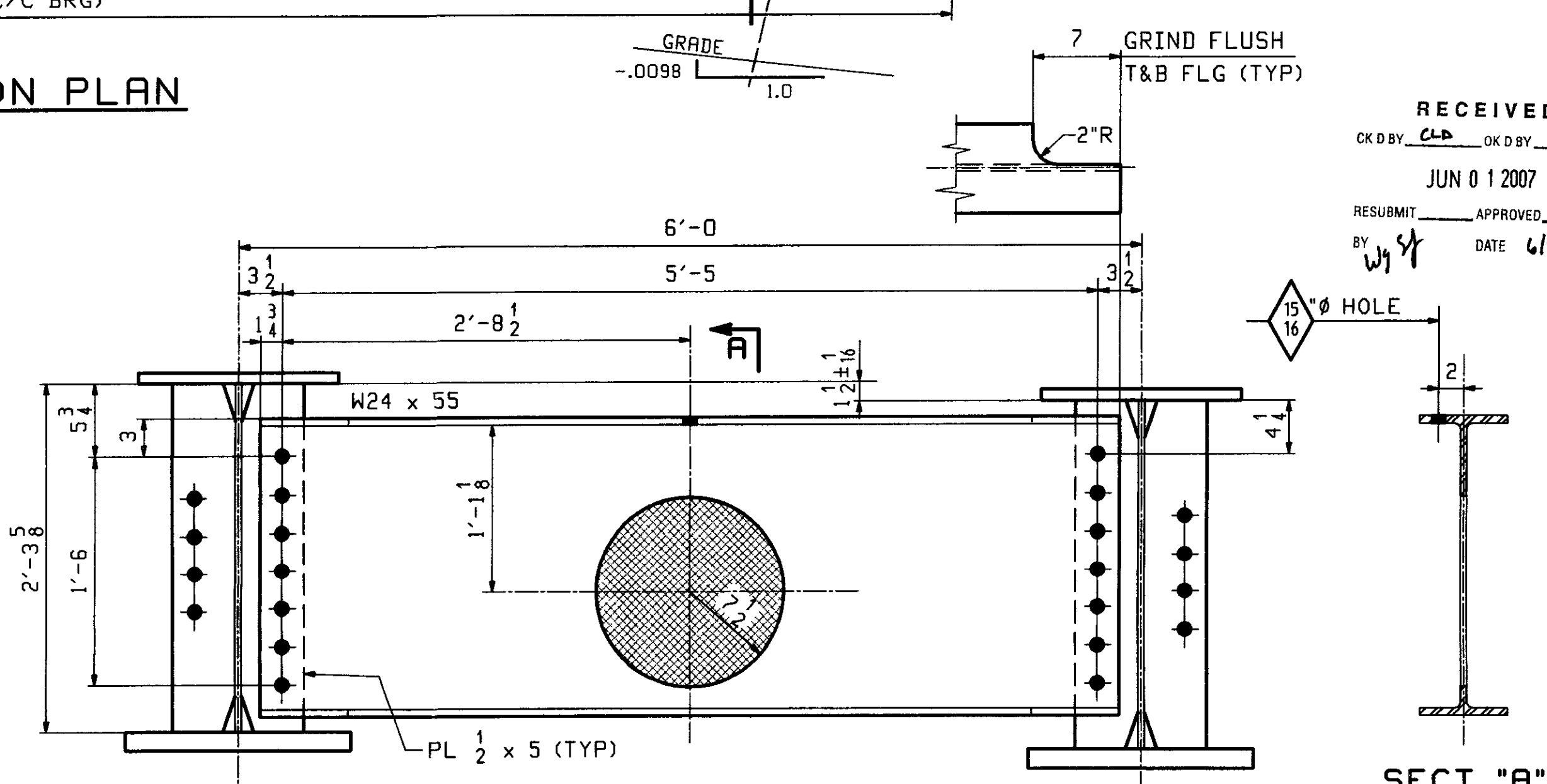
CALCULATION PLAN

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

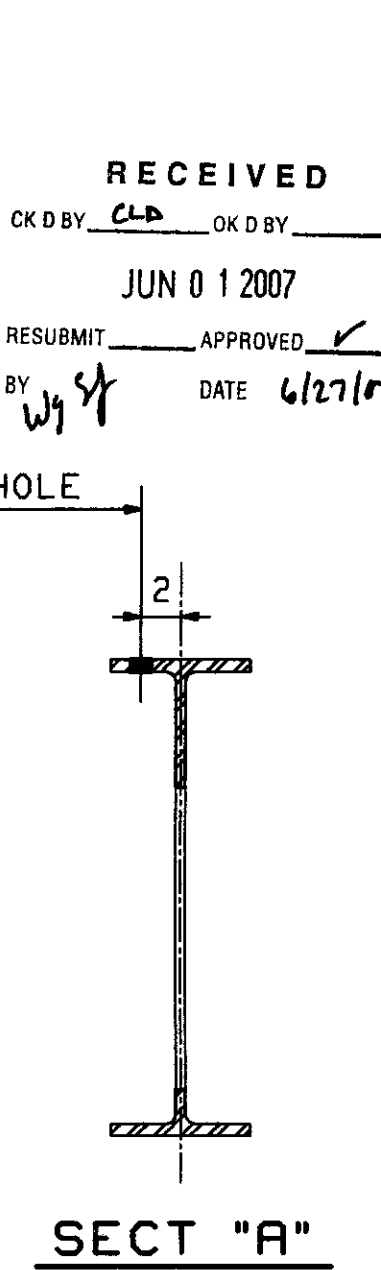
- NOTES
- 1 LONGITUDINAL DIMENSIONS ARE SLOPING ALONG BOTTOF WEB WITH CORRECTIONS MADE FOR VERTICAL CURVE, GRADE & DL CAMBER (UN)
 2. TRANSVERSE DIMENSIONS ARE IN A HORIZ. PLANE (UN).
 3. DROP ARROW POINTS TOWARDS LOW END OF MEMBER.
 4. ENDS OF GIRDERS AND BRG. STIFF'S ARE VERTICAL AFTER DL ROTATION.
 5. DIAPH CONN STIFFENERS ARE NORMAL TO GRADE.
 6. BOTTOF PT NUMBERS = TOP PT NUMBERS + 200.
 7. COMBINE INT CROSSFRAMES FOR DIFF IN DROPS OF +/- 1/16
 8. CROSSFRAME DROPS ARE CALCULATED IN THEIR FINAL POSITION.



TYP. INT DIAPHRAGM
 LOOKING BACK STATION



INT DIAPHRAGM @ WATERLINE
 LOOKING BACK STATION



SECT "A"

OUT FOR APPROVAL	5/24/07								
OUT FOR APPROVAL									
ISSUED TO SHOP									
FIELD & OFFICE									

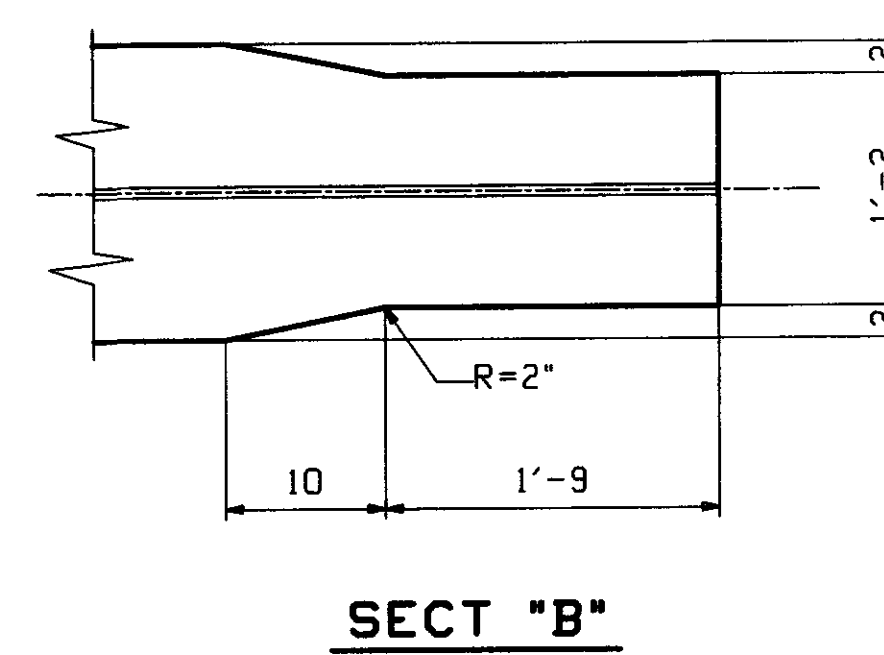
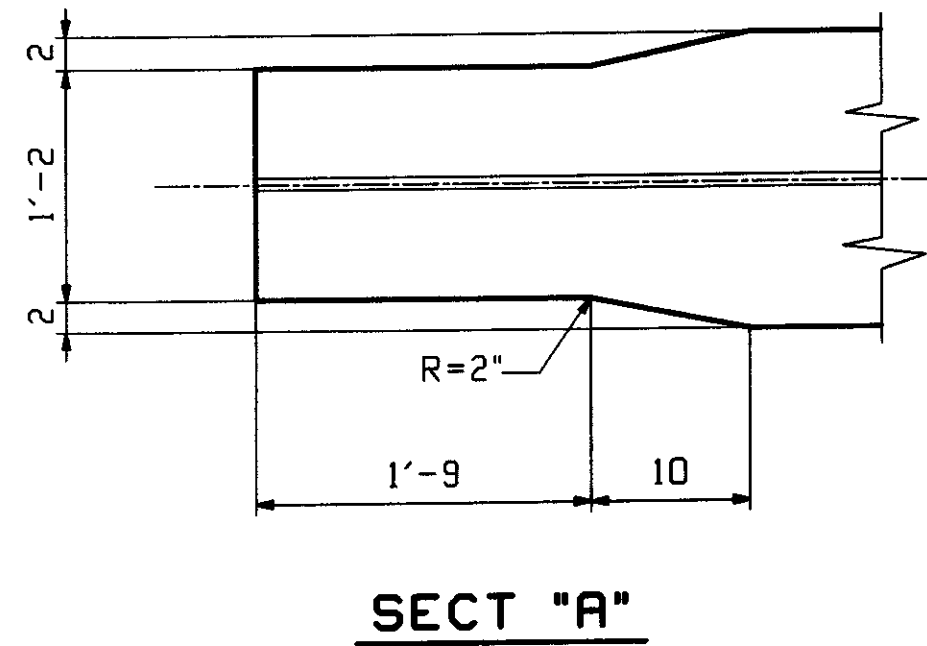
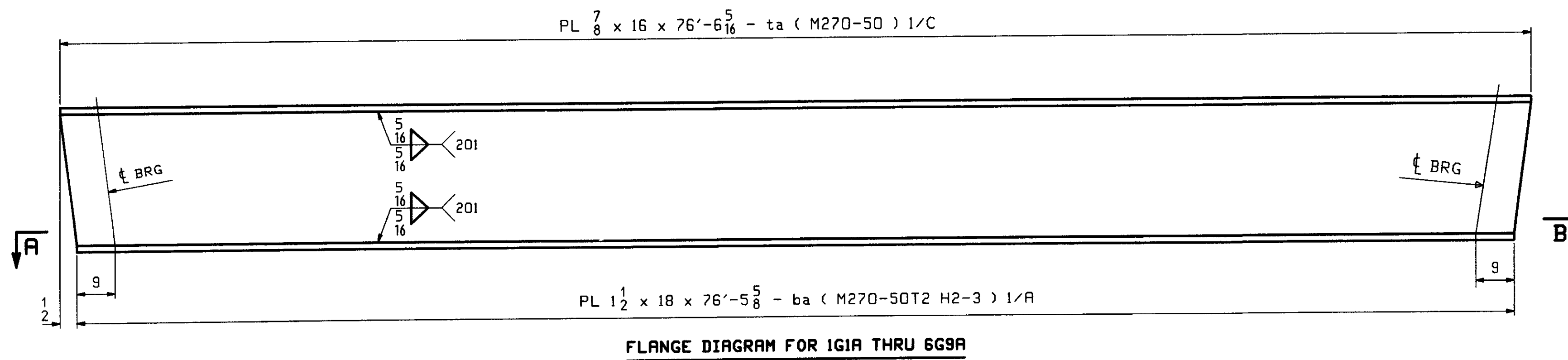
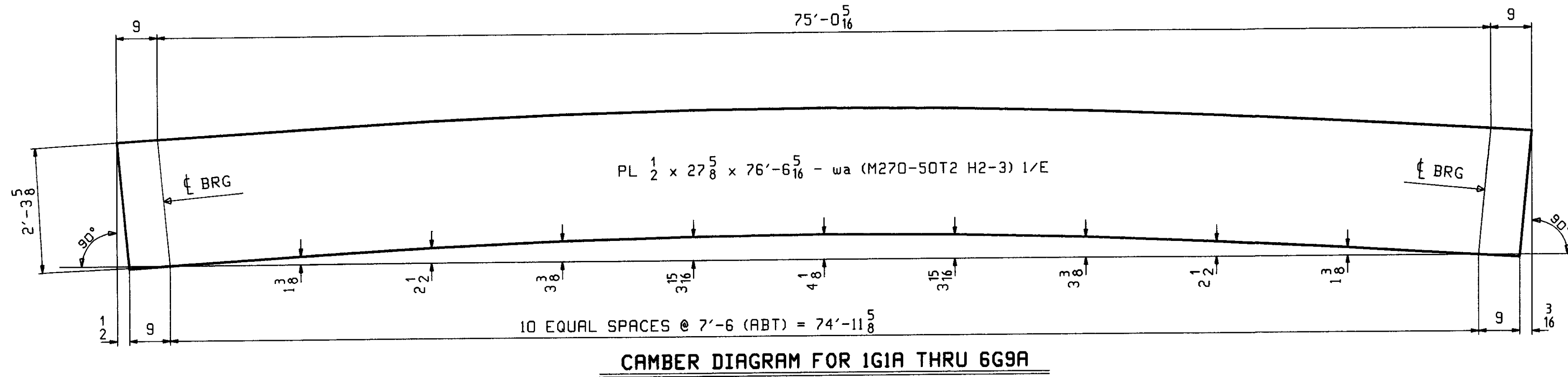
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
MATERIAL (UN.)	ELECTRODES	HOLES									SHOP BOLTS
M270 GR. 50		15 16 Ø (UN)									

SURFACE PREP & PAINT.
 SEE PAINT NOTES ON DWG GNI

DESCRIPTION:	CALCULATION PLAN	DRAWN BY	WL	DATE	05/11
JOB:	VT ROUTE 15 OVER THE GIHON RIVER	CHKD BY	PCP	DATE	05/14
	BRIDGE NO 37	APPROV BY			
	TOWN OF JOHNSON, VT (LAMOILLE COUNTY)	SUPERVISOR	M. J. GATTI		

PROJ NO.	BRF 030-2(17)S	Q.A.	
CUSTOMER:	VT A.O.T		
CASCO BAY STEEL STRUCTURES, INC.	JOB NO. 323	DRG. NO. WSI	REV. 1
75 SPRING HILL ROAD PHONE (207) 282-7360	SACO, MAINE 04072 FAX. (207) 282-1179		

100% Rev. 15, 05/01, 12:33:38 PM, C:\msd\p\br\2716\461, Rev.0



OUT FOR APPROVAL	5-24-07																			
OUT FOR APPROVAL																				
ISSUED TO SHOP																				
FIELD & OFFICE																				

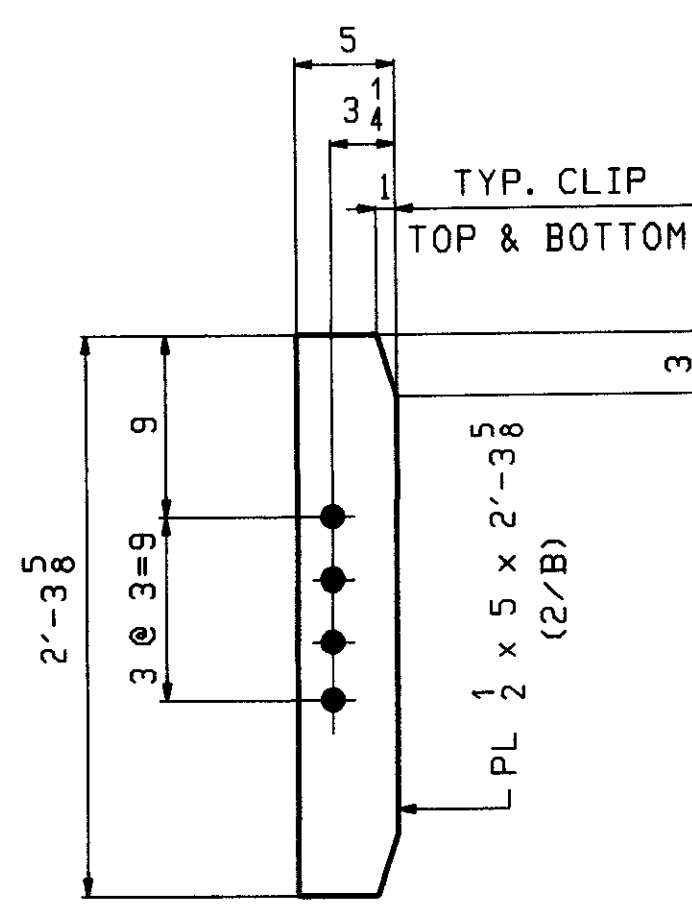
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	MATERIAL (UN) M270 GR. 50										
	SURFACE PREP. & PAINT										
	SEE PAINT NOTES ON DWG GNI										

DESCRIPTION.	CAMBER AND FLANGE DIAGRAM	DRAWN BY	DATE
JOB:	VT ROUTE 15 OVER THE GIHON RIVER	WL	05/11
	BRIDGE NO 37	CHKD BY	
	TOWN OF JOHNSON, VT. (LAMOILLE COUNTY)	PCP	05/14
	TENSOR 2716	APPROV BY	
PROJ NO.	BRF 030-2(17)S	SUPERVISOR	W. J. GATTI
CUSTOMER:	VT A O T	Q A.	

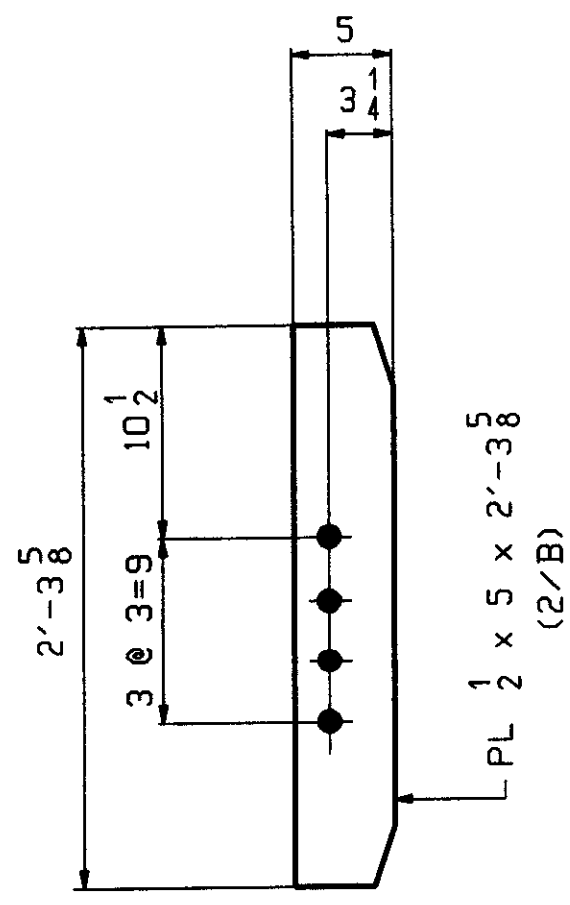
CASCO BAY STEEL STRUCTURES, INC.		JOB NO	DRG NO.
75 SPRING HILL ROAD	SACO, MAINE 04072	323	C1
PHONE (207) 282-7360	FAX. (207) 282-1179		REV.

RECEIVED
 JUN 01 2007
 BY: WJG DATE: 6/27/07

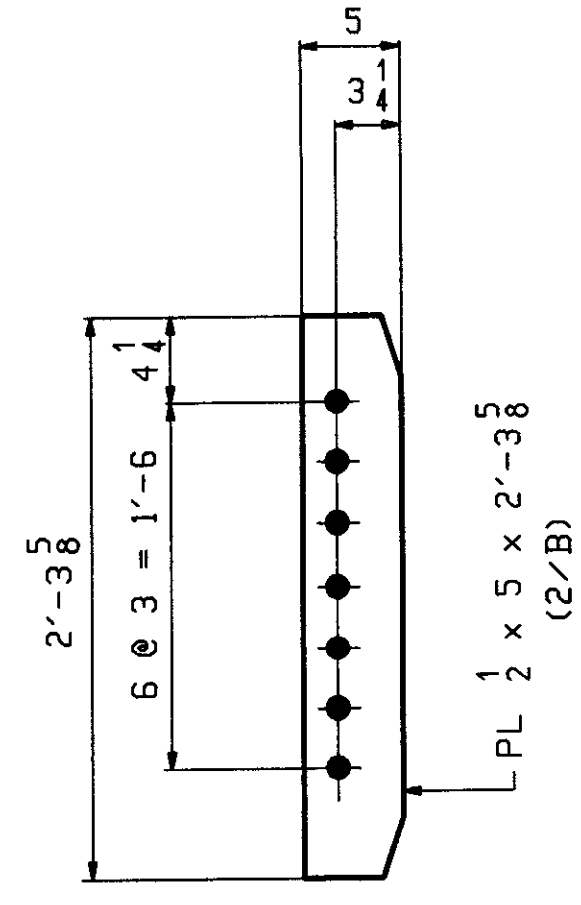
- NOTES:**
- FOR GENERAL NOTES SEE DWG GNI.
 - H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TEST AT H FREQ. FOR ZONE 2



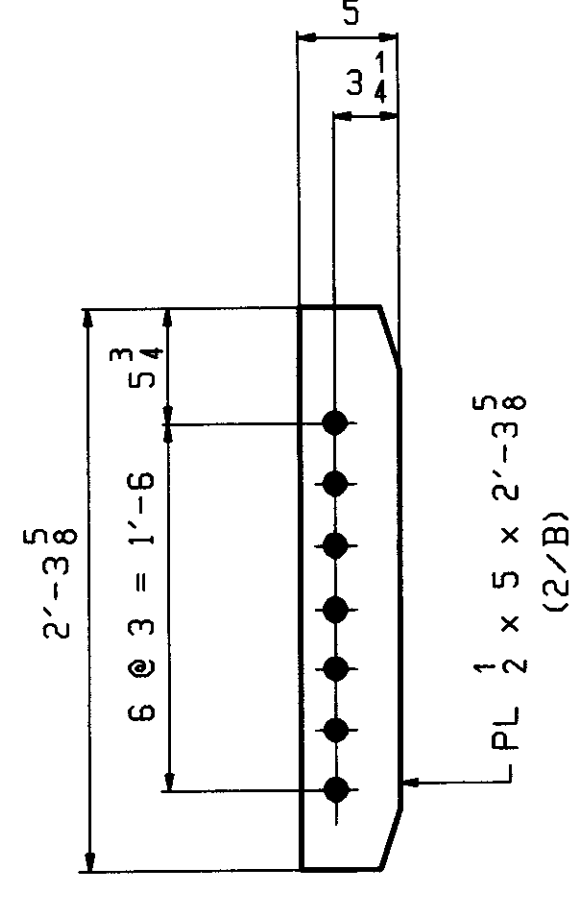
28 ~ x1a
CONN PL - LOW END



24
28 ~ x1b
CONN PL - HIGH END

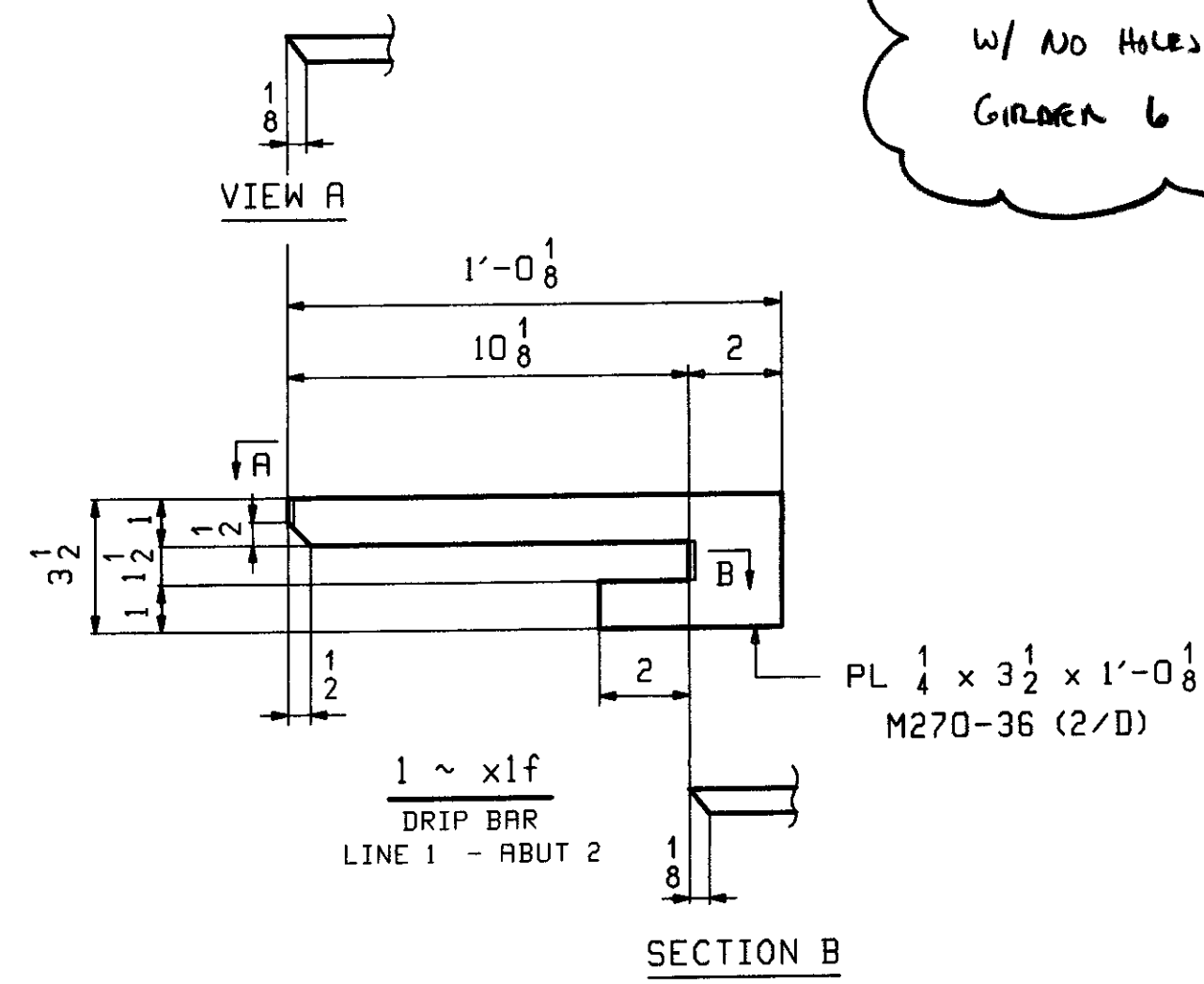


8 ~ x1c
CONN PL - LOW END
WATERLINE

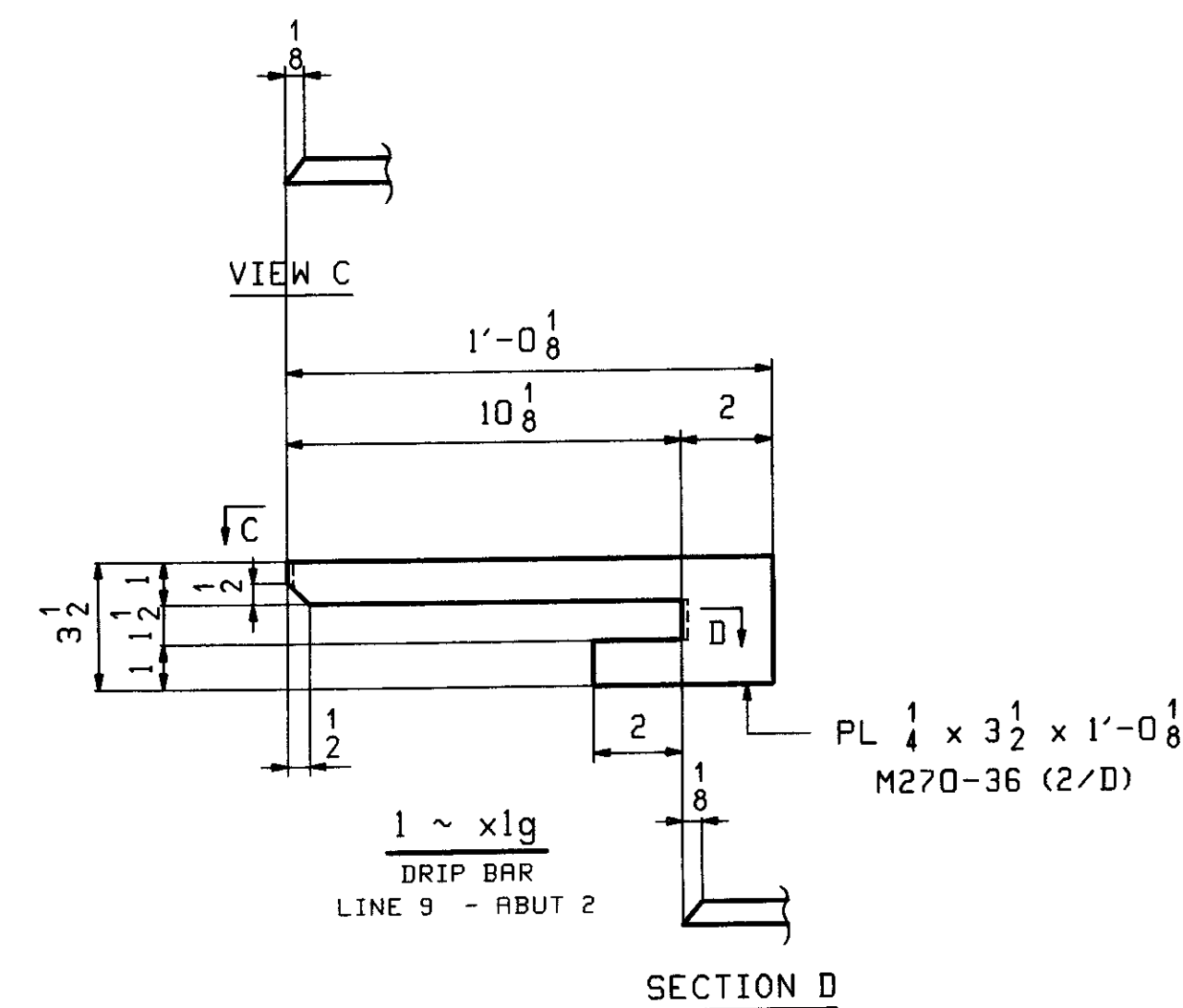


8 ~ x1d
CONN PL - HIGH END
WATERLINE

4 ~ x1b?
SAME SIZE BUT
W/ NO HOLES
GIRDERS 6 ONLY



1 ~ x1f
DRIP BAR
LINE 1 - ABUT 2



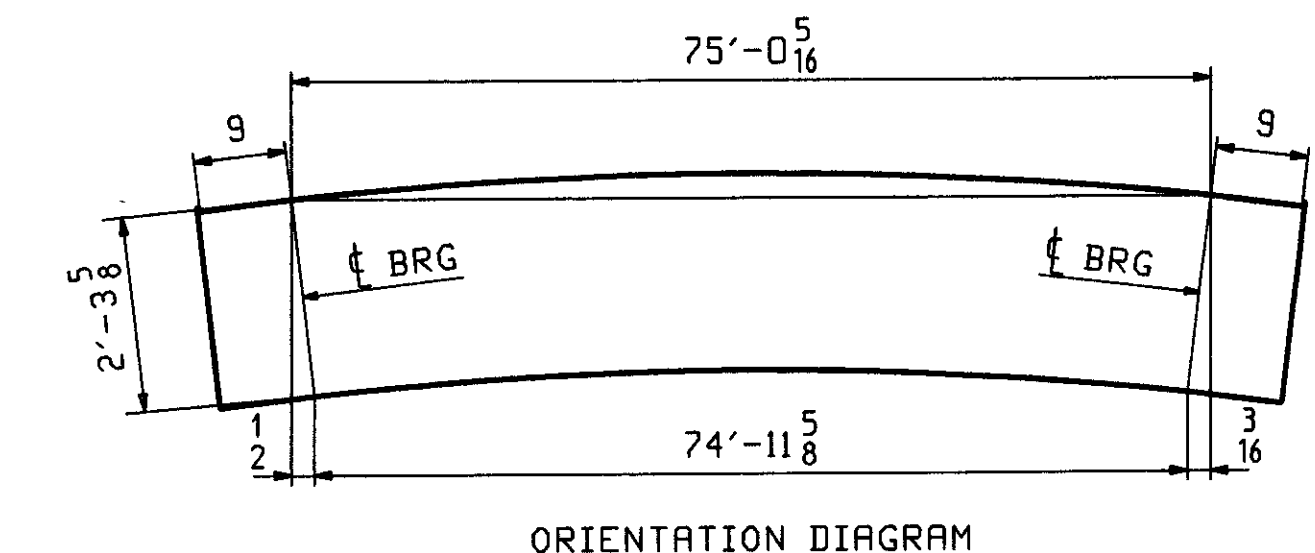
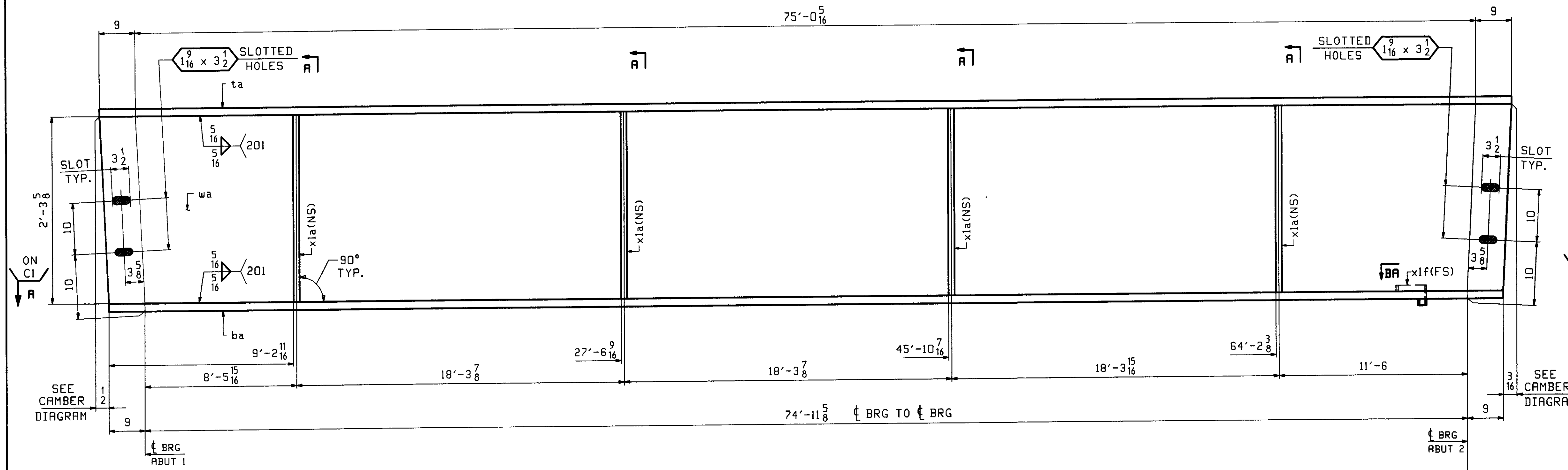
1 ~ x1g
DRIP BAR
LINE 9 - ABUT 2

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 APPROVED BY [Signature]
 DATE 6/27/07

NOTES:
 ALL MATERIAL SHALL BE M270-50.
 ALL BOLT HOLES SHALL BE 15/16" FOR 7/8" HSB.
 FOR GENERAL NOTES SEE SHEET GNI.

OUT FOR APPROVAL	5-28-07										
ISSUED TO SHOP											
FIELD & OFFICE											
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	MATERIAL (UN) M270 GR. 50										SHOP BOLTS NONE
SURFACE PREP & PAINT SEE PRINT NOTES ON DWG GNI											
DESCRIPTION: GIRDER STANDARDS										DRAWN BY	DATE
JOB: VT ROUTE 15 OVER THE GIRON RIVER										WR	05/17
BRIDGE NO 37										CHKD BY	
TOWN OF JOHNSON, VT. (LAMOILLE COUNTY)										DO	05/19
TENSOR 2718										APPROV BY	
PROJ NO. BRF 030-2(17)5										SUPERVISOR	M J GATTI
CUSTOMER: VT A O T										Q.A.	
CASCO BAY STEEL STRUCTURES, INC.										JOB NO.	DRG. NO.
75 SPRING HILL ROAD SACO, MAINE 04072										323	X1
PHONE (207) 282-7360 FAX. (207) 282-1179										REV.	△

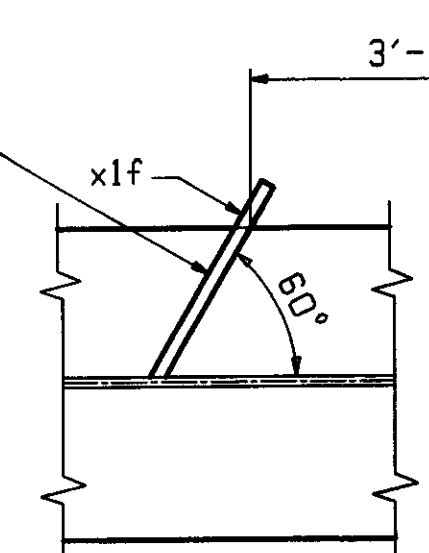
ABM INFO		SHIP		BILL OF MATERIAL				JOB NO	DRAWING NO.	REV
								323	1	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	INCHES	REMARKS	WT	PROCUREMENT NOTES
		IG1A	1		GIRDER				14345	
1	E		1	wa	PL $\frac{1}{2} \times 27 \frac{5}{8}$	76	$\frac{5}{16}$	(M270-SQT2) (H2-3)		
1	C		1	ta	PL $\frac{7}{8} \times 16$	76	$\frac{5}{16}$			
1	A		1	ba	PL $1 \frac{1}{2} \times 18$	76	$\frac{5}{8}$	(M270-SQT2) (H2-3)		
2	B		4	x1a	PL $\frac{1}{2} \times 5$	2	$\frac{3}{8}$			
2	D		1	x1f	PL $\frac{1}{4} \times 3 \frac{1}{2}$	1	$\frac{1}{8}$	(M270-36)		



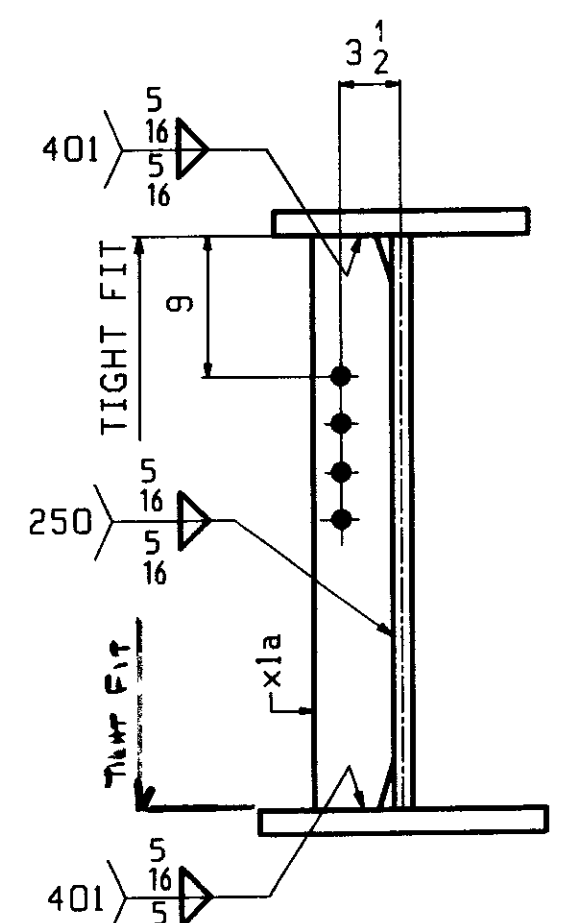
ONE - GIRDER - IG1A

FOR GIRDER STANDARD DETAILS SEE DRAWING XI.
 FOR CAMBER DIAGRAM SEE DRAWING C1.
 FOR GENERAL NOTES SEE DRAWING GNI.
 H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.

SEAL WELD ALL AROUND
 TIGHT FIT TO FLANGE
 (TYP 401)
 OK.
 ENGR.
 PLEASE VERIFY



SECTION BA

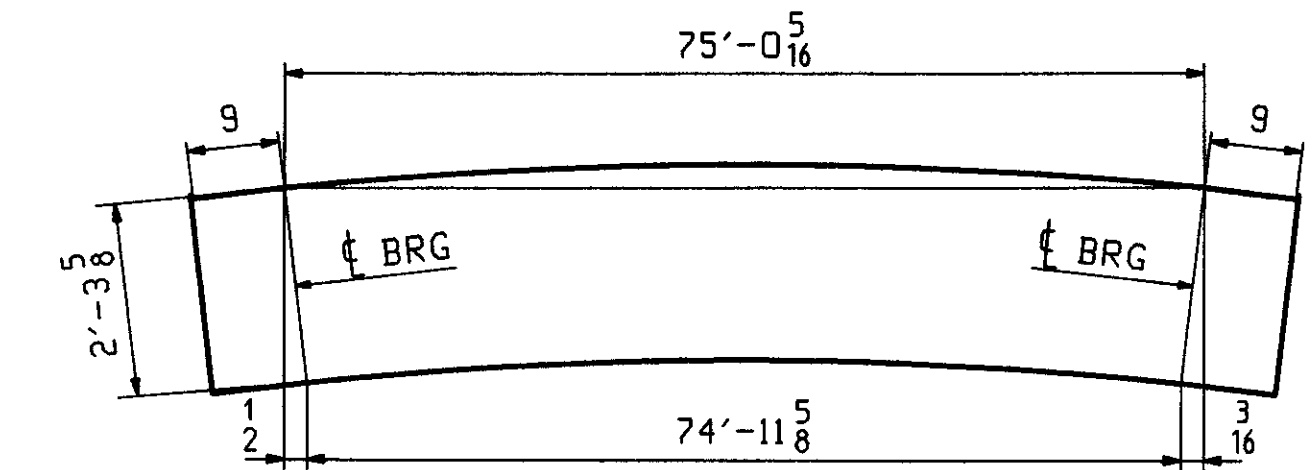
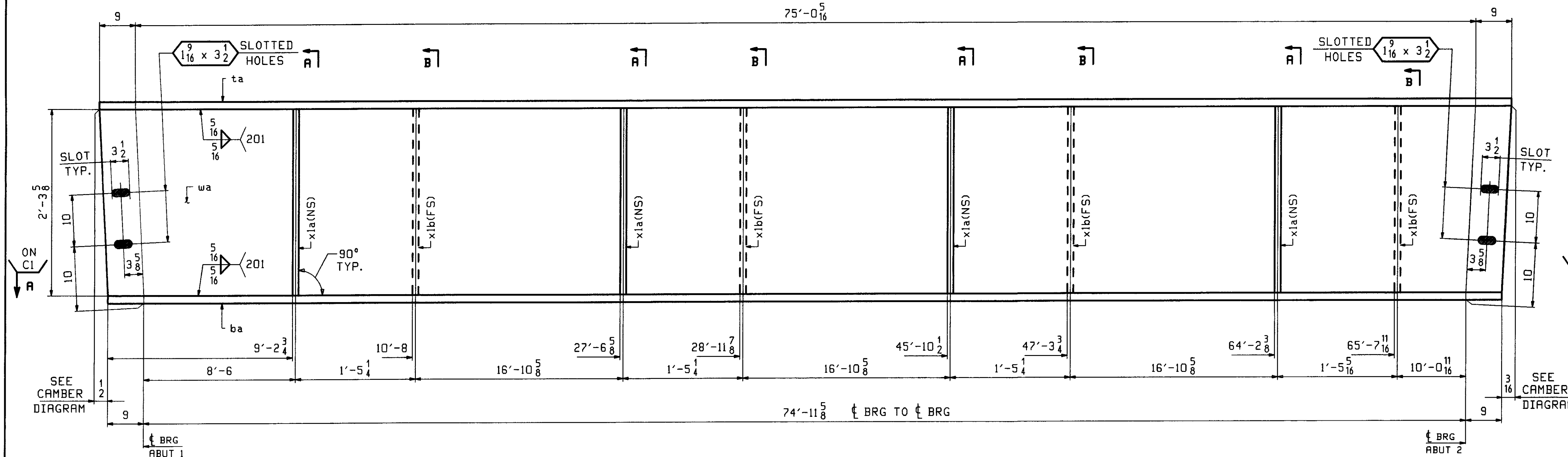


SECTION A-A

OUT FOR APPROVAL	5-24-07										
OUT FOR APPROVAL											
ISSUED TO SHOP											
FIELD & OFFICE											
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	MATERIAL (UN)-	ELECTRODES									SHOP BOLTS
	M270 GR. 50										NONE
	SURFACE PREP & PAINT-										
	SEE PRINT NOTES ON DWG GNI										
DESCRIPTION:		GIRDER - IG1A				DRAWN BY		DATE			
JOB:		VT. ROUTE 15 OVER THE GIHON RIVER				WR		05/17			
		BRIDGE NO 37				CHKD BY					
		TOWN OF JOHNSON, VT. (LAMOLLE COUNTY)				DO		05/21			
						APPROV BY					
						SUPERVISOR		M. J. GATTI			
PROJ NO.		BRF 030-2(17)S									
CUSTOMER.		VT. R.O.T.									
CASCO BAY STEEL STRUCTURES, INC.		JOB NO.		DRG. NO.							
75 SPRING HILL ROAD		323		1							
PHONE (207) 282-7360											
SACO, MAINE 04072											
FAX. (207) 282-1179											

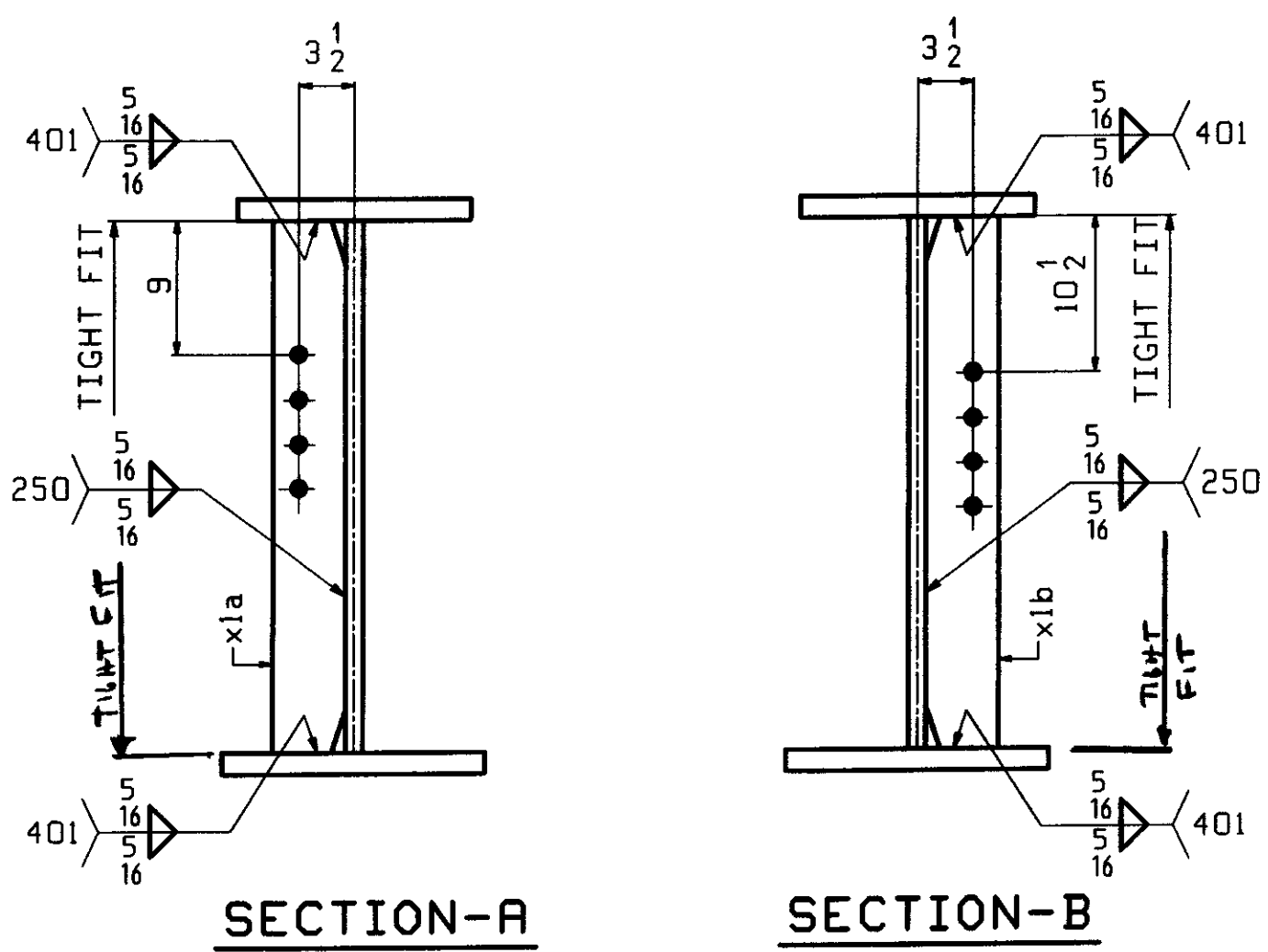
RECEIVED
 OK'D BY elo OK'D BY _____
 JUN 01 2007
 RESUBMIT _____ APPROVED MSW
 BY WY DATE _____

ABM INFO		SHIP				BILL OF MATERIAL		JOB NO	DRAWING NO	REV
								323	2	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH		REMARKS	WT	PROCUREMENT NOTES
						FT	INCHES			
		2G2A	1		GIRDER					14425
		2G3A	1		GIRDER					14425
1	E		2	wa	PL $\frac{1}{2}$ x27 $\frac{5}{8}$	76	6 $\frac{5}{16}$	(M270-50T2) (H2-3)		
1	C		2	ta	PL $\frac{7}{8}$ x16	76	6 $\frac{5}{16}$			
1	A		2	ba	PL $1\frac{1}{2}$ x18	76	5 $\frac{3}{8}$	(M270-50T2) (H2-3)		
2	B		8	x1a	PL $\frac{1}{2}$ x5	2	3 $\frac{3}{8}$			
2	B		8	x1b	PL $\frac{1}{2}$ x5	2	3 $\frac{3}{8}$			



ONE - GIRDER - 2G2A
 ONE - GIRDER - 2G3A] ALIKE EXCEPT FOR MARK

FOR GIRDER STANDARD DETAILS SEE DRAWING XI.
 FOR CAMBER DIAGRAM SEE DRAWING CI.
 FOR GENERAL NOTES SEE DRAWING GNI.
 H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



OUT FOR APPROVAL	5-24-07									
OUT FOR APPROVAL										
ISSUED TO SHOP										
FIELD & OFFICE										

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	MATERIAL (UN):										
	M270 GR. 50										NONE

SURFACE PREP & PAINT:
 SEE PAINT NOTES ON DWG GNI

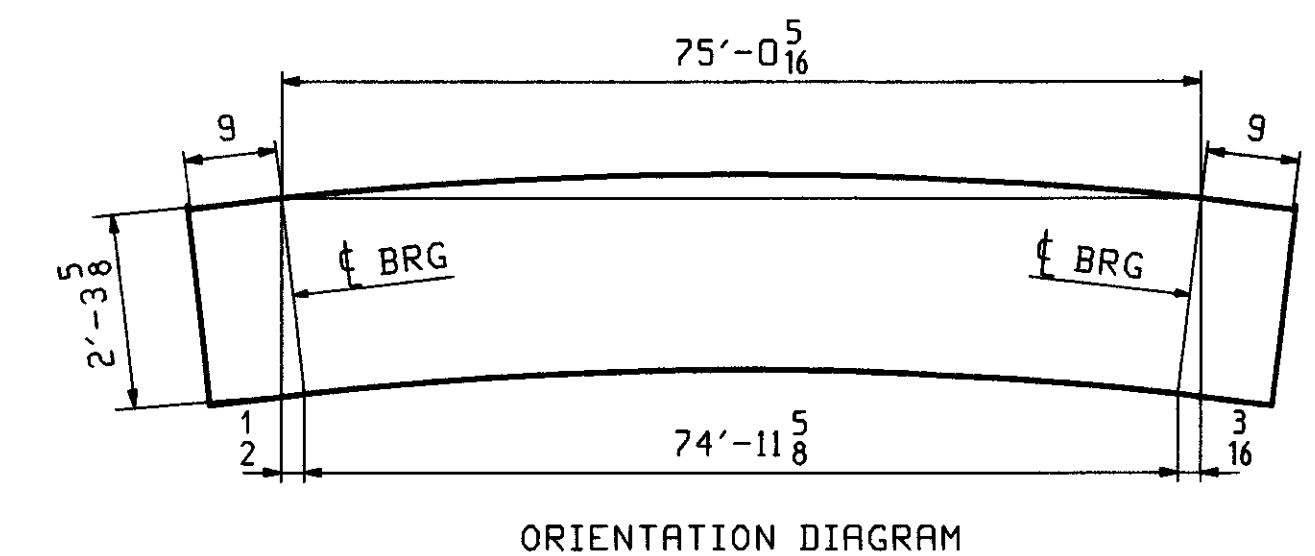
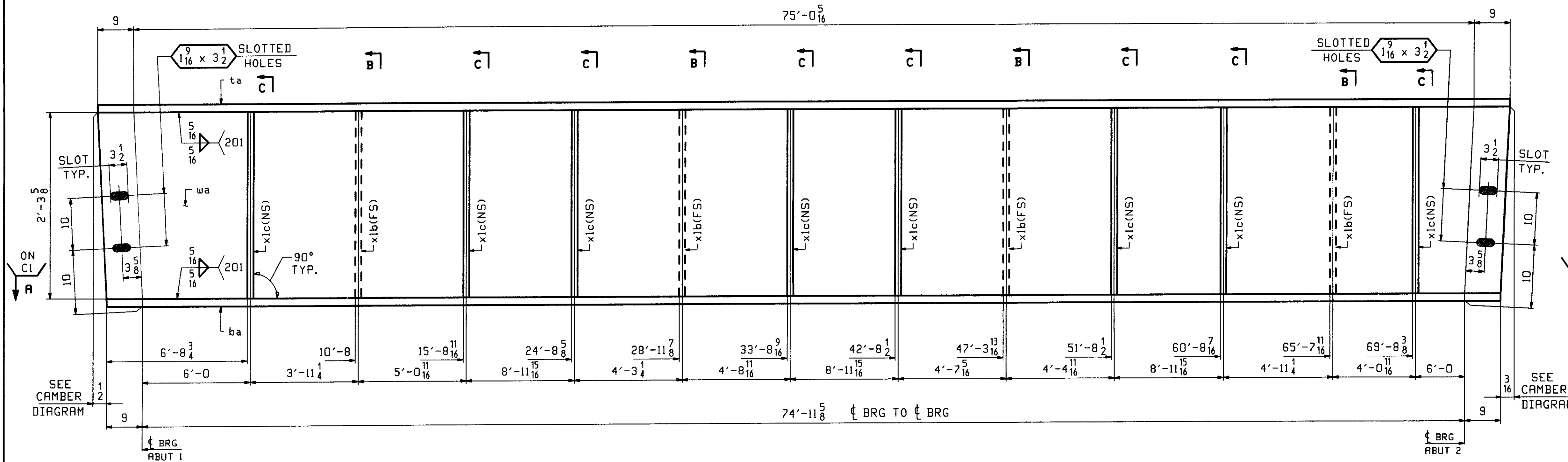
DESCRIPTION:	GIRDER - 2G2A & 2G3A	DRAWN BY	DATE
JOB:	VT ROUTE 15 OVER THE GIBON RIVER	WR	05/17
	BRIDGE NO 37	CHKD BY	
	TOWN OF JOHNSON, VT (LAMOILLE COUNTY)	DO	05/21
		APPROV BY	
		SUPERVISOR	W J GATTI
PROJ NO.	BRF 030-2(17)S	Q.A.	
CUSTOMER:	VT R.O.T		

CASCO BAY STEEL STRUCTURES, INC.		JOB NO.	DRG. NO.
75 SPRING HILL ROAD SACO, MAINE 04072		323	2
PHONE (207) 282-7360 FAX. (207) 282-1179		REV.	△

RECEIVED
 CKD BY: CLD OKD BY: _____
 JUN 01 2007
 RESUBMIT _____ APPROVED As Notd
 BY WJ DATE 6/27/07

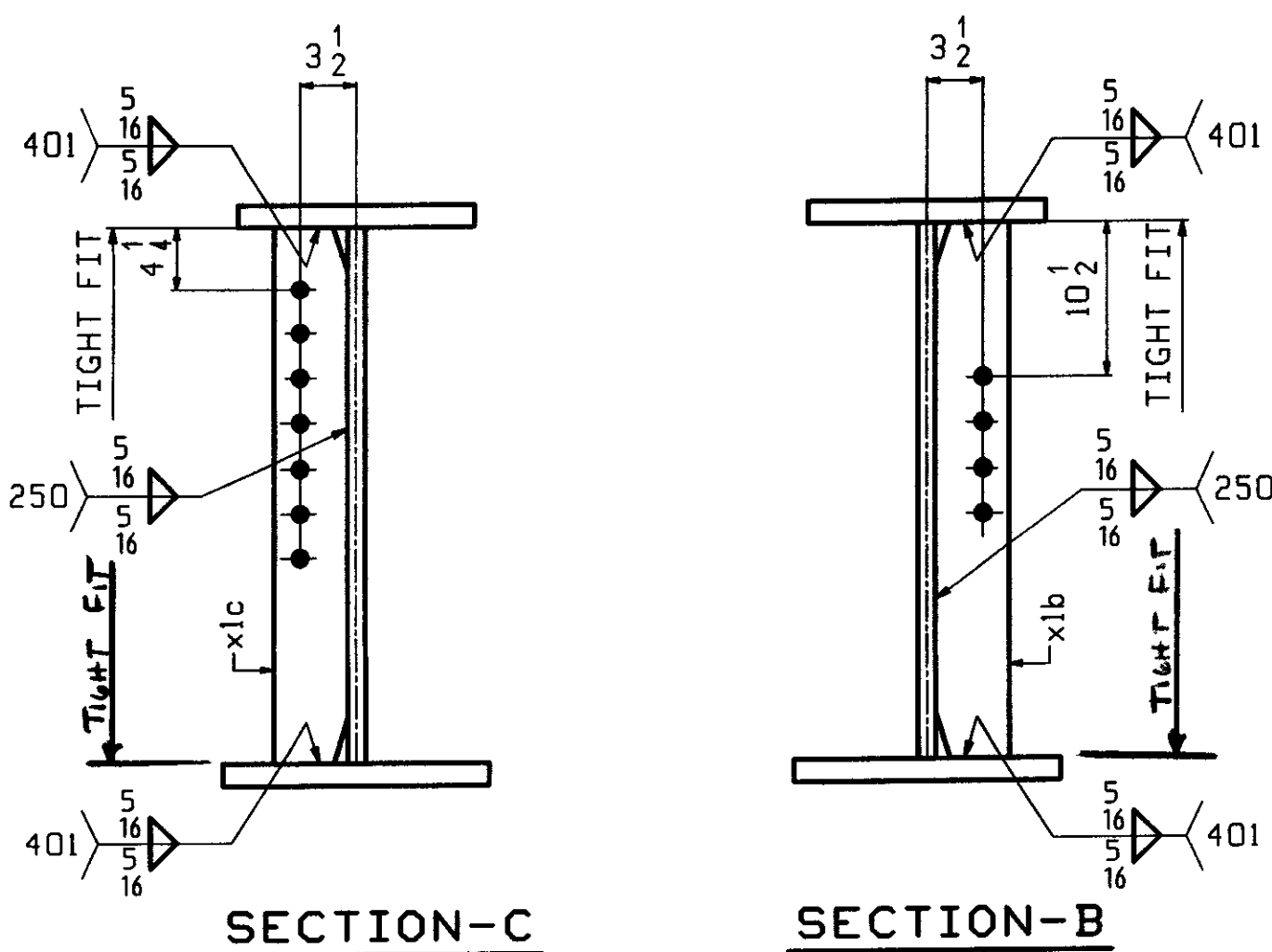
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							323	3	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT	PROCUREMENT NOTES
		3G4A	1		GIRDER			14503	
1	E		1	wa	PL 1/2 x 27 5/8	76 5/16	(M270-50T2) (H2-3)		
1	C		1	ta	PL 7/8 x 16	76 5/16			
1	A		1	ba	PL 1 1/2 x 18	76 5/8	(M270-50T2) (H2-3)		
2	B		4	x1b	PL 1/2 x 5	2 5/8			
2	B		8	x1c	PL 1/2 x 5	2 5/8			



ONE - GIRDER - 3G4A

FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
 FOR CAMBER DIAGRAM SEE DRAWING C1.
 FOR GENERAL NOTES SEE DRAWING GNI.
 H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.

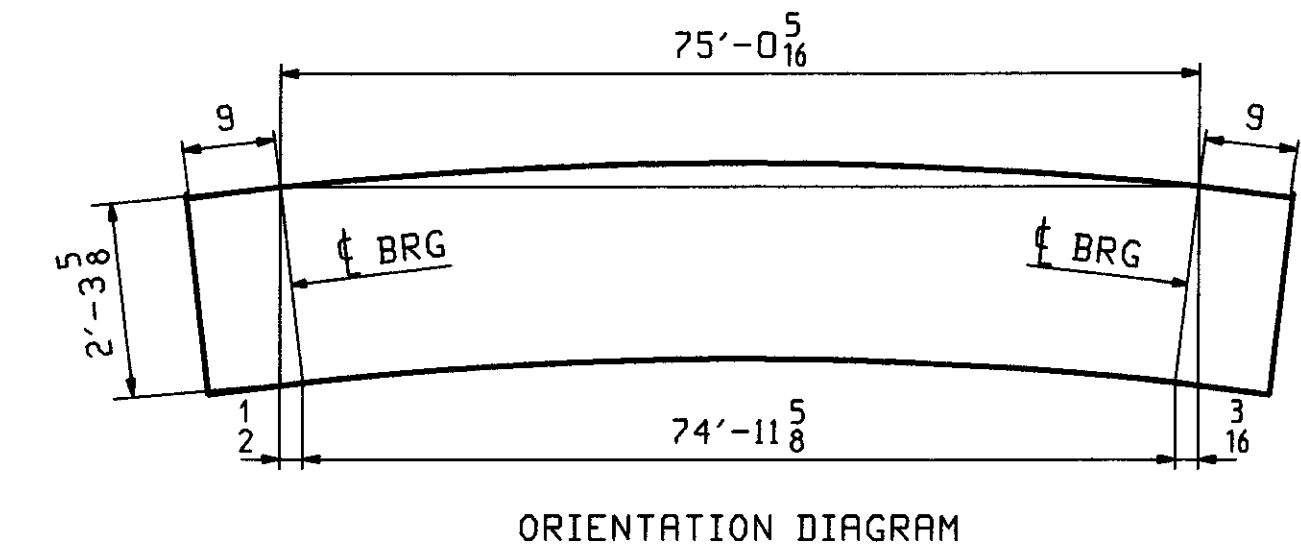
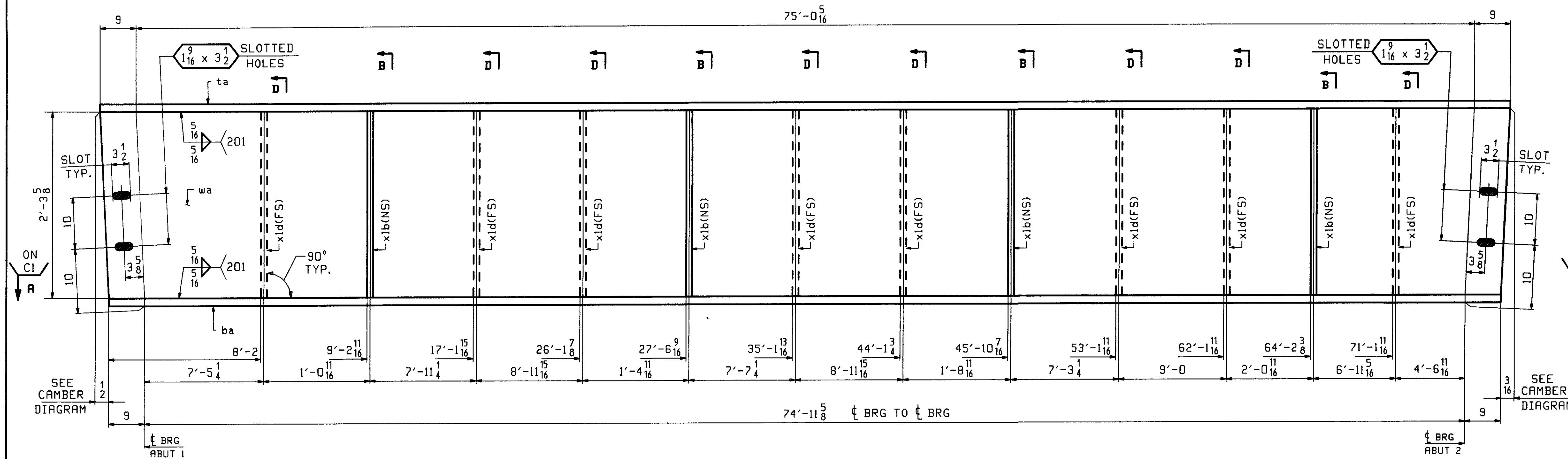


OUT FOR APPROVAL	5-24-07										
OUT FOR APPROVAL											
ISSUED TO SHOP											
FIELD & OFFICE											
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	MATERIAL (UN)	ELECTRODES									SHOP BOLTS
	M270 GR. 50										NONE
SURFACE PREP & PAINT											
SEE PAINT NOTES ON DWG GNI											
DESCRIPTION: GIRDER - 3G4A										DRAWN BY	DATE
JOB: VT. ROUTE 15 OVER THE GIHON RIVER										WR	05/17
BRIDGE NO 37										CHKD BY	
TOWN OF JOHNSON, VT. (LAMOILLE COUNTY)										DO	05/21
TENSOR 2716										APPROV BY	
PROJ NO. BRF 030-2(17)S										SUPERVISOR	W. J. GATTI
CUSTOMER: VT R.O.T										Q.A.	
CASCO BAY STEEL STRUCTURES, INC.										JOB NO.	DRG. NO.
75 SPRING HILL ROAD SACO, MAINE 04072										323	3
PHONE (207) 282-7360 FAX. (207) 282-1179										REV.	△

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 CK'D BY CLO OK'D BY
 JUN 0 1 2007
 RESUBMIT APPROVED As Notd
 BY DATE 6/21/07

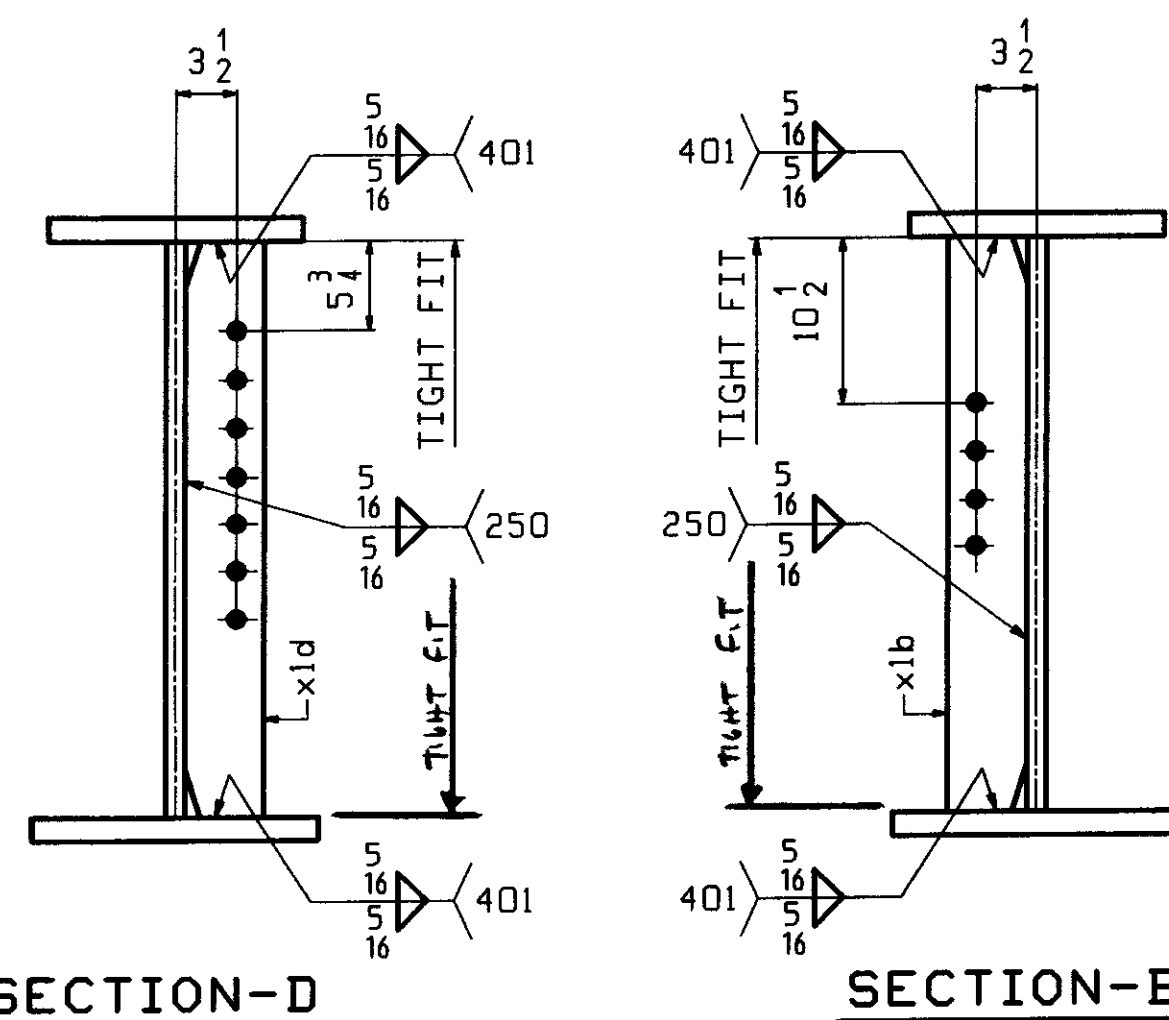
50 Rev. 12. 2002 04. 05. 25 PM. 1/2007/04/27/07.2 Rev.0

ABM INFO		BILL OF MATERIAL				JOB NO	DRAWING NO	REV	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT	PROCUREMENT NOTES
		4G5A	1		GIRDER			14503	
1	E		1	wa	PL $\frac{1}{2} \times 27 \frac{5}{8}$	76 $\frac{5}{16}$	(M270-50T2) (H2-3)		
1	C		1	ta	PL $\frac{7}{8} \times 16$	76 $\frac{5}{16}$			
1	A		1	ba	PL $1 \frac{1}{2} \times 18$	76 $\frac{5}{8}$	(M270-50T2) (H2-3)		
2	B		4	x1b	PL $\frac{1}{2} \times 5$	2 $\frac{5}{8}$			
2	B		8	x1d	PL $\frac{1}{2} \times 5$	2 $\frac{5}{8}$			



ONE - GIRDER - 4G5A

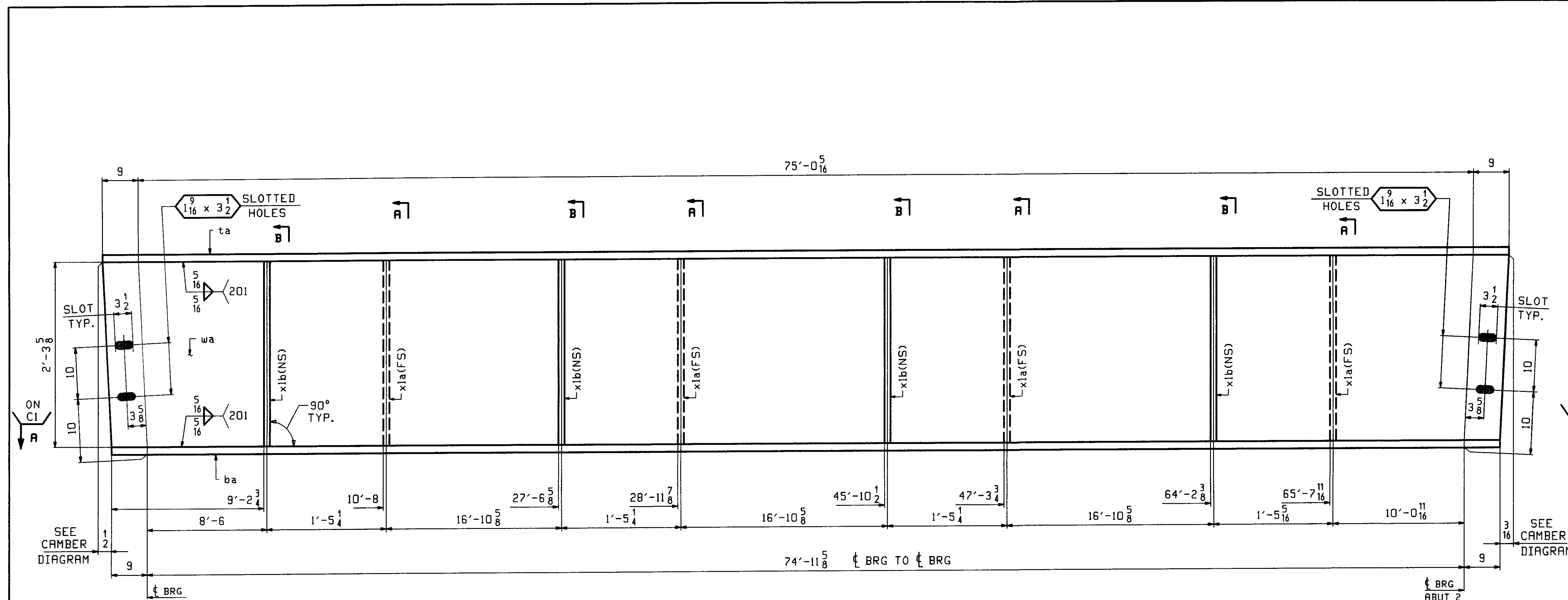
FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
 FOR CAMBER DIAGRAM SEE DRAWING C1.
 FOR GENERAL NOTES SEE DRAWING GNI.
 H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



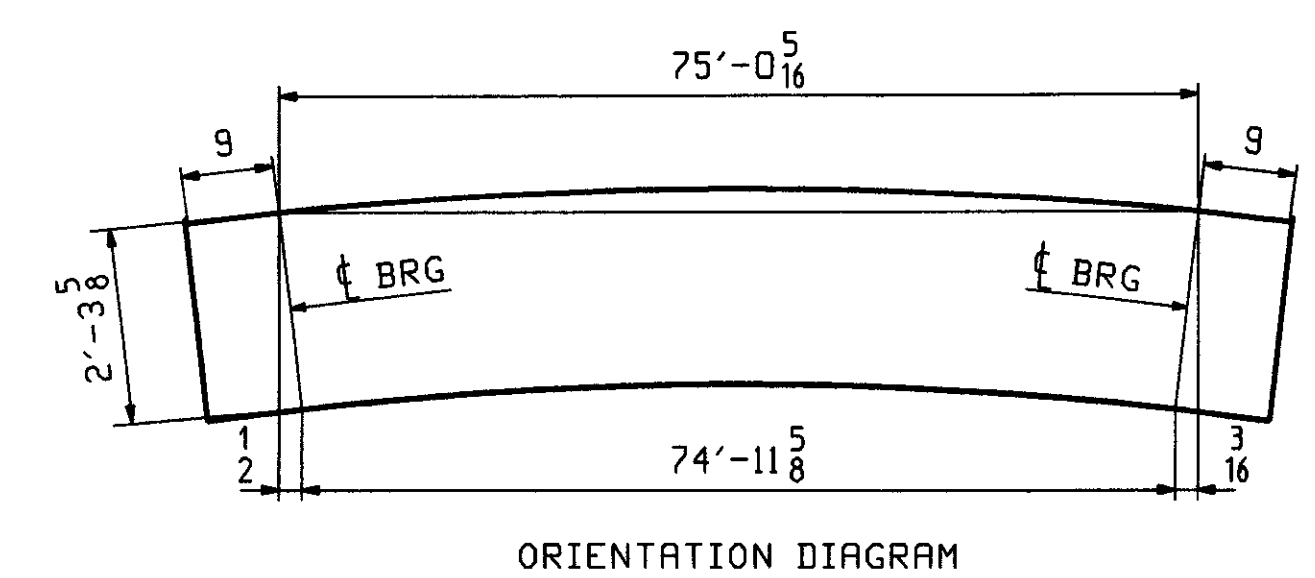
OUT FOR APPROVAL	5-21-07										
OUT FOR APPROVAL											
ISSUED TO SHOP											
FIELD & OFFICE											
REV.	REMARKS	DATE	DWN	CHK	APP	Q A	NO.	DIA.	LGT	TYPE	WASHER
	MATERIAL (UN)	ELECTRODES									SHOP BOLTS
	M270 GR. 50										NONE
SURFACE PREP. & PAINT.											
SEE PRINT NOTES ON DWG GNI											
DESCRIPTION. GIRDER - 4G5A										DRAWN BY	DATE
JOB: VT ROUTE 15 OVER THE GIHON RIVER										WR	05/17
BRIDGE NO. 37										CHKD BY	
TOWN OF JOHNSON, VT. (LAMOILLE COUNTY)										DO	05/21
TENSOR 2716										APPROV BY	
PROJ NO. BRF 030-2(17)S										SUPERVISOR	W. J. GATTI
CUSTOMER: VT A O T										Q.A.	
CASCO BAY STEEL STRUCTURES, INC.										JOB NO.	DRG NO
75 SPRING HILL ROAD SARCO, MAINE 04072										323	4
PHONE (207) 282-7360 FAX. (207) 282-1179										REV.	△

RECEIVED
 CKD BY: *ccs* OK'D BY: _____
 JUN 01 2007
 RESUBMIT _____ APPROVED *As Notd*
 BY *WJG* DATE *6/1/07*

15 JUN 12 2007 08:42:20 BR...



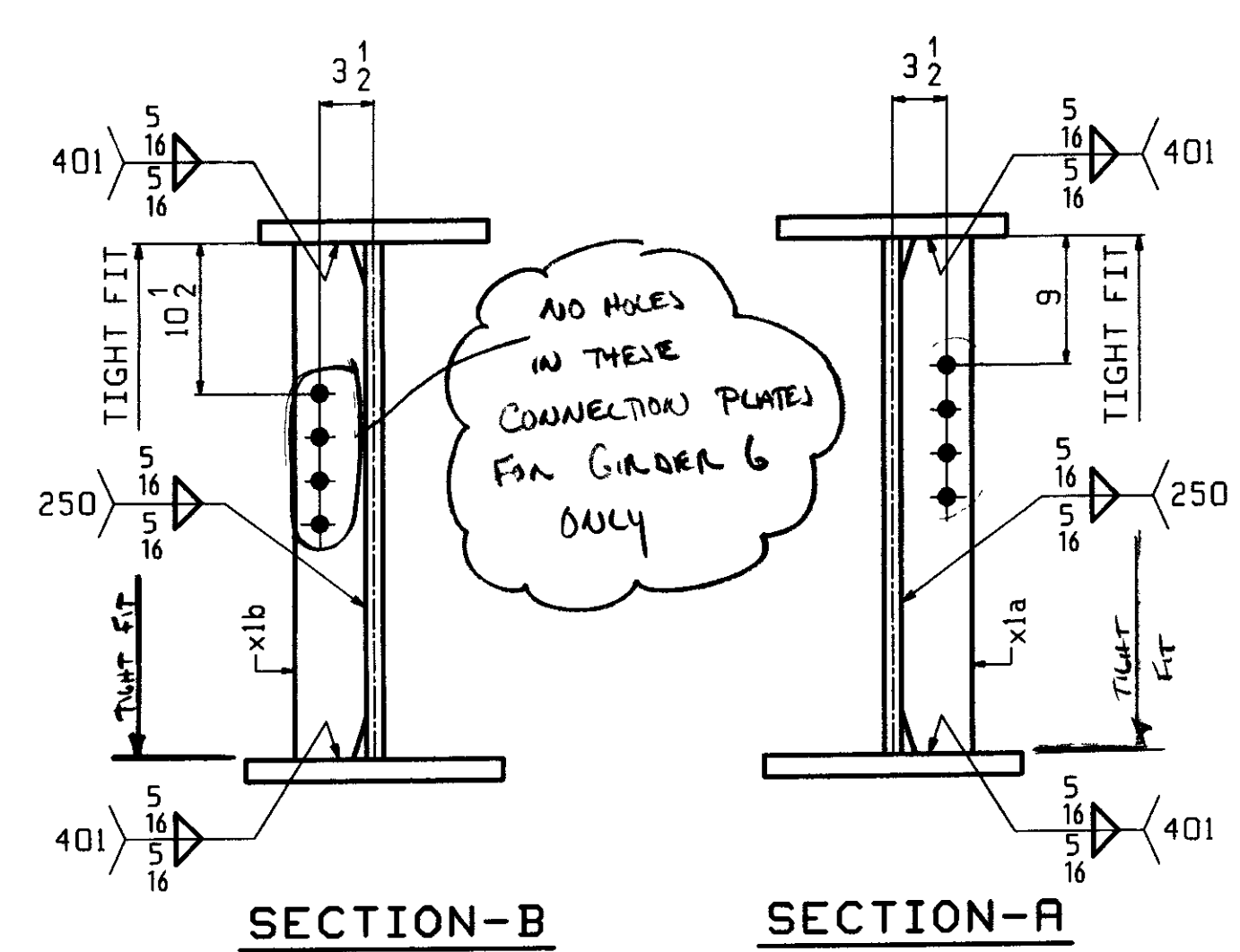
ABM INFO		BILL OF MATERIAL				JOB NO	DRAWING NO	REV.	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT	PROCUREMENT NOTES
		5G6A	1		GIRDER				14425
		5G7A	1		GIRDER				14425
		5G8A	1		GIRDER				14425
1	E		3	wa	PL 1/2 x 27 5/8	76 5/16	(M270-50T2) (H2-3)		
1	C		3	ta	PL 7/8 x 16	76 5/16			
1	A		3	ba	PL 1 1/2 x 18	76 5/8	(M270-50T2) (H2-3)		
2	B		12	x1a	PL 1/2 x 5	2 3/8			
2	B		12	x1b	PL 1/2 x 5	2 3/8			



ONE - GIRDER - 5G6A
 ONE - GIRDER - 5G7A
 ONE - GIRDER - 5G8A

ALIKE EXCEPT *
 FOR MARK

FOR GIRDER STANDARD DETAILS SEE DRAWING XI.
 FOR CAMBER DIAGRAM SEE DRAWING CI.
 FOR GENERAL NOTES SEE DRAWING GNI.
 H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



OUT FOR APPROVAL	5-24-07								
OUT FOR APPROVAL									
ISSUED TO SHOP									
FIELD & OFFICE									

REV.	REMARKS	DATE	DNW	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	MATERIAL (UN).	ELECTRODES									
	M270 GR. 50										

SURFACE PREP. & PAINT:
 SEE PRINT NOTES ON DWG GNI

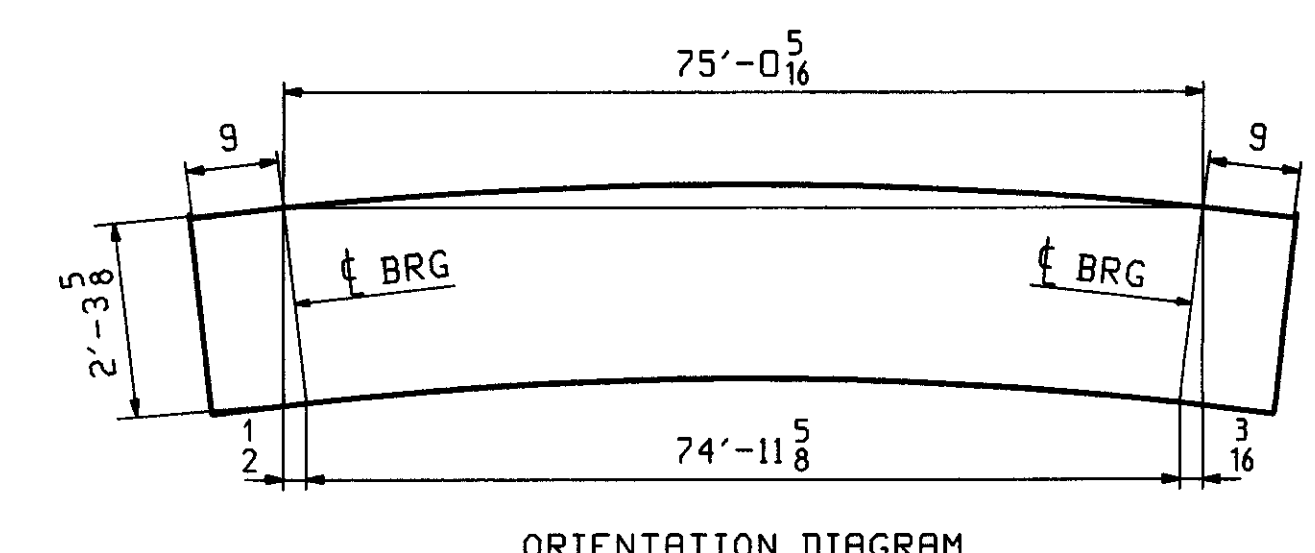
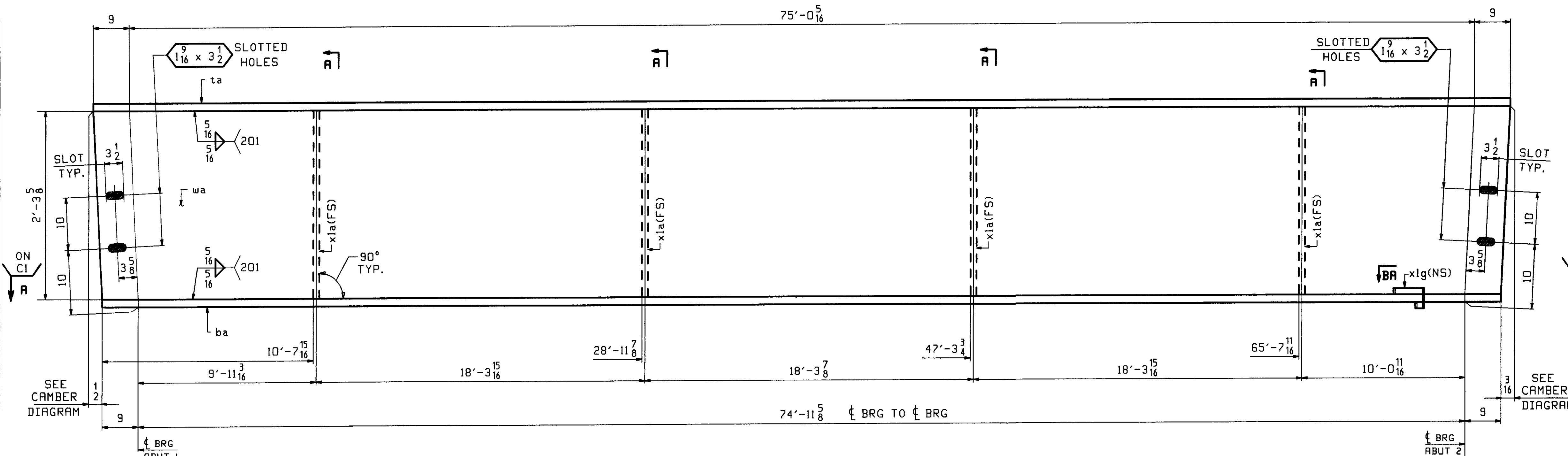
DESCRIPTION:	GIRDER - 5G6A 5G7A & 5G8A	DRAWN BY	DATE
JOB:	VT ROUTE 15 OVER THE GIHON RIVER	WR	05/17
	BRIDGE NO 37	CHKD BY	
	TOWN OF JOHNSON, VT (LAMOILLE COUNTY)	DO	05/22
		APPROV BY	
		SUPERVISOR	W. J. GATTI

PROJ NO.	BRF D30-2(17)S	Q.A.	
CUSTOMER:	VT AOT		
CASCO BAY STEEL STRUCTURES, INC.		JOB NO.	DRG. NO
75 SPRING HILL ROAD SACO, MAINE 04072		323	5
PHONE (207) 282-7360 FAX. (207) 282-1179		REV.	△

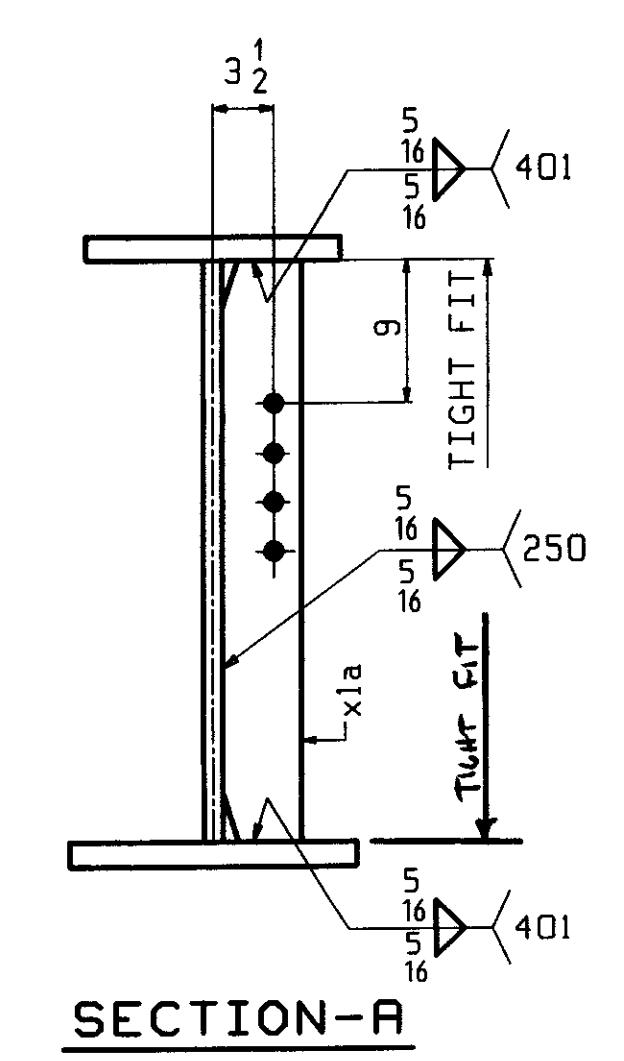
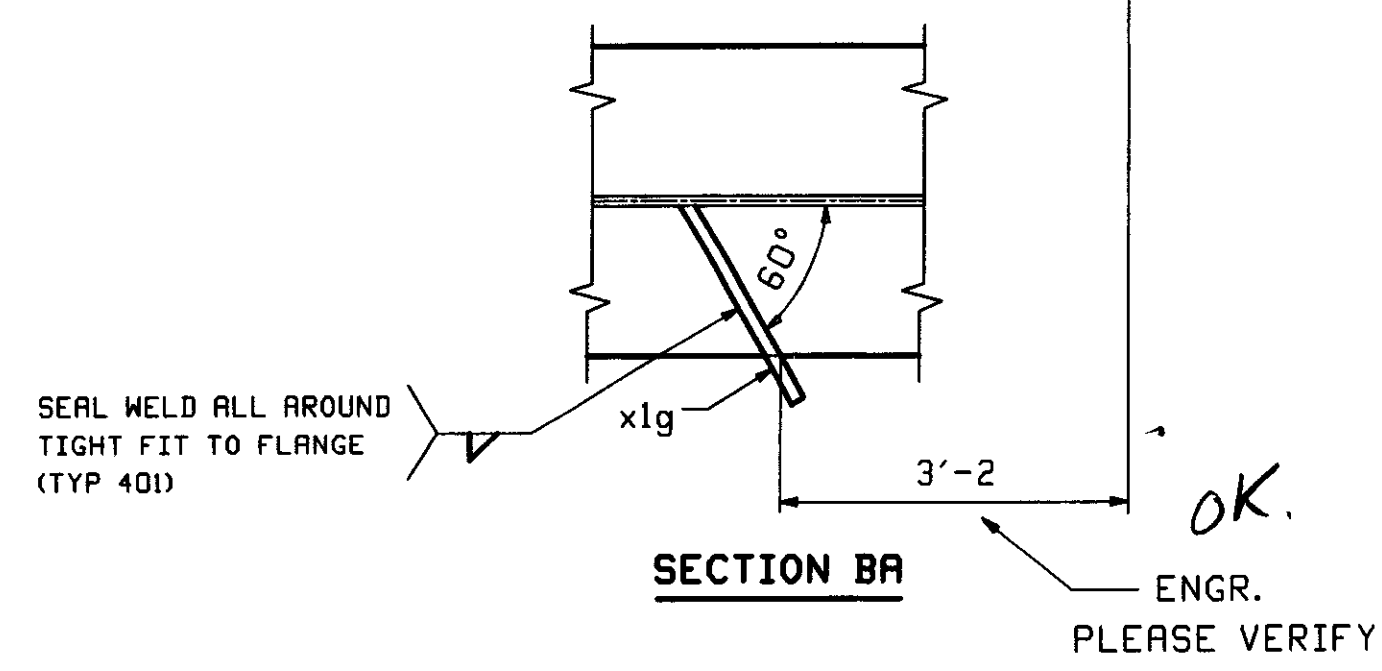
RECEIVED
 OK'D BY: CLB OK'D BY: _____
 JUN 01 2007
 RESUBMIT APPROVED: As Notd
 BY: Wjh DATE: 6/20/07

US 100 May 22, 2002 03:44:57 PM c:\pwr\pwr\2716.d Rev0

ABM INFO		SHIP		BILL OF MATERIAL				JOB NO	DRAWING NO	REV
								323	6	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES		REMARKS	WT	PROCUREMENT NOTES
		GG9A	1		GIRDER				14345	
1	E		1	wa	PL $\frac{1}{2} \times 27 \frac{3}{8}$	76	$\frac{5}{16}$	(M270-50T2) (H2-3)		
1	C		1	ta	PL $\frac{7}{8} \times 16$	76	$\frac{5}{16}$			
1	A		1	ba	PL $1 \frac{1}{2} \times 18$	76	$\frac{5}{8}$	(M270-50T2) (H2-3)		
2	B		4	x1a	PL $\frac{1}{2} \times 5$	2	$\frac{5}{8}$			
2	D		1	x1g	PL $\frac{1}{4} \times 3 \frac{1}{2}$	1	0 $\frac{1}{8}$	(M270-36)		



ONE - GIRDER - 6G9A
 FOR GIRDER STANDARD DETAILS SEE DRAWING X1.
 FOR CAMBER DIAGRAM SEE DRAWING C1.
 FOR GENERAL NOTES SEE DRAWING GNI.
 H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TESTING.



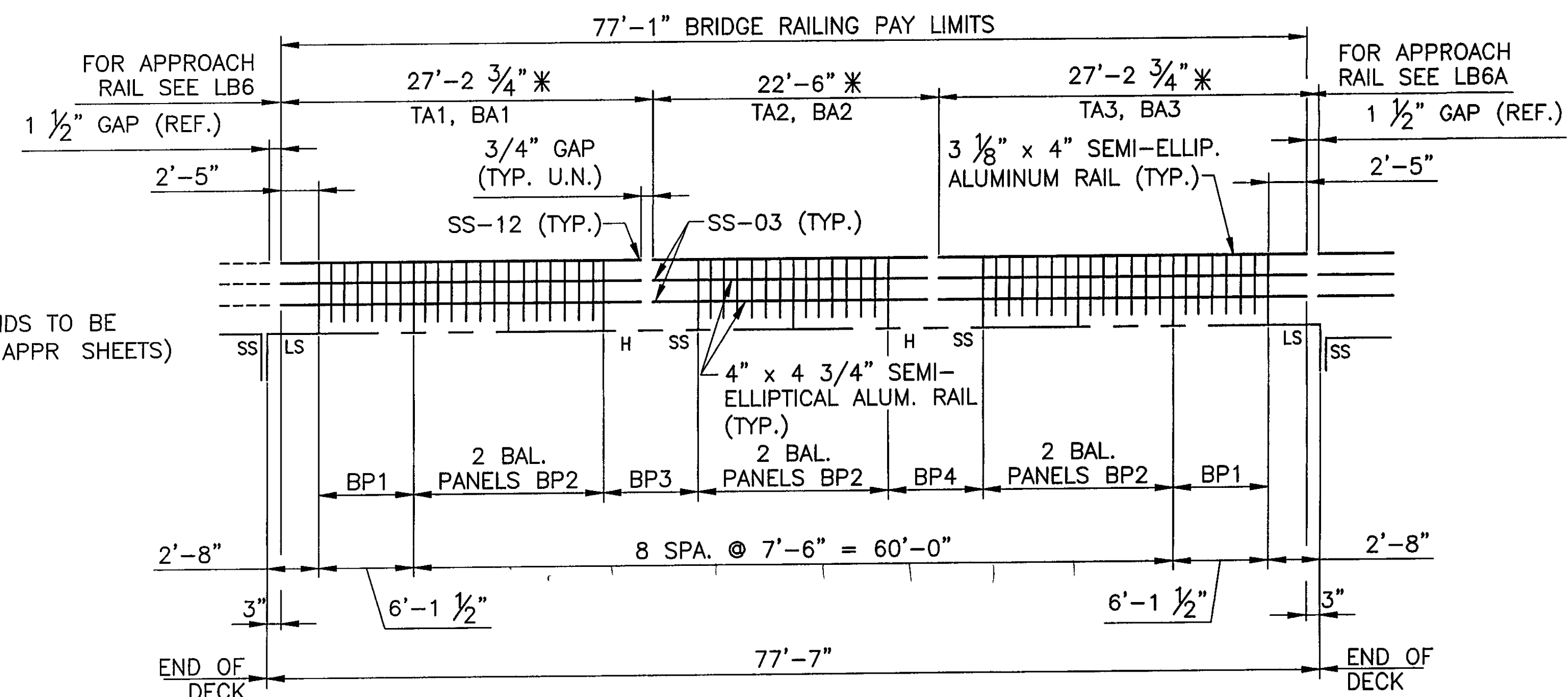
OUT FOR APPROVAL	5-24-07									
OUT FOR APPROVAL										
ISSUED TO SHOP										
FIELD & OFFICE										

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	MATERIAL (UN).										
	M270 GR. 50										
	ELECTRODES										
	HOLES										
	15/16 (UN)										
	SHOP BOLTS										
	NONE										
	SURFACE PREP & PAINT										
	SEE PRINT NOTES ON DWG GNI										

DESCRIPTION	GIRDER - 6G9A	DRAWN BY	DATE
JOB:	VT ROUTE 15 OVER THE GIHON RIVER	WR	05/17
	BRIDGE NO 37	CHKD BY	
	TOWN OF JOHNSON, VT (LAMOILLE COUNTY)	DO	05/22
		APPROV BY	
		SUPERVISOR	W. J. GATTI
PROJ NO.	BRF 030-2(17)5	Q.A.	
CUSTOMER:	VT AOT		
CASCO BAY STEEL STRUCTURES, INC.		JOB NO.	DRG NO.
75 SPRING HILL ROAD SACO, MAINE 04072		323	6
PHONE (207) 282-7360 FAX. (207) 282-1179		REV.	△

RECEIVED
 JUN 0 1 2007
 OK'D BY: *CLD* OK'D BY: _____
 RESUBMIT: _____ APPROVED: *Az Noh*
 BY: *WJG* DATE: *4/17/07*

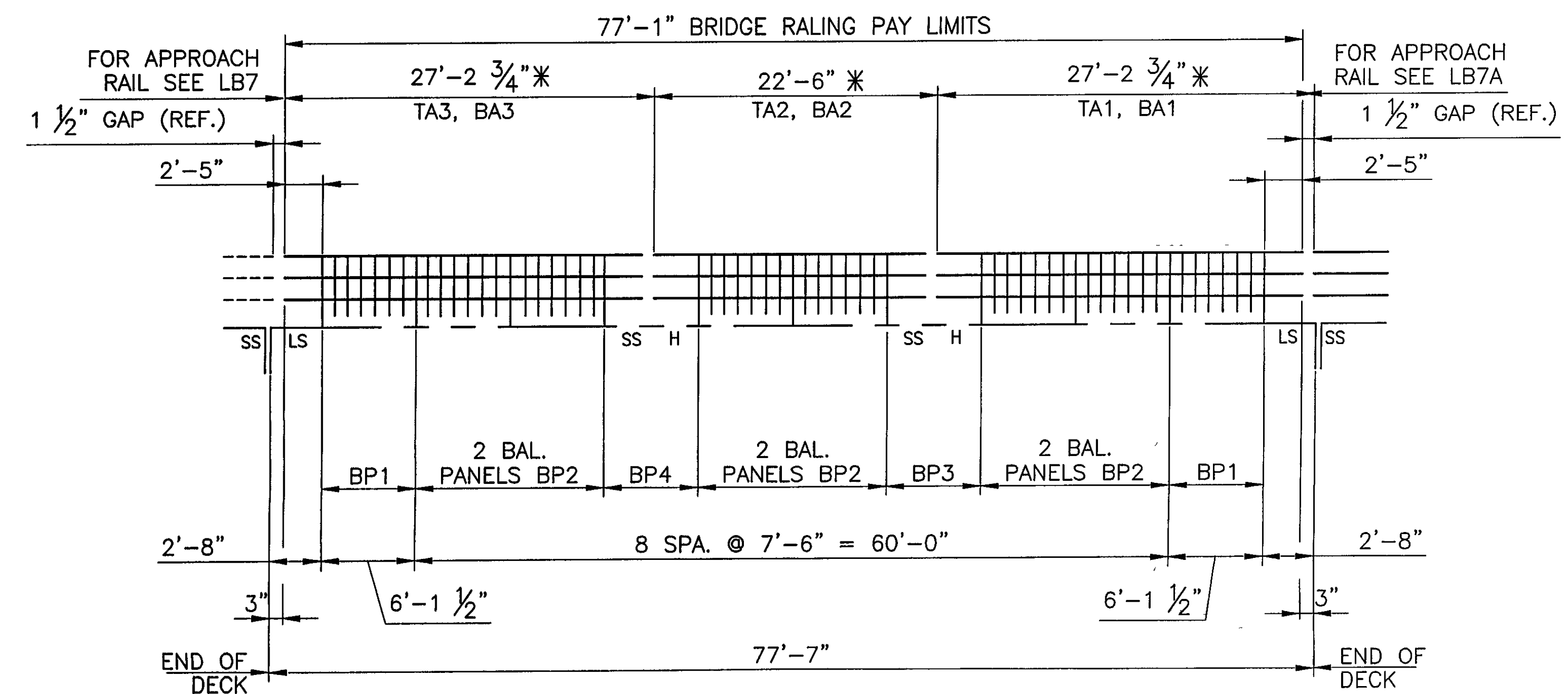
15 JUN 25 2007 09:52:05 AM casco/ahh/21614.dwg



(SPLICES @ ENDS TO BE BILLED OUT ON APPR SHEETS) (TYP.)

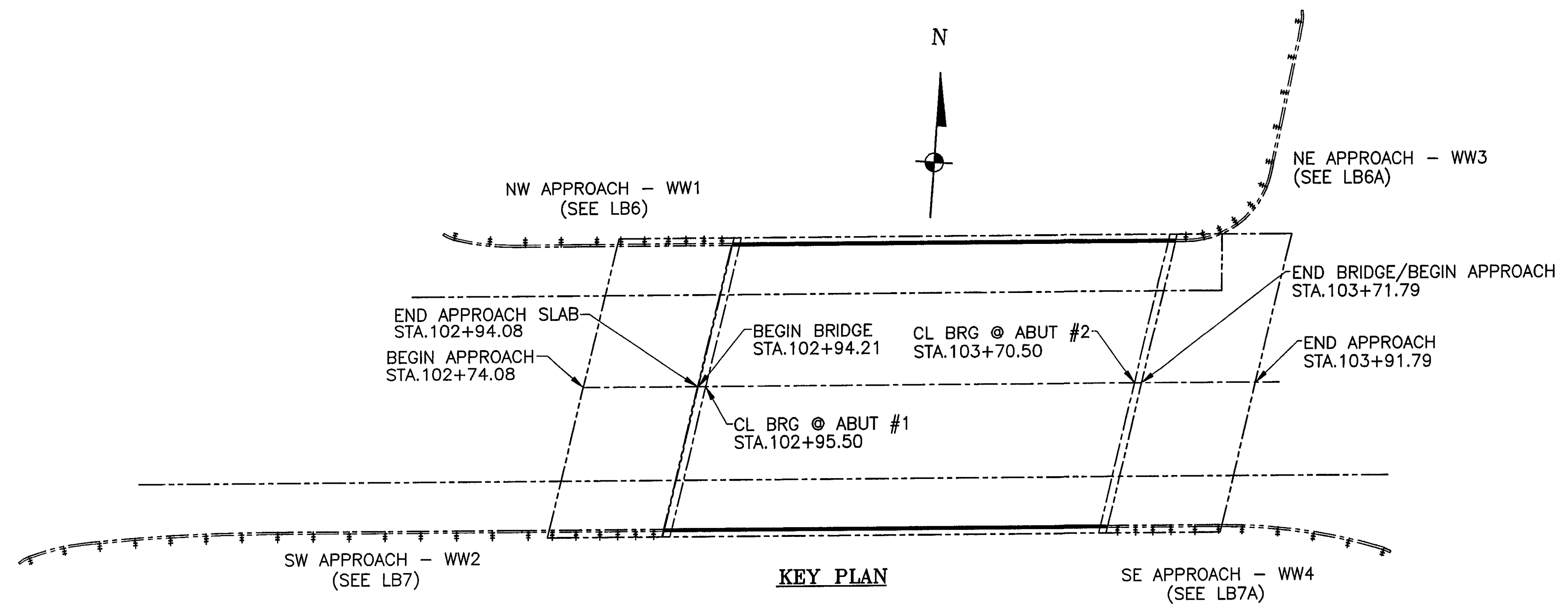
H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE

INSIDE ELEVATION ~ NORTH RAIL



OUTSIDE ELEVATION ~ SOUTH RAIL

- NOTE:**
- THIS CONTRACT IS BASED UPON THE SPACING THE ANCHOR BOLTS TO THE MEASUREMENTS SHOWN ON THE APPROVED SHOP DRAWINGS. THE L.B. FOSTER CO. WILL NOT BE RESPONSIBLE FOR WORK RESPONSIBLE NECESSITATED BY ANY OTHER SETTING AND SPACING.
 - THIS DRAWING IS NOT TO SCALE.
 - FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWING LB1.
 - LENGTH OF RAILING ON THIS SHEET IS 154.17 LF PAY LENGTH.
 - POST SPACING IS MEASURED HORIZONTALLY FF OR RAIL.
 - SPLICE GAP AT SLEEVE = 3/4" TYP U.N.
 - * ACTUAL RAIL LENGTHS. THEY DO NOT INCLUDE GAPS.
 - COMPENSATION FOR VERTICAL CURVE IS NOT NECESSARY.



KEY PLAN

ANODIZED
(SEE NOTES ON LB1)

BRIDGE No 37
PROJECT No. BRF 030-2(17)S
ITEM No 525 23

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

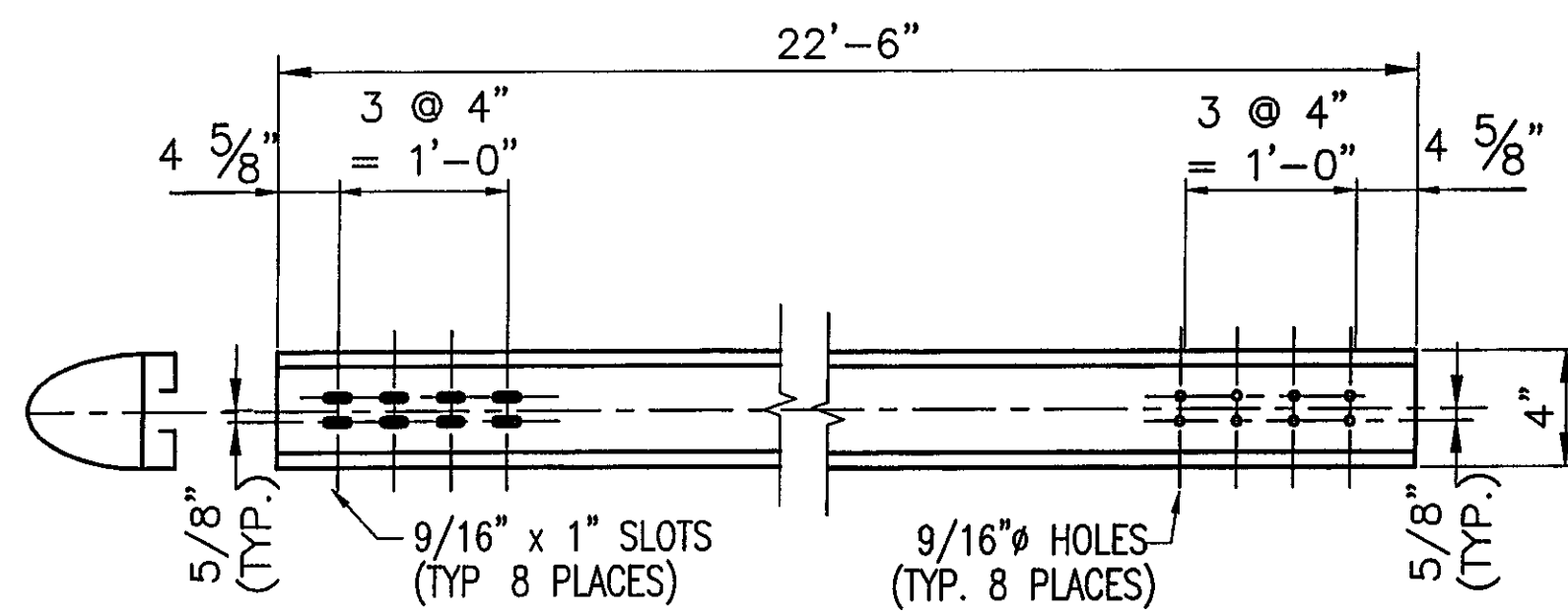
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GHON RIVER
3L ALUM BRIDGE RAILING ~ ELEVATION & KEY PLAN

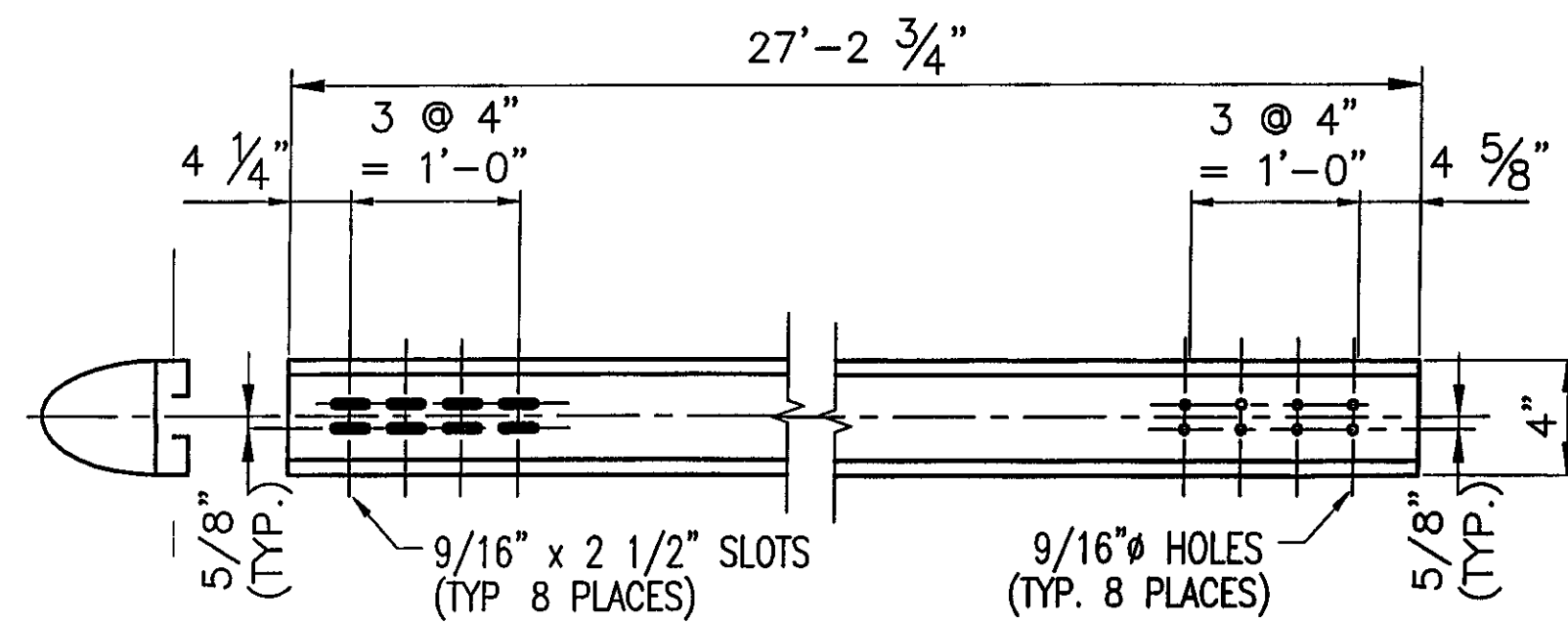
RECEIVED
CHK'D BY CLD OK'D BY GAS
AUG 03 2007
RESUBMIT _____ APPROVED _____
BY KWH DATE 8/13/07

1	REVISED PER APPROVER MARKUP	CMS	07 05 07
REV	DESCRIPTION	BY	DATE

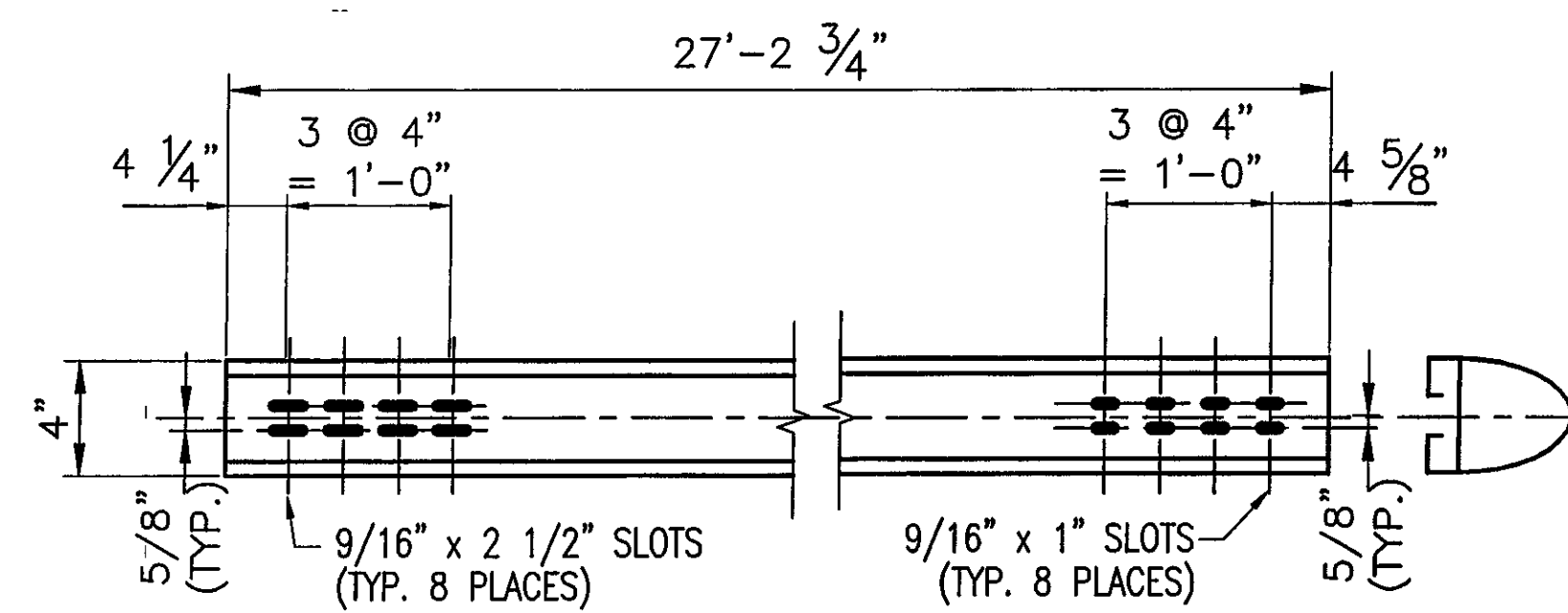
MADE CMS DATE 05/21/07 JOB No AR0395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB2 REV. No ONE



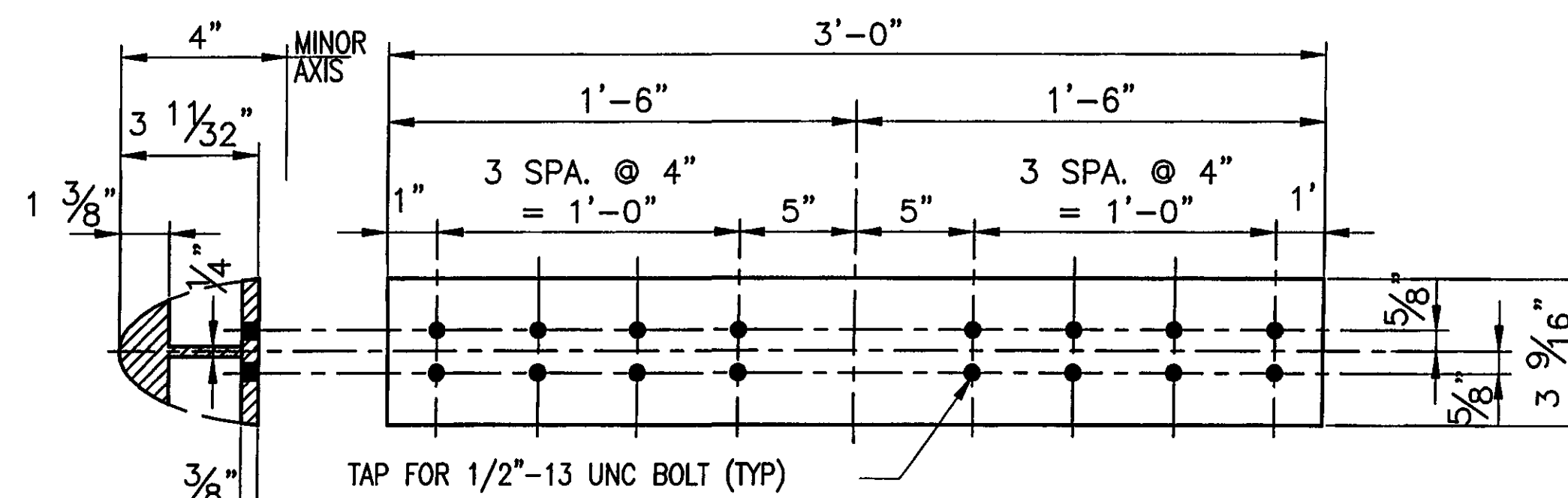
4 REQ'D. ~ RAIL 'BA2'
(BACK ELEVATION VIEW)



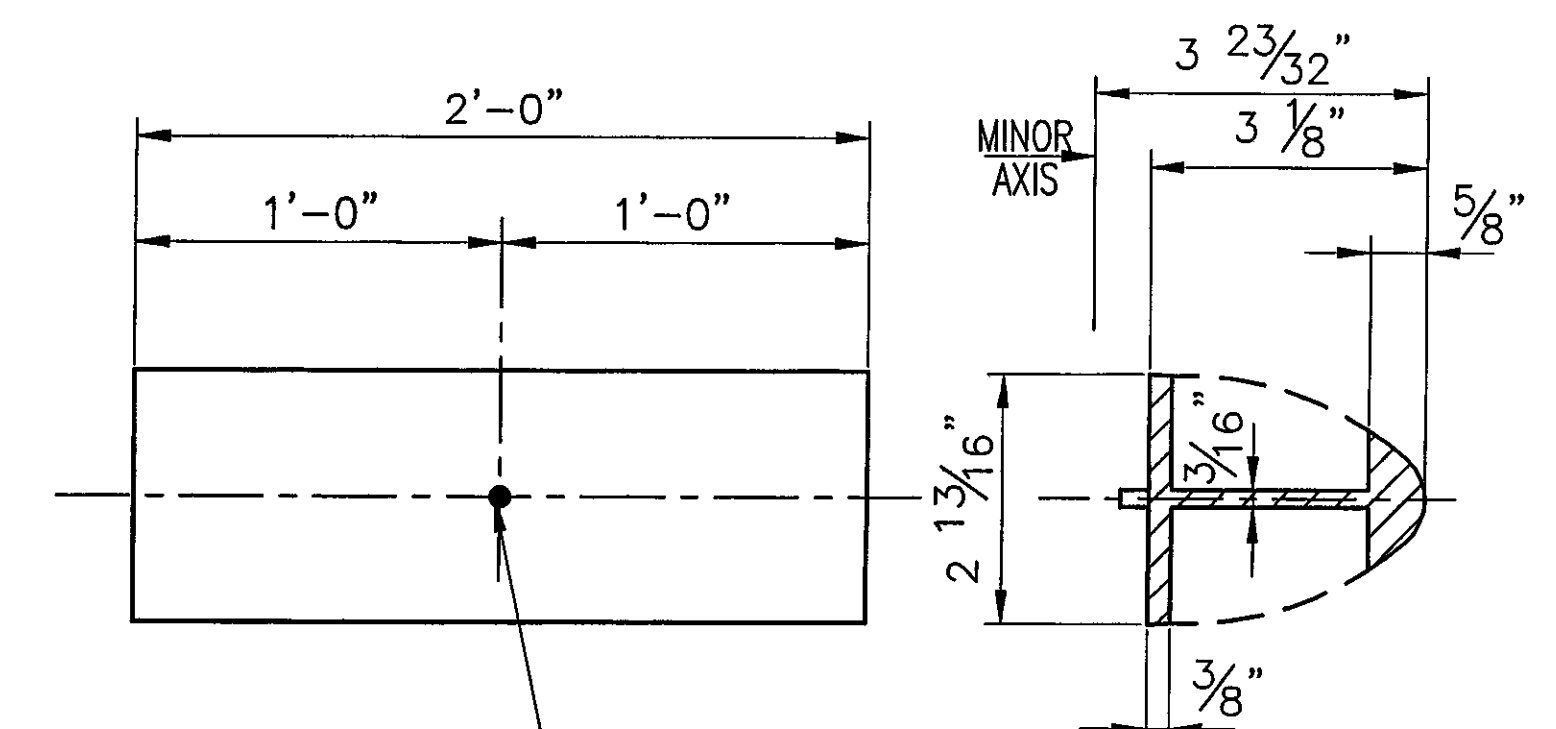
4 REQ'D. ~ RAIL 'BA1'
(BACK ELEVATION VIEW)



4 REQ'D. ~ RAIL 'BA3'
(BACK ELEVATION VIEW)



8 ~ REQ'D SPLICE SLEEVES SS-03-G
(BARRIER RAIL)



4 ~ REQ'D SPLICE SLEEVES SS-12-A
(HANDRAIL)

ANODIZED
(SEE NOTES ON LB1)

RECEIVED
CKD BY CLD OK'D BY GAS
AUG 03 2007
RESUBMIT APPROVED ✓
BY KMH DATE 8/13/07

BRIDGE No. 37
PROJECT No. BRF 030-2(17)S
ITEM No: 525 23

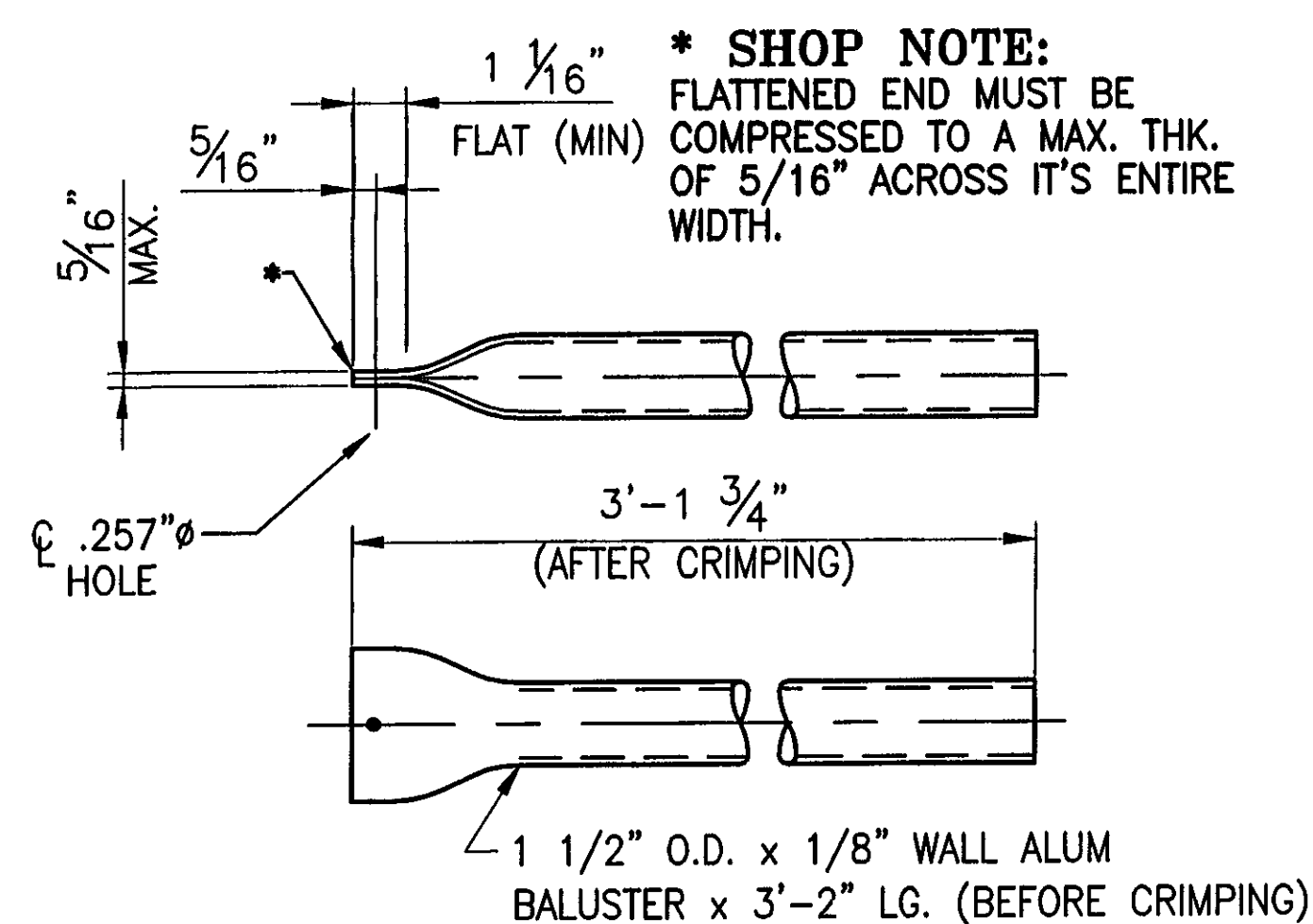
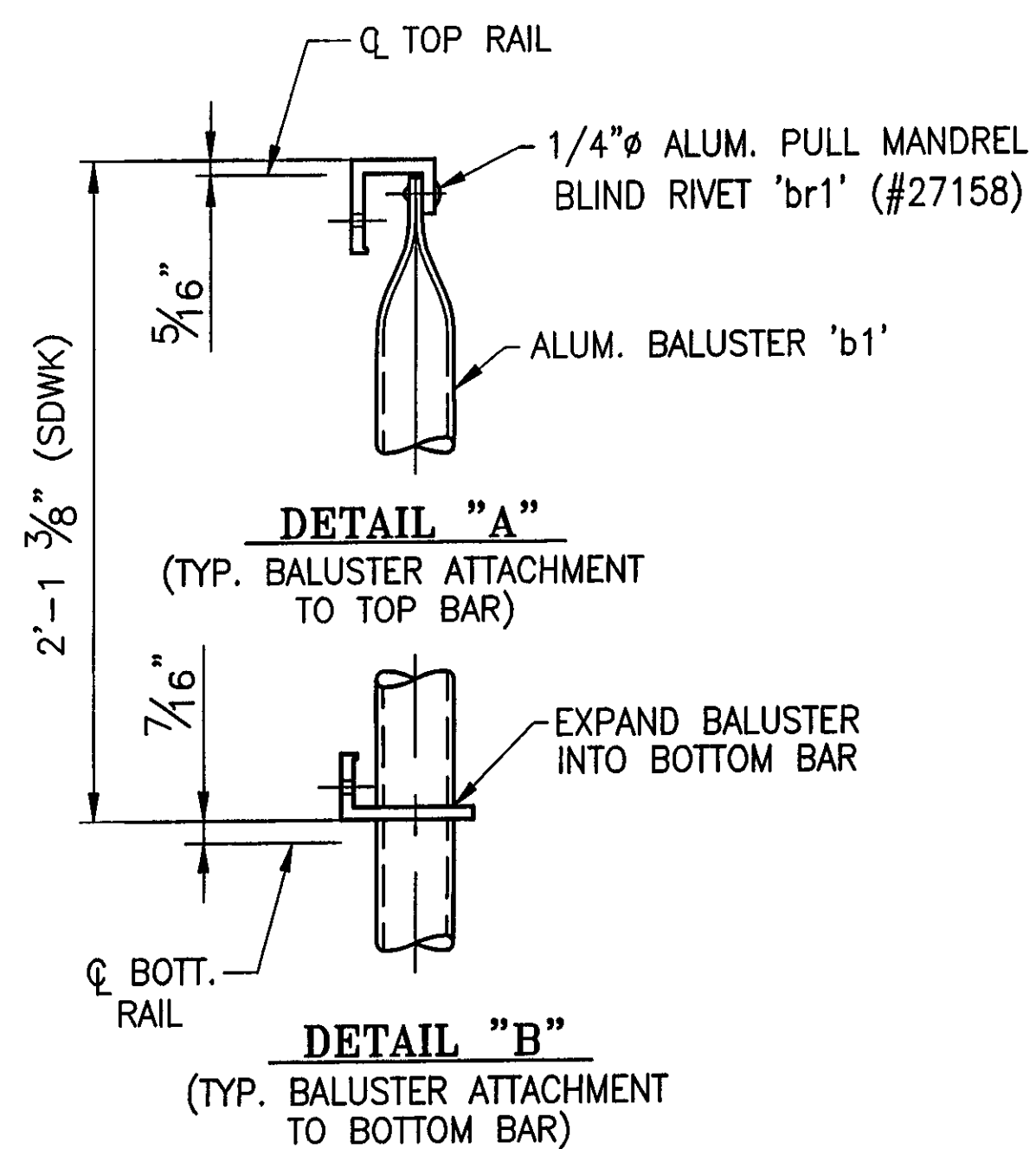
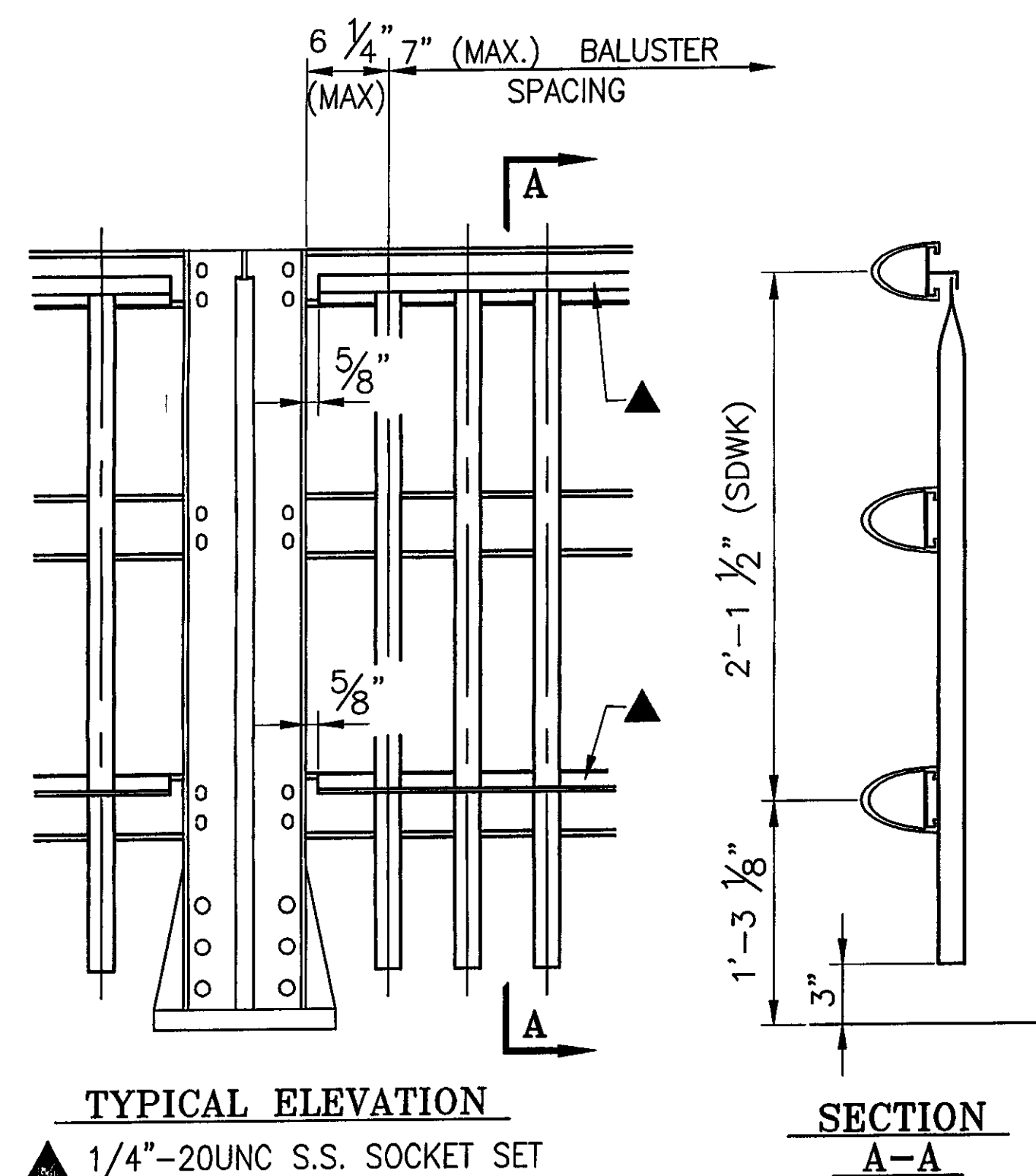
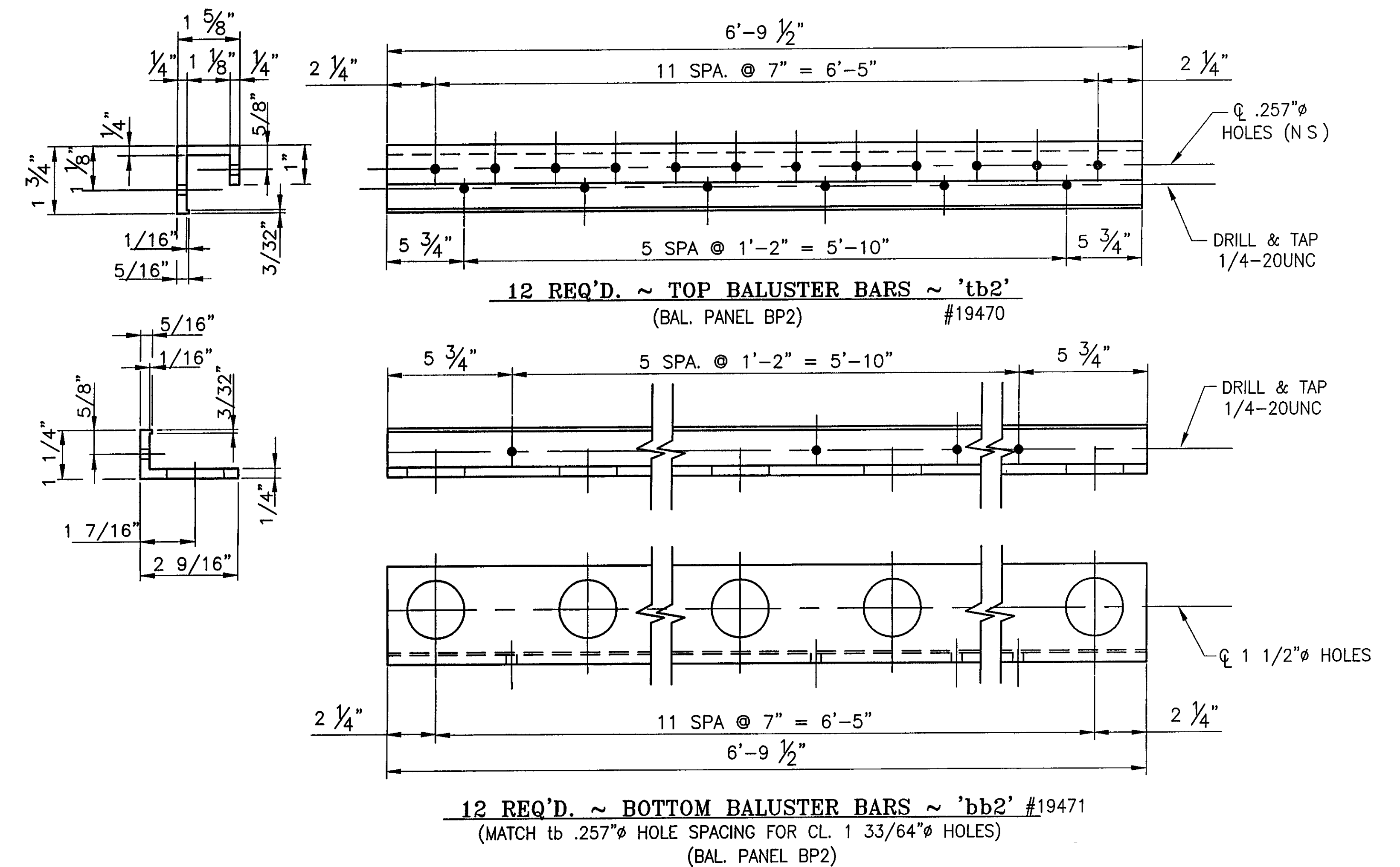
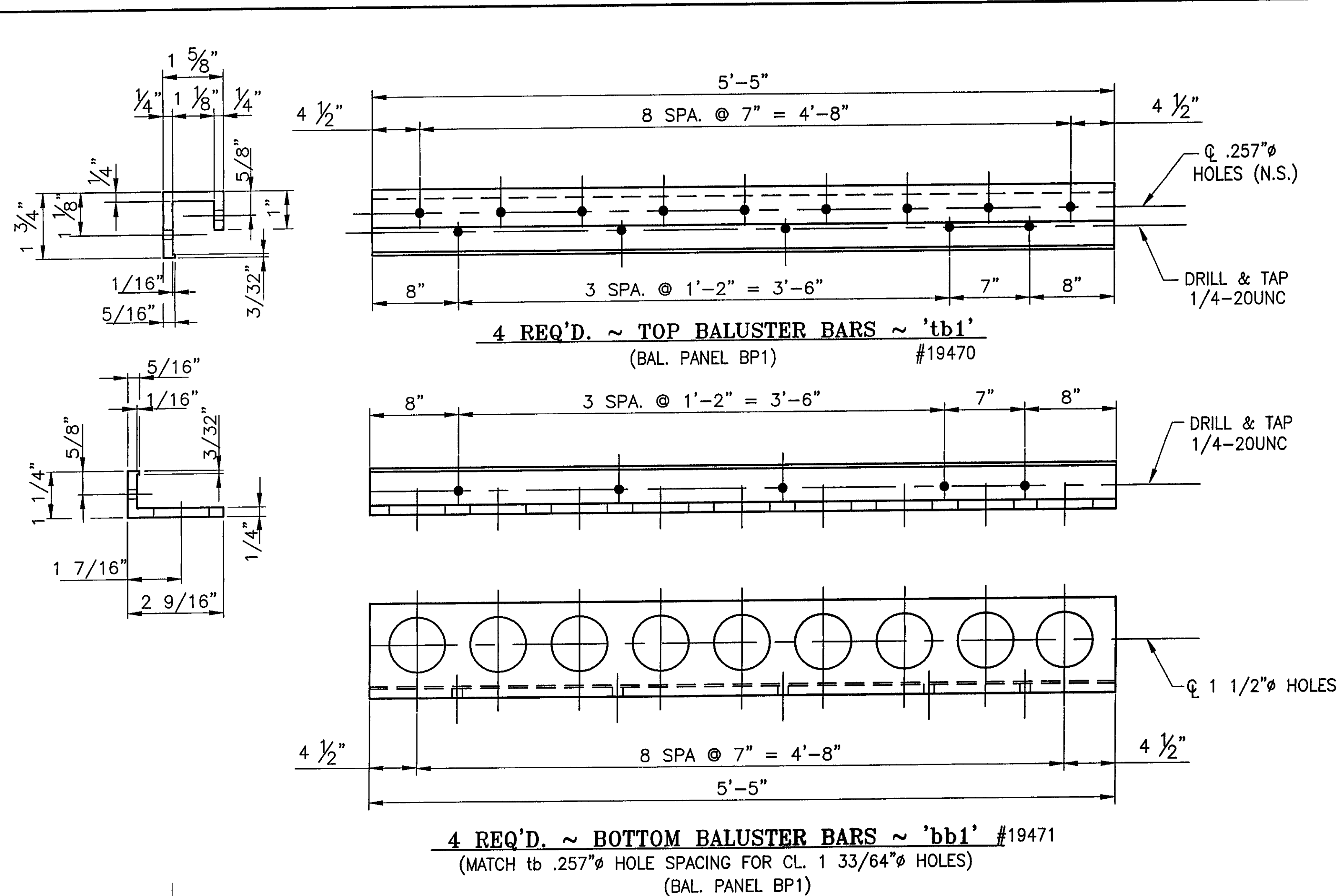
APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

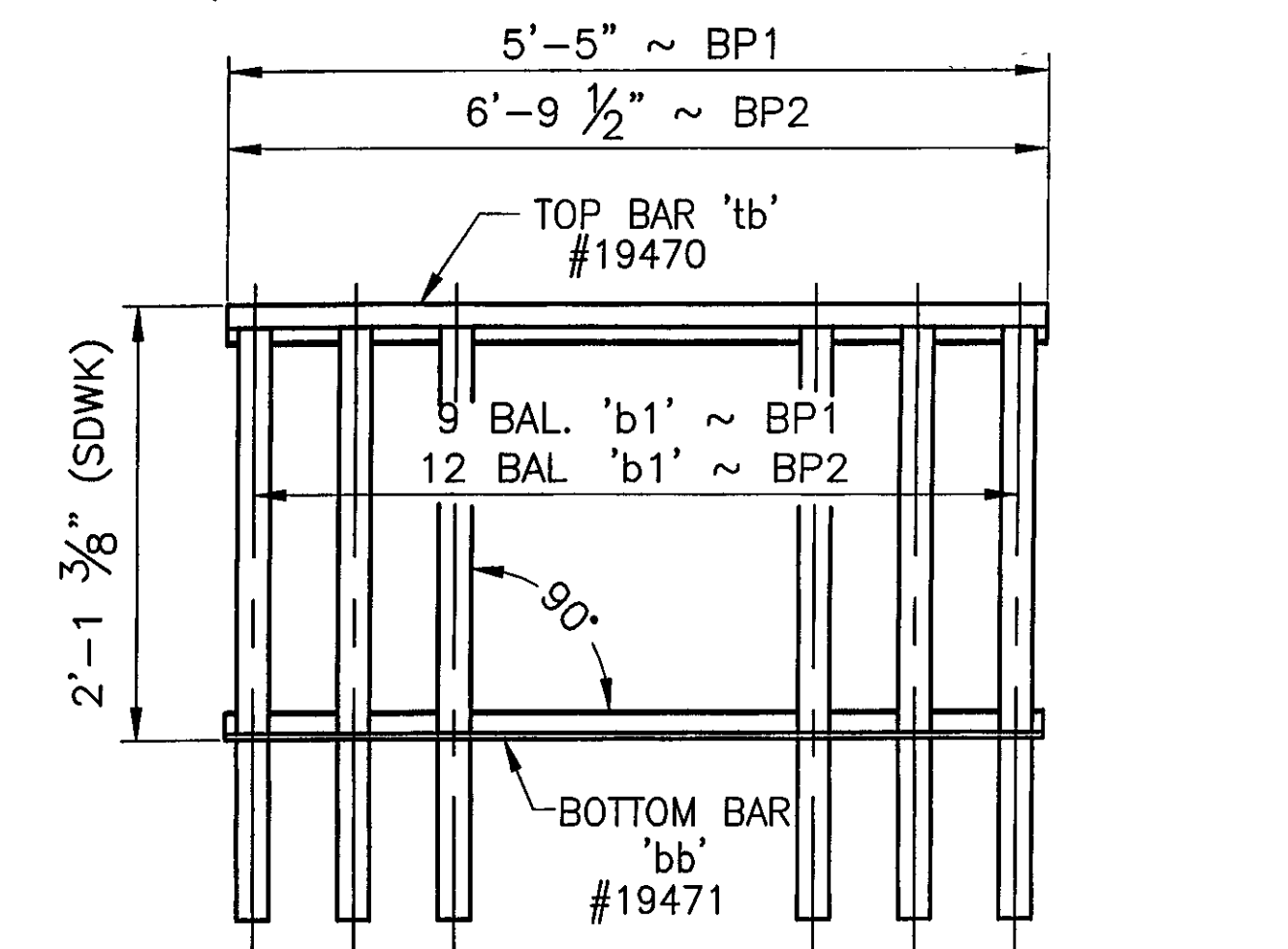
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
3-LINE ALUM BRIDGE RAIL ~ MISC. RAIL DETAILS

MADE CMS DATE 05/21/07 JOB No ARO395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB3 REV. No.

REV	DESCRIPTION	BY	DATE



180 ~ REQ'D BALUSTERS 'b1'
#19451



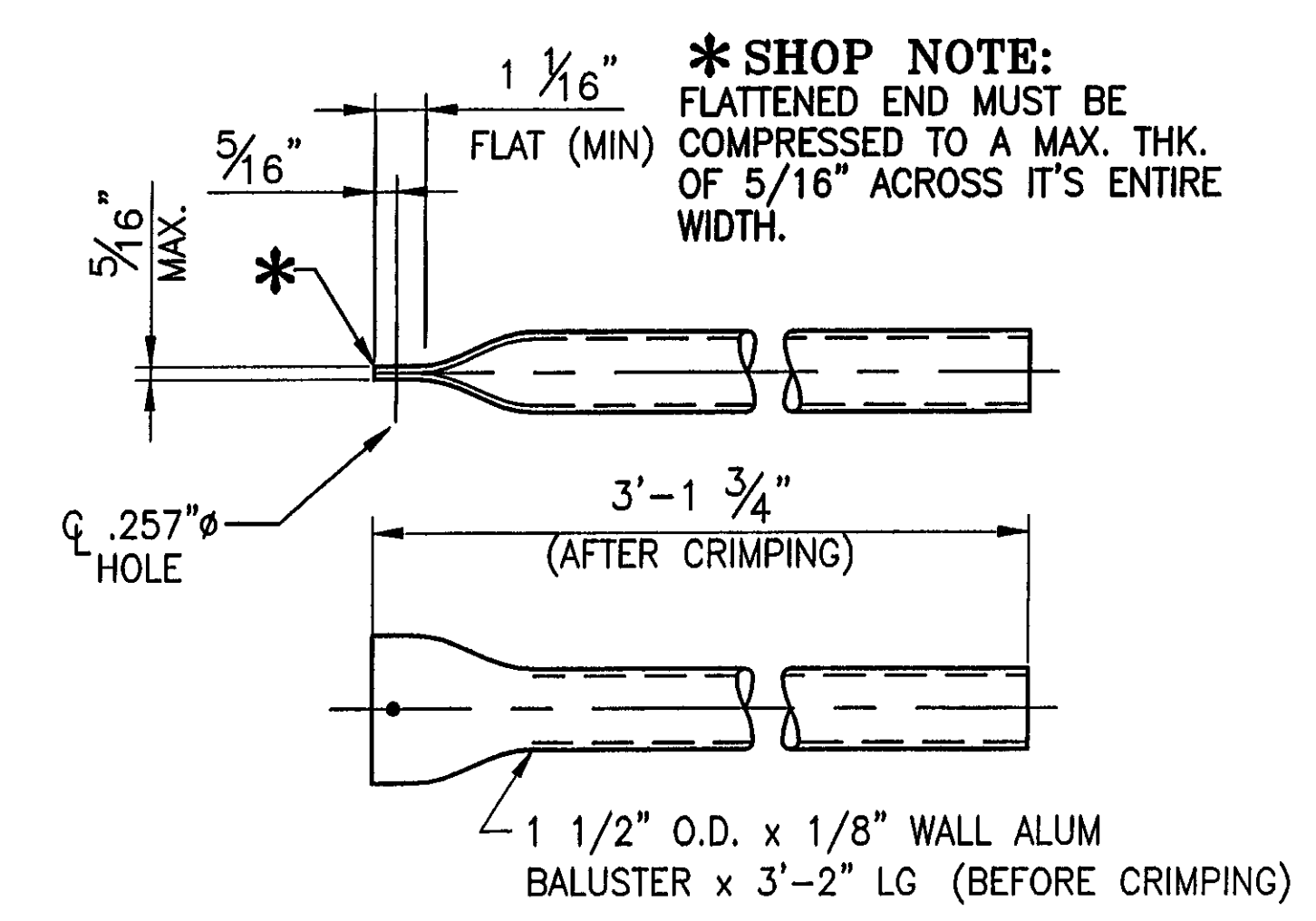
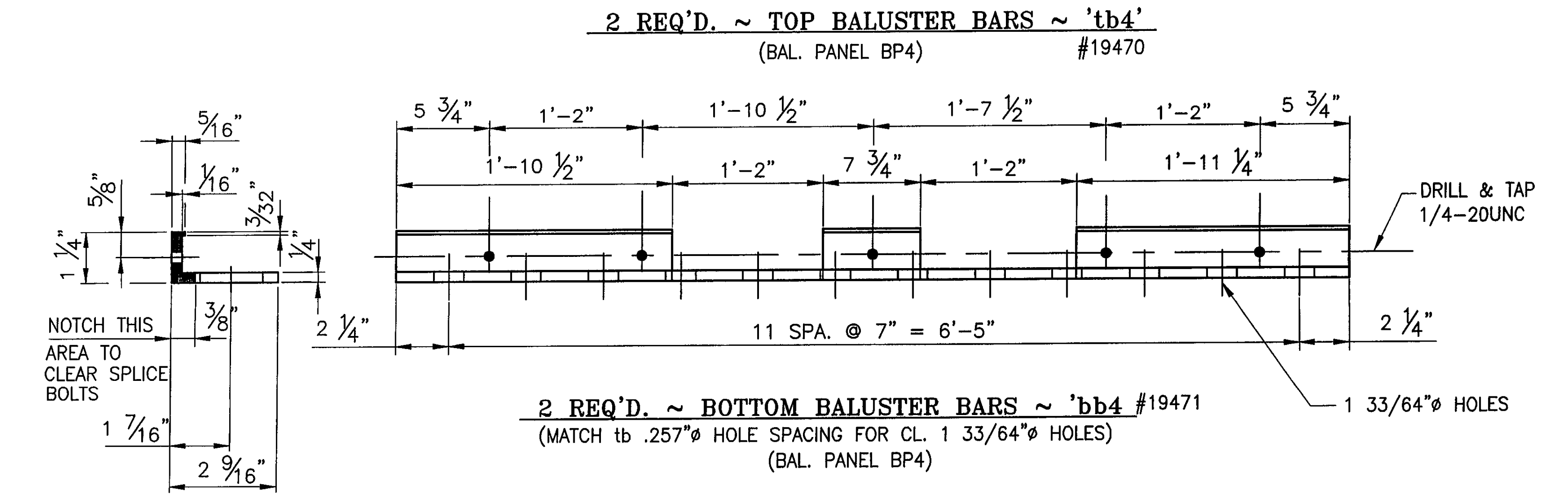
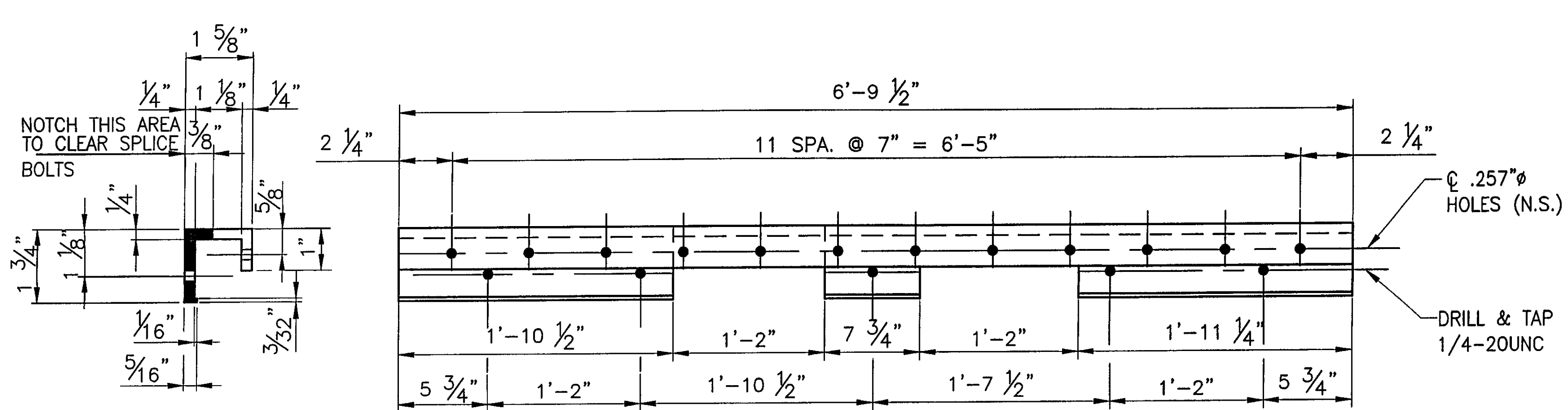
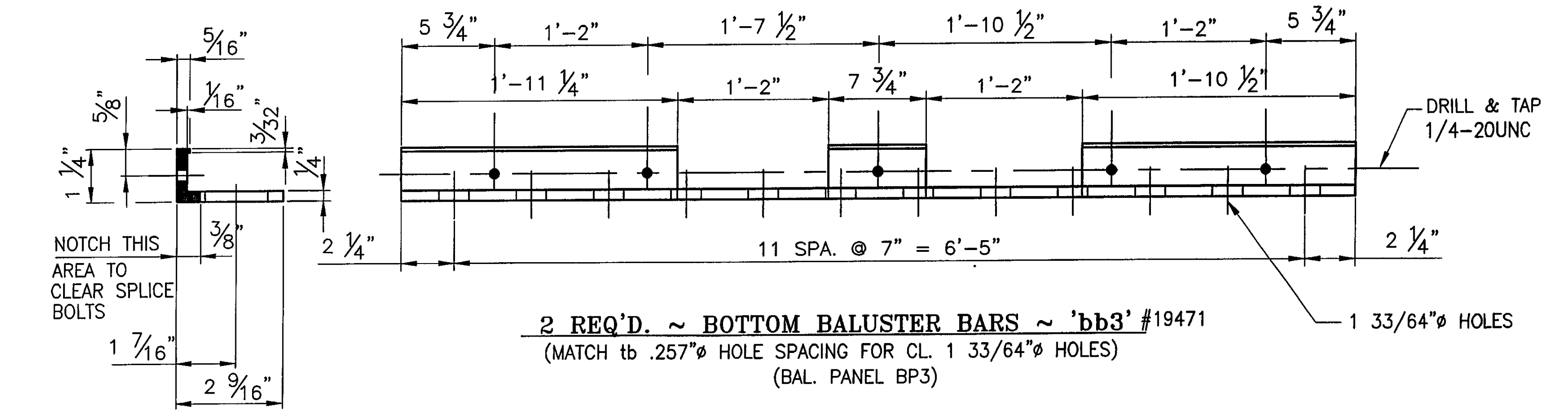
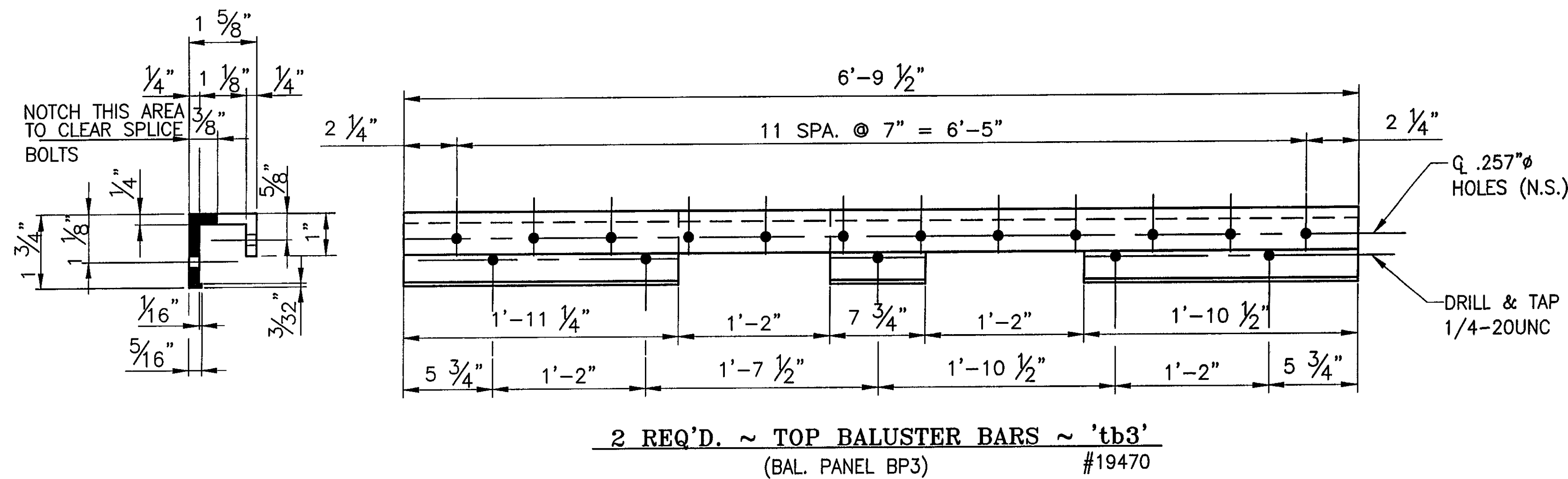
ITEM No 525 23
BRIDGE No 37
PROJECT No BRF 030-2(17)S

RECEIVED
CHKD BY CLD OK'D BY GAS
AUG 03 2007
RESUBMIT APPROVED
BY KMH DATE 8/13/07

APPROVED: _____	REC'D APPROVAL _____
L.B. FOSTER COMPANY 1016 GREENTREE ROAD PITTSBURGH, PENNSYLVANIA 15220	
FOR: F. R. LAFAYETTE, INCORPORATED VERMONT AGENCY OF TRANSPORTATION	
TOWN OF JOHNSON, COUNTY OF LAMOILLE BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIRON RIVER 3-LINE ALUM BRIDGE RAIL ~ BALUSTER PANEL DETAILS	
MADE CMS DATE 05/18/07 JOB No ARO395 CUST No _____	CHECK BLJ DATE 05/31/07 DRAWING LB4 REV. No _____

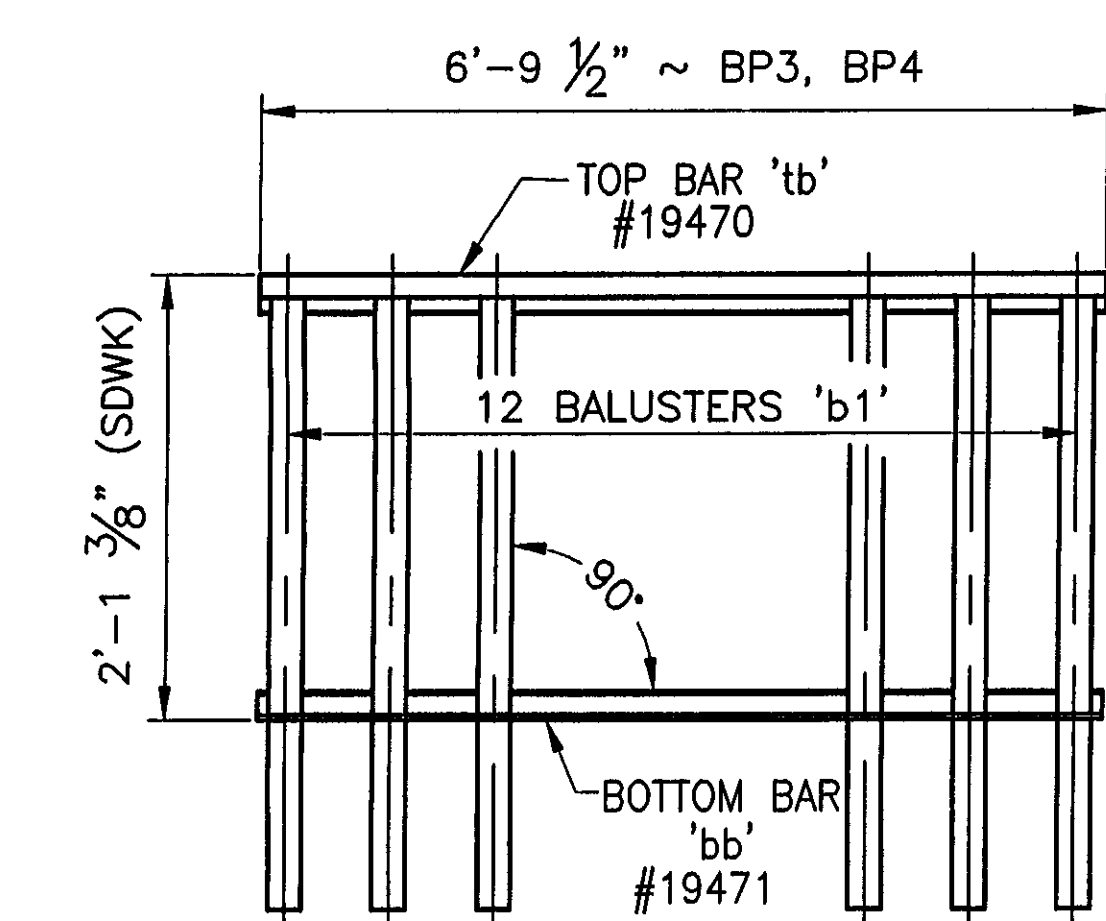
REV	DESCRIPTION	BY	DATE

ANODIZED
(SEE NOTES ON LB1)

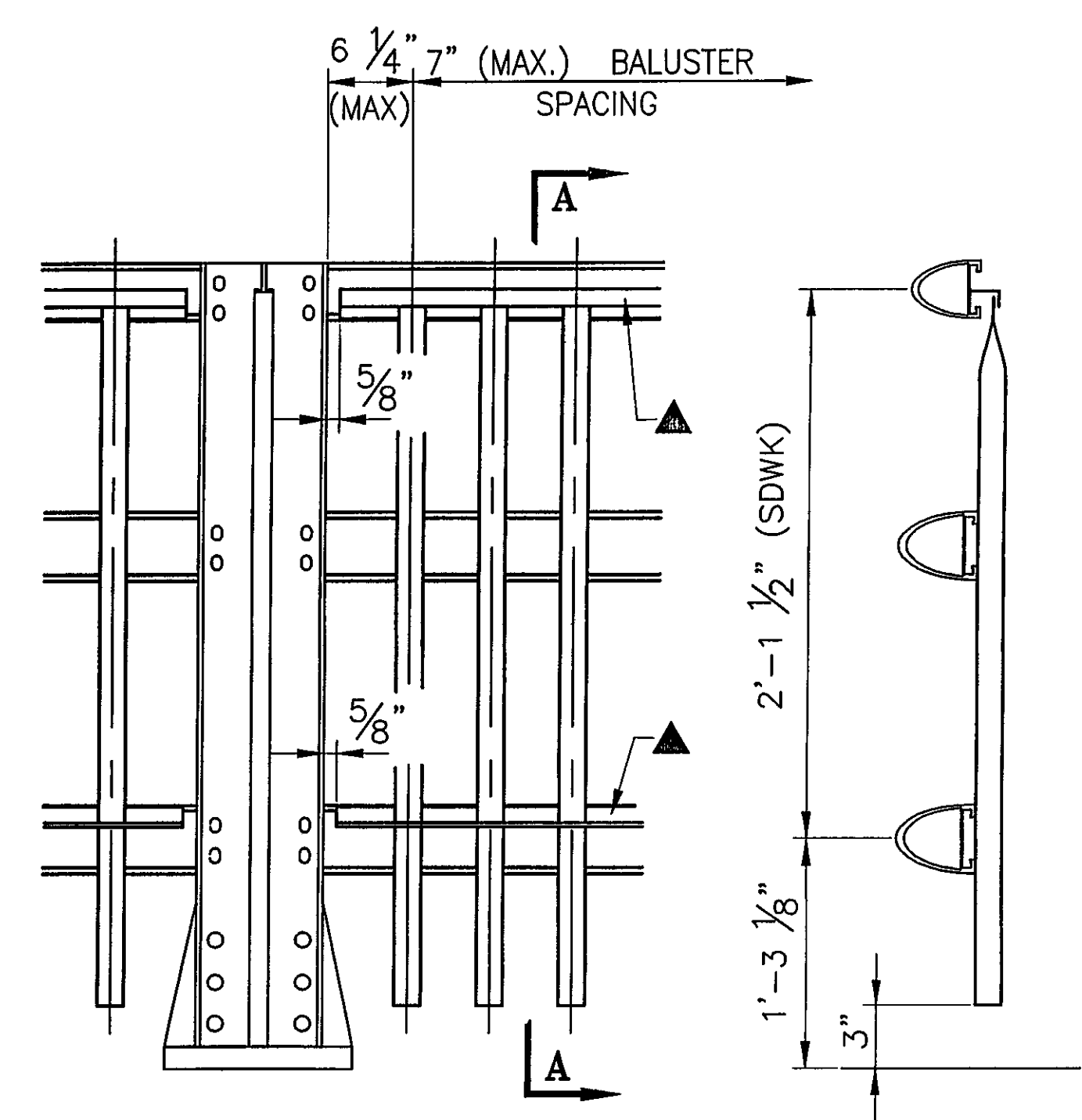


48 ~ REQ'D BALUSTERS 'b1' #19451

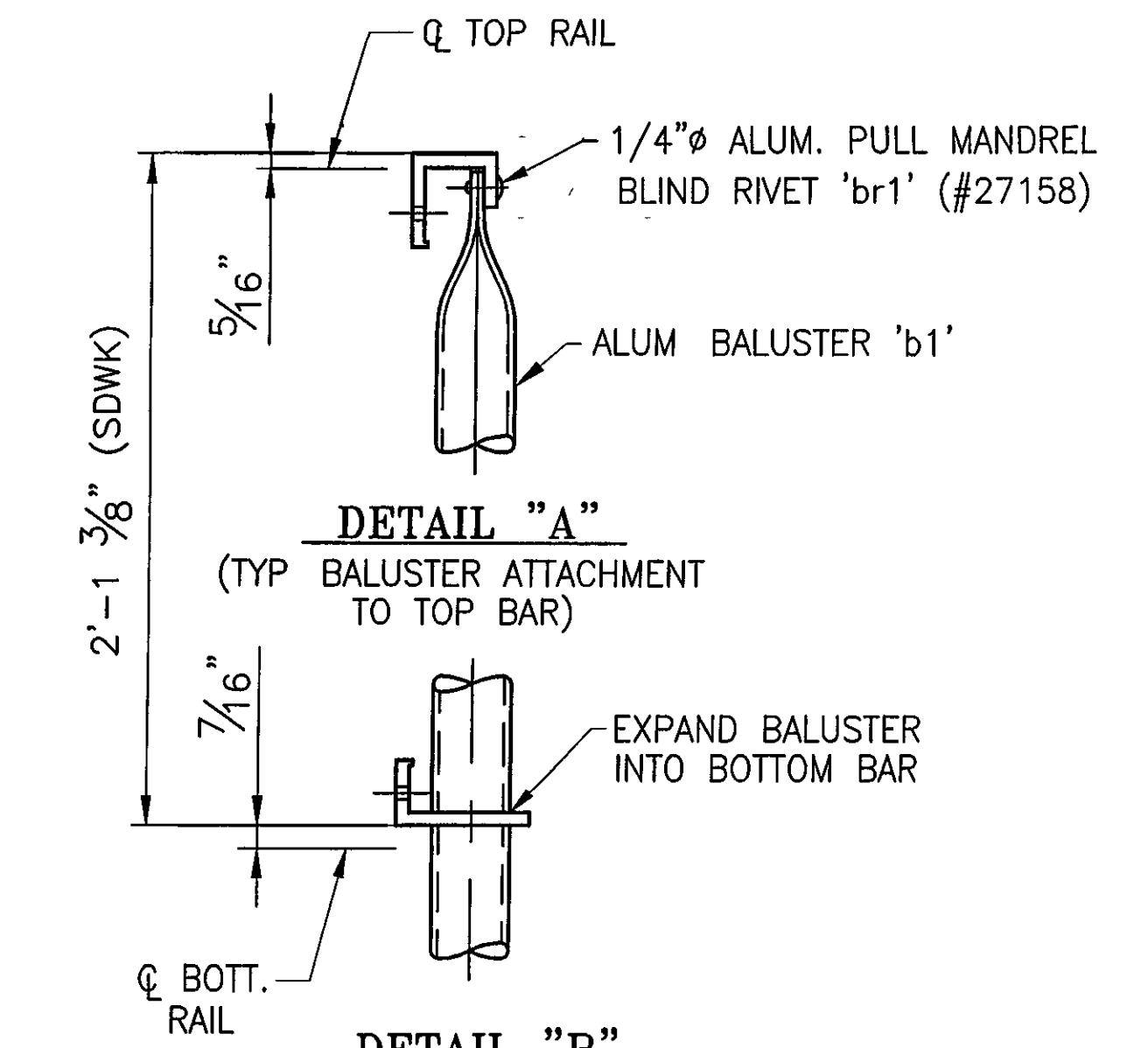
ANODIZED
(SEE NOTES ON LB1)



2 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP3'
2 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP4'



TYPICAL ELEVATION
▲ 1/4" - 20 UNC S.S. SOCKET SET SCREW x 1/2" - 'SS1' (#22079) EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE

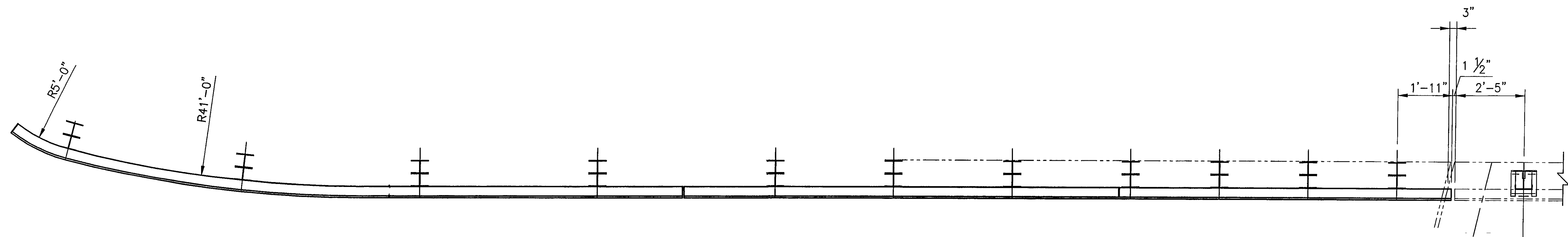


DETAIL "A"
(TYP BALUSTER ATTACHMENT TO TOP BAR)
DETAIL "B"
(TYP BALUSTER ATTACHMENT TO BOTTOM BAR)

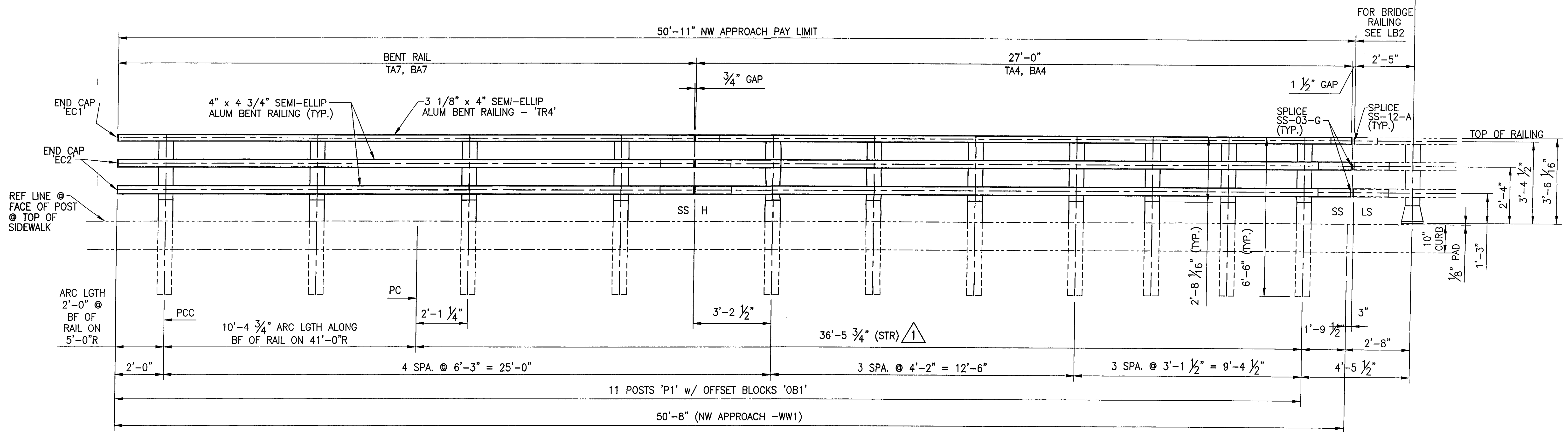
RECEIVED
CHKD BY CLD CHKD BY GAS
AUG 03 2007
RESUBMIT APPROVED BY KMH DATE 8/13/07

APPROVED:	REC'D APPROVAL
	DRAWING
L.B. FOSTER COMPANY 1016 GREENTREE ROAD PITTSBURGH, PENNSYLVANIA 15220	
FOR: F. R. LAFAYETTE, INCORPORATED VERMONT AGENCY OF TRANSPORTATION TOWN OF JOHNSON, COUNTY OF LAMOILLE BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIRON RIVER 3-LINE ALUM BRIDGE RAIL ~ BALUSTER PANEL DETAILS @ SPLICES	
MADE CMS DATE 05/22/07 JOB No ARO395 CUST No	CHECK BLJ DATE 05/31/07 DRAWING LB5 REV. No

REV	DESCRIPTION	BY	DATE



PLAN VIEW



INSIDE ELEVATION OF NW APPROACH RAIL

- NOTE:
- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
 - LENGTH OF APPROACH RAILING ON THIS SHEET IS 50.91 LF PAY LENGTH.
 - FOR KEY PLAN SEE LB6A

H = HOLE SIDE
 SS = SHORT SLOTTED SIDE
 LS = LONG SLOTTED SIDE

RECEIVED
 CND BY CLD OK'D BY GAS
 AUG 03 2007
 RESUBMIT APPROVED
 BY KMH DATE 8/13/07

BRIDGE No. 37
 PROJECT No. BR 030-2(17)S
 ITEM No. 621.74

APPROVED: _____
 REC'D APPROVAL _____
 DRAWING _____

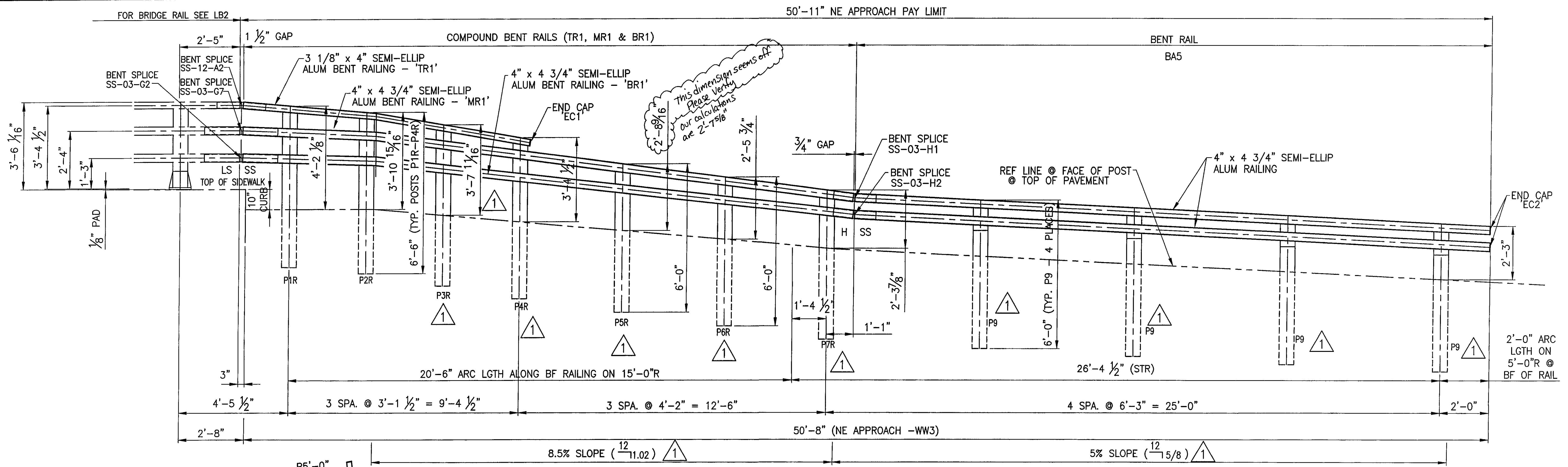
L.B. FOSTER COMPANY
 1016 GREENTREE ROAD
 PITTSBURGH, PENNSYLVANIA 15220

FOR: E. R. LAFAYETTE, INCORPORATED
 VERMONT AGENCY OF TRANSPORTATION
 TOWN OF JOHNSON, COUNTY OF LAMOILLE
 BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GHON RIVER
 3L ALUM BRIDGE APPROACH RAILING ~ ELEVATION VIEWS

MADE CMS DATE 05/23/07 JOB No. ARO395 CUST No. _____
 CHECK. BLJ DATE 05/31/07 DRAWING LB6 REV. No. ONE

REV	DESCRIPTION	BY	DATE
1	REVISED PER APPROVAL MARKUP	CMS	07 05 07

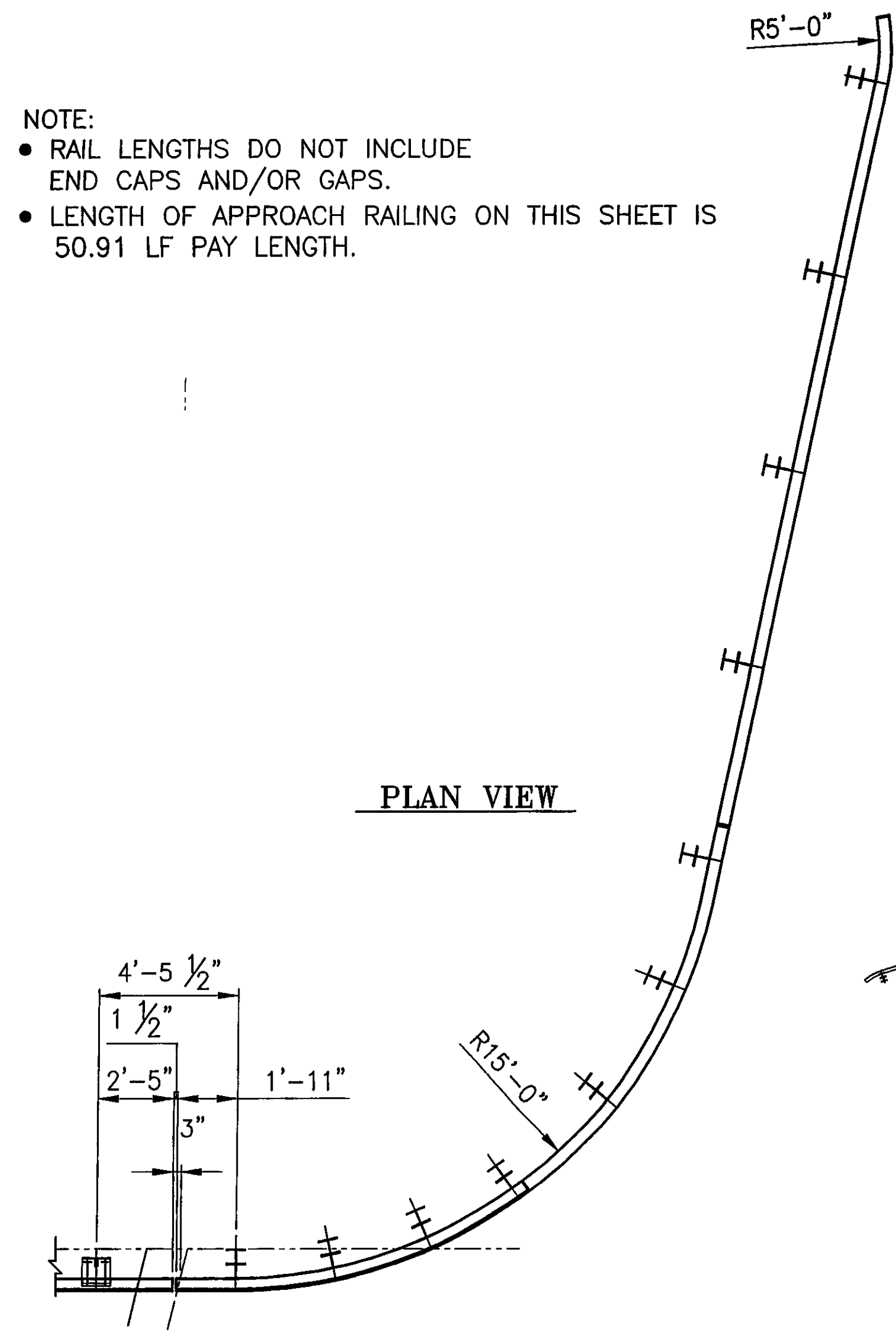
ANODIZED
 (SEE NOTES ON LB1)



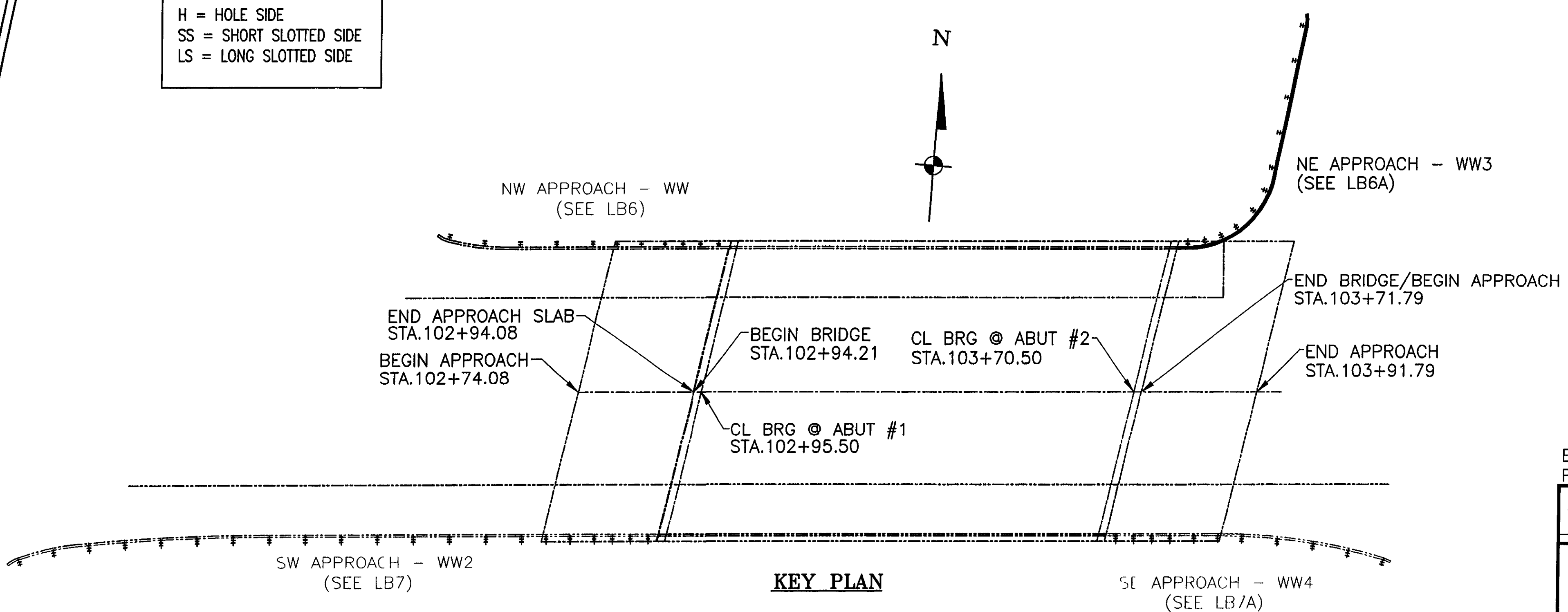
INSIDE ELEVATION OF NE APPROACH RAIL

NOTE:
 • RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
 • LENGTH OF APPROACH RAILING ON THIS SHEET IS 50.91 LF PAY LENGTH.

H = HOLE SIDE
 SS = SHORT SLOTTED SIDE
 LS = LONG SLOTTED SIDE



PLAN VIEW



KEY PLAN

ANODIZED
 (SEE NOTES ON LB1)

BRIDGE No. 37
 PROJECT No. BRF 030-2(17)S
 ITEM No: 621.74

APPROVED: _____ REC'D APPROVAL _____
 DRAWING _____

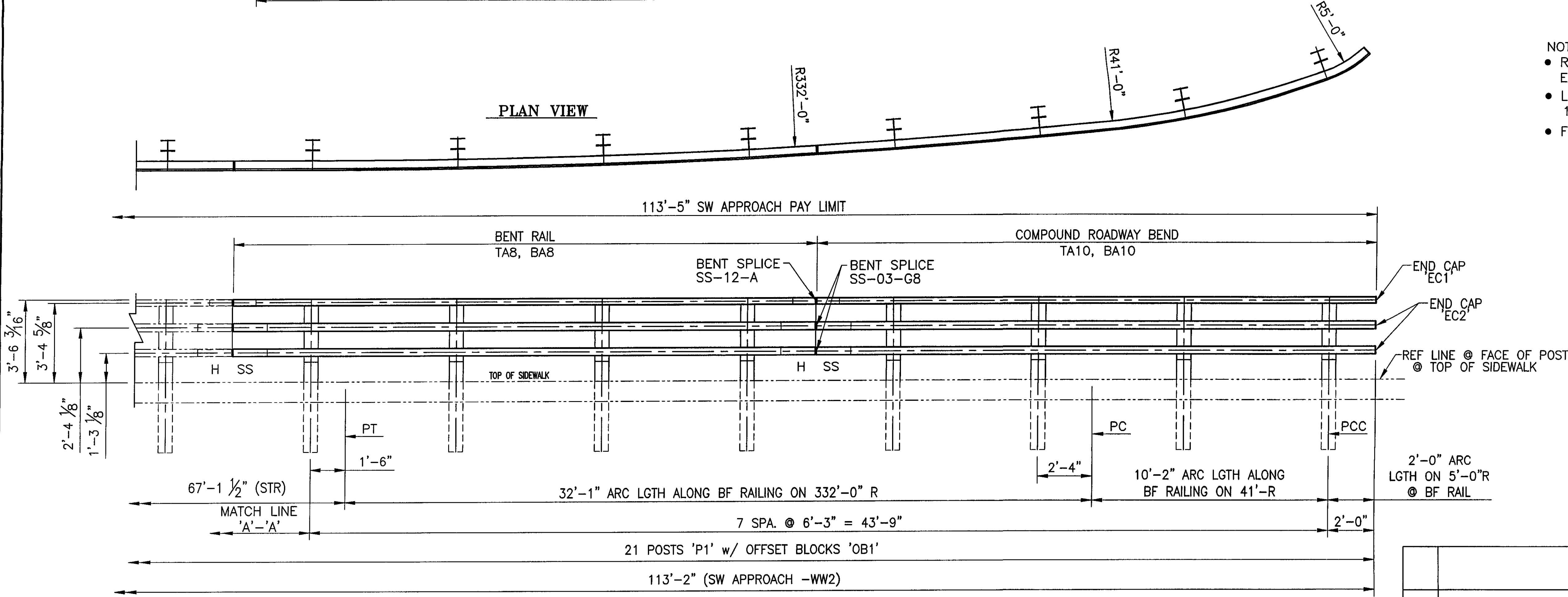
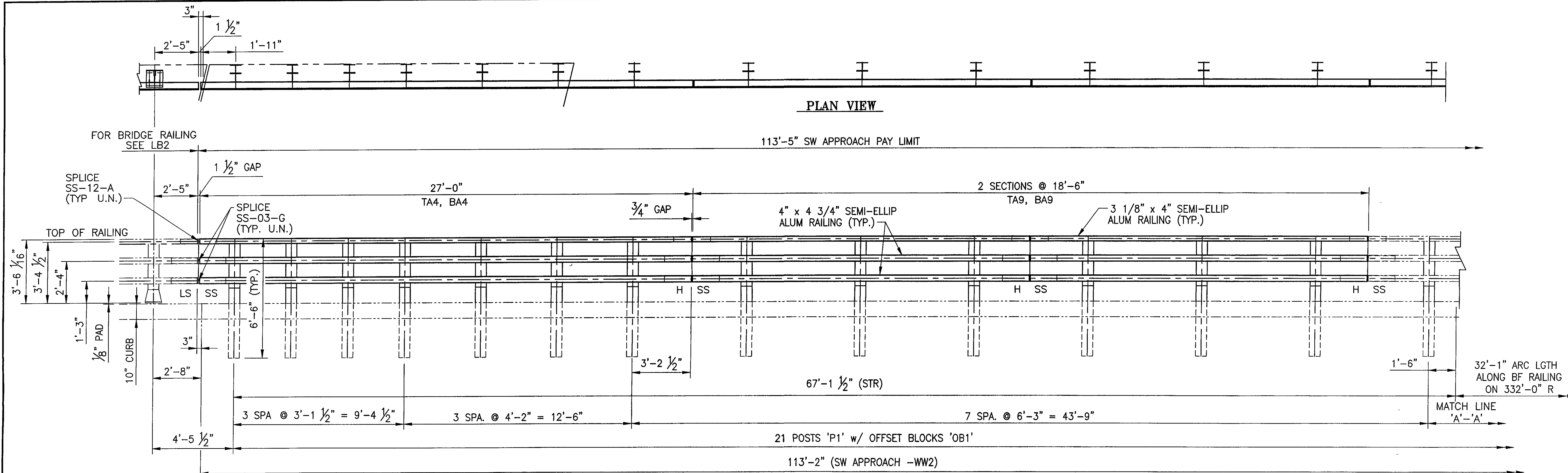
L.B. FOSTER COMPANY
 1016 GREENTREE ROAD
 PITTSBURGH, PENNSYLVANIA 15220

FOR: E. R. LAFAYETTE, INCORPORATED
 VERMONT AGENCY OF TRANSPORTATION
 TOWN OF JOHNSON, COUNTY OF LAMOILLE
 BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GHON RIVER
 3L ALUM BRIDGE APPROACH RAILING ~ ELEVATION VIEWS

RECEIVED
 CKD BY CLD OKD BY GAS
 AUG 03 2007
 RESUBMIT APPROVED AS NOTED
 BY KMH DATE 8/13/07

REV	DESCRIPTION	BY	DATE
1	REVISED PER APPROVAL MARKUP	CMS	07/24/07

MADE CMS DATE 05/23/07 JOB No ARO395 CUST No
 CHECK BLJ DATE 05/31/07 DRAWING LB6A REV. No. ONE



INSIDE ELEVATION OF SW APPROACH RAIL

- NOTE:
- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS
 - LENGTH OF APPROACH RAILING ON THIS SHEET IS 113.42 LF PAY LENGTH.
 - FOR KEY PLAN SEE LB7A

H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE

RECEIVED
OK'D BY CLD OK'D BY GAS
AUG 03 2007
RESUBMIT APPROVED
BY KMH DATE 8/13/07

ANODIZED
(SEE NOTES ON LB1)

BRIDGE No. 37
PROJECT No. BRF 030-2(17)S
ITEM No: 621.74

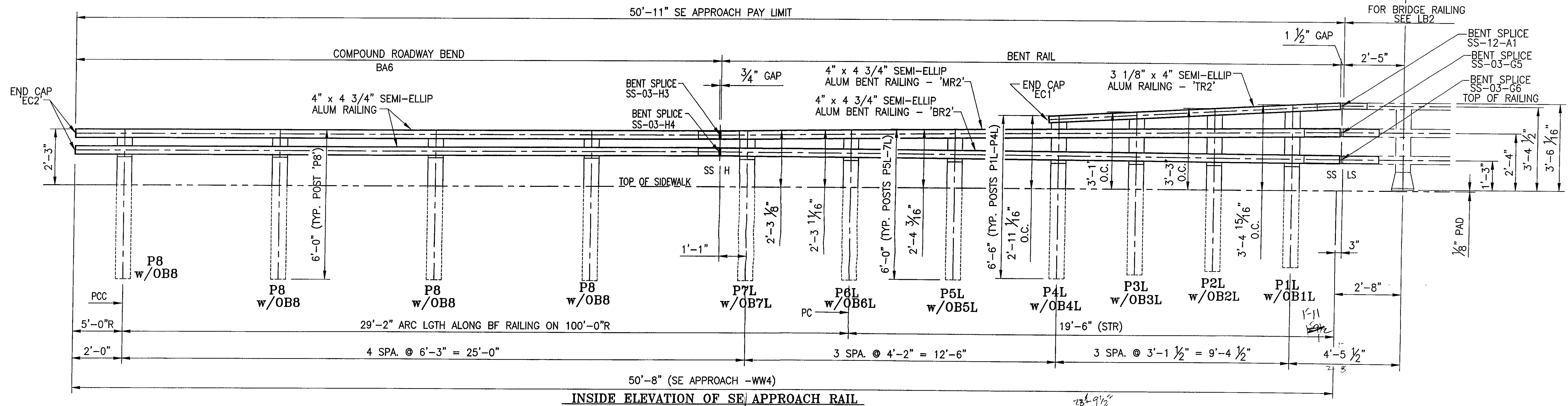
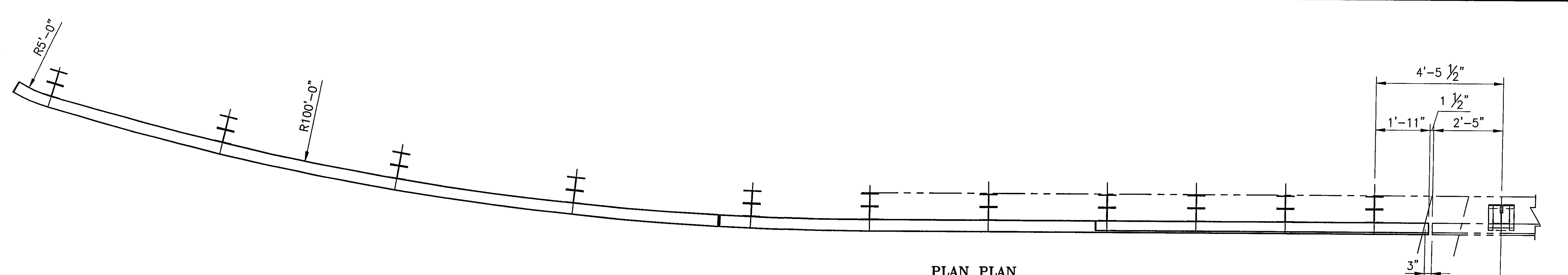
APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

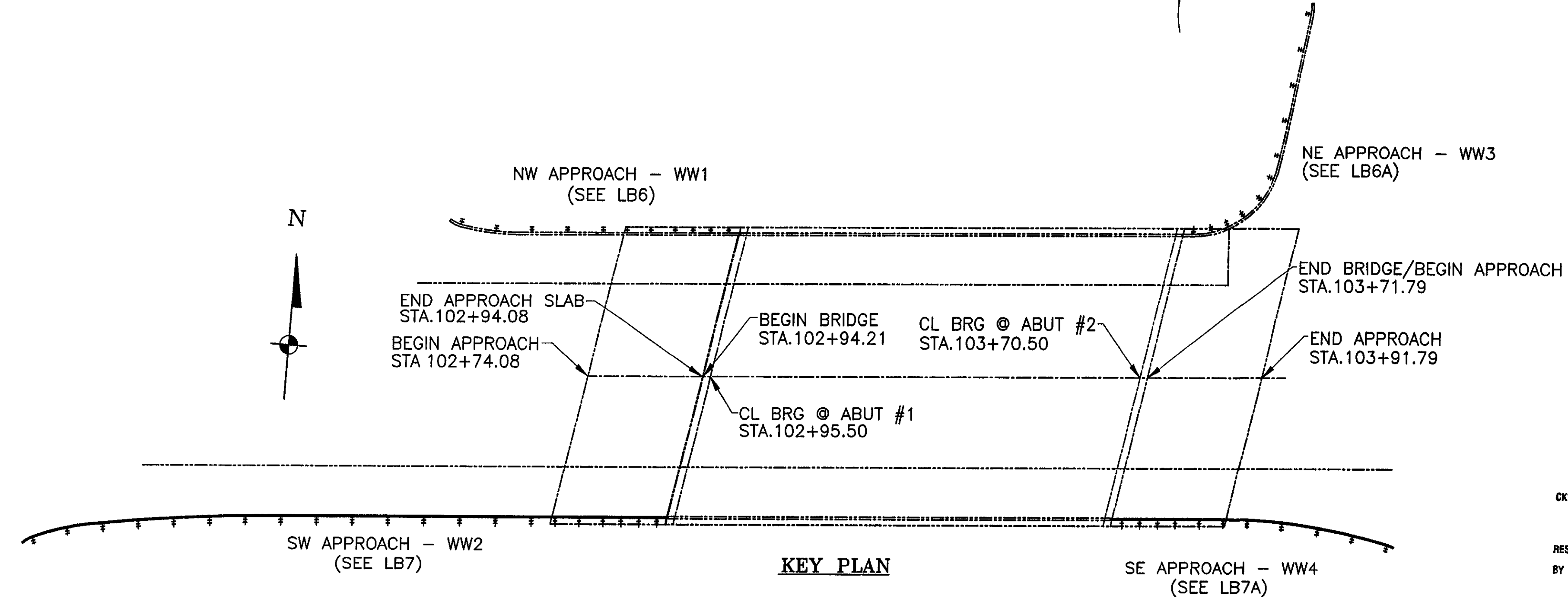
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GHON RIVER
3L ALUM BRIDGE APPROACH RAILING ~ ELEVATION VIEWS

MADE CMS DATE 05/23/07 JOB No ARO395 CUST No _____
CHECK BLJ DATE 05/31/07 DRAWING LB7 REV. No. _____

REV	DESCRIPTION	BY	DATE



NOTE:
 • RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
 • LENGTH OF APPROACH RAILING ON THIS SHEET IS 50.91 LF PAY LENGTH.



ANODIZED
 (SEE NOTES ON LB1)

RECEIVED
 OK'D BY CLD OK'D BY GAS
 AUG 03 2007
 RESUBMIT APPROVED
 BY KMH DATE 8/13/07

REV	DESCRIPTION	BY	DATE

BRIDGE No 37
 PROJECT No BRF 030-2(17)S
 ITEM No: 621.74

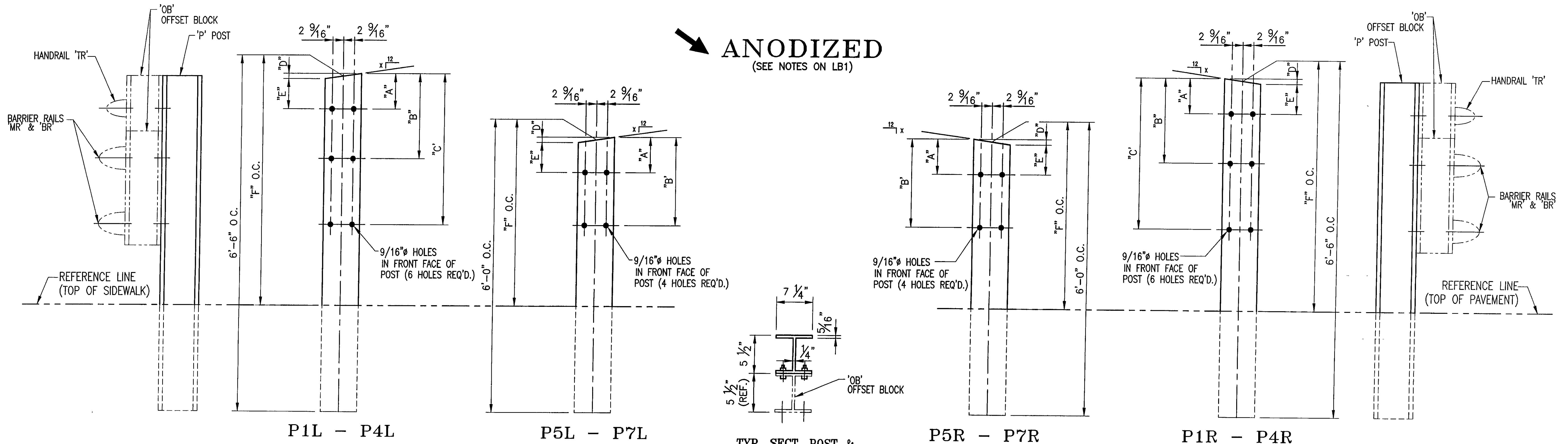
APPROVED: _____ REC'D APPROVAL _____
 DRAWING _____

L.B. FOSTER COMPANY
 1016 GREENTREE ROAD
 PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
 VERMONT AGENCY OF TRANSPORTATION
 TOWN OF JOHNSON, COUNTY OF LAMOILLE
 BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
 3L ALUM BRIDGE APPROACH RAILING ~ ELEVATION VIEWS

MADE CMS DATE 05/23/07 JOB No ARO395 CUST No
 CHECK BLJ DATE 05/31/07 DRAWING LB7A REV. No.

ANODIZED
(SEE NOTES ON LB1)



TYP. SECT. POST &
OFFSET BLOCK

**POST DETAIL CHART FOR BRIDGE 37 SE APPROACH
SIDEWALK CONDITION (WW4)**

POST No.	QTY.	OFFSET BLOCK MTG. DIMENSIONS						BEV
		A	B	C	D	E	F (O.C.)	
P1L	1	1 3/4"	1'-1 1/4"	2'-1 7/8"	3/8"	1 3/8"	3'-4 15/16"	5/8
P2L	1	1 3/4"	11 11/16"	1'-11 11/16"	3/8"	1 3/8"	3'-3"	5/8
P3L	1	1 3/4"	10 1/8"	1'-9 7/16"	3/8"	1 3/8"	3'-1"	5/8
P4L	1	1 3/4"	8 9/16"	1'-7 1/4"	3/8"	1 3/8"	2'-11 1/16"	5/8
P5L	1	2 1/16"	11 15/16"		1/16"	1 15/16"	2'-4 3/16"	1/8
P6L	1	2 1/16"	11 1/16"		1/16"	1 15/16"	2'-3 11/16"	1/8
P7L	1	2 1/16"	10 1/4"		1/16"	1 15/16"	2'-3 1/8"	1/8

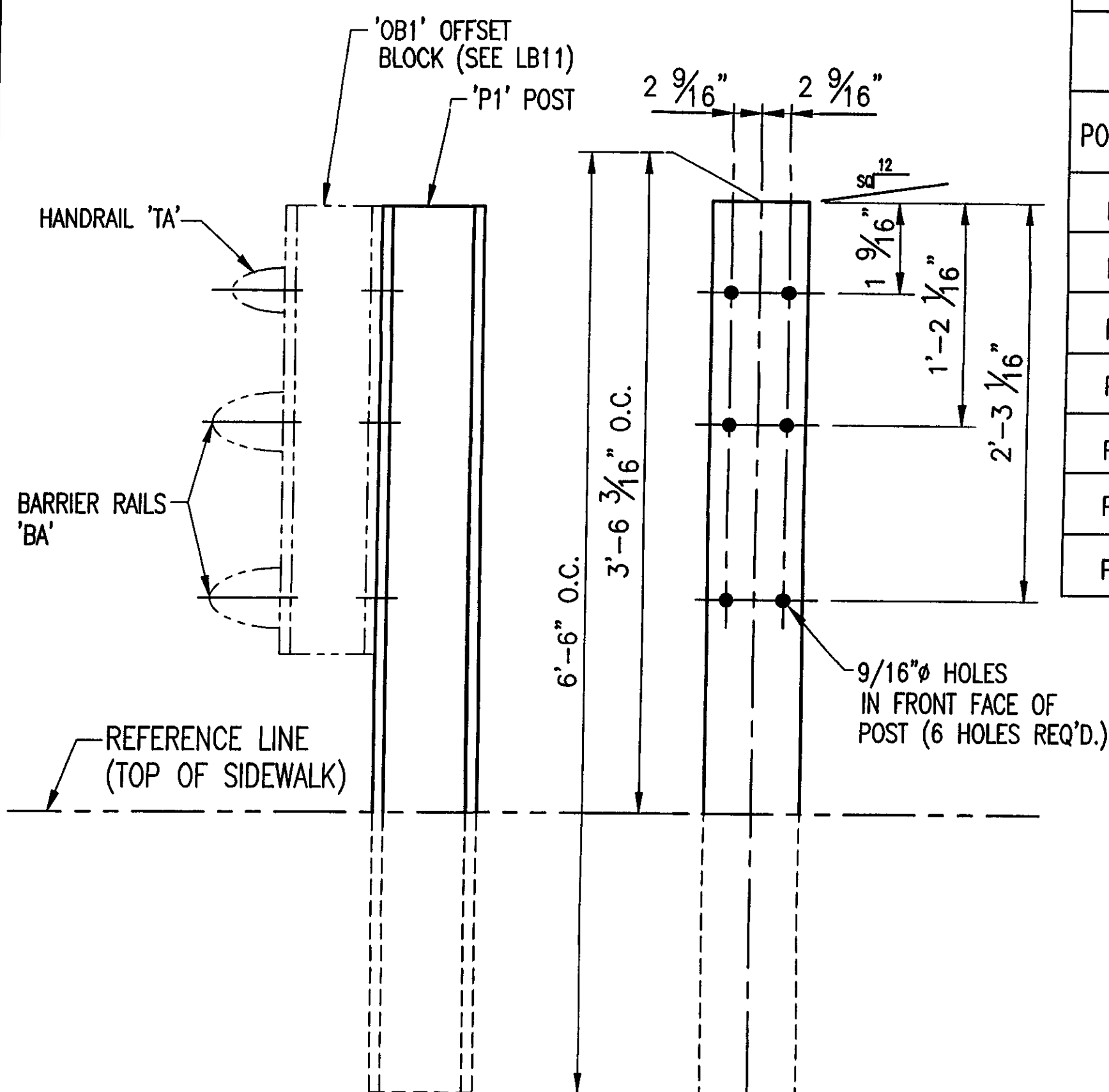
**POST DETAIL CHART FOR BRIDGE 37 NE APPROACH
CURB CONDITION DUE TO SHORT SIDEWALK (WW3)**

POST No.	QTY.	OFFSET BLOCK MTG. DIMENSIONS ¹						BEV
		A	B	C	D	E	F (O.C.)	
P1R	1	1 7/8"	1'-1 3/8"	2'-2"	5/8"	1 1/4"	4'-2 1/8"	1
P2R	1	1 7/8"	11 13/16"	1'-11 3/4"	5/8"	1 1/4"	3'-10 15/16"	1
P3R	1	2 1/4"	10 1/2"	1'-9 7/8"	1 1/4"	1"	3'-7 11/16"	2 1/16"
P4R	1	2 1/4"	8 13/16"	1'-7 5/8"	1 1/4"	1"	3'-4 1/2"	2 1/16"
P5R	1	2 1/2"	1'-0 1/2"		15/16"	1 9/16"	2'-8 3/16"	1 1/2"
P6R	1	2 1/2"	11 3/4"		15/16"	1 9/16"	2'-5 3/4"	1 1/2"
P7R	1	2 1/2"	10 15/16"		15/16"	1 9/16"	2'-3 7/8"	1 1/2"

Dimension does not match value on Drawing LB6A

NOTE:
2 CLAMPING BARS CB-01-H (#28596) PER POSTS P1-P4
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P1-P4
w/ 1/2" φ-13 UNC
S.S. BOLT x 1" LG. 'FB1',
1 1/16" O.D. x 17/32"
I.D. x 3/32" THK. ALUM
WASHER 'FW1'
(#15280 & # 19404)
(16 PER POST)

NOTE:
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P5-P7
w/ 1/2" φ-13 UNC
S.S. BOLT x 1" LG. 'FB1',
1 1/16" O.D. x 17/32"
I.D. x 3/32" THK. ALUM
WASHER 'FW1'
(#15280 & # 19404)
(8 PER POST)



32 REQ'D. ~ POST 'P1'
(NW (WW1) & SW (WW2) APPROACHES ONLY)

BRIDGE No 37
PROJECT No. BR 030-2(17)S
ITEM No. 621.74

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

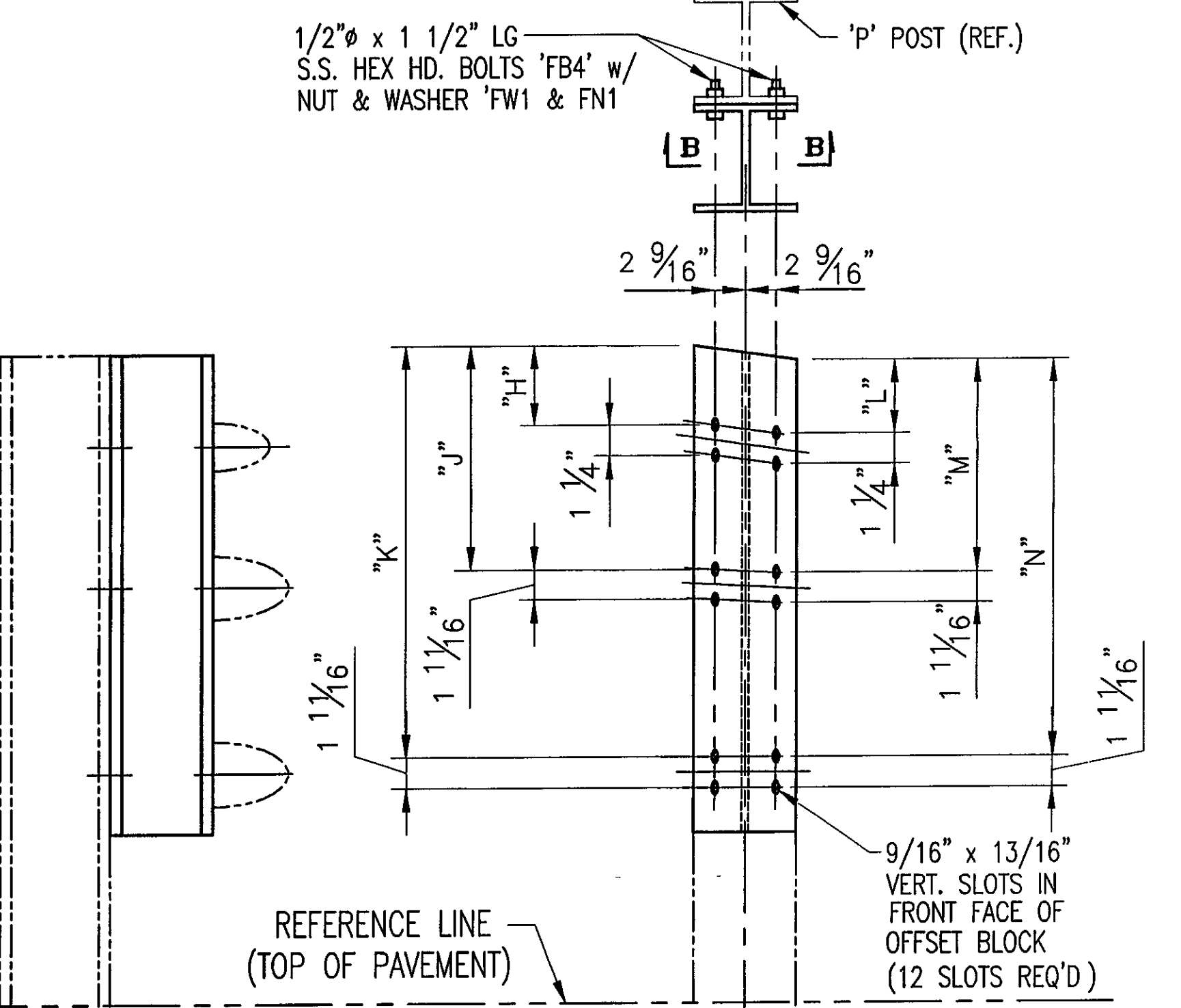
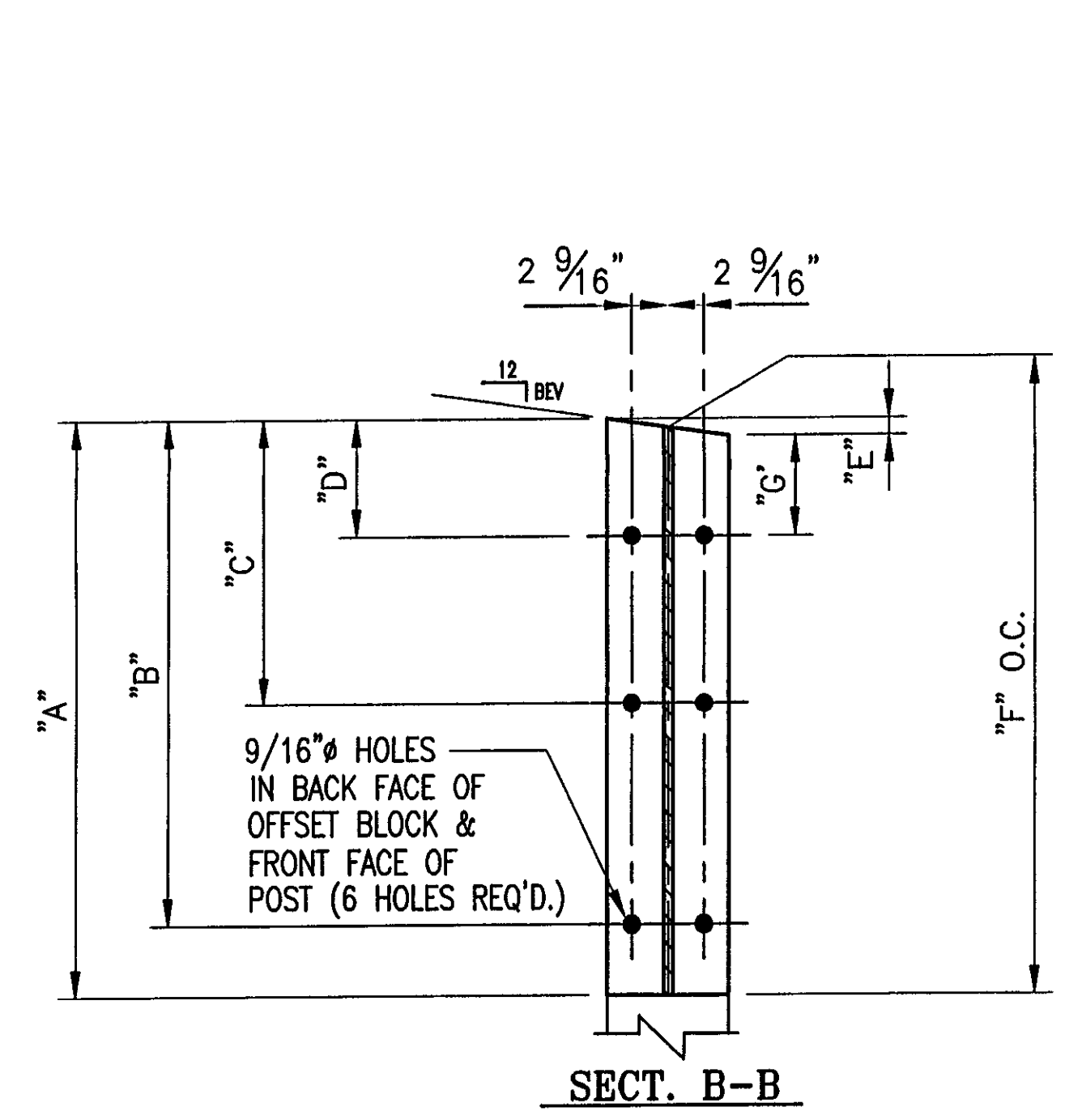
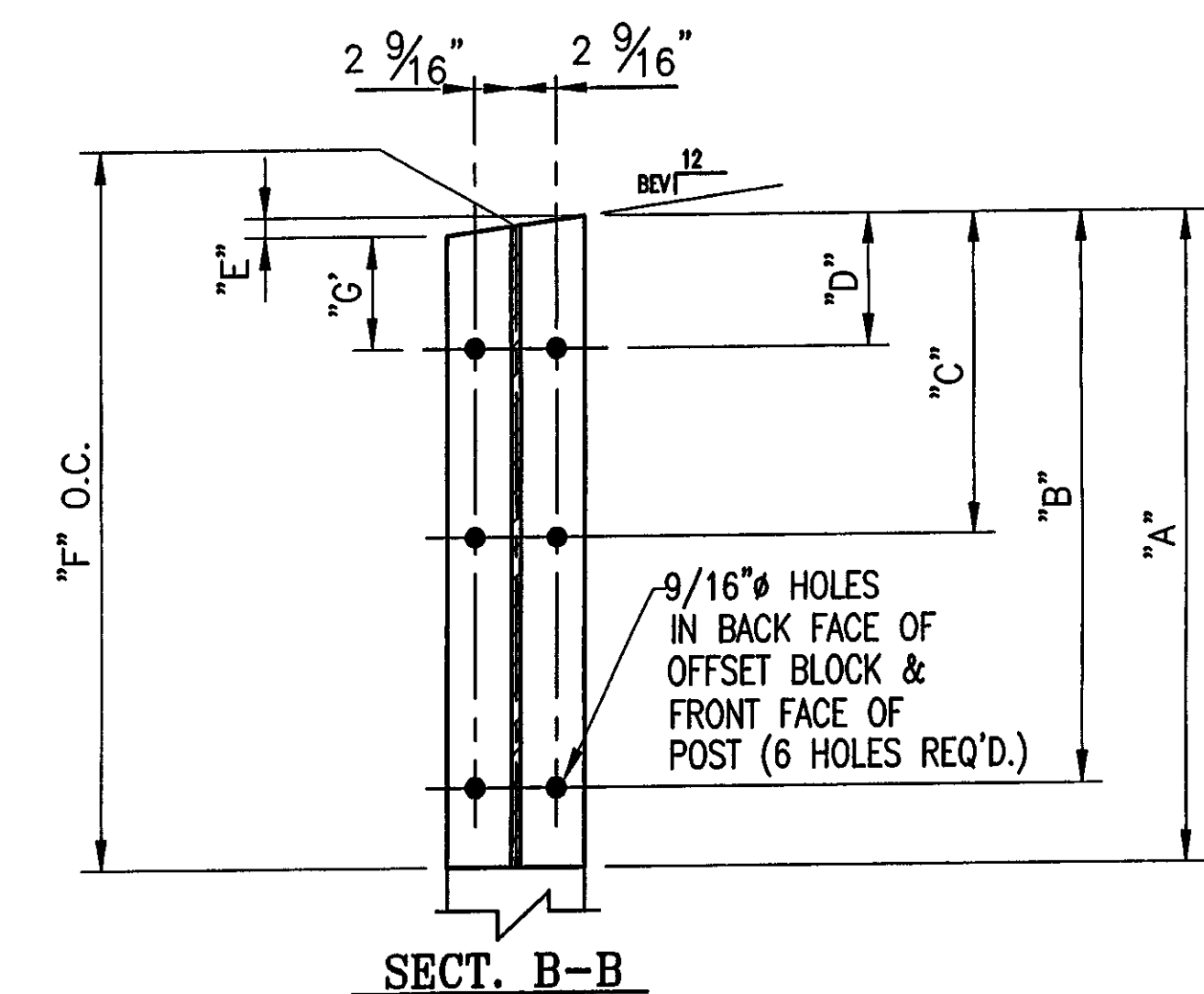
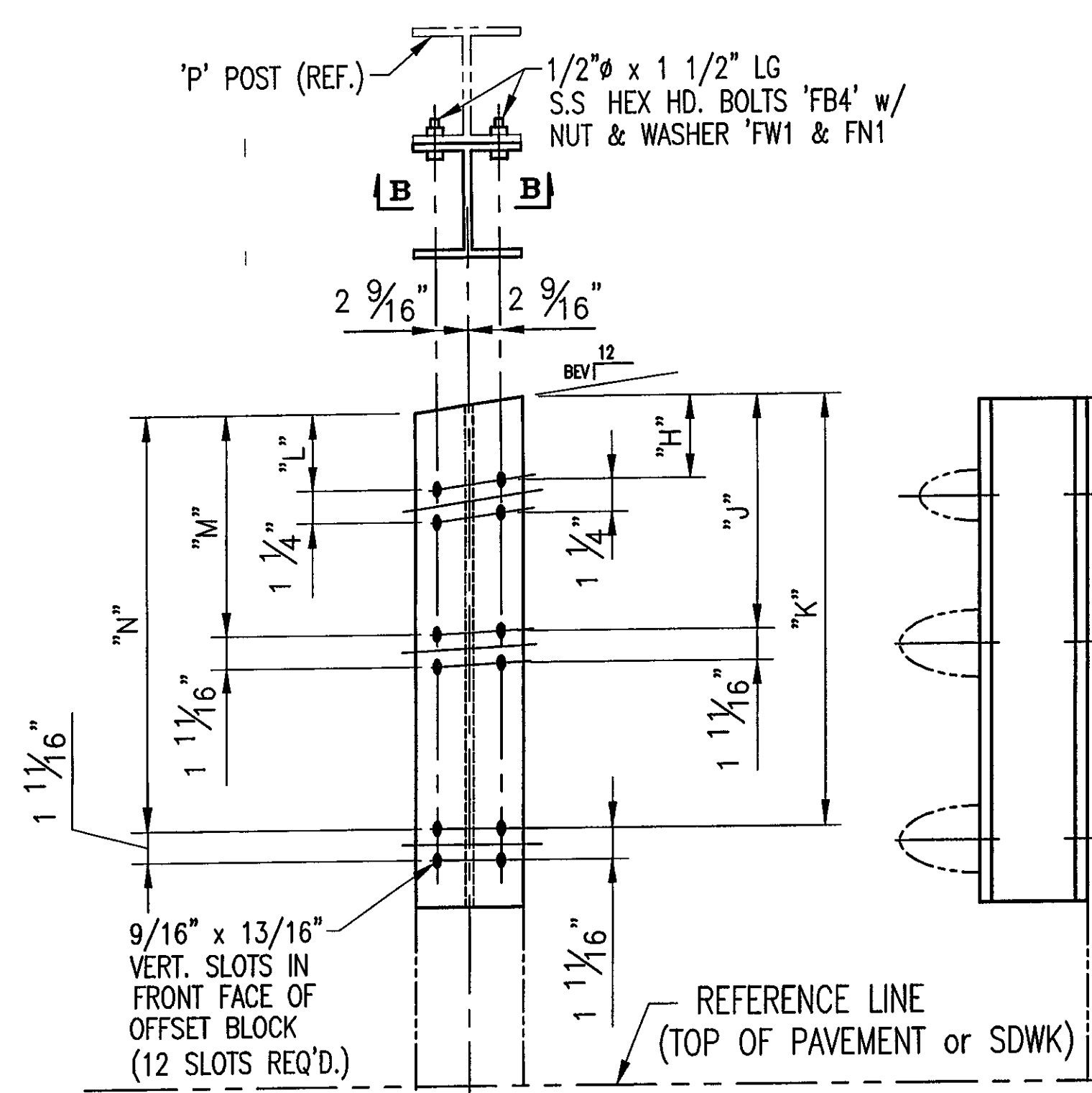
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GHON RIVER
3L ALUMINUM APPROACH RAIL POST DETAILS

MADE CMS DATE 05/23/07 JOB No AR0395 CUST No
CHECK BLJ DATE 05/31/07 DRAWING LB8 REV. No. ONE

REV.	DESCRIPTION	BY	DATE
1	REVISED DIMENSION PER APPROVER MARKUP	CMS	07 24 07

RECEIVED
CHKD BY CLD OK'D BY GAS
AUG 03 2007
RESUBMIT APPROVED AS NOTED
BY KMH DATE 8/13/07



OFFSET BLOCK CHART FOR BRIDGE 37 SE APPROACHES @ SIDEWALK (WW4)
POSTS P1L - P4L

OFFSET BLOCK ~ POST MTG. DIMENSIONS										BEV
POST No.	OFFSET BLOCK	QTY.	A	B	C	D	E	F (O.C.)	G	X
P1L	OB1L	1	2'-4 3/8"	2'-1 7/8"	1'-1 1/4"	1 3/4"	3/8"	2'-4 3/16"	1 3/8"	5/8
P2L	OB2L	1	2'-2 1/4"	1'-11 11/16"	11 11/16"	1 3/4"	3/8"	2'-2 1/16"	1 3/8"	5/8
P3L	OB3L	1	2'-0 1/16"	1'-9 7/16"	10 1/8"	1 3/4"	3/8"	1'-11 7/8"	1 3/8"	5/8
P4L	OB4L	1	1'-9 15/16"	1'-7 1/4"	8 9/16"	1 3/4"	3/8"	1'-9 3/4"	1 3/8"	5/8

OFFSET BLOCK CHART FOR BRIDGE 37 NE APPROACH @ CURB CONDITION
DUE TO SHORT SIDEWALK (WW3) - POSTS P1R - P4R

OFFSET BLOCK ~ POST MTG. DIMENSIONS										BEV
POST No.	OFFSET BLOCK	QTY.	A	B	C	D	E	F (O.C.)	G	X
P1R	OB1R	1	2'-4 1/2"	2'-2"	1'-1 3/8"	1 7/8"	5/8"	2'-4 3/16"	1 1/4"	1
P2R	OB2R	1	2'-2 3/8"	1'-11 3/4"	11 13/16"	1 7/8"	5/8"	2'-2 1/16"	1 1/4"	1
P3R	OB3R	1	2'-0 7/8"	1'-9 7/8"	10 1/2"	2 1/4"	1 1/4"	2'-0 1/8"	1"	2 1/16"
P4R	OB4R	1	1'-10 5/8"	1'-7 5/8"	8 13/16"	2 1/4"	1 1/4"	1'-10"	1"	2 1/16"

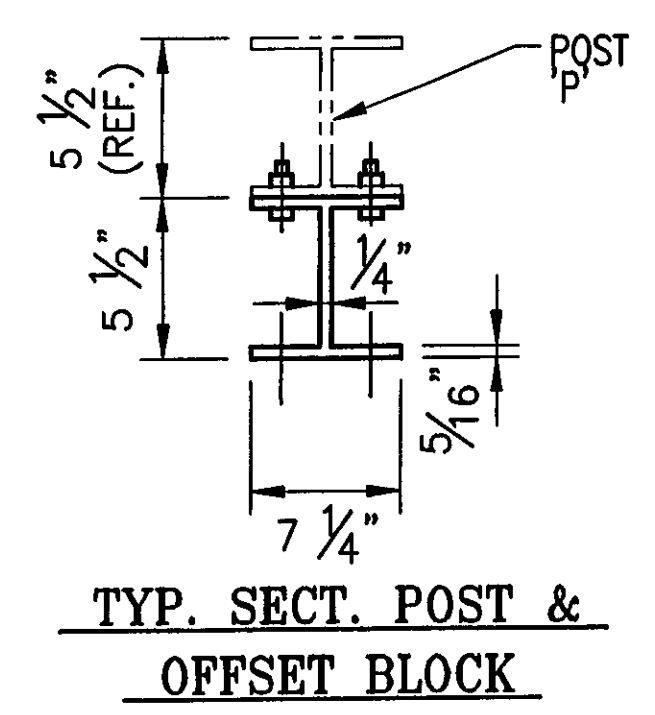
OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

POST No.	OFFSET BLOCK	H	J	K	L	M	N
P1L	OB1L	1"	1'-0 3/8"	2'-1 1/16"	7/8"	1'-0 1/16"	2'-0 5/8"
P2L	OB2L	1"	10 13/16"	1'-10 13/16"	7/8"	10 1/2"	1'-10 7/16"
P3L	OB3L	1"	9 1/4"	1'-8 5/8"	7/8"	8 15/16"	1'-8 1/4"
P4L	OB4L	1"	7 11/16"	1'-6 7/16"	7/8"	7 3/8"	1'-6"

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

POST No.	OFFSET BLOCK	H	J	K	L	M	N
P1R	OB1R	1 1/16"	1'-0 7/16"	2'-1 1/16"	7/8"	1'-0"	2'-0 9/16"
P2R	OB2R	1 1/16"	10 7/8"	1'-10 7/8"	7/8"	10 7/16"	1'-10 3/8"
P3R	OB3R	1 1/8"	9 5/16"	1'-8 3/4"	13/16"	8 11/16"	1'-6 7/8"
P4R	OB4R	1 1/8"	7 5/8"	1'-6 1/2"	13/16"	7"	1'-5 13/16"

NOTE:
 2 CLAMPING BARS CB-01-H (#28596) PER POSTS P1- P4
 4 CLAMPING BARS CB-03-A (#19447) PER POSTS P1- P4
 w/ 1/2" φ-13 UNC
 S.S. BOLT x 1" LG. 'FB1',
 1 1/16" O.D. x 17/32"
 I.D. x 3/32" THK. ALUM
 WASHER 'FW1'
 (#15280 & #19404)
 (16 PER POST)



ANODIZED
(SEE NOTES ON LB1)

RECEIVED
 OK'D BY CLD OK'D BY GAS
 AUG 03 2007
 RESUBMIT APPROVED
 BY KMH DATE 8/13/07

REVISION	DESCRIPTION	BY	DATE
1	REVISED ALL POST HIGHTS. PER APPROVERS DIMENSIONS	BLJ	07 30 07

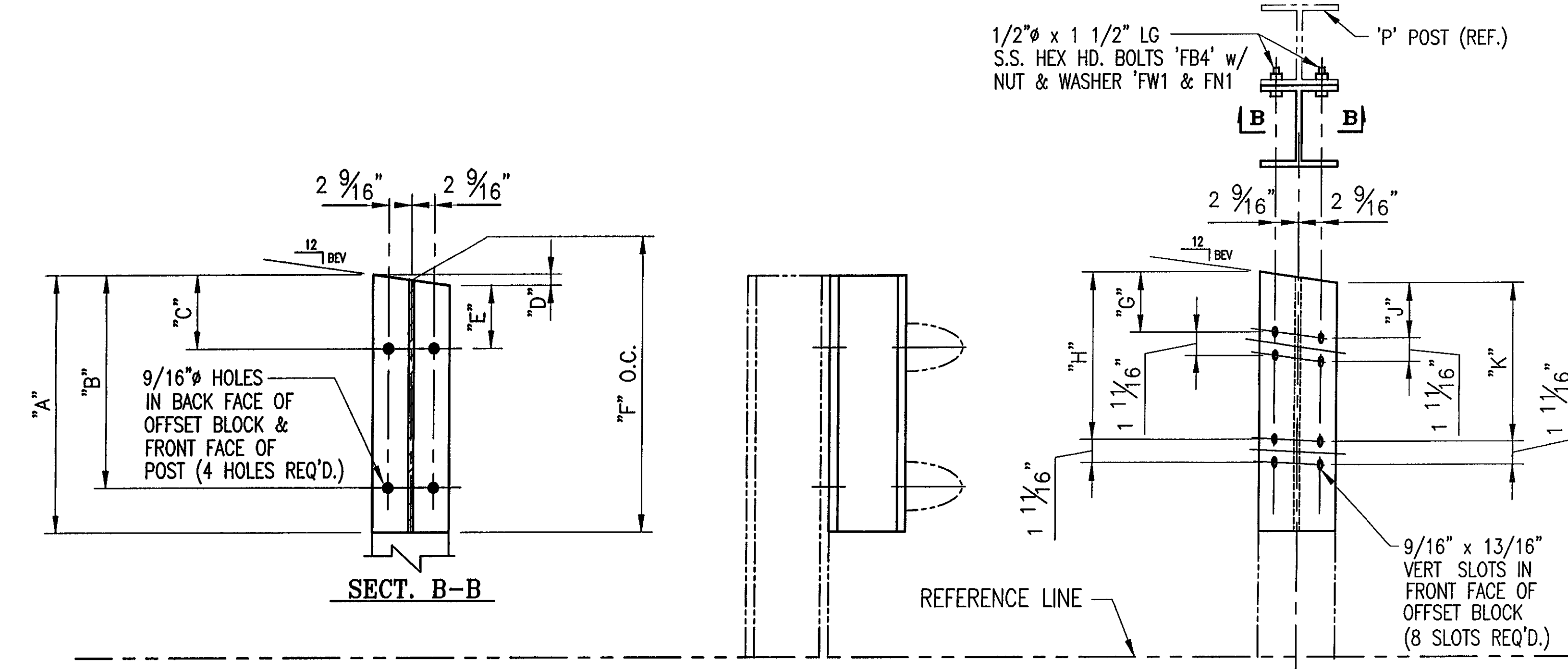
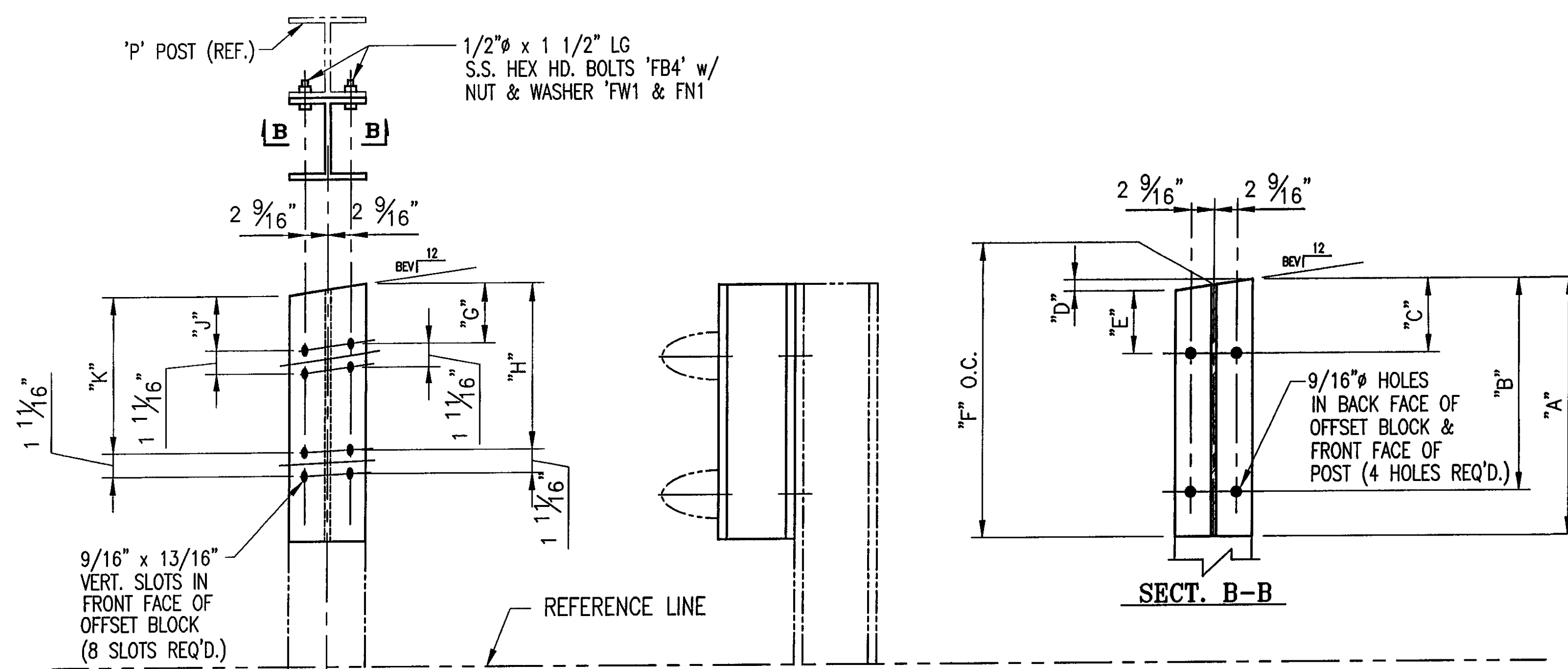
BRIDGE No. 37
 PROJECT No BRF 030-2(17)S
 ITEM No: 621.74

APPROVED: _____ REC'D APPROVAL _____
 DRAWING _____

L.B. FOSTER COMPANY
 1016 GREENTREE ROAD
 PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
 VERMONT AGENCY OF TRANSPORTATION
 TOWN OF JOHNSON, COUNTY OF LAMOILLE
 BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
 OFFSET BOX DETAILS

MADE CMS DATE 05/23/07 JOB No AR0395 CUST No _____
 CHECK BLJ DATE 06/01/07 DRAWING LB9 REV. No. ONE



OFFSET BLOCK CHART FOR BRIDGE 37 SE APPROACHES
@ SIDEWALK (WW4) ~ POSTS P5L - P7L

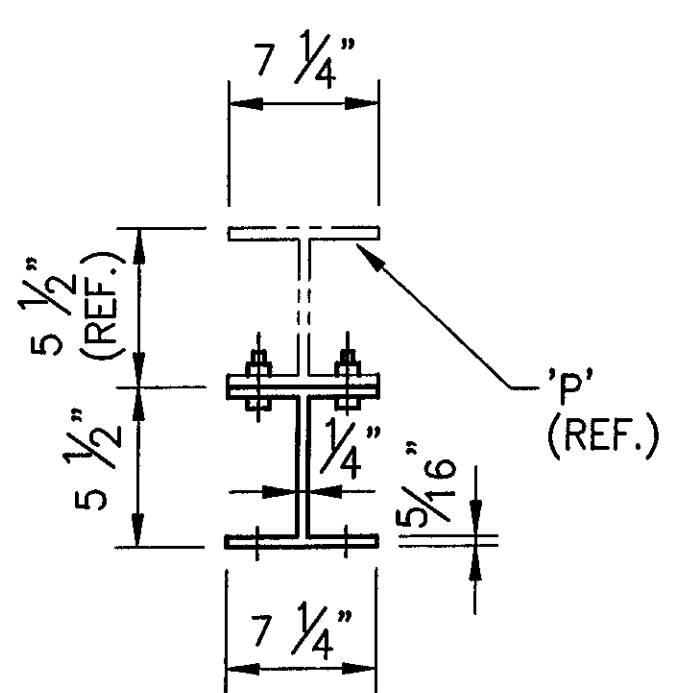
POST No.	OFFSET BLOCK	QTY.	OFFSET BLOCK ~ POST MTG. DIMENSIONS						BEV
			A	B	C	D	E	F (O.C.)	
P5L	OB5L	1	1'-2 15/16"	11 15/16"	2 1/16"	1/16"	1 15/16"	1'-2 7/8"	1/8
P6L	OB6L	1	1'-2 1/8"	11 1/16"	2 1/16"	1/16"	1 15/16"	1'-2 1/16"	1/8
P7L	OB7L	1	1'-1 5/16"	10 1/4"	2 1/16"	1/16"	1 15/16"	1'-1 1/4"	1/8

POST No.	OFFSET BLOCK	OFFSET BLOCK ~ RAIL MTG. DIMENSIONS			
		G	H	J	K
P5L	OB5L	1 3/16"	11 1/16"	1 1/8"	11"
P6L	OB6L	1 3/16"	10 1/4"	1 1/8"	10 1/8"
P7L	OB7L	1 3/16"	9 7/16"	1 1/8"	9 5/16"

OFFSET BLOCK CHART FOR BRIDGE 37 NE APPROACH
@ SHORT SIDEWALK (WW3) ~ POSTS P5R - P7R

POST No.	OFFSET BLOCK	QTY.	OFFSET BLOCK ~ POST MTG. DIMENSIONS						BEV
			A	B	C	D	E	F (O.C.)	
P5R	OB5R	1	1'-3 1/2"	1'-0 1/2"	2 1/2"	15/16"	1 9/16"	1'-3"	1 1/2
P6R	OB6R	1	1'-2 3/4"	11 3/4"	2 1/2"	15/16"	1 9/16"	1'-2 1/4"	1 1/2
P7R	OB7R	1	1'-1 15/16"	10 15/16"	2 1/2"	15/16"	1 9/16"	1'-1 1/2"	1 1/2

POST No.	OFFSET BLOCK	OFFSET BLOCK ~ RAIL MTG. DIMENSIONS			
		G	H	J	K
P5R	OB5R	1 5/16"	11 3/8"	1"	11"
P6R	OB6R	1 5/16"	10 5/8"	1"	10 1/4"
P7R	OB7R	1 5/16"	9 13/16"	1"	9 1/2"



TYP. SECT. POST &
OFFSET BLOCK

NOTE:
4 CLAMPING BARS CB-03-A
(#19447) PER POSTS P5 - P7
w/ 1/2"φ-13 UNC
S.S. BOLT x 1" LG. 'FB1',
1 1/16" O.D. x 17/32"
I.D. x 3/32" THK. ALUM
WASHER 'FW1'
(#15280 & #19404)
(8 PER POST)

ANODIZED
(SEE NOTES ON LB1)

RECEIVED
OK'D BY: CLD OK'D BY: GAS
AUG 03 2007
RESUBMIT APPROVED
BY: KMH DATE 8/13/07

1	REVISED ALL POST HIGHTS. PER APPROVERS DIMENSIONS	BLJ	07 30 07
REV.	DESCRIPTION	BY	DATE

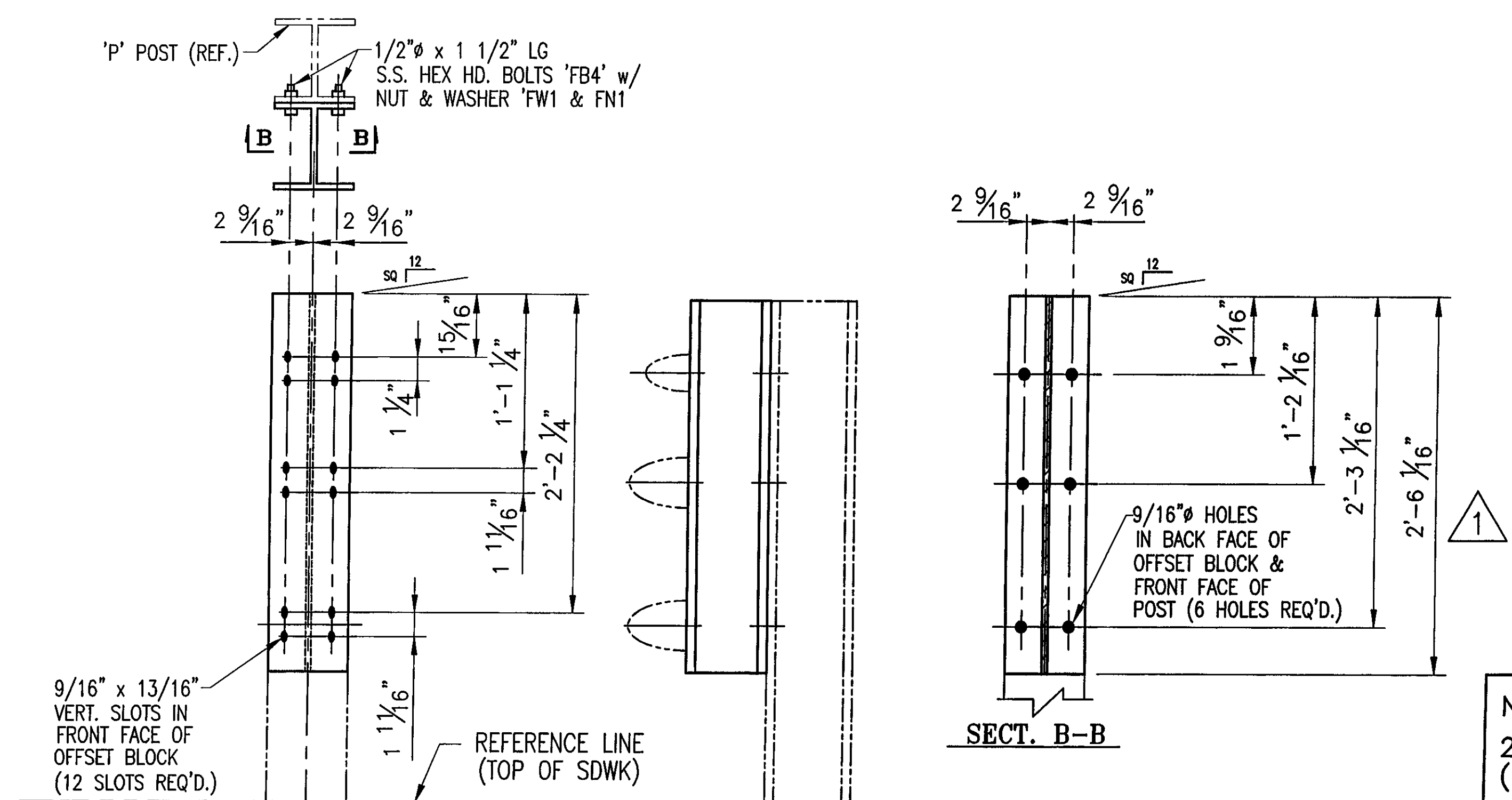
BRIDGE No. 37
PROJECT No. BRF 030-2(17)S
ITEM No: 621.74

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

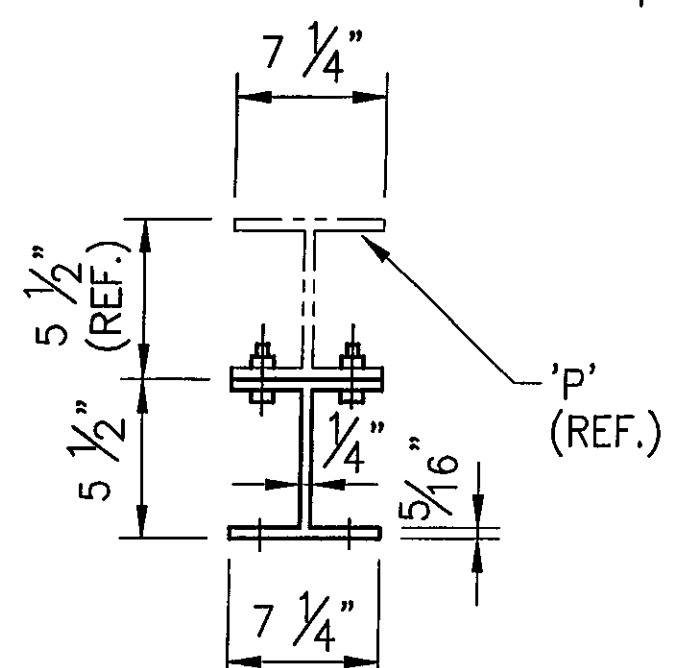
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER
OFFSET BLOCK DETAILS

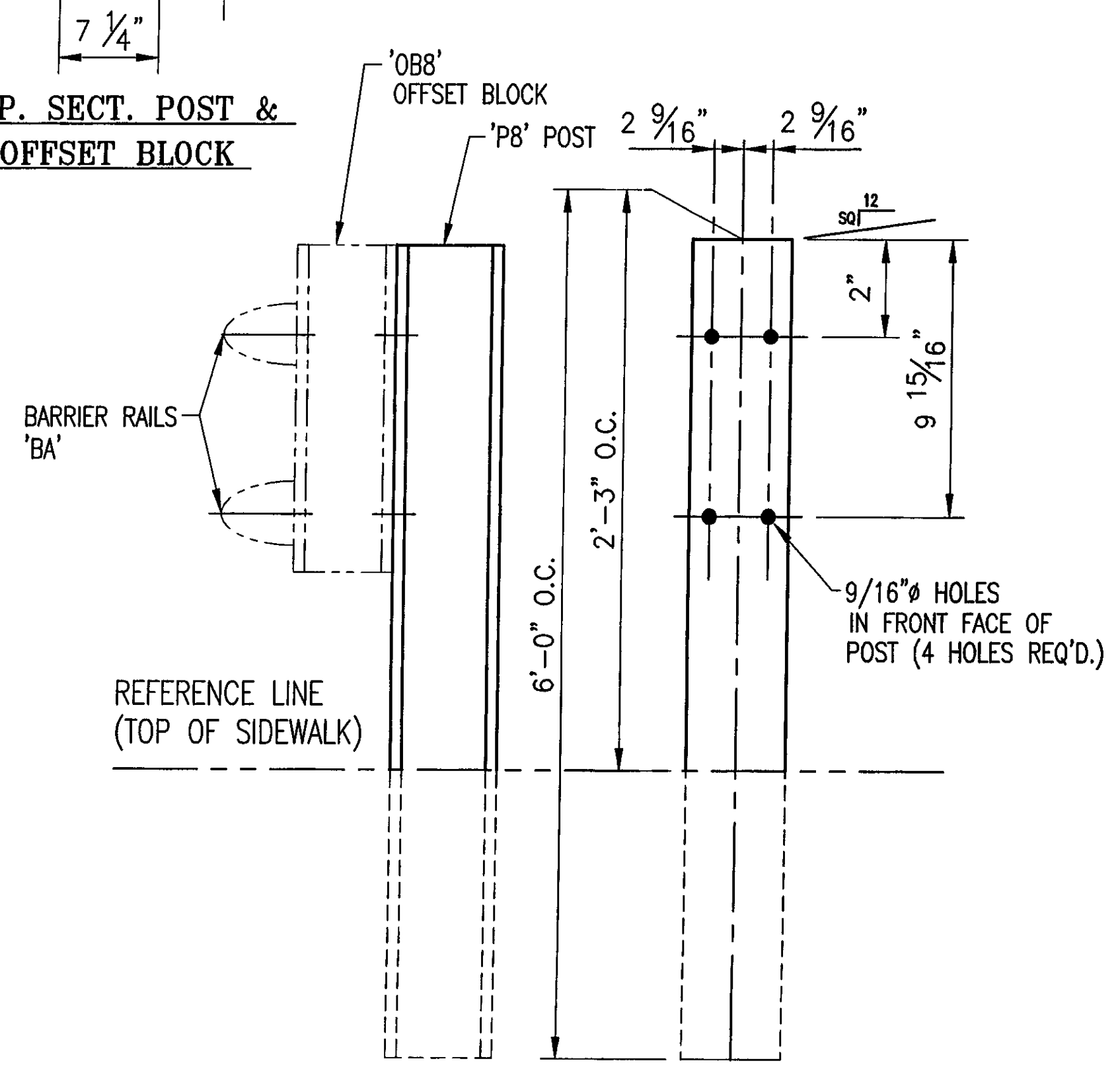
MADE CMS DATE 05/23/07 JOB No AR0395 CUST No
CHECK BLJ DATE 06/01/07 DRAWING LB10 REV. No. ONE



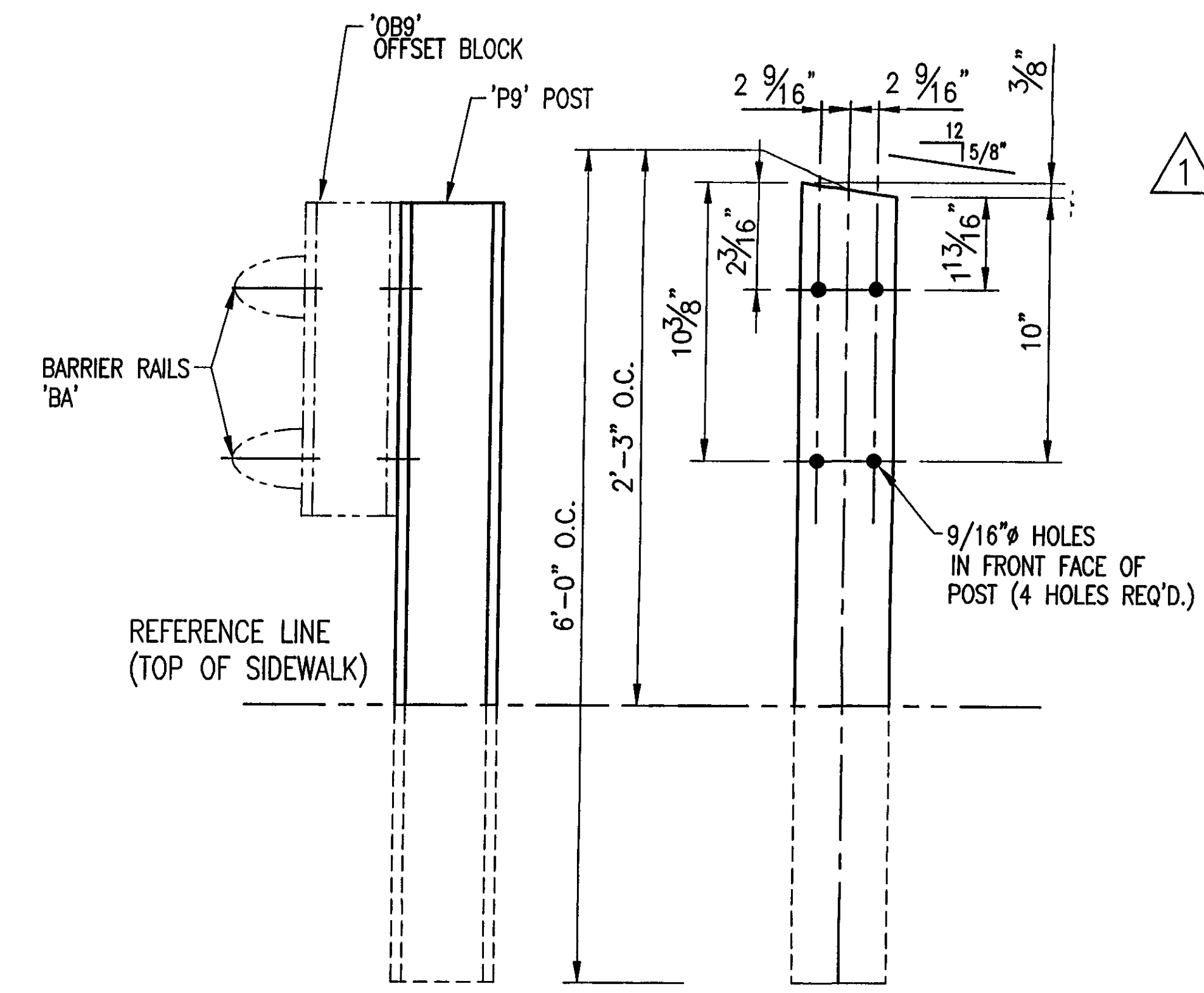
OFFSET BLOCK OB1 ~ 32 REQ'D.
(NW & SW APPROACHES ONLY)



TYP. SECT. POST & OFFSET BLOCK

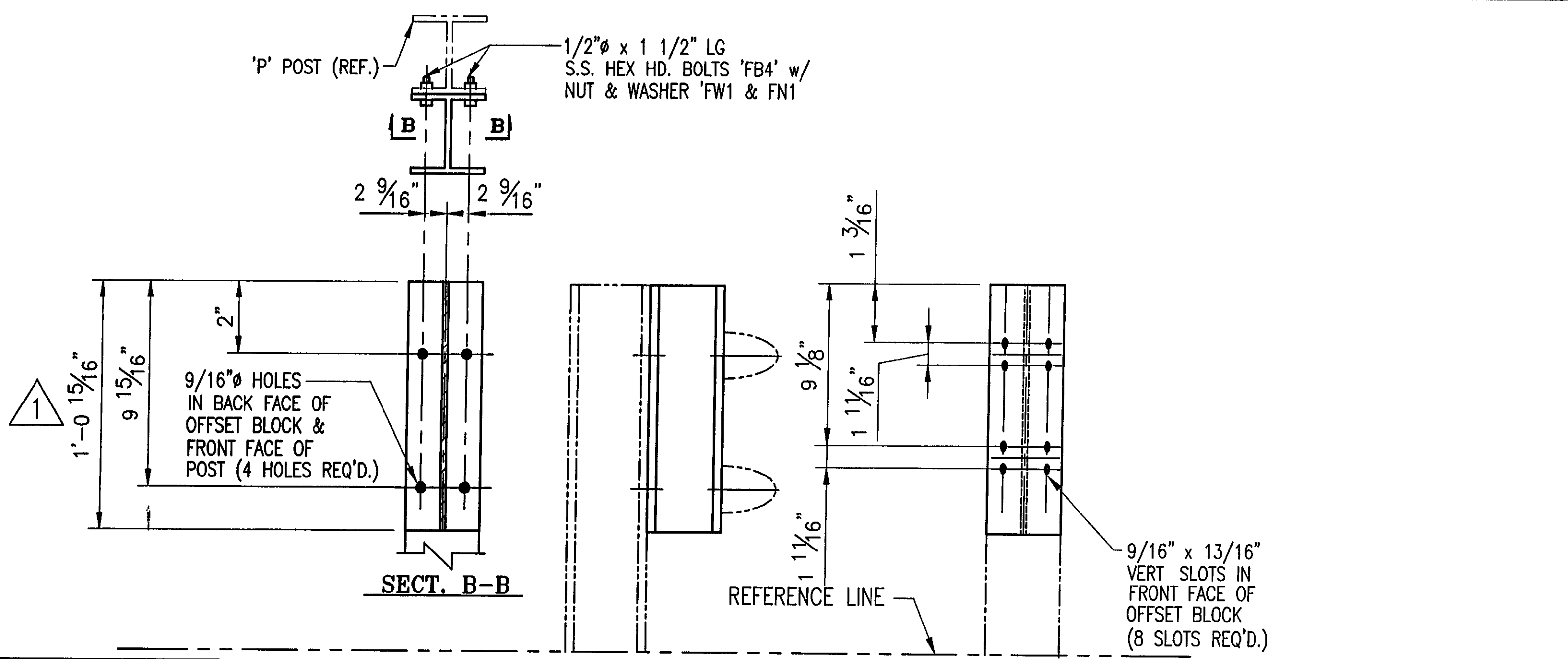


4 REQ'D. ~ POST 'P8'
SE (WW4) APPROACHE ONLY

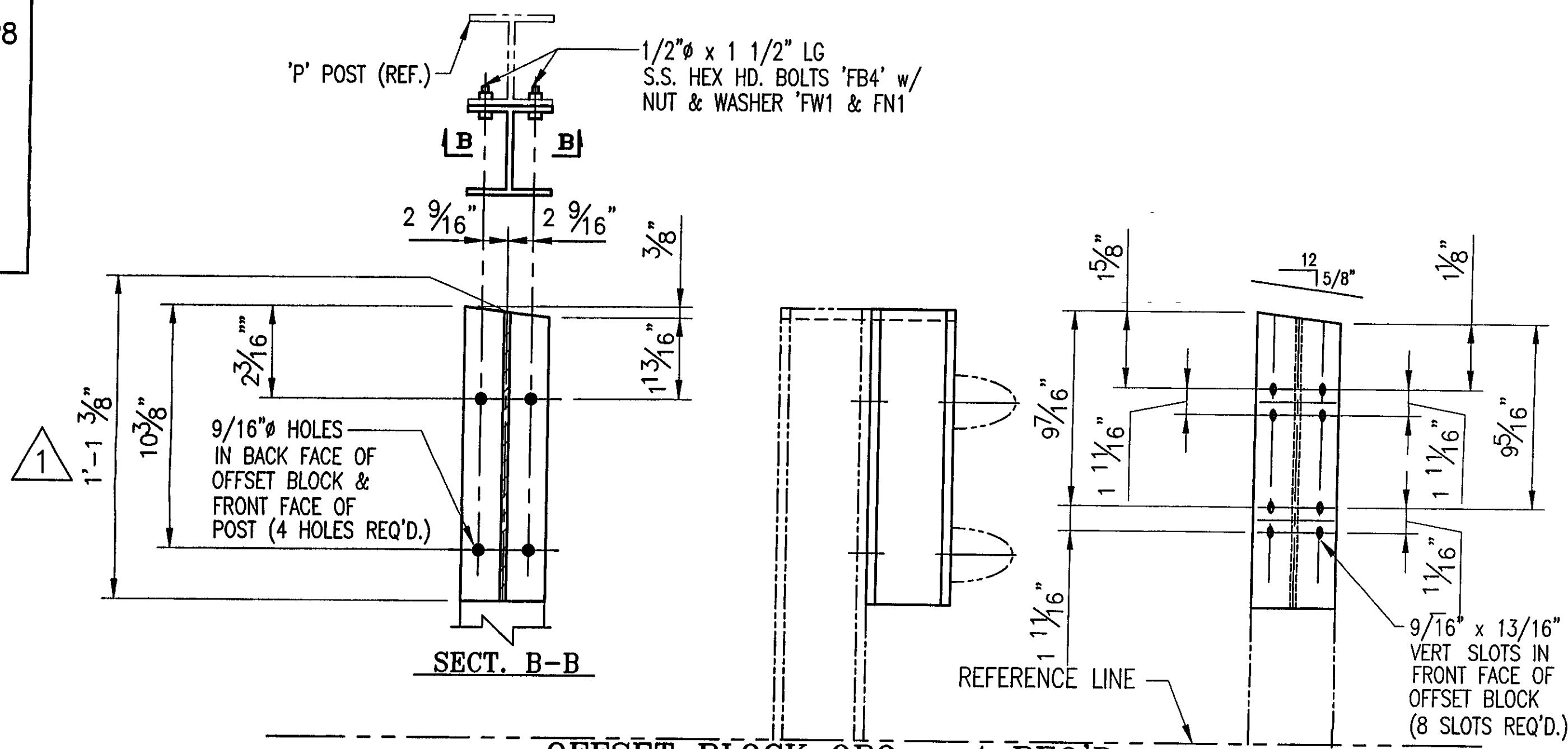


4 REQ'D. ~ POST 'P9'
(NE (WW3) APPROACHE ONLY)

NOTE:
2 CLAMPING BARS CB-01-H (#28596) PER POSTS P1
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P1 & P8
w/ 1/2" - 13 UNC S.S. BOLT x 1" LG. 'FB1',
1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM
WASHER 'FW1' (#15280 & #19404)
(16 PER POST)



OFFSET BLOCK OB8 ~ 4 REQ'D.
(SE APPROACHE ONLY)



OFFSET BLOCK OB9 ~ 4 REQ'D.
(NE APPROACHE ONLY)

ANODIZED
(SEE NOTES ON LB1)

RECEIVED
BY CLD OK'D BY GAS
AUG 03 2007
RESUBMIT APPROVED
BY KMH DATE 8/13/07

1	REVISED ALL POST HIGHTS PER APPROVERS DIMENSIONS	CMS	07 25 07
REV.	DESCRIPTION	BY	DATE

BRIDGE No. 37
PROJECT No. BRF 030-2(17)S
ITEM No: 621.74

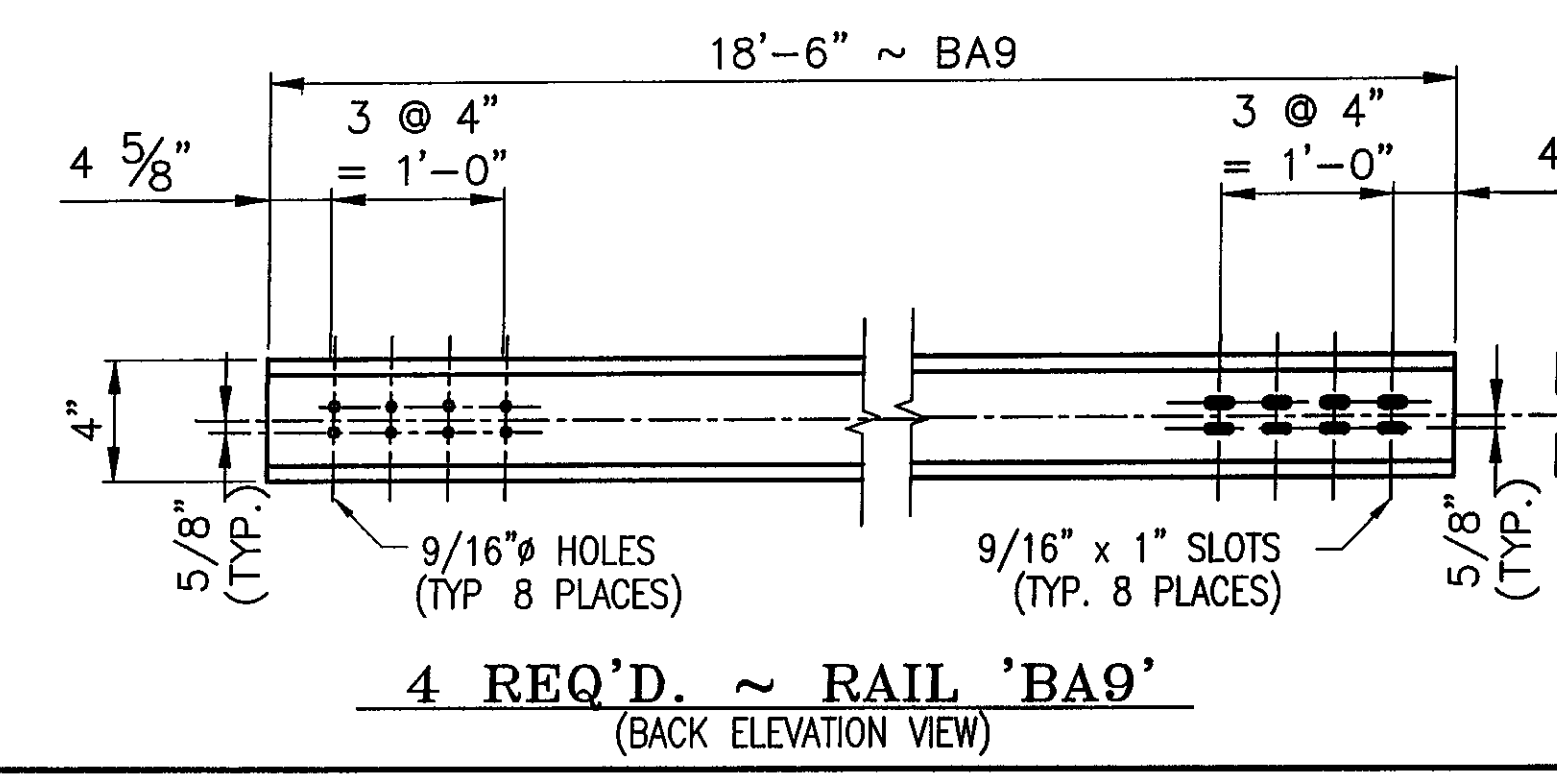
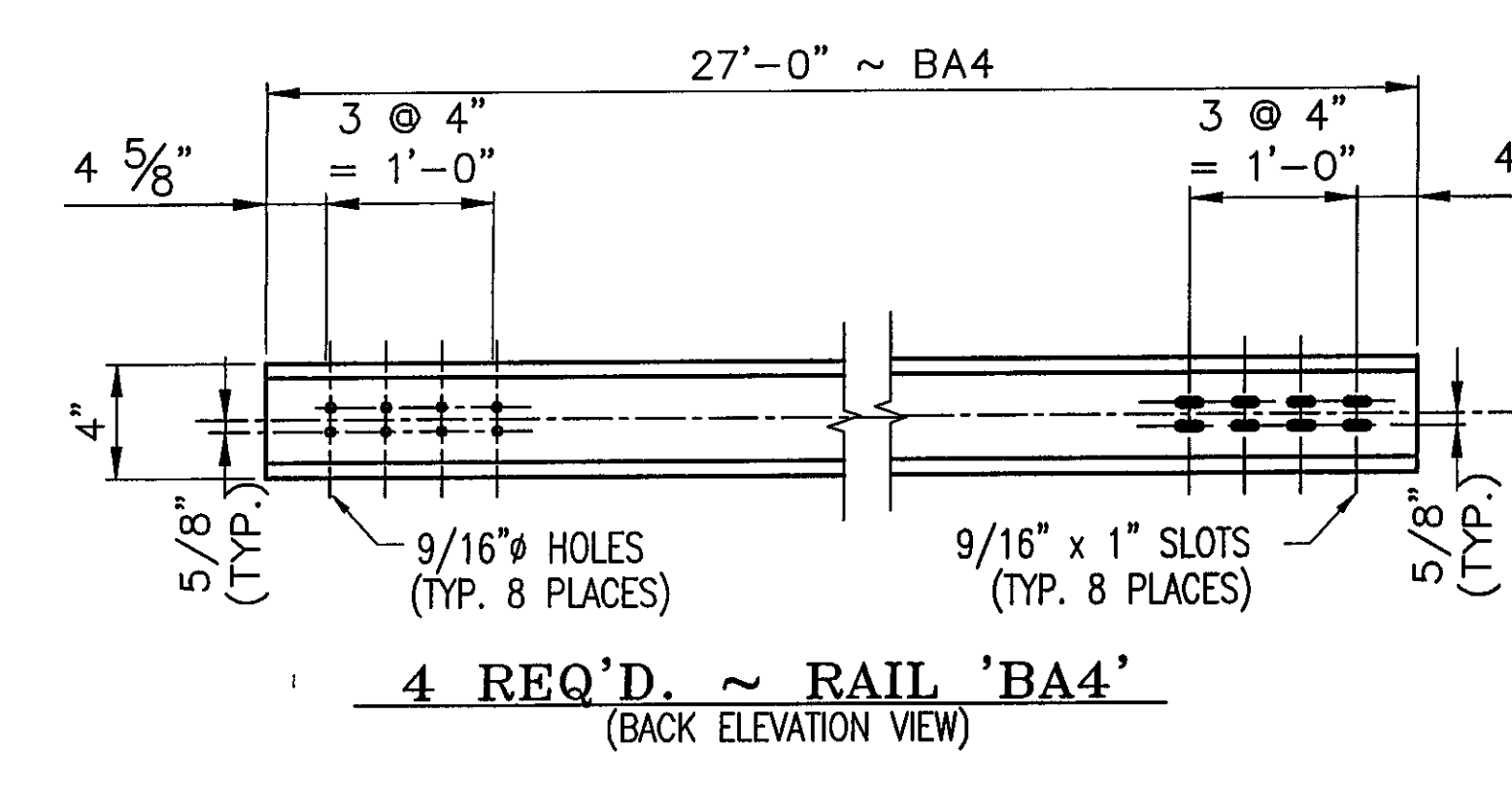
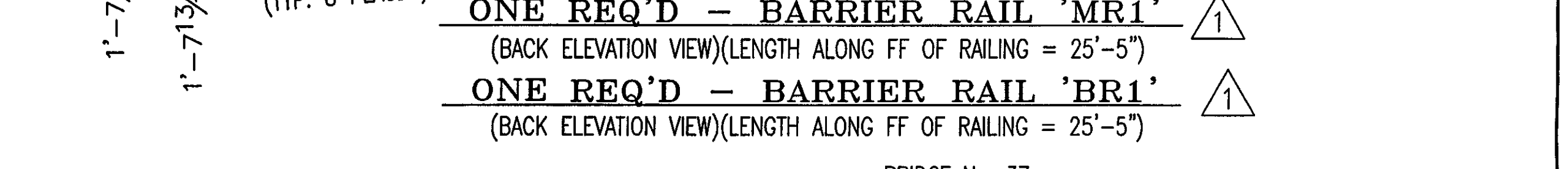
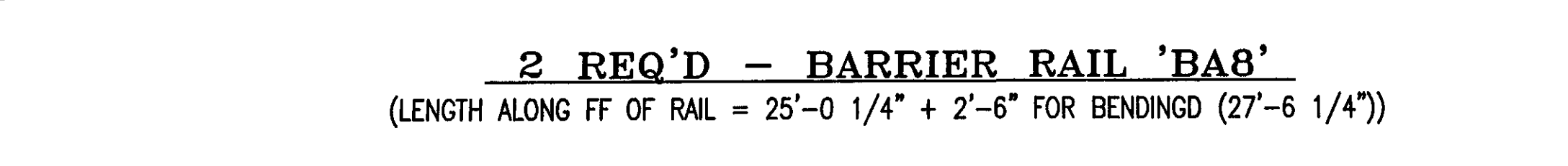
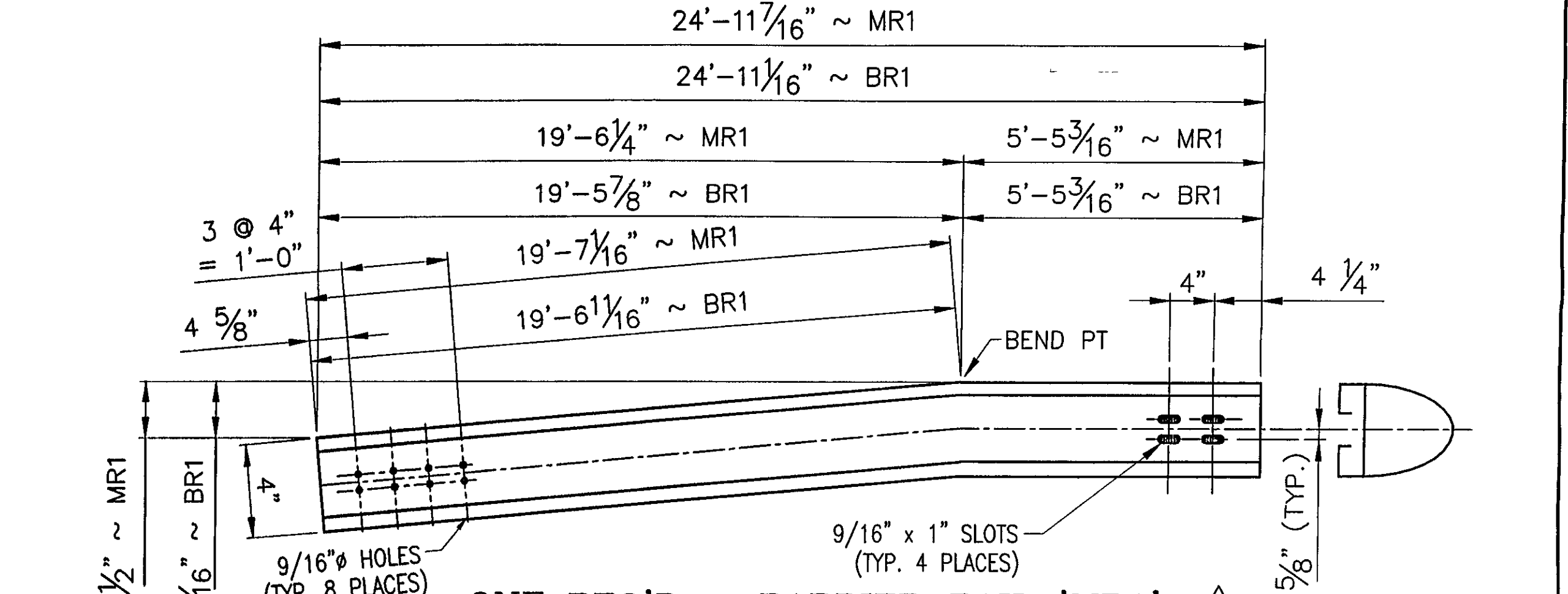
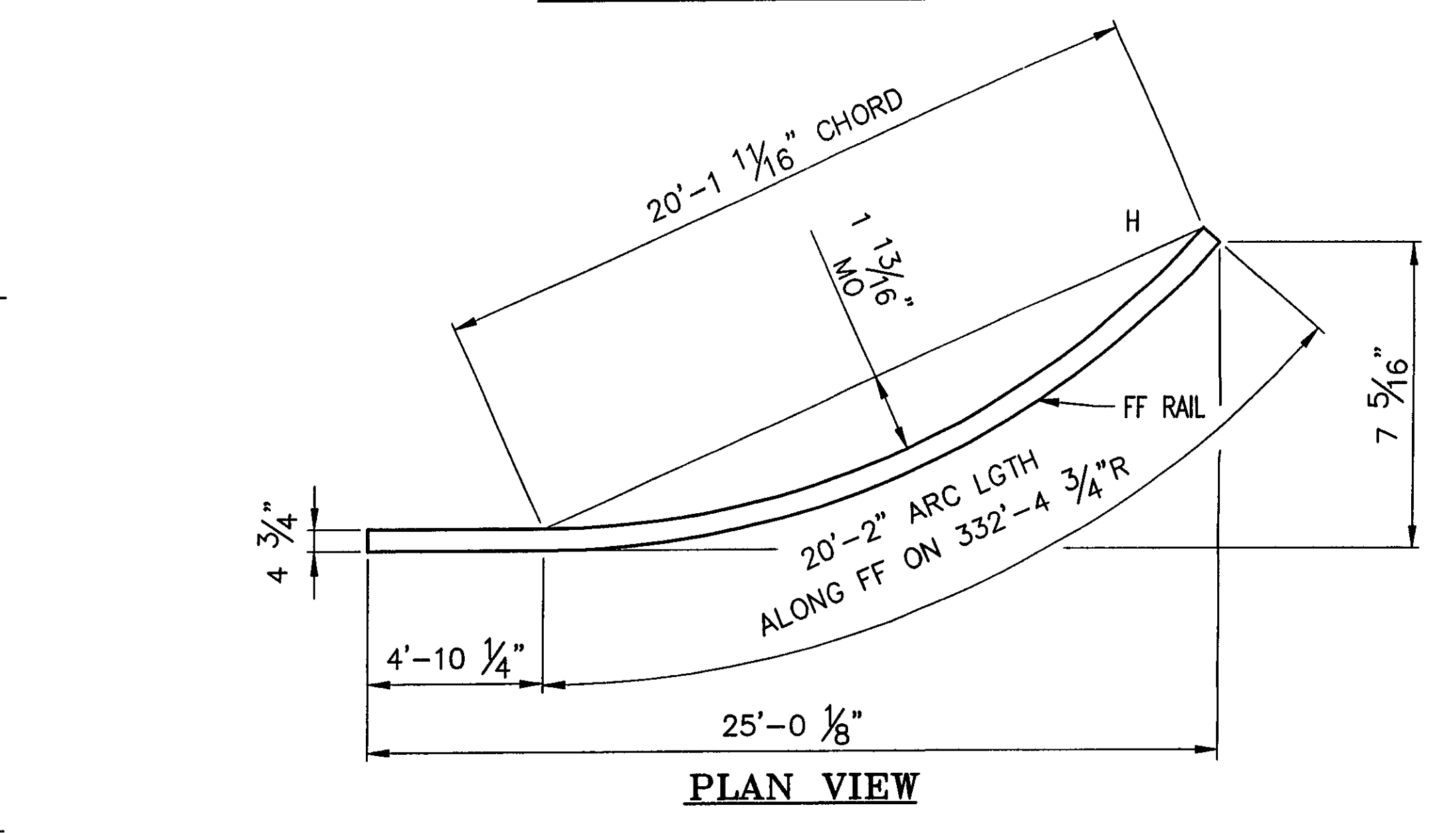
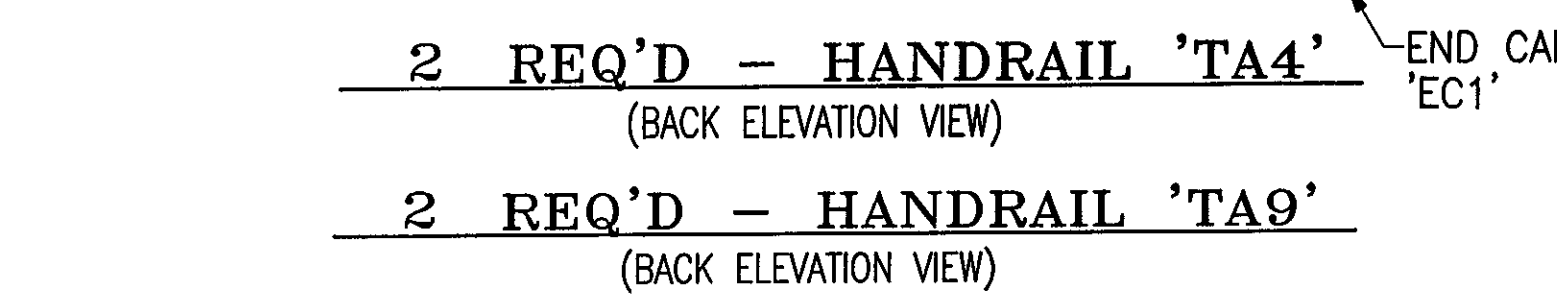
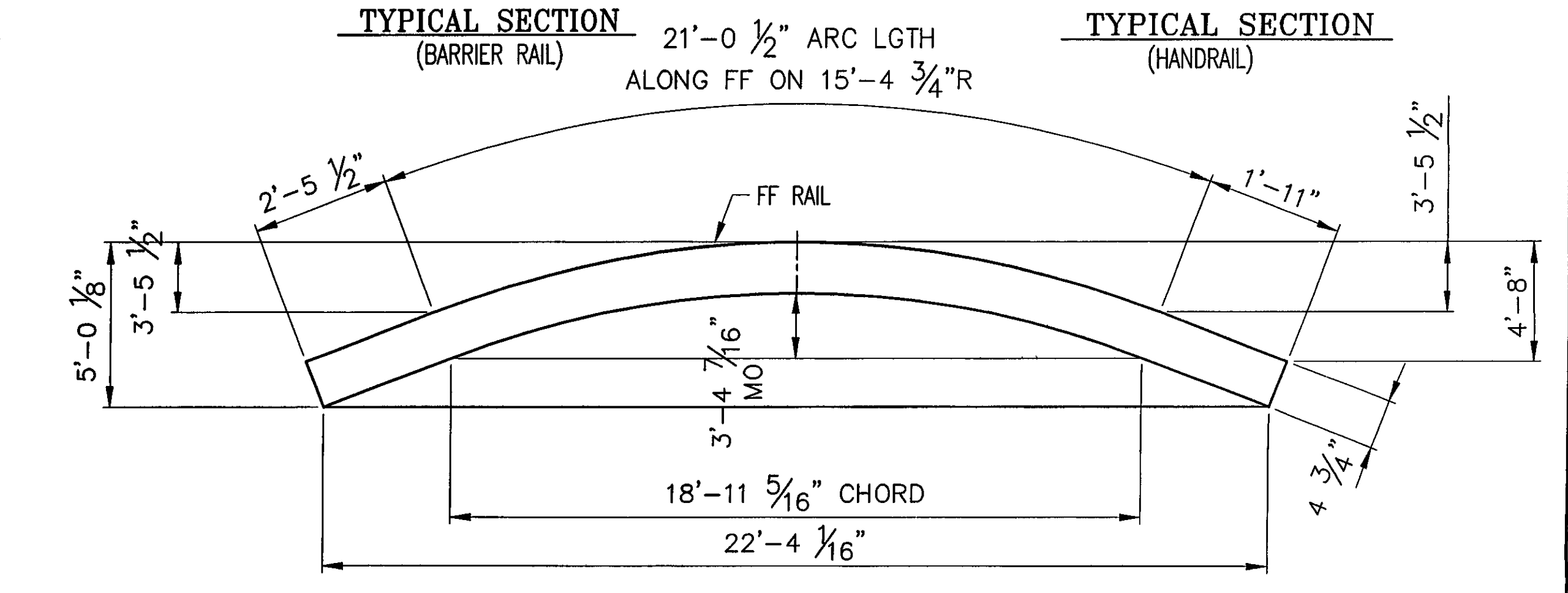
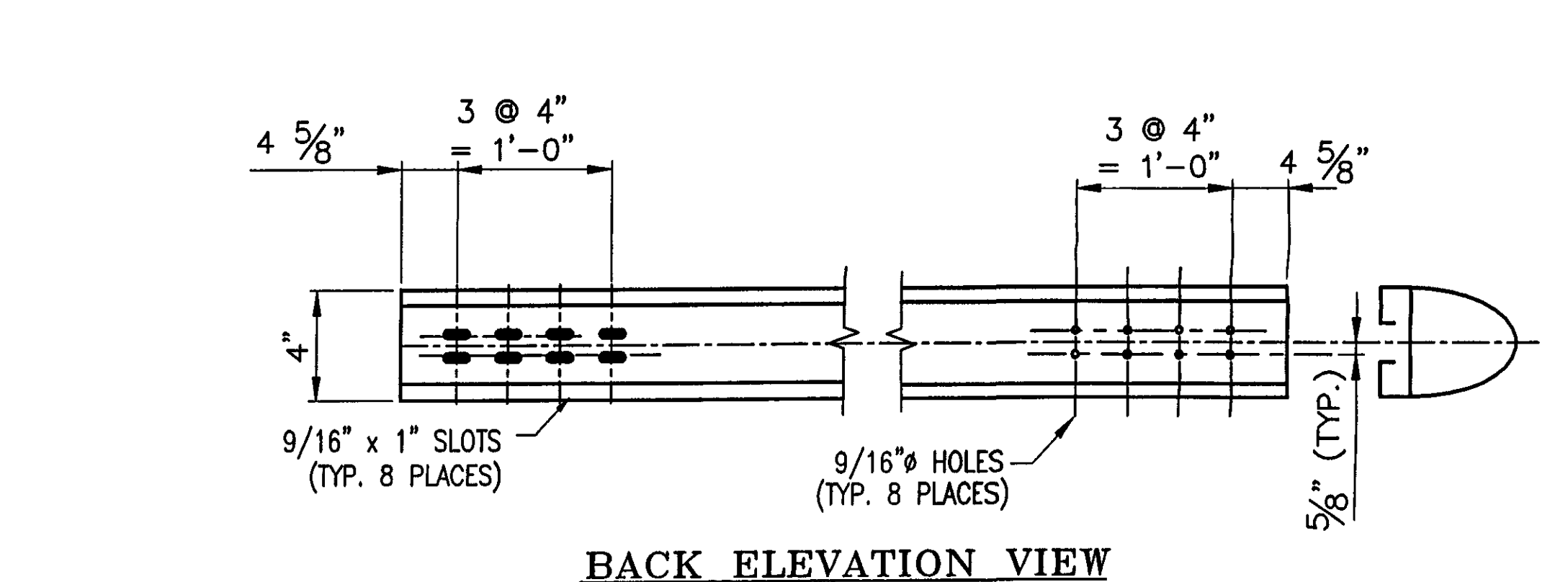
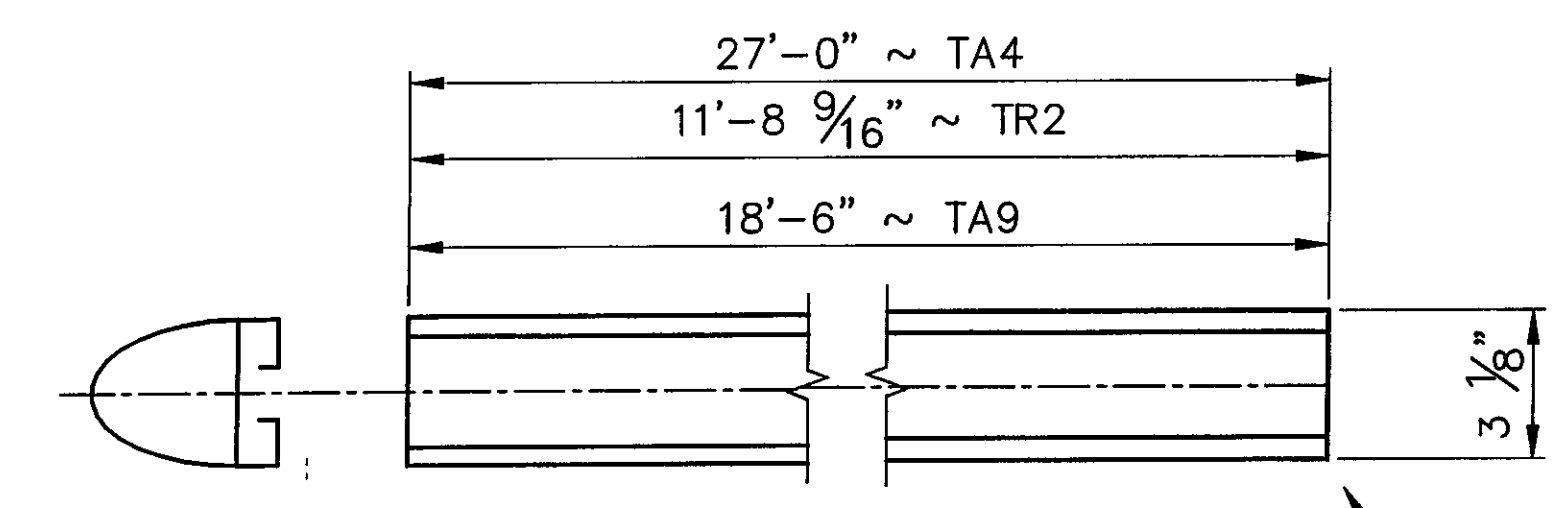
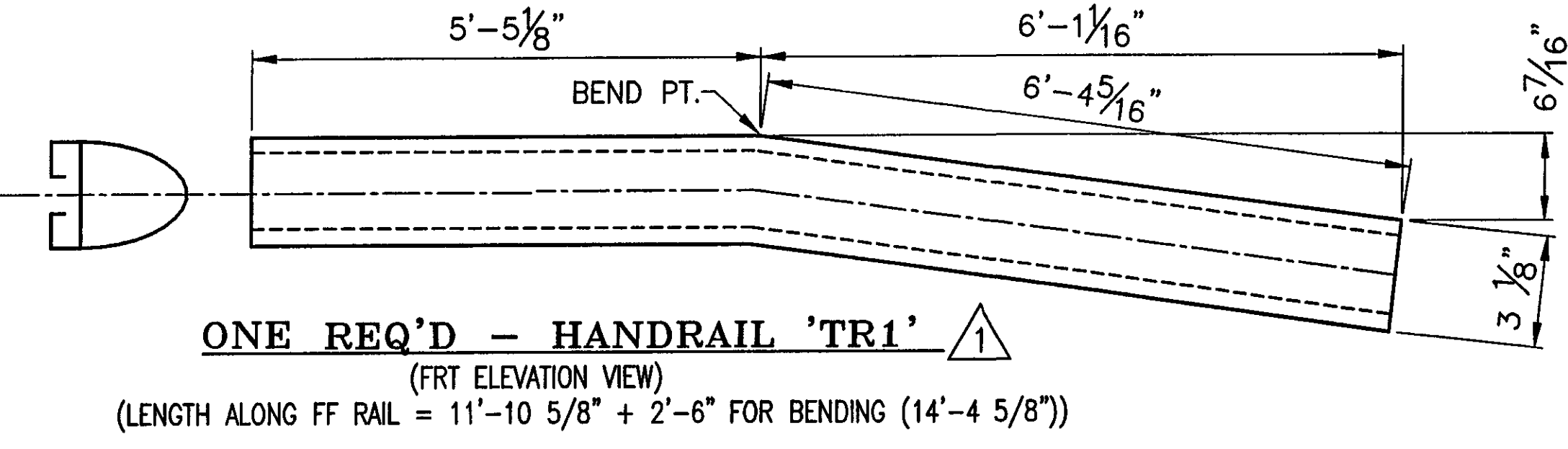
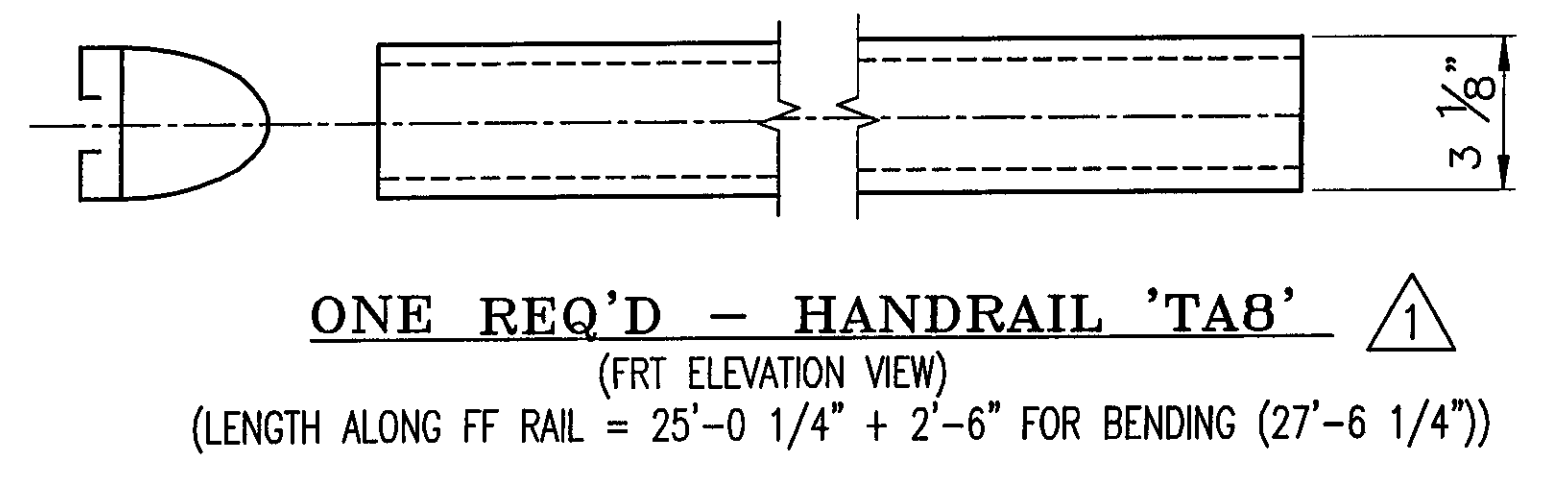
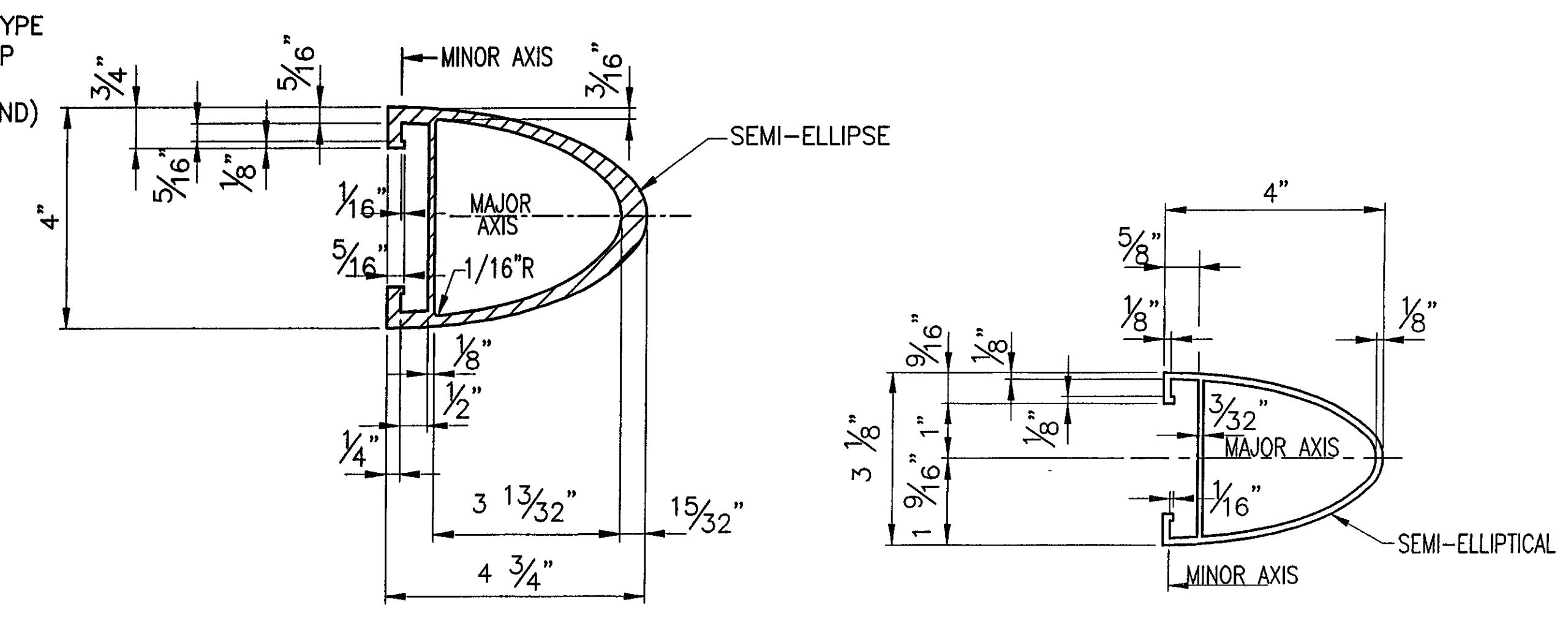
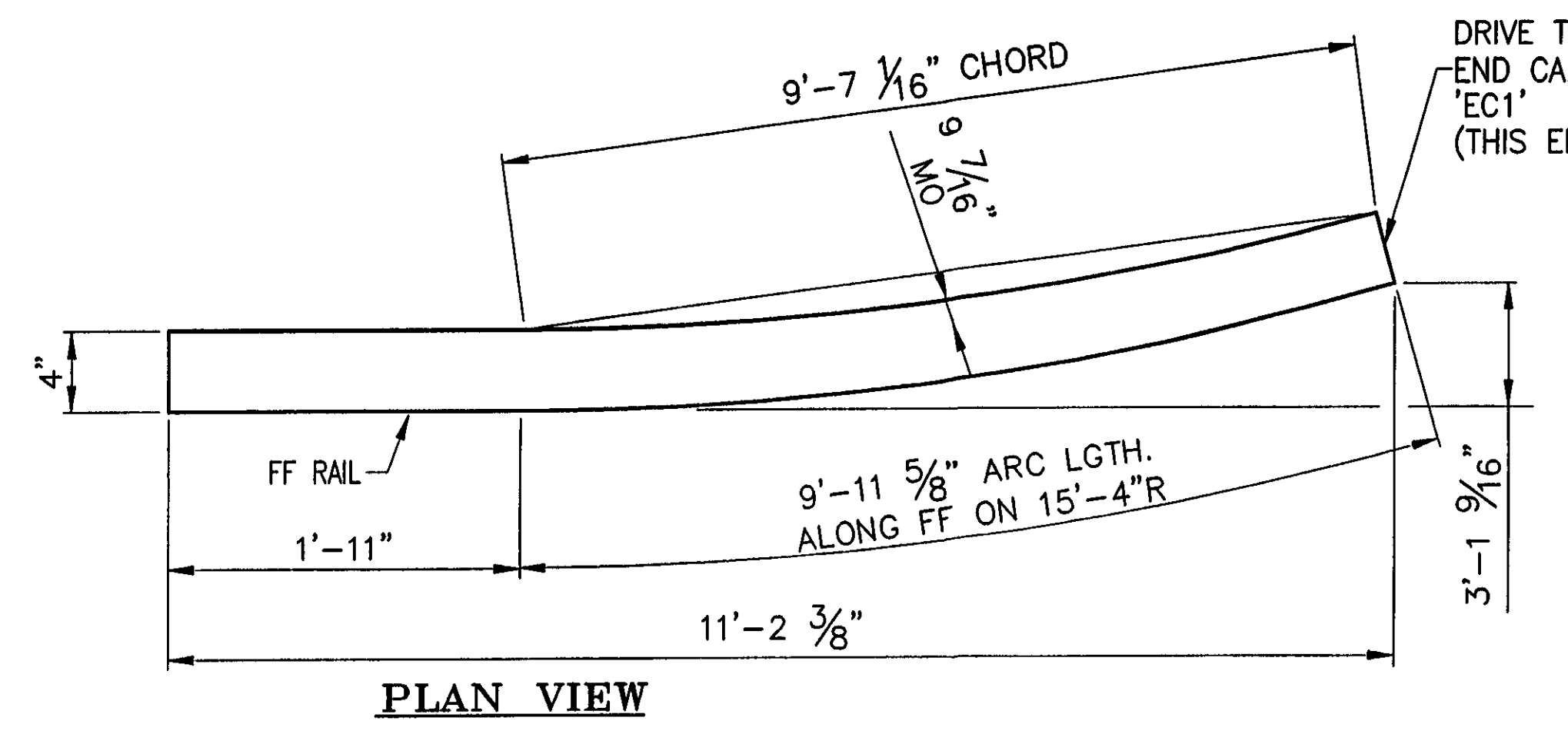
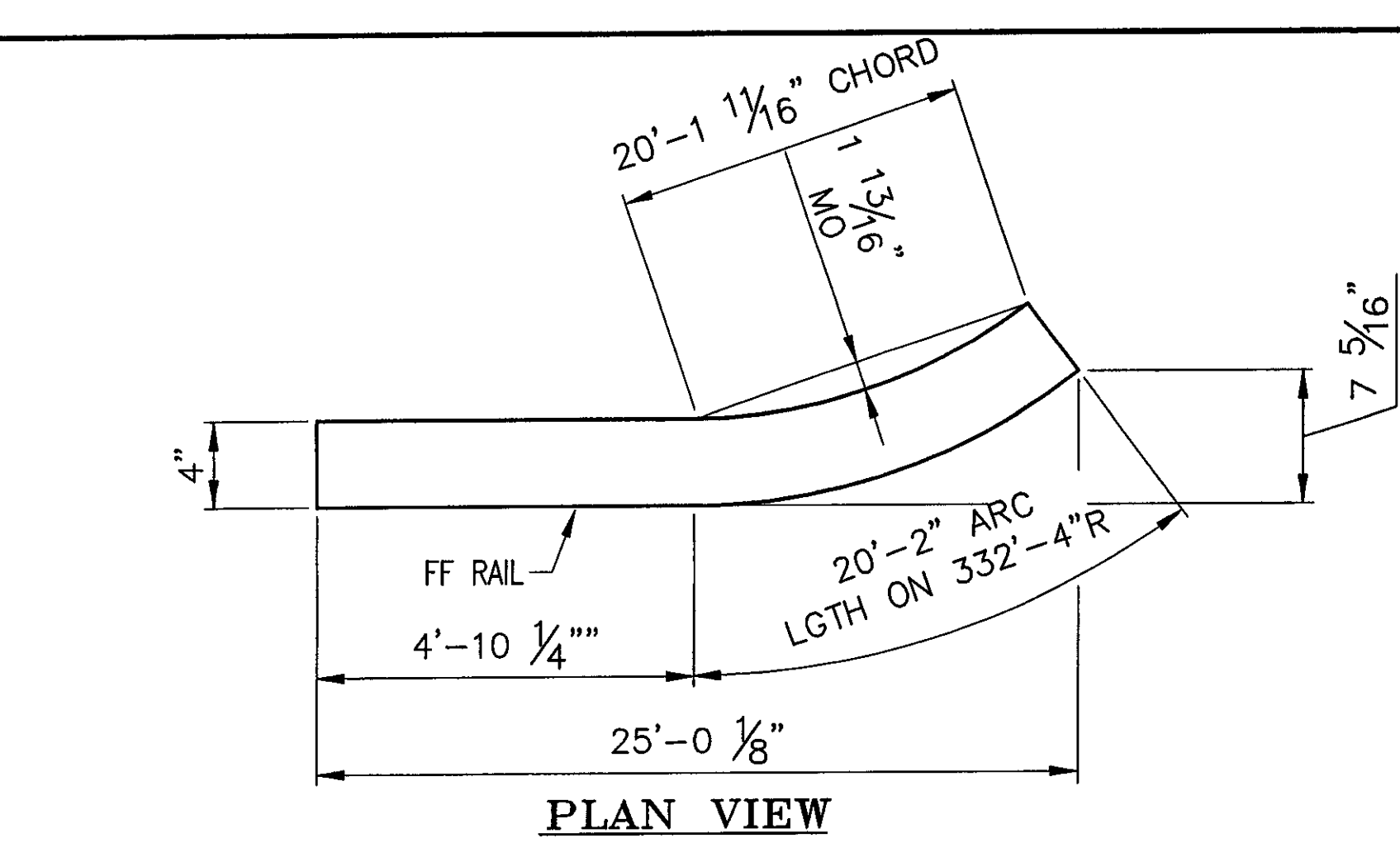
APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GIHON RIVER

OFFSET BLOCK DETAILS

MADE CMS DATE 05/23/07 JOB No ARO395 CUST No _____
CHECK BLJ DATE 06/01/07 DRAWING LB11 REV. No ONE



ANODIZED
(SEE NOTES ON LB1)

RECEIVED
CK'D BY CLD
APPROVED BY GAG
AUG 03 2007
REVISION APPROVED BY
BY KMH DATE 8/13/07

REV	DESCRIPTION	BY	DATE
1	REVISED PER APPROVAL MARKUP	BLJ	07/31/07

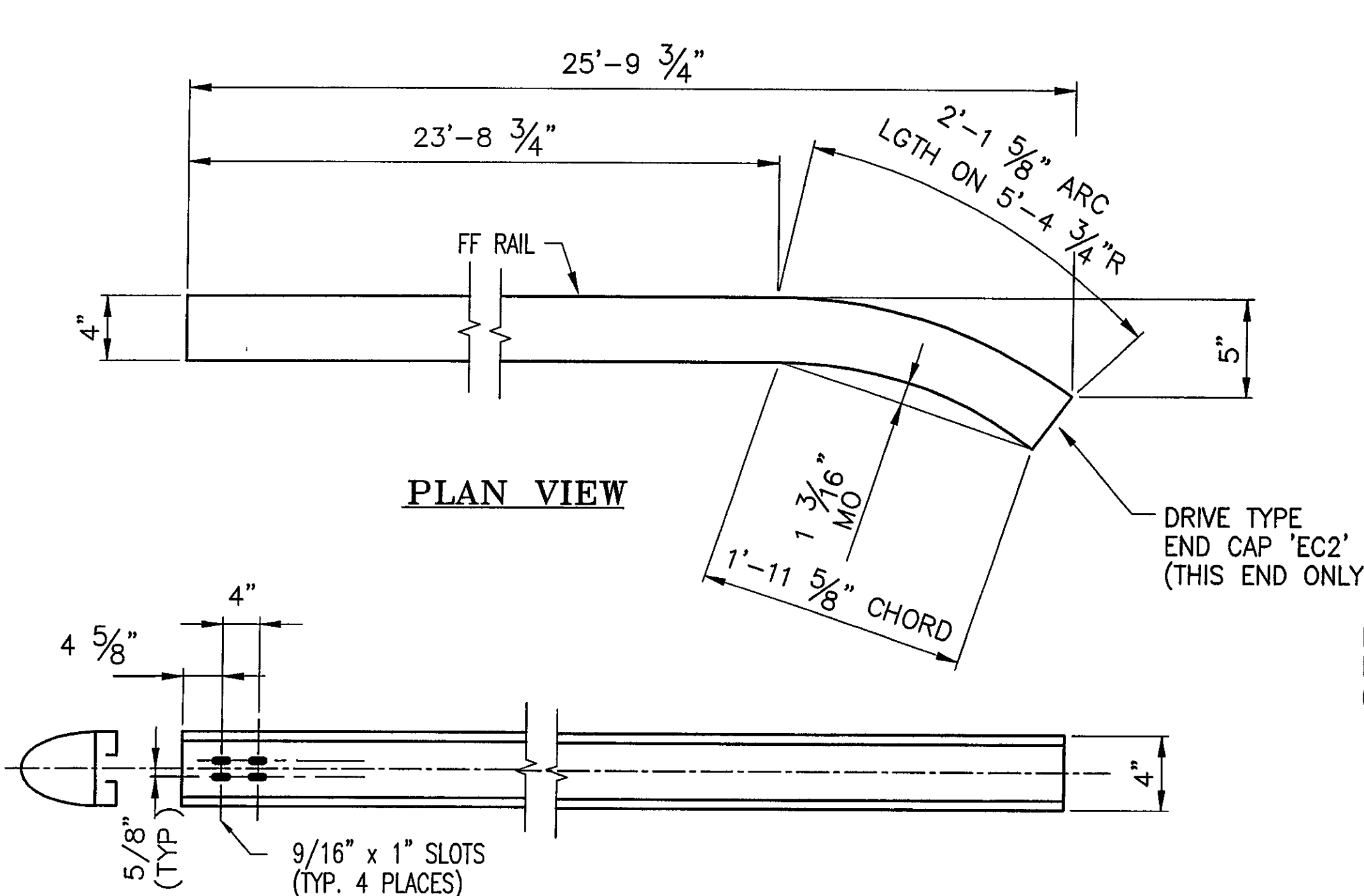
BRIDGE No. 37
PROJECT No. BRF 030-2(17)S
ITEM No: 621 74

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GHON RIVER
3L ALUMINUM APPROACH RAIL - RAIL DETAILS

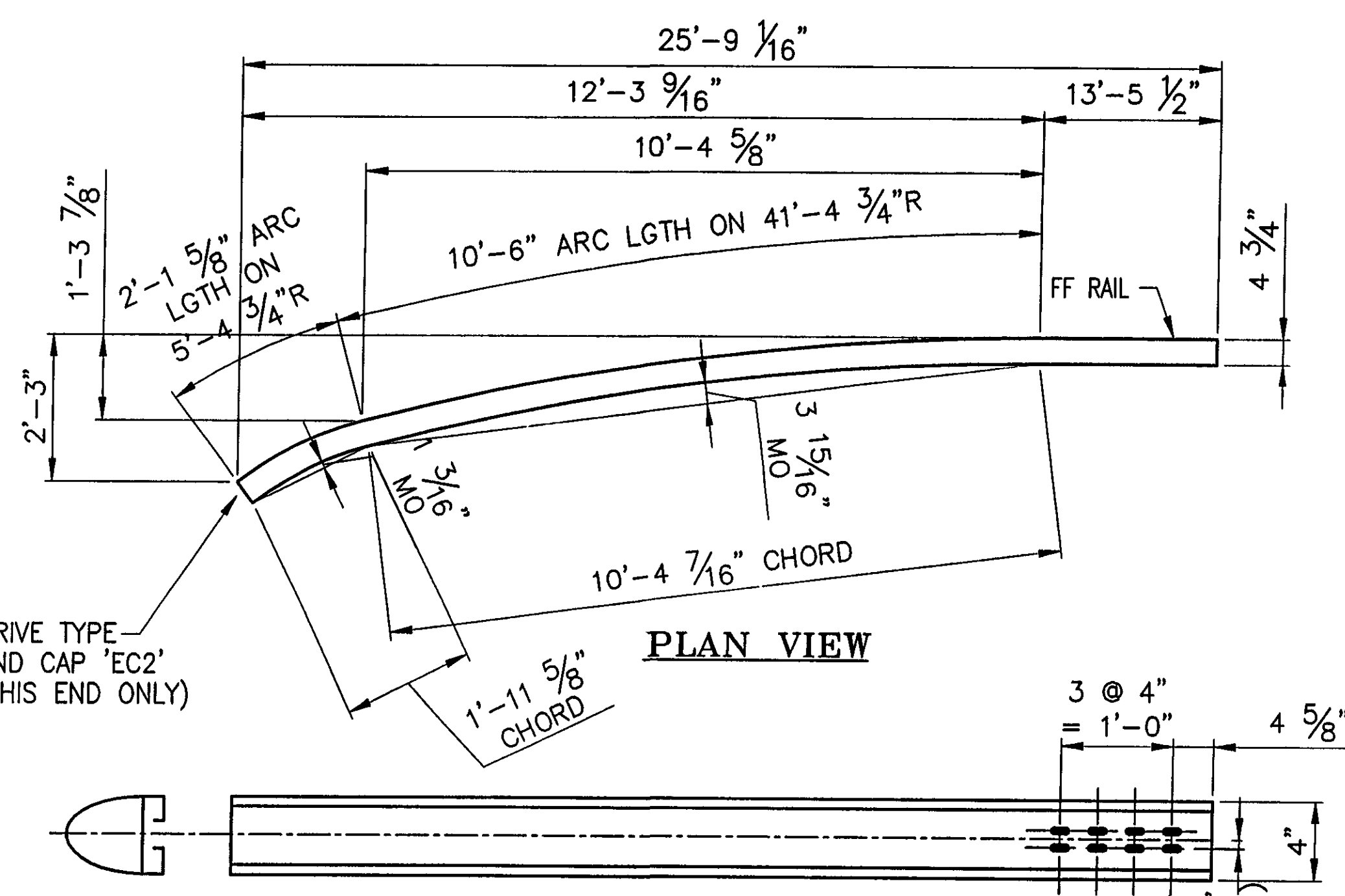
MADE CMS DATE 05/18/07 JOB No ARO395 CUST No
CHECK BLJ DATE 06/01/07 DRAWING LB12 REV. No. ONE



PLAN VIEW

2 REQ'D - BARRIER RAIL 'BA5'

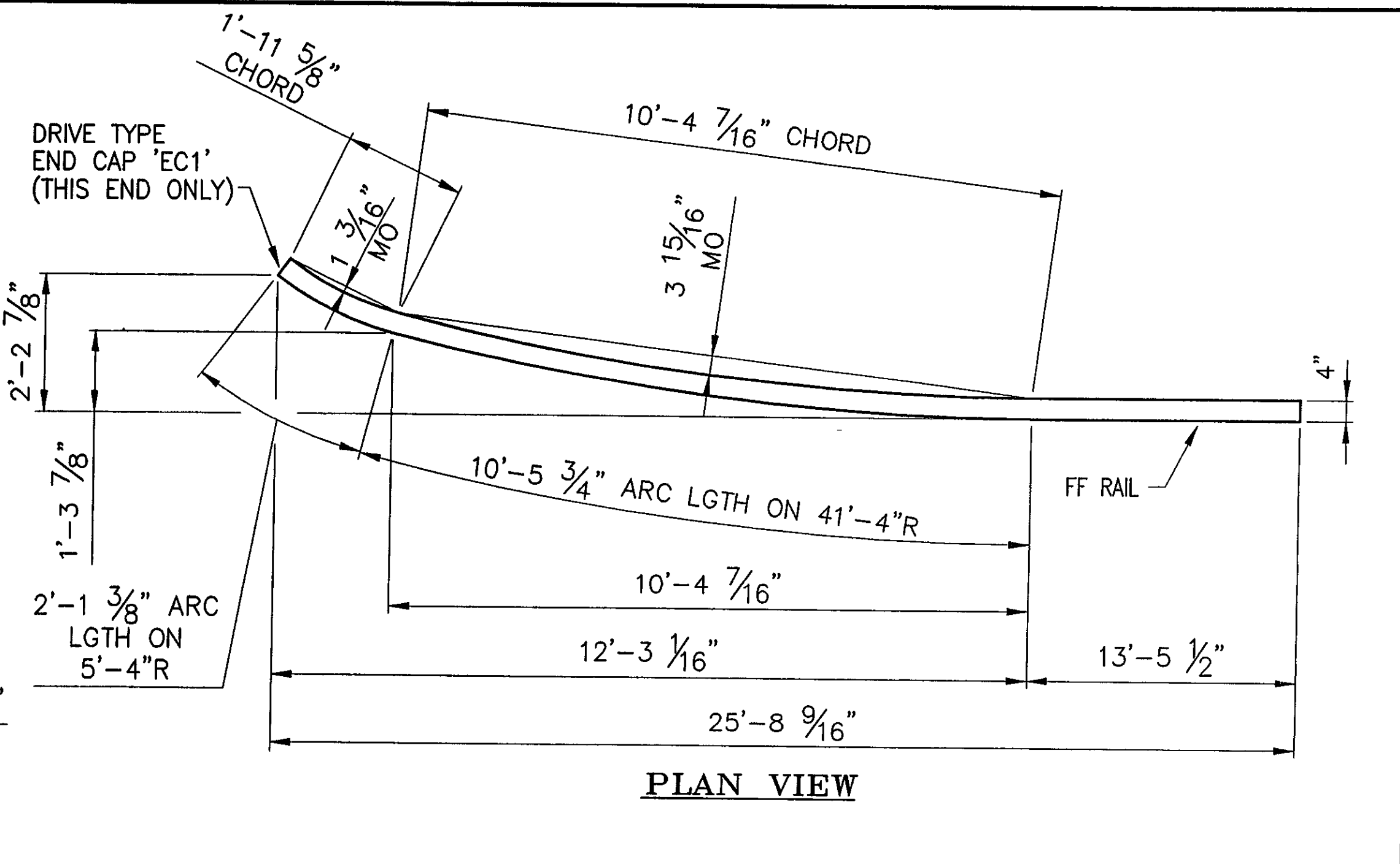
(FRT ELEVATION VIEW)
(LENGTH ALONG FF RAIL = 25'-10 3/8" + 2'-6" FOR BENDING (28'-4 3/8"))



PLAN VIEW

2 REQ'D - BARRIER 'BA7'

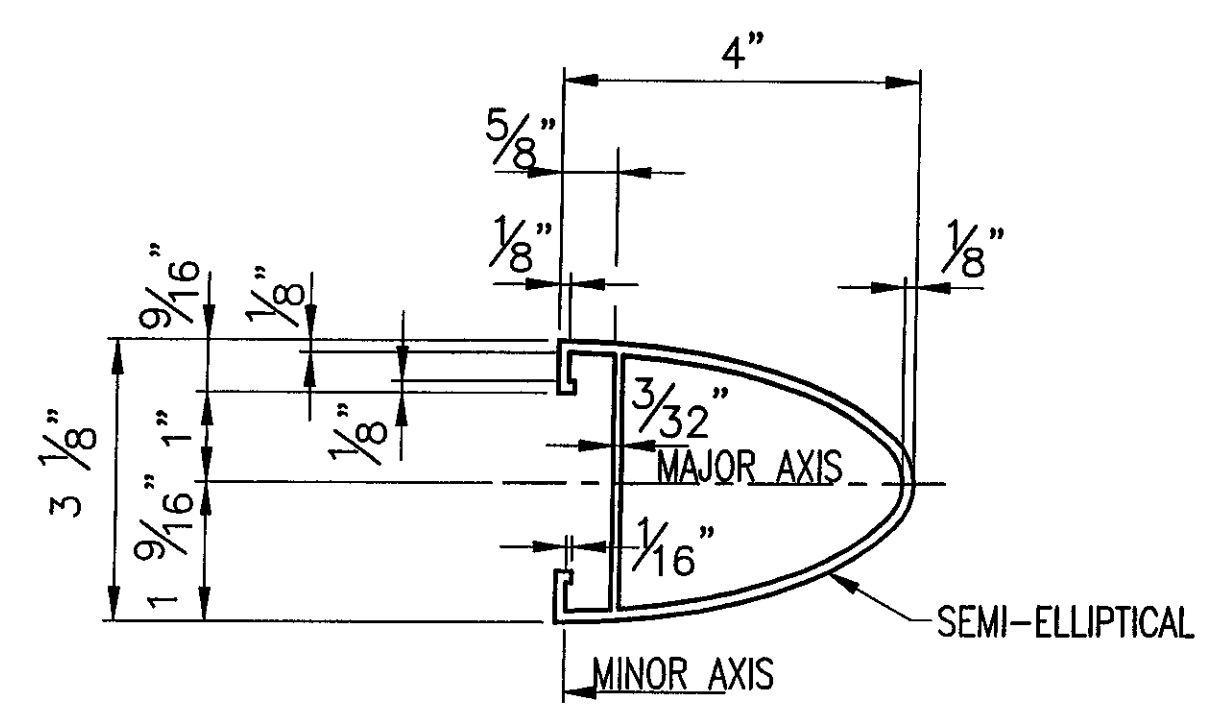
(BACK ELEVATION VIEW)
(LENGTH ALONG FF RAIL = 26'-1 1/8" + 5'-0" FOR BENDING (31'-1 1/8"))



PLAN VIEW

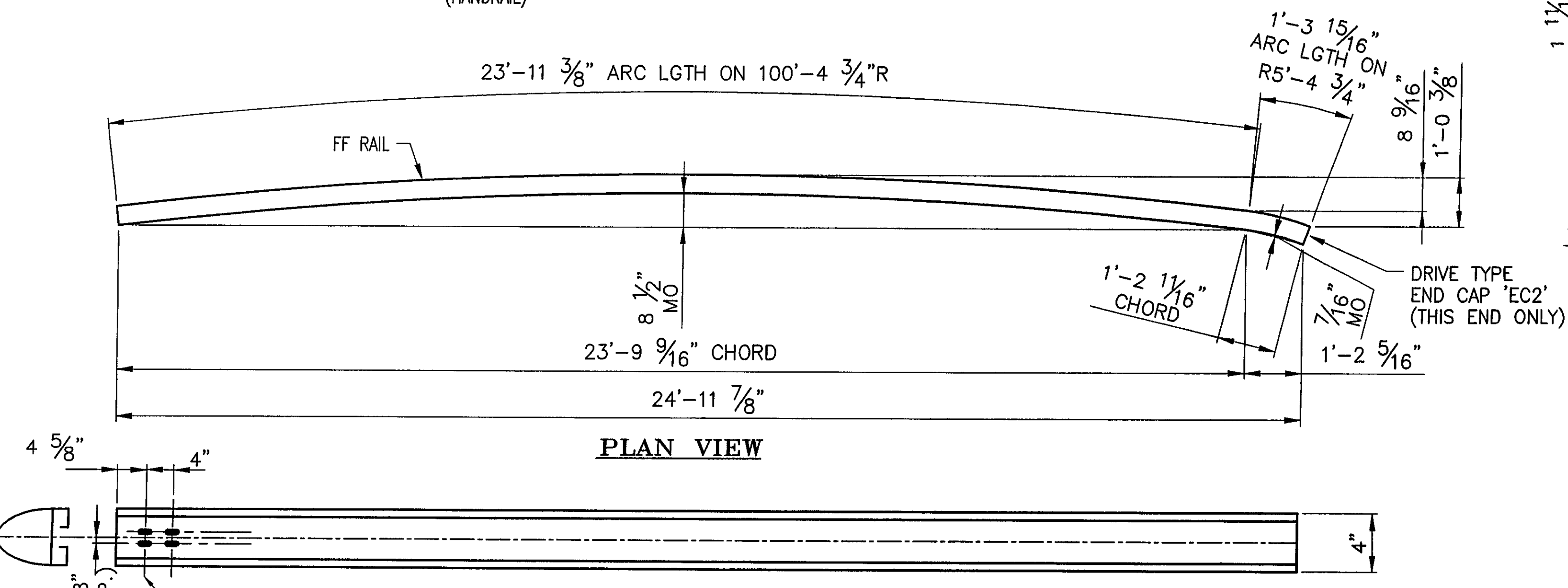
ONE REQ'D - HANDRAIL 'TA7'

(FRT ELEVATION VIEW)
(LENGTH ALONG FF RAIL = 26'-0 5/8" + 2'-6" FOR BENDING (28'-6 5/8"))



TYPICAL SECTION (HANDRAIL)

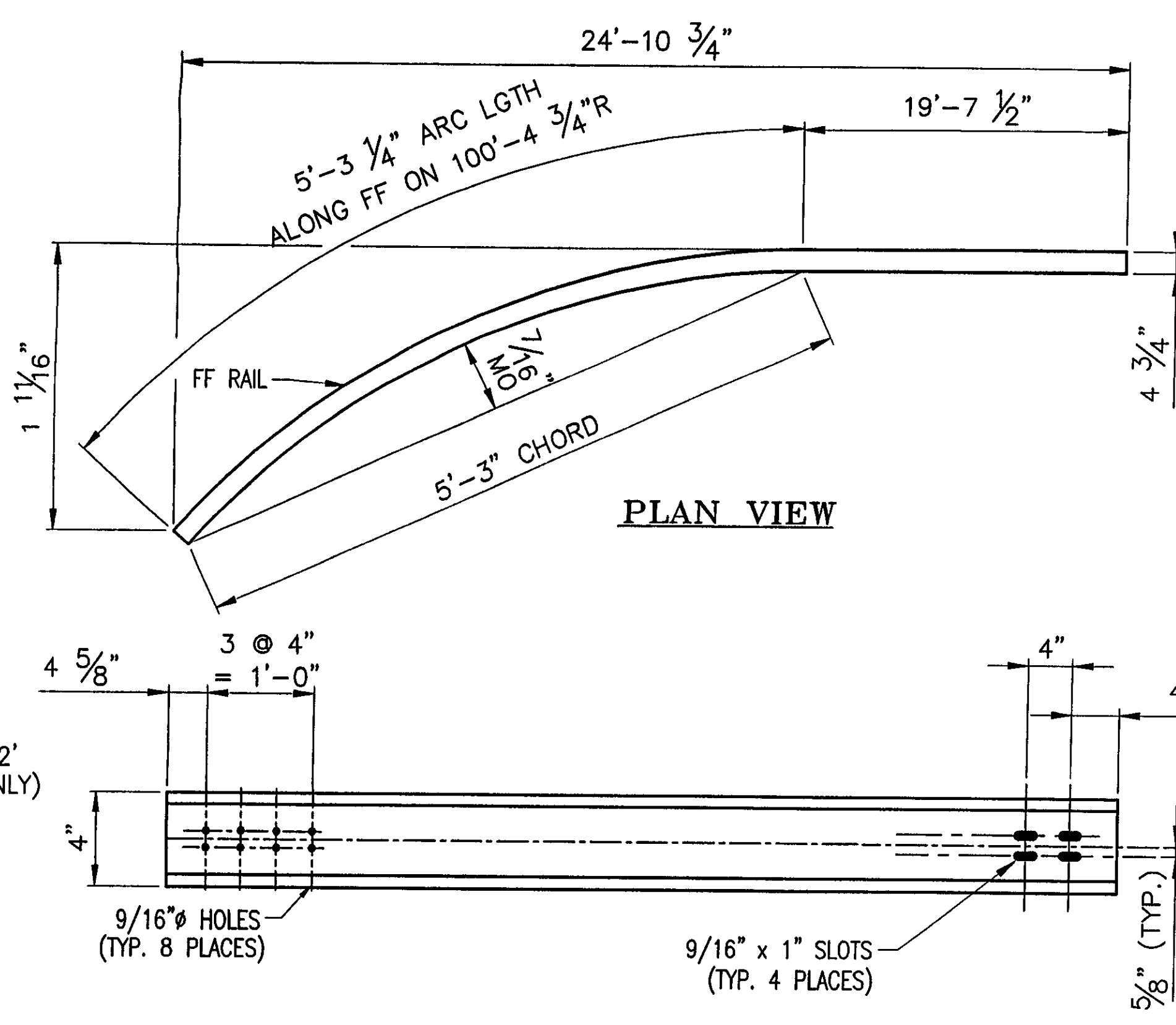
ANODIZED
(SEE NOTES ON LB1)



PLAN VIEW

2 REQ'D - BARRIER RAIL 'BA6'

(BACK ELEVATION VIEW)
(LENGTH ALONG FF RAIL = 25'-3 5/16" + 5'-0" FOR BENDING (30'-3 5/16"))



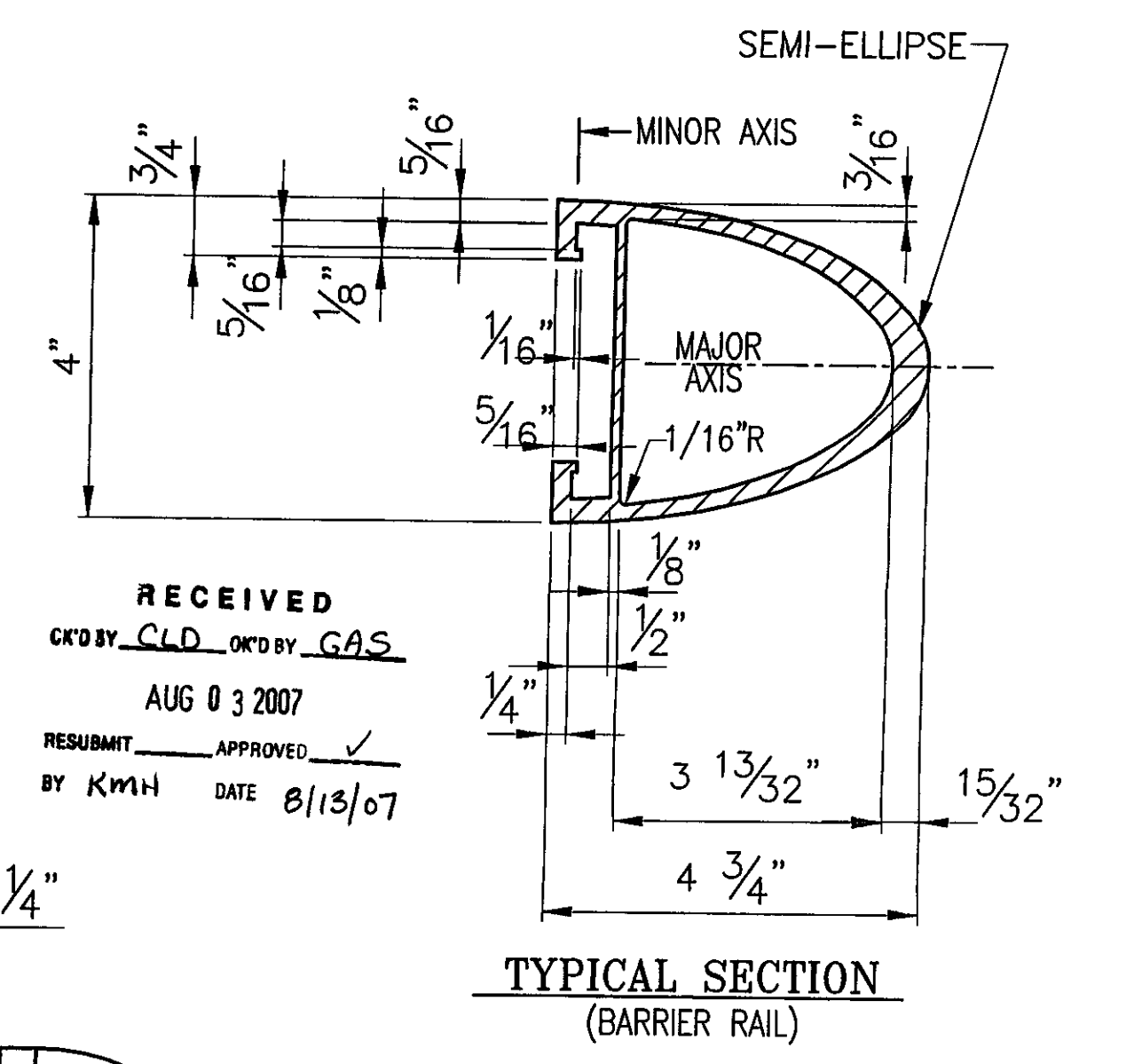
PLAN VIEW

ONE REQ'D - BARRIER RAIL 'MR2'

(BACK ELEVATION VIEW)(LENGTH ALONG FF RAIL = 24'-10 3/4" + 2'-6" (27'-4 3/4"))

ONE REQ'D - BARRIER RAIL 'BR2'

(BACK ELEVATION VIEW)(LENGTH ALONG FF RAIL = 24'-10 3/4" + 2'-6" (27'-4 3/4"))



TYPICAL SECTION (BARRIER RAIL)

RECEIVED
C'D BY CLD OK'D BY CAS
AUG 03 2007
RESUBMIT APPROVED
BY KMH DATE 8/13/07

BRIDGE No. 37
PROJECT No. BRF 030-2(17)S
ITEM No. 621.74

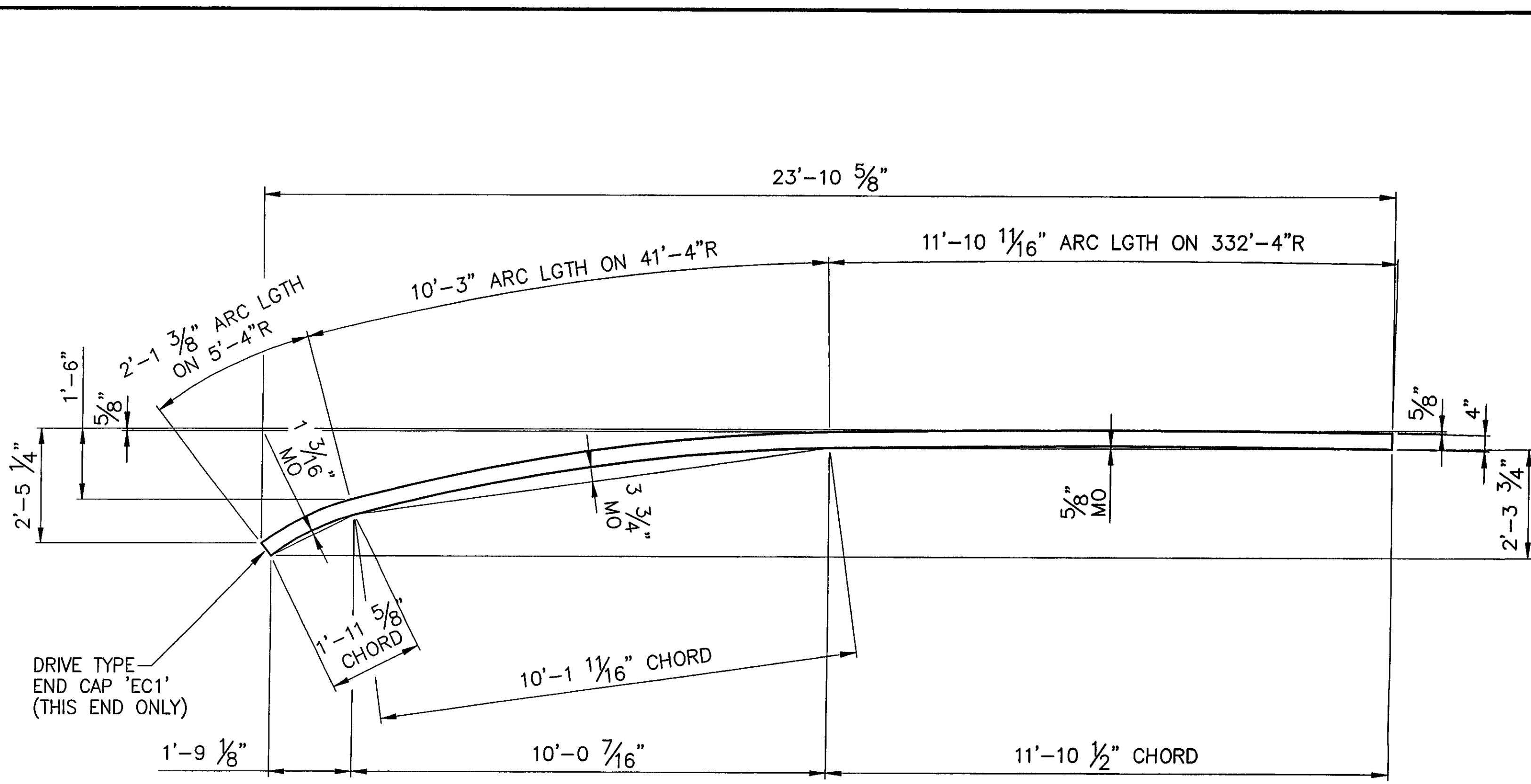
APPROVED: _____ REC'D APPROVAL _____
DRAWING

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

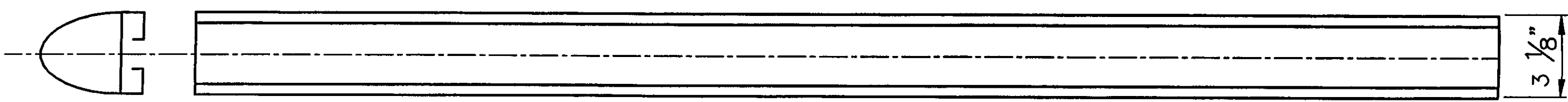
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GHON RIVER
3L ALUMINUM APPROACH RAIL - RAIL DETAILS

1	REVISED PER RAMP NE ELEV CHANGES	CMS	08 01 07
REV	DESCRIPTION	BY	DATE

MADE CMS DATE 05/24/07 JOB No ARO395 CUST No
CHECK BLJ DATE 06/01/07 DRAWING LB13 REV. No. ONE

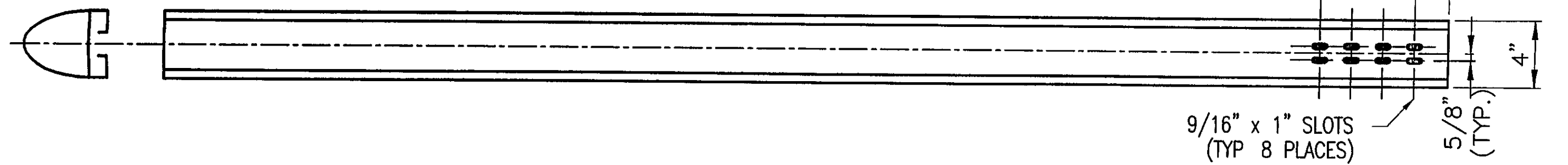
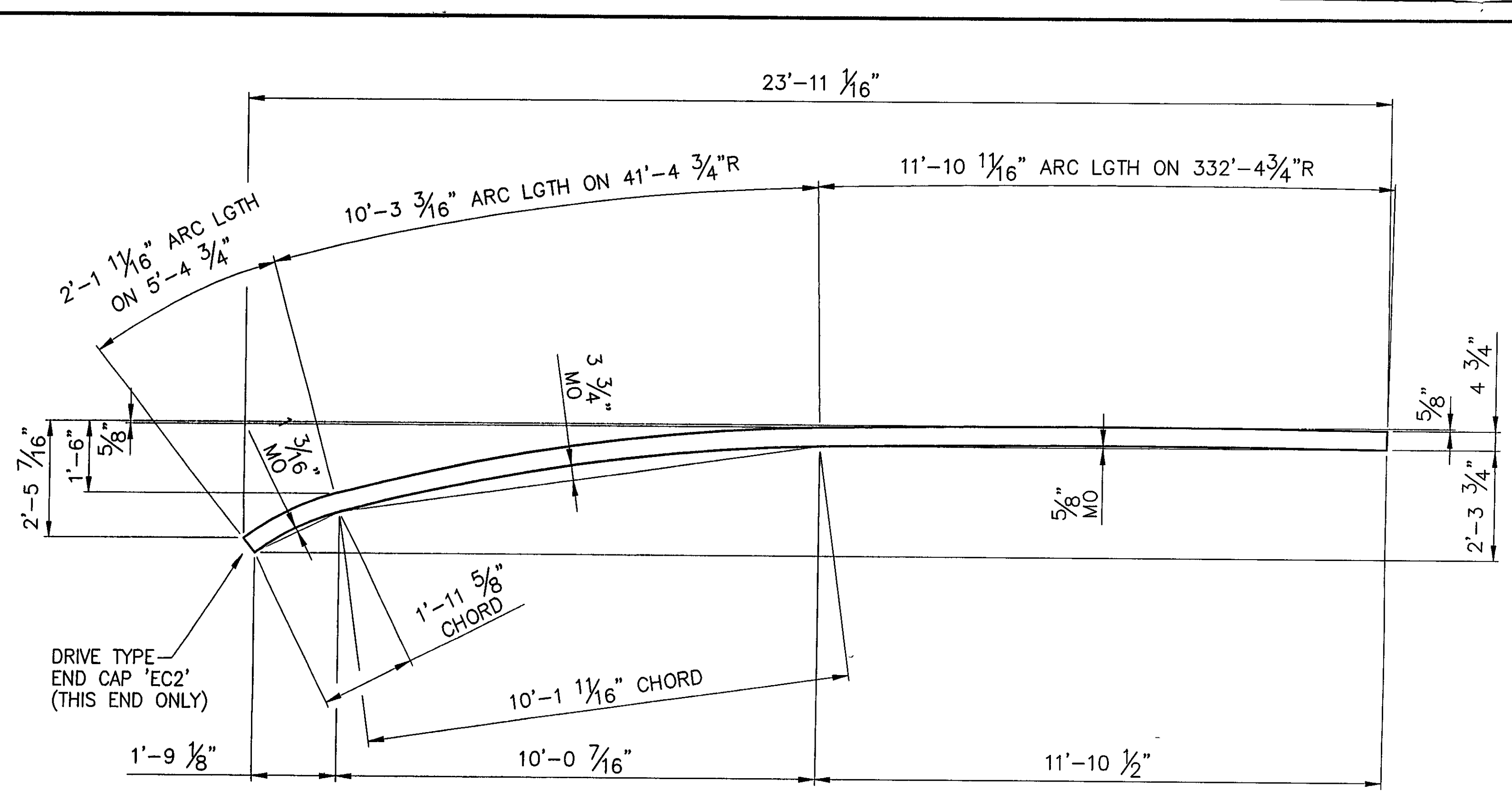


PLAN VIEW



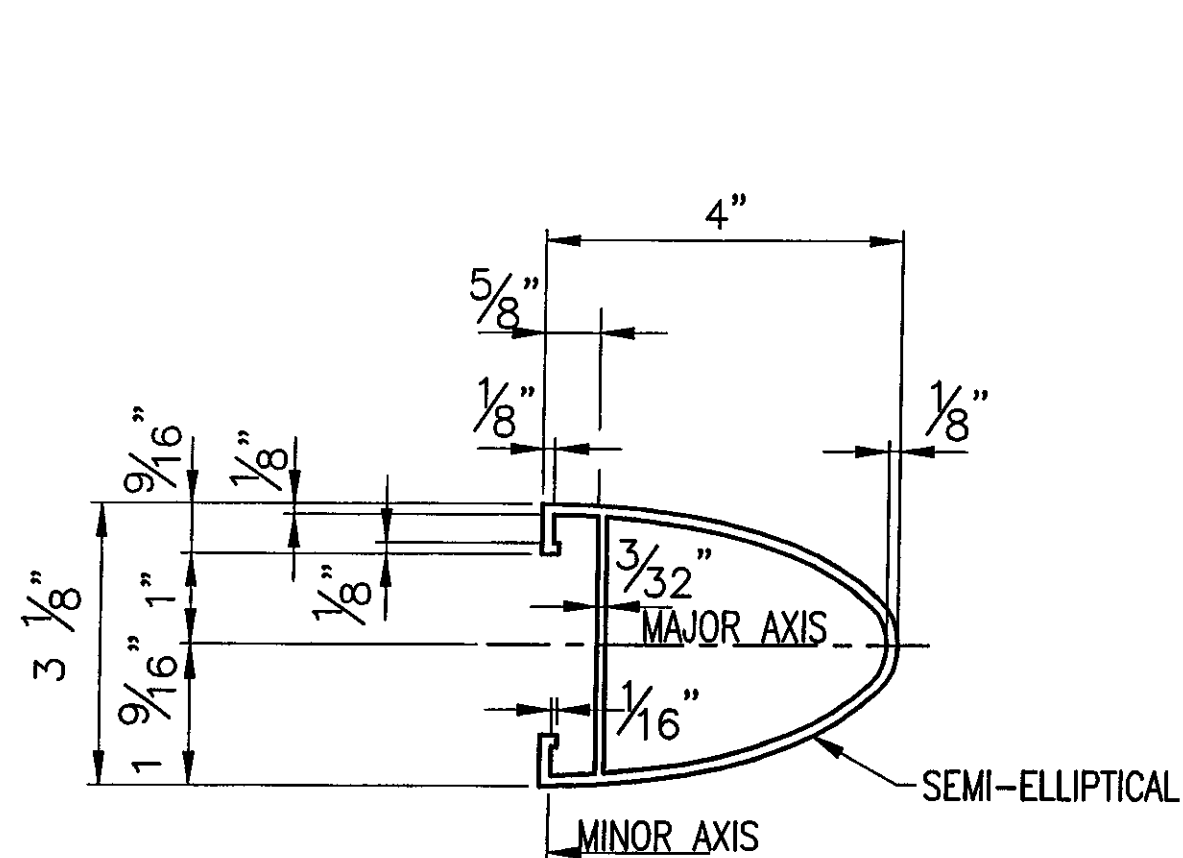
ONE REQ'D - HANDRAIL 'TA10'

(BACK ELEVATION VIEW)
(LENGTH ALONG FF RAIL = 24'-3 3/16" + 5'-0" FOR BENDING (29'-3 3/16"))

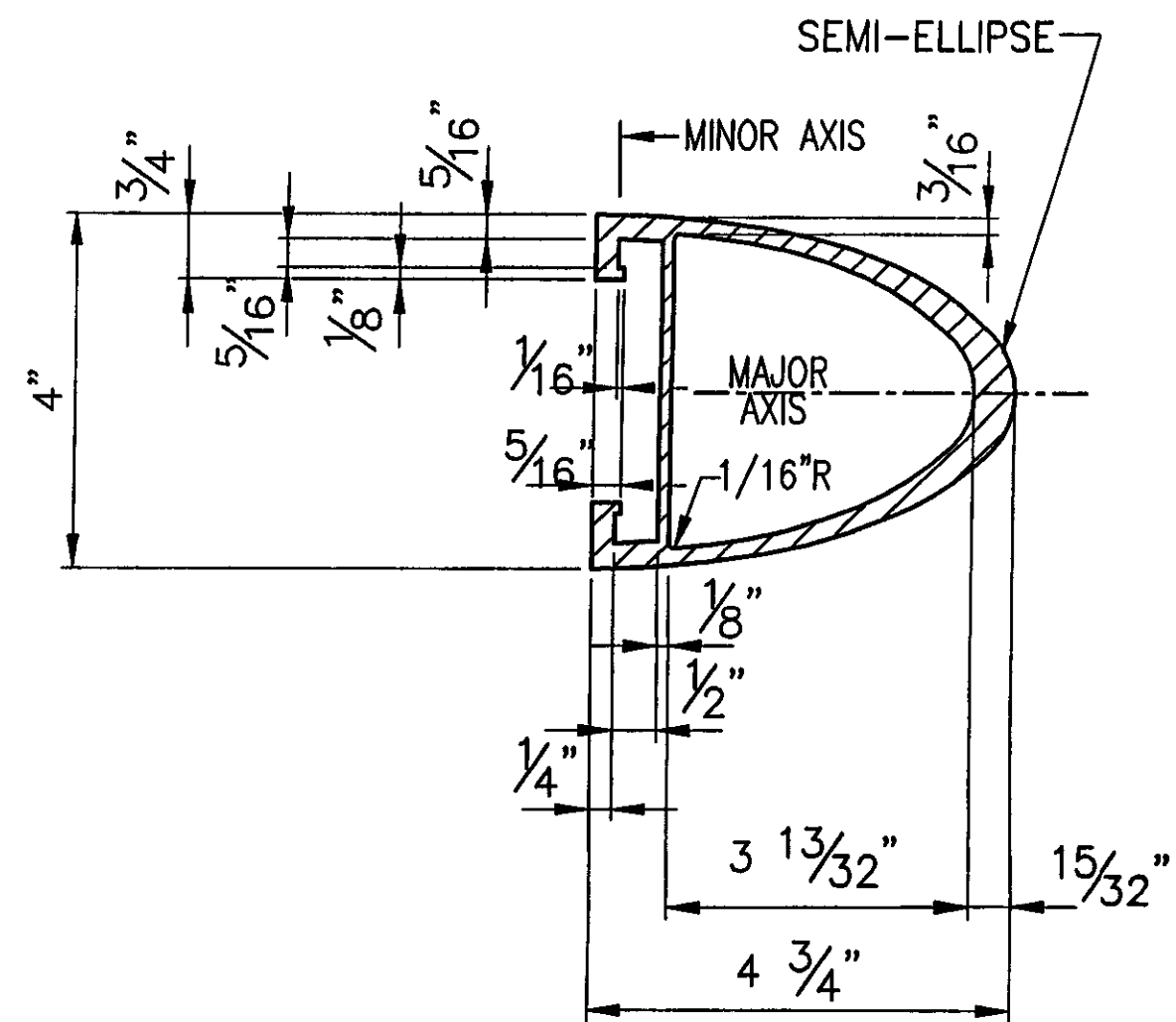


2 REQ'D - BARRIER RAIL 'BA10'

(BACK ELEVATION VIEW)
(LENGTH ALONG FF RAIL = 24'-3 9/16" + 5'-0" FOR BENDING (29'-3 9/16"))



TYPICAL SECTION
(HANDRAIL)



TYPICAL SECTION
(BARRIER RAIL)

ANODIZED
(SEE NOTES ON LB1)

RECEIVED
CK'D BY CLO OK'D BY GAS
AUG 03 2007
RESUBMIT _____ APPROVED _____
BY KMH DATE 8/13/07

BRIDGE No 37
PROJECT No BRF 030-2(17)S
ITEM No. 621 74

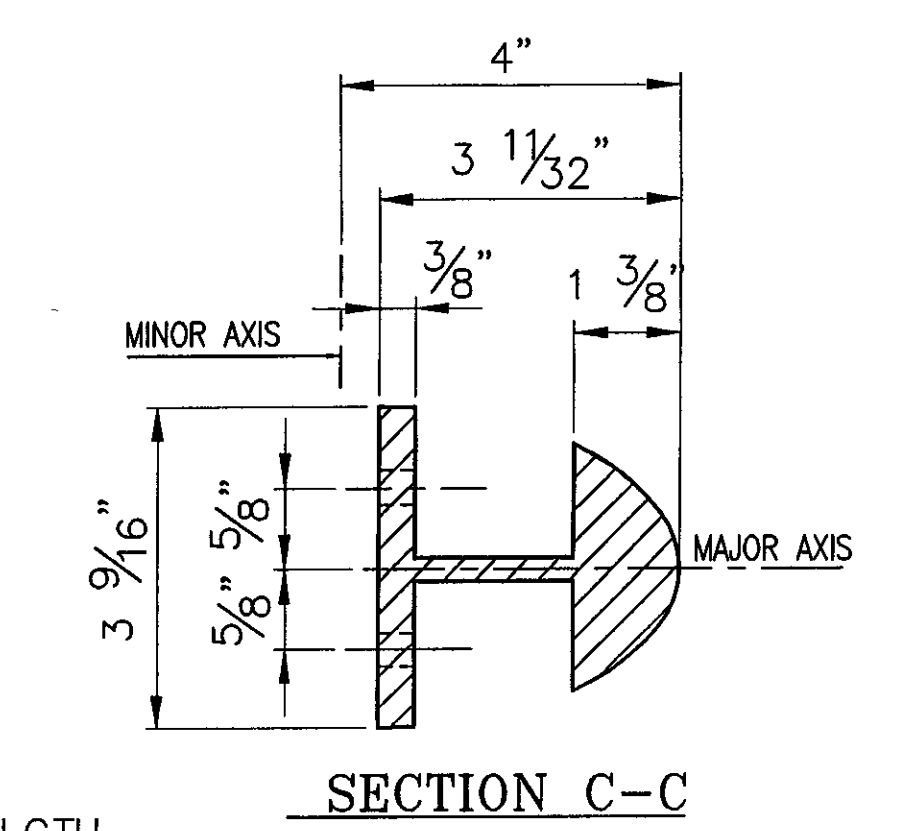
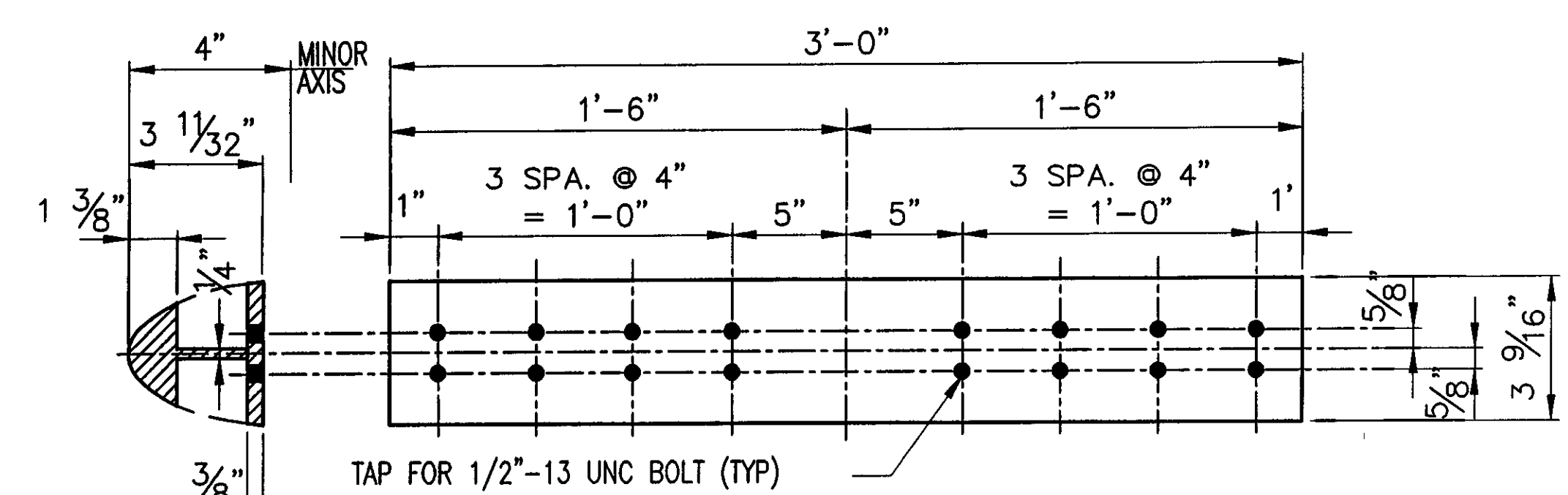
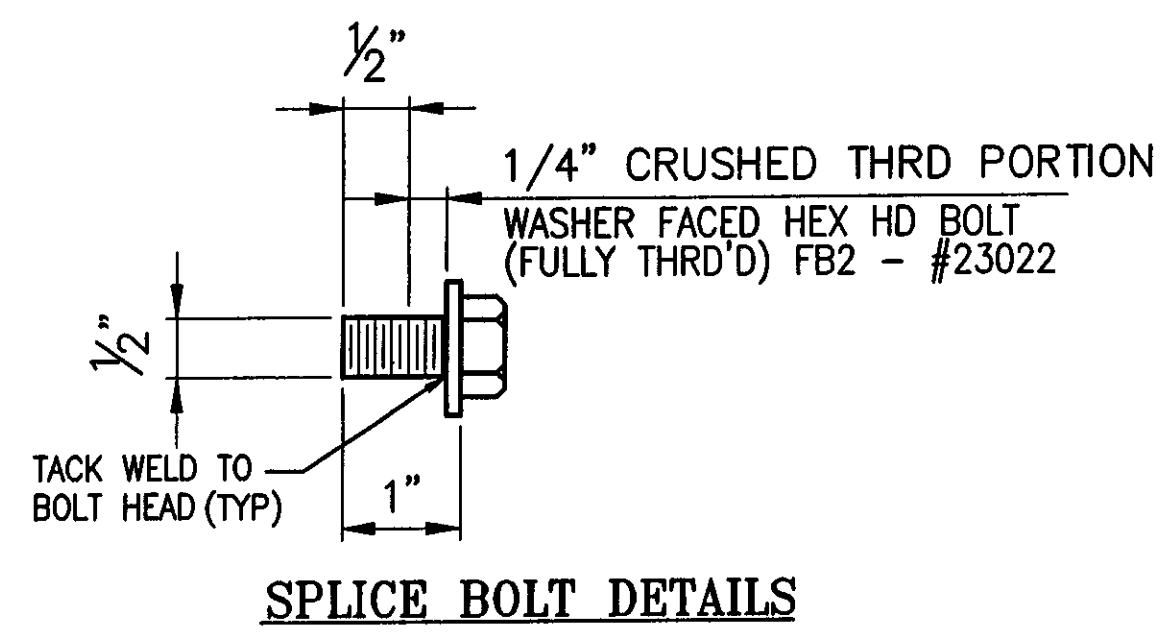
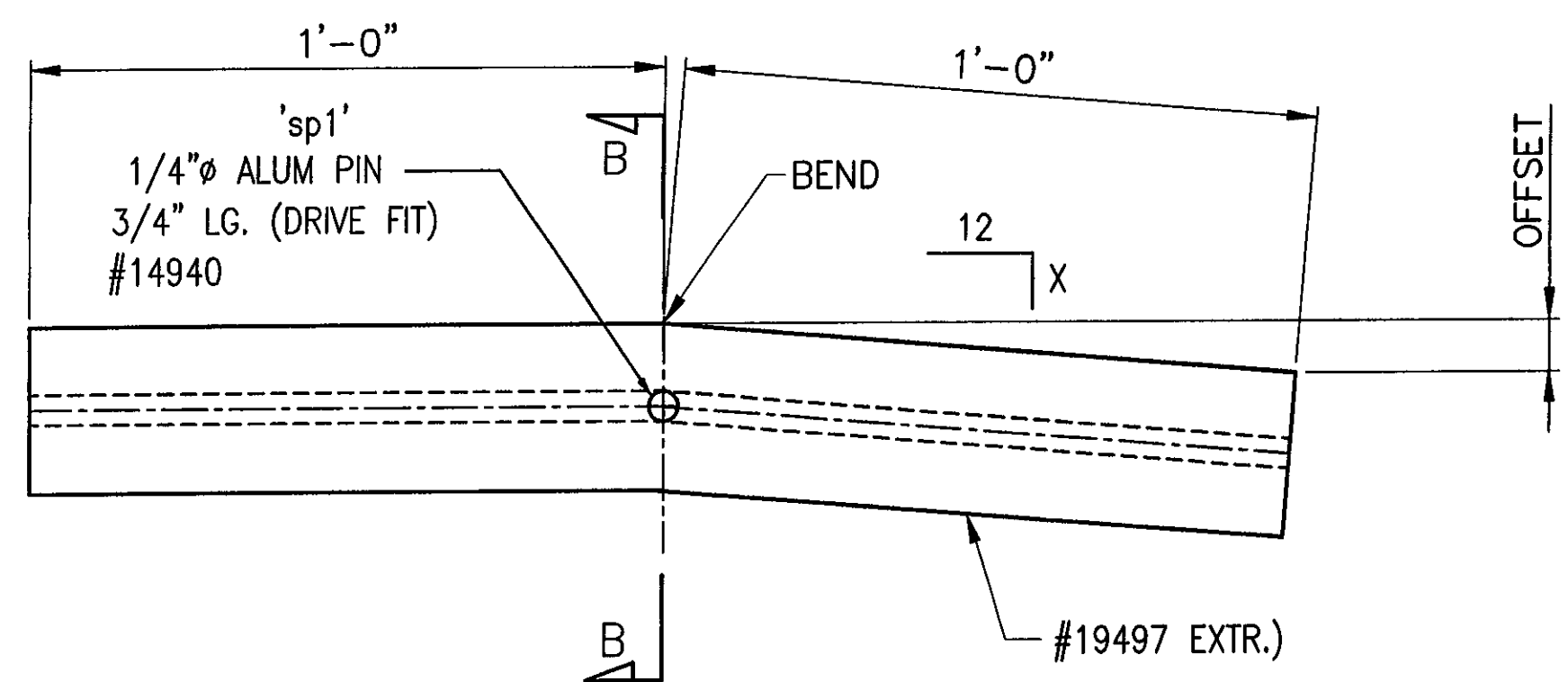
APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

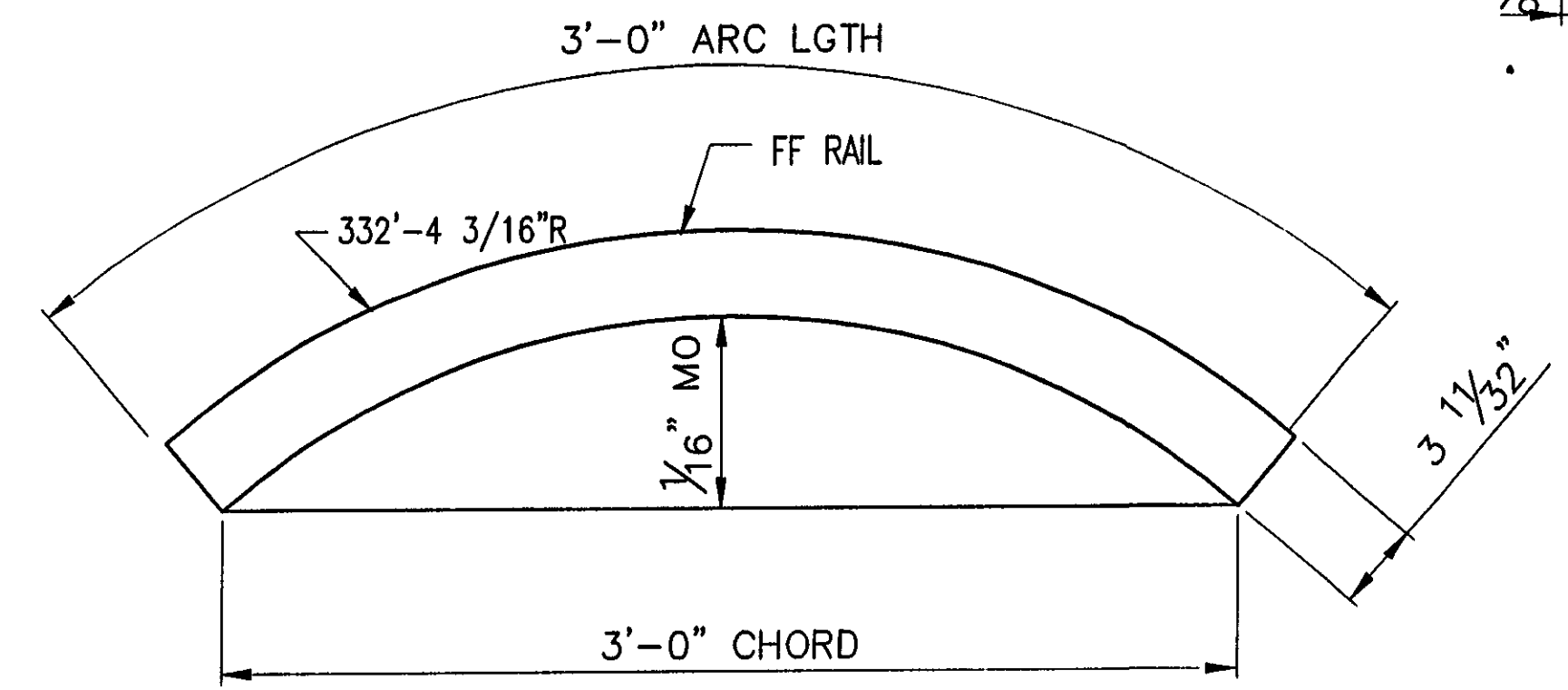
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GHON RIVER
3L ALUMINUM APPROACH RAIL - RAIL DETAILS

MADE CMS DATE 05/24/07 JOB No AR0395 CUST No _____
CHECK BLJ DATE 06/01/07 DRAWING LB14 REV. No. _____

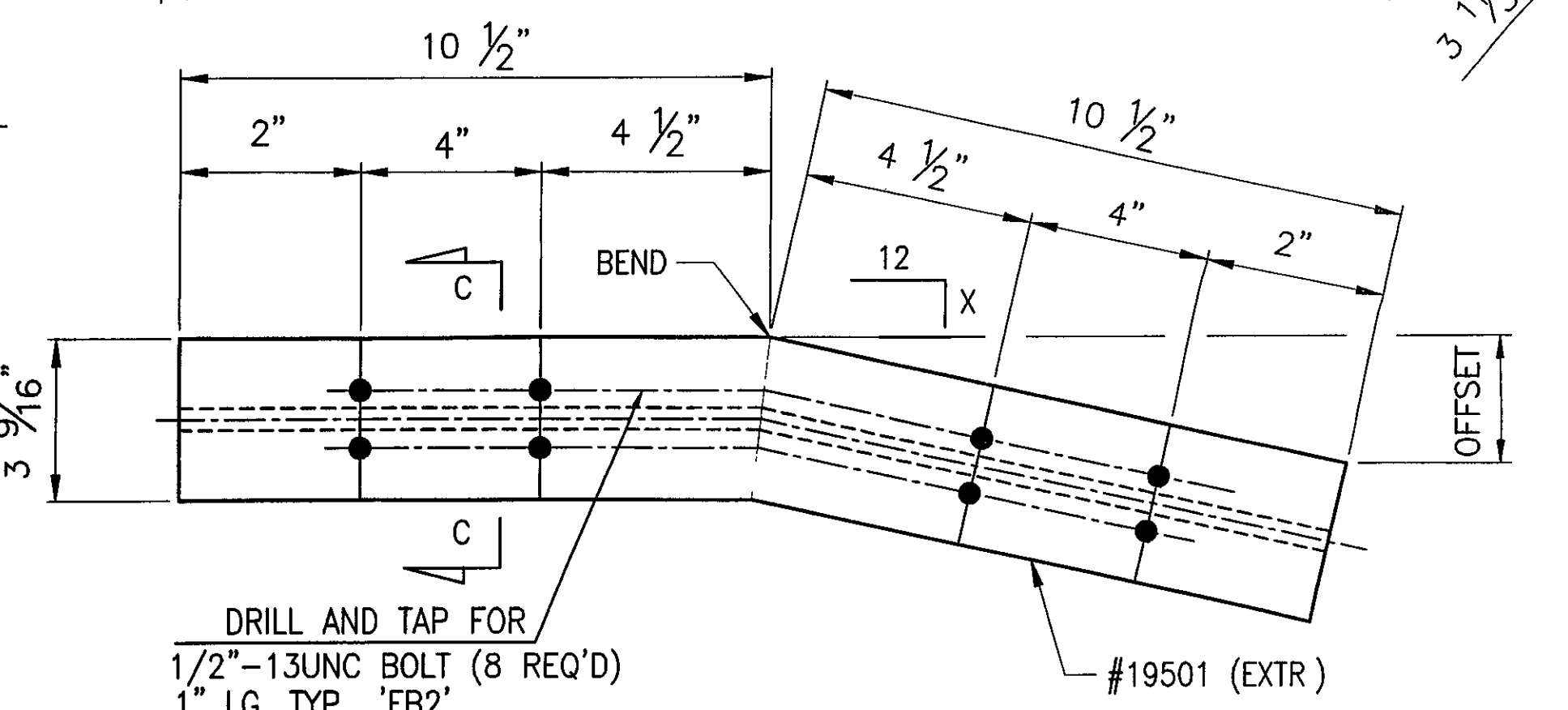
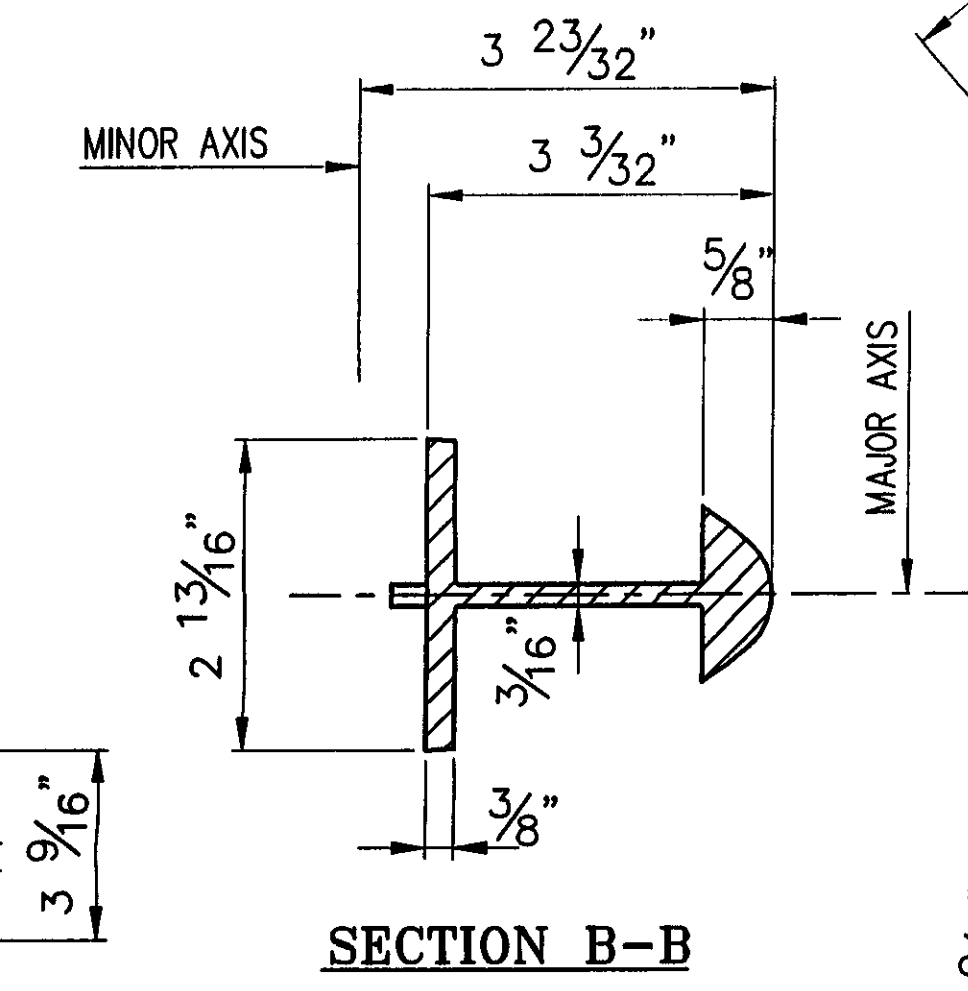
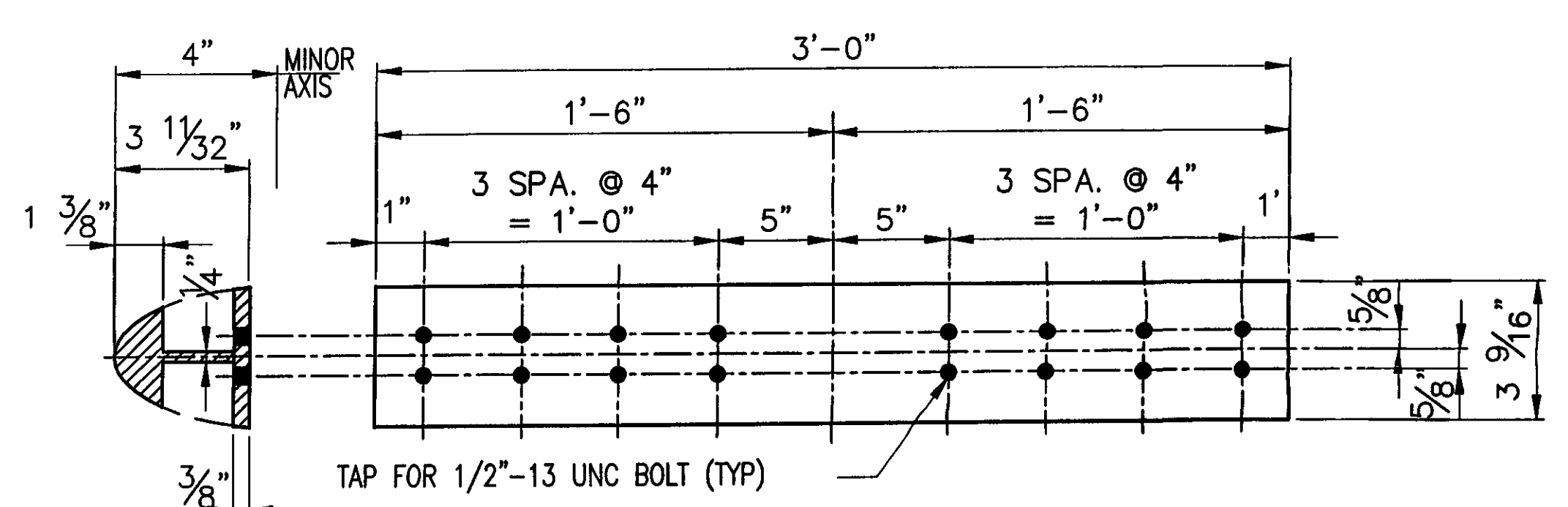
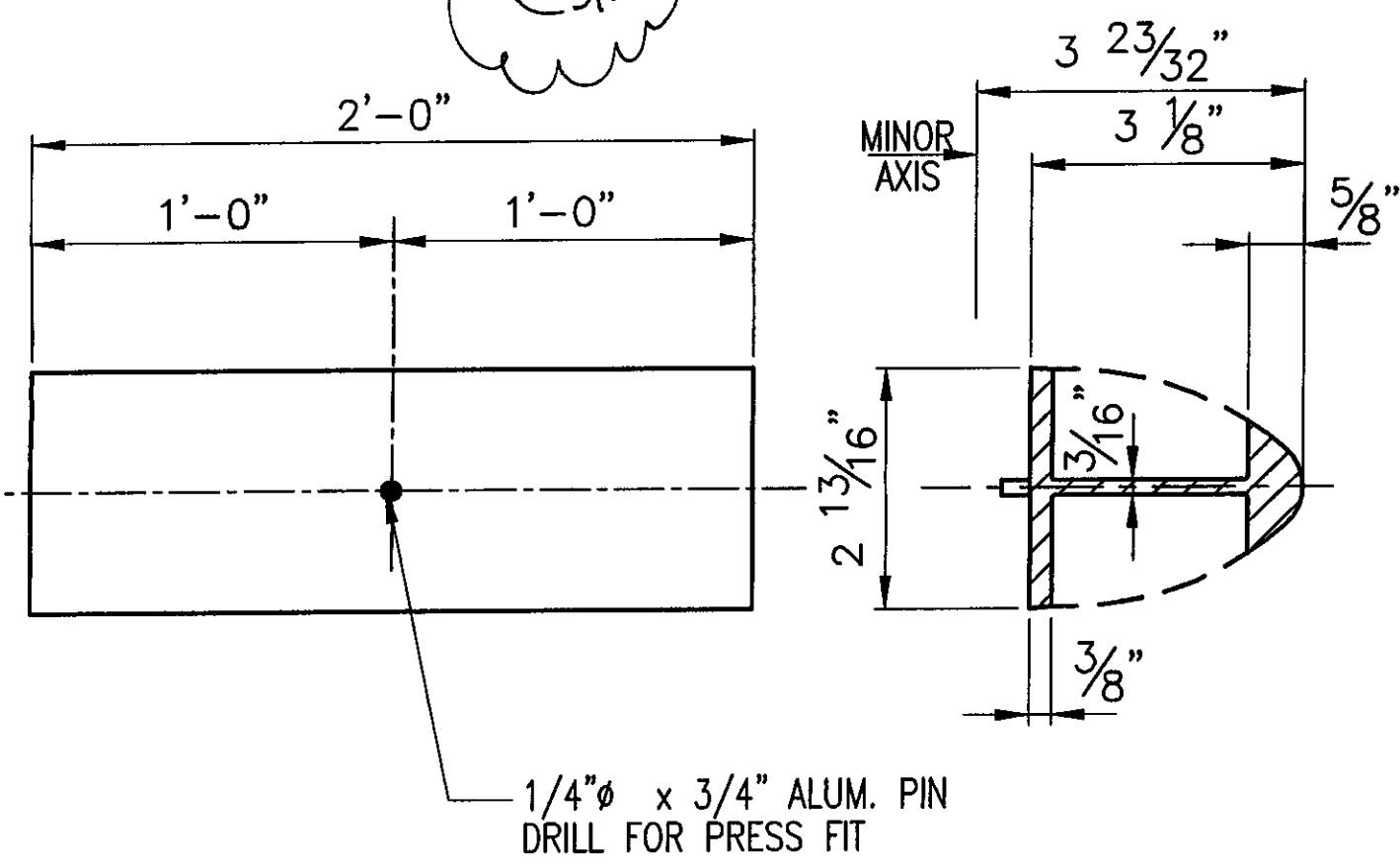
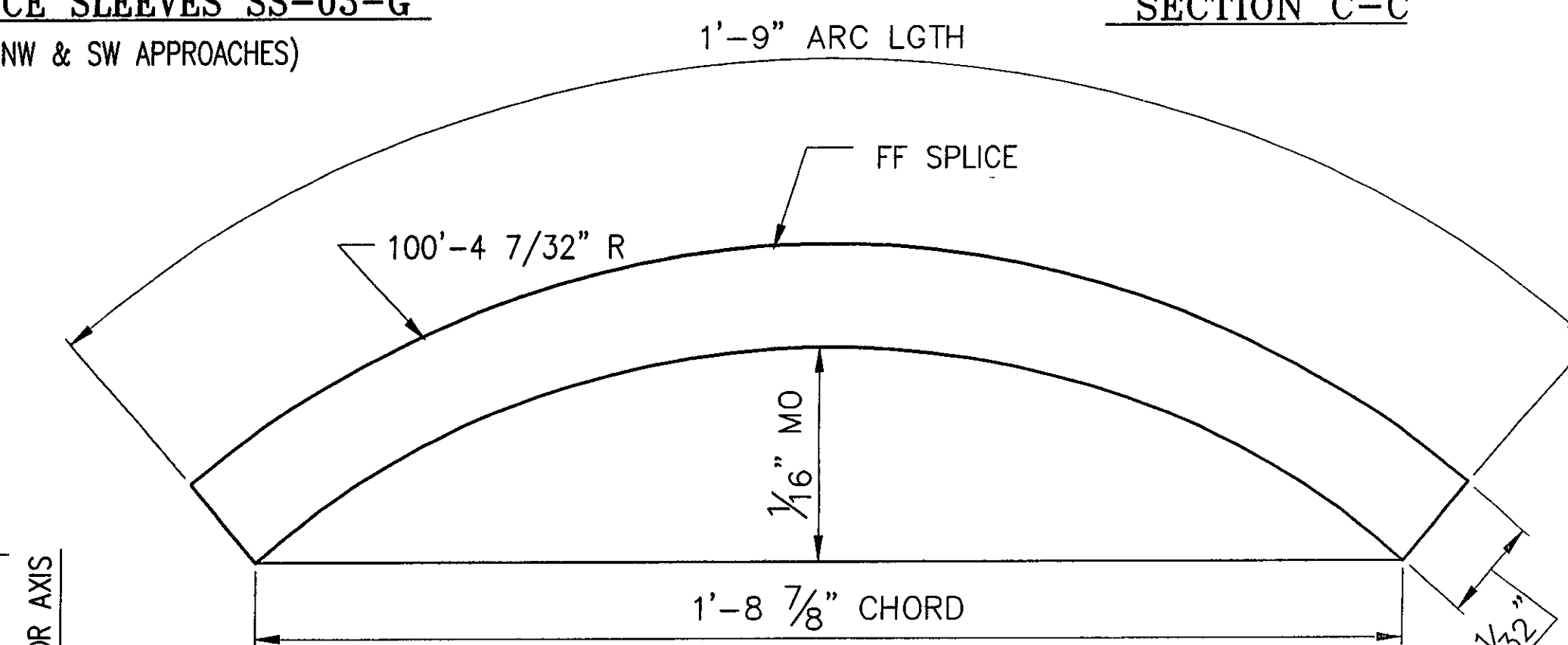
REV	DESCRIPTION	BY	DATE



HANDRAIL SPLICES				
MK.	X	QTY.	OFFSET	LOCATION
SS-12-A1	5/8"	1	5/8"	SE APPROACH
SS-12-A2	1"	1	1"	NE APPROACH



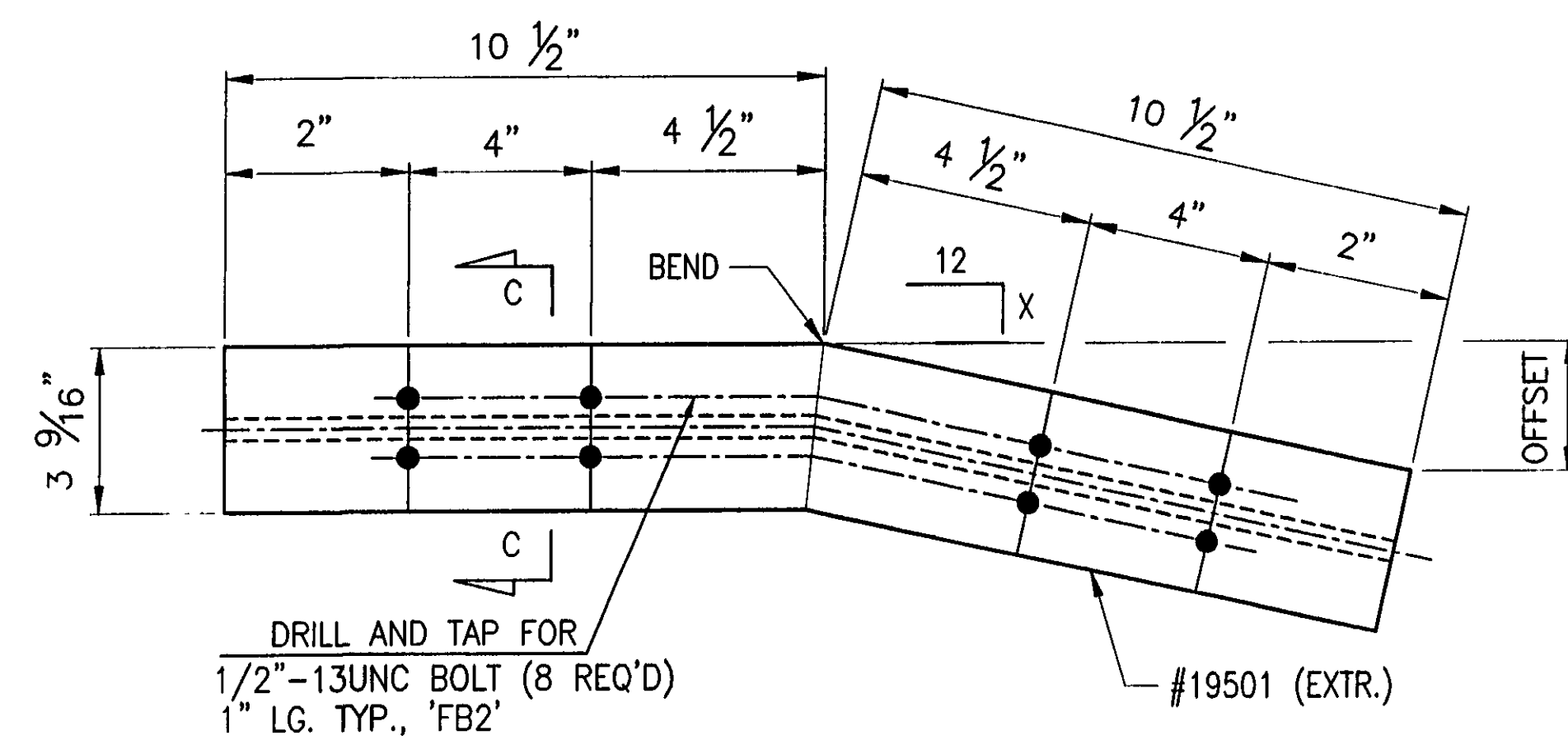
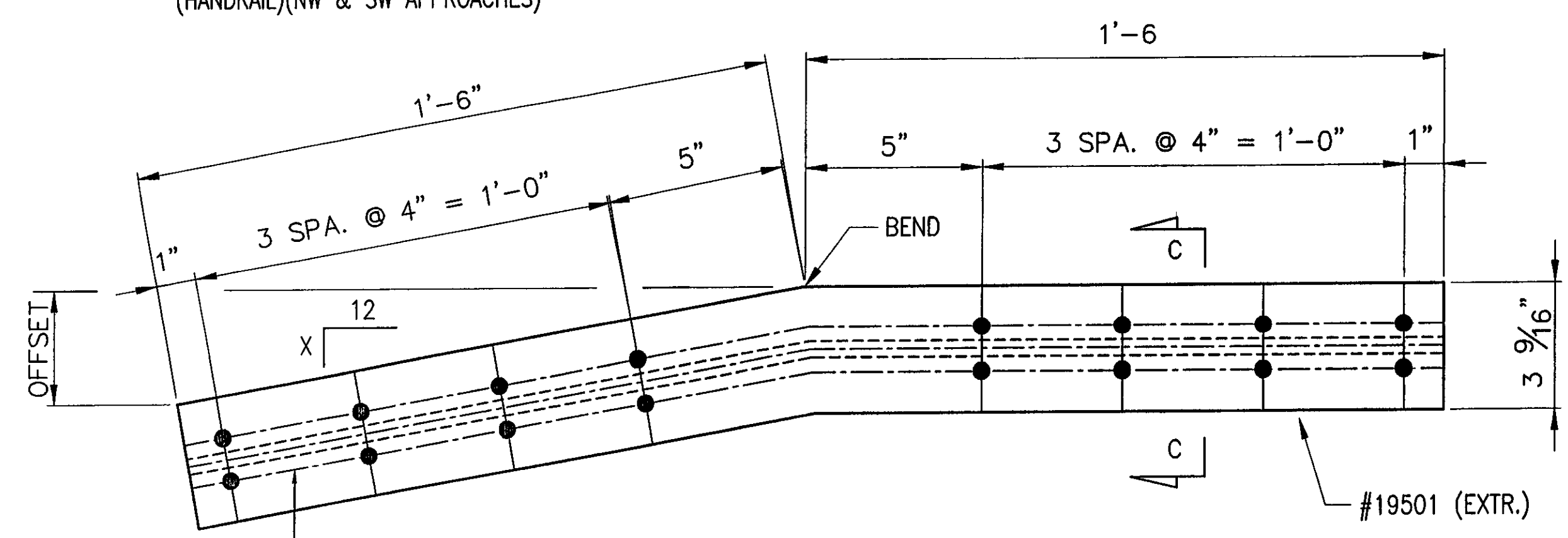
12 ~ REQ'D SPLICE SLEEVES SS-03-G
(BARRIER RAIL)(NW & SW APPROACHES)



7 ~ REQ'D SPLICE SLEEVES SS-12-A
(HANDRAIL)(NW & SW APPROACHES)

2 ~ REQ'D BENT SPLICE SLEEVES SS-03-G8
(BARRIER RAIL)(SW APPROACH)

BARRIER RAIL SPLICES				
MK.	X	QTY.	OFFSET	LOCATION
SS-03-H3	1/8"	1	1/8"	SE APPROACH
SS-03-H4	1/16"	1	1/16"	SE APPROACH



BARRIER RAIL SPLICES				
MK.	X	QTY.	OFFSET	LOCATION
SS-03-G2	5/16"	1	1/2"	NE APPROACH
SS-03-G5	1/8"	1	3/16"	SE APPROACH
SS-03-G6	1/16"	1	1/16"	SE APPROACH
SS-03-G7	1/2"	1	3/4"	NE APPROACH

BARRIER RAIL SPLICES				
MK.	X	QTY.	OFFSET	LOCATION
SS-03-H1	15/16"	1	13/16"	NE APPROACH
SS-03-H2	3/4"	1	11/16"	NE APPROACH

SPLICE WILL BE ROTATED 180° IN FIELD

ANODIZED
(SEE NOTES ON LB1)

REV	DESCRIPTION	BY	DATE
1	REVISED DIMENSIONS PER APPROVERS MARKUPS	CMS	07/24/07

RECEIVED
CHKD BY CLD OK'D BY GAS
AUG 03 2007
RESUBMIT APPROVED AS NOTED
BY KMH DATE 8/13/07

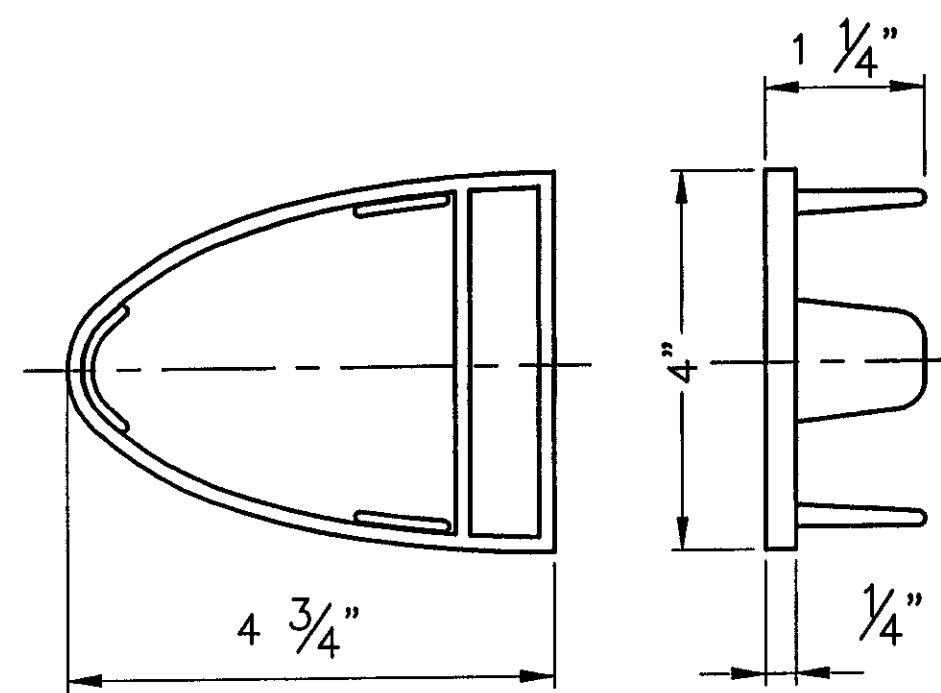
BRIDGE No 37
PROJECT No BRF 030-2(17)S
ITEM No 621.74

APPROVED: _____
REC'D APPROVAL _____
DRAWING _____

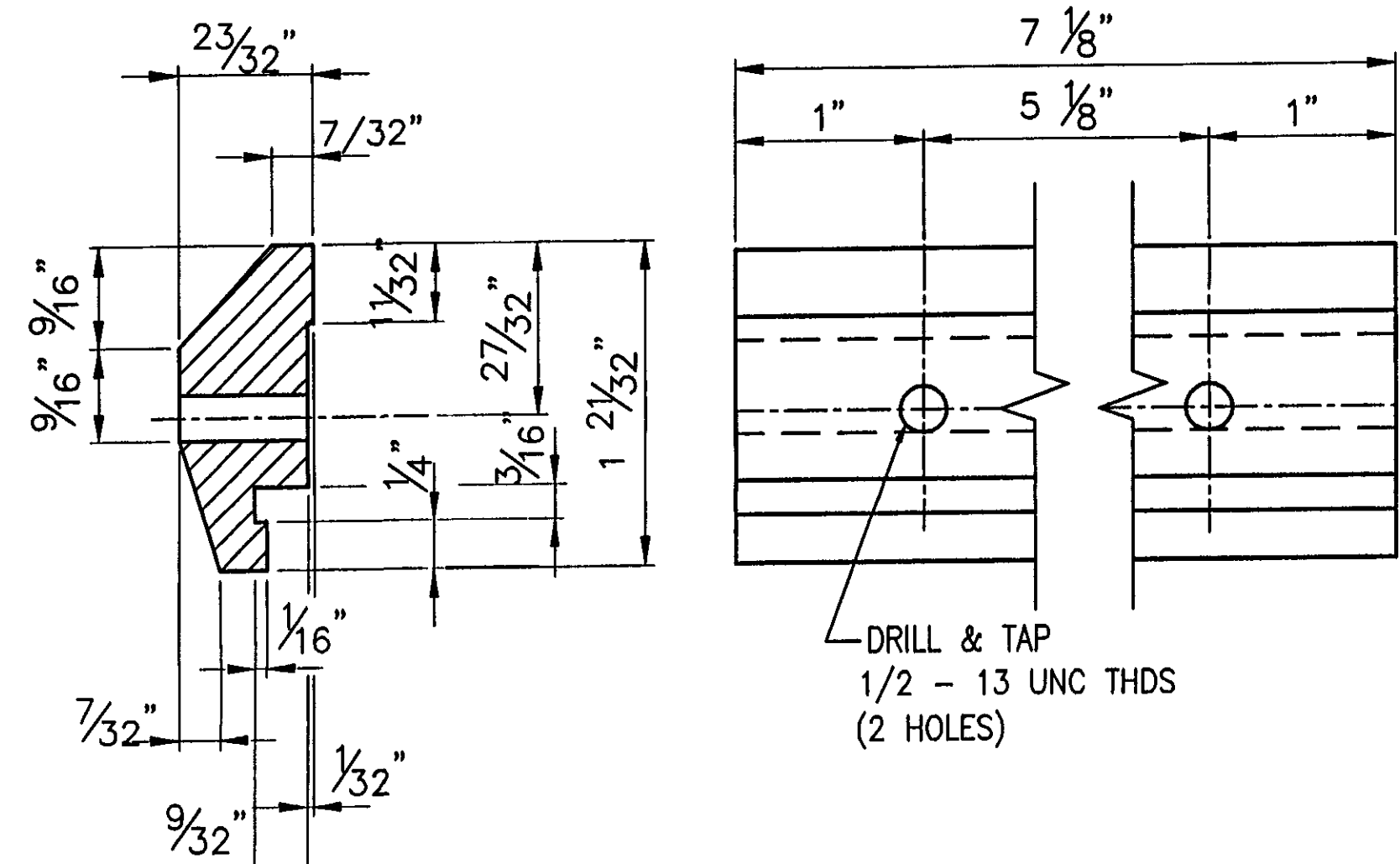
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F R LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GHON RIVER
3L ALUMINUM APPROACH ~ SPLICE DETAILS

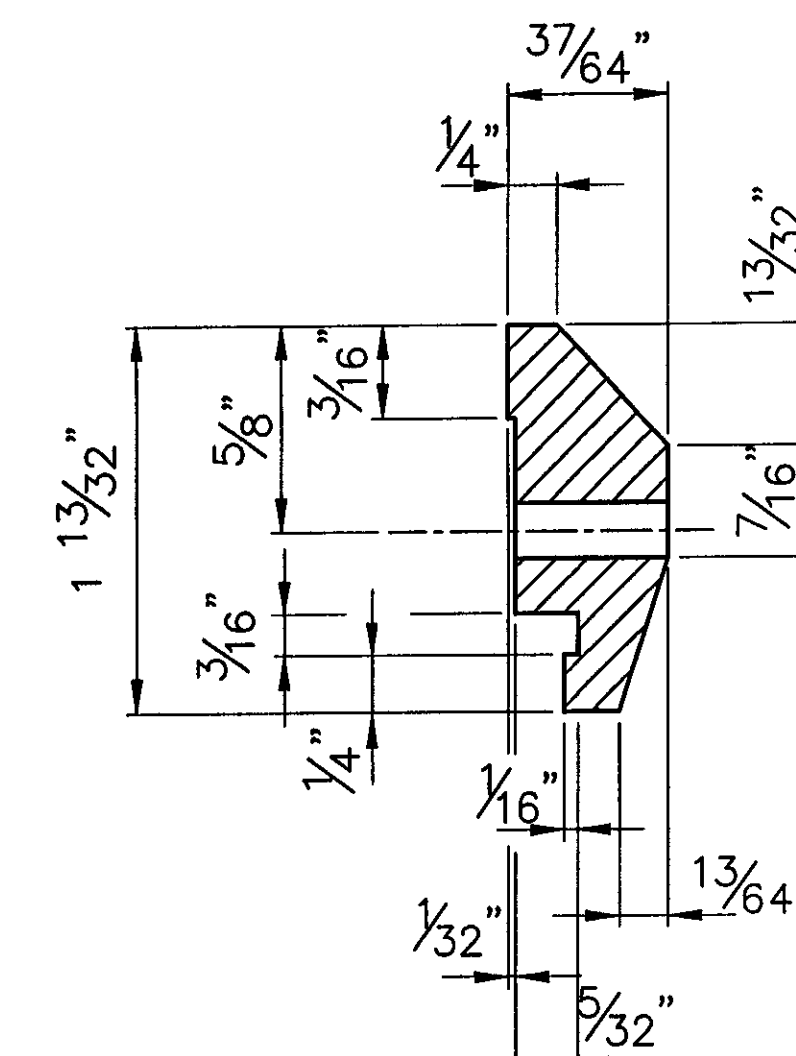
MADE CMS DATE 05/29/07 JOB No AR0395 CUST No
CHECK BLJ DATE 06/01/07 DRAWING LB15 REV. No. ONE



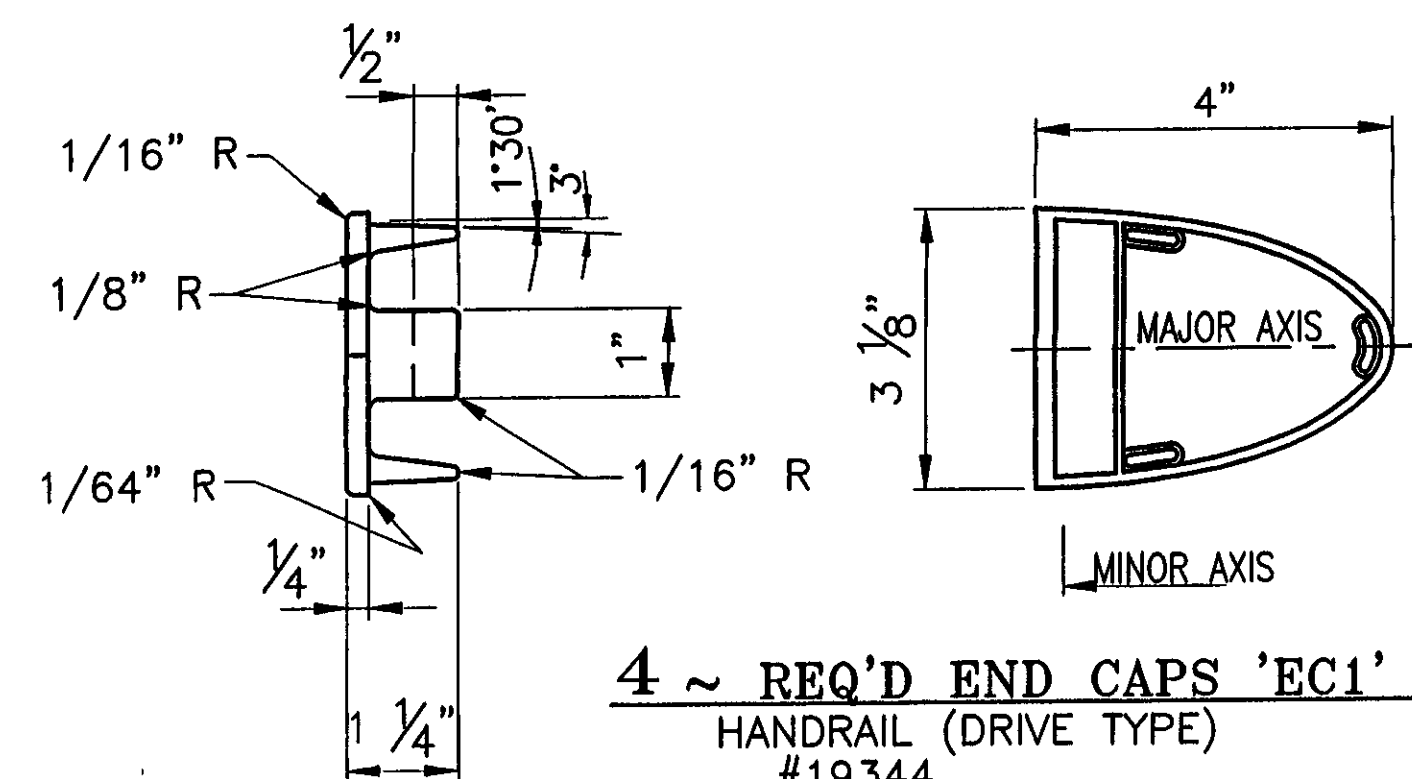
8 ~ REQ'D. ALUM
END CAPS EC2
#19345



216 ~ REQ'D CLAMP
BAR CB-03-A
(BARRIER RAIL - 4 PER POST)
#19447



80 ~ REQ'D CLAMP
BAR CB-01-H
(HANDRAIL - 2 PER POST)



4 ~ REQ'D END CAPS 'EC1'
HANDRAIL (DRIVE TYPE)
#19344

ANODIZED
(SEE NOTES ON LB1)

RECEIVED
OK'D BY CLD OK'D BY GAS
AUG 03 2007
RESUBMIT
BY KMH DATED 8/13/07

BRIDGE No 37
PROJECT No BRF 030-2(17)S
ITEM No 621.74

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: E. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION

TOWN OF JOHNSON, COUNTY OF LAMOILLE
BRIDGE RAILING FOR VT15 (MINOR ARTERIAL) OVER GHON RIVER
3L ALUMINUM APPROACH RAIL ~ MISC DETAILS

MADE CMS DATE 05/24/07 JOB No AR0395 CUST No
CHECK BLJ DATE 06/01/07 DRAWING LB16 (LAST) REV. No.

REV	DESCRIPTION	BY	DATE